MITSUBISHI ELECTRIC

GRAPHIC OPERATION TERMINAL

GOT2000

GOT2000 Series
Handy GOT Connection Manual
For GT Works3 Version1

-Handy GOT

SAFETY PRECAUTIONS

(Always read these precautions before using this equipment.)

Before using this product, please read this manual and the relevant manuals introduced in this manual carefully and pay full attention to safety to handle the product correctly.

The precautions given in this manual are concerned with this product.

In this manual, the safety precautions are ranked as "WARNING" and "CAUTION".

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

Note that failure to observe ⚠ CAUTION may lead to a serious accident depending on the circumstances.

Make sure to observe both warnings and cautions to ensure personal safety.

Please save this manual to make it accessible when required and always forward it to the end user.

[DESIGN PRECAUTIONS]

⚠ WARNING

- Some failures of the GOT or cable may keep the outputs on or off.
  Some failures of a touch panel may cause malfunction of the input objects such as a touch switch.
  An external monitoring circuit should be provided to check for output signals which may lead to a serious accident.
  Not doing so can cause an accident due to false output or malfunction.
- Do not use the GOT as the warning device that may cause a serious accident.
  An independent and redundant hardware or mechanical interlock is required to configure the device that displays and outputs serious warning.
  Not doing so can cause an accident due to false output or malfunction.
- The GOT backlight failure disables the operation on the touch switch(s).
  When the GOT backlight has a failure, the POWER LED blinks (orange/blue) and the display section dims.
  In such a case, the input by the touch switch(s) is disabled.
- Incorrect operation of the touch switch(s) may lead to a serious accident if the GOT backlight is gone out.
  When the GOT backlight goes out, the POWER LED blinks (blue/orange) and the display section dims, while the input of the touch switch(s) remains active.
  This may confuse an operator in thinking that the GOT is in "screensaver" mode, who then tries to release the GOT from this mode by touching the display section, which may cause a touch switch to operate.
- The display section of the GOT is an analog-resistive type touch panel.
  Simultaneous pressing of two or more areas on the display section may activate the switch between those areas.
  Do not press two or more areas simultaneously on the display section.
  Doing so may cause an accident due to incorrect output or malfunction.
- When programs or parameters of the controller (such as a PLC) that is monitored by the GOT are changed, be sure to shut off the power of the GOT promptly and power on the GOT again.
  Not doing so can cause an accident due to false output or malfunction.
- If a communication fault (including cable disconnection) occurs during monitoring on the GOT, communication between the GOT and PLC CPU is suspended and the GOT becomes inoperative.
  A system where the GOT is used should be configured to perform any significant operation to the system by using the switches of a device other than the GOT on the assumption that a GOT communication fault will occur.
  Not doing so can cause an accident due to false output or malfunction.
- To maintain the security (confidentiality, integrity, and availability) of the GOT and the system against unauthorized access, DoS[*1] attacks, computer viruses, and other cyberattacks from unreliable networks and devices via network, take appropriate measures such as firewalls, virtual private networks (VPNs), and antivirus solutions.
  Mitsubishi Electric shall have no responsibility or liability for any problems involving GOT trouble and system trouble by unauthorized access, DoS attacks, computer viruses, and other cyberattacks.
  *1 DoS: A denial-of-service (DoS) attack disrupts services by overloading systems or exploiting vulnerabilities, resulting in a denial-of-service (DoS) state.

[DESIGN PRECAUTIONS]

⚠CAUTION

- Do not bundle the control and communication cables with main-circuit, power or other wiring.
  Run the above cables separately from such wiring and keep them a minimum of 100 mm apart.
  Not doing so noise can cause a malfunction.
- Do not press the GOT display section with a pointed material as a pen or driver.
  Doing so can result in a damage or failure of the display section.
- When using the Ethernet interfaces, set an IP address for each interface to access a different network.
- Turn on the controllers and the network devices to be ready for communication before they communicate with the GOT. Failure to do so can cause a communication error on the GOT.
- When the GOT is subject to shock or vibration, or some colors appear on the screen of the GOT, the screen of the GOT might flicker.
- When the GOT is connected to the Ethernet network, the available IP address is restricted according to the system configuration.
  When a GOT2000 series model and a GOT1000 series model are on an Ethernet network, do not set the IP address 192.168.0.18 for the GOTs and the controllers on this network.
  Doing so can cause IP address duplication at the GOT startup, adversely affecting the communication of the device with the IP address 192.168.0.18.
  The operation at the IP address duplication depends on the devices and the system.

[MOUNTING PRECAUTIONS]

⚠WARNING

- Be sure to shut off all phases of the external power supply used by the system before mounting or removing the GOT main unit to/from the panel.
  Not doing so can cause the unit to fail or malfunction.
- Always turn off the power ON/OFF switch on the connector conversion box (GT16H-CNB-42S) before connecting or disconnecting the GOT to it.
  Connecting or disconnecting the GOT with the power being turned on may result in damage to the unit or malfunctions.

[MOUNTING PRECAUTIONS]

⚠CAUTION

- Use the GOT in the environment that satisfies the general specifications described in this manual.
  Not doing so can cause an electric shock, fire, malfunction or product damage or deterioration.
- Remove the protective film of the GOT.
  When the user continues using the GOT with the protective film, the film may not be removed.
- Do not operate or store the GOT in the environment exposed to direct sunlight, rain, high temperature, dust, humidity, or vibrations.
- Do not use the GOT in an environment with oil or chemicals.
  Doing so may cause failure or malfunction due to the oil or chemical entering into the GOT.
- Do not operate the GOT with its display section frozen.
  The water droplets on the display section may freeze at a low temperature.
  Touch switches and other input objects may malfunction if the display section is frozen.

[WIRING PRECAUTIONS]

⚠WARNING

- Make sure to attach the back cover to the Handy GOT before turning on the power and starting operation after the installation or wiring work. Otherwise, electrical shock may be caused.
- Be sure to shut off all phases of the external power supply used by the system before wiring. Failure to do so may result in an electric shock, product damage or malfunctions.
- Use a DC power supply for this product.
  The power supply in the specified range must be applied for the power supply, the operation switch, and the emergency stop switch.
  If they are connected to the power supply of the different specification, it may cause a fire or failure.

[WIRING PRECAUTIONS]

⚠CAUTION

- Connect connection cables securely to the specified connectors while the power is turned OFF. Imperfect connection may cause malfunction or failure.
- Please make sure to ground FG terminal of the GOT power supply section by applying 100 Ω or less which is used exclusively for the GOT.
  Not doing so may cause an electric shock or malfunction.
- Exercise care to avoid foreign matter such as chips and wire offcuts entering the GOT.
  Not doing so can cause a fire, failure or malfunction.
- Plug the communication cable into the GOT interface or the connector of the connected unit, and tighten the mounting screws and the terminal screws in the specified torque range.
  Undertightening can cause a short circuit or malfunction.
  Overtightening can cause a short circuit or malfunction dueto the damage of the screws or unit.

[TEST OPERATION PRECAUTIONS]

⚠WARNING

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

[STARTUP/MAINTENANCE PRECAUTIONS]

⚠WARNING

- When power is on, do not touch the terminals.
  Doing so can cause an electric shock or malfunction.
- Connect the battery correctly.
  Do not discharge, disassemble, heat, short, solder or throw the battery into the fire.
  Incorrect handling may cause the battery to generate heat, burst or take fire, resulting in injuries or fires.
- Before starting cleaning or terminal screw retightening, always switch off the power externally in all phases.
  Not doing so can cause the unit to fail or malfunction.
  Undertightening can cause a short circuit or malfunction.
  Overtightening can cause a short circuit or malfunction due to the damage of the screws or unit.

[STARTUP/MAINTENANCE PRECAUTIONS]

⚠CAUTION

- Do not disassemble or modify the unit.
  Doing so can cause a failure, malfunction, injury or fire.
- Do not touch the conductive and electronic parts of the unit directly.
  Doing so can cause a unit malfunction or failure.
- Do not drop or give an impact to the battery mounted to the unit.
  Dispose of the battery without using when it is dropped or given an impact, because it may be damaged.
- The cables connected to the unit must be run in ducts or clamped.
  Not doing so can cause the unit or cable to be damaged due to the dangling, motion or accidental pulling of the cables or can cause a malfunction due to a cable connection fault.
- When unplugging the cable connected to the unit, do not hold and pull from the cable portion.
  Doing so can cause the unit or cable to be damaged or can cause a malfunction due to a cable connection fault.
- Do not drop the module or subject it to strong shock. A module damage may result.
- Before touching the unit, always touch grounded metals, etc. to discharge static electricity from human body, etc.
  Not doing so can cause the unit to fail or malfunction.
- Replace battery with GT15-BAT by Mitsubishi electric Co. only.
  Use of another battery may present a risk of fire or explosion.
- Dispose of used battery promptly.
  Keep away from children. Do not disassemble and do not dispose of in fire.
- Before cleaning the GOT, be sure to turn off the power.
  Before cleaning, check the following items.
  • Ensure that there are no problems with the installation condition of the GOT to the control panel.
  • Ensure that there are no damages on the environmental protection sheet (not replaceable).
  If the environmental protection sheet peels or the cleaning solution enters between the sheet and the display section during cleaning, stop the cleaning immediately.
  In such a case, do not use the GOT.

[TOUCH PANEL PRECAUTIONS]

⚠ CAUTION

- For the analog-resistive film type touch panels, normally the adjustment is not required.
  However, the difference between a touched position and the object position may occur as the period of use elapses.
  When any difference between a touched position and the object position occurs, execute the touch panel calibration.
- When any difference between a touched position and the object position occurs, other object may be activated.
  This may cause an unexpected operation due to incorrect output or malfunction.

[PRECAUTIONS FOR USING A DATA STORAGE]

⚠ WARNING

- Do not remove the SD card from drive A while the SD card is being accessed by the GOT, or the GOT may stop processing for about 20 seconds.
  During this stop, you cannot operate the GOT, and the functions running in the background, including the screen refresh, alarm, logging, and script, also stop.
  This stop may affect the system operation, causing an accident.
  Since this interruption makes an impact to the system operation, it might cause failure.
  After inhibiting access to the SD card on the GOT utility screen, check that the SD card access LED is off and remove the SD card.
- Do not remove the data storage from the file server (drive N) that is being accessed by the GOT, or the system operation may be affected.
  Before removing the data storage, check the relevant system signal to make sure that the data storage is not being accessed.

[PRECAUTIONS FOR USING A DATA STORAGE]

⚠ CAUTION

- Do not remove the data storage from the GOT while the data storage is being accessed by the GOT, or the data storage and files may be damaged.
  Before removing the data storage, check the SD card access LED, relevant system signal, or others to make sure that the data storage is not being accessed.
- Turning off the GOT while it accesses the SD card results in damage to the SD card and files.
- When removing the SD card from the GOT, make sure to support the SD card by hand as it may pop out.
  Failure to do so may cause the SD card to drop from the GOT, resulting in a failure or break.
- When installing a USB memory to the GOT, make sure to install the USB memory to the USB interface firmly.
  Failure to do so may cause a malfunction due to poor contact.
- Before removing the USB device from the GOT, follow the procedure for removal on the utility screen of the GOT.
  After the successful completion dialog is displayed, remove the data storage by hand carefully.
  Not doing so may cause the data storage to drop from the GOT, resulting in a failure or break.

[PRECAUTIONS FOR USE]

⚠CAUTION

- Do not touch the edges of the touch panel (display section) repeatedly.
  Doing so may result in a failure.
- Do not turn off the GOT while data is being written to the storage memory (ROM) or SD card.
  Doing so may corrupt the data, rendering the GOT inoperative.

[PRECAUTIONS FOR REMOTE CONTROL]

⚠WARNING

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

[PRECAUTIONS FOR EXCLUSIVE AUTHORIZATION CONTROL]

⚠WARNING

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

[DISPOSAL PRECAUTIONS]

⚠CAUTION

- When disposing of this product, treat it as industrial waste.
- When disposing of batteries, separate them from other wastes according to the local regulations.
  (Refer to the GOT2000 Series User's Manual for details of the battery directive in the EU member states.)

[TRANSPORTATION PRECAUTIONS]

⚠ CAUTION

- When transporting lithium batteries, make sure to treat them based on the transport regulations. (Refer to the GOT2000 Series User's Manual (Hardware) for details of the regulated models.)
- Make sure to transport the GOT main unit and/or relevant unit(s) in the manner they will not be exposed to the impact exceeding the impact resistance described in the general specifications of this manual, as they are precision devices.
  Failure to do so may cause the unit to fail.
  Check if the unit operates correctly after transportation.
- When fumigants that contain halogen materials such as fluorine, chlorine, bromine, and iodine are used for disinfecting and protecting wooden packaging from insects, they cause malfunction when entering our products.
  Please take necessary precautions to ensure that remaining materials from fumigant do not enter our products, or treat packaging with methods other than fumigation (heat method).
  Additionally, disinfect and protect wood from insects before packing products.
- Before transporting the GOT, turn the GOT power on and check that the battery voltage status is normal on the Time setting & display screen (utilities screen).
  In addition, confirm that the adequate battery life remains on the rating plate.
  Transporting the GOT with the low battery voltage or the battery the reached battery life may unstabilize the backup data unstable during transportation.
- When transporting lithium batteries, make sure to treat them based on the transport regulations. (Refer to the GOT2000 Series User' Manual (Hardware) for details of the regulated models.)

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INTRODUCTION

Thank you for choosing Mitsubishi Electric Graphic Operation Terminal (GOT).
Before using the product, read this manual carefully and make sure you understand the functions and performance of the GOT for correct use.
☞ Manuals for GT Works3
☞ Abbreviations, Generic Terms, and Model Icons

Manuals for GT Works3

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

Manuals for GT Designer3 (GOT2000)

Point

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

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

■Screen design software-related manuals

Manual name	Manual number (Model code)	Format
GT Works3 Installation Instructions	-	PDF
GT Designer3 (GOT2000) Screen Design Manual	SH-081220ENG (1D7ML9)	PDF e-Manual
GT Converter2 Version3 Operating Manual for GT Works3	SH-080862ENG	PDF e-Manual
GOT2000 Series MES Interface Function Manual for GT Works3 Version1	SH-081228ENG	PDF e-Manual

■Connection manuals

Manual name	Manual number (Model code)	Format
GOT2000 Series Connection Manual (Mitsubishi Electric Products) For GT Works3 Version1	SH-081197ENG (1D7MJ8)	PDF e-Manual
GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1	SH-081198ENG	PDF e-Manual
GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1	SH-081199ENG	PDF e-Manual
GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1	SH-081200ENG	PDF e-Manual
GOT2000 Series Handy GOT Connection Manual For GT Works3 Version1	SH-081867ENG (1D7MS9)	PDF e-Manual
GOT2000 Series Connection Manual (α2 Connection) for GT Works3 Version1	JY997D52301	PDF e-Manual

■GT SoftGOT2000 manuals

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

■GOT2000 series user's manuals

Manual name	Manual number (Model code)	Format
GOT2000 Series User's Manual (Hardware)	SH-081194ENG (1D7MJ5)	PDF e-Manual
GOT2000 Series User's Manual (Utility)	SH-081195ENG (1D7MJ6)	PDF e-Manual
GOT2000 Series User's Manual (Monitor)	SH-081196ENG (1D7MJ7)	PDF e-Manual

■GOT SIMPLE series user's manuals

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

■Manuals related to GT Works3 add-on projects

Manual name	Manual number (Model code)	Format
GT Works3 Add-on License for GOT2000 Enhanced Drive Control (Servo) Project Data Manual (Fundamentals)	SH-082072ENG (1D7MV1)	PDF e-Manual
GT Works3 Add-on License for GOT2000 Enhanced Drive Control (Servo) Project Data Manual (Screen Details)	SH-082074ENG (1D7MV3)	PDF e-Manual

Manuals for GT Designer3 (GOT1000)

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

Abbreviations, Generic Terms, and Model Icons

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

GOT

■GOT2000 series

Abbreviations and generic terms			Description	Meaning of icon	
				Available	Unavailable
GT27	GT27-X	GT2715-X	GT2715-XTBA GT2715-XTBD		-
	GT27-S	GT2712-S	GT2712-STBA GT2712-STWA GT2712-STBD GT2712-STWD		
		GT2710-S	GT2710-STBA GT2710-STBD		
		GT2708-S	GT2708-STBA GT2708-STBD		
	GT27-V	GT2710-V	GT2710-VTBA GT2710-VTWA GT2710-VTBD GT2710-VTWD		
		GT2708-V	GT2708-VTBA GT2708-VTBD		
		GT2705-V	GT2705-VTBD		
GT25			All GT25 models		-
	GT25-W	GT2512-WX	GT2512-WXTBD GT2512-WXTSD		-
		GT2510-WX	GT2510-WXTBD GT2510-WXTSD		
		GT2507-W	GT2507-WTBD GT2507-WTSD		
		GT2507T-W	GT2507T-WTSD		
	GT25-S	GT2512-S	GT2512-STBA GT2512-STBD		
		GT2512F-S	GT2512F-STNA GT2512F-STND		
	GT25-V	GT2510-V	GT2510-VTBA GT2510-VTWA GT2510-VTBD GT2510-VTWD		
		GT2510F-V	GT2510F-VTNA GT2510F-VTND		
		GT2508-V	GT2508-VTBA GT2508-VTWA GT2508-VTBD GT2508-VTWD		
		GT2508F-V	GT2508F-VTNA GT2508F-VTND		
		GT2505-V	GT2505-VTBD		
	GT25HS-V Handy GOT	GT2506HS-V	GT2506HS-VTBD		-
		GT2505HS-V	GT2505HS-VTBD		-
GT23	GT23-V	GT2310-V	GT2310-VTBA GT2310-VTBD		-
		GT2308-V	GT2308-VTBA GT2308-VTBD		

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

■GOT SIMPLE series

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

■GOT1000 series, GOT900 series, and GOT800 series

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

Communication unit

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

Option unit

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

Option

Abbreviations and generic terms	Description
SD card	NZ1MEM-2GBSD NZ1MEM-4GBSD NZ1MEM-8GBSD NZ1MEM-16GBSD L1MEM-2GBSD L1MEM-4GBSD
Battery	GT11-50BAT GT15-BAT
Protective sheet	GT27-15PSGC GT25-12WPSGC GT25-12PSGC GT25-10WPSGC GT25-10PSGC GT25-08PSGC GT21-07WPSGC GT25T-07WPSVC GT25-05PSGC GT25-05PSGC-2 GT21-05PSGC GT21-04RPSGC-UC GT21-03PSGC-UC GT21-04PSGC-UC GT27-15PSCC GT25-12WPSCC GT25-12PSCC GT25-10WPSCC GT25-10PSCC GT25-08PSCC GT25-05PSCC GT25-05PSCC-2 GT25-12PSCC-UC GT25-10PSCC-UC GT25-08PSCC-UC GT21-07WPSCC GT21-05PSCC GT21-04RPSCC-UC GT21-04PSCC-UC GT21-03PSCC-UC GT16H-60PSC GT14H-50PSC
Antibacterial/antiviral protective sheet	GT25-12PSAC GT25-10PSAC GT25-08PSAC
Environmental protection sheet	GT25F-12ESGS GT25F-10ESGS GT25F-08ESGS
Protective cover for oil	GT20-15PCO GT20-12PCO GT20-10PCO GT20-08PCO GT21-12WPCO GT21-10WPCO GT21-07WPCO GT25T-07WPCO GT25-05PCO GT25-05PCO-2 GT05-50PCO GT21-04RPCO GT10-30PCO GT10-20PCO
USB environmental protection cover	GT25-UCOV GT25-05UCOV GT21-WUCOV

Abbreviations and generic terms	Description
Stand	GT15-90STAND GT15-80STAND GT15-70STAND GT05-50STAND GT25-10WSTAND GT21-07WSTAND GT25T-07WSTAND
Attachment	GT15-70ATT-98 GT15-70ATT-87 GT15-60ATT-97 GT15-60ATT-96 GT15-60ATT-87 GT15-60ATT-77 GT21-04RATT-40
Panel-mounted USB port extension	GT14-C10EXUSB-4S GT10-C10EXUSB-5S
Connector conversion box	GT16H-CNB-42S GT16H-CNB-37S GT11H-CNB-37S
Emergency stop switch guard cover	GT16H-60ESCOV GT14H-50ESCOV
Wall-mounting attachment	GT14H-50ATT

Software

■Software related to GOT

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

■Software related to iQ Works

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

■Other software

Abbreviations and generic terms		Description
GX Works3		SW □ DND-GXW3-E (-EA, -EAZ) type programmable controller engineering software (□ represents a version.)
GX Works2		SW □ DNC-GXW2-E (-EA, -EAZ) type programmable controller engineering software (□ represents a version.)
Controller simulator	GX Simulator3	Simulation function of GX Works3
	GX Simulator2	Simulation function of GX Works2
	GX Simulator	SW □ D5C-LLT-E (-EV) type ladder logic test tool function software package (SW5D5C-LLT (-V) or later versions) (□ represents a version.)
GX Developer		SW □ D5C-GPPW-E (-EV)/SW □ D5F-GPPW (-V) type software package (□ represents a version.)
GX LogViewer		SW □ DNN-VIEWER-E type software package (□ represents a version.)
MI Configurator		Configuration and monitor tool for Mitsubishi Electric industrial computers (SW□DNNMICONF-M) (□ represents a version.)
PX Developer		SW □ D5C-FBDQ-E type FBD software package for process control (□ represents a version.)
MT Works2		Motion controller engineering environment MELSOFT MT Works2 (SW □ DNDMTW2-E) (□ represents a version.)
MT Developer		SW□RNC-GSV type integrated start-up support software for motion controller Q series (□ represents a version.)
CW Configurator		Setting/monitoring tools for the C Controller module and MELSECWinCPU (SW□DND-RCCPU-E) (□ represents a version.)
MR Configurator2		SW □ DNC-MRC2-E type servo configuration software (□ represents a version.)
MR Configurator		MRZJW□-SETUP type servo configuration software (□ represents a version.)
FR Configurator2		Inverter setup software (SW □ DND-FRC2-E) (□ represents a version.)
FR Configurator		Inverter setup software (FR-SW □ -SETUP-WE) (□ represents a version.)
NC Configurator2		CNC parameter setting support tool (FCSB1221)
NC Configurator		CNC parameter setting support tool
FX Configurator-FP		Parameter setting, monitoring, and testing software package for FX3U-20SSCH (SW □ D5CFXSSCE) (□ represents a version.)
FX Configurator-EN-L		FX3U-ENET-L type Ethernet module setting software (SW1D5-FXENETL-E)
FX Configurator-EN		FX3U-ENET type Ethernet module setting software (SW1D5C-FXENET-E)
RT ToolBox2		Robot program creation software (3D-11C-WINE)
RT ToolBox3		Robot program creation software (3F-14C-WINE)
MX Component		MX Component Version □ (SW □ D5C-ACT-E, SW □ D5C-ACT-EA) (□ represents a version.)
MX Sheet		MX Sheet Version □ (SW □ D5C-SHEET-E, SW □ D5C-SHEET-EA) (□ represents a version.)
CPU Module Logging Configuration Tool		CPU module logging configuration tool (SW1DNN-LLUTL-E)

License key (for GT SoftGOT2000)

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

Others

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

MEMO

PART 1 PREPARATORY PROCEDURES FOR MONITORING

1 PREPARATORY PROCEDURES FOR MONITORING

- Page 45 Setting the Communication Interface
- Page 85 Writing the Package Data onto the GOT
- Page 87 Option Devices for the Respective Connection
- Page 89 Connection Cables for the Respective Connection
- Page 92 ID Recognition Function
- Page 93 Verifying GOT Recognizes Connected Equipment
- Page 95 Checking for Normal Monitoring

The following shows the procedures to be taken before monitoring and corresponding reference sections.

1. Setting the communication interface

Determine the connection type and channel No. to be used, and perform the communication setting.

☞ Page 45 Setting the Communication Interface

☞ Each chapter GOT Side Settings

2. Writing the package data

Write the project data, system application onto the GOT.

☞ Page 85 Writing the Package Data onto the GOT

3. Verifying the package data

Verify the project data, system application are properly written onto the GOT.

☞ Page 86 Checking the package data writing on GOT

4. Attaching the communication unit and connecting the cable

Mount the optional equipment and prepare/connect the connection cable according to the connection type.

☞ Page 87 Option Devices for the Respective Connection

☞ Page 89 Connection Cables for the Respective Connection

☞ Each chapter System Configuration

☞ Each chapter Connection Diagram

5. Verifying GOT recognizes connected equipment

Verify the GOT recognizes controllers on [Communication Settings] of the Utility.

☞ Page 93 Verifying GOT Recognizes Connected Equipment

6. Verifying the GOT is monitoring normally

Verify the GOT is monitoring normally using Utility, Developer, etc.

☞ Page 95 Checking for Normal Monitoring

1.1 Setting the Communication Interface

Set the communication interface of GOT and the connected equipment.
When using the GOT at the first time, make sure to set the channel of communication interface and the communication driver before writing to GOT.
Set the communication interface of the GOT at [Controller Setting] and [I/F Communication Setting] in GT Designer3.

Point

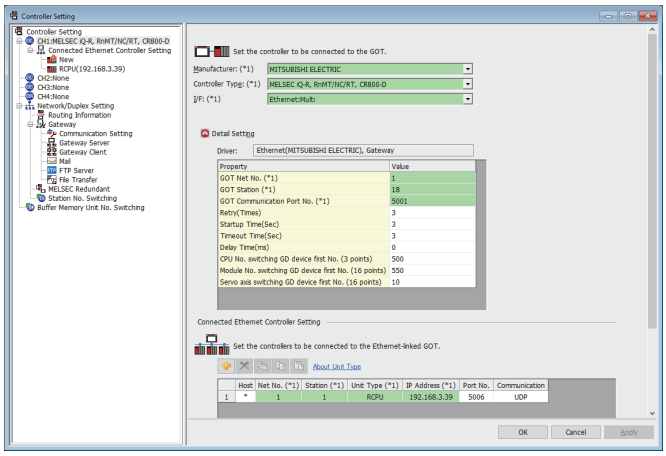
When using the parameter reflection function of MELSOFT Navigator

The system configuration of MELSOFT Navigator can be reflected to the project of GT Designer3 using the parameter function of MELSOFT Navigator.

For details of the parameter functions of MELSOFT Navigator, refer to the following.

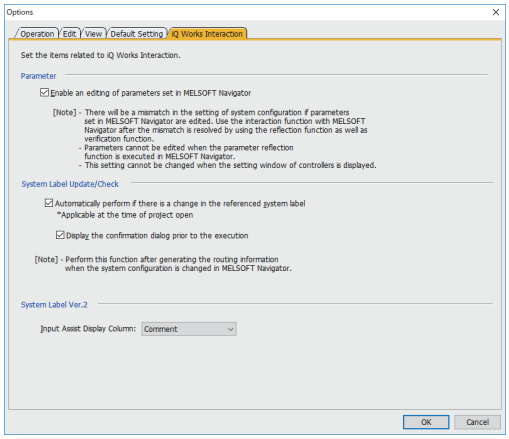
☞ Help of MELSOFT Navigator

- The color of the cells for the items which are reflected to GT Designer3 from MELSOFT Navigator changes to green. Set items, which are displayed in green cells, from the MELSOFT Navigator. When changing in GT Designer3, refer to the following (3).



- When setting the communication interface for the connection with the iQ Works untargeted equipment, set [Set by GT Designer3] to the channel connected at [Configuration detailed information input] in MELSOFT Navigator and make the settings at [Controller Setting] in GT Designer3.
- To make the items reflected from MELSOFT Navigator editable on GT Designer3, select the [Option] menu and put a check mark at [Enable an editing of parameters set in MELSOFT Navigator] in the [iQ Works Interaction] tab.

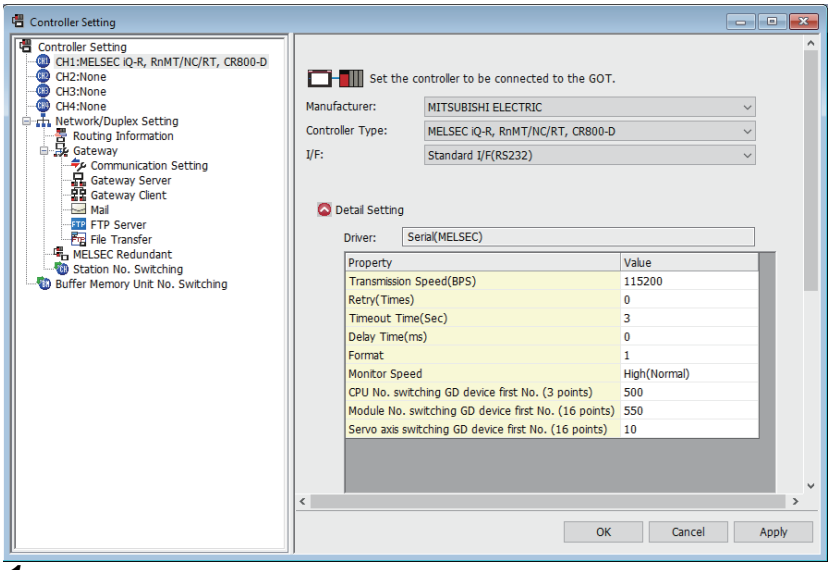
However, when the items set in MELSOFT Navigator are edited in GT Designer3, the interaction function with MELSOFT Navigator is unavailable due to a mismatch with the system configuration of MELSOFT Navigator. Eliminate mismatches using the parameter verification function etc. before using the interaction function of MELSOFT Navigator.



Setting connected equipment (Channel setting)

Set the channel of the equipment connected to the GOT.

Setting



1. Select [Common] → [Controller Setting] from the menu.

2. The Controller Setting dialog box appears.

Select the channel No. to be used from the list menu.

3. Refer to the following explanations for the setting.

Point

Channel No.2 to No.4

Use the channel No.2 to No.4 when using the Multi-channel function.

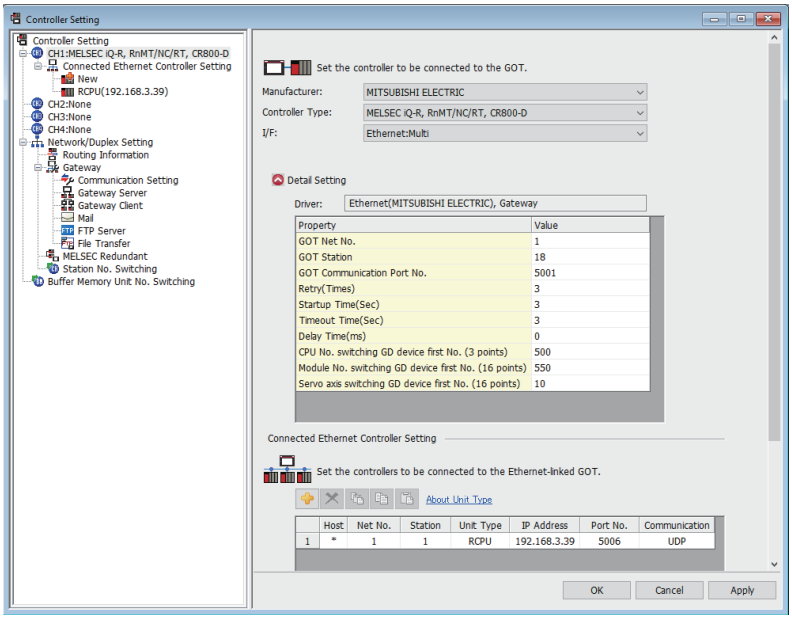
For details of the Multi-channel function, refer to the following.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) For GT Works3 Version1

Setting item

This section describes the setting items of the Manufacturer, Controller Type, Driver and I/F.

When using the channel No.2 to No.4, put a check mark at [Use CH*].



Item	Description
Use CH*	Select this item when setting the channel No.2 to No.4.
Manufacturer	Select the manufacturer of the equipment to be connected to the GOT.
Type	Select the type of the equipment to be connected to the GOT. For the settings, refer to the following. ☞ Page 49 Setting [Controller Type]
I/F	Select the interface of the GOT to which the equipment is connected. For the settings, refer to the following. ☞ Page 79 Setting [I/F]
Driver	Select the communication driver to be written to the GOT. For the settings, refer to the following. ☞ Page 48 Setting [Driver] When multiple communication drivers can be selected, this item is displayed. When only one communication driver can be selected, the driver name is displayed under [Detail Setting].
Detail Setting	Make settings for the transmission speed and data length of the communication driver. ☞ Refer to each chapter of the equipment to be connected to the GOT.

■Setting [Driver]

The displayed items for a driver differ according to the settings [Manufacturer], [Controller Type] and [I/F].

When the driver to be set is not displayed, confirm if [Manufacturer], [Controller Type] and [I/F] are correct.

For the settings, refer to the following.

☞ Setting the communication interface] section in each chapter

■Setting [Controller Type]

The type differs depending on the PLC to be used.

For the settings, refer to the following.

Type	Model name
[MELSEC MX Controller]	MXR300-16 MXR300-32 MXR300-64 MXR500-128 MXR500-256 MXF100-8-N32 MXF100-8-P32 MXF100-16-N32 MXF100-16-P32
[MELSEC iQ-R, RnMT/NC/RT, CR800-D]	R00CPU R01CPU R02CPU R04CPU R08CPU R16CPU R32CPU R120CPU
	R16MTCPU R32MTCPU R64MTCPU
	R08PCPU R16PCPU R32PCPU R120PCPU
	R04ENCPU R08ENCPU R16ENCPU R32ENCPU R120ENCPU
	R08PSFCPU R16PSFCPU R32PSFCPU R120PSFCPU
	R08SFCPU R16SFCPU R32SFCPU R120SFCPU
	R12CCPU-V
	R102WCPU-W
	CNC C80 (R16NCCPU-S1)
	CR800-R(R16RTCPU) CR800-D
	MR-J5-□B[*1] MR-J5-□B-RJ[*1] MR-J5W2-□B[*1] MR-J5W3-□B[*1] MR-J5-□G[*4] MR-J5-□G-RJ[*4] MR-J5W2-□G[*4] MR-J5W3-□G[*4] MR-J4-□B[*1] MR-J4-□B-RJ[*1] MR-J4W2-□B[*1] MR-J4W3-□B[*1] MR-J4-□GF[*1] MR-J4-□GF-RJ[*1] MR-JE-*B[*1] MR-JE-*BF[*1]

Type	Model name
[MELSEC iQ-R, RnMT/NC/RT, CR800-D]	FR-E7□0-NE *3 FR-A8□0 *3 FR-A8□2 *3 FR-A8□6 *3 FR-A8□0-E *3 FR-A8□2-E *3 FR-A8□6-E *3 FR-A8□0-GF *3 FR-A8□2-GF *3 FR-A8□0-GN *3 FR-A8□2-GN *3 FR-A8□0-CRN *3 FR-A8□2-CRN *3 FR-A8□0-R2R *3 FR-A8□2-R2R *3 FR-A8□0-AWH*3 FR-A8□0-LC*3 FR-A8□0-E-CRN *3 FR-A8□2-E-CRN *3 FR-A8□0-E-R2R *3 FR-A8□2-E-R2R *3 FR-A8□0-E-AWH*3 FR-A8□0-E-LC*3 FR-F8□0 *3 FR-F8□2 *3 FR-F8□6 *3 FR-F8□0-E *3 FR-F8□2-E *3 FR-E8□0-E *3 FR-D8□0-E*3
[MELSEC iQ-F]	FX5U FX5UC FX5UJ FX5S
	MR-J4-*B *1 MR-JE-*B *1
[MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700]	Q00CPU Q01CPU Q02CPU
	Q02HCPU Q06HCPU Q12HCPU Q25HCPU
	Q02PHCPU Q06PHCPU Q12PHCPU Q25PHCPU
	Q172CPU Q173CPU Q172CPUN Q173CPUN Q172HCPU Q173HCPU
	Q00UJCPU Q00UJCPU-S8
	Q00UCPU
	Q01UCPU
	Q02UCPU
	Q03UDCPU
	Q04UDHCPU Q06UDHCPU Q10UDHCPU Q13UDHCPU Q20UDHCPU Q26UDHCPU

Type	Model name
[MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700]	Q03UDECPU Q04UDEHCPU Q06UDEHCPU Q10UDEHCPU Q13UDEHCPU Q20UDEHCPU Q26UDEHCPU Q50UDEHCPU Q100UDEHCPU
	Q03UDVCPU Q04UDVCPU Q06UDVCPU Q13UDVCPU Q26UDVCPU
	Q12DCCPU-V Q24DHCCPU-V/VG Q24DHCCPU-LS Q26DHCCPU-LS
	Q172DCPU Q173DCPU Q172DCPU-S1 Q173DCPU-S1
	Q172DSCPU Q173DSCPU Q170MCPU Q170MSCPU Q170MSCPU-S1
	MR-MQ100
	CNC C70 (Q173NCCPU)
	CRnQ-700(Q172DRCPU) CR750-Q(Q172DRCPU) CR751-Q(Q172DRCPU) CR800-Q(Q172DSRCPU)
	CRnD-700 CR750-D CR751-D
	Q00JCPU
	Q00CPU
	Q01CPU
	Q02CPU
	Q02HCPU Q06HCPU Q12HCPU Q25HCPU
	Q02PHCPU Q06PHCPU Q12PHCPU Q25PHCPU
	Q12PRHCPU Q25PRHCPU
	QS001CPU

Type	Model name
[MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700]	MR-J5-□B[*1] MR-J5-□B-RJ[*1] MR-J5W2-□B[*1] MR-J5W3-□B[*1] MR-J4-□B[*1] MR-J4-□B-RJ[*1] MR-J4W2-□B[*1] MR-J4W3-□B[*1] MR-J4-□GF[*1] MR-J4-□GF-RJ[*1] MR-JE-*B[*1]
	FR-E7□0-NE [*3] FR-A8□0 [*3] FR-A8□2 [*3] FR-A8□6 [*3] FR-A8□0-E [*3] FR-A8□2-E [*3] FR-A8□6-E [*3] FR-A8□0-GF [*3] FR-A8□2-GF [*3] FR-A8□0-GN [*3] FR-A8□2-GN [*3] FR-A8□0-CRN [*3] FR-A8□2-CRN [*3] FR-A8□0-R2R [*3] FR-A8□2-R2R [*3] FR-A8□0-AWH[*3] FR-A8□0-LC[*3] FR-A8□0-E-CRN [*3] FR-A8□2-E-CRN [*3] FR-A8□0-E-R2R [*3] FR-A8□2-E-R2R [*3] FR-A8□0-E-AWH[*3] FR-A8□0-E-LC[*3] FR-F8□0 [*3] FR-F8□2 [*3] FR-F8□6 [*3] FR-F8□0-E [*3] FR-F8□2-E [*3] FR-E8□0-E [*3] FR-D8□0-E[*3]
[MELSEC-QnA, MELDAS C6*]	Q2ACPU Q2ACPU-S1 Q3ACPU Q4ACPU
	Q4ARCPU
	Q2ASCPU
	Q2ASCPU-S1
	Q2ASHCPU
	Q2ASHCPU-S1
	MELDAS C6 (FCA C6) MELDAS C64 (FCA C64)
	M700VS/M70V
	M800/M80

Type	Model name
[MELSEC-L]	L02CPU L06CPU L26CPU L26CPU-BT L02CPU-P L06CPU-P L26CPU-P L26CPU-PBT L02SCPU L02SCPU-P NZ2GF-ETB
	MR-J4-*B[*1] MR-JE-*B[*1] MR-JE-*BF[*1]
	FR-E7□0-NE [*3] FR-A8□0 [*3] FR-A8□2 [*3] FR-A8□6 [*3] FR-A8□0-E [*3] FR-A8□2-E [*3] FR-A8□6-E [*3] FR-A8□0-GF [*3] FR-A8□2-GF [*3] FR-A8□0-GN [*3] FR-A8□2-GN [*3] FR-A8□0-CRN [*3] FR-A8□2-CRN [*3] FR-A8□0-R2R [*3] FR-A8□2-R2R [*3] FR-A8□0-AWH[*3] FR-A8□0-LC[*3] FR-A8□0-E-CRN [*3] FR-A8□2-E-CRN [*3] FR-A8□0-E-R2R [*3] FR-A8□2-E-R2R [*3] FR-A8□0-E-AWH[*3] FR-A8□0-E-LC[*3] FR-F8□0 [*3] FR-F8□2 [*3] FR-F8□6 [*3] FR-F8□0-E [*3] FR-F8□2-E [*3] FR-E8□0-E [*3] FR-D8□0-E[*3]
[MELSEC-A]	A2UCPU
	A2UCPU-S1
	A3UCPU
	A4UCPU
	A2ACPU
	A2ACPUP21
	A2ACPUR21
	A2ACPU-S1
	A2ACPUP21-S1
	A2ACPUR21-S1
	A3ACPU
	A3ACPUP21
	A3ACPUR21
	A1NCPU
	A1NCPUP21
	A1NCPUR21
	A2NCPU
	A2NCPUP21

Type	Model name
[MELSEC-A]	A2NCPUR21
	A2NCPU-S1
	A2NCPUP21-S1
	A2NCPUR21-S1
	A3NCPU
	A3NCPUP21
	A3NCPUR21
	A2USCPU
	A2USCPU-S1
	A2USHCPU-S1
	A1SCPU
	A1SCPUC24-R2
	A1SHCPU
	A2SCPU
	A2SHCPU
	A1SJCPU
	A1SJCPU-S3
	A1SJHCPU
	A0J2HCPU
	A0J2HCPUP21
	A0J2HCPUR21
	A0J2HCPU-DC24
	A2CCPU
	A2CCPUP21
	A2CCPUR21
	A2CCPUC24
	A2CCPUC24-PRF
	A2CJCPU-S3
	A1FXCPU
	A273UCPU
	A273UHCPU
	A273UHCPU-S3
	A373UCPU
	A373UCPU-S3
	A171SCPU
	A171SCPU-S3
	A171SCPU-S3N
	A171SHCPU
	A171SHCPUN
	A172SHCPU
	A172SHCPUN
	A173UHCPU
	A173UHCPU-S1

Type	Model name
[MELSEC-FX]	FX0
	FX0S
	FX0N
	FX1
	FX2
	FX2C
	FX1S
	FX1N
	FX2N
	FX1NC
	FX2NC
	FX3S
	FX3G
	FX3GC
	FX3GE
	FX3U
	FX3UC
[MELSEC-WS]	WS0-CPU0
	WS0-CPU1
	WS0-CPU3
[MELIPC]	MI5122-VW
[MELSERVO-J2M-P8A]	MR-J2M-P8A
[MELSERVO-J2M-*DU]	MR-J2M-*DU
[MELSERVO-J2S-*A]	MR-J2S-*A
[MELSERVO-J2S-*CP]	MR-J2S-*CP
[MELSERVO-J2S-*CL]	MR-J2S-*CL
[MELSERVO-J3-*A]	MR-J3-*A
[MELSERVO-J3-*T]	MR-J3-*T
[MELSERVO-J4-*A, -JE-*A]	MR-J4-*A MR-JE-*A
[MELSERVO-J4-*A-RJ]	MR-J4-*A-RJ
[MELSERVO-J5(W)-*G(-RJ), -JET-*G]	MR-J5-G(-RJ) MR-J5W2-G MR-J5W3-G MR-J5D-*G4 MR-JET-G
[MELSERVO-JE-*C]	MR-JE-*C

Type	Model name
[FREQROL 500/700/800 Series, SENSORLESS SERVO]	FR-A5□0(L)
	FR-F5□0(L)
	FR-V5□0(L)
	FR-E5□0(C)
	FR-E5□0S
	FR-E5□0W
	FR-S5□0(E)(-R)(-C)
	FR-S5□0S(E)(-R)
	FR-S5□0W(E)(-R)
	FR-F5□0J(F)
	FR-D7□0
	FR-D7□0S
	FR-D7□0W
	FR-F7□0PJ(F)
	FR-E7□0
	FR-E7□0S
	FR-E7□0W
	FR-A7□0 *2
	FR-F7□0
	FR-F7□0P
	FR-A8□0 *2
	FR-A8□2 *2
	FR-A8□6 *2
	FR-A8□0-E *2
	FR-A8□2-E *2
	FR-A8□6-E *2
	FR-A8□0-CRN
	FR-A8□2-CRN
	FR-A8□0-R2R
	FR-A8□2-R2R
	FR-A8□0-AWH
	FR-A8□0-LC
	FR-A8□0-E-CRN
	FR-A8□2-E-CRN
	FR-A8□0-E-R2R
	FR-A8□2-E-R2R
	FR-A8□0-E-AWH
	FR-A8□0-E-LC
	FR-F8□0
	FR-F8□2
	FR-F8□6
	FR-F8□0-E
	FR-F8□2-E
	FR-E8□0
	FR-D8□0
	FR-E7□0EX
	MD-CX522-□K(-A0)

Type	Model name
[FREQROL 800]	FR-A8□0 *2
	FR-A8□2 *2
	FR-A8□6 *2
	FR-A8□0-E *2
	FR-A8□2-E *2
	FR-A8□6-E *2
	FR-A8□0-CRN
	FR-A8□2-CRN
	FR-A8□0-R2R
	FR-A8□2-R2R
	FR-A8□0-AWH
	FR-A8□0-LC
	FR-A8□0-E-CRN
	FR-A8□2-E-CRN
	FR-A8□0-E-R2R
	FR-A8□2-E-R2R
	FR-A8□0-E-AWH
	FR-A8□0-E-LC
	FR-F8□0
	FR-F8□2
	FR-F8□6
	FR-F8□0-E
	FR-F8□2-E
	FR-E8□0
	FRE8□0-E
	FR-D8□0
	FR-D8□0-E

Type	Model name
[FREQROL 800/E700NE (Batch monitor)]	FR-E7□0-NE
	FR-A8□0
	FR-A8□2
	FR-A8□6
	FR-A8□0-GF
	FR-A8□2-GF
	FR-A8□0-E
	FR-A8□2-E
	FR-A8□6-E
	FR-A8□0-CRN
	FR-A8□2-CRN
	FR-A8□0-R2R
	FR-A8□2-R2R
	FR-A8□0-AWH
	FR-A8□0-LC
	FR-A8□0-E-CRN
	FR-A8□2-E-CRN
	FR-A8□0-E-R2R
	FR-A8□2-E-R2R
	FR-A8□0-E-AWH
	FR-A8□0-E-LC
	FR-F8□0
	FR-F8□2
	FR-F8□6
	FR-F8□0-E
	FR-F8□2-E
	FR-E8□0
	FRE8□0-E
	FR-D8□0
	FR-D8□0-E

*1 The models are connected to the GOT through a Motion controller or Simple Motion module.
*2 The GOT supports the FR-B/B3 series which is the explosion proof type of FR-A700 series and FR-A800 series.
*3 It is connected to the GOT through a PLC.
*4 The models are connected to the GOT through a Motion module.

Type	Model name
[IAI X-SEL Controller]	XSEL-J
	XSEL-K
	XSEL-KE
	XSEL-KT
	XSEL-KET
	XSEL-P
	XSEL-Q
	XSEL-JX
	XSEL-KX
	XSEL-KTX
	XSEL-PX
	XSEL-QX
	SSEL
	ASEL
	PSEL
	RSEL
[IAI ROBO CYLINDER]	PCON-C
	PCON-CG
	PCON-CF
	PCON-CY
	PCON-SE
	PCON-PL
	PCON-PO
	PCON-CA
	PCON-CFA
	PCON-CB
	PCON-CFB
	ACON-C
	ACON-CG
	ACON-CY
	ACON-SE
	ACON-PL
	ACON-PO
	ACON-CB
	SCON-C
	SCON-CA
	SCON-CB
	ERC2-□-□-□-□-□-NP-□-□
	ERC2-□-□-□-□-□-PN-□-□
	ERC2-□-□-□-□-□-SE-□-□
	RCON-GW(GWG)-CC
	RCON-GW(GWG)-CIE
	RCON-GW(GWG)-DV
	RCON-GW(GWG)-EP
	RCON-GW(GWG)-PR
	RCON-GW(GWG)-PRT

Type	Model name
[IAI ROBO CYLINDER]	EC-S2
	EC-S3
	EC-S3□CR
	EC-S3R
	EC-S3□AR
	EC-S3□A
	EC-S4
	EC-S4□CR
	EC-S4R
	EC-S4□AR
	EC-S4□A
	EC-S6
	EC-S6□A
	EC-S6□AH
	EC-S6□AHR
	EC-S6□AHCR
	EC-S6□AR
	EC-S6□CR
	EC-S6□R
	EC-S6□D
	EC-S6□W
	EC-S6X□AH
	EC-S6X□AHCR
	EC-S7
	EC-S7□A
	EC-S7□AH
	EC-S7□AHR
	EC-S7□AHCR
	EC-S7□AR
	EC-S7□CR
	EC-S7□R
	EC-S7□D
	EC-S7□W
	EC-S7X□AH
	EC-S7X□AHCR
	EC-S8
	EC-S8R
	EC-S8CR
	EC-S8X
	EC-S8□A
	EC-S8□AR
	EC-S8□AH
	EC-S8□AHR
	EC-S8□AHCR
	EC-S8X□AH
	EC-S8X□AHR
	EC-S8X□AHCR
	EC-S10

Type	Model name
[IAI ROBO CYLINDER]	EC-S10X
	EC-S13
	EC-S13X
	EC-S15
	EC-S15X
	EC-S18
	EC-S18X
	EC-S18LLPR
	EC-S18XLLPR
	EC-S18LFR
	EC-S18XLFR
	EC-RR6□AH
	EC-RR7□AH
	EC-RR6□AHR
	EC-RR7□AHR
	EC-R6
	EC-R6□W
	EC-R7
	EC-R7□W
	EC-SRG9
	EC-SRGC9
	EC-SRG11
	EC-SRG15
	EC-CRP3
	EC-CGD3
	EC-CRP5
	EC-CGD5
	EC-RP3
	EC-RP4
	EC-GS4
	EC-GD3
	EC-GD4
	EC-GD5
	EC-RP5
	EC-RR2
	EC-RR3
	EC-RR3R
	EC-RR4
	EC-RR4R
	EC-RR6
	EC-RR6□R
	EC-RR6□W
	EC-RR7
	EC-RR7□R
	EC-RR7□W
	EC-RR8C
	EC-RR8□R
	EC-RR10
	EC-RR10□R
	EC-TC3
	EC-TW3
	EC-TC4
	EC-TW4

Type	Model name
[IAI ROBO CYLINDER]	EC-TC5
	EC-TW5
	EC-B6
	EC-B7
	EC-B6U
	EC-B7U
	EC-B8S
	EC-B8SS
	EC-ST9
	EC-STC9
	EC-ST11
	EC-ST15
	EC-ST15ME
	EC-RTB4
	EC-RTC9
	EC-RTC12
	EC-RTC18
	EC-RR6X□AH
	EC-RR7X□AH
	EC-WS10
	EC-WS10□R
	EC-WS10□CR
	EC-WS12
	EC-WS12□R
	EC-WS12□CR
	EC-GRBP8
	EC-GRB8M
	EC-GRBP8W
	EC-GRBP10
	EC-GRB10M
	EC-GRBP10W
	EC-GRBP13
	EC-GRB13M
	EC-GRB13L
	EC-GRBP13W
	EC-GRST3
	EC-GRST6
	EC-GRST7
	EC-GRC6
	EC-GRC7
	EC-GRTR9M
	EC-GRTR14
	EC-SL3
	EC-GDS3
	EC-GDB3
	EC-T3
	EC-CTC3
	EC-CTC5
	EC-WEGR2
	EC-WEGR2IG
	EC-WER1SA

Type	Model name
[Azbil SDC/DMC]	DMC10
	SDC15
	SDC25
	SDC26
	SDC35
	SDC36
	SDC20
	SDC21
	SDC30
	SDC31
	SDC40A
	SDC40B
	SDC40G
	SDC45
	SDC46
	CMS
	CMF015
	CMF050
	CML
	MQV
	MPC
	MVF
	PBC201-VN2
	AUR350C
	AUR450C
	RX
	CMC10B
[Azbil DMC50]	DMC50
	AHC2001

Type	Model name
[OMRON SYSMAC]	CPM1
	CPM1A
	CPM2A
	CPM2C
	CQM1
	CQM1H
	CJ1H
	CJ1G
	CJ1M
	CJ2H
	CJ2M
	CP1H
	CP1L
	CP1E
	C200HS
	C200H
	C200HX
	C200HG
	C200HE
	CS1H
	CS1G
	CS1D
	CP2E-E
	CP2E-S
	CP2E-N
	C1000H
	C2000H
	CV500
	CV1000
	CV2000
	CVM1

Type	Model name
[OMRON NJ/NX]	NJ501-1500
	NJ501-1400
	NJ501-1300
	NJ501-1520
	NJ501-1420
	NJ501-1320
	NJ501-1340
	NJ301-1200
	NJ301-1100
	NJ101-1000
	NJ101-9000
	NJ101-1020
	NJ101-9020
	NX1P2-1140DT
	NX1P2-1140DT1
	NX1P2-1040DT
	NX1P2-1040DT1
	NX1P2-9024DT
	NX1P2-9024DT1
	NX701-1700
	NX701-1600
	NX502-1700
	NX502-1600
	NX502-1500
	NX502-1400
	NX502-1300
	NX102-1200
	NX102-1100
	NX102-1000
	NX102-9000
[OMRON THERMAC/INPANEL NEO]	E5AN
	E5EN
	E5CN
	E5GN
	E5ZN

Type	Model name
[OMRON Digital Temperature Controller]	E5AN
	E5EN
	E5CN
	E5GN
	E5AN-H
	E5CN-H
	E5EN-H
	E5AN-HT
	E5CN-HT
	E5EN-HT
	E5ZN
	E5CC(-T,-B)
	E5DC
	E5GC
	E5EC(-T,-B)
	E5AC(-T)
	E5CD(-B)
	E5ED(-B)
	E5AR(-T)
	E5ER(-T)
[KEYENCE KV-700/1000/3000/5000/7000/8000]	KV-700
	KV-1000
	KV-3000
	KV-5000
	KV-5500
	KV-7300
	KV-7500
	KV-8000
	KV-X500
	KV-X520
	KV-X530
	KV-X550
	KV-N14□□
	KV-N24□□
	KV-N40□□
	KV-N60□□
	KV-NC32T

Type	Model name
[KOYO KOSTAC/DL]	SU-5E
	SU-6B
	SU-5M
	SU-6M
	PZ3
	D2-240
	D2-250-1
	D2-260
	D0-05AA
	D0-05AD
	D0-05AR
	D0-05DA
	D0-05DD
	D0-05DD-D
	D0-05DR
	D0-05DR-D
	D0-06DD1
	D0-06DD2
	D0-06DR
	D0-06DA
	D0-06AR
	D0-06AA
	D0-06DD1-D
	D0-06DD2-D
	D0-06DR-D
[JTEKT TOYOPUC-PC]	PC3JG-P-CPU
	PC3JG-CPU
	PC3JD-CPU
	PC3JD-C-CPU
	PC3J-CPU
	PC3JL-CPU
	PC2JC-CPU
	PC2J16P-CPU
	PC2J16PR-CPU
	PC2J-CPU
	PC2JS-CPU
	PC2JR-CPU
	PC10G-CPU
[SHARP JW]	JW-21CU
	JW-31CUH
	JW-50CUH
	JW-22CU
	JW-32CUH
	JW-33CUH
	JW-70CUH
	JW-100CUH
	JW-100CU
	Z-512J

Type	Model name
[Shinko Technos Controller]	ACS-13A□/□,□,C5
	JCS-33A-□/□□,C5
	JCR-33A-□/□□,C5
	JCD-33A-□/□□,C5
	JCM-33A□/□,□C5
	JIR-301-M□,C5
	PCD-33A-□/M,C5
	PC935-□/M,C5
	PC955-□/M,C5
	PC935-□/M,C
	PC955-□/M,C
	FCD-13A-□/M,C
	FCD-15A-□/M,C
	FCR-13A-□/M,C
	FCR-15A-□/M,C
	FCR-23A-□/M,C
	FIR-201-M,C
	DCL-33A-□/M,□,C5
	ACD-13A-□/M□,C
	ACD-13A-□/M□,C5
	ACR-13A-□/M□,C
	ACR-13A-□/M□,C5
	BCD2□□□-□□
	BCR2□□□-□□
	BCS2□□□-□□
[CHINO MODBUS device]	LT350
	LT370
	LT450
	LT470
	DZ1000
	DZ2000
	LT230
	LT830
	DB1000
	DB2000
	GT120
[TOSHIBA PROSEC T/V]	T2 (PU224)
	T3
	T3H
	T2E
	T2N
	model 2000(S2)
	model 2000(S2T)
	model 2000(S2E)
	model 3000 (S3)
[TOSHIBA Unified Controller nv]	PU811
	PUM11
	PUM12
	PUM14

Type	Model name
[SHIBAURA MACHINE TCmini]	TC3-01
	TC3-02
	TC5-02
	TC5-03
	TC6-00
	TC8-00
	TS2000
	TS2100
[Panasonic MINAS A4]	MINAS A4
	MINAS A4F
	MINAS A4L
[Panasonic MINAS A5]	MINAS A5
[Panasonic MEWNET-FP]	FP0-C16CT
	FP0-C32CT
	FP0R
	FP0H
	FP1-C24C
	FP1-C40C
	FP2
	FP2SH
	FP3
	FP5
	FP10(S)
	FP10SH
	FP-M(C20TC)
	FP-M(C32TC)
	FPΣ
	FP-X
[Panasonic FP7]	FP7
[HITACHI IES EHV]	EHV-CPU08
	EHV-CPU16
	EHV-CPU32
	EHV-CPU64
	EHV-CPU128
	MVH-A40□□□
	MVH-D40□□□
	MVH-A64□□□
	MVH-D64□□□

Type	Model name
[HITACHI IES HIDIC H]	H-302
	H-702
	H-1002
	H-2002
	H-4010
	H-300
	H-700
	H-2000
	H-200
	H-250
	H-252
	H-252B
	H-252C
	H-20DR
	H-28DR
	H-40DR
	H-64DR
	H-20DT
	H-28DT
	H-40DT
	H-64DT
	HL-40DR
	HL-64DR
	EH-CPU104
	EH-CPU208
	EH-CPU308
	EH-CPU316
	EH-CPU516
	EH-CPU548
[HITACHI S10VE]	LQP600
[HITACHI S10mini/S10V]	LQP510
	LQP520
	LQP800
	LQP000
	LQP010
	LQP011
	LQP120
[FUJI Temperature controller/Digital indication controller]	PXF4
	PXF5
	PXF9
	PXR3
	PXR4
	PXR5
	PXR9
	PXG4
	PXG5
	PXG9
	PXH9
	PUMA
	PUMB

Type	Model name
[FUJI MICREX-F Series]	F55
	F70
	F120S
	F140S
	F15□S
[FUJI MICREX-SX SPH]	SPH200
	SPH300
	SPH2000
	SPH3000
[YASKAWA GL/PROGIC8]	PROGIC-8
	GL120
	GL130
	GL60S
	GL60H
	GL70H
[YASKAWA CP-9200 (H)]	CP-9200(H)
[YASKAWA CP-9300MS (MC compatible)]	CP-9300MS
[YASKAWA MP2000/MP900/CP9200SH Series]	MP2200
	MP2300
	MP2300S
	MP920
	MP930
	MP940
	CP-9200SH
	CP-312
	CP-317
[YASKAWA MP3000 Series]	MP3200
	MP3300
[YASKAWA Robot Controller]	YRC1000
	YRC1000micro
[YOKOGAWA STARDOM/FA500/FA-M3 Series]	FA500
	F3SP05
	F3SP08
	F3SP10
	F3SP20
	F3SP30
	F3FP36
	F3SP21
	F3SP22-0S
	F3SP25
	F3SP35
	F3SP28
	F3SP38
	F3SP53
	F3SP58
	F3SP59
	F3SP66
	F3SP67
	F3SP71-4N
	F3SP71-4S
	F3SP76-7S
	NFCP100
	NFJT100

Type	Model name
[YOKOGAWA GREEN/UT100/UT2000/UTAdvanced]	UT320
	UT321
	UT350
	UT351
	UT420
	UT450
	UT520
	UT550
	UT551
	UT750
	UP350
	UP351
	UP550
	UP750
	UM330
	UM331
	UM350
	UM351
	US1000
	UT130
	UT150
	UT152
	UT155
	UP150
	UT2400
	UT2800
	UT32A
	UT35A
	UT52A
	UT55A
	UT75A
	UP32A
	UP35A
	UP55A
	UM33A

Type	Model name
[RKC SR Mini HG]	H-PCP-J
	H-PCP-A
	H-PCP-B
	Z-TIO
	Z-DIO
	Z-CT
	Z-COM
	J-TI-A/B
	CB100
	CB400
	CB500
	CB700
	CB900
	FB100
	FB400
	FB900
	RB100
	RB400
	RB500
	RB700
	RB900
	PF900
	PF901
	HA400
	HA401
	HA900
	HA901
	RMC500
	MA900
	MA901
	AG500
	THV-A1
	SA100
	SA200
	X-TIO
	SB1
	B400
	FZ110
	FZ400
	FZ900
	RZ100
	RZ400
	PZ400
	PZ900
	GZ400
	GZ900

Type	Model name
[AB SLC500]	SLC500-20
	SLC500-30
	SLC500-40
	SLC5/01
	SLC5/02
	SLC5/03
	SLC5/04
	SLC5/05
[AB MicroLogix series]	1761-L10BWA
	1761-L10BWB
	1761-L16AWA
	1761-L16BWA
	1761-L16BWB
	1761-L16BBB
	1761-L32AWA
	1761-L32BWA
	1761-L32BWB
	1761-L32BBB
	1761-L32AAA
	1761-L20AWA-5A
	1761-L20BWA-5A
	1761-L20BWB-5A
	1763-L16BWA
	1762-L24BWA
	1766-L32AWA
	1764-LSP
	1764-LRP

Type	Model name
[AB Control/CompactLogix]	1756-L
	1756-L1M1
	1756-L1M2
	1756-L1M3
	1756-L61
	1756-L62
	1756-L63
	1756-L64
	1756-L55M12
	1756-L55M13
	1756-L55M14
	1756-L55M16
	1756-L55M22
	1756-L55M23
	1756-L55M24
	1769-L31
	1769-L32E
	1769-L32C
	1769-L35E
	1769-L35CR
	1794-L33
	1794-L34
	1756-L72S
	1756-L71
	1756-L72
	1756-L73
	1756-L74
	1756-L75
	1756-L81E
	1756-L82E
	1756-L83E
	1756-L84E
	1756-L85E

Type	Model name
[AB Control/CompactLogix (Tag)]	1756-L
	1756-L1M1
	1756-L1M2
	1756-L1M3
	1756-L61
	1756-L62
	1756-L63
	1756-L64
	1756-L55M12
	1756-L55M13
	1756-L55M14
	1756-L55M16
	1756-L55M22
	1756-L55M23
	1756-L55M24
	1769-L32E
	1769-L35E
	1794-L33
	1794-L34
	1756-L72S
	1756-L71
	1756-L72
	1756-L73
	1756-L74
	1756-L75
	1756-L81E
	1756-L82E
	1756-L83E
	1756-L84E
	1756-L85E

Type	Model name
[GE Series 90]	IC693CPU311
	IC693CPU313
	IC693CPU323
	IC693CPU350
	IC693CPU360
	IC693CPU363
	IC693CPU366
	IC693CPU367
	IC693CPU374
	IC697CPU731
	IC697CPX772
	IC697CPX782
	IC697CPX928
	IC697CPX935
	IC697CPU780
	IC697CGR772
	IC697CGR935
	IC697CPU788
	IC697CPU789
	IC697CPM790
	IC200UAA003
	IC200UAL004
	IC200UAL005
	IC200UAL006
	IC200UAA007
	IC200UAR028
	IC200UDD110
	IC200UDD120
	IC200UDD212
	IC200UDR005
	IC200UDR006
	IC200UDR010
	IC200UDD064
	IC200UDD164
	IC200UDR164
	IC200UDR064
	IC200UAR014
	IC200UDD104
	IC200UDD112
	IC200UDR001
	IC200UDR002
	IC200UDR003
LS Industrial Systems XGK	XGK-CPUU
	XGK-CPUH
	XGK-CPUA
	XGK-CPUS
	XGK-CPUE
	XGK-CPUUN
	XGK-CPUHN
	XGK-CPUSN

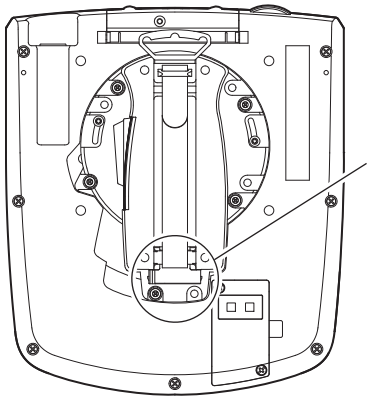
Type	Model name
[LS Industrial Systems MASTER-K]	K7M-D□□□S(/DC)
	K7M-D□□□U
	K3P-07□S
	K4P-15AS
[MEI Nexgenie]	NG16DL
	NG16ADL
	NG14RL
	NG16DN
	NG16ADN
	NG14RN
	P2210
	P2211
	P2213A
	P2214
[SICK Flexi Soft]	FX3-CPU000000
	FX3-CPU130002
	FX3-CPU320002
[SIEMENS S7-200]	SIMATIC S7-200
[SIEMENS S7-300/400 Series]	SIMATIC S7-300
	SIMATIC S7-400
[SIEMENS S7(Ethernet)]	SIMATIC S7-300
	SIMATIC S7-400
[SIEMENS OP(Ethernet)]	SIMATIC S7-200
	SIMATIC S7-200 SMART
	SIMATIC S7-300
	SIMATIC S7-400
	SIMATIC S7-1200
	SIMATIC S7-1500

Type	Connectable device
[CC-Link IE Field Network Basic]	CC-Link IE Field Network Basic master stations For the CC-Link IE Field Network Basic master stations validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin. 📖List of CC-Link IE Field Network Basic-compatible Equipment Validated to Operate with the GOT2000 Series (GOT-A-0149)
[SLMP]	SLMP servers For the SLMP-compatible equipment validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin. 📖List of SLMP-compatible Equipment Validated to Operate with the GOT2000 Series (GOT-A-0153)
[MODBUS Slave(GOT:Master)]	MODBUS slaves For the MODBUS slave equipment validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin. 📖List of Valid Devices Applicable for GOT2000 Series MODBUS Connection for Overseas (GOT-A-0170)
[MODBUS Master(GOT:Slave)]	MODBUS master equipment For the MODBUS master equipment validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin. 📖List of Valid Devices Applicable for GOT2000 Series MODBUS Connection for Overseas (GOT-A-0170)
[Microcomputer connection]	Personal computer, microcomputer board, PLC, or other devices

■Setting [I/F]

Set the I/F according to the Interface to be used.

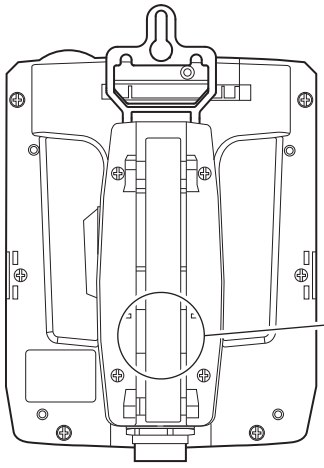
- For GT2506HS-V



Ethernet interface
RS-232 interface
RS-422/485 interface

RS-422/485 interface and RS-232 interface cannot be used at the same time.
Switch the RS-422/485 interface and RS-232 interface with the RS-422/485 ⇔ RS-232 selection connector in the environmental protection back cover.

- For GT2505HS-V



Ethernet interface
RS-232 interface
RS-422 interface

Ethernet interface, RS-422 interface and RS-232 interface cannot be used at the same time.
Switch the Ethernet interface, RS-422 interface and RS-232 interface with the Ethernet interface ⇔ RS-422 ⇔ RS-232 selection connector in the environmental protection back cover.

GOT Ethernet Setting

The GOT can be connected to a different network by using the following network.

1) GOT IP Address Setting

Set the following communication port setting.

Standard port

Set [GOT IP Address] and [Subnet Mask] in the standard port with a bult-in GOT, or port 1.

2) GOT Ethernet Common Setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

3) IP Filter Setting

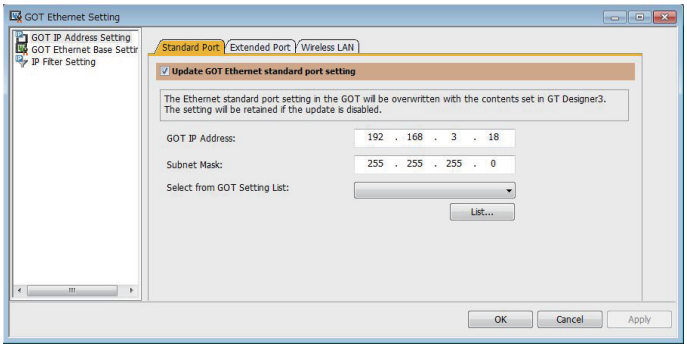
By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

GOT IP Address Setting

Set the GOT IP address.

■[Standard Port]

1. Select [Common] → [GOT Ethernet Setting] → [GOT IP Address Setting] from the menu to display the [GOT Ethernet Setting] window.



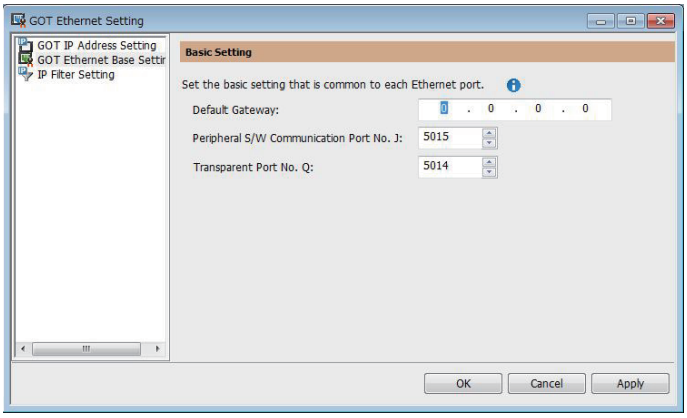
2. On the [Standard Port] tab, configure the following settings.

Item	Description	Range
Update GOT Ethernet standard port setting	The GOT Ethernet standard port settings are applied on GOT.	-
GOT IP Address	Set the IP address of the GOT IP Address. (Default:192.168.3.18)	0.0.0.0 to 255.255.255.255
Subnet Mask	Set the subnet mask for the sub network. (Only for connection via router) If the sub network is not used, the default value is set. (Default: 255.255.255.0)	0.0.0.0 to 255.255.255.255
Select from GOT Setting List.	Select the GOT set in [GOT Setting List] dialog. GT Designer3 (GOT2000) Screen Design Manual	-

GOT Ethernet Common Setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

1. Select [Common] → [GOT Ethernet Setting] → [GOT Ethernet Common Setting] from the menu to display the [GOT Ethernet Setting] window.

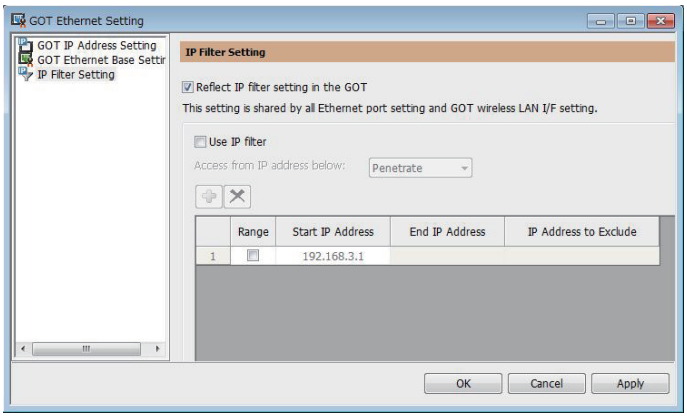


2. Configure the following settings.

Item	Description	Range
Default Gateway	Set the router address of the default gateway where the GOT is connected. (Only for connection via router) (Default: 0.0.0.0)	0.0.0.0 to 255.255.255.255
Peripheral S/W Communication Port No.	Set the GOT port No. for the communication with the peripheral S/W. (Default: 5015)	1024 to 65534 (Except for 5011 to 5013, 49153 to 49170)
Transparent Port No.	Set the GOT port No. for the transparent function. (Default: 5014)	1024 to 65534 (Except for 5011 to 5013, 49153 to 49170)

IP Filter Setting

1. Select [Common] → [GOT Ethernet Setting] → [IP Filter Setting] from the menu to display the [GOT Ethernet Setting] window.



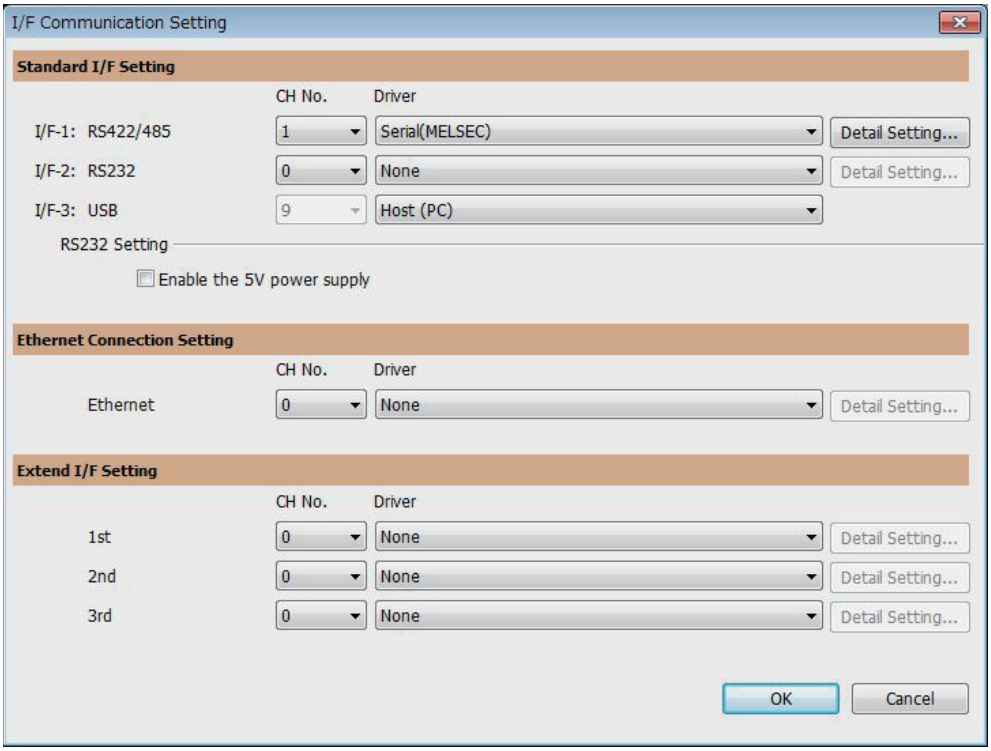
2. For the detailed settings, refer to the following manual.

☞ GT Designer3 (GOT2000) Screen Design Manual

I/F communication setting

This function displays the list of the GOT communication interfaces.
Set the channel and the communication driver to the interface to be used.

Setting



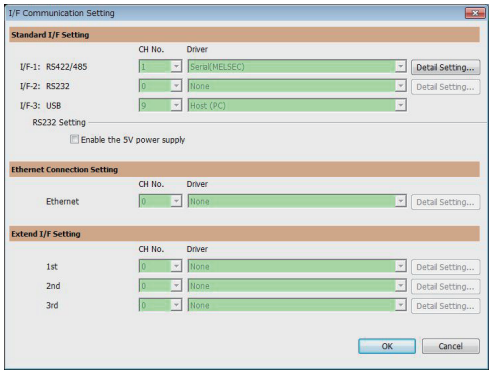
1. Select [Common] → [I/F Communication Setting] from the menu.

2. The I/F Communication Setting dialog box appears.

Make the settings with reference to the following explanation.

Point

When using the parameter reflection function of MELSOFT Navigator.
When setting [Controller Setting] in GT Designer3 using the parameter function of MELSOFT Navigator, all of I/F Communication Setting are grayout and cannot be edited Set these items at [Controller Setting] or [Peripheral Unit Setting].

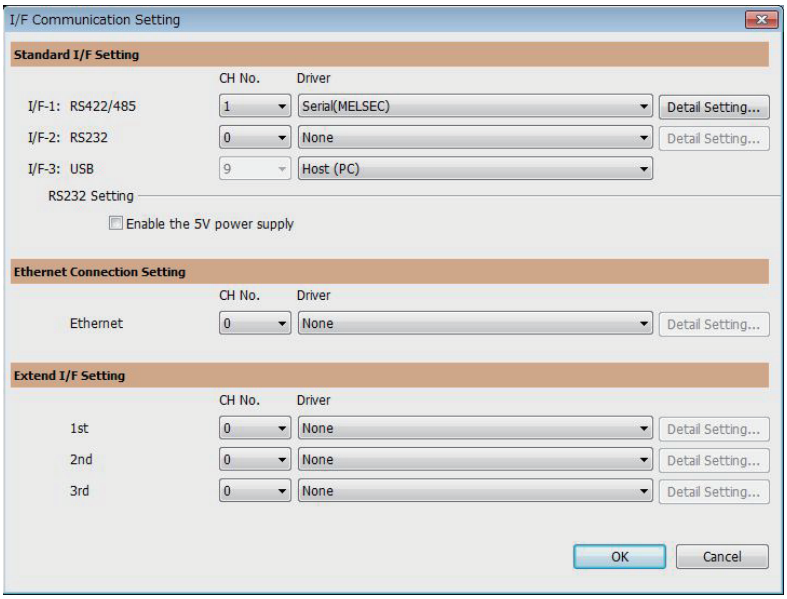


Setting item

The following describes the setting items for the standard I/F setting and extension I/F setting.

For the detailed explanations, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual



Item	Description	
Standard I/F setting	Set channel No. and drivers to the GOT standard interfaces.	
	CH No.	Set the CH No. according to the intended purpose. 0: Not used 1 to 4: Used for connecting a controller of channel No. 1 to 4 set in Setting connected equipment (Channel setting)
	Driver	Set the driver for the device to be connected. • Each communication driver suitable to the channel numbers • Each communication driver for connected devices
	Detail Setting	Set the detailed settings for the communication driver. ☞ Refer to each chapter of the equipment to be connected to the GOT.
	I/F-1,I/F-2,I/F-3	The communication type of the GOT standard interface is displayed.
	RS232 Setting	To validate the 5V power supply function in RS232, mark the [Enable the 5V power supply] checkbox. The RS232 setting is invalid when the CH No. of [I/F-1: RS232] is [9]. This setting is not available to GT2506HS-V and GT2505HS-V.
Ethernet connection setting	Set the channel number and the communication driver to the Ethernet interface with a built-in GOT.	
	CH No.	Set the CH No. according to the intended purpose. 0: Not used 1 to 4: Used for connecting a controller of channel No. 1 to 4 set in Setting connected equipment (Channel setting) 9: Used for connecting Host (PC) or Ethernet download A: Used for the remote personal computer operation function (Ethernet), VNC server function, gateway function, and MES interface function. Multi: Used for multi-channel Ethernet connection
	Driver	Set the driver for the device to be connected. • Each communication driver suitable to the channel numbers • Each communication driver for connected devices
	Detail Setting	Set the detailed settings for the communication driver. ☞ Refer to each chapter of the equipment to be connected to the GOT.

Point

Channel No., drivers, [RS232 Setting]

• Channel No.2 to No.4

Use the channel No.2 to No.4 when using the Multi-channel function.

For details of the Multi-channel function, refer to the following.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) For GT Works3 Version1

• Drivers

The displayed items for a driver differ according to the settings [Manufacturer], [Controller Type] and [I/F].

When the driver to be set is not displayed, confirm if [Manufacturer], [Controller Type] and [I/F] are correct.

Setting the communication interface] section in each chapter

Precautions

When using the multiple CPU system

When using the GOT to monitor the multiple CPU system of other stations, select [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700] for the type, regardless of the host PLC CPU type (QCPU, QnACPU, or ACPU).

When other models are selected, the setting of the CPU No. becomes unavailable.

Precautions for changing model

■When devices that cannot be converted are included.

When setting of [Manufacturer] or [Controller Type] is changed, GT Designer3 displays the device that cannot be converted (no corresponding device type, or excessive setting ranges) as [??].

In this case, set the device again.

■When the changed Manufacturer or Controller Type does not correspond to the network.

The network will be set to the host station.

■When the Manufacturer or Controller Type is changed to [None]

The GT Designer3 displays the device of the changed channel No. as [??].

In this case, set the device again.

Since the channel No. is retained, the objects can be reused in other channel No. in a batch by using the [Device Bach Edit], [CH No. Batch Edit] or [Device List].

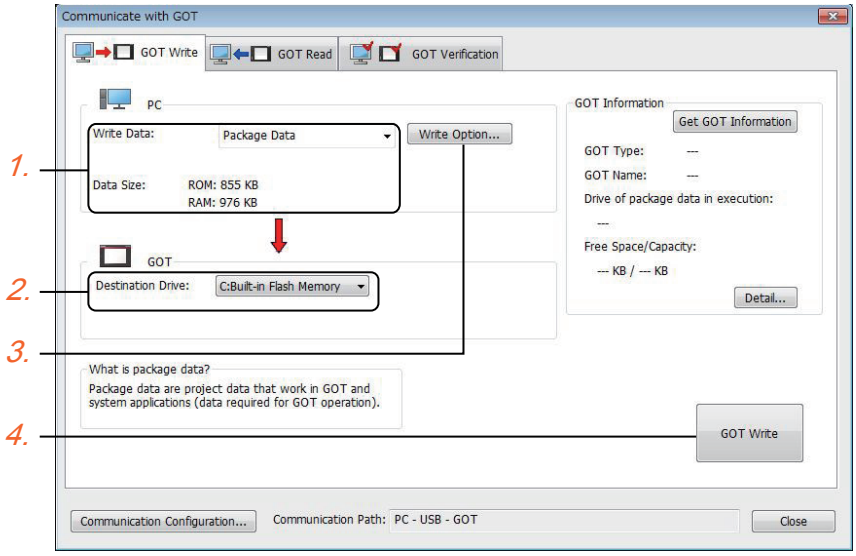
1.2 Writing the Package Data onto the GOT

Write the package data onto the GOT.

For details on writing to GOT, refer to the following help.

GT Designer3 (GOT2000) Screen Design Manual

Writing the Package Data onto the GOT



1. Select [Package Data] for [Write Data].

The capacity of the transfer data is displayed in [Data Size].

Check that the destination drive has the sufficient available space.

2. Select [Destination Drive].

3. When the system application or the special data is required to be added to the package data or deleted, click the [Write Option] button and configure the setting in the [Write Option] dialog.

4. Click the [GOT Write] button.

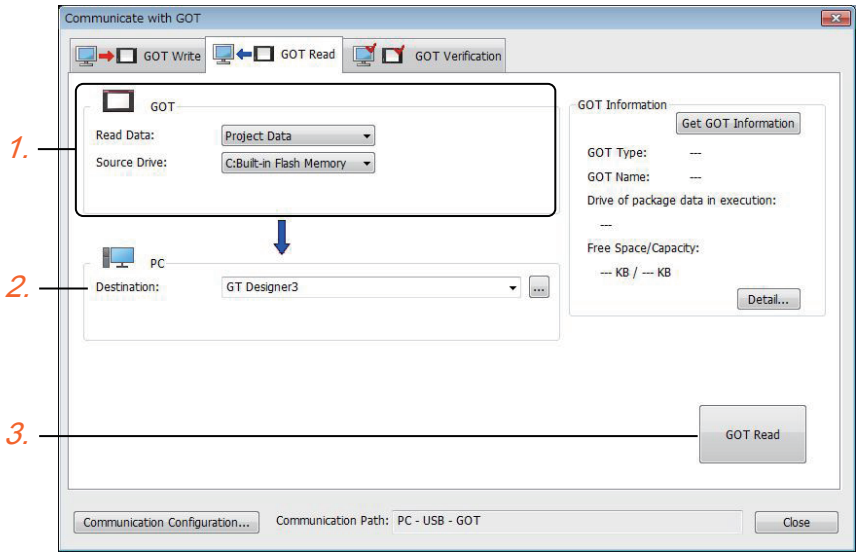
5. The package data is written to the GOT.

Checking the package data writing on GOT

Confirm if the package data is properly written onto the GOT by reading from GOT using GT Designer3.

For reading from the GOT, refer to the following help.

GT Designer3 (GOT2000) Screen Design Manual



1. Set [GOT Side] as follows.

- Select [Project Data] or [Package Data] for [Read Data].
- Select the drive where the project data or the package data is stored for [Source Drive].

2. Set [PC Side].

Set the reading destination of the project for [Destination].

To read the project data to GT Designer3, select [GT Designer3].

(When [Read Data] is [Package Data], the project data cannot be read to GT Designer3.)

To read the project data as a file, click the [...] button to set the saving format and the saving destination of the file.

3. Click the [GOT Read] button.

4. The project is read.

5. Confirm that the project data is written correctly onto the GOT.

1.3 Option Devices for the Respective Connection

The following shows the option devices to connect in the respective connection type.
For the specifications, usage and connecting procedure on option devices, refer to the respective device manual.

External cable

Product name	Model name	Contents	GOT	
			GT2506 HS-V	GT2505 HS-V
External cable (For connecting GOT and Connector Conversion Box) Connector Conversion Box: GT16H-CNB-42S	GT16H-C30-42P	Connector conversion box connection side 42-pin connector, 3m	○	-
	GT16H-C60-42P	Connector conversion box connection side 42-pin connector, 6m	○	-
	GT16H-C100-42P	Connector conversion box connection side 42-pin connector, 10m	○	-
External cable (For connecting GOT and Connector Conversion Box) Connector Conversion Box: GT16H-CNB-37S	GT16H-C30-37PE	Connector conversion box connection side 37-pin connector, 3m	○	-
	GT16H-C60-37PE	Connector conversion box connection side 37-pin connector, 6m	○	-
	GT16H-C100-37PE	Connector conversion box connection side 37-pin connector, 10m	○	-
External cable (For connecting GOT and Connector Conversion Box) Connector Conversion Box: GT16H-CNB-42S	GT14H-C30-42P	Connector conversion box connection side 42-pin connector, 3m	-	○
	GT14H-C60-42P	Connector conversion box connection side 42-pin connector, 6m	-	○
	GT14H-C100-42P	Connector conversion box connection side 42-pin connector, 10m	-	○
External cable (For connecting GOT and a connector conversion box) Connector conversion box for connecting GOT and a relay cable: GT11H-CNB-37S GT16H-CNB-37S	GT11H-C30-37P*1	Connector conversion box connection side/Relay cable connection side D-Sub 37-pin, 3m	-	○
	GT11H-C60-37P*1	Connector conversion box connection side/Relay cable connection side D-Sub 37-pin, 6m	-	○
	GT11H-C100-37P*1	Connector conversion box connection side/Relay cable connection side D-Sub 37-pin, 10m	-	○
External cable (for connecting GOT and a relay cable)	GT11H-C30*1	Relay cable connection side loose wires, 3m	-	○
	GT11H-C60*1	Relay cable connection side loose wires, 6m	-	○
	GT11H-C100*1	Relay cable connection side loose wires, 10m	-	○

*1 Use a model with version C or later.

Relay cable

Product name	Model name	Contents	GOT	
			GT2506 HS-V	GT2505 HS-V
Relay cable (for connecting an external cable and PLC)	GT11H-C15R4-8P*1	FX CPU (MINI-DIN 8-pin) connection cable, 1.5m	-	○
	GT11H-C15R4-25P*1	A/QnA CPU (D-Sub 25-pin) connection cable, 1.5m	-	○
	GT11H-C15R2-6P*1	Q CPU (MINI-DIN 6-pin) connection cable, 1.5m	-	○

*1 Use a model with version C or later.

Connector Conversion Box

Product name	Model name	Contents	GOT	
			GT2506 HS-V	GT2505 HS-V
Connector Conversion Box	GT16H-CNB-42S	Box for converting 42-pin connectors into terminal block, 9-pin D-Sub connector*1 or Ethernet RJ-45 connector.	○	○
	GT16H-CNB-37S	Box for converting D-Sub 37-pin connectors into terminal blocks or Ethernet RJ-45 connector	○	○
	GT11H-CNB-37S	Box for converting D-Sub 37-pin connectors into terminal blocks or D-Sub 9-pin connectors	-	○

*1 The D-Sub 9-pin connector cannot be used for connection to GT2505HS-V.

Serial multi-drop connection unit

Product name	Model name	Contents	GOT	
			GT2506 HS-V	GT2505 HS-V
Serial multi-drop connection unit	GT01-RS4-M	GOT multi-drop connection module GOT2000 Series Connection Manual (Mitsubishi Electric Products) For GT Works3 Version1	○	-

Connector conversion adapter

Product name	Model name	Contents	GOT	
			GT2506 HS-V	GT2505 HS-V
Connector conversion adapter	GT10-9PT5S	Adapter to connect RS-485 unfastened cables to Handy GOT	○	-

1.4 Connection Cables for the Respective Connection

To connect the GOT to a device in the respective connection type, connection cables between the GOT and a device are necessary.

For cables needed for each connection, refer to each chapter for connection.

For the dimensions of connection cables and connector shapes, refer to the following.

GOT2000 Series User's Manual (Hardware)

GOT connector specifications

The following shows the connector specifications of the GOT connector conversion box and external cable.

Refer to the following table when preparing connection cables by the user.

RS-232 interface

The following connector or equivalent connector is used for the RS-232 interface of the connector conversion box.

For the connector conversion box side of the connectio cable, use a connector and connector cover applicable to the connector conversion box connector.

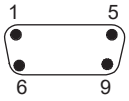
■Connector specifications

Connector conversion box	Connector type	Connector model	Manufacturer
GT16H-CNB-42S GT11H-CNB-37S	9-pin D-sub (male) #4-40UNC inch screw thread	JES-9P-2A3A	J.S.T.MFG.CO.,LTD. (JST)

■Connector pin arrangement

GT16H-CNB-42S, GT11H-CNB-37S

When seen from the front side of a connector of the connector conversion box



9-pin D-sub (male)

RS-422/485 or RS-422 interface

The following connector or equivalent connector is used for the RS-422/485 or RS-422 interface of the connector conversion box.

For the connector conversion box side of the connection cable, use a connector and connector cover applicable to the connector conversion box connector.

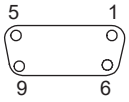
■Connector model

Connector conversion box	Interface	Connector type	Connector model	Manufacturer
GT16H-CNB-42S	RS-422/485	9-pin D-Sub (female) M2.6 metric screw thread	JES-9S-2A3B14	J.S.T.MFG.CO.,LTD. (JST)
GT11H-CNB-37S	RS-422			

■Connector pin arrangement

GT16H-CNB-42S, GT11H-CNB-37S

When seen from the front side of a connector of the connector conversion box



9-pin D-sub (female)

External cable (GT11H-C□□□-37P)

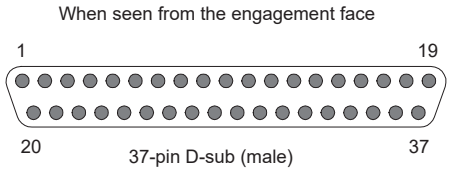
The following relay cable connector or equivalent connector is used for the external connection cable (GT11H-C □□□ -37P). For the connector to be connected to GT11H-C□□□-37P and its cover, use products applicable to the GT11HC□□□-37P connector.

■Connector model

Connector model	Connector type	Manufacturer
17JE-23370-02(D8A2)-CG	37-pin D-sub (male), M2.6 metric screw thread	DDK Ltd.

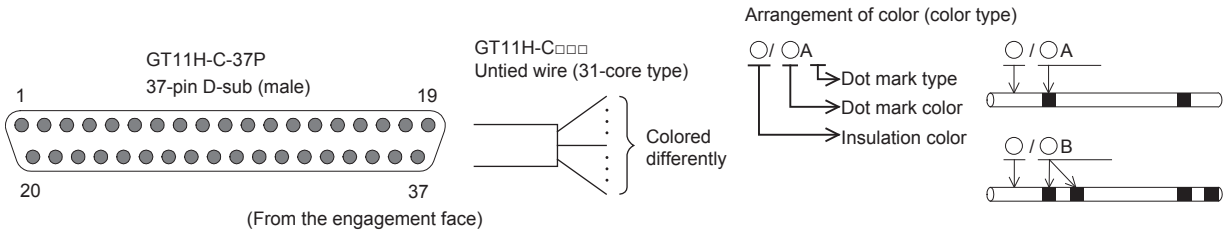
■Connector pin arrangement

External cable (GT11H-C□□□-37P)



Pin layout and signal names of the external cable

GT11H-C□□□-37P (Use C or later version.), GT11H-C□□□ (Use C or later version.)



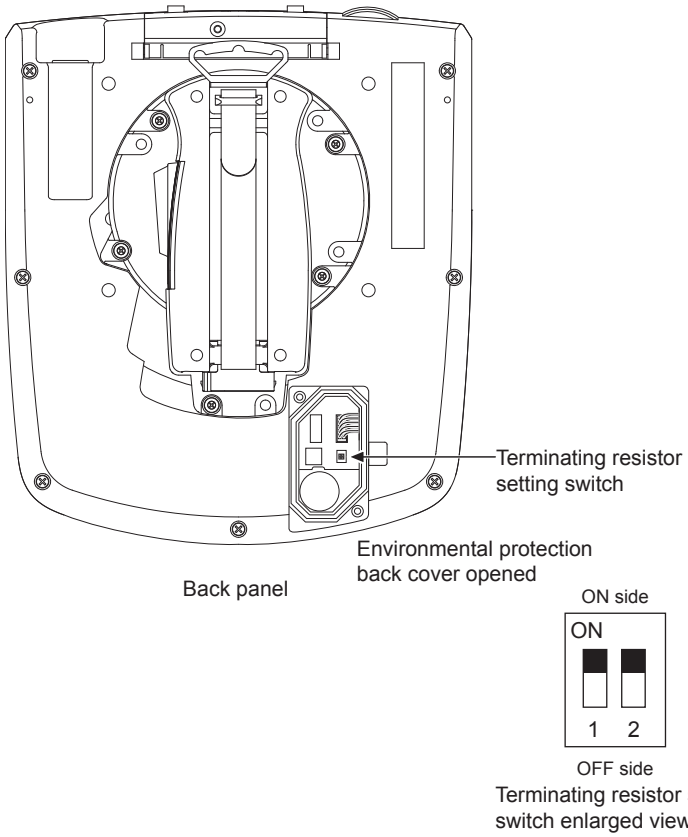
External cable			Communication, power, operation switch signal name		Application
GT11H-C□□□-37P	GT11H-C□□□		RS-422	RS-232C	
D-SUB pin No.	Wire diameter	Wire color (color type)			
1	-	Shield	FG (Shield)		Frame ground
2	AWG28 Twisted pair	W/R (A)	TXD+ (SDA)	TXD (SD)	Signal line for PLC communication
3		W/BK (A)	TXD- (SDB)	DTR (ER)	
4		GY/R (A)	RTS+ (RSA)	RXD (RD)	
5		GY/BK (A)	RTS- (RSB)	DSR (DR)	
6		O/R (A)	RXD+ (RDA)	RTS (RS)	
7		O/BK (A)	RXD- (RDB)	CTS (CS)	
8		Y/R (A)	CTS+ (CSA)	Not used	
9		Y/BK (A)	CTS- (CSB)	Not used	
10	AWG28	PK/R (A)	SG		Signal ground

Terminating resistors of GOT

The following shows the terminating resistor specifications on the GOT side.
When setting the terminating resistor in each connection type, refer to the following.

GT2506HS-VTBD

Set the terminating resistor using the terminating resistor setting switch on the back panel of the GOT.



Terminating resistor setting switch enlarged view

Terminating resistor*1	Switch No.	
	1	2
Enable	ON	ON
Disable	OFF	OFF

*1 The default setting is "Disable".

GT2505HS-VTBD

The terminating resistor of GT2505HS-VTBD is fixed to 330 Ω.

1.5 ID Recognition Function

For the detailed settings, refer to the following manual.

GOT2000 Series User's Manual (Hardware)

1.6 Verifying GOT Recognizes Connected Equipment

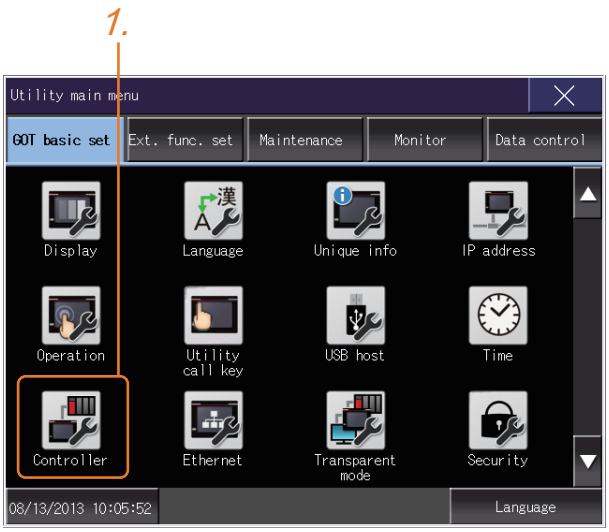
Verify the GOT recognizes controllers on [Communication Settings] of the Utility.

- Channel number of communication interface, communication drivers allocation status
- Communication unit installation status

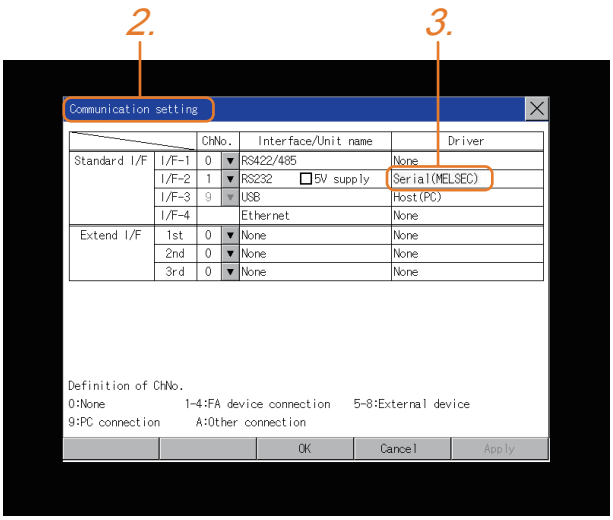
For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

1. After powering up the GOT, touch [GOT basic set] → [Controller] from the Utility.



2. The [Communication Settings] appears.



3. Verify that the communication driver name to be used is displayed in the communication interface box to be used.

4. When the communication driver name is not displayed normally, carry out the following procedure again.

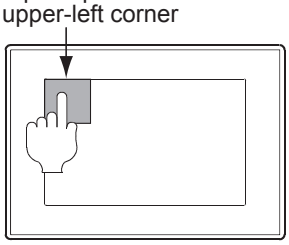
☞ Page 45 Setting the Communication Interface

Point

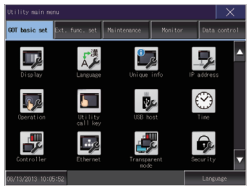
Utility

• How to display Utility (at default)

Utility call key
1-point press on GOT screen
upper-left corner



Utility display



• Utility call

When setting [Pressing time] to other than 0 second on the setting screen of the utility call key, press and hold the utility call key until the buzzer sounds.

For the setting of the utility call key, refer to the following.

GOT2000 Series User's Manual (Utility)

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

1.7 Checking for Normal Monitoring

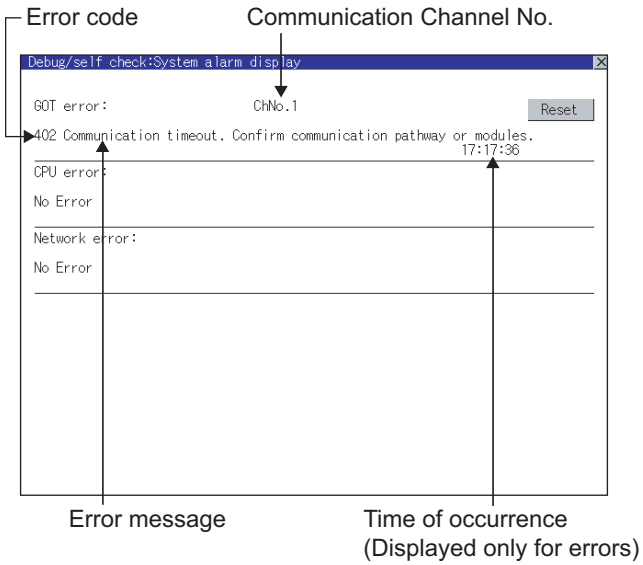
Check on the GOT

Check for errors occurring on the GOT

Presetting the system alarm to project data allows you to identify errors occurred on the GOT, PLC CPU, servo amplifier and communications.

For details on the operation method of the GOT Utility screen, refer to the following manual.

GOT2000 Series User's Manual (Utility)



Point

Alarm popup display

With the alarm popup display function, alarms are displayed as a popup display regardless of whether an alarm display object is placed on the screen or not (regardless of the display screen).

Since comments can be flown from right to left, even a long comment can be displayed all.

For details of the alarm popup display, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

Perform an I/O check

Whether the PLC can communicate with the GOT or not can be checked by the I/O check function.

If this check ends successfully, it means correct communication interface settings and proper cable connection.

Display the I/O check screen by Main Menu.

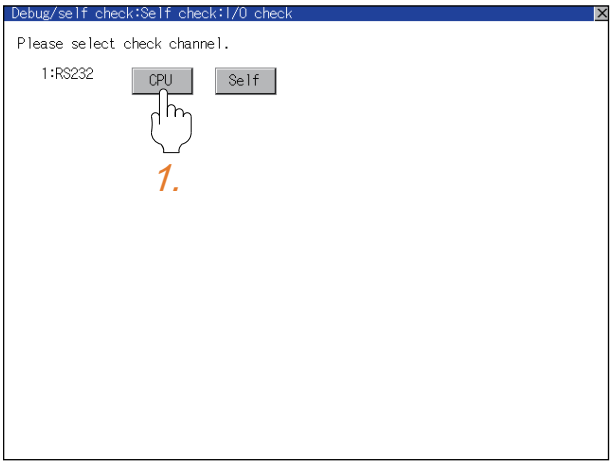
- Display the I/O check screen by [Maintenance] → [I/O check].

For details on the I/O check, refer to the following manual:

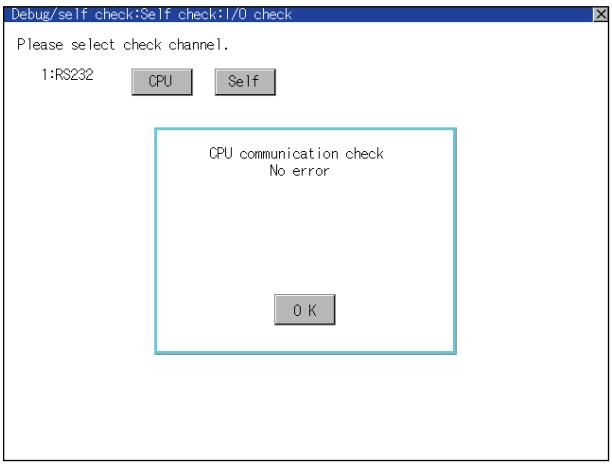
GOT2000 Series User's Manual (Utility)

1. Touch [CPU] on the I/O check screen.

Touching [CPU] executes the communication check with the connected PLC.



2. When the communication screen ends successfully, the screen on the left is displayed.



Confirming the communication state on the GOT side (For Ethernet connection)

Confirming the communication state on Windows, GT Designer3

■When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

• At normal communication

C:\>Ping 192.168.3.18

Reply from 192.168.3.18: bytes=32 time<1ms TTL=64

• At abnormal communication

C:\>Ping 192.168.3.18

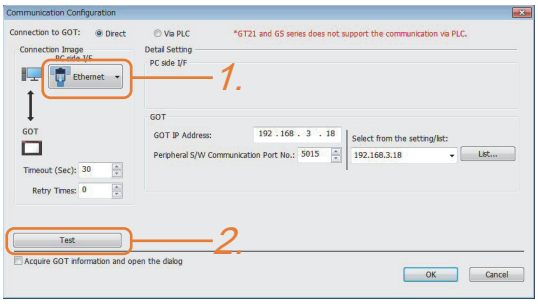
Request timed out.

■When using the [Test] of GT Designer3

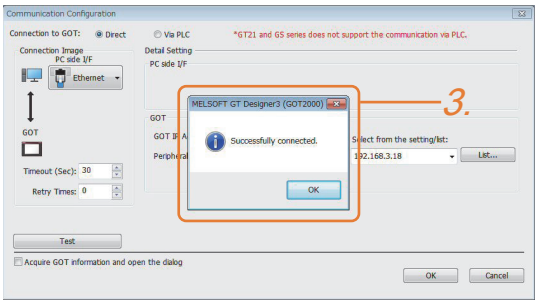
Select [Communication] → [Communication settings] from the menu to display [TEST].

1. Set the [PC side I/F] to the [Ethernet].

2. Specify the [GOT IP Address] of the [Communication Configuration] and click the [Test] button.



3. Check if GT Designer3 has been connected to the GOT.



■At abnormal communication

At abnormal communication, check the followings and execute the Ping command or [Test] again.

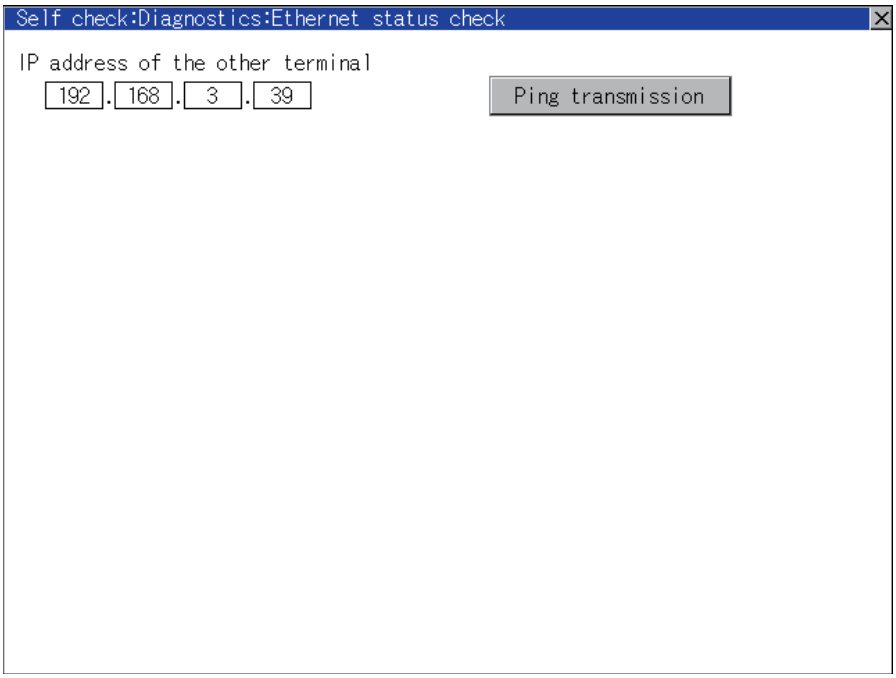
- Mounting condition of Ethernet communication unit
- Cable connecting condition
- Confirmation of [Communication Settings]
- IP address of GOT specified by Ping command

Confirming the communication state on the GOT

[PING Test] can be confirmed by the Utility screen of the GOT.

For details on the operation method of the GOT Utility screen, refer to the following manual.

GOT2000 Series User's Manual (Utility)



Confirming the communication state to each station (Station monitoring function)

The station monitoring function detects the faults (communication timeout) of the stations monitored by the GOT.
When detecting the abnormal state, it allocates the data for the faulty station to the GOT special register (GS).

No. of faulty stations

■Ethernet connection (Except for Ethernet multiple connection)

Total No. of the faulty CPU is stored.

Device	b15 to b8	b7 to b0
GS230	(00H fixed)	No. of faulty stations

■Ethernet multiple connection

Total No. of the faulty connected equipment is stored.

Channel	Device	b15 to b8	b7 to b0
Ch1	GS280	(00H fixed)	No. of faulty stations
Ch2	GS300	(00H fixed)	No. of faulty stations
Ch3	GS320	(00H fixed)	No. of faulty stations
Ch4	GS340	(00H fixed)	No. of faulty stations

Point

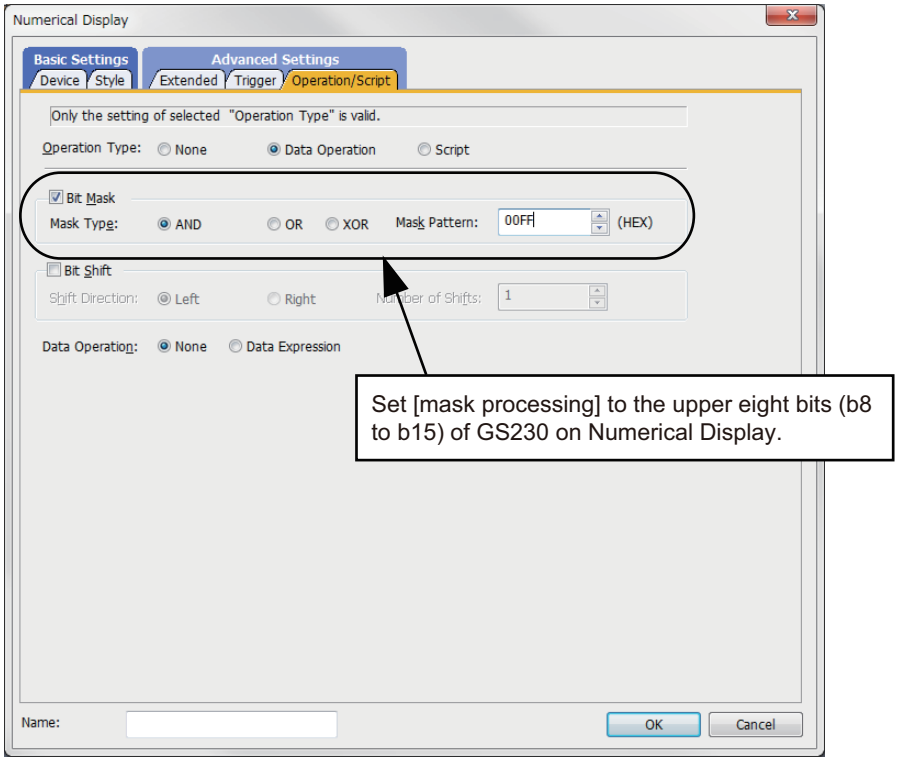
When monitoring GS230 on Numerical Display

When monitoring GS230 on Numerical Display, check [mask processing] with data operation tab as the following.

For the data operation, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

• Numerical Display (Data Operation tab)

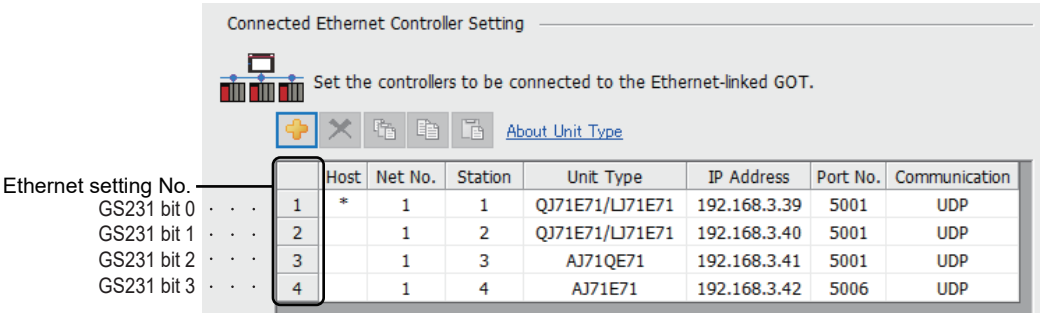


Faulty station information

The bit corresponding to the faulty station is set. (0: Normal, 1: Abnormal)

The bit is reset after the fault is recovered.

■Ethernet connection



Device	Ethernet setting No.															
	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
GS231	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
GS232	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
GS233	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
GS234	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49
GS235	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65
GS236	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81
GS237	112	111	110	109	108	107	106	105	104	103	102	101	100	99	98	97
GS238	128	127	126	125	124	123	122	121	120	119	118	117	116	115	114	113

The following shows the Ethernet setting numbers for each device in the Ethernet multiple connection.

Device				Ethernet setting No.															
Ch1	Ch2	Ch3	Ch4	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
GS281	GS301	GS321	GS341	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
GS282	GS302	GS322	GS342	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
GS283	GS303	GS323	GS343	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
GS284	GS304	GS324	GS344	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49
GS285	GS305	GS325	GS345	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65
GS286	GS306	GS326	GS346	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81
GS287	GS307	GS327	GS347	112	111	110	109	108	107	106	105	104	103	102	101	100	99	98	97
GS288	GS308	GS328	GS348	128	127	126	125	124	123	122	121	120	119	118	117	116	115	114	113

■CC-Link IE TSN connection

Device	Station number															
	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
GS1281	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
GS1282	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
GS1283	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32
GS1284	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48
GS1285	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64
GS1286	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81	80
GS1287	111	110	109	108	107	106	105	104	103	102	101	100	99	98	97	96
GS1288	-	-	-	-	-	-	-	120	119	118	117	116	115	114	113	112

■Connection with the temperature controller (AZBIL temperature controller (DMC50))

Device				Station number-Sub Station															
Ch1	Ch2	Ch3	Ch4	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
GS281	GS301	GS321	GS341	1-15	1-14	1-13	1-12	1-11	1-10	1-9	1-8	1-7	1-6	1-5	1-4	1-3	1-2	1-1	1-0
GS282	GS302	GS322	GS342	2-15	2-14	2-13	2-12	2-11	2-10	2-9	2-8	2-7	2-6	2-5	2-4	2-3	2-2	2-1	2-0
GS283	GS303	GS323	GS343	3-15	3-14	3-13	3-12	3-11	3-10	3-9	3-8	3-7	3-6	3-5	3-4	3-3	3-2	3-1	3-0
GS284	GS304	GS324	GS344	4-15	4-14	4-13	4-12	4-11	4-10	4-9	4-8	4-7	4-6	4-5	4-4	4-3	4-2	4-1	4-0
GS285	GS305	GS325	GS345	5-15	5-14	5-13	5-12	5-11	5-10	5-9	5-8	5-7	5-6	5-5	5-4	5-3	5-2	5-1	5-0
GS286	GS306	GS326	GS346	6-15	6-14	6-13	6-12	6-11	6-10	6-9	6-8	6-7	6-6	6-5	6-4	6-3	6-2	6-1	6-0
GS287	GS307	GS327	GS347	7-15	7-14	7-13	7-12	7-11	7-10	7-9	7-8	7-7	7-6	7-5	7-4	7-3	7-2	7-1	7-0
GS288	GS308	GS328	GS348	8-15	8-14	8-13	8-12	8-11	8-10	8-9	8-8	8-7	8-6	8-5	8-4	8-3	8-2	8-1	8-0

■Connection types other than the above

The supported device differs depending on the communication driver to be used.

- Communication drivers supported by the host station only

Communication driver list		
Bus Q	Bus A/QnA	Serial(MELSEC)
AJ71QC24, MELDAS C6*	AJ71C24/UC24	CC-Link(G4)
MELSEC-FX	MELSEC-WS	OMRON SYSMAC
YASKAWA GL	YASKAWA CP9200 (H)	YASKAWA CP9300MS (MC compatible)
YASKAWA MP2000/MP900/CP9200SH	AB Control/CompactLogix	SHARP JW
TOSHIBA PROSEC T/V	HITACHI IES HIDIC H	HITACHI IES HIDIC H(Protocol2)
PANASONIC MEWNET-FP	PANASONIC MEWTOCOL-7	SIEMENS S7-200
YOKOGAWA FA500/FA-M3/STARDOM	Serial(KEYENCE)	HITACHI S10mini/S10V
FUJI MICREX-SX SPH	SHIBAURA MACHINE TCmini	SICK Flexi Soft
IAI X-SEL	PROFIBUS DP	DeviceNet

The host station uses the 0th bit at the top.

Ch1: GS281.b0

Ch2: GS301.b0

Ch3: GS321.b0

Ch4: GS341.b0

• Communication drivers supported by the other stations

Communication driver list		
CC-Link IE Controller Network	CC-Link IE Field Network	MEI Nexgenie
AB SLC500 AB 1:N connection	AB MicroLogix	AB MicroLogix(Extended)
SIEMENS S7-300/400	JTEKT TOYOPUC-PC	FUJI MICREX-F
GE(SNP-X)	KOYO KOSTAC/DL	LS Industrial Systems MASTER-K
Hirata HNC	IAI robocylinder	Panasonic MINAS A4
Panasonic MINAS A5	Muratec MPC	MELSERVO-J4,J3,J2S/M,JE
FREQROL 500/700/800,SENSORLESS SERVO	FREQROL 800	FREQROL(Batch monitor)
OMRON THERMAC/INPANEL NEO	OMRON Digital Temperature Controller	AZBIL SDC/DMC
AZBIL DMC50	RKC SR Mini HG (MODBUS)	FUJI Temperature Controller/Digital Controller
YOKOGAWA GREEN/UT100/UT2000/ UTAdvanced	SHINKO TECHNOS CONTROLLER	CHINO MODBUS device
MODBUS/RTU Master		

The following shows the supported devices.

Device				Station number															
Ch1	Ch2	Ch3	Ch4	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
GS281	GS301	GS321	GS341	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0*1
GS282	GS302	GS322	GS342	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
GS283	GS303	GS323	GS343	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32
GS284	GS304	GS324	GS344	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48
GS285	GS305	GS325	GS345	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64
GS286	GS306	GS326	GS346	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81	80
GS287	GS307	GS327	GS347	111	110	109	108	107	106	105	104	103	102	101	100	99	98	97	96
GS288	GS308	GS328	GS348	127 *1*2	126 *1*2	125 *1*2	124 *1*2	123 *1*2	122 *1*2	121 *1*2	120	119	118	117	116	115	114	113	112

*1 When CC-Link IE controller network connection is not used.

*2 When CC-Link IE field network connection is not used.

For details on the GS Device, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

Network No., station No. notification

The network No. and station No. of the GOT in Ethernet connection are stored at GOT startup.

If connected by other than Ethernet, 0 is stored.

Device				Description
Ch1	Ch2	Ch3	Ch4	
GS376	GS378	GS380	GS382	Network No. (1 to 239)
GS377	GS379	GS381	GS383	Station No. (1 to 64)

PART 2 MITSUBISHI ELECTRIC PLC CONNECTIONS

When connecting Handy GOT and Mitsubishi Electric PLCs, refer to the following for the device range that can be set, the access range for monitoring and how to monitor redundant systems.

• Device Range that Can Be Set

📖GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3 Version1 Appendix 1 Settable Device Range

📖GT Designer3 (GOT2000) Screen Design Manual

• Accessible range for monitoring

📖GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3 Version1 2. ACCESS RANGE FOR MONITORING

• How to monitor redundant system

📖GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3 Version1 3. HOW TO MONITOR REDUNDANT SYSTEM

2 ETHERNET CONNECTION

3 DIRECT CPU CONNECTION (SERIAL)

4 SERIAL COMMUNICATION CONNECTION

5 CC-Link CONNECTION (Via G4)

2 ETHERNET CONNECTION

- Page 104 Connectable Model List
- Page 115 System Configuration
- Page 153 GOT Side Settings
- Page 165 PLC Side Setting
- Page 300 Precautions

2.1 Connectable Model List

PLC/Motion CPU

The following table shows the connectable models.

Series	Model name	Clock	Communication type	Connectable model	Refer to
MELSEC MX Controller (MX-R Model)	MXR300-16	○	Ethernet	GT2506-HS GT2505-HS	☞ Page 115 Connection to Ethernet module ☞ Page 129 Connection to Built-in Ethernet port CPU or C Controller module ☞ Page 137 Connection to CC-Link IE TSN-equipped module
	MXR300-32				
	MXR300-64				
	MXR500-128				
	MXR500-256				
MELSEC MX Controller (MX-F Model)	MXF100-8-N32	○	Ethernet	GT2506-HS GT2505-HS	☞ Page 115 Connection to Ethernet module ☞ Page 129 Connection to Built-in Ethernet port CPU or C Controller module ☞ Page 137 Connection to CC-Link IE TSN-equipped module
	MXF100-8-P32				
	MXF100-16-N32				
	MXF100-16-P32				

Series	Model name	Clock	Communication type	Connectable model	Refer to
MELSEC iQ-R Series	R00CPU	○	Ethernet	GT2506HS GT2505HS	☞ Page 115 Connection to Ethernet module ☞ Page 129 Connection to Built-in Ethernet port CPU or C Controller module ☞ Page 137 Connection to CC-Link IE TSN-equipped module ☞ Page 144 Connection to Motion module ☞ Page 151 Connection through a servo amplifier
	R01CPU				
	R02CPU				
	R04CPU				
	R08CPU				
	R16CPU				
	R32CPU				
	R120CPU				
	R08PCPU*2	○	Ethernet	GT2506HS GT2505HS	☞ Page 115 Connection to Ethernet module ☞ Page 129 Connection to Built-in Ethernet port CPU or C Controller module
	R16PCPU*2				
	R32PCPU*2				
	R120PCPU*2				
	R04ENCPU	○	Ethernet	GT2506HS GT2505HS	☞ Page 115 Connection to Ethernet module ☞ Page 129 Connection to Built-in Ethernet port CPU or C Controller module ☞ Page 137 Connection to CC-Link IE TSN-equipped module ☞ Page 144 Connection to Motion module ☞ Page 151 Connection through a servo amplifier
	R08ENCPU				
	R16ENCPU				
	R32ENCPU				
	R120ENCPU				
	R08PSFCPU*3	○	Ethernet	GT2506HS GT2505HS	☞ Page 115 Connection to Ethernet module ☞ Page 129 Connection to Built-in Ethernet port CPU or C Controller module
	R16PSFCPU*3				
	R32PSFCPU*3				
	R120PSFCPU*3				
	R08SFCPU*1	○	Ethernet	GT2506HS GT2505HS	☞ Page 115 Connection to Ethernet module ☞ Page 129 Connection to Built-in Ethernet port CPU or C Controller module ☞ Page 137 Connection to CC-Link IE TSN-equipped module ☞ Page 144 Connection to Motion module
	R16SFCPU*1				
	R32SFCPU*1				
	R120SFCPU*1				
Motion CPU (MELSEC iQ-R Series)	R16MTCPU	○	Ethernet	GT2506HS GT2505HS	☞ Page 115 Connection to Ethernet module ☞ Page 129 Connection to Built-in Ethernet port CPU or C Controller module
	R32MTCPU				
	R64MTCPU				
C Controller module (MELSEC iQ-R Series)	R12CCPU-V	○	Ethernet	GT2506HS GT2505HS	☞ Page 129 Connection to Built-in Ethernet port CPU or C Controller module ☞ Page 137 Connection to CC-Link IE TSN-equipped module ☞ Page 144 Connection to Motion module ☞ Page 151 Connection through a servo amplifier
MELSECWinCPU (MELSEC iQ-R Series)	R102WCPU-W	×	Ethernet	GT2506HS GT2505HS	☞ Page 129 Connection to Built-in Ethernet port CPU or C Controller module ☞ Page 137 Connection to CC-Link IE TSN-equipped module
CNC C80	R16NCCPU-S1	○	Ethernet	GT2506HS GT2505HS	☞ Page 115 Connection to Ethernet module ☞ Page 133 Connecting to Display I/F
Robot controller (MELSEC iQ-R Series)	CR800-R(R16RTCPU)	○	Ethernet	GT2506HS GT2505HS	☞ Page 115 Connection to Ethernet module ☞ Page 129 Connection to Built-in Ethernet port CPU or C Controller module

Series	Model name	Clock	Communication type	Connectable model	Refer to
CC-Link IE Filed Network head module	RJ72GF15-T2	×	Ethernet	GT 2506 HS GT 2505 HS	☞ Page 115 Connection to Ethernet module

*1 Mount a safety function module R6SFM next to the RnSFCPU on the base unit.
The RnSFCPU and the safety function module R6SFM must have the same pair version.
If their pair versions differ, the RnSFCPU does not operate.

*2 Mount a redundant function module R6RFM next to the RnPCPU on the base unit when building a redundant system.

*3 Mount the SIL2 function module R6PSFM and redundant function module R6RFM next to the RnPSFCPU on the base unit.

Series	Model name	Clock	Communication type	Connectable model	Refer to
MELSEC iQ-F Series	FX5U *2*3	○	Ethernet	GT2506HS GT2505HS	☞ Page 115 Connection to Ethernet module ☞ Page 129 Connection to Built-in Ethernet port CPU or C Controller module ☞ Page 137 Connection to CC-Link IE TSN-equipped module ☞ Page 144 Connection to Motion module ☞ Page 151 Connection through a servo amplifier
	FX5UC *2*3				
	FX5UJ*4	○	Ethernet	GT2506HS GT2505HS	☞ Page 115 Connection to Ethernet module ☞ Page 129 Connection to Built-in Ethernet port CPU or C Controller module ☞ Page 151 Connection through a servo amplifier
	FX5S	○	Ethernet	GT2506HS GT2505HS	☞ Page 129 Connection to Built-in Ethernet port CPU or C Controller module ☞ Page 151 Connection through a servo amplifier
MELSEC-Q (Q mode)	Q00JCPU	○	Ethernet	GT2506HS GT2505HS	☞ Page 115 Connection to Ethernet module
	Q00CPU*1				
	Q01CPU*1				
	Q02CPU*1				
	Q02HCPU*1 Q06HCPU*1 Q12HCPU*1 Q25HCPU*1				
	Q02PHCPU Q06PHCPU Q12PHCPU Q25PHCPU	○	Ethernet	GT2506HS GT2505HS	☞ Page 115 Connection to Ethernet module
	Q12PRHCPU (Main base)				
	Q25PRHCPU (Main base)				
	Q12PRHCPU (Extension base)				
	Q25PRHCPU (Extension base)				
	Q00UJCPU Q00UJCPU-S8	○	Ethernet	GT2506HS GT2505HS	☞ Page 115 Connection to Ethernet module
	Q00UCPU Q01UCPU Q02UCPU Q03UDCPU				
	Q04UDHCPU Q06UDHCPU Q10UDHCPU Q13UDHCPU Q20UDHCPU Q26UDHCPU				

Series	Model name	Clock	Communication type	Connectable model	Refer to
MELSEC-Q (Q mode)	Q03UDECPU Q04UDEHCPU Q06UDEHCPU Q10UDEHCPU Q13UDEHCPU Q20UDEHCPU Q26UDEHCPU Q50UDEHCPU Q100UDEHCPU	○	Ethernet	GT 2506 HS GT 2505 HS	☞ Page 115 Connection to Ethernet module ☞ Page 129 Connection to Built-in Ethernet port CPU or C Controller module
	Q03UDVCPU Q04UDVCPU Q06UDVCPU Q13UDVCPU Q26UDVCPU	○	Ethernet	GT 2506 HS GT 2505 HS	☞ Page 115 Connection to Ethernet module ☞ Page 129 Connection to Built-in Ethernet port CPU or C Controller module ☞ Page 151 Connection through a servo amplifier

*1 When in multiple CPU system configuration, use CPU function version B or later.
*2 For FX5U and FX5UC that support FX5-ENET or FX5-ENET/IP, use firmware Ver.1.240 or later.
*3 For FX5U and FX5UC that support FX5-EIP, use firmware Ver.1.340 or later.
*4 For FX5UJ that supports FX5-EIP, use firmware Ver.1.100 or later.

Series	Model name	Clock	Communication type	Connectable model	Refer to
C Controller module (Q Series)	Q12DCCPU-V *3 Q24DHCCPU-V/VG Q24DHCCPU-LS Q26DHCCPU-LS	○	Ethernet	GT 2506 HS GT 2505 HS	☞ Page 129 Connection to Built-in Ethernet port CPU or C Controller module
MELSEC-QS	QS001CPU	○	Ethernet	GT 2506 HS GT 2505 HS	☞ Page 115 Connection to Ethernet module
MELSEC-L	L02CPU L06CPU L26CPU L26CPU-BT L02CPU-P L06CPU-P L26CPU-P L26CPU-PBT	○	Ethernet	GT 2506 HS GT 2505 HS	☞ Page 129 Connection to Built-in Ethernet port CPU or C Controller module ☞ Page 115 Connection to Ethernet module ☞ Page 151 Connection through a servo amplifier
	L02SCPU L02SCPU-P	○	Ethernet	GT 2506 HS GT 2505 HS	☞ Page 115 Connection to Ethernet module
MELSEC-Q (A mode)	Q02CPU-A*2 Q02HCPU-A*2 Q06HCPU-A*2	○	Ethernet	GT 2506 HS GT 2505 HS	☞ Page 115 Connection to Ethernet module
MELSEC-QnA (QnACPU)	Q2ACPU*2 Q2ACPU-S1*2 Q3ACPU*2 Q4ACPU*2 Q4ARCPU*2	○	Ethernet	GT 2506 HS GT 2505 HS	☞ Page 115 Connection to Ethernet module
MELSEC-QnA (QnASCPU)	Q2ASCPU Q2ASCPU-S1 Q2ASHCPU Q2ASHCPU-S1	○	Ethernet	GT 2506 HS GT 2505 HS	☞ Page 115 Connection to Ethernet module
MELSEC-A (AnCPU)	A2UCPU A2UCPU-S1 A3UCPU A4UCPU A2ACPU A2ACPUP21 A2ACPUR21 A2ACPU-S1 A2ACPUP21-S1 A2ACPUR21-S1 A3ACPU A3ACPUP21 A3ACPUR21 A1NCPU A1NCPUP21 A1NCPUR21 A2NCPU A2NCPUP21 A2NCPUR21 A2NCPU-S1 A2NCPUP21-S1 A2NCPUR21-S1 A3NCPU A3NCPUP21 A3NCPUR21	○	Ethernet	GT 2506 HS GT 2505 HS	☞ Page 115 Connection to Ethernet module

*1 If the A series Ethernet module is applied to the QnACPU, the GOT can monitor the devices as the same as the case of AnACPU. However, the following devices cannot be monitored.
• Devices added to QnACPU
• Latch relays (L) and step relays (S)
(In case of QnACPU, the latch relay (L) and step relay (S) are different from the internal relay. However, whichever is specified, an access is made to the internal relay.)
• File register (R)

*2 Combination with the Ethernet module is restricted.
☞ Page 113 Ethernet module

*3 Use a module with the upper five digits later than 12042.

Series	Model name	Clock	Communication type	Connectable model	Refer to
MELSEC-A (AnSCPU)	A2USCPU	○	Ethernet	GT 2506 HS GT 2505 HS	☞ Page 115 Connection to Ethernet module
	A2USCPU-S1				
	A2USHCPU-S1				
	A1SCPU				
	A1SCPUC24-R2				
	A1SHCPU				
	A2SCPU				
	A2SCPU-S1				
	A2SHCPU				
	A2SHCPU-S1				
	A1SJCPU				
	A1SJCPU-S3				
	A1SJHCPU				
MELSEC-A	A0J2HCPU	×	Ethernet	GT 2506 HS GT 2505 HS	☞ Page 115 Connection to Ethernet module
	A0J2HCPUP21				
	A0J2HCPUR21				
	A0J2HCPU-DC24				
	A2CCPU	○	-	-	-
	A2CCPUP21				
	A2CCPUR21				
	A2CCPUC24				
	A2CCPUC24-PRF				
	A2CJCPU-S3				
	A1FXCPU				
Motion CPU (Q Series)	Q172CPU*1*2	○	Ethernet	GT 2506 HS GT 2505 HS	☞ Page 115 Connection to Ethernet module
	Q173CPU*1*2				
	Q172CPUN*1				
	Q173CPUN*1				
	Q172HCPU				
	Q173HCPU				
	Q172DCPU				
	Q173DCPU				
	Q172DCPU-S1	○	Ethernet	GT 2506 HS GT 2505 HS	☞ Page 115 Connection to Ethernet module ☞ Page 136 Connection to PERIPHERAL I/F
	Q173DCPU-S1				
	Q172DSCPU				
	Q173DSCPU				
	Q170MCPU*3				
	Q170MSCPU*4				
	Q170MSCPU-S1*4				
	MR-MQ100				

*1 When using SV13, SV22, or SV43, use a Motion CPU with the following version of OS installed.
- SW6RN-SV13Q□: 00H or later
- SW6RN-SV22Q□: 00H or later
- SW6RN-SV43Q□: 00B or later

*2 Use main modules with the following product numbers.
- Q172CPU: Product number N******* or later
- Q173CPU: Product number M******* or later

*3 When using Ethernet module, only the first step can be used on the extension base unit (Q52B/Q55B).

*4 When using Ethernet module, the extension base unit (Q5□B/Q6□B) can be used.

Series	Model name	Clock	Communication type	Connectable model	Refer to
Motion CPU (A Series)	A273UCPU	○	Ethernet	GT 2506 HS GT 2505 HS	☞ Page 115 Connection to Ethernet module
	A273UHCPU				
	A273UHCPU-S3				
	A373UCPU				
	A373UCPU-S3				
	A171SCPU				
	A171SCPU-S3				
	A171SCPU-S3N				
	A171SHCPU				
	A171SHCPUN				
	A172SHCPU				
	A172SHCPUN				
	A173UHCPU				
	A173UHCPU-S1				
MELSEC-WS	WS0-CPU0	×	-	-	-
	WS0-CPU1				
	WS0-CPU3				
MELSECNET/H Remote I/O station	QJ72LP25-25	×	Ethernet	GT 2506 HS GT 2505 HS	☞ Page 115 Connection to Ethernet module
	QJ72LP25G				
	QJ72BR15				
CC-Link IE Field Network head module	LJ72GF15-T2	×	-	-	-
CC-Link IE Field Network Ethernet adapter module	NZ2GF-ETB	×	CC-Link IE	-	☞ Page 134 Connection to NZ2GF-ETB
		×	Ethernet	GT 2506 HS GT 2505 HS	
CNC C70	Q173NCCPU	○	Ethernet	GT 2506 HS GT 2505 HS	☞ Page 133 Connecting to Display I/F
Robot controller (Q Series)	CRnQ-700(Q172DRCPU) *2	○	Ethernet	GT 2506 HS GT 2505 HS	☞ Page 115 Connection to Ethernet module
	CR750-Q(Q172DRCPU) *2				
	CR751-Q(Q172DRCPU) *2				
	CR800-Q(Q172DSRCPU) *3				
MELSEC-FX	FX0	×	-	-	-
	FX0S				
	FX0N				
	FX1				
	FX2	×			
	FX2C				
	FX1S	○			
	FX1N				
	FX2N				
	FX1NC				
	FX2NC	×			
MELSEC-FX	FX3S*1	○	Ethernet	GT 2506 HS GT 2505 HS	☞ Page 115 Connection to Ethernet module
	FX3G*1				
	FX3GC*1				
	FX3GE				
	FX3U*1				
	FX3UC*1				

*1 The supported version of the main units varies depending on the Ethernet module to be used as shown below.

Ethernet module	FX3U(C)	FX3G(C)	FX3S
FX3U-ENET-L	Ver. 2.21 or later	FX3U-ENET-L is not supported.	
FX3U-ENET	Ver. 2.21 or later	FX3U-ENET is not supported.	
FX3U-ENET-ADP	Ver. 3.10 or later	Ver. 2.00 or later	Ver. 1.00 or later

*2 The Display I/F of the robot controller cannot be connected.
Ethernet connections can be established via either of the following.
• Ethernet module (QJ71E71)
• Ethernet port built in the PLC CPU

*3 Ethernet connections can be established via the PERIPHERAL I/F of the robot controller or either of the following.
• Ethernet module (QJ71E71)
• Ethernet port built in the PLC CPU

Ethernet module

CPU series	Communication module
MELSEC MX Controller (MX-R Model)	RJ71EN71 RJ71GN11-T2 RJ71GN11-EIP
MELSEC MX Controller (MX-F Model)	FX5-ENET/IP*7 FX5-CCLGN-MS
MELSEC iQ-R Series	RJ71EN71 *3 RJ71GN11-T2 *4 RJ71GN11-EIP*4 RD78G4 *4*5, RD78G8 *4*5, RD78G16 *4*5, RD78G32 *4*5, RD78G64 *4*5, RD78GHV *4*5, RD78GHW *4*5
C Controller module (MELSEC iQ-R Series)*10	RJ71GN11-T2 RD78G4, RD78G8, RD78G16, RD78G32, RD78G64, RD78GHV, RD78GHW
MELSECWinCPU (MELSEC iQ-R Series)	RJ71GN11-T2
MELSEC iQ-F Series	FX5-ENET *6*7 FX5-ENET/IP *6*7 FX5-EIP *6*8*9 FX5-CCLGN-MS*14 FX5-40SSC-G*6*13, FX5-80SSC-G*6*13
Motion CPU (MELSEC iQ-R Series) CNC C80 (R16NCCPU-S1) CR800-R(R16RTCPU) CC-Link IE Field Network head module(MELSEC iQ-R Series)	RJ71EN71*3
MELSEC-Q (Q mode) MELSEC-QS Motion CPU (Q Series) CNC C70 Robot controller (CRnQ-700) CR800-Q (Q172DSRCPU) C Controller module (Q Series)	QJ71E71-100, QJ71E71-B5, QJ71E71-B2, QJ71E71
MELSEC-QnA (QnACPU) *1 MELSEC-QnA (QnASCPU) *1	AJ71QE71N3-T *2, AJ71QE71N-B5 *2, AJ71QE71N-B2 *2, AJ71QE71N-T *2, AJ71QE71N-B5T *2, AJ71QE71, AJ71QE71-B5 A1SJ71QE71N3-T *2*10, A1SJ71QE71N-B5 *2*10, A1SJ71QE71N-B2 *2*10, A1SJ71QE71N-T *2*10, A1SJ71QE71N-B5T *2*10, A1SJ71QE71-B5 *10, A1SJ71QE71-B2 *10
MELSEC-Q (A mode) MELSEC-A (AnCPU) MELSEC-A (AnSCPU) Motion CPU (A Series)	AJ71E71N3-T, AJ71E71N-B5, AJ71E71N-B2, AJ71E71N-T, AJ71E71N-B5T, AJ71E71-S3 A1SJ71E71N3-T *11, A1SJ71E71N-B5 *11, A1SJ71E71N-B2 *11, A1SJ71E71N-T *11, A1SJ71E71N-B5T *11, A1SJ71E71-B5-S3 *11, A1SJ71E71-B2-S3 *11
MELSEC-FX	FX3U-ENET-L, FX3U-ENET, FX3U-ENET-ADP
CC-Link IE Field Network Ethernet adapter module	NZ2GF-ETB
MELSEC-L	LJ71E71-100

*1 If the A series Ethernet module is applied to the QnACPU, the GOT can monitor the devices as the same as the case of AnACPU. However, the following devices cannot be monitored.
- Devices added to QnACPU
- Latch relays (L) and step relays (S)

(In case of QnACPU, the latch relay (L) and step relay (S) are different from the internal relay. However, whichever is specified, an access is made to the internal relay.)
- File register (R)

*2 Use B or a later function version of Ethernet module and PLC CPU.

*3 Use firmware version 12 or later when building a redundant system.

*4 The following shows the connectable PLC CPUs and their firmware versions for connection with each module.

Model	Firmware version			
	Connecting to RJ71GN11-T2	Connecting to RJ71GN11-EIP	Connecting to RD78G4, RD78G8, RD78G16, RD78G32, or RD78G64	Connecting to RD78GHV or RD78GHW
R00CPU	11 or later	29 or later	12 or later	14 or later
R01CPU				
R02CPU				
R04CPU	43 or later	62 or later	44 or later	46 or later
R08CPU				
R16CPU				
R32CPU				
R120CPU				
R04ENCPU				
R08ENCPU				
R16ENCPU				
R32ENCPU				
R120ENCPU				
R08SFCPU	20 or later	Unavailable	21 or later	21 or later
R16SFCPU				
R32SFCPU				
R120SFCPU				

*5 Use basic system software version 06 or later for the motion module.
For the firmware versions of the PLC CPUs supported by the motion modules and software versions of GX Works3 and Motion Control Setting Function, refer to the following.
MELSEC iQ-R Motion Module User's Manual (Application)

*6 Not available to FX5S.

*7 For FX5-ENET and FX5-ENET/IP, use firmware Ver.1.100 or later.
For FX5U and FX5UC that support FX5-ENET or FX5-ENET/IP, use firmware Ver.1.240 or later.

*8 For FX5U and FX5UC that support FX5-EIP, use firmware Ver.1.340 or later.

*9 For FX5UJ that supports FX5-EIP, use firmware Ver.1.100 or later.

*10 Only available for MELSEC-QnA (QnASCPU).

*11 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.

*12 When connecting to the CC-Link IE TSN master/local module or Motion module, use the C Controller module (MELSEC iQ-R series) with firmware version 15 or later.

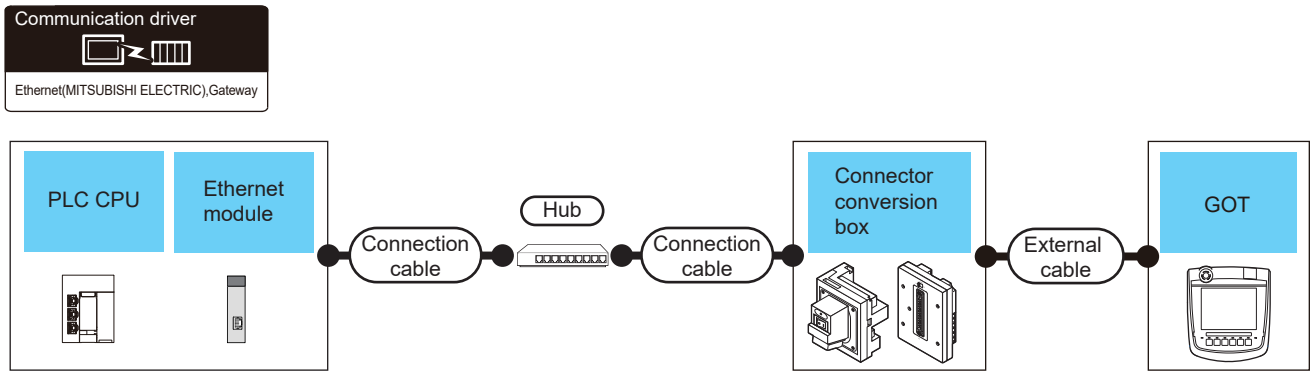
*13 For FX5U and FX5UC that support FX5-40SSC-G or FX5-80SSC-G, use firmware Ver.1.230 or later.

*14 Not available to FX5S.

2.2 System Configuration

Connection to Ethernet module

When connecting to MELSEC MX Controller



PLC			Connection cable*1	Maximum segment length*2	Connector conversion box	External cable *5	GOT Model	Max. pieces of equipment connected		
Model name	Ethernet module*3*4	Communication type	Cable model					GOT*6*8	Unit*7	
									UDP	TCP
MELSEC MX Controller (MX-R Model)	RJ71EN71	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	119 (16 or less recommended)	119	17
					GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
					GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
					GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				

PLC			Connection cable*1	Maximum segment length*2	Connector conversion box	External cable *5	GOT Model	Max. pieces of equipment connected		
Model name	Ethernet module*3*4	Communication type	Cable model					GOT*6*8	Unit*7	
									UDP	TCP
MELSEC MX Controller (MX-F Model)	FX5-ENET/IP	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	119 (16 or less recommended)	119	17
					GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
					GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
					GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the GOT to the Ethernet module, hub, or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
When only one GOT is connected, the GOT can be directly connected to the controller without a hub.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*3 For the system configuration of the Ethernet module, refer to the following manuals.
MELSEC iQ-F FX5-ENET/IP User's Manual

*4 Select [FX5-ENET] for [Unit Type] in [Connected Ethernet Controller Setting] in GT Designer3.
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
Page 159 Connected Ethernet controller setting

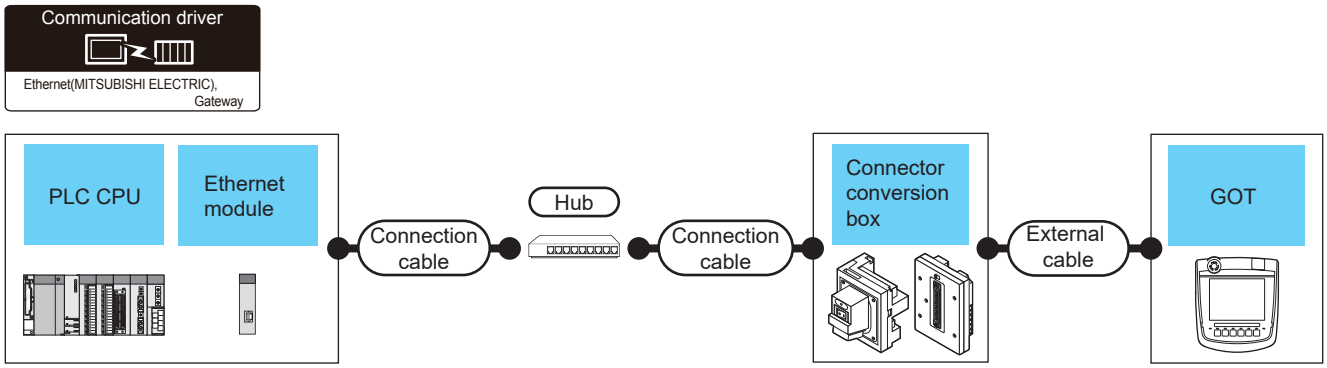
*5 Use C or later version of GT11H-C□□-37P.

*6 The number of connectable controllers per GOT channel is indicated.

*7 The number of GOTs connectable to one Ethernet module is indicated.

*8 Up to 128 controllers in total can be set for the GOT channels No. 1 to No. 4.
16 or less is recommended.

When connecting to MELSEC iQ-R series, Motion CPU (MELSEC iQ-R series), MELSECQ, QS, QnA, A, Motion CPU (Q series), or MELSEC-L



PLC			Connection cable[*1]	Maximum segment length[*2]	Connector conversion box	External cable[*6]	GOT Model	Max. pieces of equipment connected		
Model name	Ethernet module[*3*4]	Communication type	Cable model					GOT[*7*9]	Unit[*8]	
									UDP	TCP
MELSEC iQ-R Series Motion CPU (MELSEC iQ-R Series)	RJ71EN71	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	119 (16 or less recommended)	119	17
					GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
					GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
					GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				

PLC			Connection cable[*1]	Maximum segment length[*2]	Connector conversion box	External cable [*6]	GOT Model	Max. pieces of equipment connected		
Model name	Ethernet module[*3*4]	Communication type	Cable model					GOT[*7*9]	Unit[*8]	
									UDP	TCP
CNC C80 (R16NCCPU-S1) CR800-R(R16RTCPU) CC-Link IE Field Network head module(MELSEC iQ-R Series)	RJ71EN71	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	119 (16 or less recommended)	119	17
					GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
					GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
					GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				
MELSEC-Q (Q mode) Motion CPU (Q Series)[*5] Robot controller (CRnQ-700) CR800-Q (Q172DSRCPU)	QJ71E71-100 QJ71E71-B5 QJ71E71-B2 QJ71E71	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	63 (16 or less recommended)	63	17
					GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
					GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
					GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				

PLC			Connection cable[*1]	Maximum segment length[*2]	Connector conversion box	External cable [*6]	GOT Model	Max. pieces of equipment connected		
Model name	Ethernet module[*3*4]	Communication type	Cable model					GOT[*7*9]	Unit[*8]	
									UDP	TCP
MELSEC-QS	QJ71E71-100 QJ71E71-B5 QJ71E71-B2 QJ71E71	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	63 (16 or less recommended)	63	17
					GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
					GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
					GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				
MELSEC-QnA	AJ71QE71N3-T AJ71QE71N-B5 AJ71QE71N-B2 AJ71QE71N-T AJ71QE71N-B5T AJ71QE71 AJ71QE71-B5 A1SJ71QE71N3-T A1SJ71QE71N-B5 A1SJ71QE71N-B2 A1SJ71QE71N-T A1SJ71QE71N-B5T A1SJ71QE71-B5 A1SJ71QE71-B2	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	63 (4 or less recommended)	8	-
					GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
					GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
					GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				

PLC			Connection cable[*1]	Maximum segment length[*2]	Connector conversion box	External cable [*6]	GOT Model	Max. pieces of equipment connected		
Model name	Ethernet module[*3*4]	Communication type	Cable model					GOT[*7*9]	Unit[*8]	
									UDP	TCP
MELSEC-A MELSEC-Q (A mode) Motion CPU (A Series)	AJ71E71N3-T AJ71E71N-B5 AJ71E71N-B2 AJ71E71N-T AJ71E71N-B5T AJ71E71-S3 A1SJ71E71N3-T A1SJ71E71N-B5 A1SJ71E71N-B2 A1SJ71E71N-T A1SJ71E71N-B5T A1SJ71E71-B5-S3 A1SJ71E71-B2-S3	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	63 (4 or less recommended)	8	-
					GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
					GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
					GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				
MELSEC-L	LJ71E71-100	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	63 (16 or less recommended)	63	17
					GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
					GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
					GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
A cross cable is available for connecting the GOT to the Ethernet module.
For the controller to which the wireless LAN adapter can be connected and the setting method of the wireless LAN adapter, refer to the manual of the wireless LAN adapter.
When only one GOT is connected, the GOT can be directly connected to the controller without a hub.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*3 For the system configuration of the Ethernet module, refer to the following manuals.
Q Corresponding Ethernet Interface Module User's Manual (Basic)
For QnA Ethernet Interface Module User's Manual
For A Ethernet Interface Module User's Manual

*4 Select one of the following for [Unit Type] in [Connected Ethernet Controller Setting] of GT Designer3.
• Ethernet module (MELSEC iQ-R Series): RJ71EN71
• Ethernet module (Q Series): QJ71E71
• Ethernet module (QnA Series): AJ71QE71
• Ethernet module (A Series): AJ71QE71
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
☞ Page 159 Connected Ethernet controller setting

*5 When using the peripheral I/F of Q170MCPU, Q17nDCPU-S1 or MR-MQ100, refer to the following.
☞ Page 136 Connection to PERIPHERAL I/F

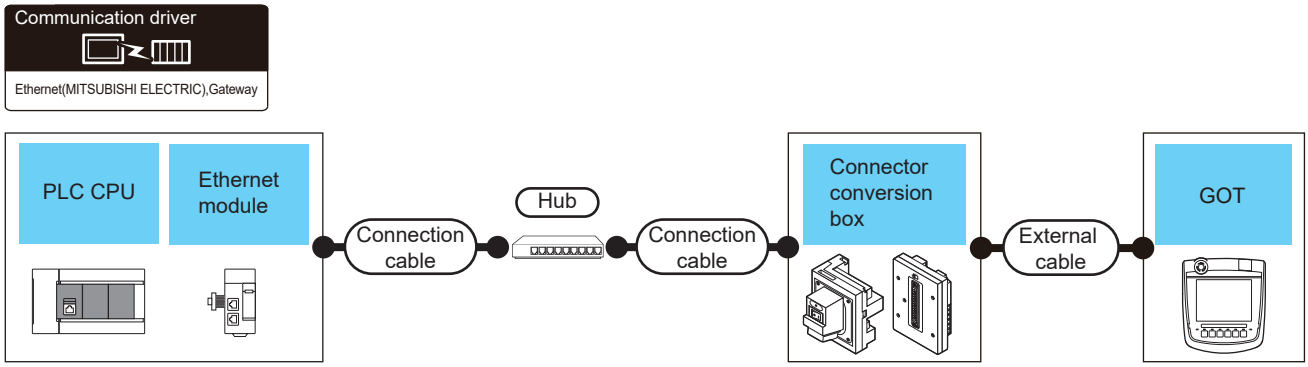
*6 Use C or later version of GT11H-C□□-37P.

*7 The number of connectable controllers per GOT channel is indicated.

*8 The number of GOTs connectable to one Ethernet module is indicated.

*9 Up to 128 controllers in total can be set for the GOT channels No. 1 to No. 4.
16 or less is recommended.

When connecting to MELSEC iQ-F series



PLC			Connection cable[*1]	Maximum segment length[*2]	Connector conversion box	External cable [*5]	GOT Model	Max. pieces of equipment connected		
Model name	Ethernet module[*3*4]	Communication type	Cable model					GOT[*6*8]	Unit[*7]	
									UDP	TCP
MELSEC iQ-F Series (FX5U, FX5UC, FX5UJ)	FX5-ENET FX5-ENET/IP FX5-EIP	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	63 (16 or less recommended)	32	32
					GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
					GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
					GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the GOT to the Ethernet module, hub, or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
When only one GOT is connected, the GOT can be directly connected to the controller without a hub.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*3 For the system configuration of the Ethernet module, refer to the following manuals.
MELSEC iQ-F FX5-ENET User's Manual
MELSEC iQ-F FX5-ENET/IP User's Manual

*4 Select [FX5-ENET] for [Unit Type] in [Connected Ethernet Controller Setting] in GT Designer3.
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
Page 159 Connected Ethernet controller setting

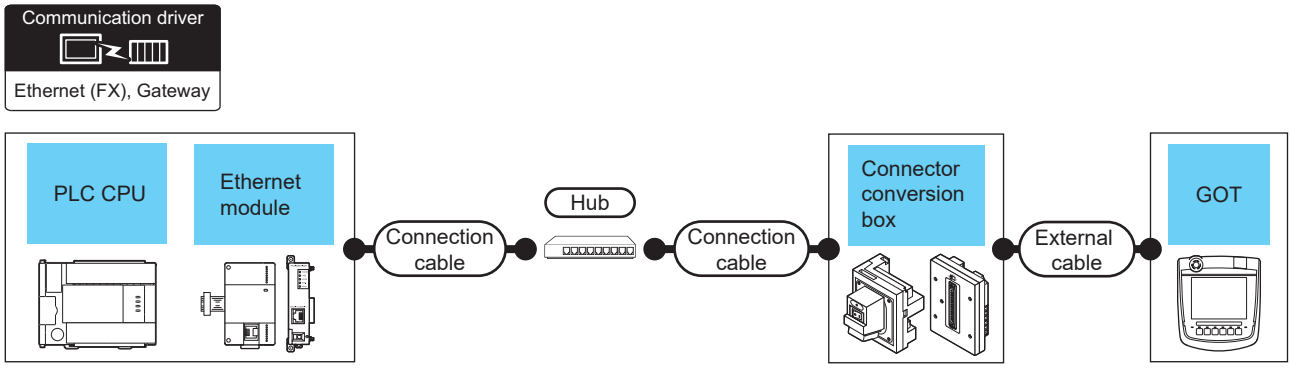
*5 Use C or later version of GT11H-C□□-37P.

*6 The number of connectable controllers per GOT channel is indicated.

*7 The number of GOTs connectable to one Ethernet module is indicated.

*8 Up to 128 controllers in total can be set for the GOT channels No. 1 to No. 4.
16 or less is recommended.

When connecting to MELSEC-FX



PLC			Connection cable*1	Maximum segment length*2	Connector conversion box	External cable *8	GOT Model	Max. pieces of equipment connected		
Model name	Ethernet module*3*4	Communication type	Cable model					GOT *9*11	Unit*10	
									UDP	TCP
MELSEC-FX (FX3U, FX3G)	FX3U-ENET-L	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	63 (16 or less recommended)	-	2
					GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
					GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
					GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				

PLC			Connection cable[*1]	Maximum segment length[*2]	Connector conversion box	External cable [*8]	GOT Model	Max. pieces of equipment connected		
Model name	Ethernet module[*3*4]	Communication type	Cable model					GOT [*9*11]	Unit[*10]	
									UDP	TCP
MELSEC-FX (FX3U, FX3G)	FX3U-ENET	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	63 (16 or less recommended)	-	4
					GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
					GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
					GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				
MELSEC-FX (FX3UC, FX3GC)	FX3UC-1PS-5V, FX2NC-CNV-IF + FX3U-ENET-L[*5]	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	63 (16 or less recommended)	-	2
					GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
					GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
					GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				

PLC			Connection cable[*1]	Maximum segment length[*2]	Connector conversion box	External cable [*8]	GOT Model	Max. pieces of equipment connected		
Model name	Ethernet module[*3*4]	Communication type	Cable model					GOT [*9*11]	Unit[*10]	
									UDP	TCP
MELSEC-FX (FX3UC, FX3GC)	FX3UC-1PS-5V, FX2NC-CNV-IF + FX3U-ENET[*5]	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	63 (16 or less recommended)	-	4
					GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
					GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
					GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				
MELSEC-FX (FX3U, FX3UC-32MT-LT(-2))	FX3U-232-BD, FX3U-485-BD, FX3U-422-BD, FX3U-USB-BD, FX3U-8AV-BD, FX3U-CNV-BD + FX3U-ENET-ADP[*6*7]	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	63 (16 or less recommended)	-	4
					GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
					GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
					GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				

PLC			Connection cable[*1]	Maximum segment length[*2]	Connector conversion box	External cable [*8]	GOT Model	Max. pieces of equipment connected		
Model name	Ethernet module[*3*4]	Communication type	Cable model					GOT [*9*11]	Unit[*10]	
									UDP	TCP
MELSEC-FX (FX3UC)	FX3U-ENET-ADP	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	63 (16 or less recommended)	-	4
					GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
					GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
					GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				
MELSEC-FX (FX3G)	FX3G-CNV-ADP + FX3U-ENET-ADP[*7]	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	63 (16 or less recommended)	-	4
					GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
					GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
					GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				

PLC			Connection cable[*1]	Maximum segment length[*2]	Connector conversion box	External cable [*8]	GOT Model	Max. pieces of equipment connected		
Model name	Ethernet module[*3*4]	Communication type	Cable model					GOT [*9*11]	Unit[*10]	
									UDP	TCP
MELSEC-FX (FX3GC)	FX3U-ENET-ADP[*7]	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	63 (16 or less recommended)	-	4
					GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
					GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
					GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				
MELSEC-FX (FX3S)	FX3S-CNV-ADP + FX3U-ENET-ADP[*7]	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	63 (16 or less recommended)	-	4
					GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
					GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
					GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the GOT to the Ethernet module, hub, or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
When only one GOT is connected, the GOT can be directly connected to the controller without a hub.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*3 For the system configuration of the Ethernet module, refer to the following manuals.
📖For FX Ethernet Interface Module User's Manual

*4 Select [FX] for [Unit Type] in [Connected Ethernet Controller Setting] in GT Designer3.
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
☞ Page 159 Connected Ethernet controller setting

*5 When using an Ethernet module with the FX3UC series, FX2NC-CNV-IF or FX3UC-1PS-5V is required.

*6 When using an Ethernet module with the FX3U series, FX3U-232-BD, FX3U-485-BD, FX3U-422-BD, FX3U-USB-BD, FX3U-8AV-BD, or FX3U-CNV-BD is required.

*7 FX3U-ENET-ADP occupies one extension communication adapter CH (Max. 2 CHs) of the FX3U(C) or FX3G(C) and one extension communication adapter CH (Max. 1 CH) of the FX3S.
One CPU allows the connection of only one FX3U-ENET-ADP.

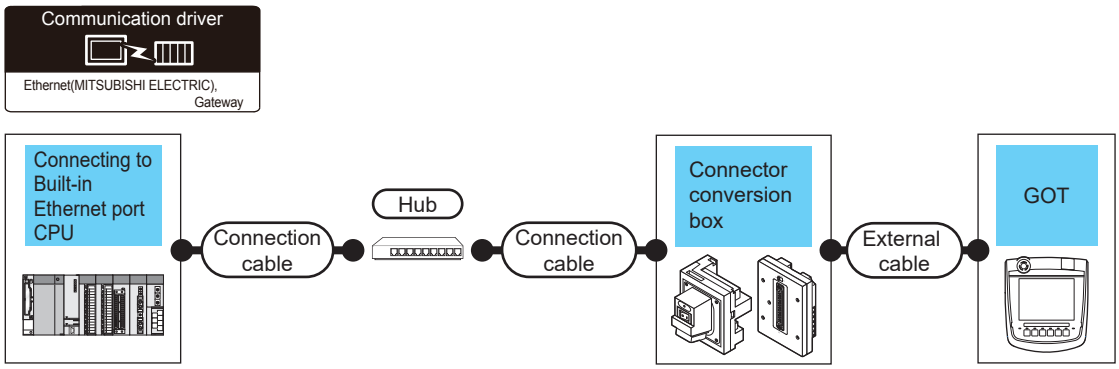
*8 Use C or later version of GT11H-C□□-37P.

*9 The number of connectable controllers per GOT channel is indicated.

*10 The number of GOTs connectable to one Ethernet module is indicated.

*11 Up to 128 controllers in total can be set for the GOT channels No. 1 to No. 4.
16 or less is recommended.

Connection to Built-in Ethernet port CPU or C Controller module



PLC		Connection cable*1*2	Maximum segment length*3	Connector conversion box	External cable *7	GOT Model	Max. pieces of equipment connected		
Model name	Communication type						GOT *8*10	Unit*9	
								UDP	TCP
MELSEC MX Controller (MX-R Model)	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	119 (16 or less recommended)	119	32
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				
MELSEC MX Controller (MX-F Model)	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	119 (16 or less recommended)	119	32
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				
MELSEC iQ-R Series*4*5*11 Robot controller CR800-R(R16RTCPU)	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	119 (16 or less recommended)	119	17
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				

PLC		Connection cable[*1*2]	Maximum segment length[*3]	Connector conversion box	External cable [*7]	GOT Model	Max. pieces of equipment connected		
Model name	Communication type						GOT [*8*10]	Unit[*9]	
								UDP	TCP
Motion CPU (MELSEC iQ-R Series)[*4*5*11]	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	119 (16 or less recommended)	119	17
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				
C Controller module (MELSEC iQ-R Series)[*11]	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	119 (16 or less recommended)	119	17
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				
MELSECWinCPU (MELSEC iQ-R Series)[*11]	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	119 (16 or less recommended)	119	17
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				
MELSEC-QnUDE(H)[*4*5] MELSEC-QnUDV[*4*5] CR800-Q(Q172DSRCPU)	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	63 (16 or less recommended)	16 (For UDP and TCP in total)	
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				
MELSEC-L[*4*5]	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	63 (16 or less recommended)	16 (For UDP and TCP in total)	
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				

PLC		Connection cable*1*2	Maximum segment length*3	Connector conversion box	External cable *7	GOT Model	Max. pieces of equipment connected		
Model name	Communication type						GOT *8*10	Unit*9	
								UDP	TCP
C Controller module (Q Series)	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	63 (16 or less recommended)	*6	
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				
MELSEC-FX (FX3GE)	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	63 (16 or less recommended)	-	4
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				
MELSEC iQ-F Series*4*5	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	63 (16 or less recommended)	-	8
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS			
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the GOT to the Ethernet module, hub, wireless LAN adapter (NZ2WL-JPA, NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
For the controller to which the wireless LAN adapter can be connected and the setting method of the wireless LAN adapter, refer to the manual of the wireless LAN adapter.

*2 When only one GOT is connected, the GOT can be directly connected to the controller without a hub.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

*4 For the system configuration of the Built-in Ethernet port CPU, refer to the manual of the PLC.

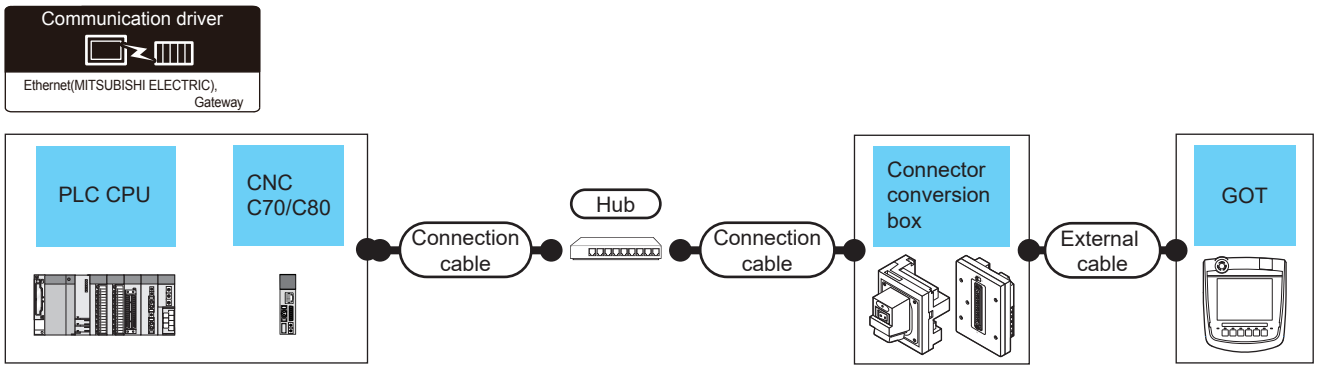
*5 For [Unit Type] to be selected in [Connected Ethernet Controller Setting] in GT Designer3, refer to the following.
☞ Page 159 Connected Ethernet controller setting

*6 By the controller type of the C Controller module (Q Series) and an operation mode, It's different in number of connectable GOTs.

Controller Type	Operation mode	Number of connectable GOTs
Q12DCCPU-V	standard monitor mode	1
	Expansion mode	16
Q24DHCCPU-V/VG/LS	-	16

*7 Use C or later version of GT11H-C□□-37P.
*8 The number of connectable controllers per GOT channel is indicated.
*9 The number of GOTs connectable to one PLC is indicated.
*10 Up to 128 controllers in total can be set for the GOT channels No. 1 to No. 4.
16 or less is recommended.
*11 For connection to RnENCPU in the multiple CPU system, the firmware version of the RnENCPU must be 14 or later.

Connecting to Display I/F



PLC		Connection cable[*1]	Maximum segment length[*3]	Connector conversion box	External cable [*6]	GOT Model	Number of connectable equipment
Model name	Communication type						
CNC C70 (Q173NCCPU)[*3*4]	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	16 GOTs for 1 network
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
CNC C80 (R16NCCPU-S1)[*5]	Ethernet			GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	8 GOTs for 1 network
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the GOT to the Ethernet module, hub, or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
When only one GOT is connected, the GOT can be directly connected to the controller without a hub.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

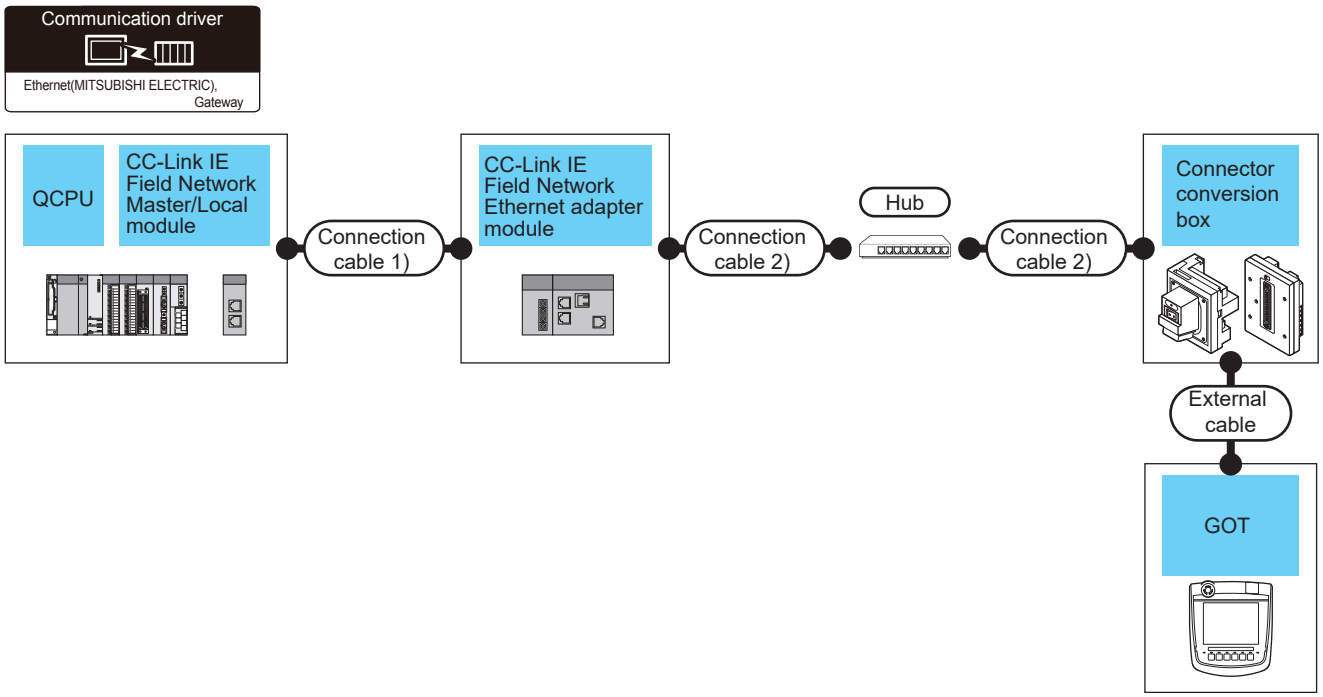
*3 For the system configuration of the CNC C70, refer to the following manual.
C70 Series SET UP MANUAL

*4 Select [Q17nNC] for [Unit Type] in [Connected Ethernet Controller Setting] of GT Designer3.
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
Page 159 Connected Ethernet controller setting

*5 Select [RnNCCPU] for [Unit Type] in [Connected Ethernet Controller Setting] of GT Designer3.
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
Page 159 Connected Ethernet controller setting

*6 Use C or later version of GT11H-C□□-37P.

Connection to NZ2GF-ETB



PLC		Connection cable 1)*4		CC-Link IEField Network Ethernet adapter module			Connection cable 2)*1		Connector conversion box	External cable *6	GOT Model	Number of connectable equipment
Model name	CC-Link IE Field Network Master/ Local module	Cable model	Max. distance	Communication type	Model name	Communication type	Cable model Connection diagram number	Maximum segment length*3				
MELSEC-Q (Q mode) Motion CPU (Q Series)	QJ71GF11-T2*4	Double-shielded twisted pair cable*3	100m	CC-Link IE	NZ2GF-ETB	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	128 GOTs*5 (recommended to 16 units or less)
									GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
MELSEC-Q (Q mode) Motion CPU (Q Series)	QJ71GF11-T2*4	Double-shielded twisted pair cable*3	100m	CC-Link IE	NZ2GF-ETB	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	128 GOTs*5 (recommended to 16 units or less)
									GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the GOT to the Ethernet module, hub, wireless LAN adapter (NZ2WL-JPA, NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
A cross cable is available for connecting the GOT to the Ethernet module.
For the controller to which the wireless LAN adapter can be connected and the setting method of the wireless LAN adapter, refer to the manual of the wireless LAN adapter.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*3 Use cables with the following specifications.

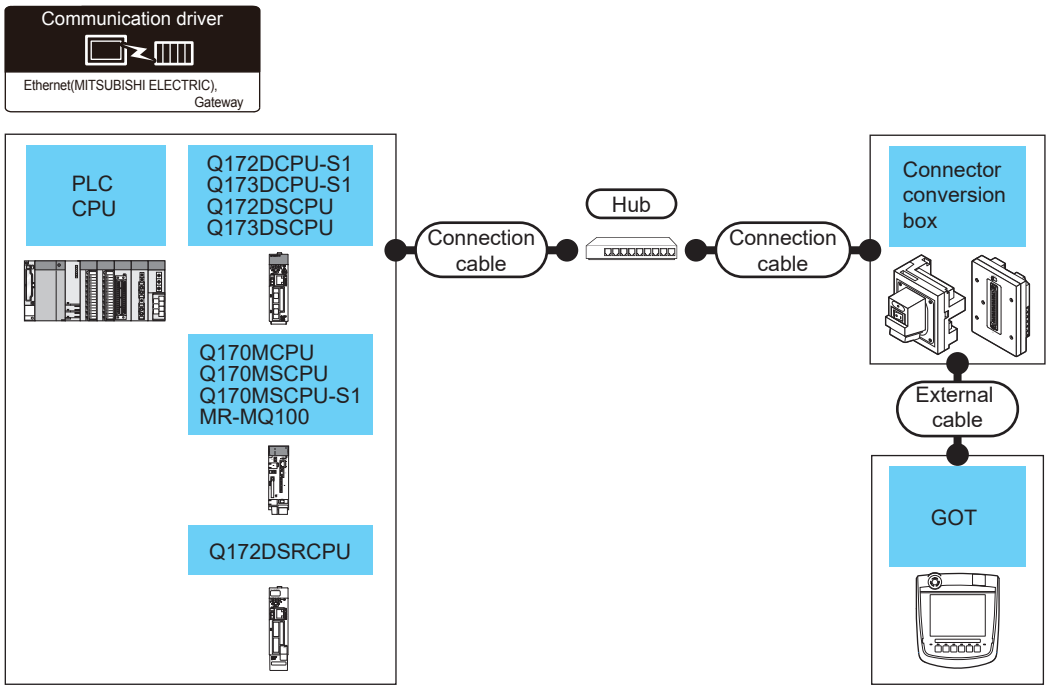
Connector	Range
Category 5e or higher Shielded RJ-45	Cable that satisfies the following specifications: IEEE802.3 1000BASE-T ANSI/TIA/EIA-568-B(Category 5e)

*4 For the system configuration on the CC-Link IE Field Network module side, refer to the following manual.
CC-Link IE Field Network Ethernet Adapter Module User's Manual

*5 The number of connectable GOTs for one network is 63 units (at most).

*6 Use C or later version of GT11H-C□□-37P.

Connection to PERIPHERAL I/F



PLC		Connection cable*1	Maximum segment length*3	Connector conversion box	External cable *4	GOT Model	Number of connectable equipment
Model name*2	Communication type						
Motion CPU (Q Series) Q172DCPU-S1 Q173DCPU-S1 Q172DSCPU Q173DSCPU Q170MCPU Q170MSCPU Q170MSCPU-S1 MR-MQ100 CR800-Q(Q172DSRCPU)	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	30m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	16 GOTs for 1 network
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the GOT to the Ethernet module, hub, or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
When only one GOT is connected, the GOT can be directly connected to the controller without a hub.

*2 When using the PERIPHERAL I/F, set as shown below.
• Use the GT Designer3 Version1.12N or later.
• Select [QnUDE(H)] for [Unit Type] in [Connected Ethernet Controller Setting] of GT Designer3.
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
☞ Page 159 Connected Ethernet controller setting

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

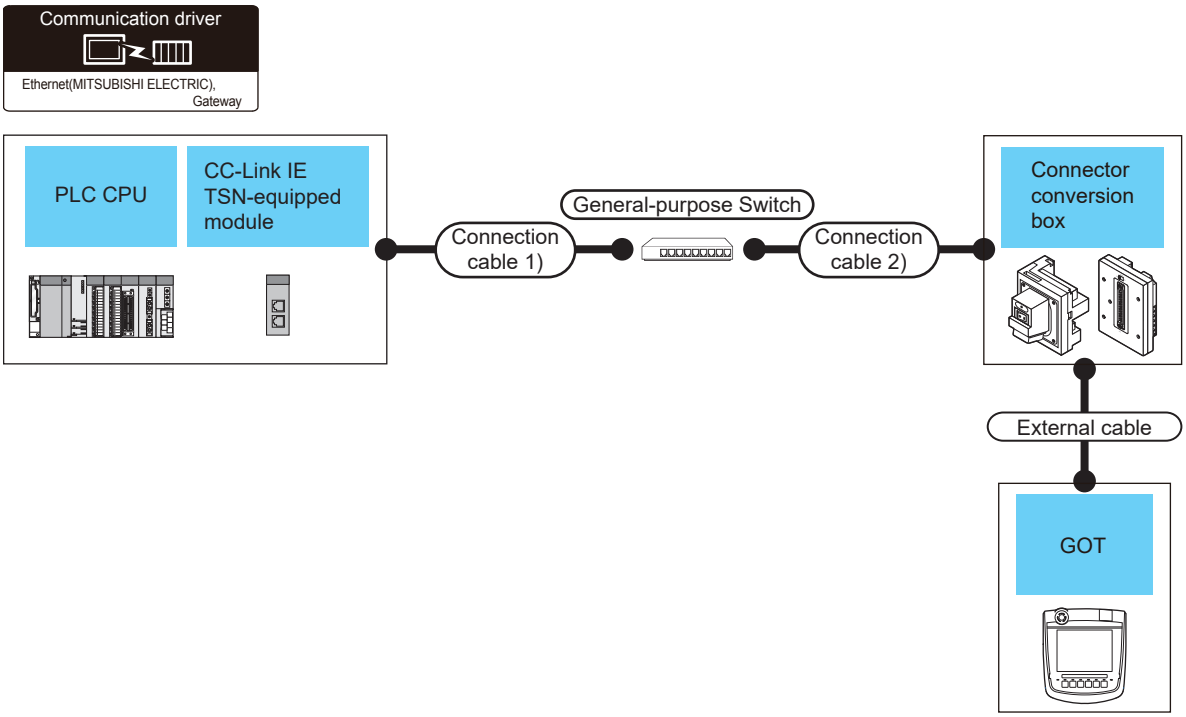
*4 Use C or later version of GT11H-C□□-37P.

Point

• Access to other networks

Other networks cannot be accessed through the PERIPHERAL I/F.

Connection to CC-Link IE TSN-equipped module



PLC			Connection cable 1) *1		External device	Connection cable 2) *1		Connector conversion box	External cable *6	GOT Model	Max. pieces of equipment connected		
Model name	CC-Link IE TSN-equipped module *3*4	Communication type	Cable model	Maximum segment length *5		Cable model	Maximum segment length *5				GOT *7*9	Unit*8	
												UDP	TCP
MELSEC MX Controller (MX-R Model)	RJ71GN11-T2 RJ71GN11-EIP	Ethernet	• 1000BASE-T Double-shielded twisted pair cable (STP) or twisted pair cable of category 5e or higher • 100BASE-TX Double-shielded twisted pair cable (STP) or twisted pair cable of category 5 or higher	100m	General-purpose Switch*2	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	119 (8 or less recommended)	8	8
								GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
								GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2506HS			
								GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				

PLC			Connection cable 1) *1		External device	Connection cable 2) *1		Connector conversion box	External cable *6	GOT Model	Max. pieces of equipment connected		
Model name	CC-Link IE TSN-equipped module *3*4	Communication type	Cable model	Maximum segment length *5		Cable model	Maximum segment length *5				GOT *7*9	Unit*8	
												UDP	TCP
MELSEC MX Controller (MX-F Model)	FX5-CCLGN-MS	Ethernet	• 1000BASE-T Double-shielded twisted pair cable (STP) or twisted pair cable of category 5e or higher • 100BASE-TX Double-shielded twisted pair cable (STP) or twisted pair cable of category 5 or higher	100m	General-purpose Switch*2	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	119 (8 or less recommended)	8	8
								GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
								GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2506HS			
								GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				

PLC			Connection cable 1) *1		External device	Connection cable 2) *1		Connector conversion box	External cable *6	GOT Model	Max. pieces of equipment connected		
Model name	CC-Link IE TSN-equipped module *3*4	Communication type	Cable model	Maximum segment length *5		Cable model	Maximum segment length *5				GOT *7*9	Unit*8	
												UDP	TCP
MELSEC iQ-R series (RnCPU, RnENCPU, RnSFCPU) C Controller module (MELSEC iQ-R series) MELSEC WinCPU (MELSEC iQ-R series)	RJ71GN11-T2	Ethernet	• 1000BASE-T Double-shielded twisted pair cable (STP) or twisted pair cable of category 5e or higher • 100BASE-TX Double-shielded twisted pair cable (STP) or twisted pair cable of category 5 or higher	100m	General-purpose Switch*2	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	119 (8 or less recommended)	8	8
								GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
MELSEC iQ-R series (RnCPU, RnENCPU, RnSFCPU) C Controller module (MELSEC iQ-R series) MELSEC WinCPU (MELSEC iQ-R series)	RJ71GN11-T2	Ethernet	• 1000BASE-T Double-shielded twisted pair cable (STP) or twisted pair cable of category 5e or higher • 100BASE-TX Double-shielded twisted pair cable (STP) or twisted pair cable of category 5 or higher	100m	General-purpose Switch*2	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	119 (8 or less recommended)	8	8
								GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				

PLC			Connection cable 1) *1		External device	Connection cable 2) *1		Connector conversion box	External cable *6	GOT Model	Max. pieces of equipment connected		
Model name	CC-Link IE TSN-equipped module *3*4	Communication type	Cable model	Maximum segment length *5		Cable model	Maximum segment length *5				GOT *7*9	Unit*8	
												UDP	TCP
MELSEC iQ-R series (RnCPU, RnENCPU)	RJ71GN11-EIP*10	Ethernet	• 1000BASE-T Double-shielded twisted pair cable (STP) or twisted pair cable of category 5e or higher • 100BASE-TX Double-shielded twisted pair cable (STP) or twisted pair cable of category 5 or higher	100m	General-purpose Switch*2	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	119 (8 or less recommended)	8	8
								GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
MELSEC iQ-R series (RnCPU, RnENCPU)	RJ71GN11-EIP*10	Ethernet	• 1000BASE-T Double-shielded twisted pair cable (STP) or twisted pair cable of category 5e or higher • 100BASE-TX Double-shielded twisted pair cable (STP) or twisted pair cable of category 5 or higher	100m	General-purpose Switch*2	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	119 (8 or less recommended)	8	8
								GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				

PLC			Connection cable 1) *1		External device	Connection cable 2) *1		Connector conversion box	External cable *6	GOT Model	Max. pieces of equipment connected		
Model name	CC-Link IE TSN-equipped module *3*4	Communication type	Cable model	Maximum segment length *5		Cable model	Maximum segment length *5				GOT *7*9	Unit*8	
												UDP	TCP
MELSEC iQ-F series (FX5U, FX5UC, FX5UJ)	FX5-CCLGN-MS	Ethernet	• 1000BASE-T Double-shielded twisted pair cable (STP) or twisted pair cable of category 5e or higher • 100BASE-TX Double-shielded twisted pair cable (STP) or twisted pair cable of category 5 or higher	100m	General-purpose Switch*2	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	63 (8 or less recommended)	8	8
								GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				
MELSEC iQ-F series (FX5U, FX5UC, FX5UJ)	FX5-CCLGN-MS	Ethernet	• 1000BASE-T Double-shielded twisted pair cable (STP) or twisted pair cable of category 5e or higher • 100BASE-TX Double-shielded twisted pair cable (STP) or twisted pair cable of category 5 or higher	100m	General-purpose Switch*2	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	63 (8 or less recommended)	8	8
								GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)				

*1 Use the straight cable.
*2 For usable General-purpose Switches, refer to the following.
MELSEC iQ-R CC-Link IE TSN User's Manual (Startup)
MELSEC iQ-R CC-Link IE TSN Plus Master/Local Module User's Manual
MELSEC iQ-F FX5 User's Manual (CC-Link IE TSN)
*3 For the system configuration of the CC-Link IE TSN-equipped module side, refer to the following.
MELSEC iQ-R CC-Link IE TSN User's Manual (Startup)
MELSEC iQ-R CC-Link IE TSN Plus Master/Local Module User's Manual
MELSEC iQ-F FX5 User's Manual (CC-Link IE TSN)
*4 Select the following for [Unit Type] in [Connected Ethernet Controller Setting] in GT Designer3.
MELSEC MX Controller (MX-R Model): [RJ71GN11-T2]
MELSEC MX Controller (MX-F Model): [FX5-CCLGN-MS]
MELSEC iQ-R series: [RJ71GN11-T2/RD78G(H)]
MELSEC iQ-F Series: [FX5-CCLGN-MS/FX5-nSSC-G]
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
Page 159 Connected Ethernet controller setting
*5 Length between the General-purpose Switch and node
*6 Use C or later version of GT11H-C□□-37P.
*7 The number of connectable controllers per GOT channel is indicated.
*8 Number of GOTs connectable to one CC-Link IE TSN-equipped module
*9 Up to 128 controllers in total can be set for the GOT channels No. 1 to No. 4.
*10 Connect the cable to the P1 port of the RJ71GN11-EIP.

Connection to Motion module

The following methods are available to connect the GOT to a Motion module.

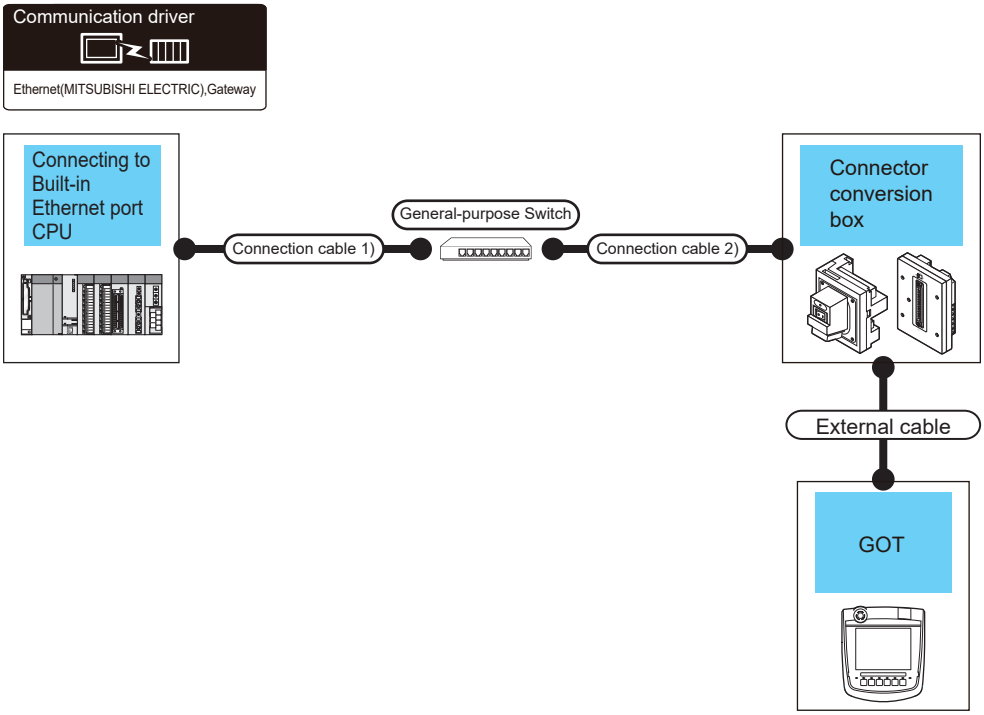
☞ Page 145 Connecting the GOT and Motion module through the built-in Ethernet port of the PLC
☞ Page 147 Connecting the GOT to the built-in Ethernet port of the Motion module

Point

To monitor the global labels of the Motion module with the GOT, connect the GOT and Motion module through the built-in Ethernet port of the PLC.
If the GOT is connected to the built-in port of the Motion module, the global labels of the Motion module cannot be monitored.

Connecting the GOT and Motion module through the built-in Ethernet port of the PLC

The following shows the system configuration for monitoring the global labels of the Motion module with the GOT.



PLC			Connection cable 1) *1		External device	Connection cable 2) *1		Connector conversion box	External cable *7	GOT Model	Number of connectable equipment
Model name	Motion module *3	Communication type	Cable model	Maximum segment length *6		Cable model	Maximum segment length *6				
MELSEC iQ-R series (RnCPU, RnENCPU, RnSFCPU)*4*9 C Controller module (MELSEC iQ-R Series) *5	RD78G4 RD78G8 RD78G16 RD78G32 RD78G64 RD78GHV RD78GHW	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable(STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	General-purpose Switch*2	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	1 GOT for 1 Motion module *8
								GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		

PLC			Connection cable 1) *1		External device	Connection cable 2) *1		Connector conversion box	External cable *7	GOT Model	Number of connectable equipment
Model name	Motion module *3	Communication type	Cable model	Maximum segment length *6		Cable model	Maximum segment length *6				
MELSEC iQ-R series (RnCPU, RnENCPU, RnSFCPU)*4*9 C Controller module (MELSEC iQ-R Series) *5	RD78G4 RD78G8 RD78G16 RD78G32 RD78G64 RD78GHV RD78GHW	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable(STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	General-purpose Switch*2	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	1 GOT for 1 Motion module *8
								GT16H-CNB-37S	GT11H-C30-37P (3m) GT11H-C60-37P (6m) GT11H-C100-37P(10m)		

*1 Use the straight cable.

*2 For usable General-purpose Switches, refer to the following.
For usable general-purpose hubs, refer to the following.
MELSEC iQ-R Motion Module User's Manual (Startup)

*3 For the system configuration on the Motion module side, refer to the following.
MELSEC iQ-R Motion Module User's Manual (Startup)

*4 Select [RCPU] for [Unit Type] in [Connected Ethernet Controller Setting] in GT Designer3.
Set either of the following values for [Port No.] according to the communication method.
• UDP: [5006]
• TCP: [5007]
For [Connected Ethernet Controller Setting] in GT Designer3, refer to the following.
Page 159 Connected Ethernet controller setting

*5 Select [RnCCPU/RnWCPU] for [Unit Type] in [Connected Ethernet Controller Setting] in GT Designer3.
Set either of the following values for [Port No.] according to the communication method.
• UDP: [5006]
• TCP: [5007]
For [Connected Ethernet Controller Setting] in GT Designer3, refer to the following.
Page 159 Connected Ethernet controller setting

*6 Length between the General-purpose Switch and node

*7 Use C or later version of GT11H-C□□-37P.

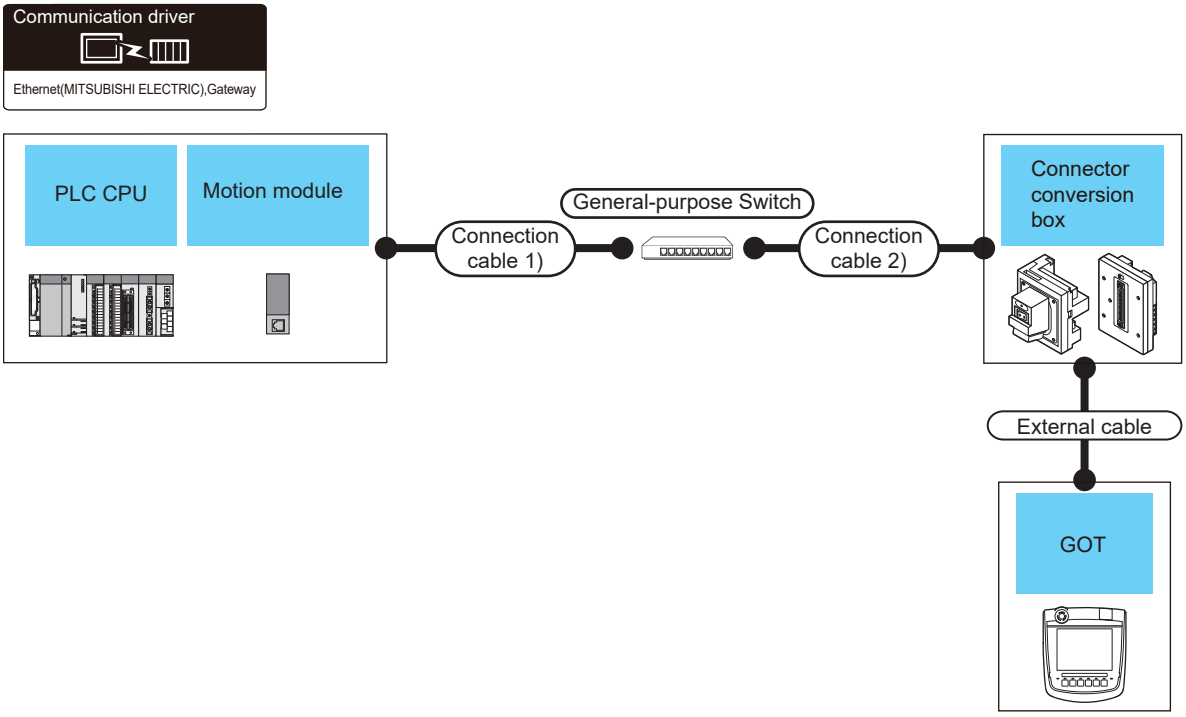
*8 Multiple devices cannot access the Motion module simultaneously.
Before accessing the Motion module monitored by the GOT from another device, exit the monitoring by the GOT.

*9 To use the multiple CPU system when the GOT is connected to RnENCPU, the firmware version of the RnENCPU must be 10 or later.

Connecting the GOT to the built-in Ethernet port of the Motion module

The following shows the system configuration for monitoring the devices of the PLC CPU with the GOT.

■When connecting to MELSEC iQ-R series



PLC			Connection cable 1) *1		External device	Connection cable 2) *1		Connector conversion box	External cable *6	GOT Model	Max. pieces of equipment connected		
Model name	Motion module *3*4	Communication type	Cable model	Maximum segment length *5		Cable model	Maximum segment length *5				GOT *7*9	Unit*8	
												UDP	TCP
MELSEC iQ-R series (RnCPU, RnENCPU, RnSFCPU) C Controller module (MELSEC iQ-R Series)	RD78G4 RD78G8 RD78G16 RD78G32 RD78G64 RD78GHV RD78GHW	Ethernet	• 1000BASE-T Double-shielded twisted pair cable (STP) or twisted pair cable of category 5e or higher • 100BASE-TX Double-shielded twisted pair cable (STP) or twisted pair cable of category 5 or higher	100m	General-purpose Switch*2	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	119 (8 or less recommended)	8	8
								GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				

PLC			Connection cable 1) *1		External device	Connection cable 2) *1		Connector conversion box	External cable *6	GOT Model	Max. pieces of equipment connected		
Model name	Motion module *3*4	Communication type	Cable model	Maximum segment length *5		Cable model	Maximum segment length *5				GOT *7*9	Unit*8	
												UDP	TCP
MELSEC iQ-R series (RnCPU, RnENCPU, RnSFCPU) C Controller module (MELSEC iQ-R Series)	RD78G4 RD78G8 RD78G16 RD78G32 RD78G64 RD78GHV RD78GHW	Ethernet	• 1000BASE-T Double-shielded twisted pair cable (STP) or twisted pair cable of category 5e or higher • 100BASE-TX Double-shielded twisted pair cable (STP) or twisted pair cable of category 5 or higher	100m	General-purpose Switch*2	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	119 (8 or less recommended)	8	8
								GT16H-CNB-37S	GT11H-C30-37P (3m) GT11H-C60-37P (6m) GT11H-C100-37P(10m)				

*1 Use the straight cable.

*2 For usable General-purpose Switches, refer to the following.
MELSEC iQ-R Motion Module User's Manual (Startup)

*3 For the system configuration on the Motion module side, refer to the following.
MELSEC iQ-R Motion Module User's Manual (Startup)

*4 Select [RJ71GN11-T2/RD78G(H)] for [Unit Type] in [Connected Ethernet Controller Setting] in GT Designer3.
For [Connected Ethernet Controller Setting] in GT Designer3, refer to the following.
Page 159 Connected Ethernet controller setting

*5 Length between the General-purpose Switch and node

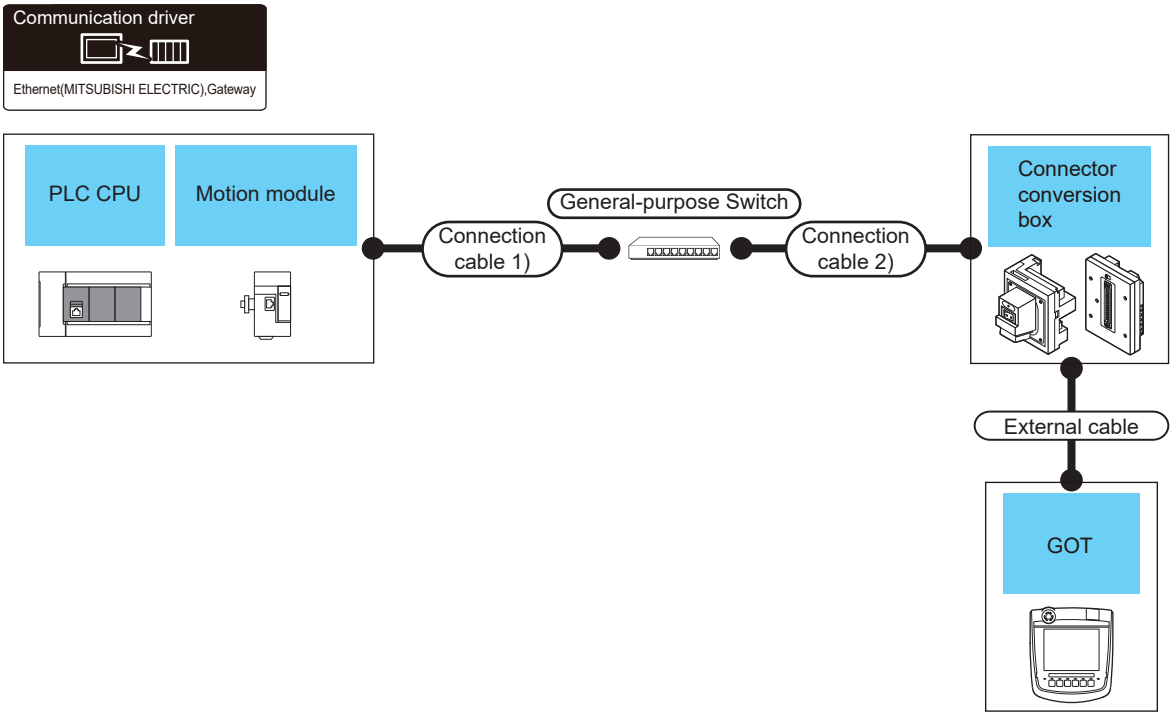
*6 Use C or later version of GT11H-C□□-37P.

*7 The number of connectable controllers per GOT channel is indicated.

*8 Number of GOTs connectable to one Motion module

*9 Up to 128 controllers in total can be set for the GOT channels No. 1 to No. 4.

■When connecting to MELSEC iQ-F series



PLC			Connection cable 1) *1		External device	Connection cable 2) *1		Connector conversion box	External cable *6	GOT Model	Max. pieces of equipment connected		
Model name	Motion module *3*4	Communication type	Cable model	Maximum segment length *5		Cable model	Maximum segment length *5				GOT *7*9	Unit *8	
												UDP	TCP
MELSEC iQ-F series (FX5U, FX5UC)	FX5-40SSC-G FX5-80SSC-G	Ethernet	• 1000BASE-T Double-shielded twisted pair cable (STP) or twisted pair cable of category 5e or higher • 100BASE-TX Double-shielded twisted pair cable (STP) or twisted pair cable of category 5 or higher	100m	General-purpose Switch *2	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	63 (8 or less recommended)	8	8
								GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)				

PLC			Connection cable 1) *1		External device	Connection cable 2) *1		Connector conversion box	External cable *6	GOT Model	Max. pieces of equipment connected		
Model name	Motion module *3*4	Communication type	Cable model	Maximum segment length *5		Cable model	Maximum segment length *5				GOT *7*9	Unit*8	
												UDP	TCP
MELSEC iQ-F series (FX5U, FX5UC)	FX5-40SSC-G FX5-80SSC-G	Ethernet	• 1000BASE-T Double-shielded twisted pair cable (STP) or twisted pair cable of category 5e or higher • 100BASE-TX Double-shielded twisted pair cable (STP) or twisted pair cable of category 5 or higher	100m	General-purpose Switch*2	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	63 (8 or less recommended)	8	8
								GT16H-CNB-37S	GT11H-C30-37P (3m) GT11H-C60-37P (6m) GT11H-C100-37P(10m)				

*1 Use the straight cable.

*2 For usable General-purpose Switches, refer to the following.
MELSEC iQ-F FX5 Motion Module/Simple Motion Module User's Manual (Startup)

*3 For the system configuration on the Motion module side, refer to the following.
MELSEC iQ-F FX5 Motion Module/Simple Motion Module User's Manual (Startup)

*4 Select [FX5-CCLGN-MS/FX5-nSSC-G] for [Unit Type] in [Connected Ethernet Controller Setting] in GT Designer3.
For [Connected Ethernet Controller Setting] in GT Designer3, refer to the following.
Page 159 Connected Ethernet controller setting

*5 Length between the General-purpose Switch and node

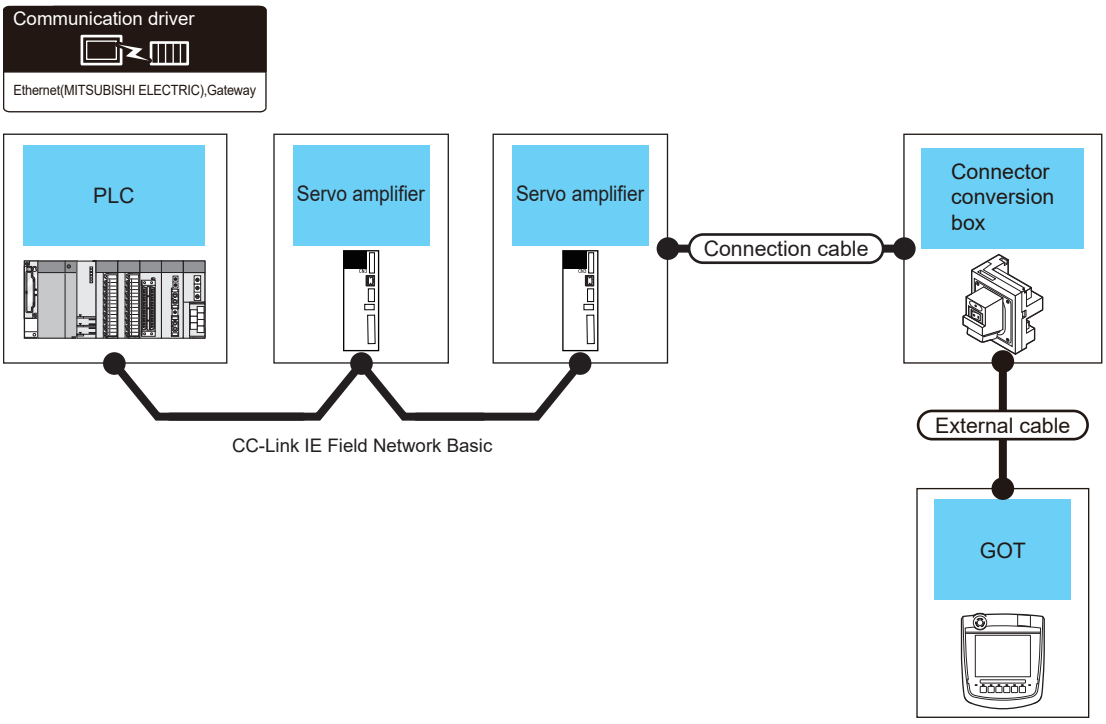
*6 Use C or later version of GT11H-C□□-37P.

*7 The number of connectable controllers per GOT channel is indicated.

*8 Number of GOTs connectable to one Motion module

*9 Up to 128 controllers in total can be set for the GOT channels No. 1 to No. 4.

Connection through a servo amplifier



PLC*1		Servo amplifier		Connection cable	Maximum segment length*2	Connector conversion box	External cable	GOT Model *3	Number of connectable equipment
Model name	Communication type	Model name	Communication type						
MELSEC iQ-R series*4 C Controller module (MELSEC iQ-R series) MELSEC iQ-F series*4 MELSEC-Q (Q mode)*5 MELSEC-L*5	CC-Link IE Field Network Basic	MR-J5-□G MR-J5-□G-RJ MR-J5D1-□G4 MR-JET-G	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	1 GOT for 1 servo amplifier

*1 For the system configuration of the PLC, refer to the following.
Manual of the PLC

*2 The length between the hub and node.
The maximum length depends on the Ethernet module used.
The following shows the number of the connectable pieces of equipment when a repeater hub is used.
• 100BASE-TX: Up to 2 pieces using cascade connection (205 m)
For the cascade connection between the switching hubs, there is no theoretical limit to the number of cascades.
For whether there is a limit, contact the switching hub manufacturer.

*3 For the settings in GOT, refer to the following.
☞ Page 153 GOT Side Settings

*4 Use a PLC whose firmware version is as shown below.

Series	Model name	Applicable firmware version
MELSEC iQ-R series	R00CPU R01CPU R02CPU	From the first version
	R04CPU R08CPU R16CPU R32CPU R120CPU	25 or later
	R04ENCPU R08ENCPU R16ENCPU R32ENCPU R120ENCPU	
MELSEC iQ-F series	FX5U FX5UC FX5UJ FX5S	1.040 or later

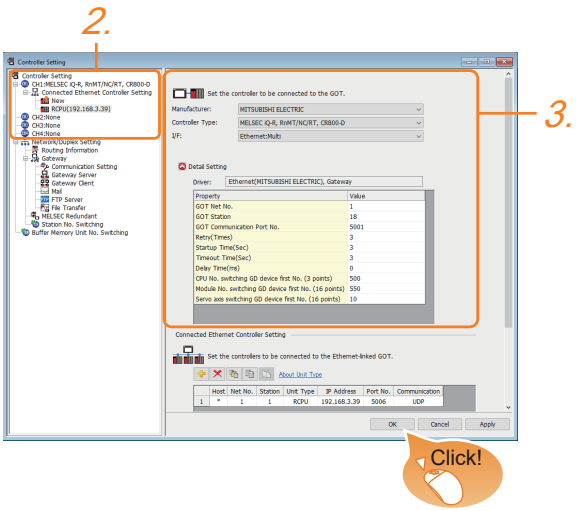
*5 Use a PLC with a serial number starting with a 5-digit number as shown below.

Series	Model name	Applicable version
MELSEC-Q (Q mode)	Q03UDVCPU Q04UDVCPU Q06UDVCPU Q13UDVCPU Q26UDVCPU	PLCs having a serial number starting with 18112 or later
MELSEC-L	L02CPU L06CPU L26CPU L26CPU-BT L02CPU-P L06CPU-P L26CPU-P L26CPU-PBT	PLCs having a serial number starting with 18112 or later

2.3 GOT Side Settings

Setting communication interface (Controller Setting)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.
2. In the [Controller Setting] window, select the channel No. to be used from the list menu.
3. Set the following items.

- [Manufacturer]: [MITSUBISHI ELECTRIC]
- [Controller Type]: Configure the setting according to the controller to be connected.
- [I/F]: [Ethernet:Multi]
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 154 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
GOT Net No.	1
GOT Station	18
GOT Communication Port No.	5001
Retry(Times)	3
Startup Time(Sec)	3
Timeout Time(Sec)	3
Delay Time(ms)	0
CPU No. switching GD device first No. (3 points)	500
Module No. switching GD device first No. (16 points)	550
Servo axis switching GD device first No. (16 points)	10

Item	Description	Range
GOT Net No.	Set the network No. of the GOT. (Default: 1)	1 to 239
GOT Station*2	Set the station No. of the GOT. (Default: 18)	1 to 120*3
GOT Communication Port No.*4	Set the GOT port No. for the connection with the Ethernet module. • For Ethernet(MITSUBISHI ELECTRIC), Gateway (Default: 5001 *5) • For Ethernet(FX), Gateway (Default: 5019 *5)	1024 to 5010, 5014 to 65534 (Except for 5011 to 5013 and 49153 to 49170)
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 3times)	0 to 5times
Startup Time	Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU. (Default: 3sec)	3 to 255sec
Timeout Time*1	Set the time period for a communication to time out. (Default: 3sec)	1 to 90sec
Delay Time	Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms)	0 to 10000(10ms)
CPU No. switching GD device first No. (3 points)	Set the start device number of the GD devices for CPU No. switching. (Default: 500) For the details, refer to the following. ☞ Page 155 Start device number of the GD devices for CPU number switching	0 to 65520
Module No. switching GD device first No. (16 points)	Set the start device number of the GD devices for module No. switching. (Default: 550) For the details, refer to the following. ☞ Page 156 Start device number of the GD devices for module number switching	0 to 65520
Servo axis switching GD device first No. (16 points)	Set the servo axis switching GD device first No. (Default: 10) For the details, refer to the following. ☞ Page 157 Servo axis switching GD device first No.	0 to 65520

*1 To connect the GOT with the Ethernet module (Q Series) in a one-on-one relationship without a hub, set [Timeout Time] to 6 sec. or longer.

*2 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 159 Connected Ethernet controller setting

*3 The range is 1 to 64 when [Driver] is set to [Ethernet(FX), Gateway].

*4 When connecting to the QCPU, LCPU, do not set [5009] for the port No. Otherwise, monitoring becomes unavailable.

*5 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

Point

• Communication interface setting by Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

Start device number of the GD devices for CPU number switching

■Specifying a CPU number with a device

[CPU No.] can be specified with the GOT internal registers (GD devices) by specifying a value (100 to 102) to [CPU No.] in the device setting dialog in GT Designer3.

Set the start device number of the GD devices to be used in [CPU No. switching GD device first No. (3 points)].

Specify [CPU No.] with the three consecutive GD devices, starting the set device number.

When [500] is set to [CPU No. switching GD device first No. (3 points)], GD500 to GD502 are used to specify [CPU No.] as shown in the following table.

CPU No.	GD device	Setting range
100	GD500	1 to 4 Setting an invalid value causes a communication timeout error. Specifying a nonexistent CPU No. or a CPU No. not supporting a multiple CPU system with a device causes a controller error.
101	GD501	
102	GD502	

■Specifying a CPU number with a device on the initially-displayed screen

Set [CPU No. switching GD device first No. (3 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

■Specifying a CPU number with a device in a multi-channel connection

If the setting range of [CPU No. switching GD device first No. (3 points)] set in each channel overlaps, the monitoring target CPU No. set to each channel is switched simultaneously.

Set [CPU No. switching GD device first No. (3 points)] in each channel so that the setting range does not overlap.

■Specifying a CPU number and a station number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [CPU No. switching GD device first No. (3 points)] in a different channel switches the monitoring target CPU No. and station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [CPU No. switching GD device first No. (3 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

Start device number of the GD devices for module number switching

■Specifying a module number with a device

In a connection via a simple motion module, [Unit No.] can be specified with the GOT internal registers (GD devices) by specifying a value (100 to 10F) to [Unit No.] in the device setting dialog in GT Designer3

Set the start device number of the GD devices to be used in [Module No. switching GD device first No. (16 points)].

Specify [Unit No.] with the 16 consecutive GD devices, starting the set device number.

When [550] is set to [Module No. switching GD device first No. (16 points)], GD550 to GD565 are used to specify [Unit No.] as shown in the following table.

Unit No.	GD device	Setting range
100	GD550	The setting range depends on [Unit Type]. • When [MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-L], or [MELIPC] is selected in [Unit Type] 00 to FF • When [MELSEC iQ-F] is selected for [Unit Type] 01 to 10 Setting an invalid value causes a device range error.
101	GD551	
102	GD552	
103	GD553	
104	GD554	
105	GD555	
106	GD556	
107	GD557	
108	GD558	
109	GD559	
10A	GD560	
10B	GD561	
10C	GD562	
10D	GD563	
10E	GD564	
10F	GD565	

■Specifying a module number with a device on the initially-displayed screen

Set [Module No. switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

■Specifying a module number with a device in a multi-channel connection

If the setting range of [Module No. switching GD device first No. (16 points)] set in each channel overlaps, the module No. of the simple motion module via the servo amplifier device of each channel is switched simultaneously.

Set [Module No. switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

■Specifying a station number and a module number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Module No. switching GD device first No. (16 points)] switches the module No. of the simple motion module via the servo amplifier device and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [Module No. switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

Servo axis switching GD device first No.

■Indirect specification of the servo axis No.

In a connection via a Motion CPU or Simple Motion module, a servo axis No. can be indirectly specified with GOT internal registers (GD devices) by specifying a value (100 to 115) to the axis No. of the servo amplifier device.
Set the start device number of the GD devices to be used in [Servo axis switching GD device first No. (16 points)].
Specify a servo axis number with 16 consecutive GD devices, starting the set device number.
When [10] is set to [Servo axis switching GD device first No. (16 points)], GD10 to GD25 are used to specify a servo axis number as shown in the following table.

Servo axis No.	GD device	Setting range
100	GD10	1 to 64 For the setting other than the above, error (dedicated device is out of range) will occur.
101	GD11	
102	GD12	
103	GD13	
104	GD14	
105	GD15	
106	GD16	
107	GD17	
108	GD18	
109	GD19	
110	GD20	
111	GD21	
112	GD22	
113	GD23	
114	GD24	
115	GD25	

■Specifying a servo axis number with a device on the initially-displayed screen

Set [Servo axis switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

■Specifying a servo axis number with a device in a multi-channel connection

If the setting rage of [Servo axis switching GD device first No. (16 points)] set in each channel overlaps, the axis No. of the servo amplifier of each channel is switched simultaneously.
Set [Servo axis switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

■Specifying a station number and a servo axis number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Servo axis switching GD device first No. (16 points)] switches the axis No. of the servo amplifier and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.
Set [Servo axis switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

GOT Ethernet Setting

GOT IP address setting

Set the following communication port setting.

- Standard port

GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

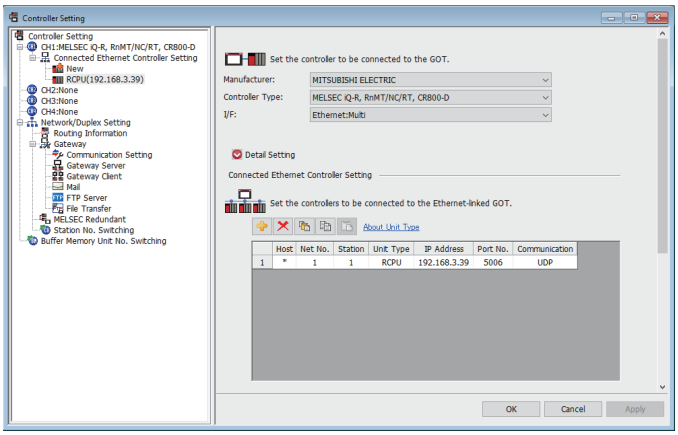
IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 80 GOT Ethernet Setting

Connected Ethernet controller setting



Item	Description	Range
[Host]	The host is displayed. It refers to a station that can be connected without setting a station number. (The host is indicated with an asterisk (*).)	-
[Net No.] *5	Set the network No. of the connected Ethernet module. (Default: 1)	[1] to [239]
[Station] *4*5	Set the station No. of the connected Ethernet module. (Default: 1)	[0], [1] to [64], [1] to [120], or [0] to [120] *6
[Unit Type] *1	Set the type of the connected Ethernet module. (Default: depending on the [Controller Type] setting)	[MX-R(Ethernet)] [MX-R(CC-Link IE TSN)] [MX-F(Ethernet)] [MX-F(CC-Link IE TSN)] [RCPU] [RnCCPU/RnWCPU] [RnNCCPU] [FX5CPU] [QnUD(P)V/QnUDE(H)] [Q17nNC] [QnD(H)CCPU] [RJ71GN11-T2/RD78G(H)] [RJ71EN71] [FX5-CCLGN-MS/FX5-nSSC-G] [FX5-ENET] [QJ71E71/LJ71E71] [LCPU] [NZ2GF-ETB] [AJ71QE71] [AJ71E71] [CR800] [CRnD-700] [Q17nDSR] [FX]
[IP Address]	Set the IP address of the connected Ethernet module. (Default: depending on the [Controller Type] setting)	[0.0.0.0] to [255.255.255.255]
[Port No.] *2*3	Set the port No. of the connected Ethernet module. (Default: depending on the [Controller Type] setting)	[1024] to [65534]
[Communication] *2	(Default: depending on the [Controller Type] setting)	[UDP], [TCP]

*1 Select one of the following [Unit Type].

GOT connection destination	Unit Type
MX-R (Ethernet port P1, P2)	[MX-R(CC-Link IE TSN)]
MX-R (Ethernet port P3)	[MX-R(Ethernet)]
MX-F (Ethernet port P1, P2)	[MX-F(CC-Link IE TSN)]
MX-F (Ethernet port P2)	[MX-F(Ethernet)]
RCPU, RnMTCPU	[RCPU]
C Controller module (MELSEC iQ-R series) MELSECWinCPU (MELSEC iQ-R Series)	[RnCCPU/RnWCPU]
CNC C80(R16NCCPU-S1)	[RnNCCPU]
FX5CPU	[FX5CPU]
QnUD(P)V, QnUDE(H), QCPU, Q170MCPU, Q170MSCPU(-S1), Q173D(S)CPU(-S1), Q172D(S)CPU(-S1)	[QnUD(P)V/QnUDE(H)]
Q17nNCCPU	[Q17nNC]
C Controller module (Q series)	[QnD(H)CCPU]
Ethernet module (MX-R Model)	[RJ71EN71]
CC-Link IE TSN master/local module (MX-R Model)	[RJ71GN11-T2/RJ71GN11-EIP]
Ethernet module (MX-F Model)	[FX5-ENET]
CC-Link IE TSN master/local module (MX-F Model)	[FX5-CCLGN-MS/FX5-nSSC-G]
CC-Link IE TSN master/local module (MELSEC iQ-R series) CC-Link IE TSN Plus master/local module (MELSEC iQ-R Series) Motion module (MELSEC iQ-R Series)	[RJ71GN11-T2/RD78G(H)]
Ethernet module (MELSEC iQ-R Series)	[RJ71EN71]
RnENCPU(Port CPU P1)	[RCPU]
RnENCPU(Port P1)	[RJ71EN71]
RnENCPU(Port P2)	-
CC-Link IE TSN master/local module (MELSEC iQ-F series) Motion module (MELSEC iQ-F Series)	[FX5-CCLGN-MS/FX5-nSSC-G]
Ethernet module (MELSEC iQ-F Series)	[FX5-ENET]
Ethernet module(Q, L series)	[QJ71E71/LJ71E71]
LCPU	[LCPU]
NZ2GF-ETB	[NZ2GF-ETB]
Ethernet module(QnA series)	[AJ71QE71]
Ethernet module(A series)	[AJ71E71]
CR800-R(R16RTCPU)	[CR800]
CRnQ-700, CR750-Q, CR751-Q(Q172DRCPU)	[CRnD-700]
CR800-Q(Q172DSRCPU)	[Q17nDSR]
Ethernet module(FX series)	[FX]

For the applicable Ethernet module, refer to the following.

☞ Page 115 System Configuration

*2 The setting range is as follows:

Type	Port No.	Communication format
[MX-R(Ethernet)]	[5006]	[UDP] (fixed)
	[5007]	[TCP] (fixed)
[MX-R(CC-Link IE TSN)]	[5001]	[UDP] (fixed)
	[5002]	[TCP] (fixed)
[MX-F(Ethernet)]	[5006]	[UDP] (fixed)
	[5007]	[TCP] (fixed)
[MX-F(CC-Link IE TSN)]	[5001]	[UDP] (fixed)
	[5554]	[TCP] (fixed)
[RCPU]	[5001] (Select this item to enable the network No. and PC No. of the Built-in Ethernet port QCPU.)	[UDP] (fixed)
	[5006]	[UDP] (fixed)
	[5007]	[TCP] (fixed)

Type	Port No.	Communication format
[RnCCPU/RnWCPU], [RnNCCPU], [QnD(H)CCPU], [LCPU], [CR800]	[5006]	[UDP] (fixed)
	[5007]	[TCP] (fixed)
[Q17nNC], [RJ71EN71], [RJ71GN11-T2/RD78G(H)], [QJ71E71/LJ71E71], [NZ2GF-ETB]	[5001]	[UDP] (fixed)
	[5002]	[TCP] (fixed)
[FX5-CCLGN-MS/FX5-nSSC-G]	[5001]	[UDP] (fixed)
	[5554]	[TCP] (fixed)
[FX5-ENET]	[5554]	[TCP] (fixed)
	[5555]	[UDP] (fixed)
[QnUD(P)V/QnUDE(H)]	[5001] (Select this item to enable the network No. and PC No. of the Built-in Ethernet port QCPU.)	[UDP] (fixed)
	[5006]	[UDP] (fixed)
	[5007]	[TCP] (fixed)
[AJ71QE71]	[5001]	[UDP] (fixed)
[AJ71E71]	[1024] to [65535]	[UDP] (fixed)
[CRnD-700]	[5001]	[UDP] (fixed)
[Q17nDSR]	[5001]	[UDP] (fixed)
[FX5CPU]	[5562]	[TCP] (fixed)
[FX]	[5551] (When using FX3U-ENET-L or FX3U-ENET)	[TCP] (fixed)
	[5556] (When using FX3U-ENET-ADP)	[TCP] (fixed)

*3 Match the port number of the CPU and [Port No.] of [Connected Ethernet Controller Setting].

*4 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 154 Communication detail settings

*5 The network No. and PLC No. are unnecessary for Built-in Ethernet port CPU (Port No.: 5006, 5007) and FX5CPU/FXCPU.
Set the numbers of [Network No.] and [Station No.] in the object setting dialog to the numbers of [Net No.] and [Station] in [Connected Ethernet Controller Setting].

*6 The setting range of the station No. differs depending on the [Controller Type] setting.

Type	Station No. setting range
[MX-R(Ethernet)] [MX-F(Ethernet)] [RCPU] [RnCCPU/RnWCPU] [RnNCCPU] [FX5CPU] [RJ71EN71] [FX5-ENET]	1 to 120
[QnUD(P)V/QnUDE(H)] [QnD(H)CCPU] [LCPU] [Q17nNC] [QJ71E71/LJ71E71] [AJ71QE71] [AJ71E71] [FX] [NZ2GF-ETB]	1 to 64
[MX-R(CC-Link IE TSN)] [MX-F(CC-Link IE TSN)]	0
[RJ71GN11-T2/RD78G(H)] [FX5-CCLGN-MS/FX5-nSSC-G]	0 to 120

When selecting [RCPU] or [QnUD(P)V/QnUDE(H)] for [Controller Type]

When [RCPU] or [QnUD(P)V/QnUDE(H)] is selected for [Controller Type], the port No. setting can be changed.

■When [5001] is set for the port No.:

There is the setting for the network No. and PC No. of the built-in Ethernet port CPU (Port No.: 5001).

Set the network No. and station No. for the object setting to match the network No. and PC No. of the built-in Ethernet port CPU.

However, when connecting to the built-in Ethernet port CPU other than [RCPU] or [QnUD(P)V/QnUDE(H)], do not set [5001] for the port No.. *1*2

Otherwise, monitoring becomes unavailable.

*1 Use the RCPU with the following firmware version.
R00CPU, R01CPU, R02CPU: 08 or later
RCPU other than the above: 40 or later

*2 Use the QnUD(P)VCPU with a serial number that contains 17052 or later in the first 5 digits.

■When [5006, 5007] is set for the port No.:

There is no setting for the network No. and PC No. of the built-in Ethernet port CPU (Port No.: 5006, 5007).

Set the same values for [Network No.] and [Station No.] in the object setting dialog as that of [Net No.] and [Station] of [Connected Ethernet Controller Setting].

Connection to the built-in Ethernet port PLC using the communication format “TCP”

When using the FA transparent function during communication with the built-in Ethernet port PLC using the communication format “TCP”, the communication format may be changed from “TCP” to “UDP” and communication with the built-in Ethernet port PLC may start.

In this case, communication with the built-in Ethernet port PLC cannot be executed normally.

Take the following corrective action.

Phenomenon	Cause	Corrective action
When using the FA transparent function, communication is failed.	There is no setting of “UDP” in the open setting of the built-in Ethernet port PLC.	Add “UDP” to the open setting at the PLC side.
	When using the Ethernet multiple connection, “TCP” and “UDP” are used to the same IP address and the FA transparent function for the channel set to “TCP” is used.	Execute the FA transparent function for the channel set to “UDP”.

Point

• Example of [Ethernet setting]

For examples of [Ethernet setting], refer to the following.

☞ Page 165 PLC Side Setting

• Parameter reflection function of MELSOFT Navigator

The color of the cells for the items which are reflected to GT Designer3 from MELSOFT Navigator changes to green. Set items, which are displayed in green cells, from the MELSOFT Navigator.

When the settings of N/W No., PLC No., type or IP address are reflected to the parameter from the MELSOFT Navigator, those settings are added.

Items set in advance are not deleted.

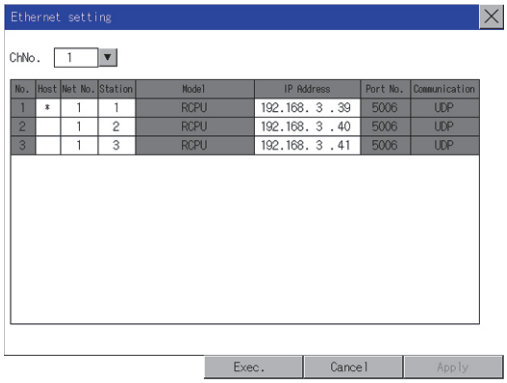
However, if the combination of the N/ W No. and the PLC No. or the IP address overlaps, the item set in advance is overwritten.

• Changing the host on the GOT main unit

The host can be changed by the utility function of the GOT main unit.

For the detailed connection method, refer to the following manual.

GOT2000 Series User's Manual (Utility)

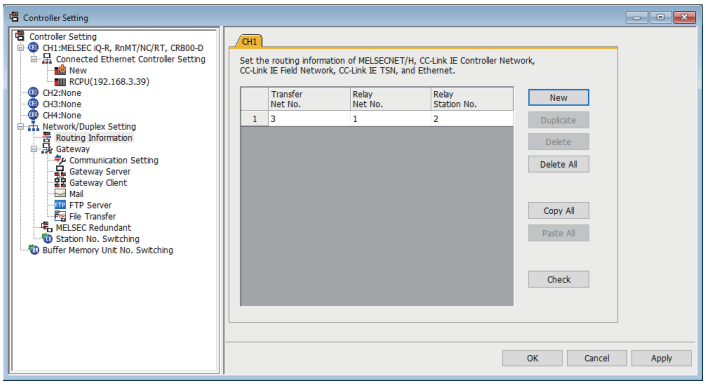


Routing parameter setting

Up to 64 [Transfer Network No.]s can be set.
However, the same transfer network number cannot be set twice or more (multiple times).
Therefore, the one that can access to other station from the request source host GOT is 64 kinds of [Transfer Network No.]s.

Point

Routing parameter setting
When communicating within the host network, routing parameter setting is unnecessary.
For details of routing parameters, refer to the following manual.
MELSEC iQ-R CPU Module User's Manual (Application)
MELSEC-Q/L Ethernet Interface Module User's Manual (Application)



Item	Range
Transfer Network No.	1 to 239
Relay Network No.*1	1 to 239
Relay Station No.*1	0 to 64

*1 To access a different network via Built-in Ethernet port CPU, set the same numbers as [Net No.] and [Station] set in [Connected Ethernet Controller Setting] on GT Designer3.

Point

• Routing parameter setting of relay station
Routing parameter setting may also be necessary for the relay station.
For the setting, refer to the following.
Page 165 PLC Side Setting
• Parameter reflection function of MELSOFT Navigator
The color of the cells for the items which are reflected to GT Designer3 from MELSOFT Navigator changes to green.
Set items, which are displayed in green cells, from the MELSOFT Navigator.
When the settings of Transfer network No., Relay network No. or Relay station No. are reflected to the parameter from the MELSOFT Navigator, those settings are added.
Items set in advance are not deleted.
However, if the target network No. overlaps, the item set in advance is overwritten.
The routing information is used manually by the user when the data is created.
Therefore, after changing the network configuration by MELSOFT Navigator, create a routing information again.
For details of the creation of the routing information, refer to the MELSOFT Navigator help.

2.4 PLC Side Setting

Model		Reference
Built-in Ethernet port (MELSEC MX Controller (MX-R Model))	MXR300-16 MXR300-32 MXR300-64 MXR500-128 MXR500-256	☞ Page 168 Connection to Built-in Ethernet port CPU of MELSEC MX Controller (MX-R Model)
Built-in Ethernet port (MELSEC MX Controller (MX-F Model))	MXF100-8-N32 MXF100-8-P32 MXF100-16-N32 MXF100-16-P32	☞ Page 179 Connection to Built-in Ethernet port CPU of MELSEC MX Controller (MX-F Model)
Built-in Ethernet port RCPU	R00CPU R01CPU R02CPU R04CPU R08CPU R16CPU R32CPU R120CPU R16MTCPU R32MTCPU R64MTCPU R08PCPU R16PCPU R32PCPU R120PCPU R04ENCPU R08ENCPU R16ENCPU R32ENCPU R120ENCPU R08PSFCPU R16PSFCPU R32PSFCPU R120PSFCPU R08SFCPU R16SFCPU R32SFCPU R120SFCPU CNC C80(R16NCCPU-S1) CR800-R(R16RTCPU)	☞ Page 190 Connection to Built-in Ethernet port CPU of MELSEC iQ-R series
C Controller module (MELSEC iQ-R series)	R12CCPU-V	☞ Page 212 Connection to C Controller module (MELSEC iQ-R Series)
MELSECWinCPU (MELSEC iQ-R Series)	R102WCPU-W	☞ Page 216 Connection to MELSECWinCPU (MELSEC iQ-R Series)
Built-in Ethernet port (MELSEC iQ-F series)	FX5U FX5UC FX5UJ FX5S	☞ Page 220 Connection to Built-in Ethernet port CPU of MELSEC iQ-F series

Model		Reference
Built-in Ethernet port QCPU	Q03UDECPU Q04UDEHCPU Q06UDEHCPU Q10UDEHCPU Q13UDEHCPU Q20UDEHCPU Q26UDEHCPU Q50UDEHCPU Q100UDEHCPU Q03UDVCPU Q04UDVCPU Q06UDVCPU Q13UDVCPU Q26UDVCPU Q172DSCPU Q173DSCPU Q172DCPU-S1 Q173DCPU-S1 Q170MCPU Q170MSCPU Q170MSCPU-S1 CR800-Q(Q172DSRCPU)	☞ Page 231 Connection to Built-in Ethernet port CPU of MELSEC-Q/L series ☞ Page 288 Connection to PERIPHERAL I/F
C Controller module (Q Series)	Q12DCCPU-V Q24DHCCPU-V/VG Q24DHCCPU-LS Q26DHCCPU-LS	☞ Page 252 Connecting to C Controller module (Q Series)
Built-in Ethernet port LCPU	L02CPU L26CPU L26CPU-BT L02CPU-P L06CPU-P L26CPU-P L26CPU-PBT L06CPU	☞ Page 231 Connection to Built-in Ethernet port CPU of MELSEC-Q/L series
Ethernet module (MELSEC iQ-R Series)	RJ71EN71*1	☞ Page 202 Connecting to Ethernet module (MELSEC iQ-R Series)
Ethernet module (MELSEC iQ-F Series)	FX5-ENET FX5-ENET/IP*2 FX5-EIP	☞ Page 224 Connection to Ethernet module (MELSEC iQ-F Series)
Ethernet module (Q Series)	QJ71E71-100 QJ71E71-B5 QJ71E71-B2 QJ71E71	☞ Page 246 Connecting to Ethernet module (Q/L Series)
Ethernet module (L Series)	LJ71E71-100	
Ethernet module (QnA Series)	AJ71QE71N3-T AJ71QE71N-B5 AJ71QE71N-B2 AJ71QE71N-T AJ71QE71N-B5T AJ71QE71 AJ71QE71-B5 A1SJ71QE71N3-T A1SJ71QE71N-B5 A1SJ71QE71N-B2 A1SJ71QE71N-T A1SJ71QE71N-B5T A1SJ71QE71-B5 A1SJ71QE71-B2	☞ Page 258 Connecting to Ethernet module (QnA Series)

Model		Reference
Ethernet module (A Series)	AJ71E71N3-T AJ71E71N-B5 AJ71E71N-B2 AJ71E71N-T AJ71E71N-B5T AJ71E71-S3 A1SJ71E71N3-T A1SJ71E71N-B5 A1SJ71E71N-B2 A1SJ71E71N-T A1SJ71E71N-B5T A1SJ71E71-B5-S3 A1SJ71E71-B2-S3	☞ Page 263 Connecting to Ethernet module (A Series)
Ethernet module (FX Series)	FX3U-ENET-L FX3U-ENET FX3U-ENET-ADP	☞ Page 269 Connecting to Ethernet module (FX Series)
Built-in Ethernet port FXCPU	FX3GE	☞ Page 277 Connecting to Built-in Ethernet port FXCPU (FX3GE)
CNC C70	Q173NCCPU	☞ Page 281 Connecting to Display I/F (CNC C70)
CC-Link IE Field Network Ethernet Adapter Module	QJ71GF11-T2	☞ Page 284 Connection to NZ2GF-ETB
CC-Link IE TSN-equipped module	RJ71GN11-T2 RJ71GN11-EIP FX5-CCLGN-MS	☞ Page 293 Connection to CC-Link IE TSN-equipped module
Motion module	RD78G4 RD78G8 RD78G16 RD78G32 RD78G64 RD78GHV RD78GHW	☞ Page 147 Connection to Motion module ☞ Page 145 Connection to Motion module

*1 The module also supports the MELSEC MX Controller (MX-R Model).
*2 The module also supports the MELSEC MX Controller (MX-F Model).

Connection to Built-in Ethernet port CPU of MELSEC MX Controller (MX-R Model)

This section describes the settings of the GOT and Built-in Ethernet port CPU in the following case of system configuration.

☞ Page 168 One-on-one connection and the GOT's communication format is UDP
☞ Page 170 One-on-one connection and the GOT's communication format is TCP
☞ Page 173 Multi-connection and the GOT's communication format is UDP
☞ Page 176 Multi-connection and the GOT's communication format is TCP

Point

• Built-in Ethernet port CPU

For details of Built-in Ethernet port CPU, refer to the following manual.

📖Manuals of the MELSEC MX Controller (MX-R series)

• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

☞ Page 300 Precautions

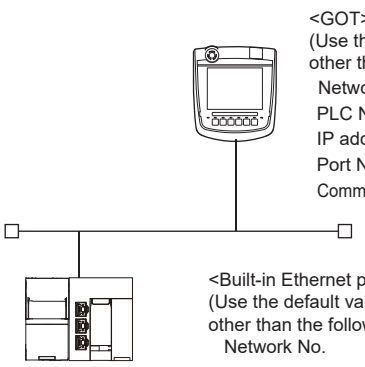
One-on-one connection and the GOT's communication format is UDP

■System configuration

For connecting one Built-in Ethernet port CPU to one GOT, the PLC side settings are not required.

Set [Controller Setting] and [Connected Ethernet Controller Setting] on GT Designer3, and then connect Built-in Ethernet port CPU and the GOT.

(MELSEC MX Controller (MX-R Model))



<GOT>
(Use the default value for settings other than the following.)
Network No. (GOT Net No.)*3 :1
PLC No. (GOT Station)*3 :1
IP address :192.168.3.18
Port No. :5001
Communication format :UDP (fixed)

<Built-in Ethernet port CPU> *1
(Use the default value for settings other than the following.)
Network No. :1 (virtual)*2
PLC No. (Station)*3 :2 (virtual)*2
IP address :192.168.3.39
Port No. :5006 (fixed)
Communication format :UDP (fixed)

*1 For the settings when using system devices such as a hub, refer to the following.
☞ Page 173 Multi-connection and the GOT's communication format is UDP

*2 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 169 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*3 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

Point

[Connected Ethernet Controller Setting] when connecting Built-in Ethernet port CPU and a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

• Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

• GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

• Connected Ethernet Controller Setting

Item		Set value
Ethernet setting No.1	Host	*
	Net No.	1*1
	Station	2*2
	Unit Type	[MX-R(Ethernet)]
	IP Address	192.168.3.39
	Port No.	5006
	Communication	UDP

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number.

■Checking communication state of Built-in Ethernet port CPU

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.39

Reply from 192.168.3.39:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.39

Request timed out.

• At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

The IP address of Built-in Ethernet port CPU specified in the ping command

Point

Ethernet diagnostics of GX Works3

Ethernet diagnostics of GX Works3 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works3, refer to the following manual.

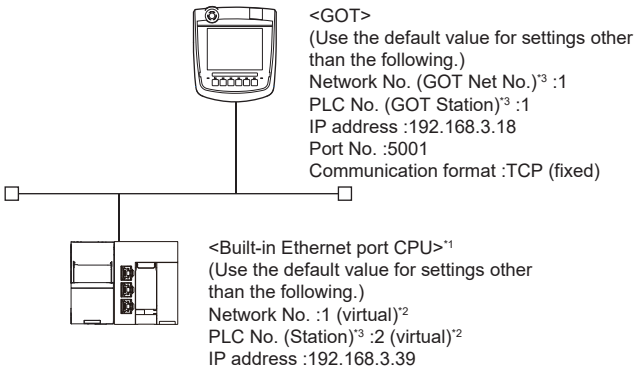
Manuals of the MELSEC MX Controller (MX-R series)

One-on-one connection and the GOT's communication format is TCP

■System configuration

For connecting one Built-in Ethernet port CPU to one GOT, the PLC side settings are not required.

Set [Controller Setting] and [Connected Ethernet Controller Setting] on GT Designer3, and then connect Built-in Ethernet port CPU to the GOT.



*1 For the settings when using system devices such as a hub, refer to the following.

☞ Page 176 Multi-connection and the GOT's communication format is TCP

*2 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.

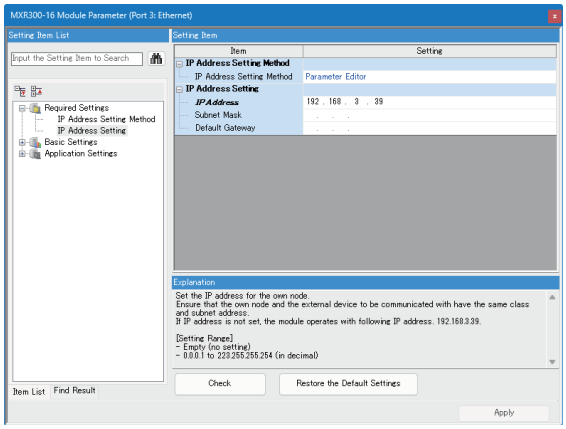
☞ Page 172 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*3 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

■[Module parameter] of GX Works3

• Built-in Ethernet port

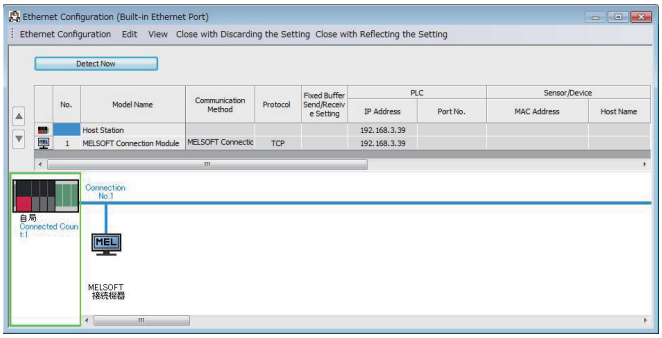


Item	Set value	Setting necessity at GOT connection
IP Address	192.168.3.39 (Use default value)	△
Subnet Mask	-	×
Default Gateway	-	×

○: Necessary △: As necessary ×: Not necessary

• External Device Configuration

The setting is required for all the connected GOTs.



Item	Set value
Protocol	(Use default value)
Open system	MELSOFT connection

■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For how to set [Controller Setting] and [Connected Ethernet Controller Setting] on GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

Point

[Connected Ethernet Controller Setting] when Built-in Ethernet port CPU is connected to a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

• Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

• GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

• Connected Ethernet Controller Setting

Item		Set value
Ethernet setting No.1	Host	*
	Net No.	1*1
	Station	2*2
	Unit Type	[MX-R(Ethernet)]
	IP Address	192.168.3.39
	Port No.	5007
	Communication	TCP (fixed)

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number.

■Checking communication state of Built-in Ethernet port CPU

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.39

Reply from 192.168.3.39:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.39

Request timed out.

• At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

The IP address of Built-in Ethernet port CPU specified in the ping command

Point

Ethernet diagnostics of GX Works3

Ethernet diagnostics of GX Works3 is available to a Ping test from the PLC.

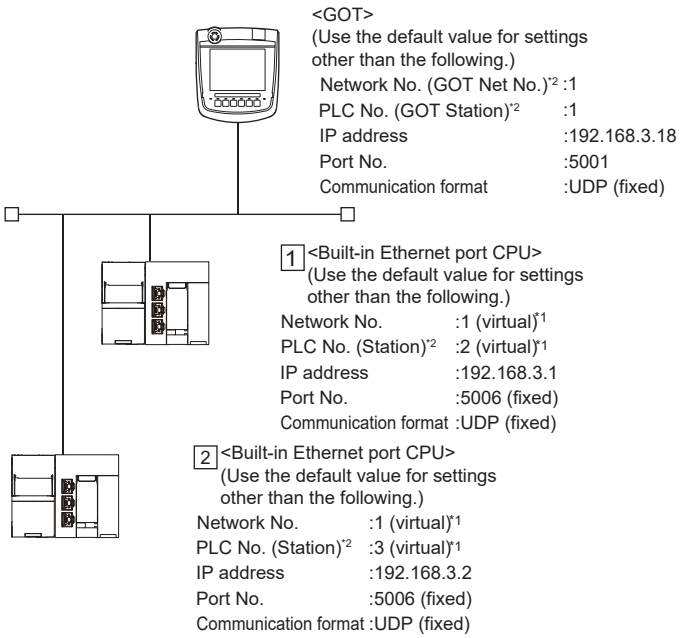
For details of Ethernet diagnostics of GX Works3, refer to the following manual.

Manuals of the MELSEC MX Controller (MX-R series)

Multi-connection and the GOT's communication format is UDP

■System configuration

(MELSEC iQ-R Series)



*1 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 174 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

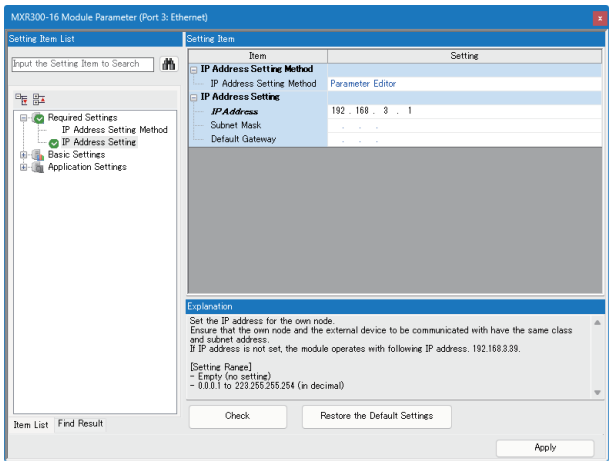
*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

■[Module parameter] of GX Works3

• Built-in Ethernet port

(For MELSEC MX Controller (MX-R Model))



Item	Set value	Setting necessity at GOT connection
IP Address	192.168.3.1	○
Subnet Mask	-	×
Default Gateway	-	×

○: Necessary △: As necessary ×: Not necessary

■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

Point

[Connected Ethernet Controller Setting] when connecting Built-in Ethernet port CPU and a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

• Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

• GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

• Connected Ethernet Controller Setting

Item		Set value	
		1	2
Ethernet setting No.1	Host	*	-
	Net No.	1*1	1*1
	Station	2*2	3*2
	Unit Type	[MX-R(Ethernet)]	[MX-R(Ethernet)]
	IP Address	192.168.3.1	192.168.3.2
	Port No.	5006	5006
	Communication	UDP	UDP

*1 Set the same value as GOT Net No.
*2 Set a value different from the GOT station number and PLC numbers of other PLCs on the same network.

■Checking communication state of Built-in Ethernet port CPU

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.1

Reply from 192.168.3.1:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.1

Request timed out.

• At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

The IP address of Built-in Ethernet port CPU specified in the ping command

Point

Ethernet diagnostics of GX Works3

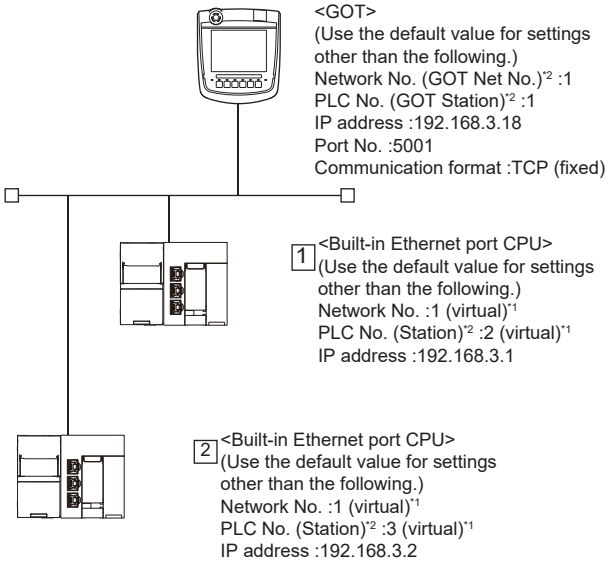
Ethernet diagnostics of GX Works3 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works3, refer to the following manual.

Manuals of the MELSEC MX Controller (MX-R series)

Multi-connection and the GOT's communication format is TCP

■System configuration



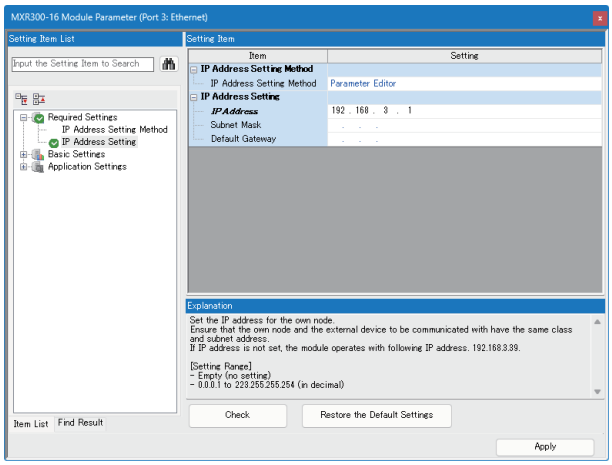
*1 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 177 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

■[Module parameter] of GX Works3

• Built-in Ethernet port

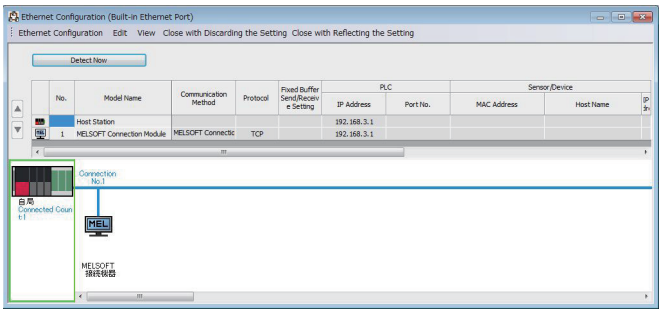


Item	Set value	Setting necessity at GOT connection
IP Address	192.168.3.1	○
Subnet Mask	-	×
Default Gateway	-	×

○: Necessary △: As necessary ×: Not necessary

• External Device Configuration

The setting is required for all the connected GOTs.



Item	Set value
Protocol	(Use default value)
Open system	MELSOFT connection

■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

Point

[Connected Ethernet Controller Setting] when Built-in Ethernet port CPU is connected to a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

• Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

• GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

• Connected Ethernet Controller Setting

Item		Set value	
		1	2
Ethernet setting No.1	Host	*	-
	Net No.	1*1	1*1
	Station	2*2	3*2
	Unit Type	[MX-R(Ethernet)]	[MX-R(Ethernet)]
	IP Address	192.168.3.1	192.168.3.2
	Port No.	5007	5007
	Communication	TCP (fixed)	TCP (fixed)

*1 Set the same value as GOT Net No.
*2 Set a value different from the GOT station number.

■Checking communication state of Built-in Ethernet port CPU

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.1

Reply from 192.168.3.1:bytes=32 time<1ms TTL=32

2) At abnormal communication

\>Ping 192.168.3.1

Request timed out.

• At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

The IP address of Built-in Ethernet port CPU specified in the ping command

Point

Ethernet diagnostics of GX Works3

Ethernet diagnostics of GX Works3 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works3, refer to the following manual.

Manuals of the MELSEC MX Controller (MX-R series)

Connection to Built-in Ethernet port CPU of MELSEC MX Controller (MX-F Model)

This section describes the settings of the GOT and Built-in Ethernet port CPU in the following case of system configuration.

☞ Page 179 One-on-one connection and the GOT's communication format is UDP
☞ Page 181 One-on-one connection and the GOT's communication format is TCP
☞ Page 184 Multi-connection and the GOT's communication format is UDP
☞ Page 187 Multi-connection and the GOT's communication format is TCP

Point

• Built-in Ethernet port CPU

For details of Built-in Ethernet port CPU, refer to the following manual.

📖Manuals of the MELSEC MX Controller (MX-F series)

• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

☞ Page 300 Precautions

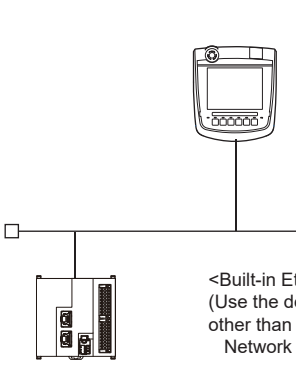
One-on-one connection and the GOT's communication format is UDP

■System configuration

For connecting one Built-in Ethernet port CPU to one GOT, the PLC side settings are not required.

Set [Controller Setting] and [Connected Ethernet Controller Setting] on GT Designer3, and then connect Built-in Ethernet port CPU and the GOT.

(MELSEC iQ-R Series)



<GOT>
(Use the default value for settings other than the following.)
Network No. (GOT Net No.)*3 :1
PLC No. (GOT Station)*3 :1
IP address :192.168.3.18
Port No. :5001
Communication format :UDP (fixed)

<Built-in Ethernet port CPU> *1
(Use the default value for settings other than the following.)
Network No. :1 (virtual)*2
PLC No. (Station)*3 :2 (virtual)*2
IP address :192.168.3.39
Port No. :5006 (fixed)
Communication format :UDP (fixed)

*1 For the settings when using system devices such as a hub, refer to the following.
☞ Page 184 Multi-connection and the GOT's communication format is UDP

*2 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 180 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*3 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

Point

[Connected Ethernet Controller Setting] when connecting Built-in Ethernet port CPU and a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

• Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

• GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

• Connected Ethernet Controller Setting

Item		Set value
Ethernet setting No.1	Host	*
	Net No.	1*1
	Station	2*2
	Unit Type	[MX-F(Ethernet)]
	IP Address	192.168.3.39
	Port No.	5006
	Communication	UDP

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number.

■Checking communication state of Built-in Ethernet port CPU

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.39

Reply from 192.168.3.39:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.39

Request timed out.

• At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

The IP address of Built-in Ethernet port CPU specified in the ping command

Point

Ethernet diagnostics of GX Works3

Ethernet diagnostics of GX Works3 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works3, refer to the following manual.

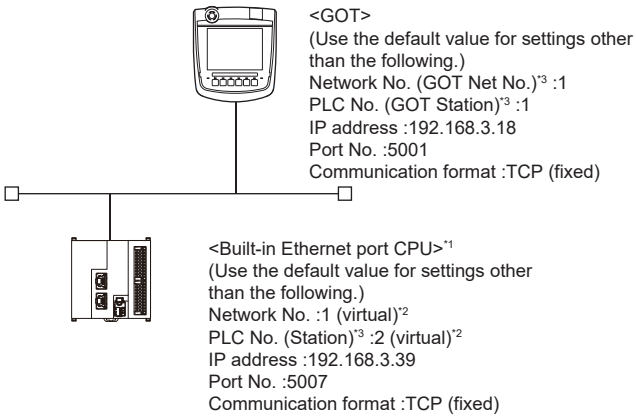
Manuals of the MELSEC MX Controller (MX-F series)

One-on-one connection and the GOT's communication format is TCP

■System configuration

For connecting one Built-in Ethernet port CPU to one GOT, the PLC side settings are not required.

Set [Controller Setting] and [Connected Ethernet Controller Setting] on GT Designer3, and then connect Built-in Ethernet port CPU to the GOT.



*1 For the settings when using system devices such as a hub, refer to the following.

☞ Page 187 Multi-connection and the GOT's communication format is TCP

*2 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.

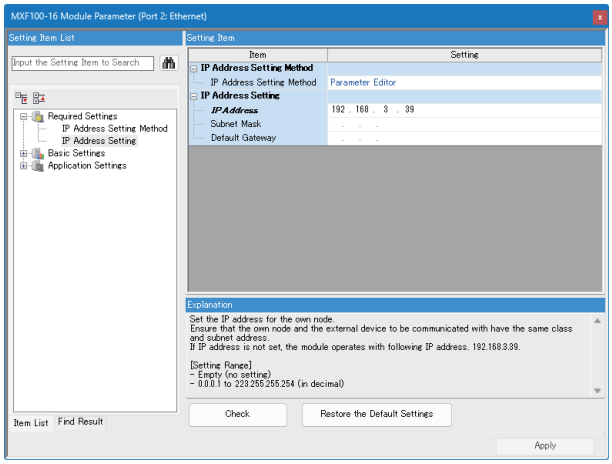
☞ Page 183 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*3 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

■[Module parameter] of GX Works3

• Built-in Ethernet port

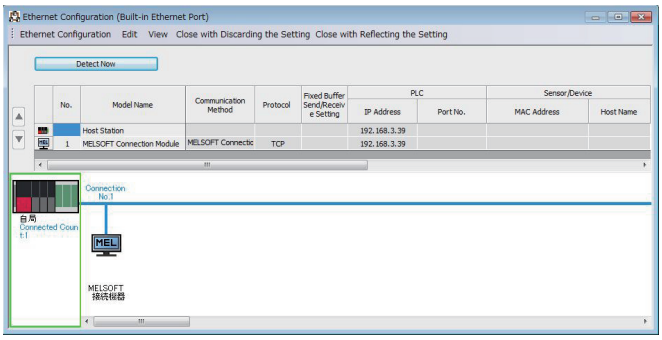


Item	Set value	Setting necessity at GOT connection
IP Address	192.168.3.39 (Use default value)	△
Subnet Mask	-	×
Default Gateway	-	×

○: Necessary △: As necessary ×: Not necessary

• External Device Configuration

The setting is required for all the connected GOTs.



Item	Set value
Protocol	(Use default value)
Open system	MELSOFT connection

■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For how to set [Controller Setting] and [Connected Ethernet Controller Setting] on GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

Point

[Connected Ethernet Controller Setting] when Built-in Ethernet port CPU is connected to a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

• Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

• GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

• Connected Ethernet Controller Setting

Item		Set value
Ethernet setting No.1	Host	*
	Net No.	1*1
	Station	2*2
	Unit Type	[MX-F(Ethernet)]
	IP Address	192.168.3.39
	Port No.	5007
	Communication	TCP (fixed)

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number.

■Checking communication state of Built-in Ethernet port CPU

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.39

Reply from 192.168.3.39:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.39

Request timed out.

• At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

The IP address of Built-in Ethernet port CPU specified in the ping command

Point

Ethernet diagnostics of GX Works3

Ethernet diagnostics of GX Works3 is available to a Ping test from the PLC.

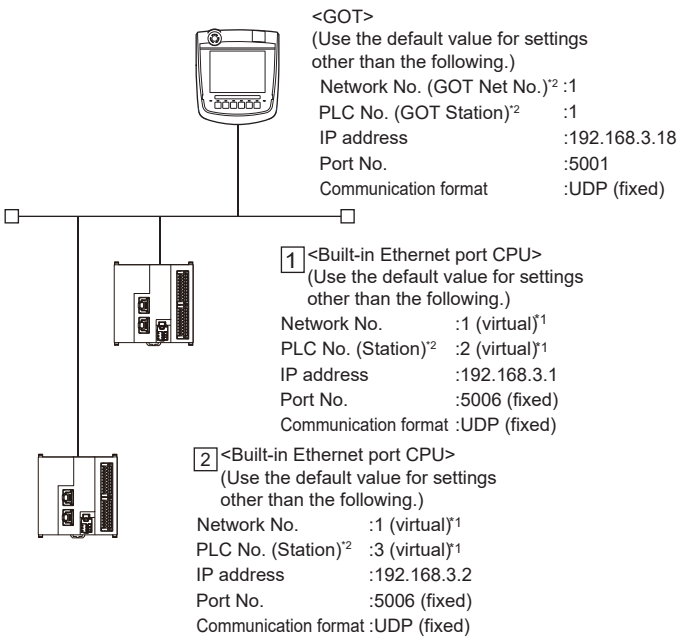
For details of Ethernet diagnostics of GX Works3, refer to the following manual.

Manuals of the MELSEC MX Controller (MX-F series)

Multi-connection and the GOT's communication format is UDP

■System configuration

(MELSEC MX Controller (MX-F Model))



*1 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 185 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

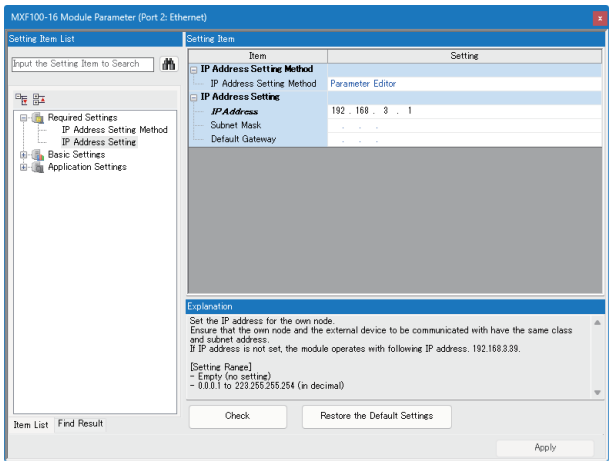
*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

■[Module parameter] of GX Works3

• Built-in Ethernet port

(For MELSEC MX Controller (MX-F Model))



Item	Set value	Setting necessity at GOT connection
IP Address	192.168.3.1	○
Subnet Mask	-	×
Default Gateway	-	×

○: Necessary △: As necessary ×: Not necessary

■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

Point

[Connected Ethernet Controller Setting] when connecting Built-in Ethernet port CPU and a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

• Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

• GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

• Connected Ethernet Controller Setting

Item		Set value	
		1	2
Ethernet setting No.1	Host	*	-
	Net No.	1*1	1*1
	Station	2*2	3*2
	Unit Type	[MX-F(Ethernet)]	[MX-F(Ethernet)]
	IP Address	192.168.3.1	192.168.3.2
	Port No.	5006	5006
	Communication	UDP	UDP

*1 Set the same value as GOT Net No.
*2 Set a value different from the GOT station number and PLC numbers of other PLCs on the same network.

■Checking communication state of Built-in Ethernet port CPU

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.1

Reply from 192.168.3.1:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.1

Request timed out.

• At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

The IP address of Built-in Ethernet port CPU specified in the ping command

Point

Ethernet diagnostics of GX Works3

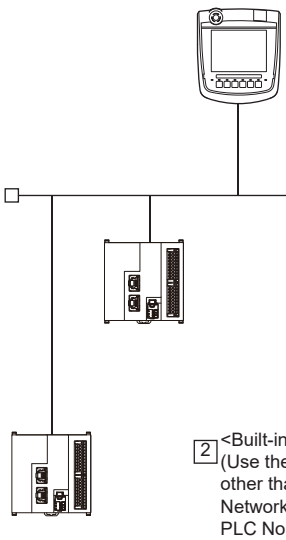
Ethernet diagnostics of GX Works3 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works3, refer to the following manual.

Manuals of the MELSEC MX Controller (MX-F series)

Multi-connection and the GOT's communication format is TCP

■System configuration



<GOT>
(Use the default value for settings other than the following.)
Network No. (GOT Net No.)*2 :1
PLC No. (GOT Station)*2 :1
IP address :192.168.3.18
Port No. :5001
Communication format :TCP (fixed)

1 <Built-in Ethernet port CPU>
(Use the default value for settings other than the following.)
Network No. :1 (virtual)*1
PLC No. (Station)*2 :2 (virtual)*1
IP address :192.168.3.1

2 <Built-in Ethernet port CPU>
(Use the default value for settings other than the following.)
Network No. :1 (virtual)*1
PLC No. (Station)*2 :3 (virtual)*1
IP address :192.168.3.2

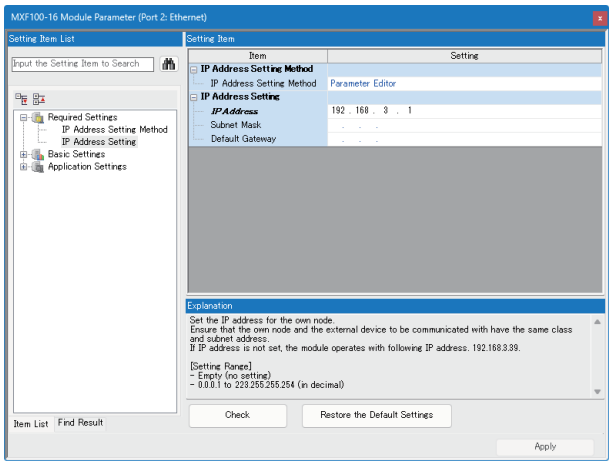
*1 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 188 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

■[Module parameter] of GX Works3

• Built-in Ethernet port

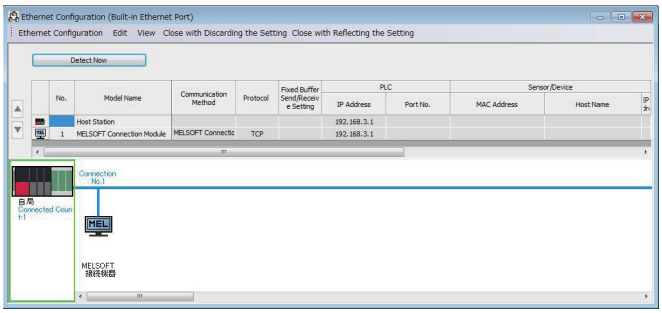


Item	Set value	Setting necessity at GOT connection
IP Address	192.168.3.1	○
Subnet Mask	-	×
Default Gateway	-	×

○: Necessary △: As necessary ×: Not necessary

• External Device Configuration

The setting is required for all the connected GOTs.



Item	Set value
Protocol	(Use default value)
Open system	MELSOFT connection

■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

Point

[Connected Ethernet Controller Setting] when Built-in Ethernet port CPU is connected to a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

• Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

• GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

• Connected Ethernet Controller Setting

Item		Set value	
		1	2
Ethernet setting No.1	Host	*	-
	Net No.	1*1	1*1
	Station	2*2	3*2
	Unit Type	[MX-F(Ethernet)]	[MX-F(Ethernet)]
	IP Address	192.168.3.1	192.168.3.2
	Port No.	5007	5007
	Communication	TCP (fixed)	TCP (fixed)

*1 Set the same value as GOT Net No.
*2 Set a value different from the GOT station number.

■Checking communication state of Built-in Ethernet port CPU

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.1

Reply from 192.168.3.1:bytes=32 time<1ms TTL=32

2) At abnormal communication

\>Ping 192.168.3.1

Request timed out.

• At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

The IP address of Built-in Ethernet port CPU specified in the ping command

Point

Ethernet diagnostics of GX Works3

Ethernet diagnostics of GX Works3 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works3, refer to the following manual.

Manuals of the MELSEC MX Controller (MX-F series)

Connection to Built-in Ethernet port CPU of MELSEC iQ-R series

This section describes the settings of the GOT and Built-in Ethernet port CPU in the following case of system configuration.

☞ Page 190 One-on-one connection and the GOT's communication format is UDP
☞ Page 192 One-on-one connection and the GOT's communication format is TCP
☞ Page 196 Multi-connection and the GOT's communication format is UDP
☞ Page 199 Multi-connection and the GOT's communication format is TCP

Point

• Built-in Ethernet port CPU

For details of Built-in Ethernet port CPU, refer to the following manual.

📖Manuals of MELSEC iQ-R Series

📖Manuals of MELSEC iQ-F Series

• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

☞ Page 300 Precautions

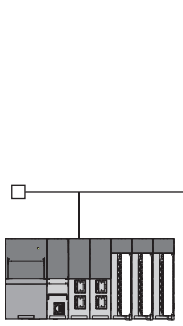
One-on-one connection and the GOT's communication format is UDP

■System configuration

For connecting one Built-in Ethernet port CPU to one GOT, the PLC side settings are not required.

Set [Controller Setting] and [Connected Ethernet Controller Setting] on GT Designer3, and then connect Built-in Ethernet port CPU and the GOT.

(MELSEC iQ-R Series)



<GOT>
(Use the default value for settings other than the following.)
Network No. (GOT Net No.)*3 :1
PLC No. (GOT Station)*3 :1
IP address :192.168.3.18
Port No. :5001
Communication format :UDP (fixed)

<Built-in Ethernet port CPU> *1
(Use the default value for settings other than the following.)
Network No. :1 (virtual)*2
PLC No. (Station)*3 :2 (virtual)*2
IP address :192.168.3.39
Port No. :5006 (fixed)
Communication format :UDP (fixed)

*1 For the settings when using system devices such as a hub, refer to the following.
☞ Page 196 Multi-connection and the GOT's communication format is UDP

*2 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 191 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*3 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

Point

[Connected Ethernet Controller Setting] when connecting Built-in Ethernet port RCPU and a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

• Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

• GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

• Connected Ethernet Controller Setting

Item		Set value
Ethernet setting No.1	Host	*
	Net No.	1*1
	Station	2*2
	Unit Type	RCPU*3
	IP Address	192.168.3.39
	Port No.	5006
	Communication	UDP

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number.

*3 In the case of CNC C80(R16NCCPU-S1), set to [RnNCCPU].
In the case of CR800-R(R16RTCPU), set to [CR800].

■Checking communication state of Built-in Ethernet port CPU

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.39

Reply from 192.168.3.39:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.39

Request timed out.

• At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

The IP address of Built-in Ethernet port CPU specified in the ping command

Point

Ethernet diagnostics of GX Works3

Ethernet diagnostics of GX Works3 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works3, refer to the following manual.

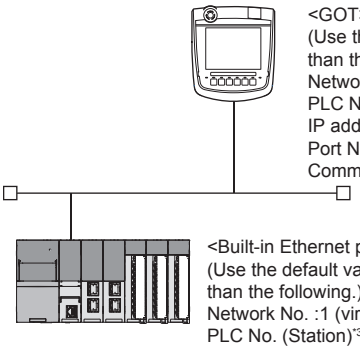
Manuals of MELSEC iQ-R Series

One-on-one connection and the GOT's communication format is TCP

■System configuration

For connecting one Built-in Ethernet port CPU to one GOT, the PLC side settings are not required.

Set [Controller Setting] and [Connected Ethernet Controller Setting] on GT Designer3, and then connect Built-in Ethernet port CPU to the GOT.



<GOT>
(Use the default value for settings other than the following.)
Network No. (GOT Net No.)*3 :1
PLC No. (GOT Station)*3 :1
IP address :192.168.3.18
Port No. :5001
Communication format :TCP (fixed)

<Built-in Ethernet port CPU>*1
(Use the default value for settings other than the following.)
Network No. :1 (virtual)*2
PLC No. (Station)*3 :2 (virtual)*2
IP address :192.168.3.39

*1 For the settings when using system devices such as a hub, refer to the following.
☞ Page 200 Multi-connection and the GOT's communication format is TCP

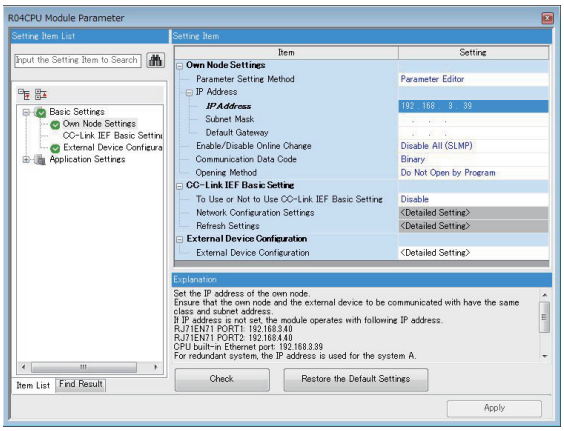
*2 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 194 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*3 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

■[Module parameter] of GX Works3

• Built-in Ethernet port

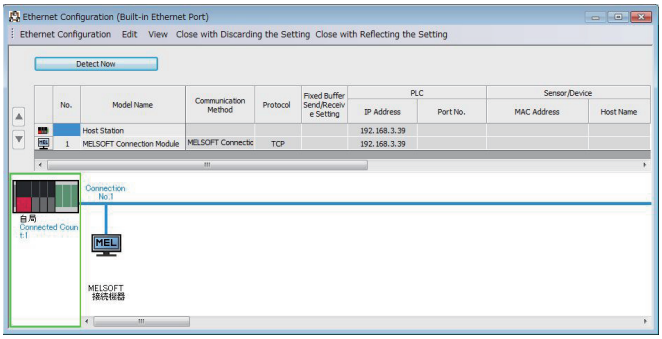


Item	Set value	Setting necessity at GOT connection
IP Address	192.168.3.39 (Use default value)	△
Subnet Mask	-	×
Default Gateway	-	×
Communication data code	(Use default value)	△
External Device Configuration	☞ • External Device Configuration	○

○: Necessary △: As necessary ×: Not necessary

• External Device Configuration

The setting is required for all the connected GOTs.



Item	Set value
Protocol	(Use default value)
Open system	MELSOFT connection

■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For how to set [Controller Setting] and [Connected Ethernet Controller Setting] on GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

Point

[Connected Ethernet Controller Setting] when Built-in Ethernet port RCPU is connected to a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

• Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

• GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

• Connected Ethernet Controller Setting

Item		Set value
Ethernet setting No.1	Host	*
	Net No.	1*1
	Station	2*2
	Unit Type	RCPU*3
	IP Address	192.168.3.39
	Port No.	5007
	Communication	TCP (fixed)

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number.

*3 In the case of CNC C80(R16NCCPU-S1), set to [RnNCCPU].

■Checking communication state of Built-in Ethernet port CPU

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.39

Reply from 192.168.3.39:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.39

Request timed out.

• At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

The IP address of Built-in Ethernet port CPU specified in the ping command

Point

Ethernet diagnostics of GX Works3

Ethernet diagnostics of GX Works3 is available to a Ping test from the PLC.

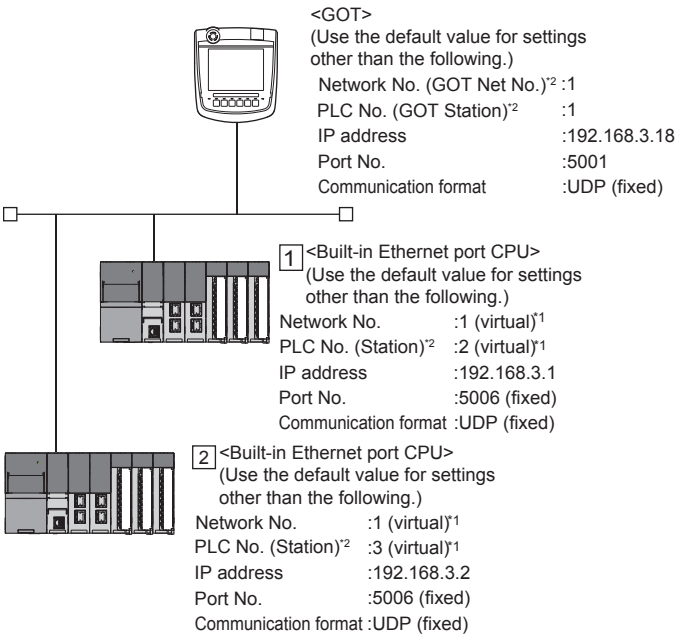
For details of Ethernet diagnostics of GX Works3, refer to the following manual.

Manuals of MELSEC iQ-R Series

Multi-connection and the GOT's communication format is UDP

■System configuration

(MELSEC iQ-R Series)



*1 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 197 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

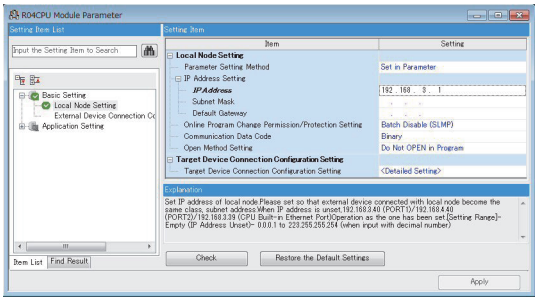
*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

■[Module parameter] of GX Works3

• Built-in Ethernet port

(For MELSEC iQ-R Series)



Item	Set value	Setting necessity at GOT connection
IP Address	192.168.3.1	○
Subnet Mask	-	×
Default Gateway	-	×
Online Program Change Permission/Protection Setting	(Use default value)	△
Communication Data Code		△
Open Method Setting		△
Target Device Connection Configuration Setting	-	×

○: Necessary △: As necessary ×: Not necessary

■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

Point

[Connected Ethernet Controller Setting] when connecting Built-in Ethernet port CPU and a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

• Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

• GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

• Connected Ethernet Controller Setting

Item		Set value	
		1	2
Ethernet setting No.1	Host	*	-
	Net No.	1*1	1*1
	Station	2*2	3*2
	Unit Type	RCPU*3	RCPU*3
	IP Address	192.168.3.1	192.168.3.2
	Port No.	5006	5006
	Communication	UDP	UDP

*1 Set the same value as GOT Net No.
*2 Set a value different from the GOT station number and PLC numbers of other PLCs on the same network.
*3 In the case of CNC C80(R16NCCPU-S1), set to [RnNCCPU].

■Checking communication state of Built-in Ethernet port CPU

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.1

Reply from 192.168.3.1:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.1

Request timed out.

• At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

The IP address of Built-in Ethernet port CPU specified in the ping command

Point

Ethernet diagnostics of GX Works3

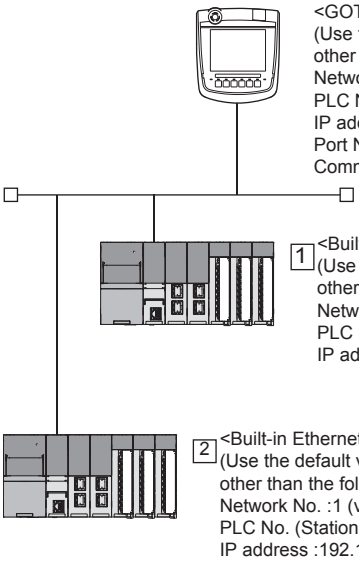
Ethernet diagnostics of GX Works3 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works3, refer to the following manual.

Manuals of MELSEC iQ-R Series

Multi-connection and the GOT's communication format is TCP

■System configuration



<GOT>
(Use the default value for settings other than the following.)
Network No. (GOT Net No.)*2 :1
PLC No. (GOT Station)*2 :1
IP address :192.168.3.18
Port No. :5001
Communication format :TCP (fixed)

1 <Built-in Ethernet port CPU>
(Use the default value for settings other than the following.)
Network No. :1 (virtual)*1
PLC No. (Station)*2 :2 (virtual)*1
IP address :192.168.3.1

2 <Built-in Ethernet port CPU>
(Use the default value for settings other than the following.)
Network No. :1 (virtual)*1
PLC No. (Station)*2 :3 (virtual)*1
IP address :192.168.3.2

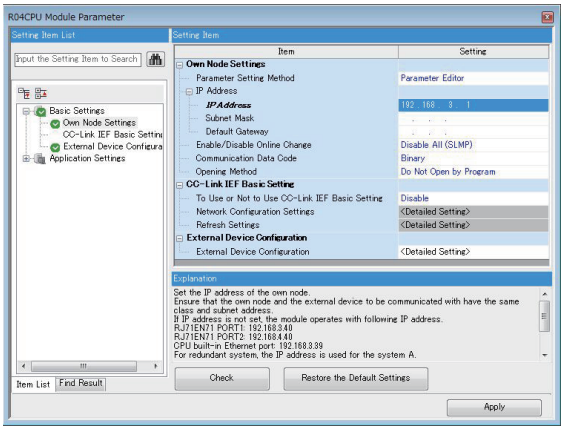
*1 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 200 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

■[Module parameter] of GX Works3

• Built-in Ethernet port

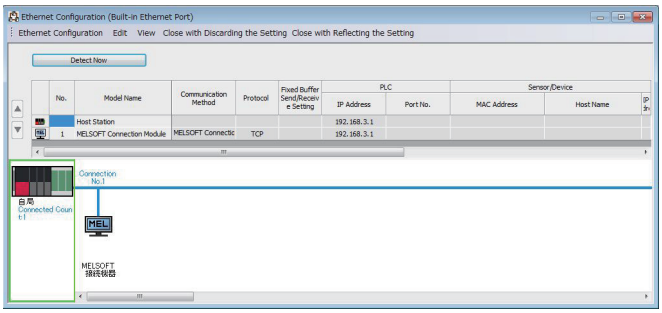


Item	Set value	Setting necessity at GOT connection
IP Address	192.168.3.1	○
Subnet Mask	-	×
Default Gateway	-	×
Online Program Change Permission/Protection Setting	(Use default value)	△
Communication data code		△
Open Method Setting		△
External Device Configuration	☞ • External Device Configuration	○

○: Necessary △: As necessary ×: Not necessary

• External Device Configuration

The setting is required for all the connected GOTs.



Item	Set value
Protocol	(Use default value)
Open system	MELSOFT connection

■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

Point

[Connected Ethernet Controller Setting] when Built-in Ethernet port CPU is connected to a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

• Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

• GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

• Connected Ethernet Controller Setting

Item		Set value	
		1	2
Ethernet setting No.1	Host	*	-
	Net No.	1*1	1*1
	Station	2*2	3*2
	Unit Type	RCPU*3	RCPU*3
	IP Address	192.168.3.1	192.168.3.2
	Port No.	5007	5007
	Communication	TCP (fixed)	TCP (fixed)

*1 Set the same value as GOT Net No.
*2 Set a value different from the GOT station number.
*3 In the case of CNC C80(R16NCCPU-S1), set to [RnNCCPU].

■Checking communication state of Built-in Ethernet port CPU

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.1

Reply from 192.168.3.1:bytes=32 time<1ms TTL=32

2) At abnormal communication

\>Ping 192.168.3.1

Request timed out.

• At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

The IP address of Built-in Ethernet port CPU specified in the ping command

Point

Ethernet diagnostics of GX Works3

Ethernet diagnostics of GX Works3 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works3, refer to the following manual.

Manuals of MELSEC iQ-R Series

Connecting to Ethernet module (MELSEC iQ-R Series)

This section describes the settings of the GOT and Ethernet module (MELSEC iQ-R Series) in the following case of the system configuration.

The Ethernet module (MELSEC iQ-R Series) also supports the MELSEC MX Controller (MX-R Model).

Point

• Ethernet module (MELSEC iQ-R Series)

For details of the Ethernet module (MELSEC iQ-R Series), refer to the following manual.

Manuals of MELSEC iQ-R Series

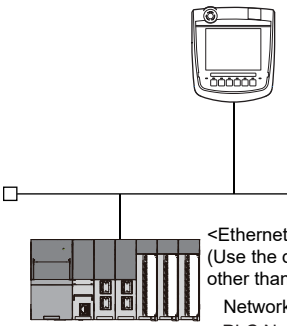
• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

Page 300 Precautions

When the GOT's communication format is UDP

■System configuration



<GOT>
(Use the default value for settings other than the following.)

Network No. (GOT Net No.)*2	:1
PLC No. (GOT Station)*2	:1
IP address	:192.168.3.18
Port No.	:5001
Communication format	:UDP (fixed)

<Ethernet module>*1
(Use the default value for settings other than the following.)

Network No.	:1
PLC No. (Station)*2	:2
IP address	:192.168.3.19
Port No.	:5001
Communication format	:UDP (fixed)

*1 The Ethernet module is mounted on the base unit slot 0.
The Start XY No. of the Ethernet module is set to "0".

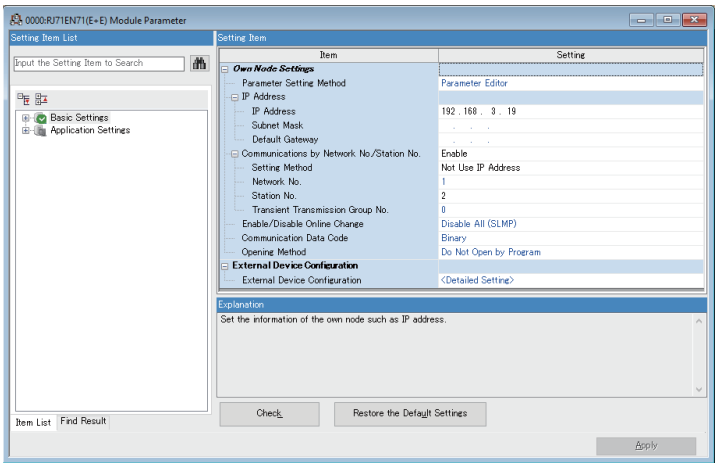
*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

■[Module parameter] of GX Works3

- Module parameter of Ethernet module (MELSEC iQ-R Series)*1

*1 Set [Module parameter] of the port under [Module information].



Item	Set value	Setting necessity at GOT
IP Address	192.168.3.19	○
Subnet Mask	-	×
Default Gateway	-	×
Communications by Network No./Station No.	Enable	○
Setting Method	Not Use IP Address	○
Network No.*2	1	○
Station No.*3	2	○
Transient Transmission Group No.	(Use default value)	×
Enable/Disable Online Change		×
Communication Data Code		×
Opening Method		×
External Device Configuration	-	×

○: Necessary △: As necessary ×: Not necessary

*2 Set the same network No. as that of the GOT.

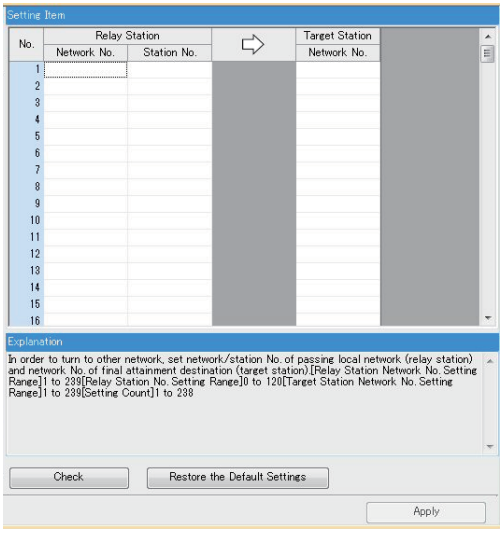
*3 Do not set the same station No. as that of the GOT.

• Routing setting

Up to 238 [Target Station Network No.]s can be set.

However, the same target station network number cannot be set twice or more (multiple times).

Therefore, the one that can access to other station from the request source host GOT is 238 kinds of [Target Station Network No.]s.



Item	Range
Target Station network No.	1 to 239
Relay Station network No.	1 to 239
Relay station No.	0 to 120

Point

Routing parameter setting of request source

Routing parameter setting is also necessary for the request source GOT.

For the setting, refer to the following.

☞ Page 164 Routing parameter setting

• Communication confirmation

The communication status can be checked with the LINK LED on the Ethernet module.

For confirming the communication state, refer to the following.

☞ Page 206 Confirming the communication state of Ethernet module

■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

Point

[Connected Ethernet Controller Setting] when Built-in Ethernet port RCPU is connected to a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

• Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

• GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

• Connected Ethernet Controller Setting

Item		Set value
Ethernet setting No.1	Host	*
	Net No.	1*1
	Station	2*2
	Unit Type	RJ71EN71
	IP Address	192.168.3.19
	Port No.	5001
	Communication	UDP

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number.

■Confirming the communication state of Ethernet module

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.19

Reply from 192.168.3.19:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.19

Request timed out.

• At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

The IP address of Built-in Ethernet port CPU specified in the ping command

Point

Ethernet diagnostics of GX Works3

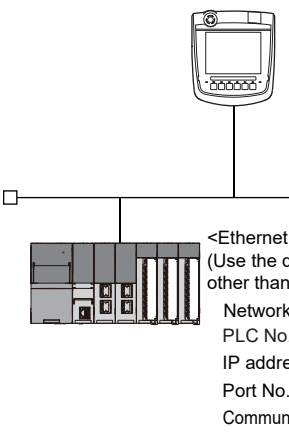
Ethernet diagnostics of GX Works3 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works3, refer to the following manual.

Manuals of MELSEC iQ-R Series

When the GOT's communication format is TCP

■System configuration



<GOT>
(Use the default value for settings other than the following.)
Network No. (GOT Net No.)*2 :1
PLC No. (GOT Station)*2 :1
IP address :192.168.3.18
Port No. :5001
Communication format :TCP (fixed)

<Ethernet module>*1
(Use the default value for settings other than the following.)
Network No. :1
PLC No. (Station)*2 :2
IP address :192.168.3.19
Port No. :5002
Communication format :TCP (fixed)

*1 The Ethernet module is mounted on the base unit slot 0.
The Start XY No. of the Ethernet module is set to "0".

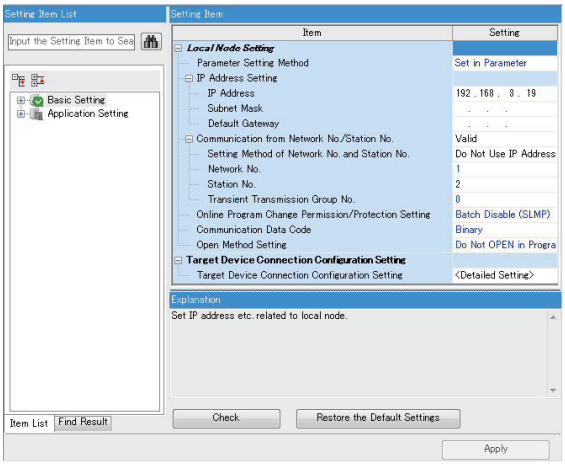
*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

■[Module parameter] of GX Works3

• Module parameter of Ethernet module (MELSEC iQ-R Series)*1

*1 Set [Module parameter] of the port under [Module information].



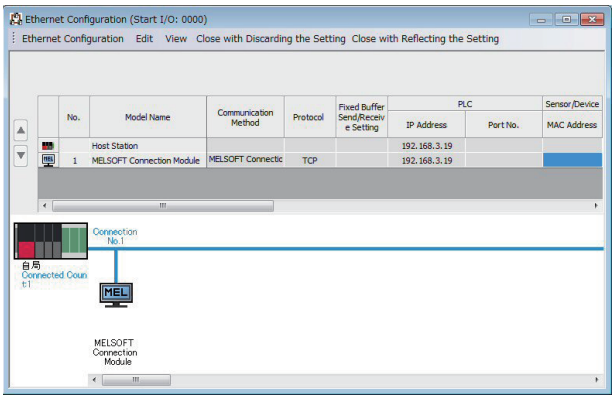
Item	Set value	Setting necessity at GOT connection
IP Address	192.168.3.19	○
Subnet Mask	-	×
Default Gateway	-	×
Setting Method of Network No. and Station No.	Do Not Use IP Address	×
Network No.*2	1	○
Station No.*3	2	○
Transient Transmission Group No.	(Use default value)	×
Online Program Change Permission/Protection Setting		×
Communication Data Code		×
Open Method Setting		×
Target Device Connection Configuration Setting	☞ • Target Device connection Configuration Setting	○

○: Necessary △: As necessary ×: Not necessary

*2 Set the same network No. as that of the GOT.

*3 Do not set the same station No. as that of the GOT.

• Target Device connection Configuration Setting



Item	Set value
Protocol	(Use default value)
Open system	MELSOFT connection (fixed)
Host station port No.	(Use default value)

Point

When changing the module parameter

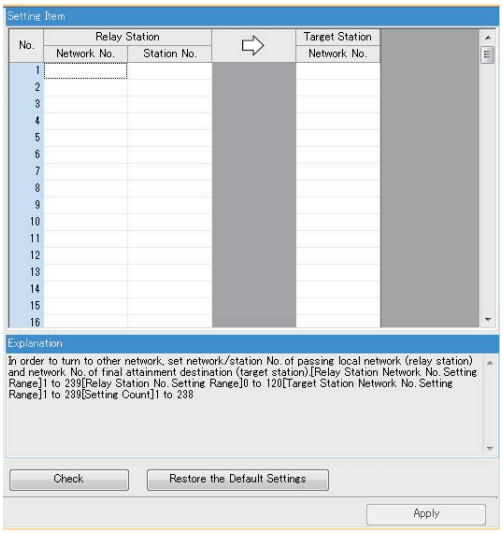
After writing module parameters to the PLC CPU, turn the PLC CPU OFF then back ON again, or reset the PLC CPU.

• Routing setting

Up to 238 [Target Station Network No.]s can be set.

However, the same target station network number cannot be set twice or more (multiple times).

Therefore, the one that can access to other station from the request source host GOT is 238 kinds of [Target Station Network No.]s.



Item	Range
Target Station network No.	1 to 239
Relay Station network No.	1 to 239
Relay station No.	0 to 120

Point

Routing parameter setting of request source

Routing parameter setting is also necessary for the request source GOT.

For the setting, refer to the following.

☞ Page 164 Routing parameter setting

• Communication confirmation

The communication status can be checked with the LINK LED on the Ethernet module.

For confirming the communication state, refer to the following.

☞ Page 211 Confirming the communication state of Ethernet module

■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

• Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

• GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

• Connected Ethernet Controller Setting

Item		Set value
Ethernet setting No.1	Host	*
	Net No.	1[*1]
	Station	2[*2]
	Unit Type	RJ71EN71
	IP Address	192.168.3.19
	Port No.	5001
	Communication	UDP

■Confirming the communication state of Ethernet module

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.19

Reply from 192.168.3.19:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.19

Request timed out.

• At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

Mounting condition of Ethernet communication unit

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

IP address of the Ethernet module specified by Ping command

Point

Ethernet diagnostics of GX Works3

Ethernet diagnostics of GX Works3 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works3, refer to the following manual.

Manuals of MELSEC iQ-R Series

Connection to C Controller module (MELSEC iQ-R Series)

This section describes the settings of the GOT and C Controller module (MELSEC iQ-R Series) in the following case of system configuration.

Use CW Configurator for the C Controller module (MELSEC iQ-R Series) communication settings.

Point

• C Controller module (MELSEC iQ-R Series)

For details of C Controller module (MELSEC iQ-R Series), refer to the following manual.

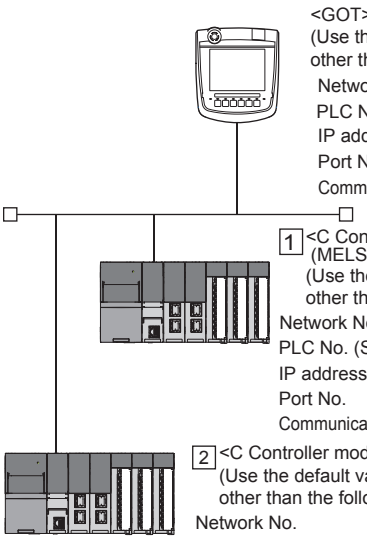
Manuals of C Controller module (MELSEC iQ-R Series)

• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

Page 300 Precautions

System configuration



<GOT>
(Use the default value for settings other than the following.)
Network No. (GOT Net No.)*2 :1
PLC No. (GOT Station)*2 :1
IP address :192.168.3.18
Port No. :5001
Communication format :UDP (fixed)

1 <C Controller module (MELSEC iQ-R Series) >
(Use the default value for settings other than the following.)
Network No. :1 (virtual)*1
PLC No. (Station)*2 :2 (virtual)*1
IP address :192.168.3.3
Port No. :5006 (fixed)
Communication format :UDP (fixed)

2 <C Controller module (MELSEC iQ-R Series) >
(Use the default value for settings other than the following.)
Network No. :1 (virtual)*1
PLC No. (Station)*2 :3 (virtual)*1
IP address :192.168.3.4
Port No. :5006 (fixed)
Communication format :UDP (fixed)

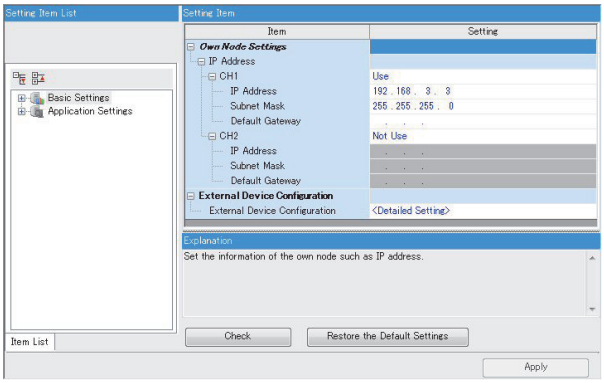
*1 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
Page 214 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

[Module parameter] of CW Configurator

■Module parameter



Item*1	Set value	Setting necessity at GOT connection
CH1	Use	×
IP Address	192.168.3.3	×
Subnet Mask	-	×
Default Gateway	-	×
CH2	Not Use	×
IP Address	-	×
Subnet Mask	-	×
Default Gateway	-	×
External Device Configuration	-	×

○: Necessary △: As necessary ×: Not necessary

*1 Set the IP address corresponding to the CH No. to be used to connect to the GOT.

[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

Point

[Connected Ethernet Controller Setting] when Built-in Ethernet port CPU is connected to a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

■Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

■GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

■Connected Ethernet Controller Setting

Item		Set value	
		1	2
Ethernet setting No.1	Host	*	-
	Net No.	1*1	1*1
	Station	2*2	3*2
	Unit Type	RnCCPU/RnWCPU	RnCCPU/RnWCPU
	IP Address	192.168.3.13	192.168.3.4
	Port No.*3	5006	5006
	Communication*3	UDP	UDP

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number and PLC numbers of other PLCs on the same network.

*3 The following [Port No.] and [Communication format] can also be set.
[Port No.]: 5007
[Communication]: TCP

Checking communication state of C Controller module (MELSEC iQ-R Series)

■When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

- At normal communication

C:\>Ping 192.168.3.3

Reply from 192.168.3.3:bytes=32 time<1ms TTL=32

- At abnormal communication

C:\>Ping 192.168.3.3

Request timed out.

■At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

- Cable connecting condition
- Confirmation of switch and network parameter setting
- Operation state of PLC CPU (faulty or not)
- The IP address of C Controller module (MELSEC iQ-R Series) specified in the ping command

Point

Ethernet diagnostics of CW Configurator

Ethernet diagnostics of CW Configurator is available to a Ping test from the PLC.

For details of Ethernet diagnostics of CW Configurator, refer to the following manual.

Manuals of C Controller module (MELSEC iQ-R Series)

Connection to MELSECWinCPU (MELSEC iQ-R Series)

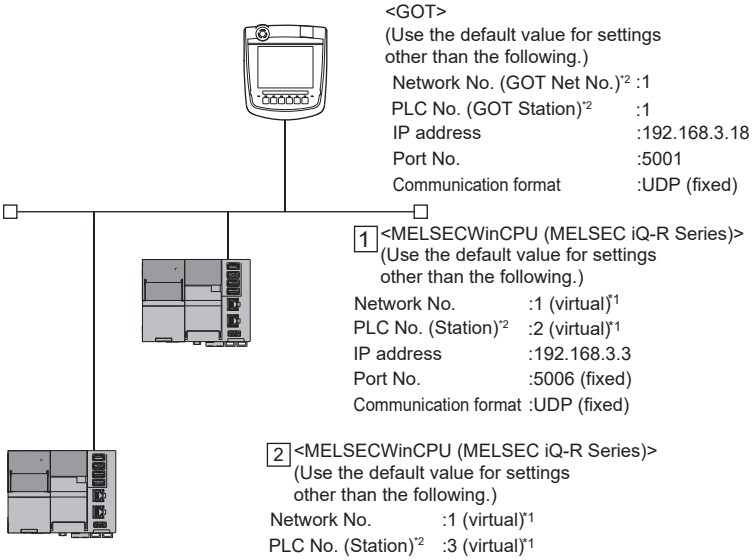
This section describes the settings of the GOT and MELSECWinCPU (MELSEC iQ-R Series) in the following system configuration.

Point

For the details of MELSECWinCPU (MELSEC iQ-R Series), refer to the following.

Manuals of MELSECWinCPU (MELSEC iQ-R Series)

System configuration



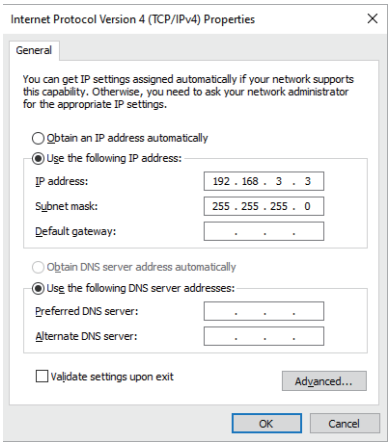
*1 These setting items do not exist at the PLC side. However, the virtual values must be set on the GOT side.
☞ Page 218 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

[Internet Protocol Version 4 (TCP/IPv4) Properties]

Configure communication settings for MELSECWinCPU (MELSEC iQ-R Series) in [Internet Protocol Version 4 (TCP/IPv4) Properties] in Windows installed in MELSECWinCPU (MELSEC iQ-R Series).



Item*1	Set value		Setting necessity at GOT connection
	1	2	
IP address	192.168.3.3	192.168.3.4	○
Subnet mask	255.255.255.0	255.255.255.0	○
Default gateway	-	-	×
Preferred DNS server	-	-	×
Alternative DNS server	-	-	×

○ : Necessary △ : As necessary × : Not necessary

*1 Set the IP address corresponding to the CH No. to be used to connect to the GOT.

Firewall settings

Firewall settings are required to connect the GOT with MELSECWinCPU (MELSEC iQ-R Series).

For details, refer to the following.

MELSEC iQ-R MELSECWinCPU Module User's Manual

[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

Point

[Connected Ethernet Controller Setting] when Built-in Ethernet port CPU is connected to a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

■Controller Setting

Item	Set value
GOT NET No.	1
GOT Station	1
GOT Communication Port No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

■GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

■Connected Ethernet Controller Setting

Item		Set value	
		1	2
Ethernet setting No.1	Host	*	-
	Net No.	1*1	1*1
	Station	2*2	3*2
	Unit Type	RnCCPU/RnWCPU	RnCCPU/RnWCPU
	IP Address	192.168.3.3	192.168.3.4
	Port No.*3	5006	5006
	Communication*3	UDP	UDP

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number and PLC numbers of other PLCs on the same network.

*3 The following [Port No.] and [Communication format] can also be set.
[Port No.]: 5007
[Communication]: TCP

Checking the communication status of MELSECWinCPU (MELSEC iQ-R Series)

■When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

• At normal communication

C:\>Ping 192.168.3.3

Reply from 192.168.3.3:bytes=32 time<1ms TTL=32

• At abnormal communication

C:\>Ping 192.168.3.3

Request timed out.

■At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

- Cable connecting condition
- Confirmation of switch and network parameter setting
- Operation state of PLC CPU (faulty or not)
- IP address of MELSECWinCPU (MELSEC iQ-R Series) specified by a ping command

Point

Ethernet diagnostics of CW Configurator is available to a Ping test from the PLC.

For details of Ethernet diagnostics of CW Configurator, refer to the following manual.

MELSEC iQ-R MELSECWinCPU Module User's Manual

Connection to Built-in Ethernet port CPU of MELSEC iQ-F series

This section describes the settings of the GOT and Built-in Ethernet port CPU in the following case of system configuration.

Point

• Connecting to Built-in Ethernet port CPU

For details of Built-in Ethernet port CPU, refer to the following manual.

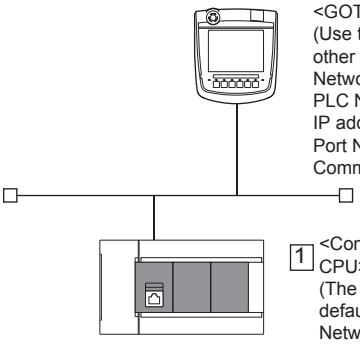
Manuals of MELSEC iQ-F Series

• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

☞ Page 300 Precautions

System configuration



<GOT>
(Use the default value for settings other than the following.)
Network No. (GOT Net No.)*2 :1
PLC No. (GOT Station)*2 :1
IP address :192.168.3.18
Port No. :5001
Communication format :TCP (fixed)

1 <Connecting to Built-in Ethernet port CPU>
(The following settings are set to the default)
Network No. : 1 (virtual)*1
PLC No. (Station)*2 : 2 (virtual)*1
IP address : 192.168.3.250 (default)
Port No. : 5562 (fixed)
Communication format : TCP (fixed)

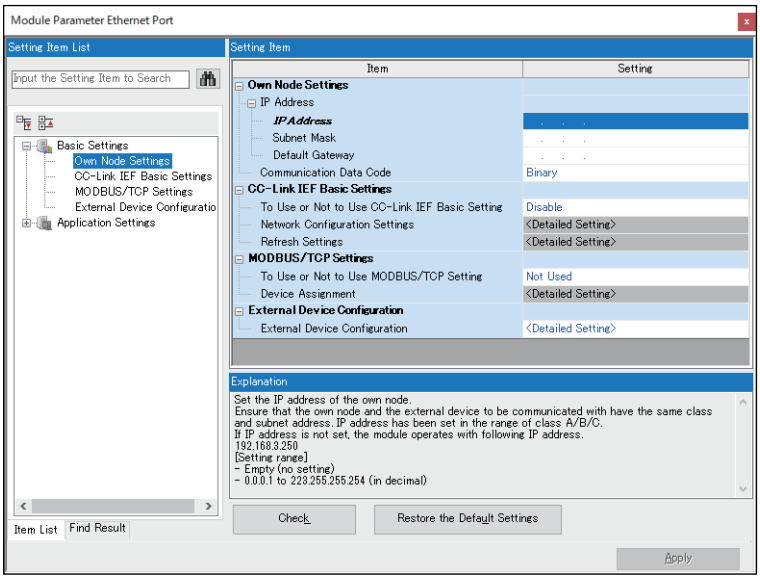
*1 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 222 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

[Module parameter] of GX Works3

■Built-in Ethernet port



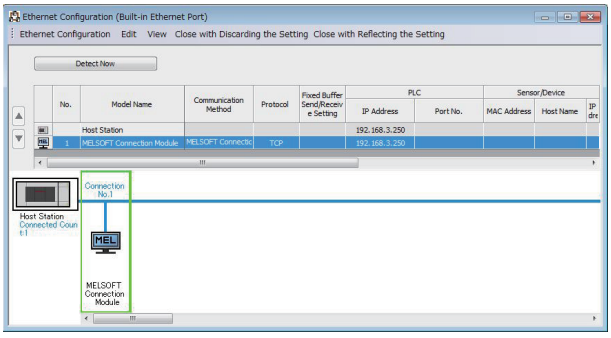
Item	Set value	Setting necessity at GOT connection
IP Address	192.168.3.250 (Use default value)	△
Subnet Mask	-	×
Default Gateway	-	×
Communication Data Code	(Use default value)	△
Target Device Connection Configuration Setting	☞ Page 221 Target Device connection Configuration Setting	○

○: Necessary △: As necessary ×: Not necessary

■Target Device connection Configuration Setting

The setting is required for all the connected GOTs*1.

*1 Even if the target device connection configuration setting is not executed, 1 GOT can be connected.
When connecting to the PLC in Ethernet connection with programming tools such as GX Works3, these programming tools and PLC may not be connected.
In this case, the setting is required for all the GOTs.



Item	Set value
Protocol	(Use default value)
Open system	MELSOFT connection (fixed)
Host station port No.	(Use default value)

[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

Point

[Connected Ethernet Controller Setting] when Built-in Ethernet port CPU is connected to a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

■Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

■GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

■Connected Ethernet Controller Setting

Item		Set value
Ethernet setting No.1	Host	*
	Net No.	1*1
	Station	2*2
	Unit Type	FX5CPU
	IP Address	192.168.3.250
	Port No.	5562 (fixed)
	Communication	TCP (fixed)

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number and PLC numbers of other PLCs on the same network.

Checking communication state of Built-in Ethernet port CPU

■When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

- At normal communication

C:\>Ping 192.168.3.250

Reply from 192.168.3.250:bytes=32 time<1ms TTL=32

- At abnormal communication

C:\>Ping 192.168.3.250

Request timed out.

■At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

- Cable connecting condition
- Confirmation of switch and network parameter setting
- Operation state of PLC CPU (faulty or not)
- The IP address of Built-in Ethernet port CPU specified in the ping command

Connection to Ethernet module (MELSEC iQ-F Series)

This section describes the settings of the GOT and Ethernet module (MELSEC iQ-F Series) in the following system configurations.

The Ethernet module (MELSEC iQ-F Series) also supports the MELSEC MX Controller (MX-F Model).

Point

• Ethernet module (MELSEC iQ-F Series)

For details of the Ethernet module (MELSEC iQ-F Series), refer to the following manual.

📖Manuals of MELSEC iQ-F Series

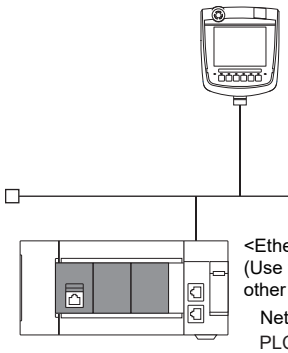
• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

☞ Page 300 Precautions

When the GOT's communication format is UDP

■System configuration



<GOT>
(Use the default value for settings other than the following.)

Network No. (GOT Net No.)*2	:1
PLC No. (GOT Station)*2	:1
IP address	:192.168.3.18
Port No.	:5001
Communication format	:UDP (fixed)

<Ethernet module>
(Use the default value for settings other than the following.)

Network No.	:1 (virtual)*1
PLC No. (Station)*2	:2 (virtual)*1
IP address	:192.168.3.251 (default)
Port No.	:5555 (fixed)
Communication format	:UDP (fixed)

*1 These setting items do not exist at the PLC side. However, the virtual values must be set on the GOT side.
☞ Page 226 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

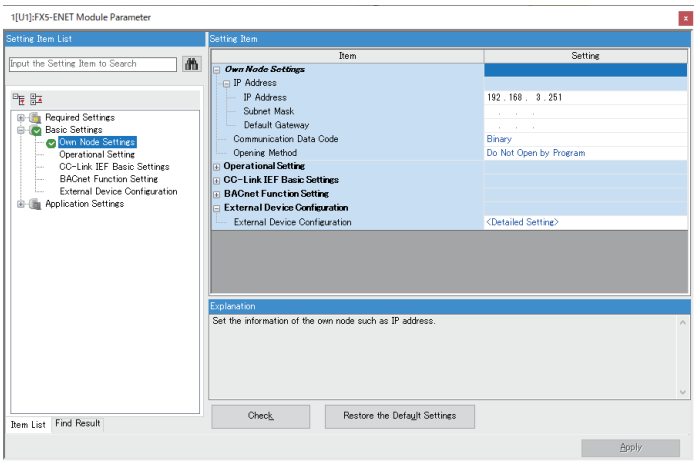
■[Module parameter] of GX Works3

For the connection with FX5-ENET or FX5-ENET/IP, use GX Works3 version 1.075D or later.

For the connection with FX5-EIP, use GX Works3 version 1.120A or later.

• Module parameter of Ethernet module (MELSEC iQ-F Series)

Set [Module parameter] of the port under [Module information].



Item	Set value	Setting necessity at GOT connection
IP Address	192.168.3.251	○
Subnet Mask	-	×
Default Gateway	-	×
Communication Data Code	(Use default value)	×
Opening Method	(Use default value)	×
External Device Configuration	-	×

○: Necessary △: As necessary ×: Not necessary

■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

Point

[Connected Ethernet Controller Setting] when Ethernet module (MELSEC iQ-F Series) is connected to a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

• Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

• GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

• Connected Ethernet Controller Setting

Item		Set value
Ethernet setting No.1	Host	*
	Net No.	1 *1
	Station	2 *2
	Unit Type	FX5-ENET
	IP Address	192.168.3.251
	Port No.	5555
	Communication	UDP

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number.

■Confirming the communication state of Ethernet module

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.251

Reply from 192.168.3.251:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.251

Request timed out.

• At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

IP address of the Ethernet module specified by Ping command

Point

Ethernet diagnostics of GX Works3

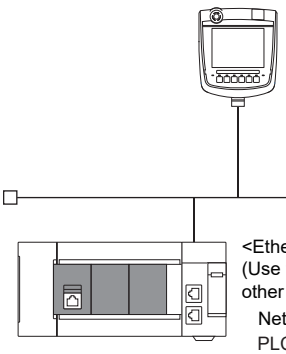
Ethernet diagnostics of GX Works3 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works3, refer to the following manual.

Manuals of MELSEC iQ-F Series

When the GOT's communication format is TCP

■System configuration



<GOT>
(Use the default value for settings other than the following.)
Network No. (GOT Net No.)*2 :1
PLC No. (GOT Station)*2 :1
IP address :192.168.3.18
Port No. :5001
Communication format :TCP (fixed)

<Ethernet module>
(Use the default value for settings other than the following.)
Network No. :1 (virtual)*1
PLC No. (Station)*2 :2 (virtual)*1
IP address :192.168.3.251 (default)
Port No. :5554 (fixed)
Communication format :TCP (fixed)

*1 These setting items do not exist at the PLC side. However, the virtual values must be set on the GOT side.
☞ Page 229 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

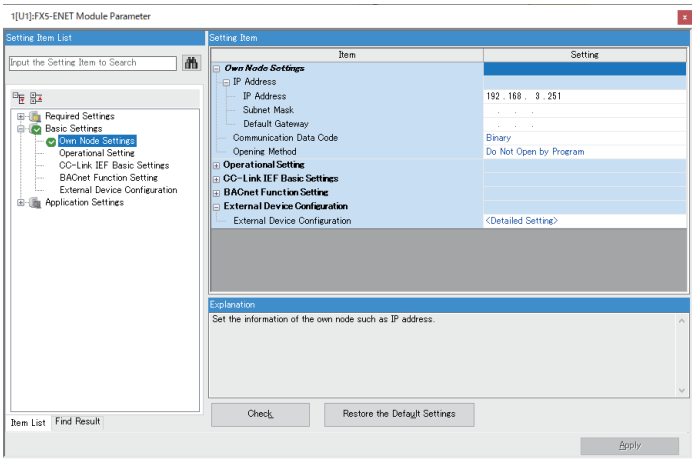
■[Module parameter] of GX Works3

For the connection with FX5-ENET or FX5-ENET/IP, use GX Works3 version 1.075D or later.

For the connection with FX5-EIP, use GX Works3 version 1.120A or later.

• Module parameter of Ethernet module (MELSEC iQ-F Series)

Set [Module parameter] of the port under [Module information].

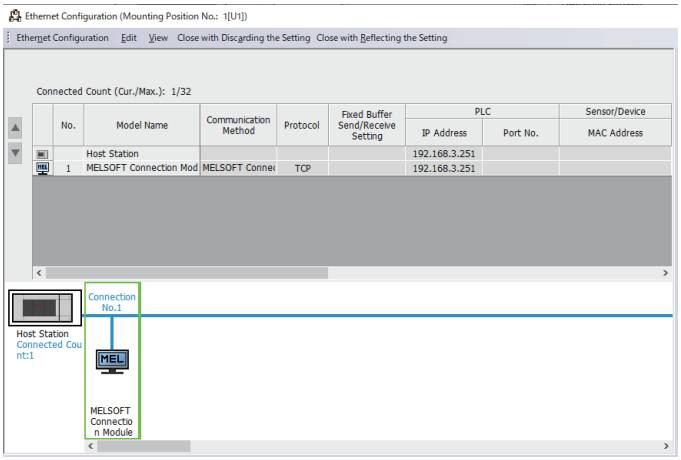


Item	Set value	Setting necessity at GOT connection
IP Address	192.168.3.251	○
Subnet Mask	-	×
Default Gateway	-	×
Communication Data Code	(Use default value)	×
Opening Method	(Use default value)	×
External Device Configuration	☞ • External Device Configuration	○

○: Necessary △: As necessary ×: Not necessary

• External Device Configuration

The setting is required for all the connected GOTs.



Item	Set value
Communication Method	MELSOFT connection
Protocol	TCP

■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

Point

[Connected Ethernet Controller Setting] when Ethernet module (MELSEC iQ-F Series) is connected to a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

• Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

• GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

• Connected Ethernet Controller Setting

Item		Set value
Ethernet setting No.1	Host	*
	Net No.	1 *1
	Station	2 *2
	Unit Type	FX5-ENET
	IP Address	192.168.3.251
	Port No.	5554
	Communication	TCP

*1 Set the same value as GOT Net No.
*2 Set a value different from the GOT station number.

■Confirming the communication state of Ethernet module

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.251

Reply from 192.168.3.251:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.251

Request timed out.

• At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

Mounting condition of Ethernet communication unit

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

IP address of the Ethernet module specified by Ping command

Point

Ethernet diagnostics of GX Works3

Ethernet diagnostics of GX Works3 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works3, refer to the following manual.

Manuals of MELSEC iQ-F Series

Connection to Built-in Ethernet port CPU of MELSEC-Q/L series

This section describes the settings of the GOT and Built-in Ethernet port CPU in the following case of system configuration.

☞ Page 231 One-on-one connection and [MELSOFT Connection Extended Setting] is the default value in the PLC
☞ Page 235 One-on-one connection and [MELSOFT Connection Extended Setting] is [Use] in the PLC
☞ Page 238 Multi-connection and [MELSOFT Connection Extended Setting] is default value in the PLC
☞ Page 242 Multi-connection and [MELSOFT Connection Extended Setting] is [Use] in the PLC

Point

• Connecting to Built-in Ethernet port CPU

For details of Built-in Ethernet port CPU, refer to the following manual.

📖QnUCPU User's Manual (Communication via Built-in Ethernet Port)

📖MELSEC-L CPU Module User's Manual (Built-In Ethernet Function)

• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

☞ Page 300 Precautions

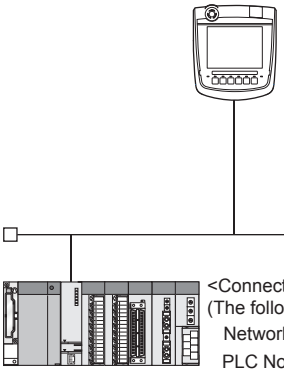
One-on-one connection and [MELSOFT Connection Extended Setting] is the default value in the PLC

■System configuration

For connecting one Built-in Ethernet port QCPU to one GOT, the PLC side settings are not required.

Set [Port No.] to [5006] and [Communication format] to [UDP] to communicate with the PLC.

Set [Controller Setting] and [Connected Ethernet Controller Setting] on GT Designer3, and then connect Built-in Ethernet port CPU to the GOT.



<GOT>
(The settings other than the following are set to the default)
Network No. (GOT Net No.)*3 : 1
PLC No. (GOT Station)*3 : 1
IP address : 192.168.3.18
Port No. : 5001
Communication format : UDP (fixed)

<Connecting to Built-in Ethernet port CPU>*1
(The following settings are set to the default)
Network No. : 1 (virtual)*2
PLC No. (Station)*3 : 2 (virtual)*2
IP address : 192.168.3.39
Communication format : UDP

*1 For the settings when using system devices such as a hub, refer to the following.
☞ Page 238 Multi-connection and [MELSOFT Connection Extended Setting] is default value in the PLC
☞ Page 242 Multi-connection and [MELSOFT Connection Extended Setting] is [Use] in the PLC

*2 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 233 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

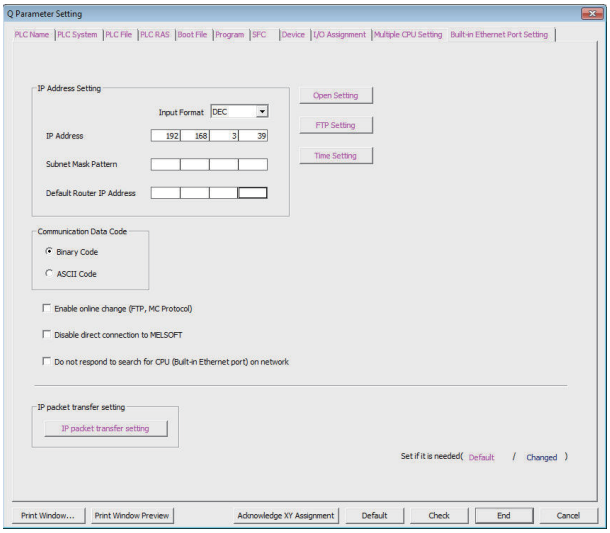
*3 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

■[PLC parameter] of GX Works2

Use the GX Works2 Version1.535H or later.

• Built-in Ethernet

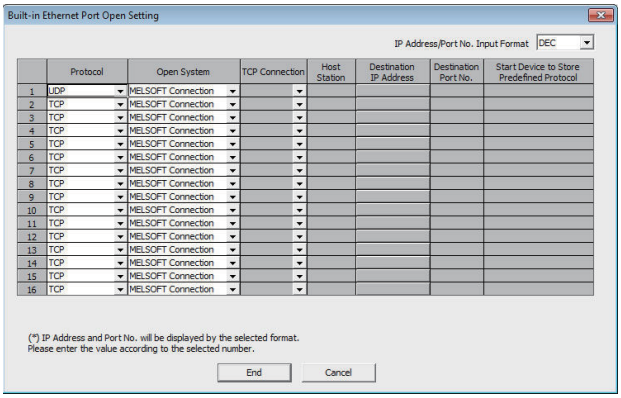


Item	Set value	Setting necessity at GOT connection
IP address	192.168.3.39 (Use default value)	○
Subnet mask pattern	-	×
Default router IP address	-	×
Communication data code	(Use default value)	△
Enable online change (FTP, MC protocol)		△
Disable direct connection to MELSOFT		△
Do not respond to search for CPU (Built-in Ethernet port) on network		△
Open settings	☞ • Open settings	○
FTP settings	(Use default value)	△
Time settings		△
MELSOFT Connection Extended Setting		△

○: Necessary △: As necessary ×: Not necessary

• Open settings

The setting is required for all the connected GOTs.



Item	Set value
Protocol	UDP, TCP
Open system	MELSOFT connection

■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

Point

[Connected Ethernet Controller Setting] when connecting Built-in Ethernet port QCPU or LCPU and a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that is not existed on the network system and any station No..

• Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

• GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

• Connected Ethernet Controller Setting

Item		Set value
Ethernet setting No.1	Host	*
	Net No.	1*1
	Station	2*2
	Unit Type	QnUD(P)V/QnUDE(H), LCPU *4
	IP address	192.168.3.39
	Port No.*3	5006
	Communication*3	UDP

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number.

*3 The following [Port No.] and [Communication format] can also be set.
[Port No.]: 5007
[Communication]: TCP

*4 For CR800-Q (Q172DSRCPU), set [Q17nDSR].

■Checking communication state of Connecting to Built-in Ethernet port CPU

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.39

Reply from 192.168.3.39:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.39

Request timed out.

• At abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

The IP address of Built-in Ethernet port CPU specified in the ping command

Point

Ethernet diagnostics of GX Works2

Ethernet diagnostics of GX Works2 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works2, refer to the following manual.

QCPU User's Manual (Hardware Design, Maintenance and Inspection)

MELSEC-L CPU Module User's Manual (Hardware Design, Maintenance and Inspection)

One-on-one connection and [MELSOFT Connection Extended Setting] is [Use] in the PLC

■System configuration

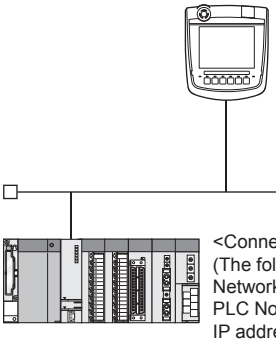
(When the PLC side [MELSOFT Connection Extended Setting] is [Use])

Set [Port No.] to [5001] and [Communication] to [UDP] to communicate with the PLC.

[MELSOFT Connection Extended Setting] is available with QnUDVCPU.

Set [MELSOFT Connection Extended Setting] to [Use], and set the items.

Set [Controller Setting] and [Connected Ethernet Controller Setting] on GT Designer3, and then connect Built-in Ethernet port CPU to the GOT.



<GOT>
(The settings other than the following are set to the default)
Network No. (GOT Net No.)*2 : 1
PLC No. (GOT Station)*2 : 1
IP address : 192.168.3.18
Port No. : 5001
Communication format : UDP (fixed)

<Connecting to Built-in Ethernet port CPU> *1
(The following settings are set to the default)
Network No. : 1
PLC No. (Station)*2 : 2
IP address : 192.168.3.39
Communication format : UDP

*1 Use the product whose the first five digits of the serial No. for QnUD(P)VCPU is "17052" or later.

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

■[PLC parameter] of GX Works2

Use the GX Works2 Version1.535H or later.

• Built-in Ethernet port

Item	Set value	Setting necessity at GOT connection
IP address	192.168.3.39 (Use default value)	○
Subnet mask pattern	-	×
Default router IP address	-	×
Communication data code	(Use default value)	△
Enable online change (FTP, MC protocol)		△
Disable direct connection to MELSOFT		△
Do not respond to search for CPU (Built-in Ethernet port) on network		△
Open settings	☞ • Open settings	○
FTP settings	(Use default value)	△
Time settings		△
MELSOFT Connection Extended Setting	☞ • MELSOFT Connection Extended Setting	○

○: Necessary △: As necessary ×: Not necessary

• Open settings

The setting is required for all the connected GOTs.

Item	Set value
Protocol	UDP, TCP
Open system	MELSOFT connection

• MELSOFT Connection Extended Setting

Item	Set value	Setting necessity at GOT connection
MELSOFT Connection Extended Setting	Use	○
Network No.	1	○
Station No.	2	○

■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

Point

[Connected Ethernet Controller Setting] when Built-in Ethernet port QCPU or LCPU is connected to a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that is not existed on the network system and any station No..

• Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5001
Retry	3 times
Startup Time	3 sec
Timeout Time	3 sec
Delay Time	0ms

• GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

• Connected Ethernet Controller Setting

Item		Set value
Ethernet setting No.1	Host	*
	Net No.	1*1
	Station	2*2
	Unit Type	QnUD(P)V/QnUDE(H) *3
	IP address	192.168.3.39
	Port No.	5001
	Communication	UDP (fixed)

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number.

*3 For CR800-Q (Q172DSRCPU), set [Q17nDSR].

■Checking communication state of Connecting to Built-in Ethernet port CPU

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.39

Reply from 192.168.3.39:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.39

Request timed out.

• At abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

The IP address of Built-in Ethernet port CPU specified in the ping command

Point

Ethernet diagnostics of GX Works2

Ethernet diagnostics of GX Works2 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works2, refer to the following manual.

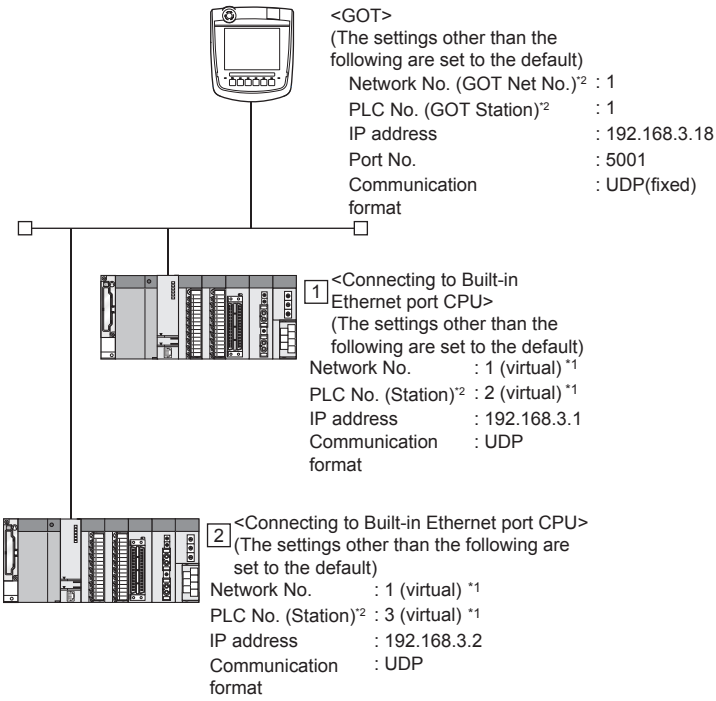
QCPU User's Manual (Hardware Design, Maintenance and Inspection)

MELSEC-L CPU Module User's Manual (Hardware Design, Maintenance and Inspection)

Multi-connection and [MELSOFT Connection Extended Setting] is default value in the PLC

■System configuration

Set [Port No.] to [5006] and [Communication format] to [UDP] to communicate with the PLC.



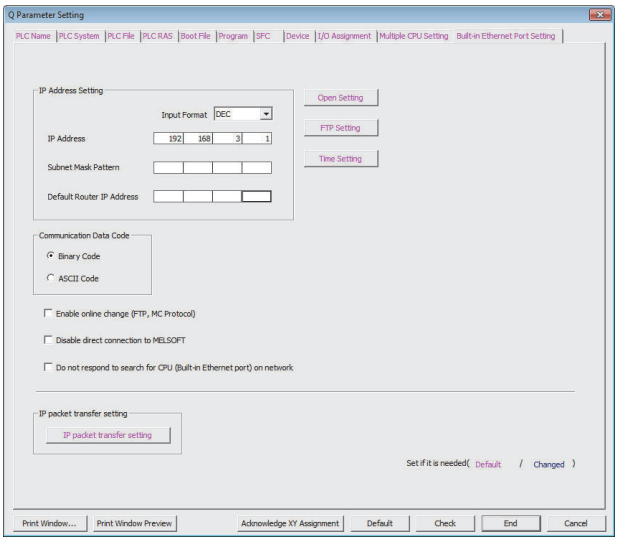
*1 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 240 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

■[PLC parameter] of GX Works2

• Built-in Ethernet port

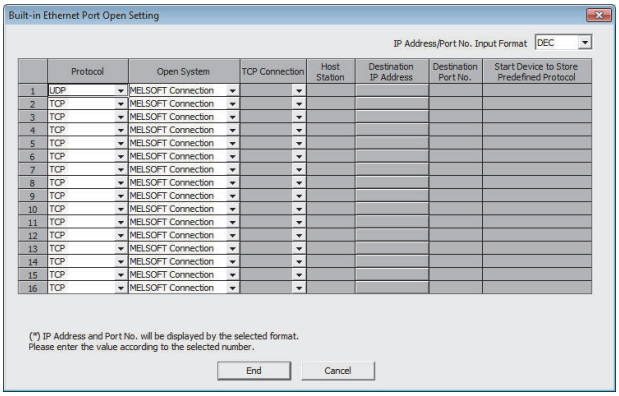


Item	Set value	Setting necessity at GOT connection
IP address	192.168.3.1	○
Subnet mask pattern	-	×
Default router IP address	-	×
Communication data code	(Use default value)	△
Enable online change (FTP, MC protocol)		△
Disable direct connection to MELSOFT		△
Do not respond to search for CPU (Built-in Ethernet port) on network		△
Open settings	☞ • Open settings.	○
FTP settings	(Use default value)	△
Time settings		△

○: Necessary △: As necessary ×: Not necessary

• Open settings

The setting is required for all the connected GOTs.



Item	Set value
Protocol	UDP, TCP
Open system	MELSOFT connection

■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

Point

[Connected Ethernet Controller Setting] when Built-in Ethernet port CPU is connected to a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that is not existed on the network system and any station No..

• Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

• GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

• Connected Ethernet Controller Setting

Item		Set value	
		1	2
Ethernet setting No.1	Host	*	-
	Net No.	1*1	1*1
	Station	2*2	3*2
	Unit Type	QnUD(P)V/QnUDE(H), LCPU	QnUD(P)V/QnUDE(H), LCPU
	IP address	192.168.3.1	192.168.3.2
	Port No.*3	5006	5006
	Communication*3	UDP	UDP

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number and PLC numbers of other PLCs on the same network.

*3 The following [Port No.] and [Communication format] can also be set.
[Port No.]: 5007
[Communication]: TCP

■Checking communication state of Connecting to Built-in Ethernet port CPU

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.1

Reply from 192.168.3.1:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.1

Request timed out.

• At abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

The IP address of Built-in Ethernet port CPU specified in the ping command

Point

Ethernet diagnostics of GX Works2

Ethernet diagnostics of GX Works2 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works2, refer to the following manual.

QCPU User's Manual (Hardware Design, Maintenance and Inspection)

MELSEC-L CPU Module User's Manual (Hardware Design, Maintenance and Inspection)

Multi-connection and [MELSOFT Connection Extended Setting] is [Use] in the PLC

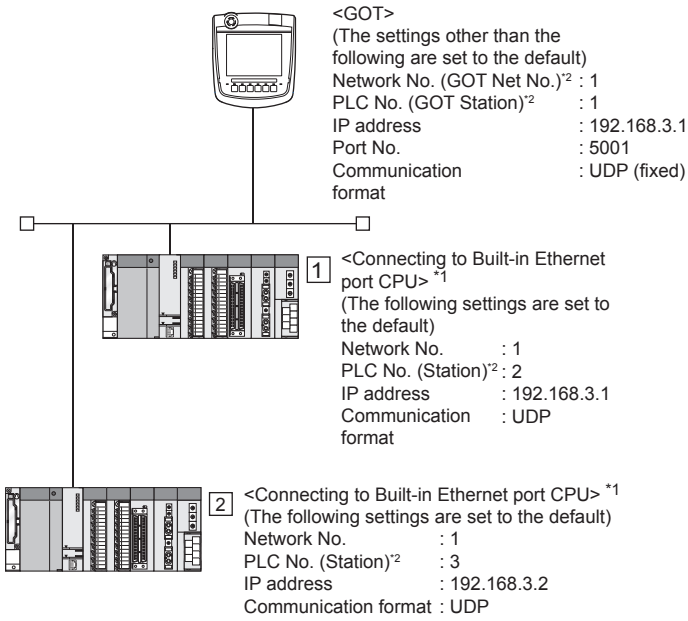
■System configuration

Set [Port No.] to [5001] and [Communication] to [UDP] to communicate with the PLC.

[MELSOFT Connection Extended Setting] is available with QnUDVCPU.

Set [MELSOFT Connection Extended Setting] to [Use], and set the items.

Set [Controller Setting] and [Connected Ethernet Controller Setting] on GT Designer3, and then connect Built-in Ethernet port CPU to the GOT.



*1 Use the product whose the first five digits of the serial No. for QnUD(P)VCPU is "17052" or later.

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

■[PLC parameter] of GX Works2

Use the GX Works2 Version1.535H or later.

• Built-in Ethernet

Item	Set value	Setting necessity at GOT connection
IP address	192.168.3.1	○
Subnet mask pattern	-	×
Default router IP address	-	×
Communication data code	(Use default value)	△
Enable online change (FTP, MC protocol)		△
Disable direct connection to MELSOFT		△
Do not respond to search for CPU (Built-in Ethernet port) on network		△
Open settings	☞ • Open settings	○
FTP settings	(Use default value)	△
Time settings		△
MELSOFT Connection Extended Setting	☞ • MELSOFT Connection Extended Setting	○

○: Necessary △: As necessary ×: Not necessary

• Open settings

The setting is required for all the connected GOTs.

Item	Set value
Protocol	UDP, TCP
Open system	MELSOFT connection

• MELSOFT Connection Extended Setting

Item	Set value	Setting necessity at GOT connection
MELSOFT Connection Extended Setting	Use	○
Network No.	1	○
Station No.	2	○

■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

Point

[Connected Ethernet Controller Setting] when Built-in Ethernet port CPU is connected to a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that is not existed on the network system and any station No.

• Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5001
Retry	3 times
Startup Time	3 sec
Timeout Time	3 sec
Delay Time	0 ms

• GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

• Connected Ethernet Controller Setting

Item		Set value	
		1	2
Ethernet setting No.1	Host	*	-
	Net No.	1*1	1*1
	Station	2*2	3*2
	Unit Type	QnUD(P)V/QnUDE(H)	QnUD(P)V/QnUDE(H)
	IP address	192.168.3.1	192.168.3.2
	Port No.	5001	5001
	Communication	UDP (fixed)	UDP (fixed)

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number and PLC numbers of other PLCs on the same network.

■Checking communication state of Connecting to Built-in Ethernet port CPU

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.1

Reply from 192.168.3.1:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.1

Request timed out.

• At abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

The IP address of Built-in Ethernet port CPU specified in the ping command

Point

Ethernet diagnostics of GX Works2

Ethernet diagnostics of GX Works2 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works2, refer to the following manual.

QCPU User's Manual (Hardware Design, Maintenance and Inspection)

MELSEC-L CPU Module User's Manual (Hardware Design, Maintenance and Inspection)

Connecting to Ethernet module (Q/L Series)

This section describes the settings of the GOT and Ethernet module (Q Series) in the following case of the system configuration.

Point

• Ethernet module (Q/L Series)

For details of the Ethernet module (Q/L Series), refer to the following manual.

📖Q Corresponding Ethernet Interface Module User's Manual (Basic)

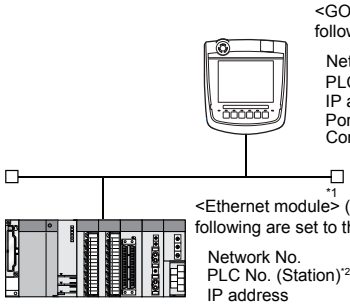
📖MELSEC-L Ethernet Interface Module User's Manual (Basic)

• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

☞ Page 300 Precautions

System configuration (for Q series)



<GOT> (The settings other than the following are set to the default)

Network No. (GOT Net No.)*2 : 1
PLC No. (GOT Station)*2 : 1
IP address : 192.168.3.18
Port No. : 5001
Communication format : UDP (fixed)

*1

<Ethernet module> (The settings other than the following are set to the default)

Network No. : 1
PLC No. (Station)*2 : 2
IP address : 192.168.3.19
Port No. : 5001
Communication format : UDP(fixed)

*1 The Ethernet module is mounted on the base unit slot 0.
The Start I/O No. of the Ethernet module is set to "0".

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

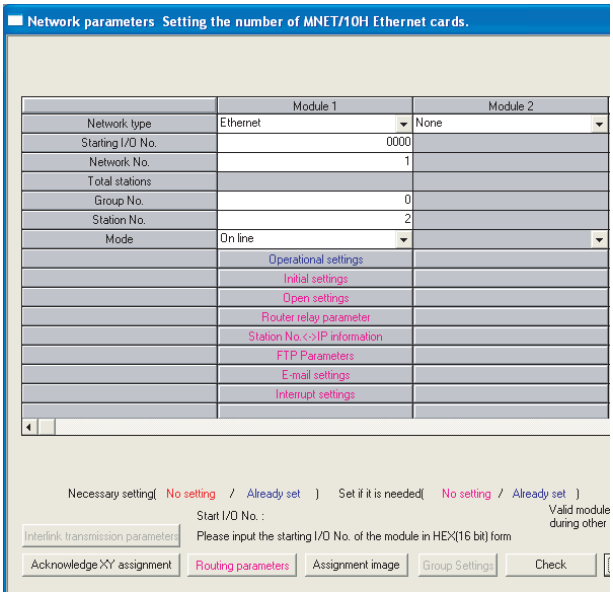
Point

When connecting to Q170MCPU

When connected to Q170MCPU, the start I/O No. of the Ethernet module is set to "70".

[Network parameter] of GX Developer

■Network parameter



Item	Set value	Setting necessity at GOT connection
Network type	Ethernet (fixed)	○
Starting I/O No.*1	0000H	○
Network No.*2	1	○
Group No.	0 (fixed)	○
Station No.*3	2	○
Mode	Online (fixed)	○
Operation setting	☞ Page 248 Operation setting	○
Initial settings	(Use default value)	△
Open settings		×
Router relay parameter		×
Station No.<->IP information		×
FTP Parameters		×
E-mail settings		×
Interrupt settings		×
Redundant settings*4		△
Routing Parameters	☞ Page 249 Routing parameter setting	△

○: Necessary △: As necessary ×: Not necessary

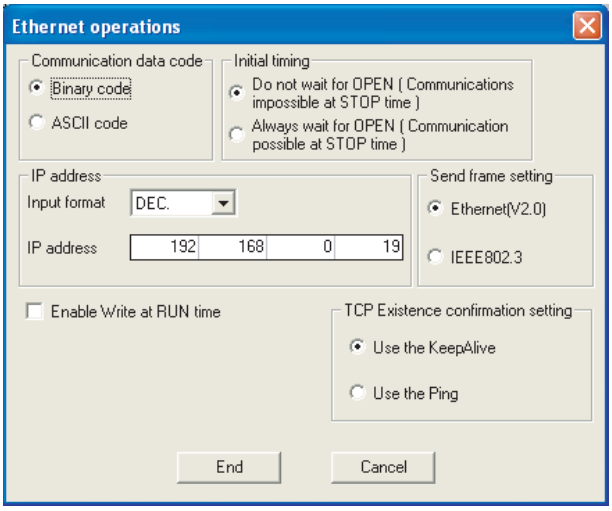
*1 When using Q170MCPU or Q170MSCPU(-S1), set the start I/O No. to 0070H.

*2 Specify the same network No. as that of the GOT.

*3 Do not set the same station No. as that of the GOT.

*4 Set when using Ethernet module in a redundant QnPRHCPU system.

■Operation setting



Item	Set value	Setting necessity at GOT connection
Communication data code*1	(Use default value)	×
IP address	192.168.3.19	○
Initial timing*1	(Use default value)	×
Send frame setting		×
Enable Write at RUN time*1		×
TCP Existence confirmation setting		×

○: Necessary △: As necessary ×: Not necessary

*1 Because port No. 5001 is fixed, these items operate at the following setting without relations to the setting given here.
- Communication date code: [Binary code]
- Initial timing: "Always wait for OPEN" (Communication is applicable while stopping the PLC CPU.)
- Enable Write at RUN time: [Enable Write at RUN time] (Writing Data is applicable while running the PLC CPU.)

Point

When changing the network parameter

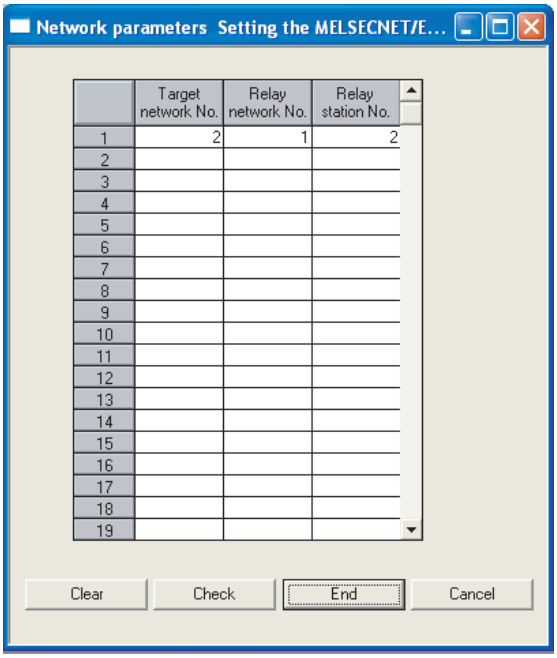
After writing the network parameter to the PLC CPU, operate the PLC CPU ether turning OFF and then ON or resetting.

■Routing parameter setting

Up to 64 [Transfer Network No.]s can be set.

However, the same transfer network number cannot be set twice or more (multiple times).

Therefore, the one that can access to other station from the request source host GOT is 64 kinds of [Transfer Network No.]s.



Item	Range
Target network No.	1 to 239
Relay network No.	1 to239
Relay station No.	0 to 64

Point

Routing parameter setting of request source

Routing parameter setting is also necessary for the request source GOT.

For the setting, refer to the following.

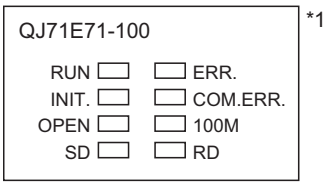
☞ Page 164 Routing parameter setting

■Communication confirmation

The INIT. LED on the Ethernet module turns on when the module is ready to communicate.

For confirming the communication state, refer to the following.

☞ Page 251 Confirming the communication state of Ethernet module



*1

*1 The LEDs layout of QJ71E71-100.

[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

■Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

■GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

■Connected Ethernet Controller Setting

Item		Set value
Ethernet setting No.1	Host	*
	Net No.	1
	Station	2
	Unit Type	QJ71E71
	IP address	192.168.3.19
	Port No.*1	5001
	Communication*1	UDP

*1 The following [Port No.] and [Communication format] can also be set.
[Port No.]: 5002
[Communication]: TCP

Confirming the communication state of Ethernet module

■When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

• At normal communication

C:\>Ping 192.168.3.19

Reply from 192.168.3.19:bytes=32 time<1ms TTL=32

• At abnormal communication

C:\>Ping 192.168.3.19

Request timed out.

■At abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

- Mounting condition of Ethernet communication unit
- Cable connecting condition
- Confirmation of switch and network parameter setting
- Operation state of PLC CPU (faulty or not)
- IP address of GOT specified by Ping command

Point

Ethernet diagnostics of GX Developer

Ethernet diagnostics of GX Developer is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Developer, refer to the following manual.

User's manual of the Ethernet module

Connecting to C Controller module (Q Series)

This section describes the settings of the GOT and C Controller module (Q Series) in the following case of the system configuration.

Point

• C Controller module (Q Series)

For details of C Controller module (Q Series), refer to the following manual.

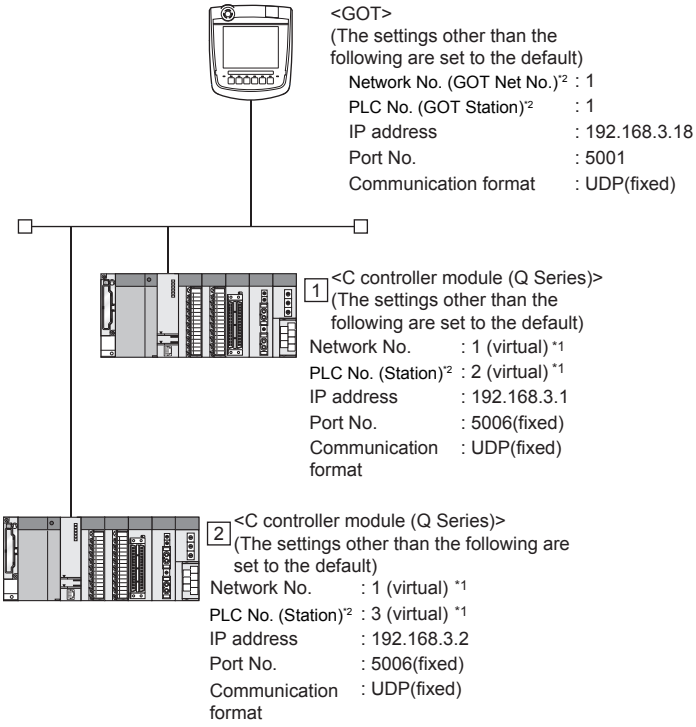
📖C Controller Module User's Manual (Hardware Design, Function Explanation)

• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

☞ Page 300 Precautions

System configuration



*1 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 256 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

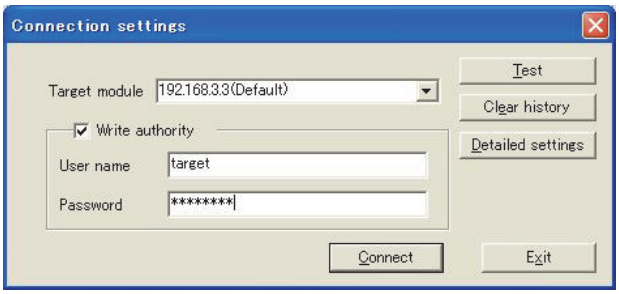
Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

Utility setting for C Controller module (Q Series)

■Q12DCCPU-V

Use SW3PVC-CCPU-E Ver.3.05F or later for the C Controller (Q Series) setting utility.

• Connection settings



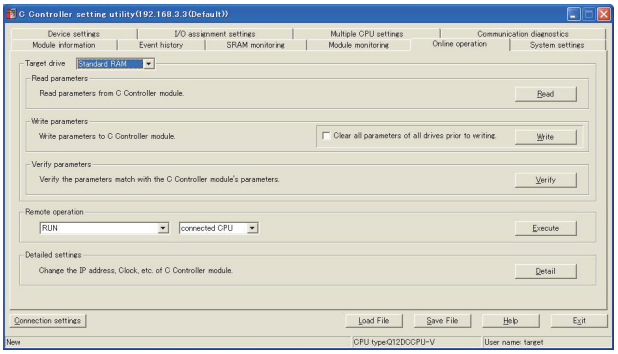
Item	Set value	Setting necessity at GOT connection
Target module*1	192.168.3.3 (Default)	○
Write authority	Mark the checkbox	○
User name*2	target	○
Password*2	password	○
Detailed settings	-	△

○: Necessary △: As necessary ×: Not necessary

*1 If the IP address of the C Controller module (Q Series) has been changed, input the changed IP address or host name.

*2 If the account of the C Controller module (Q Series) has been changed, input the changed user name and password.

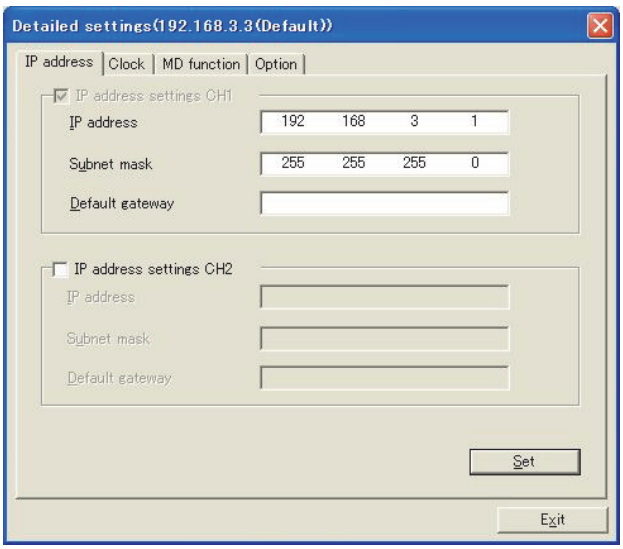
• Online operation



Item	Set value	Setting necessity at GOT connection
Detailed settings	☞ • Detail settings	○

○: Necessary △: As necessary ×: Not necessary

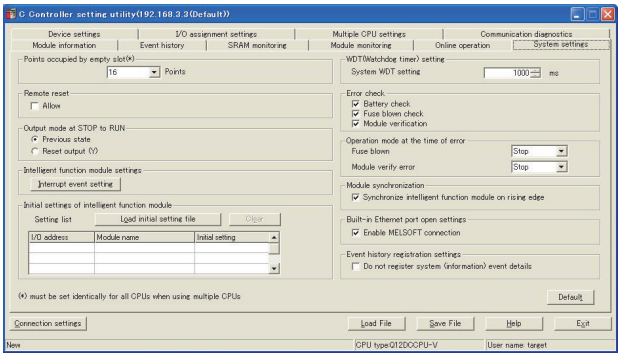
• Detail settings



Item	Set value	Setting necessity at GOT connection
IP address	192.168.3.1	○
Subnet mask	255.255.255.0	○
Default gateway	-	×
IP address settings CH2	-	×

○: Necessary △: As necessary ×: Not necessary

• System settings



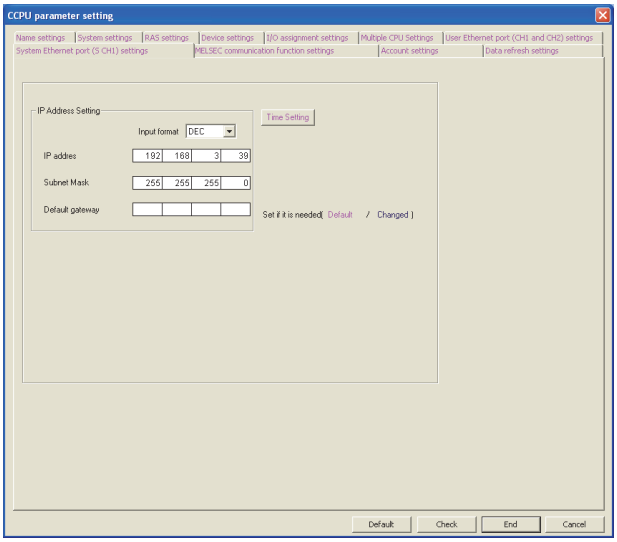
Item	Set value	Setting necessity at GOT connection
Points occupied by empty slot	(Use default value)	△
Remote reset		△
Output mode at STOP to RUN		△
Intelligent function module settings		△
Initial settings of intelligent function module		△
WDT (Watchdog timer) setting		△
Error check		△
Operation mode at the time of error		△
Module synchronization		△
Built-in Ethernet port open settings	Mark the checkbox	○
Event history registration settings	(Use default value)	△

○: Necessary △: As necessary ×: Not necessary

■Q24DHCCPU-V/VG/LS

Use SW4PVC-CCPU-E for the C Controller (Q Series) setting utility.

- Connection settings



Item	Set value	Setting necessity at GOT connection
IP Address*1	192.168.3.39 (Default)	○
Subnet Mask	255.255.255.0 (Default)	○
Default Gateway	-	×

○: Necessary △: As necessary ×: Not necessary

*1 If the IP address of the C Controller module (Q Series) has been changed, input the changed IP address.

[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

Point

[Connected Ethernet Controller Setting] when connecting C Controller module (Q Series) and a GOT

The setting items for the network No. and station No. do not exist on the PLC side.

Set the network No. and station No. on the GOT side.

Set the network No. that is not existed on the network system and any station No.

■Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

■GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

■Connected Ethernet Controller Setting

Item		Set value	
		1	2
Ethernet setting No.1	Host	*	-
	Net No.	1*1	1*1
	Station	2*2	3*2
	Unit Type	QnD(H)CCPU	QnD(H)CCPU
	IP address	192.168.3.1	192.168.3.2
	Port No.*3	5006	5006
	Communication*3	UDP	UDP

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number and PLC numbers of other PLCs on the same network.

*3 The following [Port No.] and [Communication format] can also be set.
[Port No.]: 5007
[Communication]: TCP

Checking communication state of C Controller module (Q Series)

■When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

- At normal communication

C:\>Ping 192.168.3.1

Reply from 192.168.3.1:bytes=32 time<1ms TTL=32

- At abnormal communication

C:\>Ping 192.168.3.1

Request timed out.

■At abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

- Cable connecting condition
- Confirmation of switch and network parameter setting
- Operation state of PLC CPU (faulty or not)
- The IP address of C Controller module (Q Series) specified in the ping command

Connecting to Ethernet module (QnA Series)

This section describes the settings of the GOT and Ethernet module (QnA Series) in the following case of the system configuration.

Point

• Ethernet module (QnA Series)

For details of the Ethernet module (QnA Series), refer to the following manual.

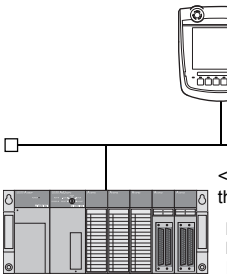
📖For QnA Ethernet Interface Module User's Manual

• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

☞ Page 300 Precautions

System configuration



<GOT>(The settings other than the following are set to the default)

Network No. (GOT Net No.)*2 : 1
PLC No. (GOT Station)*2 : 1
IP address : 192.168.3.18
Port No. : 5001
Communication format : UDP(fixed)

<Ethernet module>*1 (The settings other than the following are set to the default)

Network No. : 1
PLC No. (Station)*2 : 2
IP address : 192.168.3.19
Port No. : 5001
Communication format : UDP(fixed)

*1 The Ethernet module is mounted on the base unit slot 0.
The Start I/O No. of the Ethernet module is set to "0".

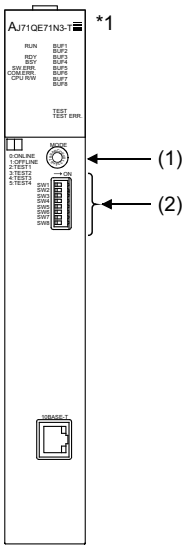
*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

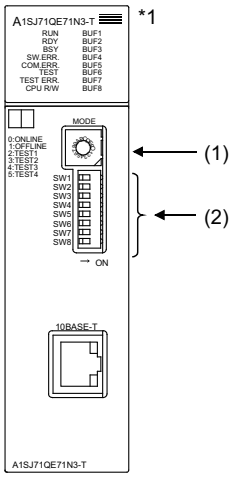
Switch settings of Ethernet module

Set the operation mode setting switch and exchange condition setting switch.

AJ71QE71N3-T, AJ71QE71N-B5, AJ71QE71N-B2, AJ71QE71N-T, AJ71QE71N-B5T, AJ71QE71, AJ71QE71-B5

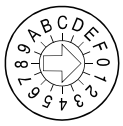


A1SJ71QE71N3-T, A1SJ71QE71N-B5, A1SJ71QE71N-B2, A1SJ71QE71N-T, A1SJ71QE71N-B5T, A1SJ71QE71-B5, A1SJ71QE71-B2



*1 The figure of AJ71QE71N3-T and A1SJ71QE71N3-T.

■Operation mode setting switch

Operation mode setting switch	Description	Set value	Setting necessity at GOT connection
	Online	0 (fixed)	○

○: Necessary △: As necessary ×: Not necessary

■Exchange condition setting switch

Exchange condition setting switch	Setting switch	Description	Set value	Setting necessity at GOT connection
	SW1	Selection of line processing at TCP timeout error	OFF	△
	SW2	Data code setting*1	OFF (fixed)	×
	SW3	Self start mode setting*2	ON	○
	SW4	(Must not to be used)	OFF (fixed)	×
	SW5			
	SW6			
	SW7	CPU exchange timing setting*1	OFF (fixed)	×
	SW8	Initial timing setting	OFF	△

○: Necessary △: As necessary ×: Not necessary

*1 Because port No. 5001 is fixed, these items operate at the following setting without relations to the setting given here.
- Data code setting: [Binary code]
- Enable Write at RUN time: [Enable Write at RUN time] (Writing Data is applicable while running the PLC CPU.)

*2 When SW3 is ON, the initial processing is executed regardless of the initial request signal (Y19).
In addition, communication is applicable while stopping the PLC CPU.
For the initial processing by using the initial request signal (Y19), refer to the following manual.
For QnA Ethernet Interface Module User's Manual

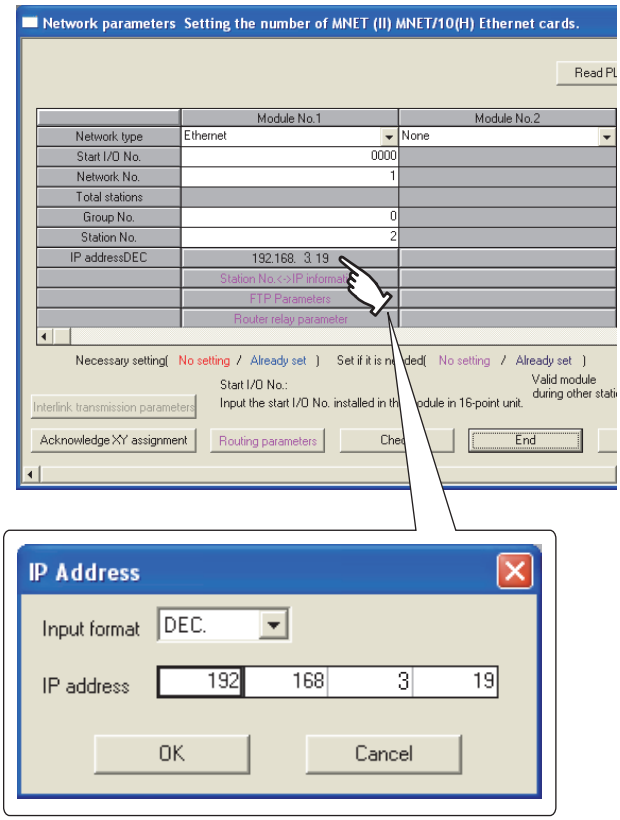
Point

When the switch setting has been changed

Turn the PLC CPU OFF then ON again, or reset the PLC CPU.

[Network parameter] of GX Developer

■Network parameter



Item	Set value	Setting necessity at GOT connection
Network type	Ethernet (fixed)	○
Start I/O No.	0000H	○
Network No.*1	1	○
Group No.	0 (fixed)	○
Station No.*2	2	○
IP address	192.168.0.19	○
Station No.<->IP information	(Use default value)	×
FTP Parameters		×
Router relay parameter		×
Routing parameters	☞ Page 261 Routing parameter setting	△

○: Necessary △: As necessary ×: Not necessary

*1 Specify the same network No. as that of the GOT.

*2 Do not set the same station No. as that of the GOT.

Point

When changing the network parameter

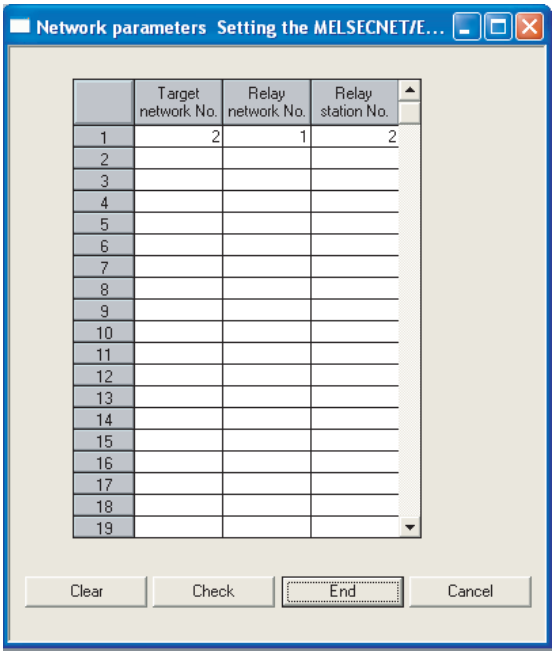
After writing the network parameter to the PLC CPU, operate the PLC CPU ether turning OFF and then ON or resetting.

■Routing parameter setting

Up to 64 [Transfer Network No.]s can be set.

However, the same transfer network number cannot be set twice or more (multiple times).

Therefore, the one that can access to other station from the request source host GOT is 64 kinds of [Transfer Network No.]s.



Item	Range
Target network No.	1 to 239
Relay network No.	1 to 239
Relay station No.	0 to 64

Point

Routing parameter setting of request source

Routing parameter setting is also necessary for the request source GOT.

For the setting, refer to the following.

☞ Page 164 Routing parameter setting

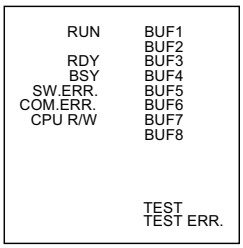
■Communication confirmation

The RDY LED on the Ethernet module turn on when the module is ready to communicate.

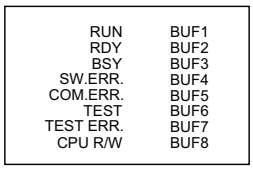
For confirming the communication state, refer to the following.

☞ Page 251 Confirming the communication state of Ethernet module

AJ71QE71N3-T, AJ71QE71N-B5, AJ71QE71N-B2, AJ71QE71N-T, AJ71QE71N-B5T, AJ71QE71, AJ71QE71-B5



A1SJ71QE71N3-T, A1SJ71QE71N-B5, A1SJ71QE71N-B2, A1SJ71QE71N-T, A1SJ71QE71N-B5T,A1SJ71QE71-B5, A1SJ71QE71-B2



[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

■Controller Setting

GOT Net No.	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5002
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

■GOT Ethernet Setting(standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

■Connected Ethernet Controller Setting

Item		Set value
Ethernet setting No.1	Host	*
	Net No.	1
	Station	2
	Unit Type	AJ71QE71
	IP address	192.168.0.19
	Port No.*1	5001
	Communication*1	UDP

*1 The following [Port No.] and [Communication format] can also be set.
[Port No.]: 5002
[Communication]: TCP

Connecting to Ethernet module (A Series)

This section describes the settings of the GOT and Ethernet module (A Series) in the following case of the system configuration.

Point

• Ethernet module (A Series)

For details of the Ethernet module (A Series), refer to the following manual.

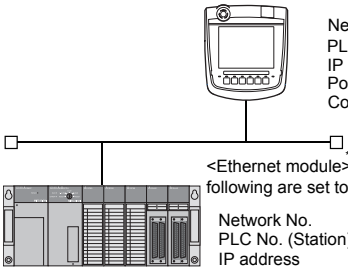
📖For A Ethernet Interface Module User's Manual

• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

☞ Page 300 Precautions

System configuration



<GOT> (The settings other than the following are set to the default)

Network No. (GOT Net No.)*3 : 1
PLC No. (GOT Station)*3 : 1
IP address : 192.168.3.18
Port No. : 5001
Communication format : UDP (fixed)

<Ethernet module>*1 (The settings other than the following are set to the default)

Network No. : 1 (virtual)*2
PLC No. (Station)*3 : 2 (virtual)*2
IP address : 192.168.3.19
Port No. : 5001
Communication format : UDP(fixed)

*1 The Ethernet module is mounted on the base unit slot 0.
The Start I/O No. of the Ethernet module is set to "0".

*2 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 268 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

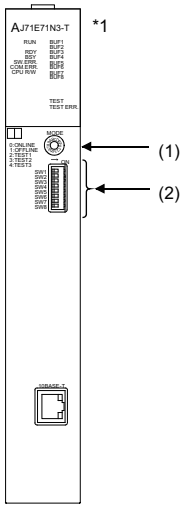
*3 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

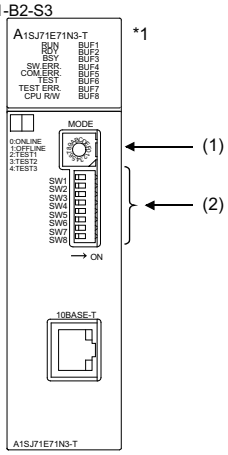
Switch settings of Ethernet module

Set the operation mode setting switch and exchange condition setting switch.

AJ71E71N3-T, AJ71E71N-B5, AJ71E71N-B2, AJ71E71N-T, AJ71E71N-B5T, AJ71E71-S3

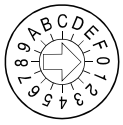


A1SJ71E71N3-T, A1SJ71E71N-B5, A1SJ71E71N-B2, A1SJ71E71N-T, A1SJ71E71N-B5T, A1SJ71E71-B5-S3, A1SJ71E71-B2-S3



*1 The figure of AJ71E71N3-T and A1SJ71E71N3-T.

■Operation mode setting switch

Operation mode setting switch	Description	Set value	Setting necessity at GOT connection
	Online	0 (fixed)	○

○: Necessary △: As necessary ×: Not necessary

■Exchange condition setting switch*1

Exchange condition setting switch	Setting switch	Description	Set value	Setting necessity at GOT connection
	SW1	Selection of line processing at TCP timeout error	OFF	△
	SW2	Data code setting (binary code)	OFF (fixed)	○
	SW3	(Must not to be used)	OFF (fixed)	×
	SW4			
	SW5			
	SW6			
	SW7	CPU exchange timing setting (Enable write at RUN time)	ON (fixed)	○
	SW8	Initial timing setting	OFF	△

○: Necessary △: As necessary ×: Not necessary

*1 The exchange condition setting switches of A1SJ71E71-B5-S3 and A1SJ71E71-B2-S3 are specified as the below.

Exchange condition setting switch	Setting switch	Description	Set value	Setting necessity at GOT connection
	SW1	Selection of line processing at TCP timeout error	OFF	△
	SW2	Data code setting (binary code)	OFF (fixed)	○
	SW3	CPU exchange timing setting (Enable write at RUN time)	ON (fixed)	○
	SW4	Initial timing setting	OFF	△

○: Necessary △: As necessary ×: Not necessary

Point

When the switch setting has been changed

Turn the PLC CPU OFF then ON again, or reset the PLC CPU.

Sequence program

The sequence program for initial processing and communication line opening processing are required.

■Programming condition

This program performs the initial processing of the Ethernet module and the opening processing of connection No. 1 when the stopping PLC CPU starts running.

• I/O signal of Ethernet module

📖For A Ethernet Interface Module User's Manual

• Device used by user

Device	Application
M102	COM.ERR turned off command
D100	IP address of Ethernet module
D110	Application setting
D111	Port No. of Ethernet module
D112 to D113	IP address of GOT
D114	Port No. of GOT
D200	Initial fault code

• Buffer memory settings used in the present example

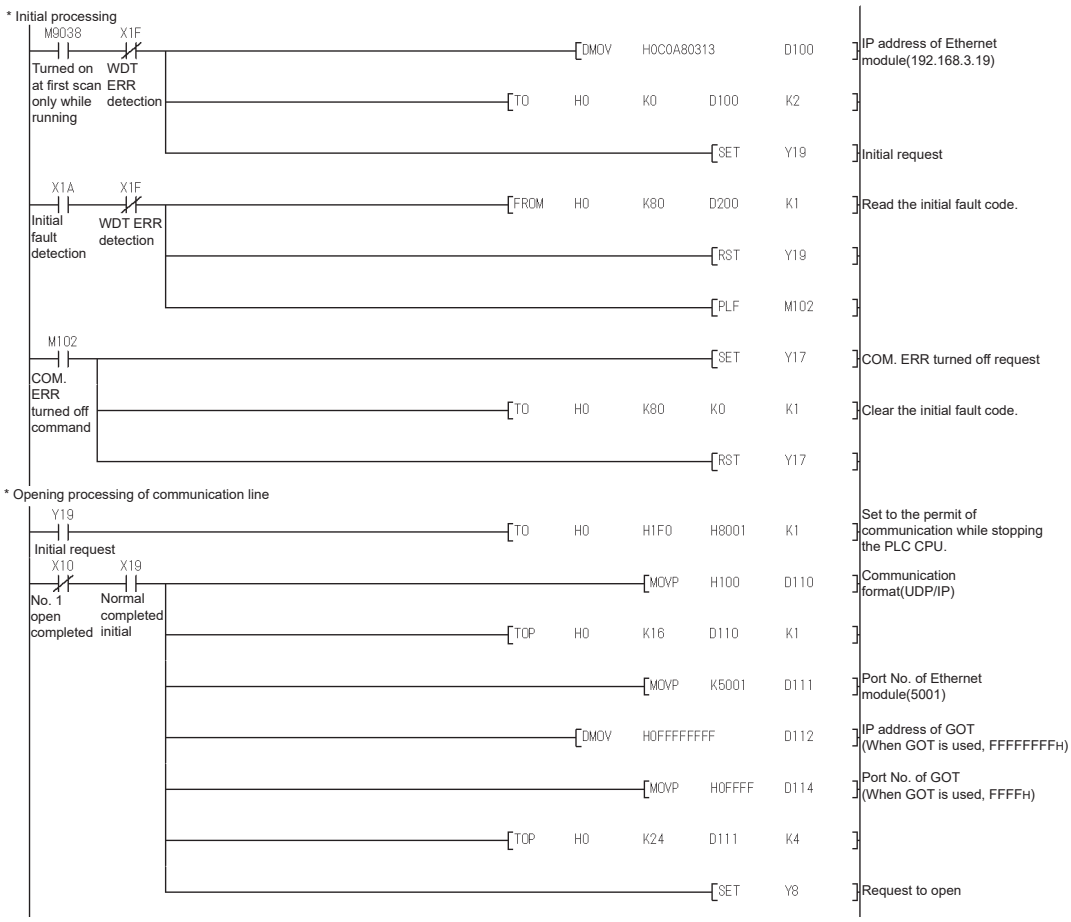
Buffer memory address Dec (Hex)	Item	Set value
0 to 1 (0 to 1H)	IP address of Ethernet module	C0A80313H (192.168.3.19)
16 (10H)	Application setting*1	100H
24 (18H)	Port No. of Ethernet module	5001
25 to 26 (19 to 1AH)	IP address of GOT	FFFFFFFFH
27 (1BH)	Port No. of GOT	FFFFH (fixed)
80 (50H)	Initial fault code	—

*1 The details of the application setting are shown below.
Settings 1), 2) and 3) can be changed by the user.
4), 5) and 6) are fixed.

b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
6)						5)	4)	3)						2)	1)

1) Fixed buffer application
0: For sending; no exchange
1: For receiving
2) Existence check
0: No
1: Yes
3) Pairing open
0: No
1: Yes
4) Communication format (Set to "1" (UDP/IP).)
0: TCP/IP
1: UDP/IP
5) Fixed buffer exchange (Set to "0" (With procedure).)
0: With procedure
1: Without procedure
6) Open method (Set to "00" (Active, UDP/IP).
00: Active, UDP/IP
10: Unpassive
11: Fullpassive

■Example of sequence program



Point

When changing the sequence program

After writing the sequence program to the PLC CPU, operate the PLC CPU ether turning OFF and then ON or resetting.

■Communication confirmation

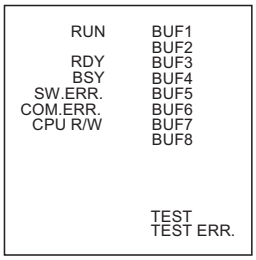
The RDY LED on the Ethernet module turn on when the module is ready to communicate.

For confirming the communication state, refer to the following.

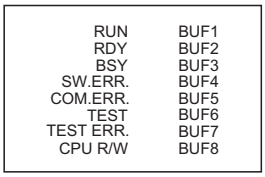
☞ Page 251 Confirming the communication state of Ethernet module

The BUF1 LED turns on when the opening processing of the connection No. 1 is completed in normal at executing of the sequence program example described at (2).

AJ71E71N3-T, AJ71E71N-B5, AJ71E71N-B2, AJ71E71N-T, AJ71E71N-B5T, AJ71E71-S3



A1SJ71E71N3-T, A1SJ71E71N-B5, A1SJ71E71N-B2, A1SJ71E71N-T, A1SJ71E71N-B5T, A1SJ71E71-B5-S3, A1SJ71E71-B2-S3



[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

■Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5002
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

■GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

■Connected Ethernet Controller Setting

Item		Set value
Ethernet setting No.1	Host	*
	Net No.	1
	Station	2
	Unit Type	AJ71E71
	IP address	192.168.3.19
	Port No.	5001
	Communication	UDP (fixed)

Connecting to Ethernet module (FX Series)

This section describes the settings of the GOT and Ethernet module (FX Series) in the following case of the system configuration.

Point

• Ethernet module (FX Series)

For details of the Ethernet module (FX Series), refer to the following manual.

📖FX3U-ENET-L User's manual

📖FX3U-ENET User's manual

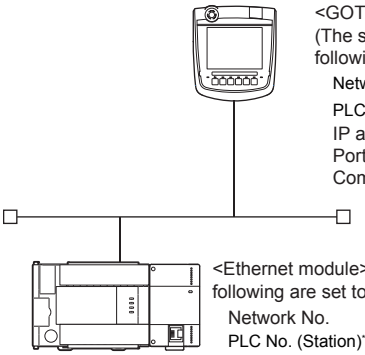
📖FX3U-ENET-ADP User's manual

• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

☞ Page 300 Precautions

System configuration



<GOT>
(The settings other than the following are set to the default)
Network No. (GOT Net No.)*2 : 1
PLC No. (GOT Station)*2 : 1
IP address : 192.168.3.18
Port No. : 5019
Communication format : TCP (fixed)

<Ethernet module> (The settings other than the following are set to the default)
Network No. : 1 (virtual)*1
PLC No. (Station)*2 : 2 (virtual)*1
IP address : 192.168.3.19
Port No. : 5556 (fixed)
Communication format : TCP (fixed)

*1 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 275 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

Ethernet parameter settings of FX Configurator-EN-L and FX Configurator-EN

■Ethernet settings

Set the Ethernet parameter using FX Configurator-EN-L or FX Configurator-EN.

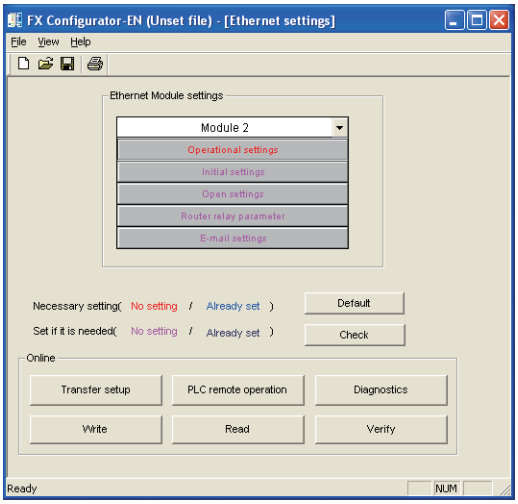
To use FX Configurator-EN-L, GX-Developer Ver.8.88S or later is required.

To use FX Configurator-EN, GX-Developer Ver.8.25B or later is required.

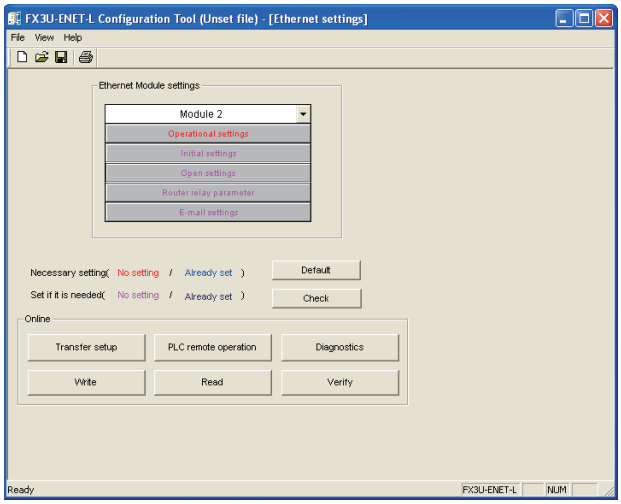
For the details on the engineering tools, refer to the following manuals.

📖FX Configurator-EN-L Operation Manual

📖FX Configurator-EN Operation manual



FX Configurator-EN-L



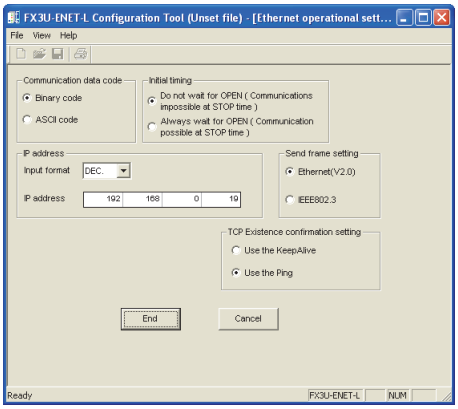
FX Configurator-EN

Item	Setting	Setting (with GOT connected)
Module	Module 0*1	○
Operational settings	☞ Page 271 Operational settings	○
Initial settings	(Use default value.)	×
Open settings	☞ Page 272 Open settings	○
Router relay parameter	(Use default value.)	×
E-mail settings		×

○:Required △:Set if necessary ×:Not required

*1 Set the number of the Ethernet module.

■Operational settings



Item	Setting	Setting (with GOT connected)
Communication date code*1	(Use default value.)	×
IP address	192.168.3.19	○
Initial timing*1	(Use default value.)	×
Send frame setting		×
TCP Existence confirmation setting		×

○:Required △:Set if necessary ×:Not required

*1 Because the port No. 5551 is fixed, the GOT operates as follows, regardless of the setting for the item.
- Communication date code : [Binary code]
- Initial timing : [Always wait for OPEN]

(Communications are enabled while the programmable controller CPU stops.)

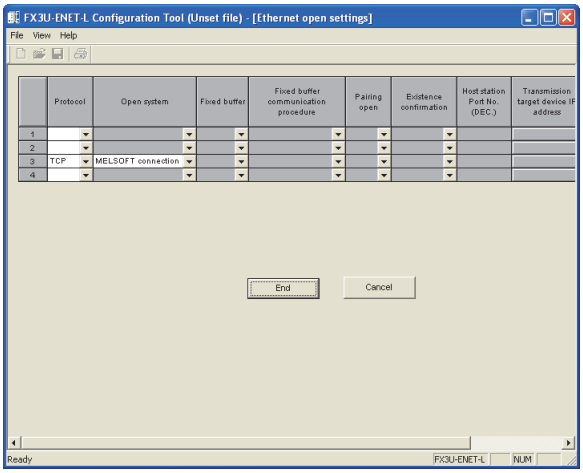
*2 The default value of IP address is 192.168.1.254. Set the IP address corresponding to the system configuration.

Point

When changing Ethernet parameter

After writing the Ethernet parameter to the programmable controller CPU, turn off and then on, or reset the programmable controller CPU.

■Open settings



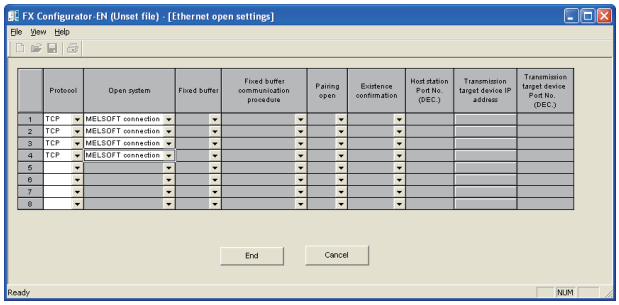
Item	Setting	Setting (with GOT connected)
Protocol	TCP	○
Open system	MELSOFT connection	○
Fixed buffer	(Use default value.)	×
Fixed buffer communication procedure		×
Pairing open		×
Existence confirmation		×
Host station Port No. (DEC.)		×
Transmission target device IP address		×
Transmission target device Port No. (DEC.)		×

○:Required △:Set if necessary ×:Not required

Point

When connecting to multiple GOTs and peripheral devices

The number of protocols equivalent to that of the GOTs and devices must be set.



Ethernet parameter settings of FX3U-ENET-ADP

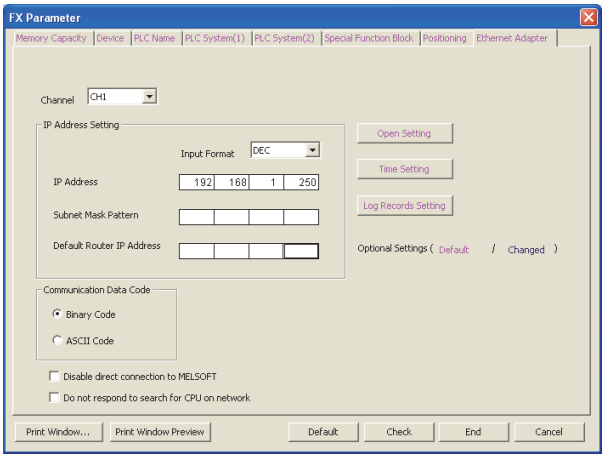
■Ethernet settings

Set the Ethernet parameter at [FX Parameter] on GX Works2.

To set FX3U-ENET-ADP, GX Works2 Ver.1.90U or later is required.

For details on the setting of FX3U-ENET-ADP, refer to the following manual.

📖FX3U-ENET-ADP User's Manual



Item	Setting	Setting (with GOT connected)
Channel	CH1 or CH2*1	×
IP Address	192.168.3.19*2	○
Open Settings	☞ Page 274 Open settings	○
Communication Data Code	(Use default value.)	×
Disable direct connection to MELSOFT		×
Do not respond to search for CPU on network		×

○:Required △:Set if necessary ×:Not required

*1 Set a channel according to the installation position of FX3U-ENET-ADP on the CPU body.

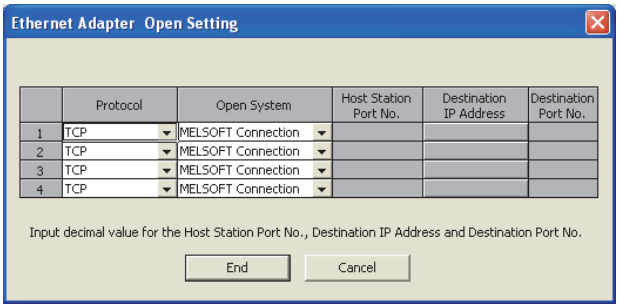
*2 The default value of IP address is 192.168.1.250.
Set the IP address corresponding to the system configuration.

Point

When changing Ethernet parameter

After writing Ethernet parameters to the PLC CPU, turn the PLC CPU OFF then back ON again.

■Open settings



Item	Setting	Setting (with GOT connected)
Protocol	TCP	○
Open System	MELSOFT connection	○

Point

When connecting to multiple GOTs and peripheral devices

The number of protocols equivalent to that of the GOTs and devices must be set.

[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

■Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5019
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

■GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

■Connected Ethernet Controller Setting

Item		Set value
Ethernet setting No.1	Host	*
	Net No.	1
	Station	2
	Unit Type	FX (fixed)
	IP address	192.168.3.19*1
	Port No.	5551 (for FX3U-ENET-L) 5556 (for FX3U-ENET-ADP)
	Communication	TCP (fixed)

*1 Set the value according to the IP address of the connected PLC.

Confirming the communication state of Ethernet module

■When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

• At normal communication

C:\>Ping 192.168.3.19

Reply from 192.168.3.19:bytes=32 time<1ms TTL=32

• At abnormal communication

C:\>Ping 192.168.3.19

Request timed out.

■At abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

- Mounting condition of Ethernet communication unit
- Cable connecting condition
- Confirmation of switch and network parameter setting
- Operation state of PLC CPU (faulty or not)
- IP address of GOT specified by Ping command

Point

Ethernet diagnostics of FX Configurator-EN-L or FX Configurator-EN is available to a Ping test from the PLC.
For details of Ethernet diagnostics of the engineering tools, refer to the following manuals.
📖FX Configurator-EN-L Operation manual
📖FX Configurator-EN Operation manual

Connecting to Built-in Ethernet port FXCPU (FX3GE)

This section describes the settings of the GOT and Ethernet module (FX Series) in the following case of the system configuration.

Point

• FX3GE

For details of FX3GE, refer to the following manual.

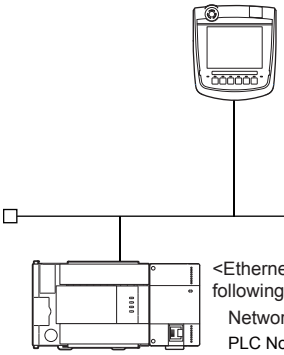
📖FX3GE SERIES PROGRAMMABLE CONTROLLERS HARDWARE MANUAL

• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

☞ Page 300 Precautions

System configuration



<GOT>
(The settings other than the following are set to the default)
Network No. (GOT Net No.)*2 : 1
PLC No. (GOT Station)*2 : 1
IP address : 192.168.0.18
Port No. : 5019
Communication format : TCP (fixed)

<Ethernet module> (The settings other than the following are set to the default)
Network No. : 1 (virtual) *1
PLC No. (Station)*2 : 2 (virtual)*1
IP address : 192.168.0.19
Port No. : 5556 (fixed)
Communication format : TCP (fixed)

*1 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 279 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

Ethernet parameter settings of FX3GE

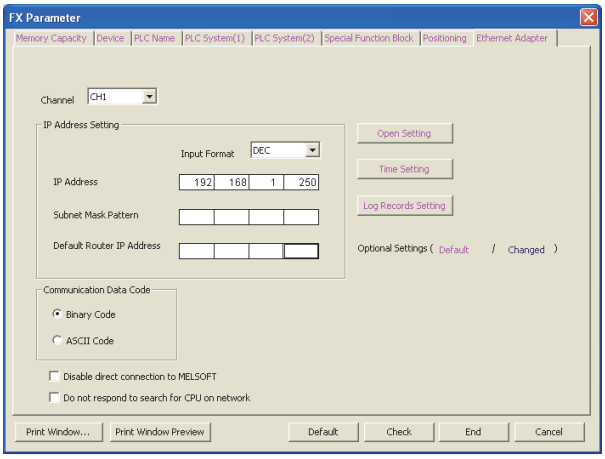
■Ethernet settings

Set the Ethernet parameter at [FX Parameter] on GX Works2.

To set FX3GE, GX Works2 Ver.1.91V or later is required.

For details on the setting of FX3GE, refer to the following manual.

📖FX3GE SERIES PROGRAMMABLE CONTROLLERS HARDWARE MANUAL



Item	Set value	Setting (with GOT connected)
Channel	CH1	×
IP Address	192.168.1.250*1	○
Open Settings	☞ Page 278 Open settings	○
Communication Data Code	(Use default value.)	×
Disable direct connection to MELSOFT		×
Do not respond to search for CPU on network		×

○:Required △:Set if necessary ×:Not required

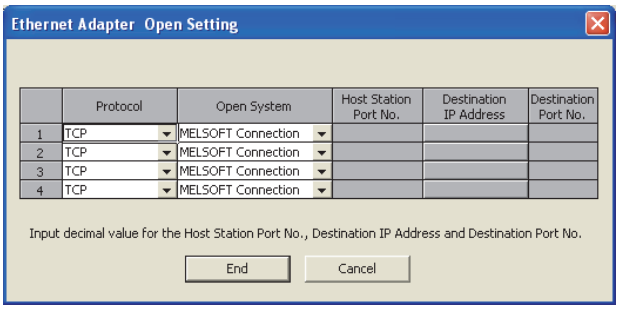
*1 The default value of IP address is 192.168.1.250.
Set the IP address corresponding to the system configuration.

Point

When changing Ethernet parameter

After writing Ethernet parameters to the PLC CPU, turn the PLC CPU OFF then back ON again.

■Open settings



Item	Set value	Setting (with GOT connected)
Protocol	TCP	○
Open System	MELSOFT connection	○

Point

When connecting to multiple GOTs and peripheral devices

The number of protocols equivalent to that of the GOTs and devices must be set.

[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

■Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5019
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

■GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

■Connected Ethernet Controller Setting

Item		Set value
Ethernet setting No.1	Host	*
	Net No.	1
	Station	2
	Unit Type	FX (fixed)
	IP address	192.168.0.19*1
	Port No.	5556*2
	Communication	TCP (fixed)

*1 Set the value according to the IP address of the connected PLC.

*2 Set the value according to the Port No. of the connected PLC.
For details, refer to the following.

☞ Page 159 Connected Ethernet controller setting

Confirming the communication state of Ethernet module

■When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

• At normal communication

C:\>Ping 192.168.3.19

Reply from 192.168.3.19:bytes=32 time<1ms TTL=32

• At abnormal communication

C:\>Ping 192.168.3.19

Request timed out.

■At abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

- Mounting condition of Ethernet communication unit
- Cable connecting condition
- Confirmation of switch and network parameter setting
- Operation state of PLC CPU (faulty or not)
- IP address of GOT specified by Ping command

Connecting to Display I/F (CNC C70)

This section describes the settings of the GOT and Display I/F (CNC C70) in the following case of the system configuration.

Point

• Display I/F (CNC C70)

For details of the Display I/F (CNC C70), refer to the following manual.

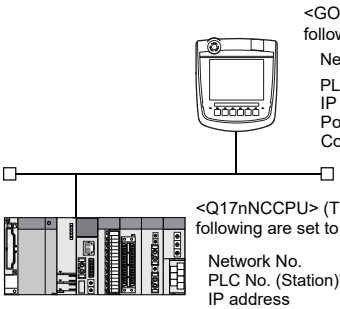
C70 Series SET UP MANUAL

• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

Page 300 Precautions

System configuration



<GOT> (The settings other than the following are set to the default)

Network No. (GOT Net No.)*1 : 239
PLC No. (GOT Station)*1 : 1
IP address : 192.168.1.1
Port No. : 5001
Communication format : UDP (fixed)

<Q17nNCCPU> (The settings other than the following are set to the default)

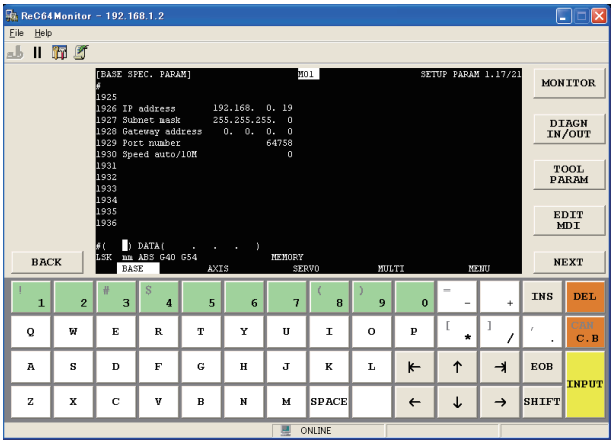
Network No. : 239
PLC No. (Station)*1 : 2
IP address : 192.168.1.2
Port No. : 5001
Communication format : UDP(fixed)

*1 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

IP address settings of CNC C70

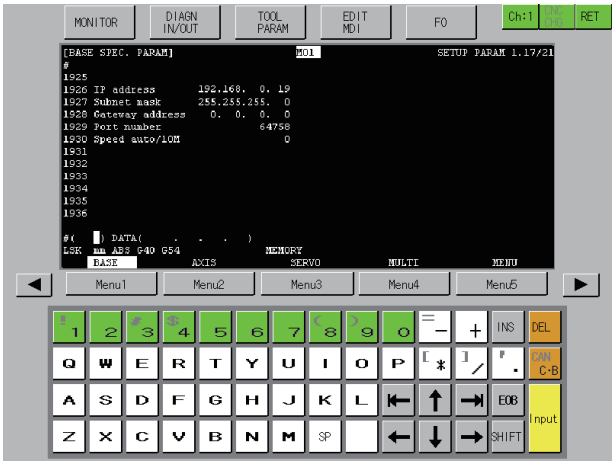
■Remote monitor tool



Item	Set value	Setting necessity at GOT connection
IP address	192.168.1.2	○
Subnet mask	255.255.255.0	○
Gateway address	0.0.0.0	○
Port number	64758 (fixed)	○
Speed auto/10M	0 (fixed)	○

○: Necessary △: As necessary ×: Not necessary

■CNC monitor



Item	Set value	Setting necessity at GOT connection
IP address	192.168.1.2	○
Subnet mask	255.255.255.0	○
Gateway address	0.0.0.0	○
Port number	64758 (fixed)	○
Speed auto/10M	0 (fixed)	○

○: Necessary △: As necessary ×: Not necessary

■Communication check

The CNC C70 can communicate with the GOT when INIT.LED of the CNC C70 is lit.

For confirming the communication state, refer to the following.

☞ Page 283 Checking communication state of CNC C70

[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

■Controller Setting

Item	Set value
GOT Net No.	259
GOT Station	1
GOT Communication Port No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

■GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.1.1
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

■Connected Ethernet Controller Setting

Item		Set value
Ethernet setting No.1	Host	*
	Net No.	239
	Station	2
	Unit Type	Q17nNC
	IP address	192.168.1.2
	Port No.*1	5001
	Communication*1	UDP

*1 The following [Port No.] and [Communication format] can also be set.
[Port No.]: 5002
[Communication]: TCP

Checking communication state of CNC C70

■When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

• At normal communication

C:\>Ping 192.168.1.2

Reply from 192.168.1.2:bytes=32 time<1ms TTL=32

• At abnormal communication

C:\>Ping 192.168.1.2

Request timed out.

■At abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

- Mounting condition of CNC C70
- Cable connecting condition
- Switch settings and network parameter settings
- Operation state of PLC CPU (faulty or not)
- IP address of the CNC C70 specified for the Ping command

Connection to NZ2GF-ETB

This section describes the settings of the GOT, the CC-Link IE Field Network Ethernet adapter module (NZ2GF-ETB), and the PLC in the following system configuration.

Point

• CC-Link IE Field Network Ethernet adapter module (NZ2GF-ETB)

For details on the CC-Link IE Field Network Ethernet adapter module (NZ2GF-ETB), refer to the following.

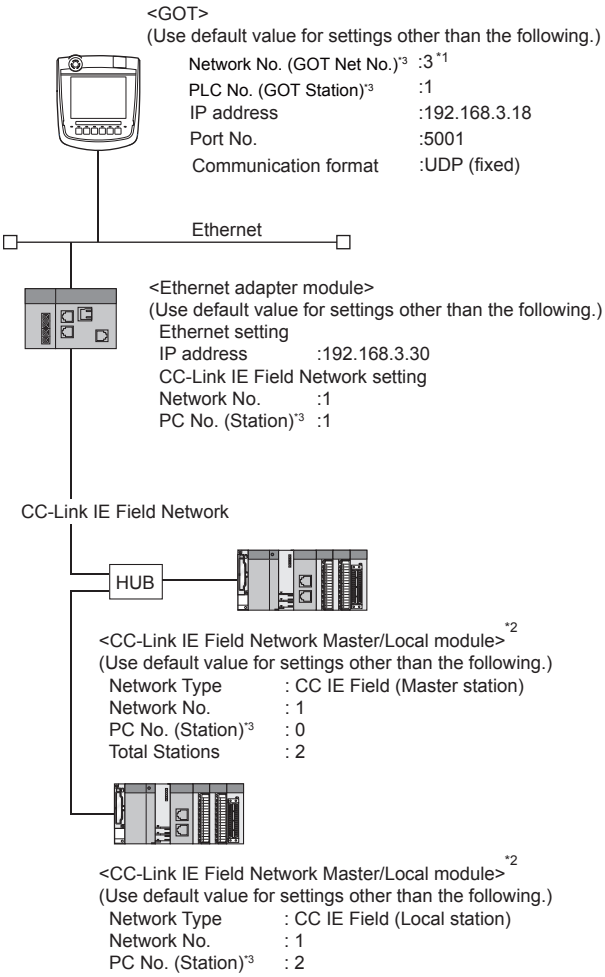
CC-Link IE Field Network Ethernet Adapter Module User's Manual

• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

Page 300 Precautions

System configuration



*1 Set the GOT network No. according to the third octet (network No.) of the Ethernet adapter module IP address.

*2 The CC-Link IE Field Network Master/Local module is mounted on slot 0 of the base unit.
The start I/O No. of the CC-Link IE Field Network Master/Local module is set at [0].

*3 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

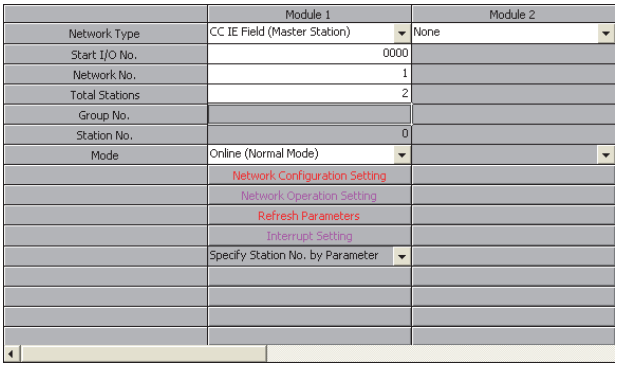
GX Works2 network parameter Ethernet/CC IE/MELSECNET

For details of the setting contents of PLC side, refer to the following manual.

MELSEC-Q CC-Link IE Field Network Master/Local Module User's Manual

■Network Type, Network No., Total Stations setting

Example: Master station setting



Item	Set value	
	Master station	Local station
Network type	CC IE Field (Master station)	CC IE Field (Local station)
Network No.	1	1
Total Stations	2	-
Station No.	0 (fixed)	2

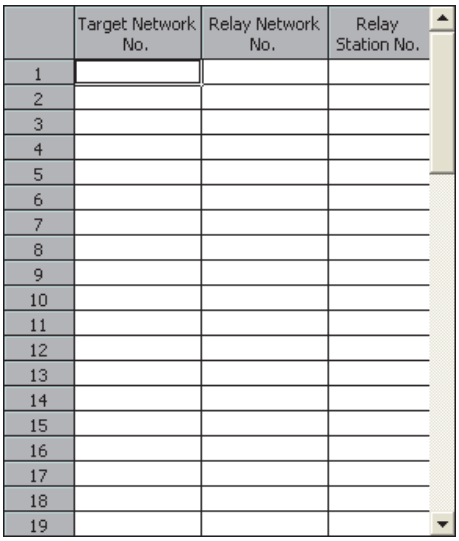
■Routing parameter setting

Set the followings as necessary.

Up to 64 [Transfer Network No.]s can be set.

However, the same transfer network number cannot be set twice or more (multiple times).

Therefore, the one that can access to other station from the request source host GOT is 64 kinds of [Transfer Network No.]s.



Item	Range
Transfer Network No.	1 to 239
Relay Network No.	1 to 239
Relay Station No.	0 to 64

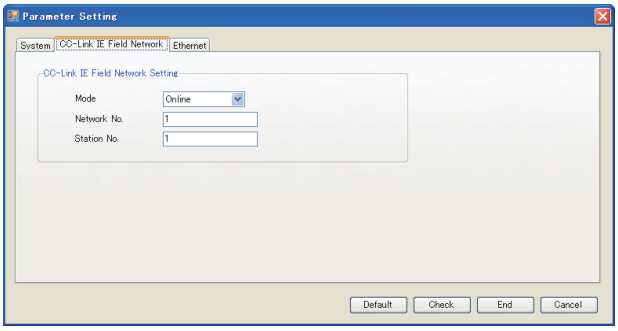
Ethernet Adapter Module setting

Set the parameter with the Ethernet adapter module setting tool.

For details of the setting method, refer to the following manual.

📖CC-Link IE Field Network Ethernet Adapter Module User's Manual

■CC-Link IE Field Network setting

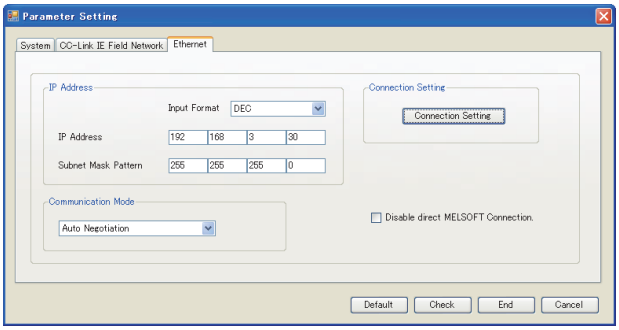


Item	Set value
Network No.	1*1
Station No.	1*2

*1 Set the same value as the network No. set on the PLC side.

*2 Set a value other than the network No. set on the PLC side.

■Ethernet setting



Item	Set value
IP address	192.168.3.30*1

*1 Set the IP address within the following range.

192.168.3.30

Set the fourth octet within the range from 1 to 64.

Set the third octet within the range from 1 to 239.

[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

■Controller Setting

Item	Set value
GOT Net No.	3*1
GOT Station	1
GOT Communication Port No.	5001
Retry	3 times
Startup Time	3 sec
Timeout Time	3 sec
Delay Time	0ms

*1 Set the GOT network No. according to the third octet (network No.) of the Ethernet adapter module IP address.

■GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

■Connected Ethernet Controller Setting

Item		Set value
Ethernet Setting No.1	Host	*
	Net No.	3*1
	Station	30*2
	Unit Type	NZ2GF-ETB
	IP address	192.168.3.30*3
	Port No.*4	5001
	Communication*4	UDP

*1 Set according to the third octet (network No.) of the Ethernet adapter module IP address.
*2 Set according to the fourth octet (PC No.) of the Ethernet adapter module IP address.
*3 Set according to the Ethernet adapter module IP address.
*4 The following [Port No.] and [Communication format] can also be set.
[Port No.]: 5002
[Communication]: TCP

■Routing parameter setting

Item	Set value
Transfer Network No.	1*1
Relay Network No.	3*2
Relay Station No.	30*3

*1 Set the same value as the Ethernet adapter module network No.
*2 Set according to the third octet (network No.) of the Ethernet adapter module IP address.
*3 Set according to the fourth octet (PC No.) of the Ethernet adapter module IP address.

Connection to PERIPHERAL I/F

This section describes the settings of the GOT and Built-in Ethernet port Motion CPU in the following system configuration.

Point

• GOT type setting

For details, refer to the following.

☞ Page 49 Setting [Controller Type]

• CPU No. specification of Q170MCPU and Q170MSCPU(-S1)

Set whether to monitor the PLC CPU area or the Motion CPU area of Q170MCPU or Q170MSCPU(-S1) by the CPU No. specification.

For details, refer to the following.

☞ Page 300 Precautions

• PLC type of GX Works2/GX Developer

When creating a program, set the following PLC type:

For Q173D(S)CPU/Q172D(S)CPU

QnUD(E)(H)CPU

For Q170MCPU and Q170MSCPU(-S1) Q03UDCPU

Q03UDCPU

• Built-in Ethernet port CPU

For details of Built-in Ethernet port CPU, refer to the following manual.

User's Manual of Q173D(S)CPU/Q172D(S)CPU, Q170MCPU, and Q170MS(-S1)CPU

• When connecting to multiple GOTs

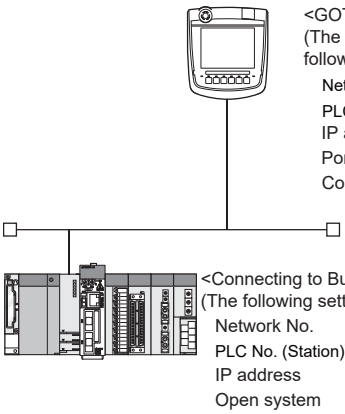
When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

☞ Page 300 Precautions

System configuration

Leave the Built-in Ethernet port Motion CPU settings as default in the following system configuration.

Set [Controller Setting] and [Connected Ethernet Controller Setting] on GT Designer3, and then connect Built-in Ethernet port CPU to the GOT.



<GOT>
(The settings other than the following are set to the default)
Network No. (GOT Net No.)*3 : 1
PLC No. (GOT Station)*3 : 1
IP address : 192.168.3.18
Port No. : 5001
Communication format : UDP (fixed)

<Connecting to Built-in Ethernet port CPU> *1
(The following settings are set to the default)
Network No. : 1 (virtual)*2
PLC No. (Station)*3 : 2 (virtual)*2
IP address : 192.168.3.39
Open system : MELSOFT connection (fixed)

*1 For the settings when using system devices such as a hub, refer to the following.
☞ Page 231 Connection to Built-in Ethernet port CPU of MELSEC-Q/L series

*2 These setting items do not exist at the PLC side.
However, the virtual values must be set on the GOT side.
☞ Page 291 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

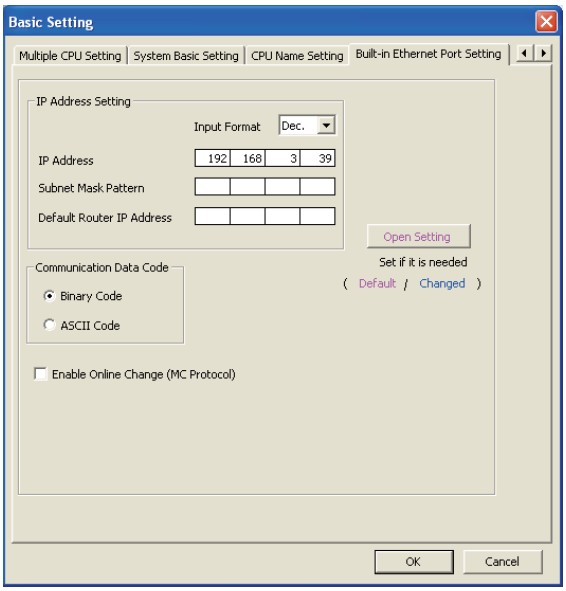
*3 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

Basic setting of MT Works2

Use the default values of the basic setting for the system configuration above.

■Built-in Ethernet port

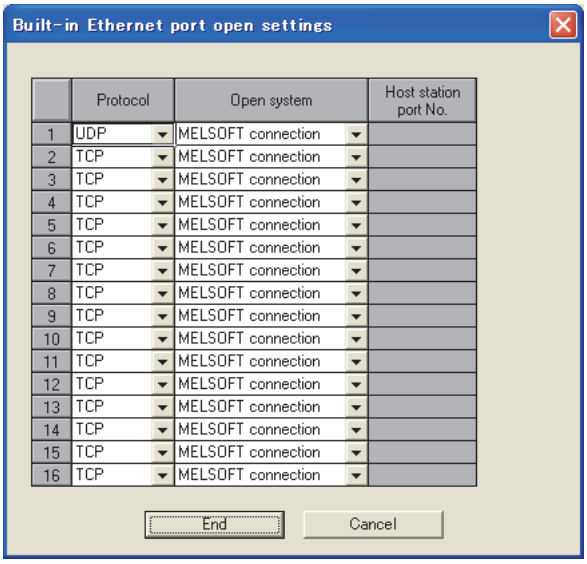


Item	Set value	Setting necessity at GOT connection
IP address	192.168.3.39 (Default)	○
Subnet mask pattern	-	×
Default router IP address	-	×
Communication data code	(Use default value)	△
Enable online change (MC protocol)		△
Open settings	☞ Page 290 Open settings	○

○: Necessary △: As necessary ×: Not necessary

■Open settings

The setting is required for all the connected GOTs.



Item	Set value
Protocol	UDP (fixed)
Open system	MELSOFT connection (fixed)
Host station port No.	-

[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

Point

[Connected Ethernet Controller Setting] when connecting a Built-in Ethernet port Motion CPU and the GOT

The setting items for the network No. and station No. do not exist on the motion CPU side.

Set the network No. and station No. on the GOT side.

Set the network No. that is not existed on the network system and any station No..

■Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5001
Retry	3times
Startup Time	3 sec
Timeout Time	3 sec
Delay Time	0ms

■GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

■Connected Ethernet Controller Setting

Item		Set value
Ethernet setting No.1	Host	*
	Net No.	1*1
	Station	2*2
	Unit Type	QnUD(P)V/QnUDE(H)
	IP address	192.168.3.39*3
	Port No.*4	5006
	Communication*4	UDP

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number.

*3 Set the value to the IP address of the Built-in Ethernet port Motion CPU.

*4 The following [Port No.] and [Communication format] can also be set.
[Port No.]: 5007
[Communication]: TCP

Checking communication state of Connecting to Built-in Ethernet port CPU

■When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

• At normal communication

C:\>Ping 192.168.3.39

Reply from 192.168.3.39:bytes=32 time<1ms TTL=32

• At abnormal communication

C:\>Ping 192.168.3.39

Request timed out.

■At abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

- Cable connecting condition
- Confirmation of switch and network parameter setting
- Operation state of PLC CPU (faulty or not)
- The IP address of Built-in Ethernet port CPU specified in the Ping command

Point

Ethernet diagnostics of GX Works2/GX Developer

Ethernet diagnostics of GX Works2/GX Developer is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works2/GX Developer, refer to the following manual.

GX Works2 Version1 Operating Manual (Common)

GX Developer Version8 Operating Manual

Connection to CC-Link IE TSN-equipped module

This section describes the settings of the GOT and a CC-Link IE TSN-equipped module in the following system configuration.

Point

• CC-Link IE TSN-equipped module

For details on the CC-Link IE TSN-equipped module, refer to the following.

MELSEC iQ-R CC-Link IE TSN User's Manual (Startup)

MELSEC iQ-R CC-Link IE TSN Plus Master/Local Module User's Manual

MELSEC iQ-F FX5 User's Manual (CC-Link IE TSN)

• When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

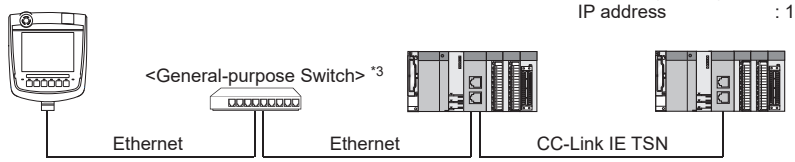
Page 300 Precautions

System configuration

The following shows a system configuration example for connecting to the CC-Link IE TSN master/local module (RJ71GN11-T2).

<GOT>
(The settings other than the following are set to the default)
Network No. (GOT Net No.) *2 : 1
PLC No. (GOT Station) *2 : 18
IP address : 192.168.3.18
Port No. : 5001
Communication format : UDP (fixed)

<CC-Link IE TSN master/local module 2> *1
(The settings other than the following are set to the default)
Station type : Master station
Network No. : 1
PLC No. (Station) *2 : 0 (fixed)
IP address : 192.168.3.99



<CC-Link IE TSN master/local module 1> *1
(The settings other than the following are set to the default)
Station type : Local station
Network No. : 1
PLC No. (Station) *2 : 1
IP address : 192.168.3.1

*1 The CC-Link IE TSN master/local module is mounted on slot 0 of the base unit.
The start XY number of the CC-Link IE TSN master/local module is set to "0".

*2 For the following setting contents, the setting names are different on the PLC side and the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

*3 A General-purpose Switch is required to connect the GOT and a CC-Link IE TSN master/local module.
For usable General-purpose Switches, refer to the following.
Manual of the CC-Link IE TSN master/local module to be used

[Module Parameter] of GX Works3

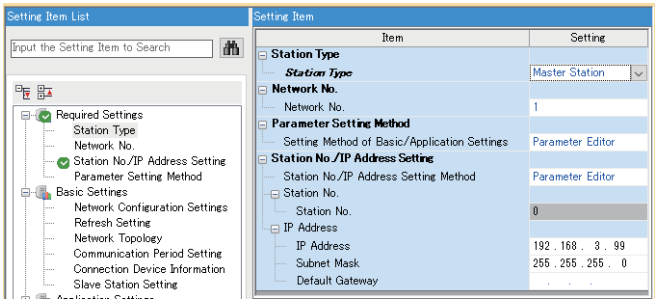
The following shows a parameter setting example for connecting to the CC-Link IE TSN master/local module (RJ71GN11-T2).

For details on the settings of the PLC, refer to the following manual.

📖Manual of the CC-Link IE TSN master/local module to be used

■[Required Settings]

Example: Setting of the CC-Link IE TSN master/local module 1



Item	Set value	
	CC-Link IE TSN master/local module 1	CC-Link IE TSN master/local module 2
Station type	Local station	Master station
Network No.	1	1
Station No.	1	0 (fixed)
IP Address	192.168.3.1	192.168.3.99

[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

The following shows a setting example of GT Designer3 for connecting to the CC-Link IE TSN master/local module (RJ71GN11-T2).

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

■Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	18
GOT Communication Port No.	5001
Retry	3 times
Startup Time	3 sec
Timeout Time	3 sec
Delay Time	0ms

■GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

■Connected Ethernet Controller Setting

Item		Set value
Ethernet setting No.1	Host	*
	Net No.	1 *1
	Station	1 *2
	Unit Type *3	RJ71GN11-T2/RD78G(H)
	IP Address	192.168.3.1
	Port No. *4	5001
	Communication *4	UDP

*1 Set the same value as GOT Net No.

*2 Set a value different from the GOT station number.

*3 For the MELSEC iQ-F series, select [FX5-CCLGN-MS/FX5-nSSC-G].
For RJ71GN11-EIP, select [RJ71GN11-T2/RD78G(H)].

*4 The following [Port No.] and [Communication format] can also be set.
• MELSEC iQ-R series
[Port No.]: 5002
[Communication]: TCP
• MELSEC iQ-F series
[Port No.]: 5554
[Communication]: TCP

Checking the communication status of the CC-Link IE TSN-equipped module

■When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

- At normal communication

C:\>Ping 192.168.3.1

Reply from 192.168.3.1:bytes=32 time<1ms TTL=32

- At abnormal communication

C:\>Ping 192.168.3.1

Request timed out.

■At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

- Connection status of the CC-Link IE TSN-equipped module
- Cable connecting condition
- Confirmation of switch and network parameter setting
- Operation state of PLC CPU (faulty or not)
- IP address of the CC-Link IE TSN-equipped module specified in the ping command

Point

Ethernet diagnostics of GX Works3

Ethernet diagnostics of GX Works3 is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Works3, refer to the following manual.

Manual of PLC to be used

Connection to built-in Ethernet port of Motion module

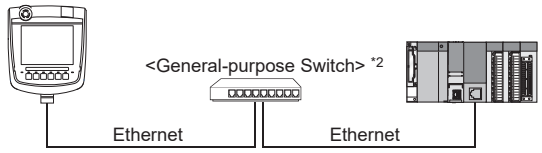
This section describes the settings of the GOT and Motion module in the following system configuration.

Point

For details on the Motion module, refer to the following.
MELSEC iQ-R Motion Module User's Manual (Startup)

System Configuration

<GOT>
(The settings other than the following are set to the default)
Network No. (GOT Net No.) *1 : 1
PLC No. (GOT Station) *1 : 18
IP address : 192.168.3.18
Port No. : 5001
Communication format : UDP



<Motion module>
(The settings other than the following are set to the default)
Network No. : 1
PLC No. (Station) *1 : 0(fixed)
IP address : 192.168.3.39

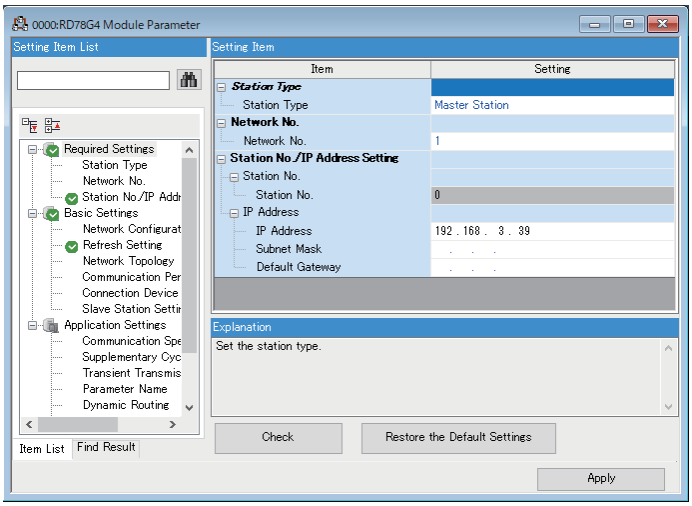
*1 For the following settings, the setting names differ on the PLC side and on the GOT side.

Contents of setting	Setting names		
	PLC side	GOT side	
		Controller Setting	Connected Ethernet Controller Setting
Network No.	Network No.	GOT Net No.	Net No.
PC No.	Station	GOT Station	Station

*2 For usable General-purpose Switches, refer to the following.
MELSEC iQ-R Motion Module User's Manual (Startup)

[Module Parameter (Network)] of GX Works3

For details on the Motion module side settings, refer to the following.
MELSEC iQ-R Motion Module User's Manual (Network)



Item		Set value
Required Settings	Network No.	1
	IP Address	192.168.3.39

[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 153 Setting communication interface (Controller Setting)

■Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	18
GOT Communication Port No.	5001
Retry	3 times
Startup Time	3 sec
Timeout Time	3 sec
Delay Time	0ms

■GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

■Connected Ethernet Controller Setting

Item		Set value
Ethernet setting No.1	Host	*
	Net No.	1 *1
	Station	0 (fixed)
	Unit Type	RJ71GN11-T2/RD78G(H) (fixed)
	IP Address	192.168.3.39
	Port No.	5001
	Communication *2	UDP

*1 Set the same value as GOT Net No.

*2 If you set [Communication] to [TCP], set [Port No.] to [5002].

Checking the communication status of the Motion module

■When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

• At normal communication

C:\>Ping 192.168.3.39

Reply from 192.168.3.39:bytes=32 time<1ms TTL=32

• At abnormal communication

C:\>Ping 192.168.3.39

Request timed out.

■At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

- IP address of the Motion module specified by the ping command execution.
- Operation state of PLC CPU (faulty or not)
- Connection status of the Motion module
- Cable connecting condition
- Confirmation of switch and network parameter setting

Connection to Motion module through Built-in Ethernet port of PLC

When connecting to MELSEC iQ-R series

For the connection between the GOT and MELSEC iQ-R series Built-in Ethernet port CPU, refer to the following.

☞ Page 190 Connection to Built-in Ethernet port CPU of MELSEC iQ-R series

For details on the Motion module, refer to the following.

📖MELSEC iQ-R Motion Module User's Manual (Startup)

When connecting to MELSEC iQ-F series

For the connection between the GOT and MELSEC iQ-F series Built-in Ethernet port CPU, refer to the following.

☞ Page 220 Connection to Built-in Ethernet port CPU of MELSEC iQ-F series

For details on the Motion module, refer to the following.

📖MELSEC iQ-F FX5 Motion Module/Simple Motion Module User's Manual (Startup)

2.5 Precautions

Connection to QnA (S) CPU type

Use B or a later function version of Ethernet module (QnA Series) and PLC CPU (QnA/QnASCPU type).

Connection to QSCPU

The GOT can only read device data and sequence programs by the ladder monitor function in the QSCPU.

The GOT cannot write any data to the QSCPU.

Connection to Q170MCPU or Q170MSCPU(-S1)

Set [CPU No.] to 2 in the device setting to monitor the device of the Motion CPU area (CPU No. 2).

When [CPU No.] is set to 1, the device on the PLC CPU area (CPU No. 1) is monitored.

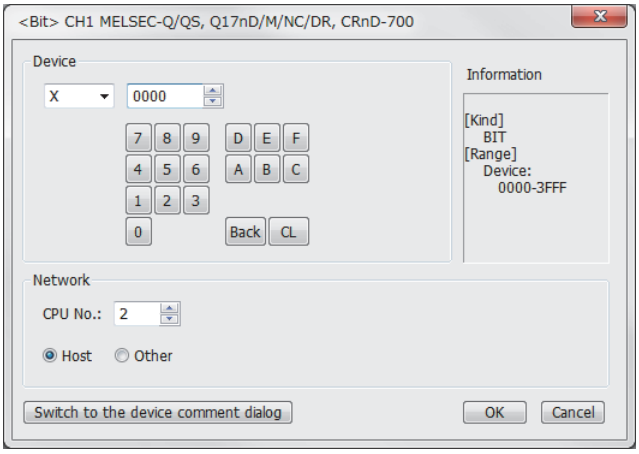
When [CPU No.] is set to 0, the monitoring target differs depending on the GOT connection destination. Refer to the following.

GOT connection destination	Monitoring target
QJ71E71 module	PLC CPU area (CPU No.1)
Q170MCPU Q170MSCPU(-S1)	Motion CPU area (CPU No.2)

When [CPU No.] is set to the number other than 0 to 2, a communication error occurs and the monitoring cannot be executed.

For the setting of [CPU No.], refer to the following.

GT Designer3 (GOT2000) Screen Design Manual



Connection in the multiple CPU system

When the GOT is connected to multiple CPU system, the following time is taken until when the PLC runs.

MELSEC iQ-R series, Motion CPU (MELSEC iQ-R series), QCPU (Q mode), Motion CPU (Q series): 10 seconds or more

MELDAS C70: 18 seconds or more

When the GOT starts before the PLC runs, a system alarm occurs.

Adjust the opening screen time in the GOT setup so that no system alarm occurs.

GT Designer3 (GOT2000) Screen Design Manual

Connection to LCPU

LCPU may diagnose (check file system, recovering process, etc.) the SD memory card when turning on the power or when resetting.

Therefore, it takes time until the SD memory card becomes available.

When the GOT starts before the SD card becomes available, a system alarm occurs.

Adjust the opening screen time in the GOT setup so that no system alarm occurs.

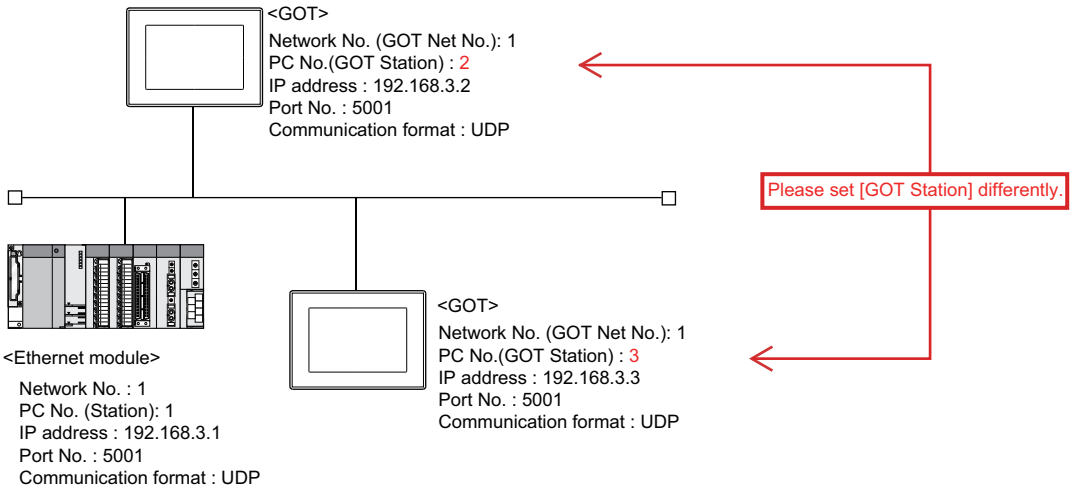
GT Designer3 (GOT2000) Screen Design Manual

Connecting multiple GOTs

■Setting GOT Station

When connecting two or more GOTs in the Ethernet network, set each [GOT Station] to the GOT.

☞ Page 153 Setting communication interface (Controller Setting)



■Setting IP address

Do not use the IP address "192.168.0.18" when using multiple GOTs with the GOT 1000 series mixed.

A communication error may occur on the GOT with the IP address.

■Setting for starting up multiple GOTs simultaneously (When connected to Built-in Ethernet port CPU)

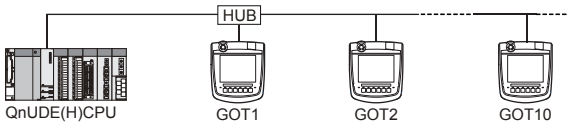
When connecting multiple GOTs to one Built-in Ethernet port CPU, adjust the timing of GOT communication start. When the communication concentrates on the PLC, the communication between GOT and PLC becomes difficult, and the monitoring by GOT may not start.

As a method for adjusting the timing, communicating one GOT alone first, and then communicating the other GOTs is effective.

Set the following items on each GOT.

- [Startup Time] of [Controller Setting], or [Title Display Time] of [GOT Setup].
- [Timeout Time] of [Controller Setting]

The following shows a setting example.



Item	GOT1	GOT2	GOT10
Startup Time	3sec (default)	4sec	4sec
Timeout Time	3sec (default)	4sec	4sec

Connecting multiple network equipment (including GOT) in a segment

By increasing the network load, the transmission speed between the GOT and PLC may be reduced.

The following actions may improve the communication performance.

- Using a switching hub
- More high speed by 100BASE-TX (100Mbps)
- Reduction of the monitoring points on GOT

Setting an IP address

Do not use "0" and "255" at the end of an IP address.
(Numbers of *.*.*.0 and *.*.*.255 are used by the system)
The GOT may not monitor the controller correctly with the above numbers.
Consult with the administrator of the network before setting an IP address to the GOT and controller.

Monitoring a PLC on a different network in the same line

When the network No. of the GOT does not match with that of the PLC on the same Ethernet, the PLC cannot be monitored.
When monitoring, set the same network No. as that of the GOT, or connect a Ethernet module to the PLC and set the routing setting to monitor as other network.
When using the multi-channel connection for GT2506HS-V, set a different network No. for each channel.

Remote password

Do not set a remote password for the following CPUs.
Otherwise, monitoring with the GOT becomes unavailable.
RCPU, FX5UCPU, QCPU (Q mode), LCPU

Connecting to the built-in Ethernet port of Built-in Ethernet port CPU

Connect to GOT after turning on the network equipment such as Built-in Ethernet port CPU or HUB to enable the communication.
When the communication with Built-in Ethernet port CPU is not available, a communication error may occur on the GOT.

Number of CPU modules connectable to one GOT

RCPU, FX5UCPU, QCPU, LCPU, ACPU, FXCPU: 128 CPU modules in total can be set for channels No. 1 to No. 4 (16 or fewer CPU modules are recommended.).
The following shows the maximum number of CPU modules that can be set for one channel.
RCPU: 119
FX5UCPU, QCPU, LCPU, ACPU, FXCPU: 63

Connecting to RnSFCPU

The RnSFCPU takes 10 seconds or more to run.
If the GOT is started before the RnSFCPU runs, a system alarm occurs.
To prevent a system alarm from occurring, adjust the title display time in the [GOT Setup] dialog.
GT Designer3 (GOT2000) Screen Design Manual

Connecting to PERIPHERAL I/F

■Monitoring other stations

The GOT cannot monitor other stations. Routing parameter setting is invalid.

■Monitoring servo amplifiers from a robot controller through a simple motion module

When a GOT is connected to the PERIPHERAL I/F of the robot controller, servo amplifiers cannot be monitored through a simple motion module.

■Monitoring a CPU module on a different network from CR800-Q (Q172DSRCPU)

When a CPU module number on a different network is specified for PERIPHERAL I/F of CR800-Q (Q172DSRCPU), the specified CPU module number within the host network is monitored.

Connecting to the built-in Ethernet port of QnUD(P)VCPU using [MELSOFT Connection Extended Setting]

When [Port No.] is set to [5001] in [Connected Ethernet Controller Setting] on GT Designer3, the built-in Ethernet port of QnUD(P)VCPU is accessible using [MELSOFT Connection Extended Setting].

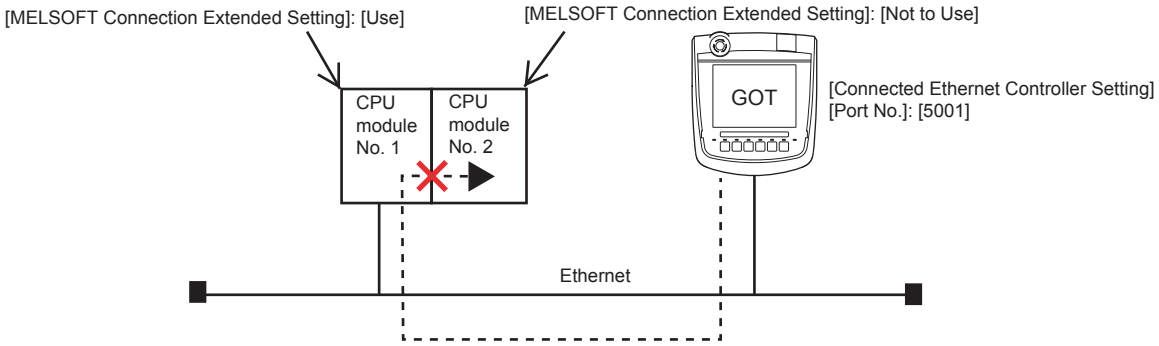
The GOT may not be able to access the PLC depending on the system configuration.

The following shows the examples of system configuration to which the GOT cannot access, and the countermeasures.

■Example 1

When connected via a CPU module whose [MELSOFT Connection Extended Setting] is set to [Use], the GOT cannot access another CPU module whose [MELSOFT Connection Extended Setting] is set to [Not to Use], or if that CPU does not support [MELSOFT Connection Extended Setting].

• Figure



1) Countermeasures

Take one of the following countermeasures.

• Change [MELSOFT Connection Extended Setting] on the PLC side.

Set [MELSOFT Connection Extended Setting] to [Use] for CPU module No. 2 that supports [MELSOFT Connection Extended Setting].

📖QnUCPU User's Manual (Communication via Built-in Ethernet Port)

• Change [Connected Ethernet Controller Setting] on the GOT side.

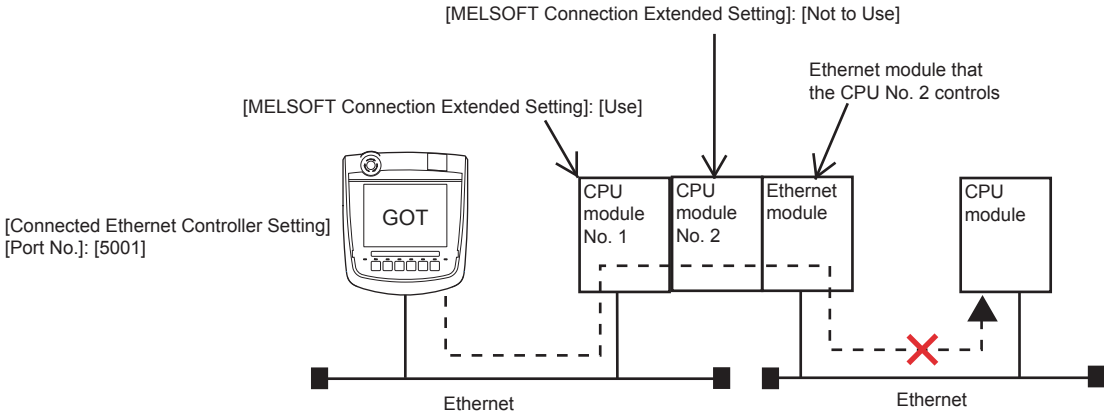
Set [Port No.] to [5006] in [Connected Ethernet Controller Setting] on the GOT side.

☞ Page 159 Connected Ethernet controller setting

■Example 2

In a multiple CPU configuration, when connected via a CPU module whose [MELSOFT Connection Extended Setting] is set to [Use], the GOT cannot access a CPU module on a different network via the network module that controls another CPU module whose [MELSOFT Connection Extended Setting] is set to [Not to Use] or if that CPU module does not support [MELSOFT Connection Extended Setting].

• Figure



1) Countermeasures

Take one of the following countermeasures.

• Change [MELSOFT Connection Extended Setting] on the PLC side.

Set [MELSOFT Connection Extended Setting] to [Use] for CPU module No. 2 that supports [MELSOFT Connection Extended Setting].

📖QnUCPU User's Manual (Communication via Built-in Ethernet Port)

• Change [Connected Ethernet Controller Setting] on the GOT side.

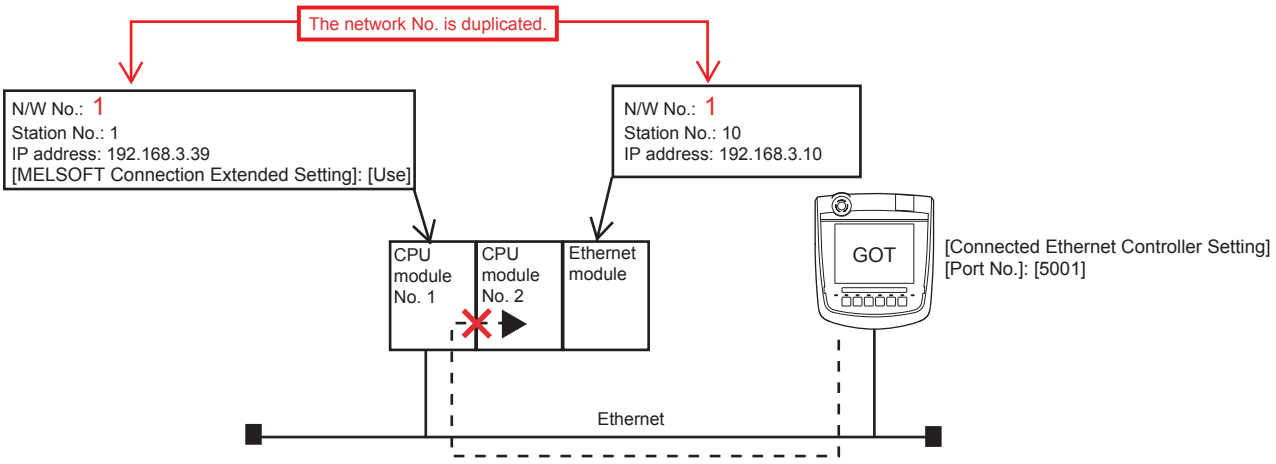
Set [Port No.] to [5006] in [Connected Ethernet Controller Setting] on the GOT side.

☞ Page 159 Connected Ethernet controller setting

■Example 3

• Figure 1

In a multiple CPU configuration, when an Ethernet module is mounted on the CPU base unit, and the same network number is set to Built-in Ethernet port CPU and the Ethernet module, the GOT cannot monitor the other CPUs in the multiple CPU configuration via Built-in Ethernet port CPU whose [MELSOFT Connection Extended Setting] is set to [Use].



1) Countermeasures

Take one of the following countermeasures.

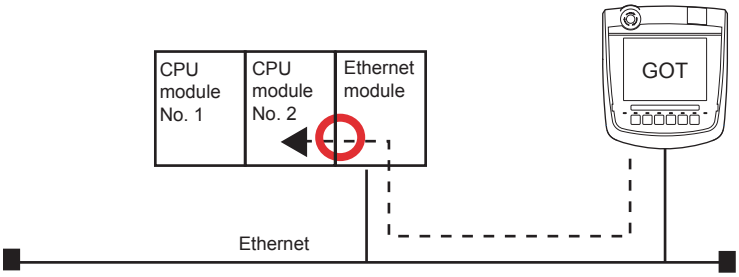
• Change [Connected Ethernet Controller Setting] on the GOT side.

Set [Port No.] to [5006] in [Connected Ethernet Controller Setting] on the GOT side.

☞ Page 159 Connected Ethernet controller setting

• Change the connection route

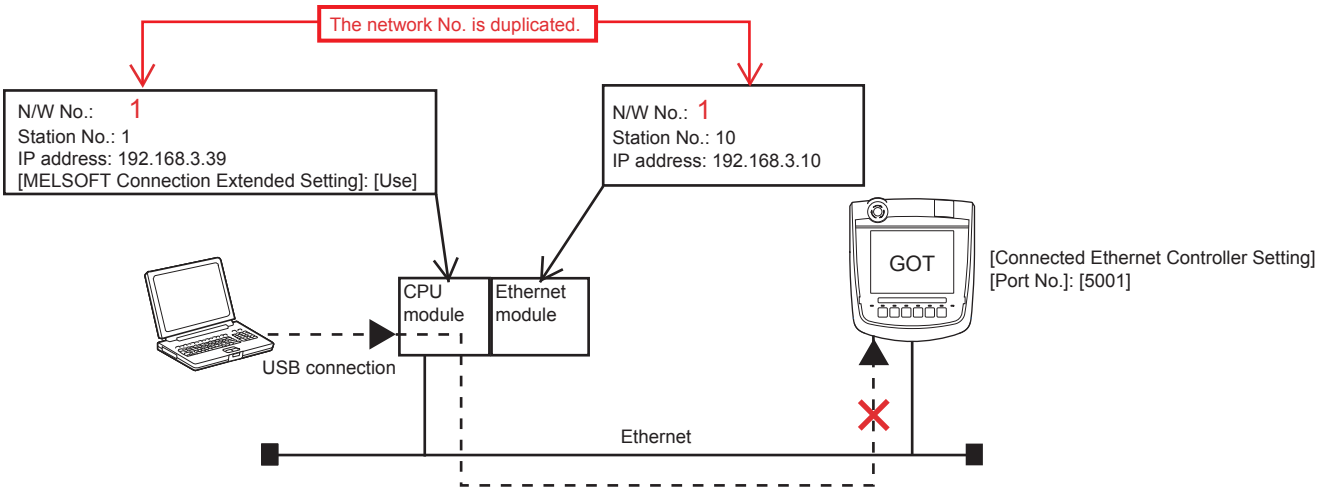
Connect the GOT to CPU module No. 2 via the Ethernet module.



• Figure 2

In the following system configuration, when the same network number is set to Built-in Ethernet port CPU and the Ethernet module, the GOT is inaccessible via Built-in Ethernet port CPU whose [MELSOFT Connection Extended Setting] is set to [Use], using GT Designer3.

Error code	Description
801fD0A3	This error occurs when the sending process of the transient transmission is not performed correctly in the CC-Link IE Field Network connection or others. (For example, when the data to be sent to the GOT is actually sent to a different network)
1000000C	This error occurs when the sending process of the transient transmission is not performed correctly in the Ethernet module (QJ71E71-100).



1) Counter measures

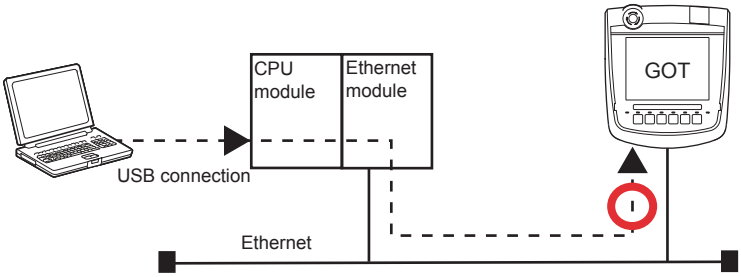
Take one of the following counter measures.

• Change the network No.

Change the network No. avoiding duplication between the Ethernet port built in CPU and the Ethernet module.

• Change the connection route.

Connect the GOT to CPU module No. 2 via the Ethernet module.



3 DIRECT CPU CONNECTION (SERIAL)

- Page 307 Connectable Model List
- Page 312 System Configuration
- Page 342 Connection Diagram
- Page 347 GOT Side Settings
- Page 354 PLC Side Setting
- Page 356 Precautions

3.1 Connectable Model List

The following table shows the connectable models.

Series	Model name	Clock	Communication type	Connectable model	Refer to
MELSEC MX Controller (MX-R Model)	MXR300-16	○	RS-232 RS-422	-	-
	MXR300-32				
	MXR300-64				
	MXR500-128				
	MXR500-256				
MELSEC MX Controller (MX-F Model)	MXF100-8-N32	○	RS-232 RS-422	-	-
	MXF100-8-P32				
	MXF100-16-N32				
	MXF100-16-P32				
MELSEC iQ-R Series	R00CPU	○	RS-232 RS-422	-	-
	R01CPU				
	R02CPU				
	R04CPU				
	R08CPU				
	R16CPU				
	R32CPU				
	R120CPU				
	R08PCPU				
	R16PCPU				
	R32PCPU				
	R120PCPU				
	R04ENCPU				
	R08ENCPU				
	R16ENCPU				
	R32ENCPU				
	R120ENCPU				
	R08PSFCPU				
	R16PSFCPU				
	R32PSFCPU				
	R120PSFCPU				
	R08SFCPU				
	R16SFCPU				
	R32SFCPU				
	R120SFCPU				
Motion CPU (MELSEC iQ-R Series)	R16MTCPU	○	RS-232 RS-422	-	-
	R32MTCPU				
	R64MTCPU				
C Controller module (MELSEC iQ-R Series)	R12CCPU-V	○	RS-232 RS-422	-	-

Series	Model name	Clock	Communication type	Connectable model	Refer to
MELSECWinCPU (MELSEC iQ-R Series)	R102WCPU-W	×	RS-232 RS-422	-	-
CNC C80	R16NCCPU-S1	○	RS-232 RS-422	-	-
Robot controller (MELSEC iQ-R Series)	CR800-R(R16RTCPU)	○	RS-232 RS-422	-	-
CC-Link IE Filed Network head module	RJ72GF15-T2	×	RS-232 RS-422	-	-
MELSEC iQ-F Series	FX5U	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 317 Connecting to MELSEC iQ-F Series
	FX5UC				
	FX5UJ				
	FX5S				
MELSEC-Q (Q mode)	Q00JCPU Q00CPU*1 Q01CPU*1	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 312 Connecting to QCPU
	Q02CPU*1 Q02HCPU*1 Q06HCPU*1 Q12HCPU*1 Q25HCPU*1		RS-232 RS-422	GT2506HS GT2505HS	
	Q02PHCPU Q06PHCPU Q12PHCPU Q25PHCPU	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 312 Connecting to QCPU
	Q12PRHCPU (Main base)				
	Q25PRHCPU (Main base)				
	Q12PRHCPU (Extension base)	○	-	-	-
	Q25PRHCPU (Extension base)				
	Q00UJCPU Q00UJCPU-S8 Q00UCPU Q01UCPU Q02UCPU Q03UDCPU Q04UDHCPU Q06UDHCPU Q10UDHCPU Q13UDHCPU Q20UDHCPU Q26UDHCPU	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 312 Connecting to QCPU
	Q03UDECPU Q04UDEHCPU Q06UDEHCPU Q10UDEHCPU Q13UDEHCPU Q20UDEHCPU Q26UDEHCPU Q50UDEHCPU Q100UDEHCPU	○	RS-232 RS-422	GT2506HS GT2505HS *2	☞ Page 312 Connecting to QCPU
	Q03UDVCPU Q04UDVCPU Q06UDVCPU Q13UDVCPU Q26UDVCPU				
C Controller module (Q Series)	Q12DCCPU-V*3 Q24DHCCPU-V/VG Q24DHCCPU-LS Q26DHCCPU-LS	○	RS-232 RS-422	GT2506HS GT2505HS *2	☞ Page 312 Connecting to QCPU
MELSEC-QS	QS001CPU	○	-	-	-

*1 When in multiple CPU system configuration, use CPU function version B or later.

*2 Access via the (RS-232) in the multiple CPU system.

*3 Use a module with the upper five digits of the serial No. later than 12042.

Series	Model name	Clock	Communication type	Connectable model	Refer to
MELSEC-L	L02CPU*1 L06CPU*1 L26CPU*1 L26CPU-BT*1 L02CPU-P*1 L06CPU-P*1 L26CPU-P*1 L26CPU-PBT*1 L02SCPU L02SCPU-P	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 313 Connecting to LCPU
MELSEC-Q (A mode)	Q02CPU-A Q02HCPU-A Q06HCPU-A	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 312 Connecting to QCPU
MELSEC-QnA (QnACPU)	Q2ACPU Q2ACPU-S1 Q3ACPU Q4ACPU	○	RS-422	GT2506HS GT2505HS	☞ Page 315 Connecting to QnACPU
	Q4ARCPU	○	RS-422	GT2506HS GT2505HS	☞ Page 315 Connecting to QnACPU
MELSEC-QnA (QnASCPU)	Q2ASCPU Q2ASCPU-S1 Q2ASHCPU Q2ASHCPU-S1	○	RS-422	GT2506HS GT2505HS	☞ Page 315 Connecting to QnACPU
MELSEC-A (AnCPU)	A2UCPU A2UCPU-S1 A3UCPU A4UCPU A2ACPU A2ACPUP21 A2ACPUR21 A2ACPU-S1 A2ACPUP21-S1 A2ACPUR21-S1 A3ACPU A3ACPUP21 A3ACPUR21 A1NCPU*2 A1NCPUP21*2 A1NCPUR21*2 A2NCPU*2 A2NCPUP21*2 A2NCPUR21*2 A2NCPU-S1*2 A2NCPUP21-S1*2 A2NCPUR21-S1*2 A3NCPU*2 A3NCPUP21*2 A3NCPUR21*2	○	RS-422	GT2506HS GT2505HS	☞ Page 316 Connecting to ACPU
MELSEC-A (AnSCPU)	A2USCPU	○	RS-422	GT2506HS GT2505HS	☞ Page 316 Connecting to ACPU

*1 The adapter L6ADP-R2 or L6ADP-R4 is required for the direct CPU connection (serial).
When using L6ADP-R4, use an LCPU whose upper five digits are "15102" or later.

*2 When monitoring AnNCPU or A2SCPU, only the following or later software version is used to write to the CPU.
• AnNCPU(S1) with link: Version L or later, AnNCPU(S1) without link: Version H or later
• A2SCPU: Version H or later

Series	Model name	Clock	Communication type	Connectable model	Refer to
MELSEC-A (AnSCPU)	A2USCPU-S1	○	RS-422	GT2506HS GT2505HS	☞ Page 316 Connecting to ACPU
	A2USHCPU-S1				
	A1SCPU				
	A1SCPUC24-R2				
	A1SHCPU				
	A2SCPU*1				
	A2SCPU-S1*1				
	A2SHCPU				
	A2SHCPU-S1				
	A1SJCPU				
	A1SJCPU-S3				
	A1SJHCPU				
MELSEC-A	A0J2HCPU*1	×	RS-422	GT2506HS GT2505HS	☞ Page 316 Connecting to ACPU
	A0J2HCPUP21*1				
	A0J2HCPUR21*1				
	A0J2HCPU-DC24*1				
	A2CCPU*1	○	RS-422	GT2506HS GT2505HS	☞ Page 316 Connecting to ACPU
	A2CCPUP21				
	A2CCPUR21				
	A2CCPUC24				
	A2CCPUC24-PRF				
	A2CJCPU-S3				
	A1FXCPU				
Motion CPU (Q Series)	Q172CPU*2*3 Q173CPU*2*3 Q172CPUN*2 Q173CPUN*2	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 312 Connecting to QCPU
	Q172HCPU	○	RS-232 RS-422	GT2506HS GT2505HS *4	☞ Page 312 Connecting to QCPU
	Q173HCPU				
	Q172DCPU				
	Q173DCPU				
	Q172DCPU-S1				
	Q173DCPU-S1				
	Q172DSCPU				
	Q173DSCPU				
	Q170MCPU	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 341 Connecting to the motion CPU
	Q170MSCPU				
	Q170MSCPU-S1				
	MR-MQ100	○	RS-422		

*1 When monitoring A0J2HCPU, A2CCPU or A2SCPU, only the following or later software version is used to write to the CPU.
- A0J2HCPU (with/without link): Version E or later
- A0J2HCPU-DC24: Version B or later
- A2CCPU, A2SCPU: Version H or later

*2 When using SV13, SV22, or SV43, use the motion CPU on which any of the following main OS version is installed.
- SW6RN-SV13Q□: 00E or later
- SW6RN-SV22Q□: 00E or later
- SW6RN-SV43Q□: 00B or later

*3 Use main modules with the following product numbers.
- Q172CPU: Product number K******* or later
- Q173CPU: Product number J******* or later

*4 Access via QCPU (RS-232) in the multiple CPU system.

Series	Model name	Clock	Communication type	Connectable model	Refer to
Motion CPU (A Series)	A273UCPU	○	RS-422	GT2506-HS GT2505-HS	☞ Page 316 Connecting to ACPU
	A273UHCPU				
	A273UHCPU-S3				
	A373UCPU				
	A373UCPU-S3				
	A171SCPU				
	A171SCPU-S3				
	A171SCPU-S3N				
	A171SHCPU				
	A171SHCPUN				
	A172SHCPU				
	A172SHCPUN				
	A173UHCPU				
	A173UHCPU-S1				
MELSEC-WS	WS0-CPU0	×	RS-232	GT2506-HS GT2505-HS	☞ Page 340 Connecting to WSCPU
	WS0-CPU1				
	WS0-CPU3				
MELSECNET/H Remote I/O station	QJ72LP25-25	×	RS-232	GT2506-HS GT2505-HS	☞ Page 312 Connecting to QCPU
	QJ72LP25G				
	QJ72BR15				
CC-Link IE Field Network head module	LJ72GF15-T2	×	-	-	-
CC-Link IE Field Network Ethernet adapter module	NZ2GF-ETB	×	-	-	-
CNC C70	Q173NCCPU	○	RS-232	GT2506-HS GT2505-HS *1	☞ Page 312 Connecting to QCPU
Robot controller (Q Series)	CRnQ-700 (Q172DRCPU) CR750-Q (Q172DRCPU) CR751-Q (Q172DRCPU) CR800-Q (Q172DSRCPU)	○	RS-232	GT2506-HS GT2505-HS *1	☞ Page 312 Connecting to QCPU
MELSEC-FX	FX0	×	RS-422	GT2506-HS GT2505-HS	☞ Page 321 Connecting to FXCPU using a connector conversion box ☞ Page 328 Connecting to FXCPU using the GT11H-C□□□-37P external cable ☞ Page 335 Connecting to FXCPU using the GT11H-C□□□ external cable
	FX0S FX0N	×	RS-422	GT2506-HS GT2505-HS	
	FX1	×	RS-422	GT2506-HS GT2505-HS	
	FX2 FX2C	×*2	RS-422	GT2506-HS GT2505-HS	
	FX1S FX1N FX2N FX1NC	○	RS-232 RS-422	GT2506-HS GT2505-HS	
	FX2NC	×*2			
	FX3S FX3G FX3GC FX3GE FX3U FX3UC	○			

*1 Access via QCPU (RS-232) in the multiple CPU system.

*2 It is available by installing the real time clock function board or the EEPROM memory with the real time clock function.

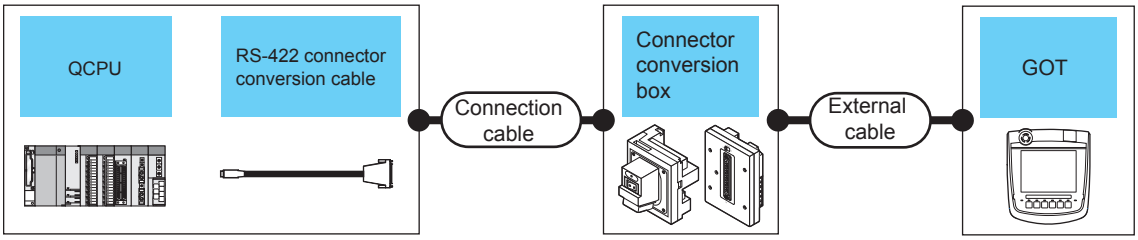
3.2 System Configuration

Connecting to QCPU

Communication driver

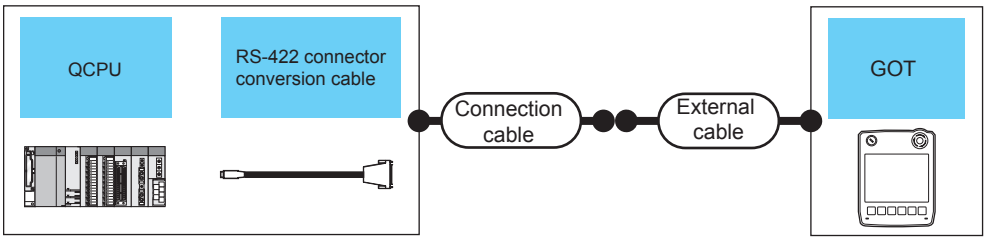
Serial (MELSEC)

When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	RS-422 connector conversion cable	Communication type	Cable model					
MELSEC-Q	-	RS-232	GT11H-C30R2-6P(3m)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	FA-CNV2402CBL(0.2m) FA-CNV2405CBL (0.5m)	RS-422	GT01-C30R4-25P(3m) GT01-C100R4-25P(10m)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13.5m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

When using the external cable (GT11H-C□□□-37P)



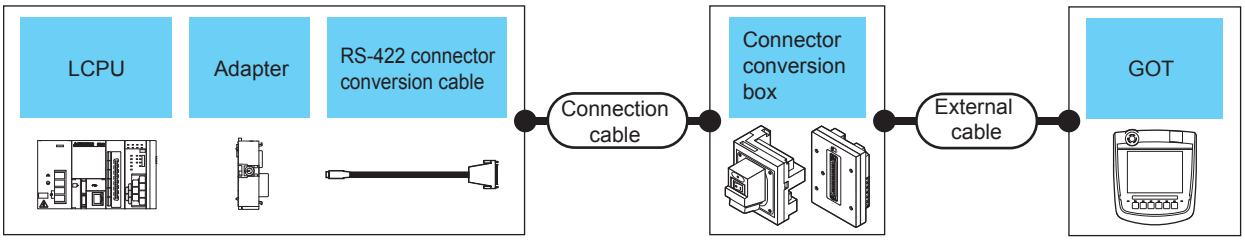
PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	RS-422 connector conversion cable	Communication type	Cable model				
MELSEC-Q	-	RS-232	GT11H-C15R2-6P(1.5m)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
	FA-CNV2402CBL(0.2m) FA-CNV2405CBL (0.5m)	RS-422	GT11H-C15R4-25P(1.5m)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		13.5m	

Connecting to LCPU

Communication driver

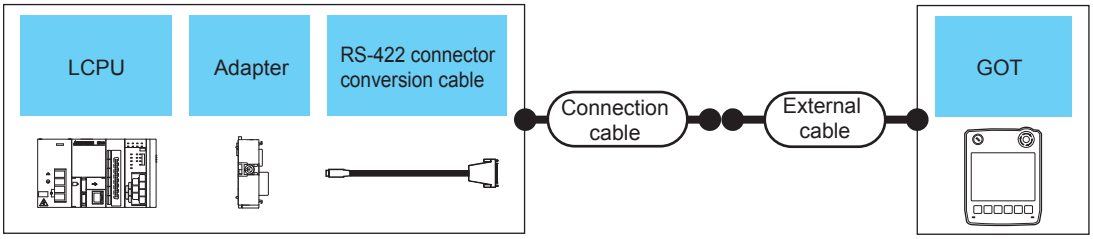
Serial (MELSEC)

When using the connector conversion box



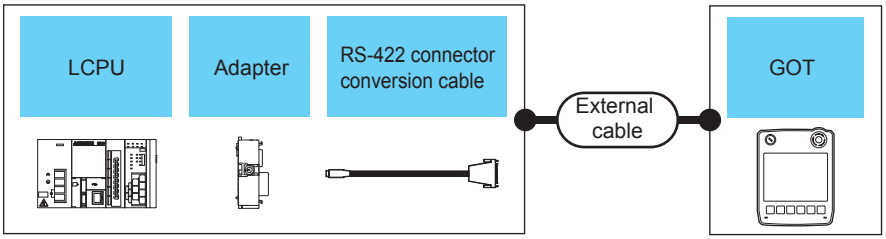
PLC				Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Adapter	RS-422 connector conversion cable	Communication type	Cable model					
L02CPU L06CPU L26CPU L26CPU-BT L02CPU-P L06CPU-P L26CPU-P L26CPU-PBT	L6ADP-R2	-	RS-232	GT11H-C30R2-6P(3m)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
					GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	L6ADP-R2	FA-CNV2402CBL(0.2m) FA-CNV2405CBL(0.5m)	RS-422	GT01-C30R4-25P(3m) GT01-C100R4-25P(10m)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13.5m	
					GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
	L6ADP-R4	-	RS-422	User preparing Page 344 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		
					GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
L02SCPU L02SCPU-P	-	-	RS-232	GT11-C30R2-6P(3m)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	
					GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		FA-CNV2402CBL(0.2m) FA-CNV2405CBL(0.5m)	RS-422	GT01-C30R4-25P(3m) GT01-C100R4-25P(10m)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13.5m	
					GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

When using the external cable (GT11H-C□□□-37P)



PLC				Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Adapter	RS-422 connector conversion cable	Communication type	Cable model				
L02CPU L06CPU L26CPU L26CPU-BT L02CPU-P L06CPU-P L26CPU-P L26CPU-PBT	L6ADP-R2	-	RS-232	GT11H-C15R2-6P(1.5m)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
	L6ADP-R2	FA-CNV2402CBL(0.2m) FA-CNV2405CBL(0.5m)	RS-422	GT11H-C15R4-25P(1.5m)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		13.5m	
	L6ADP-R4	-	RS-422	User preparing Page 344 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)			
L02SCPU L02SCPU-P	-	-	RS-232	GT11H-C15R2-6P(1.5m)	GT11H-C30-37P(3m)		6m	
		FA-CNV2402CBL(0.2m) FA-CNV2405CBL(0.5m)	RS-422	GT11H-C15R4-25P(1.5m)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		13.5m	

When using the external cable (GT11H-C□□□)



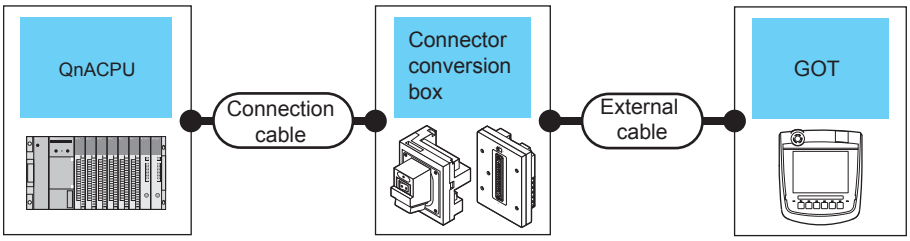
PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Adapter	Communication type				
L02CPU L06CPU L26CPU L26CPU-BT L02CPU-P L06CPU-P L26CPU-P L26CPU-PBT	L6ADP-R2	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 344 RS-422 connection diagram 3)	GT 2505HS	13.5m	1 GOT for 1 PLC

Connecting to QnACPU

Communication driver

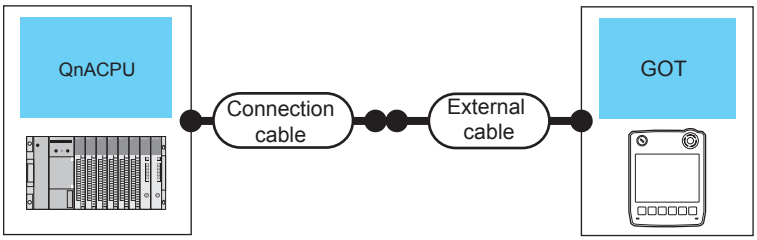
Serial (MELSEC)

When using the connector conversion box



PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Cable model					
MELSEC-QnA	RS-422	GT01-C30R4-25P(3m) GT01-C100R4-25P(10m)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 PLC
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

When using the external cable (GT11H-C□□□-37P)



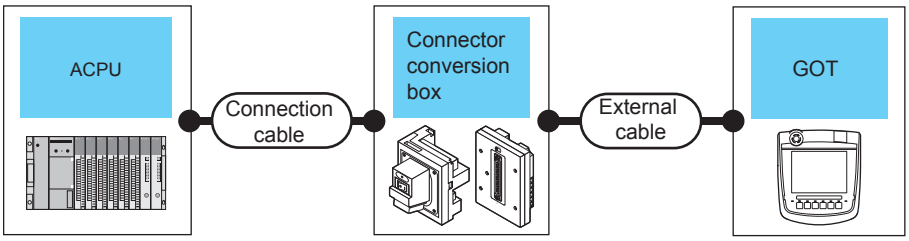
PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Cable model				
MELSEC-QnA	RS-422	GT11H-C15R4-25P(1.5m)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for 1 PLC

Connecting to ACPU

Communication driver

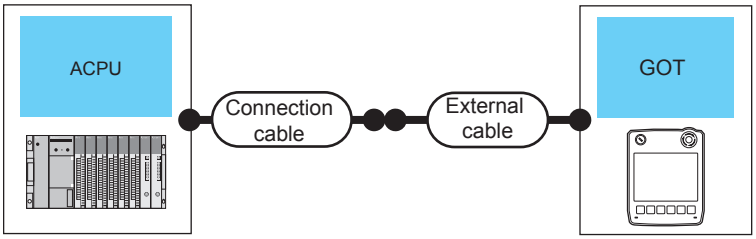
Serial (MELSEC)

When using the connector conversion box



PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Cable model					
MELSEC-A Motion CPU (A Series)	RS-422	GT01-C30R4-25P(3m) GT01-C100R4-25P(10m)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 PLC
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

When using the external cable (GT11H-C□□□-37P)



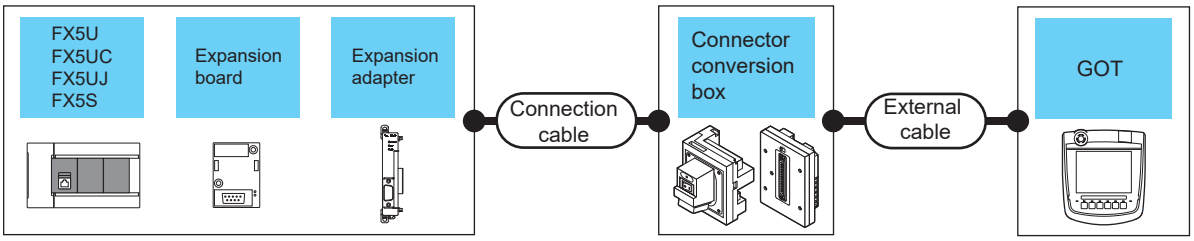
PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Cable model				
MELSEC-A Motion CPU (A Series)	RS-422	GT11H-C15R4-25P(1.5m)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for 1 PLC

Connecting to MELSEC iQ-F Series

Communication driver

Serial (MELSEC)

When using the connector conversion box



☞ Page 317 When connecting via RS-232 communication
☞ Page 318 When connecting via RS-422 communication

■When connecting via RS-232 communication

PLC				Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment*1
Model name	Expansion board	Expansion adapter	Communication type	Cable model Connection diagram number					
FX5U FX5UJ FX5S	FX5-232-BD	-	RS-232	GT01-C30R2-9S(3m) or (User preparing) Page 342 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P (3m)	GT 2506HS	6m	1 GOT for 1 Expansion board
					GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
FX5U FX5UC FX5UJ FX5S	-	FX5-232ADP			GT16H-CNB-42S	GT16H-C30-42P (3m)	GT 2506HS		
					GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 When the expansion board (communication board) and the expansion adapter are connected, a GOT and a peripheral such as a PC with GX Works3 installed can be connected to them individually.

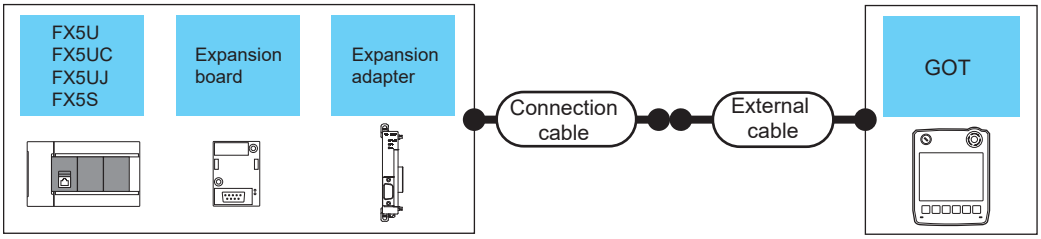
■When connecting via RS-422 communication

PLC				Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment*1
Model name	Expansion board	Expansion adapter	Communication type	Cable model Connection diagram number					
FX5U FX5UJ FX5S	FX5-422-BD-GOT	-	RS-422	GT01-C10R4-8P(1m) GT01-C30R4-8P(3m) GT01-C100R4-8P(10m)	GT16H-CNB-42S	GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 Expansion board
					GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
FX5U FX5UC	-	-	RS-422 *2	User preparing Page 345 RS-422 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P(10m)	GT 2506HS		1 GOT for 1 PLC built-in port
			RS-422		GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
FX5U FX5UJ FX5S	FX5-485-BD	-	RS-422 *2	User preparing Page 345 RS-422 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P(10m)	GT 2506HS		1 GOT for 1 Expansion board
			RS-422		GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
FX5U FX5UC FX5UJ FX5S	-	FX5-485ADP	RS-422 *2	User preparing Page 345 RS-422 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P(10m)	GT 2506HS		
			RS-422		GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 When the expansion board (communication board) and the expansion adapter are connected, a GOT and a peripheral such as a PC with GX Works3 installed can be connected to them individually.

*2 Use the RS-485 communication terminal block of the PLC to perform RS-422 communications.

When using the external cable (GT11H-C□□□-37P)



☞ Page 319 When connecting via RS-232 communication
☞ Page 319 When connecting via RS-422 communication

■When connecting via RS-232 communication

PLC				Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment*1
Model name	Expansion board	Expansion adapter	Communication type	Cable model Connection diagram number				
FX5U FX5UJ FX5S	FX5U-232-BD	-	RS-232	User preparing Page 342 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 Expansion board
FX5U FX5UC FX5UJ FX5S	-	FX5U-232ADP			GT11H-C30-37P(3m)			

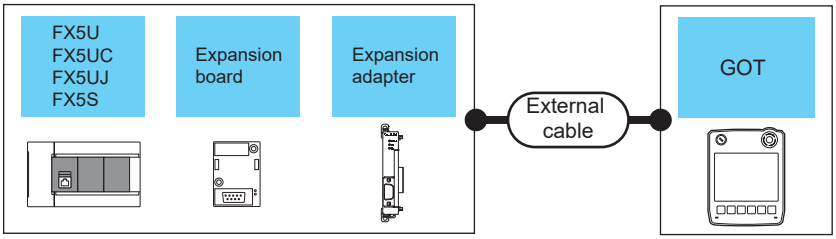
*1 When the expansion board (communication board) and the expansion adapter are connected, a GOT and a peripheral such as a PC with GX Works3 installed can be connected to them individually.

■When connecting via RS-422 communication

PLC				Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment*1
Model name	Expansion board	Expansion adapter	Communication type	Cable model Connection diagram number				
FX5U FX5UC	-	-	RS-422	User preparing Page 345 RS-422 connection diagram 5)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for 1 PLC built-in port
FX5U FX5UJ FX5S	FX5-485-BD							1 GOT for 1 Expansion board
FX5U FX5UC FX5UJ FX5S	-	FX5-485ADP						1 GOT for 1 PLC built-in port

*1 When the expansion board (communication board) and the expansion adapter are connected, a GOT and a peripheral such as a PC with GX Works3 installed can be connected to them individually.

When using the external cable (GT11H-C□□□)



☞ Page 320 When connecting via RS-232 communication
☞ Page 320 When connecting via RS-422 communication

■When connecting via RS-232 communication

PLC				External cable	GOT Model	Total distance	Number of connectable equipment*1
Model name	Expansion board	Expansion adapter	Communication type				
FX5U FX5UJ FX5S	FX5U-232-BD	-	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 342 RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 Expansion board
FX5U FX5UC FX5UJ FX5S	-	FX5U-232ADP					

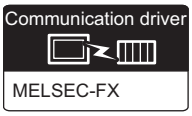
*1 When the expansion board (communication board) and the expansion adapter are connected, a GOT and a peripheral such as a PC with GX Works3 installed can be connected to them individually.

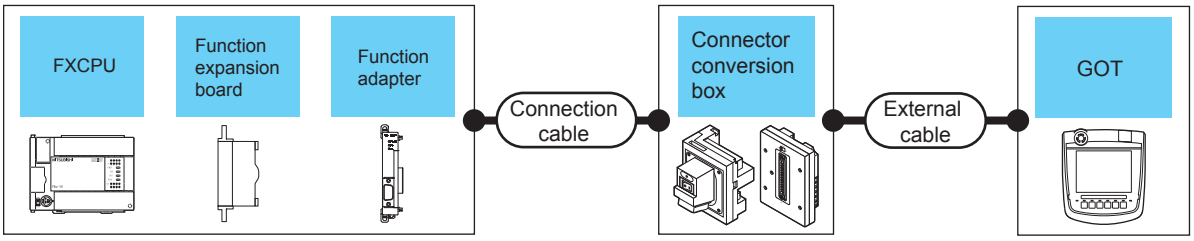
■When connecting via RS-422 communication

PLC				External cable	GOT Model	Total distance	Number of connectable equipment*1
Model name	Expansion board	Expansion adapter	Communication type				
FX5U FX5UC	-	-	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 345 RS-422 connection diagram 6)	GT 2505HS	13.5m	1 GOT for 1 PLC built-in port
FX5U FX5UJ FX5S	FX5-485-BD	-					1 GOT for 1 Expansion board
FX5U FX5UC FX5UJ FX5S	-	FX5-485ADP					

*1 When the expansion board (communication board) and the expansion adapter are connected, a GOT and a peripheral such as a PC with GX Works3 installed can be connected to them individually.

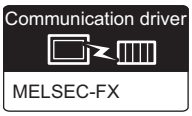
Connecting to FXCPU using a connector conversion box

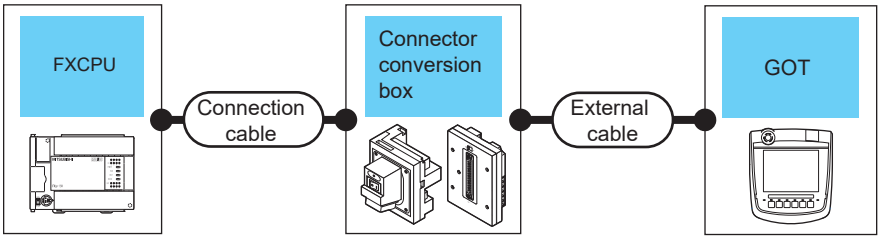




☞ Page 321 When connecting to a PLC directly
☞ Page 323 When using the function extension board
☞ Page 325 When using the function adapter
☞ Page 327 When using the function extension board and function adapter

When connecting to a PLC directly





☞ Page 321 FX0, FX0S, FX0N, FX1, FX2, FX2C
☞ Page 322 FX1S, FX1N, FX2N, FX1NC, FX2NC
☞ Page 322 FX3G, FX3S, FX3GE
☞ Page 322 FX3GC (FX3GC-□□/D, FX3GC-□□/DSS)
☞ Page 322 FX3U, FX3UC (FX3UC-□□-LT(-2))
☞ Page 322 FX3UC (FX3UC-□□/D, FX3UC-□□/DS, FX3UC-□□/DSS)

■FX0, FX0S, FX0N, FX1, FX2, FX2C

PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Cable model					
FX0 FX0S FX0N	RS-422	GT01-C10R4-8P(1m) GT01-C30R4-8P(3m) GT01-C100R4-8P(10m)	GT16H-CNB-42S	GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 PLC
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	
FX1 FX2 FX2C	RS-422	GT01-C30R4-25P(3m) GT01-C100R4-25P(10m)	GT16H-CNB-42S	GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

■FX1S, FX1N, FX2N, FX1NC, FX2NC

PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Cable model					
FX1S FX1N FX2N FX1NC FX2NC	RS-422	GT01-C10R4-8P(1m) GT01-C30R4-8P(3m) GT01-C100R4-8P(10m)	GT16H-CNB-42S	GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 PLC built-in port
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

■FX3G, FX3S, FX3GE

PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Cable model					
FX3G FX3S FX3GE	RS-422	GT01-C10R4-8P(1m) GT01-C30R4-8P(3m) GT01-C100R4-8P(10m)	GT16H-CNB-42S	GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 PLC built-in port
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

■FX3GC (FX3GC-□□/D, FX3GC-□□/DSS)

PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Cable model					
FX3GC-□□/D FX3GC-□□/DSS	RS-422	GT01-C10R4-8P(1m) GT01-C30R4-8P(3m) GT01-C100R4-8P(10m)	GT16H-CNB-42S	GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 PLC built-in port
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

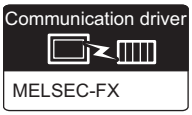
■FX3U, FX3UC (FX3UC-□□-LT(-2))

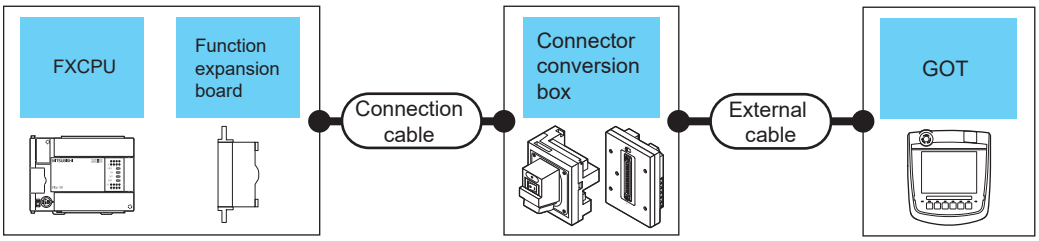
PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Cable model					
FX3U FX3UC (FX3UC-□□-LT(-2))	RS-422	GT01-C10R4-8P(1m) GT01-C30R4-8P(3m) GT01-C100R4-8P(10m)	GT16H-CNB-42S	GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 PLC built-in port
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

■FX3UC (FX3UC-□□/D, FX3UC-□□/DS, FX3UC-□□/DSS)

PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Cable model					
FX3UC-□□/D FX3UC-□□/DS FX3UC-□□/DSS	RS-422	GT01-C10R4-8P(1m) GT01-C30R4-8P(3m) GT01-C100R4-8P(10m)	GT16H-CNB-42S	GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 PLC built-in port
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

When using the function extension board





☞ Page 323 FX1S, FX1N, FX2N
☞ Page 324 FX3G, FX3S, FX3GE
☞ Page 324 FX3U, FX3UC (FX3UC-□□-LT(-2))

■FX1S, FX1N, FX2N

PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Function expansion board *1*2	Communication type	Cable model					
FX1S FX1N FX2N	FX1N-232-BD FX2N-232-BD	RS-232	GT01-C30R2-9S(3m) or User preparing Page 342 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P (3m)	GT 2506HS	6m	1 GOT for 1 function expansion board
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS	6m	
	FX1N-422-BD FX2N-422-BD	RS-422	GT01-C10R4-8P(1m) GT01-C30R4-8P(3m) GT01-C100R4-8P(10m)	GT16H-CNB-42S	GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 The function expansion board to be used differs according to the type of the FXCPU to be connected.
Use the applicable function expansion board shown in the following table.

Item	Function expansion board to be used	
	When connecting to FX1N or FX1S Series	When connecting to FX2N Series
RS-232 communication	FX1N-232-BD	FX2N-232-BD
RS-422 communication	FX1N-422-BD	FX2N-422-BD

*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 356 Precautions

■FX3G, FX3S, FX3GE

PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment *1
Model name	Function expansion board *2	Communication type	Cable model					
FX3G FX3S FX3GE	FX3G-232-BD	RS-232	GT01-C30R2-9S(3m) or User preparing Page 342 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P (3m)	GT 2506HS	6m	1 GOT for 1 function expansion board
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS	6m	
	FX3G-422-BD	RS-422	GT01-C10R4-8P(1m) GT01-C30R4-8P(3m) GT01-C100R4-8P(10m)	GT16H-CNB-42S	GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 When the function expansion board (communication board) and the function adapter are connected, a GOT and a peripheral such as a PC with GX Developer installed can be connected to them individually.

*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 356 Precautions

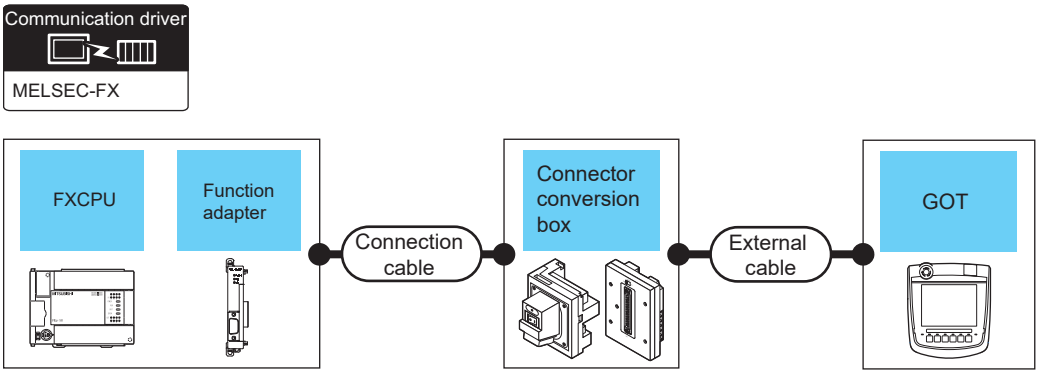
■FX3U, FX3UC (FX3UC-□□-LT(-2))

PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment *1
Model name	Function expansion board *2	Communication type	Cable model					
FX3U FX3UC (FX3UC-□□-LT(-2))	FX3U-232-BD	RS-232	GT01-C30R2-9S(3m) or User preparing Page 342 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P (3m)	GT 2506HS	6m	1 GOT for 1 function expansion board
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS	6m	
	FX3U-422-BD	RS-422	GT01-C10R4-8P(1m) GT01-C30R4-8P(3m) GT01-C100R4-8P(10m)	GT16H-CNB-42S	GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 function expansion board
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 When the function expansion board (communication board) and the function adapter are connected, a GOT and a peripheral such as a PC with GX Developer installed can be connected to them individually.

*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 356 Precautions

When using the function adapter



☞ Page 325 FX1NC, FX2NC
☞ Page 326 FX3G, FX3GE, FX3S
☞ Page 326 FX3GC (FX3GC-□□/D, FX3GC-□□/DSS)
☞ Page 326 FX3UC (FX3UC-□□/D, FX3UC-□□/DS, FX3UC-□□/DSS)

■FX1NC, FX2NC

PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Function adapter *1	Communication type	Cable model Connection diagram number					
FX1NC FX2NC	FX2NC-232ADP	RS-232	GT01-C30R2-9S(3m) or (User preparing) Page 342 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P (3m)	GT 2506HS	6m	1 GOT for 1 PLC built-in port
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS	6m	
	FX0N-232ADP		GT01-C30R2-25P(3m) or (User preparing) Page 343 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P (3m)	GT 2506HS	6m	
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS	6m	

*1 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 356 Precautions

■FX3G, FX3GE, FX3S

PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment *1
Model name	Function adapter *2	Communication type	Cable model Connection diagram number					
FX3G	FX3G-CNV-ADP + FX3U-232ADP FX3U-232ADP-MB	RS-232	GT01-C30R2-9S(3m) or User preparing Page 342 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P (3m)	GT 2506HS	6m	1 GOT for 1 function adapter
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS	6m	
FX3GE	FX3U-232ADP FX3U-232ADP-MB	RS-232	GT01-C30R2-9S(3m) or User preparing Page 342 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P (3m)	GT 2506HS	6m	
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS	6m	
FX3S	FX3S-CNV-ADP + FX3U-232ADP FX3U-232ADP-MB	RS-232	GT01-C30R2-9S(3m) or User preparing Page 342 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P (3m)	GT 2506HS	6m	
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS	6m	

*1 When the function expansion board (communication board) and the function adapter are connected, a GOT and a peripheral such as a PC with GX Developer installed can be connected to them individually.

*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 356 Precautions

■FX3GC (FX3GC-□□/D, FX3GC-□□/DSS)

PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment *1
Model name	Function adapter *2	Communication type	Cable model Connection diagram number					
FX3GC-□□/D FX3GC-□□/DSS	FX3U-232ADP FX3U-232ADP-MB	RS-232	GT01-C30R2-9S(3m) or User preparing Page 342 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P (3m)	GT 2506HS	6m	1 GOT for 1 function adapter
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS	6m	

*1 A GOT and a peripheral such as a PC with GX Developer installed can be connected to the function adapter and the FXCPU individually.

*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 356 Precautions

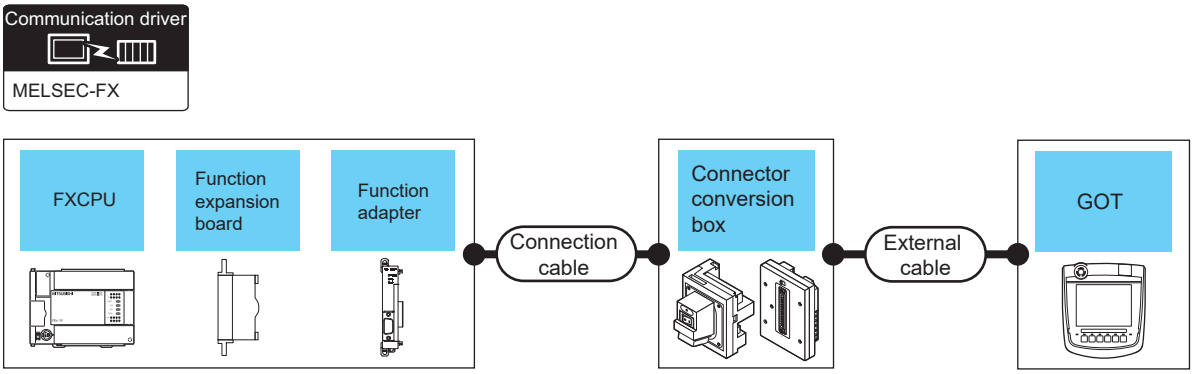
■FX3UC (FX3UC-□□/D, FX3UC-□□/DS, FX3UC-□□/DSS)

PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment *1
Model name	Function adapter *2	Communication type	Cable model Connection diagram number					
FX3UC-□□/D FX3UC-□□/DS FX3UC-□□/DSS	FX3U-232ADP FX3U-232ADP-MB	RS-232	GT01-C30R2-9S(3m) or User preparing Page 342 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P (3m)	GT 2506HS	6m	1 GOT for 1 function adapter
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS	6m	

*1 A GOT and a peripheral such as a PC with GX Developer installed can be connected to the function adapter and the FXCPU individually.

*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 356 Precautions

When using the function extension board and function adapter



☞ Page 327 FX1S, FX1N, FX2N
☞ Page 327 FX3U, FX3UC (FX3UC-□□-LT(-2))

■FX1S, FX1N, FX2N

PLC				Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment *2
Model name	Function expansion board *1	Function adapter *1	Communication type	Cable model Connection diagram number					
FX1S FX1N FX2N	FX1N-CNV-BD FX2N-CNV-BD	FX2NC-232ADP	RS-232	GT01-C30R2-9S(3m) or User preparing Page 342 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P (3m)	GT 2506HS	6m	1 GOT for 1 function expansion board
					GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS	6m	
		FX0N-232ADP		GT01-C30R2-25P(3m) or User preparing Page 343 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P (3m)	GT 2506HS	6m	
					GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS	6m	

*1 The function expansion board to be used differs according to the type of the FXCPU.
Select the function expansion board from the following table.

Item	Function expansion board to be used	
	When connecting to FX1N or FX1S Series	When connecting to FX2N Series
When the function adapter is used	FX1N-CNV-BD	FX2N-CNV-BD

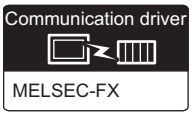
*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 356 Precautions

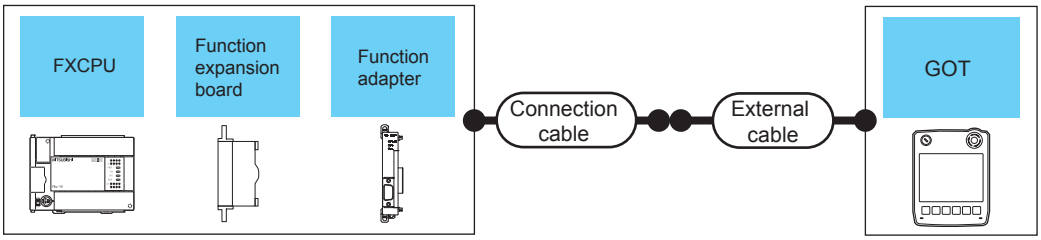
■FX3U, FX3UC (FX3UC-□□-LT(-2))

PLC				Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment *1
Model name	Function expansion board *2	Function adapter *2	Communication type	Cable model Connection diagram number					
FX3U FX3UC (FX3UC-□□-LT(-2))	FX3U-485-BD FX3U-422-BD FX3U-232-BD FX3U-USB-BD FX3U-8AV-BD FX3U-CNV-BD	FX3U-232ADP FX3U-232ADP-MB	RS-232	GT01-C30R2-9S(3m) or User preparing Page 342 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P (3m)	GT 2506HS	6m	1 GOT for 1 function adapter
					GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS	6m	

*1 When the function expansion board (communication board) and the function adapter are connected, a GOT and a peripheral such as a PC with GX Developer installed can be connected to them individually.
*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 356 Precautions

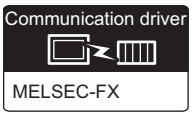
Connecting to FXCPU using the GT11H-C□□□-37P external cable

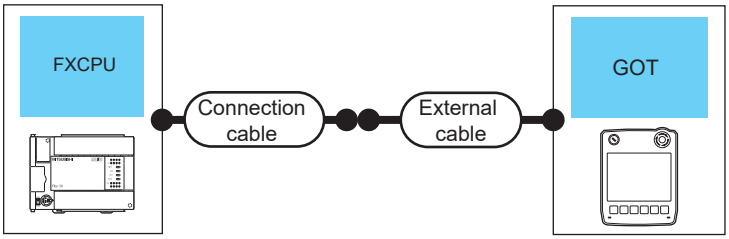




☞ Page 328 When connecting to a PLC directly
☞ Page 330 When using the function extension board
☞ Page 332 When using the function adapter
☞ Page 334 When using the function extension board and function adapter

When connecting to a PLC directly





☞ Page 328 FX0, FX0S, FX0N
☞ Page 329 FX1S, FX1N, FX2N, FX1NC, FX2NC
☞ Page 329 FX3G, FX3S, FX3GE
☞ Page 329 FX3GC (FX3GC-□□/D, FX3GC-□□/DSS)
☞ Page 329 FX3U, FX3UC (FX3UC-□□-LT(-2))
☞ Page 329 FX3UC (FX3UC-□□/D, FX3UC-□□/DS, FX3UC-□□/DSS)

■FX0, FX0S, FX0N

PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Cable model				
FX0 FX0S FX0N	RS-422	GT11H-C15R4-8P	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for 1 PLC
		GT11H-C15R4-25P	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

■FX1S, FX1N, FX2N, FX1NC, FX2NC

PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Cable model				
FX1S FX1N FX2N FX1NC FX2NC	RS-422	GT11H-C15R4-8P	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for 1 PLC built-in port

■FX3G, FX3S, FX3GE

PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Cable model				
FX3G FX3S FX3GE	RS-422	GT11H-C15R4-8P	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for 1 PLC built-in port

■FX3GC (FX3GC-□□/D, FX3GC-□□/DSS)

PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Cable model				
FX3GC-□□/D FX3GC-□□/DSS	RS-422	GT11H-C15R4-8P	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for 1 PLC built-in port

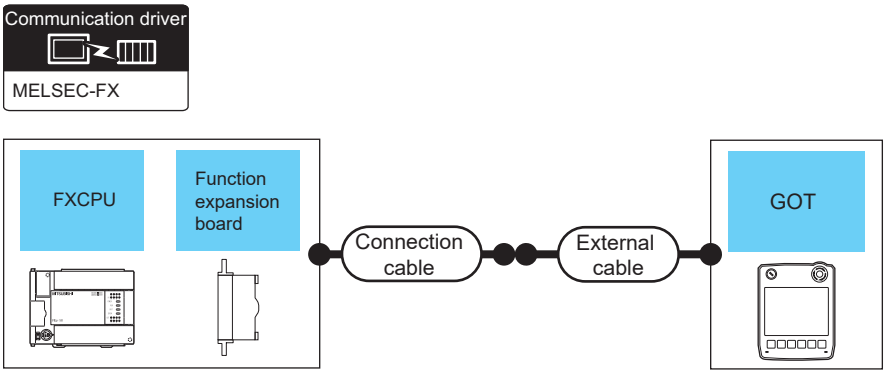
■FX3U, FX3UC (FX3UC-□□-LT(-2))

PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Cable model				
FX3U FX3UC (FX3UC-□□-LT(-2))	RS-422	GT11H-C15R4-8P	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for 1 PLC built-in port

■FX3UC (FX3UC-□□/D, FX3UC-□□/DS, FX3UC-□□/DSS)

PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Cable model				
FX3UC-□□/D FX3UC-□□/DS FX3UC-□□/DSS	RS-422	GT11H-C15R4-8P	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for 1 PLC built-in port

When using the function extension board



☞ Page 330 FX1S, FX1N, FX2N
☞ Page 330 FX3G, FX3S, FX3GE
☞ Page 331 FX3U, FX3UC (FX3UC-□□-LT(-2))

■FX1S, FX1N, FX2N

PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Function expansion board *1*2	Communication type	Cable model				
FX1S FX1N FX2N	FX1N-232-BD FX2N-232-BD	RS-232	User preparing Page 342 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 function expansion board
	FX1N-422-BD FX2N-422-BD	RS-422	GT11H-C15R4-8P	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for 1 function expansion board

*1 The function expansion board to be used differs according to the type of the FXCPU to be connected.
Use the applicable function expansion board shown in the following table.

Item	Function expansion board to be used	
	When connecting to FX1N or FX1S Series	When connecting to FX2N Series
RS-232 communication	FX1N-232-BD	FX2N-232-BD
RS-422 communication	FX1N-422-BD	FX2N-422-BD

*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 356 Precautions

■FX3G, FX3S, FX3GE

PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment *1
Model name	Function expansion board *2	Communication type	Cable model				
FX3G FX3S FX3GE	FX3G-232-BD	RS-232	User preparing Page 342 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 function expansion board
	FX3G-422-BD	RS-422	GT11H-C15R4-8P	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for 1 function expansion board

*1 When the function expansion board (communication board) and the function adapter are connected, a GOT and a peripheral such as a PC with GX Developer installed can be connected to them individually.
*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 356 Precautions

■FX3U, FX3UC (FX3UC-□□-LT(-2))

PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment *1
Model name	Function expansion board *2	Communication type	Cable model				
FX3U FX3UC (FX3UC-□□-LT(-2))	FX3U-232-BD	RS-232	User preparing Page 342 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 function expansion board
	FX3U-422-BD	RS-422	GT11H-C15R4-8P	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for 1 function expansion board

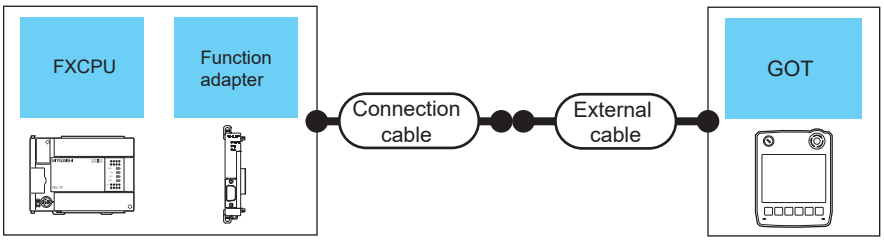
*1 When the function expansion board (communication board) and the function adapter are connected, a GOT and a peripheral such as a PC with GX Developer installed can be connected to them individually.

*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 356 Precautions

When using the function adapter

Communication driver

MELSEC-FX



☞ Page 332 FX1NC, FX2NC
☞ Page 332 FX3G, FX3GE, FX3S
☞ Page 333 FX3GC (FX3GC-□□/D, FX3GC-□□/DSS)
☞ Page 333 FX3UC (FX3UC-□□/D, FX3UC-□□/DS, FX3UC-□□/DSS)

■FX1NC, FX2NC

PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Function adapter *1	Communication type	Cable model Connection diagram number				
FX1NC FX2NC	FX2NC-232ADP	RS-232	User preparing Page 342 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC built-in port
	FX0N-232ADP	RS-232	User preparing Page 343 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	

*1 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 356 Precautions

■FX3G, FX3GE, FX3S

PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment *1
Model name	Function adapter *2	Communication type	Cable model Connection diagram number				
FX3G	FX3G-CNV-ADP + FX3U-232ADP FX3U-232ADP-MB	RS-232	User preparing Page 342 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 function adapter
FX3GE	FX3U-232ADP FX3U-232ADP-MB	RS-232	User preparing Page 342 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	
FX3S	FX3S-CNV-ADP + FX3U-232ADP FX3U-232ADP-MB	RS-232	User preparing Page 342 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	

*1 When the function expansion board (communication board) and the function adapter are connected, a GOT and a peripheral such as a PC with GX Developer installed can be connected to them individually.
*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 356 Precautions

■FX3GC (FX3GC-□□/D, FX3GC-□□/DSS)

PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment *1
Model name	Function adapter	Communication type	Cable model Connection diagram number				
FX3GC-□□/D FX3GC-□□/DSS	FX3U-232ADP FX3U-232ADP-MB	RS-232	User preparing Page 342 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 function adapter

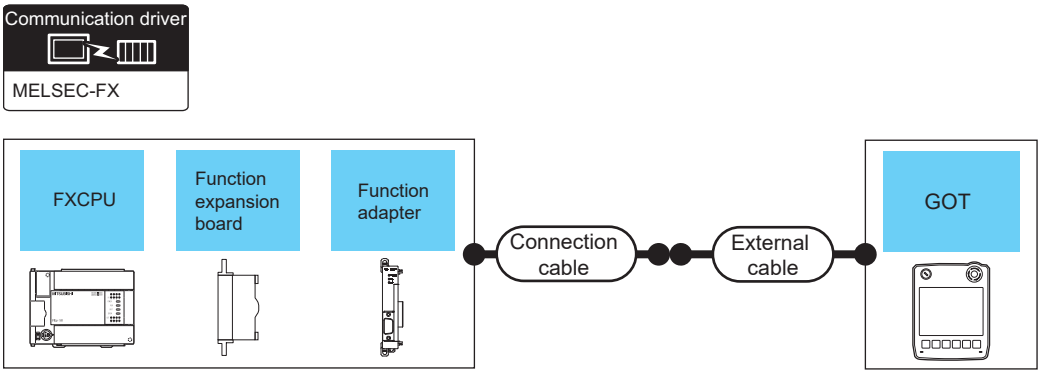
*1 A GOT and a peripheral such as a PC with GX Developer installed can be connected to the function adapter and the FXCPU individually.

■FX3UC (FX3UC-□□/D, FX3UC-□□/DS, FX3UC-□□/DSS)

PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment *1
Model name	Function adapter	Communication type	Cable model Connection diagram number				
FX3UC-□□/D FX3UC-□□/DS FX3UC-□□/DSS	FX3U-232ADP FX3U-232ADP-MB	RS-232	User preparing Page 342 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 function adapter

*1 A GOT and a peripheral such as a PC with GX Developer installed can be connected to the function adapter and the FXCPU individually.

When using the function extension board and function adapter



☞ Page 334 FX1S, FX1N, FX2N
☞ Page 334 FX3U, FX3UC (FX3UC-□□-LT(-2))

■FX1S, FX1N, FX2N

PLC				Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Function expansion board *1*2	Function adapter *2	Communication type	Cable model Connection diagram number				
FX1S FX1N FX2N	FX1N-CNV-BD FX2N-CNV-BD	FX2NC-232ADP	RS-232	User preparing Page 342 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC built-in port
		FX0N-232ADP	RS-232	User preparing Page 343 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	

*1 The function expansion board to be used differs according to the type of the FXCPU.
Select the function expansion board from the following table.

Item	Function expansion board to be used	
	When connecting to FX1N or FX1S Series	When connecting to FX2N Series
RS-232 communication	FX1N-232-BD	FX2N-232-BD
When the function adapter is used	FX1N-CNV-BD	FX2N-CNV-BD

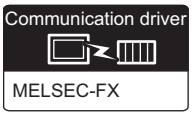
*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 356 Precautions

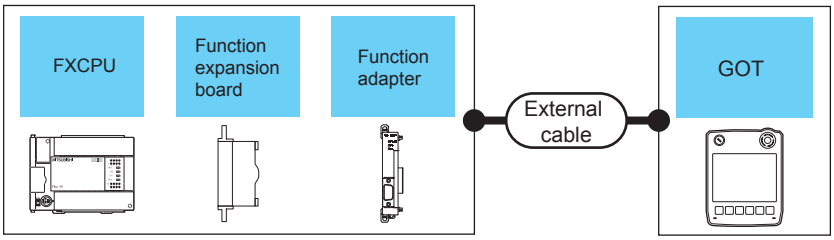
■FX3U, FX3UC (FX3UC-□□-LT(-2))

PLC				Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment *1
Model name	Function expansion board *2	Function adapter *2	Communication type	Cable model Connection diagram number				
FX3U FX3UC (FX3UC-□□-LT(-2))	FX3U-485-BD FX3U-422-BD FX3U-232-BD FX3U-USB-BD FX3U-8AV-BD FX3U-CNV-BD	FX3U-232ADP FX3U-232ADP-MB	RS-232	User preparing Page 342 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 function adapter

*1 When the function expansion board (communication board) and the function adapter are connected, a GOT and a peripheral such as a PC with GX Developer installed can be connected to them individually.
*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 356 Precautions

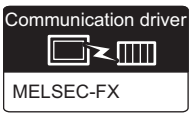
Connecting to FXCPU using the GT11H-C□□□ external cable

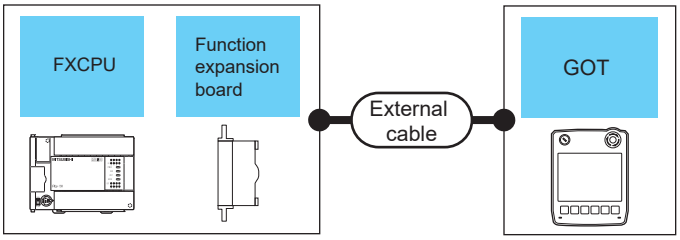




☞ Page 335 When using the function extension board
☞ Page 337 When using the function adapter
☞ Page 339 When using the function extension board and function adapter

When using the function extension board





☞ Page 335 FX1S, FX1N, FX2N
☞ Page 336 FX3G, FX3S, FX3GE
☞ Page 336 FX3U, FX3UC (FX3UC-□□-LT(-2))

■FX1S, FX1N, FX2N

PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Function expansion board *1*2	Communication type				
FX1S FX1N FX2N	FX1N-232-BD FX2N-232-BD	RS-232	GT11H-C30(3m) GT11H-C60(6m) (User preparing) Page 342 RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 function expansion board

*1 The function expansion board to be used differs according to the type of the FXCPU.
Select the function expansion board from the following table.

Item	Function expansion board to be used	
	When connecting to FX1N or FX1S Series	When connecting to FX2N Series
RS-232 communication	FX1N-232-BD	FX2N-232-BD

*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 356 Precautions

■FX3G, FX3S, FX3GE

PLC			External cable	GOT Model	Total distance	Number of connectable equipment *1
Model name	Function expansion board *2	Communication type				
FX3G FX3S FX3GE	FX3G-232-BD	RS-232	GT11H-C30(3m) GT11H-C60(6m) (User preparing) Page 342 RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 function expansion board

*1 When the function expansion board (communication board) and the function adapter are connected, a GOT and a peripheral such as a PC with GX Developer installed can be connected to them individually.

*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 356 Precautions

■FX3U, FX3UC (FX3UC-□□-LT(-2))

PLC			External cable	GOT Model	Total distance	Number of connectable equipment *1
Model name	Function expansion board *2	Communication type				
FX3U FX3UC (FX3UC-□□-LT(-2))	FX3U-232-BD	RS-232	GT11H-C30(3m) GT11H-C60(6m) (User preparing) Page 342 RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 function expansion board

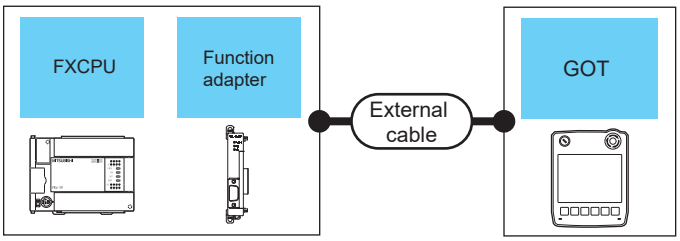
*1 When the function expansion board (communication board) and the function adapter are connected, a GOT and a peripheral such as a PC with GX Developer installed can be connected to them individually.

*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 356 Precautions

When using the function adapter

Communication driver

MELSEC-FX



☞ Page 337 FX1S, FX1N, FX2N
☞ Page 337 FX3G, FX3GE, FX3S
☞ Page 338 FX3GC (FX3GC-□□/D, FX3GC-□□/DSS)
☞ Page 338 FX3UC (FX3UC-□□/D, FX3UC-□□/DS, FX3UC-□□/DSS)

■FX1S, FX1N, FX2N

PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Function adapter *1	Communication type				
FX1NC FX2NC	FX2NC-232ADP	RS-232	GT11H-C30(3m) GT11H-C60(6m) (User preparing) Page 342 RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 PLC built-in port
	FX0N-232ADP	RS-232	GT11H-C30(3m) GT11H-C60(6m) (User preparing) Page 343 RS-232 connection diagram 6)	GT 2505HS	6m	

*1 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 356 Precautions

■FX3G, FX3GE, FX3S

PLC			External cable	GOT Model	Total distance	Number of connectable equipment *1
Model name	Function adapter *2	Communication type				
FX3G	FX3G-CNV-ADP + FX3U-232ADP FX3U-232ADP-MB	RS-232	GT11H-C30(3m) GT11H-C60(6m) (User preparing) Page 342 RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 function adapter
FX3GE	FX3U-232ADP FX3U-232ADP-MB	RS-232	GT11H-C30(3m) GT11H-C60(6m) (User preparing) Page 342 RS-232 connection diagram 3)	GT 2505HS	6m	
FX3S	FX3S-CNV-ADP + FX3U-232ADP FX3U-232ADP-MB	RS-232	GT11H-C30(3m) GT11H-C60(6m) (User preparing) Page 342 RS-232 connection diagram 3)	GT 2505HS	6m	

*1 When the function expansion board (communication board) and the function adapter are connected, a GOT and a peripheral such as a PC with GX Developer installed can be connected to them individually.
*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 356 Precautions

■FX3GC (FX3GC-□□/D, FX3GC-□□/DSS)

PLC			External cable	GOT Model	Total distance	Number of connectable equipment *1
Model name	Function adapter	Communication type				
FX3GC-□□/D FX3GC-□□/DSS	FX3U-232ADP FX3U-232ADP-MB	RS-232	GT11H-C30(3m) GT11H-C60(6m) (User preparing) Page 342 RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 function adapter

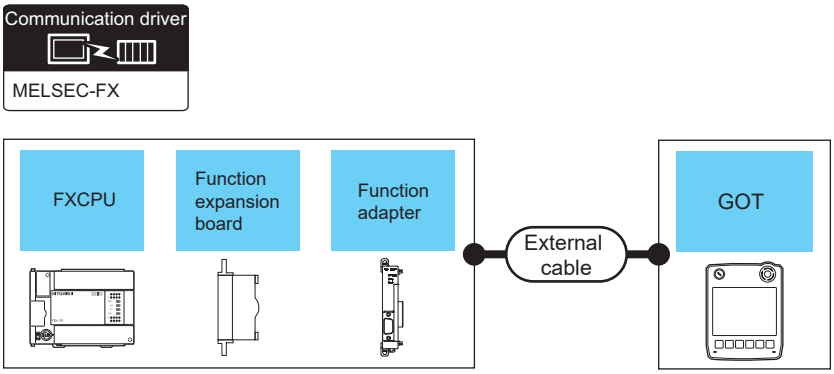
*1 A GOT and a peripheral such as a PC with GX Developer installed can be connected to the function adapter and the FXCPU individually.

■FX3UC (FX3UC-□□/D, FX3UC-□□/DS, FX3UC-□□/DSS)

PLC			External cable	GOT Model	Total distance	Number of connectable equipment *1
Model name	Function adapter	Communication type				
FX3UC-□□/D FX3UC-□□/DS FX3UC-□□/DSS	FX3U-232ADP FX3U-232ADP-MB	RS-232	GT11H-C30(3m) GT11H-C60(6m) (User preparing) Page 342 RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 function adapter

*1 A GOT and a peripheral such as a PC with GX Developer installed can be connected to the function adapter and the FXCPU individually.

When using the function extension board and function adapter



☞ Page 339 FX1S, FX1N, FX2N
☞ Page 339 FX3U, FX3UC (FX3UC-□□-LT(-2))

■FX1S, FX1N, FX2N

PLC				External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Function expansion board *1*2	Function adapter *2	Communication type				
FX1S FX1N FX2N	FX1N-CNV-BD FX2N-CNV-BD	FX2NC-232ADP	RS-232	GT11H-C30(3m) GT11H-C60(6m) User preparing Page 342 RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 PLC built-in port
		FX0N-232ADP	RS-232	GT11H-C30(3m) GT11H-C60(6m) User preparing Page 343 RS-232 connection diagram 6)	GT 2505HS	6m	

*1 The function expansion board to be used differs according to the type of the FXCPU.
Select the function expansion board from the following table.

Item	Function expansion board to be used	
	When connecting to FX1N or FX1S Series	When connecting to FX2N Series
RS-232 communication	FX1N-232-BD	FX2N-232-BD
When the function adapter is used	FX1N-CNV-BD	FX2N-CNV-BD

*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 356 Precautions

■FX3U, FX3UC (FX3UC-□□-LT(-2))

PLC				External cable	GOT Model	Total distance	Number of connectable equipment *1
Model name	Function expansion board *2	Function adapter *2	Communication type				
FX3U FX3UC (FX3UC-□□-LT(-2))	FX3U-485-BD FX3U-422-BD FX3U-232-BD FX3U-USB-BD FX3U-8AV-BD FX3U-CNV-BD	FX3U-232ADP FX3U-232ADP-MB	RS-232	GT11H-C30(3m) GT11H-C60(6m) User preparing Page 342 RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 function adapter

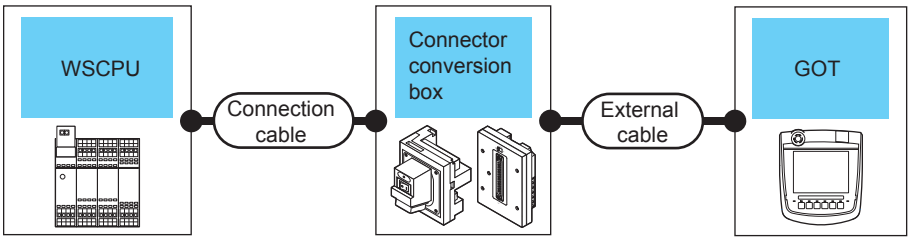
*1 When the function expansion board (communication board) and the function adapter are connected, a GOT and a peripheral such as a PC with GX Developer installed can be connected to them individually.
*2 When using function expansion boards or function adapters, confirm the communication settings.
☞ Page 356 Precautions

Connecting to WSCPU

Communication driver

MELSEC-WS

When using the connector conversion box



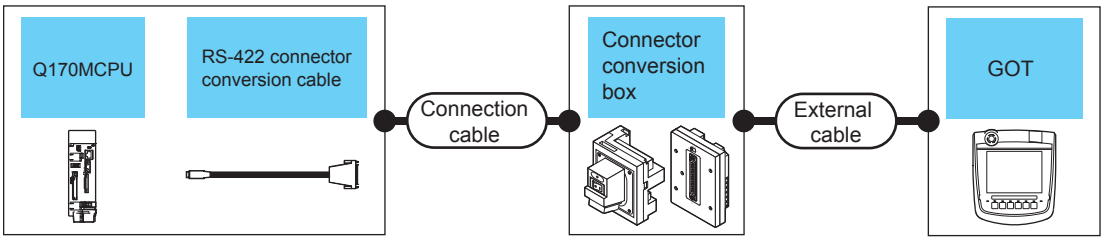
PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Cable model Connection diagram number					
MELSEC-WS	RS-232	WS0-C20R2(2m)	GT16H-CNB-42S	GT16H-C30-42P (3m)	GT 2506HS	5m	1 GOT for 1 PLC
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

Connecting to the motion CPU

Communication driver

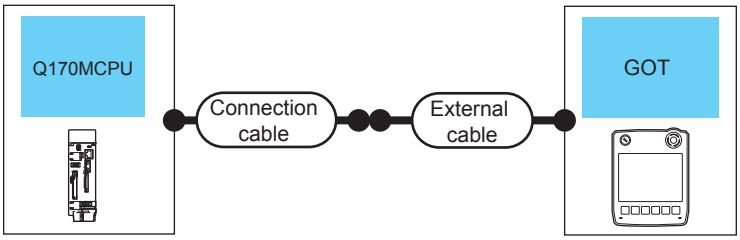
Serial (MELSEC)

When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	RS-422 connector conversion cable	Communication type	Cable model					
Q170MCPU	-	RS-232	GT11-C30R2-6P(3m)	GT16H-CNB-42S	GT16H-C30-42P (3m)	GT2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT2505HS		
	FA-CNV2402CBL(0.2m) FA-CNV2405CBL(0.5m)	RS-422	GT01-C30R4-25P(3m) GT01-C100R4-25P(10m)	GT16H-CNB-42S	GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P(10m)	GT2506HS	13.5m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT2505HS		
MR-MQ100	-		Q170MIOCBL1M-B(1m) + (User preparing) Page 346 RS-422 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P(10m)	GT2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT2505HS		

When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Cable model				
Q170MCPU	RS-232	GT11H-C15R2-6P(1.5m)	GT11H-C30-37P(3m)	GT2505HS	6m	1 GOT for 1 PLC

Point

When connecting to the motion CPU (Q Series) other than Q170MCPU or Q170MSCPU(-S1)
A motion CPU (Q series) mounted on the multiple CPU system of the QCPU (Q mode) can be monitored.
The system configuration, connection conditions, and system equipment for connecting a GOT to a motion CPU (Q series) are the same as those for connecting to the QCPU.
☞ Page 312 Connecting to QCPU

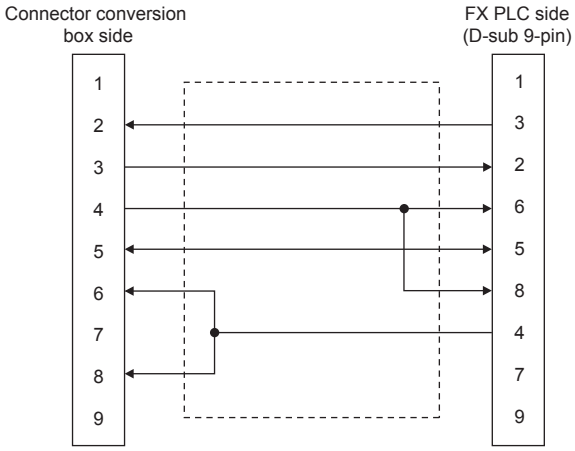
3.3 Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

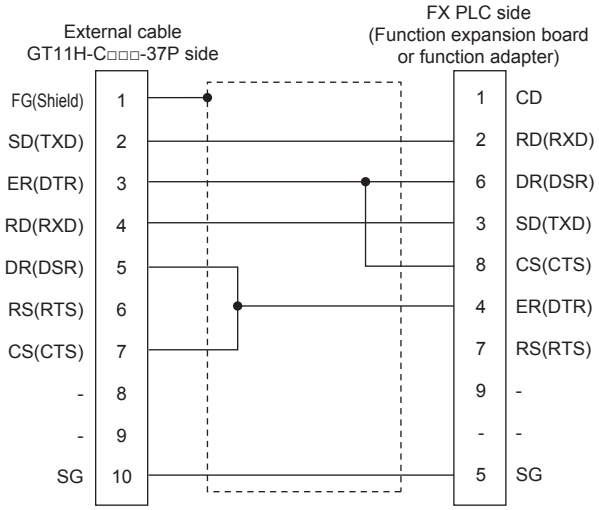
RS-232 cable

Connection diagram

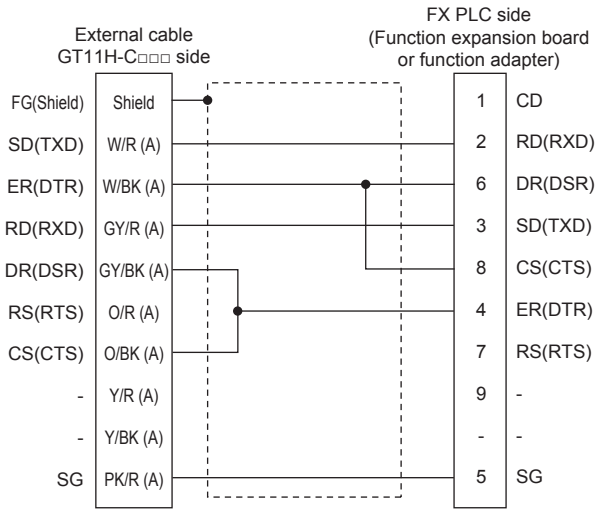
■RS-232 connection diagram 1)



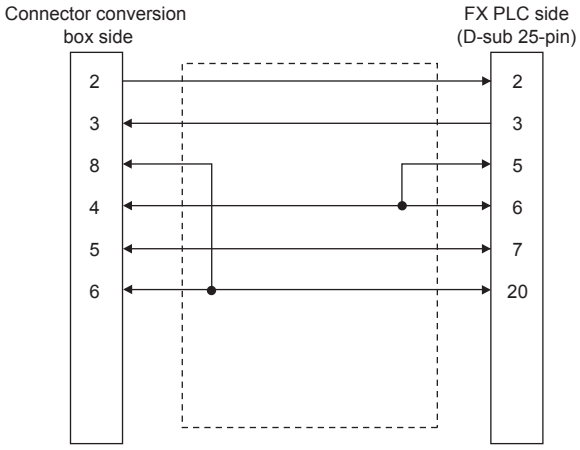
■RS-232 connection diagram 2)



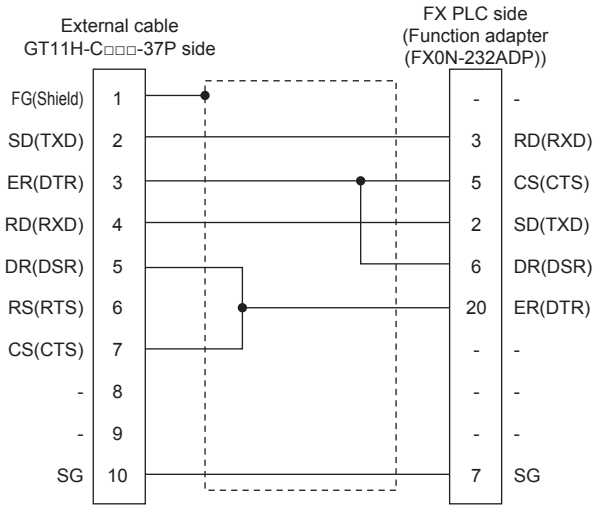
■RS-232 connection diagram 3)



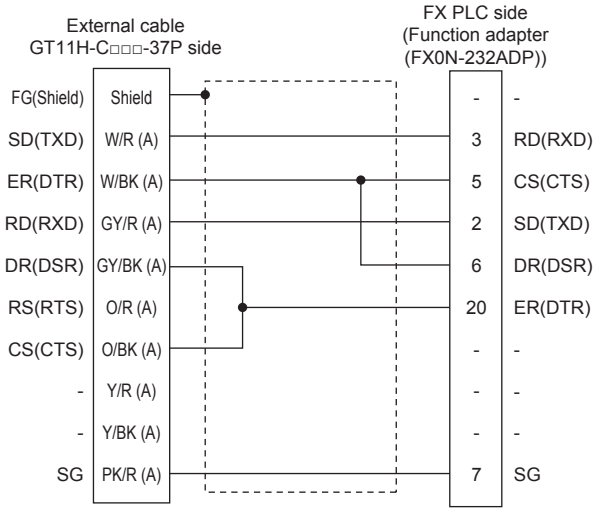
■RS-232 connection diagram 4)



■RS-232 connection diagram 5)



■RS-232 connection diagram 6)



Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

■GOT side connector

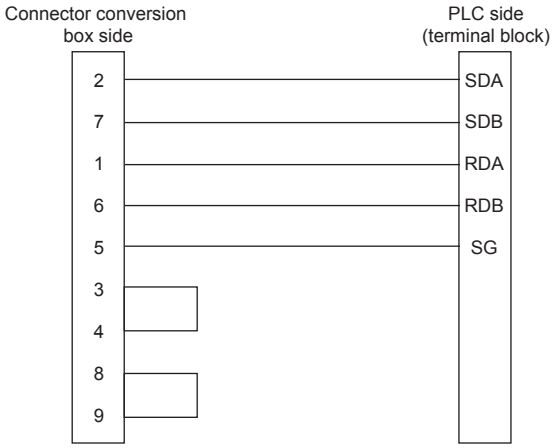
For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

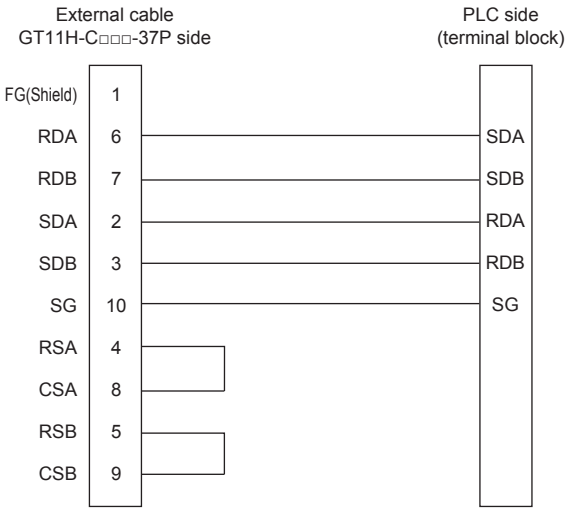
RS-422 cable

Connection diagram

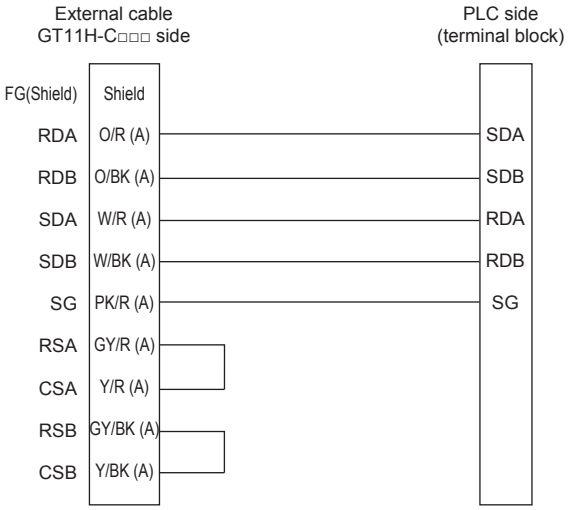
■RS-422 connection diagram 1)



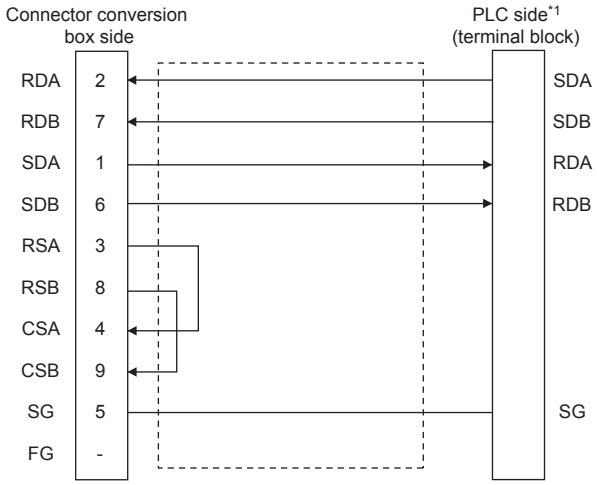
■RS-422 connection diagram 2)



■RS-422 connection diagram 3)

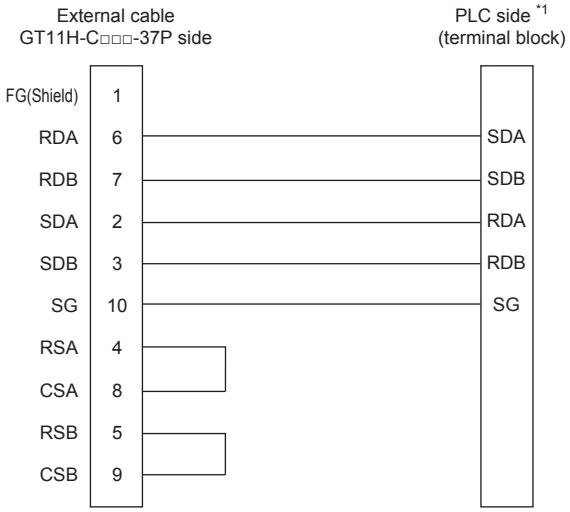


■RS-422 connection diagram 4)



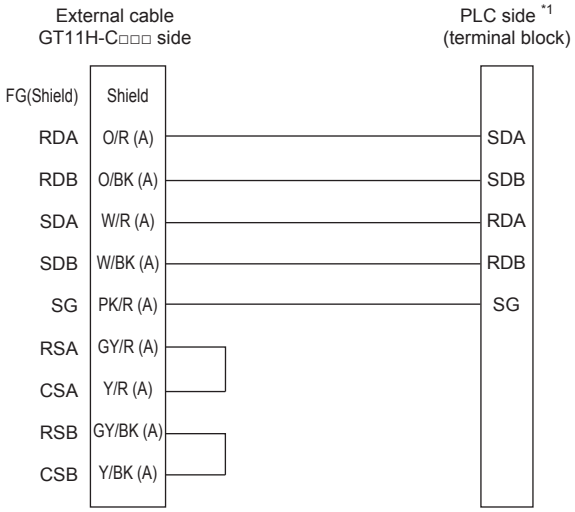
*1 Set the terminating resistor of the PLC side to "330Ω".

■RS-422 connection diagram 5)



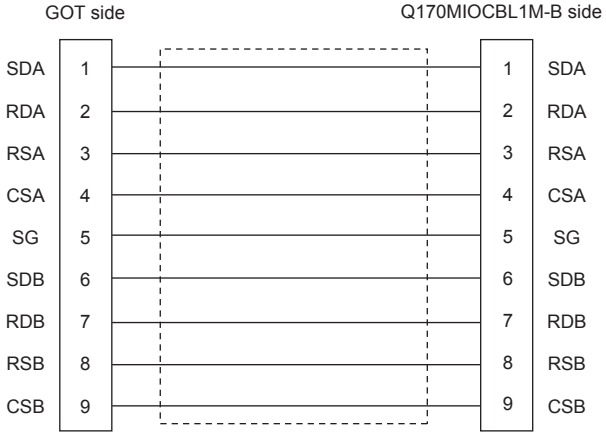
*1 Set the terminating resistor of the PLC side to "330Ω".

■RS-422 connection diagram 6)



*1 Set the terminating resistor of the PLC side to "330Ω".

■RS-422 connection diagram 7)



Precautions when preparing a cable

■Cable length

The maximum distance (between GOT and controllers) of the RS-422 cable must be the total distance or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

Connecting terminating resistors

■GOT side

When connecting a PLC to the GOT, a terminating resistor must be connected to the GOT.

- For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

- For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

3.4 GOT Side Settings

Setting communication interface (Controller Setting)

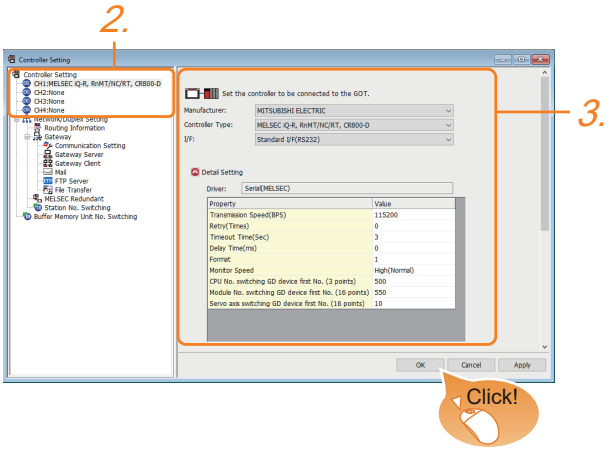
Point

GOT multi-drop connection

When using the serial multi-drop connection unit, refer to the following.

☞ Page 646 GOT MULTI-DROP CONNECTION

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [MITSUBISHI ELECTRIC]
- [Controller Type]: Configure the setting according to the controller to be connected.
- [I/F]: Interface to be used
- [Driver]: Select one of the following items according to the controller to be connected.

[Serial(MELSEC)]

[MELSEC-FX]

[MELSEC-WS]

- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 348 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following:

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Serial (MELSEC)

Property	Value
Transmission Speed(BPS)	115200
Retry(Times)	0
Timeout Time(Sec)	3
Delay Time(ms)	0
Format	1
Monitor Speed	High(Normal)
CPU No. switching GD device first No. (3 points)	500
Module No. switching GD device first No. (16 points)	550
Servo axis switching GD device first No. (16 points)	10

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 115200bps) When the setting exceeds the limit of the connected equipment, communication is performed at the fastest transmission speed supported by the connected equipment.	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Retry	Set the number of retries to be performed when a communication timeout occurs. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300 (ms)
Format*3	Select the communication format. (Default: 1)	1, 2
Monitor Speed *4	Set the monitor speed of the GOT. This setting is not valid in all systems. (Default: Normal)	High(Normal)*1 Middle Low*2
CPU No. switching GD device first No. (3 points)	Set the start device number of the GD devices for CPU No. switching. (Default: 500) For the details, refer to the following. ☞ Page 350 Start device number of the GD devices for CPU number switching	0 to 65520
Module No. switching GD device first No. (16 points)	Set the start device number of the GD devices for module No. switching. (Default: 550) For the details, refer to the following. ☞ Page 351 Start device number of the GD devices for module number switching	0 to 65520
Servo axis switching GD device first No. (16 points)	Set the servo axis switching GD device first No. (Default: 10) For the details, refer to the following. ☞ Page 352 Servo axis switching GD device first No.	0 to 65520

*1 This is effective when collecting a large data on other than the monitor screen (logging, recipe function, etc.).
However, when connecting to Q00J/Q00/Q01CPU, the sequence scan time may be influenced.
If you want to avoid the influence on the sequence scan time, do not set [High(Normal)].
(High performance is hardly affected)

*2 Set this item if you want to avoid the influence on the sequence scan time further than the [Middle] setting when connecting to Q00UJ/Q00U/Q01U/Q02UCPU or Q00J/Q00/Q01CPU.
However, the monitor speed may be reduced.

*3 The format setting differs depending on the controller.
L6ADP-R4 adapter: [2]
Other than L6ADP-R4 adapter: [1]

*4 When using a global label, set [High(Normal)] or [Middle] for [Monitor Speed] to read or write 235 two-byte characters or more.
If you set [Low] for [Monitor Speed], a system error occurs when the data is read or written.
For the details, refer to the following manual.
GT Designer3 (GOT2000) Screen Design Manual

MELSEC-FX

Property	Value
Transmission Speed(BPS)	115200
Retry(Times)	0
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 115200bps) When the setting exceeds the limit of the connected equipment, communication is performed at the fastest transmission speed supported by the connected equipment.	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300 (ms)

MELSEC-WS

Property	Value
Transmission Speed(BPS)	115200
Retry(Times)	3
Timeout Time(Sec)	3
Delay Time(ms)	5

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 115200bps) When the setting exceeds the limit of the connected equipment, communication is performed at the fastest transmission speed supported by the connected equipment.	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 3times)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 5ms)	0 to 300 (ms)

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

Start device number of the GD devices for CPU number switching

■Specifying a CPU number with a device

[CPU No.] can be specified with the GOT internal registers (GD devices) by specifying a value (100 to 102) to [CPU No.] in the device setting dialog in GT Designer3.

Set the start device number of the GD devices to be used in [CPU No. switching GD device first No. (3 points)].

Specify [CPU No.] with the three consecutive GD devices, starting the set device number.

When [500] is set to [CPU No. switching GD device first No. (3 points)], GD500 to GD502 are used to specify [CPU No.] as shown in the following table.

CPU No.	GD device	Setting range
100	GD500	1 to 4 Setting an invalid value causes a communication timeout error. Specifying a nonexistent CPU No. or a CPU No. not supporting a multiple CPU system with a device causes a controller error.
101	GD501	
102	GD502	

■Specifying a CPU number with a device on the initially-displayed screen

Set [CPU No. switching GD device first No. (3 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

■Specifying a CPU number with a device in a multi-channel connection

If the setting range of [CPU No. switching GD device first No. (3 points)] set in each channel overlaps, the monitoring target CPU No. set to each channel is switched simultaneously.

Set [CPU No. switching GD device first No. (3 points)] in each channel so that the setting range does not overlap.

■Specifying a CPU number and a station number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [CPU No. switching GD device first No. (3 points)] in a different channel switches the monitoring target CPU No. and station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [CPU No. switching GD device first No. (3 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

Start device number of the GD devices for module number switching

■Specifying a module number with a device

In a connection via a simple motion module, [Unit No.] can be specified with the GOT internal registers (GD devices) by specifying a value (100 to 10F) to [Unit No.] in the device setting dialog in GT Designer3

Set the start device number of the GD devices to be used in [Module No. switching GD device first No. (16 points)].

Specify [Unit No.] with the 16 consecutive GD devices, starting the set device number.

When [550] is set to [Module No. switching GD device first No. (16 points)], GD550 to GD565 are used to specify [Unit No.] as shown in the following table.

Unit No.	GD device	Setting range
100	GD550	The setting range depends on [Unit Type]. • When [MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-L], or [MELIPC] is selected in [Unit Type] 00 to FF • When [MELSEC iQ-F] is selected for [Unit Type] 01 to 10 Setting an invalid value causes a device range error.
101	GD551	
102	GD552	
103	GD553	
104	GD554	
105	GD555	
106	GD556	
107	GD557	
108	GD558	
109	GD559	
10A	GD560	
10B	GD561	
10C	GD562	
10D	GD563	
10E	GD564	
10F	GD565	

■Specifying a module number with a device on the initially-displayed screen

Set [Module No. switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

■Specifying a module number with a device in a multi-channel connection

If the setting range of [Module No. switching GD device first No. (16 points)] set in each channel overlaps, the module No. of the simple motion module via the servo amplifier device of each channel is switched simultaneously.

Set [Module No. switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

■Specifying a station number and a module number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Module No. switching GD device first No. (16 points)] switches the module No. of the simple motion module via the servo amplifier device and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [Module No. switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

Servo axis switching GD device first No.

■Indirect specification of the servo axis No.

In a connection via a motion CPU or simple motion module, a servo axis No. can be indirectly specified with the GOT internal registers (GD devices) by specifying a value (100 to 115) to the axis No. of the servo amplifier device.
Set the start device number of the GD devices to be used in [Servo axis switching GD device first No. (16 points)].
Specify a servo axis number with 16 consecutive GD devices, starting the set device number.
When [10] is set to [Servo axis switching GD device first No. (16 points)], GD10 to GD25 are used to specify a servo axis number as shown in the following table.

Servo axis No.	GD device	Setting range
100	GD10	1 to 64 For the setting other than the above, error (dedicated device is out of range) will occur.
101	GD11	
102	GD12	
103	GD13	
104	GD14	
105	GD15	
106	GD16	
107	GD17	
108	GD18	
109	GD19	
110	GD20	
111	GD21	
112	GD22	
113	GD23	
114	GD24	
115	GD25	

■Specifying a servo axis number with a device on the initially-displayed screen

Set [Servo axis switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

■Specifying a servo axis number with a device in a multi-channel connection

If the setting rage of [Servo axis switching GD device first No. (16 points)] set in each channel overlaps, the axis No. of the servo amplifier of each channel is switched simultaneously.
Set [Servo axis switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

■Specifying a station number and a servo axis number with devices in a multi-channel connection

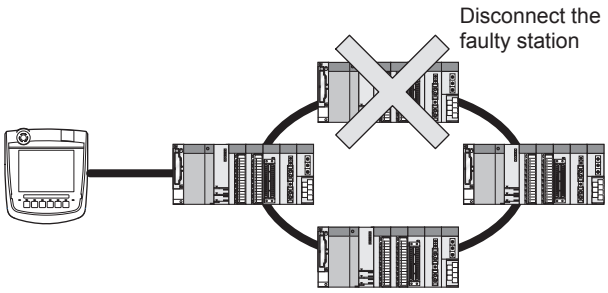
When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Servo axis switching GD device first No. (16 points)] switches the axis No. of the servo amplifier and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.
Set [Servo axis switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

Point

Cutting the portion of multiple connection of the controller

By setting GOT internal device, GOT can cut the portion of multiple connection of the controller.

For example, faulty station that has communication timeout can be cut from the system.



For details of the setting contents of GOT internal device, refer to the following manual.

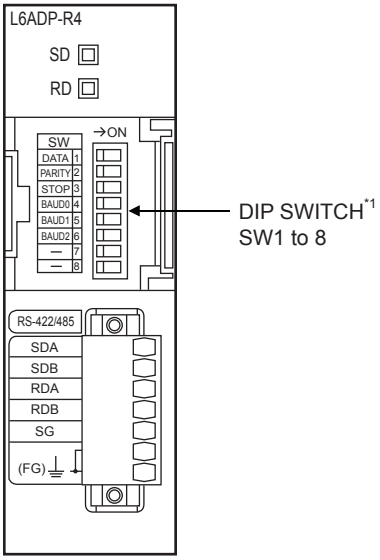
GT Designer3 (GOT2000) Screen Design Manual

3.5 PLC Side Setting

When the GOT and a PLC is connected using the direct CPU connection, no setting is required in the PLC.
When connecting the GOT and an LCPU via an L6ADP-R4/L6ADP-R2 adapter, configure the following communication settings.
For the L6ADP-R2 adapter, configure the communication settings in GX Works2 only.

L6ADP-R4 adapter settings

Set the communication settings by the DIP switches of the L6ADP-R4 adapter.



*1 SW7 and SW8 are not used.

DIP switches (SW1 to SW3)

Set the data length, parity bit, and stop bit.

Setting switch	Description	Setting range	
SW1	Data length*1	OFF	7bit
		ON	8bit
SW2	Parity*1	OFF	Disable
		ON	Enable
SW3	Stop bit*1	OFF	1bit
		ON	2bit

*1 Adjust the settings with GOT settings.
☞ Page 348 Communication detail settings

DIP switches (SW4 to SW6)

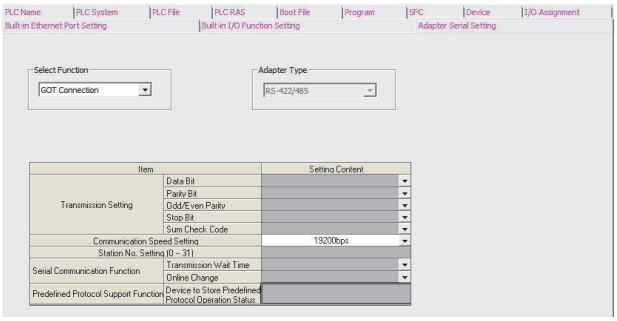
Set the transmission speed.

Setting switch	Transmission speed*1				
	9600 bps	19200 bps	38400 bps	57600 bps	115200 bps
SW4	ON	OFF	ON	OFF	ON
SW5	ON	OFF	OFF	ON	ON
SW6	OFF	ON	ON	ON	ON

*1 Adjust the settings with GOT settings.
☞ Page 348 Communication detail settings

GX Works2 settings

Set the communication speed in GX Works2.



1. Click [PLC parameter] → [Adapter Serial Setting].
2. Set [RS-422/485] in [Adapter Type].
3. Set [GOT Connection] in [Select Function].
4. Adjust [Communication Speed Setting] with the GOT communication setting.

☞ Page 348 Communication detail settings

Point

L6ADP-R4 adapter

For details on the L6ADP-R4 adapter, refer to the following manual.

MELSEC-L CPU Module User's Manual (Hardware Design, Maintenance and Inspection)

3.6 Precautions

Connection to FXCPU

■When connecting to FX3 series

When the keyword of FXCPU (FX3 series) has been set, GOT may not be able to monitoring.Perform an I/O check again.

☞ Page 96 Perform an I/O check

When the result of the I/O check is normal, check the status of keyword registration.

■When connecting with function extension board or communication special adapter

When a sequence program and settings that the FXCPU communicates with devices other than the GOT are set with software, including GX Developer, the FXCPU cannot communicate with the GOT.

• Settings with sequence program

Check the sequence program and delete the following.

📖FX SERIES PROGRAMMABLE CONTROLLERS USER'S MANUAL - Data Communication Edition

• No protocol communication (RS instruction)

• Sequence program with the computer link, N:N network, and parallel link

• Parameter setting

• Set the following special registers to 0.

Except FX3U, FX3UC: D8120

FX3U, FX3UC: D8120, D8400, D8420

FX3G, FX3GC, FX3GE: D8120, D8400, D8420, D8370

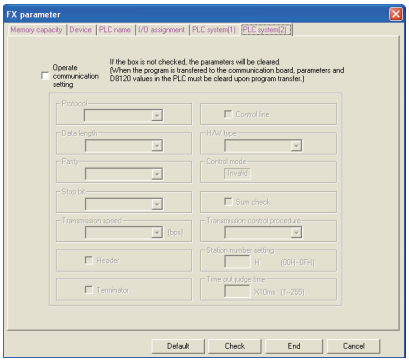
FX3S: D8120, D8400

• Settings with GX Developer

Select [PLC parameter] in [Parameter], and then click the PLC system(2) tab on the FX parameter screen.

Uncheck [Operate communication setting], and then transfer the parameter to the programmable controller.

After the transfer, turn off the programmable controller, and then turn on the programmable controller again.



Connection in the multiple CPU system

When the GOT is connected to multiple CPU system, the following time is taken until when the PLC runs.

• QCPU (Q mode), motion CPU (Q series): 10 seconds or more

• MELDAS C70: 18 seconds or more

When the GOT starts before the PLC runs, a system alarm occurs.Adjust the opening screen time in the GOT setup so that no system alarm occurs.

📖GT Designer3 (GOT2000) Screen Design Manual

Connection to LCPU

■When a system alarm occurs at GOT startup

LCPU may diagnose (check file system, recovering process, etc.) the SD memory card when turning on the power or when resetting.

Therefore, it takes time until the SD memory card becomes available.

When the GOT starts before the SD card becomes available, a system alarm occurs.

Adjust the opening screen time in the GOT setup so that no system alarm occurs.

GT Designer3 (GOT2000) Screen Design Manual

■When the module is L02SCPU or L02SCPU-P

Do not set the serial communication function of L02SCPU or L02SCPU-P.

If it is set, communications may be unavailable.

Connection to QCPU

Do not set the serial communication function of Q00UJ/Q00U/Q01U/Q02U/Q03UD/Q04UDH/Q06UDH/Q10UDH/Q13UDH/Q20UDH/Q26UDHCPU, Q00/Q01CPU.

If the function is set, the communication may not be performed.

Connection to Q170MCPU or Q170MSCPU(-S1)

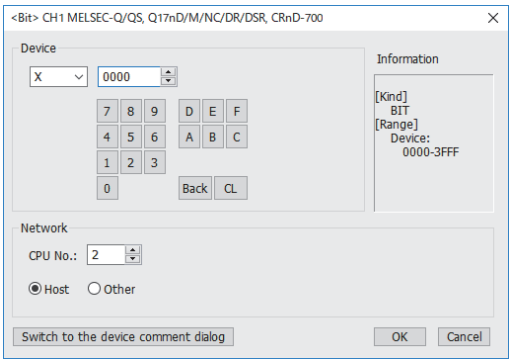
Set [CPU No.] to 2 in the device setting to monitor the device of the motion CPU area (CPU No. 2).

When [CPU No.] is set to 0 or 1, the device on the PLC CPU area (CPU No. 1) is monitored.

When [CPU No.] is set to the number other than 0 to 2, a communication error occurs and the monitoring cannot be executed.

For the setting of [CPU No.], refer to the following.

GT Designer3 (GOT2000) Screen Design Manual



Connection to MELSEC iQ-F Series

Point

MELSEC iQ-F Series communication settings

For details of MELSEC iQ-F Series communication settings, refer to the following manual.

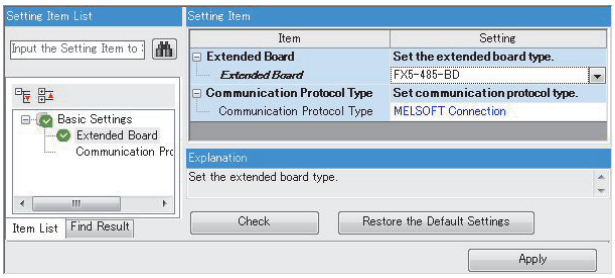
MELSEC iQ-F Series User's Manual

Module parameter settings as a default value (MELSOFT Connection).

If it sets up other than a default value, it becomes impossible to communicate with GOT.

■Module parameter setting

(When using FX5-485-BD)



Point

When changing the module parameter

After writing module parameters to the PLC CPU, turn the PLC CPU OFF then back ON again, or reset the PLC CPU.

Connection with the motion controller A series

When the following motion controller A series is connected, LINK UNIT ERROR (42) may occur in the SCPU (CPU for PLC control) depending on the contents of the display screen.

- A171SHCPU, A171SHCPUN, A172SHCPU, A172SHCPUN

In this case, reduce the number of monitored devices to less than 128.

The number of monitored devices includes the number of devices of functions running in the background such as alarm, logging, and script in addition to the displayed base screens and window screens.

4 SERIAL COMMUNICATION CONNECTION

- Page 359 Connectable Model List
- Page 367 System Configuration
- Page 385 Connection Diagram
- Page 390 GOT Side Settings
- Page 398 PLC Side Setting
- Page 410 Precautions

4.1 Connectable Model List

The following table shows the connectable models.

PLC/Motion CPU

Series	Model name	Clock	Communication type	Connectable model	Refer to
MELSEC MX Controller (MX-R Model)	MXR300-16	○	RS-232 RS-422	-	-
	MXR300-32				
	MXR300-64				
	MXR500-128				
	MXR500-256				
MELSEC MX Controller (MX-F Model)	MXF100-8-N32	○	RS-232 RS-422	-	-
	MXF100-8-P32				
	MXF100-16-N32				
	MXF100-16-P32				
MELSEC iQ-R Series	R00CPU	○	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 367 Connecting to MELSEC iQ-R series
	R01CPU				
	R02CPU				
	R04CPU				
	R08CPU				
	R16CPU				
	R32CPU				
	R120CPU				
	R08PCPU*3	○	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 367 Connecting to MELSEC iQ-R series
	R16PCPU*3				
	R32PCPU*3				
	R120PCPU*3				
	R04ENCPU	○	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 367 Connecting to MELSEC iQ-R series
	R08ENCPU				
	R16ENCPU				
	R32ENCPU				
	R120ENCPU				
	R08PSFCPU	○	-	-	-
	R16PSFCPU				
	R32PSFCPU				
	R120PSFCPU				
	R08SFCPU*2	○	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 367 Connecting to MELSEC iQ-R series
	R16SFCPU*2				
	R32SFCPU*2				
	R120SFCPU*2				

Series	Model name	Clock	Communication type	Connectable model	Refer to
Motion CPU (MELSEC iQ-R Series)	R16MTCPU	○	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 367 Connecting to MELSEC iQ-R series
	R32MTCPU				
	R64MTCPU				
C Controller module*1 (MELSEC iQ-R Series)	R12CCPU-V	○	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 367 Connecting to MELSEC iQ-R series
MELSECWinCPU (MELSEC iQ-R Series)*1	R102WCPU-W	×	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 367 Connecting to MELSEC iQ-R series
CNC C80	R16NCCPU-S1	○	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 367 Connecting to MELSEC iQ-R series
Robot controller (MELSEC iQ-R Series)	CR800-R(R16RTCPU)	○	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 367 Connecting to MELSEC iQ-R series

*1 Use the serial port of a serial communication module controlled by another CPU on the multiple CPU.

*2 Mount a safety function module R6SFM next to the RnSFCPU on the base unit.
The RnSFCPU and the safety function module R6SFM must have the same pair version.
If their pair versions differ, the RnSFCPU does not operate.

*3 Mount a redundant function module R6RFM next to the RnPCPU on the base unit when building a redundant system.

Series	Model name	Clock	Communication	Connectable model	Refer to
CC-Link IE Filed Network head module	RJ72GF15-T2	×	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 367 Connecting to MELSEC iQ-R series
MELSEC iQ-F Series	FX5U	○	RS-232 RS-422	-	-
	FX5UC				
	FX5UJ				
	FX5S				
MELSEC-Q (Q mode)	Q00JCPU	○	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 369 Connecting to QCPU (Q mode)
	Q00CPU*1				
	Q01CPU*1				
	Q02CPU*1				
	Q02HCPU*1 Q06HCPU*1 Q12HCPU*1 Q25HCPU*1				
	Q02PHCPU Q06PHCPU Q12PHCPU Q25PHCPU	○	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 369 Connecting to QCPU (Q mode)
	Q12PRHCPU (Main base)	○	-	-	-
	Q25PRHCPU (Main base)				
	Q12PRHCPU (Extension base)	○	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 369 Connecting to QCPU (Q mode)
	Q25PRHCPU (Extension base)				
	Q00UJCPU Q00UJCPU-S8	○	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 369 Connecting to QCPU (Q mode)
	Q00UCPU				
	Q01UCPU				
	Q02UCPU				
	Q03UDCPU				
	Q04UDHCPU Q06UDHCPU Q10UDHCPU Q13UDHCPU Q20UDHCPU Q26UDHCPU				
	Q03UDECPU Q04UDEHCPU Q06UDEHCPU Q10UDEHCPU Q13UDEHCPU Q20UDEHCPU Q26UDEHCPU Q50UDEHCPU Q100UDEHCPU				
	Q03UDVCPU Q04UDVCPU Q06UDVCPU Q13UDVCPU Q26UDVCPU				

*1 When in multiple CPU system configuration, use CPU function version B or later.

Series	Model name	Clock	Communication	Connectable model	Refer to
C Controller module (Q Series)*2	Q12DCCPU-V*1 Q24DHCCPU-V/VG Q24DHCCPU-LS Q26DHCCPU-LS	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 369 Connecting to QCPU (Q mode)
MELSEC-QS	QS001CPU	×	-	-	-
MELSEC-L	L02CPU L06CPU L26CPU L26CPU-BT L02CPU-P L06CPU-P L26CPU-P L26CPU-PBT L02SCPU L02SCPU-P	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 371 Connecting to LCPU
MELSEC-Q (A mode)	Q02CPU-A Q02HCPU-A Q06HCPU-A	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 373 Connecting to QCPU (A mode)
MELSEC-QnA (QnACPU)*3	Q2ACPU Q2ACPU-S1 Q3ACPU Q4ACPU	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 375 Connecting to QnACPU (QnACPU type)
	Q4ARCPU	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 375 Connecting to QnACPU (QnACPU type)
MELSEC-QnA (QnASCPU)*3	Q2ASCPU Q2ASCPU-S1 Q2ASHCPU Q2ASHCPU-S1	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 378 Connecting to QnACPU (QnASCPU type)
MELSEC-A (AnCPU)	A2UCPU A2UCPU-S1 A3UCPU A4UCPU A2ACPU A2ACPUP21 A2ACPUR21 A2ACPU-S1 A2ACPUP21-S1 A2ACPUR21-S1 A3ACPU A3ACPUP21 A3ACPUR21 A1NCPU A1NCPUP21 A1NCPUR21 A2NCPU A2NCPUP21 A2NCPUR21 A2NCPU-S1 A2NCPUP21-S1 A2NCPUR21-S1 A3NCPU A3NCPUP21 A3NCPUR21	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 381 Connecting to ACPU (AnCPU type)

*1 Use only modules with the upper five digits of the serial No. later than 12042.

*2 Use the serial port of a serial communication module controlled by another CPU on the multiple CPU.

*3 If the A series computer link module is applied to the QnACPU, the GOT can monitor the devices in the same range on AnACPU. However, the following devices cannot be monitored.

- Devices added to QnACPU
- Latch relays (L) and step relays (S)

(In case of QnACPU, the latch relay (L) and step relay (S) are different from the internal relay. However, whichever is specified, an access is made to the internal relay.)

- File register (R)

Series	Model name	Clock	Communication	Connectable model	Refer to
MELSEC-A (AnSCPU)	A2USCPU	○	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 383 Connecting to ACPU (AnSCPU type, A0J2HCPU, A2CCPU)
	A2USCPU-S1				
	A2USHCPU-S1				
	A1SCPU				
	A1SCPUC24-R2 *2				
	A1SHCPU*1				
	A2SCPU*1				
	A2SCPU-S1*1				
	A2SHCPU*1				
	A2SHCPU-S1*1				
	A1SJCPU				
	A1SJCPU-S3				
	A1SJHCPU*1				
MELSEC-A	A0J2HCPU*1	×	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 383 Connecting to ACPU (AnSCPU type, A0J2HCPU, A2CCPU)
	A0J2HCPUP21*1				
	A0J2HCPUR21*1				
	A0J2HCPU-DC24*1				
	A2CCPU	○	-	-	-
	A2CCPUP21				
	A2CCPUR21				
	A2CCPUC24	○	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 383 Connecting to ACPU (AnSCPU type, A0J2HCPU, A2CCPU)
	A2CCPUC24-PRF				
	A2CJCPU-S3	○	-	-	-
	A1FXCPU				

*1 The computer link module version U or later supports the A2SCPU(S1), A2SHCPU(S1), A1SHCPU, A1SJHCPU and A0J2HCPU(P21/R21/-DC24).
In addition, A0J2-C214-S1 (A0J2HCPU-dedicated computer link module) cannot be used.

*2 Use hardware version C or later, software version E or later.

Series	Model name	Clock	Communication	Connectable model	Refer to
Motion CPU (Q Series)	Q172CPU *2*3	○	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 369 Connecting to QCPU (Q mode)
	Q173CPU *2*3				
	Q172CPUN *2				
	Q173CPUN *2				
	Q172HCPU				
	Q173HCPU				
	Q172DCPU				
	Q173DCPU				
	Q172DCPU-S1				
	Q173DCPU-S1				
	Q172DSCPU				
	Q173DSCPU				
	Q170MCPU *4				
	Q170MSCPU *5				
	Q170MSCPU-S1 *5				
Motion CPU (A Series)	A273UCPU	○	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 381 Connecting to ACPU (AnCPU type)
	A273UHCPU				
	A273UHCPU-S3				
	A373UCPU				
	A373UCPU-S3				
	A171SCPU	○	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 383 Connecting to ACPU (AnSCPU type, A0J2HCPU, A2CCPU)
	A171SCPU-S3				
	A171SCPU-S3N				
	A171SHCPU*1				
	A171SHCPUN*1				
	A172SHCPU*1				
	A172SHCPUN*1				
	A173UHCPU				
	A173UHCPU-S1				

*1 For serial communication connection of A171SHCPU(N) and A172SHCPU(N), use the computer link module whose software version is version U or later.

*2 When using SV13, SV22, or SV43, use a Motion CPU with the following version of OS installed.
- SW6RN-SV13Q□: 00H or later
- SW6RN-SV22Q□: 00H or later
- SW6RN-SV43Q□: 00B or later

*3 Use main modules with the following product numbers.
- Q172CPU: Product number N******* or later
- Q173CPU: Product number M******* or later

*4 Only the first step can be used on the extension base unit (Q52B/Q55B).

*5 The extension base unit (Q5□B/Q6□B) can be used.

Series	Model name	Clock	Communication	Connectable model	Refer to
MELSEC-WS	WS0-CPU0	×	-	-	-
	WS0-CPU1				
	WS0-CPU3				
MELSECNET/H Remote I/O station	QJ72LP25-25	×	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 369 Connecting to QCPU (Q mode)
	QJ72LP25G				
	QJ72BR15				
CC-Link IE Field Network head module	LJ72GF15-T2	×	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 371 Connecting to LCPU
CC-Link IE Field Network Ethernet adapter module	NZ2GF-ETB	×	-	-	-
CNC C70	Q173NCCPU	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 369 Connecting to QCPU (Q mode)
Robot controller (Q Series)	CRnQ-700 (Q172DRCPU) CR750-Q (Q172DRCPU) CR751-Q (Q172DRCPU) CR800-Q(Q172DSRCPU)	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 369 Connecting to QCPU (Q mode)
MELSEC-FX	FX0	×	-	-	-
	FX0S				
	FX0N				
	FX1				
	FX2	×			
	FX2C				
	FX1S	○			
	FX1N				
	FX2N				
	FX1NC				
	FX2NC	×			
	FX3S	○			
	FX3G				
	FX3GC				
	FX3GE				
	FX3U				
	FX3UC				

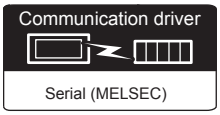
Serial communication module/Computer link module

CPU series	Model name[*1]
MELSEC iQ-R Series Motion CPU (MELSEC iQ-R Series) C Controller module[*7] (MELSEC iQ-R Series) MELSECWinCPU (MELSEC iQ-R Series)[*7] CNC C80 CR800-R(R16RTCPU) CC-Link IE Field Network head module (MELSEC iQ-R Series)	RJ71C24[*9], RJ71C24-R2[*9], RJ71C24-R4[*9]
MELSEC-Q (Q mode) Motion CPU (Q Series) MELSECNET/H remote I/O station CNC C70 Robot controller (CRnQ-700) CR800-Q (Q172DSRCPU) C Controller module (Q Series)	QJ71C24[*2], QJ71C24-R2[*2]
	QJ71C24N, QJ71C24N-R2, QJ71C24N-R4
	QJ71CMO[*3], QJ71CMON[*3]
MELSEC-L CC-Link IE Field Network head module (MELSEC iQ-R Series)	LJ71C24, LJ71C24-R2
MELSEC-Q (A mode)	A1SJ71UC24-R2, A1SJ71UC24-R4, A1SJ71UC24-PRF
	A1SJ71C24-R2, A1SJ71C24-R4, A1SJ71C24-PRF
MELSEC-QnA (QnACPU) MELSEC-QnA (QnASCPU)	AJ71QC24[*4], AJ71QC24-R2[*4], AJ71QC24-R4[*4]
	AJ71QC24N[*4], AJ71QC24N-R2[*4], AJ71QC24N-R4[*4]
	A1SJ71QC24[*4], A1SJ71QC24-R2[*4]
	A1SJ71QC24N[*4], A1SJ71QC24N-R2[*4]
	A1SJ71QC24N1[*4], A1SJ71QC24N1-R2[*4]
	AJ71UC24[*4*6]
	A1SJ71C24-R2[*6], A1SJ71C24-R4[*6], A1SJ71C24-PRF[*6]
	A1SJ71UC24-R2[*6], A1SJ71UC24-R4[*6], A1SJ71C24-PRF[*6]
MELSEC-A (AnCPU) MELSEC-A (AnSCPU) MELSEC-A Motion CPU (A Series)	AJ71UC24[*4*5]
	A1SJ71UC24-R2[*5], A1SJ71UC24-R4[*5], A1SJ71UC24-PRF[*5]
	A1SJ71C24-R2[*5], A1SJ71C24-R4[*5], A1SJ71C24-PRF[*5]
	A1SCPUC24-R2[*8]
	A2CCPUC24[*4], A2CCPUC24-PRF[*4]

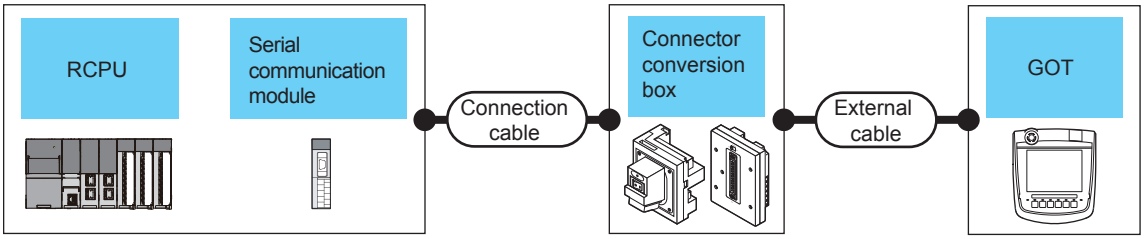
*1 Communication cannot be performed with RS-485.
A0J2-C214-S1 cannot be used.
*2 Either CH1 or CH2 can be used for the function version A.
Both CH1 and CH2 can be used together for the function version B or later.
*3 Only CH2 can be connected.
*4 Either CH1 or CH2 can be used.
*5 The computer link module version U or later supports the A2SCPU(S1), A2SHCPU(S1), A1SHCPU, A1SJHCPU and A0J2HCPU.
*6 The module operates in the device range on AnACPU.
*7 Use the serial port of a serial communication module controlled by another CPU on the multiple CPU.
*8 Use hardware version C or later, software version E or later.
*9 Use firmware version 07 or higher when building a redundant system.

4.2 System Configuration

Connecting to MELSEC iQ-R series



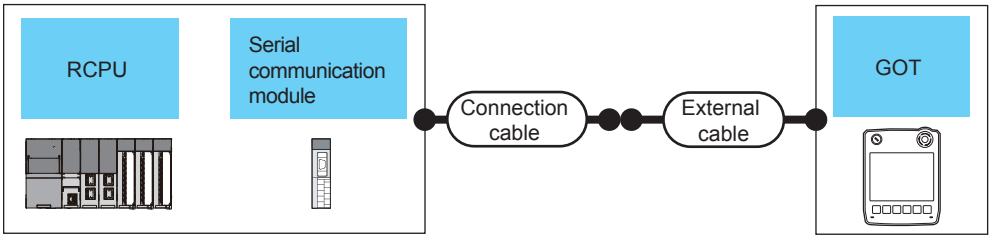
When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication module*1	Communication type	Cable model					
MELSEC iQ-R Series Motion CPU (MELSEC iQ-R Series) C Controller module (MELSEC iQ-R Series) MELSECWinCPU (MELSEC iQ-R Series) CNC C80 (R16NCCPU-S1)	RJ71C24 RJ71C24-R2	RS-232	GT09-C30R2-9P(3m) or User preparing Page 385 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	2 GOTs for 1 serial communication module
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	RJ71C24 RJ71C24-R4	RS-422	GT09-C30R4-6C(3m) GT09-C100R4-6C(10m) or User preparing Page 388 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 For details on the system configuration on the serial communication module side, refer to the following manual.
Manuals of MELSEC iQ-R Series

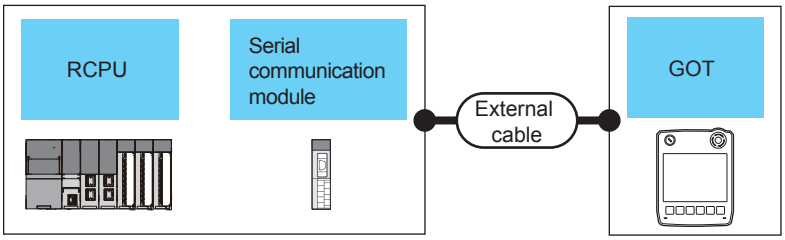
When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication module*1	Communication type	Cable model				
MELSEC iQ-R Series	RJ71C24 RJ71C24-R2	RS-232	User preparing Page 385 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	2 GOTs for 1 serial communication module
	RJ71C24 RJ71C24-R4	RS-422	User preparing Page 388 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 For details on the system configuration on the serial communication module side, refer to the following manual.
Manuals of MELSEC iQ-R Series

When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication module*1	Communication type				
MELSEC iQ-R Series	RJ71C24 RJ71C24-R2	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 386 RS-232 connection diagram 3)	GT 2505HS	6m	2 GOTs for 1 serial communication module
	RJ71C24 RJ71C24-R4	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 388 RS-422 connection diagram 3)	GT 2505HS	13m	

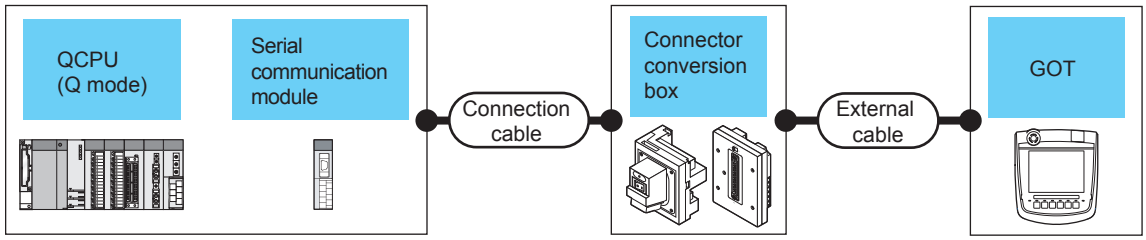
*1 For details on the system configuration on the serial communication module side, refer to the following manual.
Manuals of MELSEC iQ-R Series

Connecting to QCPU (Q mode)

Communication driver

Serial (MELSEC)

When using the connector conversion box

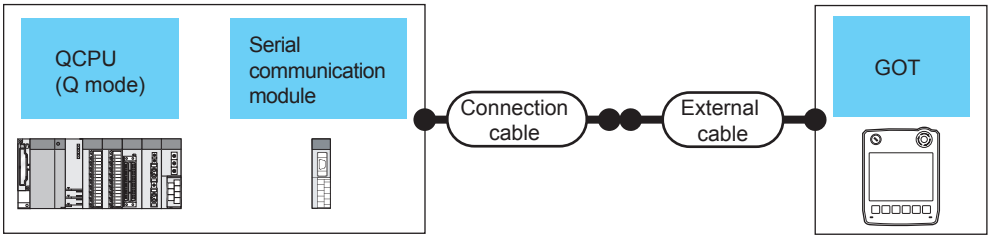


PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication module*1	Communication type	Cable model					
MELSEC-Q (Q mode)	QJ71C24 QJ71C24N QJ71C24-R2 QJ71C24N-R2 QJ71CMO QJ71CMON	RS-232	GT09-C30R2-9P(3m) or User preparing Page 385 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	2 GOTs for 1 serial communication module*2 1 GOT for 1 modem interface module
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	QJ71C24 QJ71C24N QJ71C24N-R4	RS-422	GT09-C30R4-6C(3m) GT09-C100R4-6C(10m) or User preparing Page 388 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 For details on the system configuration on the serial communication module side, refer to the following manual.
Q Corresponding Serial Communication Module User's Manual (Basic)
For details on the system configuration on the modem interface module side, refer to the following manual.
Modem Interface Module User's Manual

*2 Two GOTs can be connected with the function version B or later of the serial communication module.

When using the external cable (GT11H-C□□□-37P)

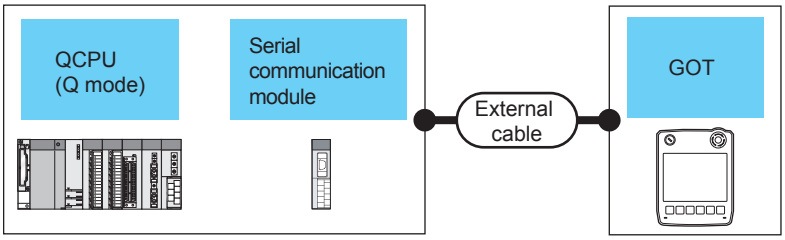


PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication module*1	Communication type	Cable model				
MELSEC-Q (Q mode)	QJ71C24 QJ71C24N QJ71C24-R2 QJ71C24N-R2 QJ71CMO QJ71CMON	RS-232	User preparing Page 385 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	2 GOTs for 1 serial communication module*2 1 GOT for 1 modem interface module
	QJ71C24 QJ71C24N QJ71C24N-R4	RS-422	User preparing Page 388 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 For details on the system configuration on the serial communication module side, refer to the following manual.
Q Corresponding Serial Communication Module User's Manual (Basic)
For details on the system configuration on the modem interface module side, refer to the following manual.
Modem Interface Module User's Manual

*2 Two GOTs can be connected with the function version B or later of the serial communication module.

When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication module*1	Communication type				
MELSEC-Q (Q mode)	QJ71C24 QJ71C24N QJ71C24-R2 QJ71C24N-R2 QJ71CMO QJ71CMON	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 386 RS-232 connection diagram 3)	GT 2505HS	6m	2 GOTs for 1 serial communication module*2 1 GOT for 1 modem interface module
	QJ71C24 QJ71C24N QJ71C24N-R4	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 388 RS-422 connection diagram 3)	GT 2505HS	13m	

*1 For details on the system configuration on the serial communication module side, refer to the following manual.
Q Corresponding Serial Communication Module User's Manual (Basic)
For details on the system configuration on the modem interface module side, refer to the following manual.
Modem Interface Module User's Manual

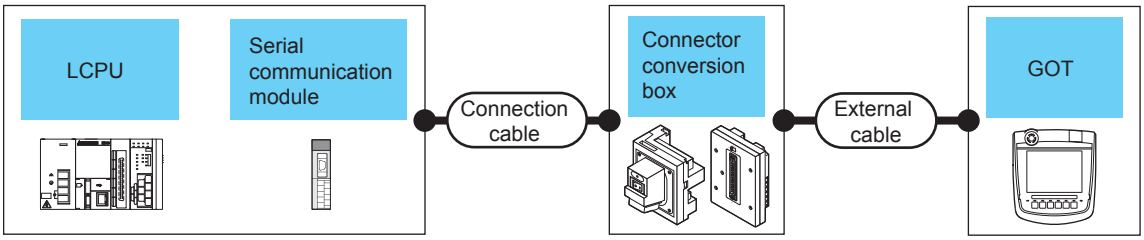
*2 Two GOTs can be connected with the function version B or later of the serial communication module.

Connecting to LCPU

Communication driver

Serial (MELSEC)

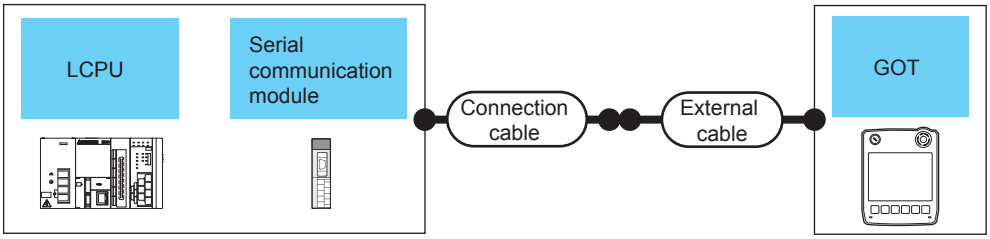
When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication module*1	Communication type	Cable model					
MELSEC-L	LJ71C24 LJ71C24-R2	RS-232	GT09-C30R2-9P(3m) or User preparing Page 385 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	2 GOTs for 1 serial communication module
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	LJ71C24	RS-422	GT09-C30R4-6C(3m) GT09-C100R4-6C(10m) or User preparing Page 388 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 For details on the system configuration on the serial communication module side, refer to the following manual.
MELSEC-L Serial Communication Module User's Manual (Basic)

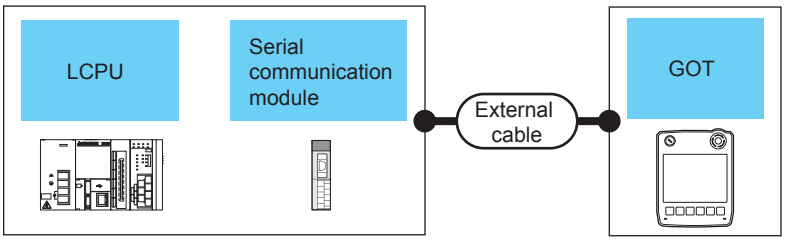
When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication module*1	Communication type	Cable model				
MELSEC-L	LJ71C24 LJ71C24-R2	RS-232	User preparing Page 385 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	2 GOTs for 1 serial communication module
	LJ71C24	RS-422	User preparing Page 388 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 For details on the system configuration on the serial communication module side, refer to the following manual.
MELSEC-L Serial Communication Module User's Manual (Basic)

When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication module*1	Communication type				
MELSEC-L	LJ71C24 LJ71C24-R2	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 386 RS-232 connection diagram 3)	GT 2505HS	6m	2 GOTs for 1 serial communication module
	LJ71C24	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 388 RS-422 connection diagram 3)	GT 2505HS	13m	

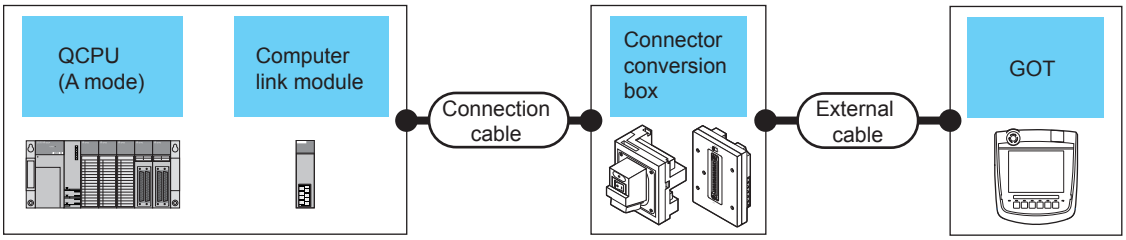
*1 For details on the system configuration on the serial communication module side, refer to the following manual.
MELSEC-L Serial Communication Module User's Manual (Basic)

Connecting to QCPU (A mode)

Communication driver

Serial (MELSEC)

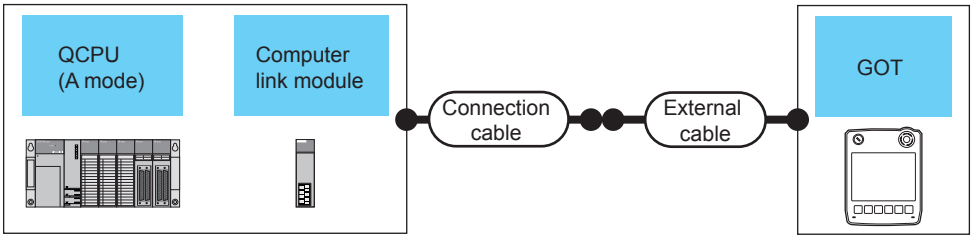
When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Computer link module*1	Communication type	Cable model					
MELSEC-Q (A mode)	A1SJ71UC24-R2 A1SJ71C24-R2 A1SJ71UC24-PRF A1SJ71C24-PRF	RS-232	GT09-C30R2-9P(3m) or User preparing Page 385 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 computer link module
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	A1SJ71UC24-R4 A1SJ71C24-R4	RS-422	GT09-C30R4-6C(3m) GT09-C100R4-6C(10m) or User preparing Page 388 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual

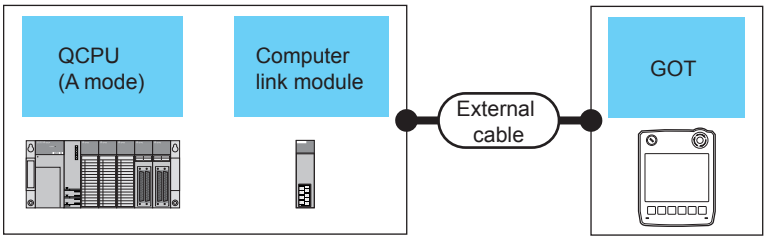
When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Computer link module*1	Communication type	Cable model				
MELSEC-Q (A mode)	A1SJ71UC24-R2 A1SJ71C24-R2 A1SJ71UC24-PRF A1SJ71C24-PRF	RS-232	User preparing Page 385 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 computer link module
	A1SJ71UC24-R4 A1SJ71C24-R4	RS-422	User preparing Page 388 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual

When using the external cable (GT11H-C□□□)



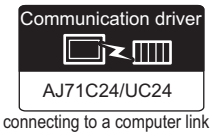
PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Computer link module*1	Communication type				
MELSEC-Q (A mode)	A1SJ71UC24-R2 A1SJ71C24-R2 A1SJ71UC24-PRF A1SJ71C24-PRF	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 386 RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 computer link module
	A1SJ71UC24-R4 A1SJ71C24-R4	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 388 RS-422 connection diagram 3)	GT 2505HS	13m	

*1 For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual

Connecting to QnACPU (QnACPU type)

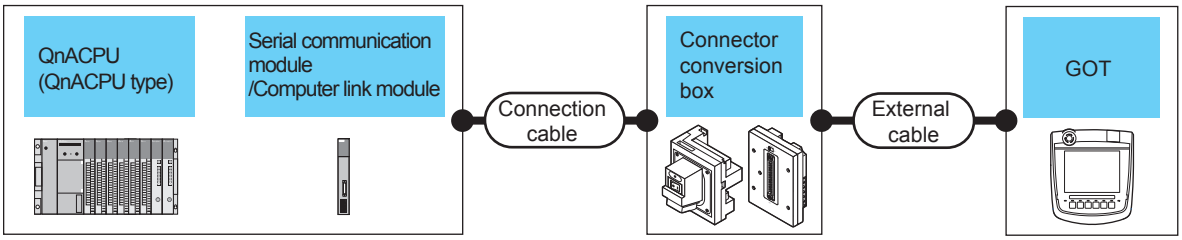


(When connecting to a serial communication module)



(When connecting to a computer link module)

When using the connector conversion box

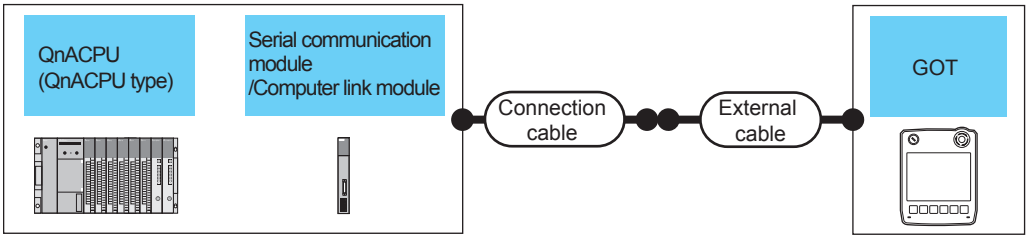


PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication module *1 Computer link module *2	Communication type	Cable model					
MELSEC-QnA (QnACPU)	AJ71QC24 AJ71QC24N AJ71QC24-R2 AJ71QC24N-R2	RS-232	GT09-C30R2-25P(3m) or Page 386 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT2506HS	6m	1 GOT for 1 serial communication module
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT2505HS		
	AJ71QC24-R4 AJ71QC24N-R4	RS-422	GT01-C30R4-25P(3m) GT01-C100R4-25P(10m)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT2505HS		
	AJ71QC24 AJ71QC24N AJ71QC24-R4 AJ71QC24N-R4	RS-422	GT09-C30R4-6C(3m) GT09-C100R4-6C(10m) or Page 388 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT2505HS		
MELSEC-QnA (QnACPU)	AJ71UC24	RS-232	GT09-C30R2-25P(3m) or Page 386 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT2506HS	6m	1 GOT for 1 computer link module
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT2505HS		
	AJ71UC24	RS-422	GT09-C30R4-6C(3m) GT09-C100R4-6C(10m) or Page 388 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT2505HS		

*1 For details on the system configuration on the serial communication module side, refer to the following manual.
Serial Communications Module User's Manual (Modem Function Additional Version)

*2 For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual
When connecting to a computer link module, set the communication driver to [AJ71C24/UC24].

When using the external cable (GT11H-C□□□-37P)

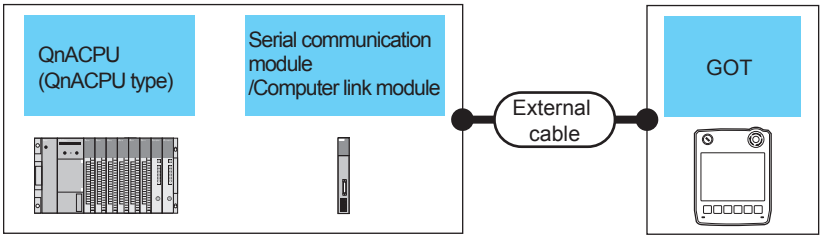


PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication module *1 Computer link module *2	Communication type	Cable model				
MELSEC-QnA (QnACPU)	AJ71QC24 AJ71QC24N AJ71QC24-R2 AJ71QC24N-R2	RS-232	User preparing Page 386 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 serial communication module
	AJ71QC24 AJ71QC24N AJ71QC24-R4 AJ71QC24N-R4	RS-422	User preparing Page 388 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	
	AJ71UC24	RS-232	User preparing Page 386 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 computer link module
	AJ71UC24	RS-422	User preparing Page 388 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 For details on the system configuration on the serial communication module side, refer to the following manual.
Serial Communications Module User's Manual (Modem Function Additional Version)

*2 For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual
When connecting to a computer link module, set the communication driver to [AJ71C24/UC24].

When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication module *1 Computer link module *2	Communication type				
MELSEC-QnA (QnACPU)	AJ71QC24 AJ71QC24N AJ71QC24-R2 AJ71QC24N-R2	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 387 RS-232 connection diagram 6)	GT 2505HS	6m	1 GOT for 1 serial communication module
	AJ71QC24 AJ71QC24N AJ71QC24-R4 AJ71QC24N-R4	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 388 RS-422 connection diagram 3)	GT 2505HS	13m	
	AJ71UC24	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 387 RS-232 connection diagram 6)	GT 2505HS	6m	1 GOT for 1 computer link module
	AJ71UC24	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 388 RS-422 connection diagram 3)	GT 2505HS	13m	

*1 For details on the system configuration on the serial communication module side, refer to the following manual.
Serial Communications Module User's Manual (Modem Function Additional Version)

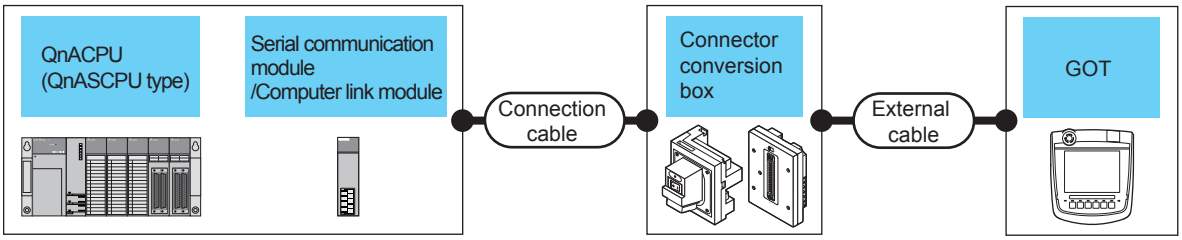
*2 For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual
When connecting to a computer link module, set the communication driver to [AJ71C24/UC24].

Connecting to QnACPU (QnASCPU type)

Communication driver
AJ71QC24,MELDAS C6*
(When connecting to a serial communication module)

Communication driver
AJ71C24/UC24
(When connecting to a computer link module)

When using the connector conversion box

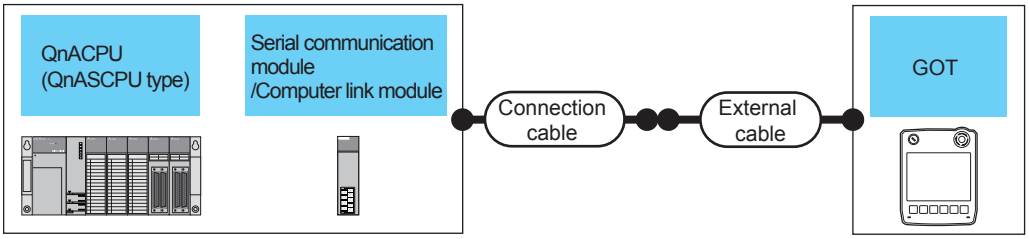


PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication module *1 /Computer link module *2	Communication type	Cable model					
MELSEC-QnA (QnASCPU)	A1SJ71QC24 A1SJ71QC24N A1SJ71QC24N1 A1SJ71QC24-R2 A1SJ71QC24N-R2 A1SJ71QC24N1-R2	RS-232	GT09-C30R2-9P(3m) or User preparing Page 385 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 serial communication module
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	A1SJ71QC24 A1SJ71QC24N A1SJ71QC24N1	RS-422	GT09-C30R4-6C(3m) GT09-C100R4-6C(10m) or User preparing Page 388 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
	A1SJ71UC24-R2 A1SJ71C24-R2 A1SJ71UC24-PRF A1SJ71C24-PRF	RS-232	GT09-C30R2-9P(3m) or User preparing Page 385 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 computer link module
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	A1SJ71UC24-R4 A1SJ71C24-R4	RS-422	GT09-C30R4-6C(3m) GT09-C100R4-6C(10m) or User preparing Page 388 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 For details on the system configuration on the serial communication module side, refer to the following manual.
Serial Communication Module User's Manual (Modem Function Additional Version)

*2 For details on the system configuration on the serial communication module side, refer to the following manual.
Serial Communication Module User's Manual (Modem Function Additional Version)
For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual
When connecting to a computer link module, set the communication driver to [AJ71C24/UC24].

When using the external cable (GT11H-C□□□-37P)

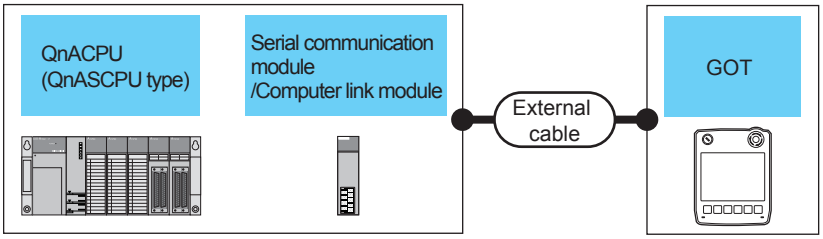


PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication module *1 /Computer link module *2	Communication type	Cable model				
MELSEC-QnA (QnASCPU)	A1SJ71QC24 A1SJ71QC24N A1SJ71QC24N1 A1SJ71QC24-R2 A1SJ71QC24N-R2 A1SJ71QC24N1-R2	RS-232	User preparing Page 385 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 serial communication module
	A1SJ71QC24 A1SJ71QC24N A1SJ71QC24N1	RS-422	User preparing Page 388 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	
	A1SJ71UC24-R2 A1SJ71C24-R2 A1SJ71UC24-PRF A1SJ71C24-PRF	RS-232	User preparing Page 385 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 computer link module
	A1SJ71UC24-R4 A1SJ71C24-R4	RS-422	User preparing Page 388 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 For details on the system configuration on the serial communication module side, refer to the following manual.
Serial Communication Module User's Manual (Modem Function Additional Version)

*2 For details on the system configuration on the serial communication module side, refer to the following manual.
Serial Communication Module User's Manual (Modem Function Additional Version)
For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual
When connecting to a computer link module, set the communication driver to [AJ71C24/UC24].

When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication module *1 Computer link module *2	Communication type				
MELSEC-QnA (QnASCPU)	A1SJ71QC24 A1SJ71QC24N A1SJ71QC24N1 A1SJ71QC24-R2 A1SJ71QC24N-R2 A1SJ71QC24N1-R2	RS-232	GT11H-C30(3m) GT11H-C60(6m) User preparing Page 386 RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 serial communication module
	A1SJ71QC24 A1SJ71QC24N A1SJ71QC24N1	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) User preparing Page 388 RS-422 connection diagram 3)	GT 2505HS	13m	
	A1SJ71UC24-R2 A1SJ71C24-R2 A1SJ71UC24-PRF A1SJ71C24-PRF	RS-232	GT11H-C30(3m) GT11H-C60(6m) User preparing Page 386 RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 computer link module
	A1SJ71UC24-R4 A1SJ71C24-R4	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) User preparing Page 388 RS-422 connection diagram 3)	GT 2505HS	13m	

*1 For details on the system configuration on the serial communication module side, refer to the following manual.
Serial Communication Module User's Manual (Modem Function Additional Version)

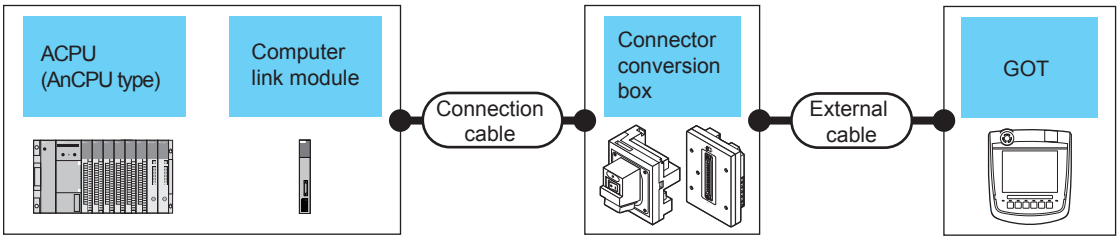
*2 For details on the system configuration on the serial communication module side, refer to the following manual.
Serial Communication Module User's Manual (Modem Function Additional Version)
For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual
When connecting to a computer link module, set the communication driver to [AJ71C24/UC24].

Connecting to ACPU (AnCPU type)

Communication driver

AJ71C24/UC24

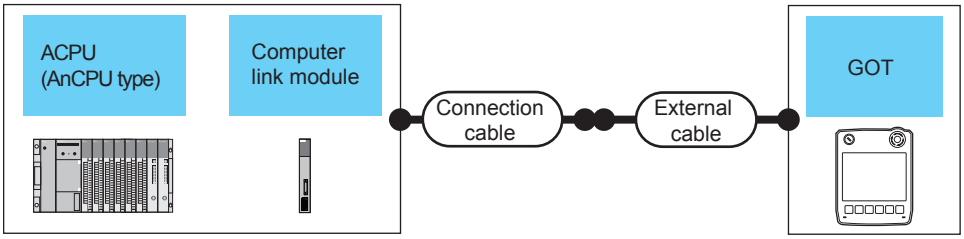
When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Computer link module *1	Communication type	Cable model					
MELSEC-A (AnCPU) Motion CPU (A series)	AJ71UC24	RS-232	GT09-C30R2-25P(3m) or (User preparing) Page 386 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 computer link module
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		RS-422	GT09-C30R4-6C(3m) GT09-C100R4-6C(10m) or (User preparing) Page 388 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual

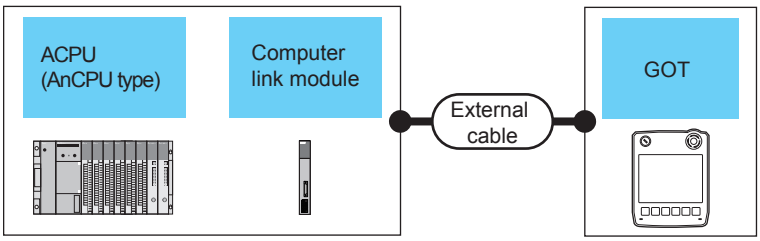
When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Computer link module *1	Communication type	Cable model				
MELSEC-A (AnCPU) Motion CPU (A series)	AJ71UC24	RS-232	User preparing Page 386 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 computer link module
		RS-422	User preparing Page 388 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual

When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Computer link module *1	Communication type				
MELSEC-A (AnCPU) Motion CPU (A series)	AJ71UC24	RS-232	GT11H-C30(3m) GT11H-C60(6m) User preparing Page 387 RS-232 connection diagram 6)	GT 2505HS	6m	1 GOT for 1 computer link module
		RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) User preparing Page 388 RS-422 connection diagram 3)	GT 2505HS	13m	

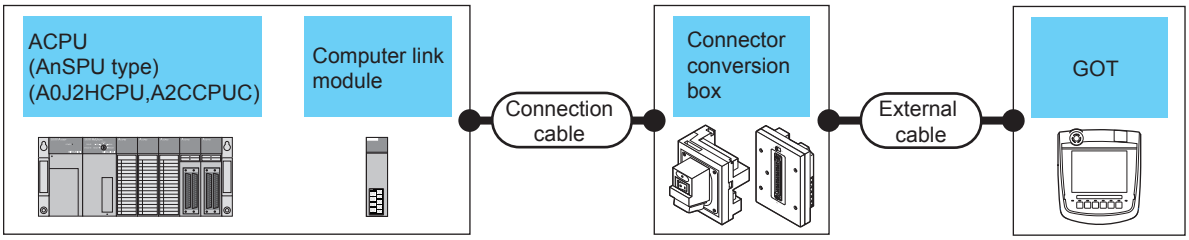
*1 For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual

Connecting to ACPU (AnSCPU type, A0J2HCPU, A2CCPU)

Communication driver

AJ71C24/UC24

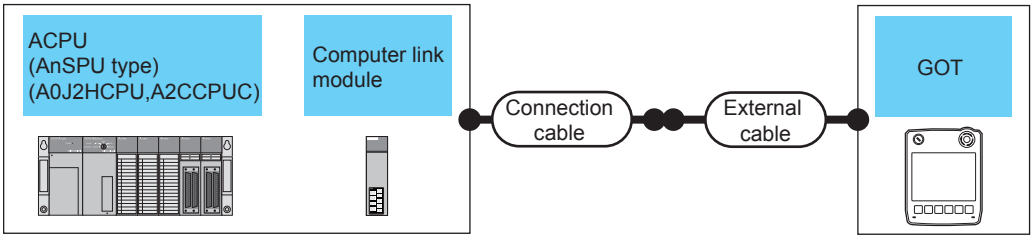
When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Computer link module *1	Communication type	Cable model					
MELSEC-A (AnSCPU) (A0J2H) (A2CCPU) Motion CPU (A series)	A1SJ71UC24-R2 A1SJ71C24-R2 A1SJ71UC24-PRF A1SJ71C24-PRF A1SCPUC24-R2 A2CCPUC24 A2CCPUC24-PRF	RS-232	GT09-C30R2-9P(3m) or User preparing Page 385 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 computer link module
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	A1SJ71UC24-R4 A1SJ71C24-R4	RS-422	GT09-C30R4-6C(3m) GT09-C100R4-6C(10m) or User preparing Page 388 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual

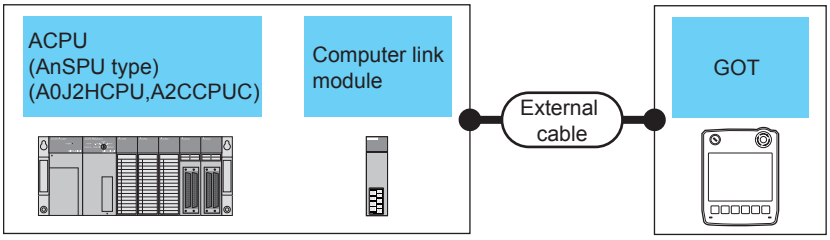
When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Computer link module *1	Communication type	Cable model				
MELSEC-A (AnSCPU) (A0J2H) (A2CCPUC) Motion CPU (A series)	A1SJ71UC24-R2 A1SJ71C24-R2 A1SJ71UC24-PRF A1SJ71C24-PRF A1SCPUC24-R2 A2CCPUC24 A2CCPUC24-PRF	RS-232	User preparing Page 385 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 computer link module
	A1SJ71UC24-R4 A1SJ71C24-R4	RS-422	User preparing Page 388 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual

When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Computer link module *1	Communication type				
MELSEC-A (AnSCPU) (A0J2H) (A2CCPUC) Motion CPU (A series)	A1SJ71UC24-R2 A1SJ71C24-R2 A1SJ71UC24-PRF A1SJ71C24-PRF A1SCPUC24-R2 A2CCPUC24 A2CCPUC24-PRF	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 386 RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 computer link module
	A1SJ71UC24-R4 A1SJ71C24-R4	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 388 RS-422 connection diagram 3)	GT 2505HS	13m	

*1 For the system configuration on the computer link module side, refer to the following manual.
Computer Link Module (Com. link func./Print. func.) User's Manual

4.3 Connection Diagram

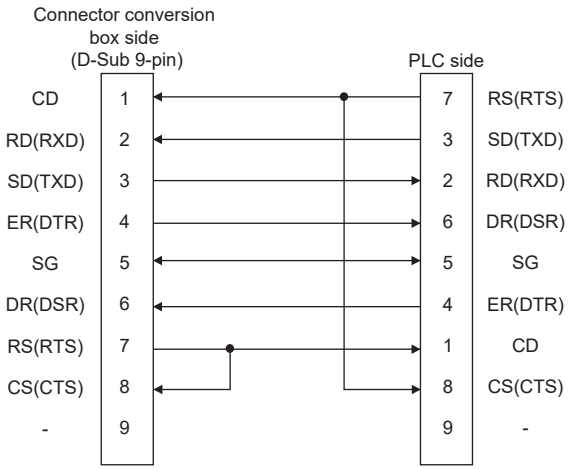
The following diagram shows the connection between the GOT and the PLC.

RS-232 cable

Connection diagram

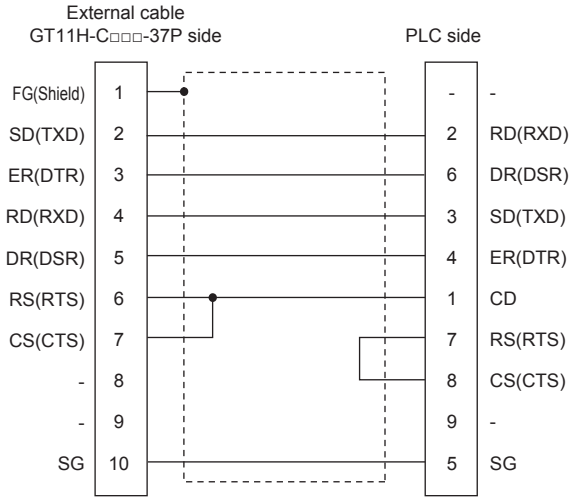
■RS-232 connection diagram 1)

PLC side connector D-sub 9-pin



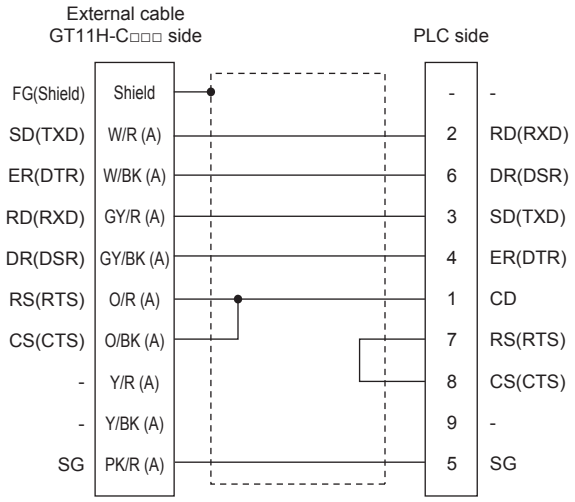
■RS-232 connection diagram 2)

PLC side connector D-sub 9-pin



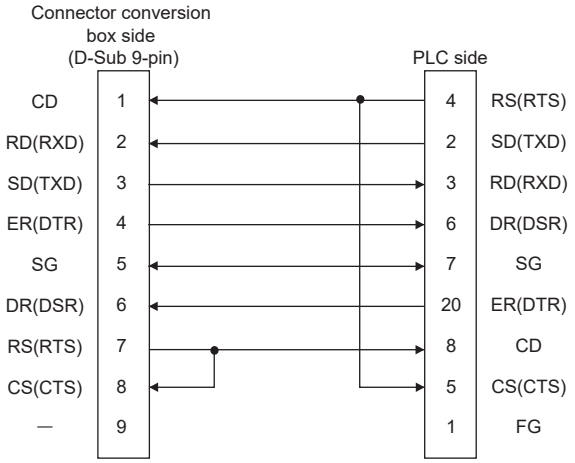
■RS-232 connection diagram 3)

PLC side connector D-sub 9-pin



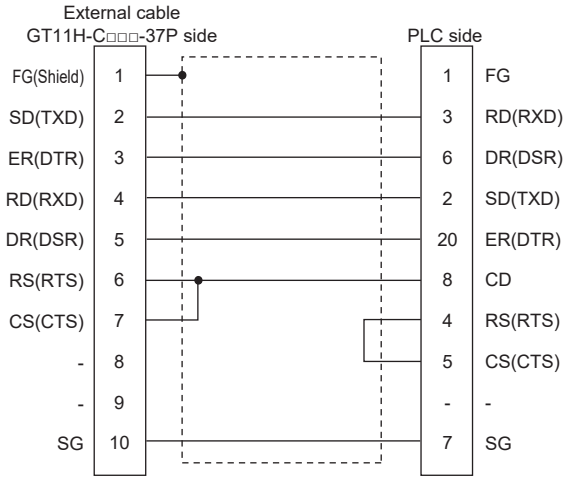
■RS-232 connection diagram 4)

PLC side connector D-sub 25-pin



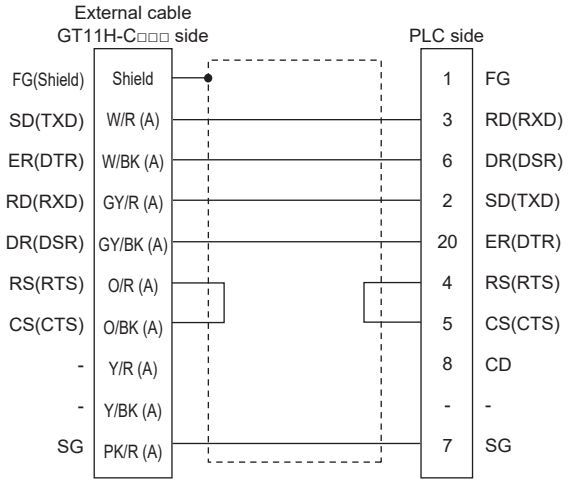
■RS-232 connection diagram 5)

PLC side connector D-sub 25-pin



■RS-232 connection diagram 6)

PLC side connector D-sub 25-pin



Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

■GOT side connector

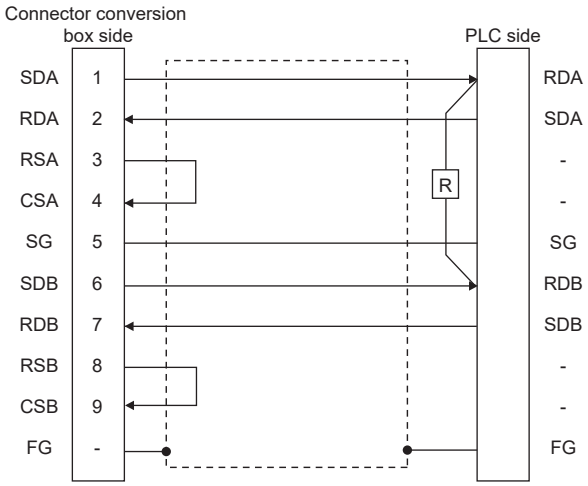
For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

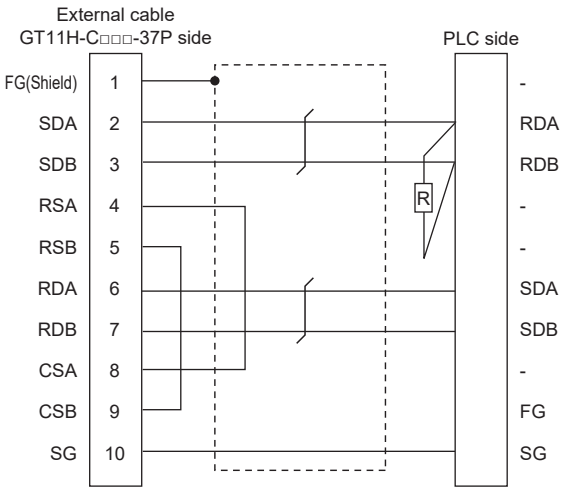
RS-422 cable

Connection diagram

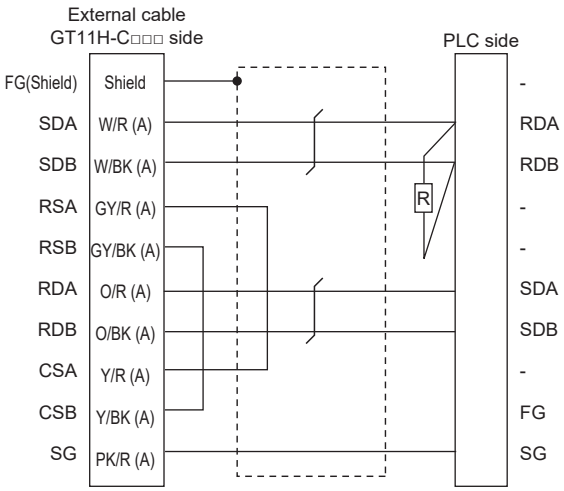
■RS-422 connection diagram 1)



■RS-422 connection diagram 2)



■RS-422 connection diagram 3)



Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

Connecting terminating resistors

■GOT side

When connecting a PLC to the GOT, a terminating resistor must be connected to the GOT.

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

■Serial communication module or computer link module side

Connect the terminating resistors (330Ω 1/4W (orange/orange/brown/□)) on the serial communication module or computer link module side.

For details, refer to the following manual.

📖User's Manual for the serial communication module or computer link module

• Other than A2CCPUC24(-PRF)

Connect the terminating resistors supplied with the module across RDA and RDB.

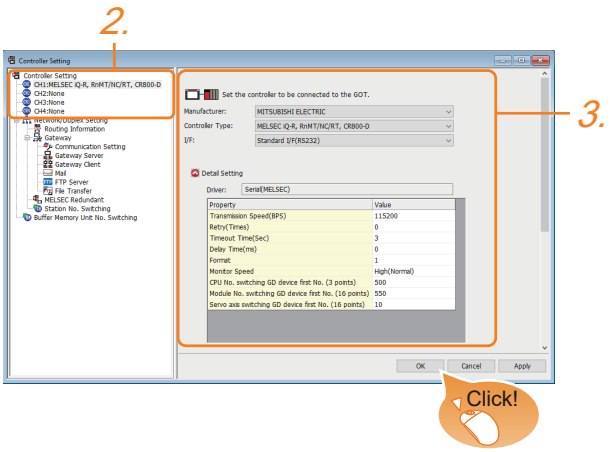
• A2CCPUC24(-PRF)

Set TXD and RXD on the terminating resistor setting pin to "A".

4.4 GOT Side Settings

Setting communication interface (Controller Setting)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [MITSUBISHI ELECTRIC]
- [Controller Type]: Configure the setting according to the controller to be connected.
- [I/F]: Interface to be used
- [Driver]: Select one of the following items according to the controller to be connected.

[Serial(MELSEC)]
[AJ71QC24, MELDAS C6*]
[AJ71C24/UC24]

- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 391 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Serial (MELSEC)

Property	Value
Transmission Speed(BPS)	115200
Retry(Times)	0
Timeout Time(Sec)	3
Delay Time(ms)	0
Format	1
Monitor Speed	High(Normal)
CPU No. switching GD device first No. (3 points)	500
Module No. switching GD device first No. (16 points)	550
Servo axis switching GD device first No. (16 points)	10

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 115200bps) When the setting exceeds the limit of the connected equipment, communication is performed at the fastest transmission speed supported by the connected equipment.	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300 (ms)
Format*3	Select the communication format. (Default: 1)	1, 2
Monitor Speed *4	Set the monitor speed of the GOT. This setting is not valid in all systems. (Default: Normal)	High (Normal)*1 Middle Low*2
CPU No. switching GD device first No. (3 points)	Set the start device number of the GD devices for CPU No. switching. (Default: 500) For the details, refer to the following. ☞ Page 394 Start device number of the GD devices for CPU number switching	0 to 65520
Module No. switching GD device first No. (16 points)	Set the start device number of the GD devices for module No. switching. (Default: 550) For the details, refer to the following. ☞ Page 395 Start device number of the GD devices for module number switching	0 to 65520
Servo axis switching GD device first No. (16 points)	Set the servo axis switching GD device first No. (Default: 10) For the details, refer to the following. ☞ Page 396 Servo axis switching GD device first No.	0 to 65520

*1 This is effective when collecting a large data on other than the monitor screen (logging, recipe function, etc.).
However, when connecting to Q00J/Q00/Q01CPU, the sequence scan time may be influenced.
If you want to avoid the influence on the sequence scan time, do not set [High (Normal)].
(High performance is hardly affected)

*2 Set this item if you want to avoid the influence on the sequence scan time further than the [Middle] setting when connecting to Q00UJ/Q00U/Q01U/Q02UCPU or Q00J/Q00/Q01CPU.

*3 Set this item when replacing the F900 series with GOT2000 series.

• To change the communication settings of the serial communication module connected to an F900 model, set as follows.

The baud rate can be changed to 115200bps.

[Intelligent function module switch setting] of PLC

Switch No.	CH1 side	CH2 side
Switch 1	0000H	-
Switch 2	0000H	-
Switch 3	-	0000H
Switch 4	-	0000H
Switch 5	0000H	0000H

☞ Page 398 PLC Side Setting

GOT communication settings

Item	Set value
Format	1

• To maintain the communication settings of the serial communication module connected to an F900 model, set as follows.

The baud rate remains 38400bps.

GOT communication settings

Item	Set value
Format	2

*4 When using a global label, set [High (Normal)] or [Middle] for [Monitor Speed] to read or write 235 two-byte characters or more.
If you set [Low] for [Monitor Speed], a system error occurs when the data is read or written.
For the details, refer to the following manual.
GT Designer3 (GOT2000) Screen Design Manual

AJ71QC24, MELDAS C6*

Property	Value
Transmission Speed(BPS)	19200
Data Bit	8 bit
Stop Bit	1 bit
Parity	Odd
Retry(Times)	0
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 19200bps)	4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bit)	8bit (fixed)
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit (fixed)
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Odd)	Odd (fixed)
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300 (ms)

AJ71C24/UC24

Property	Value
Transmission Speed(BPS)	19200
Data Bit	8 bit
Stop Bit	1 bit
Parity	Odd
Retry(Times)	0
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 19200bps)	4800bps, 9600bps, 19200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bit)	8bit (fixed)
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit (fixed)
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Odd)	Odd (fixed)
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300 (ms)

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

Start device number of the GD devices for CPU number switching

■Specifying a CPU number with a device

[CPU No.] can be specified with the GOT internal registers (GD devices) by specifying a value (100 to 102) to [CPU No.] in the device setting dialog in GT Designer3.

Set the start device number of the GD devices to be used in [CPU No. switching GD device first No. (3 points)].

Specify [CPU No.] with the three consecutive GD devices, starting the set device number.

When [500] is set to [CPU No. switching GD device first No. (3 points)], GD500 to GD502 are used to specify [CPU No.] as shown in the following table.

CPU No.	GD device	Setting range
100	GD500	1 to 4 Setting an invalid value causes a communication timeout error. Specifying a nonexistent CPU No. or a CPU No. not supporting a multiple CPU system with a device causes a controller error.
101	GD501	
102	GD502	

■Specifying a CPU number with a device on the initially-displayed screen

Set [CPU No. switching GD device first No. (3 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

■Specifying a CPU number with a device in a multi-channel connection

If the setting range of [CPU No. switching GD device first No. (3 points)] set in each channel overlaps, the monitoring target CPU No. set to each channel is switched simultaneously.

Set [CPU No. switching GD device first No. (3 points)] in each channel so that the setting range does not overlap.

■Specifying a CPU number and a station number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [CPU No. switching GD device first No. (3 points)] in a different channel switches the monitoring target CPU No. and station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [CPU No. switching GD device first No. (3 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

Start device number of the GD devices for module number switching

■Specifying a module number with a device

In a connection via a simple motion module, [Unit No.] can be specified with the GOT internal registers (GD devices) by specifying a value (100 to 10F) to [Unit No.] in the device setting dialog in GT Designer3

Set the start device number of the GD devices to be used in [Module No. switching GD device first No. (16 points)].

Specify [Unit No.] with the 16 consecutive GD devices, starting the set device number.

When [550] is set to [Module No. switching GD device first No. (16 points)], GD550 to GD565 are used to specify [Unit No.] as shown in the following table.

Unit No.	GD device	Setting range
100	GD550	The setting range depends on [Unit Type]. • When [MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-L], or [MELIPC] is selected in [Unit Type] 00 to FF • When [MELSEC iQ-F] is selected for [Unit Type] 01 to 10 Setting an invalid value causes a device range error.
101	GD551	
102	GD552	
103	GD553	
104	GD554	
105	GD555	
106	GD556	
107	GD557	
108	GD558	
109	GD559	
10A	GD560	
10B	GD561	
10C	GD562	
10D	GD563	
10E	GD564	
10F	GD565	

■Specifying a module number with a device on the initially-displayed screen

Set [Module No. switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

■Specifying a module number with a device in a multi-channel connection

If the setting range of [Module No. switching GD device first No. (16 points)] set in each channel overlaps, the module No. of the simple motion module via the servo amplifier device of each channel is switched simultaneously.

Set [Module No. switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

■Specifying a station number and a module number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Module No. switching GD device first No. (16 points)] switches the module No. of the simple motion module via the servo amplifier device and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [Module No. switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

Servo axis switching GD device first No.

■Indirect specification of the servo axis No.

In a connection via a Motion CPU or Simple Motion module, a servo axis No. can be indirectly specified with GOT internal registers (GD devices) by specifying a value (100 to 115) to the axis No. of the servo amplifier device.
Set the start device number of the GD devices to be used in [Servo axis switching GD device first No. (16 points)].
Specify a servo axis number with 16 consecutive GD devices, starting the set device number.
When [10] is set to [Servo axis switching GD device first No. (16 points)], GD10 to GD25 are used to specify a servo axis number as shown in the following table.

Servo axis No.	GD device	Setting range
100	GD10	1 to 64 For the setting other than the above, error (dedicated device is out of range) will occur.
101	GD11	
102	GD12	
103	GD13	
104	GD14	
105	GD15	
106	GD16	
107	GD17	
108	GD18	
109	GD19	
110	GD20	
111	GD21	
112	GD22	
113	GD23	
114	GD24	
115	GD25	

■Specifying a servo axis number with a device on the initially-displayed screen

Set [Servo axis switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

■Specifying a servo axis number with a device in a multi-channel connection

If the setting rage of [Servo axis switching GD device first No. (16 points)] set in each channel overlaps, the axis No. of the servo amplifier of each channel is switched simultaneously.
Set [Servo axis switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

■Specifying a station number and a servo axis number with devices in a multi-channel connection

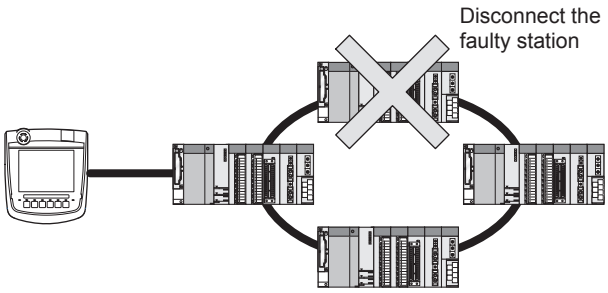
When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Servo axis switching GD device first No. (16 points)] switches the axis No. of the servo amplifier and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.
Set [Servo axis switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

Point

Cutting the portion of multiple connection of the controller

By setting GOT internal device, GOT can cut the portion of multiple connection of the controller.

For example, faulty station that has communication timeout can be cut from the system.



For details of the setting contents of GOT internal device, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

4.5 PLC Side Setting

The GOT operates under the following transmission specifications when it is connected to a Mitsubishi Electric PLC in the computer link connection.

Transmission specifications	Setting
Data bit	8bits
Parity bit	Yes (Odd)
Stop bit	1bit
Sum check	Yes
Transmission speed (Baud rate)	Set the same transmission speed on both the GOT and the PLC.

The PLC side settings (the serial communication module, computer link module) are explained in Section 4.5.2 to Section 4.5.4.

Model		Refer to
Serial communication module (MELSEC iQ-R Series)	RJ71C24, RJ71C24-R2, RJ71C24-R4	☞ Page 399 Connecting to MELSEC iQ-R series
Serial communication module (Q Series)	QJ71C24N, QJ71C24	☞ Page 399 Connecting to MELSEC-Q, L series
	QJ71C24N-R2, QJ71C24-R2	
	QJ71C24N-R4	
Modem interface module	QJ71CMO, QJ71CMON	☞ Page 399 Connecting to MELSEC-Q, L series
Serial communication module (L Series)	LJ71C24, LJ71C24-R2	☞ Page 399 Connecting to MELSEC-Q, L series
Serial communication module (QnA Series)	AJ71QC24N, AJ71QC24	☞ Page 402 Connection to MELSEC-QnA series
	AJ71QC24N-R2, AJ71QC24-R2	
	AJ71QC24N-R4, AJ71QC24-R4	
	A1SJ71QC24N1, A1SJ71QC24N, A1SJ71QC24	
	A1SJ71QC24N1-R2, A1SJ71QC24N-R2, A1SJ71QC24-R2	
Computer link module	AJ71UC24	☞ Page 405 Connecting to MELSEC-A series
	A1SJ71UC24-R2, A1SJ71UC24-PRF, A1SJ71C24-R2, A1SJ71C24-PRF	☞ Page 405 Connecting to MELSEC-A series
	A1SJ71UC24-R4, A1SJ71C24-R4	☞ Page 405 Connecting to MELSEC-A series
	A1SCPUC24-R2	☞ Page 405 Connecting to MELSEC-A series
	A2CCPUC24, A2CCPUC24-PRF	☞ Page 405 Connecting to MELSEC-A series

Connecting to MELSEC iQ-R series

Point

Serial communication module (MELSEC iQ-R Series)

For details of the serial communication module (MELSEC iQ-R Series), refer to the following manual.

Manuals of MELSEC iQ-R Series

[Module parameter] of GX Works3

The PLC can communicate with the GOT with the default module parameter setting.

Point

• When changing the module parameter

After writing module parameters to the PLC CPU, turn the PLC CPU OFF then back ON again, or reset the PLC CPU.

• Connection of multiple GOTs

To some serial communication module models, two GOTs can be connected using both CH1 and CH2.

Connecting to MELSEC-Q, L series

Point

• Serial communication module (MELSEC-Q, L series)

For details on the serial communication module (MELSEC-Q, L series), refer to the following.

Q Corresponding Serial Communication Module User's Manual (Basic)

MELSEC-L Serial Communication Module User's Manual (Basic)

• Modem interface module

For details of the modem interface module, refer to the following manual.

Modem Interface Module User's Manual

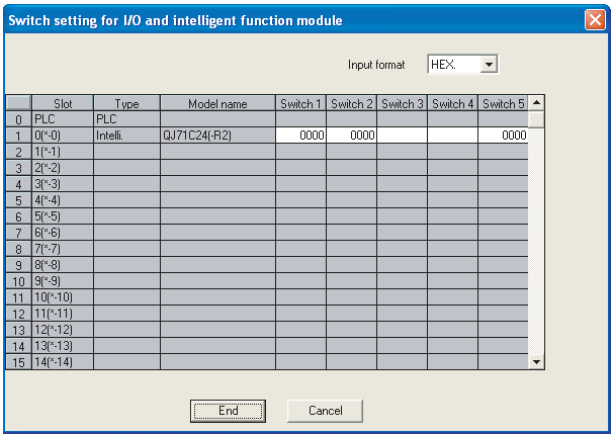
[Intelligent function module switch setting] on GX Developer

[The intelligent function module switch setting] on GX Developer is not necessary.

(When no [intelligent function module switch setting] is made, the module runs in the GX Developer connection mode.)

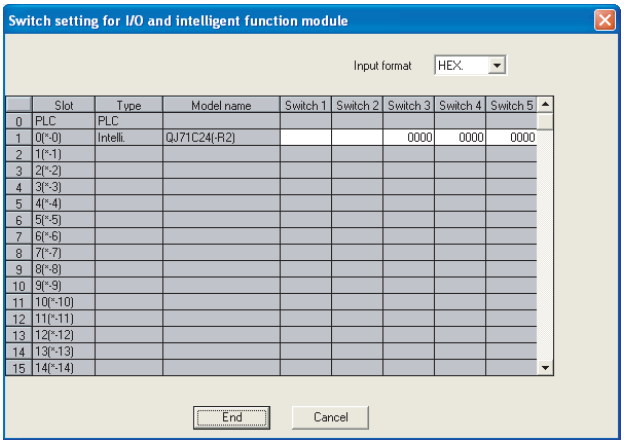
A module can be also connected to a GOT by making the following [intelligent function module switch setting] on GX Developer.

■When connecting to the CH1 side



Switch No.	Bit		Description			Set value*3
	Position	Specified value				
Switch 1	b0	OFF	CH1 transmission settings*1	Operation setting	(Operates according to the GOT side specifications.)	0000H
	b1	OFF		Data Bit		
	b2	OFF		Parity Bit		
	b3	OFF		Even/Odd parity		
	b4	OFF		Stop bit		
	b5	OFF		Sum check code		
	b6	OFF		Write during RUN		
	b7	OFF		Setting modifications		
	b8 to b15	—	CH1 transmission speed setting*2			
Switch 2	—		CH1 Communication protocol setting		GX Developer connection	0000H
Switch 5	—		Station number setting		0th station	0000H

■When connecting to the CH2 side



Switch No.	Bit		Description			Set value*3
	Position	Specified value				
Switch 3	b0	OFF	CH2 transmission settings*1	Operation setting	(Operates according to the GOT side specifications.)	0000H
	b1	OFF		Data bit		
	b2	OFF		Parity bit		
	b3	OFF		Even/odd parity		
	b4	OFF		Stop bit		
	b5	OFF		Sum check code		
	b6	OFF		Write during RUN		
	b7	OFF		Setting modifications		
	b8 to b15	—	CH2 transmission speed setting*2			
Switch 4	—		CH2 Communication protocol setting		GX Developer connection	0000H
Switch 5	—		Station number setting		0th station	0000H

*1 The module operates under the following transmission specifications.

Transmission specifications	Setting details
Operation setting	Independent
Data bit	8bits
Parity bit	Yes
Even/odd parity	Odd
Stop bit	1bit
Sum check code	Yes

*2 The serial communication module operates at the transmission speed set on the GOT.

*3 When the value of switch setting is other than "0", the setting of [Format] and [Transmission Speed] on the GOT side are required to be changed.

☞ Page 391 Communication detail settings

Point

• When the [intelligent function module switch setting] has been set

After writing PLC parameters to the PLC CPU, turn the PLC CPU OFF then back ON again, or reset the PLC CPU.

• Connection of multiple GOTs

To some serial communication module models, two GOTs can be connected using both CH1 and CH2.

Model	Connection of 2 GOTs	
	Function version A	Function version B
QJ71C24(-R2)	△	○
QJ71C24N(-R2/R4)	-	○
LJ71C24(-R2)	○	-

○: 2 GOTs connectable, △: 1 GOT connectable, -: Not applicable

• When connecting to the modem interface module

When the modem interface module is connected, only CH2 can be used.

Connection to MELSEC-QnA series

Point

Serial communication module (MELSEC-QnA series)

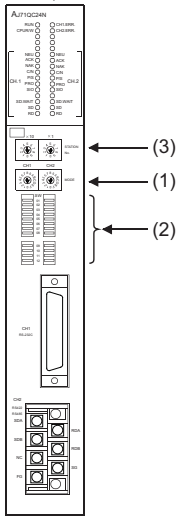
For details on the serial communication module (MELSEC-QnA series), refer to the following.

Serial Communication Module User's Manual (Modem Function Additional Version)

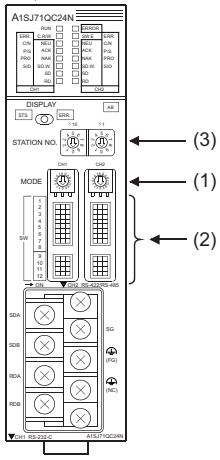
Switch setting on serial communication module

Set the Station number switches, the Mode setting switch for the channel used for GOT connection, and the Transmission specifications switches.

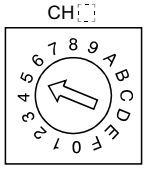
AJ71QC24N, AJ71QC24N-R2, AJ71QC24N-R4,AJ71QC24, AJ71QC24-R2, AJ71QC24-R4



A1SJ71QC24N1, A1SJ71QC24N1-R2, A1SJ71QC24N, A1SJ71QC24N-R2, A1SJ71QC24, A1SJ71QC24-R2



■Mode setting switch

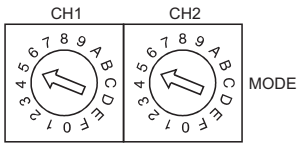
Mode setting switch*1	Description	Set value
	Dedicated protocol (Format 5) (Binary mode)	5

*1 The mode switch in the figure is for the AJ71QC24 (N) (-R2/R4).

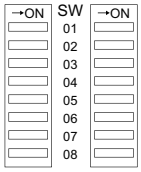
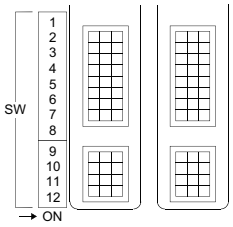
Point

When connecting a GOT to CH2

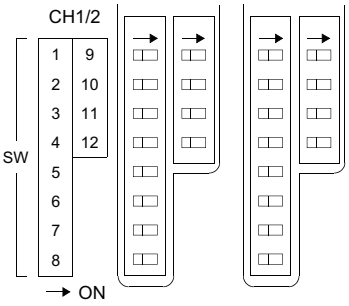
Set the CH1 side mode switch to any other than "0" (interlocked operation).



■Transmission specifications setting switch

Transmission specifications setting switch	Setting switch	Description		Set value
AJ71QC24(N) (-R2/R4)  A1SJ71QC24(N) (N1)(-R2)*1  	SW01	Operation setting	Independent operation	OFF
	SW02	Data bit setting	8bits	ON
	SW03	Parity bit enable/disable setting	Enable	ON
	SW04	Even/odd parity setting	Odd	OFF
	SW05	Stop bit setting	1bit	OFF
	SW06	Sum check enable/disable setting	Enable	ON
	SW07	Write during RUN enable/disable setting	Enable	ON
	SW08	Setting change enable/disable	Disable (prohibit)	OFF
	SW09 to SW12	Transmission speed setting	(Consistent with the GOT side specifications)	See (a)
	SW13 to SW15	—	The switch is located on the left side of the module. (only on AJ71QC24 (-R2/R4))	All OFF

*1 The following shows the layout of switches in the case of the following hardware versions for the module.
Switch settings and switch ON/OFF directions are the same.



Target unit	Hardware version
A1SJ71QC24	Version E hardware or earlier
A1SJ71QC24-R2	Version D hardware or earlier
A1SJ71QC24N, A1SJ71QC24N-R2	Version A hardware

• Transmission speed setting (SW09 to SW12)

Set the transmission speed (SW09 to SW12) as follows.

The transmission speed setting must be consistent with that of the GOT side.

Setting Switch	Transmission speed*1*2*3					
	4800 bps	9600 bps	19200 bps	38400 bps*4	57600 bps*4	115200 bps*4
SW09	OFF	ON	OFF	ON	OFF	ON
SW10	OFF	OFF	ON	ON	ON	ON
SW11	ON	ON	ON	ON	OFF	OFF
SW12	OFF	OFF	OFF	OFF	ON	ON

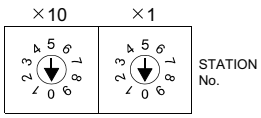
*1 Only transmission speeds available on the GOT side are shown.

*2 When the software version of AJ71QC24 (-R2/R4) and A1SJ71QC24 (-R2) is "L" or earlier, and when 2 devices are connected to the two interfaces individually, make the setting so that the total transmission speed of the two interfaces is within 19200bps.
When the total transmission speed of the two interfaces is within 19200bps, a controller other than GOT can be connected to the computer link module.
When only one device is connected to either of the interfaces, a maximum transmission speed of 19200bps can be set to the one where the device is connected.In this instance, set SW09 to SW12 to "OFF" on the other side.

*3 When 3 devices are connected to the two interfaces individually in the case of AJ71QC24N(-R2/R4), A1SJ71QC24N(-R2), and A1SJ71QC24N1(-R2), make the setting so that the total transmission speed of the two interfaces is within 115200bps (within 230400bps in the case of A1SJ71QC24N1(-R2)).
When the total transmission speed of the two interfaces is within 115200bps (within 230400bps in the case of A1SJ71QC24N1(-R2)), a controller other than GOT can be connected to the computer link module.
When only one device is connected to either of the interfaces, a maximum transmission speed of 115200bps can be set to the one where the device is connected.
In this instance, set SW09 to SW12 to "OFF" on the other side.

*4 This can be set only in the case of AJ71QC24N (-R2/R4), A1SJ71QC24N (-R2) or A1SJ71QC24N1 (-R2).

■Station number switch (for both CH1 and CH2)

Station number switch*1	Contents	Set value
	Set the station number of the serial communication module to which an access is made from the GOT.	0

*1 The station number switch in the figure is for the AJ71QC24 (N) (-R2/R4).

Point

When the switch setting has been changed

Turn the PLC CPU OFF then ON again, or reset the PLC CPU.

Connecting to MELSEC-A series

Point

Computer link module (MELSEC-A series)

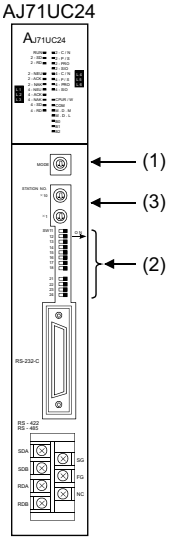
For details on the computer link module (MELSEC-A series), refer to the following.

Computer Link Module (Com. link func./Print. func.) User's Manual

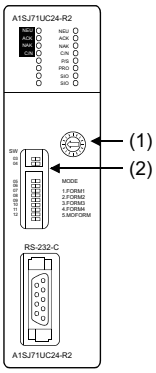
Switch setting on the computer link module

Set the Mode setting switch, the Transmission specifications switches and the Station number setting switches.

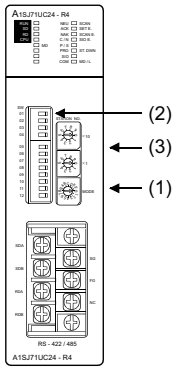
AJ71UC24



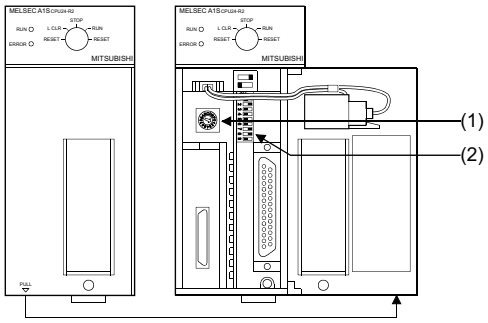
A1SJ71UC24-R2, A1SJ71UC24-PRF, A1SJ71C24-R2, A1SJ71C24-PRF



A1SJ71UC24-R4, A1SJ71C24-R4

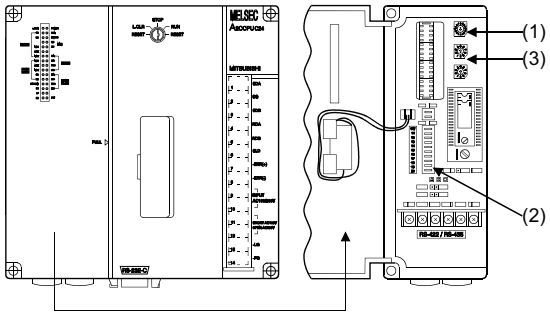


A1SCPUC24-R2



When the cover is open

A2CCPUC24, A2CCPUC24-PRF



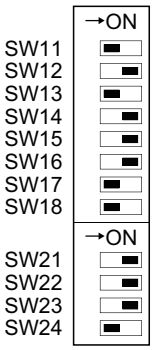
When the cover is open

■Mode setting switch

Mode setting switch	Contents		Set value
	Dedicated protocol type 1	RS-232 connection	1
		RS-422 connection	5

■Transmission specifications switch

• AJ71UC24

Transmission specifications switch	Setting switch	Description		Set value
	SW11	Main channel setting	RS-232 connection	OFF
			RS-422 connection	ON
	SW12	Data bit setting	8bits	ON
	SW13	Transmission speed setting	(Consistent with the GOT side specifications)	See descriptions below.
	SW14			
	SW15			
	SW16	Parity bit setting	Set	ON
	SW17	Even/odd parity setting	Odd	OFF
	SW18	Stop bit setting	1bit	OFF
	SW21	Sum check setting	Set	ON
	SW22	Write during RUN enabled/disabled setting	Enabled	ON
	SW23	Computer link/multi-drop selection	Computer link	ON
	SW24	Master station/Local station setting	(Setting ignored)	OFF

• Transmission speed setting (SW13 to SW15)

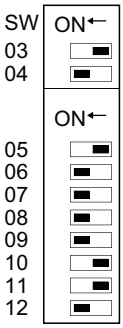
Set the transmission speed (SW13 to SW15) as follows.

The transmission speed setting must be consistent with that of the GOT side.

Setting switch	Transmission speed*1		
	4800bps	9600bps	19200bps
SW13	OFF	ON	OFF
SW14	OFF	OFF	ON
SW15	ON	ON	ON

*1 Only transmission speeds available on the GOT side are shown.

• A1SJ71UC24-R2, A1SJ71UC24-PRF, A1SJ71C24-R2, A1SJ71C24-PRF

Transmission specifications switch	Setting switch	Description		Set value
	SW03	Unused	—	OFF
	SW04	Write during RUN enabled/disabled setting	Enabled	ON
	SW05	Transmission speed setting	(Consistent with the GOT side specifications)	See descriptions below.
	SW06			
	SW07			
	SW08	Data bit setting	8bits	ON
	SW09	Parity bit setting	Set	ON
	SW10	Even/odd parity setting	Odd	OFF
	SW11	Stop bit setting	1bit	OFF
	SW12	Sum check setting	Set	ON

• Transmission speed setting (SW05 to SW07)

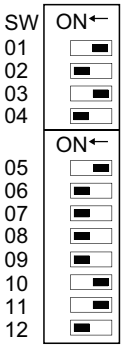
Set the transmission speed (SW05 to SW07) as follows.

The transmission speed setting must be consistent with that of the GOT side.

Setting switch	Transmission speed*1		
	4800bps	9600bps	19200bps
SW05	OFF	ON	OFF
SW06	OFF	OFF	ON
SW07	ON	ON	ON

*1 Only transmission speeds available on the GOT side are shown.

• A1SJ71UC24-R4, A1SJ71C24-R4

Transmission specifications switch	Setting switch	Description		Set value
	SW01	Master station/Local station setting	(Setting ignored)	OFF
	SW02	Computer link/multi-drop selection	Computer link	ON
	SW03	Unused	—	OFF
	SW04	Write during RUN enabled/disabled setting	Enabled	ON
	SW05	Transmission speed setting	(Consistent with the GOT side specifications)	See descriptions below.
	SW06			
	SW07			
	SW08	Data bit setting	8bits	ON
	SW09	Parity bit setting	Set	ON
	SW10	Even/odd parity setting	Odd	OFF
	SW11	Stop bit setting	1bit	OFF
	SW12	Sum check setting	Set	ON

• Transmission speed setting (SW05 to SW07)

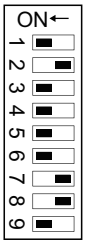
Set the transmission speed (SW05 to SW07) as follows.

The transmission speed setting must be consistent with that of the GOT side.

Setting switch	Transmission speed*1		
	4800bps	9600bps	19200bps
SW05	OFF	ON	OFF
SW06	OFF	OFF	ON
SW07	ON	ON	ON

*1 Only transmission speeds available on the GOT side are shown.

• A1SCPUC24-R2

Transmission specifications switch	Setting switch	Description		Set value
	1	Write during RUN enabled/disabled setting	Enabled	ON
	2	Transmission speed setting	(Consistent with the GOT side specifications)	See descriptions below.
	3			
	4			
	5	Data bit setting	8bits	ON
	6	Parity bit setting	Set	ON
	7	Even/odd parity setting	Odd	OFF
	8	Stop bit setting	1bit	OFF
	9	Sum check setting	Set	ON

• Transmission speed setting (2 to 4)

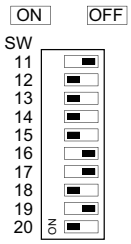
Set the transmission speed (2 to 4) as follows.

The transmission speed setting must be consistent with that of the GOT side.

Setting switch	Transmission speed*1		
	4800bps	9600bps	19200bps
2	OFF	ON	OFF
3	OFF	OFF	ON
4	ON	ON	ON

*1 Only transmission speeds available on the GOT side are shown.

• A2CCPUC24, A2CCPUC24-PRF

Transmission specifications switch	Setting switch	Description		Set value
	SW11	Transmission speed setting	(Consistent with the GOT side specifications)	See descriptions below.
	SW12			
	SW13			
	SW14	Data bit setting	8bits	ON
	SW15	Parity bit setting	Set	ON
	SW16	Even/odd parity setting	Odd	OFF
	SW17	Stop bit setting	1bit	OFF
	SW18	Sum check setting	Set	ON
	SW19	Main channel setting	RS-232	OFF
	SW20	Write during RUN enabled/disabled setting	Enabled	ON

• Transmission speed setting (SW11 to SW13)

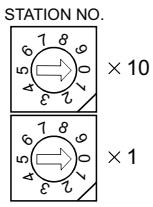
Set the transmission speed (SW11 to SW13) as follows.

The transmission speed setting must be consistent with that of the GOT side.

Setting switch	Transmission speed*1		
	4800bps	9600bps	19200bps
SW11	OFF	ON	OFF
SW12	OFF	OFF	ON
SW13	ON	ON	ON

*1 Only transmission speeds available on the GOT side are shown.

■Station number setting switch

Station number switch*1	Description	Set value
	Set the station number of the computer link module to which an access is made from the GOT.	0

*1 The station number setting switch in the figure is for the A1SJ71UC24-R4.

Point

When the switch setting has been changed

Turn the PLC CPU OFF then ON again, or reset the PLC CPU.

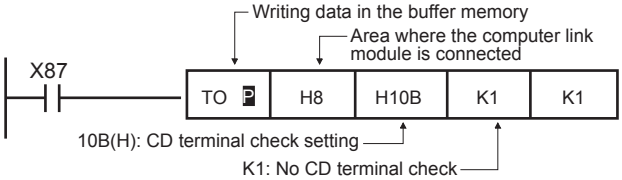
Point

When connecting GT2506HS-V or GT2505HS-V to a computer link module

When you connect GT2506HS-V or GT2505HS-V to a computer link module via RS-232, refer to the following sequence programs to set the buffer memory of the computer link module so that CD signals are not checked.

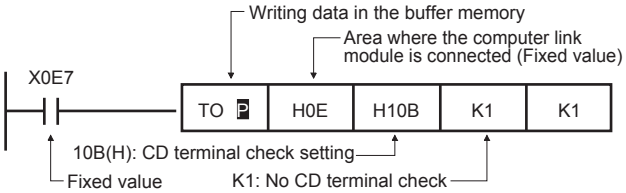
• In the case of A computer link

Refer to the program example below in which the I/O signals of the computer link module are 80 to 9F (H).

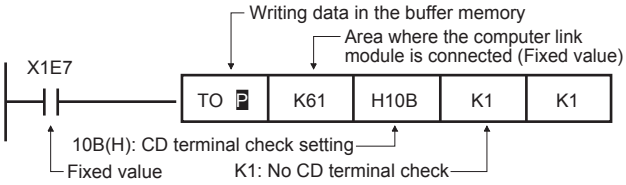


• In the case of CPU equipped with built-in computer link

A1SCPUC24-R2



A2CCPUC24



4.6 Precautions

Time taken until the PLC runs when connected in the multiple CPU system

The following time is taken until the PLC runs.

MELSEC iQ-R series, Motion CPU (MELSEC iQ-R series), QCPU (Q mode), Motion CPU (Q series): 10 seconds or more

MELDAS C70: 18 seconds or more

When the GOT starts before the PLC runs, a system alarm occurs.Adjust the opening screen time in the GOT setup so that no system alarm occurs.

GT Designer3 (GOT2000) Screen Design Manual

Connection to LCPU

LCPU may diagnose (check file system, recovering process, etc.) the SD memory card when turning on the power or when resetting.

Therefore, it takes time until the SD memory card becomes available.

When the GOT starts before the SD card becomes available, a system alarm occurs.

Adjust the opening screen time in the GOT setup so that no system alarm occurs.

GT Designer3 (GOT2000) Screen Design Manual

When monitoring the Q170MCPU

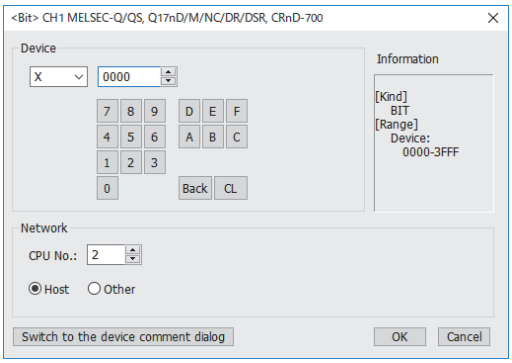
Set [CPU No.] to 2 in the device setting to monitor the device of the Motion CPU area (CPU No. 2).

When [CPU No.] is set to 0 or 1, the device on the PLC CPU area (CPU No. 1) is monitored.

When [CPU No.] is set to the number other than 0 to 2, a communication error occurs and the monitoring cannot be executed.

For the setting of [CPU No.], refer to the following.

GT Designer3 (GOT2000) Screen Design Manual



Connection to RnSFCPU

The RnSFCPU takes 10 seconds or more to run.

If the GOT is started before the RnSFCPU runs, a system alarm occurs.

To prevent a system alarm from occurring, adjust the title display time in the [GOT Setup] dialog.

GT Designer3 (GOT2000) Screen Design Manual

5 CC-Link CONNECTION (Via G4)

- Page 411 Connectable Model List
- Page 417 System Configuration
- Page 423 Connection Diagram
- Page 425 GOT Side Settings
- Page 431 PLC Side Settings
- Page 440 Precautions

5.1 Connectable Model List

PLC/Motion CPU

The following table shows the connectable models.

Series	Model name	Clock	Communication type	Connectable model	Refer to
MELSEC MX Controller (MX-R Model)	MXR300-16	○	CC-Link (G4)	-	-
	MXR300-32				
	MXR300-64				
	MXR500-128				
	MXR500-256				
MELSEC MX Controller (MX-F Model)	MXF100-8-N32	○	CC-Link (G4)	-	-
	MXF100-8-P32				
	MXF100-16-N32				
	MXF100-16-P32				
MELSEC iQ-R Series	R00CPU	○	CC-Link (G4)	-	-
	R01CPU				
	R02CPU				
	R04CPU				
	R08CPU				
	R16CPU				
	R32CPU				
	R120CPU				
	R08PCPU				
	R16PCPU				
	R32PCPU				
	R120PCPU				
	R04ENCPU				
	R08ENCPU				
	R16ENCPU				
	R32ENCPU				
	R120ENCPU				
	R08PSFCPU				
	R16PSFCPU				
	R32PSFCPU				
	R120PSFCPU				
	R08SFCPU				
	R16SFCPU				
	R32SFCPU				
	R120SFCPU				
Motion CPU (MELSEC iQ-R Series)	R16MTCPU	○	CC-Link (G4)	-	-
	R32MTCPU				
	R64MTCPU				

Series	Model name	Clock	Communication type	Connectable model	Refer to
C Controller module (MELSEC iQ-R Series)	R12CCPU-V	○	CC-Link (G4)	-	-
MELSECWinCPU (MELSEC iQ-R Series)	R102WCPU-W	×	CC-Link (G4)	-	-
CNC C80	R16NCCPU-S1	○	CC-Link (G4)	-	-
Robot controller (MELSEC iQ-R Series)	CR800-R(R16RTCPU)	○	CC-Link (G4)	-	-
CC-Link IE Filed Network head module	RJ72GF15-T2	×	CC-Link (G4)	-	-
MELSEC iQ-F Series	FX5U	○	-	-	-
	FX5UC				
	FX5UJ				
	FX5S				
MELSEC-Q (Q mode)	Q00JCPU	○	CC-Link (G4)	GT2506HS GT2505HS	☞ Page 417 Connecting to QCPU (Q mode)
	Q00CPU*1				
	Q01CPU*1				
	Q02CPU*1				
	Q02HCPU*1 Q06HCPU*1 Q12HCPU*1 Q25HCPU*1				
	Q02PHCPU Q06PHCPU Q12PHCPU Q25PHCPU	○	CC-Link (G4)	GT2506HS GT2505HS	
	Q12PRHCPU (Main base)				
	Q25PRHCPU (Main base)				
	Q12PRHCPU (Extension base)				
	Q25PRHCPU (Extension base)				
	Q00UJCPU Q00UJCPU-S8	○	CC-Link (G4)	GT2506HS GT2505HS	
	Q00UCPU Q01UCPU Q02UCPU Q03UDCPU				
	Q04UDHCPU Q06UDHCPU Q10UDHCPU Q13UDHCPU Q20UDHCPU Q26UDHCPU				
	Q03UDECPU Q04UDEHCPU Q06UDEHCPU Q10UDEHCPU Q13UDEHCPU Q20UDEHCPU Q26UDEHCPU Q50UDEHCPU Q100UDEHCPU				
	Q03UDVCPU Q04UDVCPU Q06UDVCPU Q13UDVCPU Q26UDVCPU				

*1 When in multiple CPU system configuration, use CPU function version B or later.

Series	Model name	Clock	Communication type	Connectable model	Refer to
C Controller module (Q Series)	Q12DCCPU-V[*1] Q24DHCCPU-V/VG Q24DHCCPU-LS Q26DHCCPU-LS	○	CC-Link(G4)	GT 2506 HS GT 2505 HS	☞ Page 417 Connecting to QCPU (Q mode)
MELSEC-QS	QS001CPU	○	-	-	-
MELSEC-L	L02CPU L06CPU L26CPU L26CPU-BT L02CPU-P L06CPU-P L26CPU-P L26CPU-PBT L02SCPU L02SCPU-P	○	CC-Link(G4)	GT 2506 HS GT 2505 HS	☞ Page 420 Connecting to LCPU
MELSEC-Q (A mode)	Q02CPU-A Q02HCPU-A Q06HCPU-A	○	-	-	-
MELSEC-QnA (QnACPU)	Q2ACPU Q2ACPU-S1 Q3ACPU Q4ACPU Q4ARCPU	○	-	-	-
MELSEC-QnA (QnASCPU)	Q2ASCPU Q2ASCPU-S1 Q2ASHCPU Q2ASHCPU-S1	○	-	-	-
MELSEC-A (AnCPU)	A2UCPU A2UCPU-S1 A3UCPU A4UCPU A2ACPU A2ACPUP21 A2ACPUR21 A2ACPU-S1 A2ACPUP21-S1 A2ACPUR21-S1 A3ACPU A3ACPUP21 A3ACPUR21 A1NCPU A1NCPUP21 A1NCPUR21 A2NCPU A2NCPUP21 A2NCPUR21 A2NCPU-S1 A2NCPUP21-S1 A2NCPUR21-S1 A3NCPU A3NCPUP21 A3NCPUR21	○	-	-	-

*1 Use only modules with the upper five digits of the serial No. later than 12042.

Series	Model name	Clock	Communication type	Connectable model	Refer to
MELSEC-A (AnSCPU)	A2USCPU	○	-	-	-
	A2USCPU-S1				
	A2USHCPU-S1				
	A1SCPU				
	A1SCPUC24-R2				
	A1SHCPU				
	A2SCPU				
	A2SCPU-S1				
	A2SHCPU				
	A2SHCPU-S1				
	A1SJCPU				
	A1SJCPU-S3				
	A1SJHCPU				
MELSEC-A	A0J2HCPU	×	-	-	-
	A0J2HCPUP21				
	A0J2HCPUR21				
	A0J2HCPU-DC24				
	A2CCPU	○	-	-	-
	A2CCPUP21				
	A2CCPUR21				
	A2CCPUC24				
	A2CCPUC24-PRF				
	A2CJCPU-S3				
	A1FXCPU				
Motion CPU (Q Series)	Q172CPU*1*2	○	CC-Link (G4)	GT2506HS GT2505HS	☞ Page 417 Connecting to QCPU (Q mode)
	Q173CPU*1*2				
	Q172CPUN*1				
	Q173CPUN*1				
	Q172HCPU				
	Q173HCPU				
	Q172DCPU				
	Q173DCPU				
	Q172DCPU-S1				
	Q173DCPU-S1				
	Q172DSCPU				
	Q173DSCPU				
	Q170MCPU*3				
	Q170MSCPU*4				
	Q170MSCPU-S1*4				

*1 When using SV13, SV22, or SV43, use a Motion CPU with the following version of OS installed.
- SW6RN-SV13Q□: 00H or later
- SW6RN-SV22Q□: 00H or later
- SW6RN-SV43Q□: 00B or later

*2 Use main modules with the following product numbers.
- Q172CPU: Product number N******* or later
- Q173CPU: Product number M******* or later

*3 Only the first step can be used on the extension base unit (Q52B/Q55B).

*4 The extension base unit (Q5□B/Q6□B) can be used.

Series	Model name	Clock	Communication type	Connectable model	Refer to
Motion CPU (A Series)	A273UCPU	○	-	-	-
	A273UHCPU				
	A273UHCPU-S3				
	A373UCPU				
	A373UCPU-S3				
	A171SCPU				
	A171SCPU-S3				
	A171SCPU-S3N				
	A171SHCPU				
	A171SHCPUN				
	A172SHCPU				
	A172SHCPUN				
	A173UHCPU				
	A173UHCPU-S1				
MELSEC-WS	WS0-CPU0	×	-	-	-
	WS0-CPU1				
	WS0-CPU3				
MELSECNET/H Remote I/O station	QJ72LP25-25	×	-	-	-
	QJ72LP25G				
	QJ72BR15				
CC-Link IE Field Network head module	LJ72GF15-T2	×	-	-	-
CC-Link IE Field Network Ethernet adapter module	NZ2GF-ETB	×	-	-	-
CNC C70	Q173NCCPU	○	CC-Link (G4)	GT 2506 HS GT 2505 HS	☞ Page 417 Connecting to QCPU (Q mode)
Robot controller (Q Series)	CRnQ-700 (Q172DRCPU) CR750-Q (Q172DRCPU) CR751-Q (Q172DRCPU) CR800-Q (Q172DSRCPU)	○	CC-Link (G4)	GT 2506 HS GT 2505 HS	☞ Page 417 Connecting to QCPU (Q mode)
MELSEC-FX	FX0	×	-	-	-
	FX0S				
	FX0N				
	FX1				
	FX2	×			
	FX2C				
	FX1S	○			
	FX1N				
	FX2N				
	FX1NC				
	FX2NC	×			
	FX3S	○			
	FX3G				
	FX3GC				
	FX3GE				
	FX3U				
	FX3UC				

CC-Link module/peripheral module

CPU series	Model name	
	CC-Link module	Peripheral module
MELSEC-Q (Q mode) C Controller module (Q Series) Motion CPU (Q Series) CNC C70 Robot controller (Q Series)	QJ61BT11 QJ61BT11N	AJ65BT-G4-S3 AJ65BT-R2N
MELSEC-L	LJ61BT11	

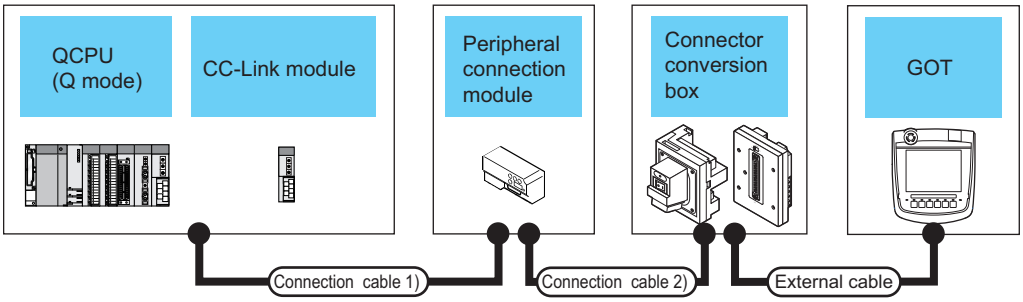
5.2 System Configuration

Connecting to QCPU (Q mode)

Communication driver

CC-Link (G4)

When using the connector conversion box



PLC		Connection cable 1)		Peripheral connection module		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *4	Number of connectable equipment
Model name	CC-Link module *1	Cable model	Max. distance	Model name	Communication type	Cable model Connection diagram number					
MELSEC-Q (Q mode) C Controller module (Q Series) Robot controller (Q Series)	QJ61BT11 QJ61BT11N	CC-Link dedicated cable *2	*3	AJ65BT-R2N	RS-232	GT09-C30R2-9P or Page 423 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 peripheral connection module
							GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
				AJ65BT-G4-S3	RS-422	GT01-C30R4-25P(3m) GT01-C100R4-25P(10m)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
							GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

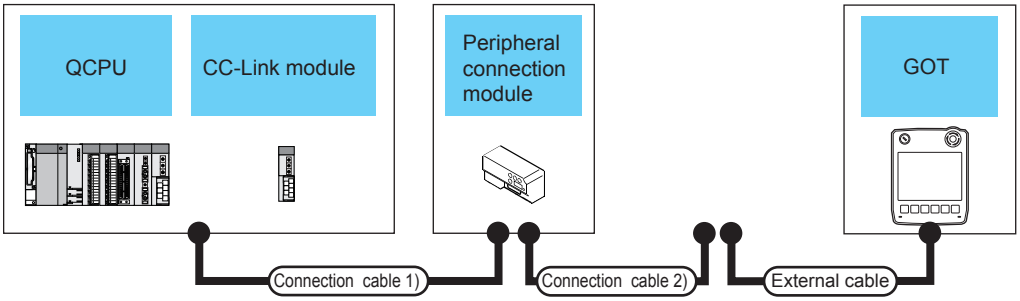
*1 For the system configuration of the CC-Link module, refer to the following manual.
CC-Link System Master/Local Module User's Manual QJ61BT11N

*2 For the specifications and inquiries of the CC-Link dedicated cable, refer to the following.
CC-Link Partner Association's home page: http://www.cc-link.org/

*3 The maximum overall extension cable length and the length between stations vary depending on the cable type to be used and the transmission speed.
For details, refer to the following manual.
CC-Link System Master/Local Module User's Manual QJ61BT11N

*4 The distance from the GOT to the peripheral connection module (Connection cable 2) + External cable)

When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable 1)		Peripheral connection module		Connection cable 2)	External cable	GOT Model	Total distance *4	Number of connectable equipment
Model name	CC-Link module *1	Cable model	Max. distance	Model name	Communication type	Cable model Connection diagram number				
MELSEC-Q C Controller module (Q Series) CR800-Q (Q172DSR CPU)	QJ61BT11 QJ61BT11N	CC-Link dedicated cable *2	*3	AJ65BT-R2N	RS-232	User preparing Page 423 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 peripheral connection module
		CC-Link dedicated cable *2	*3	AJ65BT-G4-S3	RS-422	GT11H-C15R4-25P	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for 1 peripheral connection module

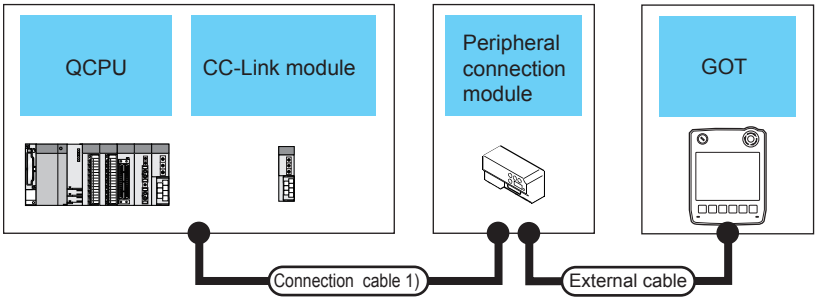
*1 For the system configuration of the CC-Link module, refer to the following manual.
CC-Link System Master/Local Module User's Manual QJ61BT11N

*2 For the specifications and inquiries of the CC-Link dedicated cable, refer to the following.
CC-Link Partner Association's home page: http://www.cc-link.org/

*3 The maximum overall extension cable length and the length between stations vary depending on the cable type to be used and the transmission speed.
For details, refer to the following manual.
CC-Link System Master/Local Module User's Manual QJ61BT11N

*4 The distance from the GOT to the peripheral connection module (Connection cable 2) + External cable)

When using the external cable (GT11H-C□□□)



PLC		Connection cable 1)		Peripheral connection module		External cable	GOT Model	Total distance *4	Number of connectable equipment
Model name	CC-Link module *1	Cable model	Max. distance	Model name	Communication type				
MELSEC-Q C Controller module (Q Series) CR800-Q (Q172DSRCPU)	QJ61BT11 QJ61BT11N	CC-Link dedicated cable *2	*3	AJ65B T-R2N	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 424 RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 peripheral connection module

*1 For the system configuration of the CC-Link module, refer to the following manual.
📖CC-Link System Master/Local Module User's Manual QJ61BT11N

*2 For the specifications and inquiries of the CC-Link dedicated cable, refer to the following.
☞ CC-Link Partner Association's home page: http://www.cc-link.org/

*3 The maximum overall extension cable length and the length between stations vary depending on the cable type to be used and the transmission speed.
For details, refer to the following manual.
📖CC-Link System Master/Local Module User's Manual QJ61BT11N

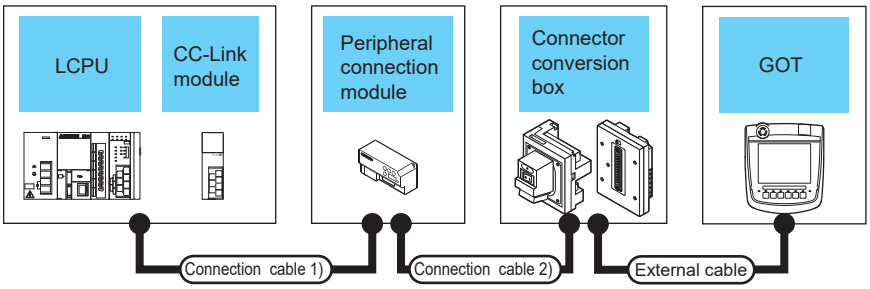
*4 The distance from the GOT to the peripheral connection module (External cable)

Connecting to LCPU

Communication driver

CC-Link (G4)

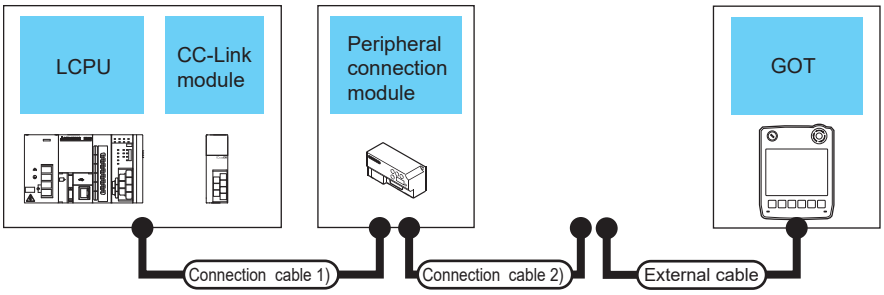
When using the connector conversion box



PLC		Connection cable 1)		Peripheral connection module		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *4	Number of connectable equipment
Model name	CC-Link module *1	Cable model	Max. distance	Model name	Communication type	Cable model Connection diagram number					
L02CPU L06CPU L26CPU L26CPU-BT L02CPU-P L06CPU-P L26CPU-P L26CPU-PBT L02SCPU L02SCPU-P	LJ61BT11	CC-Link dedicated cable *2	*3	AJ65BT-R2N	RS-232	GT09-C30R2-9P or User preparing Page 423 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 peripheral connection module
							GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
				AJ65BT-G4-S3	RS-422	GT01-C30R4-25P(3m) GT01-C100R4-25P(10m)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
							GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
L26CPU-BT L26CPU-PBT	-			AJ65BT-R2N	RS-232	GT09-C30R2-9P or User preparing Page 423 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	
							GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
				AJ65BT-G4-S3	RS-422	GT01-C30R4-25P(3m) GT01-C100R4-25P(10m)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
							GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 For the system configuration of the CC-Link module, refer to the following manual.
MELSEC-L CC-Link System Master/Local Module User's Manual
*2 For the specifications and inquiries of the CC-Link dedicated cable, refer to the following.
CC-Link Partner Association's home page: http://www.cc-link.org/
*3 The maximum overall extension cable length and the length between stations vary depending on the cable type to be used and the transmission speed.
For details, refer to the following manual.
MELSEC-L CC-Link System Master/Local Module User's Manual
*4 The distance from the GOT to the peripheral connection module (Connection cable 2) + External cable)

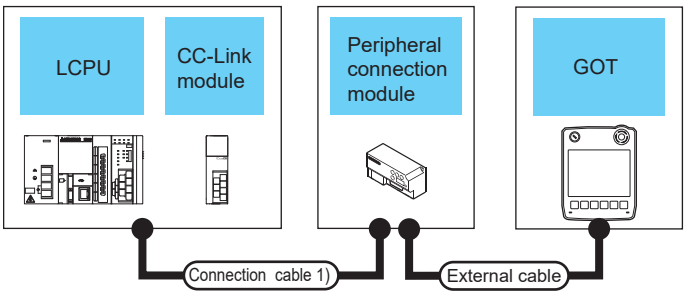
When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable 1)		Peripheral connection module		Connection cable 2)	External cable	GOT Model	Total distance *4	Number of connectable equipment
Model name	CC-Link module *1	Cable model	Max. distance	Model name	Communication type	Cable model Connection diagram number				
L02CPU L26CPU-BT L02CPU-P L26CPU-PBT	LJ61BT11	CC-Link dedicated cable *2	*3	AJ65BT-R2N	RS-232	User preparing Page 423 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 peripheral connection module
L26CPU-BT L26CPU-PBT	-						GT11H-C30-37P(3m)	GT 2505HS		
L02CPU L26CPU-BT L02CPU-P L26CPU-PBT	LJ61BT11	CC-Link dedicated cable *2	*3	AJ65BT-G4-S3	RS-422	GT11H-C15R4-25P	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for 1 peripheral connection module
L26CPU-BT L26CPU-PBT	-				RS-422		GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 For the system configuration of the CC-Link module, refer to the following manual.
MELSEC-L CC-Link System Master/Local Module User's Manual
*2 For the specifications and inquiries of the CC-Link dedicated cable, refer to the following.
CC-Link Partner Association's home page: http://www.cc-link.org/
*3 The maximum overall extension cable length and the length between stations vary depending on the cable type to be used and the transmission speed.
For details, refer to the following manual.
MELSEC-L CC-Link System Master/Local Module User's Manual
*4 The distance from the GOT to the peripheral connection module (Connection cable 2) + External cable)

When using the external cable (GT11H-C□□□)



PLC		Connection cable 1)		Peripheral connection module		External cable	GOT Model	Total distance *4	Number of connectable equipment
Model name	CC-Link module *1	Cable model	Max. distance	Model name	Communication type				
L02CPU L26CPU-BT L02CPU-P L26CPU-PBT	LJ61BT11	CC-Link dedicated cable *2	*3	AJ65BT-R2N	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 424 RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 peripheral connection module
L26CPU-BT L26CPU-PBT	-					GT11H-C30(3m) GT11H-C60(6m) ☞ Page 424 RS-232 connection diagram 3)	GT 2505HS		

*1 For the system configuration of the CC-Link module, refer to the following manual.
📖MELSEC-L CC-Link System Master/Local Module User's Manual

*2 For the specifications and inquiries of the CC-Link dedicated cable, refer to the following.
☞ CC-Link Partner Association's home page: http://www.cc-link.org/

*3 The maximum overall extension cable length and the length between stations vary depending on the cable type to be used and the transmission speed.
For details, refer to the following manual.
📖MELSEC-L CC-Link System Master/Local Module User's Manual

*4 The distance from the GOT to the peripheral connection module (External cable)

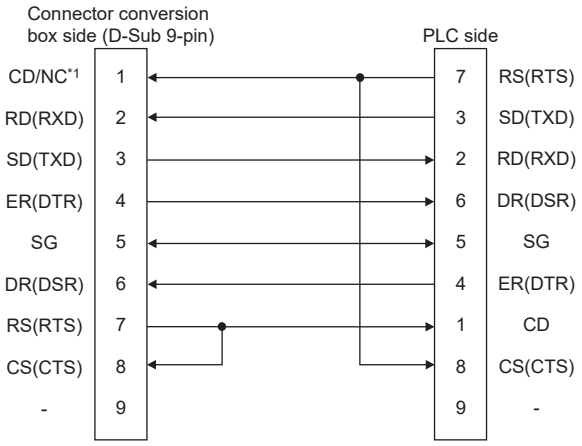
5.3 Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

RS-232 cable

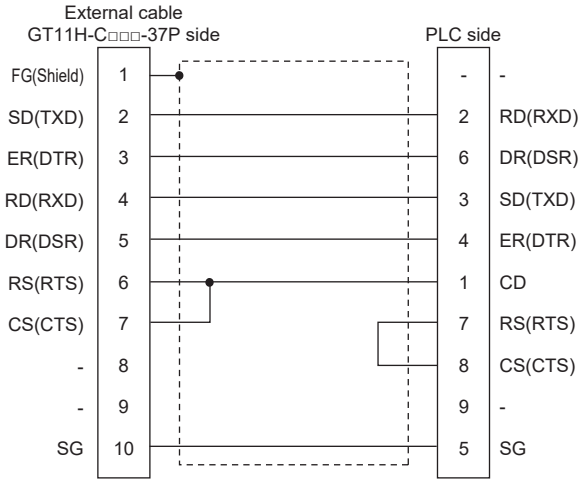
Connection diagram

■RS-232 connection diagram 1)

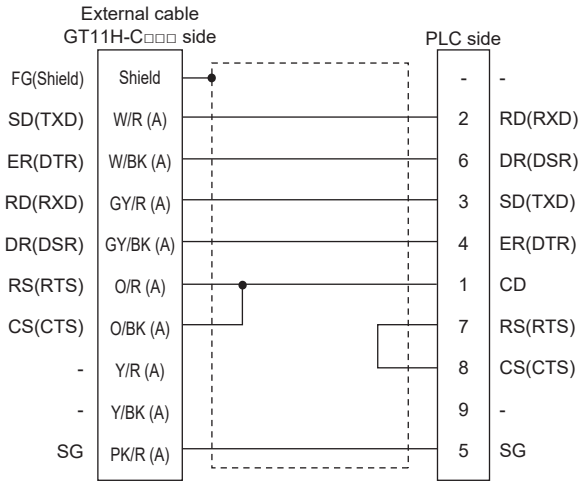


*1 GT2506HS-V: CD, GT2505HS-V: NC

■RS-232 connection diagram 2)



■RS-232 connection diagram 3)



Precautions when preparing a cable

■Cable length

The total distance (between GOT and peripheral connection module) of the RS-232 cable must be 6m or less.

■GOT side connector

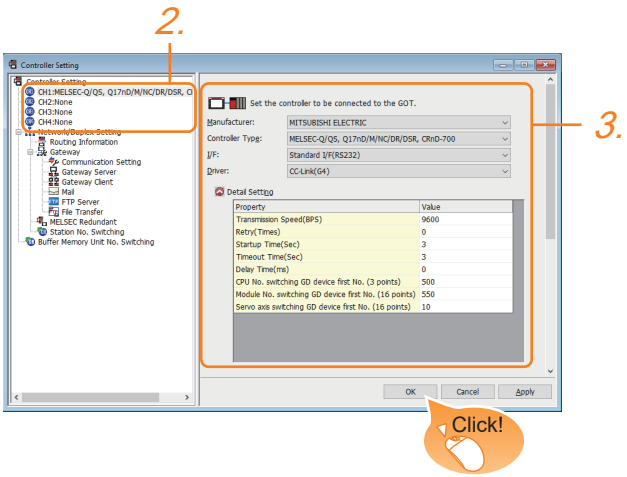
For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

5.4 GOT Side Settings

Setting communication interface (Controller Setting)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [MITSUBISHI ELECTRIC]
- [Controller Type]: Configure the setting according to the controller to be connected.
- [I/F]: Interface to be used
- [Driver]: [CC-Link(G4)]
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 426 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following:
☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
Transmission Speed(BPS)	9600
Retry(Times)	0
Startup Time(Sec)	3
Timeout Time(Sec)	3
Delay Time(ms)	0
CPU No. switching GD device first No. (3 points)	500
Module No. switching GD device first No. (16 points)	550
Servo axis switching GD device first No. (16 points)	10

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 9600bps)	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Retry	Set the number of retries to be performed when a communication timeout occurs. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Delay time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300ms
CPU No. switching GD device first No. (3 points)	Set the start device number of the GD devices for CPU No. switching. (Default: 500) For the details, refer to the following. ☞ Page 427 Start device number of the GD devices for CPU number switching	0 to 65520
Module No. switching GD device first No. (16 points)	Set the start device number of the GD devices for module No. switching. (Default: 550) For the details, refer to the following. ☞ Page 428 Start device number of the GD devices for module number switching	0 to 65520
Servo axis switching GD device first No. (16 points)	Set the servo axis switching GD device first No. (Default: 10) For the details, refer to the following. ☞ Page 429 Servo axis switching GD device first No.	0 to 65520

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

📖GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

Start device number of the GD devices for CPU number switching

■Specifying a CPU number with a device

[CPU No.] can be specified with the GOT internal registers (GD devices) by specifying a value (100 to 102) to [CPU No.] in the device setting dialog in GT Designer3.

Set the start device number of the GD devices to be used in [CPU No. switching GD device first No. (3 points)].

Specify [CPU No.] with the three consecutive GD devices, starting the set device number.

When [500] is set to [CPU No. switching GD device first No. (3 points)], GD500 to GD502 are used to specify [CPU No.] as shown in the following table.

CPU No.	GD device	Setting range
100	GD500	1 to 4 Setting an invalid value causes a communication timeout error. Specifying a nonexistent CPU No. or a CPU No. not supporting a multiple CPU system with a device causes a controller error.
101	GD501	
102	GD502	

■Specifying a CPU number with a device on the initially-displayed screen

Set [CPU No. switching GD device first No. (3 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

■Specifying a CPU number with a device in a multi-channel connection

If the setting range of [CPU No. switching GD device first No. (3 points)] set in each channel overlaps, the monitoring target CPU No. set to each channel is switched simultaneously.

Set [CPU No. switching GD device first No. (3 points)] in each channel so that the setting range does not overlap.

■Specifying a CPU number and a station number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [CPU No. switching GD device first No. (3 points)] in a different channel switches the monitoring target CPU No. and station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [CPU No. switching GD device first No. (3 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

Start device number of the GD devices for module number switching

■Specifying a module number with a device

In a connection via a simple motion module, [Unit No.] can be specified with the GOT internal registers (GD devices) by specifying a value (100 to 10F) to [Unit No.] in the device setting dialog in GT Designer3

Set the start device number of the GD devices to be used in [Module No. switching GD device first No. (16 points)].

Specify [Unit No.] with the 16 consecutive GD devices, starting the set device number.

When [550] is set to [Module No. switching GD device first No. (16 points)], GD550 to GD565 are used to specify [Unit No.] as shown in the following table.

Unit No.	GD device	Setting range
100	GD550	The setting range depends on [Unit Type]. • When [MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-L], or [MELIPC] is selected in [Unit Type] 00 to FF • When [MELSEC iQ-F] is selected for [Unit Type] 01 to 10 Setting an invalid value causes a device range error.
101	GD551	
102	GD552	
103	GD553	
104	GD554	
105	GD555	
106	GD556	
107	GD557	
108	GD558	
109	GD559	
10A	GD560	
10B	GD561	
10C	GD562	
10D	GD563	
10E	GD564	
10F	GD565	

■Specifying a module number with a device on the initially-displayed screen

Set [Module No. switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

■Specifying a module number with a device in a multi-channel connection

If the setting range of [Module No. switching GD device first No. (16 points)] set in each channel overlaps, the module No. of the simple motion module via the servo amplifier device of each channel is switched simultaneously.

Set [Module No. switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

■Specifying a station number and a module number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Module No. switching GD device first No. (16 points)] switches the module No. of the simple motion module via the servo amplifier device and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [Module No. switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

Servo axis switching GD device first No.

■Indirect specification of the servo axis No.

In a connection via a motion CPU or simple motion module, a servo axis No. can be indirectly specified with the GOT internal registers (GD devices) by specifying a value (100 to 115) to the axis No. of the servo amplifier device.
Set the start device number of the GD devices to be used in [Servo axis switching GD device first No. (16 points)].
Specify a servo axis number with 16 consecutive GD devices, starting the set device number.
When [10] is set to [Servo axis switching GD device first No. (16 points)], GD10 to GD25 are used to specify a servo axis number as shown in the following table.

Servo axis No.	GD device	Setting range
100	GD10	1 to 64 For the setting other than the above, error (dedicated device is out of range) will occur.
101	GD11	
102	GD12	
103	GD13	
104	GD14	
105	GD15	
106	GD16	
107	GD17	
108	GD18	
109	GD19	
110	GD20	
111	GD21	
112	GD22	
113	GD23	
114	GD24	
115	GD25	

■Specifying a servo axis number with a device on the initially-displayed screen

Set [Servo axis switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

■Specifying a servo axis number with a device in a multi-channel connection

If the setting rage of [Servo axis switching GD device first No. (16 points)] set in each channel overlaps, the axis No. of the servo amplifier of each channel is switched simultaneously.
Set [Servo axis switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

■Specifying a station number and a servo axis number with devices in a multi-channel connection

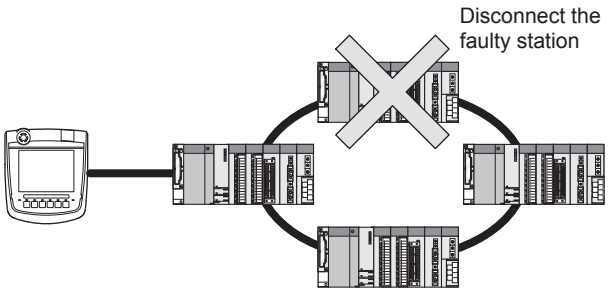
When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Servo axis switching GD device first No. (16 points)] switches the axis No. of the servo amplifier and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.
Set [Servo axis switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

Point

Cutting the portion of multiple connection of the controller

By setting GOT internal device, GOT can cut the portion of multiple connection of the controller.

For example, faulty station that has communication timeout can be cut from the system.



For details of the setting contents of GOT internal device, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

5.5 PLC Side Settings

Model		Reference
Peripheral connection module	AJ65BT-G4-S3	☞ Page 431 Connecting AJ65BT-G4-S3
	AJ65BT-R2N	☞ Page 433 Connecting AJ65BT-R2N

Connecting AJ65BT-G4-S3

This section describes the settings of the GOT and peripheral connection module in the following case of the system configuration.

Point

• Peripheral connection module

For details of the peripheral connection module, refer to the following manual.

📖Peripheral Connection Module Type AJ65BT-G4-S3 User's Manual (detail volume)

• CC-Link module

For details of the CC-Link module, refer to the following manual.

📖CC-Link System Master/Local Module User's Manual QJ61BT11N

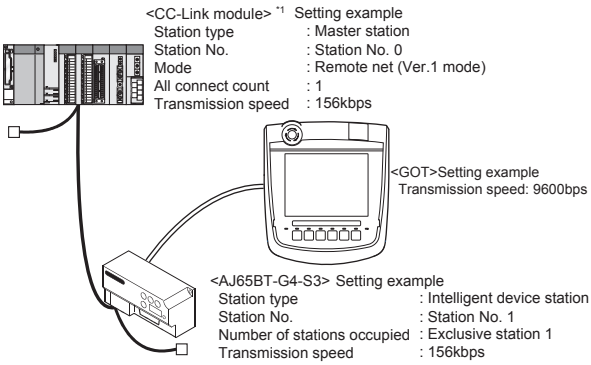
📖MELSEC-L CC-Link System Master/Local Module User's Manual

• CC-Link function built-in CPU

For details on the CC-Link function built-in CPU, refer to the following manual.

📖MELSEC-L CC-Link System Master/Local Module User's Manual

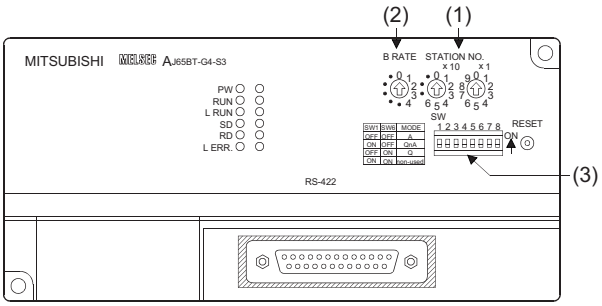
System configuration



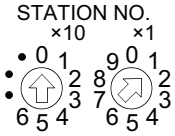
*1 The Start I/O No. of the CC-Link module is set to "0"

Switch setting of peripheral connection module

Set the station number setting switch, data link transmission speed setting switch, and operation setting DIP switch.



■Station number setting switch

Station number setting switch	Description	Set value	Setting necessity at GOT connection
STATION NO. ×10 ×1 	AJ65BT-G4-S3 station number setting	1 to 64	○

○: Necessary △: As necessary ×: Not necessary

■Data link transmission speed setting switch

Data link transmission speed setting switch	Description	Set value	Setting necessity at GOT connection
B RATE 	Data link transmission speed setting	0: 156kbps 1: 625kbps 2: 2.5Mbps 3: 5Mbps 4: 10Mbps	○

○: Necessary △: As necessary ×: Not necessary

■Operation setting DIP switch

Operation setting DIP switch	Setting Switch	Description	Set value	Setting necessity at GOT connection
SW 1 2 3 4 5 6 7 8  ON	SW1, SW6	Operation mode	SW1 = OFF SW6 = ON (fixed) (Q mode)	○
	SW2	Peripheral transmission speed*1	OFF (fixed)	×
	SW3			
	SW4	Not used	OFF (fixed)	×
	SW5			
	SW7			
	SW8	Test mode	OFF (fixed) (Q mode)	○

○: Necessary △: As necessary ×: Not necessary

*1 The peripheral connection module operates with the baud rate set in the GOT.
☞ Page 439 [Controller Setting] of GT Designer3

Point

Operation mode of peripheral connection module

Be sure to set the "Q mode" as an operation mode of the peripheral connection module.

Connecting AJ65BT-R2N

This section describes the settings of the GOT and peripheral connection module in the following case of the system configuration.

Point

• Peripheral connection module

For details of the peripheral connection module, refer to the following manual.

Peripheral Connection Module Type AJ65BT-R2N User's Manual

• CC-Link module

For details of the CC-Link module, refer to the following manual.

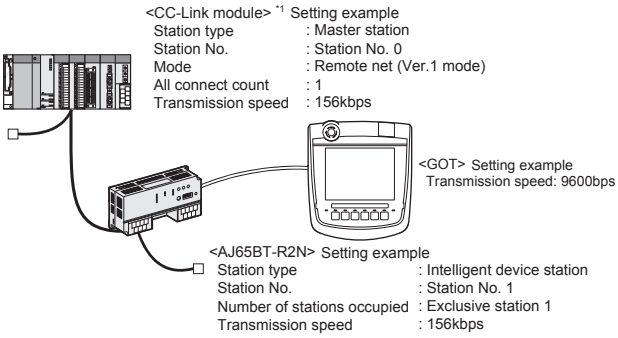
CC-Link System Master/Local Module User's Manual QJ61BT11N

• CC-Link built-in CPU

For details on the CC-Link function built-in CPU, refer to the following manual.

MELSEC-L CC-Link System Master/Local Module User's Manual

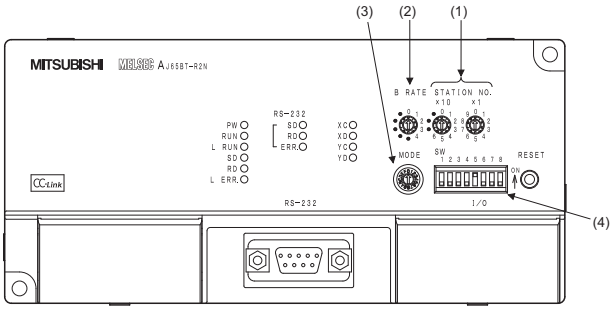
System configuration



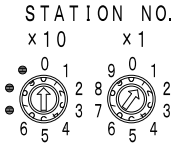
*1 The Start I/O No. of the CC-Link module is set to "0"

Switch setting of peripheral connection module

Set the station number setting switch, data link transmission speed setting switch, and operation setting DIP switch.



■Station number setting switch

Station number setting switch	Description	Set value	Setting necessity at GOT connection
	AJ65BT-R2N station number setting	1 to 64	○

○: Necessary △: As necessary ×: Not necessary

■Data link transmission speed setting switch

Data link transmission speed setting switch	Description	Set value	Setting necessity at GOT connection
B RATE 	Data link transmission speed setting	0: 156kbps 1: 625kbps 2: 2.5Mbps 3: 5Mbps 4: 10Mbps	○

○: Necessary △: As necessary ×: Not necessary

■Mode setting switch

Mode setting switch	Description	Set value	Setting necessity at GOT connection
MODE 	Mode setting	5 (fixed) (MELSOFT /connection mode)	○

○: Necessary △: As necessary ×: Not necessary

■RS-232 transmission setting switch

RS-232 transmission setting switch	Setting switch	Description	Set value	Setting necessity at GOT connection
SW 1 2 3 4 5 6 7 8 ON 	SW1	Peripheral transmission speed*1	OFF (fixed)	○
	SW2			
	SW3			
	SW4			
	SW5	Data bit length	OFF (fixed)	○
	SW6	Parity bit length	OFF (fixed)	○
	SW7			
	SW8	Stop bit length	OFF (fixed)	○

○: Necessary △: As necessary ×: Not necessary

*1 The peripheral connection module operates with the baud rate set in the GOT.
☞ Page 439 [Controller Setting] of GT Designer3

Point

Precautions when setting peripheral connection module

• mode setting switch

Be sure to set the Operation mode setting switch to "5" (MELSOFT/connection mode).

• RS-232 transmission setting switch

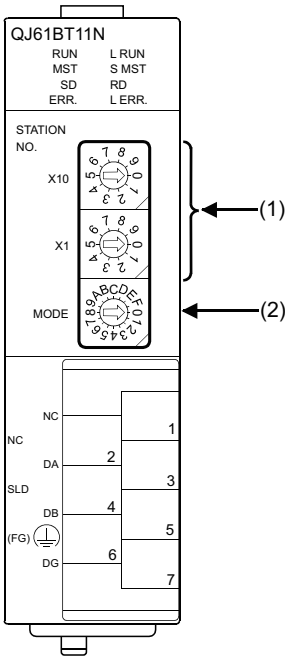
Turn OFF SW1 through SW8 of the RS-232 transmission setting switch.

If any switch of SW1 through SW8 is ON, setting error will occur (RUN LED turns off).

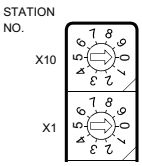
Switch setting of CC-Link module (Q series)

Set the station number setting switch, transmission speed / mode setting switch.

QJ61BT11, QJ61BT11N

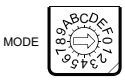


Station number setting switch

Station number setting switch	Description	Set value	Setting necessity at GOT connection
	Station number setting (master station)	0 (fixed)	○

○: Necessary △: As necessary ×: Not necessary

Transmission rate/mode setting switch

Transmission rate/mode setting switch	Description	Set value	Setting necessity at GOT connection
	Transmission rate/mode setting	0: 156kbps 1: 625kbps 2: 2.5Mbps 3: 5Mbps 4: 10Mbps	○

○: Necessary △: As necessary ×: Not necessary

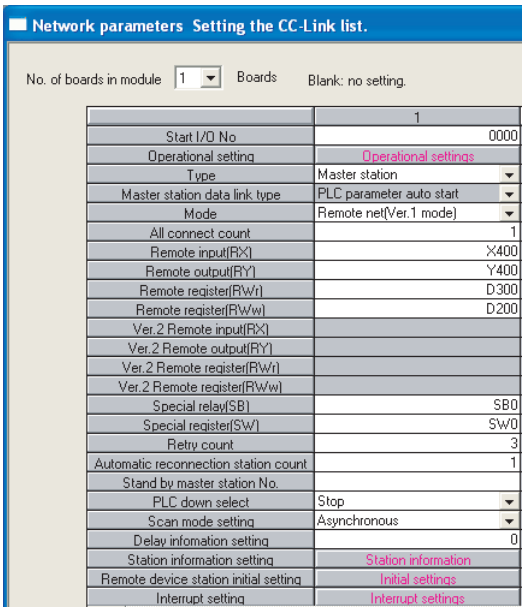
Point

When the switch setting has been changed

Turn the PLC CPU OFF then ON again, or reset the PLC CPU.

[Network parameter] of GX Developer

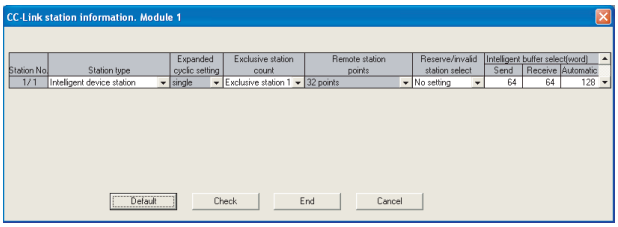
Network parameter



Item	Set value	Setting necessity at GOT connection
No. of boards in module	1	○
Start I/O No.	0000H	○
Operation setting	(Use default value)	△
Type	Master station (fixed)	○
Mode	Remote net (Ver.1 mode)	○
All connect count	1	○
Remote input (RX)	X400	△
Remote output (RY)	Y400	△
Remote register (RWr)	D300	△
Remote register (RWw)	D200	△
Special relay (SB)	SB0	△
Special register (SW)	SW0	△
Retry count	(Use default value)	△
Automatic reconnection station count		△
Stand by master station No.		×
PLC down select		△
Scan mode setting		△
Delay information setting		△
Station information setting	☞ Page 437 Station information setting	○
Remote device station initial setting	(Use default value)	×
Interrupt setting		×

○: Necessary △: As necessary ×: Not necessary

Station information setting



Item*1	Set value	Setting necessity at GOT connection
Station type*2	Intelligent device station (fixed)	○
Number of stations occupied	Exclusive station 1 (fixed)	○
Reserve/invalid station select	No setting	○
Intelligent buffer select (word)	(Use default value)	×

○: Necessary △: As necessary ×: Not necessary

*1 When the [Mode] of the CC-Link module is set at [Remote net - (Ver. 2 mode)], [Remote station points] can be set.
[Remote station points] is a setting for the remote I/O station.
The default value (32 points) must be used on the GOT.

*2 When the [Mode] of the CC-Link module is set at [Remote net - (Ver. 2 mode)] or [Remote net - Additional mode], set to [Ver. 1 Intelligent device station].

Point

When changing the network parameter

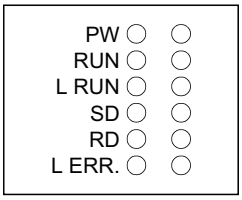
After writing the network parameter to the PLC CPU, operate the PLC CPU ether turning OFF and then ON or resetting.

Completion confirmation

After initial communications of CC-Link are completed, the L RUN LED of AJ65BT-G4-S3 turns on.

The GOT starts to monitor after the L-RUN LED of AJ65BT-G4-S3 turns on.

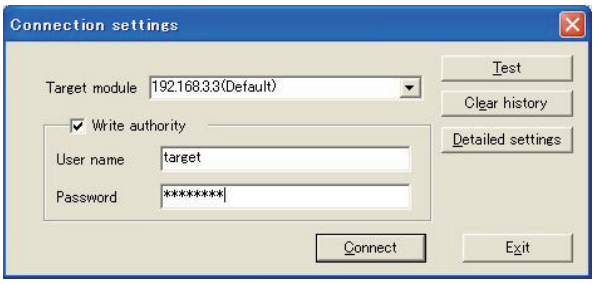
It does not monitor while the L RUN LED turns off.



Parameter setting (when connecting to C Controller module (Q Series))

Use SW3PVC-CCPU-E Ver.3.05F or later for the C Controller module setting utility.

Connection settings



Item	Set value	Setting necessity at GOT connection
Target module*1	192.168.3.3	○
Write authority	Mark the checkbox	○
User name*2	target	○
Password*2	password	○
Detailed settings	-	△

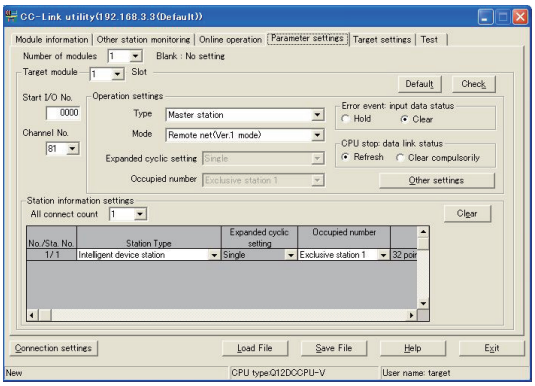
○: Necessary △: As necessary ×: Not necessary

*1 If the IP address of the C Controller module (Q Series) has been changed, input the changed IP address or host name.

*2 If the account of the C Controller module (Q Series) has been changed, input the changed user name and password.

[Parameter Setting] of CC-Link utility

■Network parameter



Item		Set value	Setting necessity at GOT connection
Number of modules		1	○
Target module		1	○
Start I/O No.		0000H	○
Channel No.		(Use default value)	○
Operation setting	type	Master station (fixed)	○
	Mode*1	Remote net (Ver.1 mode)	○
	Expanded cyclic station	Single (fixed)	△
	Occupied number	Exclusive station 1 (fixed)	△
	Error event: input data status	Clear	△
	CPU stop: data link status	Refresh	△
	Other settings	(Use default value)	△

Item		Set value	Setting necessity at GOT connection
Station information settings	All connect count	1	○
	Station type	Ver.1 Intelligent device station (fixed)	○
	Expanded cyclic station	Single	△
	Occupied number*2	Exclusive station 1	×
	Remote station points	32 points	○
	Reserve/invalid station select	No setting	○
	Intelligent buffer select (word)	(Use default value)	×

○: Necessary △: As necessary ×: Not necessary

*1 If the CC-Link module [Mode] is [Remote net -Ver.1 mode], [Remote station points] cannot be set.

*2 Set the same setting as that of the GOT.

Point

When changing the network parameter

After writing the network parameter to the C Controller module (Q Series), either turn the C Controller module (Q Series) OFF and then ON or reset it.

[Controller Setting] of GT Designer3

Item	Set value
Transmission Speed	9600bps 19200bps 38400bps 57600bps 115200bps
Retry Count	0 to 5times
Timeout Time	3 to 30sec
Delay Time	0 to 300ms

Point

[Controller Setting] of GT Designer3

For [Controller Setting], of GT Designer3, refer to the following.

☞ Page 425 Setting communication interface (Controller Setting)

5.6 Precautions

Connection in the multiple CPU system

When the GOT is connected to multiple CPU system, the following time is taken until when the PLC runs.

QCPU (Q mode), motion CPU (Q series): 10 seconds or more

MELDAS C70: 18 seconds or more

When the GOT starts before the PLC runs, a system alarm occurs.

Adjust the opening screen time in the GOT setup so that no system alarm occurs.

GT Designer3 (GOT2000) Screen Design Manual

Connection to LCPU

LCPU may diagnose (check file system, execute recovering process, etc.) the SD memory card when turning on the power or when resetting.

Therefore, it takes time until the SD memory card becomes available.

When the GOT starts before the SD card becomes available, a system alarm occurs.

Adjust the opening screen time in the GOT setup so that no system alarm occurs.

GT Designer3 (GOT2000) Screen Design Manual

Connection to Q17nDCPU, Q170MCPU, Q170MSCPU(-S1), CNC C70, CRnQ-700, or CR800-Q (Q172DSRCPU)

The Q17nDCPU, Q170MCPU, Q170MSCPU(-S1), CNC C70, CRnQ-700, and CR800-Q (Q172DSRCPU) are applicable to CC-Link Ver.2 only.

For connecting to the CC-Link (Via G4) network system, set the CC-Link (G4) network system to the CC-Link Ver.2 mode.

Connection to Q170MCPU or Q170MSCPU(-S1)

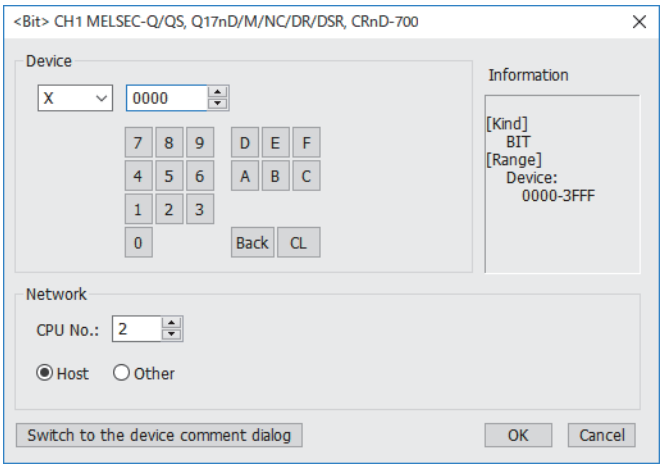
Set [CPU No.] to 2 in the device setting to monitor the device of the motion CPU area (CPU No. 2).

When [CPU No.] is set to 0 or 1, the device on the PLC CPU area (CPU No. 1) is monitored.

When [CPU No.] is set to the number other than 0 to 2, a communication error occurs and the monitoring cannot be executed.

For the setting of [CPU No.], refer to the following.

GT Designer3 (GOT2000) Screen Design Manual



PART 3 MITSUBISHI ELECTRIC FA DEVICE CONNECTIONS

6 MELIPC CONNECTION

7 INVERTER CONNECTION

8 SERVO AMPLIFIER CONNECTION

9 ROBOT CONTROLLER CONNECTION

10 CNC CONNECTION

6 MELIPC CONNECTION

- Page 442 Connectable Model List
- Page 443 System Configuration
- Page 445 GOT side settings
- Page 452 MELIPC Side Settings
- Page 458 Settable Device Range

6.1 Connectable Model List

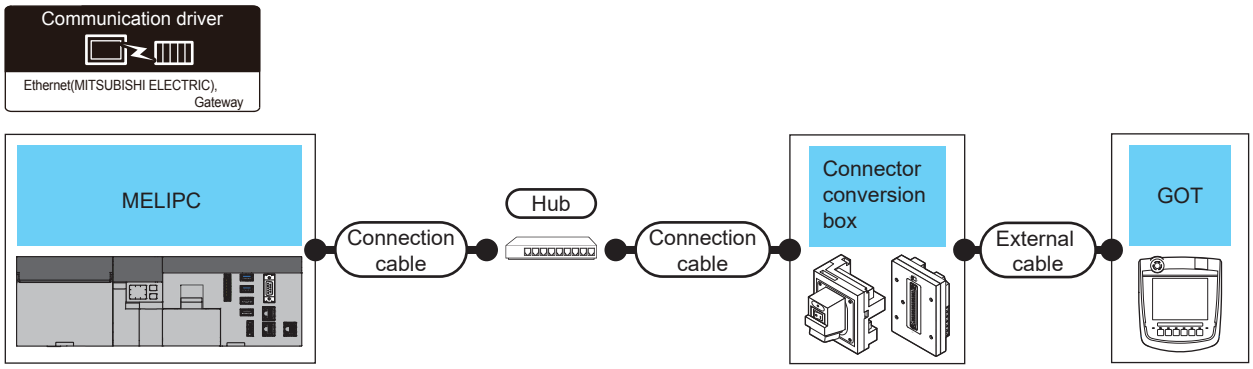
The following table shows the connectable models.

Series	Model name	Clock	Communication type	Connectable model	Refer to
MELIPC	MI5122-VW	○	Ethernet	GT 2506 HS GT 2505 HS	☞ Page 443 Connection to MELIPC (MI5122-VW)

6.2 System Configuration

Connection to MELIPC (MI5122-VW)

Direct connection



MELIPC		Connection cable*1	Max. distance*2	Connector conversion box	External cable*5	GOT Model	Number of connectable equipment
Model name	Communication Type						
MI5122-VW*3*4 (Built in Ethernet port: CH1)	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	16 GOTs
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the GOT to the Ethernet module, hub, or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
When only one GOT is connected, the GOT can be directly connected to the controller without a hub.

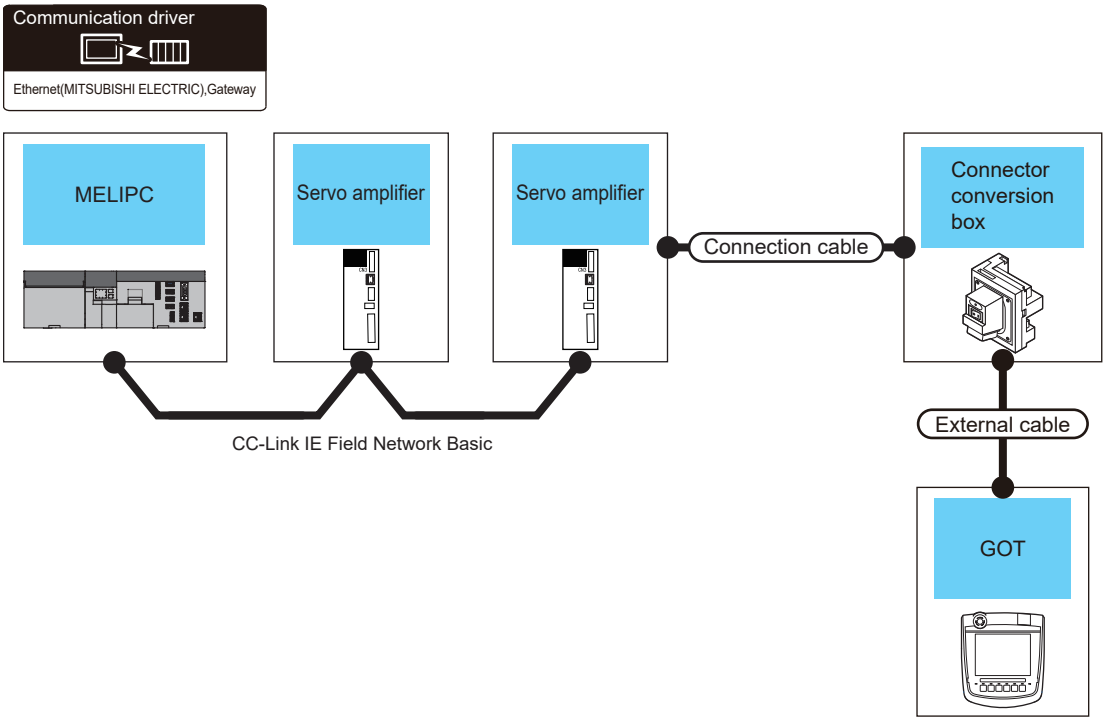
*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*3 For the system configuration of MELIPC, refer to the following manual.
Manuals of MELIPC

*4 Select [MELIPC] for [Unit Type] in [Connected Ethernet Controller Setting] of GT Designer3.
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
Page 451 Connected Ethernet Controller Setting

*5 Use C or later version of GT11H-C□□-37P.

Connection through a servo amplifier



MELIPC*1		Servo amplifier		Connection cable	Maximum segment length*2	Connector conversion box	External cable	GOT Model *3	Number of connectable equipment
Model name	Communication type	Model name	Communication type						
MI5122-VW	CC-Link IE Field Network Basic	MR-J5-□G MR-J5-□G-RJ MR-J5D1-□G4 MR-JET-G	Ethernet	100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	1 GOT for 1 servo amplifier

*1 For the system configuration of MELIPC, refer to the following manual.
Manuals of MELIPC

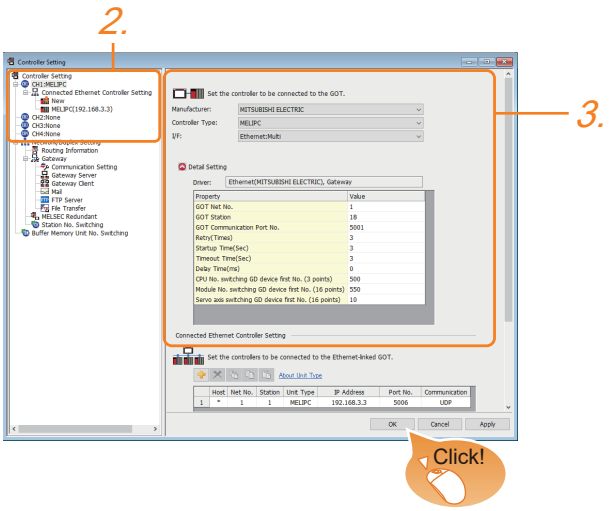
*2 The length between the hub and node.
The maximum length depends on the Ethernet module used.
The following shows the number of the connectable pieces of equipment when a repeater hub is used.
• 100BASE-TX: Up to 2 pieces using cascade connection (205 m)
For the cascade connection between the switching hubs, there is no theoretical limit to the number of cascades.
For whether there is a limit, contact the switching hub manufacturer.

*3 For the settings in GOT, refer to the following.
Page 445 GOT side settings

6.3 GOT side settings

Setting communication interface (Controller Setting)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.
2. In the [Controller Setting] window, select the channel No. to be used from the list menu.
3. Set the following items.

- [Manufacturer]: [MITSUBISHI ELECTRIC]
- [Controller Type]: [MELIPC]
- [I/F]: [Ethernet:Multi]
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 446 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following:
☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
GOT Net No.	1
GOT Station	18
GOT Communication Port No.	5001
Retry(Times)	3
Startup Time(Sec)	3
Timeout Time(Sec)	3
Delay Time(ms)	0
CPU No. switching GD device first No. (3 points)	500
Module No. switching GD device first No. (16 points)	550
Servo axis switching GD device first No. (16 points)	10

Item	Description	Range
GOT Net No.	Set the network No. of the GOT. (Default: 1)	1 to 239
GOT Station*1	Set the station No. of the GOT. (Default: 18)	1 to 120
GOT Communication Port No.	Set the GOT port No. for the connection with the Ethernet module. (Default: 5001)	1024 to 5010, 5014 to 65534 (Except for 5011 to 5013 and 49153 to 49170)
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 3times)	0 to 5times
Startup Time	Specify the time period from the GOT startup until GOT starts the communication with the MELIPC. (Default: 3sec)	3 to 255sec
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 90sec
Delay Time	Set the delay time for reducing the load of the network/destination MELIPC. (Default: 0ms)	0 to 10000(10ms)
CPU No. switching GD device first No. (3 points)	Set the start device number of the GD devices for CPU No. switching. (Default: 500) For the details, refer to the following. ☞ Page 447 Start device number of the GD devices for CPU number switching	0 to 65520
Module No. switching GD device first No. (16 points)	Set the start device number of the GD devices for module No. switching. (Default: 550) For the details, refer to the following. ☞ Page 448 Start device number of the GD devices for module number switching	0 to 65520
Servo axis switching GD device first No. (16 points)	Set the servo axis switching GD device first No. (Default: 10) For the details, refer to the following. ☞ Page 449 Servo axis switching GD device first No.	0 to 65520

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 451 Connected Ethernet Controller Setting

Point

Examples of [Controller Setting]

For examples of [Controller Setting], refer to the following.

☞ Page 452 MELIPC Side Settings

Start device number of the GD devices for CPU number switching

■Specifying a CPU number with a device

[CPU No.] can be specified with the GOT internal registers (GD devices) by specifying a value (100 to 102) to [CPU No.] in the device setting dialog in GT Designer3.

Set the start device number of the GD devices to be used in [CPU No. switching GD device first No. (3 points)].

Specify [CPU No.] with the three consecutive GD devices, starting the set device number.

When [500] is set to [CPU No. switching GD device first No. (3 points)], GD500 to GD502 are used to specify [CPU No.] as shown in the following table.

CPU No.	GD device	Setting range
100	GD500	1 to 4 Setting an invalid value causes a communication timeout error. Specifying a nonexistent CPU No. or a CPU No. not supporting a multiple CPU system with a device causes a controller error.
101	GD501	
102	GD502	

■Specifying a CPU number with a device on the initially-displayed screen

Set [CPU No. switching GD device first No. (3 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

■Specifying a CPU number with a device in a multi-channel connection

If the setting range of [CPU No. switching GD device first No. (3 points)] set in each channel overlaps, the monitoring target CPU No. set to each channel is switched simultaneously.

Set [CPU No. switching GD device first No. (3 points)] in each channel so that the setting range does not overlap.

■Specifying a CPU number and a station number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [CPU No. switching GD device first No. (3 points)] in a different channel switches the monitoring target CPU No. and station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [CPU No. switching GD device first No. (3 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

Start device number of the GD devices for module number switching

■Specifying a module number with a device

In a connection via a simple motion module, [Unit No.] can be specified with the GOT internal registers (GD devices) by specifying a value (100 to 10F) to [Unit No.] in the device setting dialog in GT Designer3

Set the start device number of the GD devices to be used in [Module No. switching GD device first No. (16 points)].

Specify [Unit No.] with the 16 consecutive GD devices, starting the set device number.

When [550] is set to [Module No. switching GD device first No. (16 points)], GD550 to GD565 are used to specify [Unit No.] as shown in the following table.

Unit No.	GD device	Setting range
100	GD550	The setting range depends on [Unit Type]. • When [MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-L], or [MELIPC] is selected in [Unit Type] 00 to FF • When [MELSEC iQ-F] is selected for [Unit Type] 01 to 10 Setting an invalid value causes a device range error.
101	GD551	
102	GD552	
103	GD553	
104	GD554	
105	GD555	
106	GD556	
107	GD557	
108	GD558	
109	GD559	
10A	GD560	
10B	GD561	
10C	GD562	
10D	GD563	
10E	GD564	
10F	GD565	

■Specifying a module number with a device on the initially-displayed screen

Set [Module No. switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

■Specifying a module number with a device in a multi-channel connection

If the setting range of [Module No. switching GD device first No. (16 points)] set in each channel overlaps, the module No. of the simple motion module via the servo amplifier device of each channel is switched simultaneously.

Set [Module No. switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

■Specifying a station number and a module number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Module No. switching GD device first No. (16 points)] switches the module No. of the simple motion module via the servo amplifier device and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [Module No. switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

Servo axis switching GD device first No.

■Indirect specification of the servo axis No.

In a connection via a Motion CPU or Simple Motion module, a servo axis No. can be indirectly specified with GOT internal registers (GD devices) by specifying a value (100 to 115) to the axis No. of the servo amplifier device.
Set the start device number of the GD devices to be used in [Servo axis switching GD device first No. (16 points)].
Specify a servo axis number with 16 consecutive GD devices, starting the set device number.
When [10] is set to [Servo axis switching GD device first No. (16 points)], GD10 to GD25 are used to specify a servo axis number as shown in the following table.

Servo axis No.	GD device	Setting range
100	GD10	1 to 64 For the setting other than the above, error (dedicated device is out of range) will occur.
101	GD11	
102	GD12	
103	GD13	
104	GD14	
105	GD15	
106	GD16	
107	GD17	
108	GD18	
109	GD19	
110	GD20	
111	GD21	
112	GD22	
113	GD23	
114	GD24	
115	GD25	

■Specifying a servo axis number with a device on the initially-displayed screen

Set [Servo axis switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

■Specifying a servo axis number with a device in a multi-channel connection

If the setting rage of [Servo axis switching GD device first No. (16 points)] set in each channel overlaps, the axis No. of the servo amplifier of each channel is switched simultaneously.
Set [Servo axis switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

■Specifying a station number and a servo axis number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Servo axis switching GD device first No. (16 points)] switches the axis No. of the servo amplifier and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.
Set [Servo axis switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

GOT IP address setting

Set the following communication port setting.

- Standard port

GOT Ethernet common setting

Configure the following settings which are common to standard ports.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

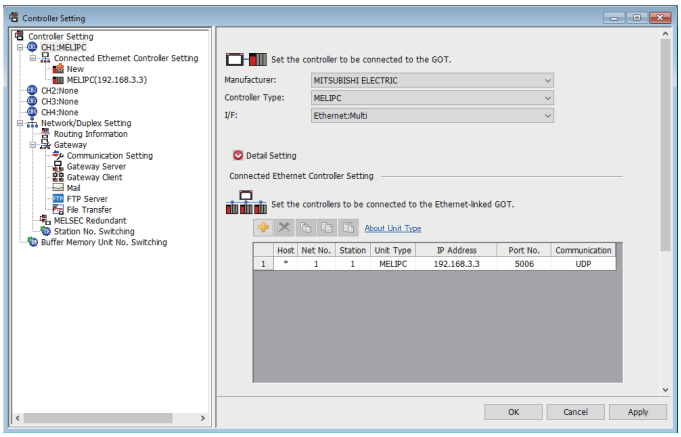
IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 80 GOT Ethernet Setting

Connected Ethernet Controller Setting



Item	Description	Range
Host	The host is displayed. It refers to a station that can be connected without setting a station number. (The host is indicated with an asterisk (*).))	-
Net No.	N/W No. Set the network No. of the connected MELIPC built-in Ethernet port (CH1). (Default: 1)	1 to 239
Station*1	Set the station No. of the connected MELIPC built-in Ethernet port (CH1). (Default: 1)	1 to120
Unit Type	Set the type of the connected MELIPC built-in Ethernet port (CH1).	MELIPC
IP Address	Set the IP address of the connected MELIPC built-in Ethernet port (CH1). (Default: 192.168.3.3)	0.0.0.0 to 255.255.255.255
Port No.	Set the port No. of the connected MELIPC built-in Ethernet port (CH1). (Default: 5006)	5006, 5001
Communication	Connection Method differs depending on the port No. <Port No.: For 5006> UDP (fixed) <Port No.: For 5007> TCP (fixed)	UDP, TCP

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 446 Communication detail settings

Point

• Examples of [Connected Ethernet Controller Setting]

For examples of [Connected Ethernet Controller Setting], refer to the following.

☞ Page 452 MELIPC Side Settings

• Communication interface setting by Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

6.4 MELIPC Side Settings

Model	
MELIPC	MI5122-VW

Connecting to MELIPC (MI5122-VW) (multiple connection)

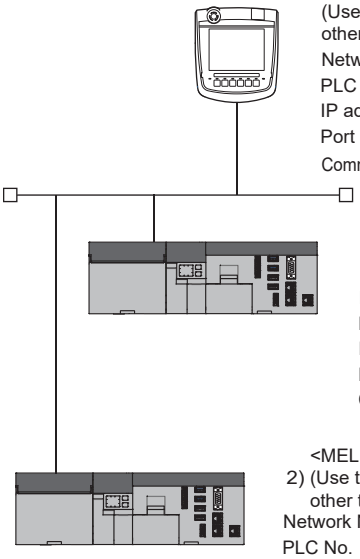
This section describes the settings of the GOT and MELIPC(MI5122-VW) in the following case of system configuration.
The settings of MELIPC side use the Peripheral Tool for Edge Computer MI Configurator.

Point

Peripheral Tool for Edge Computer MI Configurator
For details of Peripheral Tool for Edge Computer MI Configurator, refer to the following manual.
Manuals of MELIPC

When the GOT's communication format is UDP

■System configuration



<GOT>
(Use the default value for settings other than the following.)
Network No. :1
PLC No. :18
IP address :192.168.3.18
Port No. :5001
Communication format :UDP (fixed)

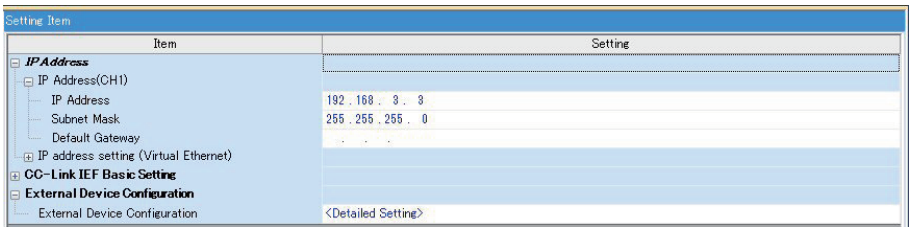
<MELIPC built-in Ethernet port (CH1)>
1) (Use the default value for settings other than the following.)
Network No. :1 (virtual)*1
PLC No. :1 (virtual)*1
IP address :192.168.3.3
Port No. :5006 (fixed)
Communication format :UDP (fixed)

<MELIPC built-in Ethernet port (CH1)>
2) (Use the default value for settings other than the following.)
Network No. :1 (virtual)*1
PLC No. :2 (virtual)*1
IP address :192.168.3.4
Port No. :5006 (fixed)
Communication format :UDP (fixed)

*1 These setting items do not exist at the MELIPC side.
However, the virtual values must be set on the GOT side.
☞ Page 453 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

■[Basic Parameter] of MI Configurator

• External device interaction setting



Item	Set value	Setting necessity at GOT connection
IP Address	192.168.3.3	×
Subnet Mask	-	×
Default Gateway	-	×
CC-Link IEF Basic Setting	(Use default value)	×
Target Device Connection Configuration Setting	-	×

○: Necessary △: As necessary ×: Not necessary

■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 445 Setting communication interface (Controller Setting)

Point

[Connected Ethernet Controller Setting] when connecting MELIPC built-in Ethernet port (CH1) and a GOT

The setting items for the network number and station number do not exist at the MELIPC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

• Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	18
GOT Ethernet Setting	192.168.3.18
GOT Communication Port No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

• GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

• Connected Ethernet Controller Setting

Item		Set value	
		1)	2)
Ethernet setting No.1	Host	*	-
	Net No.	1*1	1*1
	Station	1*2	2*2
	Unit Type	MELIPC	MELIPC
	IP Address	192.168.3.3	192.168.3.4
	Port No.	5006 (fixed)	5006 (fixed)
	Communication	UDP (fixed)	UDP (fixed)

*1 Set the same value as GOT Net No.
*2 Set a value different from the GOT station number and PLC numbers of other MELIPCs on the same network.

■Checking communication state of MELIPC built-in Ethernet port (CH1)

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

At normal communication

C:\>Ping 192.168.3.3

Reply from 192.168.3.3:bytes=32 time<1ms TTL=32

At abnormal communication

C:\>Ping 192.168.3.3

Request timed out.

• At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of MELIPC (faulty or not)

The IP address of MELIPC built-in Ethernet port (CH1) specified in the ping command

Point

Ethernet diagnostics of MI Configurator

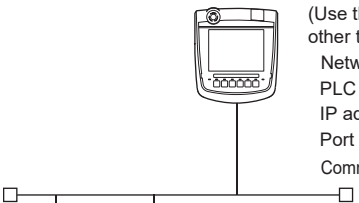
Ethernet diagnostics of MI Configurator is available to a Ping test from the MELIPC.

For details of Ethernet diagnostics of MI Configurator, refer to the following manual.

Manuals of MELIPC

When the GOT's communication format is TCP

■System configuration



<GOT>
(Use the default value for settings other than the following.)
Network No. :1
PLC No. :18
IP address :192.168.3.18
Port No. :5001
Communication format :TCP (fixed)



<MELIPC built-in Ethernet port (CH1)>
1) (Use the default value for settings other than the following.)
Network No. :1 (virtual)*1
PLC No. :1 (virtual)*1
IP address :192.168.3.3

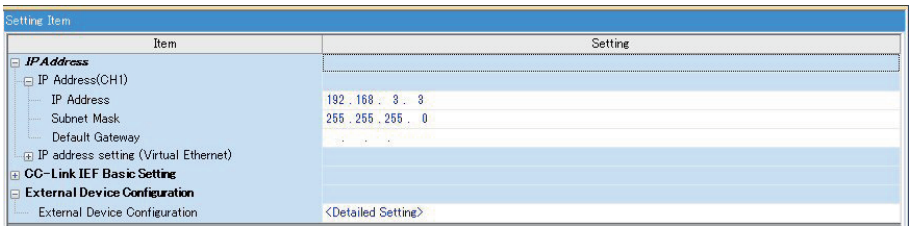


<MELIPC built-in Ethernet port (CH1)>
2) (Use the default value for settings other than the following.)
Network No. :1 (virtual)*1
PLC No. :2 (virtual)*1
IP address :192.168.3.4

*1 These setting items do not exist at the MELIPC side.
However, the virtual values must be set on the GOT side.
☞ Page 456 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

■[Basic Parameter] of MI Configurator

• External device interaction setting

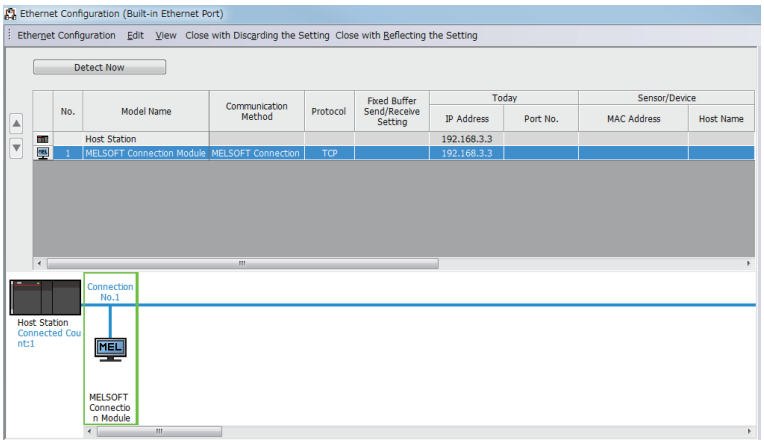


Item	Set value	Setting necessity at GOT connection
IP Address	192.168.3.3	×
Subnet Mask	-	×
Default Gateway	-	×
CC-Link IEF Basic Setting	(Use default value)	×
Target Device Connection Configuration Setting	☞ • External Device Configuration	○

○: Necessary △: As necessary ×: Not necessary

• External Device Configuration

The setting is required for all the connected GOTs.



Item	Set value
Protocol	(Use default value)
Open system	MELSOFT connection

■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 445 Setting communication interface (Controller Setting)

Point

[Connected Ethernet Controller Setting] when MELIPC built-in Ethernet port (CH1) is connected to a GOT

The setting items for the network No. and station No. do not exist at the MELIPC side.

Set the network No. and station No. on the GOT side.

Set the network No. that does not exist on the network system and any station No.

• Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	18
GOT Ethernet Setting	192.168.3.18
GOT Communication Port No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

• GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

• Connected Ethernet Controller Setting

Item		Set value	
		1)	2)
Ethernet setting No.1	Host	*	-
	Net No.	1*1	1*1
	Station	1*2	2*2
	Unit Type	MELIPC	MELIPC
	IP Address	192.168.3.3	192.168.3.4
	Port No.	5007	5007
	Communication	TCP (fixed)	TCP (fixed)

*1 Set the same value as GOT Net No.
*2 Set a value different from the GOT station number.

■Checking communication state of MELIPC built-in Ethernet port (CH1)

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

At normal communication

C:\>Ping 192.168.3.3

Reply from 192.168.3.3:bytes=32 time<1ms TTL=32

At abnormal communication

C:\>Ping 192.168.3.3

Request timed out.

• At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of MELIPC (faulty or not)

The IP address of MELIPC built-in Ethernet port (CH1) specified in the ping command

Point

Ethernet diagnostics of MELIPC

Ethernet diagnostics of MELIPC is available to a Ping test from the MELIPC.

For details of Ethernet diagnostics of MELIPC, refer to the following manual.

Manuals of MELIPC

6.5 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3 Version1

7 INVERTER CONNECTION

- Page 459 Connectable Model List
- Page 462 Serial Connection
- Page 535 Ethernet Connection
- Page 546 Connection through a PLC
- Page 549 Settable Device Range

7.1 Connectable Model List

The following table shows the connectable models.

Type	Series *1	Model name	Clock	Communication type	Connectable model	Refer to
Inverter	FR-A500(L) series	FR-A5□0(L)	×	RS-485	GT 2506 HS GT 2505 HS	☞ Page 462 Connection to FR-A500(L), FR-F500(L), or FR-V500(L)
	FR-F500(L) series	FR-F5□0(L)				
	FR-V500(L) series	FR-V5□0(L)				
	FR-E500 series	FR-E5□0(C) FR-E5□0S FR-E5□0W	×	RS-485	GT 2506 HS GT 2505 HS	☞ Page 467 Connection to FR-E500, FR-S500(E), FR-F500J, FR-D700, or FR-F700PJ
	FR-S500(E) series	FR-S5□0(E)(-R)(-C) FR-S5□0S(E)(-R) FR-S5□0W(E)(-R)				
	FR-F500J series	FR-F5□0J(F)				
	FR-D700 series	FR-D7□0 FR-D7□0S FR-D7□0W				
	FR-F700PJ series	FR-F7□0PJ(F)				
	FR-E700 series	FR-E7□0 FR-E7□0S FR-E7□0W	×	RS-485	GT 2506 HS GT 2505 HS	☞ Page 470 Connection to FR-E700 or sensorless servo (FR-E7□0EX)
		FR-E7□0-NE *4	×	Ethernet	GT 2506 HS GT 2505 HS	☞ Page 535 Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, FR-E800, or FR-D800
	FR-A700 series	FR-A7□0	×	RS-485	GT 2506 HS GT 2505 HS	☞ Page 476 Connection to FR-A700, FR-F700, or FR-F700P
	FR-F700 series	FR-F7□0				
	FR-F700P series	FR-F7□0P				

Type	Series *1	Model name	Clock	Communication type	Connectable model	Refer to
Inverter	FR-A800 series	FR-A8□0 FR-A8□2 FR-A8□6	×	RS-485	GT2506-HS GT2505-HS	☞ Page 482 Connection to FR-A800, FR-A800 Plus, FR-F800, FR-E800, or FR-D800
				Ethernet *5	GT2506-HS GT2505-HS	☞ Page 535 Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, FR-E800, or FR-D800
				*2	GT2506-HS GT2505-HS	☞ Page 546 Connection to FR-A800, FR-F800, FR-E800, or FR-D800
		FR-A8□0-E FR-A8□2-E FR-A8□6-E	×	RS-485	GT2506-HS GT2505-HS	☞ Page 482 Connection to FR-A800, FR-A800 Plus, FR-F800, FR-E800, or FR-D800
				Ethernet	GT2506-HS GT2505-HS	☞ Page 535 Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, FR-E800, or FR-D800
				*2	GT2506-HS GT2505-HS	☞ Page 546 Connection to FR-A800, FR-F800, FR-E800, or FR-D800
		FR-A8□0-GF FR-A8□2-GF	×	RS-485	GT2506-HS GT2505-HS	☞ Page 482 Connection to FR-A800, FR-A800 Plus, FR-F800, FR-E800, or FR-D800
				*2	GT2506-HS GT2505-HS	☞ Page 546 Connection to FR-A800, FR-F800, FR-E800, or FR-D800
		FR-A8□0-GN FR-A8□2-GN	×	RS-485	GT2506-HS GT2505-HS	☞ Page 482 Connection to FR-A800, FR-A800 Plus, FR-F800, FR-E800, or FR-D800
				Ethernet *5	GT2506-HS GT2505-HS	☞ Page 535 Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, FR-E800, or FR-D800
				*2	GT2506-HS GT2505-HS	☞ Page 546 Connection to FR-A800, FR-F800, FR-E800, or FR-D800

Type	Series *1	Model name	Clock	Communication type	Connectable model	Refer to
Inverter	FR-A800 Plus series	FR-A8□0-CRN FR-A8□2-CRN FR-A8□0-R2R FR-A8□2-R2R FR-A8□0-AWH FR-A8□0-LC	×	RS-485	GT2506HS GT2505HS	☞ Page 482 Connection to FR-A800, FR-A800 Plus, FR-F800, FR-E800, or FR-D800
				*2	GT2506HS GT2505HS	☞ Page 546 Connection to FR-A800, FR-F800, FR-E800, or FR-D800
		FR-A8□0-E-CRN FR-A8□2-E-CRN FR-A8□0-E-R2R FR-A8□2-E-R2R FR-A8□0-E-AWH FR-A8□0-E-LC	×	RS-485	GT2506HS GT2505HS	☞ Page 482 Connection to FR-A800, FR-A800 Plus, FR-F800, FR-E800, or FR-D800
				Ethernet	GT2506HS GT2505HS	☞ Page 535 Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, FR-E800, or FR-D800
				*2	GT2506HS GT2505HS	☞ Page 546 Connection to FR-A800, FR-F800, FR-E800, or FR-D800
	FR-F800 series	FR-F8□0 FR-F8□2 FR-F8□6	×	RS-485	GT2506HS GT2505HS	☞ Page 482 Connection to FR-A800, FR-A800 Plus, FR-F800, FR-E800, or FR-D800
				Ethernet *5	GT2506HS GT2505HS	☞ Page 535 Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, FR-E800, or FR-D800
				*2	GT2506HS GT2505HS	☞ Page 546 Connection to FR-A800, FR-F800, FR-E800, or FR-D800
		FR-F8□0-E *3 FR-F8□2-E *3	×	RS-485	GT2506HS GT2505HS	☞ Page 482 Connection to FR-A800, FR-A800 Plus, FR-F800, FR-E800, or FR-D800
				Ethernet	GT2506HS GT2505HS	☞ Page 535 Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, FR-E800, or FR-D800
				*2	GT2506HS GT2505HS	☞ Page 546 Connection to FR-A800, FR-F800, FR-E800, or FR-D800
	FR-E800 series	FR-E8□0	×	RS-485	GT2506HS GT2505HS	☞ Page 482 Connection to FR-A800, FR-A800 Plus, FR-F800, FR-E800, or FR-D800
		FR-E8□0-E		Ethernet	GT2506HS GT2505HS	☞ Page 535 Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, FR-E800, or FR-D800
				*2	GT2506HS GT2505HS	☞ Page 546 Connection to FR-A800, FR-F800, FR-E800, or FR-D800
	FR-D800 series	FR-D8□0	×	RS-485	GT2506HS GT2505HS	☞ Page 482 Connection to FR-A800, FR-A800 Plus, FR-F800, FR-E800, or FR-D800
		FR-D8□0-E	×	Ethernet		☞ Page 535 Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, FR-E800, or FR-D800
Sensorless servo	-	FR-E7□0EX	×	RS-485	GT2506HS GT2505HS	☞ Page 470 Connection to FR-E700 or sensorless servo (FR-E7□0EX)
Magnet motor drive	MELIPM series	MD-CX522-□K(-A0)	×	RS-485	GT2506HS GT2505HS	☞ Page 490 Connection to MELIPM

*1 The GOT supports the FR-B, B3 series (explosion-proof type of FR-A700 and FR-A800 series).

*2 The communication type depends on the connection type between a PLC CPU and the GOT.

*3 When the communication type is the Ethernet connection and the communication format is TCP, use an inverter with SERIAL (serial No.) "□7Z******" or later.
SERIAL (serial No.) is described on a rating plate of the inverter.

*4 Use an inverter with SERIAL (serial No.) "□88******" or later.
For FR-E700-SC-NNE and FR-E700-SC-ENE, use an inverter with SERIAL (serial No.) "□89******" or later.
SERIAL (serial No.) is described on a rating plate of the inverter.

*5 A built-in option (FR-A8NCG) is required.
Use an inverter with the following SERIAL (serial No.).
SERIAL (serial No.) is described on a rating plate of the inverter.

Country of origin indication	SERIAL (serial No.)
MADE in Japan	□96****** and later
MADE in China	□97****** and later

7.2 Serial Connection

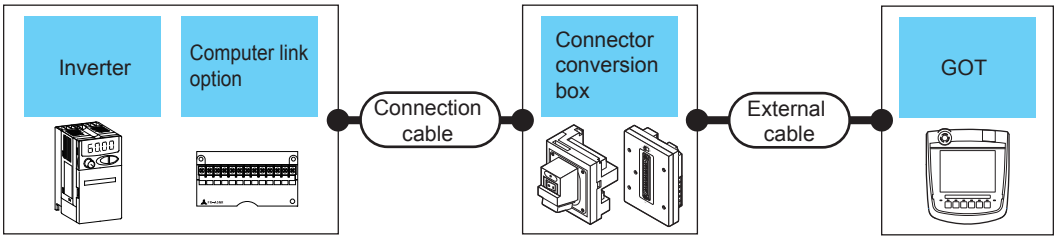
Connection to FR-A500(L), FR-F500(L), or FR-V500(L)

Communication driver

FREQROL 500/700/800, SENSORLESS SERVO

When connecting to one inverter

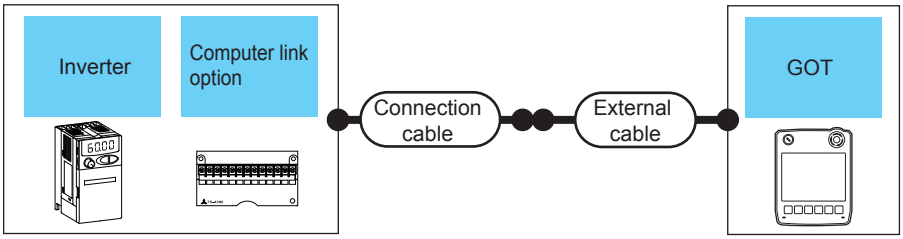
■When using the connector conversion box



Inverter			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Computer link option	Communication type	Connection diagram number					
FR-A5□0(L) FR-F5□0(L) FR-V5□0(L)	-	RS-485	User preparing Page 493 RS-485 connection diagram 1) *1	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 inverter
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
FR-A5□0(L) FR-F5□0(L) FR-V5□0(L)	FR-A5NR		User preparing Page 494 RS-485 connection diagram 3)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Connect to the PU port of the inverter.

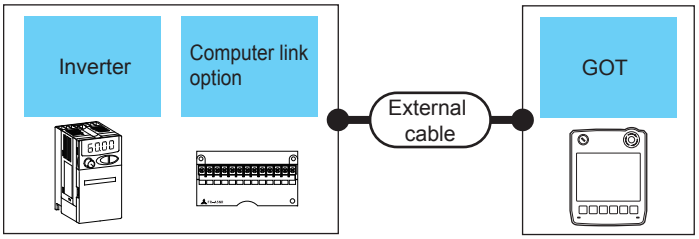
■When using the external cable (GT11H-C□□□-37P)



Inverter			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Computer link option	Communication type	Connection diagram number				
FR-A5□0(L) FR-F5□0(L) FR-V5□0(L)	-	RS-485	User preparing Page 493 RS-485 connection diagram 2) *1	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for 1 inverter
FR-A5□0(L) FR-F5□0(L) FR-V5□0(L)	FR-A5NR		User preparing Page 494 RS-485 connection diagram 4)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Connect to the PU port of the inverter.

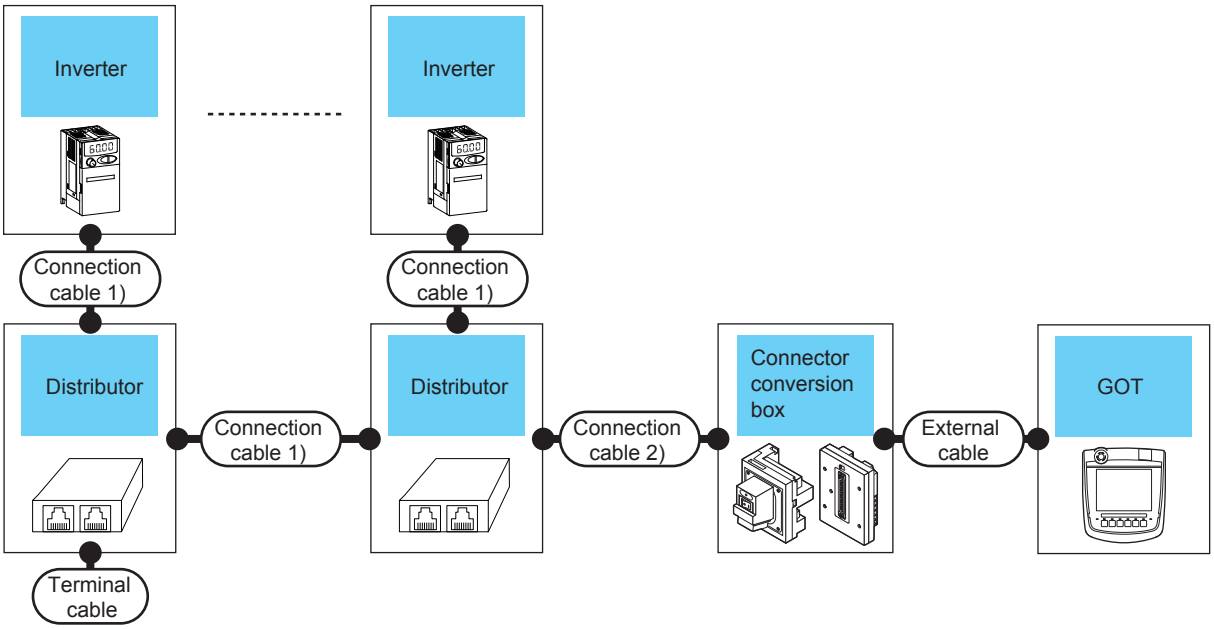
■When using the external cable (GT11H-C□□□)



Inverter			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Computer link option	Communication type				
FR-A5□0(L) FR-F5□0(L) FR-V5□0(L)	FR-A5NR	RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 494 RS-485 connection diagram 5)	GT 2505HS	13m	1 GOT for 1 inverter

When connecting to multiple inverters (Max. 31) (Using the distributor)

■When using the connector conversion box



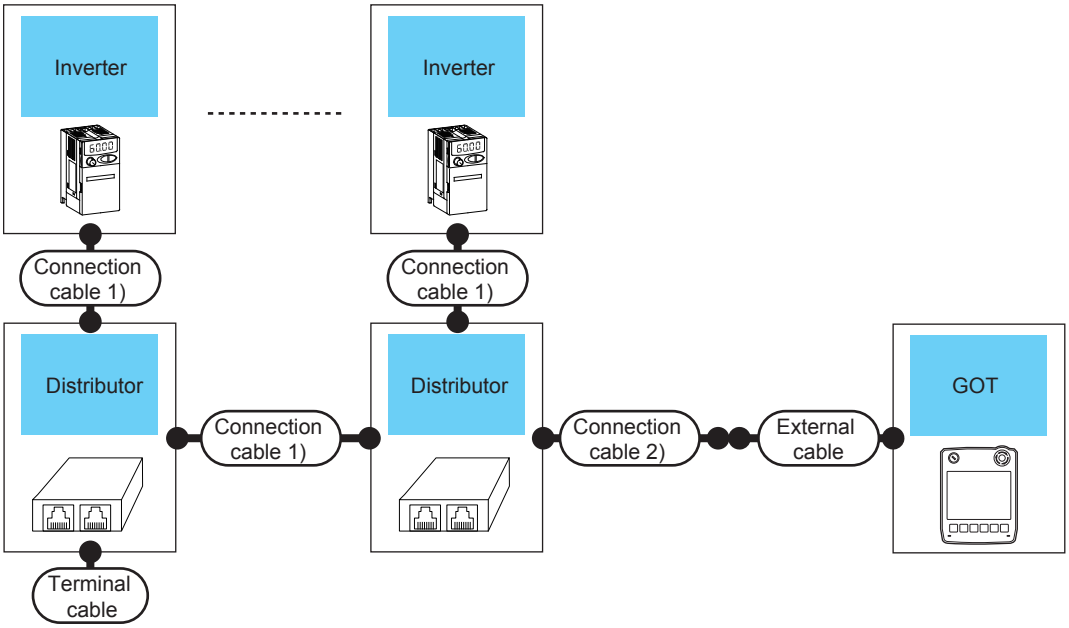
Inverter		Terminal cable	Connection cable 1)	Distributor*2	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name	Communication type		Connection diagram number	Model name	Connection diagram number					
FR-A5□0(L) FR-F5□0(L) FR-V5□0(L)	RS-485	User preparing Page 501 RS-485 connection diagram 22)	User preparing Page 495 RS-485 connection diagram 6) *1	BMJ-8 (Recommended)	User preparing Page 493 RS-485 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	31 inverters for one GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		10 inverters for one GOT

*1 Connect to the PU port of the inverter.

*2 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

*3 The distance from the GOT to the inverter (Connection cable 1) + Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)



Inverter		Terminal cable	Connection cable 1)	Distributor *2	Connection cable 2)	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name	Communication type		Connection diagram number	Model name	Connection diagram number				
FR-A5□0(L) FR-F5□0(L) FR-V5□0(L)	RS-485	User preparing Page 501 RS-485 connection diagram 22)	User preparing Page 495 RS-485 connection diagram 6) *1	BMJ-8 (Recommended)	User preparing Page 493 RS-485 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	10 inverters for one GOT

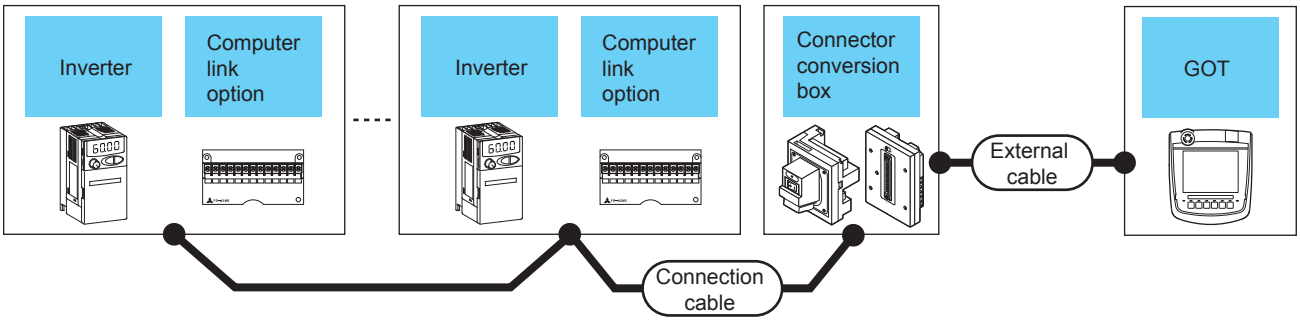
*1 Connect to the PU port of the inverter.

*2 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

*3 The distance from the GOT to the inverter (Connection cable 1) + Connection cable 2) + External cable)

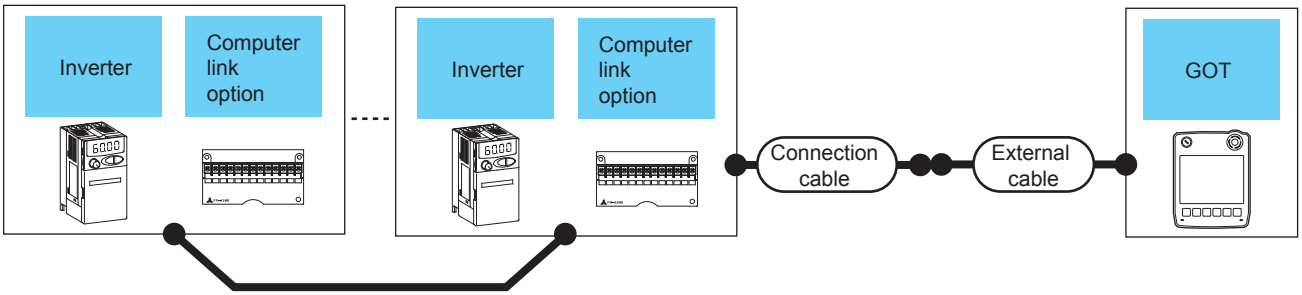
When connecting to multiple inverters (Max. 31) (Using the computer link option)

■When using the connector conversion box



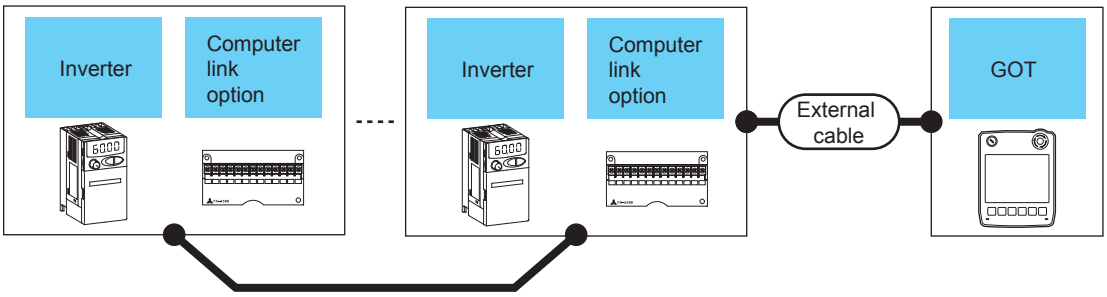
Inverter			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Computer link option	Communication type	Connection diagram number					
FR-A5□0(L) FR-F5□0(L) FR-V5□0(L)	FR-A5NR	RS-485	User preparing Page 495 RS-485 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	31 inverters for one GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		10 inverters for one GOT

■When using the external cable (GT11H-C□□□-37P)



Inverter			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Computer link option	Communication type	Connection diagram number				
FR-A5□0(L) FR-F5□0(L) FR-V5□0(L)	FR-A5NR	RS-485	User preparing Page 495 RS-485 connection diagram 8)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	10 inverters for one GOT

■When using the external cable (GT11H-C□□□)



Inverter			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Computer link option	Communication type				
FR-A5□0(L) FR-F5□0(L) FR-V5□0(L)	FR-A5NR	RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 496 RS-485 connection diagram 9)	GT 2505HS	13m	10 inverters for one GOT

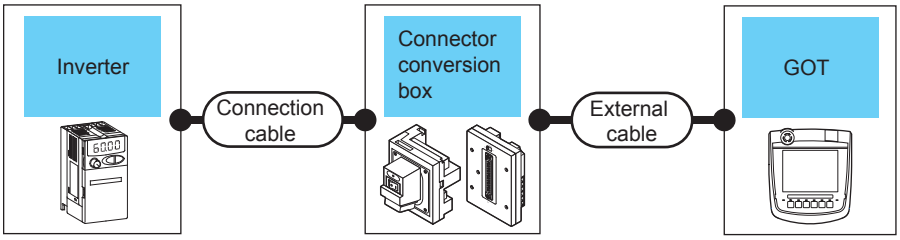
Connection to FR-E500, FR-S500(E), FR-F500J, FR-D700, or FR-F700PJ

Communication driver

FREQROL 500/700/800, SENSORLESS SERVO

When connecting to one inverter

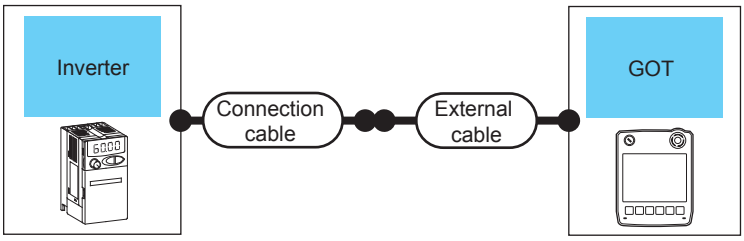
■When using the connector conversion box



Inverter		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Connection diagram number					
FR-E5□0(C) FR-E5□0S FR-E5□0W FR-S5□0(E)(-R)(-C) FR-S5□0S(E)(-R) FR-S5□0W(E)(-R) FR-F5□0J(F) FR-D7□0 FR-D7□0S FR-D7□0W FR-F7□0PJ(F)	RS-485	User preparing Page 493 RS-485 connection diagram 1) *1	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 inverter
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Connect to the PU port of the inverter.

■When using the external cable (GT11H-C□□□-37P)

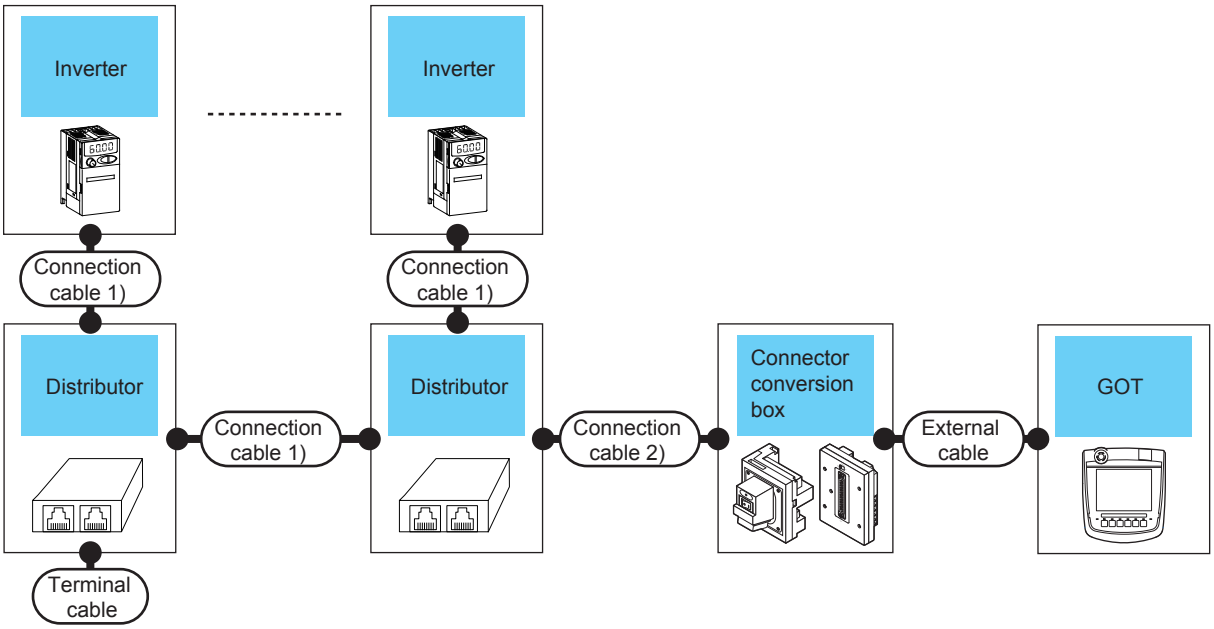


Inverter		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Connection diagram number					
FR-E5□0(C) FR-E5□0S FR-E5□0W FR-S5□0(E)(-R)(-C) FR-S5□0S(E)(-R) FR-S5□0W(E)(-R) FR-F5□0J(F) FR-D7□0 FR-D7□0S FR-D7□0W FR-F7□0PJ(F)	RS-485	User preparing Page 493 RS-485 connection diagram 2) *1	GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for 1 inverter

*1 Connect to the PU port of the inverter.

When connecting to multiple inverters (Max. 31) (Using the distributor)

■When using the connector conversion box



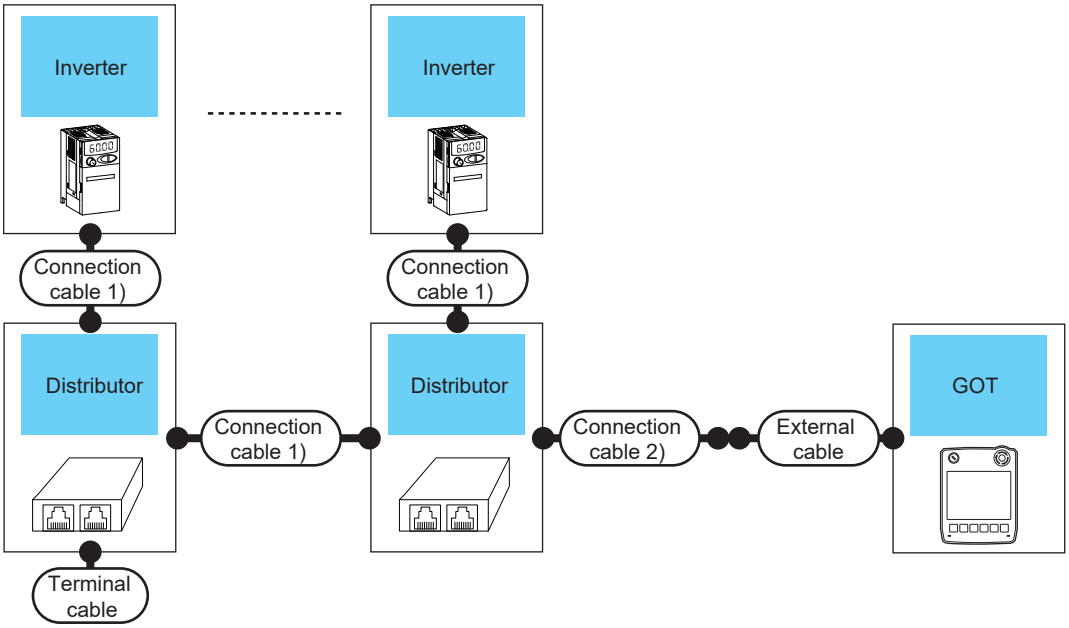
Inverter		Terminal cable	Connection cable 1)	Distributor*2	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name	Communication type		Connection diagram number	Model name	Connection diagram number					
FR-E5□0(C) FR-E5□0S FR-E5□0W FR-S5□0(E)(-R)(-C) FR-S5□0S(E)(-R) FR-S5□0W(E)(-R) FR-F5□0J(F) FR-D7□0 FR-D7□0S FR-D7□0W FR-F7□0PJ(F)	RS-485	User preparing Page 501 RS-485 connection diagram 22)	User preparing Page 495 RS-485 connection diagram 6) *1	BMJ-8 (Recommended)	User preparing Page 493 RS-485 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	31 inverters for one GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		10 inverters for one GOT

*1 Connect to the PU port of the inverter.

*2 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

*3 The distance from the GOT to the inverter (Connection cable 1) + Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)



Inverter		Terminal cable	Connection cable 1)	Distributor*2	Connection cable 2)	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name	Communication type		Connection diagram number	Model name	Connection diagram number				
FR-E5□0(C) FR-E5□0S FR-E5□0W FR-S5□0(E)(-R)(-C) FR-S5□0S(E)(-R) FR-S5□0W(E)(-R) FR-F5□0J(F) FR-D7□0 FR-D7□0S FR-D7□0W FR-F7□0PJ(F)	RS-485	User preparing Page 501 RS-485 connection diagram 22)	User preparing Page 495 RS-485 connection diagram 6) *1	BMJ-8 (Recommended)	User preparing Page 493 RS-485 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	10 inverters for one GOT

*1 Connect to the PU port of the inverter.

*2 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

*3 The distance from the GOT to the inverter (Connection cable 1) + Connection cable 2) + External cable)

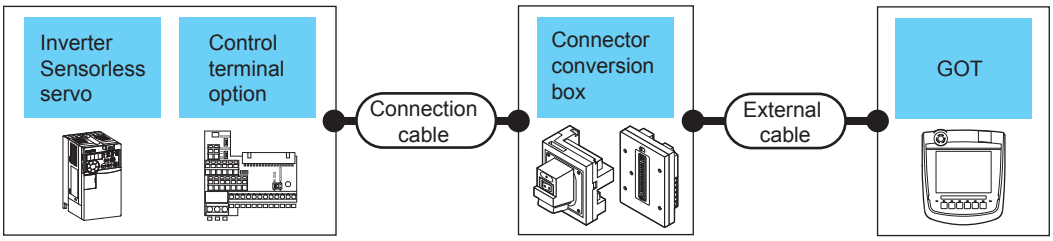
Connection to FR-E700 or sensorless servo (FR-E7□0EX)

Communication driver

FREQROL 500/700/800, SENSORLESS SERVO

When connecting to one inverter

■When using the connector conversion box

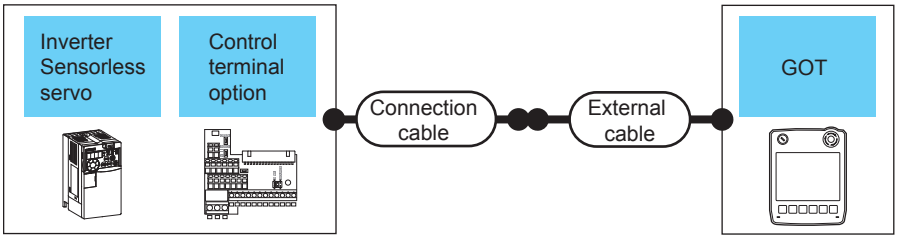


Inverter			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Control terminal option	Communication type	Connection diagram number					
FR-E7□0 FR-E7□0S FR-E7□0W FR-E7□0EX	-	RS-485	User preparing Page 493 RS-485 connection diagram 1) *1	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 inverter
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
FR-E7□0 FR-E7□0S FR-E7□0W FR-E7□0EX	FR-E7TR*2		User preparing Page 499 RS-485 connection diagram 16)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Connect to the PU port of the inverter.

*2 The control terminal option and the PU port cannot be used at the same time.

■When using the external cable (GT11H-C□□□-37P)

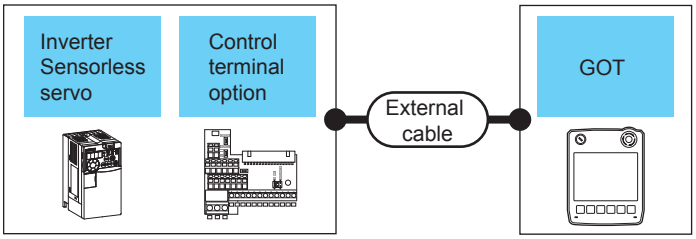


Inverter			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Control terminal option	Communication type	Connection diagram number				
FR-E7□0 FR-E7□0S FR-E7□0W FR-E7□0EX	-	RS-485	User preparing Page 493 RS-485 connection diagram 2) *1	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for 1 inverter
FR-E7□0 FR-E7□0S FR-E7□0W FR-E7□0EX	FR-E7TR*2		User preparing Page 499 RS-485 connection diagram 17)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Connect to the PU port of the inverter.

*2 The control terminal option and the PU port cannot be used at the same time.

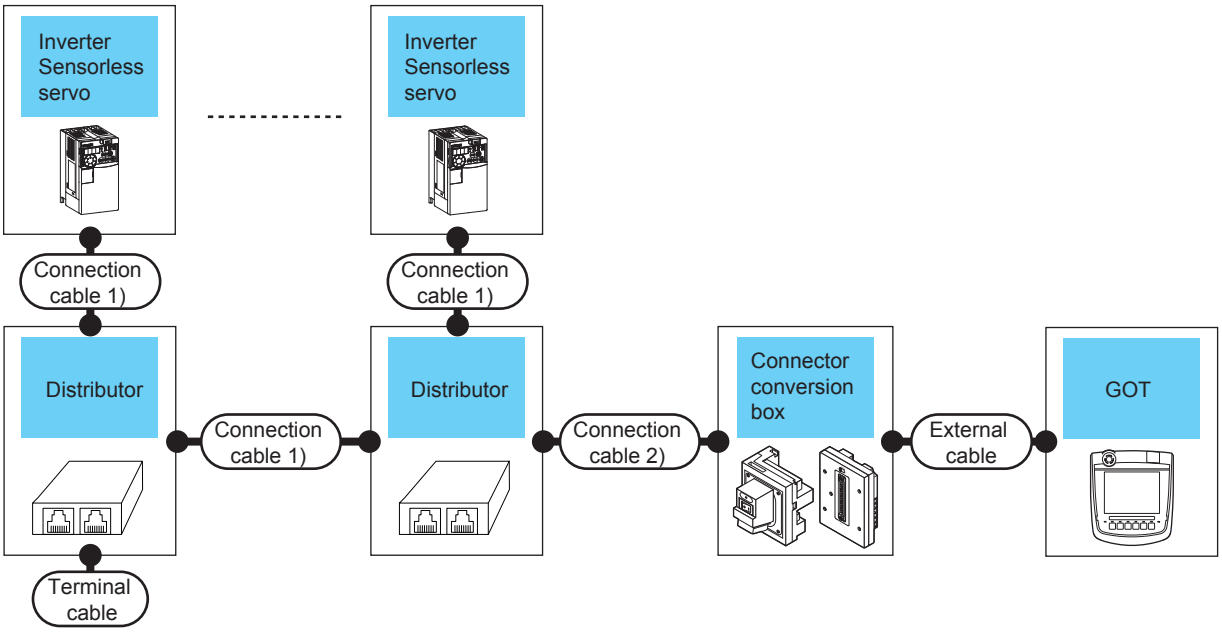
■When using the external cable (GT11H-C□□□)



Inverter			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Control terminal option	Communication type				
FR-E7□0 FR-E7□0S FR-E7□0W FR-E7□0EX	FR-E7TR	RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 500 RS-485 connection diagram 18)	GT 2505HS	13m	1 GOT for 1 inverter

When connecting to multiple inverters (Max. 31) (Using the distributor)

■When using the connector conversion box



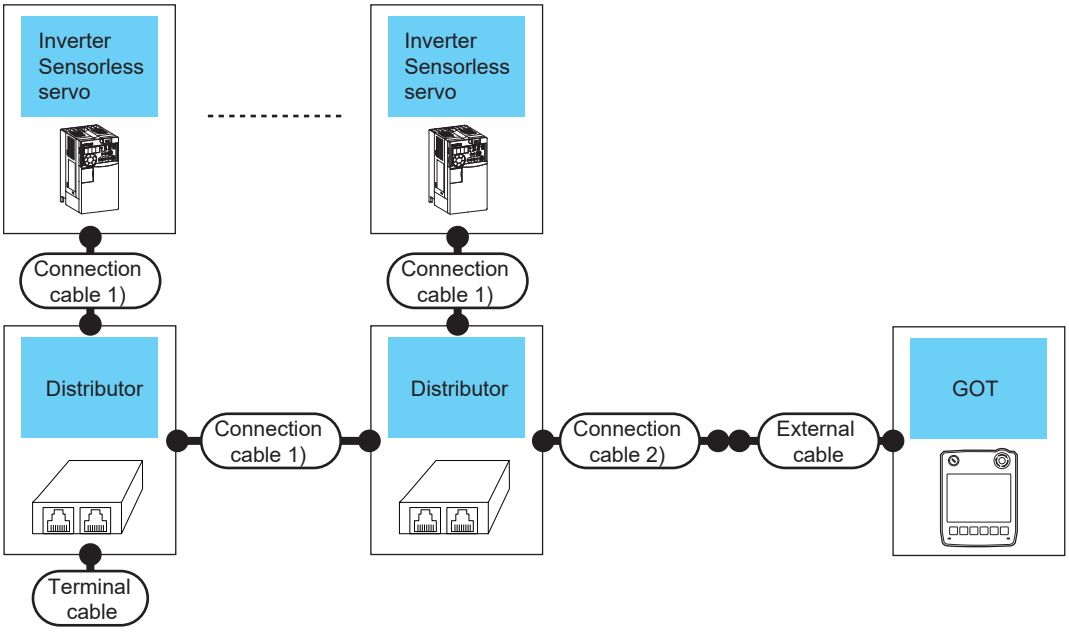
Inverter		Terminating cable	Connection cable 1)	Distributor*2	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name	Communication type		Connection diagram number	Model name	Connection diagram number					
FR-E7□0 FR-E7□0S FR-E7□0W FR-E7□0EX	RS-485	(User preparing) Page 501 RS-485 connection diagram 22)	(User preparing) Page 495 RS-485 connection diagram 6) *1	BMJ-8 (Recommended)	(User preparing) Page 493 RS-485 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	31 inverters for one GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		10 inverters for one GOT

*1 Connect to the PU port of the inverter.

*2 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

*3 The distance from the GOT to the inverter (Connection cable 1) + Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)



Inverter		Terminating cable	Connection cable 1)	Distributor*2	Connection cable 2)	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name	Communication type		Connection diagram number	Model name	Connection diagram number				
FR-E7□0 FR-E7□0S FR-E7□0W FR-E7□0EX	RS-485	User preparing Page 501 RS-485 connection diagram 22)	User preparing Page 495 RS-485 connection diagram 6) *1	BMJ-8 (Recommended)	User preparing Page 493 RS-485 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	10 inverters for one GOT

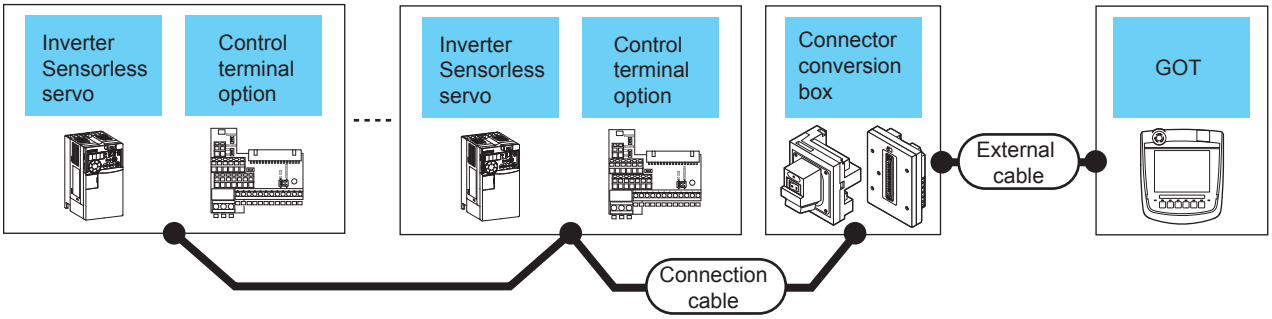
*1 Connect to the PU port of the inverter.

*2 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

*3 The distance from the GOT to the inverter (Connection cable 1) + Connection cable 2) + External cable)

When connecting to multiple inverters (Max. 31) (Using the control terminal option)

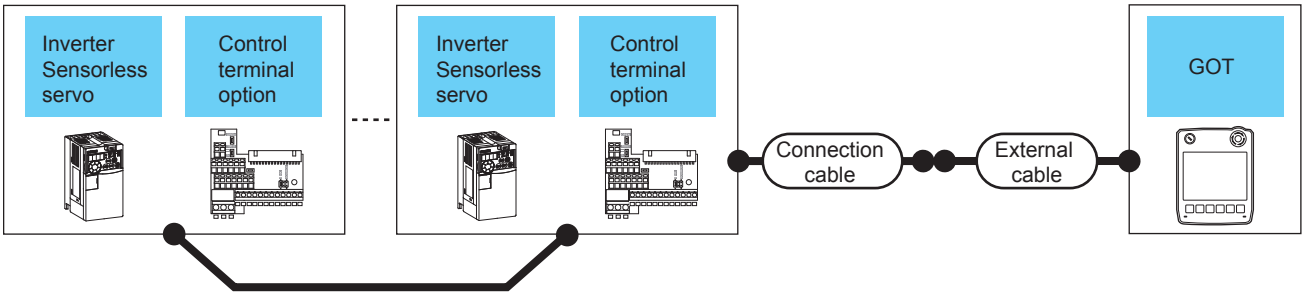
■When using the connector conversion box



Inverter			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Control terminal option	Communication type	Connection diagram number					
FR-E7□0 FR-E7□0S FR-E7□0W FR-E7□0EX	FR-E7TR*1	RS-485	User preparing Page 500 RS-485 connection diagram 19)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	31 inverters for one GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		10 inverters for one GOT

*1 The control terminal option and the PU port cannot be used at the same time.

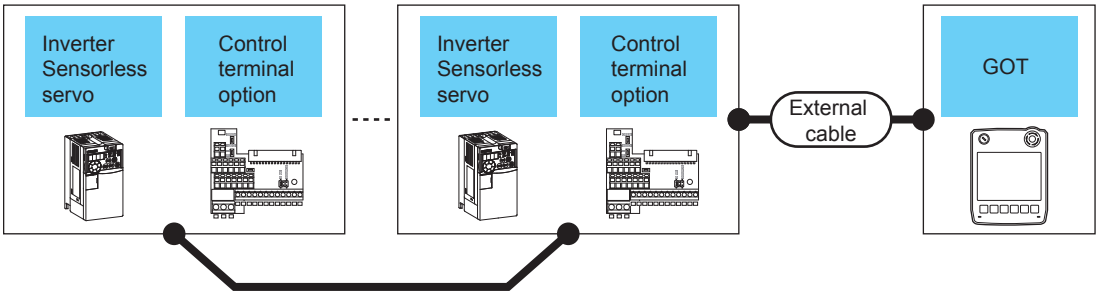
■When using the external cable (GT11H-C□□□-37P)



Inverter			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Control terminal option	Communication type	Connection diagram number				
FR-E7□0 FR-E7□0S FR-E7□0W FR-E7□0EX	FR-E7TR*1	RS-485	User preparing Page 501 RS-485 connection diagram 20)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	10 inverters for one GOT

*1 The control terminal option and the PU port cannot be used at the same time.

■When using the external cable (GT11H-C□□□)



Inverter			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Control terminal option	Communication type				
FR-E7□0 FR-E7□0S FR-E7□0W FR-E7□0EX	FR-E7TR*1	RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 501 RS-485 connection diagram 21)	GT 2505HS	13m	10 inverters for one GOT

*1 The control terminal option and the PU port cannot be used at the same time.

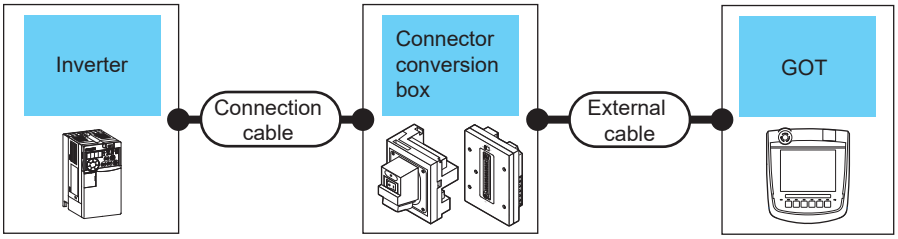
Connection to FR-A700, FR-F700, or FR-F700P

Communication driver

FREQROL 500/700/800, SENSORLESS SERVO

When connecting to one inverter

■When using the connector conversion box



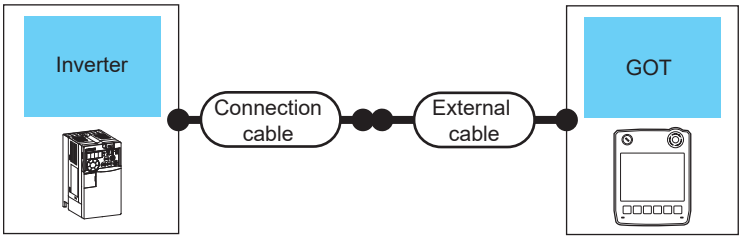
Inverter		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name*1	Communication type	Connection diagram number					
FR-A7□0 FR-F7□0 FR-F7□0P	RS-485	User preparing Page 493 RS-485 connection diagram 1) *2	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 inverter
	RS-485		GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
FR-A7□0 FR-F7□0 FR-F7□0P	RS-485	User preparing Page 496 RS-485 connection diagram 10) *3	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 inverter
	RS-485		GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 The GOT supports the FR-B, B3 series (explosion-proof type of FR-A700 series).

*2 Connect to the PU port of the inverter.

*3 Connect to the RS-485 terminal block of the inverter.

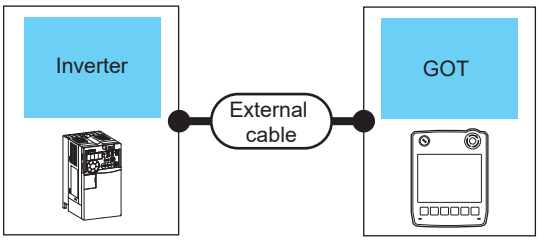
■When using the external cable (GT11H-C□□□-37P)



Inverter		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name*1	Communication type	Connection diagram number				
FR-A7□0 FR-F7□0 FR-F7□0P	RS-485	User preparing Page 493 RS-485 connection diagram 2) *2	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for 1 inverter
FR-A7□0 FR-F7□0 FR-F7□0P	RS-485	User preparing Page 497 RS-485 connection diagram 11) *3	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 The GOT supports the FR-B, B3 series (explosion-proof type of FR-A700 series).
*2 Connect to the PU port of the inverter.
*3 Connect to the RS-485 terminal block of the inverter.

■When using the external cable (GT11H-C□□□)

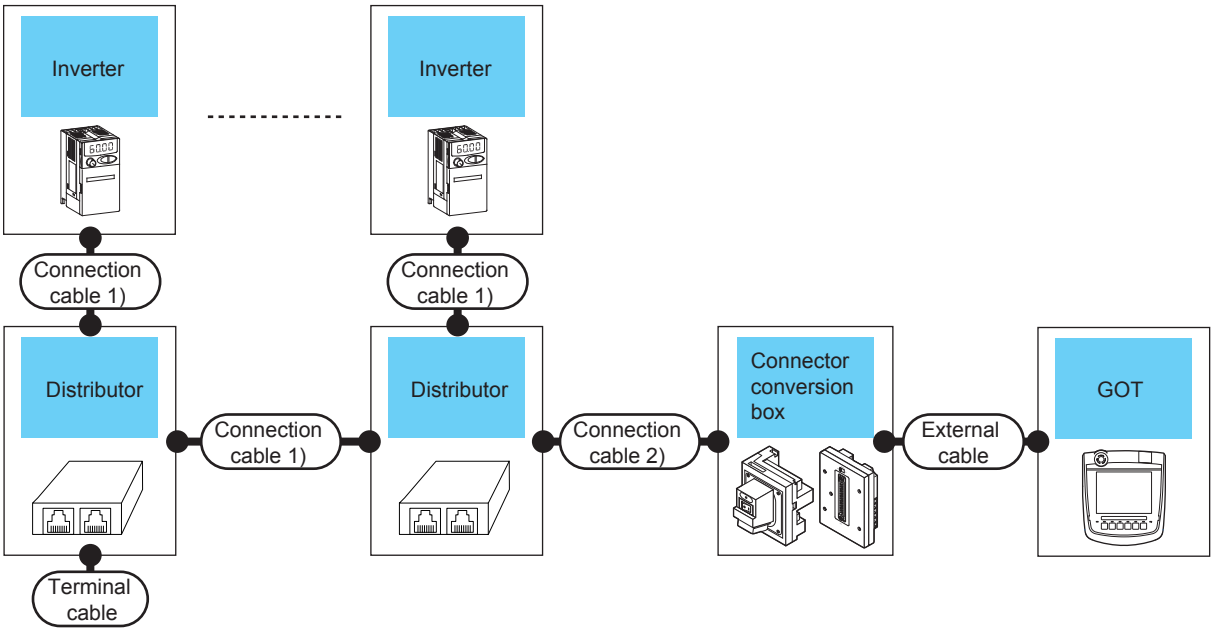


Inverter		External cable *2	GOT Model	Total distance	Number of connectable equipment
Model name*1	Communication type				
FR-A7□0 FR-F7□0 FR-F7□0P	RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 497 RS-485 connection diagram 12)	GT 2505HS	13m	1 GOT for 1 inverter

*1 The GOT supports the FR-B, B3 series (explosion-proof type of FR-A700 series).
*2 Connect to the RS-485 terminal block of the inverter.

When connecting to multiple inverters (Max. 31) (Using the distributor)

■When using the connector conversion box



Inverter		Terminal cable	Connection cable 1)	Distributor *1	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name *2	Communication type		Connection diagram number	Model name	Connection diagram number					
FR-A7□0 FR-F7□0 FR-F7□0P	RS-485	User preparing Page 501 RS-485 connection diagram 22)	User preparing Page 495 RS-485 connection diagram 6) *4	BMJ-8 (Recommended)	User preparing Page 493 RS-485 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	31 inverters for one GOT
	RS-485					GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		10 inverters for one GOT

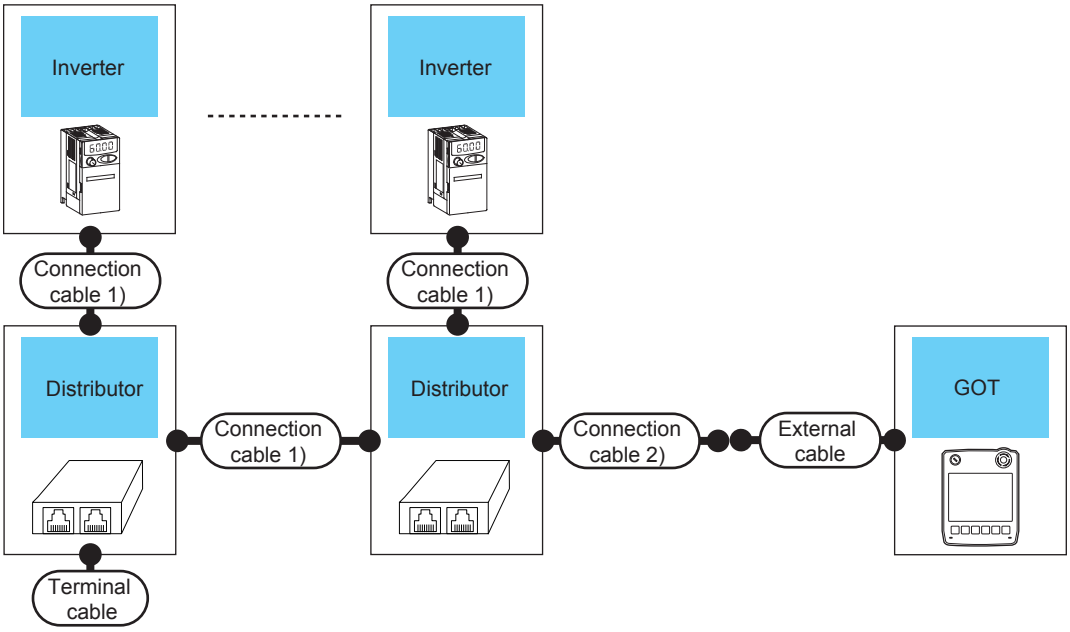
*1 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

*2 The GOT supports the FR-B, B3 series (explosion-proof type of FR-A700 series).

*3 The distance from the GOT to the inverter (Connection cable 1) + Connection cable 2) + External cable)

*4 Connect to the PU port of the inverter.

■When using the external cable (GT11H-C□□□-37P)



Inverter		Terminal cable	Connection cable 1)	Distributor *1	Connection cable 2)	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name*2	Communication type		Connection diagram number	Model name	Connection diagram number				
FR-A7□0 FR-F7□0 FR-F7□0P	RS-485	User preparing Page 501 RS-485 connection diagram 22)	User preparing Page 495 RS-485 connection diagram 6) *4	BMJ-8 (Recommended)	User preparing Page 493 RS-485 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	10 inverters for one GOT

*1 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

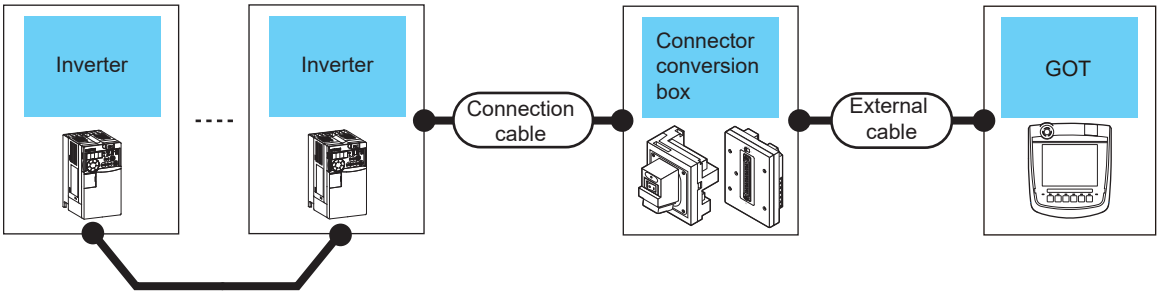
*2 The GOT supports the FR-B, B3 series (explosion-proof type of FR-A700 series).

*3 The distance from the GOT to the inverter (Connection cable 1) + Connection cable 2) + External cable)

*4 Connect to the PU port of the inverter.

When connecting to multiple inverters (Max. 31) (Using the built-in RS485 terminal block)

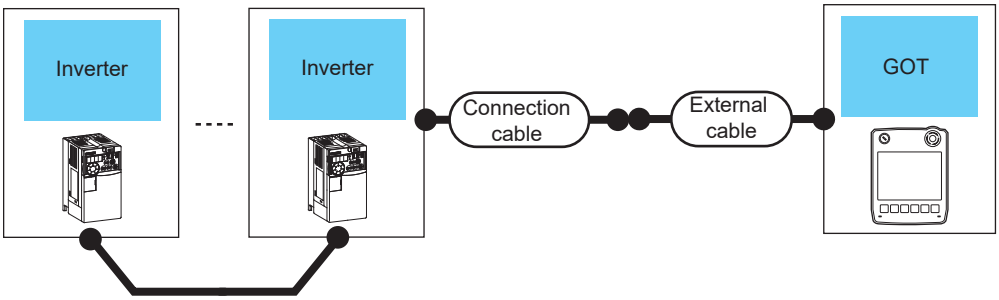
■When using the connector conversion box



Inverter		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name*1	Communication type	Connection diagram number					
FR-A7□0 FR-F7□0 FR-F7□0P	RS-485	User preparing Page 498 RS-485 connection diagram 13) *2	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	31 inverters for one GOT
	RS-485		GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	10 inverters for one GOT

*1 The GOT supports the FR-B, B3 series (explosion-proof type of FR-A700 and FR-A800 series).
*2 Connect to the RS-485 terminal block of the inverter.

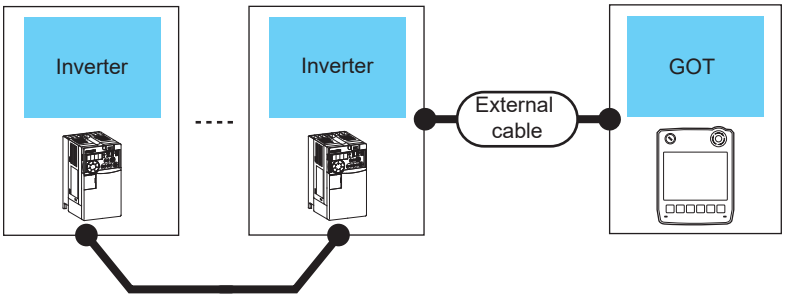
■When using the external cable (GT11H-C□□□-37P)



Inverter		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Connection diagram number				
FR-A7□0 FR-F7□0 FR-F7□0P	RS-485	User preparing Page 498 RS-485 connection diagram 14) *1	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	10 inverters for one GOT

*1 Connect to the RS-485 terminal block of the inverter.

■When using the external cable (GT11H-C□□□)



Inverter		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type				
FR-A7□0 FR-F7□0 FR-F7□0P	RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 499 RS-485 connection diagram 15)	GT 2505HS	13m	10 inverters for one GOT

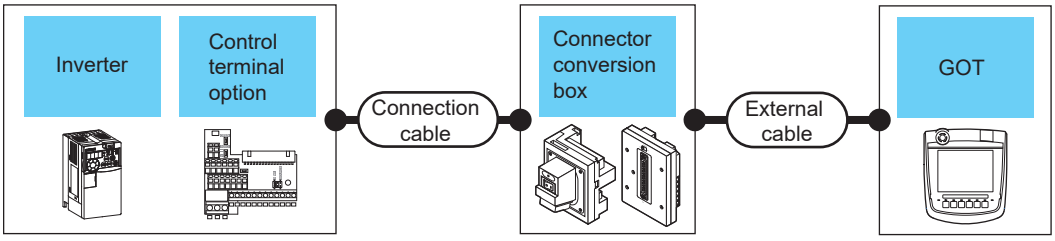
Connection to FR-A800, FR-A800 Plus, FR-F800, FR-E800, or FR-D800

Communication driver	Communication driver	Communication driver
FREQROL 500/700/800, SENSORLESS SERVO	FREQROL 800	FREQROL(Batch monitor)

(For automatic connection, Using the PLC function)

When connecting to one inverter

■When using the connector conversion box

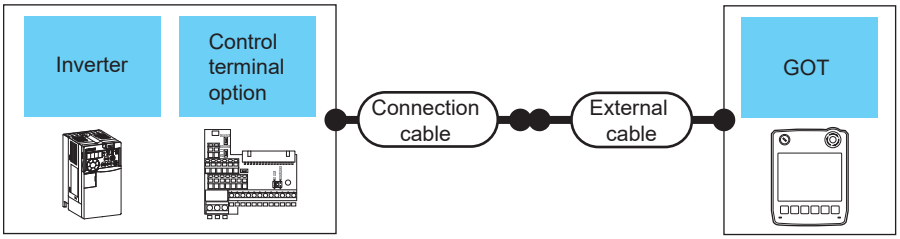


Inverter			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name*1	Control terminal option	Communication type	Connection diagram number					
FR-A8□0 FR-A8□2 FR-A8□6 FR-A8□0-E FR-A8□2-E FR-A8□6-E FR-A8□0-GF FR-A8□2-GF FR-A8□0-GN FR-A8□2-GN FR-A8□0-CRN FR-A8□2-CRN FR-A8□0-E-CRN FR-A8□2-E-CRN FR-A8□0-R2R FR-A8□2-R2R FR-A8□0-E-R2R FR-A8□2-E-R2R FR-A8□0-AWH FR-A8□0-E-AWH FR-A8□0-LC FR-A8□0-E-LC FR-F8□0 FR-F8□2 FR-F8□6 FR-F8□0-E FR-F8□2-E FR-E8□0 FR-D8□0	-	RS-485	User preparing Page 493 RS-485 connection diagram 1) *3	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 inverter
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

Inverter			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name*1	Control terminal option	Communication type	Connection diagram number					
FR-A8□0 FR-A8□2 FR-A8□6 FR-A8□0-GN FR-A8□2-GN FR-A8□0-CRN FR-A8□2-CRN FR-A8□0-R2R FR-A8□2-R2R FR-A8□0-AWH FR-A8□0-LC FR-F8□0 FR-F8□2 FR-F8□6 FR-D8□0	-	RS-485	User preparing Page 496 RS-485 connection diagram 10) *4	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 inverter
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
FR-A8□0-E FR-A8□2-E FR-A8□6-E	A8ERS*2	RS-485	User preparing Page 496 RS-485 connection diagram 10)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 inverter
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 The GOT supports the FR-B, B3 series (explosion-proof type of FR-A800 series).
*2 The control terminal option and the PU port cannot be used at the same time.
*3 Connect to the PU port of the inverter.
*4 Connect to the RS-485 terminal block of the inverter.

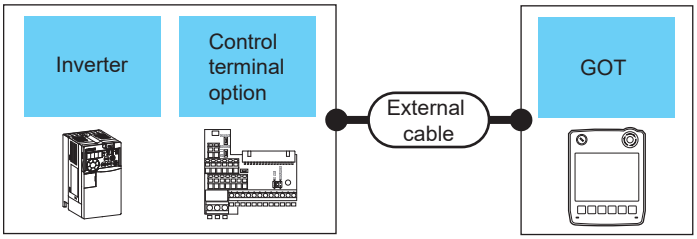
■When using the external cable (GT11H-C□□□-37P)



Inverter			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name*1	Control terminal option	Communication type	Connection diagram number				
FR-A8□0 FR-A8□2 FR-A8□6 FR-A8□0-E FR-A8□2-E FR-A8□6-E FR-A8□0-GF FR-A8□2-GF FR-A8□0-GN FR-A8□2-GN FR-A8□0-CRN FR-A8□2-CRN FR-A8□0-E-CRN FR-A8□2-E-CRN FR-A8□0-R2R FR-A8□2-R2R FR-A8□0-E-R2R FR-A8□2-E-R2R FR-A8□0-AWH FR-A8□0-E-AWH FR-A8□0-LC FR-A8□0-E-LC FR-F8□0 FR-F8□2 FR-F8□6 FR-F8□0-E FR-F8□2-E FR-E8□0 FR-D8□0	-	RS-485	User preparing Page 493 RS-485 connection diagram 2) *3	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for 1 inverter
FR-A8□0 FR-A8□2 FR-A8□6 FR-A8□0-GN FR-A8□2-GN FR-A8□0-CRN FR-A8□2-CRN FR-A8□0-R2R FR-A8□2-R2R FR-A8□0-AWH FR-A8□0-LC FR-F8□0 FR-F8□2 FR-F8□6 FR-D8□0	-		User preparing Page 497 RS-485 connection diagram 11) *4	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
FR-A8□0-E FR-A8□2-E FR-A8□6-E	A8ERS*2		User preparing Page 497 RS-485 connection diagram 11)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 The GOT supports the FR-B, B3 series (explosion-proof type of FR-A800 series).
*2 The control terminal option and the PU port cannot be used at the same time.
*3 Connect to the PU port of the inverter.
*4 Connect to the RS-485 terminal block of the inverter.

■When using the external cable (GT11H-C□□□)

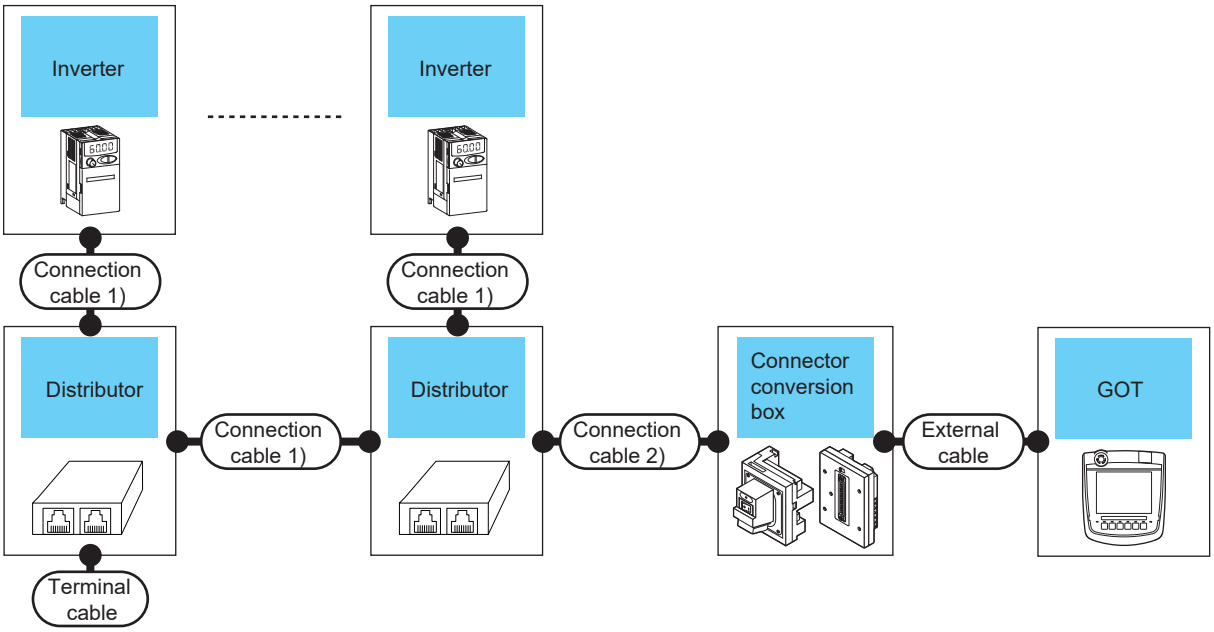


Inverter			External cable *3	GOT Model	Total distance	Number of connectable equipment
Model name*1	Control terminal option	Communication type				
FR-A8□0 FR-A8□2 FR-A8□6 FR-A8□0-GN FR-A8□2-GN FR-A8□0-CRN FR-A8□2-CRN FR-A8□0-R2R FR-A8□2-R2R FR-A8□0-AWH FR-A8□0-LC FR-F8□0 FR-F8□2 FR-F8□6 FR-D8□0	-	RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 497 RS-485 connection diagram 12)	GT 2505HS	13m	1 GOT for 1 inverter
FR-A8□0-E FR-A8□2-E FR-A8□6-E	A8ERS*2		GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 497 RS-485 connection diagram 12)	GT 2505HS		

*1 The GOT supports the FR-B, B3 series (explosion-proof type of FR-A800 series).
*2 The control terminal option and the PU port cannot be used at the same time.
*3 Connect to the RS-485 terminal block of the inverter.

When connecting to multiple inverters (Max. 31) (Using the distributor)

■When using the connector conversion box



Inverter		Terminal cable	Connection cable 1)	Distributor *1	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name *2	Communication type		Connection diagram number	Model name	Connection diagram number					
FR-A8□0 FR-A8□2 FR-A8□6 FR-A8□0-E FR-A8□2-E FR-A8□6-E FR-A8□0-GF FR-A8□2-GF FR-A8□0-GN FR-A8□2-GN FR-A8□0-CRN FR-A8□2-CRN FR-A8□0-E-CRN FR-A8□2-E-CRN FR-A8□0-R2R FR-A8□2-R2R FR-A8□0-E-R2R FR-A8□2-E-R2R FR-A8□0-AWH FR-A8□0-E-AWH FR-A8□0-LC FR-A8□0-E-LC FR-F8□0 FR-F8□2 FR-F8□6 FR-F8□0-E FR-F8□2-E FR-E8□0 FR-D8□0	RS-485	User preparing Page 501 RS-485 connection diagram 22)	User preparing Page 495 RS-485 connection diagram 6) *4	BMJ-8 (Recommended)	User preparing Page 493 RS-485 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	31 inverters for one GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		10 inverters for one GOT

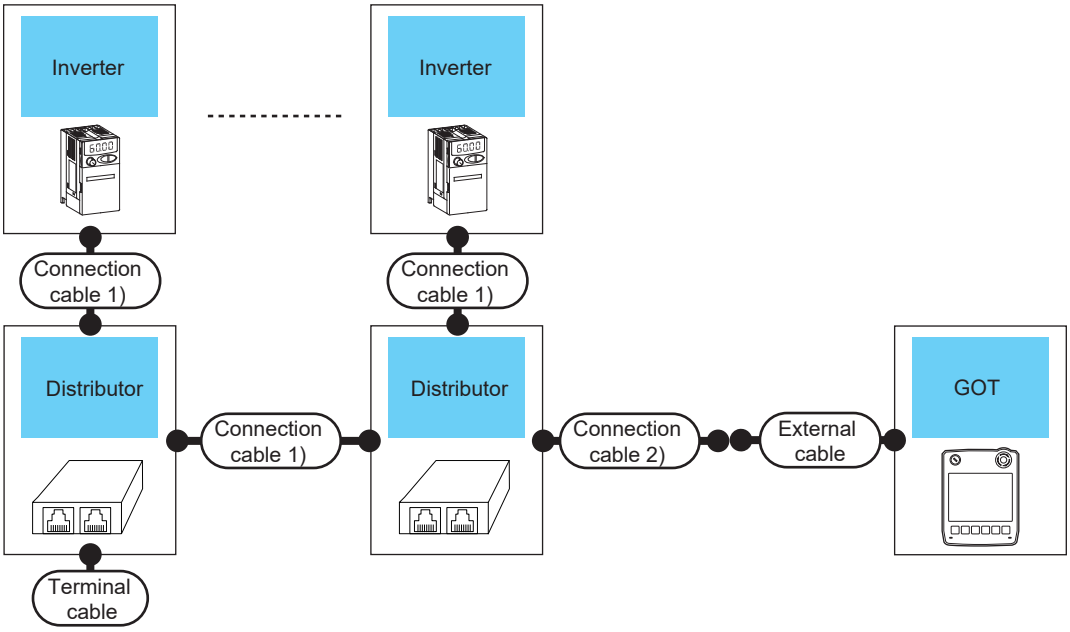
*1 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

*2 The GOT supports the FR-B, B3 series (explosion-proof type of FR-A800 series).

*3 The distance from the GOT to the inverter (Connection cable 1) + Connection cable 2) + External cable)

*4 Connect to the PU port of the inverter.

■When using the external cable (GT11H-C□□□-37P)



Inverter		Terminal cable	Connection cable 1)	Distributor *1	Connection cable 2)	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name *2	Communication type		Connection diagram number	Model name	Connection diagram number				
FR-A8□0 FR-A8□2 FR-A8□6 FR-A8□0-E FR-A8□2-E FR-A8□6-E FR-A8□0-GF FR-A8□2-GF FR-A8□0-GN FR-A8□2-GN FR-A8□0-CRN FR-A8□2-CRN FR-A8□0-E-CRN FR-A8□2-E-CRN FR-A8□0-R2R FR-A8□2-R2R FR-A8□0-E-R2R FR-A8□2-E-R2R FR-A8□0-AWH FR-A8□0-E-AWH FR-A8□0-LC FR-A8□0-E-LC FR-F8□0 FR-F8□2 FR-F8□6 FR-F8□0-E FR-F8□2-E FR-E8□0 FR-D8□0	RS-485	User preparing Page 501 RS-485 connection diagram 22)	User preparing Page 495 RS-485 connection diagram 6) *4	BMJ-8 (Recommended)	User preparing Page 493 RS-485 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	10 inverters for one GOT

*1 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

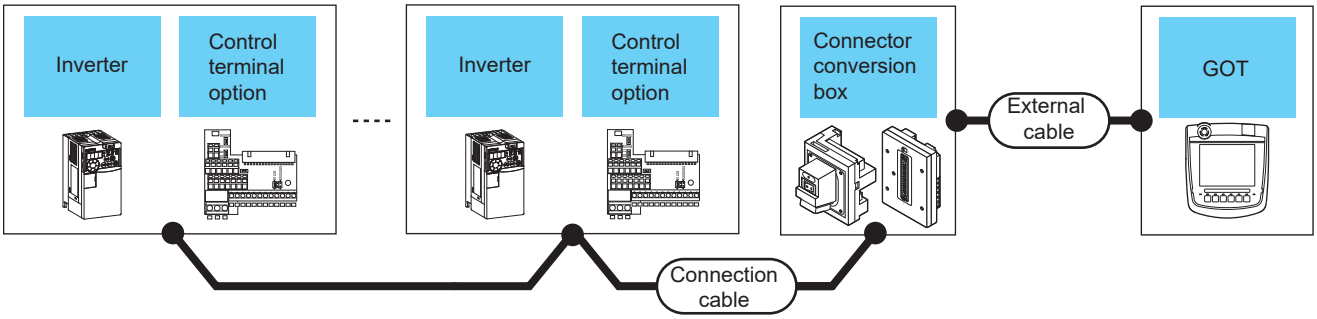
*2 The GOT supports the FR-B, B3 series (explosion-proof type of FR-A800 series).

*3 The distance from the GOT to the inverter (Connection cable 1) + Connection cable 2) + External cable)

*4 Connect to the PU port of the inverter.

When connecting to multiple inverters (Max. 31) (Using the built-in RS485 terminal block)

■When using the connector conversion box

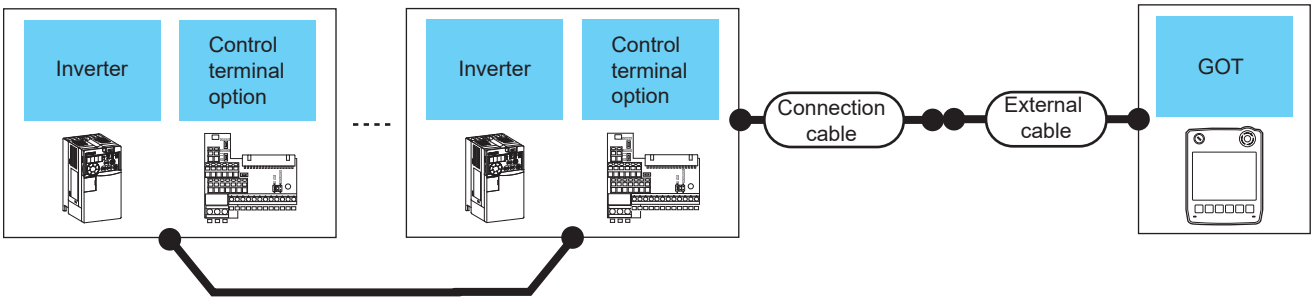


Inverter			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name*1	Control terminal option	Communication type	Connection diagram number					
FR-A8□0 FR-A8□2 FR-A8□6 FR-A8□0-GN FR-A8□2-GN FR-A8□0-CRN FR-A8□2-CRN FR-A8□0-R2R FR-A8□2-R2R FR-A8□0-AWH FR-A8□0-LC FR-F8□0 FR-F8□2 FR-F8□6 FR-D8□0	-	RS-485	User preparing Page 498 RS-485 connection diagram 13) *2	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	31 inverters for one GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	10 inverters for one GOT
FR-A8□0-E FR-A8□2-E FR-A8□6-E	A8ERS	RS-485	User preparing Page 498 RS-485 connection diagram 13) *2	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	31 inverters for one GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	10 inverters for one GOT

*1 The GOT supports the FR-B, B3 series (explosion-proof type of FR-A800 series).

*2 Connect to the RS-485 terminal block of the inverter.

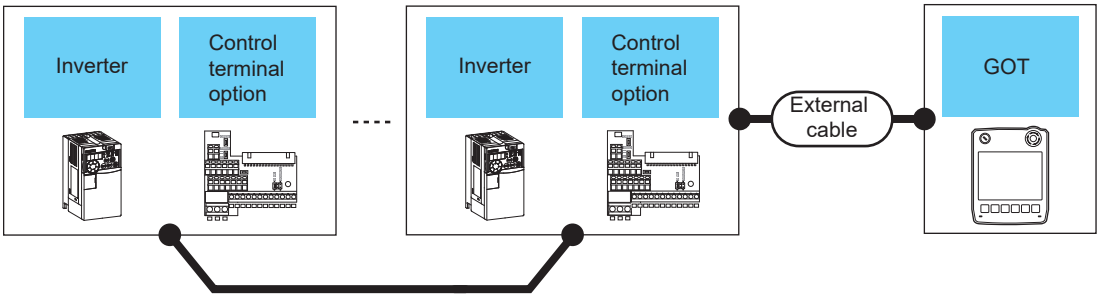
■When using the external cable (GT11H-C□□□-37P)



Inverter			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Control terminal option	Communication type	Connection diagram number				
FR-A8□0-E FR-A8□2-E FR-A8□6-E	A8ERS	RS-485	User preparing Page 498 RS-485 connection diagram 14) *1	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	10 inverters for one GOT

*1 Connect to the RS-485 terminal block of the inverter.

■When using the external cable (GT11H-C□□□)



Inverter			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Control terminal option	Communication type				
FR-A8□0-E FR-A8□2-E FR-A8□6-E	A8ERS	RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 499 RS-485 connection diagram 15)	GT 2505HS	13m	10 inverters for one GOT

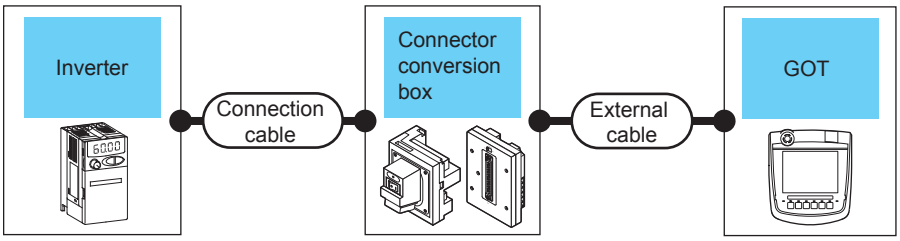
Connection to MELIPM

Communication driver

FREQROL 500/700/800, SENSORLESS SERVO

When connecting to one inverter

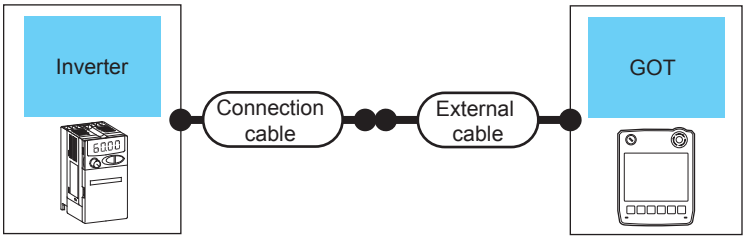
■When using the connector conversion box



Inverter		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Connection diagram number					
MD-CX522-□K(-A0)	RS-485	User preparing Page 493 RS-485 connection diagram 1) *1	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 inverter
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Connect to the PU port of the inverter.

■When using the external cable (GT11H-C□□□-37P)

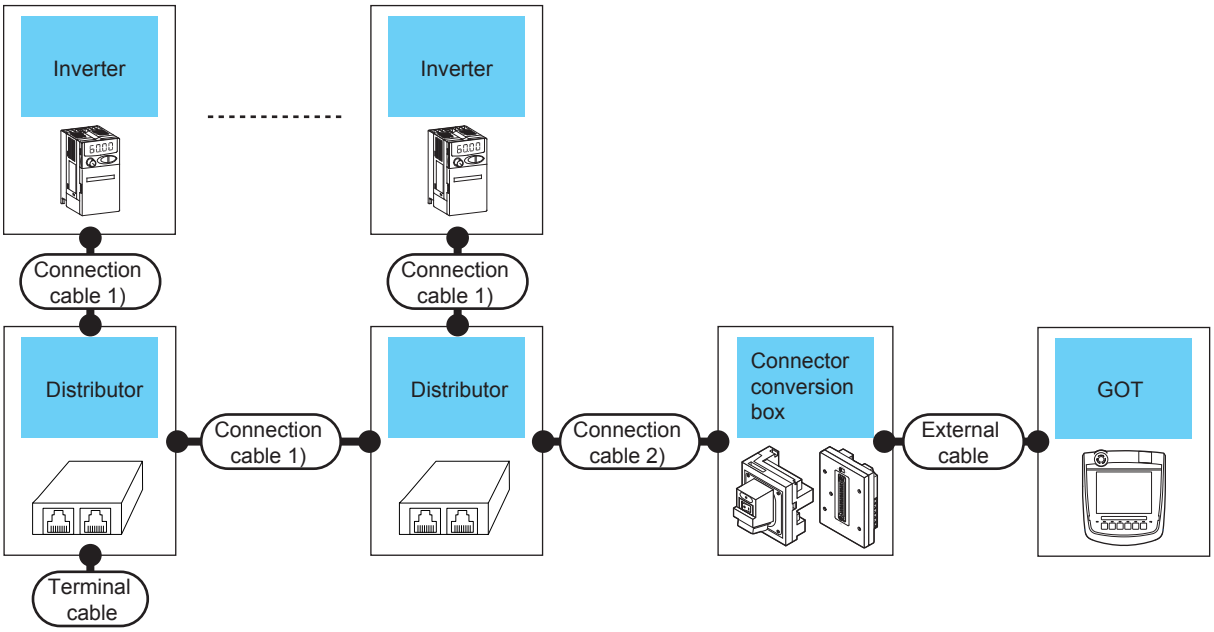


Inverter		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Connection diagram number				
MD-CX522-□K(-A0)	RS-485	User preparing Page 493 RS-485 connection diagram 2) *1	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for 1 inverter

*1 Connect to the PU port of the inverter.

When connecting to multiple inverters (Max. 31) (Using the distributor)

■When using the connector conversion box



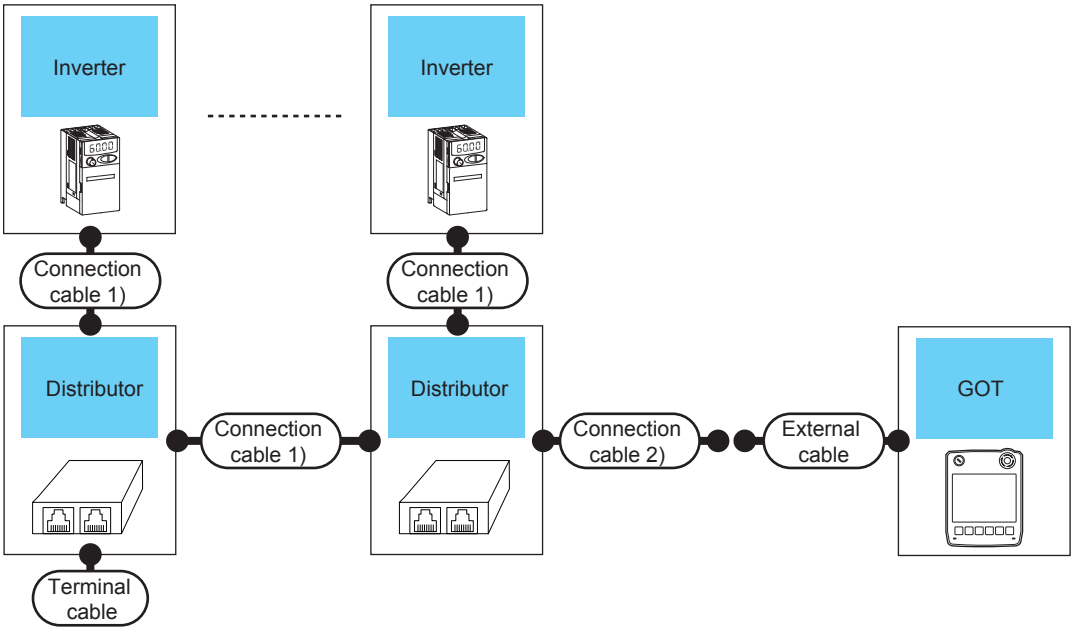
Inverter		Terminating cable	Connection cable 1)	Distributor *2	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name	Communication type		Connection diagram number	Model name	Connection diagram number					
MD-CX522-□K(-A0)	RS-485	User preparing Page 501 RS-485 connection diagram 22)	User preparing Page 495 RS-485 connection diagram 6) *1	BMJ-8 (Recommended)	User preparing Page 493 RS-485 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	31 inverters for one GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		10 inverters for one GOT

*1 Connect to the PU port of the inverter.

*2 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

*3 The distance from the GOT to the inverter (Connection cable 1) + Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)



Inverter		Terminating cable	Connection cable 1)	Distributor *2	Connection cable 2)	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name	Communication type		Connection diagram number	Model name	Connection diagram number				
MD-CX522-□K(-A0)	RS-485	User preparing Page 501 RS-485 connection diagram 22)	User preparing Page 495 RS-485 connection diagram 6) *1	BMJ-8 (Recommended)	User preparing Page 493 RS-485 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	10 inverters for one GOT

*1 Connect to the PU port of the inverter.

*2 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

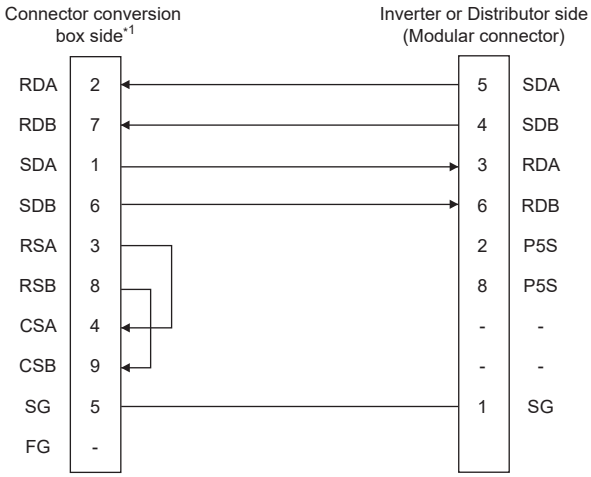
*3 The distance from the GOT to the inverter (Connection cable 1) + Connection cable 2) + External cable)

Connection diagram

The following diagram shows the connection between the GOT and the inverter.

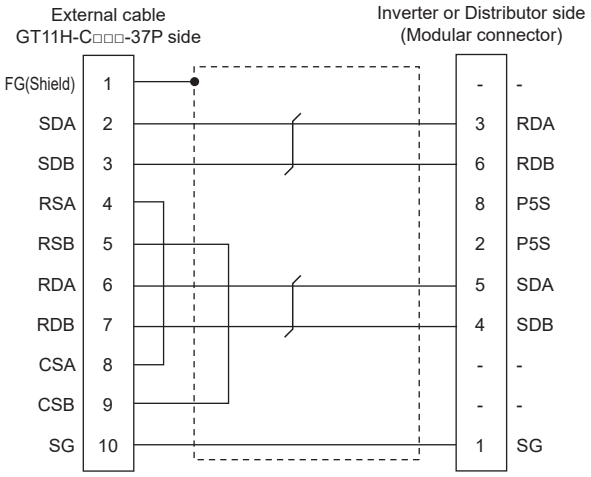
RS-485 cable

■RS-485 connection diagram 1)

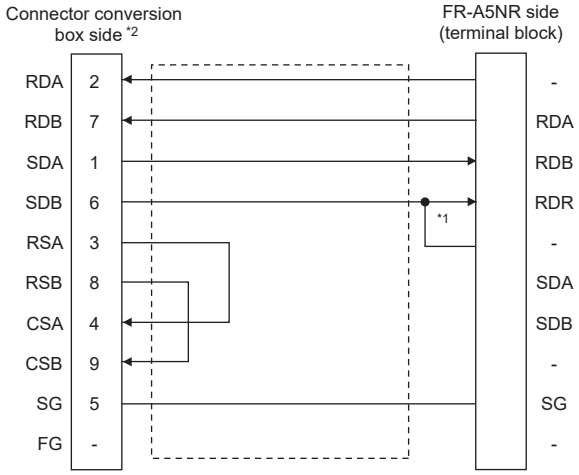


*1 In the case of GT2506HS-V, set the terminating resistor to "Disable".
☞ Page 91 Terminating resistors of GOT

■RS-485 connection diagram 2)



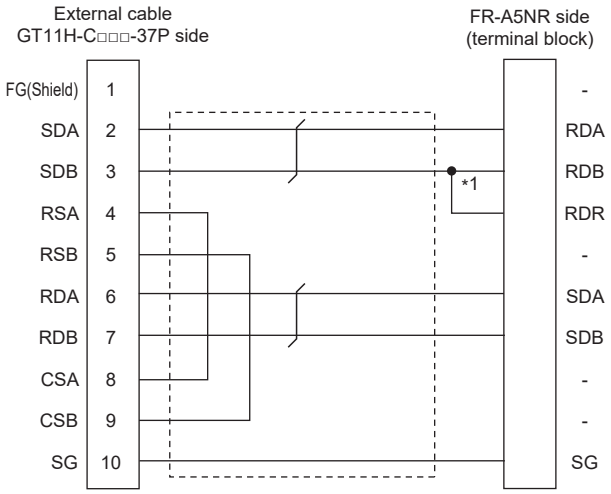
■RS-485 connection diagram 3)



*1 Connect a terminating resistor jumper between the RDB and RDR of FR-A5NR.
The terminating resister jumper is supplied with FR-A5NR.

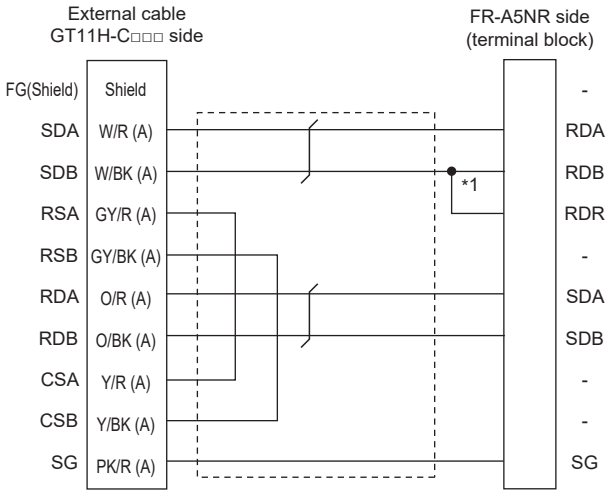
*2 In the case of GT2506HS-V, set the terminating resistor to "Disable".
☞ Page 91 Terminating resistors of GOT

■RS-485 connection diagram 4)



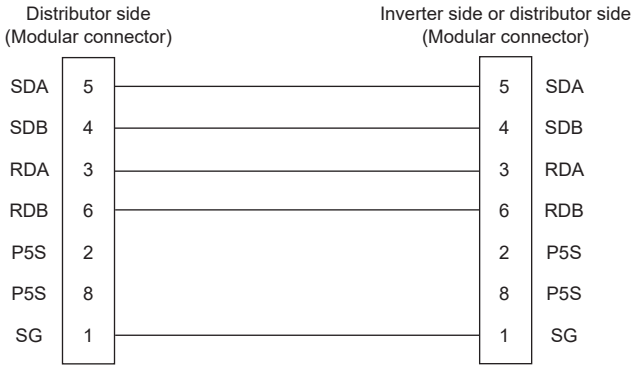
*1 Connect a terminating resistor jumper to RDB and RDR.
The terminating resister jumper is packed together with the FR-A5NR.

■RS-485 connection diagram 5)

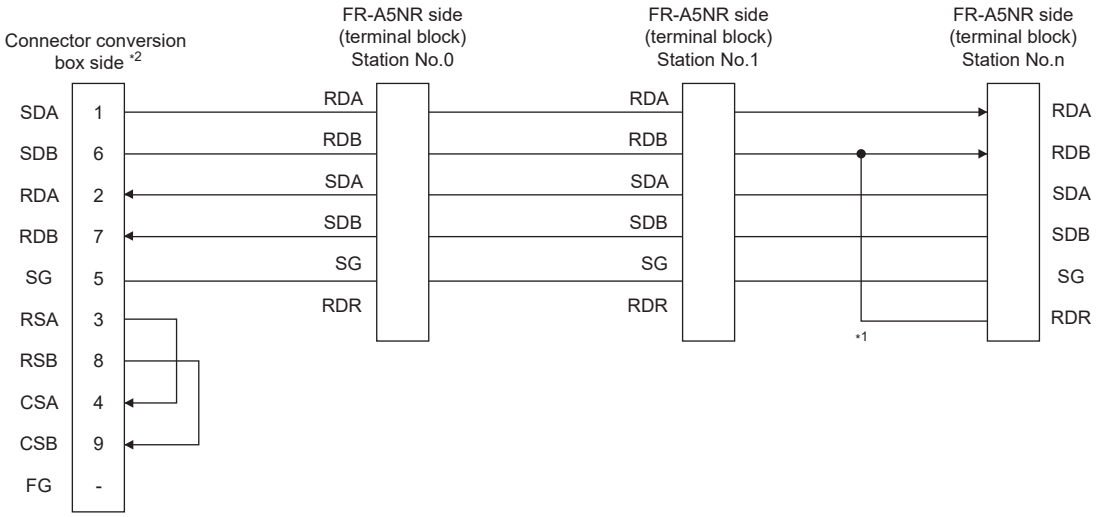


*1 Connect a terminating resistor jumper to RDB and RDR.
The terminating resister jumper is packed together with the FR-A5NR.

■RS-485 connection diagram 6)



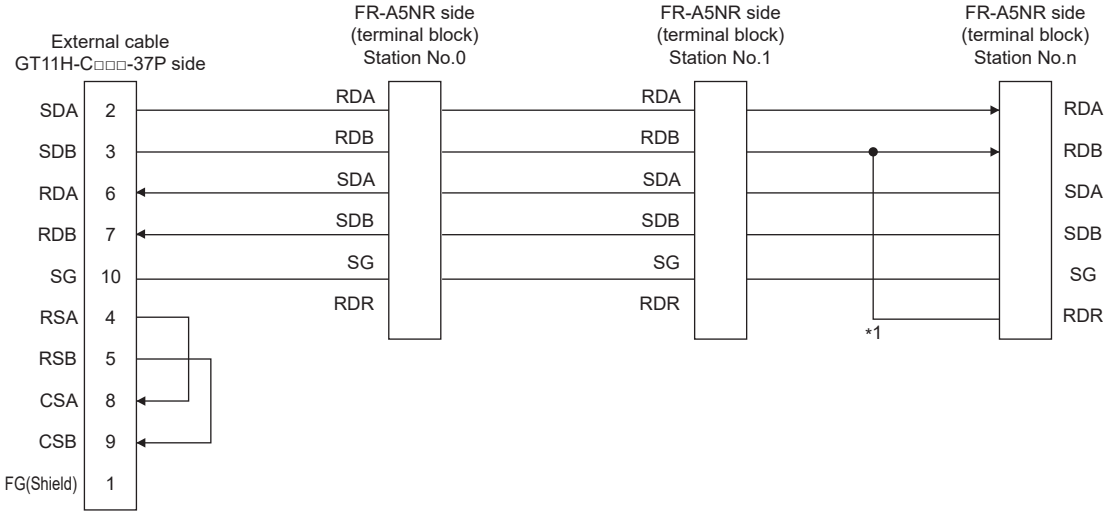
■RS-485 connection diagram 7)



*1 Connect a terminating resistor jumper to RDB and RDR which are assigned in the FR-A5NR of the inverter located farthest from the GOT.
The terminating resister jumper is packed together with the FR-A5NR.

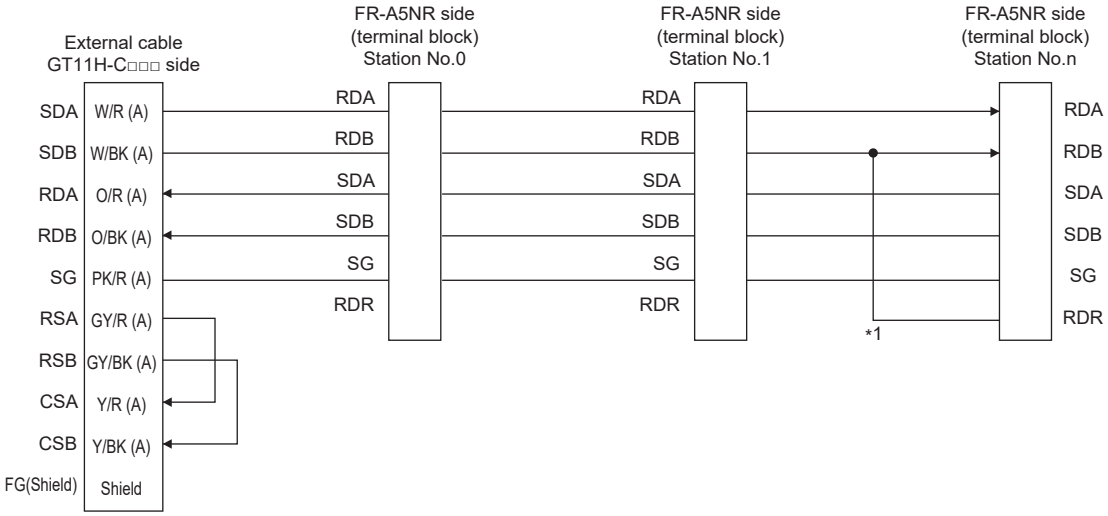
*2 In the case of GT2506HS-V, set the terminating resistor of GOT side, which will be a terminal, to "Enable".
☞ Page 91 Terminating resistors of GOT

■RS-485 connection diagram 8)



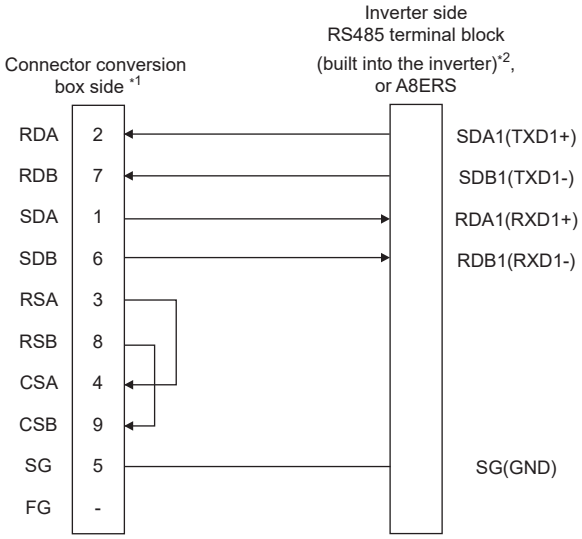
*1 Connect a terminating resistor jumper to RDB and RDR which are assigned in the FR-A5NR of the inverter located farthest from the GOT.
The terminating resister jumper is packed together with the FR-A5NR.

■RS-485 connection diagram 9)



*1 Connect a terminating resistor jumper to RDB and RDR which are assigned in the FR-A5NR of the inverter located farthest from the GOT.
The terminating resister jumper is packed together with the FR-A5NR.

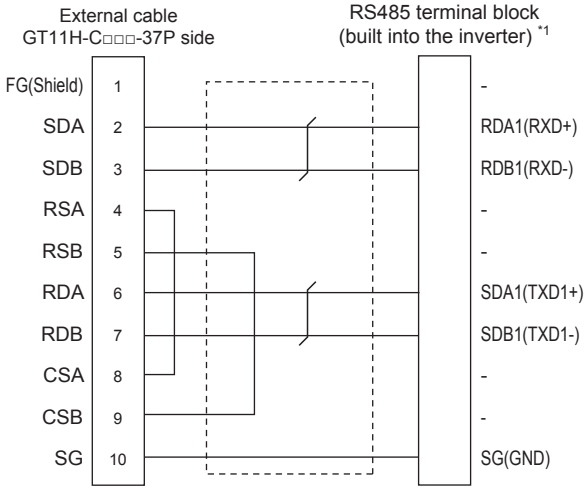
■RS-485 connection diagram 10)



*1 In the case of GT2506HS-V, set the terminating resistor of GOT side, which will be a terminal, to "Disable".
☞ Page 91 Terminating resistors of GOT

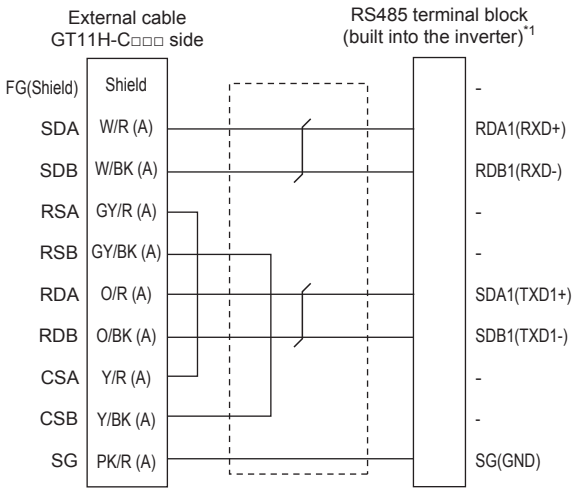
*2 RDA2, RDB2, SDA2 and SDB2 terminals of the RS-485 terminal block (built into the inverter) cannot be used.

■RS-485 connection diagram 11)



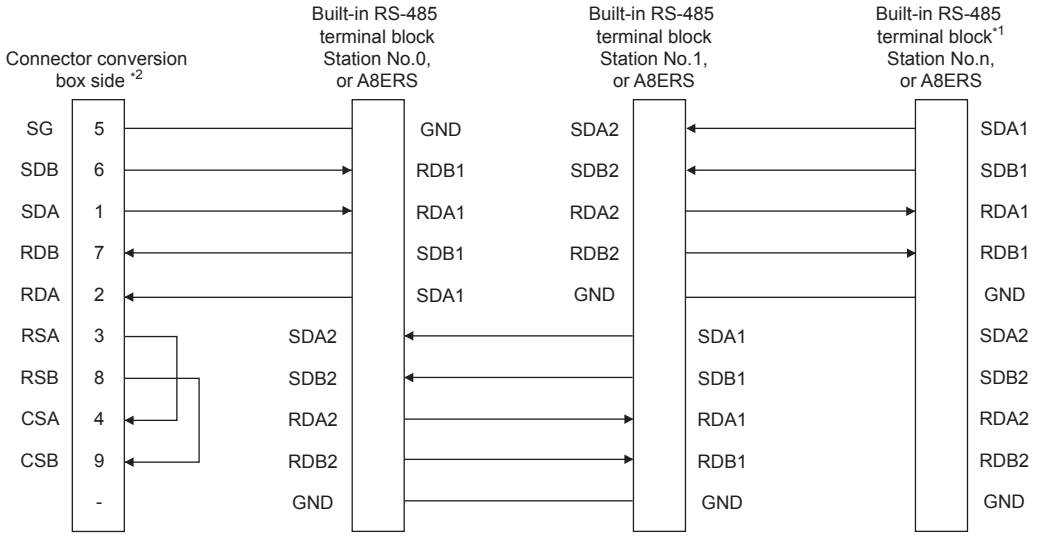
*1 RDA2, RDB2, SDA2 and SDB2 terminals of the RS-485 terminal block (built into the inverter) cannot be used.

■RS-485 connection diagram 12)



*1 RDA2, RDB2, SDA2 and SDB2 terminals of the RS-485 terminal block (built into the inverter) cannot be used.

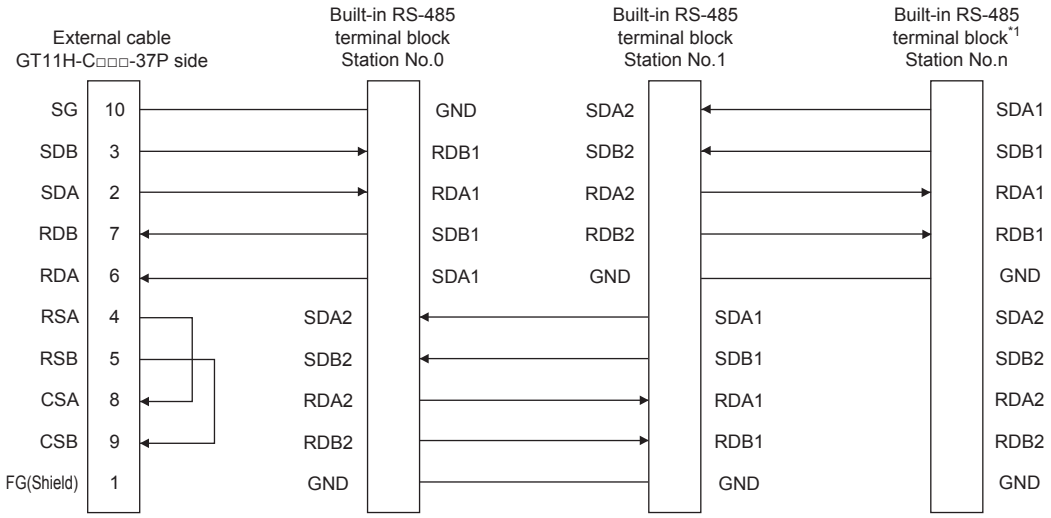
■RS-485 connection diagram 13)



*1 Set the terminator switch built in the farthest inverter from the GOT to ON (100Ω).

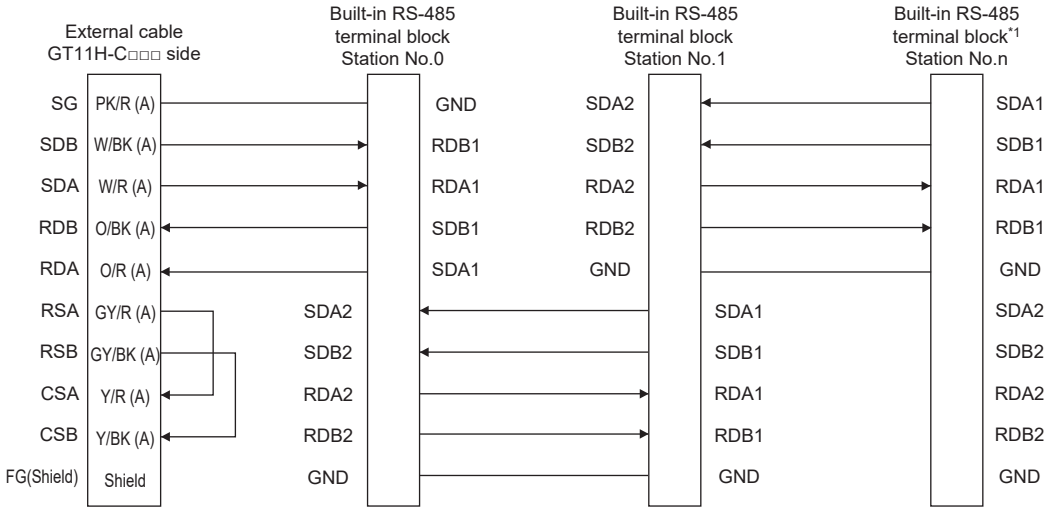
*2 In the case of GT2506HS-V, set the terminating resistor of GOT side, which will be a terminal, to "Enable".
☞ Page 91 Terminating resistors of GOT

■RS-485 connection diagram 14)



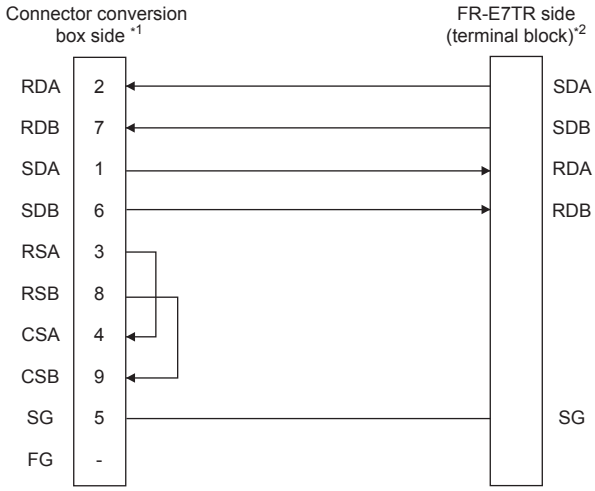
*1 Set the terminator switch built in the farthest inverter from the GOT to ON (100Ω).

■RS-485 connection diagram 15)



*1 Set the terminator switch built in the farthest inverter from the GOT to ON (100Ω).

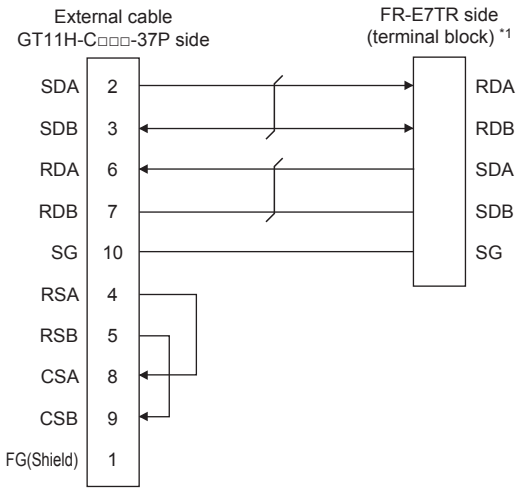
■RS-485 connection diagram 16)



*1 In the case of GT2506HS-V, set the terminating resistor of GOT side, which will be a terminal, to "Disable".
☞ Page 91 Terminating resistors of GOT

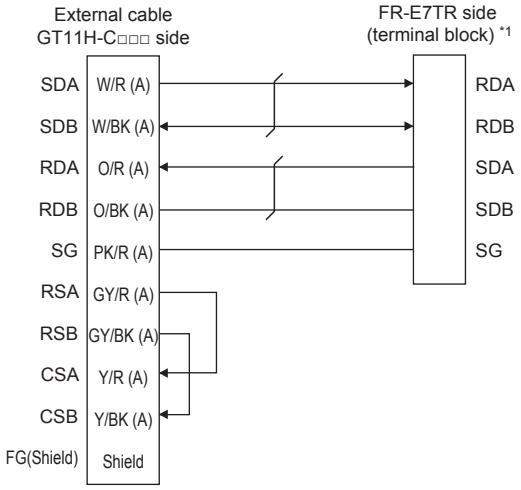
*2 Turn ON (100Ω) the terminator switch for the FR-E7TR.

■RS-485 connection diagram 17)



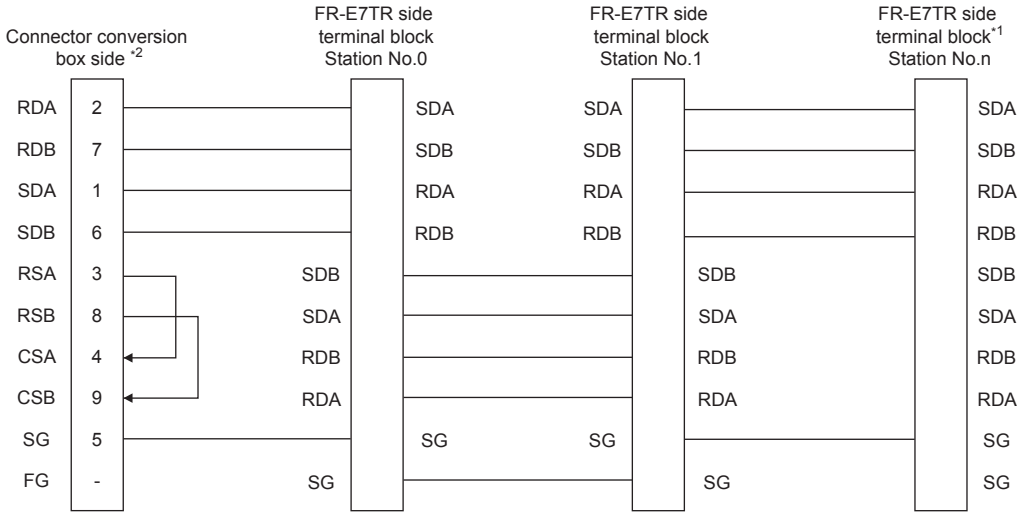
*1 Turn ON (100Ω) the terminator switch for the FR-E7TR.

■RS-485 connection diagram 18)



*1 Turn ON (100Ω) the terminator switch for the FR-E7TR.

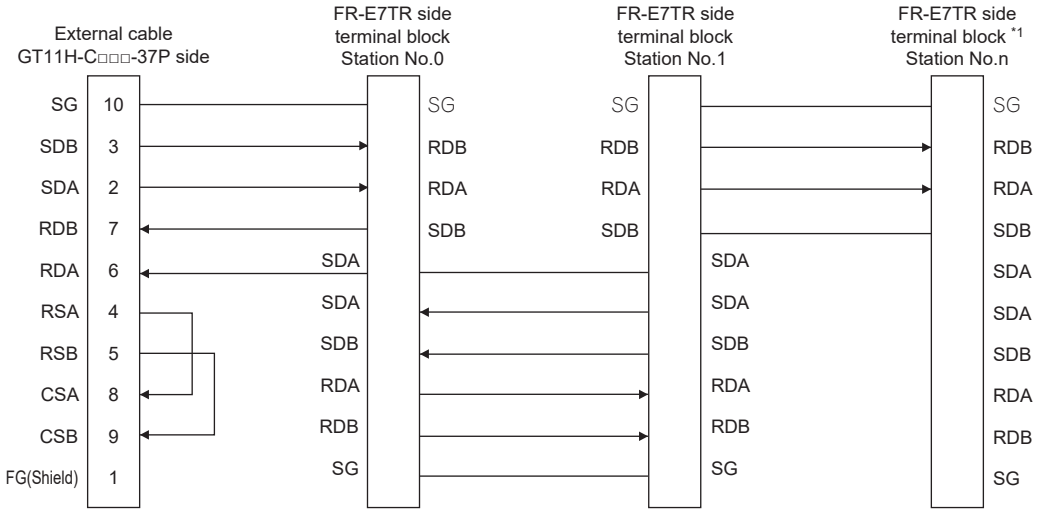
■RS-485 connection diagram 19)



*1 Turn ON (100Ω) the terminator switch for the most distant FR-E7TR from the GOT.

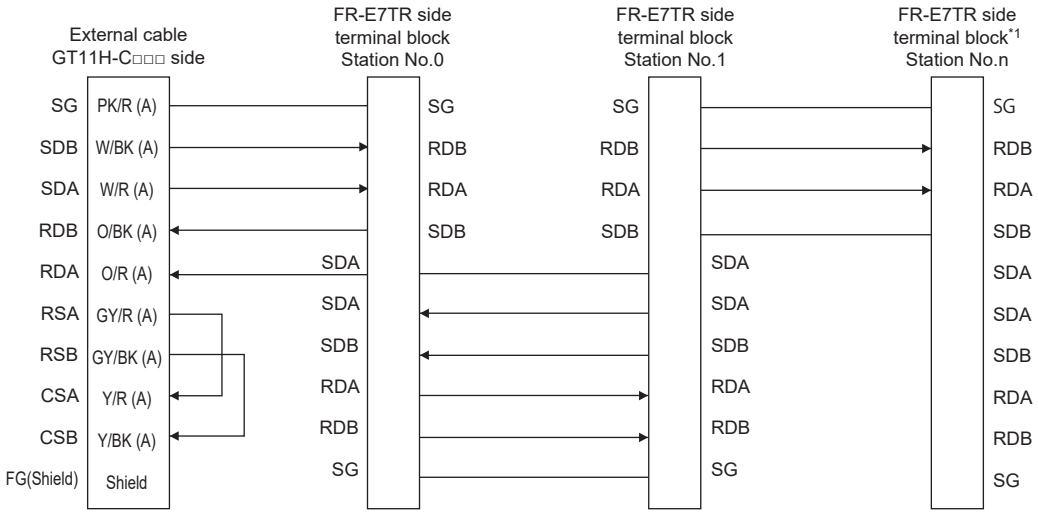
*2 In the case of GT2506HS-V, set the terminating resistor of GOT side, which will be a terminal, to "Enable".
☞ Page 91 Terminating resistors of GOT

■RS-485 connection diagram 20)



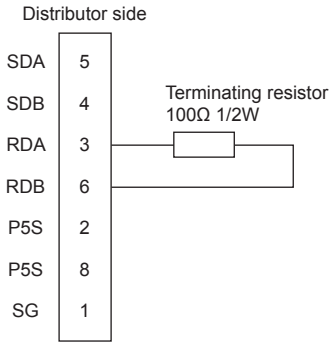
*1 Turn ON (100Ω) the terminator switch for the most distant FR-E7TR from the GOT.

■RS-485 connection diagram 21)



*1 Turn ON (100Ω) the terminator switch for the most distant FR-E7TR from the GOT.

■RS-485 connection diagram 22)



Precautions when preparing a cable

■Cable length

The total distance (between GOT and inverters) of the RS-422 cable must be 13 m or less.

■GOT side connector

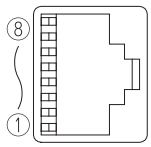
For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■Inverter connector specifications

• Pin layout in the PU port

When seen from the front of the inverter
(receptacle side)



Modular jack

Pin No.	Signal name	Remark
1	GND (SG)	
2	(P5S)	Not used
3	RXD+ (RDA)	
4	TXD- (SDB)	
5	TXD+ (SDA)	
6	RXD- (RDB)	
7	GND (SG)	
8	(P5S)	Not used

The contents in the parentheses indicate symbols described in the inverter manual.

The pins number 2 and 8 (P5S) are connected to the power supply for an operation panel or a parameter unit.

Do not use them in RS-485 communication.

• Connector of cable between FREQROL Series inverters

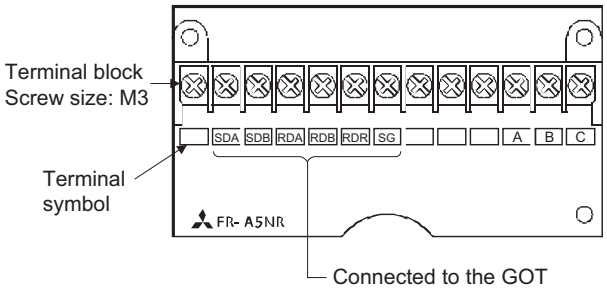
Use the commercial connectors and cables shown in the table below or the comparable products.

(Refer to the manual for the inverter.)

Name	Model name	Specifications	Manufacturer
Connector	5-554720-3	RJ45 connector	Tyco International, Ltd
Modular ceiling rosette (Distributor)	BMJ-8	-	HAKKO ELECTRIC CO.,LTD. TEL(03)-3806-9171
Cable	SGLPEV 0.5mm × 4P	Cable conforming to EIA568 (such as cable 10BASE-T)	MITSUBISHI CABLE INDUSTRIES, LTD.

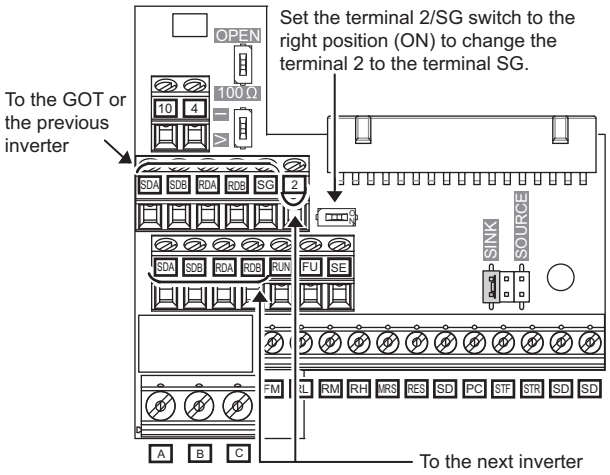
■Terminal block layout in the FR-A5NR computer link option

Mount this option to the FR-A500(L), FR-F500(L), or FR-V500(L) series.



■Terminal block layout in the FR-E7TR control terminal option

Mount this option to the FR-E700 series or the sensorless servo (FR-E7□0EX).



Connecting terminating resistors

■GOT side

• For GT2506HS-V

When connecting a PLC to the GOT, a terminating resistor must be connected to the GOT.

Set the terminating resistor setting switch.

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

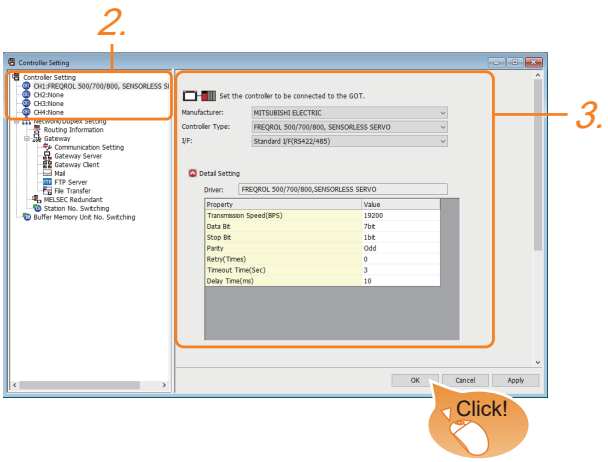
For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

GOT side settings

Setting communication interface (Controller Setting)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [MITSUBISHI ELECTRIC]
- [Controller Type]: Configure the setting according to the controller to be connected.
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 505 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

- When [Controller Type] is set to [FREQROL 800/E700NE(Batch monitor)]

The [Faults history] and [Batch monitor] functions of FR Configurator2 can be realized on GOT by creating the screens.

- Checking controller setting

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

■FREQROL 500/700/800, SENSORLESS SERVO

Property	Value
Transmission Speed(BPS)	19200
Data Bit	7 bit
Stop Bit	1 bit
Parity	Odd
Retry(Times)	0
Timeout Time(Sec)	3
Delay Time(ms)	10

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 19200bps)	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 7bits)	7bits/8bits
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit/2bits
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Odd)	None Even Odd
Retry	Set the number of retries to be performed when a communication timeout occurs. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 10ms)	0 to 300ms

■FREQROL(Batch monitor), FREQROL 800

(For automatic connection)

Property	Value
Transmission Speed(BPS)	115200
Data Bit	8 bit
Stop Bit	1 bit
Parity	Odd
Retry(Times)	0
Timeout Time(Sec)	3
Host Address	0
Delay Time(ms)	10
Negotiation Time(Sec)	5
Initialization Wait Time(Sec)	3
Automatioc Negotiation	Yes

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 115200bps)	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bits)	8bits
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Odd)	Odd
Retry	Set the number of retries to be performed when a communication timeout occurs. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Host Address	Specify the station number of the inverter in the system configuration. (Default: 0)	0 to 31
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 10ms)	0 to 300ms
Negotiation Time	Set the time period that the GOT side communication setting is sent to the inverter. (Default: 5sec)	1 to 10sec
Initialization Wait Time	Set the wait time from when the communication setting is changed until when the communication starts. (Default: 3sec)	1 to 10sec
Automatioc Negotiation	Set whether to use the automatic connection. (Default: Yes)	Yes No

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manuals.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

Point

Cutting the portion of multiple connection of the controller

By setting GOT internal device, GOT can cut the portion of multiple connection of the controller.

For example, faulty station that has communication timeout can be cut from the system.

For details of the setting contents of GOT internal device, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

FREQROL series inverter side settings

For details on the inverter, refer to the manual of each series.

Connecting to FR-S500(E) or FR-F500J series

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

■Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
RS-485 port	Pr.79, n1 to n7, n10 to n12

■Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Set Pr.30 (Extended function selection) to 1 [With display] before making the parameter settings.

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

Setting item*1	Parameter No.*4	Set value	Contents of setting
Communication station number	n1 (331)	0 to 31	☞ Page 532 Station number setting
Communication speed*2	n2 (332)	192*3	19200bps
Stop bit length*2	n3 (333)	10	Data length: 7bit Stop bit length: 1bit
Parity check presence/absence*2	n4 (334)	1	Odd
Number of communication retries	n5 (335)	- (65535)	The inverter will not come to an alarm stop.
Communication check time interval	n6 (336)	-	Communication check suspension
Wait time setting	n7 (337)	0	0ms
CRLF selection	n11 (341)	1*3	With CR, without LF
Protocol selection*5	-	-	-
Operation mode selection	Pr.79	0*3	External operation mode at power on
Link start mode selection	n10 (340)	1	Computer link operation
EEPROM write selection	n12 (342)	0*3	Written to RAM and EEPROM

*1 Setting items are the parameter names described in the FR-S500(E) and FR-F500J series manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 Inverter default values (No need to change)

*4 When being monitored from the GOT, the parameter n1 through n7 correspond with Pr.331 through Pr.337, and the parameter n10 through n12 correspond with Pr.340 through Pr.342.
Numbers in brackets show the parameter number when the parameter unit is in use.

*5 There is no Protocol selection setting on the inverter side.

Connecting to FR-E500 series

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

■Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
PU connector	Pr.79, Pr.117 to Pr.124, Pr.146, Pr.342

■Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

Setting item*1	Parameter No.	Set value	Contents of setting
Communication station number	Pr.117	0 to 31	☞ Page 532 Station number setting
Communication speed*2	Pr.118	192*3	19200bps
Stop bit length*2	Pr.119	10	Data length: 7bit Stop bit length: 1bit
Parity check presence/absence*2	Pr.120	1	Odd
Number of communication retries	Pr.121	9999 (65535)	The inverter will not come to an alarm stop.
Communication check time interval	Pr.122	9999	Communication check suspension
Wait time setting	Pr.123	0	0ms
CRLF presence/ absence selection	Pr.124	1*3	With CR, without LF
Protocol selection*4	-	-	-
Operation mode selection	Pr.79	1*3	PU operation mode
Communication startup mode selection*4	-	-	-
EEPROM write selection	Pr.342	0*3	Written to RAM and EEPROM
Frequency setting command selection*5	Pr.146	9999	Built-in frequency setting potentiometer invalid

*1 Setting items are the parameter names described in the FR-E500 series manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 Inverter default values (No need to change)

*4 There is no Protocol selection setting on the inverter side.

*5 The setting is required for Frequency setting command selection.

Connecting to FR-F500(L) series

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

■Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
PU connector	Pr.79, Pr.117 to Pr.124
FR-A5NR (Option unit)	Pr.79, Pr.331 to Pr.337, Pr.340 to Pr.342

■Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Set Pr.160 (user group read selection) to 0 [All parameters can be accessed for reading and writing.] before making the parameter settings.

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

Setting item*1	Parameter No.		Set value		Contents of setting
	PU connector	FR-A5NR			
Communication station number	Pr.117	Pr.331	0 to 31		☞ Page 532 Station number setting
Communication speed*2	Pr.118	Pr.332	192*4		19200bps
Stop bit length/data length Stop bit length*2	Pr.119	Pr.333	10		Data length: 7bit Stop bit length: 1bit
Parity check presence/absence*2	Pr.120	Pr.334	1		Odd
Number of communication retries	Pr.121	Pr.335	9999		The inverter will not come to an alarm stop.
Communication check time interval	Pr.122	Pr.336	9999		Communication check suspension
Wait time setting	Pr.123	Pr.337	0		0ms
CRLF presence/ absence selection	Pr.124	Pr.341	1*3		With CR, without LF
Protocol selection*5	-	-	-		-
Operation mode selection	Pr.79		PU connector	1	PU operation mode
			FR-A5NR	0*3	External operation mode at power on
Link start mode selection*6	-	Pr.340	1		Computer link operation
EEPROM write selection*6	-	Pr.342	0*3		Written to RAM and EEPROM

*1 Setting items are the parameter names described in the FR-F500(L) series and FR-A5NR manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 Inverter default values (No need to change)

*4 Since the value has been set as a default, no setting is required when connecting to the PU connector on the inverter side.

*5 There is no Protocol selection setting on the inverter side.

*6 The setting is required on the inverter side when FR-A5NR is used.

Connecting to FR-A500(L) series

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

■Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
PU connector	Pr.79, Pr.117 to Pr.124, Pr.342
FR-A5NR (Option unit)	Pr.79, Pr.331 to Pr.337, Pr.340 to Pr.342

■Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

Setting item*1	Parameter No.		Set value		Contents of setting
	PU connector	FR-A5NR			
Communication station number	Pr.117	Pr.331	0 to 31		☞ Page 532 Station number setting
Communication speed*2	Pr.118	Pr.332	192*4		19200bps
Stop bit length*2	Pr.119	Pr.333	10		Data length: 7bit Stop bit length: 1bit
Parity check presence/absence*2	Pr.120	Pr.334	1		Odd
Number of communication retries	Pr.121	Pr.335	9999		The inverter will not come to an alarm stop.
Communication check time interval	Pr.122	Pr.336	9999		Communication check suspension
Wait time setting	Pr.123	Pr.337	0		0ms
CRLF presence/ absence selection	Pr.124	Pr.341	1*3		With CR, without LF
Protocol selection*5	-	-	-		-
Operation mode selection	Pr.79		PU connector	1	PU operation mode
			FR-A5NR	0*3	External operation mode at power on
Link start mode selection*6	-	Pr.340	1		Computer link operation
EEPROM write selection	Pr.342		0*3		Written to RAM and EEPROM

*1 Setting items are the parameter names described in the FR-A500(L) series and FR-A5NR manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 Inverter default values (No need to change)

*4 Since the value has been set as a default, no setting is required when connecting to the PU connector on the inverter side.

*5 There is no Protocol selection setting on the inverter side.

*6 The setting is required on the inverter side when FR-A5NR is used.

Connecting to FR-V500(L) series

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

■Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
PU connector	Pr.79, Pr.117 to Pr.124, Pr.342
FR-A5NR (Option unit)	Pr.79, Pr.331 to Pr.337, Pr.340 to Pr.342

■Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Set Pr.160 (Extended function display selection) to 1 [All parameters can be accessed for reading and writing.] before making the parameter settings.

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

Setting item*1	Parameter No.		Set value		Contents of setting
	PU connector	FR-A5NR			
Communication station number	Pr.117	Pr.331	0 to 31		☞ Page 532 Station number setting
Communication speed*2	Pr.118	Pr.332	192*4		19200bps
Stop bit length/data length Stop bit length*2	Pr.119	Pr.333	10		Data length: 7bit Stop bit length: 1bit
Parity check presence/absence*2	Pr.120	Pr.334	1		Odd
Number of communication retries	Pr.121	Pr.335	9999		The inverter will not come to an alarm stop.
Communication check time interval	Pr.122	Pr.336	9999		Communication check suspension
Wait time setting	Pr.123	Pr.337	0		0ms
CRLF presence/ absence selection	Pr.124	Pr.341	1*3		With CR, without LF
Protocol selection*5	-	-	-		-
Operation mode selection	Pr.79		PU connector	1	PU operation mode
			FR-A5NR	0*3	External operation mode at power on
Link start mode selection*6	-	Pr.340	1		Computer link operation
EEPROM write selection	Pr.342		0*3		Written to RAM and EEPROM

*1 Setting items are the parameter names described in the FR-V500(L) series and FR-A5NR manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 Inverter default values (No need to change)

*4 Since the value has been set as a default, no setting is required when connecting to the PU connector on the inverter side.

*5 There is no Protocol selection setting on the inverter side.

*6 The setting is required on the inverter side when FR-A5NR is used.

Connecting to FR-E700 series

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

■Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
PU connector	Pr.79, Pr.117 to Pr.124, Pr.340, Pr.342, Pr.549
FR-E7TR (RS-485 terminal block)	

■Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Do not change these parameters, even though they can be monitored from the GOT. If they are changed, communication with the GOT is disabled.

Setting item*1	Parameter No.	Set value	Contents of setting
PU communication station number	Pr.117	0 to 31	☞ Page 532 Station number setting
PU communication speed*2	Pr.118	192*3	19200bps
PU communication stop bit length*2	Pr.119	10	Data length: 7bit Stop bit length: 1bit
PU communication parity check*2	Pr.120	1	Odd
Number of PU communication retries	Pr.121	9999	The inverter will not come to an alarm stop.
PU communication check time interval	Pr.122	9999	Communication check suspension
PU communication wait time setting	Pr.123	0	0ms
PU communication CR/LF selection	Pr.124	1*3	With CR, without LF
Protocol selection	Pr.549	0*3	Mitsubishi Electric inverter protocol
Operation mode selection	Pr.79	0*3	PU operation mode
Communication startup mode selection	Pr.340	1	Network operation mode.
Communication EEPROM write selection	Pr.342	0*3	Written to RAM and EEPROM

*1 Setting items are the parameter names described in the FR-E700 series manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 Inverter default values (No need to change)

Connecting to FR-D700 series

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

■Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
PU connector	Pr.79, Pr.117 to Pr.124, Pr.340, Pr.342, Pr.549

■Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Before setting the parameters, set Pr.160 (User group read selection) to 0 so that simple mode + extended mode parameters are displayed.

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

Setting item*1	Parameter No.	Set value	Contents of setting
PU communication station number	Pr.117	0 to 31	☞ Page 532 Station number setting
PU communication speed*2	Pr.118	192*3	19200bps
PU communication stop bit length*2	Pr.119	10	Data length: 7bit Stop bit length: 1bit
PU communication parity check*2	Pr.120	1	Odd
Number of PU communication retries	Pr.121	9999	The inverter will not come to an alarm stop.
PU communication check time interval	Pr.122	9999	Communication check suspension
PU communication wait time setting	Pr.123	0	0ms
PU communication CR/LF selection	Pr.124	1*3	With CR, without LF
Protocol selection	Pr.549	0*3	Mitsubishi Electric inverter protocol
Operation mode selection	Pr.79	0*3	PU operation mode
Communication startup mode selection	Pr.340	1	Network operation mode.
Communication EEPROM write selection	Pr.342	0*3	Written to RAM and EEPROM

*1 Setting items are the parameter names described in the FR-D700 series manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 Inverter default values (No need to change)

Connecting to FR-F700 or FR-F700P series

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

■Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
PU connector	Pr.79, Pr.117 to Pr.124, Pr.340, Pr.342
RS-485 terminal	Pr.79, Pr.331 to Pr.337, Pr.340 to Pr.342, Pr.549

■Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Before setting the parameters, set Pr.160 (User group read selection) to 0 so that simple mode + extended mode parameters are displayed.

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

Setting item*1	Parameter No.		Set value		Contents of setting
	PU connector	RS-485			
PU communication station number/RS-485 communication station number	Pr.117	Pr.331	0 to 31		☞ Page 532 Station number setting
PU communication speed/RS-485 communication speed*2	Pr.118	Pr.332	192*4		19200bps
PU communication stop bit length/ RS-485 communication stop bit length*2	Pr.119	Pr.333	10		Data length: 7bit Stop bit length: 1bit
PU communication parity check/ RS-485 communication parity check*2	Pr.120	Pr.334	1		Odd
Number of PU communication retries/ RS-485 communication retry count	Pr.121	Pr.335	9999		The inverter will not come to an alarm stop.
PU communication check time interval/ RS-485 communication check time interval	Pr.122	Pr.336	9999*4		Communication check suspension
PU communication waiting time setting/ RS-485 communication waiting time setting	Pr.123	Pr.337	0		0ms
PU communication CR/LF selection/ RS-485 communication CR/LF selection	Pr.124	Pr.341	1*3		With CR, without LF
Protocol selection	-	Pr.549	0*3		Mitsubishi Electric inverter protocol
Operation mode selection	Pr.79		PU connector	1	PU operation mode
			RS-485	0*3	External operation mode at power on
Communication startup mode selection	Pr.340		PU connector	0*3	Refer to Pr.79 settings.
			RS-485	1	Network operation mode.
Communication EEPROM write selection	Pr.342		0*3		Written to RAM and EEPROM

*1 Setting items are the parameter names described in the FR-F700 and FR-F700P series manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 Inverter default values (No need to change)

*4 Since the value has been set as a default, no setting is required when connecting to the PU connector on the inverter side.

Point

Automatic setting with Pr.999 (FR-F700P series only)

If Pr.999 is set as the following, the communication settings other than [PU communication station number] and [Communication EEPROM write selection] can be automatically set in a batch to the default communication settings of the GOT side.

Parameter No.	Set value	Description	Operation in parameter setting mode
Pr.999*1	10	GOT Initial settings (PU connector)	[AUTO]→[GOT]→[1]Write
	11	GOT Initial settings (RS-485 terminal)	-

*1 When monitoring the value of Pr.999, 9999 is always monitored.

Connecting to FR-F700PJ series

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

■Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
PU connector	Pr.79, Pr.117 to Pr.124, Pr.340, Pr.342, Pr.549

■Communication settings of inverter

Set the following parameters using the PU (parameter unit). Before setting the parameters, set Pr.160 (Extended function display selection) to 0 so that simple mode + extended mode parameters are displayed.

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

Setting item*1	Parameter No.	Set value	Contents of setting
PU communication station number	Pr.117	0 to 31	☞ Page 532 Station number setting
PU communication speed*2	Pr.118	192*3	19200bps
PU communication stop bit length	Pr.119	10	Data length: 7bit Stop bit length: 1bit
PU communication parity check*2	Pr.120	1	Odd
Number of PU communication retries	Pr.121	9999	The inverter will not come to an alarm stop.
PU communication check time interval	Pr.122	9999	Communication check suspension
PU communication waiting time setting	Pr.123	0	0ms
PU communication CR/LF selection	Pr.124	1*3	With CR, without LF
Protocol selection	Pr.549	0*3	Mitsubishi Electric inverter protocol
Operation mode selection	Pr.79	0*3	External operation mode at power on
Communication startup mode selection	Pr.340	1	Network operation mode.
Communication EEPROM write selection	Pr.342	0*3	Written to RAM and EEPROM

*1 Setting items are the parameter names described in the FR-F700PJ series manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 Inverter default values (No need to change)

Point

Automatic setting with Pr.999

If Pr.999 is set as the following, the communication settings other than [PU communication station number] and [Communication EEPROM write selection] can be automatically set in a batch to the default communication settings of the GOT side.

Parameter No.	Set value	Description	Operation in parameter setting mode
Pr.999*1	10	GOT Initial settings (PU connector)	[AUTO] → [GOT] → [1]Write

*1 When monitoring the value of Pr.999, 9999 is always monitored.

Connecting to FR-A700 series

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

■Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
PU connector	Pr.79, Pr.117 to Pr.124, Pr.340, Pr.342
RS-485 terminal	Pr.79, Pr.331 to Pr.337, Pr.340 to Pr.342, Pr.549

■Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

Setting item*1	Parameter No.		Set value		Contents of setting
	PU connector	RS-485			
PU communication station number/ RS-485 communication station number	Pr.117	Pr.331	0 to 31		☞ Page 532 Station number setting
PU communication speed/ RS-485 communication speed*2	Pr.118	Pr.332	192*4		19200bps
PU communication stop bit length/ RS-485 communication stop bit length*2	Pr.119	Pr.333	10		Data length: 7bit Stop bit length: 1bit
PU communication parity check/ RS-485 communication parity check*2	Pr.120	Pr.334	1		Odd
Number of PU communication retries/ RS-485 communication retry count	Pr.121	Pr.335	9999		The inverter will not come to an alarm stop.
PU communication check time interval/ RS-485 communication check time interval	Pr.122	Pr.336	9999*4		Communication check suspension
PU communication waiting time setting/ RS-485 communication waiting time setting	Pr.123	Pr.337	0		0ms
PU communication CR/LF selection/ RS-485 communication CR/LF selection	Pr.124	Pr.341	1*3		With CR, without LF
Protocol selection	-	Pr.549	0*3		Mitsubishi Electric inverter protocol
Operation mode selection	Pr.79		PU connector	1	PU operation mode
			RS-485	0*3	External operation mode at power on
Communication startup mode selection	Pr.340		PU connector	0*3	Refer to Pr.79 settings.
			RS-485	1	Network operation mode.
Communication EEPROM write selection	Pr.342		0*3		Written to RAM and EEPROM

*1 Setting items are the parameter names described in the FR-A700 series manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 Inverter default values (No need to change)

*4 Since the value has been set as a default, no setting is required when connecting to the PU connector on the inverter side.

Point

• Automatic setting with Pr.999

If Pr.999 is set as the following, the communication settings other than [PU communication station number] and [Communication EEPROM write selection] can be automatically set in a batch to the default communication settings of the GOT side.

Parameter No.	Set value	Description	Operation in parameter setting mode
Pr.999*1	10	GOT Initial settings (PU connector)	[AUTO] → [GOT] → [1]Write
	11	GOT Initial settings (RS-485)	-

*1 When monitoring the value of Pr.999, 9999 is always monitored.

• Inverters available for automatic batch setting

Parameters are not automatically set in a batch depending on the SERIAL (production number) symbol of the inverter to be used.

For details, contact your local distributor.

Connecting to FR-A800, FR-A800 Plus, or FR-F800 series

Configure the inverter communication settings by one of the following three methods.

To automatically reconfigure the GOT side communication settings to the inverter side communication settings in batches and to perform the automatic connection, refer to the following.

☞ Page 517 Communication settings of inverter (Automatic connection)

To automatically reconfigure the GOT side default communication settings to the inverter side communication settings in batches, refer to the following.

☞ Page 518 Automatic setting with Pr.999

To manually reconfigure the GOT side communication settings to the inverter communication settings, refer to the following.

☞ Page 520 Communication settings of inverter (Manual setting)

Be sure to perform the inverter reset after updating each parameter.

■Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
PU connector	Pr.79, Pr.117 to Pr.124, Pr.340, Pr.342, Pr.414
RS-485 terminal	Pr.79, Pr.331 to Pr.337, Pr.340 to Pr.342, Pr.414, Pr.549

■Communication settings of inverter (Automatic connection)

When [Automatic Negotiation] is set to [Yes] in the GOT communication settings, the inverter parameters are reconfigured to the GOT communication settings.

Set the following parameters before the automatic connection.

Setting item	Parameter No.		Setting range	Contents of setting
	PU connector	RS-485		
PU communication station number/RS-485 communication station number	Pr.117	Pr.331	0 to 31	☞ Page 532 Station number setting
PLC function operation selection	Pr.414		0 to 2	0: Disable PLC function 1 or 2: Enable PLC function
Protocol selection	-	Pr.549	0, 1	0: Mitsubishi Electric inverter protocol 1: MODBUS RTU protocol

The following shows the parameters to be reconfigured by the automatic connection.

Setting item	Parameter No.	
	PU connector	RS-485
PU communication speed/RS-485 communication speed	Pr.118	Pr.332
PU communication stop bit length/RS-485 communication stop bit length	Pr.119	Pr.333
PU communication parity check/RS-485 communication parity check	Pr.120	Pr.334
Number of PU communication retries/RS-485 communication retry count	Pr.121	Pr.335
PU communication check time interval/RS-485 communication check time interval	Pr.122	Pr.336
PU communication waiting time setting/RS-485 communication waiting time setting	Pr.123	Pr.337
PU communication CR/LF selection/RS-485 communication CR/LF selection	Pr.124	Pr.341

Before performing the automatic connection, connect all the GOTs and the inverters.

After the automatic connection is performed, if a station is added or changed, or the communication settings are not reconfigured normally, change the settings with the automatic batch parameter setting (Pr.999) separately.

If the inverter power turns off while the automatic connection is executed, execute the automatic connection on the GOT again.

If the automatic connection fails, a communication timeout error occurs.

If the automatic connection succeeds, the GOT normally starts communicating with each station.

■Automatic setting with Pr.999

Setting Pr.999 as shown below automatically configures the communication settings to the default communication settings of the GOT side collectively.

Parameter No.	Set value	Description	Operation in parameter setting mode
Pr.999*1	10	GOT (FREQROL 500/700/800, SENSORLESS SERVO) initial settings (PU connector)	[AUTO] → [GOT] → [1]Write
	11	GOT (FREQROL 500/700/800, SENSORLESS SERVO) initial settings (RS-485)	-
	12	GOT (FREQROL 800) initial settings (PU connector)	[AUTO] → [GOT] → [2]Write
	13	GOT (FREQROL 800) initial settings (RS-485)	-

*1 When monitoring the value of Pr.999, 9999 is always monitored.

The following shows the values to be automatically set in batches when the above values are set for Pr.999.

• Pr.999=10

Pr.No.	Setting item	Set value
79	Operation mode selection	1
118	PU communication speed	192
119	PU communication stop bit length	10
120	PU communication parity check	1
121	Number of PU communication retries	9999
122	PU communication check time interval	9999
123	PU communication waiting time setting	0ms
124	PU communication CR/LF selection	1
340	Communication startup mode selection	0

• Pr.999=11

Pr.No.	Setting item	Set value
79	Operation mode selection	0
332	RS-485 communication speed	192
333	RS-485 communication stop bit length	10
334	RS-485 communication parity check	1
335	RS-485 communication retry count	9999
336	RS-485 communication check time interval	9999
337	RS-485 communication waiting time setting	0ms
340	Communication startup mode selection	1
341	RS-485 communication CR/LF selection	1
549	Protocol selection	0

• Pr.999=12

Pr.No.	Setting item	Set value
79	Operation mode selection	1
118	PU communication speed	1152
119	PU communication stop bit length	0
120	PU communication parity check	1
121	Number of PU communication retries	9999
122	PU communication check time interval	9999
123	PU communication waiting time setting	0ms
124	PU communication CR/LF selection	1
340	Communication startup mode selection	0
414	PLC function operation selection	2*1

*1 Before configuring the automatic batch setting, if Pr.414 is set to 1, the setting is not changed.

• Pr.999=13

Pr.No.	Setting item	Set value
79	Operation mode selection	0
332	RS-485 communication speed	1152
333	RS-485 communication stop bit length	0
334	RS-485 communication parity check	1
335	RS-485 communication retry count	9999
336	RS-485 communication check time interval	9999
337	RS-485 communication waiting time setting	0ms
340	Communication startup mode selection	1
341	RS-485 communication CR/LF selection	1
414	PLC function operation selection	2*1
549	Protocol selection	0

*1 Before configuring the automatic batch setting, if Pr.414 is set to 1, the setting is not changed.

■Communication settings of inverter (Manual setting)

Set the following parameters using the PU (operation panel or parameter unit).

Before setting the parameters, set Pr.160 (User group read selection) to 0 so that simple mode + extended parameters are displayed. (The default value of FREQROL-F800 is 9999.)

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

Setting item*1	Parameter No.		Set value		Contents of setting
	PU connector	RS-485			
PU communication station number/ RS-485 communication station number	Pr.117	Pr.331	0 to 31		☞ Page 532 Station number setting
PU communication speed/ RS-485 communication speed*2	Pr.118	Pr.332	192*3		19200bps
PU communication stop bit length/data length/ RS-485 communication stop bit length/data length*2	Pr.119	Pr.333	10*4		Data length: 7bit Stop bit length: 1bit
PU communication parity check/ RS-485 communication parity check*2	Pr.120	Pr.334	1		Odd
Number of PU communication retries/ RS-485 communication retry count	Pr.121	Pr.335	9999		The inverter will not come to an alarm stop.
PU communication check time interval/ RS-485 communication check time interval	Pr.122	Pr.336	9999*3		Communication check suspension
PU communication waiting time setting/ RS-485 communication waiting time setting	Pr.123	Pr.337	0		0ms
PU communication CR/LF selection/ RS-485 communication CR/LF selection	Pr.124	Pr.341	1*5		With CR, without LF
Protocol selection	-	Pr.549	0*5		Mitsubishi Electric inverter protocol
Operation mode selection	Pr.79		PU connector	1	PU operation mode
			RS-485	0*5	External operation mode at power on
Communication startup mode selection	Pr.340		PU connector	0*5	Refer to Pr.79 settings.
			RS-485	1	Network operation mode.
Communication EEPROM write selection	Pr.342		0*5		Written to RAM and EEPROM
PLC function operation selection*6	Pr.414		1, 2		Enabled with 1 and 2.

*1 Setting items are the parameter names described in the FR-A800 and FR-F800 series manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 Since the value has been set as a default, no setting is required when connecting to the PU connector on the inverter side.

*4 To use [FR 800 driver], set 0.

*5 Inverter default values (No need to change).

*6 The inverter side setting defaults to 0 (invalid).
To use the PLC function, set 1 or 2.

■Parameters for monitoring data specific to FR-A800 Plus series

• How to monitor the winding length (upper + lower) (PV29)

Set Pr.645 (Winding diameter storage selection) to [1], and set Pr.1263 (Stored winding length (lower 4 digits)) and Pr.1298 (Stored winding length (upper 4 digits)) on the inverter side.

Communication drivers of FREQROL (Batch monitor) that supports monitoring PV are the setting target.

Setting item *1	Parameter No.	Setting range	Description
Winding diameter storage selection	Pr.645	0, 1	Select whether to store the winding diameter and winding length. 0: Do not store. 1: Stores the current winding diameter.
Stored winding diameter	Pr.646	1 to 6553 mm	The stored winding diameter can be read/written.
Operation time with stored winding diameter	Pr.647	0 to 100 s	Set the time to hold the stored winding diameter after the start signal turns on.
Target winding diameter	Pr.648	1 to 6563 mm	Set the winding diameter to output the Target winding diameter achieved signal (Y233).
Winding length increment	Pr.1262	0	1km
		1	100m
		2	10m
		3	1m
		4	1cm
		5	1mm
Stored winding length (lower 4 digits)	Pr.1263	0 to 9999 m*2	The stored winding length (lower 4 digits) can be read/written.
Winding length detection (lower 4 digits)	Pr.1264	0 to 9999 m*2	Set the winding length (lower 4 digits) to output the Winding/unwinding completion signal (Y234).
Stored winding length (upper 4 digits)	Pr.1298	0 to 9999 m*2	The stored winding length (upper 4 digits) can be read/written.
Stored winding length increment	Pr.1299	0	1m
		1	1cm
		2	1mm
Winding length detection (upper 4 digits)	Pr.1346	0 to 9999 m*2	Set the winding length (lower 4 digits) to output the Winding/unwinding completion signal (Y234).

*1 The parameter names described in the FR-A800 Plus series manuals

*2 The unit differs depending on the setting of Pr.1262.

• How to monitor the actual line speed (PV27)

The actual line speed can be set with the input value of the line speed command by setting Pr.362 (Actual line speed input selection) to [0].

For the line speed command, a value can be set in Pr.360 by setting Pr.361 (Line speed command input selection) to [8].

Communication drivers of FREQROL (Batch monitor) that supports monitoring PV are the setting target.

Setting item [*1]	Parameter No.	Setting range	Description
Line speed command voltage/current bias	Pr.350	0 to 100%	Set the converted value (%) of the bias voltage (current) for analog input.
Line speed command bias	Pr.351	0 to 6553.4 m/min [*2]	Set the bias line speed command value for analog input.
Line speed command voltage/current gain	Pr.352	0 to 100%	Set the converted value (%) of the gain voltage (current) for analog input.
Line speed command gain	Pr.353	0 to 6553.4 m/min [*2] 9999	Set the gain line speed command value for analog input.
Line speed command pulse input bias	Pr.354	0 to 500k pulses/s	Set the number of bias input pulses for pulse train input.
Line speed command pulse input gain	Pr.355	0 to 500k pulses/s	Set the number of gain input pulses for pulse train input.
Line speed command digital input bias	Pr.356	0 to 65535	Set the bias line speed command value for pulse train input.
Line speed command digital input gain	Pr.357	0 to 65535	Set the gain line speed command value for pulse train input.
Line speed unit	Pr.358	0	m/min
		1	m/sec
		2	mm/min
		3	mm/sec
Line speed command value	Pr.360	0 to 6553.4 m/min [*2]	Set the line speed command value.
Line speed command input selection	Pr.361	0	According to the priority of the speed command rights
		1	Terminal JOG single-phase pulse train input
		2	FR-A8AP/FR-A8AL/FR-A8TP encoder pulse train input
		3	Terminal 2 (0 to 100%)
		4	Terminal 4 (20 to 100%)
		5	Terminal 1 (-100 to 100%)
		6	Terminal 6 (FR-A8AZ) (-100 to 100%)
		7	FR-A8AL single-phase pulse train input
		8	Line speed command according to the setting of Pr.360 (Line speed command value)
		9999	No function
Actual line speed input selection	Pr.362	0 (Default)	V* (line speed command)
		1	Terminal JOG single-phase pulse train input
		2	FR-A8AP/FR-A8AL/FR-A8TP encoder pulse train input (complementary 12 V / differential 5 V (A-, B-phases)) [*3]
		3	Terminal 2 (analog value: 0 to 100%) (0 to 5 V DC) [*4]
		4	Terminal 4 (analog value: 20 to 100%) (4 to 20 mA DC) [*4]
		5	Terminal 1 (analog value: -100 to 100%) (0 to ±10 V DC) [*4]
		6	Terminal 6 (FR-A8AZ) (analog value: -100 to 100%) (0 to ±10 V DC) [*4]
		7	FR-A8AL single-phase pulse train input (PP, NP)
		9999	No function [*5]
Command pulse selection	Pr.428	0	Forward/Reverse pulse train (negative logic)
		1	Pulse train + rotation direction sign (negative logic)
		2	A/B-phase pulse train (negative logic)
		3	Forward/Reverse pulse train (positive logic)
		4	Pulse train + rotation direction sign (positive logic)
		5	A/B-phase pulse train (positive logic)
Start line speed command	Pr.622	0 to 6553.4 m/min [*2]	Set the line speed command to start operation.
Line multi-speed setting (high-speed)	Pr.1265	0 to 6553.4 m/min [*2]	Set the line speed command value when the RH signal is ON.

Setting item [*1]	Parameter No.	Setting range	Description
Line multi-speed setting (middle-speed)	Pr.1266	0 to 6553.4 m/min [*2]	Set the line speed command value when the RM signal is ON.
Line multi-speed setting (low-speed)	Pr.1267	0 to 6553.4 m/min [*2]	Set the line speed command value when the RL signal is ON.
Line multi-speed setting (speed 4)	Pr.1268	0 to 6553.4 m/min [*2]	The line speed from 4th speed to 15th speed can be set according to the combination of the RH, RM, RL and REX signals.
Line multi-speed setting (speed 5)	Pr.1269	0 to 6553.4 m/min [*2]	
Line multi-speed setting (speed 6)	Pr.1270	0 to 6553.4 m/min [*2]	
Line multi-speed setting (speed 7)	Pr.1271	0 to 6553.4 m/min [*2]	
Line multi-speed setting (speed 8)	Pr.1272	0 to 6553.4 m/min [*2]	
Line multi-speed setting (speed 9)	Pr.1273	0 to 6553.4 m/min [*2]	
Line multi-speed setting (speed 10)	Pr.1274	0 to 6553.4 m/min [*2]	
Line multi-speed setting (speed 11)	Pr.1275	0 to 6553.4 m/min [*2]	
Line multi-speed setting (speed 12)	Pr.1276	0 to 6553.4 m/min [*2]	
Line multi-speed setting (speed 13)	Pr.1277	0 to 6553.4 m/min [*2]	
Line multi-speed setting (speed 14)	Pr.1278	0 to 6553.4 m/min [*2]	
Line multi-speed setting (speed 15)	Pr.1279	0 to 6553.4 m/min [*2]	

*1 The parameter names described in the FR-A800 Plus series manuals
*2 The unit differs depending on the setting of Pr.358.
*3 When Pr.362 is set to [2], use Pr.862 to select the option used for the actual line speed input.
*4 The input specification in the initial setting is indicated.
*5 When Pr.362 is set to [9999] (No function), the actual line speed is regarded as 0.

Connecting to FR-E800 series

Configure the inverter communication settings by one of the following three methods.

To automatically reconfigure the GOT side communication settings to the inverter side communication settings in batches and to perform the automatic connection, refer to the following.

☞ Page 524 Communication settings of inverter (Automatic connection)

To automatically reconfigure the GOT side default communication settings to the inverter side communication settings in batches, refer to the following.

☞ Page 525 Automatic setting with Pr.999

To manually reconfigure the GOT side communication settings to the inverter communication settings, refer to the following.

☞ Page 526 Communication settings of inverter (Manual setting)

Be sure to perform the inverter reset after updating each parameter.

■Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
PU connector	Pr.79, Pr.117 to Pr.124, Pr.340, Pr.342, Pr.414, Pr.549

■Communication settings of inverter (Automatic connection)

When [Automatic Negotiation] is set to [Yes] in the GOT communication settings, the inverter parameters are reconfigured to the GOT communication settings.

Set the following parameters before the automatic connection.

Setting item	Parameter No.	Setting range	Contents of setting
PU communication station number	Pr.117	0 to 31	☞ Page 532 Station number setting
PLC function operation selection	Pr.414	0 to 2	0: Disable PLC function 1 or 2: Enable PLC function
Protocol selection	Pr.549	0, 1	0: Mitsubishi Electric inverter (computer link) protocol 1: MODBUS RTU protocol

The following shows the parameters to be reconfigured by the automatic connection.

Setting item	Parameter No.
PU communication speed	Pr.118
PU communication stop bit length/data length	Pr.119
PU communication parity check	Pr.120
Number of PU communication retries	Pr.121
PU communication check time interval	Pr.122
PU communication waiting time setting	Pr.123
PU communication CR/LF selection	Pr.124

Before performing the automatic connection, connect all the GOTs and the inverters.

After the automatic connection is performed, if a station is added or changed, or the communication settings are not reconfigured normally, change the settings with the automatic batch parameter setting (Pr.999) separately.

If the inverter power turns off while the automatic connection is executed, execute the automatic connection on the GOT again.

If the automatic connection fails, a communication timeout error occurs.

If the automatic connection succeeds, the GOT normally starts communicating with each station.

■Automatic setting with Pr.999

Setting Pr.999 as shown below automatically configures the communication settings to the default communication settings of the GOT side collectively.

Parameter No.	Set value	Description	Operation in parameter setting mode
Pr.999 *1	10	GOT ([FREQROL 500/700/800, SENSORLESS SERVO]) initial settings	[AUTO] → [GOT] → [1]Write
	12	GOT ([FREQROL 800], [FREQROL(Batch monitor)]) initial settings	[AUTO] → [GOT] → [2]Write

*1 When monitoring the value of Pr.999, 9999 is always monitored.

The following shows the values to be automatically set in batches when the above values are set for Pr.999.

• Pr.999=10

Pr.No.	Setting item	Set value
79	Operation mode selection	1
118	PU communication speed	192
119	PU communication stop bit length/data length	10
120	PU communication parity check	1
121	Number of PU communication retries	9999
122	PU communication check time interval	9999
123	PU communication waiting time setting	0ms
124	PU communication CR/LF selection	1
340	Communication startup mode selection	0
549	Protocol selection	0

• Pr.999=12

Pr.No.	Setting item	Set value
79	Operation mode selection	1
118	PU communication speed	1152
119	PU communication stop bit length/data length	0
120	PU communication parity check	1
121	Number of PU communication retries	9999
122	PU communication check time interval	9999
123	PU communication waiting time setting	0ms
124	PU communication CR/LF selection	1
340	Communication startup mode selection	0
414	PLC function operation selection	2 *1
549	Protocol selection	0

*1 Before configuring the automatic batch setting, if Pr.414 is set to 1, the setting is not changed.

■Communication settings of inverter (Manual setting)

Set the following parameters using the PU (operation panel or parameter unit).

Do not change these parameters, even though they can be monitored from the GOT. If they are changed, communication with the GOT is disabled.

Setting item[*1]	Parameter No.	Set value	Contents of setting
PU communication station number	Pr.117	0 to 31	☞ Page 532 Station number setting
PU communication speed [*2]	Pr.118	192 [*4]	19200bps
PU communication stop bit length/data length [*2]	Pr.119	10 [*6]	Data length: 7bit Stop bit length: 1bit
PU communication parity check [*2]	Pr.120	1	Odd
Number of PU communication retries	Pr.121	9999	The inverter will not come to an alarm stop.
PU communication check time interval	Pr.122	9999 [*4]	Communication check suspension
PU communication waiting time setting	Pr.123	0	0ms
PU communication CR/LF selection	Pr.124	1 [*3]	With CR, without LF
Protocol selection	Pr.549	0	Mitsubishi Electric inverter (computer link) protocol
Operation mode selection	Pr.79	0 [*3]	External operation mode at power on
Link start mode selection	Pr.340	1	Network operation mode.
EEPROM write selection	Pr.342	0	Written to RAM and EEPROM
PLC function operation selection[*5]	Pr.414	1, 2	Enabled with 1 and 2.

*1 Setting items are the parameter names described in the FR-E800 series manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 Inverter default values (No need to change).

*4 Since the value has been set as a default, no setting is required when connecting to the PU connector on the inverter side.

*5 The inverter side setting defaults to 0 (invalid).
To use the PLC function, set 1 or 2.

*6 To use [FREQROL 800] or [FREQROL(Batch monitor)] drivers, set 0.

Connecting to FR-D800 series

Configure the inverter communication settings by one of the following three methods.

To automatically reconfigure the GOT side communication settings to the inverter side communication settings in batches and to perform the automatic connection, refer to the following.

☞ Page 527 Communication settings of inverter (Automatic connection)

To automatically reconfigure the GOT side default communication settings to the inverter side communication settings in batches, refer to the following.

☞ Page 528 Automatic setting with Pr.999

To manually reconfigure the GOT side communication settings to the inverter communication settings, refer to the following.

☞ Page 529 Communication settings of inverter (Manual setting)

Be sure to perform the inverter reset after updating each parameter.

■Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
PU connector	Pr.79, Pr.117 to Pr.124, Pr.340, Pr.342, Pr.549
RS-485 terminal	Pr.79, Pr.331 to Pr.337, Pr.340 to Pr.342, Pr.549, Pr.1065

■Communication settings of inverter (Automatic connection)

When [Automatic Negotiation] is set to [Yes] in the GOT communication settings, the inverter parameters are reconfigured to the GOT communication settings.

Set the following parameters before the automatic connection.

Setting item	Parameter No.	Setting range	Contents of setting
PU communication station number	Pr.117	0 to 31	☞ Page 532 Station number setting
Protocol selection	Pr.549	0, 1	0: Mitsubishi Electric inverter (computer link) protocol 1: MODBUS RTU protocol

The following shows the parameters to be reconfigured by the automatic connection.

Setting item	Parameter No.
PU communication speed	Pr.118
PU communication stop bit length/data length	Pr.119
PU communication parity check	Pr.120
Number of PU communication retries	Pr.121
PU communication check time interval	Pr.122
PU communication waiting time setting	Pr.123
PU communication CR/LF selection	Pr.124

Before performing the automatic connection, connect all the GOTs and the inverters.

After the automatic connection is performed, if a station is added or changed, or the communication settings are not reconfigured normally, change the settings with the automatic batch parameter setting (Pr.999) separately.

If the inverter power turns off while the automatic connection is executed, execute the automatic connection on the GOT again.

If the automatic connection fails, a communication timeout error occurs.

If the automatic connection succeeds, the GOT normally starts communicating with each station.

■Automatic setting with Pr.999

Setting Pr.999 as shown below automatically configures the communication settings to the default communication settings of the GOT side collectively.

Parameter No.	Set value	Description	Operation in parameter setting mode
Pr.999 *1	10	GOT ([FREQROL 500/700/800, SENSORLESS SERVO]) initial settings	[AUTO] → [GOT] → [1]Write
	12	GOT ([FREQROL 800], [FREQROL(Batch monitor)]) initial settings	[AUTO] → [GOT] → [2]Write

*1 When monitoring the value of Pr.999, 9999 is always monitored.

The following shows the values to be automatically set in batches when the above values are set for Pr.999.

• Pr.999=10

Pr.No.	Setting item	Set value
79	Operation mode selection	1
118	PU communication speed	192
119	PU communication stop bit length/data length	10
120	PU communication parity check	1
121	Number of PU communication retries	9999
122	PU communication check time interval	9999
123	PU communication waiting time setting	0ms
124	PU communication CR/LF selection	1
340	Communication startup mode selection	0
549	Protocol selection	0

• Pr.999=12

Pr.No.	Setting item	Set value
79	Operation mode selection	1
118	PU communication speed	1152
119	PU communication stop bit length/data length	0
120	PU communication parity check	1
121	Number of PU communication retries	9999
122	PU communication check time interval	9999
123	PU communication waiting time setting	0ms
124	PU communication CR/LF selection	1
340	Communication startup mode selection	0
414	PLC function operation selection	2 *1
549	Protocol selection	0

*1 Before configuring the automatic batch setting, if Pr.414 is set to 1, the setting is not changed.

■Communication settings of inverter (Manual setting)

Set the following parameters using the PU (operation panel or parameter unit).

Do not change these parameters, even though they can be monitored from the GOT. If they are changed, communication with the GOT is disabled.

Setting item*1	Parameter No.	Set value	Contents of setting
PU communication station number	Pr.117	0 to 31	☞ Page 532 Station number setting
PU communication speed *2	Pr.118	192 *4	19200bps
PU communication stop bit length/data length *2	Pr.119	10 *6	Data length: 7bit Stop bit length: 1bit
PU communication parity check *2	Pr.120	1	Odd
Number of PU communication retries	Pr.121	9999	The inverter will not come to an alarm stop.
PU communication check time interval	Pr.122	9999 *4	Communication check suspension
PU communication waiting time setting	Pr.123	0	0ms
PU communication CR/LF selection	Pr.124	1 *3	With CR, without LF
Protocol selection	Pr.549	0	Mitsubishi Electric inverter (computer link) protocol
Operation mode selection	Pr.79	0 *3	External operation mode at power on
Link start mode selection	Pr.340	1	Network operation mode.
E^2PROM write selection	Pr.342	0	Written to RAM and EEPROM
PLC function operation selection*5	Pr.414	1, 2	Enabled with 1 and 2.

*1 Setting items are the parameter names described in the FR-E800 series manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 Inverter default values (No need to change).

*4 Since the value has been set as a default, no setting is required when connecting to the PU connector on the inverter side.

*5 The inverter side setting defaults to 0 (invalid).
To use the PLC function, set 1 or 2.

*6 To use [FREQROL 800] or [FREQROL(Batch monitor)] drivers, set 0.

Connecting to sensor less servo (FR-E7□0EX)

Make the communication settings of the sensorless servo (FR-E700EX).

Be sure to perform the inverter reset after updating each parameter.

■Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
PU connector	Pr.79, Pr.117 to Pr.124, Pr.340, Pr.342, Pr.549
FR-E7TR (RS-485 terminal block)	

■Communication settings of sensorless servo

Set the following parameters using the PU (operation panel or parameter unit).

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

Setting item*1	Parameter No.	Set value	Contents of setting
PU communication station number	Pr.117	0 to 31	☞ Page 532 Station number setting
PU communication speed*2	Pr.118	192*3	19200bps
PU communication stop bit length*2	Pr.119	10	Data length: 7bit Stop bit length: 1bit
PU communication parity check*2	Pr.120	1	Odd
Number of PU communication retries	Pr.121	9999	The inverter will not come to an alarm stop.
PU communication check time interval	Pr.122	9999	Communication check suspension
PU communication wait time setting	Pr.123	0	0ms
PU communication CR/LF selection	Pr.124	1*3	With CR, without LF
Protocol selection	Pr.549	0*3	Mitsubishi Electric inverter protocol
Operation mode selection	Pr.79	0*3	PU operation mode
Communication startup mode selection	Pr.340	1	Network operation mode.
Communication EEPROM write selection	Pr.342	0*3	Written to RAM and EEPROM

*1 Setting items are the parameters name described in the sensorless servo (FR-E7□0EfX) manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 No change is required since this is the default value of sensorless servo (FR-E7□0EX).

Connecting to MELIPM series

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

■Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
PU connector	Pr.79, Pr.117 to Pr.124

■Communication settings of inverter

Set the following parameters using the PU (parameter unit).

After setting the parameters for the communication settings, reset the inverter.

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

Setting item*1	Parameter No.	Set value	Contents of setting
Communication station number	Pr.117	0 to 31	☞ Page 532 Station number setting
Communication speed*2	Pr.118	192*3	19200bps
Stop bit length/data length*2	Pr.119	10	Data length: 7bit Stop bit length: 1bit
Parity check presence/absence*2	Pr.120	1	Odd
Number of communication retries	Pr.121	9999	The inverter will not come to an alarm stop.
Communication check time interval	Pr.122	9999	Communication check suspension
Wait time setting	Pr.123	0	0ms
CRLF presence/absence selection	Pr.124	1*3	With CR, without LF

*1 Setting items are parameter names described in the manual of MELIPM series.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

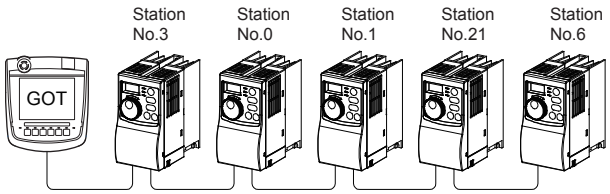
*3 Inverter default values (No need to change)

Station number setting

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.



Examples of station number setting

Direct specification

When setting the device, specify the station number of the inverter of which data is to be changed.

Specification range
0 to 31

Indirect specification

When setting the device, indirectly specify the station number of the inverter of which data is to be changed using the 16-bit GOT internal data register (GD10 to GD25).

When specifying the station No. from 100 to 155 on GT Designer3, the value of GD10 to GD25 compatible to the station No. specification will be the station No. of the inverter.

Specification station NO.	Compatible device	Setting range
100	GD10	0 to 31 For the setting other than the above, error (dedicated device is out of range) will occur.
101	GD11	
102	GD12	
103	GD13	
104	GD14	
105	GD15	
106	GD16	
107	GD17	
108	GD18	
109	GD19	
110	GD20	
111	GD21	
112	GD22	
113	GD23	
114	GD24	
115	GD25	

Precautions

Station No. of inverter system

The station No. required for the inverter system will differ according to the selected driver.

• When selecting [FREQROL 500/700/800, SENSORLESS SERVO]

Make sure to establish inverter system with No.0 station.

• When selecting [FREQROL(Batch monitor)] or [FREQROL 800]

Make sure to establish inverter system with the station number set with the host address.

Number of inverter

• GT2506HS-V

Up to 31 inverters can be connected.

• GT2505HS-V

Up to 10 inverters can be connected.

Parameter setting

■Communication parameter change

Do not make any change for each communication parameter of the inverter side from GOT.

If changed, the communication to the inverter cannot be made.

■When setting "8888" or "9999" to inverter parameter (Pr)

"8888" and "9999" designate special function.

When specifying from the GOT, it will be as follows.

Set value of inverter side	Value specified by GOT
8888	65520
9999	65535

Screen switching devices, system information devices

Make sure to use GD for screen switching devices and system information devices when the GOT is connected to only the inverter.

GOT clock setting

The clock function is enabled or disabled depending on the driver selected.

• When selecting [FREQROL 500/700/800, SENSORLESS SERVO]

The clock function is disabled even though [Adjust] or [Broadcast] is set by the GOT clock setting.

• When selecting [FREQROL(Batch monitor)] or [FREQROL 800]

The clock function is enabled by using the PLC function of the FR-A800, FR-A800 Plus, or FR-F800 series.

Settable driver

The following shows the settable drivers according to the models used.

• When connecting the GOT to one or more inverters or sensorless servo drive units

[FREQROL 500/700/800, SENSORLESS SERVO]

• When connecting the GOT to one or more inverters (FR-A800, FR-A800 Plus, or FR-F800 series)

[FREQROL(Batch monitor)]

[FREQROL 800]

• When automatically connecting the GOT to an inverter (FR-A800, FR-A800 Plus, or FR-F800 series) or using the PLC function of an inverter (FR-A800, FR-A800 Plus, or FR-F800 series)

[FREQROL(Batch monitor)]

[FREQROL 800]

Automatic connection of FR-A800, FR-A800 Plus, or FR-F800 series

The automatic connection requires the user-specified negotiation time and the initialization wait time.

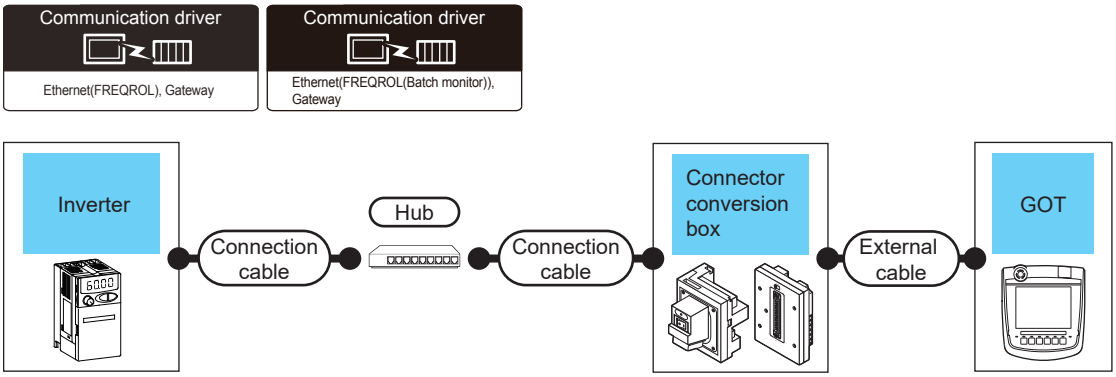
By monitoring the Notify Automatic Connection Status (GS277), you can check the completion of the automatic connection.

For details, refer to the following.

GT Designer3 (GOT2000) Screen Design Manual

7.3 Ethernet Connection

Connection to FR-E700, FR-A800, FR-A800 Plus, FR-F800, FR-E800, or FR-D800



Inverter		Connection cable*1*2	Maximum segment length*3	Connector conversion box	External cable *4	GOT Model	Number of connectable equipment
Model name	Communication type						
FR-E7□0-NE *6*8 FR-A8□0 *7 FR-A8□2 *7 FR-A8□6 *7 FR-A8□0-GN FR-A8□2-GN FR-A8□0-E *5 FR-A8□2-E *5 FR-A8□6-E *5 FR-A8□0-E-CRN FR-A8□2-E-CRN FR-A8□0-E-R2R FR-A8□2-E-R2R FR-A8□0-E-AWH FR-A8□0-E-LC FR-F8□0 *7 FR-F8□2 *7 FR-F8□6 *7 FR-F8□0-E *5 FR-F8□2-E *5 FR-E8□0-E FR-D8□0-E	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	*9
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the GOT to the Ethernet module, hub, wireless LAN adapter (NZ2WL-JPA, NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.

*2 When only one GOT is connected, the GOT can be directly connected to the controller without a hub.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

*4 Use C or later version of GT11H-C□□-37P.

*5 When the communication type is the Ethernet connection and the communication format is TCP, use an inverter with SERIAL (serial No.) "□7Z******" or later.
SERIAL (serial No.) is described on a rating plate of the inverter.

*6 Use an inverter with SERIAL (serial No.) "□88******" or later.
For FR-E700-SC-NNE and FR-E700-SC-ENE, use an inverter with SERIAL (serial No.) "□89******" or later.
SERIAL (serial No.) is described on a rating plate of the inverter.

*7 A built-in option (FR-A8NCG) is required.
Use an inverter with the following SERIAL (serial No.).
SERIAL (serial No.) is described on a rating plate of the inverter.

Country of origin indication	SERIAL (serial No.)
MADE in Japan	□96****** and later
MADE in China	□97****** and later

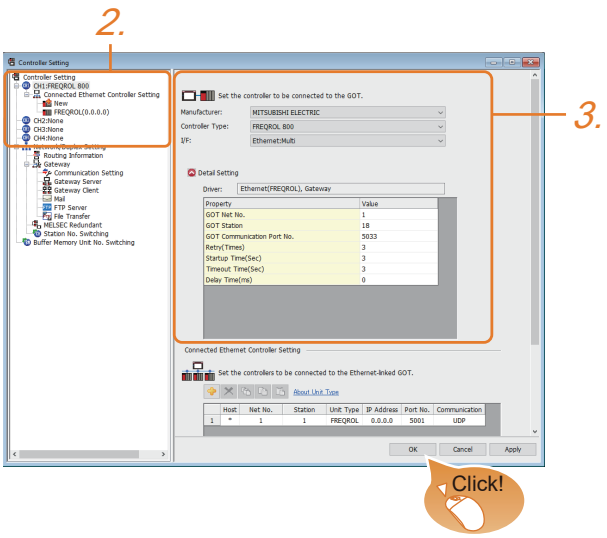
*8 Select [FREQROL 800/E700NE(Batch monitor)] for [Controller Type] in [Controller Setting] in GT Designer3.
*9 The number of connectable GOTs and those of inverters differ depending on [Controller Type] in [Controller Setting] in GT Designer3.

[Controller Type]	Number of GOTs connectable to one inverter	Number of inverters connectable to one GOT
[FREQROL 800]	UDP: 16 (When monitoring the devices of the PLC) TCP: 1	UDP: 128 (16 or less recommended) TCP: 128 (16 or less recommended)
[FREQROL 800/E700NE(Batch monitor)]	UDP: Unlimited TCP: 1	UDP: 128 (16 or less recommended) TCP: 128 (16 or less recommended)

GOT side settings

Setting communication interface (Controller Setting)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

• [Manufacturer]: [MITSUBISHI ELECTRIC]

• [Controller Type]: Select one of the following items.

[FREQROL 800]

[FREQROL 800/E700NE(Batch monitor)]

• [I/F]: [Ethernet:Multi]

• [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 538 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

• When [Controller Type] is set to [FREQROL 800/E700NE(Batch monitor)]

The [Faults history] and [Batch monitor] functions of FR Configurator2 can be realized on GOT by creating the screens.

• Checking controller setting

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5033
Retry(Times)	3
Startup Time(Sec)	3
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
GOT Net No.	Set the network No. of the GOT. (Default: 1)	1 to 239
GOT Station*1	Set the station No. of the GOT. (Default: 18)	1 to 120
GOT Communication Port No.	Set the GOT port No. for the connection with the Ethernet module. The default value varies depending on the [Controller Type]. [FREQROL 800]: 5033 *2 [FREQROL 800/E700NE(Batch monitor)]: 5036 *2	1024 to 5010, 5014 to 65534 (Except for 5011 to 5013, 49153 to 49170)
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 3times)	0 to 5times
Startup Time	Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU. (Default: 3sec)	3 to 255sec
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 90sec
Delay Time	Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms)	0 to 10000(ms)

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 539 Connected Ethernet Controller Setting

*2 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

GOT Ethernet Setting

■GOT IP address setting

Set the following communication port setting.

- Standard port

■GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

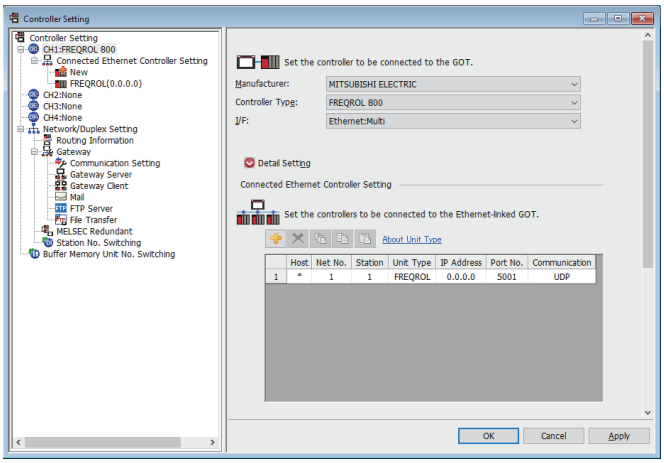
■IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 80 GOT Ethernet Setting

Connected Ethernet Controller Setting



Item	Description	Set value
Host	The host is displayed. It refers to a station that can be connected without setting a station number. (The host is indicated with an asterisk (*).)	-
Net No.	Set the network No. of the connected Ethernet module. (Default: 1)	1 to 239
Station*1	Set the station No. of the connected Ethernet module. (Default: 1)	1 to 120
Unit Type	FREQROL (fixed)	FREQROL (fixed)
IP Address	Set the IP address of the connected Ethernet module. (Default: 0.0.0.0)	Inverter side IP address
Port No.	Set the port No. of the connected Ethernet module. (Default: 5001)	Inverter side port No.
Communication	UDP, TCP*2 (Default: UDP)	Adjust the settings with the Inverter settings.

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 538 Communication detail settings

*2 For the connection to FR-E700-NE, only UDP is supported.

Point

• When connecting to an inverter in communication format [TCP]

When connecting to an inverter via [TCP] communication, use an inverter with SERIAL (serial No.) "□7Z******" or later.

SERIAL (serial No.) is described on a rating plate of the inverter.

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

Inverter side settings

For details of the inverter, refer to the manual of each series.

Connecting to FR-A800, FR-F800, or FR-E800 series (FR-A8□0-E, FR-A8□2-E, FR-A8□6-E, FR-F8□0-E, FR-F8□2-E, or FR-E8□0-E)

■Communication settings

For setting up the inverter, refer to the following.

📖Manual of the inverter used

■Communication port and the supported parameters

GOT connection destination	Parameters corresponding to inverter
Ethernet connector	Pr.79, Pr.340, Pr.342, Pr.414, Pr.502, Pr.549 to 551, Pr.779, Pr.1424 to 1429, Pr.1431 to 1432, Pr.1434 to 1455

■Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

For parameter setting values, refer to the following.

📖Manual of the inverter used

○: Required, △: Set it as necessary

Setting item[*1]	Parameter No.	Setting necessity at GOT connection
Operation mode switching	Pr.79	△
Communication startup mode	Pr.340	△
Communication EEPROM write selection	Pr.342	△
PLC function operation	Pr.414	△
Stop mode selection at communication error	Pr.502	△
Protocol selection	Pr.549	○
NET mode command source selection	Pr.550	△
PU mode command source selection	Pr.551	△
Operation frequency during communication error	Pr.779	△
Ethernet communication network number[*2]	Pr.1424	○
Ethernet communication station number[*2]	Pr.1425	○
Link speed and duplex mode selection	Pr.1426	△
Ethernet function selection 1[*2]	Pr.1427	○
Ethernet function selection 2	Pr.1428	△
Ethernet function selection 3	Pr.1429	△
Ethernet signal loss detection function selection	Pr.1431	△
Ethernet communication check time interval	Pr.1432	△
Ethernet IP address 1 (Built-in Ethernet)[*2]	Pr.1434	○
Ethernet IP address 2 (Built-in Ethernet)[*2]	Pr.1435	○
Ethernet IP address 3 (Built-in Ethernet)[*2]	Pr.1436	○
Ethernet IP address 4 (Built-in Ethernet)[*2]	Pr.1437	○
Subnet mask 1[*2]	Pr.1438	△
Subnet mask 2[*2]	Pr.1439	△
Subnet mask 3[*2]	Pr.1440	△
Subnet mask 4[*2]	Pr.1441	△
Ethernet IP filter address 1	Pr.1442	△
Ethernet IP filter address 2	Pr.1443	△
Ethernet IP filter address 3	Pr.1444	△
Ethernet IP filter address 4	Pr.1445	△
Ethernet IP filter address 2 range specification	Pr.1446	△
Ethernet IP filter address 3 range specification	Pr.1447	△

Setting item*1	Parameter No.	Setting necessity at GOT connection
Ethernet IP filter address 4 range specification	Pr.1448	△
Ethernet command source selection IP address 1	Pr.1449	△
Ethernet command source selection IP address 2	Pr.1450	△
Ethernet command source selection IP address 3	Pr.1451	△
Ethernet command source selection IP address 4	Pr.1452	△
Ethernet command source selection IP address 3 range specification	Pr.1453	△
Ethernet command source selection IP address 4 range specification	Pr.1454	△
Keepalive time	Pr.1455	△

*1 Setting items are the parameter names described in the FR-A800, FR-F800, and FR-E800 series manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

Connecting to FR-A800 Plus series

■Communication setting

For the inverter side settings, refer to the following.

📖Manual of the inverter used

■Communication port and corresponding parameters

GOT connection destination	Inverter side parameter (R2R)	Inverter side parameter (CRN, AWH, LC)
Ethernet connector	Pr.79, Pr.340, Pr.342, Pr.442 to 445, Pr.502, Pr.549 to 551, Pr.1073 to 1078, Pr.1431, 1432, Pr.1434 to 1455	Pr.79, Pr.340, Pr.342, Pr.442 to 445, Pr.502, Pr.549 to 551, Pr.1424 to 1429, Pr.1431, 1432, Pr.1434 to 1455

■Inverter communication settings

Set the following parameters using the PU (parameter unit).

Do not change the parameters for communication setting from the GOT.

If they are changed, communication with the GOT may be disabled.

○: Required, △: Set it as necessar

Setting item*1	Parameter No.	Set value	Setting necessity at GOT connection
Operation mode switching	Pr.79	0 (default) *3	△
Communication startup mode	Pr.340	10 *3	△
Communication EEPROM write selection	Pr.342	0 (default) *3	△
Stop mode selection at communication error	Pr.502	0 (default) *3	△
Protocol selection	Pr.549	0 (default)	○
NET mode command source selection	Pr.550	9999 (default) *3	△
PU mode command source selection	Pr.551	2 *3	△
Ethernet communication network number *2	Pr.1073 (R2R) or Pr.1424 (CRN, AWH, LC)	1 to 239	○
Ethernet communication station number *2	Pr.1074 (R2R) or Pr.1425 (CRN, AWH, LC)	1 to 120	○
Link speed and duplex mode selection	Pr.1075 (R2R) or Pr.1426 (CRN, AWH, LC)	0 (default)	△
Ethernet function selection 1 *2	Pr.1076 (R2R) or Pr.1427 (CRN, AWH, LC)	5000 to 5002, 5006 to 5008	○
Ethernet function selection 2	Pr.1077 (R2R) or Pr.1428 (CRN, AWH, LC)	45237 (default) *3	△
Ethernet function selection 3	Pr.1078 (R2R) or Pr.1429 (CRN, AWH, LC)	9999 (default) *3	△
Ethernet signal loss detection function selection	Pr.1431	0 (default) *3	△
Ethernet communication check time interval	Pr.1432	9999 (default) *3	△
Ethernet IP address 1 (Built-in Ethernet) *2	Pr.1434	0 to 255	○
Ethernet IP address 2 (Built-in Ethernet) *2	Pr.1435	0 to 255	○
Ethernet IP address 3 (Built-in Ethernet) *2	Pr.1436	0 to 255	○
Ethernet IP address 4 (Built-in Ethernet) *2	Pr.1437	0 to 255	○
Subnet mask 1 *2	Pr.1438	255 (default) *3	△
Subnet mask 2 *2	Pr.1439	255 (default) *3	△
Subnet mask 3 *2	Pr.1440	255 (default) *3	△
Subnet mask 4 *2	Pr.1441	0 (default) *3	△

Setting item[*1]	Parameter No.	Set value	Setting necessity at GOT connection
Ethernet IP filter address 1	Pr.1442	0 (default) [*3]	△
Ethernet IP filter address 2	Pr.1443	0 (default) [*3]	△
Ethernet IP filter address 3	Pr.1444	0 (default) [*3]	△
Ethernet IP filter address 4	Pr.1445	0 (default) [*3]	△
Ethernet IP filter address 2 range specification	Pr.1446	9999 (default) [*3]	△
Ethernet IP filter address 3 range specification	Pr.1447	9999 (default) [*3]	△
Ethernet IP filter address 4 range specification	Pr.1448	9999 (default) [*3]	△
Ethernet command source selection IP address 1	Pr.1449	0 (default) [*3]	△
Ethernet command source selection IP address 2	Pr.1450	0 (default) [*3]	△
Ethernet command source selection IP address 3	Pr.1451	0 (default) [*3]	△
Ethernet command source selection IP address 4	Pr.1452	0 (default) [*3]	△
Ethernet command source selection IP address 3 range specification	Pr.1453	9999 (default) [*3]	△
Ethernet command source selection IP address 4 range specification	Pr.1454	9999 (default) [*3]	△
Keepalive time	Pr.1455	3600s (default) [*3*4]	△

*1 The parameter names described in the FR-A800 Plus series manuals
*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.
*3 Change the setting depending on the usage environment.
*4 For the precautions for the TCP/IP connection, refer to the following.
☞ Page 545 When the GOT and inverter are connected using TCP/IP

■Parameters for monitoring data specific to FR-A800 Plus series

For how to monitor the winding length (upper + lower) (PV29) and actual line speed (PV27), refer to the following.
☞ Page 521 Parameters for monitoring data specific to FR-A800 Plus series

Connecting to FR-E700 series (FR-E7□0-NE)

■Communication settings

For setting up the inverter, refer to the following.

📖Manual of the inverter used

• Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
Ethernet connector	Pr.79, Pr.340, Pr.342, Pr.442 to 445, Pr.502, Pr.549 to 551, Pr.805 to 812, Pr.830 to 835, Pr.837 to 852

• Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Do not change these parameters from the GOT.

If they are changed, communication with the GOT is disabled.

○: Required, △: Set it as necessary

Setting item [*1]	Parameter No.	Set value	Setting necessity at GOT connection
Operation mode switching	Pr.79	0(default)[*3]	△
Communication startup mode	Pr.340	10[*3]	△
Communication EEPROM write selection	Pr.342	0(default)[*3]	△
Stop mode selection at communication error	Pr.502	0(default)[*3]	△
Protocol selection	Pr.549	0(default)[*3]	○
NET mode command source selection	Pr.550	0(default)[*3]	△
PU mode command source selection	Pr.551	2[*3]	△
Ethernet communication network number [*2]	Pr.830	1 to 239	○
Ethernet communication station number [*2]	Pr.831	1 to 120	○
Link speed and duplex mode selection	Pr.832	0(default)[*3]	△
Ethernet function selection 1 [*2]	Pr.833	30, 31, 36, 38	○
Ethernet function selection 2	Pr.834	20(default)[*3]	△

Setting item *1	Parameter No.	Set value	Setting necessity at GOT connection
Ethernet function selection 3	Pr.835	9999(default)*3	△
Ethernet signal loss detection function selection	Pr.851	3(default)*3	△
Ethernet communication check time interval	Pr.852	1.5s(default)*3	△
Ethernet IP address 1 (Built-in Ethernet) *2	Pr.805	0 to 255	○
Ethernet IP address 2 (Built-in Ethernet) *2	Pr.806	0 to 255	○
Ethernet IP address 3 (Built-in Ethernet) *2	Pr.807	0 to 255	○
Ethernet IP address 4 (Built-in Ethernet) *2	Pr.808	0 to 255	○
Subnet mask 1 *2	Pr.809	255(default)*3	△
Subnet mask 2 *2	Pr.810	255(default)*3	△
Subnet mask 3 *2	Pr.811	255(default)*3	△
Subnet mask 4 *2	Pr.812	0(default)*3	△
Gateway address 1 *2	Pr.442	0(default)*3	△
Gateway address 2 *2	Pr.443	0(default)*3	△
Gateway address 3 *2	Pr.444	0(default)*3	△
Gateway address 4 *2	Pr.445	0(default)*3	△
Ethernet IP filter address 1	Pr.837	0(default)*3	△
Ethernet IP filter address 2	Pr.838	0(default)*3	△
Ethernet IP filter address 3	Pr.839	0(default)*3	△
Ethernet IP filter address 4	Pr.840	0(default)*3	△
Ethernet IP filter address 2 range specification	Pr.841	9999(default)*3	△
Ethernet IP filter address 3 range specification	Pr.842	9999(default)*3	△
Ethernet IP filter address 4 range specification	Pr.843	9999(default)*3	△
Ethernet command source specification IP address 1	Pr.844	0(default)*3	△
Ethernet command source specification IP address 2	Pr.845	0(default)*3	△
Ethernet command source specification IP address 3	Pr.846	0(default)*3	△
Ethernet command source specification IP address 4	Pr.847	0(default)*3	△
Ethernet command source selection IP address 3 range specification	Pr.848	9999(default)*3	△
Ethernet command source selection IP address 4 range specification	Pr.849	9999(default)*3	△
Ethernet TCP disconnection time coefficient	Pr.850	3600*3	△

*1 Setting items are the parameter names described in the FR-E700 series manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 Change the setting depending on the usage environment.

Connecting to FR-D800 series (FR-D8□0-E))

■Communication settings

For setting up the inverter, refer to the following.

📖Manual of the inverter used

■Communication port and the supported parameters

GOT connection destination	Parameters corresponding to inverter
Ethernet connector	Pr.79, Pr.340, Pr.342, Pr.502, Pr.549 to 551, Pr779, Pr.1424 to 1432, Pr.1434 to 1455

■Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

For parameter setting values, refer to the following.

📖Manual of the inverter used

○: Required, △: Set it as necessary

Setting item[*1]	Parameter No.	Setting necessity at GOT connection
Operation mode switching	Pr.79	△
Communication startup mode	Pr.340	△
Communication EEPROM write selection	Pr.342	△
Stop mode selection at communication error	Pr.502	△
Protocol selection	Pr.549	○
NET mode command source selection	Pr.550	△
PU mode command source selection	Pr.551	△
Operation frequency during communication error	Pr.779	△
Ethernet communication network number[*2]	Pr.1424	○
Ethernet communication station number[*2]	Pr.1425	○
Link speed and duplex mode selection	Pr.1426	△
Ethernet function selection 1[*2]	Pr.1427	○
Ethernet function selection 2	Pr.1428	△
Ethernet function selection 3	Pr.1429	△
Ethernet function selection 4	Pr.1430	△
Ethernet signal loss detection function selection	Pr.1431	△
Ethernet communication check time interval	Pr.1432	△
Ethernet IP address 1 (Built-in Ethernet)[*2]	Pr.1434	○
Ethernet IP address 2 (Built-in Ethernet)[*2]	Pr.1435	○
Ethernet IP address 3 (Built-in Ethernet)[*2]	Pr.1436	○
Ethernet IP address 4 (Built-in Ethernet)[*2]	Pr.1437	○
Subnet mask 1[*2]	Pr.1438	△
Subnet mask 2[*2]	Pr.1439	△
Subnet mask 3[*2]	Pr.1440	△
Subnet mask 4[*2]	Pr.1441	△
Ethernet IP filter address 1	Pr.1442	△
Ethernet IP filter address 2	Pr.1443	△
Ethernet IP filter address 3	Pr.1444	△
Ethernet IP filter address 4	Pr.1445	△
Ethernet IP filter address 2 range specification	Pr.1446	△
Ethernet IP filter address 3 range specification	Pr.1447	△
Ethernet IP filter address 4 range specification	Pr.1448	△
Ethernet command source selection IP address 1	Pr.1449	△
Ethernet command source selection IP address 2	Pr.1450	△
Ethernet command source selection IP address 3	Pr.1451	△
Ethernet command source selection IP address 4	Pr.1452	△
Ethernet command source selection IP address 3 range specification	Pr.1453	△
Ethernet command source selection IP address 4 range specification	Pr.1454	△
Keepalive time	Pr.1455	△

*1 Setting items are the parameter names described in the FR-A800, FR-F800, and FR-E800 series manuals.

*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

Precautions

Connection port of inverter

Make sure to connect an Ethernet cable to an Ethernet port of an inverter.

When connecting an Ethernet cable by mistake to a PU port, there is a fear that equipment is damaged.

Monitoring virtual devices (RS, WS, A, Pr, PG, SP)

From multiple GOTs, it cannot monitor the virtual devices (RS, WS, A, Pr, PG, SP) of a single inverter at the same time.

When the GOT and inverter are connected using TCP/IP

When the GOT and inverter are connected using TCP/IP, they may not be connected again after they are disconnected.

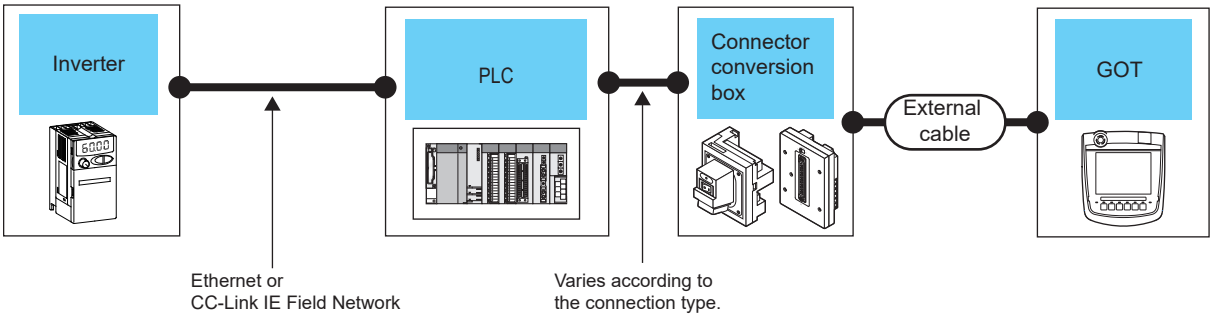
In such a case, reset the inverter, or shorten the keepalive time and Ethernet TCP disconnection time coefficient.

For setting the keepalive time and Ethernet TCP disconnection time coefficient, refer to the following.

📖Manual of the inverter used

7.4 Connection through a PLC

Connection to FR-A800, FR-F800, FR-E800, or FR-D800



Inverter		PLC	Communication type *1	Connector conversion box	GOT Model	Number of connectable equipment
Model name	**Communication type**	**CPU type**				
FR-E7□0-NE *5 FR-A8□0-E *4 FR-A8□2-E *4 FR-A8□6-E *4 FR-A8□0-E-CRN FR-A8□2-E-CRN FR-A8□0-E-R2R FR-A8□2-E-R2R FR-A8□0-E-AWH FR-A8□0-E-LC FR-F8□0-E *4 FR-F8□2-E *4 FR-E8□0-E FR-D8□0-E	Ethernet	MELSEC MX Controller (MX-R Model) RCPU QCPU LCPU	For the system configuration between the GOT and the PLC, refer to the following. ☞ Page 104 ETHERNET CONNECTION*7 ☞ Page 307 DIRECT CPU CONNECTION (SERIAL) ☞ Page 359 SERIAL COMMUNICATION CONNECTION	GT16H-CNB-42S or GT16H-CNB-37S	GT 2506HS	*2
FR-A8□0 *3 FR-A8□2 *3 FR-A8□6 *3 FR-A8□0-GF FR-A8□2-GF FR-A8□0-CRN *3 FR-A8□2-CRN *3 FR-A8□0-R2R *3 FR-A8□2-R2R *3 FR-A8□0-LC *3 FR-F8□0 *3 FR-F8□2 *3 FR-F8□6 *3	CC-Link IE Field network*6	MELSEC MX Controller (MX-R Model) RCPU QCPU LCPU		GT16H-CNB-37S or GT11H-CNB-37S	GT 2505HS	

*1 The connection type depends on the CPU model.
☞ [System Configuration] section in each chapter

*2 The numbers of connectable devices below depend on the connection type.
☞ [System Configuration] section in each chapter
• Number of GOTs connectable to one PLC
• Number of PLCs connectable to one GOT

*3 The option for the CC-Link IE Field Network communication (FR-A8NCE) is required.
Use a CC-Link IE Field Network communication option (FR-A8NCE) whose SERIAL (serial No.) is "□83***" or later.
SERIAL (serial No.) is described on the CC-Link IE Field Network communication option (FR-A8NCE).

*4 When the communication type is the Ethernet connection and the communication format is TCP, use an inverter whose SERIAL (serial No.) is "□7Z******" or later.
SERIAL (serial No.) is described on a rating plate of the inverter.

*5 Use an inverter with SERIAL (serial No.) "□88******" or later.
SERIAL (serial No.) is described on a rating plate of the inverter.

*6 Use an inverter having SERIAL (serial No.) "□83******" or later.
SERIAL (serial No.) is described on a rating plate of the inverter.

*7 To monitor other networks, routing parameter setting is necessary.
For the routing parameter setting, refer to the following.
☞ Page 164 Routing parameter setting

GOT side settings

The GOT settings depend on the connection type between the GOT and PLC.

For details on the GOT settings, refer to the following.

☞ Page 104 ETHERNET CONNECTION

☞ Page 307 DIRECT CPU CONNECTION (SERIAL)

☞ Page 359 SERIAL COMMUNICATION CONNECTION

Inverter side settings

For details of the inverter, refer to the manual of each series.

Connection by Ethernet

■Communication settings

For setting up the inverter, refer to the following.

📖Manual of the inverter used

For details on the communication port, parameters corresponding to the inverter, and communication settings of the inverter, refer to the following.

☞ Page 540 Connecting to FR-A800, FR-F800, or FR-E800 series (FR-A8□0-E, FR-A8□2-E, FR-A8□6-E, FR-F8□0-E, FR-F8□2-E, or FR-E8□0-E)

☞ Page 543 Connecting to FR-D800 series (FR-D8□0-E))

CC-Link IE Field Network connection

■Communication settings

For setting up the inverter, refer to the following.

📖Manual of the inverter used

• Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
Ethernet connector	Pr.79, Pr.313 to 315, Pr.338 to 340, Pr.342, Pr.349, Pr.434 to 435, Pr.500 to 502, Pr.541, Pr.550, Pr.779, Pr.804, Pr.810

• Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Do not change these parameters, even though they can be monitored from the GOT.

If they are changed, communication with the GOT is disabled.

○: Required, △: Set it as necessary

Setting item *1	Parameter No.	Set value	Setting necessity at GOT connection
Operation mode selection	Pr.79	0 (default) *3	△
Communication startup mode selection	Pr.340	10 *3	△
DO0 output selection	Pr.313	9999 (default) *3	△
DO1 output selection	Pr.314	9999 (default) *3	△
DO2 output selection	Pr.315	9999 (default) *3	△
Communication operation command source	Pr.338	0 (default) *3	△
Communication speed command source	Pr.339	0 (default) *3	△
Communication EEPROM write selection	Pr.342	0 (default) *3	△
Communication reset selection	Pr.349	0 (default) *3	△
Network number (CC-Link IE) *2	Pr.434	1 to 239	○
Station number (CC-Link IE) *2	Pr.435	1 to 120	○
Communication error execution waiting time	Pr.500	0s (default) *3	△
Communication error occurrence count display	Pr.501	0 (default) *3	△
Stop mode selection at communication error	Pr.502	0 (default) *3	△
Frequency command sign selection	Pr.541	0 (default) *3	△
NET mode operation command source selection	Pr.550	0 *3	△

Setting item [*1]	Parameter No.	Set value	Setting necessity at GOT connection
Operation frequency during communication error	Pr.779 [*4]	9999 (default) [*3]	△
Torque command source selection	Pr.804	0 (default) [*3]	△
Torque limit input method selection	Pr.810	0 (default) [*3]	△

*1 The setting items are the parameter names described in the manuals of the FR-A800 and FR-F800 series.
*2 Settings on the GOT can be changed.
When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.
*3 Change the setting depending on the usage environment.
*4 For FR-A8□0-R2R and FR-A8□2-R2R, this setting is unavailable.

■Parameters for monitoring data specific to FR-A800 Plus series

For how to monitor the winding length (upper + lower) (PV29) and actual line speed (PV27), refer to the following.

☞ Page 521 Parameters for monitoring data specific to FR-A800 Plus series

Precautions

When the device of the PLC and virtual device of the inverter are monitored simultaneously

In the following cases, the device monitor speed of the PLC that passes through the GOT and inverter decreases.

- Monitoring the device of the PLC and virtual device of the inverter on the same screen or background
- Resetting the inverter

By connecting a different channel for each controller with the multi-channel function, the decreasing device monitor speed of the PLC can be improved.

Link devices of CC-Link IE Field Network, or CC-Link IE Field Network Basic connection

When functions (signals) are assigned to link devices (RX, RY, RWr, RWw) on the inverter, the GOT cannot write data to these virtual devices.

Example) CMD1 (Forward rotation command)

Since the forward rotation command is assigned to RY0 on the inverter, the GOT cannot write data to the virtual device, or CMD1 (forward rotation command).

For the functions (signals) assigned to the link devices (RX, RY, RWw, and RWr), refer to the following.

📖Manual of the inverter used

Control the functions (signals) assigned to the link devices (RX, RY, RWw, and RWr) on the master station.

7.5 Settable Device Range

When directly connecting the GOT to an inverter

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3 Version1
[FREQROL 500/700/800, SENSORLESS SERVO]
[FREQROL 800]
[FREQROL 800/E700NE(Batch monitor)]

When connecting the GOT to an inverter via a PLC

For details of the device setting, refer to the following.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3 Version1

MEMO

8 SERVO AMPLIFIER CONNECTION

- Page 551 Connectable Model List
- Page 553 Serial Connection
- Page 577 Ethernet Connection
- Page 596 Connection through a PLC
- Page 610 Settable Device Range
- Page 611 Precautions

8.1 Connectable Model List

The following table shows the connectable models.

Series	Model name	Clock	Communication type	Connectable model	Refer to
MELSERVO-J2-Super	MR-J2S-□A MR-J2S-□CP MR-J2S-□CL	×	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 553 Connecting to the MELSERVO-J2-Super Series
MELSERVO-J2M	MR-J2M-P8A MR-J2M-□DU	×	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 555 Connecting to the MELSERVO-J2M Series
MELSERVO-J3	MR-J3-□A MR-J3-□T	×	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 558 Connecting to the MELSERVO-J4, J3 Series
MELSERVO-J4	MR-J4-□A*1 MR-J4-□A-RJ*1	×	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 558 Connecting to the MELSERVO-J4, J3 Series
	MR-J4-□B*2*6 MR-J4-□B-RJ*2*6 MR-J4W2-□B*2*6 MR-J4W3-□B*2*6	×	*3	GT2506HS GT2505HS	☞ Page 596 Connection to MELSERVO-J4 series
	MR-J4-□GF*4 MR-J4-□GF-RJ*4	×	*5		
MELSERVO-J5	MR-J5-□B MR-J5-□B-RJ MR-J5W2-□B MR-J5W3-□B	×	*5	GT2506HS GT2505HS	☞ Page 600 Connection to MELSERVO-J5 or JET series
	MR-J5-□G*7 MR-J5-□G-RJ*7 MR-J5W2-□G*7 MR-J5W3-□G*7 MR-J5D1-□G4*7 MR-J5D2-□G4*7 MR-J5D3-□G4*7	×	*5	GT2506HS GT2505HS	☞ Page 600 Connection to MELSERVO-J5 or JET series
	MR-J5-□G MR-J5-□G-RJ MR-J5W2-□G*8 MR-J5W3-□G*8 MR-J5D1-□G4 MR-J5D2-□G4*8 MR-J5D3-□G4*8	×	Ethernet	GT2506HS GT2505HS	☞ Page 577 Connection to the MELSERVO-J5 or JET series
MELSERVO-JET	MR-JET-□G*7	×	*5	GT2506HS GT2505HS	☞ Page 600 Connection to MELSERVO-J5 or JET series
	MR-JET-□G	×	Ethernet	GT2506HS GT2505HS	☞ Page 577 Connection to the MELSERVO-J5 or JET series
MELSERVO-JE	MR-JE-□A	×	RS-422	GT2506HS GT2505HS	☞ Page 563 Connecting to the MELSERVO-JE-□A Series
	MR-JE-□B*2 MR-JE-□BF*2	×	*3	GT2506HS GT2505HS	☞ Page 606 Connection to MELSERVO-JE-□B series
	MR-JE-□C	×	Ethernet	GT2506HS GT2505HS	☞ Page 580 Connecting to the MELSERVO-JE-C Series

*1 For the RS-422 communication, use MELSERVO-J4 of software version A3 or a later version.
*2 The models are connected to the GOT through a Motion controller or Simple Motion module.
*3 The communication type depends on the connection type between a motion CPU or PLC CPU and the GOT.
*4 The models are connected to the GOT through a Simple Motion module or CC-Link IE Field Network master/local module.
*5 The communication type depends on the connection type between a PLC CPU and the GOT.
*6 If the models are J3-compatible, the GOT cannot monitor the servo amplifiers.
*7 The models are connected to the GOT through a Motion module or CC-Link IE TSN master/local module.
*8 The connection with the PLC through a CC-Link IE Field Network Basic is not supported.

8.2 Serial Connection

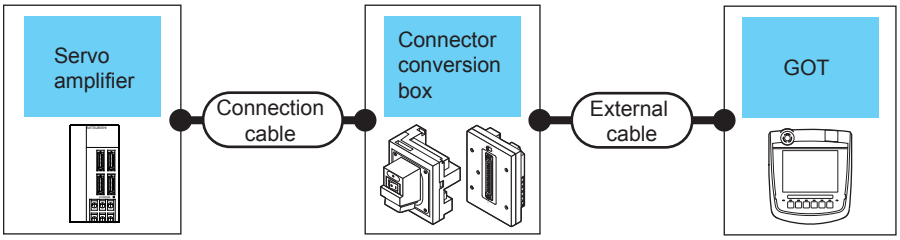
Connecting to the MELSERVO-J2-Super Series

Communication driver

MELSERVO-J4, J3, J2S/M, JE

When connecting via RS-232 communication

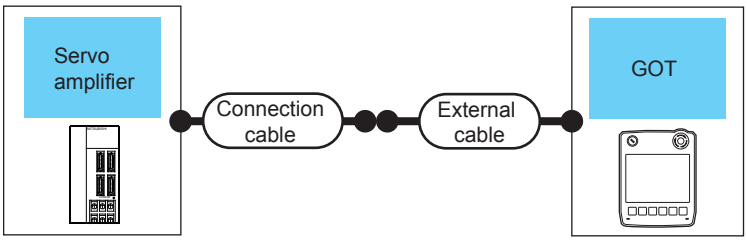
■When using the connector conversion box



Servo amplifier		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Cable model Connection diagram number					
MR-J2S-□A*1 MR-J2S-□CP*1 MR-J2S-□CL*1	RS-232	MR-CPCATCBL3M(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 servo amplifier
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Connect the connector of the servo amplifier to CN3.

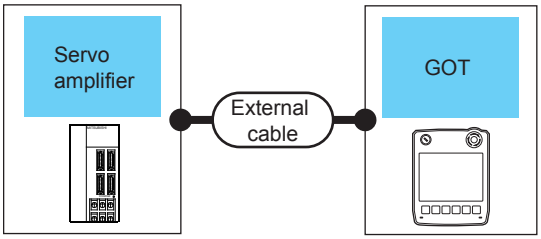
■When using the external cable (GT11H-C□□□-37P)



Servo amplifier		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Cable model Connection diagram number				
MR-J2S-□A*1 MR-J2S-□CP*1 MR-J2S-□CL*1	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 servo amplifier

*1 Connect the connector of the servo amplifier to CN3.

■When using the external cable (GT11H-C□□□)

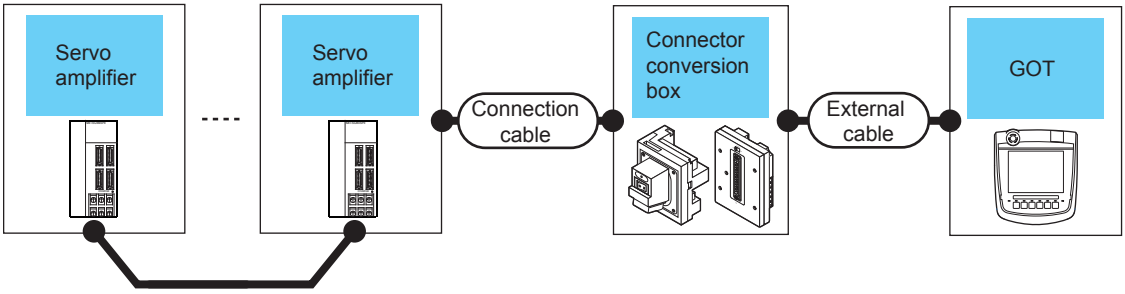


Servo amplifier		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type				
MR-J2S-□A*1 MR-J2S-□CP*1 MR-J2S-□CL*1	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 servo amplifier

*1 Connect the connector of the servo amplifier to CN3.

When connecting via RS-422 communication

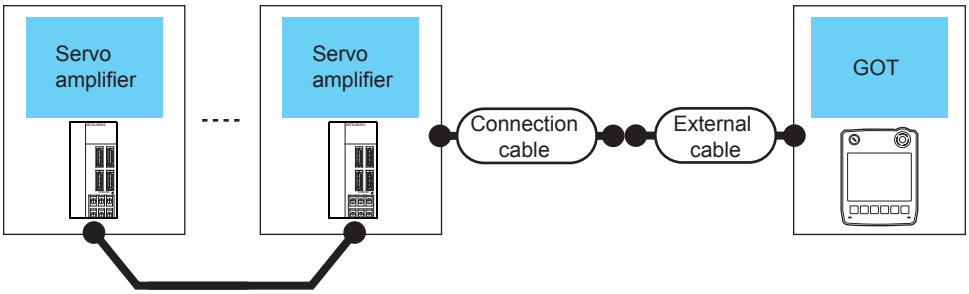
■When using the connector conversion box



Servo amplifier		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Connection diagram number					
MR-J2S-□A*1 MR-J2S-□CP*1 MR-J2S-□CL*1	RS-422	User preparing RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 32 servo amplifiers for 1 GOT (multi-drop communication)
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Connect the connector of the servo amplifier to CN3.

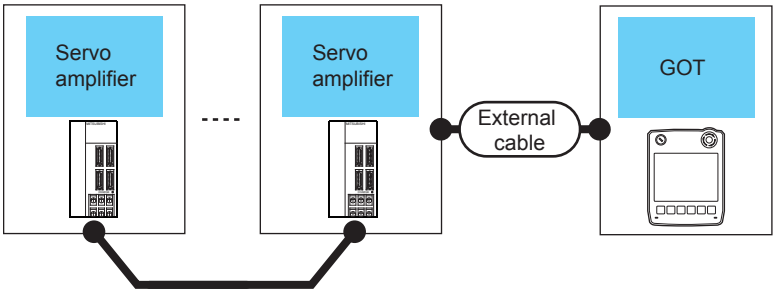
■When using the external cable (GT11H-C□□□-37P)



Servo amplifier		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Connection diagram number				
MR-J2S-□A*1 MR-J2S-□CP*1 MR-J2S-□CL*1	RS-422	User preparing RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	Up to 32 servo amplifiers for 1 GOT (multi-drop communication)

*1 Connect the connector of the servo amplifier to CN3.

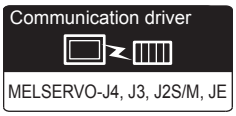
■When using the external cable (GT11H-C□□□)



Servo amplifier		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type				
MR-J2S-□A*1 MR-J2S-□CP*1 MR-J2S-□CL*1	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 3)	GT 2505HS	13m	Up to 32 servo amplifiers for 1 GOT (multi-drop communication)

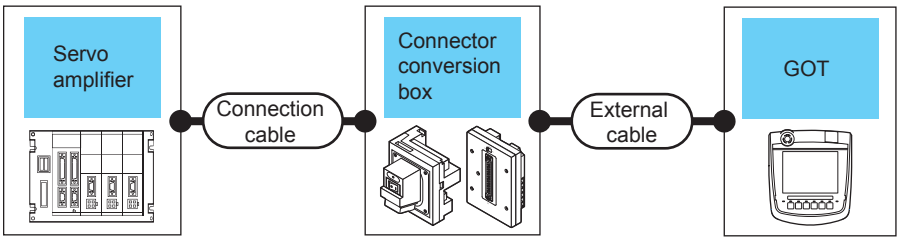
*1 Connect the connector of the servo amplifier to CN3.

Connecting to the MELSERVO-J2M Series



When connecting via RS-232 communication

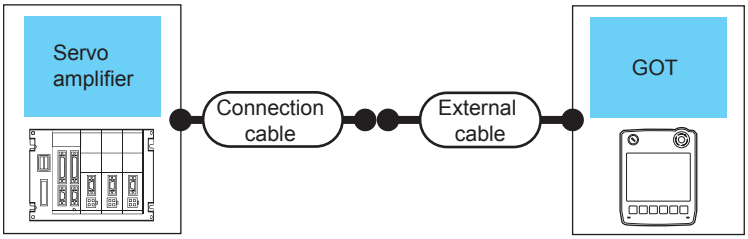
■When using the connector conversion box



Servo amplifier		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Cable model Connection diagram number					
MR-J2M-P8A*1 MR-J2M-□DU*1	RS-232	MR-CPCATCBL3M(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 servo amplifier
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Connect the connector of the servo amplifier to CN3.

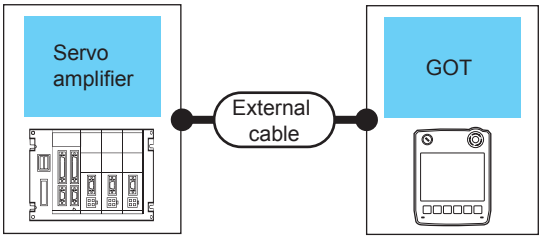
■When using the external cable (GT11H-C□□□-37P)



Servo amplifier		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Cable model Connection diagram number				
MR-J2M-P8A*1 MR-J2M-□DU*1	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 servo amplifier

*1 Connect the connector of the servo amplifier to CN3.

■When using the external cable (GT11H-C□□□)

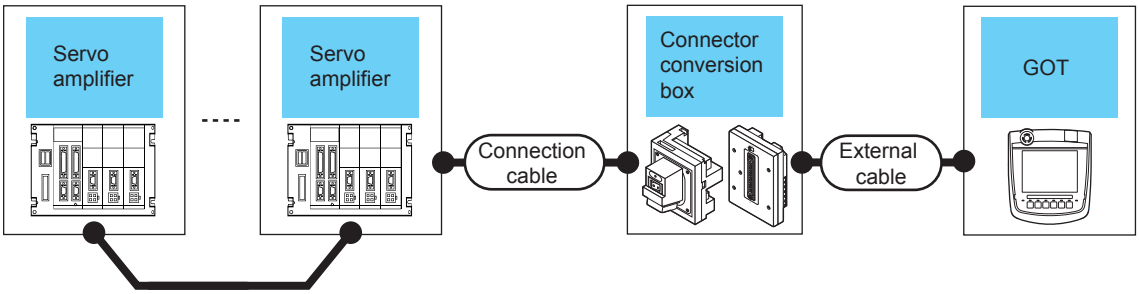


Servo amplifier		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type				
MR-J2M-P8A*1 MR-J2M-□DU*1	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-422 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 servo amplifier

*1 Connect the connector of the servo amplifier to CN3.

When connecting via RS-422 communication

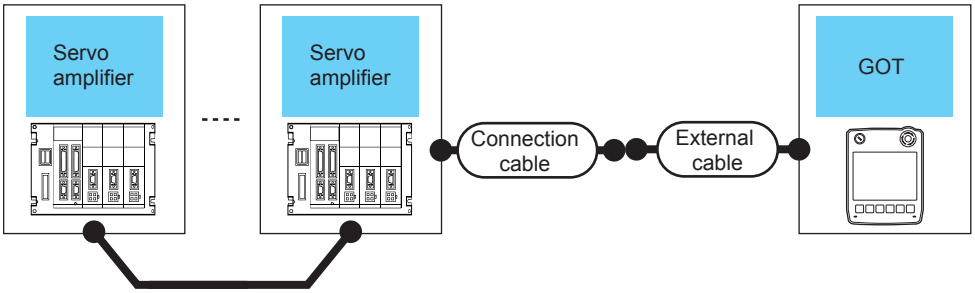
■When using the connector conversion box



Servo amplifier		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Connection diagram number					
MR-J2M-P8A*1 MR-J2M-□DU*1	RS-422	User preparing RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	0 to 31 servo amplifiers for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Connect the connector of the servo amplifier to CN3.

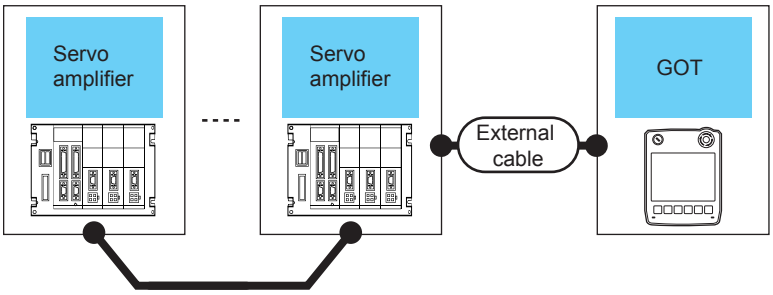
■When using the external cable (GT11H-C□□□-37P)



Servo amplifier		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Connection diagram number				
MR-J2M-P8A*1 MR-J2M-□DU*1	RS-422	User preparing RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	0 to 31 servo amplifiers for 1 GOT

*1 Connect the connector of the servo amplifier to CN3.

■When using the external cable (GT11H-C□□□)



Servo amplifier		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type				
MR-J2M-P8A*1 MR-J2M-□DU*1	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 3)	GT 2505HS	13m	0 to 31 servo amplifiers for 1 GOT

*1 Connect the connector of the servo amplifier to CN3.

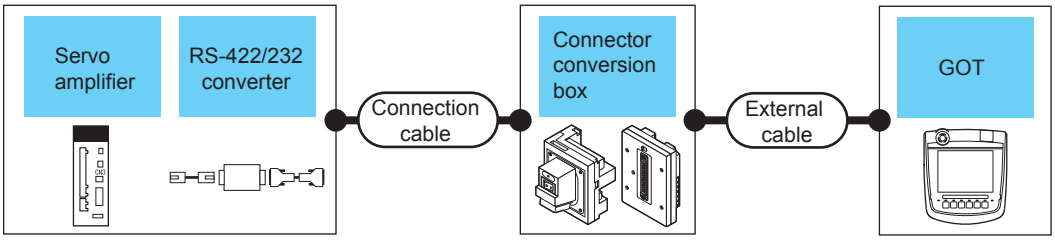
Connecting to the MELSERVO-J4, J3 Series

Communication driver

MELSERVO-J4, J3, J2S/M, JE

When connecting to one servo amplifier

• When using the connector conversion box



Servo amplifier			Connection cable	Connector conversion box	External cable	GOT Model	Total distance *4	Number of connectable equipment
Model name	RS-422/232 interface converter RS-422/232 conversion cable	Communication type	Cable model Connection diagram number					
MR-J4-□A*1 MR-J4-□A-RJ*1 MR-J3-□A*1 MR-J3-□T*1	DSV-CABV(1.5m)*2 or FA-T-RS40VS*3	RS-232	-	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 servo amplifier
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	-	RS-422	User preparing RS-422 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

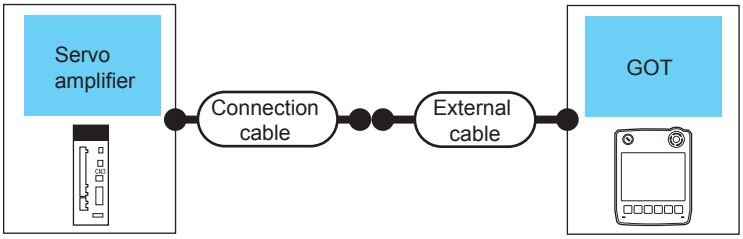
*1 Connect the connector of the servo amplifier to CN3.

*2 DSV-CABV is a product manufactured by Diatrend Corporation.
For details, contact Diatrend Corporation.

*3 FA-T-RS40VS is a product manufactured by MITSUBISHI ELECTRIC ENGINEERING COMPANY LIMITED.
For details, contact MITSUBISHI ELECTRIC ENGINEERING COMPANY LIMITED.
The cables (RS-PCATCBL-0.5M(0.5m), RS-422SCBL-2M(2m)) are packed together.
Use the provided cables to connect devices.
* FA-T-RS40VS stopped being produced at the end of March, 2013. The replacement product is not produced.

*4 The distance from the GOT to the interface converter or the conversion cable (Connection cable + External cable)

• When using the external cable (GT11H-C□□□-37P)



Servo amplifier		Connection cable	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	**Communication type**	**Cable model Connection diagram number**				
MR-J4-□A*1 MR-J4-□A-RJ*1 MR-J3-□A*1 MR-J3-□T*1	RS-422	User preparing RS-422 connection diagram 5)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for 1 servo amplifier

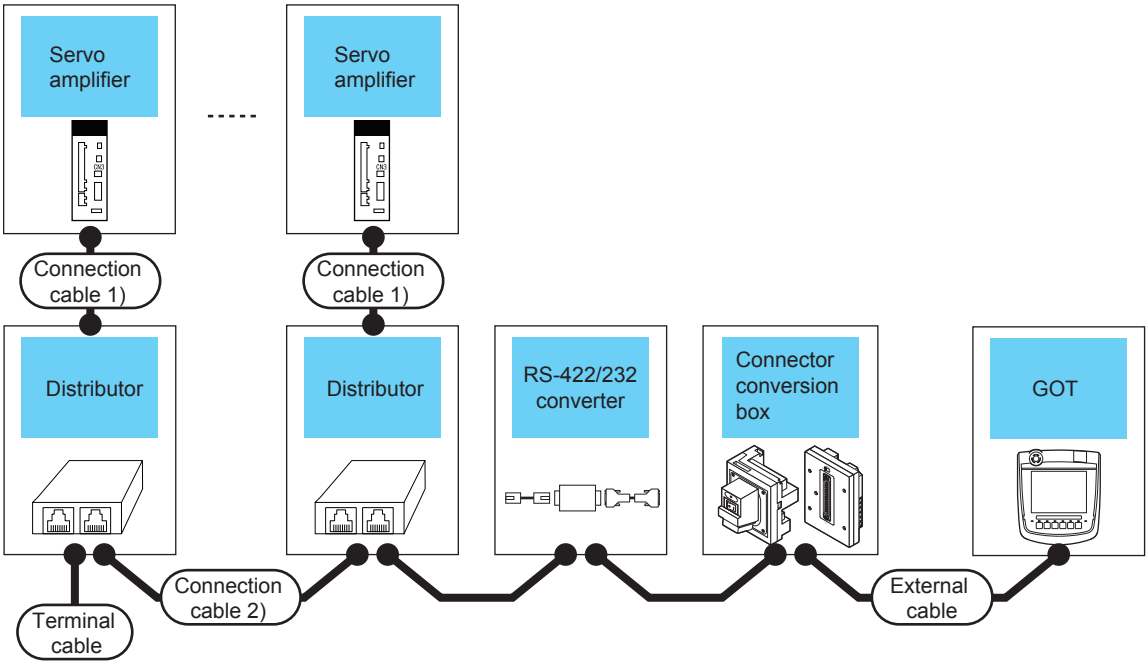
*1 Connect the connector of the servo amplifier to CN3.

*2 The distance from the GOT to the interface converter or the conversion cable (Connection cable + External cable)

When connecting to multiple servo amplifiers

■RS-232 connection

• When using the connector conversion box



Servo amplifier	Terminating cable	Connection cable 1)	Distributor *3	Connection cable 2)	Distributor *3	RS-422/232 interface converter*2		Connector conversion box	External cable	GOT Model	Total distance *4	Number of connectable equipment
Model name	Connection diagram number	Connection diagram number	Model name	Connection diagram number	Model name	Model name	Communication type					
MR-J4-□A*1 MR-J4-□A-RJ*1 MR-J3-□A*1 MR-J3-□T*1	User preparing RS-422 connection diagram 8)	User preparing RS-422 connection diagram 7)	BMJ-8 (Recommended)	User preparing RS-422 connection diagram 6)	BMJ-8 (Recommended)	FA-T-RS40VS	RS-232	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 32 servo amplifiers for 1 GOT
								GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m)	GT 2505HS		

*1 Connect the connector of the servo amplifier to CN3.

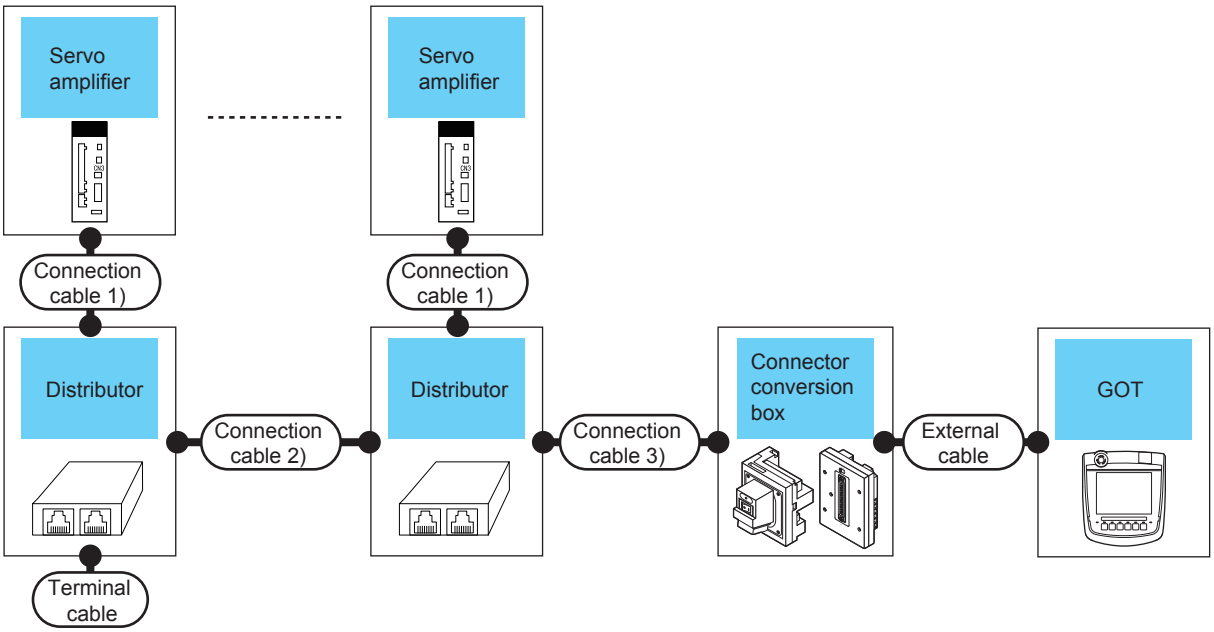
*2 FA-T-RS40VS is a product manufactured by MITSUBISHI ELECTRIC ENGINEERING COMPANY LIMITED.
For detail of this product, contact MITSUBISHI ELECTRIC ENGINEERING COMPANY LIMITED.
The cables (RS-PCATCBL-0.5M(0.5m), RS-422SCBL-2M(2m)) are packed together.
Use the cables packed together to connect.

*3 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

*4 The distance from the GOT to the RS422/232 interface converter.

■RS-422 connection

• When using the connector conversion box



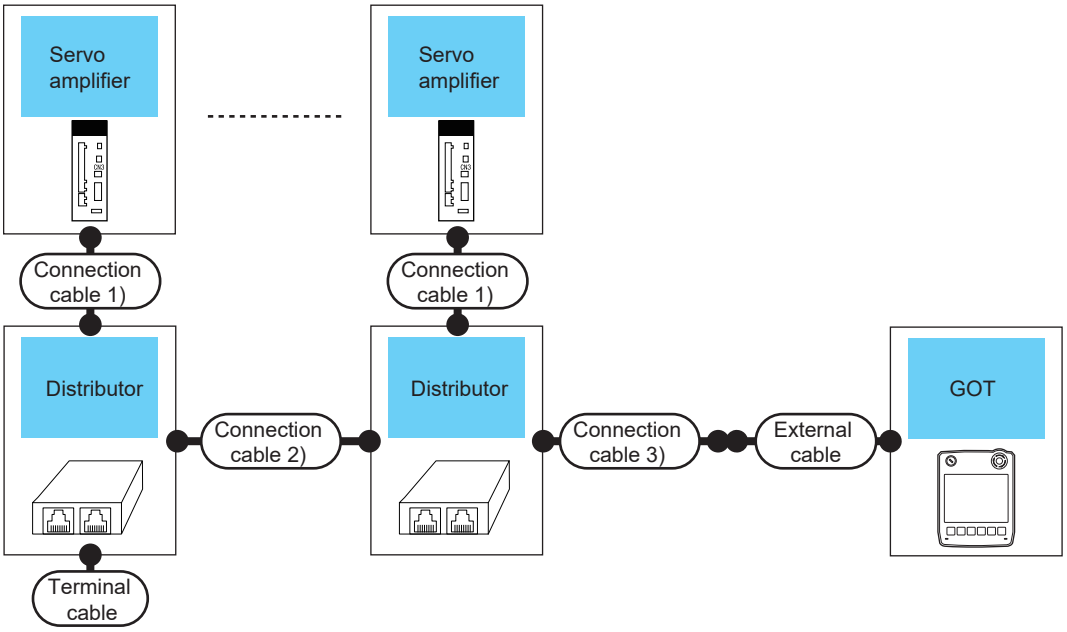
Servo amplifier		Terminating cable	Connection cable 1)	Distributor *2	Connection cable 2)	Distributor *2	Connection cable 3)	Connector conversion box	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name	Communication type	Connection diagram number	Connection diagram number	Model name	Connection diagram number	Model name	Connection diagram number					
MR-J4-□A*1 MR-J4-□A-RJ*1 MR-J3-□A*1 MR-J3-□T*1	RS-422	User preparing RS-422 connection diagram 8)	User preparing RS-422 connection diagram 7)	BMJ-8 (Recommended)	User preparing RS-422 connection diagram 6)	BMJ-8 (Recommended)	User preparing RS-422 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 32 servo amplifiers for 1 GOT
								GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Connect the connector of the servo amplifier to CN3.

*2 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

*3 The distance from the GOT to the servo amplifier (Connection cable 1) + Connection cable 2) + Connection cable 3) + External connection cable).

• When using the external cable (GT11H-C□□□-37P)



Servo amplifier		Terminating cable	Connection cable 1)	Distributor *2	Connection cable 2)	Distributor *2	Connection cable 3)	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name	**Communication type**	**Connection diagram number**	**Connection diagram number**	**Model name**	**Connection diagram number**	**Model name**	**Connection diagram number**				
MR-J4-□A*1 MR-J4-□A-RJ*1 MR-J3-□A*1 MR-J3-□T*1	RS-422	User preparing RS-422 connection diagram 8)	User preparing RS-422 connection diagram 7)	BMJ-8 (Recommended)	User preparing RS-422 connection diagram 6)	BMJ-8 (Recommended)	User preparing RS-422 connection diagram 5)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	Up to 32 servo amplifiers for 1 GOT

*1 Connect the connector of the servo amplifier to CN3.

*2 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD.
For details, contact HAKKO ELECTRIC CO., LTD.

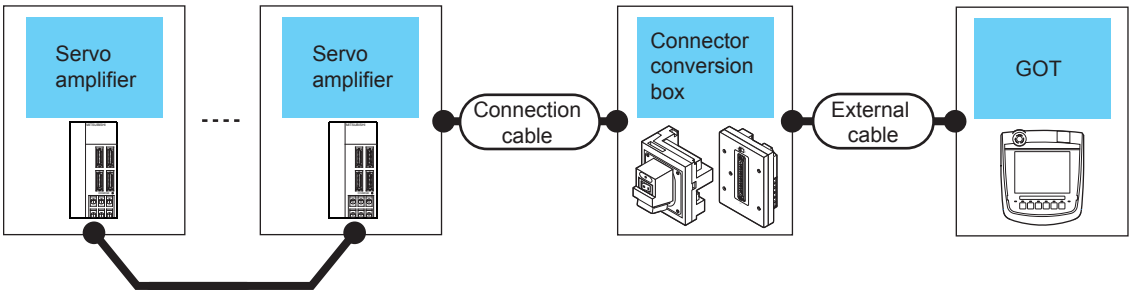
*3 The distance from the GOT to the servo amplifier (Connection cable 1) + Connection cable 2) + Connection cable 3) + External connection cable).

Connecting to the MELSERVO-JE-□A Series

Communication driver

MELSERVO-J4, J3, J2S/M, JE

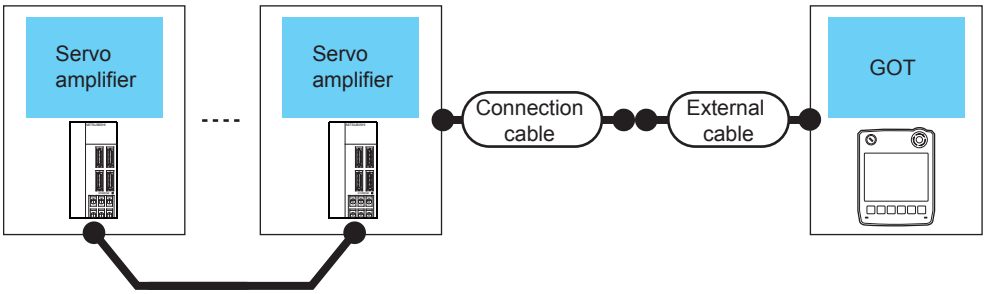
When using the connector conversion box



Servo amplifier		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Connection diagram number					
MR-JE-□A*1	RS-422	User preparing RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 32 servo amplifiers for 1 GOT (multi-drop communication)
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Connect the connector of the servo amplifier to CN1.

When using the external cable (GT11H-C□□□-37P)

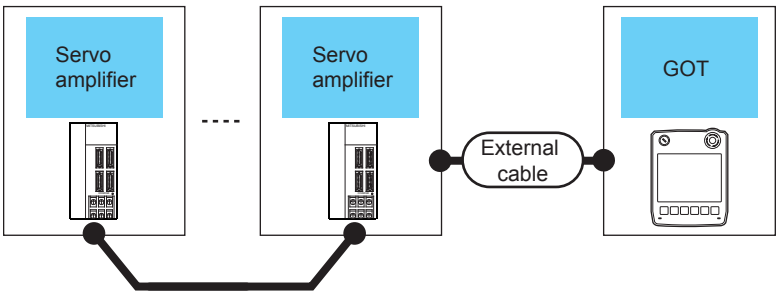


Servo amplifier		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Connection diagram number				
MR-JE-□A*1	RS-422	User preparing RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	Up to 32 servo amplifiers for 1 GOT (multi-drop communication)

*1 Connect the connector of the servo amplifier to CN1.

8

When using the external cable (GT11H-C□□□)



Servo amplifier		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type	Connection diagram number				
MR-JE-□A*1	RS-422	User preparing RS-422 connection diagram 3)	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 3)	GT 2505HS	13m	Up to 32 servo amplifiers for 1 GOT (multi-drop communication)

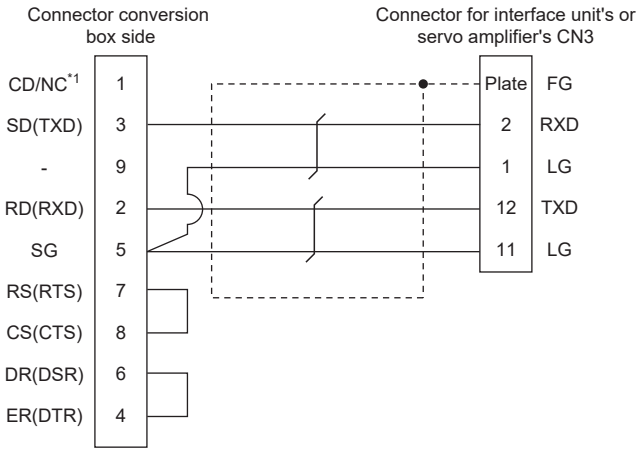
*1 Connect the connector of the servo amplifier to CN1.

Connection Diagram

The following diagram shows the connection between the GOT and the servo amplifier.

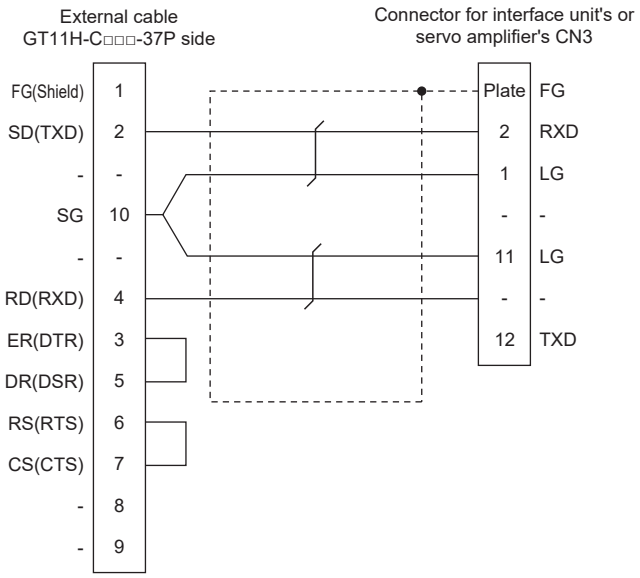
RS-232 cable

■RS-232 connection diagram 1)



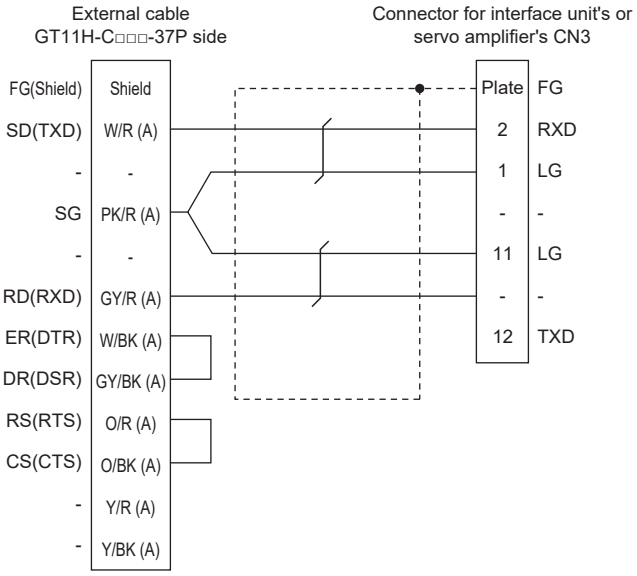
*1 GT2506HS-V: CD, GT2505HS-V: NC

■RS-232 connection diagram 2)



8

■RS-232 connection diagram 3)



■Precautions when preparing cable

• Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

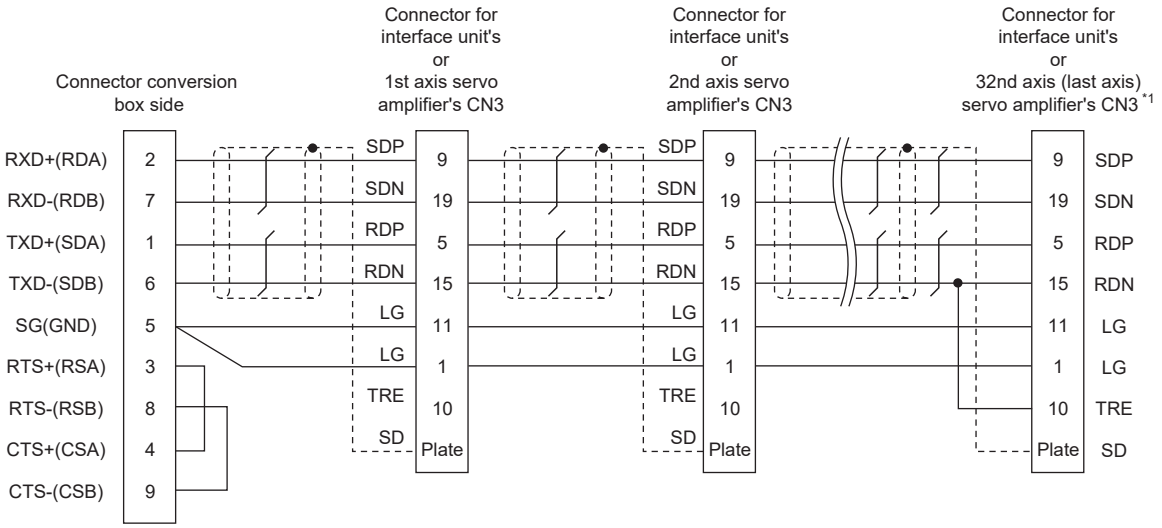
• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

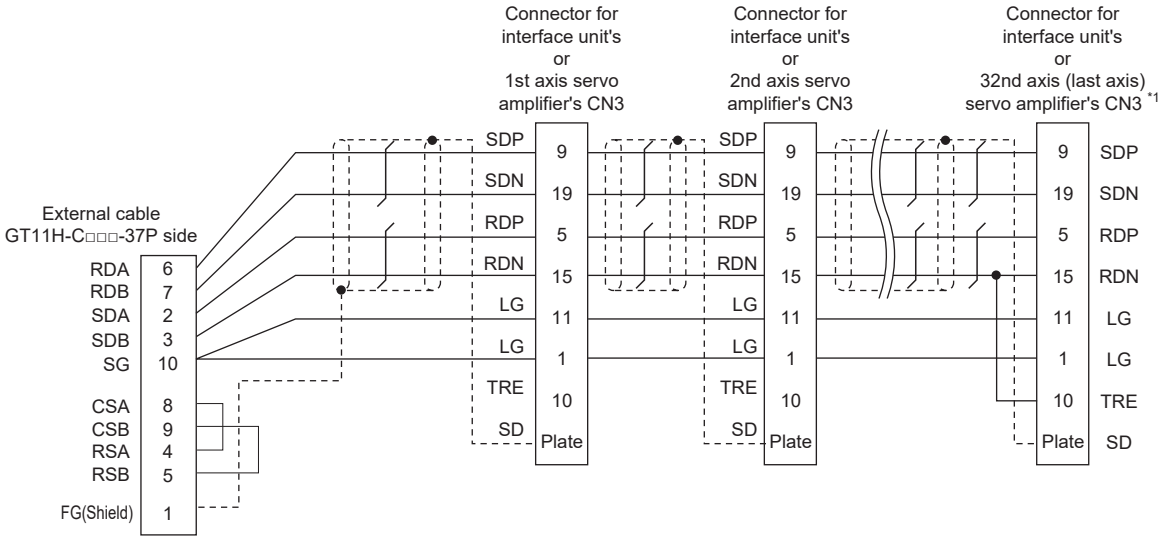
RS-422 cable

■RS-422 connection diagram 1)



*1 At the last axis, connect TRE to RDN.

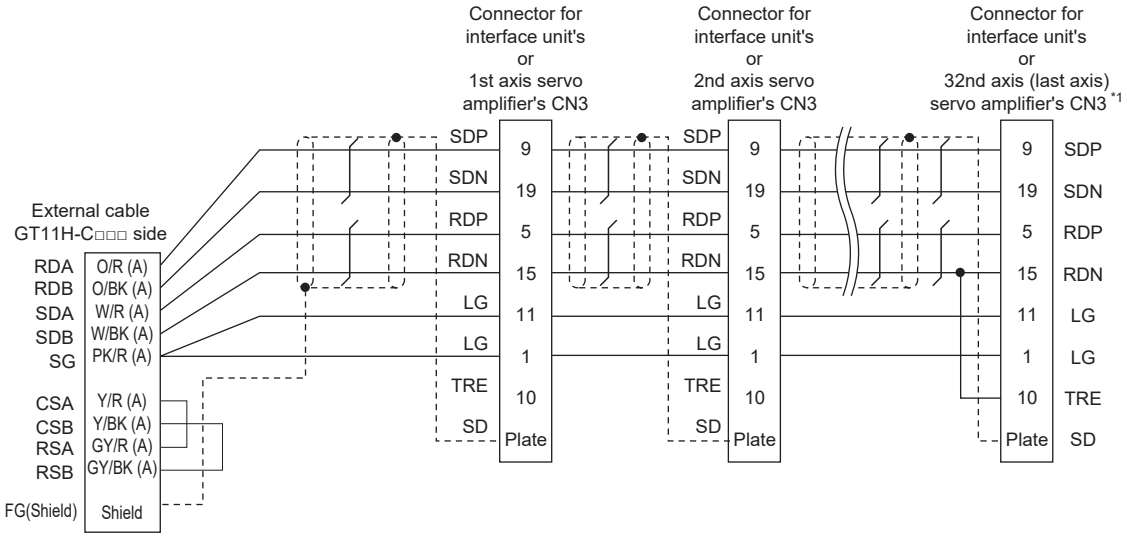
■RS-422 connection diagram 2)



*1 At the last axis, connect TRE to RDN.

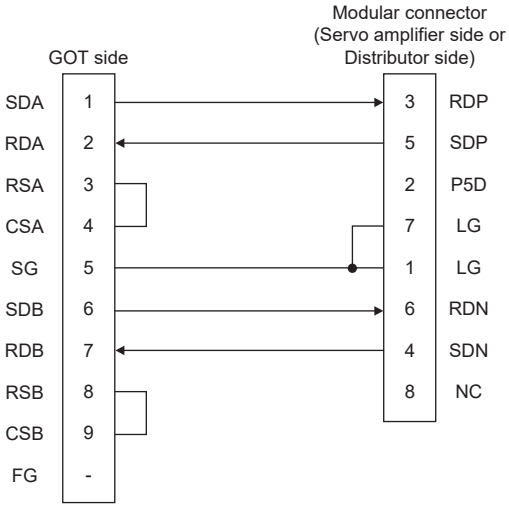
8

■RS-422 connection diagram 3)

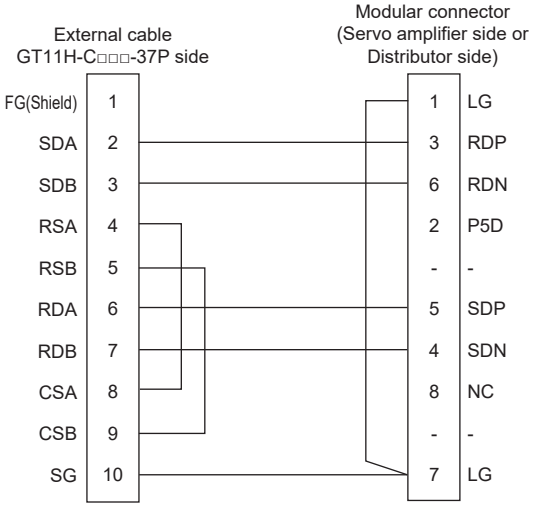


*1 At the last axis, connect TRE to RDN.

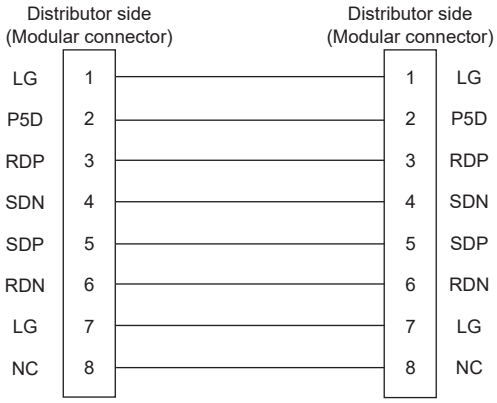
■RS-422 connection diagram 4)



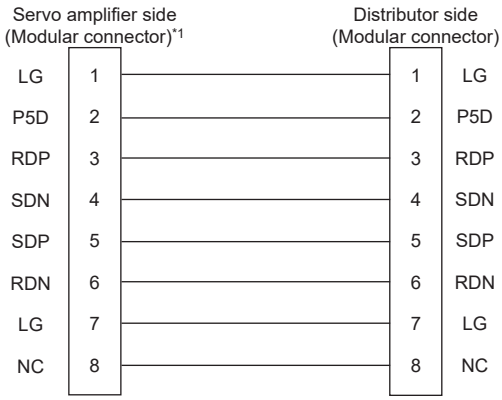
■RS-422 connection diagram 5)



■RS-422 connection diagram 6)

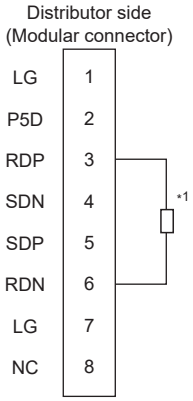


■RS-422 connection diagram 7)



*1 Make the wiring between the distributor and servo amplifier as short as possible.

■RS-422 connection diagram 8)



*1 Perform terminal processing on the part between RDP (3-pin) and RDN (6-pin) with a 150Ω resistor.

■Precautions when preparing cable

• Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

• Servo amplifier connector

Use the connector compatible with the servo amplifier.

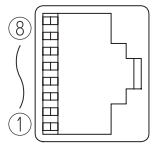
For details, refer to the following.

📖See the technical data of the servo amplifier to be used.

• Servo amplifier connector specifications

Pin layout in the Modular connector

When seen from the front of the servo amplifier
(receptacle side)



Modular jack

Pin No.	Signal name
1	LG
2	P5D
3	RDP
4	SDN
5	SDP
6	RDN
7	LG
8	NC

Connector of cable between MELSERVO Series servo amplifiers

Name	Model name	Specifications	Manufacturer
Connector	TM10P-88P (Plug)	RJ45 connector	HIROSE ELECTRIC CO.,LTD.
Modular ceiling rosette (Distributor)	BMJ-8	-	HAKKO ELECTRIC CO.,LTD. TEL(03)-3806-9171
Cable	-	Cable conforming to EIA568 (such as cable 10BASE-T)	-

Use the commercial connectors and cables shown in the table below or the comparable products.

(Refer to the manual for the servo amplifier.)

■Connecting terminating resistors

When connecting a Servo Amplifier to the GOT, a terminating resistor must be connected to the GOT.

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

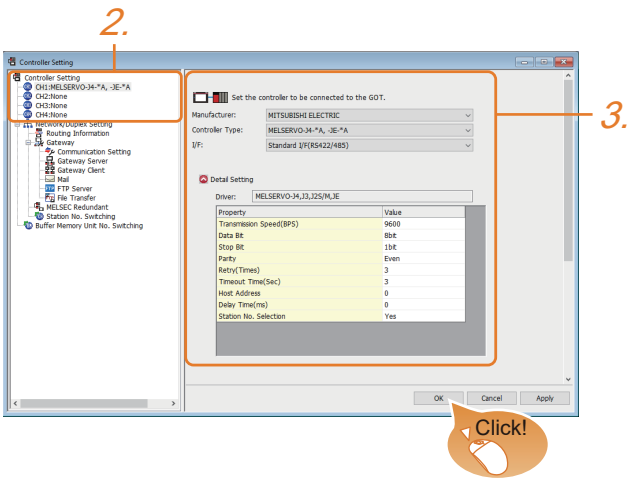
• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

GOT Side Settings

Setting communication interface (Controller Setting)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [MITSUBISHI ELECTRIC]
- [Controller Type]: Configure the setting according to the controller to be connected.
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 572 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
Transmission Speed(BPS)	9600
Data Bit	8 bit
Stop Bit	1 bit
Parity	Even
Retry(Times)	3
Timeout Time(Sec)	3
Host Address	0
Delay Time(ms)	0
Station No. Selection	Yes

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 9600bps)	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bit)	8bit (fixed)
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit (fixed)
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Even)	Even (fixed)
Retry	Set the number of retries to be performed when a communication timeout occurs. (Default: 3times)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Host Address	Specify the station number of the servo amplifier in the system configuration. (Default: 0)	0 to 31
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300 (ms)
Station No. Selection	Specify whether to use the station No. during communication. If [Yes] is selected, the station No. is fixed to "0." (Default: Yes)	Yes/No

Point

• Communication interface setting by Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

• Cutting the portion of multiple connection of the controller

By setting GOT internal device, GOT can cut the portion of multiple connection of the controller.

For example, faulty station that has communication timeout can be cut from the system.

For details of the setting contents of GOT internal device, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

Setting on Servo Amplifier Side

Model name	Refer to
MELSERVO-J2-Super Series	☞ Page 573 Connecting to the MELSERVO-J2-Super Series
MELSERVO-J2M Series	☞ Page 574 Connecting to the MELSERVO-J2M Series
MELSERVO-J4, J3, JE-□A, JE Series	☞ Page 575 Connecting to the MELSERVO-J4,J3, JE-□A Series

Connecting to the MELSERVO-J2-Super Series

Point

MELSERVO-J2-Super Series

For details of the MELSERVO-J2-Super Series, refer to the following manual.

📖MELSERVO-J2-Super Series Servo Amplifier Instruction Manual

■Parameters of MELSERVO-J2-Super Series

Enter the parameters of the MELSERVO-J2-Super Series.

Item	Set value
Basic parameter No. 15	Station number setting: 0 to 31 (Default: 0)*1
Basic parameter No. 16	Serial communication function selection (Default: 0000) Basic parameter No. 16 (3) (2) 0 (1) (1) Serial communication baud rate selection*2 0: 9600bps 1: 19200bps 2: 38400bps 3: 57600bps (2) Serial communication I/F selection 0: RS-232 1: RS-422 (3) Communication response delay time selection 0: Invalid 1: Valid (Response after 800μs or longer delay)
In case of MR-J2S-□: Expansion parameter 2 No. 53 In case of MR-J2S-□CP: Expansion parameter 2 No. 57 In case of MR-J2S-□CL: Expansion parameter 2 No. 57	Function selection 8 (Default: 0000)*3 Expansion parameter 2 No. 53 or No. 57 0 (1) 0 0 (1) Station No. selection for protocol 0: With station No. 1: Without station No.

*1 Avoid duplication of the station No. with any of the other axes.

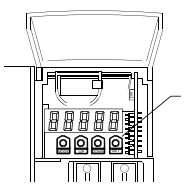
*2 Specify the same transmission speed as that of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 571 Connecting terminating resistors

*3 To change the set value, enter "000E" to basic parameter No. 19.

Point

• Parameter setting

Set the parameter at the pushbutton switch provided on the operation section of the servo amplifier or setup software.



Pushbutton switch provided on the operation section of the servo amplifier

• When changing the parameter

Turn off then on the servo amplifier to be effective the new parameter.

Connecting to the MELSERVO-J2M Series

Point

MELSERVO-J2M Series

For details of the MELSERVO-J2M Series, refer to the following manual.

MELSERVO-J2M Series Servo Amplifier Instruction Manual

■Parameter of MELSERVO-J2M Series

Enter the parameters of the MELSERVO-J2M Series.

Item	Set value
Basic IFU parameter No. 0	Serial communication function selection (Default: 0000) Basic IFU parameter No. 0 (3) (2) 0 (1) (1) Serial communication baud rate selection*1 0: 9600bps 1: 19200bps 2: 38400bps 3: 57600bps (2) Serial communication I/F selection 0: RS-232 1: RS-422 (3) Communication response delay time selection 0: Invalid 1: Valid (Response after 800μs or longer delay)
Basic IFU parameter No. 10	Interface unit serial communication station No. selection: 0 to 31 (Default: 0) *2
Basic IFU parameter No. 11	Slot 1 serial communication station No. selection: 0 to 31 (Default: 1) *2
Basic IFU parameter No. 12	Slot 2 serial communication station No. selection: 0 to 31 (Default: 2) *2
Basic IFU parameter No. 13	Slot 3 serial communication station No. selection: 0 to 31 (Default: 3) *2
Basic IFU parameter No. 14	Slot 4 serial communication station No. selection: 0 to 31 (Default: 4) *2
Basic IFU parameter No. 15	Slot 5 serial communication station No. selection: 0 to 31 (Default: 5) *2
Basic IFU parameter No. 16	Slot 6 serial communication station No. selection: 0 to 31 (Default: 6) *2
Basic IFU parameter No. 17	Slot 7 serial communication station No. selection: 0 to 31 (Default: 7) *2
Basic IFU parameter No. 18	Slot 8 serial communication station No. selection: 0 to 31 (Default: 8) *2

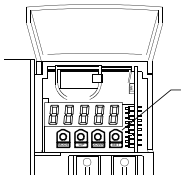
*1 Specify the same transmission speed as that of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 571 Connecting terminating resistors

*2 Avoid duplication of the station No. with any of the other units.

Point

• Parameter setting

Set the parameter at the pushbutton switch provided on the operation section of the servo amplifier or setup software.



Pushbutton switch
provided on the operation
section of the servo amplifier

• When changing the parameter

Turn off then on the servo amplifier to be effective the new parameter.

Connecting to the MELSERVO-J4,J3, JE-□A Series

Point

MELSERVO-J4, J3, JE-□A Series

For details of the MELSERVO-J4, J3, JE Series, refer to the following manual.

MELSERVO-J4, J3, JE Series Servo Amplifier Instruction Manual

■Parameters of MELSERVO-J4, J3, JE-□A Series

Enter the parameters of the MELSERVO-J4, J3, JE Series.

Item	Set value
Basic parameter No. PC20	Station number setting: 0 to 31 (Default: 0)*1
Basic parameter No. PC21	Serial communication function selection (Default: 0000) Basic parameter No. PC21 | | (2) | (1) | | (1) Serial communication baud rate selection*2 0: 9600bps 1: 19200bps 2: 38400bps 3: 57600bps 4: 115200bps (2) Communication response delay time selection 0: Invalid 1: Valid (Response after 800μs or longer delay)

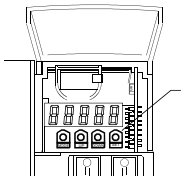
*1 Avoid duplication of the station No. with any of the other axes.

*2 Specify the same transmission speed as that of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
Page 571 Connecting terminating resistors

Point

• Parameter setting

Set the parameter at the pushbutton switch provided on the operation section of the servo amplifier or setup software.



Pushbutton switch
provided on the operation
section of the servo amplifier

• When changing the parameter

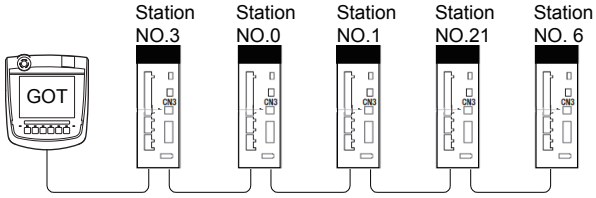
Turn off then on the servo amplifier to be effective the new parameter.

Station number setting

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.



Examples of station number setting

Direct specification

When setting the device, specify the station number of the servo amplifier of which data is to be changed.

Specification range
0 to 31

Indirect specification

When setting the device, indirectly specify the station number of the inverter of which data is to be changed using the 16-bit GOT internal data register (GD10 to GD25).

When specifying the station No. from 100 to 115 on GT Designer3,the value of GD10 to GD25 compatible to the station No.specification will be the station No.of the servo amplifier.

Specification station NO.	Compatible device	Setting range
100	GD10	0 to 31 For the setting other than the above, a communication timeout error will occur.
101	GD11	
102	GD12	
103	GD13	
104	GD14	
105	GD15	
106	GD16	
107	GD17	
108	GD18	
109	GD19	
110	GD20	
111	GD21	
112	GD22	
113	GD23	
114	GD24	
115	GD25	

All station specification

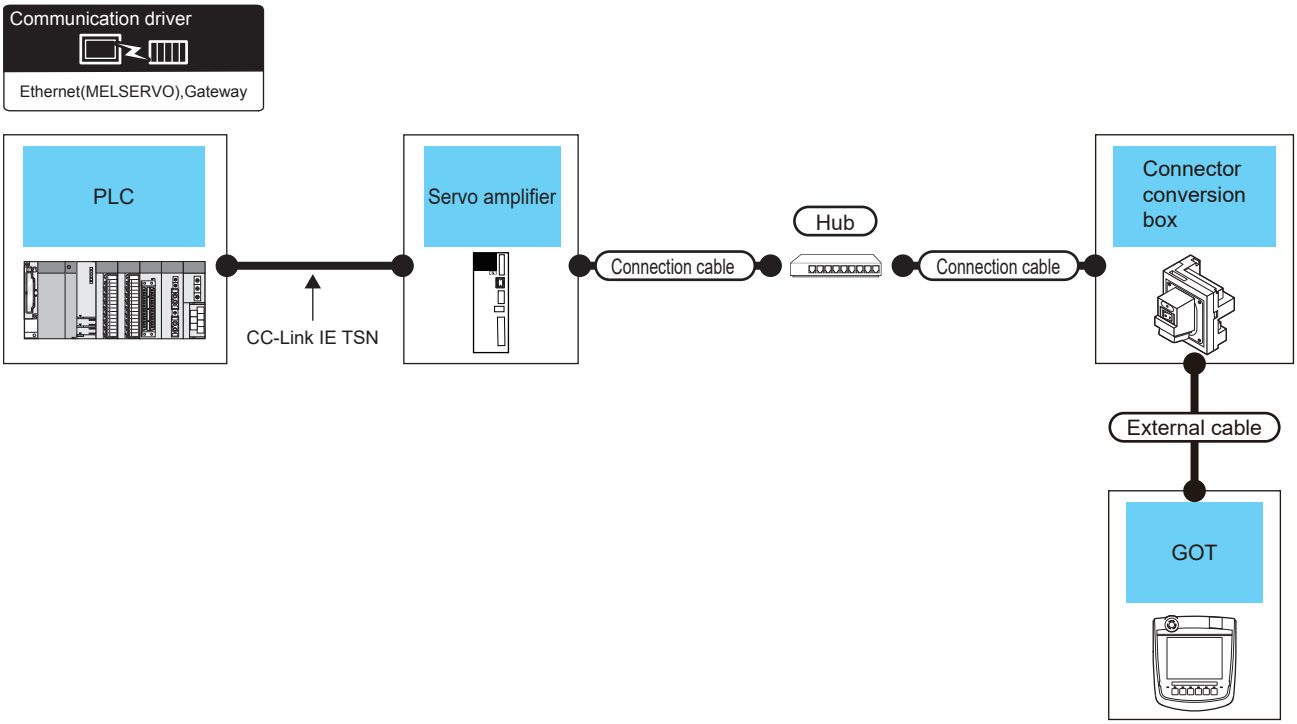
Target station differs depending on write-in operation or read-out operation.

- For write-in operation, all station will be a target.
- For read-out operation, only one station will be a target.

8.3 Ethernet Connection

Connection to the MELSERVO-J5 or JET series

When connecting a servo amplifier and PLC or Motion module by the CC-Link IE TSN connection



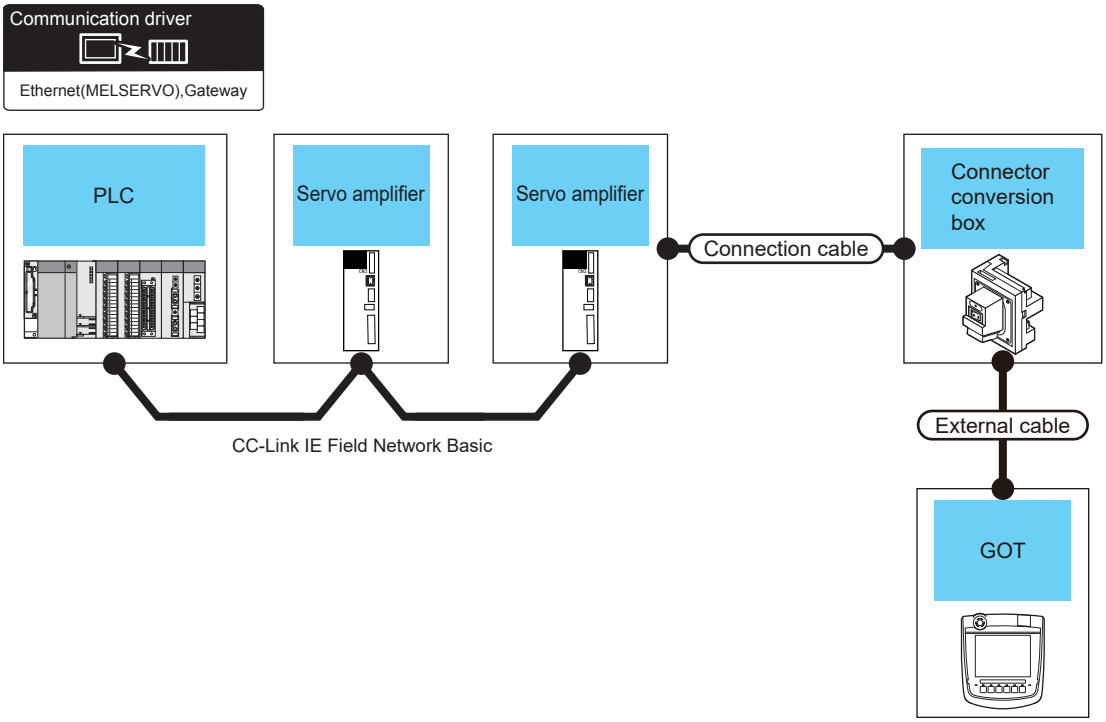
Controller	Communication type	Connection cable		External device	Connection cable		Connector conversion box	External cable	GOT Model	Number of connectable equipment
		Cable model	Maximum segment length*2		Cable model	Maximum segment length*2				
MR-J5-□G MR-J5-□G-RJ MR-J5W2-□G MR-J5W3-□G MR-J5D1-□G4 MR-J5D2-□G4 MR-J5D3-□G4 MR-JET-□G	Ethernet	• 1000BASE-T Double-shielded twisted pair cable (STP) or twisted pair cable: Category 5e or higher	100 m	Hub*1	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher	100 m	GT16H-CNB-42S	GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P (10m)	GT 2506HS	1 GOT for 1 servo amplifier

*1 Use a hub to connect the servo amplifier.
Use cables, connectors, and hubs that meet the IEEE802.3 1000BASE-T standard.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

When connecting servo amplifiers and PLC by the CC-Link IE Field Network Basic connection

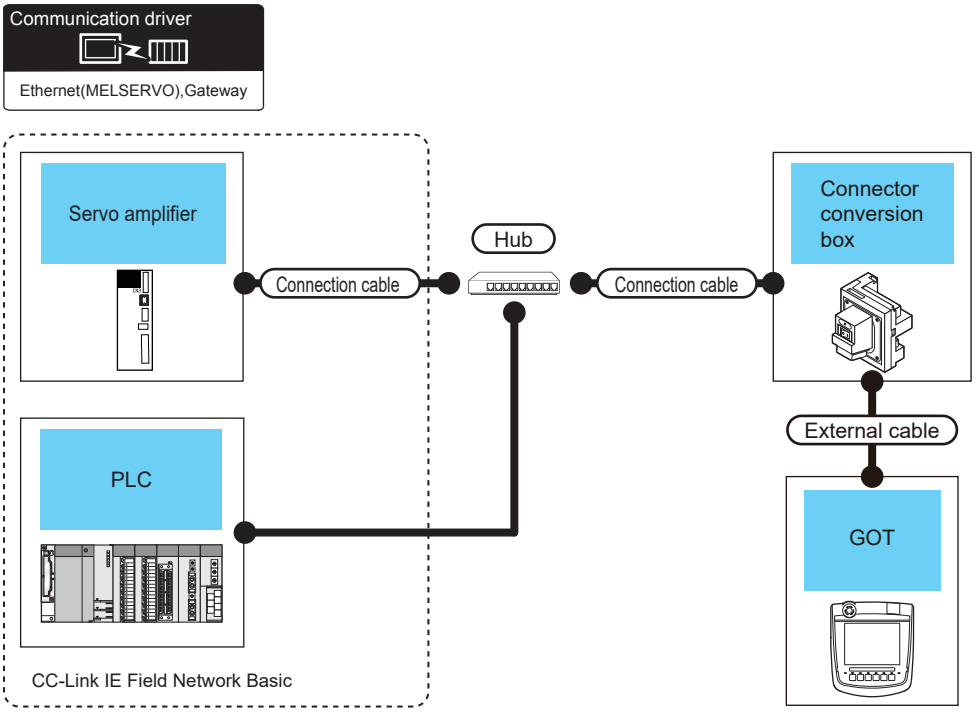
■Direct connection to a servo amplifier



PLC		Connection cable		Connector conversion box	External cable	GOT Model	Number of connectable equipment
Model name	Communication type	Cable model	Maximum segment length*1				
MR-J5-□G MR-J5-□G-RJ MR-J5D1-□G4 MR-JET-□G	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher	100 m	GT16H-CNB-42S	GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P (10m)	GT 2506HS	1 GOT for 1 servo amplifier

*1 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

■Connection via a hub



Controller	Communication type	Connection cable		External device	Connection cable		Connector conversion box	External cable	GOT Model	Number of connectable equipment
		Cable model	Maximum segment length*2		Cable model	Maximum segment length*2				
MR-J5-□G MR-J5-□G-RJ MR-J5D1-□G4 MR-JET-□G	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher	100 m	Hub*1	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher	100 m	GT16H-CNB-42S	GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P (10m)	GT 2506HS	1 GOT for 1 servo amplifier

*1 Use a hub to connect the servo amplifier.
Use cables, connectors, and hubs that meet the IEEE802.3 100BASE-TX standard.

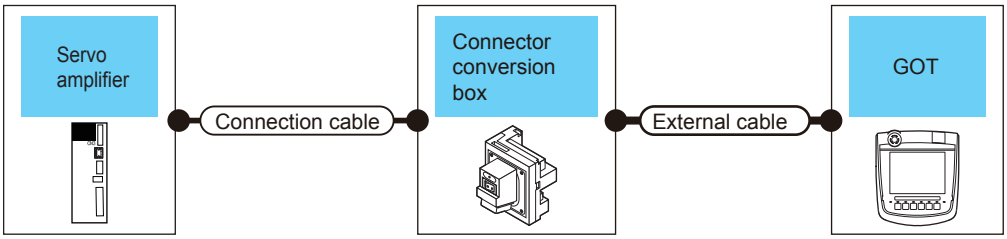
*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

Connecting to the MELSERVO-JE-C Series

Communication driver

Ethernet(MELSERVO),Gateway

When connecting to one servo amplifier



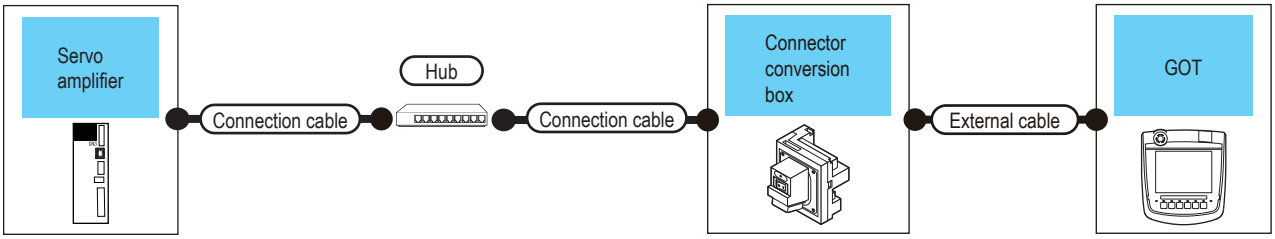
PLC		Connection cable*1*2	Maximum segment length*3	Connector conversion box	External cable	GOT Model	Number of connectable equipment
Model name	Communication type						
MR-JE-C	Ethernet	100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher	100 m	GT16H-CNB-42S	GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P (10m)	GT 2506HS	1 GOT

*1 The connection destination of the twisted pair cable differs depending on the configuration of the Ethernet network system to be used. Connect to the Ethernet module, hub, transceiver, the wireless LAN adapter (NZ2WL-JPA, NZ2WL-JPS) or other system equipment corresponding to the applicable Ethernet network system.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
For the controller to which the wireless LAN adapter can be connected and the setting method of the wireless LAN adapter, refer to the manual of the wireless LAN adapter.

*2 A straight cable is available.
When connecting CPU and GOT directly with Ethernet cable, remember that the by cross cable is available.
GOT2000 Series Instruction Manual (Hardware Section)

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

When connecting to multiple servo amplifiers



Controller	Communication type	Connection cable		External device	Connection cable		Connector conversion box	External cable	GOT Model	Number of connectable equipment
		Cable model*3	Maximum segment length*2		Cable model*3	Maximum segment length*2				
MR-JE-C	Ethernet	100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher	100m	Hub*1	100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher	100 m	GT16H-CNB-42S	GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P (10m)	GT 2506HS	When servo amplifier: GOT is N: 1128 or less servo amplifiers for one GOT When servo amplifier: GOT is 1:N The following number of GOTs for one servo amplifier Depends on MELSERVO-JE-C*4

*1 Use a hub to connect the servo amplifier.
Use cables, connectors, and hubs that meet the IEEE802.3 100BASE-TX standard.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

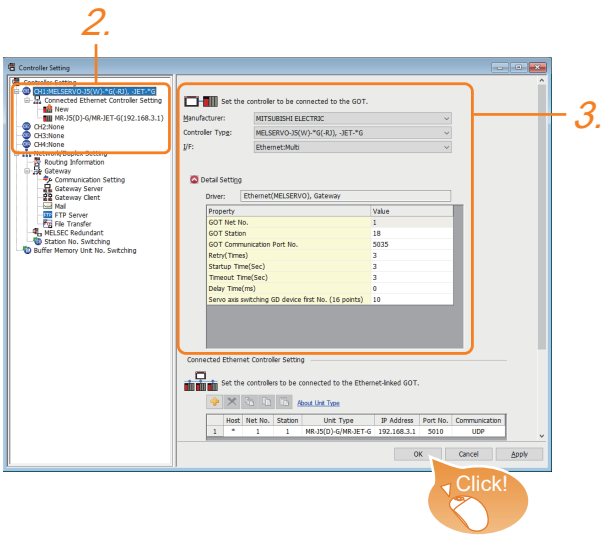
*3 Use the straight cable for the twisted pair cable.

*4 For details, refer to the manual of MELSERVO-JE-C.
One GOT is recommended to connect to MELSERVO-JE-C.

GOT Side Settings

Setting communication interface (Controller Setting)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [MITSUBISHI ELECTRIC]
- [Controller Type]: Select one of the following items according to the controller to be connected.

[MELSERVO-J5(W)-*G(-RJ), -JET-*G]

[MELSERVO-JE-*C]

- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 583 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
GOT Net No.	1
GOT Station	18
GOT Communication Port No.	5035
Retry(Times)	3
Startup Time(Sec)	3
Timeout Time(Sec)	3
Delay Time(ms)	0
Servo axis switching GD device first No. (16 points)	10

Item	Description	Range
GOT Net No.	Set the network No. of the GOT. 1 (fixed)	1 (fixed)
GOT Station*1	Set the station No. of the GOT. (Default: 18)	1 to 254
GOT Communication Port No.	Set the GOT port No. for the connection with the Servo amplifier. (Default: 5035)	1024 to 5010, 5014 to 65534 (Except for 5011 to 5013, 49153 to 49170)
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 3times)	0 to 5times
Startup Time	Specify the time period from the GOT startup until GOT starts the communication with the Servo amplifier. (Default: 3sec)	3 to 255sec
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 90sec
Delay Time	Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms)	0 to 10000 (ms)
Servo axis switching GD device first No. (16 points) *2	Set the servo axis switching GD device first No. (Default: 10) For the details, refer to the following. ☞ Page 584 Servo axis switching GD device first No.	0 to 65520

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 586 Connected Ethernet Controller Setting

*2 MR-JE-C is not supported.

■Servo axis switching GD device first No.

• Indirect specification of the servo axis No.

In a connection via a Motion CPU or Simple Motion module, a servo axis No. can be indirectly specified with GOT internal registers (GD devices) by specifying a value (100 to 115) to the axis No. of the servo amplifier device.

Set the start device number of the GD devices to be used in [Servo axis switching GD device first No. (16 points)].

Specify a servo axis number with 16 consecutive GD devices, starting the set device number.

When [10] is set to [Servo axis switching GD device first No. (16 points)], GD10 to GD25 are used to specify a servo axis number as shown in the following table.

Servo axis No.	GD device	Setting range
100	GD10	1 to 64 Setting an invalid value causes a device range error.
101	GD11	
102	GD12	
103	GD13	
104	GD14	
105	GD15	
106	GD16	
107	GD17	
108	GD18	
109	GD19	
110	GD20	
111	GD21	
112	GD22	
113	GD23	
114	GD24	
115	GD25	

• Specifying a servo axis number with a device on the initially-displayed screen

Set [Servo axis switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

• Specifying a servo axis number with a device in a multi-channel connection

If the setting rage of [Servo axis switching GD device first No. (16 points)] set in each channel overlaps, the axis No. of the servo amplifier of each channel is switched simultaneously.

Set [Servo axis switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

• Specifying a station number and a servo axis number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Servo axis switching GD device first No. (16 points)] switches the axis No. of the servo amplifier and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [Servo axis switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

GOT Ethernet Setting

■GOT IP address setting

Set the following communication port setting.

- Standard port

■GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

■IP filter setting

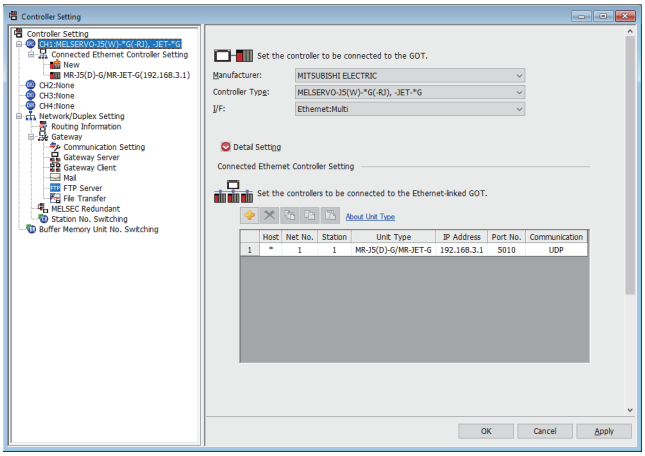
By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 80 GOT Ethernet Setting

Connected Ethernet Controller Setting

■When the model is [MELSERVO-J5(W)-*G(-RJ), -JET-*G]



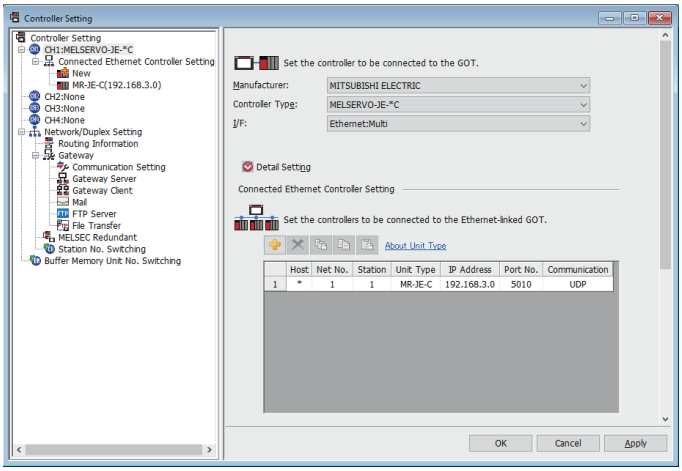
Item	Description	Range
Host	The host is displayed. (The host is indicated with an asterisk (*))	—
Net No. *1	Set the network No. of the connected Servo amplifier. 1 (fixed)	1 (fixed)
Station*1*2	Set the station No. of the connected Servo amplifier. (Default: 1)	1 to 254
Unit Type	MR-J5(D)-G/MR-JET-G (fixed)	MR-J5(D)-G/MR-JET-G (fixed)
IP address	Set the IP address of the connected Servo amplifier. (Default: 192.168.3.1)	0.0.0.1 to 255.255.255.254 *3
Port No.	Set the port No. of the connected Servo amplifier. 5010 (fixed)	5010 (fixed)
Communication	UDP (fixed)	UDP (fixed)

*1 [Net No.] and [Station] should match [Network No.] and [Station No.] set for the monitoring target device.

*2 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 583 Communication detail settings

*3 Since [0.0.0.0] and [255.255.255.255] cannot be set in the servo amplifier, set the IP address within the range of [0.0.0.1] to [255.255.255.254].
When [0.0.0.0] or [255.255.255.255] is set, a communication error occurs.

■When the model is [MELSERVO-JE-*C]



Item	Description	Range
Host	The host is displayed. (The host is indicated with an asterisk (*))	—
Net No.	Set the network No. of the connected Servo amplifier. 1 (fixed)	1 (fixed)
Station*1	Set the station No. of the connected Servo amplifier. (Default: 1)	1 to 254
Unit Type	MR-JE-C (fixed)	MR-JE-C (fixed)
IP address	Set the IP address of the connected Servo amplifier. (Default: 192.168.3.0)	0.0.0.0 to 255.255.255.255
Port No./Communication	Set the port No. of the connected Servo amplifier. (Default: 5010) Communication format differs depending on the port No. to be set. • When the port No. is [5010], the communication is [UDP] (fixed). • When the port No. is [5012], the communication is [TCP] (fixed).	

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 583 Communication detail settings

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting]after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

Servo amplifier side settings

This section describes the settings of the GOT and servo amplifier in the following system configuration.

Point

• Servo amplifier

For the details of the servo amplifier, refer to the following.

Manual of the MELSERVO-J5

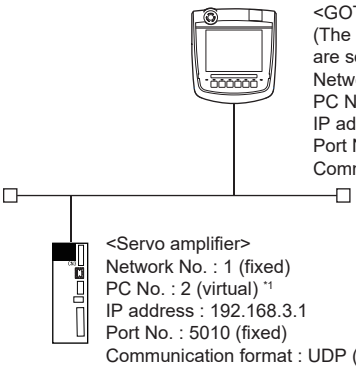
Manual of the MELSERVO-JET

Manual of the MELSERVO-JE-C

Connection to MELSERVO-J5 or JET series

■System configuration

The following shows a system configuration example for connection to the MELSERVO-J5 series.



<GOT>
(The settings other than the following are set to the default)
Network No. : 1 (fixed)
PC No. : 1
IP address : 192.168.3.18
Port No. : 5035
Communication format : UDP (fixed)

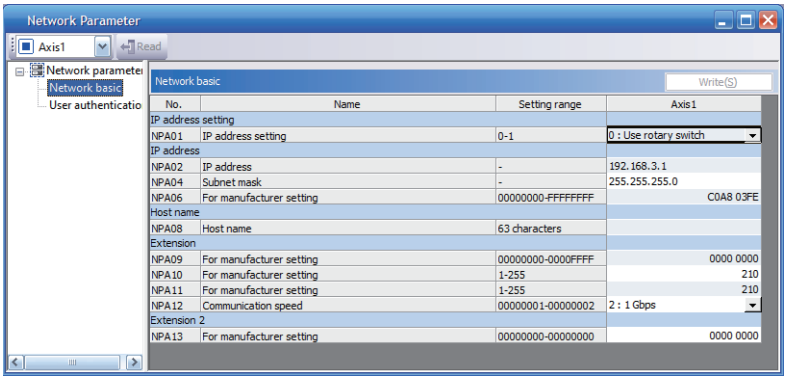
<Servo amplifier>
Network No. : 1 (fixed)
PC No. : 2 (virtual) *1
IP address : 192.168.3.1
Port No. : 5010 (fixed)
Communication format : UDP (fixed)

*1 Although the setting is nonexistent on the servo amplifier side, set a virtual value on the GOT side.
☞ Page 590 [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

■IP address setting

The following shows an example of servo amplifier settings for connection to the MELSERVO-J5 series.

• [Network basic] of MR Configurator2



Setting item	Description	Setting value
[NPA01]	[NPA01] Select whether to set the IP address with the rotary switches or parameter. The following shows the IP address when the rotary switches are used. • First octet to third octet: Values set in [NPA02] • Fourth octet: Values set with the rotary switches SW1 and SW2 When the parameter is used, the values set in [NPA02] are used as the IP address.	0: Use rotary switch 1: Use parameter
[NPA02]	Set the IP address.	192.168.3.1 (Default)
[NPA04]	Set the subnet mask.	255.255.255.0 (Default)

• IP address setting

Setting value of [NPA01]	Rotary switch (SW1, SW2)	IP address	
0 : Use rotary switch	00h	First octet	The first octet set in [NPA02] is used.
		Second octet	The second octet set in [NPA02] is used.
		Third octet	The third octet set in [NPA02] is used.
		Fourth octet	The fourth octet set in [NPA02] is used.
	01h to FEh	First octet	The first octet set in [NPA02] is used.
		Second octet	The second octet set in [NPA02] is used.
		Third octet	The third octet set in [NPA02] is used.
		Fourth octet	The setting values of the rotary switches (SW1 and SW2) are used.
	FFh	First octet	Use prohibited
		Second octet	
		Third octet	
		Fourth octet	
1 : Use parameter	—	First octet	The first octet set in [NPA02] is used.
		Second octet	The second octet set in [NPA02] is used.
		Third octet	The third octet set in [NPA02] is used.
		Fourth octet	The fourth octet set in [NPA02] is used.

■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

The following shows a setting example on the GOT side for connecting to the MELSERVO-J5 series.

• Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5035
Retry	3 times
Startup Time	3 sec
Timeout Time	3 sec
Delay Time	0 ms

• GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

• Connected Ethernet Controller Setting

Item		Set value
Ethernet setting No.1	Host	*
	Net No.	1 (fixed)
	Station	2*1
	Unit Type	MR-J5(D)-G/MR-JET-G
	IP address	192.168.3.1
	Port No.	5010
	Communication	UDP

*1 Set a value different from that of GOT PLC No.

■Checking the communication status of the servo amplifier

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.1

Reply from 192.168.3.1:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.1

Request timed out.

• At abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

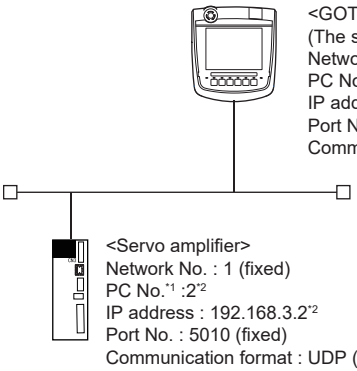
Operation state of PLC CPU (faulty or not)

IP address of servo amplifier Ethernet port specified by Ping command

When connecting to MELSERVO-JE-C (when connecting to GOT and one servo amplifier)

■System configuration

The following shows a system configuration example for connection to the MELSERVO-JE-C series.



<GOT>
(The settings other than the following are set to the default)
Network No. : 1 (fixed)
PC No. :1
IP address : 192.168.3.18
Port No. : 5035
Communication format : UDP (fixed)

<Servo amplifier>
Network No. : 1 (fixed)
PC No.*1 :2*2
IP address : 192.168.3.2*2
Port No. : 5010 (fixed)
Communication format : UDP (fixed)

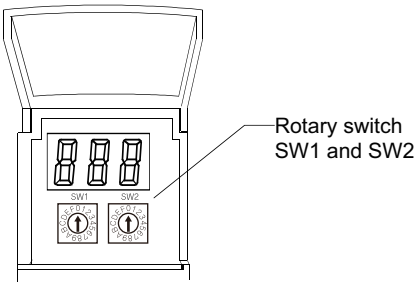
*1 PC No. corresponds to "Identification number" on the servo amplifier side.
*2 The fourth octet of IP address follows PC No. (Identification number).

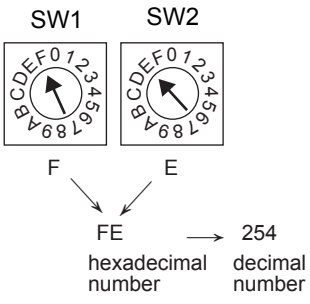
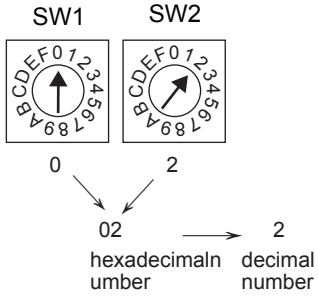
■Setting of the identification number and IP address on the servo amplifier side

The following shows an example of servo amplifier settings for connection to the MELSERVO-JE-C series.

Set the identification number of the servo amplifier using the rotary switch SW1 and SW2 in front of the servo amplifier.

The fourth octet of IP address follows the identification number of the servo amplifier.



Setting item	Setting range	Range
Identification number	01_H to FE_H	02_H
First octet*1	192 (Default)	192 (Default)
Second octet*1	168 (Default)	168 (Default)
Third octet*1	3 (Default)	3 (Default)
Fourth octet	1 to 254  The value of the identification number converted from the hexadecimal number to the decimal number is the value of the fourth octet of IP address on the servo amplifier side.	2 

*1 Cannot be set by the rotary switch SW1 and SW2.

■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

The following shows an example of GOT settings for connection to the MELSERVO-JE-C series.

• Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5035
Retry	3 times
Startup Time	3 sec
Timeout Time	3 sec
Delay Time	0 ms

• GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

• Connected Ethernet Controller Setting

Item		Set value
Ethernet setting No.1	Host	*
	Net No.	1 (fixed)
	Station	2*1
	Unit Type	MR-JE-C
	IP address	192.168.3.2
	Port No.*2	5010
	Communication*2	UDP

*1 Set a value different from that of GOT PLC No.

*2 The following [Port No.] and [Communication format] can also be set.
[Port No.]: 5012
[Communication]: TCP

■Checking the communication status of the servo amplifier

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.2

Reply from 192.168.3.2:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.2

Request timed out.

• At abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

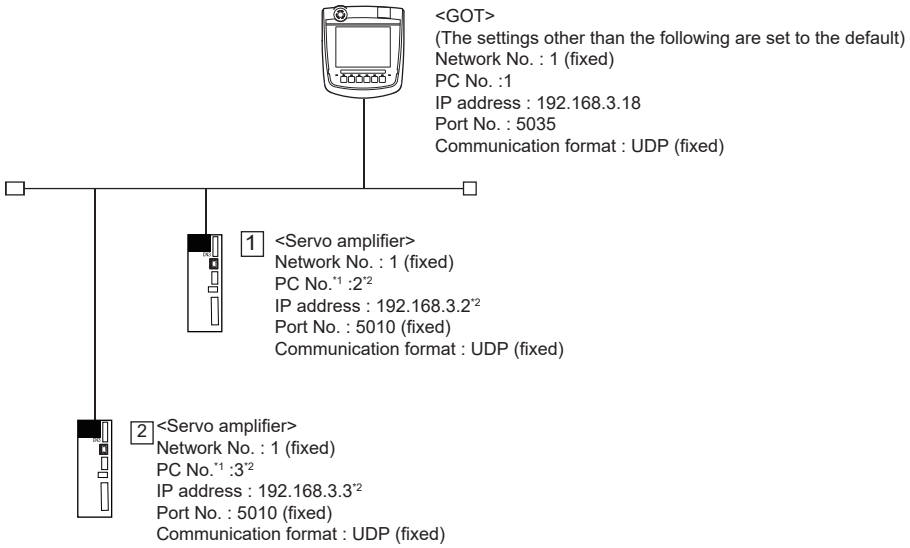
Operation state of PLC CPU (faulty or not)

IP address of servo amplifier Ethernet port specified by Ping command

When connecting to MELSERVO-JE-C (when connecting to GOT and multiple servo amplifiers)

■System configuration

The following shows a system configuration example for connection to the MELSERVO-JE-C series.



*1 PC No. corresponds to "Identification number" on the servo amplifier side.

*2 The fourth octet of IP address follows PC No. (Identification number).

■Setting of the identification number and IP address on the servo amplifier side

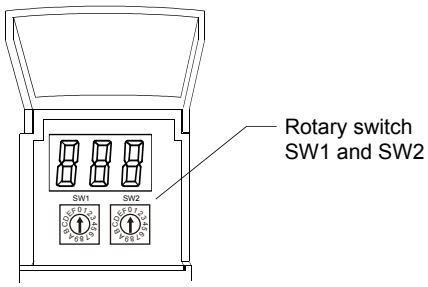
The following shows an example of servo amplifier settings for connection to the MELSERVO-JE-C series.

Set the identification number of the servo amplifier using the rotary switch SW1 and SW2 in front of the servo amplifier.

The fourth octet of IP address follows the identification number of the servo amplifier.

For details of the setting method, refer to the following.

☞ Page 591 When connecting to MELSERVO-JE-C (when connecting to GOT and one servo amplifier)



Setting item	Set value	
	1	2
Identification number	02_H	03_H
First octet*1	192 (Default)	192 (Default)
Second octet*1	168 (Default)	168 (Default)
Third octet*1	3 (Default)	3 (Default)
Fourth octet*1	2	3

*1 Cannot be set by the rotary switch SW1 and SW2.

■[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

The following shows a setting example on the GOT side for connecting to the MELSERVO-JE-C series.

• Controller Setting

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5035
Retry	3 times
Startup Time	3 sec
Timeout Time	3 sec
Delay Time	0 ms

• GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

• Connected Ethernet Controller Setting

Item		Set value	
		1	2
Ethernet setting No.1	Host	*	-
	Net No.	1 (fixed)	1 (fixed)
	Station	2*1	3*1
	Unit Type	MR-JE-C	MR-JE-C
	IP address	192.168.3.2	192.168.3.3
	Port No.*2	5010	5010
	Communication*2	UDP	UDP

*1 Set a value different from that of GOT PLC No.

*2 The following [Port No.] and [Communication format] can also be set.
[Port No.]: 5012
[Communication]: TCP

■Checking the communication status of the servo amplifier

• When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

1) At normal communication

C:\>Ping 192.168.3.2

Reply from 192.168.3.2:bytes=32 time<1ms TTL=32

2) At abnormal communication

C:\>Ping 192.168.3.2

Request timed out.

• At abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

Cable connecting condition

Confirmation of switch and network parameter setting

Operation state of PLC CPU (faulty or not)

IP address of servo amplifier Ethernet port specified by Ping command

Point

Communication setting other than identification number setting by the rotary switch SW1 and SW2

Communication setting can also be set by the following method other than identification number setting by the rotary switch SW1 and SW2.

- Method for using SLMP command (IP Address Set)
- Method for using MR Configurator2

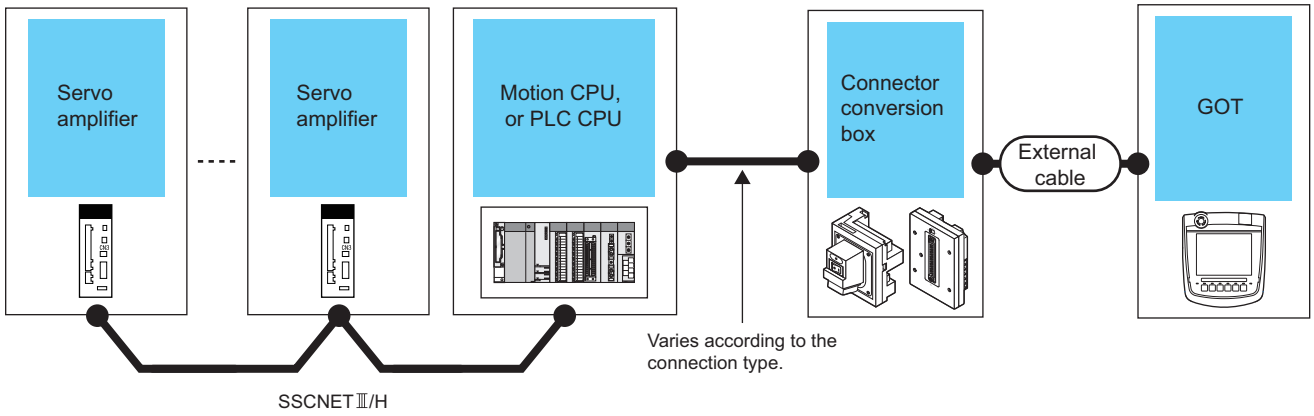
For details, refer to the following manual.

Manual of the MELSERVO-JE-C

8.4 Connection through a PLC

Connection to MELSERVO-J4 series

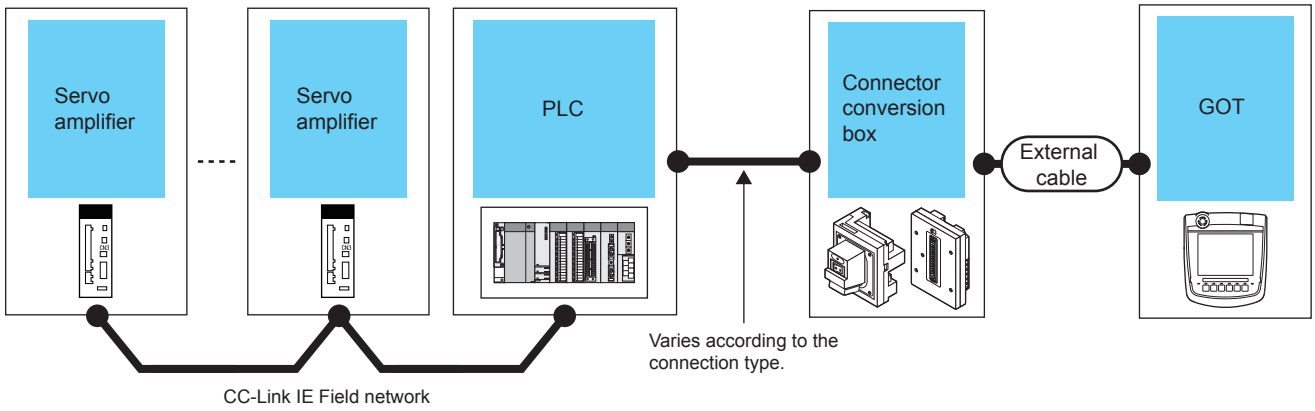
When connecting the GOT and servo amplifiers through a motion controller or simple motion module



Servo amplifier		Motion CPU, or PLC			Connector conversion box	GOT Model	Number of connectable equipment
Model name	Communication type	Simple motion module or master/local module	CPU type	Communication type*1			
MR-J4-□B MR-J4-□B-RJ MR-J4W2-□B MR-J4W3-□B	SSCNETIII/H	-	RnMT Q17nDS Q170MS	For the system configuration between the GOT and the motion controller or PLC, refer to the following. ☞ Page 104 ETHERNET CONNECTION ☞ Page 307 DIRECT CPU CONNECTION (SERIAL) ☞ Page 359 SERIAL COMMUNICATION CONNECTION ☞ Page 411 CC-Link CONNECTION (Via G4)	GT16H-CNB-42S	GT 2506HS	*2
		RD77MS2 RD77MS4 RD77MS8 RD77MS16	RnCPU				
		QD77MS2 *3 QD77MS4 *3 QD77MS16 *3	QnCPU				
		LD77MS2 LD77MS4 LD77MS16	LnCPU				
		FX5-40SSC-S FX5-80SSC-S*4	FX5CPU				
		-	RnMT Q17nDS Q170MS	For the system configuration between the GOT and the motion controller or PLC, refer to the following. ☞ Page 104 ETHERNET CONNECTION ☞ Page 307 DIRECT CPU CONNECTION (SERIAL) ☞ Page 359 SERIAL COMMUNICATION CONNECTION ☞ Page 411 CC-Link CONNECTION (Via G4)	GT11H-CNB-37S or GT16H-CNB-37S	GT 2505HS	*2
		RD77MS2 RD77MS4 RD77MS8 RD77MS16	RnCPU				
		QD77MS2 *3 QD77MS4 *3 QD77MS16 *3	QnCPU				
		LD77MS2 LD77MS4 LD77MS16	LnCPU				
		FX5-40SSC-S FX5-80SSC-S*4	FX5CPU				

*1 The connection type depends on the CPU model.
☞ [System Configuration] section in each chapter
*2 The numbers of connectable devices below depend on the connection type.
☞ [System Configuration] section in each chapter
• Number of GOTs connectable to one motion controller or PLC
• Number of motion controllers or PLCs connectable to one GOT
*3 Use a module with the upper five digits later than 12042.
*4 Use a module with its software version 1.004 or later.

When connecting the GOT and servo amplifiers through a simple motion module or CC-Link IE field network master/local module



Servo amplifier		PLC			Connector conversion box	GOT Model	Number of connectable equipment
Model name	**Communication type**	**Simple motion module or master/local module**	**CPU type**	**Communication type*1**			
MR-J4-□GF MR-J4-□GF-RJ	CC-Link IE Field network	RD77GF4*3 RD77GF8*3 RD77GF16*3 RD77GF32	RCPU	For the system configuration between the GOT and the PLC, refer to the following. ☞ Page 104 ETHERNET CONNECTION*4 ☞ Page 307 DIRECT CPU CONNECTION (SERIAL) ☞ Page 359 SERIAL COMMUNICATION CONNECTION	GT16H-CNB-42S or GT16H-CNB-37S	GT 2506HS	*2
		QD77GF4*3 QD77GF8*3 QD77GF16*3	QCPU				
		RnENCPU	RCPU				
		RJ71EN71 RJ71GF11-T2	RCPU				
		QJ71GF11-T2*3	QCPU				
		LJ71GF11-T2*3	LCPU				
		RD77GF4*3 RD77GF8*3 RD77GF16*3 RD77GF32	RCPU	For the system configuration between the GOT and the PLC, refer to the following. ☞ Page 104 ETHERNET CONNECTION*4 ☞ Page 307 DIRECT CPU CONNECTION (SERIAL) ☞ Page 359 SERIAL COMMUNICATION CONNECTION	GT11H-CNB-37S or GT16H-CNB-37S	GT 2505HS	*2
		QD77GF4*3 QD77GF8*3 QD77GF16*3	QCPU				
		RnENCPU	RCPU				
		RJ71EN71 RJ71GF11-T2	RCPU				
		QJ71GF11-T2*3	QCPU				
		LJ71GF11-T2*3	LCPU				

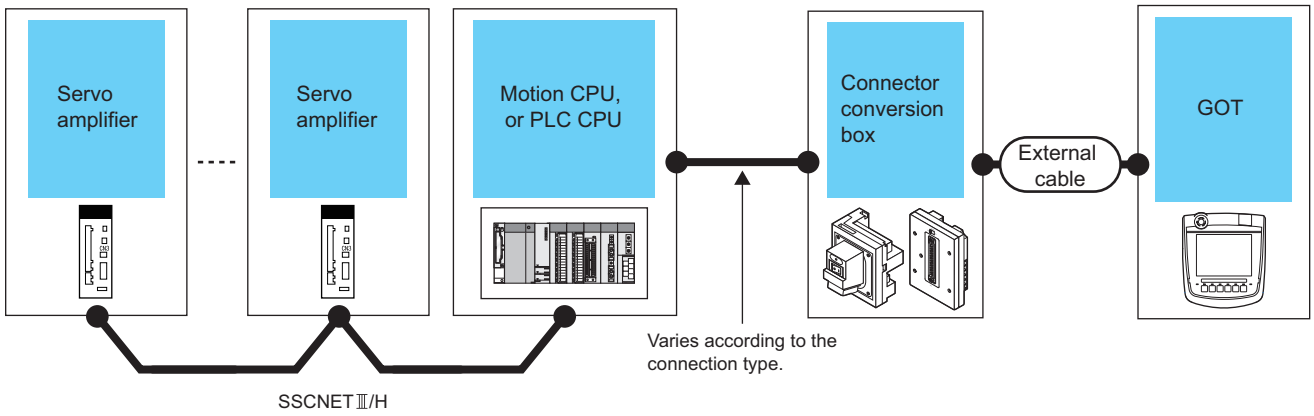
*1 The connection type depends on the CPU model.
☞ [System Configuration] section in each chapter
*2 The numbers of connectable devices below depend on the connection type.
☞ [System Configuration] section in each chapter
• Number of GOTs connectable to one PLC
• Number of PLCs connectable to one GOT
*3 Use the following version or later.

Simple motion module or master/local module	Motion mode	I/O mode
RD77GF4, RD77GF8, RD77GF16	Software version [01] or later	Software version [02] or later
RD77GF32	From first product	From first product
QD77GF4, QD77GF8, QD77GF16	From first product	First 5 digits of serial No. 18022 or higher
QJ71GF11-T2	-	First 5 digits of serial No. 14102 or higher
LJ71GF11-T2	-	First 5 digits of serial No. 14102 or higher

*4 To monitor other networks, routing parameter setting is necessary.
For the routing parameter setting, refer to the following.
☞ Page 164 Routing parameter setting

Connection to MELSERVO-J5 or JET series

When connecting the GOT and servo amplifiers through a motion controller or simple motion module



Servo amplifier		Motion CPU, or PLC			Connector conversion box	GOT Model	Number of connectable equipment
Model name	Communication type	Simple Motion module	CPU type	Communication type*1			
MR-J5-□B MR-J5-□B-RJ MR-J5W2-□B MR-J5W3-□B	SSCNETIII/H	-	RnMT Q17nDS*4 Q170MS	For the system configuration between the GOT and the motion controller or PLC, refer to the following. ☞ Page 104 ETHERNET CONNECTION ☞ Page 307 DIRECT CPU CONNECTION (SERIAL) ☞ Page 359 SERIAL COMMUNICATION CONNECTION ☞ Page 411 CC-Link CONNECTION (Via G4)	GT16H-CNB-42S	GT 2506HS	*2
		RD77MS2 RD77MS4 RD77MS8 RD77MS16	RnCPU				
		QD77MS2 *3 QD77MS4 *3 QD77MS16 *3	QnCPU				
		-	RnMT Q17nDS*4 Q170MS	For the system configuration between the GOT and the motion controller or PLC, refer to the following. ☞ Page 104 ETHERNET CONNECTION ☞ Page 307 DIRECT CPU CONNECTION (SERIAL) ☞ Page 359 SERIAL COMMUNICATION CONNECTION ☞ Page 411 CC-Link CONNECTION (Via G4)	GT11H-CNB-37S or GT16H-CNB-37S	GT 2505HS	*2
		RD77MS2 RD77MS4 RD77MS8 RD77MS16	RnCPU				
		QD77MS2 *3 QD77MS4 *3 QD77MS16 *3	QnCPU				

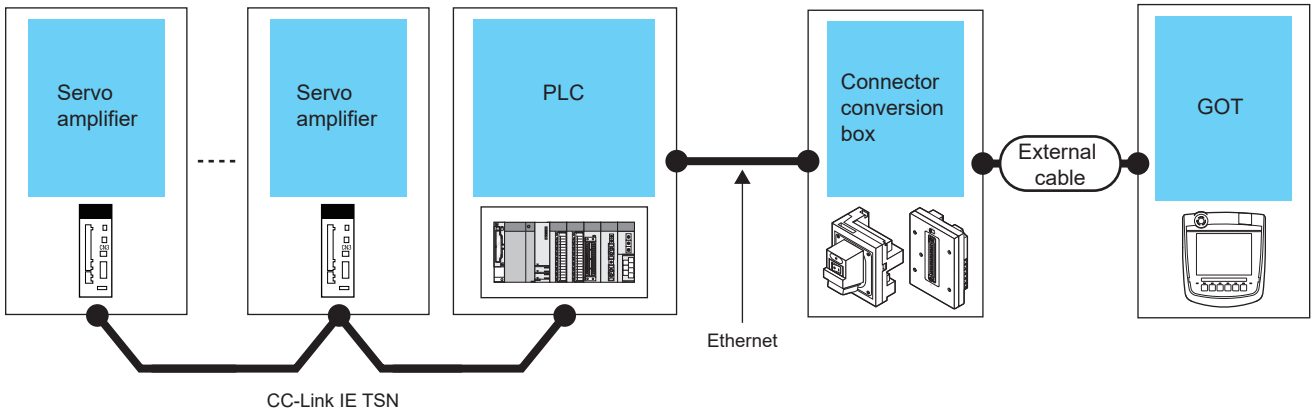
*1 The connection type depends on the CPU model.
☞ [System Configuration] section in each chapter

*2 The numbers of connectable devices below depend on the connection type.
☞ [System Configuration] section in each chapter
• Number of GOTs connectable to one motion controller or PLC
• Number of motion controllers or PLCs connectable to one GOT

*3 Use a module that has a serial number starting with 23092 or later.

*4 Use a module with OS software version 00Y or later.

When connecting the GOT and servo amplifiers through a Motion module



Servo amplifier		PLC			Connector conversion box	GOT Model	Number of connectable equipment
Model name	Communication type	Motion module*4	CPU type	Communication type			
MR-J5-□G MR-J5-□G-RJ MR-J5W2-□G MR-J5W3-□G MR-J5D1-□G4 MR-J5D2-□G4 MR-J5D3-□G4 MR-JET-□G	CC-Link IE TSN	RD78G4 RD78G8 RD78G16 RD78G32 RD78G64 RD78GHV RD78GHW	RnCPU*1 RnENCPU*1 R12CCPU-V*1	For the system configuration between the GOT and the PLC, refer to the following. ☞ Page 145 Connecting the GOT and Motion module through the built-in Ethernet port of the PLC*3	GT16H-CNB-42S or GT16H-CNB-37S	GT 2506HS	1 GOT for 1 motion module
					GT16H-CNB-42S or GT16H-CNB-37S	GT 2505HS	1 GOT for 1 motion module
		FX5-40SSC-G FX5-80SSC-G	FX5U*2 FX5UC*2	For the system configuration between the GOT and the PLC, refer to the following. ☞ Page 145 Connecting the GOT and Motion module through the built-in Ethernet port of the PLC*3	GT16H-CNB-42S or GT16H-CNB-37S	GT 2506HS	1 GOT for 1 motion module
					GT16H-CNB-42S or GT16H-CNB-37S	GT 2505HS	1 GOT for 1 motion module

*1 Select either of the following for [Unit Type] in [Connected Ethernet Controller Setting] in GT Designer3.
• For RnCPU and RnENCPU: [RCPU]
• For R12CCPU-V: [RnCCPU/RnWCPU]
Set either of the following values for [Port No.] according to the communication method.
• UDP: [5006]
• TCP: [5007]
For [Connected Ethernet Controller Setting] in GT Designer3, refer to the following.
☞ Page 159 Connected Ethernet controller setting

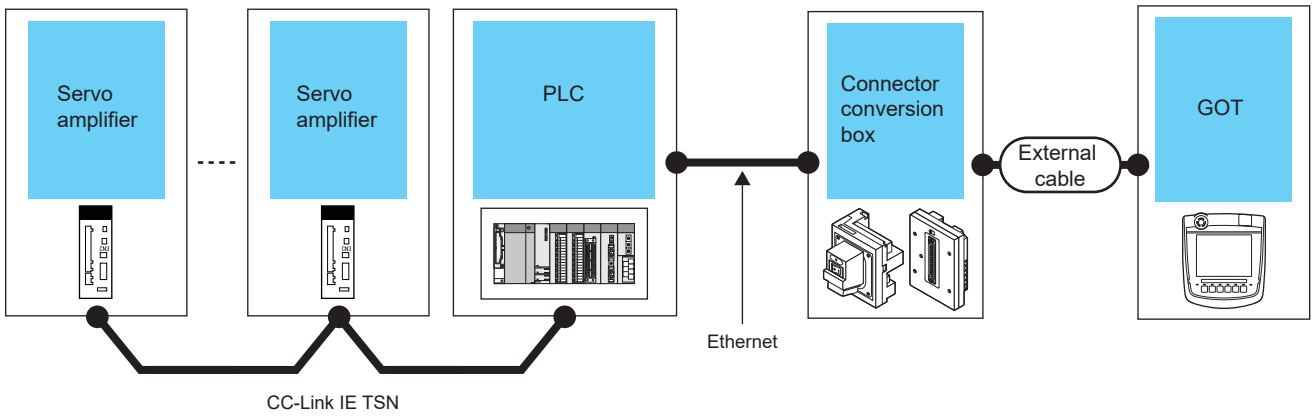
*2 Select [FX5CPU] for [Unit Type] in [Connected Ethernet Controller Setting] in GT Designer3.
For [Connected Ethernet Controller Setting] in GT Designer3, refer to the following.
☞ Page 159 Connected Ethernet controller setting

*3 To monitor other networks, routing parameter setting is necessary.
For the routing parameter setting, refer to the following.
☞ Page 164 Routing parameter setting

*4 When monitoring a servo amplifier through a Motion module, the available mode on the servo amplifier varies depending on the firmware version of the Motion module to be used.
The following shows the details.

Motion module	Motion mode	Simple Motion mode
RD78G4 RD78G8 RD78G16	From the first product	Firmware version 16 or later
RD78G32 RD78G64	From the first product	Unavailable
RD78GHV RD78GHW	From the first product	Unavailable
FX5-40SSC-G FX5-80SSC-G	Unavailable	From the first product

When connecting the GOT and servo amplifiers through a CC-Link IE TSN-equipped module



Servo amplifier		PLC			Connector conversion box	GOT Model	Number of connectable equipment
Model name	Communication type	CC-Link IE TSN-equipped module	CPU type	Communication type			
MR-J5-□G*6 MR-J5-□G-RJ*6 MR-J5W2-□G*6 MR-J5W3-□G*6 MR-J5D1-□G4*6 MR-J5D2-□G4*6 MR-J5D3-□G4*6 MR-JET-□G*6	CC-Link IE TSN	RJ71GN11-T2*5	MELSEC MX Controller (MX-R Model)*2 RnCPU*1 RnENCPU*1 RnSFCPU*1 R12CCPU-V*1 R102WCPU-W*1	For the system configuration between the GOT and the PLC, refer to the following. ☞ Page 129 Connection to Built-in Ethernet port CPU or C Controller module*3	GT16H-CNB-42S or GT16H-CNB-37S	GT 2506HS	*4
					GT16H-CNB-42S or GT16H-CNB-37S	GT 2505HS	*4
		RJ71GN11-EIP	MELSEC MX Controller (MX-R Model)*2 RnCPU*1 RnENCPU*1		GT16H-CNB-42S or GT16H-CNB-37S	GT 2505HS	*4
					GT16H-CNB-42S or GT16H-CNB-37S	GT 2505HS	*4
		FX5-CCLGN-MS	MXF100-8-N32*2 MXF100-8-P32*2 MXF100-16-N32*2 MXF100-16-P32*2		GT16H-CNB-42S or GT16H-CNB-37S	GT 2505HS	*4
					GT16H-CNB-42S or GT16H-CNB-37S	GT 2505HS	*4

*1 Select either of the following for [Unit Type] in [Connected Ethernet Controller Setting] in GT Designer3.
• For RnCPU, RnENCPU, or RnSFCPU: [RCPU]
• For R12CCPU-V or R102WCPU-W: [RnCCPU/RnWCPU]
Set either of the following values for [Port No.] when the communication format is:
• UDP: [5006]
• TCP: [5007]
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
☞ Page 159 Connected Ethernet controller setting

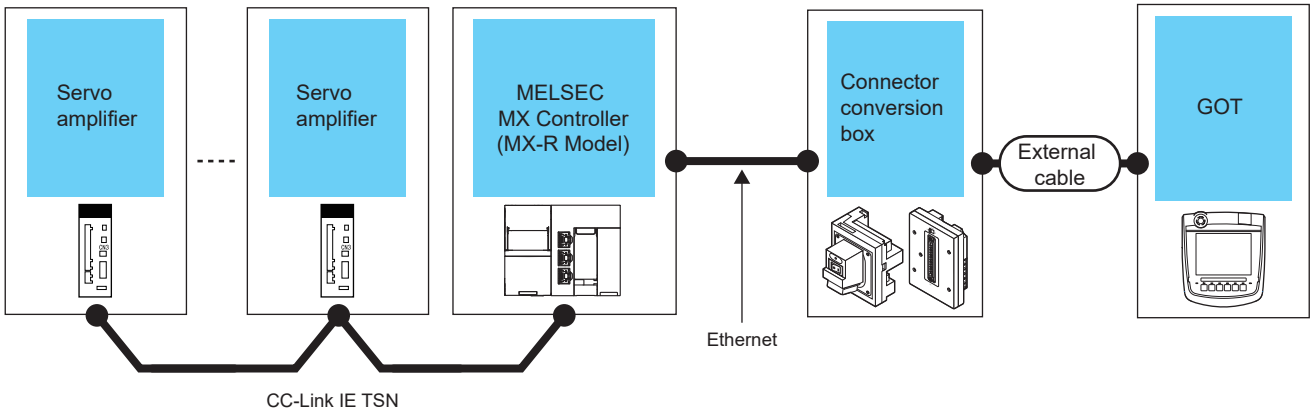
*2 Select either of the following for [Unit Type] in [Connected Ethernet Controller Setting] in GT Designer3.
• For connection to a MELSEC MX Controller (MX-R model): [MX-R(Ethernet)]
• For connection to a MELSEC MX Controller (MX-F Model): [MX-F(Ethernet)]
Set either of the following values for [Port No.] when the communication format is:
For the MELSEC MX Controller (MX-R Model)
• UDP: [5006]
• TCP: [5007]
For the MELSEC MX Controller (MX-F Model)
• UDP: [5006]
• TCP: [5007]
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
☞ Page 159 Connected Ethernet controller setting

*3 To monitor other networks, routing parameter setting is necessary.
For the routing parameter setting, refer to the following.
☞ Page 164 Routing parameter setting

*4 For the number of connectable GOTs and PLCs, refer to the following.
☞ Page 129 Connection to Built-in Ethernet port CPU or C Controller module
*5 Use one with firmware version 11 or later.
*6 Use one whose firmware version is as shown below.

Servo amplifier	Applicable firmware version
MR-J5-□G MR-J5-□G-RJ MR-J5W2-□G MR-J5W3-□G MR-JET-□G	B9 or later
MR-J5D1-□G4 MR-J5D2-□G4 MR-J5D3-□G4	C0 or later

When connecting the GOT and servo amplifiers through a MELSEC MX Controller (MX-R Model)



Servo amplifier		PLC		Connector conversion box	GOT Model	Number of connectable equipment
Model name	Communication type	CPU type*1*4 (MX-R Model)	Communication type			
MR-J5-□G MR-J5-□G-RJ MR-J5W2-□G MR-J5W3-□G MR-J5D1-□G4 MR-J5D2-□G4 MR-J5D3-□G4 MR-JET-□G	CC-Link IE TSN	MXR300-16 MXR300-32 MXR300-64 MXR500-128 MXR500-256	For the system configuration between the GOT and the PLC, refer to the following. ☞ Page 129 Connection to Built-in Ethernet port CPU or C Controller module*2	GT16H-CNB-42S or GT16H-CNB-37S	GT 2506HS	*3

*1 Select [MX-R(Ethernet)] for [Unit Type] in [Connected Ethernet Controller Setting] in GT Designer3.
Set either of the following values for [Port No.] according to the communication method.
• UDP: [5006]
• TCP: [5007]
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
☞ Page 159 Connected Ethernet controller setting

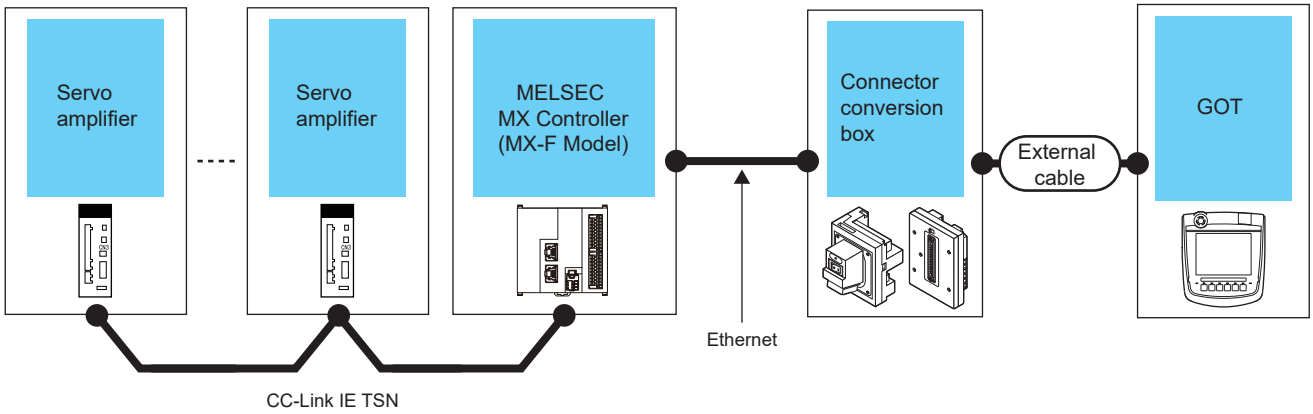
*2 To monitor other networks, routing parameter setting is necessary.
For the routing parameter setting, refer to the following.
☞ Page 164 Routing parameter setting

*3 For the number of connectable GOTs and PLCs, refer to the following.
☞ Page 129 Connection to Built-in Ethernet port CPU or C Controller module

*4 When monitoring the servo amplifiers through the MELSEC MX Controller (MX-R Model), the available mode for the servo amplifiers varies depending on the firmware version of the MELSEC MX Controller (MX-R Model) to be used.

MELSEC MX Controller (MX-R Model)	PLCopen motion controller FB mode	Simple Motion mode
MXR300-16 MXR300-32 MXR300-64 MXR500-128 MXR500-256	From the first product	Unavailable

When connecting the GOT and servo amplifiers through a MELSEC MX Controller (MX-F Model)



Servo amplifier		PLC		Connector conversion box	GOT Model	Number of connectable equipment
Model name	Communication type	CPU type*1*4 (MX-F Model)	Communication type			
MR-J5-□G MR-J5-□G-RJ MR-J5W2-□G MR-J5W3-□G MR-J5D1-□G4 MR-J5D2-□G4 MR-J5D3-□G4 MR-JET-□G	CC-Link IE TSN	MXF100-8-N32 MXF100-8-P32 MXF100-16-N32 MXF100-16-P32	For the system configuration between the GOT and the PLC, refer to the following. ☞ Page 129 Connection to Built-in Ethernet port CPU or C Controller module*2	GT16H-CNB-42S or GT16H-CNB-37S	GT 2506HS	*3

*1 Select [MX-F(Ethernet)] for [Unit Type] in [Connected Ethernet Controller Setting] in GT Designer3.
Set either of the following values for [Port No.] according to the communication method.
• UDP: [5006]
• TCP: [5007]
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
☞ Page 159 Connected Ethernet controller setting

*2 To monitor other networks, routing parameter setting is necessary.
For the routing parameter setting, refer to the following.
☞ Page 164 Routing parameter setting

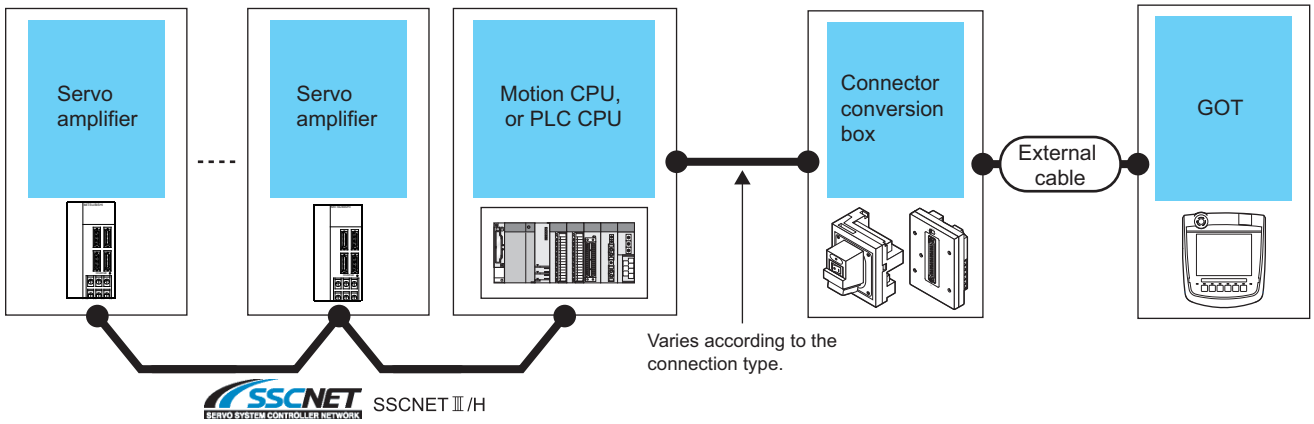
*3 For the number of connectable GOTs and PLCs, refer to the following.
☞ Page 129 Connection to Built-in Ethernet port CPU or C Controller module

*4 When monitoring the servo amplifiers through the MELSEC MX Controller (MX-F Model), the available mode for the servo amplifiers varies depending on the firmware version of the MELSEC MX Controller (MX-F Model) to be used.

MELSEC MX Controller (MX-F Model)	PLCopen motion controller FB mode	Simple Motion mode
MXF100-8-N32 MXF100-8-P32 MXF100-16-N32 MXF100-16-P32	From the first product	Unavailable

Connection to MELSERVO-JE-□B series

When using the connector conversion box



Servo amplifier		Motion CPU, or PLC			Connector conversion box	GOT Model	Number of connectable equipment
Model name	Communication type	Simple motion module	CPU type	Communication type*1			
MR-JE-□B MR-JE-□BF	SSCNETIII/H	RD77MS*3	RnCPU	For the system configuration between the GOT and the motion controller or PLC, refer to the following. ☞ Page 104 ETHERNET CONNECTION ☞ Page 307 DIRECT CPU CONNECTION (SERIAL) ☞ Page 359 SERIAL COMMUNICATION CONNECTION ☞ Page 411 CC-Link CONNECTION (Via G4)	GT16H-CNB-42S	GT 2506HS	*2
		QD77MS*4	QnCPU				
		LD77MS*4	LnCPU				
		FX5-40SSC-S	FX5CPU				
		RD77MS*3	RnCPU		GT11H-CNB-37S	GT 2505HS	
		QD77MS*4	QnCPU				
		LD77MS*4	LnCPU				
		FX5-40SSC-S	FX5CPU				
		FX5-80SSC-S*5					

*1 The connection type depends on the CPU model.
☞ [System Configuration] section in each chapter

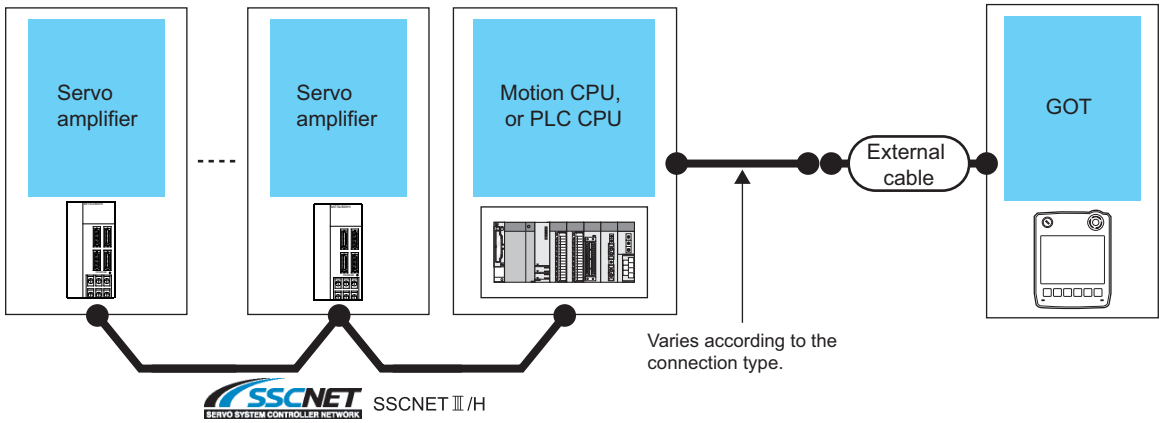
*2 The numbers of connectable devices below depend on the connection type.
☞ [System Configuration] section in each chapter
• Number of GOTs connectable to one motion controller or PLC
• Number of motion controllers or PLCs connectable to one GOT

*3 Use the firmware version later than 3.

*4 Use a module with the upper five digits later than 16102.

*5 Use a module with its software version 1.004 or later.

When using the external cable (GT11H-C□□□-37P)



Servo amplifier		Motion CPU, or PLC			GOT Model	Number of connectable equipment
Model name	Communication type	Simple motion module	CPU type	Communication type*1		
MR-JE-□B MR-JE-□BF	SSCNETIII/H	RD77MS*3	RnCPU	For the system configuration between the GOT and the motion controller or PLC, refer to the following. ☞ Page 104 ETHERNET CONNECTION ☞ Page 307 DIRECT CPU CONNECTION (SERIAL) ☞ Page 359 SERIAL COMMUNICATION CONNECTION ☞ Page 411 CC-Link CONNECTION (Via G4)	GT 2505HS	*2
		QD77MS*4	QnCPU			
		LD77MS*4	LnCPU			
		FX5-40SSC-S	FX5CPU			
		FX5-80SSC-S*5				

*1 The connection type depends on the CPU model.
☞ [System Configuration] section in each chapter

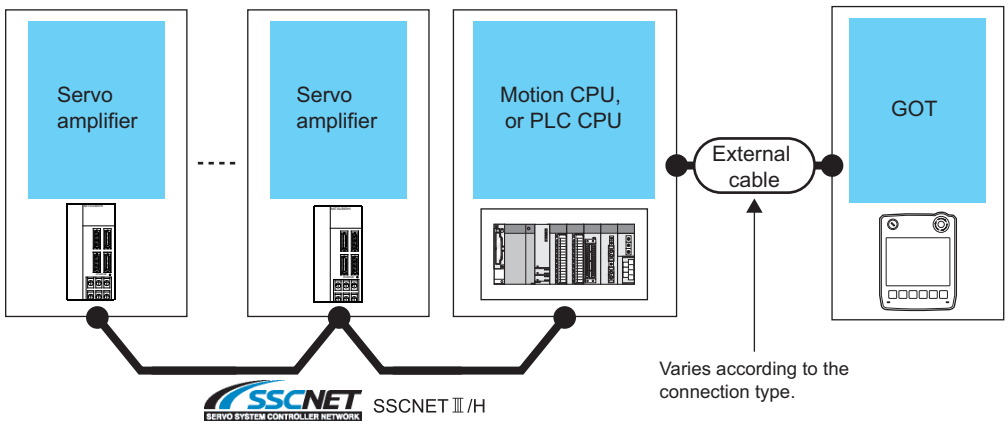
*2 The numbers of connectable devices below depend on the connection type.
☞ [System Configuration] section in each chapter
• Number of GOTs connectable to one motion controller or PLC
• Number of motion controllers or PLCs connectable to one GOT

*3 Use the firmware version later than 3.

*4 Use a module with the upper five digits later than 16102.

*5 Use a module with its software version 1.004 or later.

When using the external cable (GT11H-C□□□)



Servo amplifier		Motion CPU, or PLC			GOT Model	Number of connectable equipment
Model name	Communication type	Simple motion module	CPU type	Communication type*1		
MR-JE-□B MR-JE-□BF	SSCNETIII/H	RD77MS*3	RnCPU	For the system configuration between the GOT and the motion controller or PLC, refer to the following. ☞ Page 104 ETHERNET CONNECTION ☞ Page 307 DIRECT CPU CONNECTION (SERIAL) ☞ Page 359 SERIAL COMMUNICATION CONNECTION ☞ Page 411 CC-Link CONNECTION (Via G4)	GT 2505HS	*2
		QD77MS*4	QnCPU			
		LD77MS*4	LnCPU			
		FX5-40SSC-S	FX5CPU			
		FX5-80SSC-S*5				

*1 The connection type depends on the CPU model.
☞ [System Configuration] section in each chapter

*2 The numbers of connectable devices below depend on the connection type.
☞ [System Configuration] section in each chapter
• Number of GOTs connectable to one motion controller or PLC
• Number of motion controllers or PLCs connectable to one GOT

*3 Use the firmware version later than 3.

*4 Use a module with the upper five digits later than 16102.

*5 Use a module with its software version 1.004 or later.

GOT side settings

Connection through Motion controller or PLC

The settings of the GOT depend on the connection type between the GOT and the Motion module or the GOT and the PLC CPU.

For details of the GOT side settings, refer to the following.

☞ Page 104 ETHERNET CONNECTION
☞ Page 307 DIRECT CPU CONNECTION (SERIAL)
☞ Page 359 SERIAL COMMUNICATION CONNECTION
☞ Page 411 CC-Link CONNECTION (Via G4)

Connection through Motion module

The settings of the GOT depend on the connection type between the GOT and the PLC CPU.

For details of the GOT side settings, refer to the following.

☞ Page 104 ETHERNET CONNECTION

8.5 Settable Device Range

Direct connection

For the range of devices usable in the GOT when the GOT and servo amplifier are directly connected, refer to the following.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3 Version1

[MELSERVO-J2M-P8A]
[MELSERVO-J2M-*DU]
[MELSERVO-J2S-*A]
[MELSERVO-J2S-*CP]
[MELSERVO-J2S-*CL]
[MELSERVO-J3-*A]
[MELSERVO-J3-*T]
[MELSERVO-J4-*A, -JE-*A]
[MELSERVO-J4-*A-RJ]
[MELSERVO-JE-*C]
[MELSERVO-J5(W)-*G(-RJ), -JET-*G]

Connection through Motion controller or PLC

For the range of devices usable in the GOT when the GOT and servo amplifier are connected through a Motion controller or Simple Motion module, refer to the following.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3 Version1

8.6 Precautions

Station number setting in the servo system

Make sure to establish servo system with the station number set with the host address.
For details of host address setting, refer to the following.
☞ Page 571 GOT Side Settings

GOT clock function

Since the servo amplifier does not have a clock function, the settings of [Adjust] or [Broadcast] by GOT clock control will be disabled.

Servo amplifier/test operation using the GOT

During the servo amplifier/test operation, when the communication between the GOT and the servo amplifier is interrupted for 0.5[ms] or more, the servo amplifier decelerates, stops, and then gets into the servo lock status. During the servo amplifier/test operation, continue the communication constantly by monitoring the status display of the servo amplifier on the GOT screen, etc.

When connecting multiple GOTs

Do not monitor the same servo amplifier simultaneously with multiple GOTs. If multiple GOTs simultaneously write data to a device of the same servo amplifier, the servo amplifier may malfunction.

When multiple GOTs and the servo amplifier are connected by Ethernet connection

If the same servo amplifier is monitored (read) by multiple GOTs simultaneously, the servo amplifier may not receive all the commands and the GOTs may not monitor (read) the servo amplifier correctly.

When monitoring same communication channel, PLC and servo amplifier at the same time

■Deterioration of the monitoring performance

- If devices of the PLC and servo amplifier are monitored on the same screen or back ground, the monitoring performance will slow down.
- If devices of multiple servo amplifiers are monitored on the same screen, the monitoring performance will slow down.

■How to improve deterioration of monitoring performance

- Separating the channel numbers used for the controllers connected by using the multi-channel function can prevent slowdown in monitoring of the PLC devices.

When monitoring the servo amplifier for multiple axes at the same communication channel

■Deterioration of monitoring performance

- If devices of the servo amplifier for multiple axes are monitored on the same screen or back ground, the monitoring performance may extremely slow down.

■How to improve deterioration of monitoring performance

- The number of the axes which is monitored on the same screen or back ground should be 4 or less.

Using the multi-channel function, set the monitor of the servo amplifier for multiple axes to the different channel separately per 4 axes.

MEMO

9 ROBOT CONTROLLER CONNECTION

- Page 613 Connectable Model List
- Page 614 System Configuration
- Page 615 GOT Side Settings
- Page 622 PLC Side Settings
- Page 626 Settable Device Range
- Page 626 Precautions

9.1 Connectable Model List

The following table shows the connectable models.

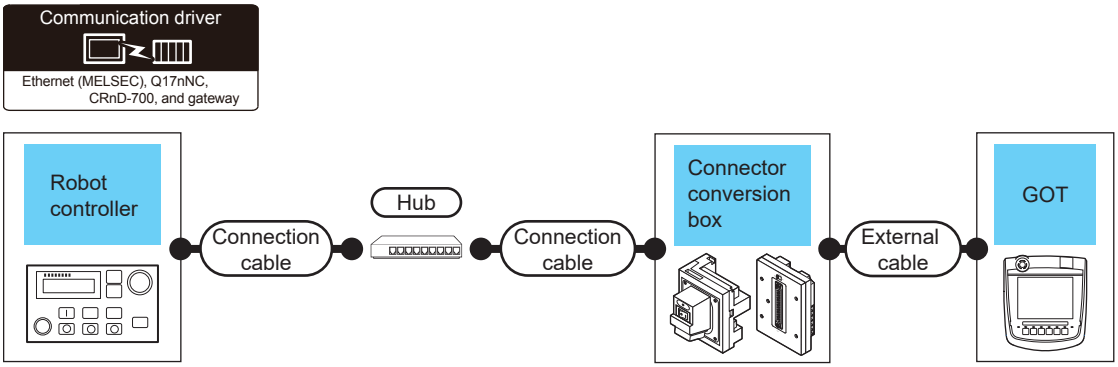
Series	Model name	Clock	Communication type	Connectable model*2	Refer to
Robot controller*1	CR800-D CRnD-700 CR750-D CR751-D	○	Ethernet	GT 2506 HS GT 2505 HS	☞ Page 614 Connecting to robot controller (CR800-D, CRnD-700)

*1 For details on the connection with CR800-R (R16RTCPU), CRnQ-700/CR750-Q/CR751-Q (Q172DRCPU), and CR800-Q (Q172DSRCPU), refer to MITSUBISHI ELECTRIC PLC CONNECTIONS.

*2 When the robot controller is connected, use the GOT outside the safety fence.

9.2 System Configuration

Connecting to robot controller (CR800-D, CRnD-700)



Robot controller		Connection cable*1*2	Maximum segment length*3	Connector conversion box	External cable *8	GOT Model	Number of connectable equipment
Model name	Communication type						
CR800-D*4*5 CRnD-700*6*7 CR750-D*6*7 CR751-D*6*7	Ethernet	Twisted pair cable • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3, 4, or 5 • 100BASE-TX Shielded twisted pair cable (STP) of category 5 or 5e	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	1 GOT
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the GOT to the Ethernet module, hub, or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.

*2 When only one GOT is connected, the GOT can be directly connected to the controller without a hub.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*4 For the system configuration of CR800-D, refer to the following manual.
Manuals of CR800-D

*5 Select [CR800] for [Unit Type] in [Connected Ethernet Controller Setting] of GT Designer3.
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
Page 621 Connected Ethernet Controller Setting

*6 For the system configuration of CRnD-700, CR750-D/CR751-D, refer to the following manual.
CRnD-700, CR750-D/CR751-D SET UP MANUAL

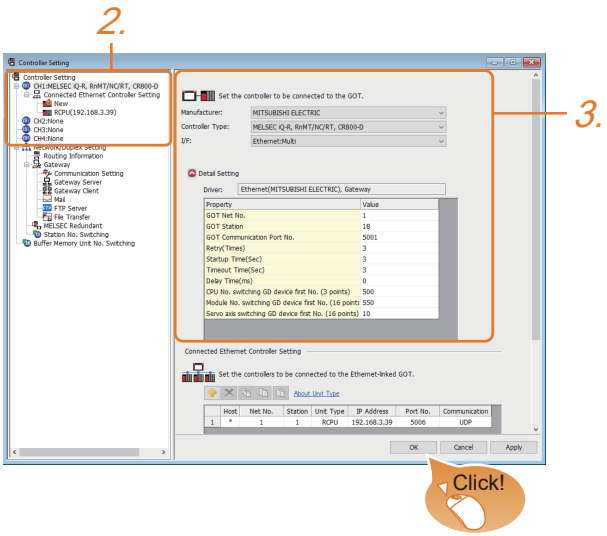
*7 Select [CRnD-700] for [Unit Type] in [Connected Ethernet Controller Setting] of GT Designer3.
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
Page 621 Connected Ethernet Controller Setting

*8 Use C or later version of GT11H-C□□-37P.

9.3 GOT Side Settings

Setting communication interface (Controller Setting)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [MITSUBISHI ELECTRIC]
- [Controller Type]: Configure the setting according to the controller to be connected.
- [I/F]: [Ethernet:Multi]
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 616 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following:
☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
GOT Net No.	1
GOT Station	18
GOT Communication Port No.	5001
Retry(Times)	3
Startup Time(Sec)	3
Timeout Time(Sec)	3
Delay Time(ms)	0
CPU No. switching GD device first No. (3 points)	500
Module No. switching GD device first No. (16 points)	550
Servo axis switching GD device first No. (16 points)	10

Item	Description	Range
GOT Net No.	Set the network No. of the GOT. (Default: 1)	1 to 239
GOT Station*1	Set the station No. of the GOT. (Default: 18)	1 to 120
GOT Communication Port No.	Set the GOT port No. for the connection with the Ethernet module. (Default: 5001 *2)	1024 to 5010 to 5014 to 65534 (Except for 5011, 5012, 5013 and 49153 to 49170)
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 3times)	0 to 5times
Startup Time	Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU. (Default: 3sec)	3 to 255sec
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 90sec
Delay Time	Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms)	0 to 10000 (ms)
CPU No. switching GD device first No. (3 points)	Set the start device number of the GD devices for CPU No. switching. (Default: 500) For the details, refer to the following. ☞ Page 617 Start device number of the GD devices for CPU number switching	0 to 65520
Module No. switching GD device first No. (16 points)	Set the start device number of the GD devices for module No. switching. (Default: 550) For the details, refer to the following. ☞ Page 618 Start device number of the GD devices for module number switching	0 to 65520
Servo axis switching GD device first No. (16 points)	Set the servo axis switching GD device first No. (Default: 10) For the details, refer to the following. ☞ Page 619 Servo axis switching GD device first No.	0 to 65520

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 621 Connected Ethernet Controller Setting

*2 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

Point

Example of [Controller Setting]

For examples of [Controller Setting], refer to the following.

☞ Page 622 PLC Side Settings

Start device number of the GD devices for CPU number switching

■Specifying a CPU number with a device

[CPU No.] can be specified with the GOT internal registers (GD devices) by specifying a value (100 to 102) to [CPU No.] in the device setting dialog in GT Designer3.

Set the start device number of the GD devices to be used in [CPU No. switching GD device first No. (3 points)].

Specify [CPU No.] with the three consecutive GD devices, starting the set device number.

When [500] is set to [CPU No. switching GD device first No. (3 points)], GD500 to GD502 are used to specify [CPU No.] as shown in the following table.

CPU No.	GD device	Setting range
100	GD500	1 to 4 Setting an invalid value causes a communication timeout error. Specifying a nonexistent CPU No. or a CPU No. not supporting a multiple CPU system with a device causes a controller error.
101	GD501	
102	GD502	

■Specifying a CPU number with a device on the initially-displayed screen

Set [CPU No. switching GD device first No. (3 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

■Specifying a CPU number with a device in a multi-channel connection

If the setting range of [CPU No. switching GD device first No. (3 points)] set in each channel overlaps, the monitoring target CPU No. set to each channel is switched simultaneously.

Set [CPU No. switching GD device first No. (3 points)] in each channel so that the setting range does not overlap.

■Specifying a CPU number and a station number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [CPU No. switching GD device first No. (3 points)] in a different channel switches the monitoring target CPU No. and station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [CPU No. switching GD device first No. (3 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

Start device number of the GD devices for module number switching

■Specifying a module number with a device

In a connection via a simple motion module, [Unit No.] can be specified with the GOT internal registers (GD devices) by specifying a value (100 to 10F) to [Unit No.] in the device setting dialog in GT Designer3

Set the start device number of the GD devices to be used in [Module No. switching GD device first No. (16 points)].

Specify [Unit No.] with the 16 consecutive GD devices, starting the set device number.

When [550] is set to [Module No. switching GD device first No. (16 points)], GD550 to GD565 are used to specify [Unit No.] as shown in the following table.

Unit No.	GD device	Setting range
100	GD550	The setting range depends on [Unit Type]. • When [MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-L], or [MELIPC] is selected in [Unit Type] 00 to FF • When [MELSEC iQ-F] is selected for [Unit Type] 01 to 10 Setting an invalid value causes a device range error.
101	GD551	
102	GD552	
103	GD553	
104	GD554	
105	GD555	
106	GD556	
107	GD557	
108	GD558	
109	GD559	
10A	GD560	
10B	GD561	
10C	GD562	
10D	GD563	
10E	GD564	
10F	GD565	

■Specifying a module number with a device on the initially-displayed screen

Set [Module No. switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

■Specifying a module number with a device in a multi-channel connection

If the setting range of [Module No. switching GD device first No. (16 points)] set in each channel overlaps, the module No. of the simple motion module via the servo amplifier device of each channel is switched simultaneously.

Set [Module No. switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

■Specifying a station number and a module number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Module No. switching GD device first No. (16 points)] switches the module No. of the simple motion module via the servo amplifier device and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [Module No. switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

Servo axis switching GD device first No.

■Indirect specification of the servo axis No.

In a connection via a Motion CPU or Simple Motion module, a servo axis No. can be indirectly specified with GOT internal registers (GD devices) by specifying a value (100 to 115) to the axis No. of the servo amplifier device.
Set the start device number of the GD devices to be used in [Servo axis switching GD device first No. (16 points)].
Specify a servo axis number with 16 consecutive GD devices, starting the set device number.
When [10] is set to [Servo axis switching GD device first No. (16 points)], GD10 to GD25 are used to specify a servo axis number as shown in the following table.

Servo axis No.	GD device	Setting range
100	GD10	1 to 64 For the setting other than the above, error (dedicated device is out of range) will occur.
101	GD11	
102	GD12	
103	GD13	
104	GD14	
105	GD15	
106	GD16	
107	GD17	
108	GD18	
109	GD19	
110	GD20	
111	GD21	
112	GD22	
113	GD23	
114	GD24	
115	GD25	

■Specifying a servo axis number with a device on the initially-displayed screen

Set [Servo axis switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

■Specifying a servo axis number with a device in a multi-channel connection

If the setting rage of [Servo axis switching GD device first No. (16 points)] set in each channel overlaps, the axis No. of the servo amplifier of each channel is switched simultaneously.
Set [Servo axis switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

■Specifying a station number and a servo axis number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Servo axis switching GD device first No. (16 points)] switches the axis No. of the servo amplifier and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.
Set [Servo axis switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

GOT IP address setting

Set the following communication port setting.

- Standard port

GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

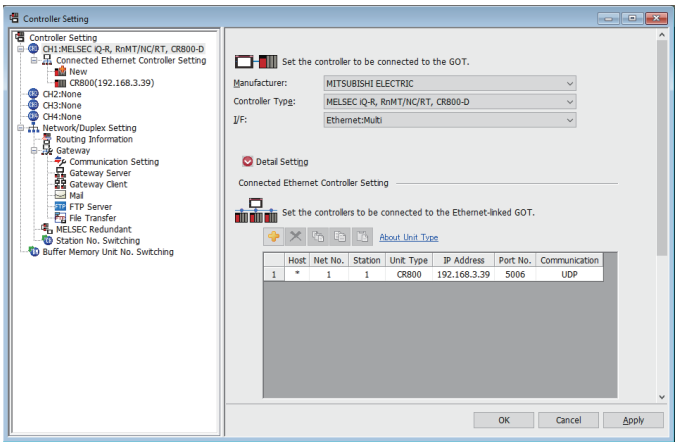
IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 80 GOT Ethernet Setting

Connected Ethernet Controller Setting



Item	Description	Range
Host	The host is displayed. It refers to a station that can be connected without setting a station number. (The host is indicated with an asterisk (*))	—
Net No.	Set the network No. of the connected Ethernet module. (Default: 1)	1 to 239
Station*2	Set the station No. of the connected Ethernet module. (Default: 1)	1 to 64
Unit Type*1	Set the type of the connected Ethernet module. CRnD-700, CR800	CRnD-700, CR800
IP address	Set the IP address of the connected Ethernet module. (Default: blank)	0.0.0.0 to 255.255.255.255
Port No./Communication	The port No. and communication that can be set differ depending on the [Unit Type]. <CR800> • When the port No. is [5006], the communication is [UDP] (fixed). • When the port No. is [5007], the communication is [TCP] (fixed). <CRnD-700> • Port No. can be set only [5001], and the communication is [UDP] (fixed).	

*1 Selected from [CRnD-700] and [CR800] for [Controller Type].

*2 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].

☞ Page 616 Communication detail settings

Point

• Example of [Connected Ethernet Controller Setting]

For examples of [Connected Ethernet Controller Setting], refer to the following.

☞ Page 622 PLC Side Settings

• Communication interface setting by Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

9.4 PLC Side Settings

Model		Reference
Robot controller	CR800-D	☞ Page 622 Connecting to robot controller (CR800-D)
	CRnD-700	☞ Page 624 Connecting to robot controller (CRnD-700)

Connecting to robot controller (CR800-D)

This section describes the settings of a GOT and a robot controller in the following case of system configuration.

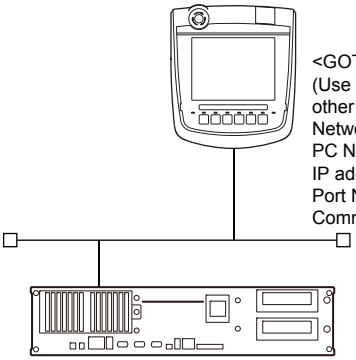
Point

Robot controller (CR800-D)

For details of the robot controller (CR800-D), refer to the following manual.

📖CR800-D SET UP MANUAL

System configuration



<GOT>
(Use the default value for settings other than the following.)
Network No. :1
PC No. :18
IP address :192.168.0.18
Port No. :5001
Communication format :UDP (fixed)

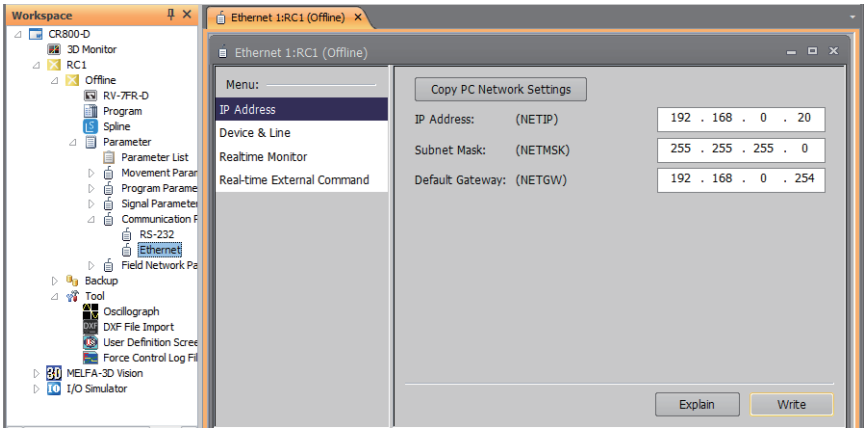
<CR800-D>
(Use the default value for settings other than the following.)
Network No. :1 (virtual)*1
PC No. :2 (virtual)*1
IP address :192.168.0.19

*1 These setting items do not exist at the robot controller side.
However, the virtual values must be set on the GOT side.
☞ Page 623 Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

Parameter settings for CR800-D

Set the parameters using RT ToolBox3

Select [Online] → [Parameter] → [Communication Parameter] → [Ethernet] and set [IP Address].



Item	Set value	Setting necessity at GOT connection
IP Address (NETIP)	192.168.0.19	○

○: Necessary △: As necessary ×: Not necessary

Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 615 Setting communication interface (Controller Setting)

■Controller Setting

Item	Set value
GOT Net No.	1
GOT PC No.	18
GOT Communication Port No.	5001
Retry	3 times
Startup Time	3 sec
Timeout Time	3 sec
Delay Time	0 ms

■GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.0.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

■Connected Ethernet Controller Setting

Item		Set value
Ethernet setting No.1	Host	*
	Net No.	1
	Station	1
	Unit Type	CR800
	IP Address	192.168.0.19
	Port No.	5001 (fixed)
	Communication	UDP (fixed)

Checking communication state of CR800-D

■When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

• At normal communication

C:\>Ping 192.168.0.19

Reply from 192.168.0.19:bytes=32 time<1ms TTL=32

• At abnormal communication

C:\>Ping 192.168.0.19

Request timed out.

■At abnormal communication

At abnormal communication, check the following and execute the Ping command again.

- Cable connecting condition
- Confirmation of switch and network parameter setting
- Operation state of CR800-D (faulty or not)
- The IP address of CR800-D specified in the ping command

Connecting to robot controller (CRnD-700)

This section describes the settings of a GOT and a robot controller in the following case of system configuration.

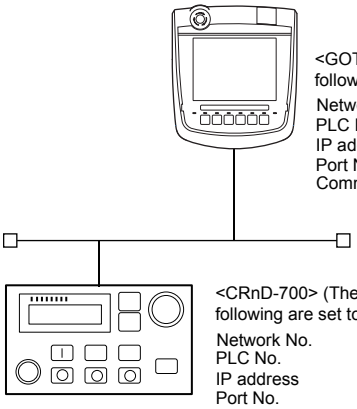
Point

Robot controller (CRnD-700)

For details of the robot controller (CRnD-700), refer to the following manual.

CRnD-700 SET UP MANUAL

System configuration



<GOT> (The settings other than the following are set to the default)

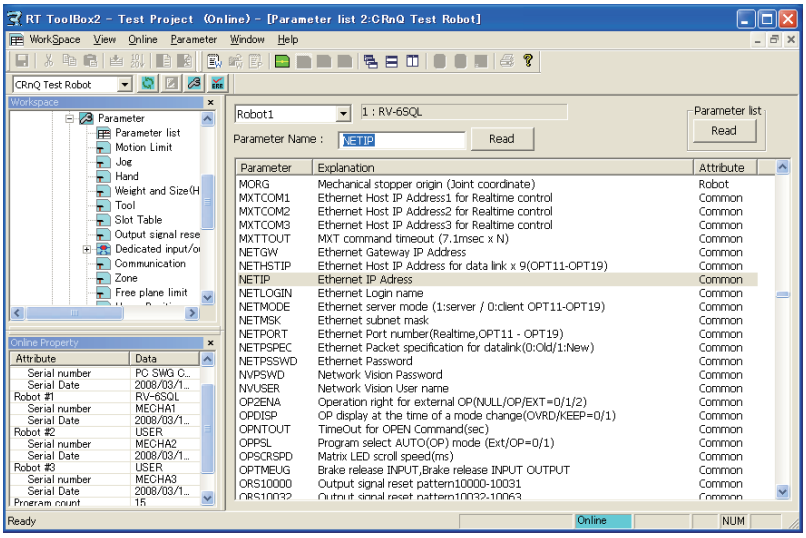
Network No.	: 1
PLC No.	: 1
IP address	: 192.168.0.18
Port No.	: 5001
Communication format	: UDP (fixed)

<CRnD-700> (The settings other than the following are set to the default)

Network No.	: 1
PLC No.	: 2
IP address	: 192.168.0.19
Port No.	: 5001
Communication format	: UDP(fixed)

Parameter settings for CRnD-700

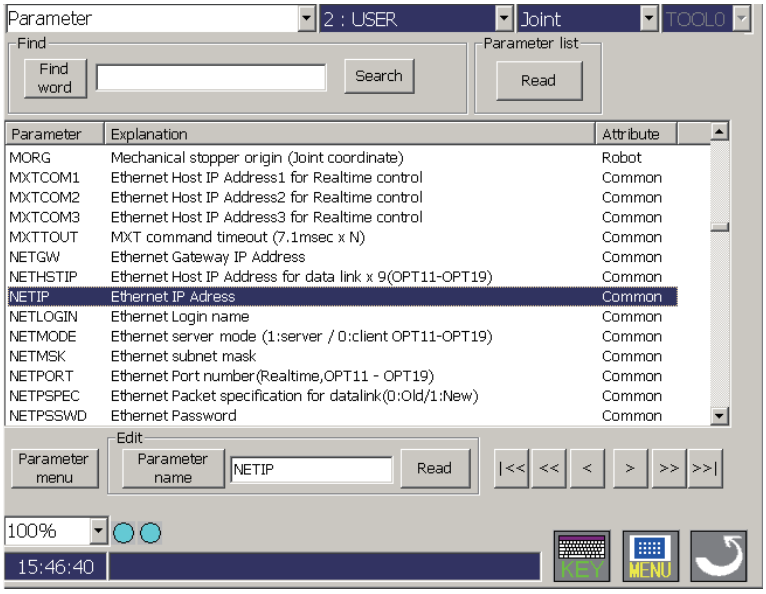
■For RT ToolBox2



Item	Set value	Setting necessity at GOT connection
NETIP	192.168.0.19	○
GOTPORT	5001	○

○: Necessary △: As necessary ×: Not necessary

■For R32TB or R56TB



(For R56TB)

Item	Set value	Setting necessity at GOT connection
NETIP	192.168.0.19	○
GOTPORT	5001	○

○: Necessary △: As necessary ×: Not necessary

[Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3

For the setting method of [Controller Setting] and [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.

☞ Page 615 Setting communication interface (Controller Setting)

■Communication settings

Item	Set value
GOT Net No.	1
GOT Station	1
GOT Communication Port No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

■GOT Ethernet Setting (standard port)

Item	Set value
GOT IP Address	192.168.0.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral S/W Communication Port No.	5015
Transparent Port No.	5014

■Connected Ethernet Controller Setting

Item		Set value
Ethernet setting No.1	Host	*
	Net No.	1
	Station	2
	Unit Type	CRnD-700
	IP address	192.168.0.19
	Port No.	5001 (fixed)
	Communication	UDP (fixed)

Confirming communication state of CRnD-700

■When using the Windows Command Prompt

Execute a Ping command at the Command Prompt of Windows.

• At normal communication

C:\>Ping 192.168.0.19

Reply from 192.168.0.19:bytes=32 time<1ms TTL=32

• At abnormal communication

C:\>Ping 192.168.0.19

Request timed out.

■At abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

- Cable connecting condition
- Parameter settings
- Operation state of the CRnD-700. (faulty or not)
- The IP address of the CRnD-700 specified for the Ping command.

9.5 Settable Device Range

For details on the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) For GT Works3 Version1
[MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]
[MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700]

9.6 Precautions

When setting IP address

Do not use "0" and "255" at the end of an IP address.

(Numbers of *.*.*.0 and *.*.*.255 are used by the system)

The GOT may not monitor the controller correctly with the above numbers.

Consult with the administrator of the network before setting an IP address to the GOT and controller.

When connecting to the multiple network equipment (including GOT) in a segment

By increasing the network load, the transmission speed between the GOT and PLC may be reduced.

The following actions may improve the communication performance.

- Using a switching hub
- More high speed by 100BASE-TX (100Mbps)
- Reduction of the monitoring points on GOT

10 CNC CONNECTION

- Page 627 Connectable Model List
- Page 628 System Configuration
- Page 631 Connection Diagram
- Page 633 GOT Side Settings
- Page 641 CNC Side Settings
- Page 643 Settable Device Range
- Page 644 Precautions

10.1 Connectable Model List

The following table shows the connectable models.

Series	Model name	Clock	Communication type	Connectable model	Refer to
MELDAS C6/C64*1	FCA C6 FCA C64	×	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 628 Direct CPU connection (serial)
			MELSECNET/10	-	-
			CC-Link (ID)	-	-
			Ethernet	GT2506HS GT2505HS	☞ Page 630 Ethernet connection
M700VS/M70V	M700VS M70V	×	CC-Link (ID)	-	-

*1 Use the NC system software version D0 or later.

For the connection to CNC C80, CNC C70, refer to PART 2 MITSUBISHI ELECTRIC PLC CONNECTIONS.

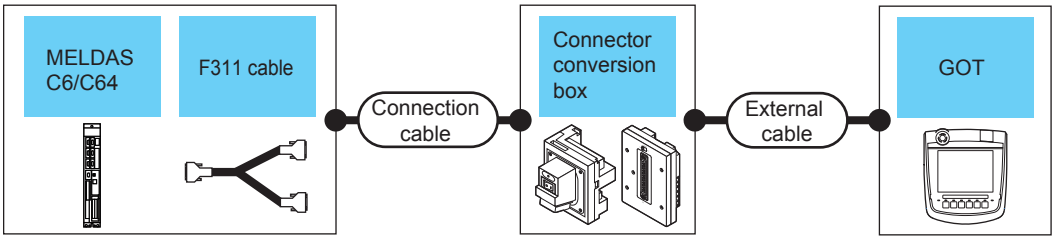
10.2 System Configuration

Direct CPU connection (serial)

Communication driver

AJ71C24, MELDAS C6*

When using the connector conversion box



CNC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance *4	Number of connectable equipment
Model name	F311 cable	Communication type	Cable model					
MELDAS C6/C64*1	-	RS-232	User preparing Page 631 RS232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
MELDAS C6/C64*2	User preparing *3	RS-422	GT01-C30R4-25P(3m) GT01-C100R4-25P(10m)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

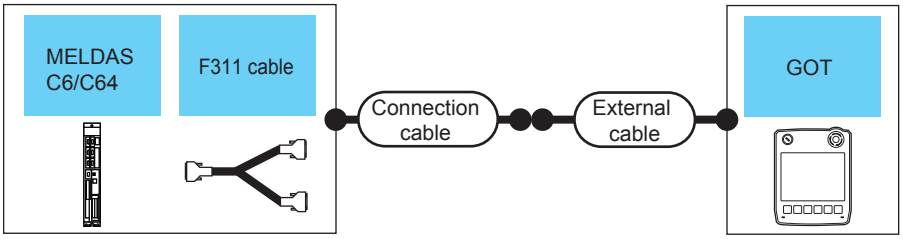
*1 Connect the connector of the CNC side to TERMINAL.

*2 Connect the connector of the CNC side to SIO.

*3 To be prepared by the user, referring the following.
MELDAS C6/C64 CONNECTION AND MAINTENANCE MANUAL (BNP-B2255)

*4 The distance from the GOT to the CNC (F311 cable + Connection cable + External connection cable)

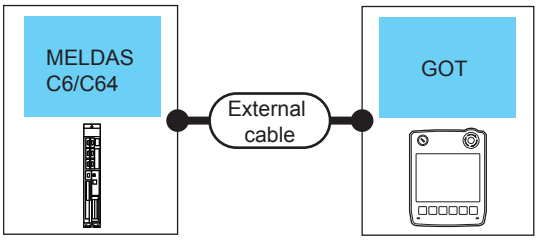
When using the external cable (GT11H-C□□□-37P)



CNC			Connection cable	External cable	GOT Model	Total distance *4	Number of connectable equipment
Model name	F311 cable	Communication type	Cable model				
MELDAS C6/C64*1	-	RS-232	User preparing Page 631 RS232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
MELDAS C6/C64*2	User preparing *3	RS-422	GT11H-C15R4-25P(1.5m)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 Connect the connector of the CNC side to TERMINAL.
*2 Connect the connector of the CNC side to SIO.
*3 To be prepared by the user, referring the following.
☞ MELDAS C6/C64 CONNECTION AND MAINTENANCE MANUAL (BNP-B2255)
*4 The distance from the GOT to the CNC (F311 cable + Connection cable + External connection cable)

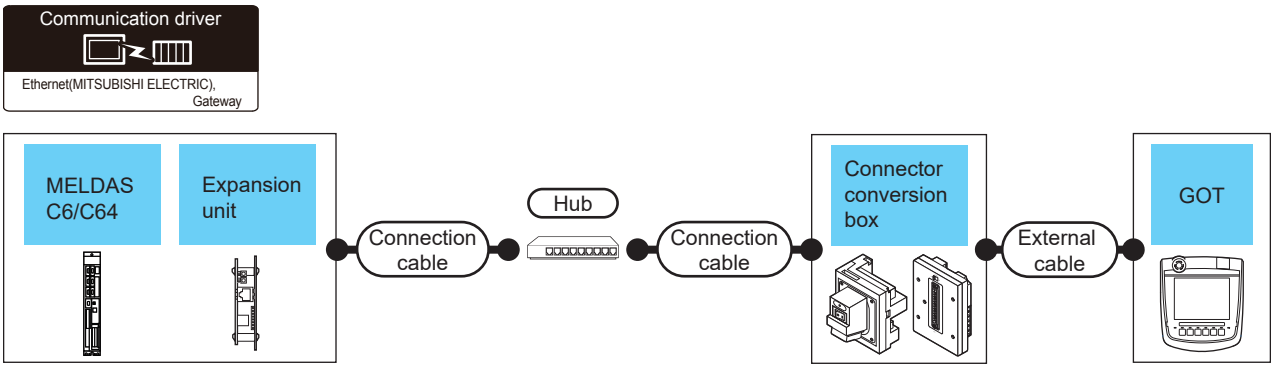
When using the external cable (GT11H-C□□□)



CNC		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication type				
MELDAS C6/C64*1	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 632 RS232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 PLC

*1 Connect the connector of the CNC side to TERMINAL.

Ethernet connection



CNC			Connection cable*1		Connector conversion box	External cable *5	GOT Model	Number of connectable equipment
Model name	Expansion unit	Communication type	Cable model	Maximum segment length*2				
MELDAS C6/C64	FUC6-EX875*3*4	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	128 GOTs (recommended to 16 units or less)
					GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
					GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
					GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the GOT to the Ethernet module, hub, or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
When only one GOT is connected, the GOT can be directly connected to the controller without a hub.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*3 For the system configuration of the expansion unit, refer to the following manuals.
MELDAS C6/C64 CONNECTION AND MAINTENANCE MANUAL (BNP-B2255)
MELDAS C6/C64 NETWORK MANUAL (BNP-B2373)

*4 Select [AJ71QE71] for [Unit Type] in [Connected Ethernet Controller Setting] of GT Designer3.
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
Page 640 Connected Ethernet Controller Setting

*5 Use C or later version of GT11H-C□□-37P.

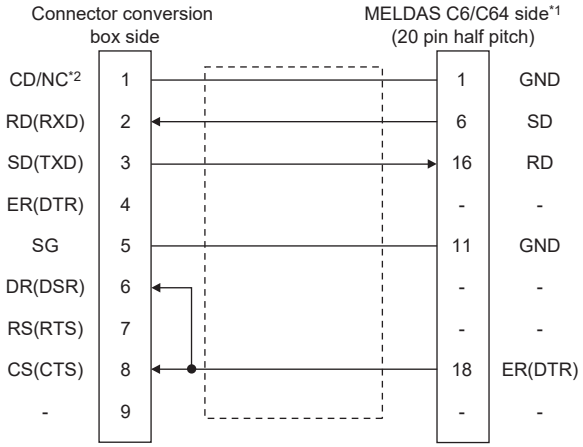
10.3 Connection Diagram

The following diagram shows the connection between the GOT and the CNC.

RS-232 cable

Connection diagram

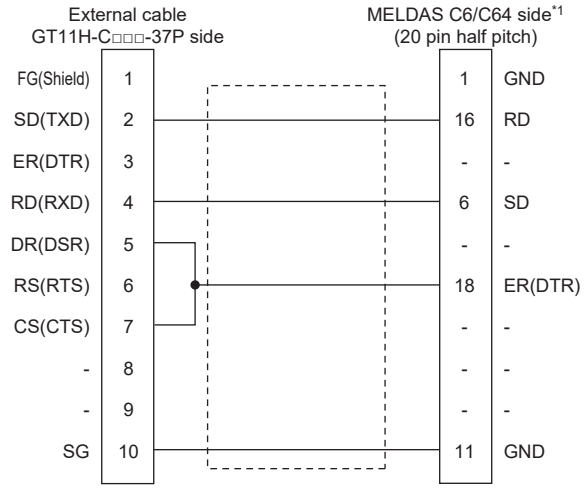
■RS232 connection diagram 1)



*1 For details of the MELDAS C6/C64 side connection, refer to the following manuals.
MELDAS C6/C64 CONNECTION AND MAINTENANCE MANUAL BNP-B2255
MELDAS C6/C64 NETWORK MANUAL BNP-B2373

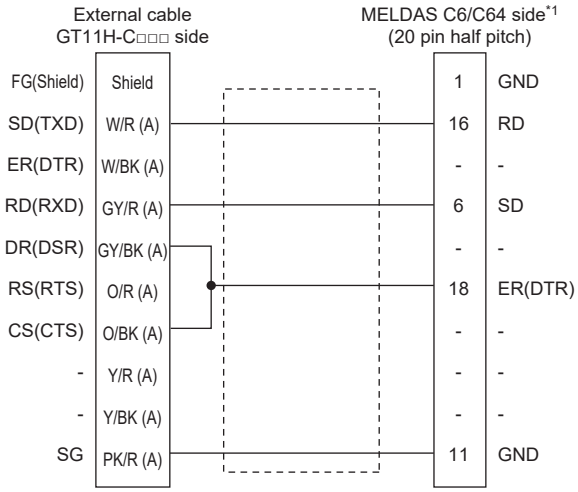
*2 GT2506HS-V: CD, GT2505HS-V: NC

■RS232 connection diagram 2)



*1 For details of the MELDAS C6/C64 side connection, refer to the following manuals.
MELDAS C6/C64 CONNECTION AND MAINTENANCE MANUAL BNP-B2255
MELDAS C6/C64 NETWORK MANUAL BNP-B2373

■RS232 connection diagram 3)



*1 For details of the MELDAS C6/C64 side connection, refer to the following manuals.
MELDAS C6/C64 CONNECTION AND MAINTENANCE MANUAL BNP-B2255
MELDAS C6/C64 NETWORK MANUAL BNP-B2373

Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

■GOT side connector

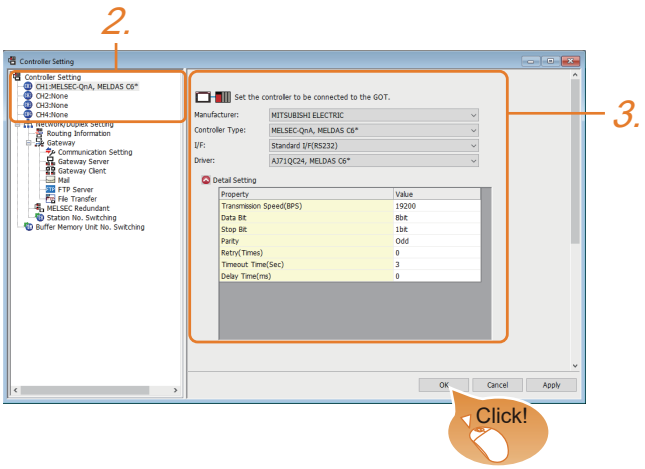
For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

10.4 GOT Side Settings

Setting communication interface (Controller Setting)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: MITSUBISHI ELECTRIC
- [Controller Type]: MELSEC-QnA, MELDAS C6*
- [I/F]: Interface to be used
- [Driver]:

For direct CPU connection (serial)
[AJ71QC24, MELDAS C6*]
For Ethernet connection
[Ethernet(MITSUBISHI ELECTRIC), Gateway]

- [[Detail Setting]: Configure the settings according to the usage environment.

☞ Page 634 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

AJ71QC24, MELDAS C6*

Property	Value
Transmission Speed(BPS)	19200
Data Bit	8 bit
Stop Bit	1 bit
Parity	Odd
Retry(Times)	0
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 19200bps)	4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bit)	8bit (fixed)
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit (fixed)
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Odd)	Odd (fixed)
Retry	Set the number of retries to be performed when a communication timeout occurs. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300ms

Ethernet (MITSUBISHI ELECTRIC), Gateway

Property	Value
Network Type	MNET/H mode
Network No.	1
Station No.	1
Group No.	0
Mode Setting	Online(Auto Reconnect)
Transmission Speed(Mbps)	25
Refresh Interval(Times)	1
Retry(Times)	3
Timeout Time(Sec)	3
Delay Time(ms)	0
CPU No. switching GD device first No. (3 points)	500
Module No. switching GD device first No. (16 points	550
Servo axis switching GD device first No. (16 points)	10

Item	Description	Range
GOT Net No.	Set the network No. of the GOT. (Default: 1)	1 to 239
GOT Station*1	Set the station No. of the GOT. (Default: 18)	1 to 64
GOT Communication Port No.	Set the GOT port No. for the connection with the Ethernet module. (Default: 5001 *2)	1024 to 5010 to 5014 to 65534 (Except for 5011, 5012, 5013 and 49153 to 49170)
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 3times)	0 to 5times
Startup Time	Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU. (Default: 3sec)	3 to 255sec
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	3 to 90sec
Delay Time	Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms)	0 to 10000 (ms)
CPU No. switching GD device first No. (3 points)	Set the start device number of the GD devices for CPU No. switching. (Default: 500) For the details, refer to the following. ☞ Page 636 Start device number of the GD devices for CPU number switching	0 to 65520
Module No. switching GD device first No. (16 points)	Set the start device number of the GD devices for module No. switching. (Default: 550) For the details, refer to the following. ☞ Page 637 Start device number of the GD devices for module number switching	0 to 65520
Servo axis switching GD device first No. (16 points)	Set the servo axis switching GD device first No. (Default: 10) For the details, refer to the following. ☞ Page 638 Servo axis switching GD device first No.	0 to 65520

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 640 Connected Ethernet Controller Setting

*2 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

Point

• Communication interface setting by Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

Start device number of the GD devices for CPU number switching

■Specifying a CPU number with a device

[CPU No.] can be specified with the GOT internal registers (GD devices) by specifying a value (100 to 102) to [CPU No.] in the device setting dialog in GT Designer3.

Set the start device number of the GD devices to be used in [CPU No. switching GD device first No. (3 points)].

Specify [CPU No.] with the three consecutive GD devices, starting the set device number.

When [500] is set to [CPU No. switching GD device first No. (3 points)], GD500 to GD502 are used to specify [CPU No.] as shown in the following table.

CPU No.	GD device	Setting range
100	GD500	1 to 4 Setting an invalid value causes a communication timeout error. Specifying a nonexistent CPU No. or a CPU No. not supporting a multiple CPU system with a device causes a controller error.
101	GD501	
102	GD502	

■Specifying a CPU number with a device on the initially-displayed screen

Set [CPU No. switching GD device first No. (3 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

■Specifying a CPU number with a device in a multi-channel connection

If the setting range of [CPU No. switching GD device first No. (3 points)] set in each channel overlaps, the monitoring target CPU No. set to each channel is switched simultaneously.

Set [CPU No. switching GD device first No. (3 points)] in each channel so that the setting range does not overlap.

■Specifying a CPU number and a station number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [CPU No. switching GD device first No. (3 points)] in a different channel switches the monitoring target CPU No. and station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [CPU No. switching GD device first No. (3 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

Start device number of the GD devices for module number switching

■Specifying a module number with a device

In a connection via a simple motion module, [Unit No.] can be specified with the GOT internal registers (GD devices) by specifying a value (100 to 10F) to [Unit No.] in the device setting dialog in GT Designer3

Set the start device number of the GD devices to be used in [Module No. switching GD device first No. (16 points)].

Specify [Unit No.] with the 16 consecutive GD devices, starting the set device number.

When [550] is set to [Module No. switching GD device first No. (16 points)], GD550 to GD565 are used to specify [Unit No.] as shown in the following table.

Unit No.	GD device	Setting range
100	GD550	The setting range depends on [Unit Type]. • When [MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-L], or [MELIPC] is selected in [Unit Type] 00 to FF • When [MELSEC iQ-F] is selected for [Unit Type] 01 to 10 Setting an invalid value causes a device range error.
101	GD551	
102	GD552	
103	GD553	
104	GD554	
105	GD555	
106	GD556	
107	GD557	
108	GD558	
109	GD559	
10A	GD560	
10B	GD561	
10C	GD562	
10D	GD563	
10E	GD564	
10F	GD565	

■Specifying a module number with a device on the initially-displayed screen

Set [Module No. switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

■Specifying a module number with a device in a multi-channel connection

If the setting range of [Module No. switching GD device first No. (16 points)] set in each channel overlaps, the module No. of the simple motion module via the servo amplifier device of each channel is switched simultaneously.

Set [Module No. switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

■Specifying a station number and a module number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Module No. switching GD device first No. (16 points)] switches the module No. of the simple motion module via the servo amplifier device and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.

Set [Module No. switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

Servo axis switching GD device first No.

■Indirect specification of the servo axis No.

In a connection via a Motion CPU or Simple Motion module, a servo axis No. can be indirectly specified with GOT internal registers (GD devices) by specifying a value (100 to 115) to the axis No. of the servo amplifier device.
Set the start device number of the GD devices to be used in [Servo axis switching GD device first No. (16 points)].
Specify a servo axis number with 16 consecutive GD devices, starting the set device number.
When [10] is set to [Servo axis switching GD device first No. (16 points)], GD10 to GD25 are used to specify a servo axis number as shown in the following table.

Servo axis No.	GD device	Setting range
100	GD10	1 to 64 For the setting other than the above, error (dedicated device is out of range) will occur.
101	GD11	
102	GD12	
103	GD13	
104	GD14	
105	GD15	
106	GD16	
107	GD17	
108	GD18	
109	GD19	
110	GD20	
111	GD21	
112	GD22	
113	GD23	
114	GD24	
115	GD25	

■Specifying a servo axis number with a device on the initially-displayed screen

Set [Servo axis switching GD device first No. (16 points)] so that the values of the GD devices are retained and monitored upon the GOT startup.

■Specifying a servo axis number with a device in a multi-channel connection

If the setting rage of [Servo axis switching GD device first No. (16 points)] set in each channel overlaps, the axis No. of the servo amplifier of each channel is switched simultaneously.
Set [Servo axis switching GD device first No. (16 points)] for each channel so that the setting range does not overlap.

■Specifying a station number and a servo axis number with devices in a multi-channel connection

When GD10 to GD25 are used to specify the station No. of an inverter or non-Mitsubishi temperature controller connected, setting [10] to [Servo axis switching GD device first No. (16 points)] switches the axis No. of the servo amplifier and the station No. of an inverter or non-Mitsubishi temperature controller set to each channel simultaneously.
Set [Servo axis switching GD device first No. (16 points)] so that the setting range does not overlap the station No. of an inverter or non-Mitsubishi temperature controller.

GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

GOT IP address setting

Set the following communication port setting.

- Standard port

GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

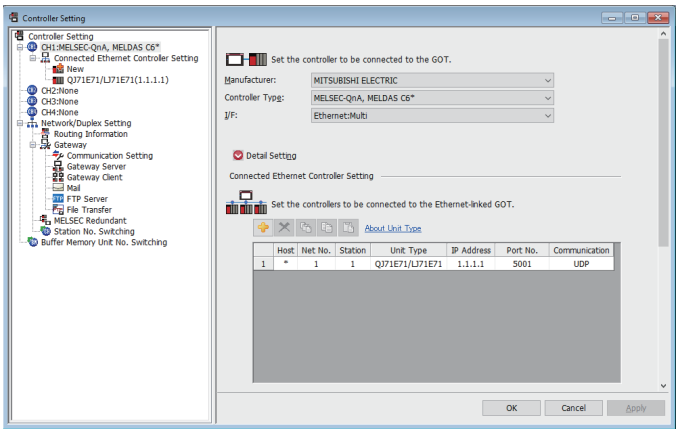
IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 80 GOT Ethernet Setting

Connected Ethernet Controller Setting



Item	Description	Range
Host	The host is displayed. It refers to a station that can be connected without setting a station number. (The host is indicated with an asterisk (*))	—
Net No.	Set the network No. of the connected Ethernet module. (Default: 1)	Network No. of CNC*1
Station*2	Set the station No. of the connected Ethernet module. (Default: 1)	Station No. of CNC
Unit Type	Set the type of the connected Ethernet module. (Default: QJ71E71/LJ71E71)	AJ71QE71
IP Address	Set the IP address of the connected Ethernet module. (Default: 1.1.1.1)	IP address of CNC
Port No.	Set the port No. of the connected Ethernet module. (Default: 5001)	5001
Communication	UDP (fixed)	UDP (fixed)

*1 For operating CNC monitor function, set N/W No. to "239".

*2 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].

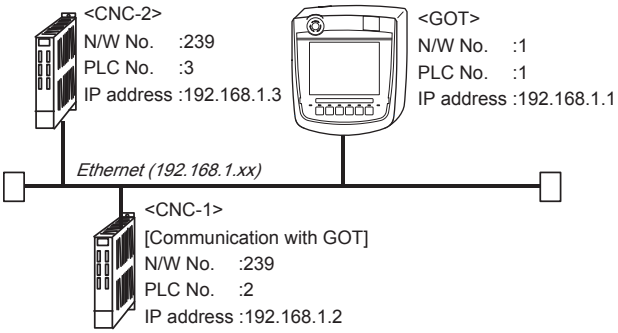
☞ Page 634 Communication detail settings

10.5 CNC Side Settings

Ethernet connection

System configuration

The following shows the example of the system configuration when using the CNC monitor function.



Parameter setting

Set parameters related to Ethernet with MELSEC's peripheral devices in the same way as parameter setting of MELSEC CPU, and write them on CNC by Personal computer.

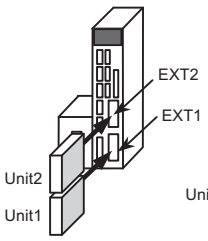
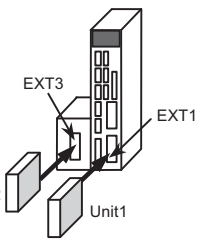
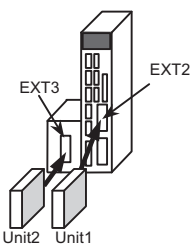
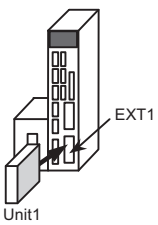
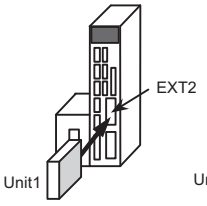
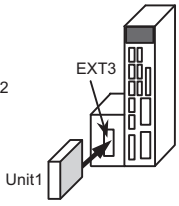
■Network parameter setting

Set the network parameters by peripheral device and write them on CNC.

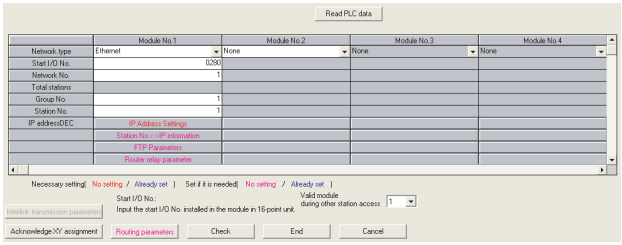
An example of parameter setting by GPPW is as follows.

Set the first I/O No. as follows according to the expansion slot to which the unit is inserted.

• Unit No.

Slot position	Start I/O No.	Mounting position of extension unit
EXT1	0200	[When mounted in EXT1 and EXT2]  [When mounted in EXT1 and EXT3] 
EXT2	0280	[When mounted in EXT2 and EXT3]  [When mounted in EXT1 only] 
EXT3	0300	[When mounted in EXT2 only]  [When mounted in EXT3 only] 

• Example of GX Developer setting



For details of the parameter setting, refer to the following.

📖C6/C64/C64T NETWORK INSTRUCTION MANUAL BNP-B2373

Point

IP address setting

IP address setting on GX Developer is invalid.

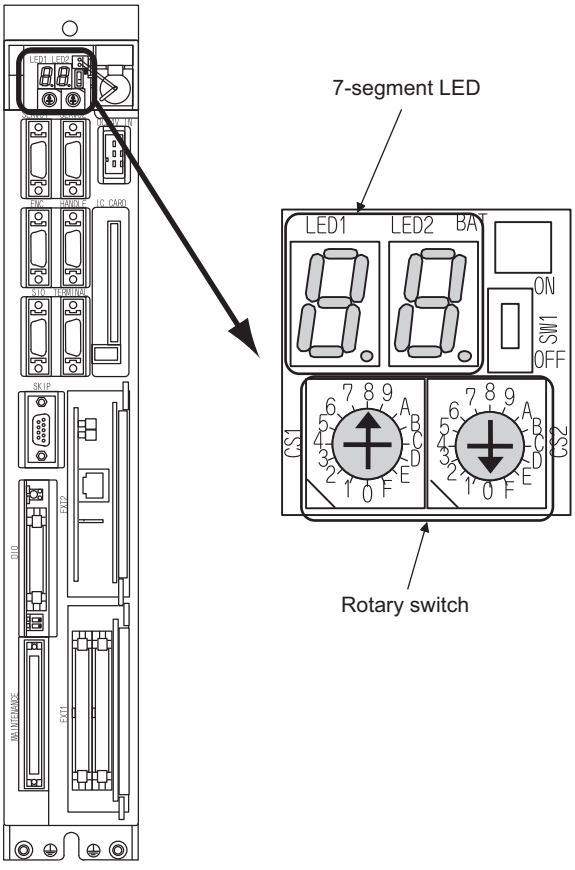
Set the IP address by the 7-segment LED and rotary switch of the CNC side, referring to the next page.

■CNC side parameter setting

Confirm the CNC side parameter setting with the settings of IP address, gateway address, subnet mask and port No. by the 7-segment LED and rotary switch of the CNC side.

For details of the parameter setting operation, refer to the following.

📖C6/C64/C64T NETWORK INSTRUCTION MANUAL BNP-B2373 IV Setting the Ethernet IP Address



10.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Mitsubishi Electric Products) for GT Works3 Version1 [MELSEC QnA, MELDAS C6*]

10.7 Precautions

Direct CPU connection (serial)

Version of CNC

For MELDAS C6/C64, use NC system software version D0 or later.

Ethernet connection

Via network system

GOT with Ethernet communication cannot access the CNCs in another network via the CNC (network module, Ethernet module, etc.).

When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [PLC No.] to the GOT.

☞ Page 633 Setting communication interface (Controller Setting)

When connecting to the multiple network equipment (including GOT) in a segment

By increasing the network load, the transmission speed between the GOT and CNC may be reduced.

The following actions may improve the communication performance.

- Using a switching hub
- More high speed by 100BASE-TX (100Mbps)
- Reduction of the monitoring points on GOT

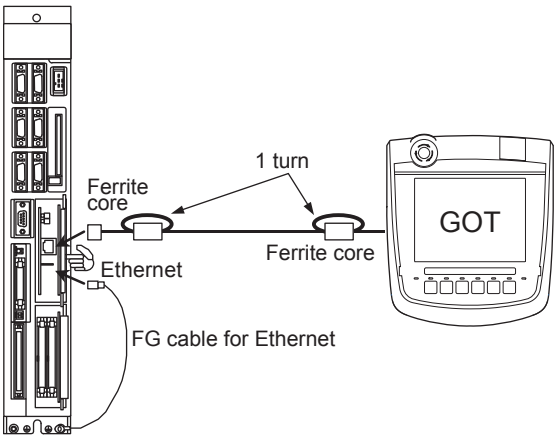
Ethernet cable connection

Ethernet cable is so susceptible to noise that you should wire power cables and electric supply cables separately.

And you need to attach a ferrite core (attachment) on the control unit side.

For details of the Ethernet cable connection, refer to the following

C6/C64/C64T NETWORK INSTRUCTION MANUAL BNP-B2373 IX Connection Function with GOT



Version of CNC

For MELDAS C6/C64, use NC system software version D0 or later.

PART 4 MULTIPLE GOT CONNECTIONS

11 GOT MULTI-DROP CONNECTION

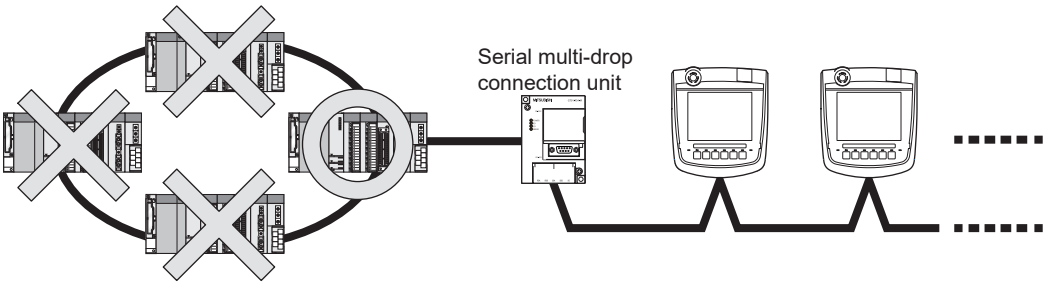
11 GOT MULTI-DROP CONNECTION

- Page 646 CPU that can be Monitored
- Page 647 Connectable Model List
- Page 664 System Configuration
- Page 665 Connection Diagram
- Page 667 GOT Side Settings
- Page 669 Settings of Serial Multi-Drop Connection Unit
- Page 675 Setting of connection conversion adapter
- Page 676 Precautions

11.1 CPU that can be Monitored

The GOT can monitor only a CPU to which a serial multi-drop connection unit (GT01-RS4-M) is connected directly.

GT2505HS-V does not support the GOT multi-drop connection.



11.2 Connectable Model List

Direct CPU connection (serial)

The following table shows the connectable models for direct CPU connection (serial) of the CPU and serial multi-drop connection unit.

Series	Model name	Clock	Communication type		Connectable model
			Between CPU and serial multi-drop connection unit	Between serial multi-drop connection unit and GOT	
MELSEC MX Controller (MX-R Model)	MXR300-16 MXR300-32 MXR300-64 MXR500-128 MXR500-256	○	RS-232 RS-422	RS-485	-
MELSEC MX Controller (MX-F Model)	MXF100-8-N32 MXF100-8-P32 MXF100-16-N32 MXF100-16-P32	○	RS-232 RS-422	RS-485	-
MELSEC iQ-R Series	R00CPU	○	RS-232 RS-422	RS-485	-
	R01CPU				
	R02CPU				
	R04CPU				
	R08CPU				
	R16CPU				
	R32CPU				
	R120CPU				
	R08PCPU				
	R16PCPU				
	R32PCPU				
	R120PCPU				
	R04ENCPU				
	R08ENCPU				
	R16ENCPU				
	R32ENCPU				
	R120ENCPU				
	R08PSFCPU				
	R16PSFCPU				
	R32PSFCPU				
	R120PSFCPU				
	R08SFCPU				
	R16SFCPU				
	R32SFCPU				
	R120SFCPU				
Motion CPU (MELSEC iQ-R Series)	R16MTCPU	○	RS-232 RS-422	RS-485	-
	R32MTCPU				
	R64MTCPU				
C Controller module (MELSEC iQ-R Series)	R12CCPU-V	○	RS-232 RS-422	RS-485	-
MELSECWinCPU (MELSEC iQ-R Series)	R102WCPU-W	×	RS-232 RS-422	RS-485	-
CNC C80	R16NCCPU-S1	○	RS-232 RS-422	RS-485	-
Robot controller (MELSEC iQ-R Series)	CR800-R(R16RTCPU)	○	RS-232 RS-422	RS-485	-

Series	Model name	Clock	Communication type		Connectable model
			Between CPU and serial multi-drop connection unit	Between serial multi-drop connection unit and GOT	
MELSEC iQ-F Series	FX5U	○	RS-232 RS-422	RS-485	-
	FX5UC				
	FX5UJ				
	FX5S				
MELSEC-Q (Q mode)*4	Q00JCPU	○	RS-232 RS-422	RS-485	GT 2506 HS
	Q00CPU*1				
	Q01CPU*1				
	Q02CPU*1				
	Q02HCPU*1				
	Q06HCPU*1				
	Q12HCPU*1				
	Q25HCPU*1				
	Q02PHCPU	○	-	-	-
	Q06PHCPU				
	Q12PHCPU				
	Q25PHCPU				
	Q12PRHCPU (Main base)				
	Q25PRHCPU (Main base)				
	Q12PRHCPU (Extension base)	○	-	-	-
	Q25PRHCPU (Extension base)				
	Q00UJCPU Q00UJCPU-S8	○	RS-232 RS-422	RS-485	GT 2506 HS
	Q00UCPU				
	Q01UCPU				
	Q02UCPU				
	Q03UDCPU				
	Q04UDHCPU				
	Q06UDHCPU				
	Q10UDHCPU				
	Q13UDHCPU				
	Q20UDHCPU				
	Q26UDHCPU				
	Q03UDECPU	○	RS-232	RS-485	GT 2506 HS *2
	Q04UDEHCPU				
	Q06UDEHCPU				
	Q10UDEHCPU				
	Q13UDEHCPU				
	Q20UDEHCPU				
	Q26UDEHCPU				
	Q50UDEHCPU				
	Q100UDEHCPU				
	Q03UDVCPU				
	Q04UDVCPU				
	Q06UDVCPU				
	Q13UDVCPU				
	Q26UDVCPU				
C Controller module (Q Series)	Q12DCCPU-V*3	○	RS-232	RS-485	GT 2506 HS *2
	Q24DHCCPU-V/VG				
	Q24DHCCPU-LS				
	Q26DHCCPU-LS	○	RS-232	RS-485	-

*1 When in multiple CPU system configuration, use CPU function version B or later.
*2 Access via the (RS-232) in the multiple CPU system.
*3 Use a module with the upper five digits of the serial No. later than 12042.
*4 Ww and Wr devices cannot be monitored.

Series	Model name	Clock	Communication type		Connectable model
			Between CPU and serial multi-drop connection unit	Between serial multi-drop connection unit and GOT	
MELSEC-QS*2	QS001CPU	○	-	-	-
MELSEC-L*2	L02CPU*4 L06CPU*4 L26CPU*4 L26CPU-BT*4 L02CPU-P*4 L06CPU-P*4 L26CPU-P*4 L26CPU-PBT*4 L02SCPU L02SCPU-P	○	RS-232 RS-422	RS-485	GT 2506 HS
MELSEC-Q (A mode)*2	Q02CPU-A Q02HCPU-A Q06HCPU-A	○	RS-232 RS-422	RS-485	GT 2506 HS
MELSEC-QnA (QnACPU)*2	Q2ACPU Q2ACPU-S1 Q3ACPU Q4ACPU	○	RS-422	RS-485	GT 2506 HS
	Q4ARCPU	○	RS-422	RS-485	-
MELSEC-QnA (QnASCPU)*2	Q2ASCPU Q2ASCPU-S1 Q2ASHCPU Q2ASHCPU-S1	○	RS-422	RS-485	GT 2506 HS
MELSEC-A (AnCPU)*3	A2UCPU A2UCPU-S1 A3UCPU A4UCPU A2ACPU A2ACPUP21 A2ACPUR21 A2ACPU-S1 A2ACPUP21-S1 A2ACPUR21-S1 A3ACPU A3ACPUP21 A3ACPUR21 A1NCPU*1 A1NCPUP21*1 A1NCPUR21*1 A2NCPU*1 A2NCPUP21*1 A2NCPUR21*1 A2NCPU-S1*1 A2NCPUP21-S1*1 A2NCPUR21-S1*1 A3NCPU*1 A3NCPUP21*1 A3NCPUR21*1	○	RS-422	RS-485	GT 2506 HS
MELSEC-A (AnSCPU)*3	A2USCPU	○	RS-422	RS-485	GT 2506 HS

*1 When monitoring AnNCPU or A2SCPU, only the following or later software version is used to write to the CPU.
- AnNCPU(S1) with link: Version L or later, AnNCPU(S1) without link: Version H or later
- A2SCPU: Version H or later

*2 Ww and Wr devices cannot be monitored.

*3 SB, SW, Ww, Wr, ER, and BM devices cannot be monitored.

*4 The adapter L6ADP-R2 or L6ADP-R4 is required for the direct CPU connection (serial).
When using L6ADP-R4, use an LCPU whose upper five digits are "15102" or later.

Series	Model name	Clock	Communication type		Connectable model
			Between CPU and serial multi-drop connection unit	Between serial multi-drop connection unit and GOT	
MELSEC-A (AnSCPU)*5	A2USCPU-S1	○	RS-422	RS-485	GT 2506 HS
	A2USHCPU-S1				
	A1SCPU				
	A1SCPUC24-R2				
	A1SHCPU				
	A2SCPU*1				
	A2SHCPU				
	A1SJCPU				
	A1SJCPU-S3				
	A1SJHCPU				
MELSEC-A*5	A0J2HCPU*1	×	RS-422	RS-485	GT 2506 HS
	A0J2HCPUP21*1				
	A0J2HCPUR21*1				
	A0J2HCPU-DC24*1				
	A2CCPU*1	○	RS-422	RS-485	GT 2506 HS
	A2CCPUP21				
	A2CCPUR21				
	A2CCPUC24				
	A2CCPUC24-PRF				
	A2CJCPU-S3				
	A1FXCPU				
Motion CPU (Q Series)	Q172CPU*2*3	○	RS-232 RS-422	RS-485	GT 2506 HS
	Q173CPU*2*3				
	Q172CPUN*2				
	Q173CPUN*2				
	Q172HCPU	○	RS-232	RS-485	GT 2506 HS *4
	Q173HCPU				
	Q172DCPU				
	Q173DCPU				
	Q172DCPU-S1				
	Q173DCPU-S1				
	Q172DSCPU				
	Q173DSCPU				
	Q170MCPU	○	RS-232	RS-485	GT 2506 HS
	Q170MSCPU				
	Q170MSCPU-S1				
	MR-MQ100				
Motion CPU (A Series)*5	A273UCPU	○	-	-	-
	A273UHCPU	○			
	A273UHCPU-S3				
	A373UCPU	○			
	A373UCPU-S3				
	A171SCPU				
	A171SCPU-S3				
	A171SCPU-S3N				

*1 When monitoring A0J2HCPU or A2CCPU, only the following or later software version is used to write to the CPU.
- A0J2HCPU (with/without link): Version E or later
- A0J2HCPU-DC24: Version B or later
- A2CCPU: Version H or later

*2 When using SV13, SV22, or SV43, use a Motion CPU with the following version of OS installed.
- SW6RN-SV13Q□: 00E or later
- SW6RN-SV22Q□: 00E or later
- SW6RN-SV43Q□: 00B or later

*3 Use main modules with the following product numbers.
- Q172CPU: Product number K******* or later
- Q173CPU: Product number J******* or later

*4 Access via the (RS-232) in the multiple CPU system.

*5 SB, SW, Ww, Wr, ER, and BM devices cannot be monitored.

Series	Model name	Clock	Communication type		Connectable model
			Between CPU and serial multi-drop connection unit	Between serial multi-drop connection unit and GOT	
Motion CPU (A Series)*2	A171SHCPU	○	RS-422	RS-485	-
	A171SHCPUN				
	A172SHCPU				
	A172SHCPUN				
	A173UHCPU				
	A173UHCPU-S1				
MELSEC-WS	WS0-CPU0	×	RS-232	-	-
	WS0-CPU1				
	WS0-CPU3				
MELSECNET/H remote I/O station	QJ72LP25-25	×	RS-232	-	-
	QJ72LP25G				
	QJ72BR15				
CC-Link IE Field Network head module	LJ72GF15-T2	×	-	-	-
CC-Link IE Field Network Ethernet adapter module	NZ2GF-ETB	×	-	-	-
CNC C70	Q173NCCPU	○	RS-232	-	-
Robot controller (Q Series)	CRnQ-700 (Q172DRCPU) CR750-Q (Q172DRCPU) CR751-Q (Q172DRCPU) CR800-Q (Q172DSRCPU)	○	RS-232	-	-
MELSEC-FX	FX0	×	RS-422	RS-485	GT 2506 HS
	FX0S	×			
	FX0N				
	FX1	×			
	FX2	×*1			
	FX2C				
	FX1S	○	RS-232 RS-422	RS-485	GT 2506 HS
	FX1N				
	FX2N				
	FX1NC				
	FX2NC	×*1			
	FX3S	○			
	FX3G				
	FX3GC				
	FX3GE				
	FX3U				
	FX3UC				
FR-A500(L)	FR-A5□0(L)	×	-	-	-
FR-F500(L)	FR-F5□0(L)				
FR-V500(L)	FR-V5□0(L)				
FR-E500	FR-E5□0(C) FR-E5□0S FR-E5□0W				
FR-S500(E)	FR-S5□0(E)(-R)(-C) FR-S5□0S(E)(-R) FR-S5□0W(E)(-R)				
FR-F500J	FR-F5□0J(F)				

*1 It is available by installing the real time clock function board or the EEPROM memory with the real time clock function.

*2 SB, SW, Ww, Wr, ER, and BM devices cannot be monitored.

Series	Model name	Clock	Communication type		Connectable model
			Between CPU and serial multi-drop connection unit	Between serial multi-drop connection unit and GOT	
FR-D700	FR-D7□0 FR-D7□0S FR-D7□0W	×	-	-	-
FR-F700PJ	FR-F7□0PJ(F)				
FR-E700	FR-E7□0 FR-E7□0S FR-E7□0W				
	FR-E700-NE				
FR-A700	FR-A7□0				
FR-F700	FR-F7□0				
FR-F700P	FR-F7□0P				
FR-A800	FR-A8□0 FR-A8□2 FR-A8□6				
FR-A800-E	FR-A8□0-E FR-A8□2-E FR-A8□6-E				
FR-A800-GF	FR-A8□0-GF FR-A8□2-GF				
FR-A800-GN	FR-A8□0-GN FR-A8□2-GN				
FR-A800 Plus	FR-A8□0-CRN FR-A8□2-CRN FR-A8□0-R2R FR-A8□2-R2R				
	FR-A8□0-E-CRN FR-A8□2-E-CRN FR-A8□0-E-R2R FR-A8□2-E-R2R				
FR-F800	FR-F8□0 FR-F8□2 FR-F8□6				
FR-F800-E	FR-F8□0-E FR-F8□2-E				
FR-E800	FR-E8□0				
FR-E800-E	FR-E8□0-E				
FR-D800	FR-D8□0				
FR-D800-E	FR-D8□0-E				
Sensorless servo	FR-E7□0EX				
MELIPM	MD-CX522-□K(-A0)				
MELSERVO	MR-J2S-□A	×	-	-	-
	MR-J2S-□CP				
	MR-J2S-□CL				
	MR-J2M-P8A				
	MR-J2M-□DU				
	MR-J3-□A				
	MR-J3-□T				
	MR-J4-□A				
	MR-JE-□A				

Serial communication connection

The following table shows the connectable models for connecting the CPU to the serial multi-drop connection unit in the serial communication connection.

Series	Model name	Clock	Communication type		Connectable model
			Between CPU and serial multi-drop connection unit	Between serial multi-drop connection unit and GOT	
MELSEC MX Controller (MX-R Model)	MXR300-16	○	RS-232 RS-422	RS-485	-
	MXR300-32				
	MXR300-64				
	MXR500-128				
	MXR500-256				
MELSEC MX Controller (MX-F Model)	MXF100-8-N32	○	RS-232 RS-422	RS-485	-
	MXF100-8-P32				
	MXF100-16-N32				
	MXF100-16-P32				
MELSEC iQ-R Series	R00CPU	○	RS-232 RS-422	RS-485	-
	R01CPU				
	R02CPU				
	R04CPU				
	R08CPU				
	R16CPU				
	R32CPU				
	R120CPU				
	R08PCPU				
	R16PCPU				
	R32PCPU				
	R120PCPU				
	R04ENCPU				
	R08ENCPU				
	R16ENCPU				
	R32ENCPU				
	R120ENCPU				
	R08PSFCPU				
	R16PSFCPU				
	R32PSFCPU				
	R120PSFCPU				
	R08SFCPU				
	R16SFCPU				
	R32SFCPU				
	R120SFCPU				
Motion CPU (MELSEC iQ-R Series)	R16MTCPU	○	RS-232 RS-422	RS-485	-
	R32MTCPU				
	R64MTCPU				
C Controller module (MELSEC iQ-R Series)	R12CCPU-V	○	RS-232 RS-422	RS-485	-
MELSECWinCPU (MELSEC iQ-R Series)	R102WCPU-W	×	RS-232 RS-422	RS-485	-
CNC C80	R16NCCPU-S1	○	RS-232 RS-422	RS-485	-
Robot controller (MELSEC iQ-R Series)	CR800-R(R16RTCPU)	○	RS-232 RS-422	RS-485	-

Series	Model name	Clock	Communication type		Connectable model
			Between CPU and serial multi-drop connection unit	Between serial multi-drop connection unit and GOT	
MELSEC iQ-F Series	FX5U	○	RS-232 RS-422	RS-485	-
	FX5UC				
	FX5UJ				
	FX5S				
MELSEC-Q (Q mode)*3	Q00JCPU	○	RS-232 RS-422	RS-485	GT 2506 HS
	Q00CPU*1				
	Q01CPU*1				
	Q02CPU*1				
	Q02HCPU*1				
	Q06HCPU*1				
	Q12HCPU*1				
	Q25HCPU*1				
	Q02PHCPU	○	-	-	-
	Q06PHCPU				
	Q12PHCPU				
	Q25PHCPU				
	Q12PRHCPU (Main base)				
	Q25PRHCPU (Main base)				
	Q12PRHCPU (Extension base)				
	Q25PRHCPU (Extension base)				
	Q00UJCPU Q00UJCPU-S8	○	RS-232 RS-422	RS-485	GT 2506 HS
	Q00UCPU				
	Q01UCPU				
	Q02UCPU				
	Q03UDCPU				
	Q04UDHCPU				
	Q06UDHCPU				
	Q10UDHCPU				
	Q13UDHCPU				
	Q20UDHCPU				
	Q26UDHCPU				
	Q03UDECPU				
	Q04UDEHCPU				
	Q06UDEHCPU				
	Q10UDEHCPU				
	Q13UDEHCPU				
	Q20UDEHCPU				
	Q26UDEHCPU				
	Q50UDEHCPU				
	Q100UDEHCPU				
	Q03UDVCPU				
	Q04UDVCPU				
	Q06UDVCPU				
	Q13UDVCPU				
	Q26UDVCPU				
C Controller module (Q Series)	Q12DCCPU-V*2	○	RS-232	RS-485	GT 2506 HS
	Q24DHCCPU-V/VG				
	Q24DHCCPU-LS				
	Q26DHCCPU-LS	○	RS-232	RS-485	-

Series	Model name	Clock	Communication type		Connectable model
			Between CPU and serial multi-drop connection unit	Between serial multi-drop connection unit and GOT	
MELSEC-QS	QS001CPU	○	-	-	-

*1 When in multiple CPU system configuration, use CPU function version B or later.
*2 Use a module with the upper five digits of the serial No. later than 12042.
*3 Ww and Wr devices cannot be monitored.

Series	Model name	Clock	Communication type		Connectable model
			Between CPU and serial multi-drop connection unit	Between serial multi-drop connection unit and GOT	
MELSEC-L[*1]	L02CPU	○	RS-232 RS-422	RS-485	GT 2506 HS
	L06CPU				
	L26CPU				
	L26CPU-BT				
	L02CPU-P				
	L06CPU-P				
	L26CPU-P				
	L26CPU-PBT				
	L02SCPU				
	L02SCPU-P				
MELSEC-Q (A mode)[*1]	Q02CPU-A	○	-	-	-
	Q02HCPU-A				
	Q06HCPU-A				
MELSEC-QnA (QnACPU)[*1]	Q2ACPU	○	RS-232 RS-422	RS-485	GT 2506 HS
	Q2ACPU-S1				
	Q3ACPU				
	Q4ACPU				
	Q4ARCPU	○	-	-	-
MELSEC-QnA (QnASCPU)[*1]	Q2ASCPU	○	RS-232 RS-422	RS-485	GT 2506 HS
	Q2ASCPU-S1				
	Q2ASHCPU				
	Q2ASHCPU-S1				
MELSEC-A (AnCPU)	A2UCPU	○	RS-232 RS-422	-	-
	A2UCPU-S1				
	A3UCPU				
	A4UCPU				
	A2ACPU				
	A2ACPUP21				
	A2ACPUR21				
	A2ACPU-S1				
	A2ACPUP21-S1				
	A2ACPUR21-S1				
	A3ACPU				
	A3ACPUP21				
	A3ACPUR21				
	A1NCPU				
	A1NCPUP21				
	A1NCPUR21				
	A2NCPU				
	A2NCPUP21				
	A2NCPUR21				
	A2NCPU-S1				
	A2NCPUP21-S1				
	A2NCPUR21-S1				
	A3NCPU				
	A3NCPUP21				
	A3NCPUR21				

*1 Ww and Wr devices cannot be monitored.

Series	Model name	Clock	Communication type		Connectable model
			Between CPU and serial multi-drop connection unit	Between serial multi-drop connection unit and GOT	
MELSEC-A (AnSCPU)	A2USCPU	○	RS-232 RS-422	-	-
	A2USCPU-S1	○	-	-	-
	A2USHCPU-S1				
	A1SCPU				
	A1SCPUC24-R2				
	A1SHCPU				
	A2SCPU				
	A2SHCPU				
	A1SJCPU				
	A1SJCPU-S3				
	A1SJHCPU				
MELSEC-A	A0J2HCPU	×	-	-	-
	A0J2HCPUP21				
	A0J2HCPUR21				
	A0J2HCPU-DC24				
	A2CCPU	○			
	A2CCPUP21				
	A2CCPUR21				
	A2CCPUC24				
	A2CCPUC24-PRF				
	A2CJCPU-S3				
	A1FXCPU				
Motion CPU (Q Series)	Q172CPU*1*2	○	RS-232 RS-422	RS-485	GT 2506 HS
	Q173CPU*1*2				
	Q172CPUN*1*2				
	Q173CPUN*1*2				
	Q172HCPU				GT 2506 HS *3
	Q173HCPU				
	Q172DCPU				
	Q173DCPU				
	Q172DCPU-S1				
	Q173DCPU-S1				
	Q172DSCPU				
	Q173DSCPU				
	Q170MCPU				GT 2506 HS
	Q170MSCPU				
	Q170MSCPU-S1				
Motion CPU (A Series)	A273UCPU	○	RS-232 RS-422	-	-
	A273UHCPU				
	A273UHCPU-S3				
	A373UCPU				
	A373UCPU-S3				
	A171SCPU				
	A171SCPU-S3				
	A171SCPU-S3N				

*1 When using SV13, SV22, or SV43, use a Motion CPU with the following version of OS installed.
- SW6RN-SV13Q□: 00E or later
- SW6RN-SV22Q□: 00E or later
- SW6RN-SV43Q□: 00B or later

*2 Use main modules with the following product numbers.
- Q172CPU: Product number K******* or later
- Q173CPU: Product number J******* or later

*3 Access via the (RS-232) in the multiple CPU system.

Series	Model name	Clock	Communication type		Connectable model
			Between CPU and serial multi-drop connection unit	Between serial multi-drop connection unit and GOT	
Motion CPU (A Series)	A171SHCPU	○	-	-	-
	A171SHCPUN				
	A172SHCPU				
	A172SHCPUN				
	A173UHCPU				
	A173UHCPU-S1				
MELSEC-WS	WS0-CPU0	×	-	-	--
	WS0-CPU1				
MELSECNET/H remote I/O station	QJ72LP25-25	×	-	-	-
	QJ72LP25G				
	QJ72BR15				
CC-Link IE Field Network head module	LJ72GF15-T2	×	-	-	-
CC-Link IE Field Network Ethernet adapter module	NZ2GF-ETB	×	-	-	-
CNC C70	Q173NCCPU	○	-	-	-
Robot controller (Q Series)	CRnQ-700 (Q172DRCPU) CR750-Q (Q172DRCPU) CR751-Q (Q172DRCPU) CR800-Q (Q172DSRCPU)	○	-	-	-
MELSEC-FX	FX0	×	-	-	-
	FX0S	×			
	FX0N				
	FX1	×			
	FX2	×*1			
	FX2C				
	FX1S	○			
	FX1N				
	FX2N				
	FX1NC				
	FX2NC	×*1			
	FX3S	○			
	FX3G				
	FX3GC				
	FX3GE				
	FX3U				
	FX3UC				
FR-A500(L)	FR-A5□0(L)	×	-	-	-
FR-F500(L)	FR-F5□0(L)				
FR-V500(L)	FR-V5□0(L)				
FR-E500	FR-E5□0(C) FR-E5□0S FR-E5□0W				
FR-S500(E)	FR-S5□0(E)(-R)(-C) FR-S5□0S(E)(-R) FR-S5□0W(E)(-R)				
FR-F500J	FR-F5□0J(F)				

*1 It is available by installing the real time clock function board or the EEPROM memory with the real time clock function.

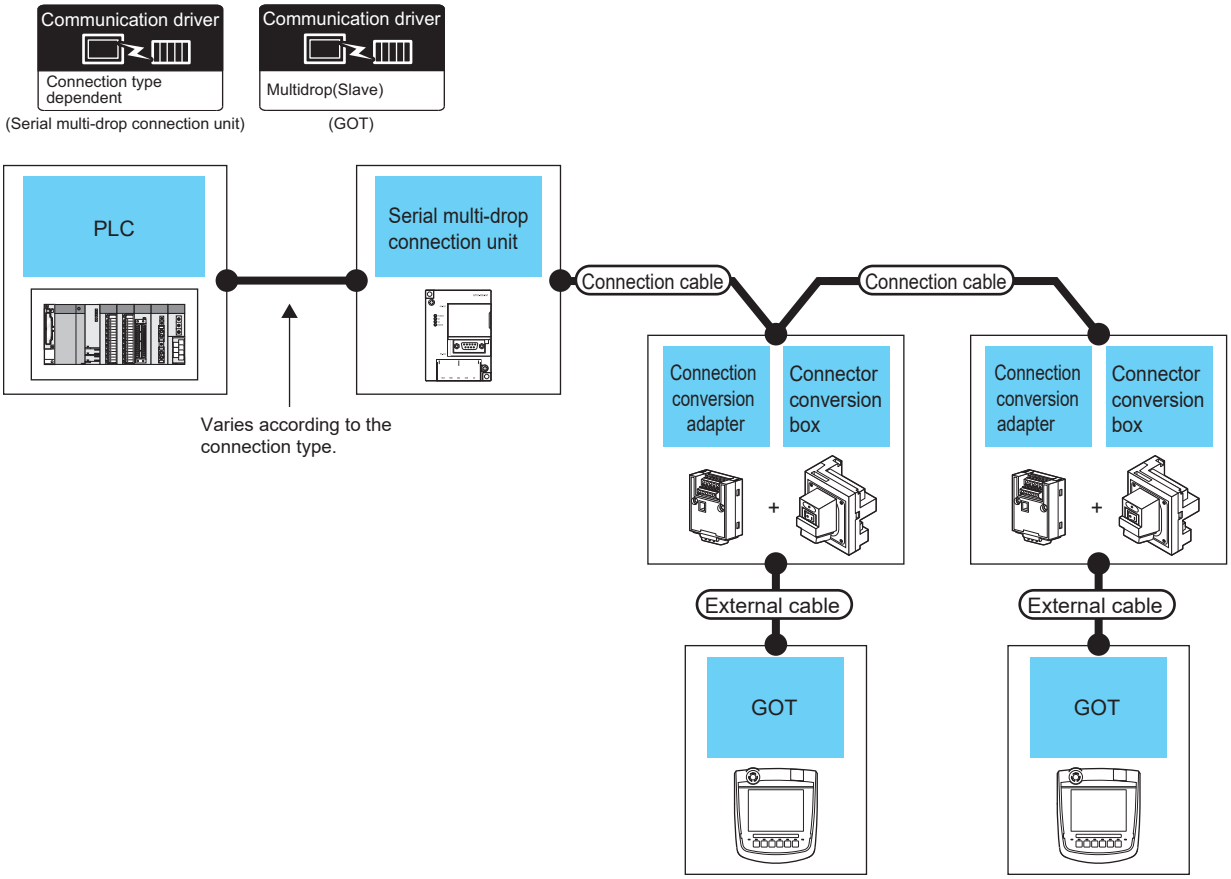
Series	Model name	Clock	Communication type		Connectable model
			Between CPU and serial multi-drop connection unit	Between serial multi-drop connection unit and GOT	
FR-D700	FR-D7□0 FR-D7□0S FR-D7□0W	×	-	-	-
FR-F700PJ	FR-F7□0PJ(F)				
FR-E700	FR-E7□0 FR-E7□0S FR-E7□0W				
	FR-E7□0-NE				
FR-A700	FR-A7□0				
FR-F700	FR-F7□0				
FR-F700P	FR-F7□0P				
FR-A800	FR-A8□0 FR-A8□2 FR-A8□6				
FR-A800-E	FR-A8□0-E FR-A8□2-E FR-A8□6-E				
FR-A800-GF	FR-A8□0-GF				
	FR-A8□2-GF				
FR-A800-GN	FR-A8□0-GN FR-A8□2-GN				
FR-A800 Plus	FR-A8□0-CRN FR-A8□2-CRN FR-A8□0-R2R FR-A8□2-R2R				
	FR-A8□0-E-CRN FR-A8□2-E-CRN FR-A8□0-E-R2R FR-A8□2-E-R2R				
FR-F800	FR-F8□0 FR-F8□2 FR-F8□6				
FR-F800-E	FR-F8□0-E FR-F8□2-E				
FR-E800	FR-E8□0				
FR-E800-E	FR-E8□0-E				
FR-D800	FR-D8□0				
FR-D800-E	FR-D8□0-E				
Sensorless servo	FR-E7□0EX				
MELIPM	MD-CX522-□K(-A0)				
MELSERVO	MR-J2S-□A	×	-	-	-
	MR-J2S-□CP				
	MR-J2S-□CL				
	MR-J2M-P8A				
	MR-J2M-□DU				
	MR-J3-□A				
	MR-J3-□T				
	MR-J4-□A				
	MR-JE-□A				

[Controller Type] and [Communication driver] of GT Designer3

The following table shows the [Controller Type] and [Communication driver] of GT Designer3 for which the GOT multi-drop connection is available.

GOT type	PLC ←→ Serial multi-drop connection unit		
	Connection type	Type	Serial multi-drop connection driver
GT 2506HS	DIRECT CPU CONNECTION (SERIAL) COMPUTER LINK CONNECTION	MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700	Serial (MELSEC)
		MELSEC-QnA, MELDAS C6*	
		MELSEC-L	
	DIRECT CPU CONNECTION (SERIAL)	MELSEC-A	MELSEC-A
		MELSEC-FX	MELSEC-FX

11.3 System Configuration



PLC	Serial multi-drop connection unit		Connection cable	Connector conversion adapter	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
	Model	Communication type	Cable model						
For the system configuration between the Serial multi-drop connection unit and PLC, refer to the following. ☞ Page 307 DIRECT CPU CONNECTION (SERIAL) ☞ Page 359 SERIAL COMMUNICATION CONNECTION	GT01-RS4-M	RS-485	(User preparing) Page 665 RS-485 connection diagram 1)	GT10-9PT5S*1	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	500m*2	16 GOTs for a serial multi-drop connection unit*3

*1 Connect it to the RS-422/485 interface (built into GOT).
*2 The maximum distance from the PLC to the terminal GOT.
*3 When the number of connected GOTs is increased, the response performance decreases.

11.4 Connection Diagram

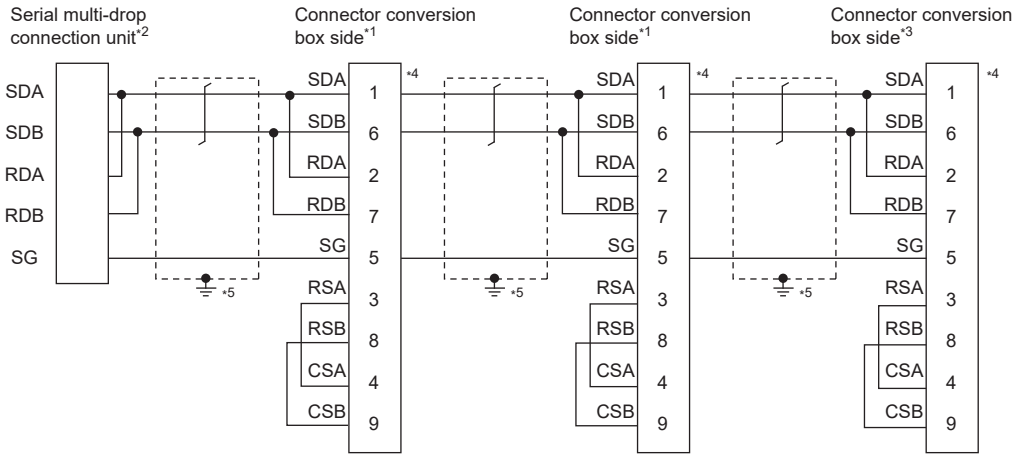
The following diagram shows the cable connection between the serial multi-drop connection unit and the GOT.

RS-485 cable

Connection diagram

■RS-485 connection diagram 1)

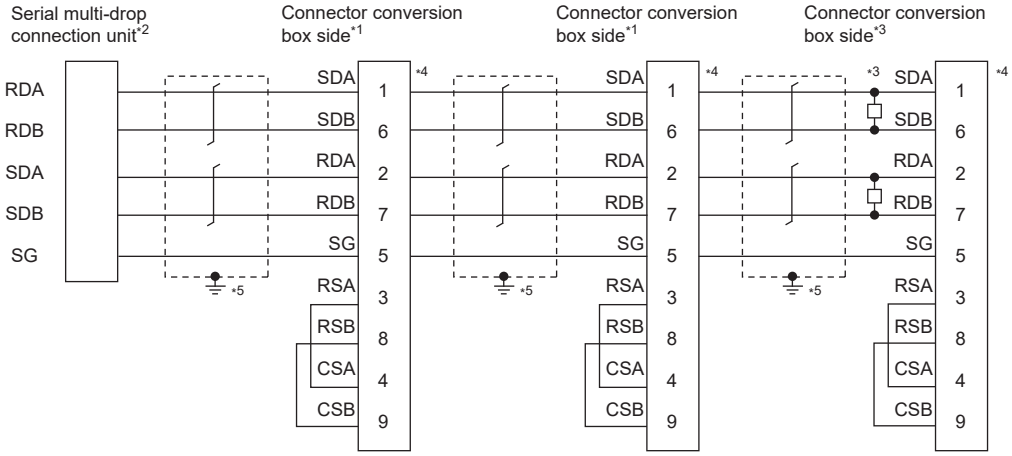
(For 1 pair wiring)



*1 Set the terminating resistor setting switch of the GOT main unit to "Disable".
*2 Set the terminating resistor selector to "110Ω".
*3 Set the terminating resistor setting switch of the GOT main unit to "Enable".
*4 Set the 1pair/2pair signal selection switch of the connection conversion adapter to "1pair".
*5 Make sure to ground a cable shield line by applying Class D Grounding (100Ω or less).

■RS-485 connection diagram 1)

(For 2 pair wiring)



*1 Set the terminating resistor setting switch of the GOT main unit to "Disable".
*2 Set the terminating resistor selector to "330Ω".
*3 Set the terminating resister setting switch of the GOT main unit to "Disable" and connect a 330Ω terminating resistor to the GOT.
*4 Set the 1pair/2pair signal selection switch of the connection conversion adapter to "2pair".
*5 Make sure to ground a cable shield line by applying Class D Grounding (100Ω or less).

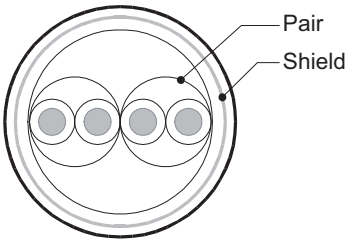
Precautions when preparing a cable

■Cable

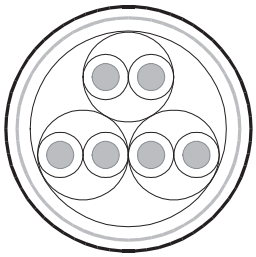
Use a shielded twisted pair cable of 0.3mm2 or more as a cable for GOT multi-drop connection.

The following shows recommended model names and manufacturers of the cable to be used.

Manufacturer	Model	Remark
Mitsubishi Cable Industries,Ltd	SPEV(SB)-0.5-2P	Two-pair cable of 0.5mm2
Showa Electric Wire & Cable Co.,Ltd	KMPEV-SB CWS-178 0.5SQ × 2P	Two-pair cable of 0.5mm2
Sumitomo Electric Industries.,Ltd	DPEV SB 0.3 × 3P	Three-pair cable of 0.3mm2
	DPEV SB 0.5 × 3P	Three-pair cable of 0.5mm2
The Furukawa Electric Co.,Ltd	D-KPEV-SB 0.5 × 3P	Three-pair cable of 0.5mm2
Fujikura Ltd.	IPEV-SB 2P × 0.3 mm2	Two-pair cable of 0.3mm2
	IPEV-SB 2P × 0.5 mm2	Two-pair cable of 0.5mm2



Two-pair cable structural drawing example



Three-pair cable structural drawing example

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

Connecting terminating resistors

When connecting a serial multi-drop connection unit to the GOT, a terminating resistor must be connected to the GOT.

■For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Enable".

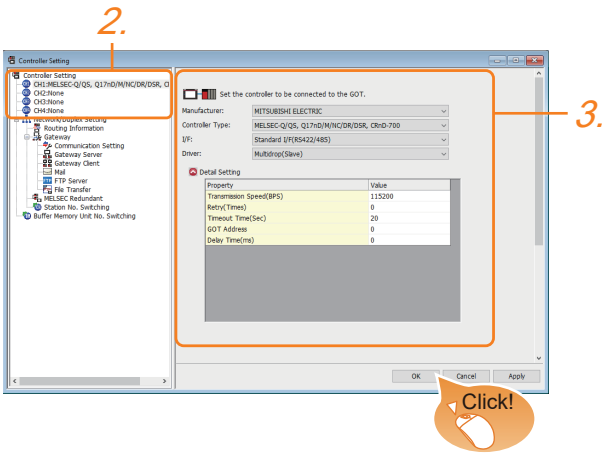
For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

11.5 GOT Side Settings

Setting communication interface (Controller Setting)

Set the channel of connecting equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: Configure the setting according to the controller.
- [Controller Type]: Configure the setting according to the controller.
- [I/F]: Interface to be used
- [Driver]: [Multidrop(Slave)]
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 668 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
Transmission Speed(BPS)	115200
Retry(Times)	0
Timeout Time(Sec)	20
GOT Address	0
Delay Time(ms)	0

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 115200bps)	4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
GOT Address	Specify the station number of the host station in the system configuration. (Default: 0)	0 to 15
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300 ms

Point

• Communication interface setting by Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

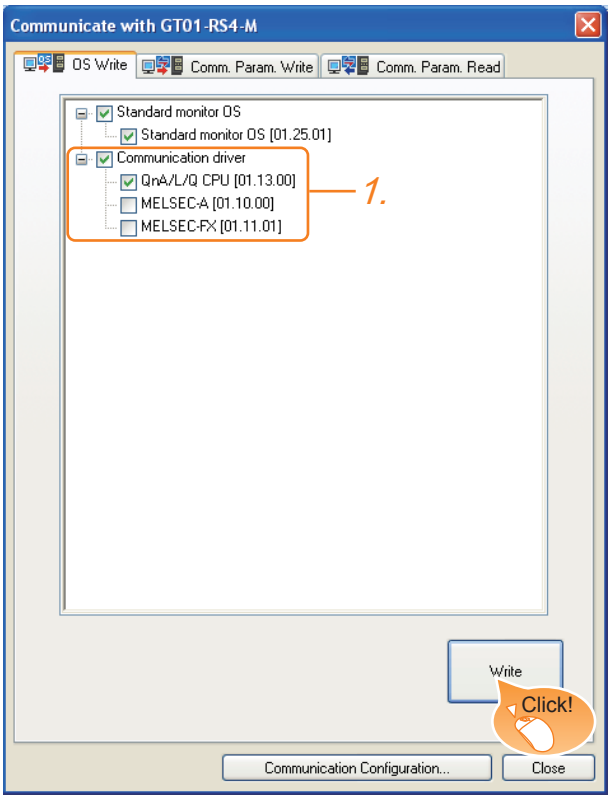
11.6 Settings of Serial Multi-Drop Connection Unit

Write the OS

Install the standard monitor OS and communication driver according to the desired connection type to the serial multi-drop connection unit using GT Designer3 (GOT1000) (Version1.12N or later).

For the OS writing methods, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

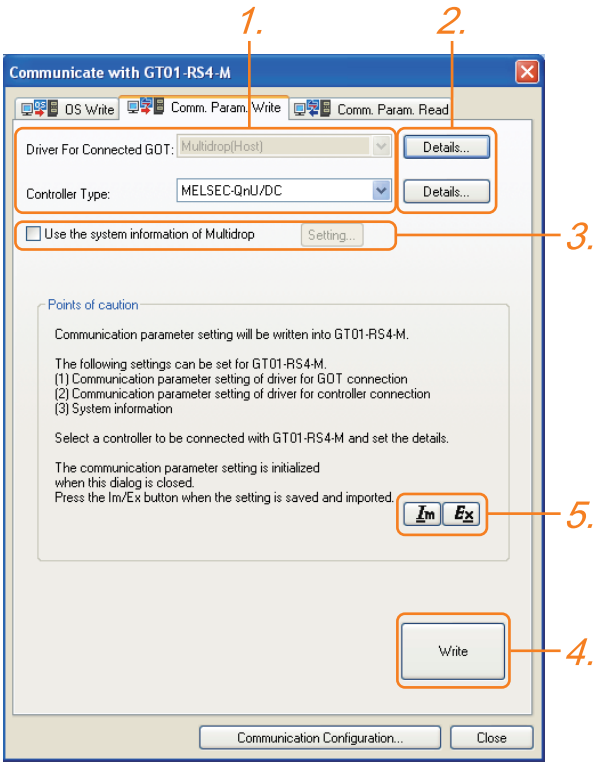


1. Check-mark a communication driver according to the desired connection type and click the [Write] button.

Setting communication interface (Controller Setting)

Make the serial multi-drop connection unit interface setting on [Communication with GT01-RS4-M] of GT Designer 3.
For the communication interface driver, set the same communication driver as the serial multi-drop connection.
For details on [Communication with GT01-RS4-M] of GT Designer3, refer to the manuals.
GT Designer3 (GOT2000) Screen Design Manual

Controller Setting



1. Set [Controller Type] as follows.

• PLC used

[Driver For Connected GOT] is fixed to the following selection.

• Multi-drop(Host)

2. Configure the detailed settings for the driver.

☞ Page 674 Communication detail settings

3. Set [Use the system information of Multidrop] as necessary.

☞ Page 671 Setting the multi-drop system information function

4. When you have completed the settings, click the [Write] button.

5. If the [Communication with GT01-RS4-M] dialog box is closed, communication setting contents for GT01-RS4-M does not remain.

• To maintain the communication setting contents, click Ex (export).

☞ Page 673 Exporting/Importing the communication setting contents

• To use communication setting contents which are saved previously, click Im (import).

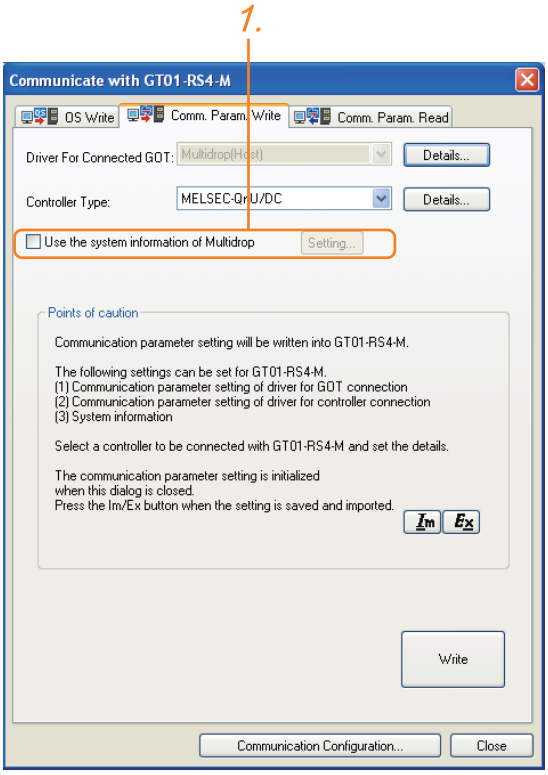
☞ Page 673 Exporting/Importing the communication setting contents

Setting the multi-drop system information function

When checking the connection status of each GOT which is connected to GT01-RS4-M on the PLC side, set the multi-drop system information function.

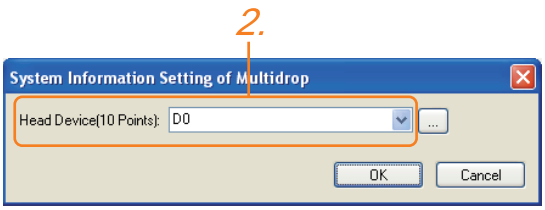
The GOT connection status is stored in the PLC side word device.

■Setting on the PLC side word device



1. Select [Use the system information of Multidrop] and click the [Set] button.

The following dialog window is displayed.



2. Set the PLC side word device to [Head Device (10 Points)].

In this example, "D0" is set.

■Assignment contents of the PLC side word device

The following table shows the device assignment contents when setting [Head Device (10 Points)] to "D0".

Device	Description
D0 (Head device+0)	Control signal 1-1
D1(Head device+1)	Station information notification signal
D2(Head device+2)	(Reserve)
D3(Head device+3)	(Reserve)
D4(Head device+4)	(Reserve)
D5(Head device+5)	Slave station control signal
D6(Head device+6)	(Reserve)
D7(Head device+7)	(Reserve)
D8(Head device+8)	(Reserve)
D9(Head device+9)	(Reserve)

■Details on the word device assignment contents

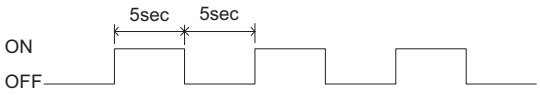
• Control signal 1-1

Bit position	Description
bit0	10 second cycle flicker signal
bit1 to 15	(Reserve)

< 10 second cycle flicker signal *1 >

By the repetition of turning ON/OFF every 5 seconds, the connection between GT01-RS4-M and the PLC can be confirmed on the PLC side.

When no repetition of this ON/OFF is observed, GT01-RS4-M is not connected to the PLC.



*1 When writing or clearing data on the program area from the personal computer to the PLC using FA transparent function, flicker of the signal as shown above may be temporarily stopped.

• Station information notification signal *1

This signal notifies the status of the slave station (GOT) which is connected to the master station (GT01-RS4-M).

Only the bit corresponding to the number of connected slave station (GOT) is turned ON and other bits are turned OFF.

bit15	bit14	.....	bit2	bit1	bit0
Station No. 15	Station No. 14	.....	Station No. 2	Station No. 1	Station No. 0

• 1: Connected

• 0: Unconnected (Including communication error status)

*1 When the communication between GT01-RS4-M and the PLC becomes faulty, the station information notification signal is not updated.

• Slave station control signal

This signal controls slave stations which are not updated by the master station.

Usually, the master station accesses all stations (up to 16 stations).

In addition, if stations are temporarily in communication error due to a power disconnection or screen data transfer during the steady operation, the automatic recovery of the station is executed for one station per ten seconds.

Therefore, the automatic recovery may take maximum 2 minutes and 30 seconds.

Using this control signal, the number of slave stations to be monitored by the master station can be reduced to the actual number of slave stations to be used by a user.

This makes the automatic recovery processing smooth.

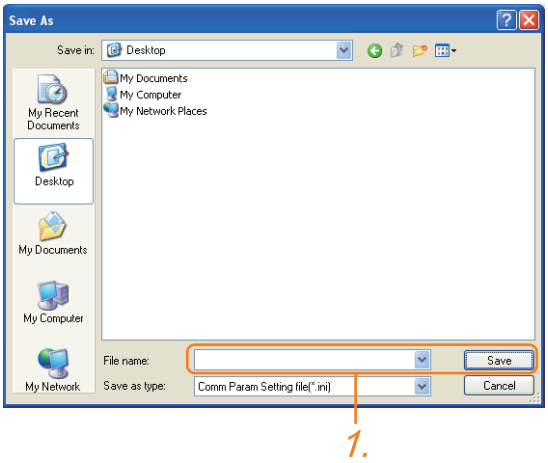
If an error occurs in only one station, the time for the station to recover automatically can be reduced within 10 seconds.

Device value	Action
0	The master station accesses all the slave stations (station 0 to 15). When the multi-drop system information is not used, the operation is the same.
Other than 0	Turning on the bit corresponding to a station No. disconnects the specified slave station from the master station. bit15 | bit14 | ..... | bit2 | bit1 | bit0 Station No. 15 | Station No. 14 | ..... | Station No. 2 | Station No. 1 | Station No. 0 1...Connected 0...Unconnected

When the bits are off and the master station and the slave stations are in communication, the communication with the corresponding slave stations is disconnected if the above corresponding bits are turned on.

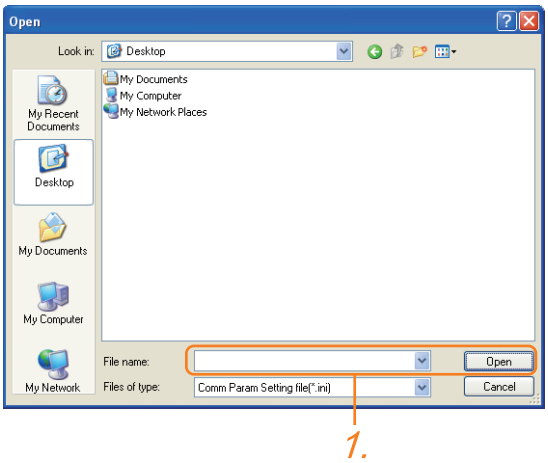
Exporting/Importing the communication setting contents

■ Export



1. After determining the storage location as necessary, name the file and save it.
The file format is [*.ini] (fixed).

■ Import

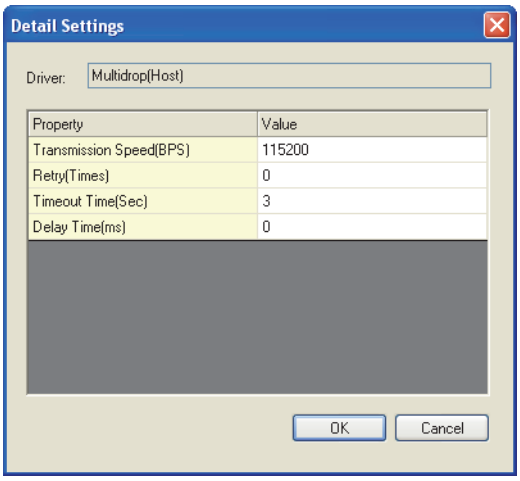


1. Enter the name of the file previously saved and open the file.
The file format is [*.ini] (fixed).

Communication detail settings

Make the settings according to the usage environment.

■For the connection with GOT



Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 115200bps)	4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300 ms

■For the connected equipment

Set the communication detail settings of the driver for controllers according to the connection type.

☞ Refer to each chapter.

Setting switches

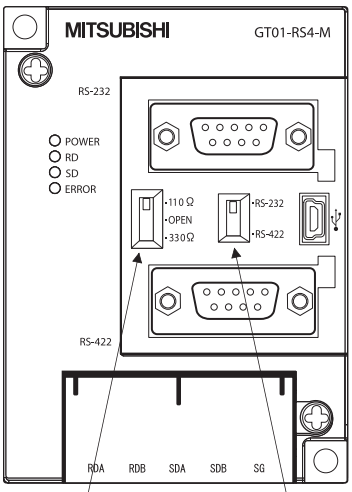
Set the switches according to the connection type.

Point

Serial multi-drop connection unit

For details on the serial multi-drop connection unit, refer to the following manual.

Serial Multi-Drop Connection Unit User's Manual



Terminating resistor selector switch

PLC communication selection switch

11.7 Setting of connection conversion adapter

Setting switches

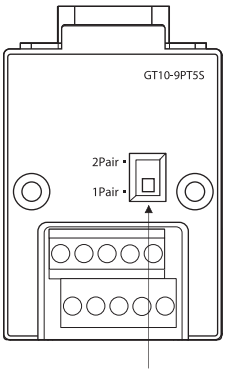
Set the switches according to the connection type.

Point

Connector conversion adapter

For details on the connection conversion adapter, refer to the following manual.

Connection Conversion Adapter User's manual



1pair / 2pair signal selection switch

11.8 Precautions

Connecting GOT2000 in multi-drop connection

■Installing standard monitor OS and communication driver to the serial multi-drop connection unit

When connecting GOT2000 in multi-drop connection, the standard monitor OS and communication driver must be installed to the GOT from GT Designer3 (GOT1000) (Version 1.12N or later).

The standard monitor OS or communication driver cannot be installed from GT Designer3 (GOT2000).

■Device specification

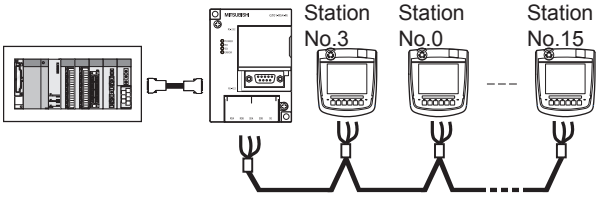
Network No. and station No. are not supported.

Station number setting on GOT

Set each station number so that no station number overlaps.When the station No. is duplicated, the GOT whose station No. is duplicated cannot be monitored normally.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.



The example of a Station No. setting

Extended function of GOT

The extended functions of GOT shown below are not available.

System monitor, Device monitor, Ladder monitor, A list editor, FX list editor, Intelligent unit monitor, Network monitor, Q motion monitor, Servo amplifier monitor, CNC monitor, Backup/restore, CNC data I/O, SFC monitor, Ladder editor, Log viewer, MELSEC-L troubleshoot, Motion SFC, motion program (SV43) editor, Motion program (SV43) I/O

System alarm

The alarms of the serial multi-drop connection unit are displayed on the system alarm.

The alarms of the connected PLC are not displayed.

Activating the serial multi-drop connection unit

The master module detects a slave GOT, which is connected, at the startup.It may take time to detect again the slave station which is not detected at this point.

Activate the master module in the condition that a communication can be made after the startup of the slave GOT.

Using the multi-drop connection in the multi-channel configuration

If a communication timeout error occurs when using the multi-drop connection in the multi-channel configuration, set the send delay time to the serial multi-drop connection unit side.

☞ Page 674 Communication detail settings

Device update cycle

- When the number of connected slave GOTs and the device points of each GOT increase, the device update cycle on the screen may get slower.

In such a case, it is recommended to reduce the device points of each GOT.
(Please consider 250 points as a guide of 1 GOT, and 750 points as a guide of the total points.)
In addition, when a timeout error occurs, make the timeout time longer in the communication settings of the slave GOT.

- When the device number is set randomly, the device update cycle becomes slower compared to the case that the device number is set consecutively.

Therefore, it is recommended to set the device number consecutively.

- Depending on the device points or combination, it may take time to switch the screen.

At this time, the device update cycle of other slave station is also affected.

When using the FA transparent function in the GOT multi-drop connection

FA transparent function is available for each GOT in the GOT multi-drop connection system.

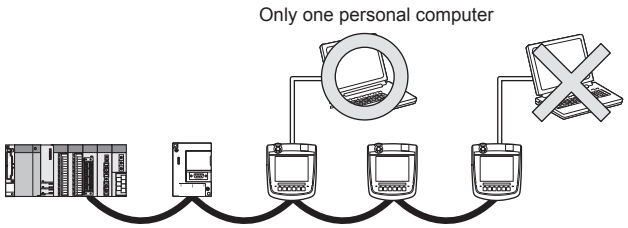
■Installing the required system application (standard function) and communication driver

When using the FA transparent function in the GOT multi-drop connection system, make sure to install the required system application (standard function) and communication driver to the GOT, and install the standard monitor OS and communication driver to the serial multi-drop connection unit.

☞ Page 676 Connecting GOT2000 in multi-drop connection

■Number of personal computers

Only one personal computer can be connected to the multi-drop connection system.



■Monitor speed of GOT

The monitoring performance slows down according to the number of monitoring GOTs. While using FA transparent function, the monitoring performance of the whole multi-drop system decreases.
As a result, timeout error may occur in GOTs in the system.

Specifying a CPU number or module number with a device

In the GOT multi-drop connection, specifying a CPU number or module number with a device is not available.

8-bit and 64-bit devices

The GOT multi-drop connection does not support 8-bit and 64-bit devices.
When the GOT multi-drop connection is established with 64-bit devices, the following alarms occur.

- At writing data: System alarm 315
- At reading data: System alarm 322

8-bit devices can be set only to the GOT internal devices (GB). When 8-bit devices are set to the GB devices, no alarm occurs in the GOT multi-drop connection.

Mixture of GOT2000 series and GOT1000 series

The GOT multi-drop connection allows mixture of GOT2000 series and GOT1000 series.

MEMO

PART 5 MULTI-CHANNEL FUNCTION

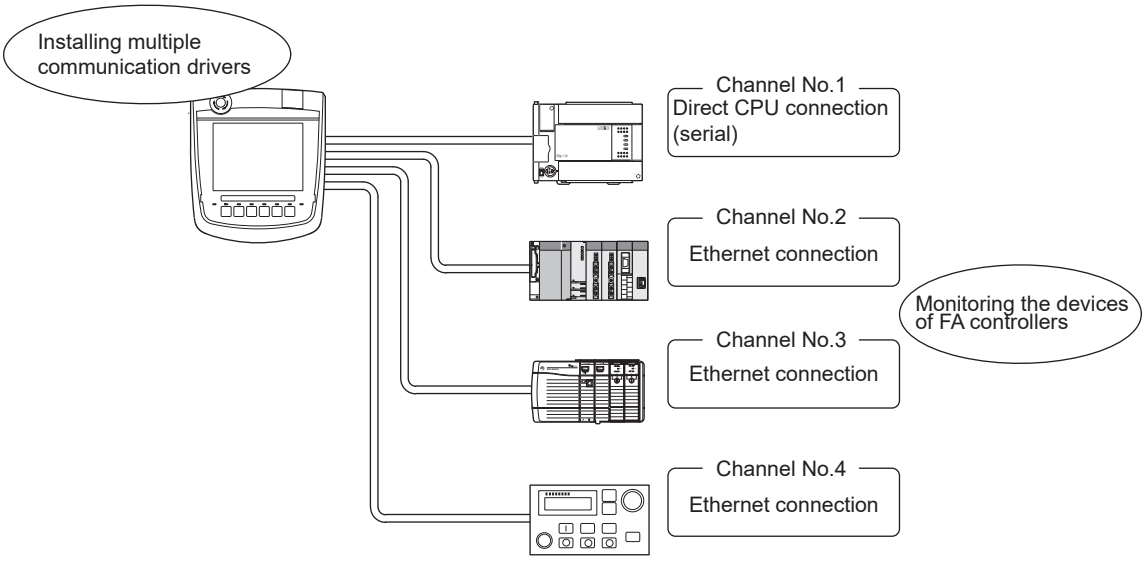
12 MULTI-CHANNEL FUNCTION

- Page 680 What is Multi-channel Function?
- Page 682 System Configuration Example
- Page 683 GOT Side Settings
- Page 690 Precautions
- Page 691 Multi-channel function check sheet

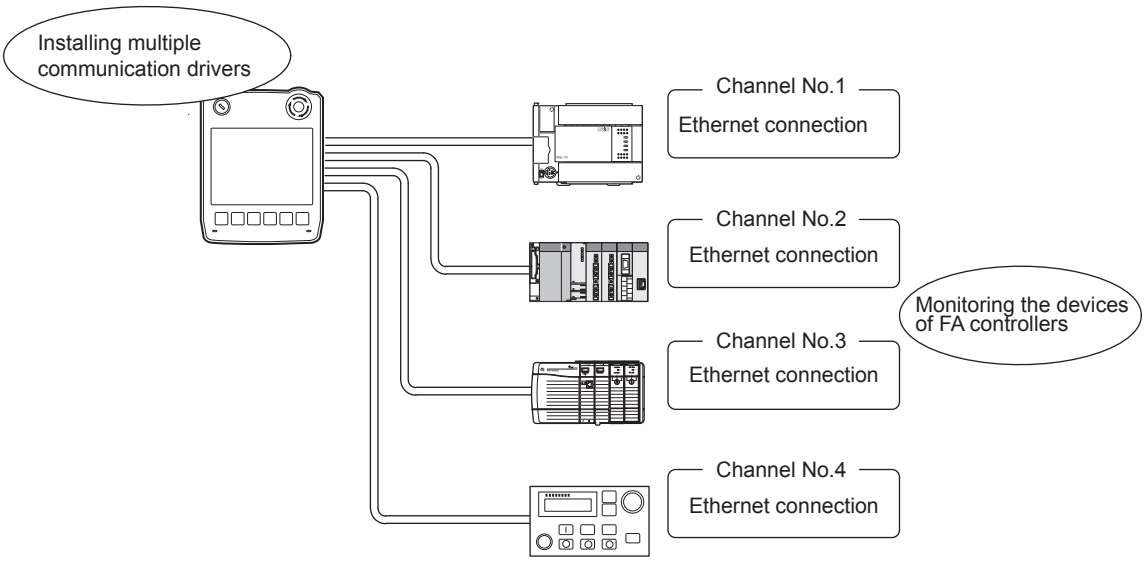
12.1 What is Multi-channel Function?

Multi-channel Function is a function to monitor up to four FA controllers on one GOT by writing multiple communication drivers in the GOT.

- For GT2506HS-V



- For GT2505HS-V



Point

• Before using the multi-channel function

This manual describes the procedure to use the multi-channel function, based on the following system configuration example.

☞ Page 682 System Configuration Example

• System configuration when the multi-channel function is used

The system configuration between GOT and the controllers is the same as that of when not using the multi-channel function.

For the system configuration between GOT and the controllers, refer to the following.

☞ Each chapter indicating the system configuration

• System configuration of GT2505HS-V

For GT2505HS-V, the Ethernet connection and the serial connection cannot be used simultaneously.

Features of the multi-channel function

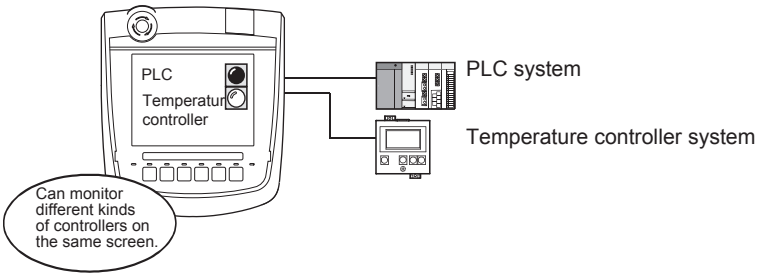
■With a single unit of GOT, the system consisting of PLC CPU, temperature controller, servo amplifier and other controllers can be configured.

One GOT can monitor a PLC CPU, temperature controller and servo amplifier, etc.

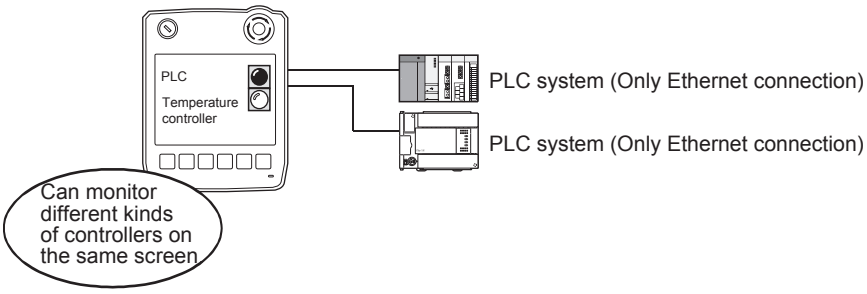
Therefore, the system configuration, in which several controllers are mixed, can be easily established.

In addition, each system can be monitored on the GOT screen, and the unified management of the information is possible.

• For GT2506HS-V



• For GT2505HS-V

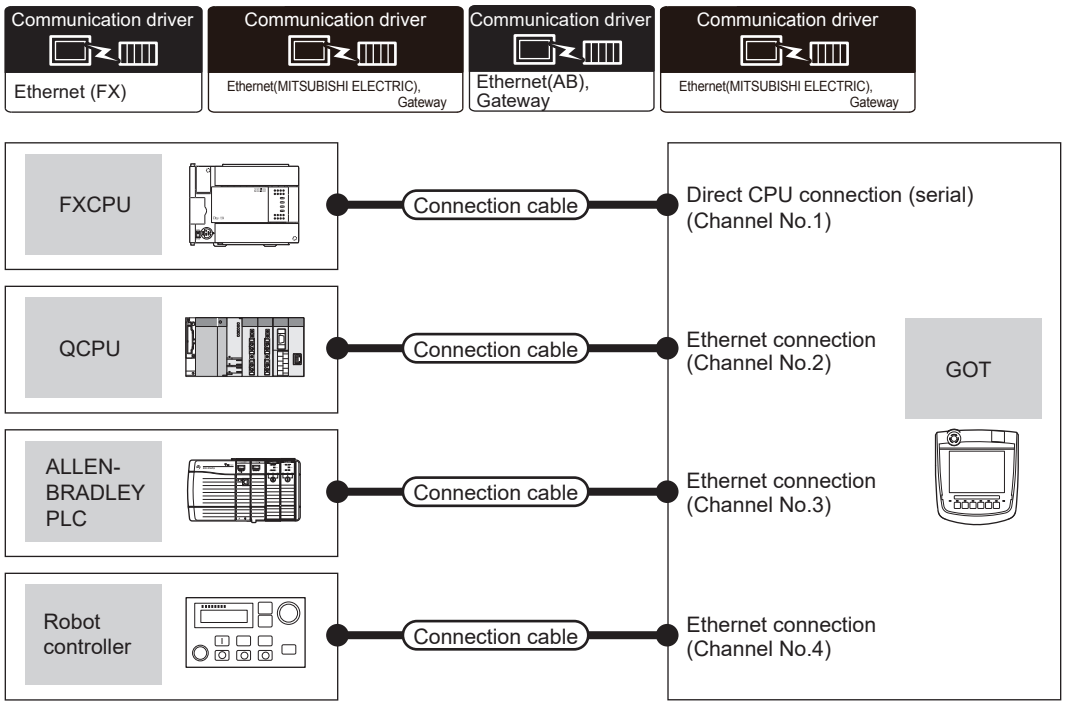


12.2 System Configuration Example

Serial connection (one channel) and multiple Ethernet connections can be made to one GOT.
For details on the connection type and channel number to be used, refer to the following.
☞ Page 683 Determining the connection type and channel No. (System selection)

Point

Only one channel is available for the serial connection in the multi-channel function.
RS-232 interface and RS-422/485 interface cannot be used at the same time.



PLC	Communication type	Connection cable	GOT		Number of connectable equipment
			Channel No.	Model	
MELSEC-FX	Direct CPU connection (serial)	For the system configuration between GOT and the controllers, refer to the following. ☞ Each chapter indicating the system configuration	1	GT 2506HS	4 connected equipment for 1 GOT (4 channels)
QCPU	Ethernet		2		
ALLEN-BRADLEY PLC			3		
Robot controller			4		
MELSEC-FX			1	GT 2505HS	Ethernet connection only, 4 controllers for 1 GOT (4 channels)
QCPU			2		
ALLEN-BRADLEY PLC			3		
Robot controller			4		

12.3 GOT Side Settings

The following shows the settings on GT2506HS-V as an example.

General flow from system selection to drawing

System selection for using the multi-channel function is explained below.

Make selection and setting for the multi-channel function by following the order shown below.

1. System selection

Determine the connection type and the channel No. to be used.

☞ Page 683 Determining the connection type and channel No. (System selection)

2. Interface selection

Determine the GOT side interface and communication units to be used for the multichannel function.

☞ Page 684 Determining the GOT side interface (Interface selection)

3. Make settings for Communication Settings.

☞ Page 687 Setting for communication settings

4. Confirm items to know before starting drawing.

☞ Page 688 Items to be checked before starting drawing

Determining the connection type and channel No. (System selection)

Determining the connection type

The combinations of the Ethernet connection and the serial connection are available as shown in the following table.

Ethernet connection	Serial connection	
Ethernet connection	Direct CPU connection (serial)	MODBUS/RTU connection
Microcomputer connection (Ethernet)		
Non-Mitsubishi Electric PLC connection (Ethernet connection)	Computer link connection	Temperature controller connection
MODBUS/TCP connection	CC-Link connection (via G4)	Inverter connection
Robot controller connection	Non-Mitsubishi Electric PLC connection (serial connection)	Servo amplifier connection
CNC connection (Ethernet connection)	Microcomputer connection (Serial)	CNC connection (serial connection)
	GOT multi-drop connection	Non-Mitsubishi Electric safety controller connection
	Non-Mitsubishi Electric servo amplifier connection	Non-Mitsubishi Electric robot controller connection
	Non-Mitsubishi Electric temperature controller connection	

The following shows the applicable combinations of connection types and the number of channels

Allowable combination of connection types	Number of channels
• Ethernet connection: 1 to 3 channels • Serial connection: 1 channel	Max. 4 channels
• Ethernet connection: 4 channels	Max. 4 channels

Determining the channel No.

After determining the connection type to be used, determine the channel No. (CH No. 1 to CH No. 4) to be used for the respective connection types.

There are no special cautions to be attended to for determining channel No.

Set the channel No.by selecting [Common] → [Controller Setting] in GT Designer3

GT Designer3 (GOT2000) Screen Design Manual

Write Check Sheet

Write down the following items selected in this section to the check sheet.

1 Selection of connection type

Write down the name of connection type to be used.

■ Check sheet No.1 (selection of connection type and interface)

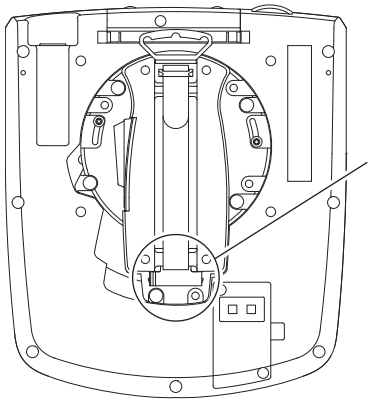
Channel No. of controller (No.1 to 4)

CH No.	1 Selection of connection type (☞ 28.3.2)	2 Selection of interface (☞ 28.3.3)
1	Connection name QCPU Direct connection	
2	Connection name YOKOGAWA PLC connection	
3	Connection name YASKAWA PLC connection	
4	Connection name MODBUS®/TCP connection	

RS-232 interface and RS-422/485 interface cannot be used at the same time.

Determining the GOT side interface (Interface selection)

Use the GOT by combining the RS-232 interface, RS-422/485 interface and Ethernet interface which are built in GOT.



Ethernet interface
RS-232 interface
RS-422/485 interface

RS-422/485 interface and RS-232 interface cannot be used at the same time. Switch the RS-422/485 interface and RS-232 interface with the RS-422/485⇔RS-232 selection connector in the environmental protection back cover.

Select the interface to be used to enable the selected connection.

Select the interfaces and according to the connection type by referring to the following.

Selected connection type	Reference for required interface and communication unit
• Ethernet Connection	☞ Page 685 GOT interface used for Ethernet connection
• Microcomputer connection (Ethernet)	
• Non-Mitsubishi Electric PLC connection (Ethernet connection)	
• MODBUS®/TCP connection	
• Robot controller connection	
• CNC connection (Ethernet connection)	
• Direct CPU connection (serial)	☞ Page 685 GOT interface used for serial connection
• Computer link connection	
• CC-Link connection (via G4)	
• Non-Mitsubishi Electric PLC connection (serial connection)	
• Microcomputer connection (Serial)	
• GOT multi- drop connection	
• MODBUS®/RTU connection	
• Temperature controller connection	

Selected connection type	Reference for required interface and communication unit
• Inverter connection	☞ Page 685 GOT interface used for serial connection
• Servo amplifier connection	
• CNC connection (serial connection)	
• GOT multi-drop connection	
• Non-Mitsubishi Electric servo amplifier connection	
• Non-Mitsubishi Electric temperature controller connection	
• Non-Mitsubishi Electric safety controller connection	
• Non-Mitsubishi Electric robot controller connection	

GOT interface used for Ethernet connection

For the Ethernet connection, use the following interface built in the GOT.

Interface	Interface built in GOT
Interface built in GOT	Ethernet interface*1

*1 Up to four channels can be used.

Point

When using Ethernet download and gateway function.

The Ethernet download and the gateway function can be used with the GOT built-in Ethernet interface (1 ch).

GOT interface used for serial connection

For the serial connection, use the following interface built in the GOT.

Interface	Interface built in GOT
Interface built in GOT	RS-232 interface, RS-422/485 interface

Refer to the explanation below to check if the number of channels for the multi-channel function to be used is restricted or not. If it is restricted, review the system configuration.

Write Check Sheet

Write down the following items selected in this section to the check sheet.

② Selection of an interface

Write down the name of the interface to be used for each of the connection type.

■ Check sheet No.1 (selection of connection type and interface)

Channel No. of controller (No.1 to 4)

CH No.	① Selection of connection type (☞ 28.3.2)	② Selection of interface (☞ 28.3.3)
1	Connection name QCPU Direct connection	RS-232 interface
2	Connection name YOKOGAWA PLC connection	Ethernet interface
3	Connection name YASKAWA PLC connection	Ethernet interface
4	Connection name MODBUS®/TCP connection	Ethernet interface

RS-232 interface and RS-422/485 interface cannot be used at the same time.

Write Check Sheet

Write down the following items to the check sheet.

◆3

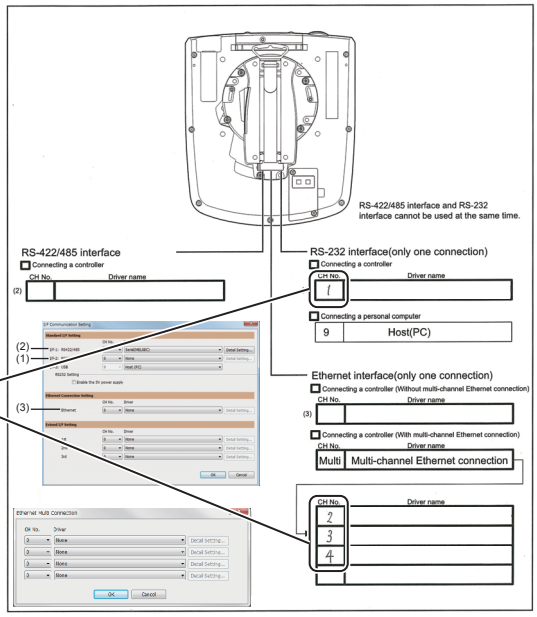
1. After writing down the names of communication units, write down the CH No. to be assigned to each communication interface, based on the entry in ■ Check Sheet No. 1 (selection of connection type and interface).

■ Check sheet No.1 (selection of connection type and interface)

Channel No. of controller (No.1 to 4)

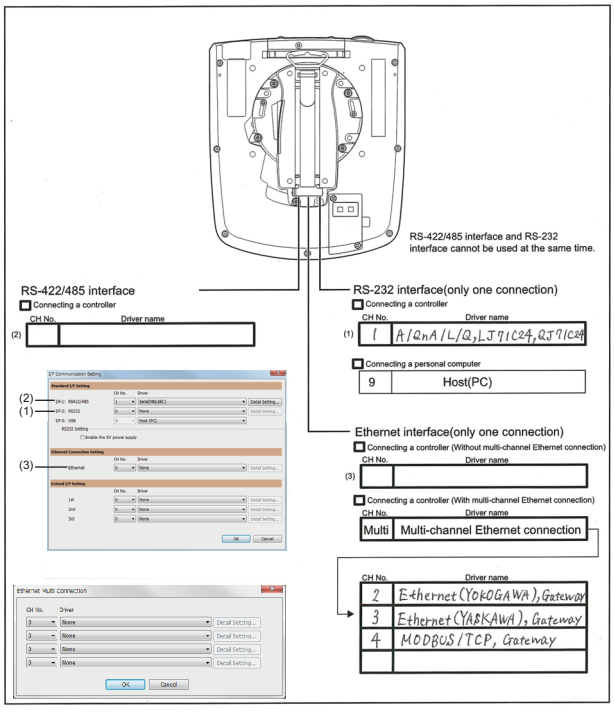
CH No.	◆Selection of connection type (☞ 28.3.2)	◆Selection of interface (☞ 28.3.3)
1	Connection name QCPU Direct connection	RS-232 interface
2	Connection name YOKOGAWA PLC connection	Ethernet interface
3	Connection name YASKAWA PLC connection	Ethernet interface
4	Connection name MODBUS®/TCP connection	Ethernet interface

RS-232 interface and RS-422/485 interface cannot be used at the same time.



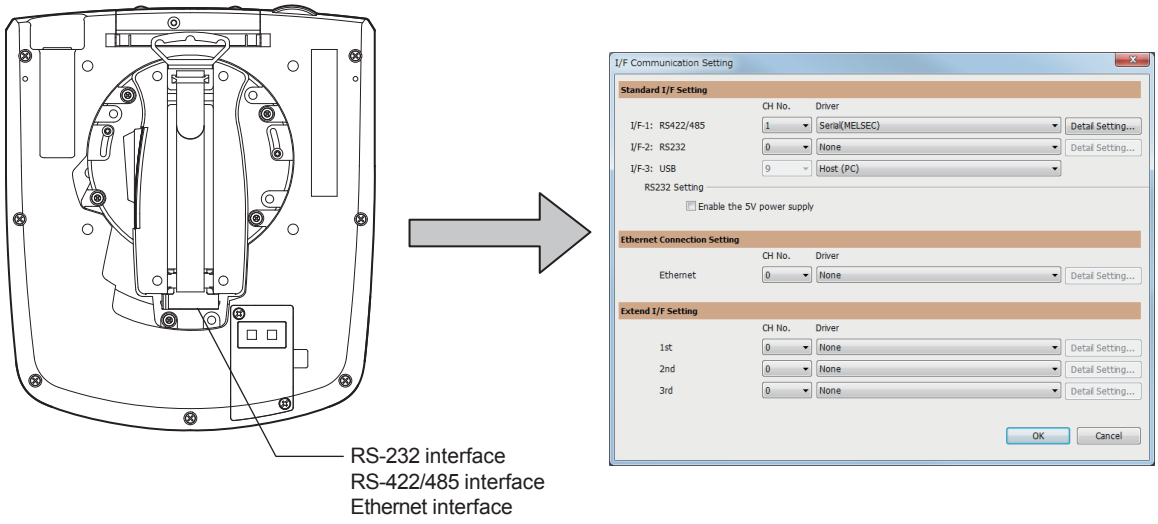
2. After writing down CH No., write down the communication driver name for each connection type.
For the communication drivers used for the respective connection types, r efer to the following.

☞ Chapters of each respective connection type



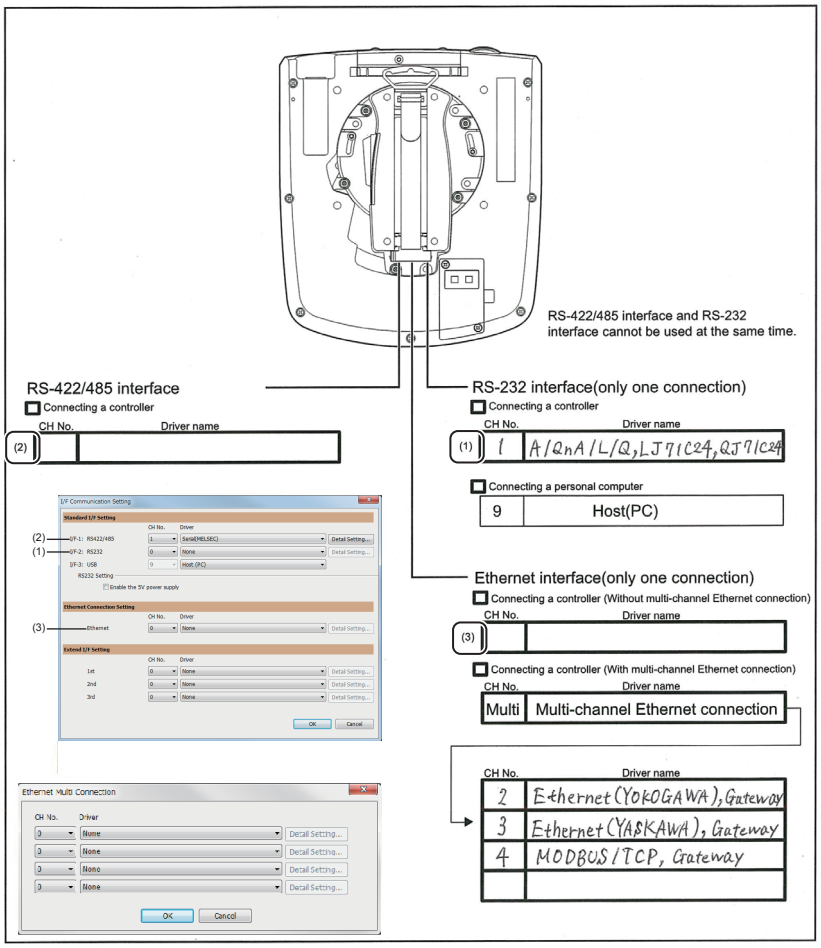
Setting for communication settings

Make the communication settings in the interface to be used.



Check

Make settings for Communication Settings by GT Designer3 referring to the check sheet where the necessary information has been written.
The position that the settings should be made on the communication settings screen are specified on the check sheet by numbers.



This completes the setting for Communication Settings.
Create a screen with GT Designer3.

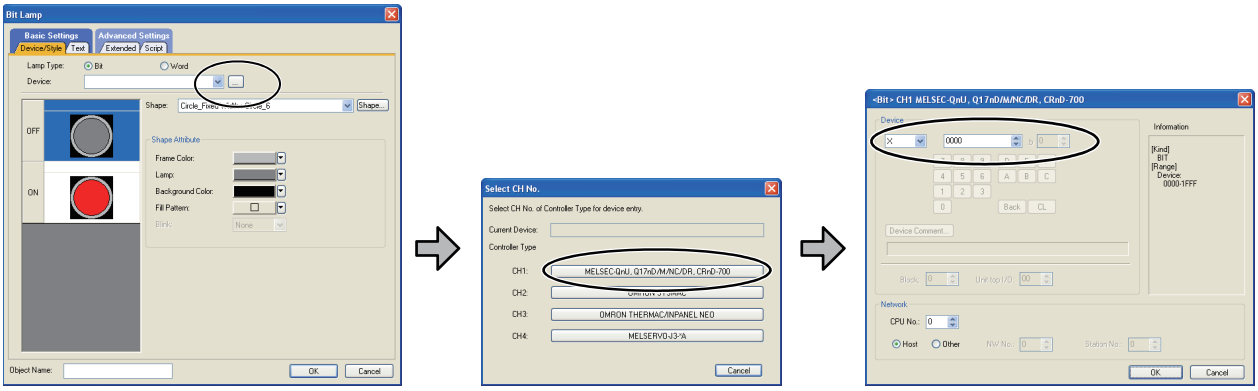
Items to be checked before starting drawing

The following describes that should be understood before starting drawing and the functions that should be set beforehand when using the multi-channel function.

Device settings

It is necessary to set the device to be used together with the CH No.

📖GT Designer3 (GOT2000) Screen Design Manual



1. Click the device setting button.
2. Click the controller to be set.
3. Set the device.

Accessible range for monitoring

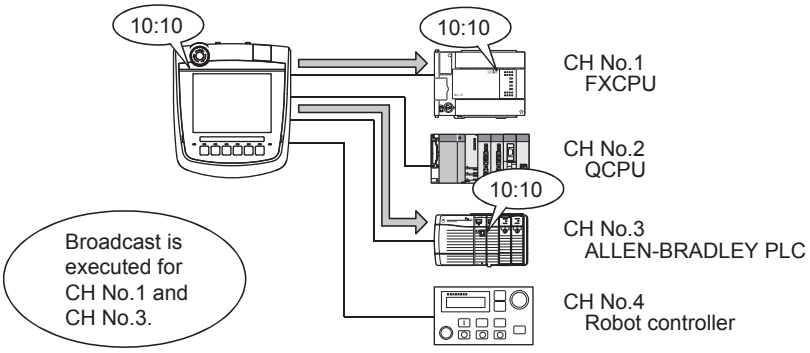
The accessible range for monitoring is not changed even when the multi-channel function is used.

📖GOT2000 Series Connection Manual (Mitsubishi Electric Products) For GT Works3 Version1

Clock function

Set the controller for which adjust/broadcast should be executed by the CH No.

📖GT Designer3 (GOT2000) Screen Design Manual



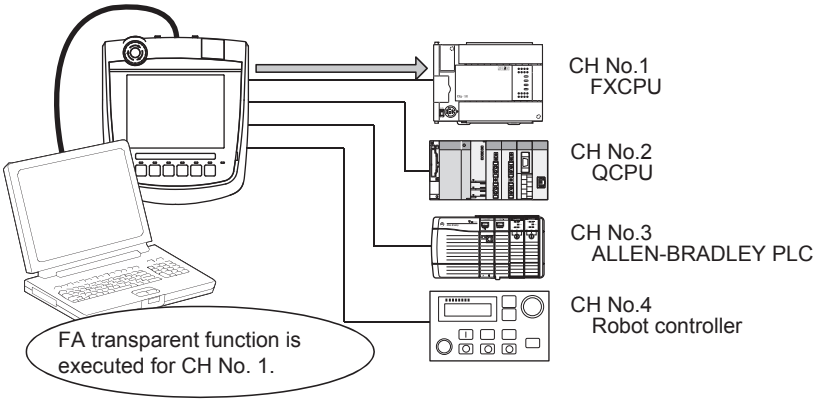
FA transparent function

Set the controller for which the FA transparent function should be executed by the CH No.

☞ Page 737 Setting communication interface

The set CH No. can be changed by the Utility.

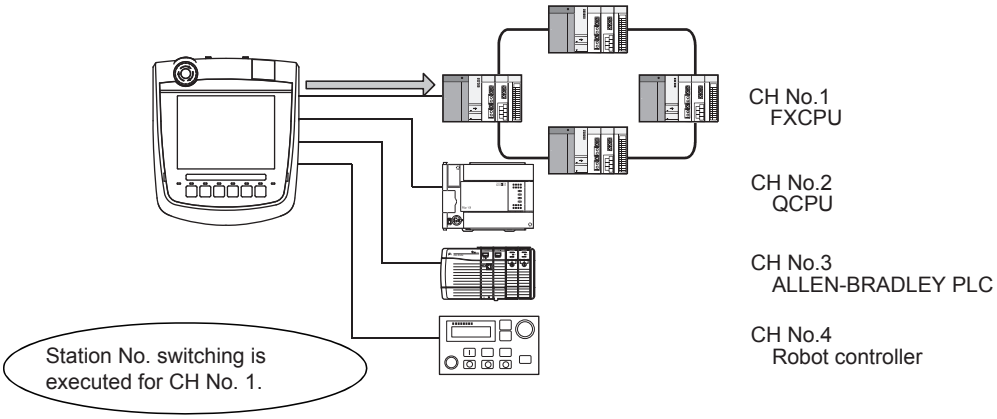
To execute the FA transparent function for other CH No., change the CH No. using the Utility.



Station No. switching function

Set the controller for which the station No. switching function should be executed by the CH No.

GT Designer3 (GOT2000) Screen Design Manual



12.4 Precautions

Precautions for use

Occurrence of the same system alarm at different channels

When the advanced system alarm is used, if the system alarms with the same error code occur in different channels the GOT treats the alarms as the same system alarm.
Therefore, if the system alarms with the same error code occur one by one, the time of later system alarm occurrence is not reflected to the GOT.

Confirmation of the channel No. at which a system alarm occurred

When a system alarm occurred, confirm the channel No. where the alarm occurred, using the procedure indicated below.

■Check by [System alarm display] of the utility.

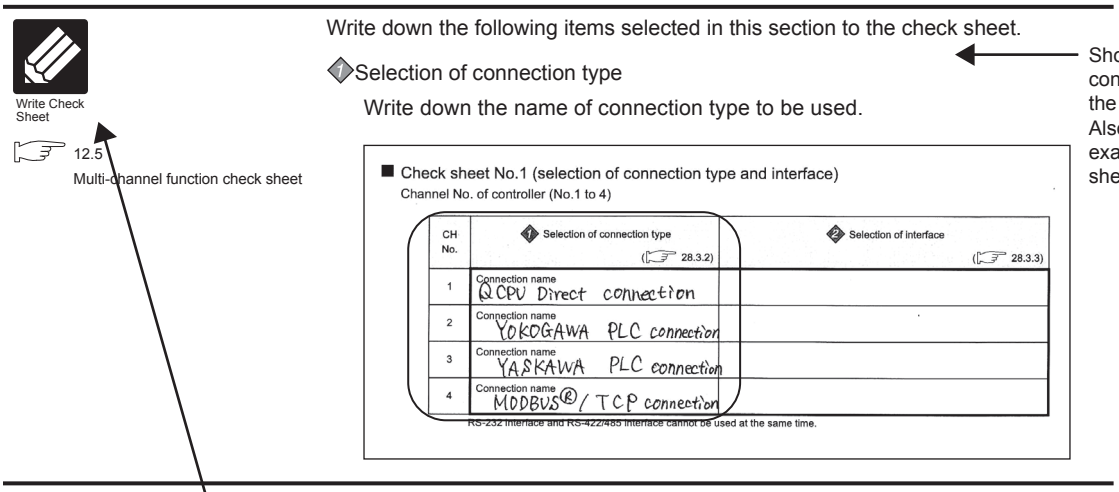
📖GOT2000 Series User's Manual (Utility)

■Monitor the internal devices of the GOT.

📖GT Designer3 (GOT2000) Screen Design Manual

12.5 Multi-channel function check sheet

This section provides the check sheet to be used for Communication Settings when the multi-channel function is used.
12.3.2 to 12.3.4 contain explanations of the items to be checked on the check sheet.
Checking items explained in these sections using the check sheet on the following page allows you to complete the setting for the multi-channel function.



The following symbols are used for each purpose.



Indicates parts where items and details are to be written.
Confirm the details and write them to the check sheet.



Indicates parts where written details are to be checked.
Confirm the details and perform the Communication Settings.

Check sheet No.1 (selection of connection type and interface)

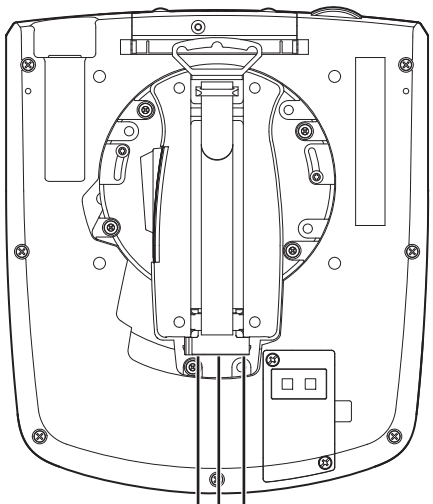
Channel No. of controller (No.1 to 4)

CHNo.	Selection of connection type	Page 683 Determining the connection type and channel No. (System selection)	Selection of interface	Page 684 Determining the GOT side interface (Interface selection)
1	Connection name			
2	Connection name			
3	Connection name			
4	Connection name			

*1 RS-232 interface and RS-422/485 interface cannot be used at the same time.

Check sheet No. 2 (selection of GOT side interface)

3 Assigning the channel No.

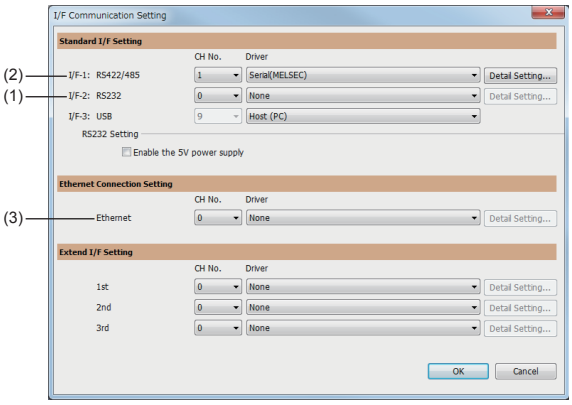


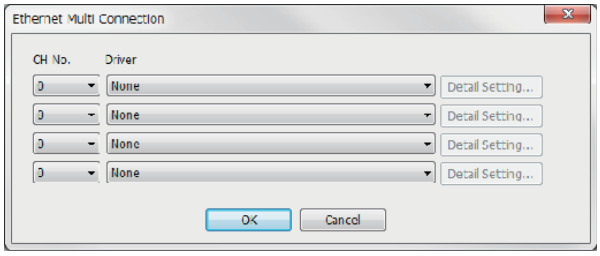
RS-422/485 interface and RS-232 interface cannot be used at the same time.

RS-422/485 interface

☐ Connecting a controller

	CH No.	Driver name
(2)		





RS-232 interface(only one connection)

☐ Connecting a controller

	CH No.	Driver name
(1)		

☐ Connecting a personal computer

9	Host(PC)

Ethernet interface(only one connection)

☐ Connecting a controller (Without multi-channel Ethernet connection)

	CH No.	Driver name
(3)		

☐ Connecting a controller (With multi-channel Ethernet connection)

CH No.	Driver name
Multi	Multi-channel Ethernet connection

CH No.	Driver name

PART 6 FA TRANSPARENT

13 FA TRANSPARENT FUNCTION

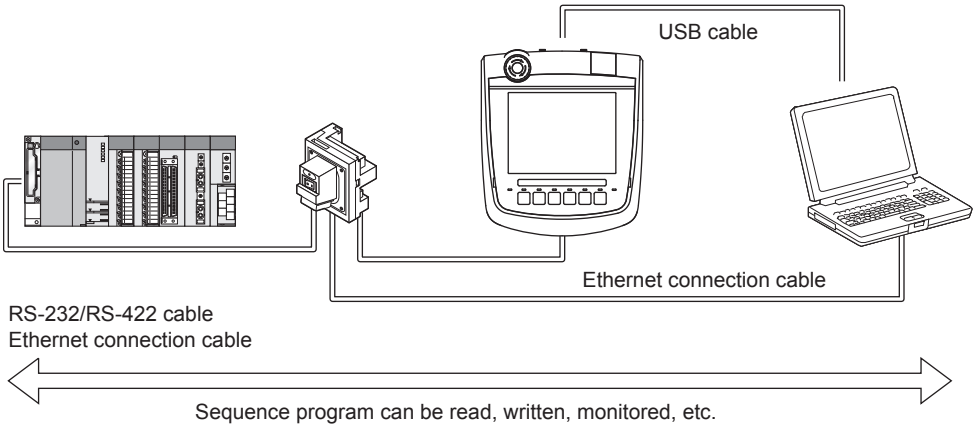
13 FA TRANSPARENT FUNCTION

- Page 694 FA Transparent Function
- Page 695 Compatible Software
- Page 703 List of Models that Can Be Monitored
- Page 728 System Configuration
- Page 737 GOT Side Settings
- Page 740 Personal Computer Side Setting
- Page 827 Precautions

13.1 FA Transparent Function

The FA transparent function allows the programs of the Mitsubishi Electric PLC to be read, written, and monitored via a GOT connected to a personal computer with the GOT and the PLC connected.

Example) When the sequence programs are read from, written to, and monitored from the Mitsubishi Electric PLC through a GOT



Point

The USB cable which connects the Handy GOT and the PC is connected to the USB interface (device) in the interface environmental protection cover of the Handy GOT.

Since the Handy GOT is used with the interface environment protection cover opened, it is out of the warranty for protective structure (IP65f).

13.2 Compatible Software

The following shows the software compatible with the FA transparent function.

Point

• The range accessible by software when FA transparent function is used

Use of the FA transparent function does not affect the range accessible by the software.

For details on accessible range, refer to the manual for the respective software.

• The software settings when using FA transparent function

For the software settings, refer to the following when using FA transparent function.

☞ Page 740 Accessing by GX Works3
☞ Page 750 Accessing by CW Configurator
☞ Page 756 Accessing the PLC by the PX Developer, GX Configurator
☞ Page 762 Accessing by GX Works2
☞ Page 776 Accessing by GX LogViewer
☞ Page 777 Accessing PLC by GX Configurator-QP
☞ Page 778 Accessing by the MT Developer
☞ Page 779 Accessing by the MT Works2
☞ Page 784 Accessing the servo amplifier by the MR Configurator
☞ Page 784 Accessing the servo amplifier by the MR Configurator2
☞ Page 785 Accessing the inverter by the FR Configurator
☞ Page 786 Accessing the inverter by the FR Configurator2
☞ Page 794 Accessing PLC by FX Configurator-FP
☞ Page 795 Accessing by FX Configurator-EN-L or FX Configurator-EN
☞ Page 796 Accessing by RT ToolBox3
☞ Page 810 Accessing by RT ToolBox2
☞ Page 813 Accessing by NC Configurator2
☞ Page 814 Accessing by MELSOFT Navigator
☞ Page 815 Accessing by CPU Module Logging Configuration Tool
☞ Page 818 Accessing by Setting/ Monitoring tool for C Controller module
☞ Page 820 Accessing by MX Component (MX Sheet)
☞ Page 825 Accessing by MI Configurator

When connecting the GOT and the personal computer by USB

■When connecting the GOT and controller using the direct CPU connection (serial)

The following shows the software and the accessible controllers.

Controller		Software	Applicable version
FX5U, FX5UC		GX Works3	1.005F or later
		MX Component	4.11M or later
		MX Sheet	*5
FX5UJ		GX Works3	1.060N or later
FX5S		GX Works3	1.080J or later
QCPU (Q mode)		MELSOFT Navigator	1.71Z or later
		GX Works2	1.497T or later
		PX Developer	1.40S or later
		GX Developer	8.118Y or later
		MX Component	4.05F or later
		MX Sheet	*1
		GX LogViewer	1.32J or later
		CPU Module Logging Configuration Tool	1.32J or later
LCPU*2		MELSOFT Navigator	1.71Z or later
		GX Works2	1.497T or later
		GX Developer	8.118Y or later
		MX Component	4.05F or later
		MX Sheet	*1
		GX LogViewer	1.32J or later
		CPU Module Logging Configuration Tool	1.32J or later
QCPU (A mode) QnA/ACPU Motion CPU (A series)		GX Developer	8.118Y or later
		MX Component	4.05F or later
		MX Sheet	*1
FXCPU		MELSOFT Navigator	1.71Z or later
		GX Works2	1.497T or later
		GX Developer	8.118Y or later
		MX Component	4.05F or later
		MX Sheet	*1
Motion CPU (Q series)		MELSOFT Navigator	1.71Z or later
		MT Works2	1.66U or later
		MX Component	4.05F or later
		MX Sheet	*1
FR-A700 series		FR Configurator	3.00
FR-F700 series		FR Configurator	3.00
FR-E700 series		FR Configurator	3.00
FR-D700 series		FR Configurator	3.00
FR-A800 and FR-F800 series		FR Configurator2	From the first version
FR-A800 Plus series	FR-A800-CRN FR-A800-E-CRN FR-A800-R2R FR-A800-E-R2R	FR Configurator2	1.16S or later
	FR-A800-LC FR-A800-E-LC	FR Configurator2	1.19V or later
FR-E800 series		FR Configurator2	1.19V or later
FR-D800 series		FR Configurator2	1.34L or later
Robot controller (CRnQ-700)		RT ToolBox2	3.00 or later
		RT ToolBox3	From the first version
CR800-Q (Q172DSRCPU)		RT ToolBox3 *19	1.20W or later
MELSERVO (MR-J3-B)*4		MR Configurator2*3	1.24A or later
MELSERVO (MR-J4-B)*4		MR Configurator2*3	1.24A or later

*1 Use MX Component (Version 4.05F or later) for MX Sheet.
*2 An adapter (L6ADP-R2 or L6ADP-R4) is required to use an LCPU other than the following.
• L02SCPU
• L02SCPU-P
When using L6ADP-R4, use an LCPU having a serial number starting with 15102 or later.
*3 Start MR Configurator2 with MT Developer2 Version 1.66U or later.
*4 A Motion controller is required between the GOT and controller in the direct CPU connection (serial).
*5 Use MX Component (Version 4.11M or later) for MX Sheet.

■When connecting the GOT and controller using the serial communication connection

The following shows the software and the accessible controllers.

Controller	Software	Applicable version
RCPU	GX Works3	• RCPU redundant system: 1.030G or later • Other than the above: From the first version
	MX Component	4.06G or later
	MX Sheet	*2
	CPU Module Logging Configuration Tool	1.142Y or later
Motion CPU (MELSEC iQ-R series)	MX Component	4.06G or later
	MX Sheet	*1
C Controller module (MELSEC iQ-R series)	CW Configurator	1.013P or later
MELSECWinCPU (MELSEC iQ-R series)	CW Configurator	1.013P or later
QCPU (Q mode)	MELSOFT Navigator	1.71Z or later
	GX Works2	1.497T or later
	PX Developer	1.40S or later
	GX Developer	8.118Y or later
	MX Component	4.05F or later
	MX Sheet	*1
	GX LogViewer	1.32J or later
	CPU Module Logging Configuration Tool	1.32J or later
LCPU	MELSOFT Navigator	1.71Z or later
	GX Works2	1.497T or later
	GX Developer	8.118Y or later
	MX Component	4.05F or later
	MX Sheet	*1
	GX LogViewer	1.32J or later
	CPU Module Logging Configuration Tool	1.32J or later

*1 Use MX Component (Version 4.05F or later) for MX Sheet.

*2 Use MX Component (Version 4.06G or later) for MX Sheet.

■When connecting the GOT and controller using the Ethernet connection

The following shows the software and the accessible controllers.

Controller	Software	Applicable version
MELSEC MX Controller (MX-R Model, MX-F Model)	GX Works3	1.115V or later
RCPU	GX Works3	• RCPU redundant system: 1.030G or later • Other than the above: From the first version
	MX Component	4.06G or later
	MX Sheet	*5
	CPU Module Logging Configuration Tool	1.142Y or later
Motion CPU (MELSEC iQ-R series)	MT Works2	1.100E or later
	MX Component	4.06G or later
	MX Sheet	*5
C Controller module (MELSEC iQ-R series)	CW Configurator	From the first version
MELSECWinCPU (MELSEC iQ-R series)	CW Configurator	1.013P or later
Robot controller (CR800-R, CR800-D)	RT ToolBox3	From the first version
FX5U, FX5UC	GX Works3	• When using FX5-ENET or FX5-ENET/IP: 1.075D or later • When using FX5-EIP: 1.120A or later • Other than the above: 1.005F or later
	MX Component	• When using FX5-ENET, FX5-ENET/IP, or FX5-EIP: Not available • Other than the above: 4.11M or later
	MX Sheet	• When using FX5-ENET, FX5-ENET/IP, or FX5-EIP: Not available • Other than the above: *6
FX5UJ	GX Works3	1.060N or later
FX5S	GX Works3	1.080J or later
QCPU (Q mode), C Controller module (Q series)	MELSOFT Navigator	1.71Z or later
	GX Works2*1	1.497T or later (Same when using the CC-Link IE Field Network Ethernet adapter (NZ2GF-ETB))
	GX Developer	8.118Y or later
	MX Component	4.05F or later
	MX Sheet	*2
	Setting/monitoring tool for C Controller module	4.04E or later
	GX LogViewer	1.32J or later
	CPU Module Logging Configuration Tool	1.32J or later
LCPU	MELSOFT Navigator	1.71Z or later
	GX Works2	1.497T or later
	GX Developer	8.118Y or later
	MX Component	4.05F or later
	MX Sheet	*2
	GX LogViewer	1.32J or later
	CPU Module Logging Configuration Tool	1.32J or later
FXCPU	GX Works2	1.497T or later
	MX Component	4.05F or later
	MX Sheet	*2
QCPU (A Mode), QnA/ACPU	GX Developer	8.118Y or later
	MX Component	4.05F or later
	MX Sheet	*2
Motion CPU (Q series)	MELSOFT Navigator	1.71Z or later
	MT Works2	1.66U or later
CNC CPU (Q173NCCPU)	NC Configurator2	B0 or later
FR-E700 (FR-E7□0-NE), FR-A800, and FR-F800 series	FR Configurator2	• Through the Ethernet port built in the RCPU: 1.16S or later • Other than the above: 1.15R or later

Controller		Software	Applicable version
FR-A800 Plus series	FR-A800-E-CRN FR-A800-E-R2R	FR Configurator2	1.16S or later
	FR-A800-E-LC	FR Configurator2	1.19V or later
FR-E800 series		FR Configurator2	1.19V or later
FR-D800 series		FR Configurator2	1.34L or later
Robot controller (CRnQ-700, CRnD-700)		RT ToolBox2	3.00 or later
		RT ToolBox3	From the first version
CR800-Q (Q172DSRCPU)		RT ToolBox3	1.20W or later
MELSERVO (MR-J3-B) *4		MR Configurator2*3	1.23Z or later
MELSERVO (MR-J4-B) *4		MR Configurator2*3	1.23Z or later
MELIPC		MI Configurator	From the first version

*1 C controller module (Q series) does not support CC-Link IE Field Network.
*2 Use MX Component (Version 4.05F or later) for MX Sheet.
*3 Start MR Configurator2 with MT Developer2 Version 1.66U or later.
*4 A Motion controller is required between the GOT and controller in the Ethernet connection.
*5 Use MX Component (Version 4.06G or later) for MX Sheet.
*6 Use MX Component (Version 4.11M or later) for MX Sheet.

When connecting the GOT and the personal computer via Ethernet

■When connecting the GOT and controller using the direct CPU connection (serial)

The following shows the software and the accessible controllers.

Controller	Software	Applicable version
FX5U, FX5UC	GX Works3	1.005F or later
	MX Component	4.11M or later
	MX Sheet	*4
FX5UJ	GX Works3	1.060N or later
FX5S	GX Works3	1.080J or later
QCPU (Q mode)	GX Works2	1.48A or later
	MX Component	3.15R or later
	MX Sheet	*2
LCPU*1	GX Works2	1.48A or later
	MX Component	3.15R or later
	MX Sheet	*2
FXCPU	GX Works2	1.73B or later
	MX Component	4.05F or later
	MX Sheet	*5
Motion CPU (Q series)	MT Works2	1.19V or later
FR-A800 series	FR Configurator2	1.31H or later
FR-F800 series	FR Configurator2	1.31H or later
FR-E800 series	FR Configurator2	1.31H or later
FR-D800 series	FR Configurator2	1.34L or later
MELSERVO (MR-J3-B)*3	MR Configurator2	1.07H or later
MELSERVO (MR-J4-B)*3	MR Configurator2	1.09K or later

*1 An adapter (L6ADP-R2 or L6ADP-R4) is required to use an LCPU other than the following.
- L02SCPU
- L02SCPU-P

When using L6ADP-R4, use an LCPU having a serial number starting with 15102 or later.

*2 Use MX Component (Version 3.15R or later) for MX Sheet.

*3 A Motion controller is required between the GOT and controller in the direct CPU connection (serial).

*4 Use MX Component (Version 4.11M or later) for MX Sheet.

*5 Use MX Component (Version 4.05F or later) for MX Sheet.

■When connecting the GOT and controller using the serial communication connection

The following shows the software and the accessible controllers.

Controller	Software	Applicable version
RCPU	GX Works3	• RCPU redundant system: 1.030G or later • Other than the above: From the first version
	MX Component	4.06G or later
	MX Sheet	*2
	CPU Module Logging Configuration Tool	1.142Y or later
Motion CPU (MELSEC iQ-R series)	MX Component	4.05F or later
	MX Sheet	*3
C Controller module (MELSEC iQ-R series)	CW Configurator	1.013P or later
MELSECWinCPU (MELSEC iQ-R series)	CW Configurator	1.013P or later
QCPU (Q mode)	GX Works2	1.48A or later
	MX Component	3.15R or later
	MX Sheet	*1
LCPU	GX Works2	1.48A or later
	MX Component	3.15R or later
	MX Sheet	*1

*1 Use MX Component (Version 3.15R or later) for MX Sheet.
*2 Use MX Component (Version 4.06G or later) for MX Sheet.
*3 Use MX Component (Version 4.05F or later) for MX Sheet.

13.3 List of Models that Can Be Monitored

The following models support FA transparent function.

When connecting the GOT and the personal computer by USB

■MELSEC MX Controller (MX-R Model)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
MXR300-16 MXR300-32 MXR300-64 MXR500-128 MXR500-25	GX Works3 *1	-	-	GT 2506HS GT 2505HS

*1 Use GX Works3 Version 1.115V or later.

■MELSEC MX Controller (MX-F Model)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
MXF100-8-N32 MXF100-8-P32 MXF100-16-N32 MXF100-16-P32	GX Works3 *1	-	-	GT 2506HS GT 2505HS

*1 Use GX Works3 Version 1.115V or later.

■MELSEC iQ-R Series

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
R00CPU *1 R01CPU *1 R02CPU *1 R04CPU R08CPU R16CPU R32CPU R120CPU	GX Works3 MX Component MX Sheet CPU Module Logging Configuration Tool	-	GT 2506HS GT 2505HS	GT 2506HS GT 2505HS
R08PCPU R16PCPU R32PCPU R120PCPU				
R04ENCPU *3 R08ENCPU *3 R16ENCPU *3 R32ENCPU *3 R120ENCPU *3				
R08SFCPU *2*3 R16SFCPU *2*3 R32SFCPU *2*3 R120SFCPU *2*3				
R08PSFCPU *4 R16PSFCPU *4 R32PSFCPU *4 R120PSFCPU *4	GX Works3 *5	-	-	GT 2506HS GT 2505HS

*1 For R00CPU, R01CPU, R02CPU, use GX Works3 Ver.1.040S and later.
*2 Mount a safety function module R6SFM next to the RnSFCPU on the base unit.
The RnSFCPU and the safety function module R6SFM must have the same pair version.
If their pair versions differ, the RnSFCPU does not operate.
*3 Please use the MX Component Version 4.11M or later.
MX Sheet, please use the MX Component (Version 4.11M or later).

*4 Mount a SIL2 function module R6PSFM and a redundant function module R6RFM next to RnPSFCPU on the base unit.
*5 Use GX Works3 Version 1.050C or later.

■Motion CPU (MELSEC iQ-R Series)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
R16MTCPU R32MTCPU R64MTCPU	MT Works2	-	-	GT 2506HS GT 2505HS
	MX Component MX Sheet	-	GT 2506HS GT 2505HS	GT 2506HS GT 2505HS

■C controller module (MELSEC iQ-R Series)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
R12CCPU-V	CW Configurator	-	GT 2506HS GT 2505HS *1	GT 2506HS GT 2505HS

*1 Use CW Configurator Ver.1.013P or later.

■MELSECWinCPU (MELSEC iQ-R Series)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
R102WCPU-W	CW Configurator*1	-	GT 2506HS GT 2505HS	GT 2506HS GT 2505HS

*1 Use CW Configurator Ver.1.013P or later.

■CNC C80

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
R16NCCPU-S1	GX Works3	-	-	GT 2506HS GT 2505HS

■Robot controller (MELSEC iQ-R Series)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
CR800-R(R16RTCPU)	RT ToolBox3	-	-	GT 2506HS GT 2505HS
CR800-D	RT ToolBox3	-	-	GT 2506HS GT 2505HS

■CC-Link IE Filed Network head module

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
RJ72GF15-T2	GX Works3	-	GT 2506HS GT 2505HS	GT 2506HS GT 2505HS

■MELSEC iQ-F Series

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
FX5U FX5UC	GX Works3 *1 MX Component *2*3 MX Sheet *2*3	GT 2506HS GT 2505HS	-	GT 2506HS GT 2505HS
FX5UJ	GX Works3 *4	GT 2506HS GT 2505HS	-	GT 2506HS GT 2505HS
FX5S	GX Works3 *5	GT 2506HS GT 2505HS	-	GT 2506HS GT 2505HS

*1 Use FX5-ENET Version 1.240 or later.
*2 The FA transparent through FX5-ENET is not supported.
*3 Please use the MX Component Version 4.11M or later.
MX Sheet, please use the MX Component (Version 4.11M or later).
*4 Use GX Works3 Version 1.060N or later.
*5 Use GX Works3 Version 1.080J or later.

■MELSEC-Q (Q mode)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
Q00JCPU Q00CPU Q01CPU Q02CPU Q02HCPU Q06HCPU Q12HCPU Q25HCPU Q02PHCPU Q06PHCPU Q12PHCPU Q25PHCPU	GX Works2 GX Developer GX Configurator PX Developer MX Component MX Sheet	GT 2506HS GT 2505HS	GT 2506HS GT 2505HS	GT 2506HS GT 2505HS
Q12PRHCPU (Main base) Q25PRHCPU (Main base)	GX Works2 GX Developer GX Configurator PX Developer MX Component MX Sheet	GT 2506HS GT 2505HS	-	GT 2506HS GT 2505HS
Q12PRHCPU (Extension base) Q25PRHCPU (Extension base)	-	-	-	-
Q00UJCPU Q00UJCPU-S8 Q00UCPU Q01UCPU Q02UCPU Q03UDCPU Q04UDHCPU Q06UDHCPU Q10UDHCPU Q13UDHCPU Q20UDHCPU Q26UDHCPU	GX Works2 GX Developer GX Configurator PX Developer MX Component MX Sheet	GT 2506HS GT 2505HS	GT 2506HS GT 2505HS	GT 2506HS GT 2505HS
Q03UDECPU Q04UDEHCPU Q06UDEHCPU Q10UDEHCPU Q13UDEHCPU Q20UDEHCPU Q26UDEHCPU Q50UDEHCPU Q100UDEHCPU Q03UDVCPU *1 Q04UDVCPU *1 Q06UDVCPU *1 Q13UDVCPU *1 Q26UDVCPU *1	GX Works2 GX Developer GX Configurator PX Developer MX Component MX Sheet	GT 2506HS GT 2505HS *2	GT 2506HS GT 2505HS	GT 2506HS GT 2505HS

*1 QnUDVCPU is applicable to CPU Module Logging Configuration Tool and GX LogViewer.

*2 Use the serial port of QCPU in the multiple CPU system, since the CPU has no direct coupled I/F.

■C Controller module (Q Series)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
Q12DCCPU-V	GX Works2 GX Developer MX Component MX Sheet	GT 2506HS GT 2505HS *1	-	GT 2506HS GT 2505HS *2
Q24DHCCPU-V/VG Q24DHCCPU-LS Q26DHCCPU-LS	GX Works2 GX Developer MX Component MX Sheet	GT 2506HS GT 2505HS *1	-	GT 2506HS GT 2505HS *2
	Setting/Monitoring tool for C Controller module	GT 2506HS GT 2505HS *1	-	GT 2506HS GT 2505HS

*1 Use the serial port of QCPU in the multiple CPU system since Q12DCCPU-V1 and Q24DHCCPU-V/VG have no direct coupled I/F.

*2 When using Q12DCCPU-V1 or Q24DHCCPU-V/VG as the connected CPU, only MX Component can be used.
When accessing other CPUs relaying Q12DCCPU-V or Q24DHCCPU-V/VG, GX Works2 can also be used.

■MELSEC-QS

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
QS001CPU	-	-	-	-

■MELSEC-L

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
L02CPU L06CPU L26CPU L26CPU-BT L06CPU-P *1 L26CPU-P *1 L02CPU-P *1 L26CPU-PBT *1 L02SCPU L02SCPU-P *1	GX Works2 *2 GX Developer GX LogViewer MX Component MX Sheet CPU Module Logging Configuration Tool	GT 2506HS GT 2505HS	GT 2506HS GT 2505HS	GT 2506HS GT 2505HS *3

*1 L02CPU-P, L06CPU-P, L26CPU-P, L02SCPU-P, and L26CPU-PBT do not support MX Component and MX Sheet.

*2 GX Works2 cannot be connected to the MELSEC-L series through the Ethernet port of the MELSEC iQ-R series built-in Ethernet port CPU.

*3 When connecting to the Ethernet unit (LJ71E71-100), use MX Component Version 4.13P or later and MX Sheet Version 2.10L or later.

■MELSEC-Q (A mode)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
Q02CPU-A Q02HCPU-A Q06HCPU-A	GX Developer MX Component MX Sheet	GT 2506HS GT 2505HS	GT 2506HS GT 2505HS	GT 2506HS GT 2505HS

■MELSEC-QnA (QnACPU)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
Q2ACPU Q2ACPU-S1 Q3ACPU Q4ACPU	GX Developer MX Component MX Sheet	GT 2506HS GT 2505HS	GT 2506HS GT 2505HS	GT 2506HS GT 2505HS
Q4ARCPU				

■MELSEC-QnA (QnASCPU)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
Q2ASCPU Q2ASCPU-S1 Q2ASHCPU Q2ASHCPU-S1	GX Developer MX Component MX Sheet	GT 2506HS GT 2505HS	-	-

■MELSEC-A (AnCPU)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
A2UCPU A2UCPU-S1	GX Developer MX Component MX Sheet	GT 2506HS GT 2505HS	-	-
A3UCPU				
A4UCPU				
A2ACPU A2ACPUP21 A2ACPUR21 A2ACPU-S1 A2ACPUP21-S1 A2ACPUR21-S1				
A3ACPU A3ACPUP21 A3ACPUR21				
A1NCPU A1NCPUP21 A1NCPUR21				
A2NCPU A2NCPUP21 A2NCPUR21 A2NCPU-S1 A2NCPUP21-S1 A2NCPUR21-S1				
A3NCPU A3NCPUP21 A3NCPUR21				

■MELSEC-A (AnSCPU)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
A2USCPU A2USCPU-S1 A2USHCPU-S1	GX Developer MX Component MX Sheet	GT 2506HS GT 2505HS	-	-
A1SCPU A1SCPUC24-R2 A1SHCPU				
A2SCPU A2SCPU-S1 A2SHCPU A2SHCPU-S1				
A1SJCPU A1SJCPU-S3 A1SJHCPU				

■MELSEC-A

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
A0J2HCPU A0J2HCPUP21 A0J2HCPUR21 A0J2HCPU-DC24	GX Developer MX Component MX Sheet	GT 2506HS GT 2505HS	-	-
A2CCPU A2CCPUP21 A2CCPUR21				
A2CCPUC24 A2CCPUC24-PRF				
A2CJCPU-S3				
A1FXCPU				

■Motion CPU (Q Series)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
Q172CPU Q173CPU Q172CPUN Q173CPUN	MT Developer	GT 2506HS GT 2505HS	-	-
Q172HCPU Q173HCPU	MT Developer MR Configurator	GT 2506HS GT 2505HS *1	-	-
Q172DCPU Q173DCPU Q172DCPU-S1 Q173DCPU-S1 Q172DSCPU Q173DSCPU	MT Works2	GT 2506HS GT 2505HS *2	-	GT 2506HS GT 2505HS
Q170MCPU Q170MSCPU Q170MSCPU-S1	MT Works2 GX Works2	GT 2506HS GT 2505HS	-	GT 2506HS GT 2505HS

*1 Use the serial port of QCPU in the multiple CPU system since only the USB port is available as the direct coupled I/F for Q172H/Q173HCPU.

*2 Use the serial port of QCPU in the multiple CPU system since Q172D/Q173DCPU has no direct coupled I/F.

■Motion CPU (A Series)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
A273UCPU A273UHCPU A273UHCPU-S3 A373UCPU A373UCPU-S3	GX Developer MX Component MX Sheet	GT 2506HS GT 2505HS	-	-
A171SCPU A171SCPU-S3 A171SCPU-S3N A171SHCPU A171SHCPUN A172SHCPU A172SHCPUN A173UHCPU A173UHCPU-S1				

■MELSEC-FX

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
FX0	GX Works2 GX Developer MX Component MX Sheet	GT 2506HS GT 2505HS	-	-
FX0S FX0N				
FX1 FX2 FX2C				
FX1S FX1N FX2N FX1NC FX2NC				
FX3G(C) FX3S FX3GE	GX Developer FX Configurator-FP	GT 2506HS GT 2505HS	-	-
	GX Works2 MX Component MX Sheet	GT 2506HS GT 2505HS	-	GT 2506HS GT 2505HS
FX3U(C) *1	GX Developer FX Configurator-FP FX Configurator-EN-L FX Configurator-EN	GT 2506HS GT 2505HS	-	-
	GX Works2 MX Component MX Sheet	GT 2506HS GT 2505HS	-	GT 2506HS GT 2505HS

*1 For FX3U-ENET-L and FX3U-ENET, use a module with version 1.12 or later and serial number 1340001 or later.

■MELSEC-WS

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
WS0-CPU0 WS0-CPU1 WS0-CPU3	-	-	-	-

■MELSECNET/H Remote I/O station

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
QJ72LP25-25 QJ72LP25G QJ72BR15	-	-	-	-

■CC-Link IE Field Network head module

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
LJ72GF15-T2	-	-	-	-

■CC-Link IE Field Network Ethernet adapter module

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
NZ2GF-ETB	GX Works2	-	-	GT 2506HS GT 2505HS

■CNC

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
CNC C70 (Q173NCCPU)	NC Configurator2	-	-	GT 2506HS GT 2505HS *1
MELDAS C6/C64	-	-	-	-

*1 Connect to the DISPLAY I/F of Q173NCCPU.

■Robot controller (Q Series)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
CRnQ-700(Q172DRCPU) CR750-Q(Q172DRCPU) CR751-Q(Q172DRCPU)	RT ToolBox2 RT ToolBox3	GT 2506HS GT 2505HS *1	-	GT 2506HS GT 2505HS
CR800-Q(Q172DSRCPU)	RT ToolBox3			
CRnD-700 CR750-D CR751-D	RT ToolBox2 RT ToolBox3	-	-	GT 2506HS GT 2505HS

*1 Use the serial port of QCPU in the multiple CPU system since CRnQ-700 and CR800-Q (Q172DSRCPU) have no direct coupled I/F.

■MELIPC

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
MI5122-VW	MI Configurator	-	-	GT 2506HS GT 2505HS

■FR-A500(L), FR-F500(L), FR-V500(L), FR-E500, FR-S500(E), FR-F500J

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
FR-A5□0(L)	FR Configurator	GT 2506HS GT 2505HS	-	-
FR-F5□0(L)				
FR-V5□0(L)				
FR-E5□0(C) FR-E5□0S FR-E5□0W				
FR-S5□0(E)(-R)(-C) FR-S5□0S(E)(-R) FR-S5□0W(E)(-R)				
FR-F5□0J(F)				

■FR-D700, FR-F700PJ, FR-E700, FR-A700, FR-F700, FR-F700P

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
FR-D7□0 FR-D7□0S FR-D7□0W	FR Configurator	GT 2506HS GT 2505HS	-	-
FR-F7□0PJ(F)				
FR-E7□0 FR-E7□0S FR-E7□0W				
FR-E7□0-NE	FR Configurator2 *1	-	-	GT 2506HS GT 2505HS *2
FR-A7□0	FR Configurator	GT 2506HS GT 2505HS	-	-
FR-F7□0				
FR-F7□0P				

*1 For connection to the inverter through the Ethernet port built in the MELSEC iQ-R series CPU, use FR Configurator2 Ver.1.16S or later.
*2 Set the port number that supports the UDP connection (5000, 5001, 5006, or 5008) for the communication port setting of the inverter.

■FR-A800

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
FR-A8□0 FR-A8□2 FR-A8□6	FR Configurator2 *1	GT 2506HS GT 2505HS	-	-
FR-A8□0-E FR-A8□2-E FR-A8□6-E	FR Configurator2 *1	GT 2506HS GT 2505HS	-	GT 2506HS GT 2505HS *2
FR-A8□0-GF FR-A8□2-GF	FR Configurator2 *1	GT 2506HS GT 2505HS	-	-
FR-A8□0-GN FR-A8□2-GN	-	-	-	-

*1 For connection to the inverter through the Ethernet port built in the MELSEC iQ-R series CPU, use FR Configurator2 Ver.1.16S or later.
*2 Set the port number that supports the UDP connection (5000, 5001, 5006, or 5008) for the communication port setting of the inverter.

■FR-A800 Plus

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
FR-A8□0-CRN*3 FR-A8□2-CRN*3 FR-A8□0-R2R*3 FR-A8□2-R2R*3 FR-A8□0-LC*4	FR Configurator2 *1	GT 2506HS GT 2505HS	-	-
FR-A8□0-E-CRN*3 FR-A8□2-E-CRN*3 FR-A8□0-E-R2R*3 FR-A8□2-E-R2R*3 FR-A8□0-E-LC*4	FR Configurator2 *1	GT 2506HS GT 2505HS	-	GT 2506HS GT 2505HS *2

*1 For connection to the inverter through the Ethernet port built in the MELSEC iQ-R series CPU, use FR Configurator2 Ver.1.16S or later.
*2 Set the port number that supports the UDP connection (5000, 5001, 5006, or 5008) for the communication port setting of the inverter.
*3 Use FR Configurator2 Version 1.16S or later.
*4 Use FR Configurator2 Version 1.19V or later.

■FR-F800

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
FR-F8□0 FR-F8□2 FR-F8□6	FR Configurator2 *1	GT 2506HS GT 2505HS	-	-
FR-F8□0-E FR-F8□2-E	FR Configurator2 *1	GT 2506HS GT 2505HS	-	GT 2506HS GT 2505HS *2

*1 For connection to the inverter through the Ethernet port built in the MELSEC iQ-R series CPU, use FR Configurator2 Ver.1.16S or later.
*2 Set the port number that supports the UDP connection (5000, 5001, 5006, or 5008) for the communication port setting of the inverter.

■FR-E800

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
FR-E8□0	FR Configurator2 *1*2	GT 2506HS GT 2505HS	-	-
FR-E8□0-E	FR Configurator2 *1*2	-	-	GT 2506HS GT 2505HS *3

*1 For connection to the inverter through the Ethernet port built in the MELSEC iQ-R series CPU, use FR Configurator2 Ver.1.16S or later.
*2 Use FR Configurator2 Version 1.19V or later.
*3 Set the port number that supports the UDP connection (5000, 5001, 5006, or 5008) for the communication port setting of the inverter.

■FR-D800

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
FR-D8□0	FR Configurator2 *1*2	GT 2506HS GT 2505HS	-	-
FR-D8□0-E	FR Configurator2 *1*2	-	-	GT 2506HS GT 2505HS *3

*1 For connection to the inverter through the Ethernet port built in the MELSEC iQ-R series CPU, use FR Configurator2 Ver.1.16S or later.
*2 Use FR Configurator2 Version 1.19V or later.
*3 Set the port number that supports the UDP connection (5000, 5001, 5006, or 5008) for the communication port setting of the inverter.

■Sensorless servo

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
FR-E7□0EX	FR Configurator	GT 2506HS GT 2505HS	-	-

■MELIPM

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
MD-CX522-□K(-A0)	FR Configurator	GT 2506HS GT 2505HS	-	-

■MELSERVO

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
MR-J2S-□A MR-J2S-□CP MR-J2S-□CL	-	-	-	-
MR-J2M-P8A MR-J2M-□DU	-	-	-	-
MR-J3-□A MR-J3-□T	-	-	-	-
MR-J3-□B *1	MR Configurator	GT 2506HS GT 2505HS	-	-
	MR Configurator2	GT 2506HS GT 2505HS	-	GT 2506HS GT 2505HS
MR-J4-□A MR-J4-□A-RJ MR-JE-□A	-	-	-	-
MR-J4-□B *1 MR-J4-□B-RJ *1 MR-J4W2-□B *1 MR-J4W3-□B *1	MR Configurator2	GT 2506HS GT 2505HS	-	GT 2506HS GT 2505HS
MR-JE-□B	MR Configurator2	-	-	-

*1 A motion controller is required between the GOT and PLC in direct CPU connection (serial).

When connecting the GOT and the personal computer by Ethernet

■MELSEC MX Controller (MX-R Model)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
MXR300-16 MXR300-32 MXR300-64 MXR500-128 MXR500-25	GX Works3 *1	-	-	GT 2506HS

*1 Use GX Works3 Version 1.115V or later.

■MELSEC MX Controller (MX-F Model)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
MXF100-8-N32 MXF100-8-P32 MXF100-16-N32 MXF100-16-P32	GX Works3 *1	-	-	GT 2506HS

*1 Use GX Works3 Version 1.115V or later.

■MELSEC iQ-R Series

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
R00CPU *1 R01CPU *1 R02CPU *1 R04CPU R08CPU R16CPU R32CPU R120CPU R08PCPU R16PCPU R32PCPU R120PCPU R04ENCPU *2 R08ENCPU *2 R16ENCPU *2 R32ENCPU *2 R120ENCPU *2 R08SFCPU *2*3 R16SFCPU *2*3 R32SFCPU *2*3 R120SFCPU *2*3	GX Works3 MX Component MX Sheet CPU Module Logging Configuration Tool	-	GT 2506HS	-
R08PSFCPU R16PSFCPU R32PSFCPU R120PSFCPU	-	-	-	-

*1 For R00CPU, R01CPU, R02CPU, use GX Works3 Ver.1.040S and later.

*2 Please use the MX Component Version 4.11M or later.
MX Sheet, please use the MX Component (Version 4.11M or later).

*3 Mount a safety function module R6SFM next to the RnSFCPU on the base unit.
The RnSFCPU and the safety function module R6SFM must have the same pair version.
If their pair versions differ, the RnSFCPU does not operate.

■Motion CPU (MELSEC iQ-R Series)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
R16MTCPU R32MTCPU R64MTCPU	MT Works2	-	-	-
	MX Component MX Sheet	-	GT 2506HS	-

■C controller module (MELSEC iQ-R Series)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
R12CCPU-V	CW Configurator*1	-	GT 2506HS	-

*1 Use CW Configurator Ver.1.013P or later.

■MELSECWinCPU (MELSEC iQ-R Series)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
R102WCPU-W	CW Configurator*1	-	GT 2506HS	-

*1 Use CW Configurator Ver.1.013P or later.

■CNC C80

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
R16NCCPU-S1	GX Works3	-	-	-

■Robot controller (MELSEC iQ-R Series)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
CR800-R(R16RTCPU)	-	-	-	-
CR800-D	-	-	-	-

■CC-Link IE Filed Network head module

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
RJ72GF15-T2	GX Works3	-	GT 2506HS	-

■MELSEC iQ-F Series

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
FX5U FX5UC	GX Works3 MX Component *1*2*3 MX Sheet *1*2*3	GT 2506HS	-	-
FX5UJ	GX Works3 *4	GT 2506HS	-	-
FX5S	GX Works3 *5	GT 2506HS	-	-

*1 Use FX5-ENET Version 1.240 or later.
*2 The FA transparent through FX5-ENET is not supported.
*3 Please use the MX Component Version 4.11M or later.
MX Sheet, please use the MX Component (Version 4.11M or later).
*4 Use GX Works3 Version 1.060N or later.
*5 Use GX Works3 Version 1.080J or later.

■MELSEC-Q (Q mode)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
Q00JCPU	GX Works2 MX Component MX Sheet	GT 2506HS	GT 2506HS	-
Q00CPU				
Q01CPU				
Q02CPU				
Q02HCPU Q06HCPU Q12HCPU Q25HCPU				
Q02PHCPU Q06PHCPU Q12PHCPU Q25PHCPU				
Q12PRHCPU (Main base)	GX Works2 MX Component MX Sheet	GT 2506HS	-	-
Q25PRHCPU (Main base)				

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
Q12PRHCPU (Extension base)	-	-	-	-
Q25PRHCPU (Extension base)				
Q00UJCPU Q00UJCPU-S8	GX Works2 MX Component MX Sheet	GT 2506HS	GT 2506HS	-
Q00UCPU				
Q01UCPU				
Q02UCPU				
Q03UDCPU				
Q04UDHCPU Q06UDHCPU Q10UDHCPU Q13UDHCPU Q20UDHCPU Q26UDHCPU				
Q03UDECPU Q04UDEHCPU Q06UDEHCPU Q10UDEHCPU Q13UDEHCPU Q20UDEHCPU Q26UDEHCPU Q50UDEHCPU Q100UDEHCPU	GX Works2 MX Component MX Sheet	GT 2506HS *1	GT 2506HS	-
Q03UDVCPU Q04UDVCPU Q06UDVCPU Q13UDVCPU Q26UDVCPU				

*1 Use the serial port of QCPU in the multiple CPU system, since QnUDEHCPU, QnUDVCPU has no direct coupled I/F.

■C controller module (Q Series)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
Q12DCCPU-V	GX Works2 MX Component MX Sheet	GT 2506HS *1	-	-
Q24DHCCPU-V/VG Q24DHCCPU-LS Q26DHCCPU-LS	GX Works2 MX Component MX Sheet Setting/Monitoring tool for C Controller module	GT 2506HS *1	-	-

*1 Use the serial port of QCPU in the multiple CPU system, since QnUDEHCPU, QnUDVCPU has no direct coupled I/F.

■MELSEC-QS

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
QS001CPU	-	-	-	-

■MELSEC-L

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
L02CPU L06CPU L26CPU L26CPU-BT L02CPU-P L06CPU-P L26CPU-P L26CPU-PBT L02SCPU L02SCPU-P	GX Works2 MX Component MX Sheet	GT 2506HS	GT 2506HS	-

■MELSEC-Q (A mode)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
Q02CPU-A Q02HCPU-A Q06HCPU-A	-	-	-	-

■MELSEC-QnA (QnACPU)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
Q2ACPU Q2ACPU-S1 Q3ACPU Q4ACPU	-	-	-	-
Q4ARCPU	-	-	-	-

■MELSEC-QnA (QnASCPU)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
Q2ASCPU Q2ASCPU-S1 Q2ASHCPU Q2ASHCPU-S1	-	-	-	-

■MELSEC-A (AnCPU)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
A2UCPU A2UCPU-S1	-	-	-	-
A3UCPU	-	-	-	-
A4UCPU A2ACPU A2ACPUP21 A2ACPUR21 A2ACPU-S1 A2ACPUP21-S1 A2ACPUR21-S1	-	-	-	-
A3ACPU A3ACPUP21 A3ACPUR21	-	-	-	-
A1NCPU A1NCPUP21 A1NCPUR21	-	-	-	-
A2NCPU A2NCPUP21 A2NCPUR21 A2NCPU-S1 A2NCPUP21-S1 A2NCPUR21-S1	-	-	-	-
A3NCPU A3NCPUP21 A3NCPUR21	-	-	-	-

■MELSEC-A (AnSCPU)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
A2USCPU A2USCPU-S1 A2USHCPU-S1	-	-	-	-
A1SCPU	-	-	-	-
A1SCPUC24-R2 A1SHCPU	-	-	-	-
A2SCPU A2SCPU-S1 A2SHCPU A2SHCPU-S1	-	-	-	-
A1SJCPU A1SJCPU-S3 A1SJHCPU	-	-	-	-

■MELSEC-A

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
A0J2HCPU A0J2HCPUP21 A0J2HCPUR21 A0J2HCPU-DC24	-	-	-	-
A2CCPU A2CCPUP21 A2CCPUR21	-	-	-	-
A2CCPUC24 A2CCPUC24-PRF	-	-	-	-
A2CJCPU-S3	-	-	-	-
A1FXCPU	-	-	-	-

■Motion CPU (Q Series)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
Q172CPU Q173CPU Q172CPUN Q173CPUN	-	-	-	-
Q172HCPU Q173HCPU	-	-	-	-
Q172DCPU Q173DCPU Q172DCPU-S1 Q173DCPU-S1 Q172DSCPU Q173DSCPU	MT Works2	GT 2506HS *1	-	-
Q170MCPU Q170MSCPU Q170MSCPU-S1	MT Works2 GX Works2	GT 2506HS	-	-

*1 Use the serial port of QCPU in the multiple CPU system since Q172D/Q173DCPU has no direct coupled I/F.

■Motion CPU (A Series)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
A273UCPU A273UHCPU A273UHCPU-S3 A373UCPU A373UCPU-S3	-	-	-	-
A171SCPU A171SCPU-S3 A171SCPU-S3N A171SHCPU A171SHCPUN A172SHCPU A172SHCPUN A173UHCPU A173UHCPU-S1	-	-	-	-

■MELSEC-FX

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
FX0 FX0S FX0N FX1 FX2 FX2C FX1S FX1N FX2N FX1NC FX2NC	GX Works2 MX Component MX Sheet	GT 2506HS	-	-
FX3G(C) FX3S FX3GE FX3U(C)	MX Component MX Sheet	GT 2506HS	-	-

■MELSEC-WS

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
WS0-CPU0 WS0-CPU1 WS0-CPU3	-	-	-	-

■MELSECNET/H Remote I/O station

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
QJ72LP25-25 QJ72LP25G QJ72BR15	-	-	-	-

■CC-Link IE Field Network head module

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
LJ72GF15-T2	-	-	-	-

■CC-Link IE Field Network Ethernet adapter module

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
NZ2GF-ETB	-	-	-	-

■CNC

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
CNC C70(Q173NCCPU)	-	-	-	-
MELDAS C6/C64	-	-	-	-

■Robot controller (Q Series)

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
CRnQ-700(Q172DRCPU) CR750-Q(Q172DRCPU) CR751-Q(Q172DRCPU)	-	-	-	-
CR800-Q(Q172DSRCPU)	-	-	-	-
CRnD-700 CR750-D CR751-D	-	-	-	-

■MELIPC

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
MI5122-VW	-	-	-	-

■FR-A500(L), FR-F500(L), FR-V500(L), FR-E500, FR-S500(E), FR-F500J

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
FR-A5□0(L)	-	-	-	-
FR-F5□0(L)	-	-	-	-
FR-V5□0(L)	-	-	-	-
FR-E5□0(C) FR-E5□0S FR-E5□0W	-	-	-	-
FR-S5□0(E)(-R)(-C) FR-S5□0S(E)(-R) FR-S5□0W(E)(-R)	-	-	-	-
FR-F5□0J(F)	-	-	-	-

■FR-D700, FR-F700PJ, FR-E700, FR-A700, FR-F700, FR-F700P

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
FR-D7□0 FR-D7□0S FR-D7□0W	-	-	-	-
FR-F7□0PJ(F)	-	-	-	-
FR-E7□0 FR-E7□0S FR-E7□0W	-	-	-	-
FR-E7□0-NE	-	-	-	-
FR-A7□0	-	-	-	-
FR-F7□0	-	-	-	-
FR-F7□0P	-	-	-	-

■FR-A800

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
FR-A8□0 FR-A8□2 FR-A8□6	FR Configurator2	GT 2506HS GT 2505HS	-	-
FR-A8□0-E FR-A8□2-E FR-A8□6-E	FR Configurator2	GT 2506HS GT 2505HS	-	-
FR-A8□0-GF FR-A8□2-GF	FR Configurator2	GT 2506HS GT 2505HS	-	-
FR-A8□0-GN FR-A8□2-GN	-	-	-	-

■FR-A800 Plus

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
FR-A8□0-CRN FR-A8□2-CRN FR-A8□0-R2R FR-A8□2-R2R FR-A8□0-LC	-	-	-	-
FR-A8□0-E-CRN FR-A8□2-E-CRN FR-A8□0-E-R2R FR-A8□2-E-R2R FR-A8□0-E-LC	-	-	-	-

■FR-F800

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
FR-F8□0 FR-F8□2 FR-F8□6	FR Configurator2	GT 2506HS GT 2505HS	-	-
FR-F8□0-E FR-F8□2-E	FR Configurator2	GT 2506HS GT 2505HS	-	-

■FR-E800

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
FR-E8□0	FR Configurator2	GT 2506HS GT 2505HS	-	-
FR-E8□0-E	-	-	-	-

■FR-D800

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
FR-D8□0	FR Configurator2	GT 2506HS GT 2505HS	-	-
FR-D8□0-E	FR Configurator2	-	-	GT 2506HS GT 2505HS *3

■Sensorless servo

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
FR-E7□0EX	-	-	-	-

■MELIPM

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
MD-CX522-□K(-A0)	-	-	-	-

■MELSERVO

Model name	Target software	Connection type		
		Direct CPU connection (serial)	Serial communication connection	Ethernet connection
MR-J2S-□A MR-J2S-□CP MR-J2S-□CL	-	-	-	-
MR-J2M-P8A MR-J2M-□DU	-	-	-	-
MR-J3-□A MR-J3-□T	-	-	-	-
MR-J3-□B *1	MR Configurator2	GT 2506HS	-	-
MR-J4-□A MR-J4-□A-RJ MR-JE-□A	-	-	-	-
MR-J4-□B *1 MR-J4-□B-RJ *1 MR-J4W2-□B *1 MR-J4W3-□B *1	MR Configurator2	GT 2506HS	-	-
MR-JE-□B	MR Configurator2	-	-	-

*1 A motion controller is required between the GOT and PLC in direct CPU connection (serial).

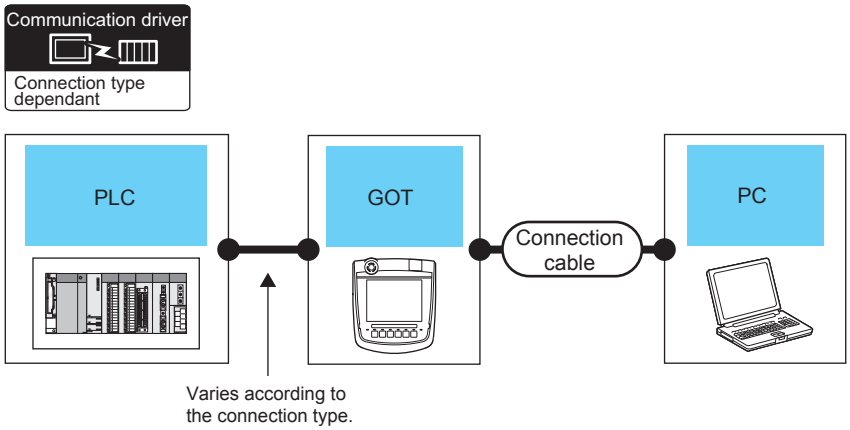
13.4 System Configuration

GX Series, MX Series, for C Controller module

The following shows the software for each series.

Series	Software
GX Series	GX Works3, GX Works2, GX Developer, GX LogViewer, CPU Module Logging Configuration Tool
MX Series	MX Component, MX Sheet
For C Controller module	CW Configurator, setting/monitoring tool for C Controller module

When connecting the GOT and the personal computer by USB



PLC	GOT		Connection cable		Personal computer	Number of connectable equipment
Connection type	Model	Interface	Cable model	Max. distance	Software	
For the system configuration between the GOT and PLC, refer to the following. ☞ Page 104 ETHERNET CONNECTION ☞ Page 307 DIRECT CPU CONNECTION (SERIAL)*4 ☞ Page 359 SERIAL COMMUNICATION CONNECTION	GT 2506HS GT 2505HS	USB	GT09-C30USB-5P(3m) GT09-C20USB-5P(2m)	3m	GX Works3 CW Configurator MX Component MX Sheet CPU Module Logging Configuration Tool	1 personal computer for 1 GOT
For the system configuration between the GOT and PLC, refer to the following. ☞ Page 104 ETHERNET CONNECTION ☞ Page 307 DIRECT CPU CONNECTION (SERIAL)*3 ☞ Page 359 SERIAL COMMUNICATION CONNECTION*1 ☞ Page 646 GOT MULTI-DROP CONNECTION*2	GT 2506HS GT 2505HS	USB	GT09-C30USB-5P(3m) GT09-C20USB-5P(2m)	3m	GX Works2 GX Developer GX LogViewer MX Component MX Sheet CPU Module Logging Configuration Tool Setting/Monitoring toolfor C Controllermodule	1 personal computer for 1 GOT

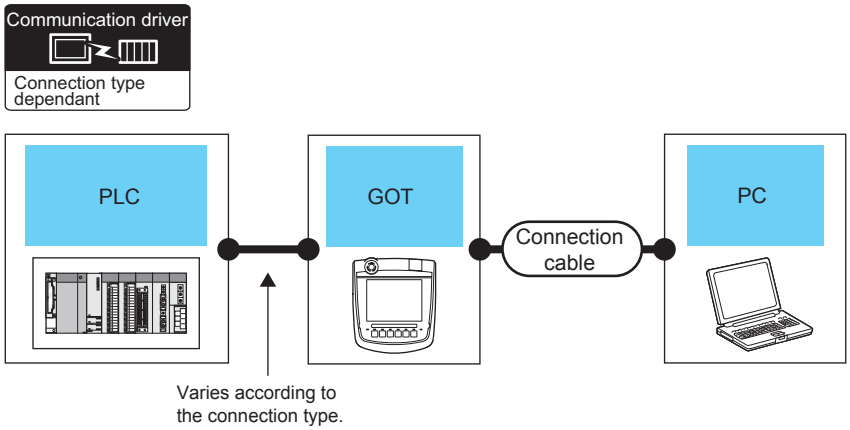
*1 Applicable to the QCPU only

*2 GX LogViewer, MX Component, MX Sheet, QnUDVCPU•LCPU Logging Configuration Tool and Setting/Monitoring tool for C Controller module are not supported.

*3 Not applicable to Setting/Monitoring tool for C Controller module.

*4 CPU Module Logging Configuration Tool does not support the direct CPU connection (serial).

When connecting the GOT and the personal computer by Ethernet



PLC	GOT		Connection cable*1	Maximum segment length*2	Personal computer	Number of connectable equipment
Connection type	Model	Interface	Cable model		Software	
For the system configuration between the GOT and PLC, refer to the following. ☞ Page 307 DIRECT CPU CONNECTION (SERIAL)*3 ☞ Page 359 SERIAL COMMUNICATION CONNECTION*3	GT 2506HS	- (Built into GOT)	Twisted pair cable • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e	100m	GX Works2 Setting/Monitoring tool for C Controller module	1 personal computer for 1 GOT
For the system configuration between the GOT and PLC, refer to the following. ☞ Page 359 SERIAL COMMUNICATION CONNECTION*3	GT 2505HS				GX Works3 CW Configurator CPU Module Logging Configuration Tool	

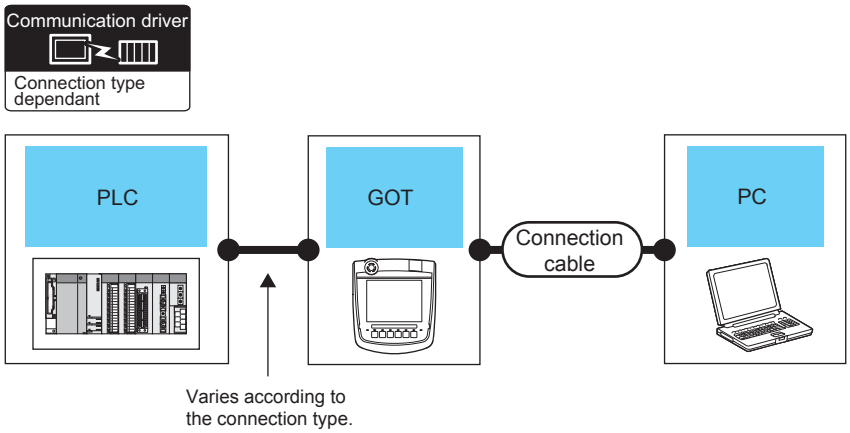
*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
A cross cable is available for connecting the GOT to the Ethernet module.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

*3 Not applicable to Setting/Monitoring tool for C Controller module.

PX Developer, GX Configurator

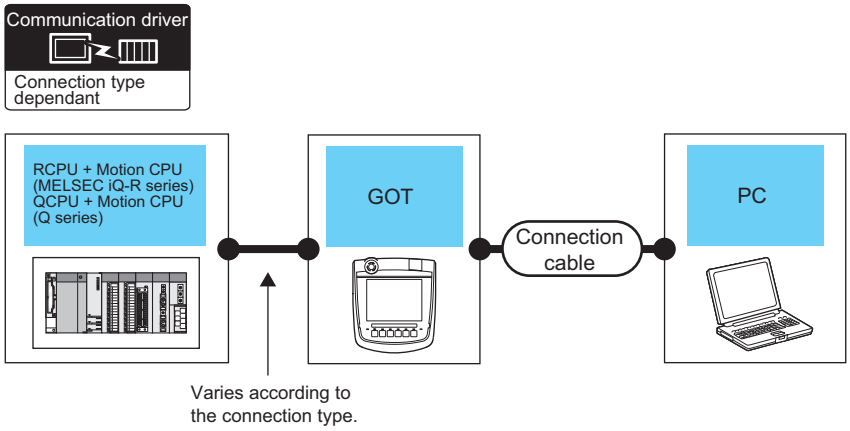
When connecting the GOT and the personal computer by USB



PLC	GOT		Connection cable		Personal computer	Number of connectable equipment
Connection type	Model	Interface	Cable model	Max. distance	Software	
For the system configuration between the GOT and PLC, refer to the following. ☞ Page 307 DIRECT CPU CONNECTION (SERIAL) ☞ Page 359 SERIAL COMMUNICATION CONNECTION	GT 2506HS GT 2505HS	USB	GT09-C30USB-5P(3m) GT09-C20USB-5P(2m)	3m	PX Developer GX Configurator	1 personal computer for 1 GOT

MT Developer, MT Works2

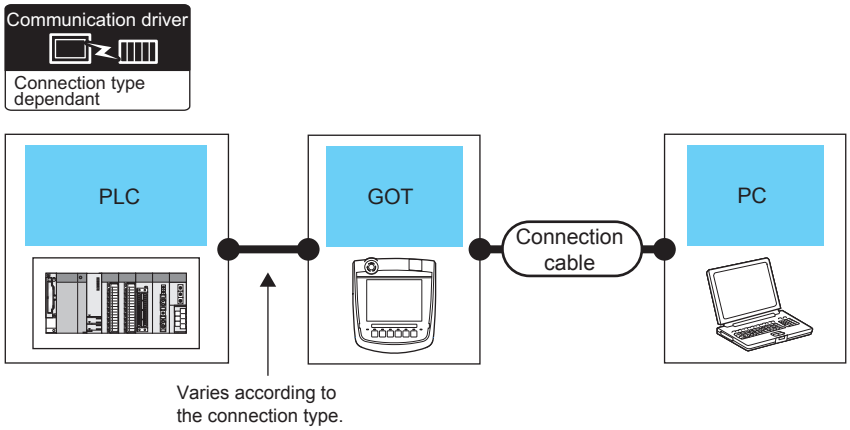
When connecting the GOT and the personal computer by USB



PLC	GOT		Connection cable		Personal computer	Number of connectable equipment
Connection type	Model	Interface	Cable model	Max. distance	Software	
For the system configuration between the GOT and PLC, refer to the following. ☞ Page 104 ETHERNET CONNECTION ☞ Page 307 DIRECT CPU CONNECTION (SERIAL)*1 ☞ Page 646 GOT MULTI-DROP CONNECTION*1	GT 2506HS GT 2505HS	USB	GT09-C30USB-5P(3m) GT09-C20USB-5P(2m)	3m	MT Developer MT Works2	1 personal computer for 1 GOT

*1 The Motion CPU (MELSEC iQ-R series) does not support the direct CPU connection (serial) and GOT multi-drop connection.

When connecting the GOT and the personal computer by Ethernet



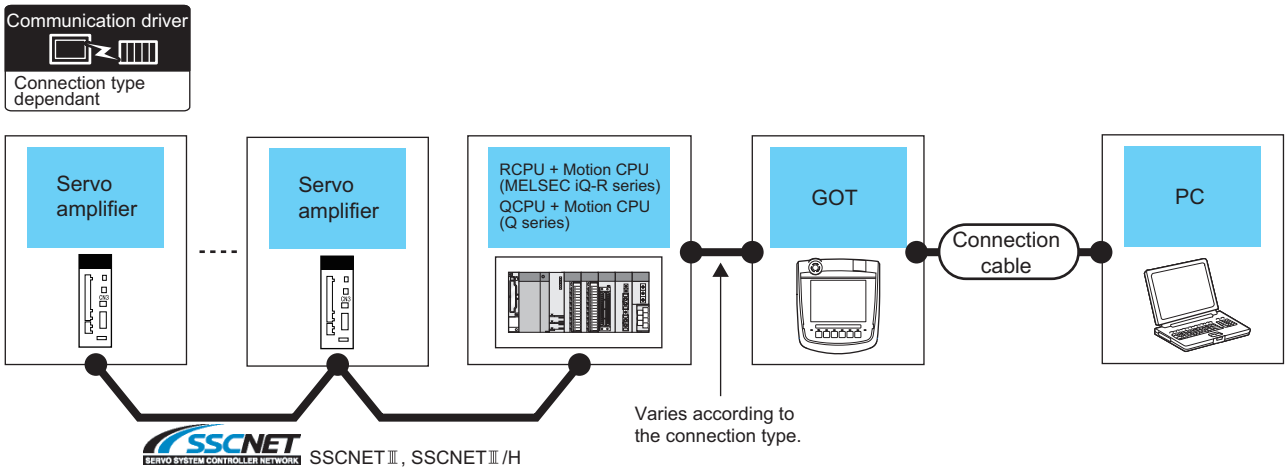
PLC	GOT		Connection cable*1	Maximum segment length*2	Personal computer	Number of connectable equipment
Connection type	Model	Interface	Cable model		Software	
For the system configuration between the GOT and PLC, refer to the following. ☞ Page 307 DIRECT CPU CONNECTION (SERIAL)	GT 2506HS	- (Built into GOT)	Twisted pair cable • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e	100m	MT Works2	1 personal computer for 1 GOT

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
A cross cable is available for connecting the GOT to the Ethernet module.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

MR Configurator, MR Configurator2

When connecting the GOT and the personal computer by USB

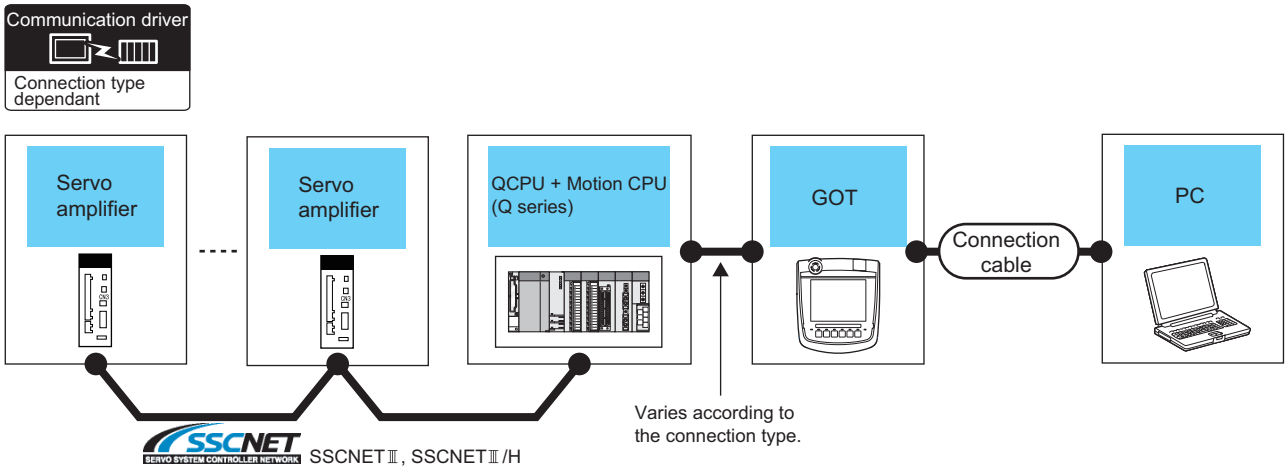


PLC	GOT		Connection cable		Personal computer	Number of connectable equipment
Connection type	Model	Interface	Cable model	Max. distance	Software	
For the system configuration between the GOT and PLC, refer to the following. ☞ Page 104 ETHERNET CONNECTION[*1] ☞ Page 307 DIRECT CPU CONNECTION (SERIAL)[*2]	GT 2506HS GT 2505HS	USB	GT09-C30USB-5P(3m) GT09-C20USB-5P(2m)	3m	MR Configurator MR Configurator2	1 personal computer for 1 GOT

*1 Only MR Configurator2 is compatible with the Ethernet connection.

*2 The Motion CPU (MELSEC iQ-R series) does not support the direct CPU connection (serial).

When connecting the GOT and the personal computer by Ethernet



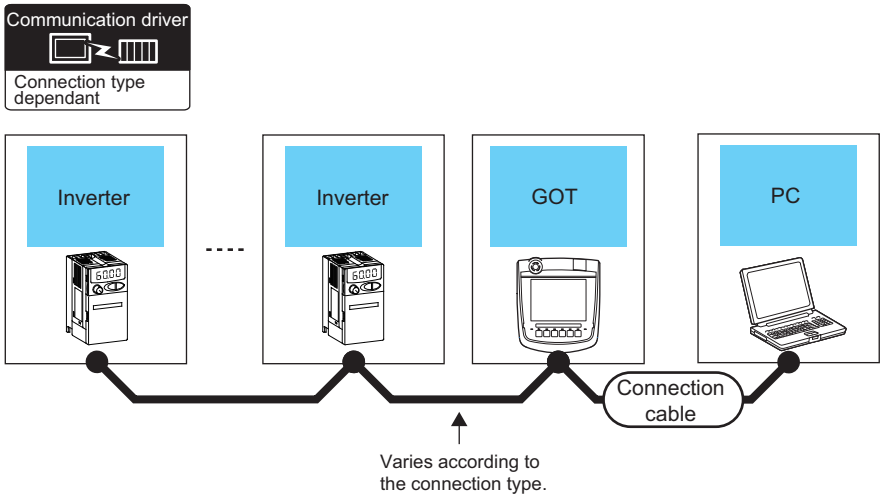
PLC	GOT		Connection cable[*1]	Maximum segment length[*2]	Personal computer	Number of connectable equipment
Connection type	Model	Interface	Cable model		Software	
For the system configuration between the GOT and PLC, refer to the following. ☞ Page 307 DIRECT CPU CONNECTION (SERIAL)	GT 2506HS	- (Built into GOT)	Twisted pair cable • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e	100m	MR Configurator2	1 personal computer for 1 GOT

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
A cross cable is available for connecting the GOT to the Ethernet module.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

FR Configurator, FR Configurator2

When connecting the GOT and the personal computer by USB

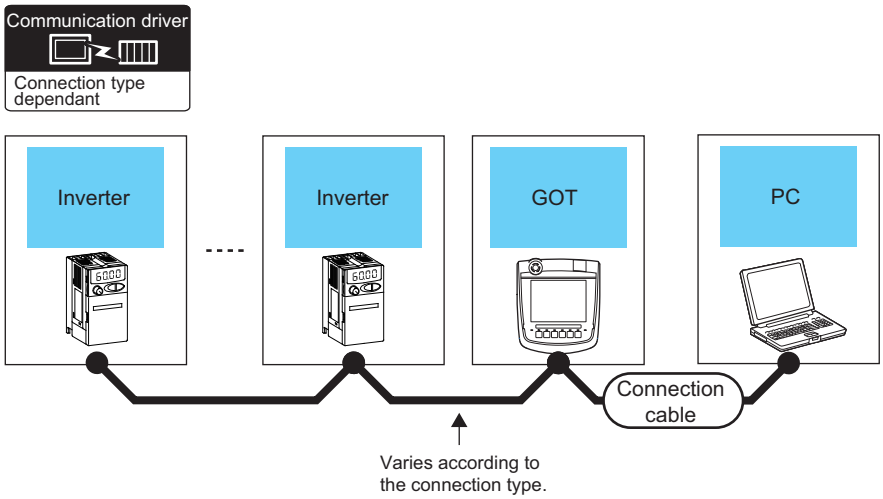


Inverter	GOT		Connection cable		Personal computer	Number of connectable equipment
Connection type	Model	Interface	Cable model	Max. distance	Software	
For details on the system configuration between GOT and Mitsubishi Electric inverter, refer to the following. ☞ Page 459 INVERTER CONNECTION	GT 2506HS GT 2505HS	USB	GT09-C30USB-5P(3m) GT09-C20USB-5P(2m)	3m	FR Configurator FR Configurator2	1 personal computer for 1 GOT

When connecting the GOT and the personal computer by Ethernet

Point

When the GOT and the inverters are connected using the direct CPU connection (serial), the communication driver [FREQROL 500/700/800, SENSORLESS SERVO] is not supported.

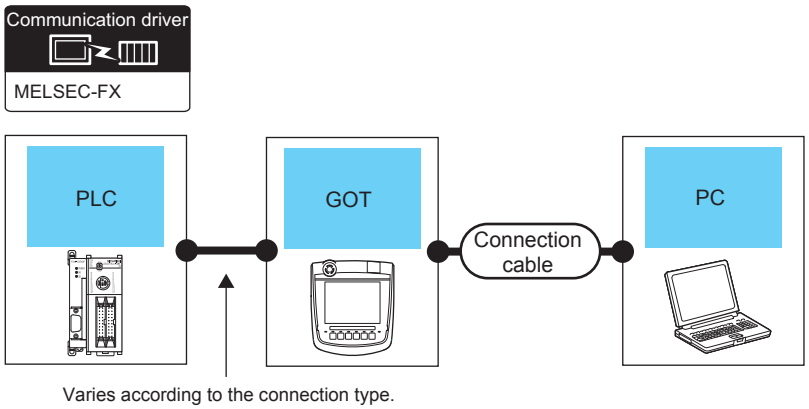


Inverter	GOT		Connection cable *1	Maximum segment length *2	Personal computer	Number of connectable equipment
Connection type	Model	Interface	Cable model		Software	
For details on the system configuration between GOT and Mitsubishi Electric inverter, refer to the following. ☞ Page 459 INVERTER CONNECTION	GT 2506HS GT 2505HS	- (Built into GOT)	Twisted pair cable • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e	100m	FR Configurator2	1 personal computer for 1 GOT

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
A cross cable is available for connecting the GOT to the Ethernet module.
For the controller to which the wireless LAN adapter can be connected and the setting method of the wireless LAN adapter, refer to the manual of the wireless LAN adapter.

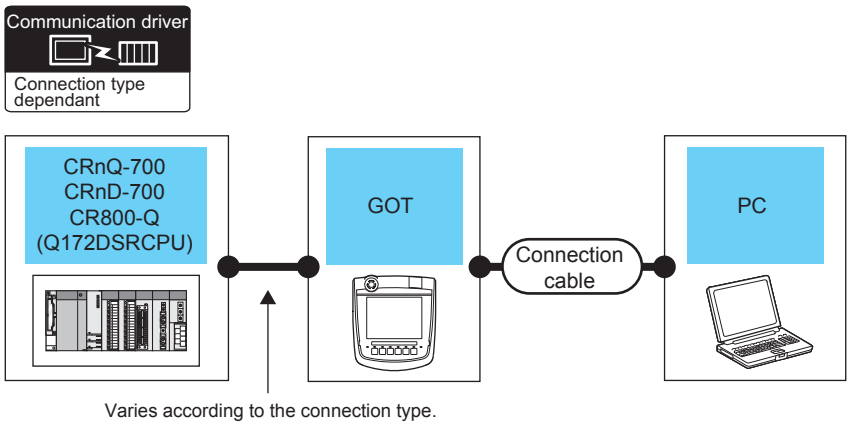
*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

FX Configurator-FP, FX Configurator-EN-L, FX Configurator-EN



PLC	GOT		Connection cable		Personal computer	Number of connectable equipment
Connection type	Model	Interface	Cable model	Max. distance	Software	
For the system configuration between the GOT and PLC, refer to the following. ☞ Page 307 DIRECT CPU CONNECTION (SERIAL)	GT 2506HS GT 2505HS	USB	GT09-C30USB-5P(3m) GT09-C20USB-5P(2m)	3m	FX Configurator-FP, FX Configurator-EN-L FX Configurator-EN	1 personal computer for 1 GOT

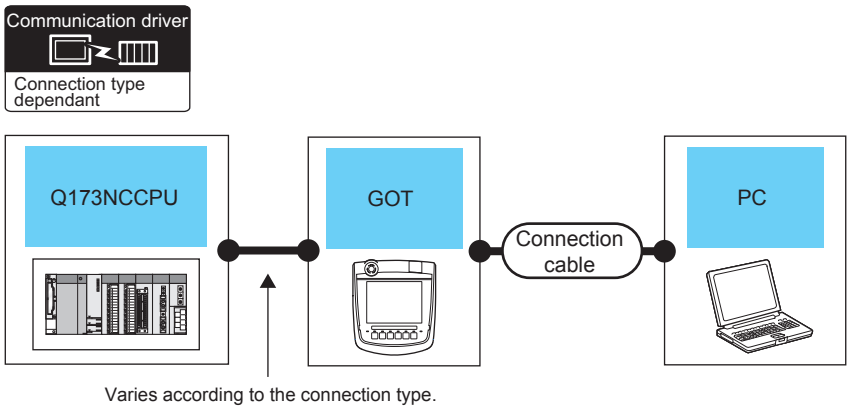
RT ToolBox2, RT ToolBox3



PLC	GOT		Connection cable		Personal computer	Number of connectable equipment
Connection type	Model	Interface	Cable model	Max. distance	Software	
For the system configuration between the GOT and PLC, refer to the following. ☞ Page 104 ETHERNET CONNECTION ☞ Page 307 DIRECT CPU CONNECTION (SERIAL)*1	GT 2506HS GT 2505HS	USB	GT09-C30USB-5P(3m) GT09-C20USB-5P(2m)	3m	RT ToolBox2 RT ToolBox3	1 personal computer for 1 GOT

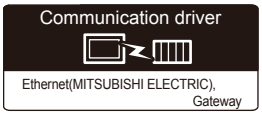
*1 CRnD-700 does not support the direct CPU connection (serial).

NC Configurator2

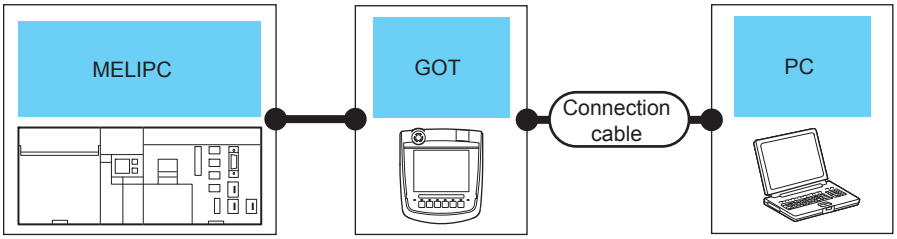


PLC	GOT		Connection cable		Personal computer	Number of connectable equipment
Connection type	Model	Interface	Cable model	Max. distance	Software	
For the system configuration between the GOT and PLC, refer to the following. ☞ Page 104 ETHERNET CONNECTION	GT 2506HS GT 2505HS	USB	GT09-C30USB-5P(3m) GT09-C20USB-5P(2m)	3m	NC Configurator2	1 personal computer for 1 GOT

MI Configurator



When connecting the GOT and the personal computer by USB



PLC	GOT		Connection cable		Personal computer	Number of connectable equipment
Connection type	Model	Interface	Cable model	Max. distance	Software	
For the system configuration between the GOT and the MELIPC, refer to the following. ☞ Page 442 MELIPC CONNECTION*1	GT 2506HS GT 2505HS	USB	GT09-C30USB-5P(3m) GT09-C20USB-5P(2m)	3m	MI Configurator	1 personal computer for 1 GOT

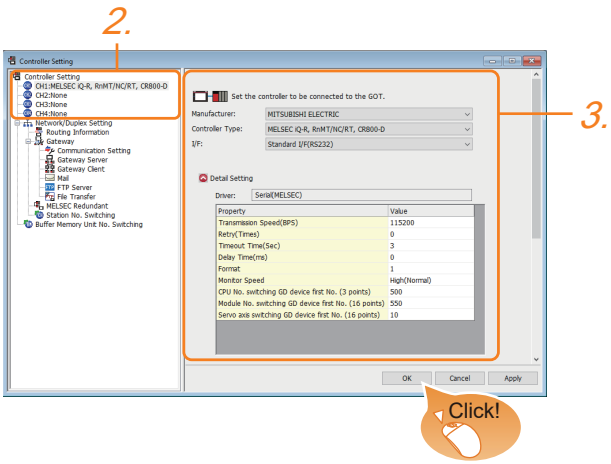
*1 The FA transparent function is supported only when the GOT is connected to the MELIPC by Ethernet.

13.5 GOT Side Settings

Setting communication interface

Controller Setting

Set the channel of the connected equipment.



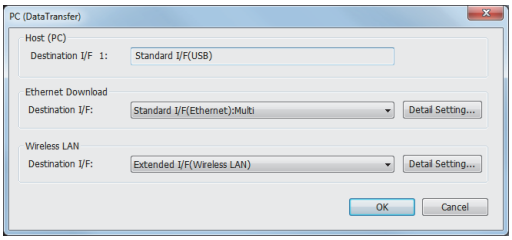
1. Select [Common] → [Controller Setting] from the menu.
2. In the [Controller Setting] window, select the channel No. to be used from the list menu.
3. Set [Manufacturer], [Controller Type], [I/F], and [Detail Setting] according to the controller used.
4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 82 I/F communication setting

Communication setting with personal computer

Set the communication setting between the GOT and the personal computer.
For details of the setting contents, refer to the following manual.
GT Designer3 (GOT2000) Screen Design Manual



1. Select [Common] → [Peripheral Setting] → [PC (Data Transfer)] from the menu.
2. The [PC (Data Transfer)] is displayed.

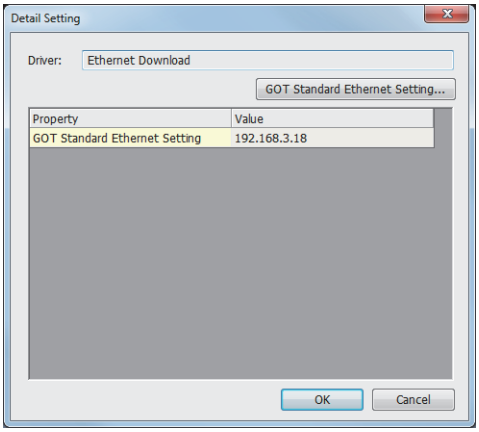
Set the interface of the GOT to be used in the communication with the personal computer.

■Host (PC) setting

When communicating the GOT and the personal computer in the direct connection, set the interface of the GOT to be used in the communication with the personal computer.

■Ethernet download setting

When communicating the GOT via Ethernet, set the interface of the GOT to be used in the communication with the personal computer.

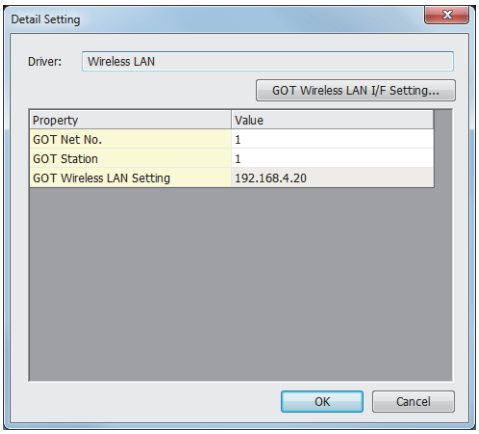


Item	Description	Range
GOT Standard Ethernet Setting *1	Set the IP address of the GOT. (Default: 192.168.3.18)	0.0.0.0 to 255.255.255.255

*1 For setting, refer to the following.
☞ Page 80 GOT Ethernet Setting

■Wireless LAN setting

When communicating the GOT via wireless LAN, set the interface of the GOT to be used in the communication with the personal computer.



Item	Description	Range
GOT Wireless LAN I/F Setting *1	Set the IP address of the GOT. (Default: 192.168.4.20)	0.0.0.0 to 255.255.255.255

*1 For setting, refer to the following.
☞ Page 80 GOT Ethernet Setting

Point

When connecting the GOT and the personal computer by Ethernet or wireless LAN, match the GOT IP address and the transparent port No. with those in [PLC side I/F Detailed Setting of GOT] of GX Works2.
☞ Page 762 Accessing by GX Works2

1. Click the [OK] button when settings are completed.

Point

• Communication interface setting by Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after downloading [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

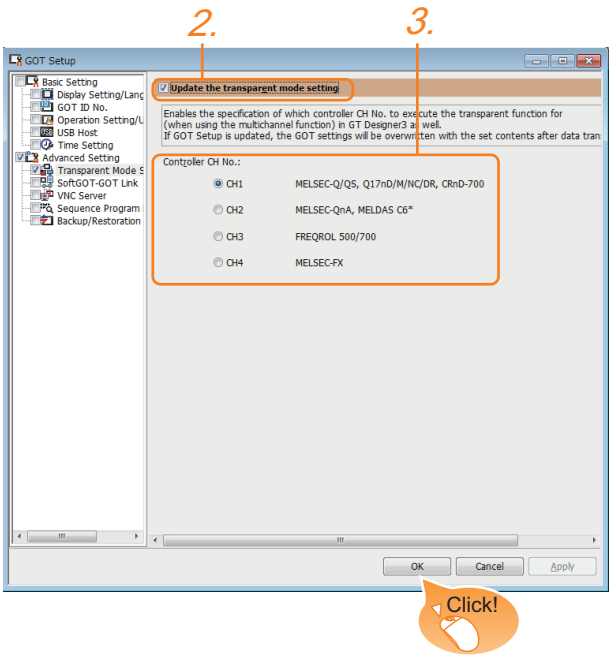
GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

GOT Setup

When using the multi-channel function, specify the channel No. on which FA transparent function is executed.



1. Select [Common] → [GOT Environmental Setting] → [GOT Setup] from the menu.
2. Check [Enable GOT Setup].
3. As necessary, check one of [CH1] to [CH4]. (Default: CH1)

GOT	Selectable CH No.
GT 2506HS GT 2505HS	[CH1], [CH2], [CH3], [CH4]

4. When you have completed the settings, click the [OK] button.

Point

Transparent setting on the utility screen

Transparent setting can be performed by the GOT.

For details of the operating, refer to the following.

GOT2000 Series User's Manual (Utility)

13.6 Personal Computer Side Setting

Accessing by GX Works3

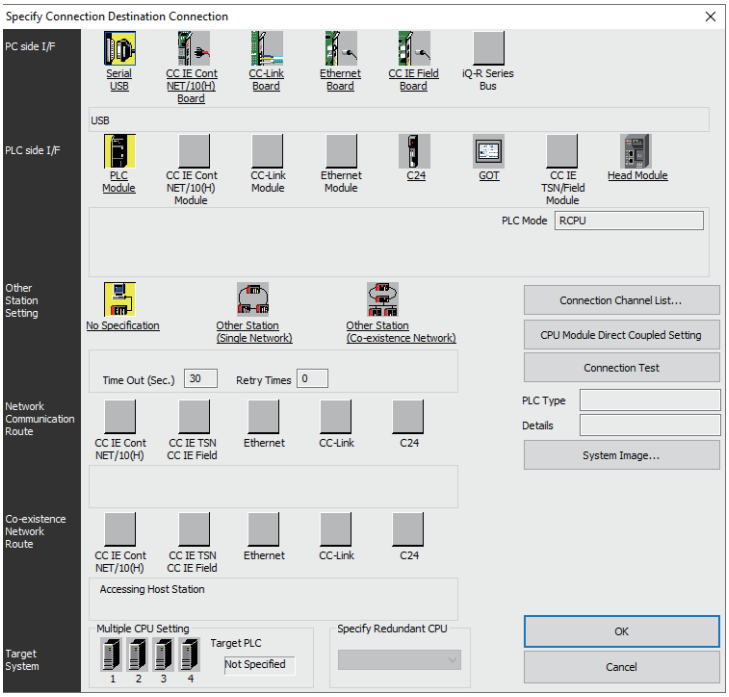
The following shows the procedure to set the FA transparent function of GX Works3.

GX Works3 Version 1.030G or later is required to use the FA transparent function for the RCPU redundant system.

When connecting the GOT and the personal computer by USB

■Connecting the GOT and PLC in Ethernet connection

- When connecting to RCPU

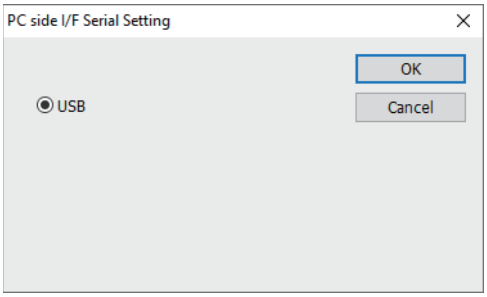


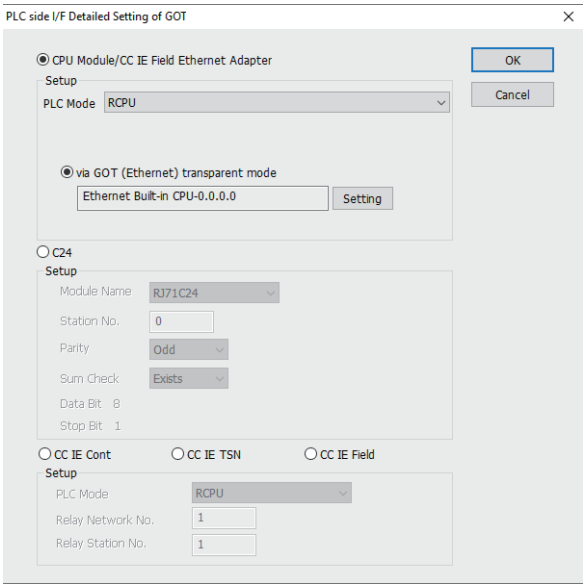
1. Click [Online] → [Current Connection Destination] on GX Works3.

Displays the [Specify Connection Destination] dialog.

2. Set [Specify Connection Destination].

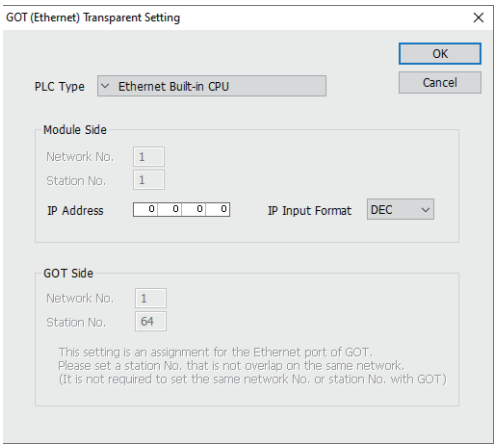
- PC side I/F: Serial USB
- PLC side I/F: GOT
- Other Station Setting: No Specification





3. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

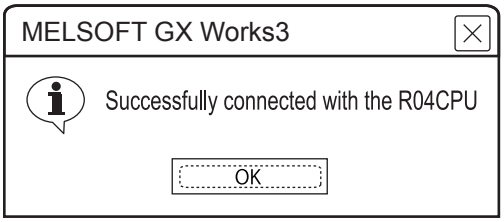
4. On the [PLC side I/F Detailed Setting of GOT], mark the [via GOT(Ethernet) transparent mode] checkbox and click [Setting...].



5. By clicking [Set], the [GOT (Ethernet) Transparent Setting] is displayed.

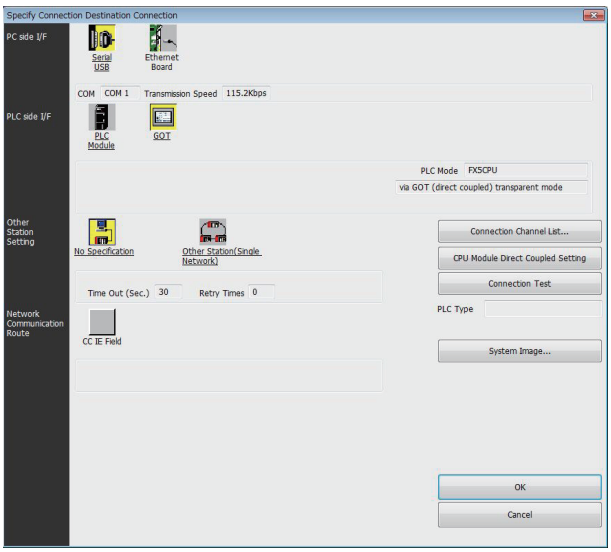
Here, set the built-in Ethernet port CPU or Ethernet module, which is firstly connected via a GOT.

Item		Description
[PLC Type]		Select the controller connected to the GOT by Ethernet. • [RJ71EN71] • [Ethernet Built-in CPU]
[Module Side]	[Network No.]	When [RJ71EN71] is set for [PLC type], specify the network number assigned to the Ethernet module.
	[Station No.]	When [RJ71EN71] is set for [PLC type], specify the station number assigned to the Ethernet module.
	[IP address]	Specify the IP address assigned to the built-in Ethernet port CPU or Ethernet module.



6. The screen returns to the [Connection Channel Setup]. Click [Connection Test] to check if GX Works3 has been connected to the RCPU.

• When connecting to FX5U, FX5UC, or FX5UJ



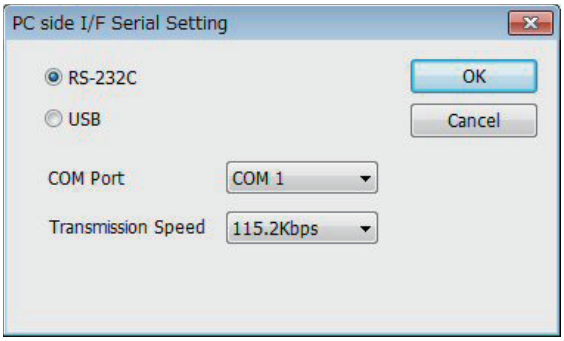
1. Click [Online] → [Current Connection Destination] → [Other connection method] in GX Works3.
Displays the [Specify Connection Destination] dialog.

2. Set the [Specify Connection Destination]:

• PC side I/F: Serial USB

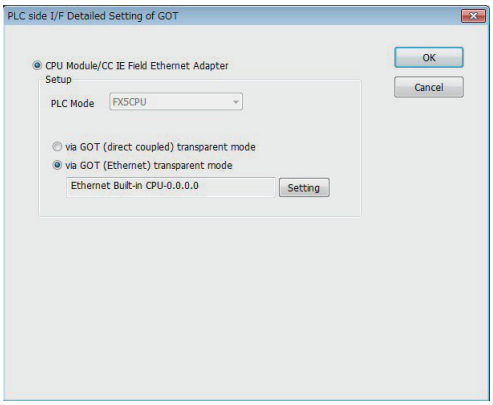
• PLC side I/F: GOT

• Other Station Setting: No Specification



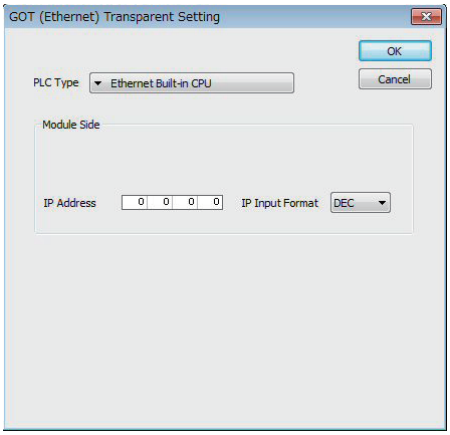
3. Double-click [Serial USB] of the PC side I/F to display [PC side I/F Serial Setting].

4. Select [USB] in the [PC side I/F Serial Setting] dialog.



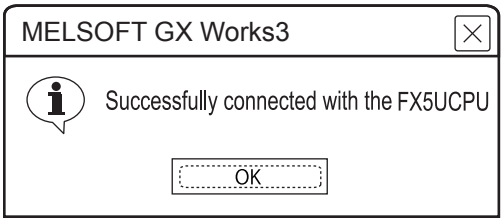
5. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

6. On the [PLC side I/F Detailed Setting of GOT], mark the [via GOT (Ethernet) transparent mode] checkbox and click [Setting...].



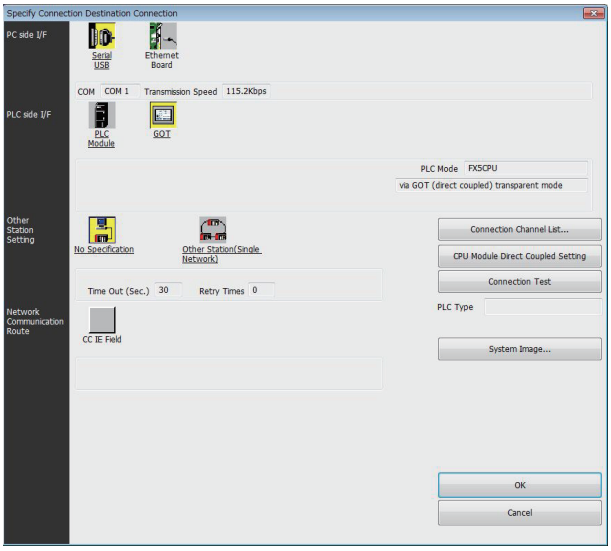
7. By clicking [Setting], the [GOT (Ethernet) transparent setting] is displayed.
Here, set the built-in Ethernet port CPU , which is firstly connected via a GOT.

8. Specify the IP address for [IP address] same as the IP address assigned to the built-in Ethernet port CPU.



9. The screen returns to Specify Connection Destination Connection1.
Click [Connection Test] to check if GX Works3 has been connected to the FX5CPU.

■Connecting the GOT and PLC in direct CPU connection (serial) (FX5U, FX5UC, FX5UJ)

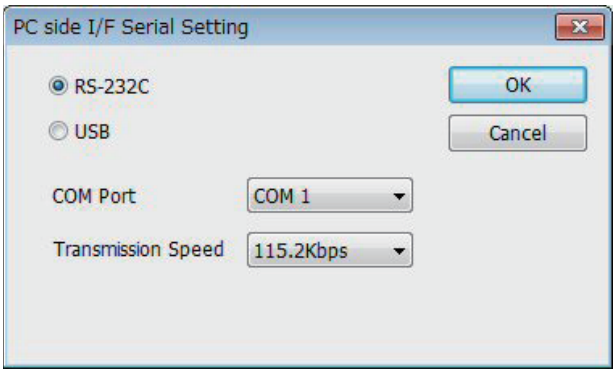


1. Click [Online] → [Current Connection Destination] → [Other connection method] in GX Works3.

Displays the [Specify Connection Destination] dialog.

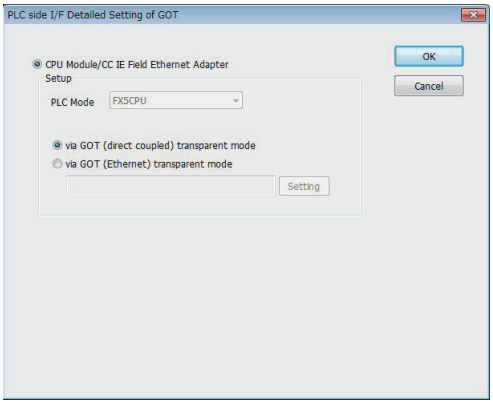
2. Set the [Specify Connection Destination]:

- PC side I/F: Serial USB
- PLC side I/F: GOT
- Other Station Setting: No Specification:



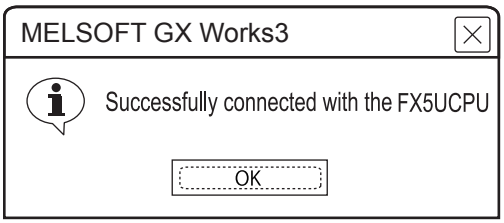
3. Double-click [Serial USB] of the PC side I/F to display [PC side I/F Serial Setting].

4. Select [USB] in the [PC side I/F Serial Setting] dialog.



5. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

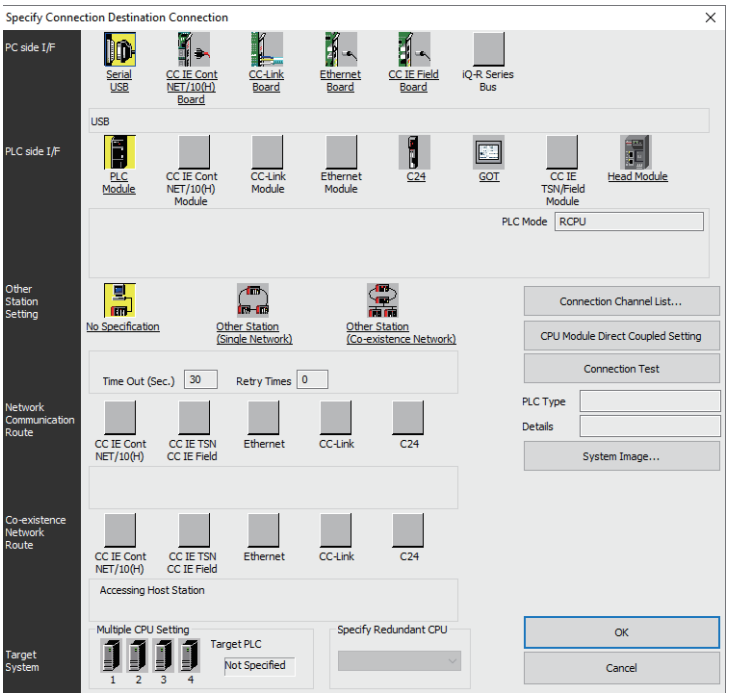
6. Check-mark [via GOT (direct coupled) transparent mode] in [PLC side I/F Detailed Setting of GOT].



7. The screen returns to Specify Connection Destination Connection1.

Click [Connection Test] to check if GX Works3 has been connected to the FX5UCPU.

■Connecting the GOT and PLC in serial communication connection (when connecting to RJ71C24)

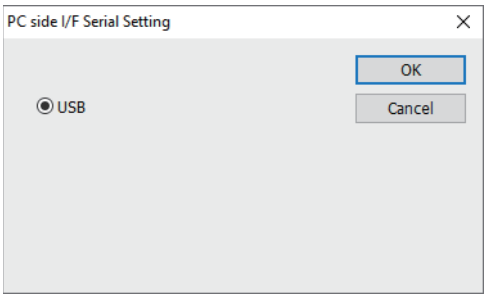


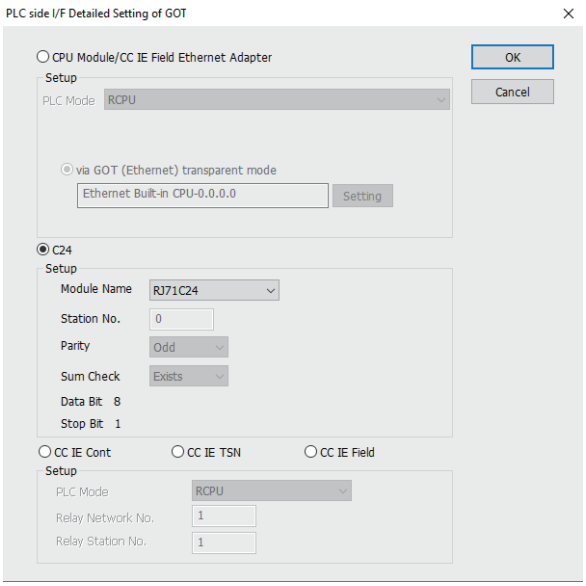
1. Click [Online] → [Current Connection Destination] on GX Works3.

Displays the [Specify Connection Destination] dialog.

2. Set [Specify Connection Destination].

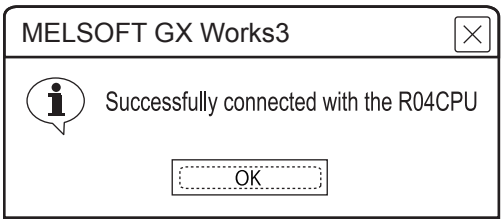
- PC side I/F: Serial USB
- PLC side I/F: GOT
- Other Station Setting: No Specification





3. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

4. Check-mark [C24] in [PLC side I/F Detailed Setting of GOT].

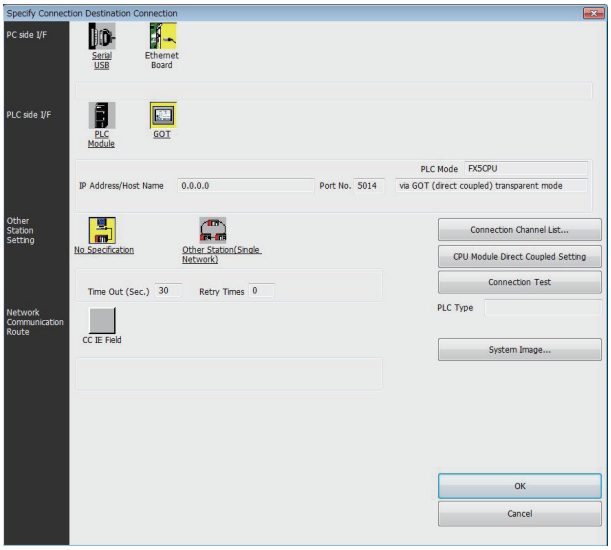


5. The screen returns to the [Connection Channel Setup].

Click [Connection Test] to check if GX Works3 has been connected to the RCPU.

When connecting the GOT and the personal computer by Ethernet

■Connecting the GOT and PLC in direct CPU connection (serial) (FX5U, FX5UC, FX5UJ)

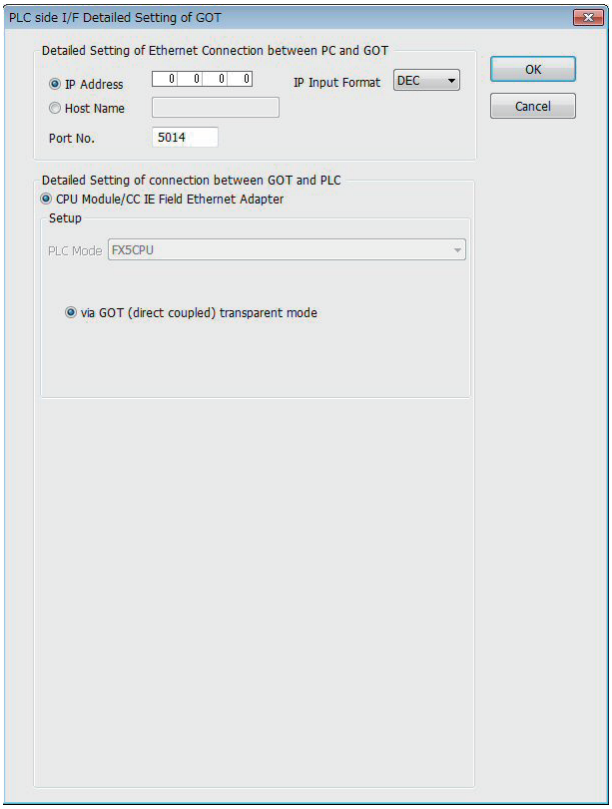


1. Click [Online] → [Current Connection Destination] → [Other connection method] in GX Works3.

Displays the [Specify Connection Destination] dialog.

2. Set [Specify Connection Destination].

- PC side I/F: Ethernet Board
- PLC side I/F: GOT
- Other Station Setting : No Specification

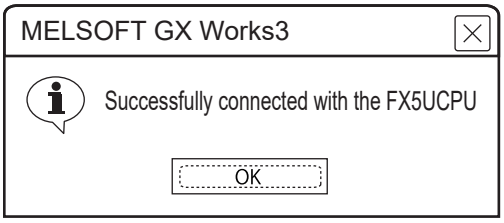


3. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

4. [Set the IP address and port No. in [Ethernet detail setting for PC and GOT connection].

Set the IP address and port No. to the same as the Ethernet download setting.

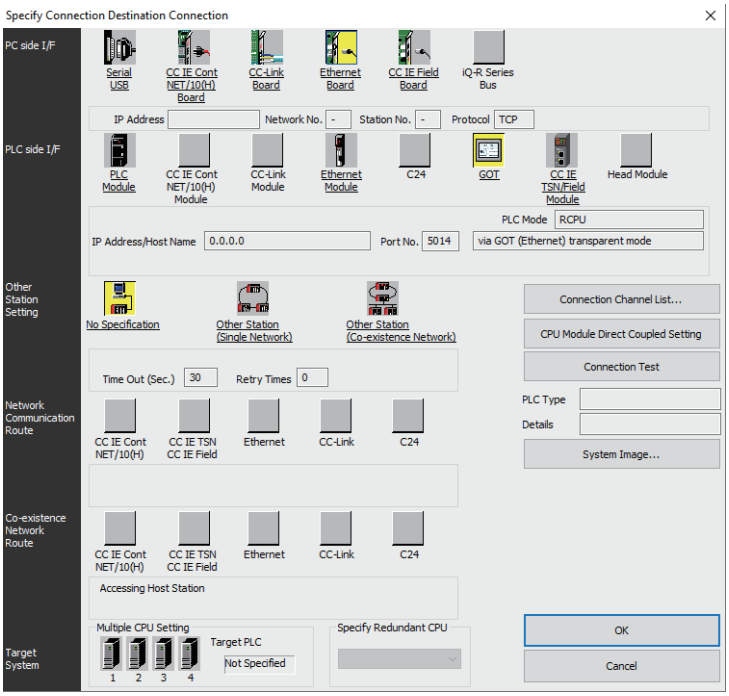
☞ Page 738 Ethernet download setting



5. The screen returns to the [Connection Channel Setup].

Click [Connection Test] to check if GX Works3 has been connected to the FX5CPU.

■Connecting the GOT and PLC in serial communication connection (when connecting to RJ71C24)

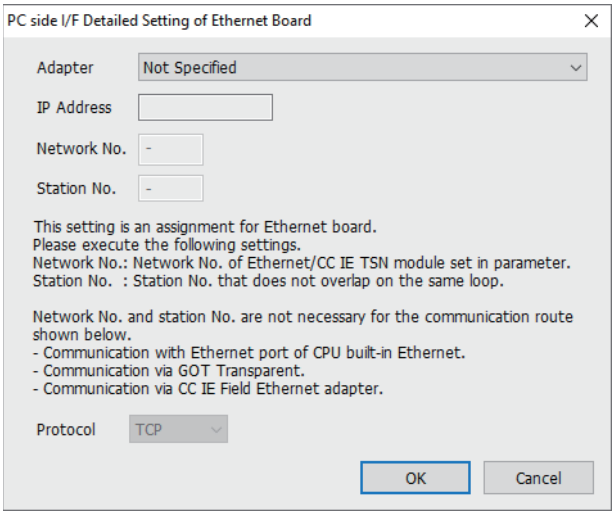


1. Click [Online] → [Current Connection Destination] on GX Works3.

Displays the [Specify Connection Destination] dialog.

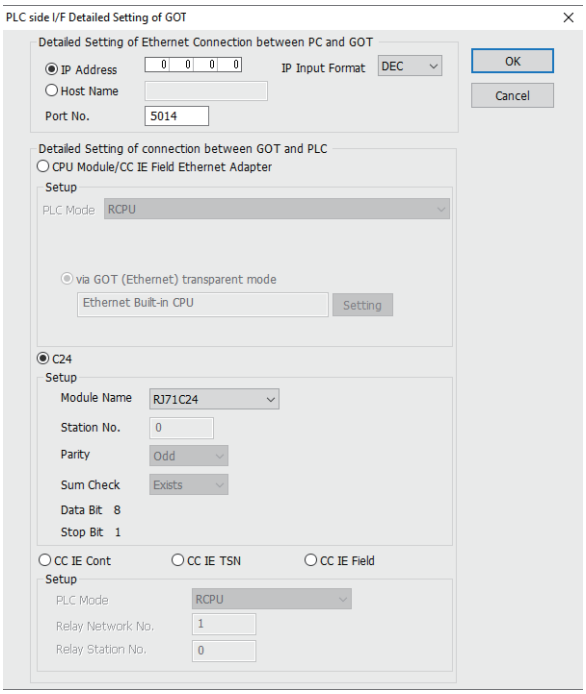
2. Set [Specify Connection Destination].

- PC side I/F: Ethernet Board
- PLC side I/F: GOT
- Other Station Setting : No Specification



3. Double-click [Ethernet Board] of the PC side I/F to display [PC side I/F Ethernet Board Setting].

4. Network No. and Station No. are not required to be changed (default) because they are not used.



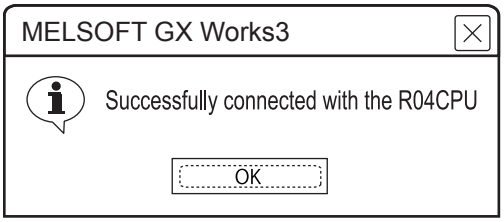
5. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

6. Set the IP address and port No. in [Ethernet detail setting for PC and GOT connection].

Set the IP address and port No. to the same as the Ethernet download setting.

☞ Page 738 Ethernet download setting

7. Check-mark [C24] in [Detail setting for GOT and PLC connection].



8. The screen returns to the [Connection Channel Setup].

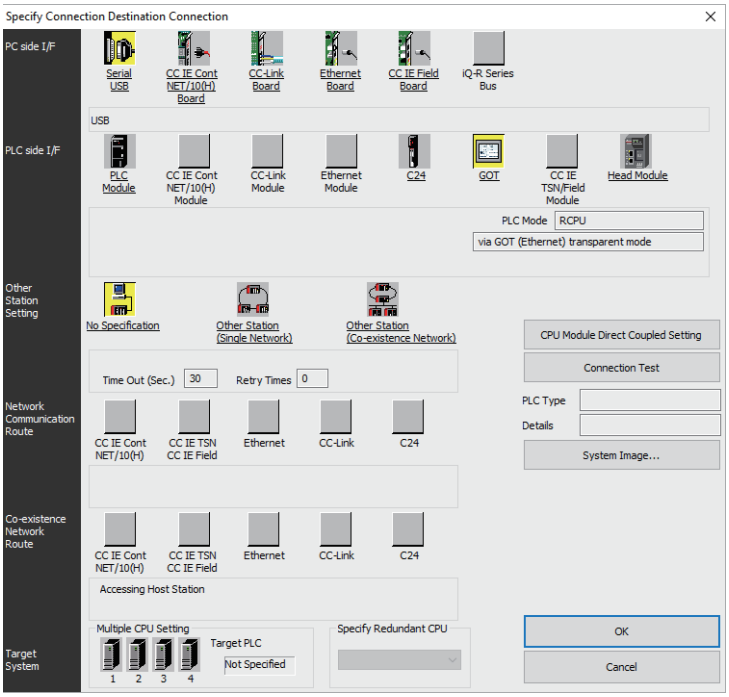
Click [Connection Test] to check if GX Works3 has been connected to the RCPU.

Accessing by CW Configurator

The following shows the procedure to set the FA transparent function of CW Configurator.

When connecting the GOT and the personal computer by USB

■Connecting the GOT and PLC in Ethernet connection

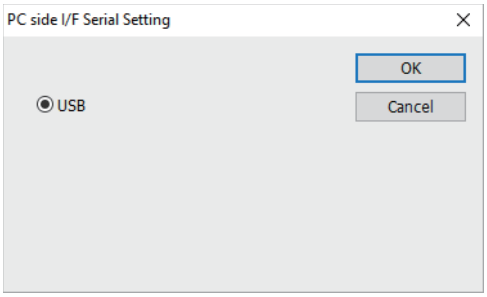


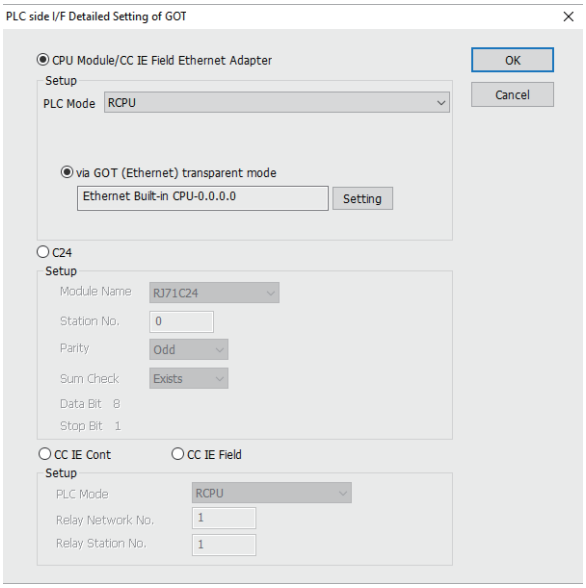
1. Click [Online] → [Current Connection Destination] on CW Configurator.

Displays the [Specify Connection Destination] dialog.

2. Set [Specify Connection Destination].

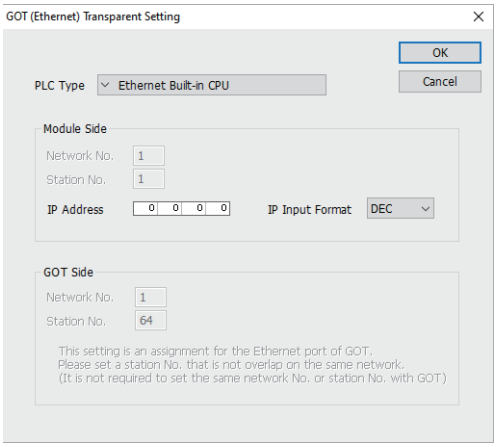
- PC side I/F: Serial USB
- PLC side I/F: GOT
- Other Station Setting: No Specification





3. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

4. On the [PLC side I/F Detailed Setting of GOT], mark the [via GOT(Ethernet) transparent mode] checkbox and click [Setting...].

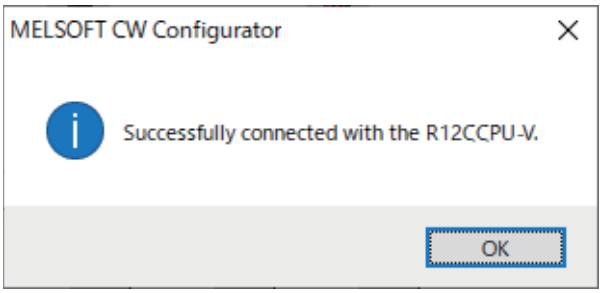


5. By clicking [Set], the [GOT (Ethernet) Transparent Setting] is displayed.

Here, set the built-in Ethernet port CPU, which is firstly connected via a GOT.

6. Set [Ethernet Built-in CPU] for [PLC Type].

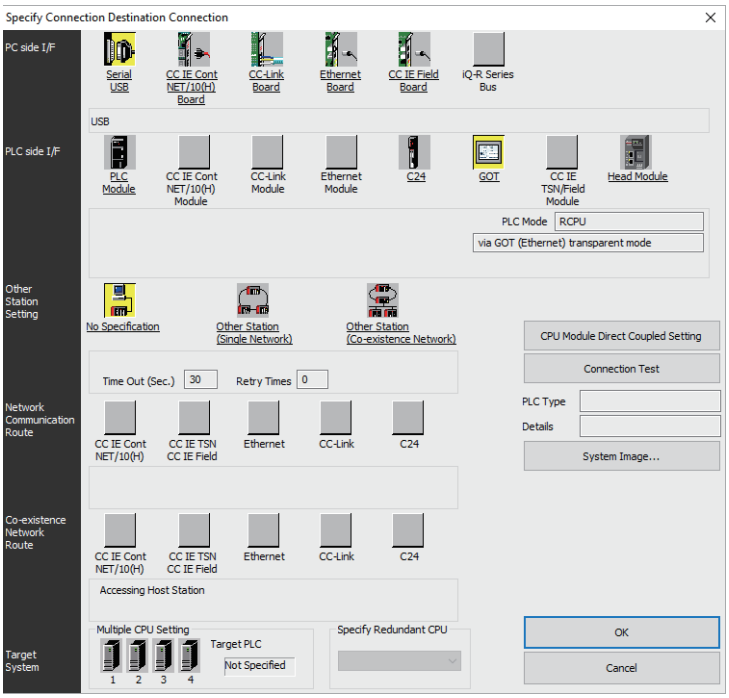
7. For [IP address], specify the IP address that is set for the Built-in Ethernet port CPU.



8. The screen returns to the [Connection Channel Setup].

Click [Connection Test] to check if CW Configurator has been connected to the R12CCPU-V.

■Connecting the GOT and PLC in serial communication connection (when connecting to RJ71C24)

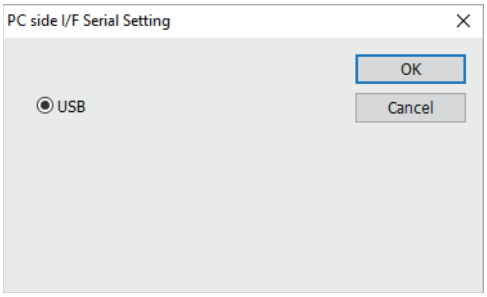


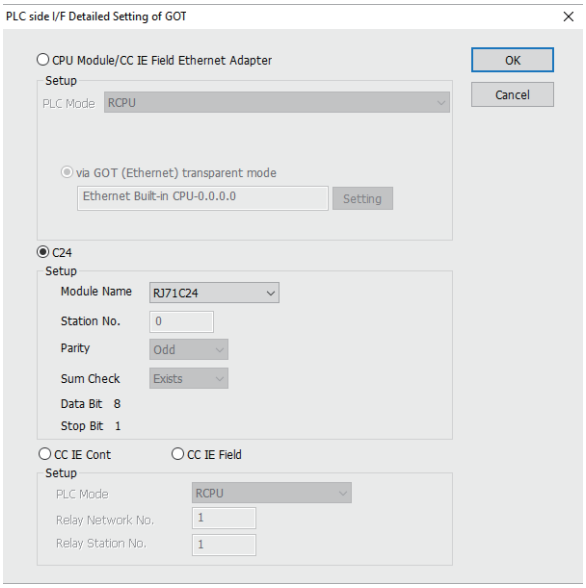
1. Click [Online] → [Current Connection Destination] on CW Configurator.

Displays the [Specify Connection Destination] dialog.

2. Set [Specify Connection Destination].

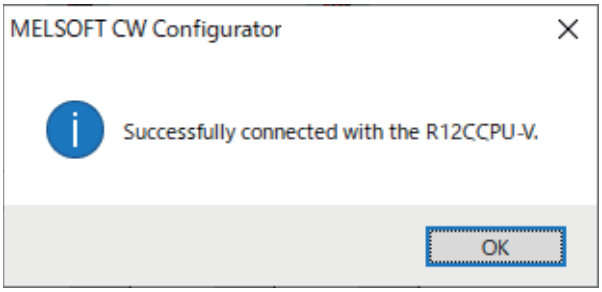
- PC side I/F: Serial USB
- PLC side I/F: GOT
- Other Station Setting: No Specification





3. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

4. Check-mark [C24] in [PLC side I/F Detailed Setting of GOT].

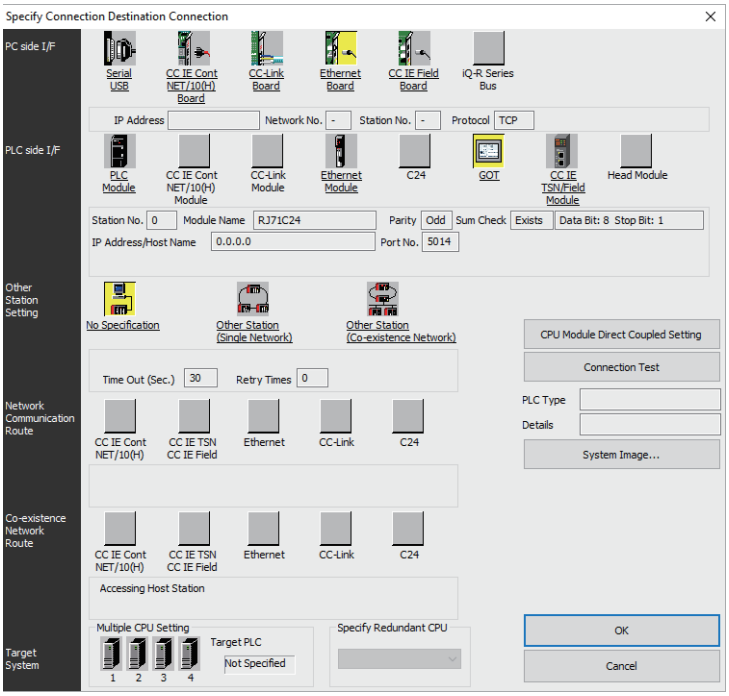


5. The screen returns to the [Connection Channel Setup].

Click [Connection Test] to check if CW Configurator has been connected to the R12CCPU-V.

When connecting the GOT and the personal computer by Ethernet

■Connecting the GOT and PLC in serial communication connection (when connecting to RJ71C24)

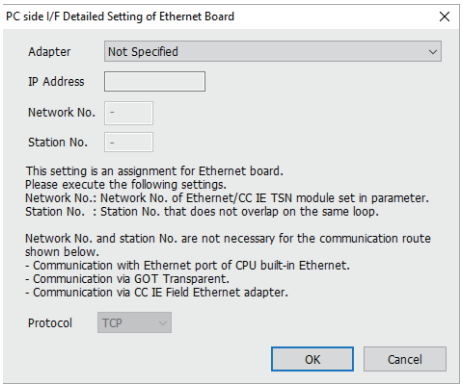


1. Click [Online] → [Current Connection Destination] on CW Configurator.

Displays the [Specify Connection Destination] dialog.

2. Set [Specify Connection Destination].

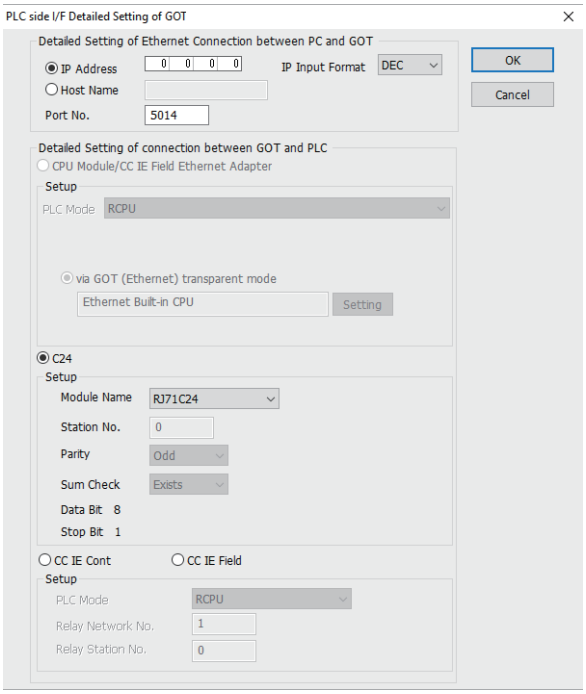
- PC side I/F: Ethernet Board
- PLC side I/F: GOT
- Other Station Setting: No Specification



3. Double-click [Ethernet Board] of the PC side I/F to display [PC side I/F Ethernet Board Setting].

4. Select [Adapter] in [PC side I/F Detailed Setting of Ethernet Board].

The network number and the station number are not used. The default settings need not be changed.



5. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

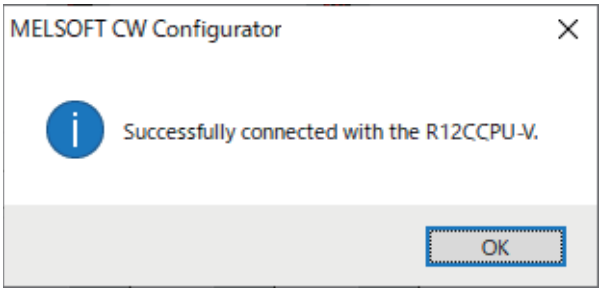
6. Set the IP address and port No. in [Ethernet detail setting for PC and GOT connection].

Check the IP address and port number on the GOT side in the [GOT Ethernet Setting] window in GT Designer3.

For the details, refer to the following.

GT Designer3 (GOT2000) Screen Design Manual

7. Check-mark [C24] in [Detail setting for GOT and PLC connection].



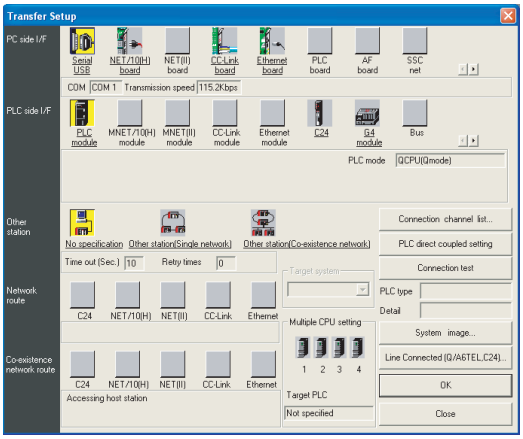
8. The screen returns to the [Connection Channel Setup].

Click [Connection Test] to check if CW Configurator has been connected to the R12CCPU-V.

Accessing the PLC by the PX Developer, GX Configurator

The setting method for the FA transparent function of PX Developer is used as an example.

Connecting the GOT and PLC in direct CPU connection (serial) (when connecting to QCPU (Q mode))



1. Click [Online] → [Transfer Setup] in PX Developer.

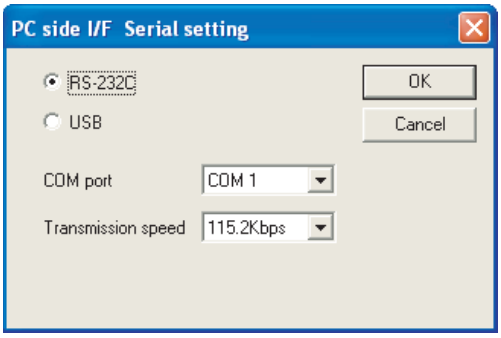
2. The [Transfer Setup] is displayed.

3. Set the [Transfer Setup]:

PC side I/F: Serial USB (COM)

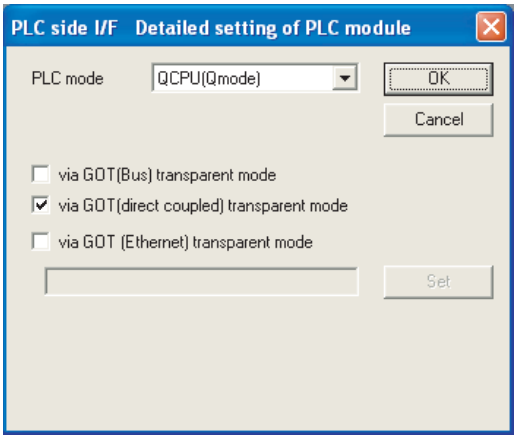
PLC side I/F: PLC module

Other station: No specification



4. Double-click [Serial] of the PC side I/F to display [PC side I/F Serial setting].

5. Select [USB] in the [PC side I/F Serial Setting] dialog.



6. Double-click [PLC module] of the PLC side I/F to display [PLC side I/F Detailed setting of PLC module].

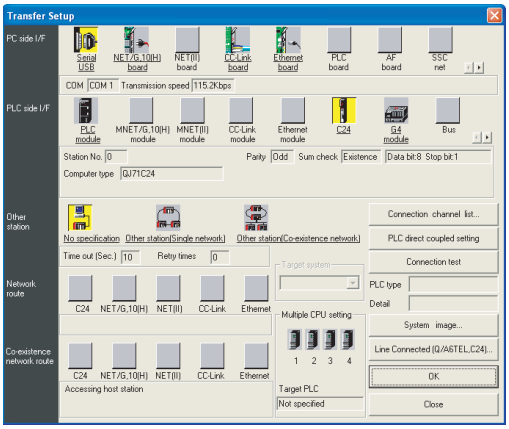
7. Check [via GOT (direct coupled) transparent mode] for [PLC side I/F Detailed setting of PLC module].



8. The screen returns to [Transfer Setup].

Click [Connection Test] to check if PX Developer has been connected to the QCPU (Q mode).

Connecting the GOT and PLC in serial communication connection (when connected to the QJ71C24(N)) (GX Configurator is not supported.)



1. Click [Online] → [Transfer Setup] in PX Developer.

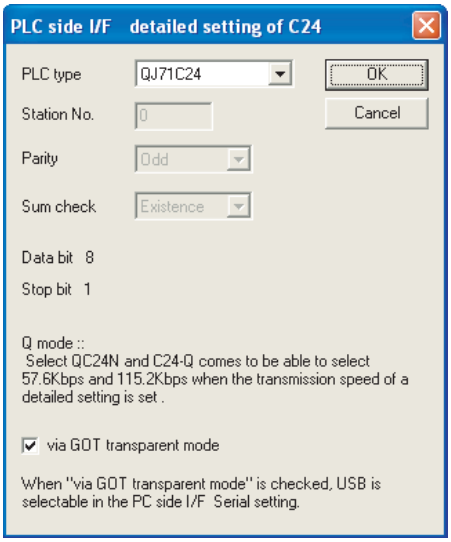
2. The [Transfer Setup] is displayed.

3. Set the [Transfer Setup]:

PC side I/F: Serial

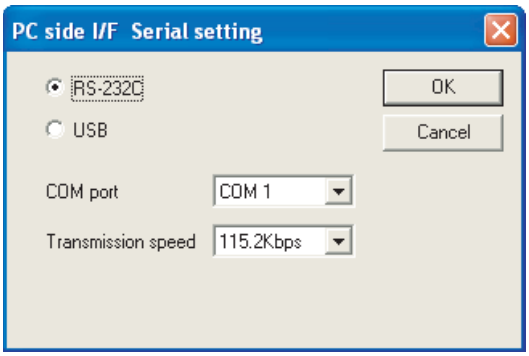
PLC side I/F: C24

Other station: No specification



4. Return to [Transfer Setup] and double-click [C24] of the PLC side I/F to display [PLC side I/F detailed setting of C24].

5. Check [via GOT transparent mode] for [PLC side I/F detailed setting of C24].



6. Double-click [Serial] of the PC side I/F to display [PC side I/F Serial setting].

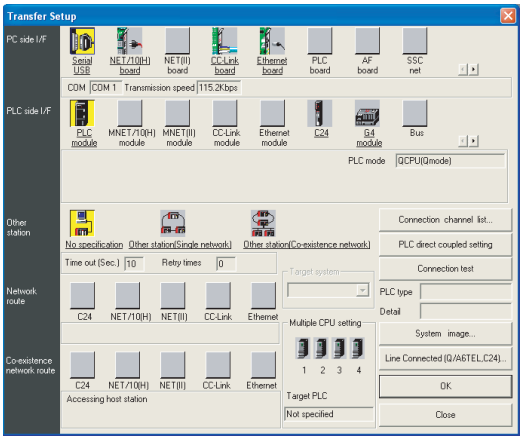
7. Select [USB] in the [PC side I/F Serial Setting] dialog.



8. The screen returns to [Transfer Setup].

Click [Connection Test] to check if PX Developer has been connected to the QCPU (Q mode).

When connecting the GOT and PLC in Ethernet communication (when connecting to QCPU (Q mode))



1. Click [Online] → [Transfer Setup] in PX Developer.

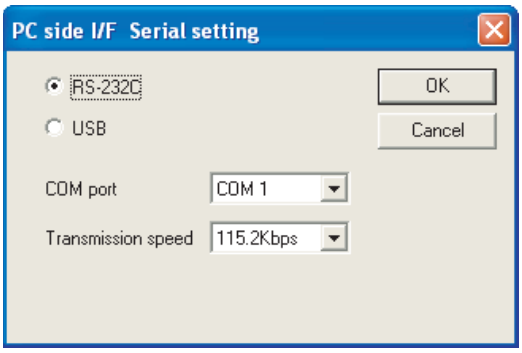
2. The [Transfer Setup] is displayed.

3. Set the [Transfer Setup]:

PC side I/F: Serial USB (COM)

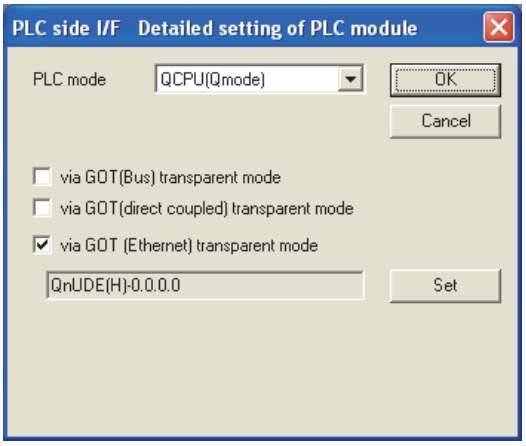
PLC side I/F: PLC module

Other station: No specification



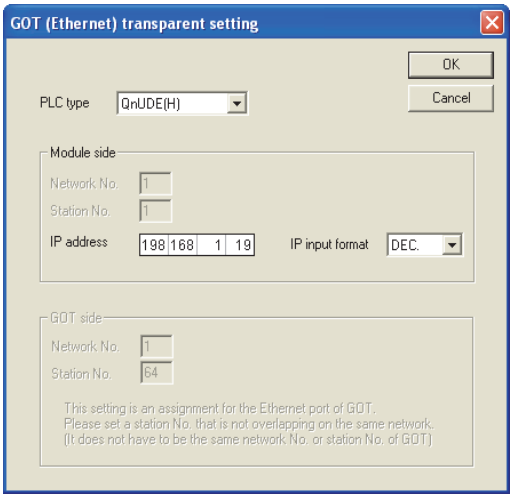
4. Double-click [Serial] of the PC side I/F to display [PC side I/F Serial setting].

5. Select [USB] in the [PC side I/F Serial Setting] dialog.



6. Double-click [PLC module] of the PLC side I/F to display [PLC side I/F Detailed setting of PLC module].

7. On the [PLC side I/F Detailed setting of PLC module], mark the [via GOT(Ethernet) transparent mode] checkbox and click [Set].



8. By clicking [Set], the [GOT (Ethernet) transparent setting] is displayed.

Here, set the built-in Ethernet port QCPU or Ethernet module, which is firstly connected via a GOT.

9. Set [QnUDE (H)] or [QJ71E71] for [Type name].

When connecting the Q173NCCPU, set [QJ71E71].

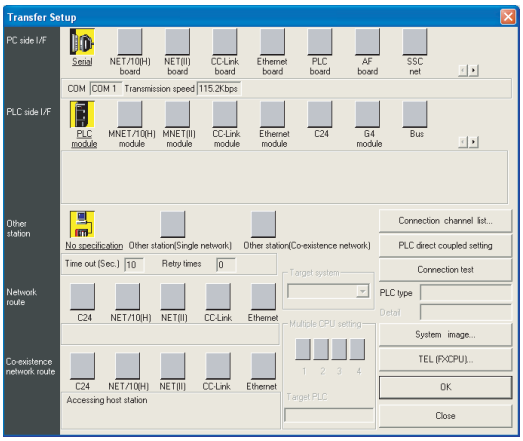
10. Specify the number for [Network No.] and [Station No.] same as the number assigned to the Ethernet module.
When [QnUDE (H)] is set for [Type name], the setting is not required.

11. Specify the IP address for [IP address] same as the IP address assigned to the built-in Ethernet port QCPU or Ethernet module.



12. The screen returns to [Transfer Setup].
Click [Connection Test] to check if PX Developer has been connected to the QCPU (Q mode).

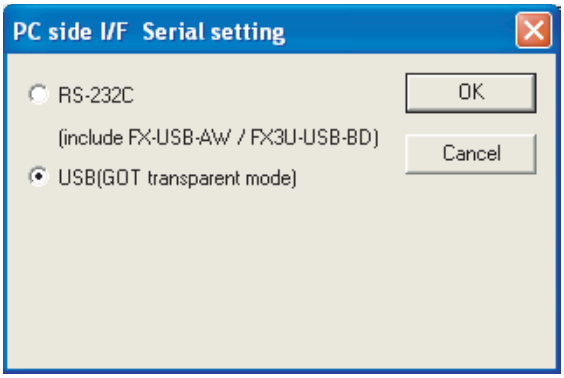
Connecting the GOT and PLC in direct CPU connection (serial) (when connecting to FXCPU)



1. Click [Online] → [Transfer Setup] in PX Developer.

2. The [Transfer Setup] is displayed.

3. Set the [Transfer Setup]:
PC side I/F: Serial
PLC side I/F: PLC module
Other station: No specification



4. Double-click [Serial] of the PC side I/F to display [PC side I/F Serial setting].

5. Select [USB (GOT transparent mode)] in the [PC side I/F Serial Setting] dialog.



6. The screen returns to the [Transfer Setup].

Click the [Connection Test] to check if PX Developer has been connected to the FXCPU.

Point

How to operate PX Developer

For the PX Developer operation method, refer to the following manual.

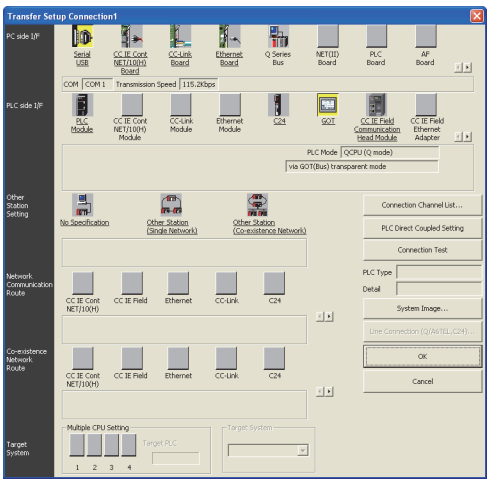
PX Developer Version 1 Operating Manual (Programming Tool)

Accessing by GX Works2

The following shows the procedure to set the FA transparent function of GX Works2.

When connecting the GOT and the personal computer by USB

■Connecting the GOT and PLC in direct CPU connection (serial) (when connecting to QCPU (Q mode))

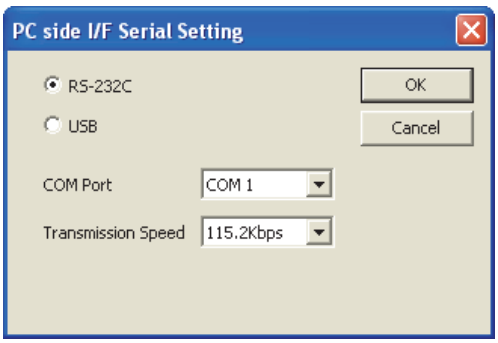


1. Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of GX Works2.
2. The [Transfer Setup Connection1] is displayed.
3. Set the [Transfer Setup Connection1]:

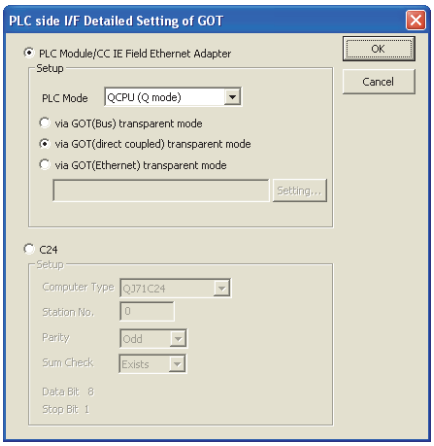
PC side I/F: Serial USB

PLC side I/F: GOT

Other Station Setting: No Specification:

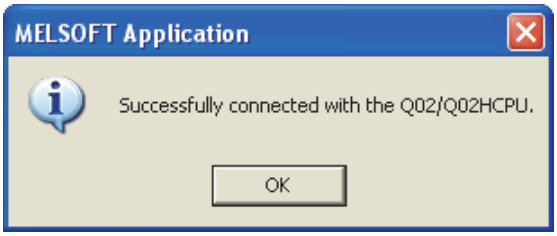


4. Double-click [Serial USB] of the PC side I/F to display [PC side I/F Serial Setting].
5. Select [USB] in the [PC side I/F Serial Setting] dialog.



6. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

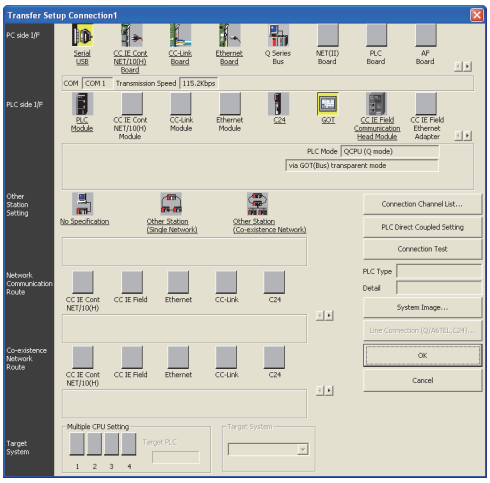
7. Check [via GOT (direct coupled) transparent mode] for [PLC side I/F Detailed Setting of GOT].



8. The screen returns to [Transfer Setup Connection1].

Click [Connection Test] to check if GX Works2 has been connected to the QCPU (Q mode).

■Connecting the GOT and PLC in serial communication connection (when connecting to QJ71C24 (N))



1. Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of GX Works2.

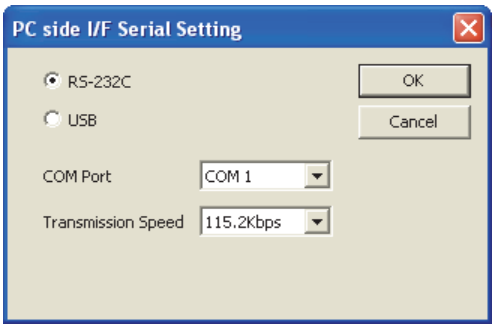
2. The [Transfer Setup Connection1] is displayed.

3. Set the [Transfer Setup Connection1]:

PC side I/F: Serial USB

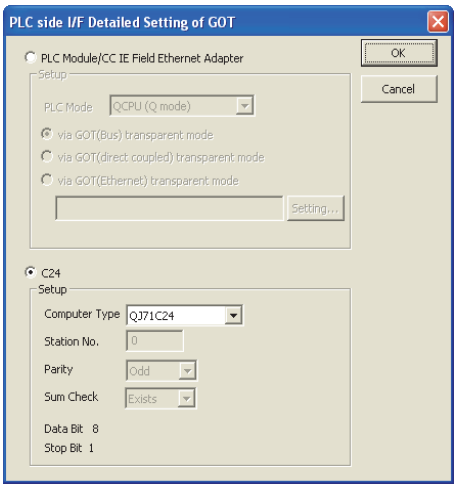
PLC side I/F: GOT

Other Station Setting: No Specification



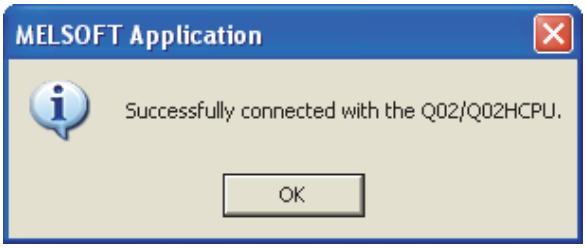
4. Double-click [Serial USB] of the PC side I/F to display [PC side I/F Serial Setting].

5. Select [USB] in the [PC side I/F Serial Setting] dialog.



6. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

7. Check-mark [C24] in [PLC side I/F Detailed Setting of GOT].

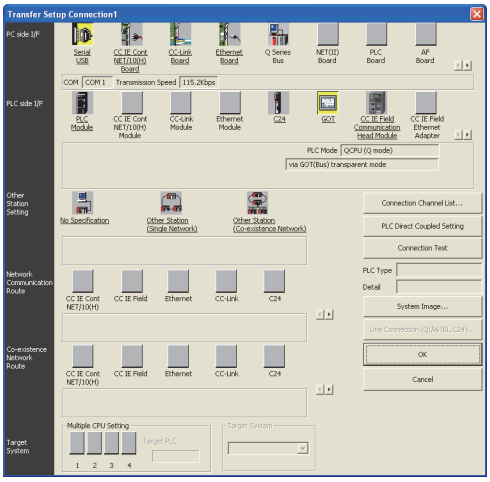


8. The screen returns to [Transfer Setup Connection1].

Click [Connection Test] to check if GX Works2 has been connected to the QCPU (Q mode).

■Connecting the GOT and PLC in Ethernet connection

• Connecting to QCPU (Q mode)



1. Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of GX Works2.

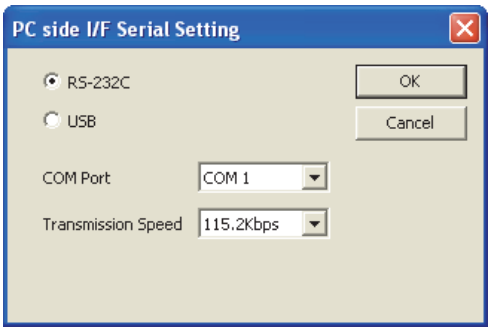
2. The [Transfer Setup Connection1] is displayed.

3. Set the [Transfer Setup Connection1]:

PC side I/F: Serial USB

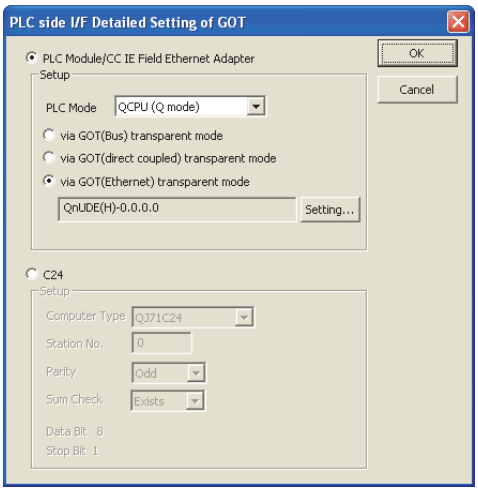
PLC side I/F: GOT

Other Station Setting: No Specification



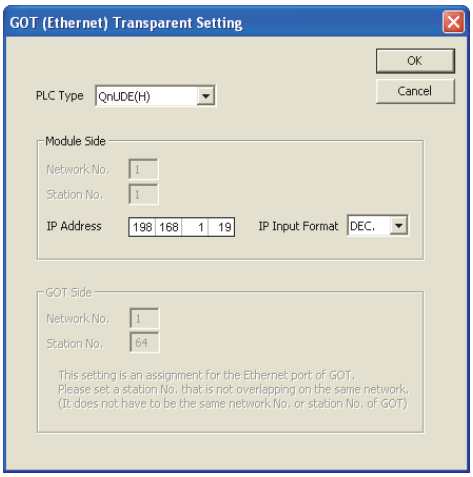
4. Double-click [Serial USB] of the PC side I/F to display [PC side I/F Serial Setting].

5. Select [USB] in the [PC side I/F Serial Setting] dialog.



6. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

7. On the [PLC side I/F Detailed Setting of GOT], mark the [via GOT(Ethernet) transparent mode] checkbox and click [Setting...].



8. By clicking [Set], the [GOT (Ethernet) Transparent Setting] is displayed.

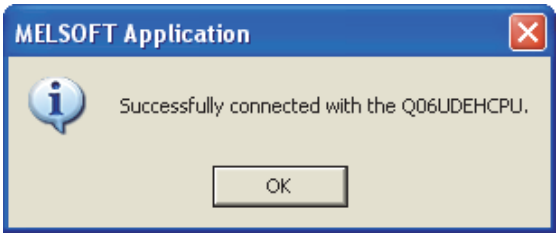
Here, set the built-in Ethernet port QCPU or Ethernet module, which is firstly connected via a GOT.

9. Set [QnUDE(H)] or [QJ71E71] for [PLC Type].

10. Specify the number for [Network No.] and [Station No.] same as the number assigned to the Ethernet module.

When [QnUDE(H)] is set for [PLC type], the setting is not required.

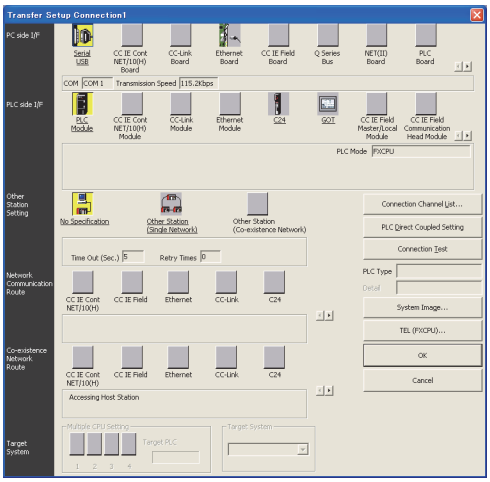
11. Specify the IP address for [IP Address] same as the IP address assigned to the built-in Ethernet port QCPU or Ethernet module.



12. The screen returns to [Transfer Setup Connection1].

Click [Connection Test] to check if GX Works2 has been connected to the QCPU (Q mode).

- Connecting to FXCPU



1. Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of GX Works2.

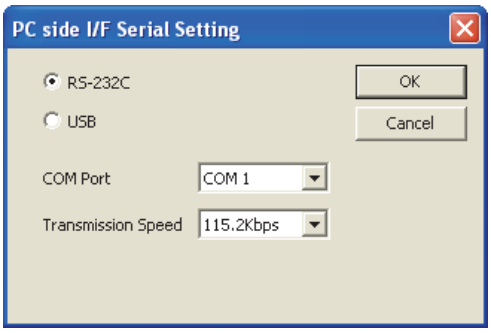
2. The [Transfer Setup Connection1] is displayed.

3. Set the [Transfer Setup Connection1]:

PC side I/F: Serial USB

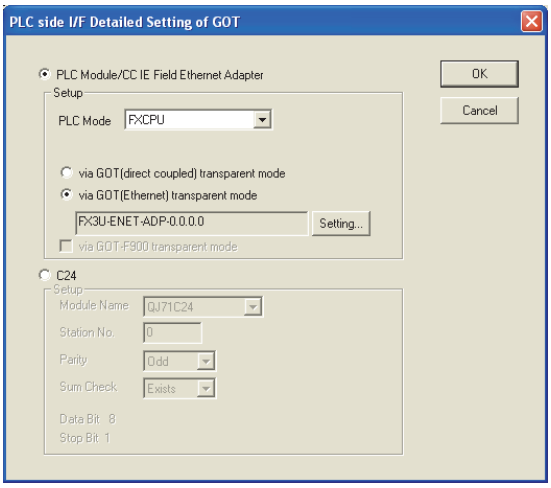
PLC side I/F: GOT

Other Station Setting: No Specification



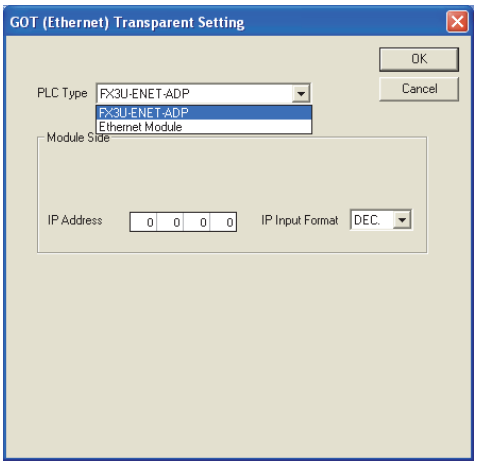
4. Double-click [Serial USB] of the PC side I/F to display [PC side I/F Serial Setting].

5. Select [USB] in the [PC side I/F Serial Setting] dialog.



6. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

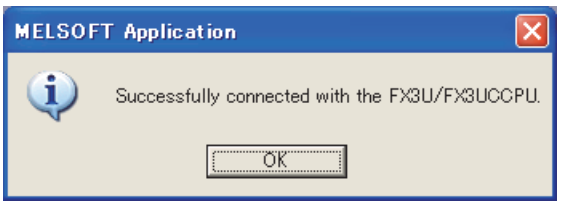
7. On the [PLC side I/F Detailed Setting of GOT], mark the [via GOT(Ethernet) transparent mode] checkbox and click [Setting...].



8. By clicking [Set], the [GOT (Ethernet) transparent setting] is displayed.
Here, set the [FX3U-ENET-ADP] or [Ethernet Module], which is connected via a GOT.

9. Set [FX3U-ENET-ADP] or [Ethernet Module] for [PLC Type].

10. Specify the IP address for [IP address] same as the IP address assigned to the [FX3U-ENET-ADP] or [Ethernet Module].



11. The screen returns to [Transfer Setup].
Click [Connection Test] to check if GX Works2 has been connected to the FXCPU.

■Connecting the GOT and Ethernet adapter (NZ2GF-ETB) in Ethernet connection, and connecting it to a PLC in the CC-Link IE Field Network.

This section describes the settings of the GX Works2 in the following case of system configuration.

Point

Version of GX Works2

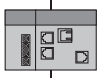
GX Works2 Version 1.34L or later is required to execute the FA transparent function with using Ethernet adapter (NZ2GF-ETB).

<GOT>
(Use default value for settings other than the following.)



Network No. :3
PC No. :1
IP address :192.168.3.18
Port No. :5001
Communication format :UDP (fixed)

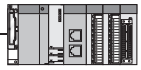
Ethernet



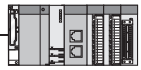
<Ethernet adapter module>
(Use default value for settings other than the following.)
・Ethernet setting
IP address :192.168.3.30
CC-Link IE Field Network setting
Network No. :1
Station No. :1

CC-Link IE Field Network

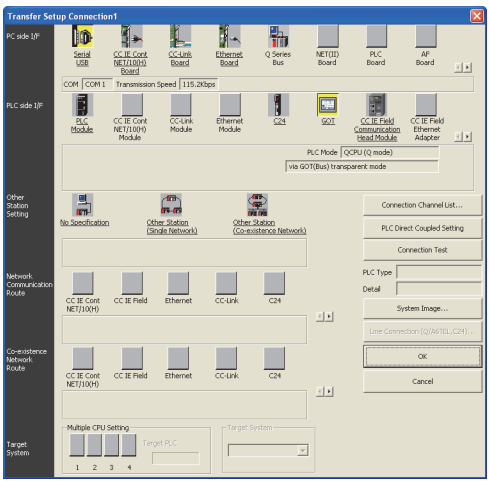
HUB



<CC-Link IE Field Network Master/Local module>
(Use default value for settings other than the following.)
Network Type : CC IE Field (Master station)
Network No. : 1
PC No. : 0
Total Stations : 2



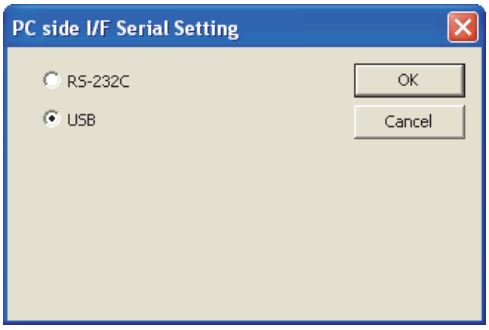
<CC-Link IE Field Network Master/Local module>
(Use default value for settings other than the following.)
Network Type : CC IE Field (Local station)
Network No. : 1
PC No. : 2



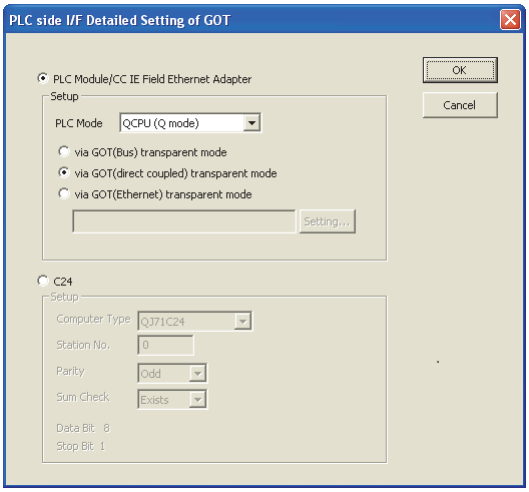
1. Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of GX Works2.
2. The [Transfer Setup Connection1] is displayed.
3. Set the [Transfer Setup Connection1].

PC side I/F: Serial USB

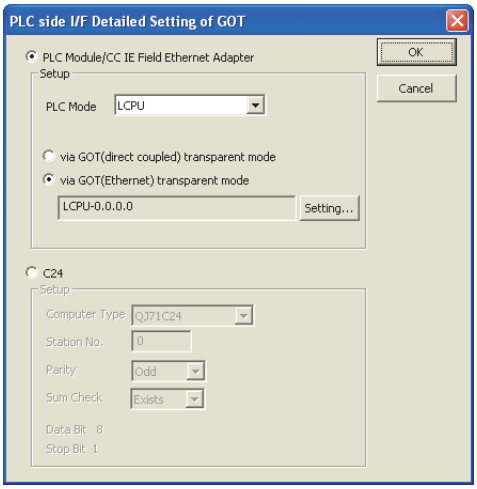
PLC side I/F: GOT



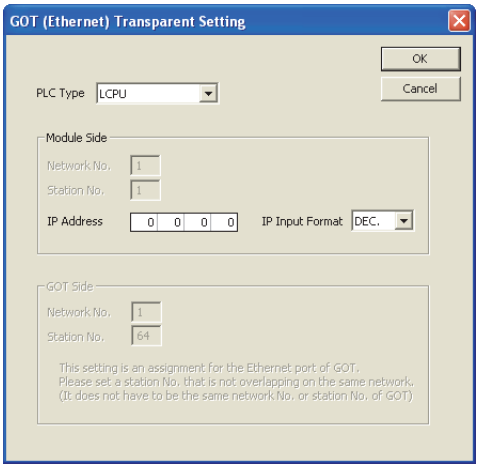
4. Double-click [Serial USB] of the PC side I/F to display [PC side I/F Serial Setting].
5. Select [USB] in the [PC side I/F Serial Setting] dialog.



6. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].
7. Set the [CPU mode] to [LCPU].



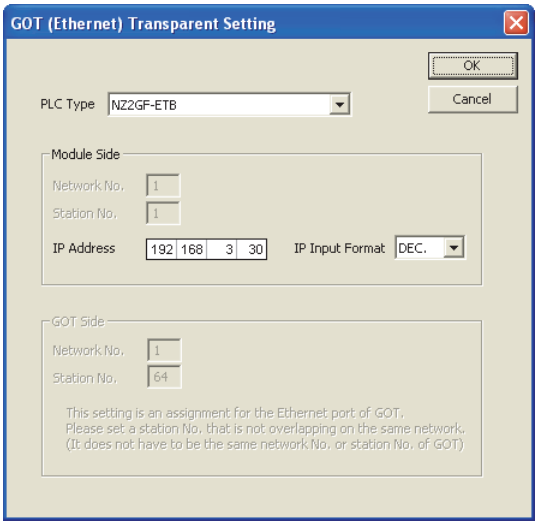
8. On the[PLC side I/F Detailed Setting of GOT], mark the [via GOT(Ethernet) transparent mode] checkbox and click [Setting...].



9. [GOT (Ethernet) Transparent Setting] is displayed.

Here, set the Ethernet module, which is firstly connected via a GOT.

10. Set [NZ2GF-ETB] for [PLC Type].

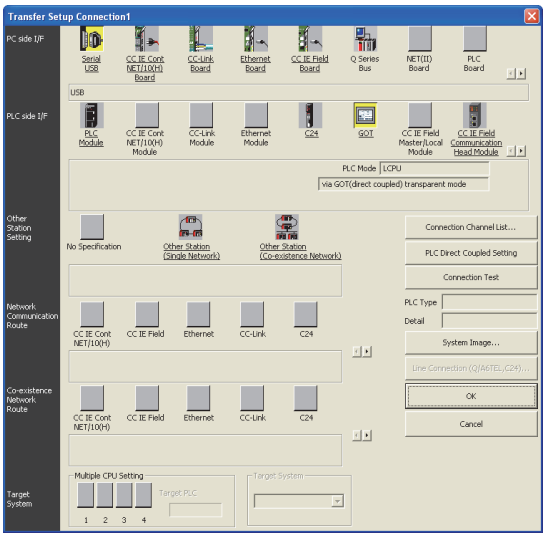


11. Set the same number to [IP address] as the number assigned to NZ2GF-ETB, and click [OK].

In the system configuration example, the setting is as follows.

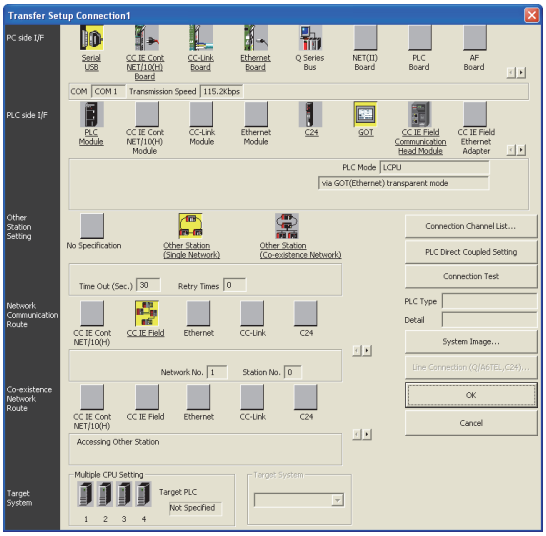
[IP address]: 192 168 3 30

12. Return to [PLC side I/F Detailed Setting of GOT], and click [OK].

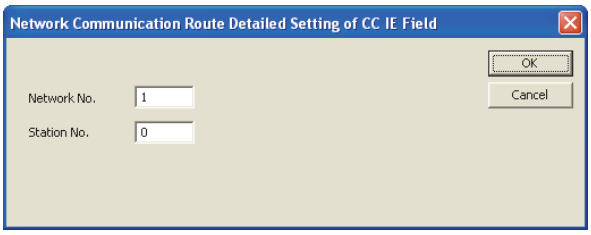


13. The [Transfer Setup Connection1] is displayed.

14. Click [Other station (Single network)].



15. Double-click [CC IE Field].



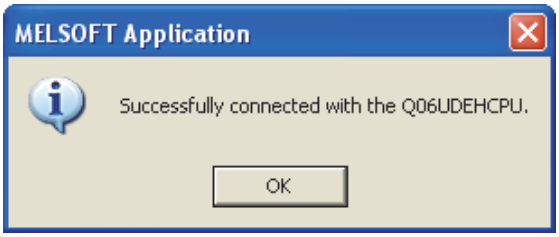
16. Network Communication Route Detailed Setting of CC IE Field is displayed.

17. Set [Network No.] and [Station No.] assigned to CPU, and click [OK].

When connecting to CC-Link IE Field Network Master/Local module of the system configuration example, the setting is as follows.

[Network No.] :1

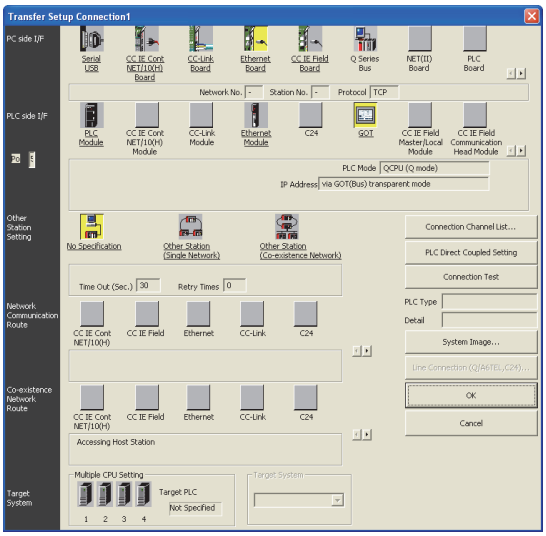
[Station No.] :0



18. The screen returns to [Transfer Setup]. Click [Connection Test] to check if GX Works2 has been connected to the QCPU (Q mode).

When connecting the GOT and the personal computer by Ethernet

■Connecting the GOT and PLC in direct CPU connection (serial) (when connecting to QCPU (Q mode))



1. Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of GX Works2.

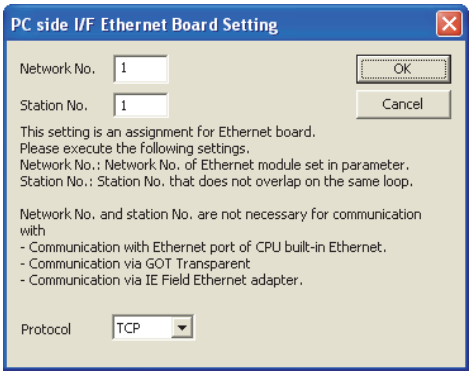
2. The [Transfer Setup] is displayed.

3. Set the [Transfer Setup]:

PC side I/F :Ethernet Board

PLC side I/F :GOT

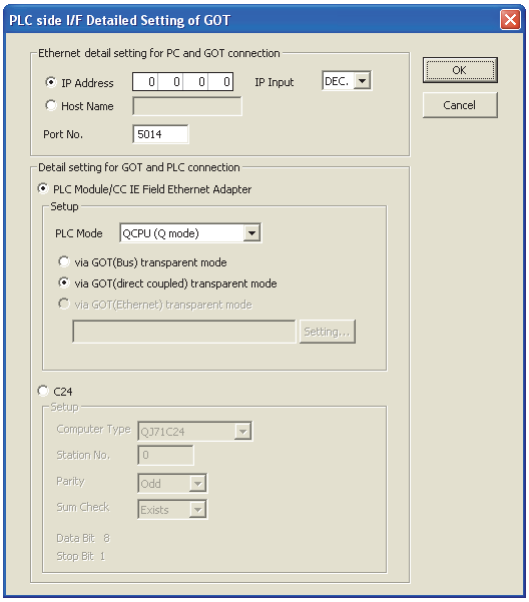
Other Station Setting : No specification



4. Double-click [Ethernet Board] of the PC side I/F to display [PC side I/F Ethernet Board Setting].

5. Set the protocol to TCP. Network No. and Station No. are not required to be changed (default) because they are not used.

(For bus connection)



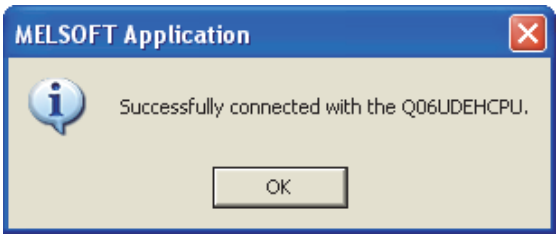
6. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

7. Set the IP address and port No. in [Ethernet detail setting for PC and GOT connection].

Set the IP address and port No. to the same as the Ethernet download setting.

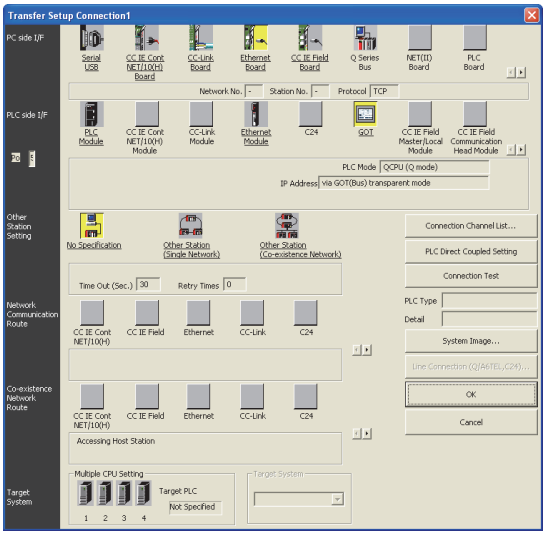
☞ Page 738 Ethernet download setting

8. Check [via GOT (direct coupled) transparent mode] for [PLC side I/F Detailed Setting of GOT].



9. The screen returns to [Transfer Setup]. Click [Connection Test] to check if GX Works2 has been connected to the QCPU (Q mode).

■Connecting the GOT and PLC in computer link connection (when connecting to QJ71C24 (N))



1. Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of GX Works2.

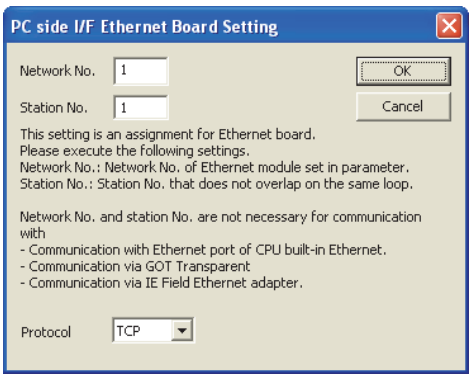
2. The [Transfer Setup] is displayed.

3. Set the [Transfer Setup]:

PC side I/F: Ethernet Board

PLC side I/F: GOT

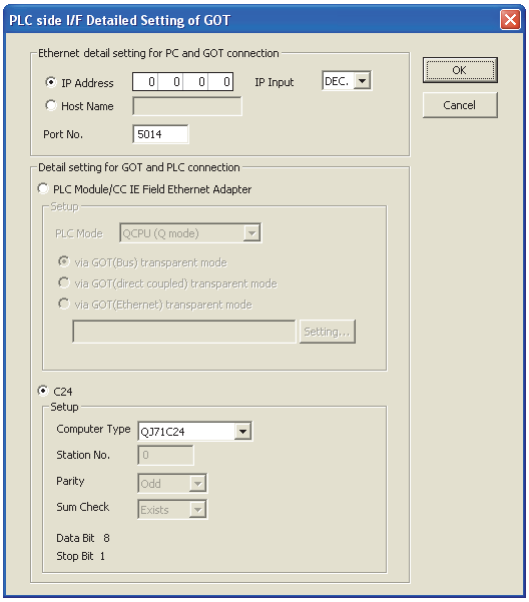
Other Station Setting: No specification



4. Double-click [Ethernet Board] of the PC side I/F to display [PC side I/F Ethernet Board Setting].

5. Set the protocol to TCP.

Network No. and Station No. are not required to be changed (default) because they are not used.



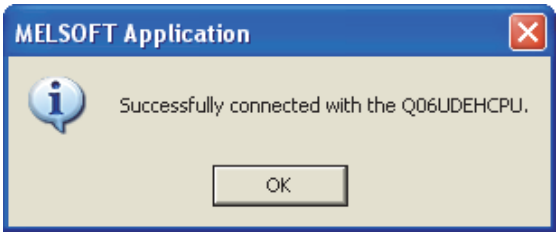
6. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

7. Set the IP address and port No. in [Ethernet detail setting for PC and GOT connection].

Set the IP address and port No. to the same as the Ethernet download setting.

☞ Page 738 Ethernet download setting

8. Check [C24] in [Detail setting for GOT and PLC connection].

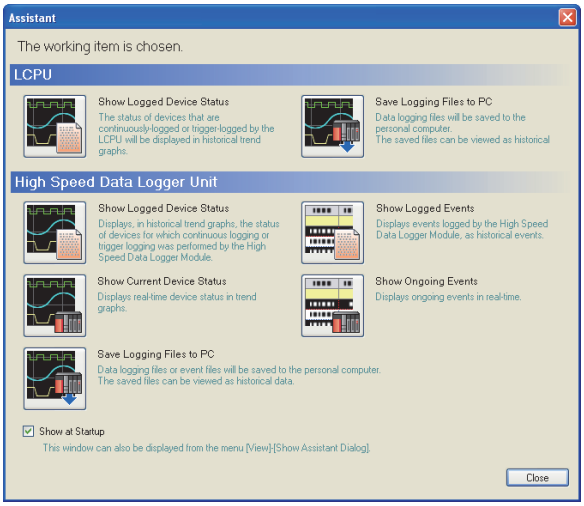


9. The screen returns to [Transfer Setup].

Click [Connection Test] to check if GX Works2 has been connected to the QCPU (Q mode).

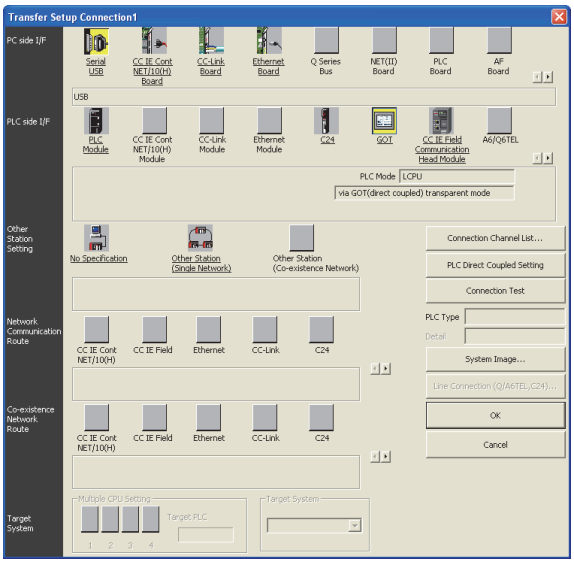
Accessing by GX LogViewer

The following shows the procedure to set the FA transparent function of GX LogViewer.



1. Click [Show Assistant Dialog] for [View] on GX LogViewer.

2. The [Assistant] dialog box is displayed.



3. Click [LCPU] → [Show Logged Device Status] in the [Assistant] dialog box.

4. The [Transfer Setup Connection 1] dialog box is displayed.

5. Set the [Transfer Setup Connection 1]:

PC side I/F: Serial USB

PLC side I/F: GOT

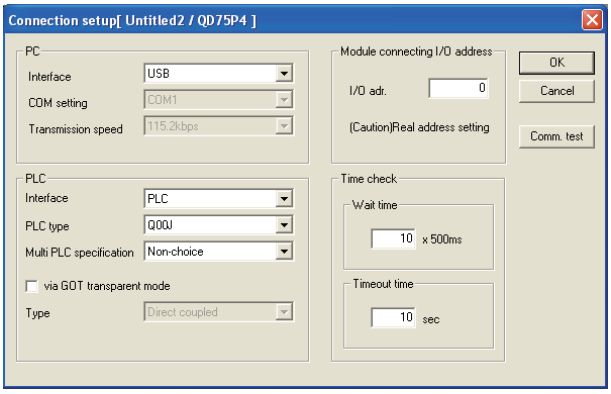
Other Station Setting: (Select from the system configuration)

6. For [PC side I/F Serial Setting] and [PLC side I/F Detailed Setting of GOT] of [Transfer Setup], refer to the following.

☞ Page 762 Accessing by GX Works2

Accessing PLC by GX Configurator-QP

The following shows the procedure to set the FA transparent function of GX Configurator-QP.



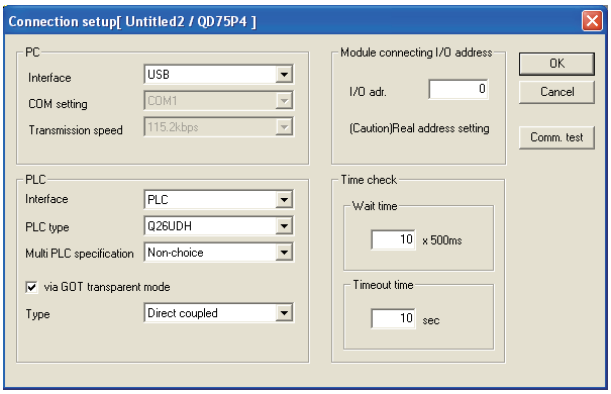
1. Click [Transfer setup] for [Online] on GX Configurator-QP.

2. The [Transfer Setup] is displayed.

3. Set the following in [PC] in [Connection setup].

When connecting the GOT and PC with USB

Interface: USB



4. Set the [PLC] in [Connection setup].

PLC type: Q series PLC type

Multi PLC specification: Non-choice/No.1 to 4

Mark the [via GOT transparent mode] checkbox.

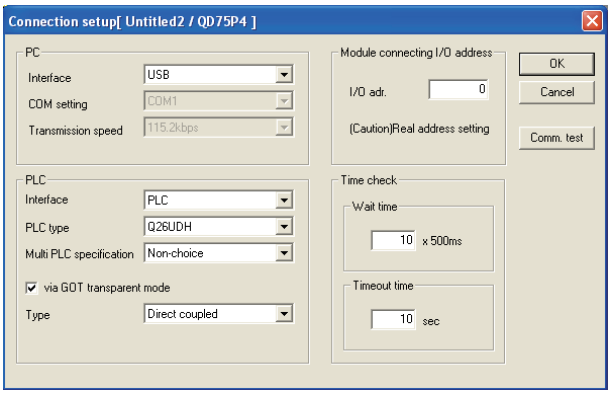
Direct CPU connection (serial)

Interface: PLC

Type: Direct coupled

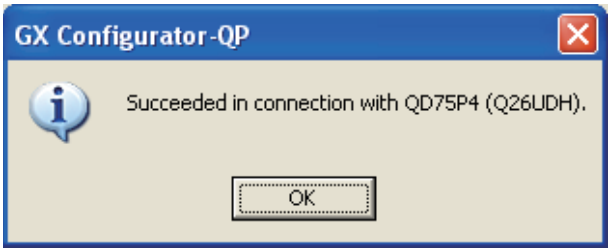
Computer link connection

Interface: C24



5. Set the [Module connecting I/O address] in [Transfer setup].

Specify the actual I/O address of the module.

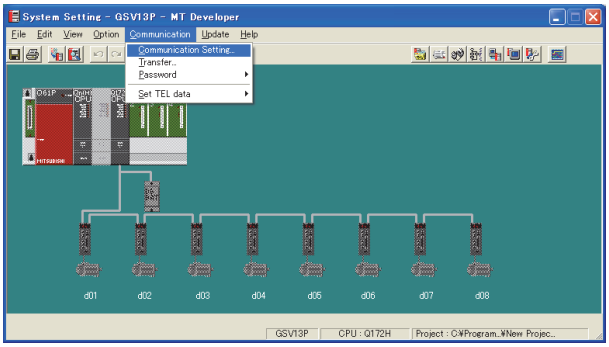


6. The screen returns to the [Transfer setup].

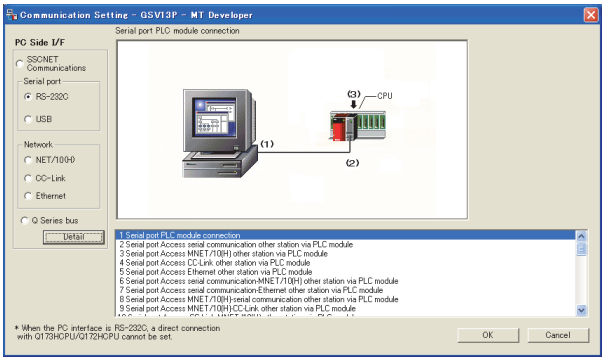
Click the Connection Test to check if GX Developer has been connected to the QD75*** (QnCPU).

Accessing by the MT Developer

This section explains the procedure for setting the FA transparent function of MT Developer using the setting when the motion CPU (Q series) is connected as an example.

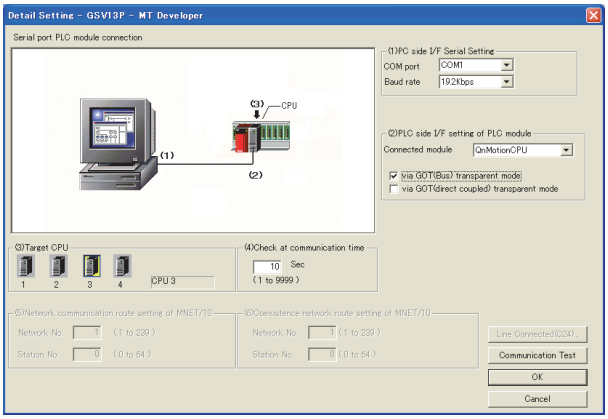


1. Click [Communication] → [Communication Setting] in MT Developer.

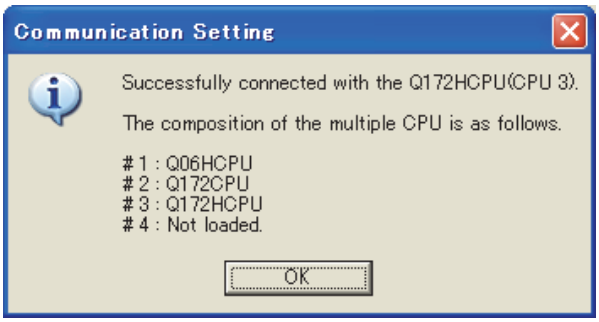


2. Select [USB] in [Serial port].

3. Click [Detail].



4. Check [via GOT (direct coupled) transparent mode] for [PLC side I/F Detailed setting of PLC module].
5. As necessary, select a CPU that is targeted by using the transparent function in [CPU].
6. Click [Connection Test].



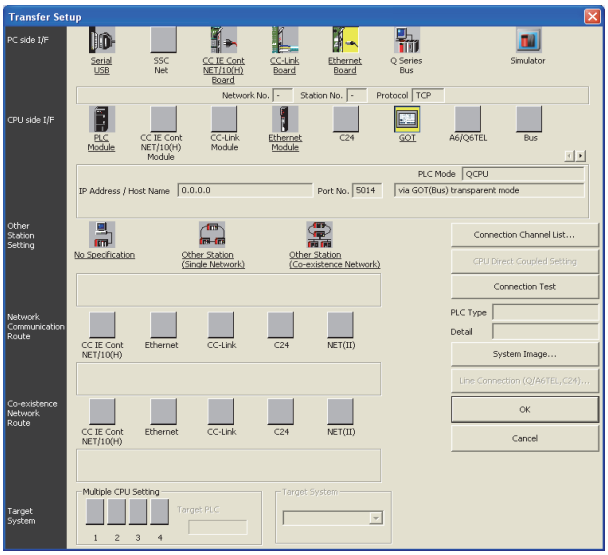
7. Confirm that the personal computer is connected to the Motion CPU (Q series).

Accessing by the MT Works2

This section explains the procedure to set the FA transparent function of MT Works2 with an example of connecting to the Motion CPU (Q series).

When connecting the GOT and the personal computer by USB

■Connecting the GOT and PLC in direct CPU connection (serial)



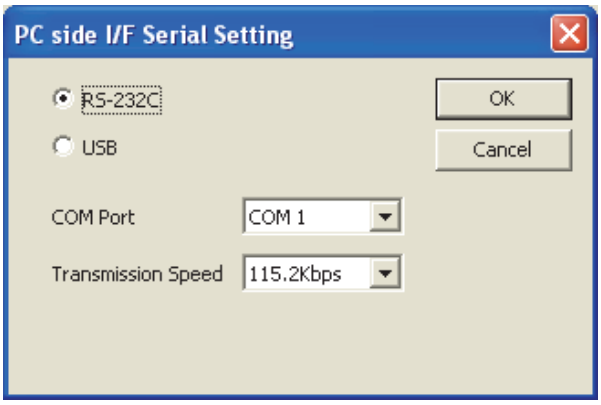
1. Click [Transfer setup] → [Online].
2. The [Transfer setup] is displayed.

3. Set the [Transfer setup]:

PC side I/F: Serial USB

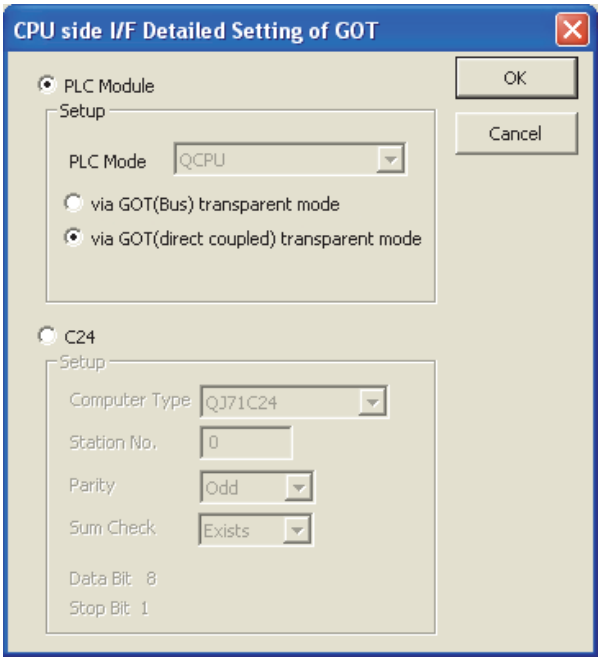
CPU side I/F: GOT

Other Station Setting: No specification



4. Double-click [Serial] of the PLC side I/F to display [PC side I/F Serial setting].

5. Select [USB] in the [PC side I/F Serial Setting] dialog.



6. Double-click [GOT] of the CPU side I/F to display [CPU side I/F Detailed Setting of GOT].

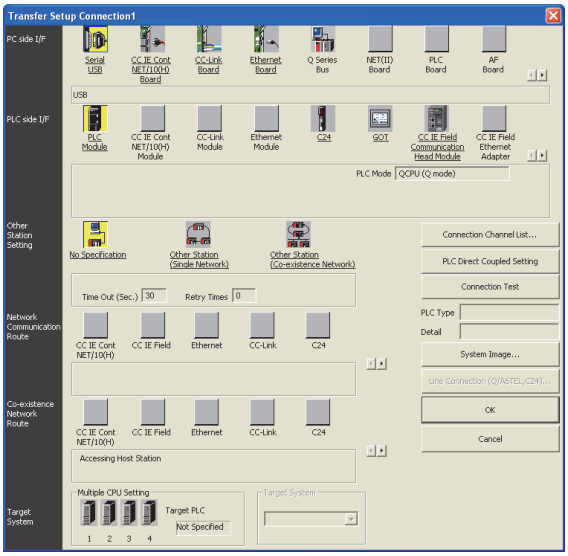
7. Check [via GOT (direct coupled) transparent mode] for [CPU side I/F Detailed Setting of GOT].



8. The screen returns to [Transfer setup].

Click [Connection Test] to check if MT Works2 has been connected to the motion controller (Q mode).

■When connecting the GOT and PLC in Ethernet communication

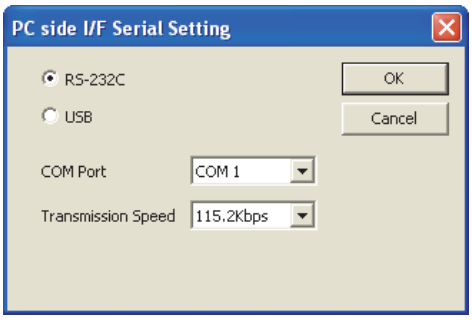


1. Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of MT Works2.
2. The [Transfer Setup] is displayed.
3. Set the [Transfer Setup]:

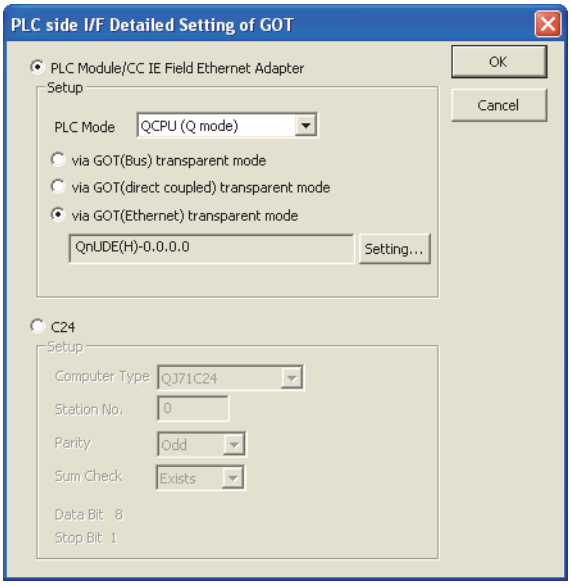
PC side I/F: Serial USB

PLC side I/F: GOT

Other Station Setting: No Specification:



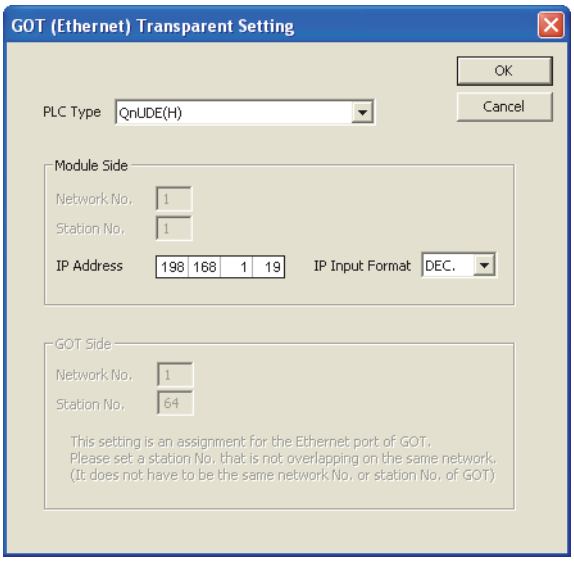
4. Double-click [Serial USB] of the PC side I/F to display [PC side I/F Serial Setting].
5. Select [USB] in the [PC side I/F Serial Setting] dialog.



6. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

7. PLC side I/F Detailed Setting of GOT

Mark the [via GOT(Ethernet) transparent mode] checkbox and click [Set].



8. By clicking [Set], the [GOT (Ethernet) Transparent Setting] is displayed.

Here, set the built-in Ethernet port QCPU or Ethernet module, which is firstly connected via a GOT.

9. Set [QnUDE(H)] or [QJ71E71] for [Type name].

10. Specify the number for [Network No.] and [Station No.] same as the number assigned to the Ethernet module.

When [QnUDE(H)] is set for [Type name], the setting is not required.

11. Specify the IP address for [IP address] same as the IP address assigned to the built-in Ethernet port QCPU or Ethernet module.

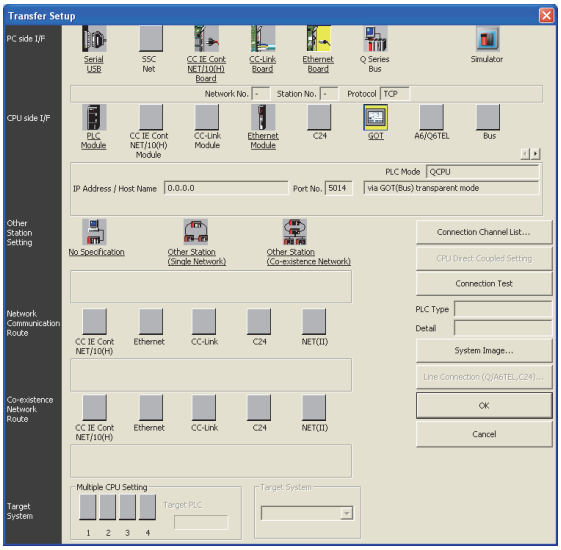


12. The screen returns to [Transfer setup].

Click [Connection Test] to check if MT Works2 has been connected to the motion controller (Q mode).

When connecting the GOT and the personal computer by Ethernet

■Connecting the GOT and PLC in direct CPU connection (serial)

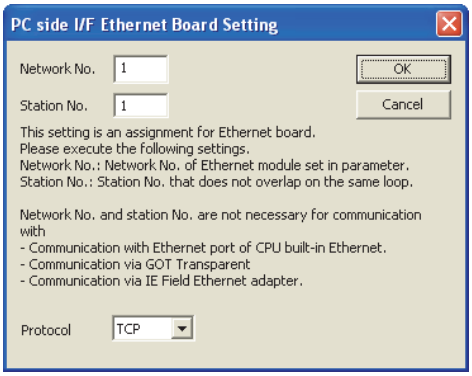


1. Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of MT Works2.
2. The [Transfer Setup] is displayed.
3. Set the [Transfer Setup]:

PC side I/F: Ethernet Board

PLC side I/F: GOT

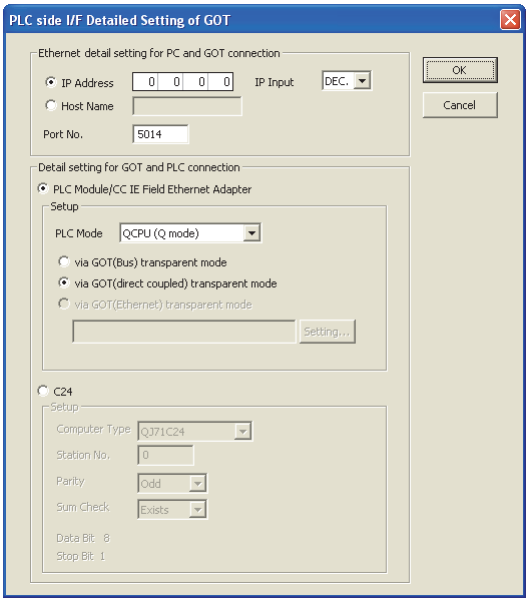
Other Station Setting: No Specification:



4. Double-click [Ethernet Board] of the PC side I/F to display [PC side I/F Ethernet Board Setting].

5. Set the protocol to TCP. Network No. and Station No. are not required to be changed (default) because they are not used.

(Direct CPU connection (serial))



6. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].

7. Set the IP address and port No. in [Ethernet detail setting for PC and GOT connection].

Set the IP address and port No. to the same as the Ethernet download setting.

☞ Page 738 Ethernet download setting

8. Check [via GOT (direct coupled) transparent mode] for [Detail setting for GOT and PLC connection].



9. The screen returns to [Transfer Setup].

Click [Connection Test] to check if MT Works2 has been connected to the Motion controller (Q mode).

Accessing the servo amplifier by the MR Configurator

Make the FA transparent settings with the of MT Developer.

For details, refer to the following:

☞ Page 778 Accessing by the MT Developer

Accessing the servo amplifier by the MR Configurator2

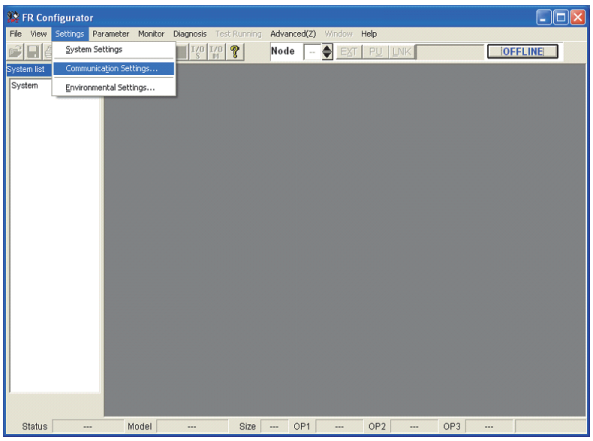
Make the FA transparent settings in the MT Works2 communication settings.

For details of MT Works2, refer to the following.

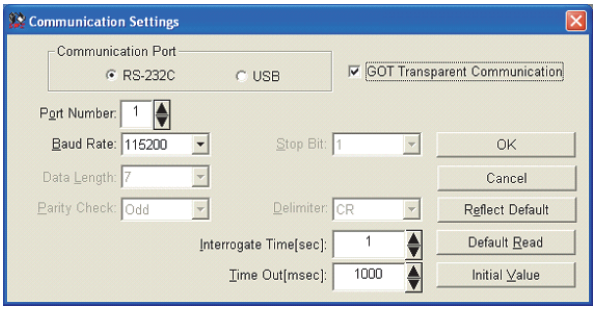
☞ Page 779 Accessing by the MT Works2

Accessing the inverter by the FR Configurator

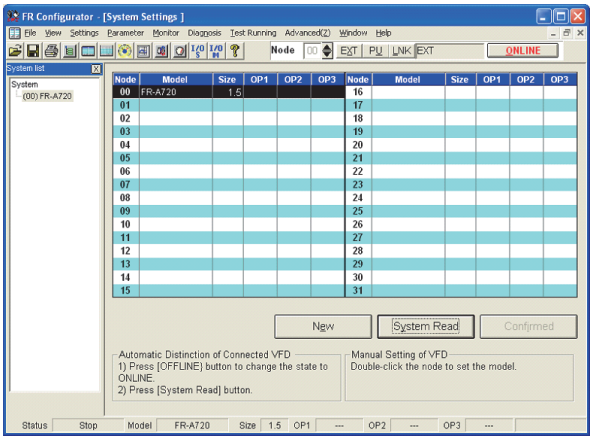
This section explains how to set the FA transparent function of FR Configurator using a connection to the FR-A700 or FR-F700 series as an example.



1. Click [Settings] → [Communication Settings...] in FR Configurator.



2. Select [USB] in [Communication Port].
3. Click [GOT Transparent Communication].
4. Click the [OK].



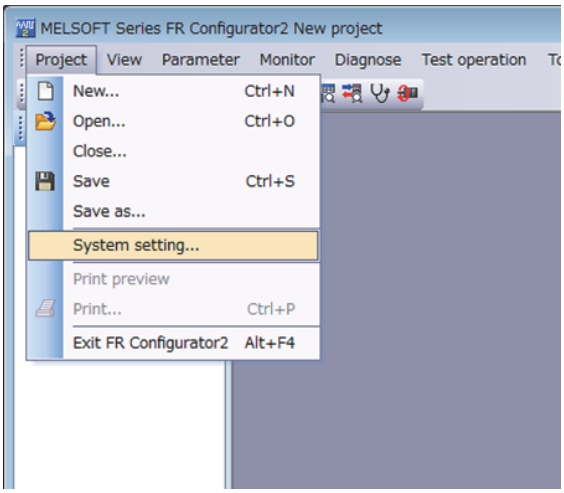
5. Click [OFFLINE] to make it [ONLINE].
6. Click [System Read], and ensure that the GOT has been connected to the FR-A700 or FR-F700 series properly.

Accessing the inverter by the FR Configurator2

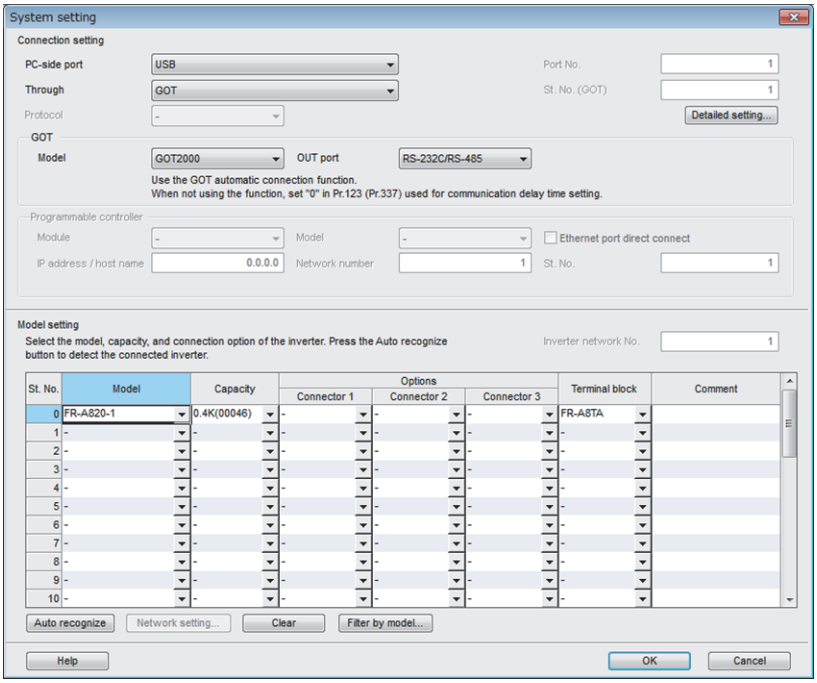
This section explains how to set the FA transparent function of FR Configurator2 using a connection to the FR-E700 (FR-E700-NE), FR-A800, or FR-F800 series as an example.

When directly connecting the GOT and inverter

■USB connection between the GOT and personal computer, serial connection between the GOT and inverter



1. Click [Project] → [System setting] in FR Configurator2 to display the [System setting] dialog.



2. Set [Connection setting] in the [System setting] dialog.

- [PC-side port]: [USB]
- [Through]: [GOT]

3. Set [GOT].

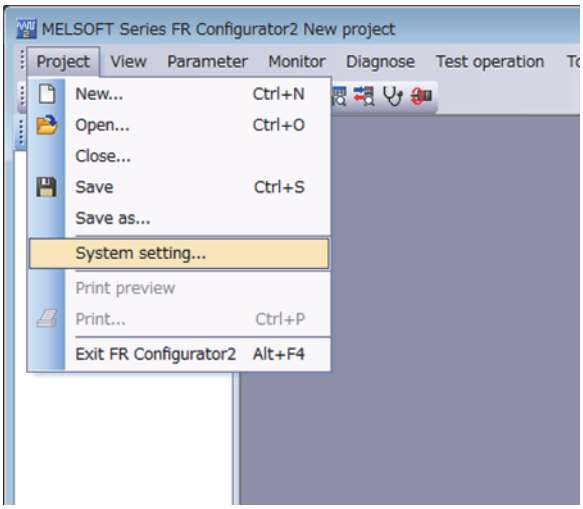
- [Model]: [GOT2000]
- [OUT port]: [RS-232C/RS-485]

4. Set [Model setting].

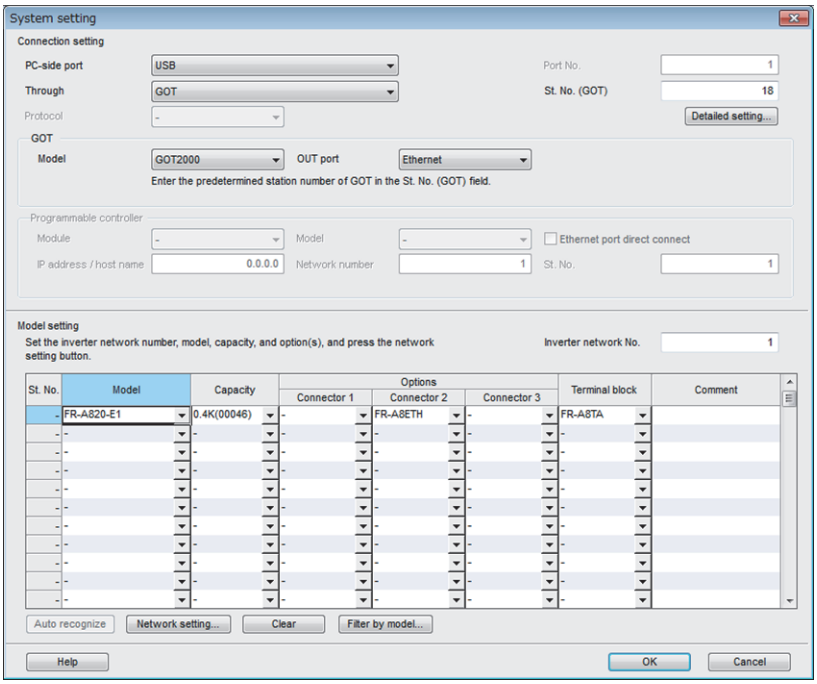
- [Model]: Model of the inverter to be connected

5. Click [OK] to complete the setting.

■USB connection between the GOT and personal computer, Ethernet connection between the GOT and inverter



1. Click [Project] → [System setting] in FR Configurator2 to display the [System setting] dialog.



2. Set [Connection setting] in the [System setting] dialog.

- [PC-side port]: [USB]
- [Through]: [GOT]
- [St. No. (GOT)]: Station number of the GOT to be used

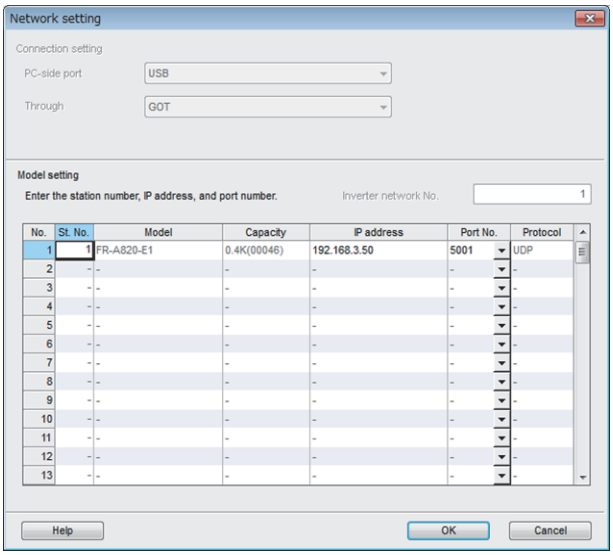
3. Set [GOT].

- [Model]: [GOT2000]
- [OUT port]: [Ethernet]

4. Set [Model setting].

- [Inverter network No.]: Network No. of the inverter to be connected
- [Model]: Model of the inverter to be connected

5. Click the [Network setting] button to display the [Network setting] dialog.

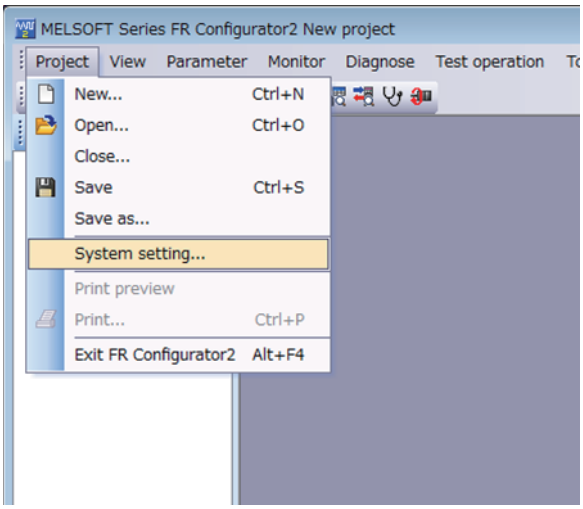


6. Configure [Model setting] in the [Network setting] dialog, and click [OK].

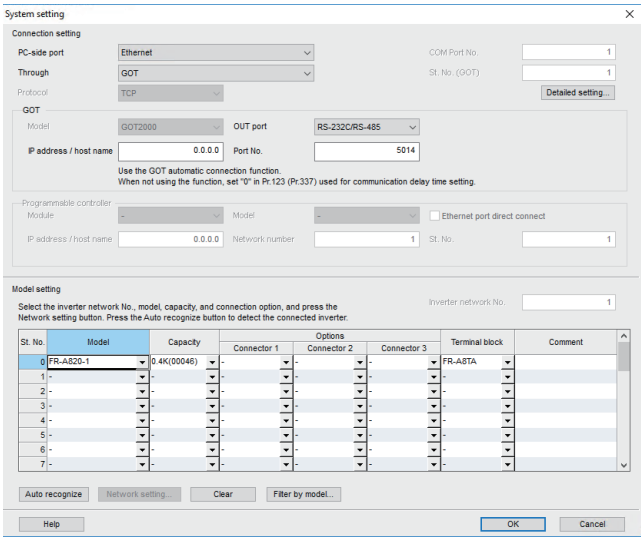
- [St. No.]: Station number of the inverter to be connected
- [IP address]: IP address of the inverter to be connected
- [Port No.]: Port number of the inverter to be connected

7. Click [OK] in the [System setting] dialog to complete the settings.

■Connecting the GOT and a personal computer in an Ethernet connection, and the GOT and an inverter in a serial connection



1. Click [Project] → [System setting] in FR Configurator2 to display the [System setting] dialog.



2. Set [Connection setting] in the [System setting] dialog.

- [PC-side port]: [Ethernet]
- [Through]: [GOT]

3. Set [GOT].

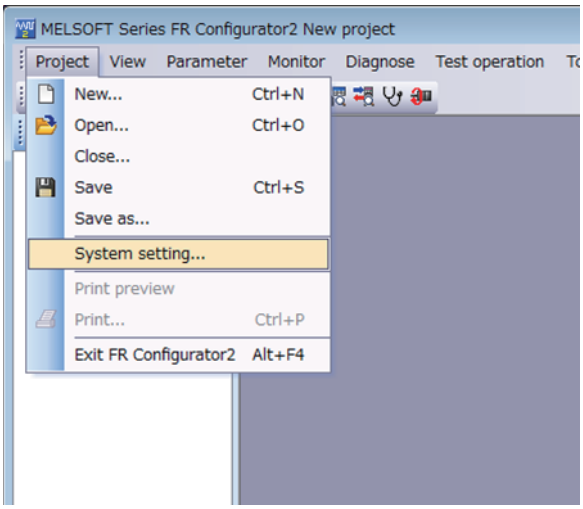
- [OUT port]: [RS-232C/RS-485]
- [IP address / host name]: IP address assigned to the GOT
- [Port No.]: [5014]

4. Set [Model setting].

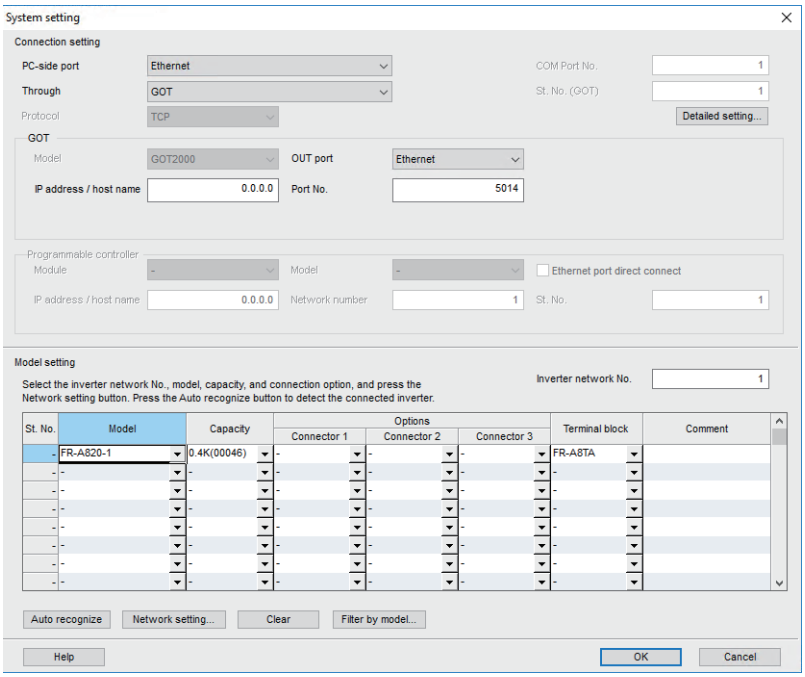
- [Model]: Model of the inverter to be connected

5. Click [OK] to complete the setting.

■Ethernet connection between the GOT and personal computer, Ethernet connection between the GOT and inverter



1. Click [Project] → [System setting] in FR Configurator2 to display the [System setting] dialog.



2. Set [Connection setting] in the [System setting] dialog.

- [PC-side port]: [Ethernet]
- [Through]: [GOT]

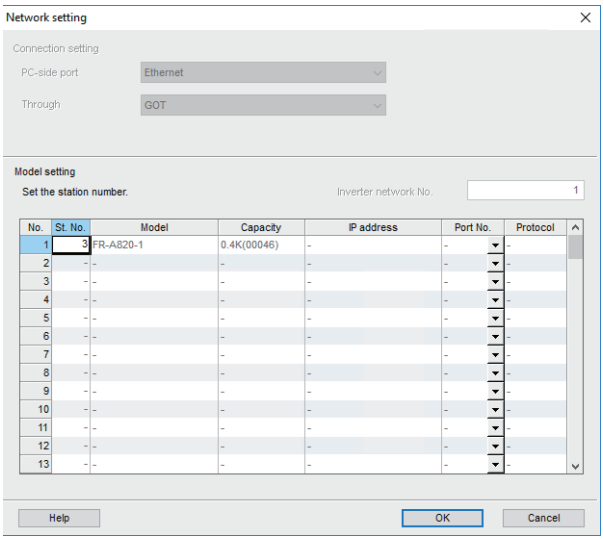
3. Set [GOT].

- [IP address / host name]: IP address assigned to the GOT
- [Port No.]: [5014]

4. Set [Model setting].

- [Inverter network No.]: Network No. of the inverter to be connected
- [Model]: Model of the inverter to be connected

5. Click the [Network setting] button to display the [Network setting] dialog.

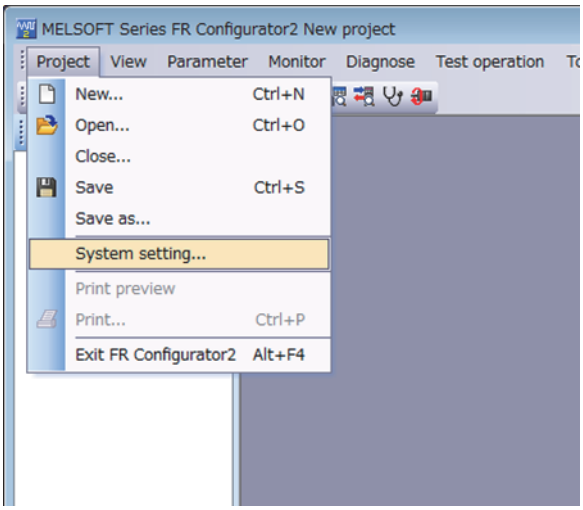


6. Configure [Model setting] in the [Network setting] dialog, and click [OK].

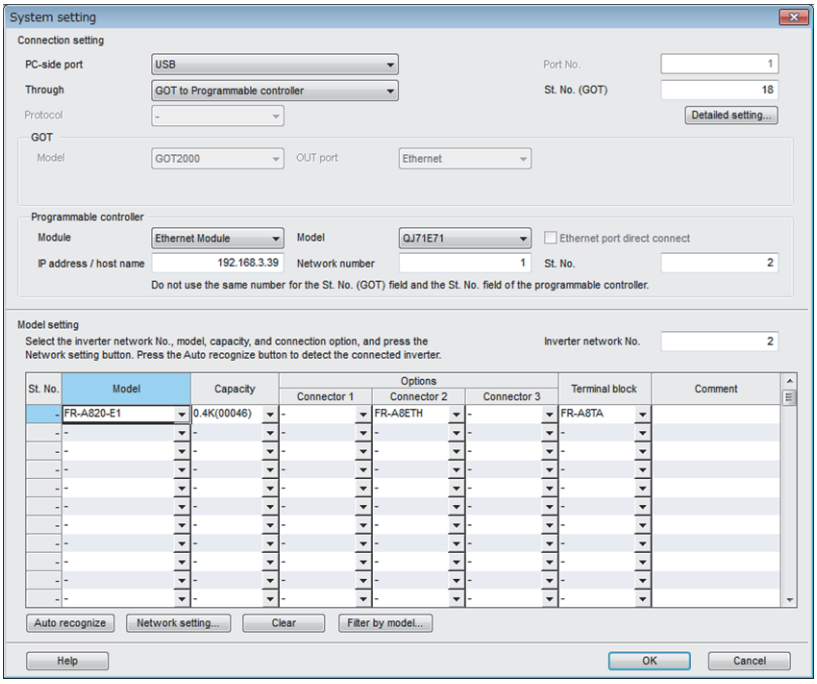
- [St. No.]: Station number of the inverter to be connected

7. Click [OK] in the [System setting] dialog to complete the settings.

When connecting the GOT and inverter via a PLC



1. Click [Project] → [System setting] in FR Configurator2 to display the [System setting] dialog.



2. Set [Connection setting] in the [System setting] dialog.

- [PC-side port]: [USB]
- [Through]: [GOT to Programmable controller]
- [St. No. (GOT)]: Station number of the GOT to be used

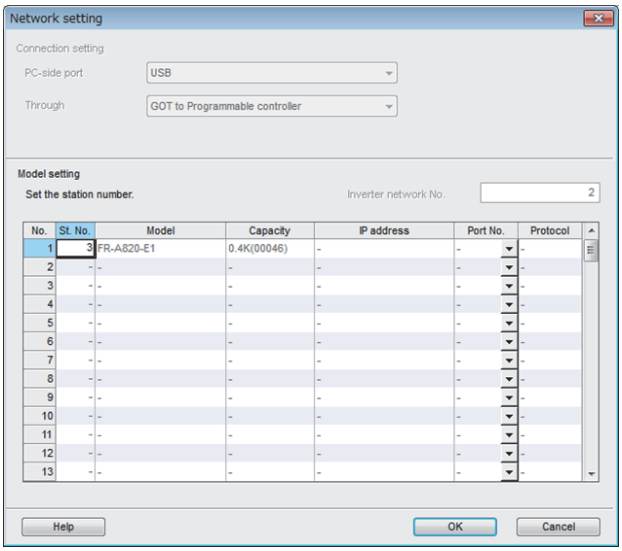
3. Set [Programmable controller].

- [Module]: Type of the PLC module that relays the GOT and inverter
- [Model]: Model of the PLC module that relays the GOT and inverter
- [IP address / host name]: IP address/host name of the PLC module that relays the GOT and inverter
- [Network number]: Network No. of the PLC module that relays the GOT and inverter
- [St. No.]: Station number of the PLC module that relays the GOT and inverter

4. Set [Model setting].

- [Inverter network No.]: Network No. of the inverter to be connected
- [Model]: Model of the inverter to be connected

5. Click the [Network setting] button to display the [Network setting] dialog.



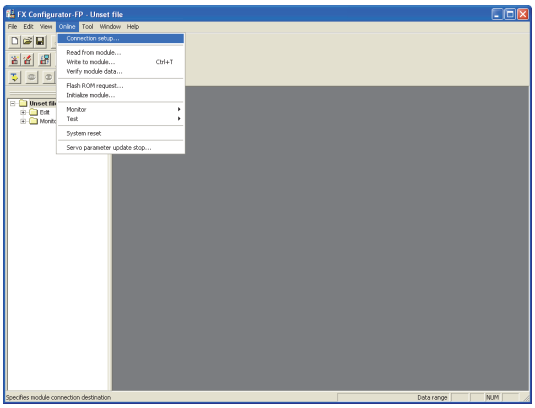
6. Configure [Model setting] in the [Network setting] dialog, and click [OK].

- [St. No.]: Station number of inverter to be connected

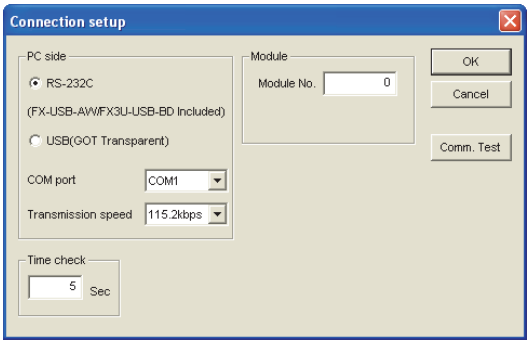
7. Click [OK] in the [System setting] dialog to complete the settings.

Accessing PLC by FX Configurator-FP

This section explains the procedure to set the FA transparent function of FX Configurator-FP with an example of connecting to FXCPU.

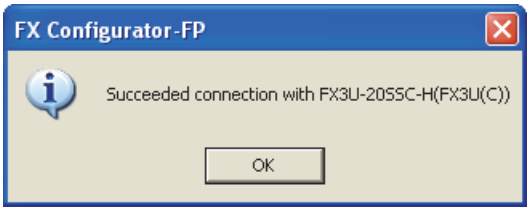


1. Click [Connection setup] for [Online] on FX Configurator-FP.



2. Select [USB (GOT Transparent)] in [PC side].

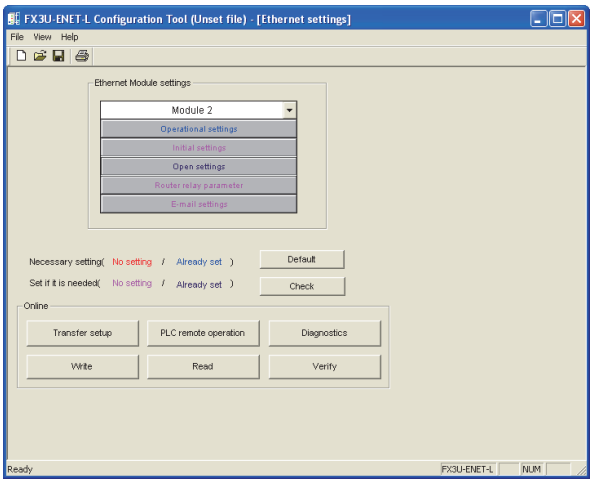
3. Click [Comm. Test].



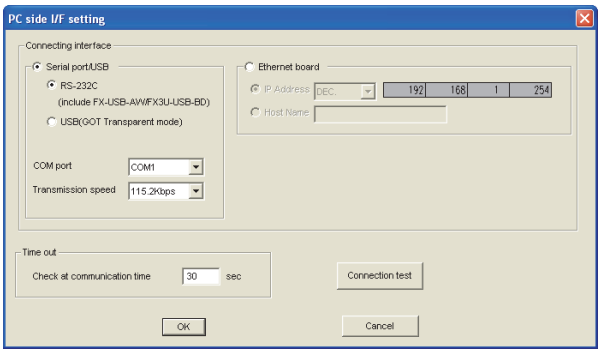
4. After the communication test is completed, check that the GOT is correctly connected to the FXCPU.

Accessing by FX Configurator-EN-L or FX Configurator-EN

This section explains how to set the FA transparent function using FX Configurator-EN-L or FX Configurator-EN.
The following shows FX Configurator-EN-L as an example.

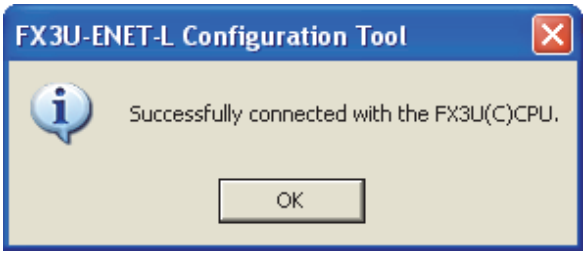


1. Click [Transfer setup] on the FX Configurator-EN-L.



2. Select [USB (GOT Transparent mode)] in [Serial port/USB] of [Connecting interface].

3. Click [Connection test]

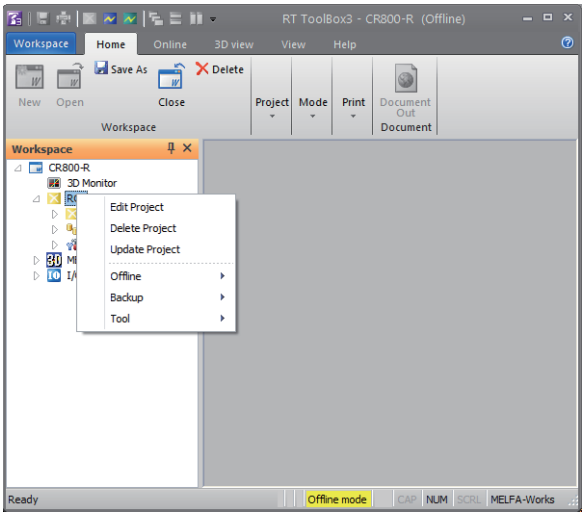


4. After the communication test is completed, check that the GOT is correctly connected to the FXCPU.

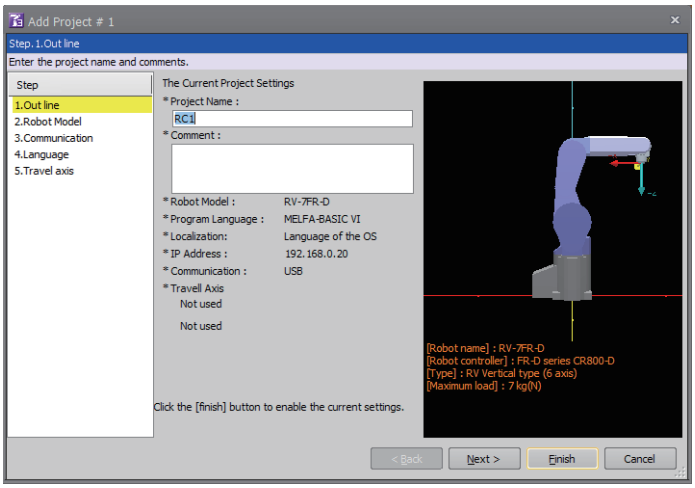
Accessing by RT ToolBox3

The following shows the procedure to set the FA transparent function of RT ToolBox3.

CR800-R Series



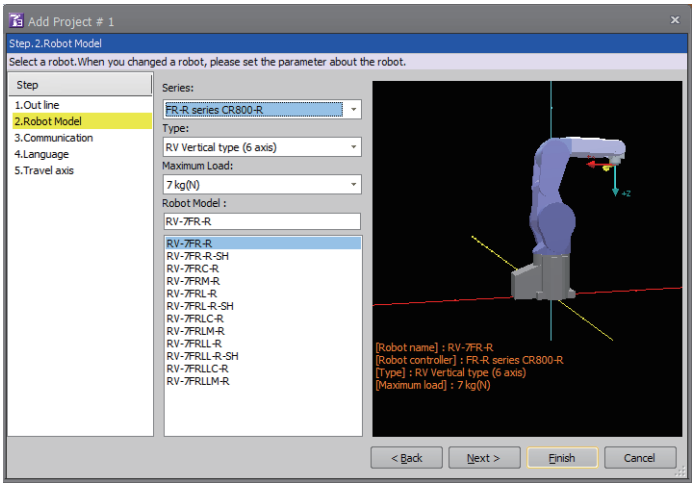
1. Right-click a project name to be a target on the workspace of RT ToolBox3, and click [Edit Project] to display the [Edit Project] dialog.



2. Click the [Next] button.

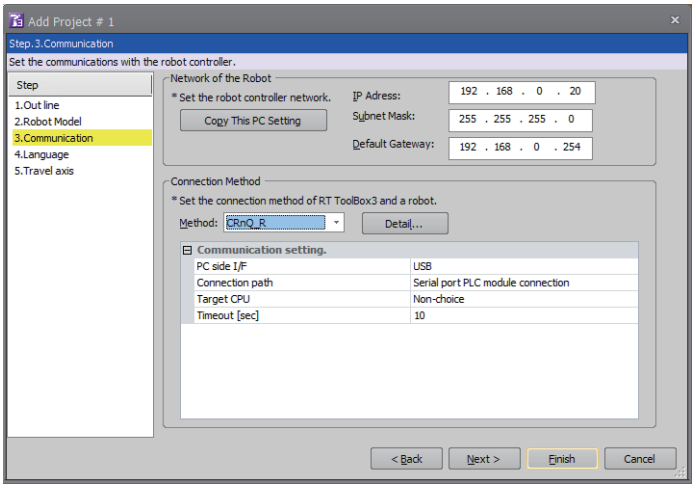
3. Set the following item, and click the [Next] button.

- [Series]: [FR-R series CR800-R]



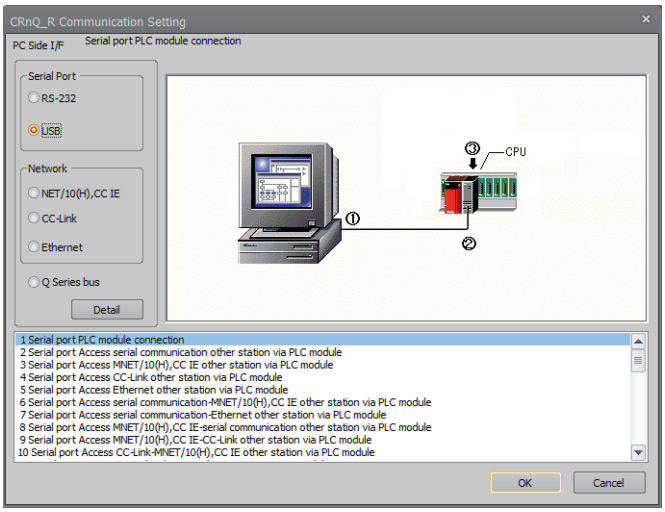
4. Set the following item, and click the [Detail] button to display the [CRnQ_R Communication Setting] dialog.

• [Method]: [CRnQ_R]



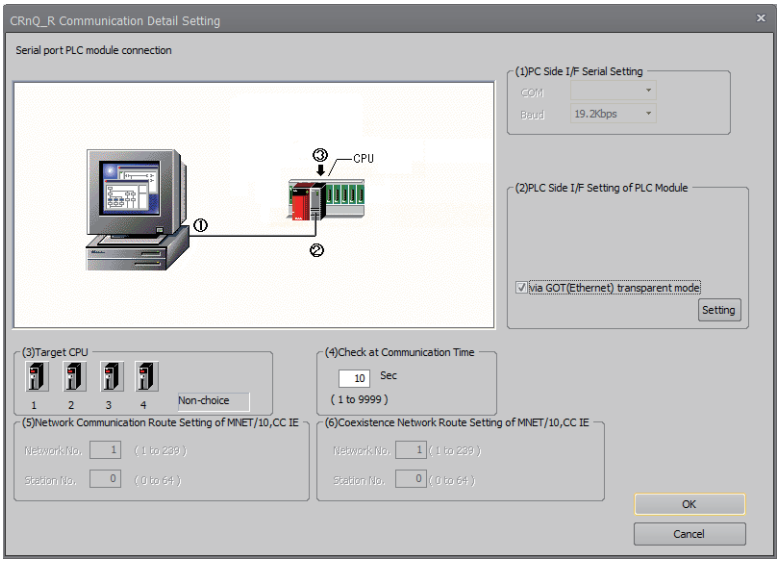
5. Set the following item, and click the [Detail] button to display the [CRnQ_R Communication Detail Setting] dialog.

• [Serial Port]: [USB]



6. Select [via GOT(Ethernet) transparent mode] in [(2)PLC Side I/F Setting of PLC Module].

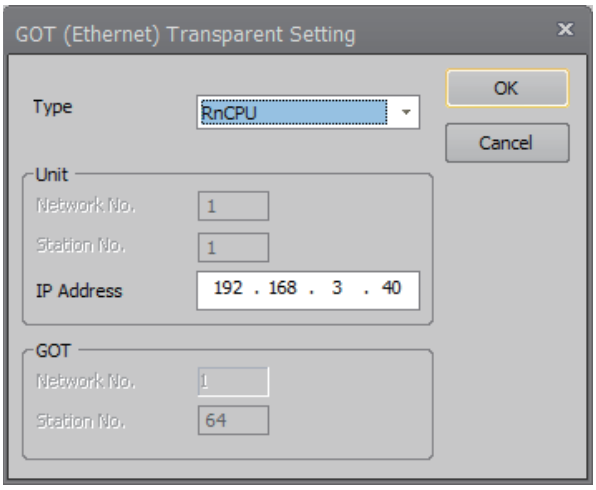
Select the transparent target controller in [(3)Target CPU] as necessary.



7. Click the [Setting] button to display the [GOT (Ethernet) Transparent Setting] dialog.

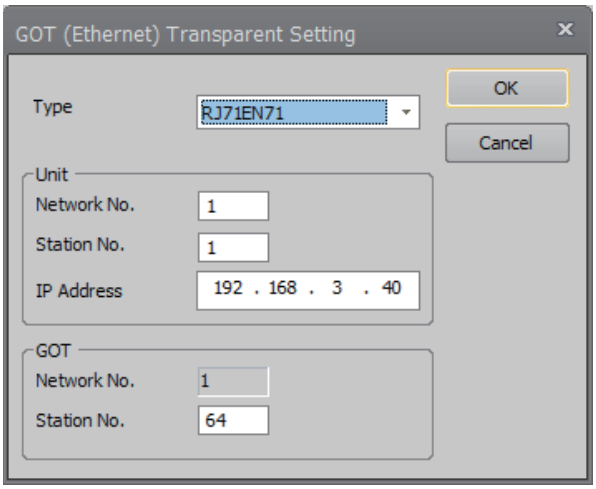
8. Set the following according to the interface of the controller.

• When connecting with an Ethernet port built in a PLC CPU



Item		Setting
[Type]		[RnCPU]
[Unit]	[IP Address]	IP address assigned to RnCPU

• When connecting with an Ethernet module



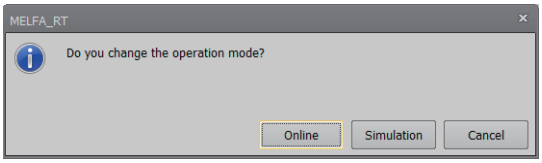
Item		Setting
[Type]		[RJ71EN71]
[Unit]	[Network No.]	Network number assigned to the Ethernet module
	[Station No.]	Station number assigned to the Ethernet module
	[IP Address]	IP address assigned to the Ethernet module
[GOT]	[Station No.]	Station number assigned to the GOT

9. Click the [OK] buttons of the dialogs set at Step 5 to 8 to complete the settings.

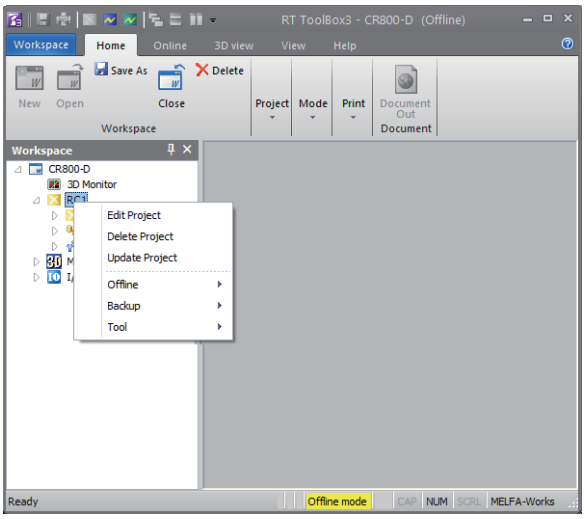
10. Click [Finish] in the [Edit Project] dialog to complete the settings.

After completing the settings, change the operation mode to [Online].

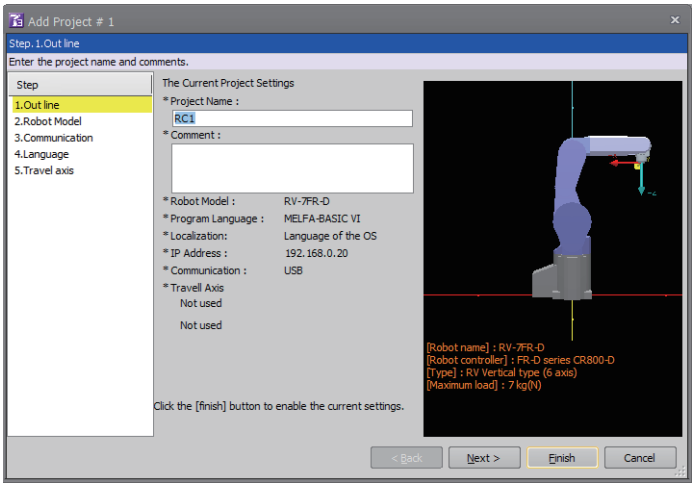
Change the operation mode with the GOT and robot controller connected.



CR800-D Series



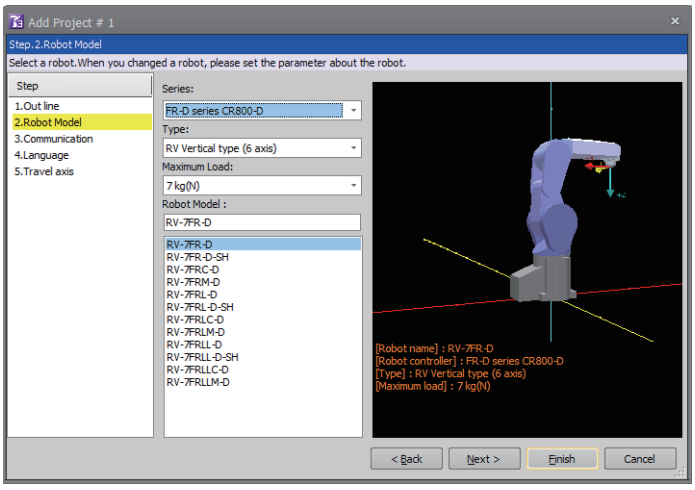
1. Right-click a project name to be a target on the workspace of RT ToolBox3, and click [Edit Project] to display the [Edit Project] dialog.



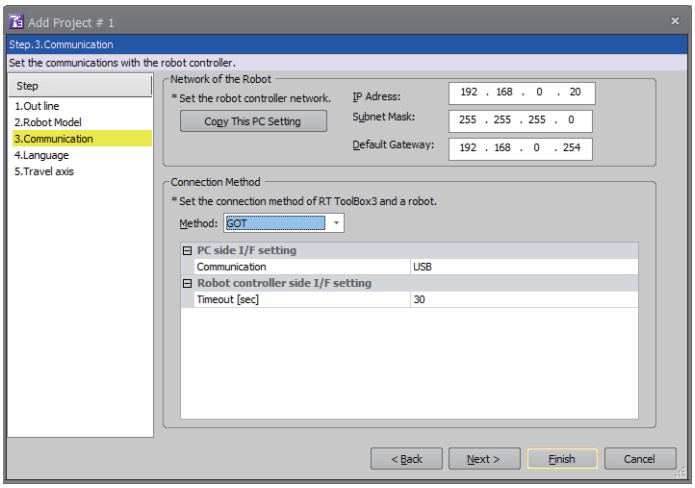
2. Click the [Next] button.

3. Set the following item, and click the [Next] button.

- [Series]: [FR-D series CR800-D]



4. Set the following items.

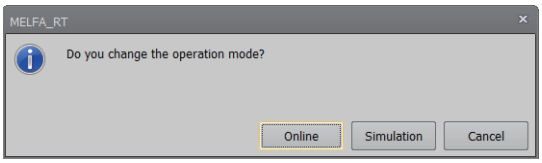


Item		Setting
[Method]		[GOT]
[PC side I/F setting]	[Communication]	[USB]
[Robot controller side I/F setting]	[Timeout [sec]]	Set this item as necessary.

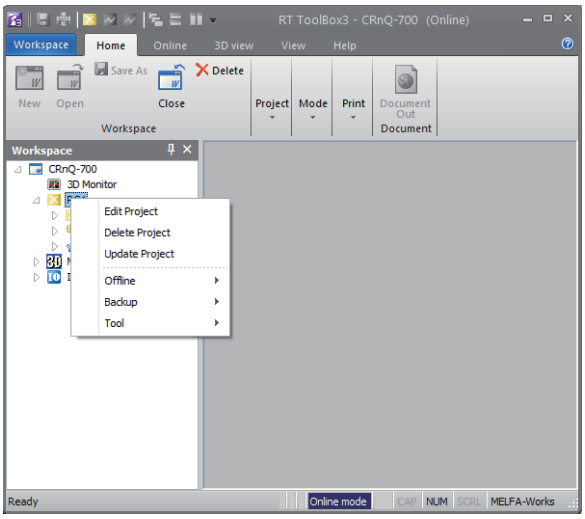
5. Click [Finish] in the [Edit Project] dialog to complete the settings.

After completing the settings, change the operation mode to [Online].

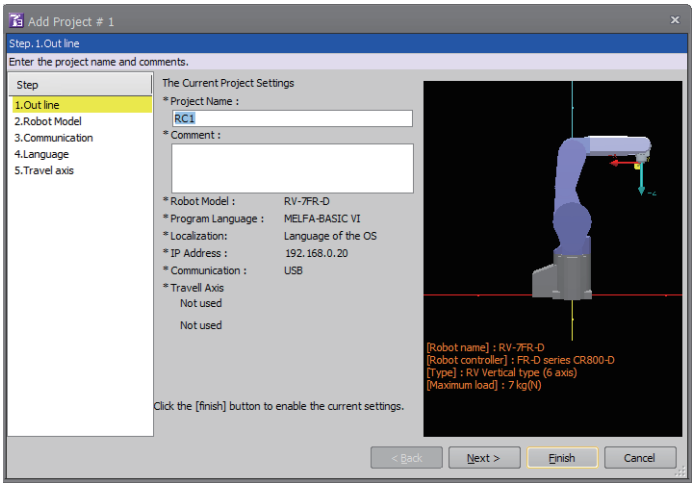
Change the operation mode with the GOT and robot controller connected.



CRnQ-700 Series



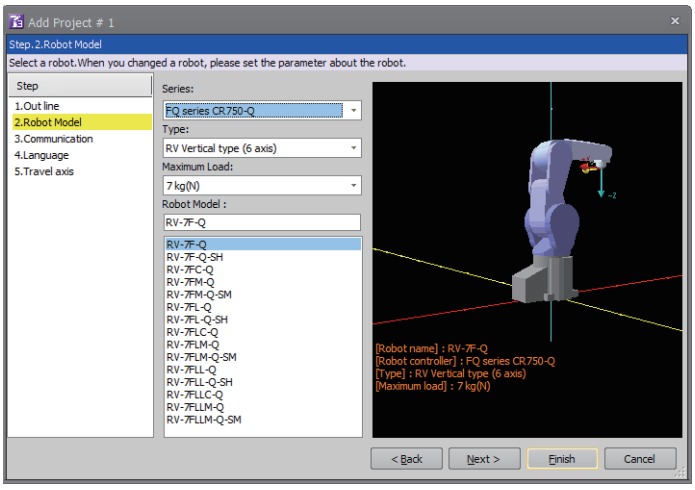
1. Right-click a project name to be a target on the workspace of RT ToolBox3, and click [Edit Project] to display the [Edit Project] dialog.



2. Click the [Next] button.

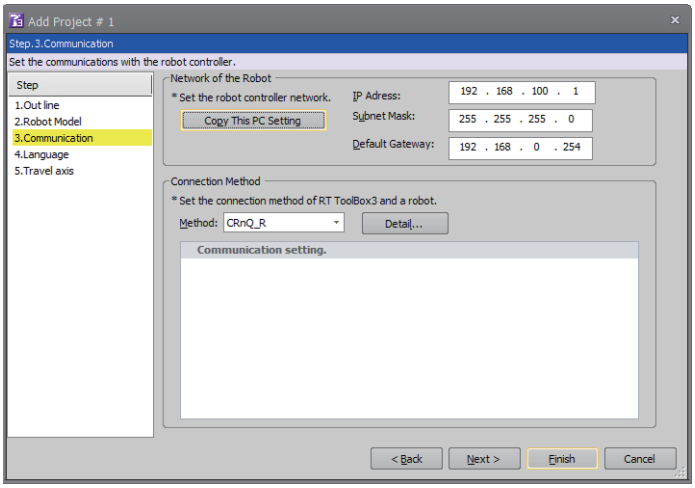
3. Set the following item, and click the [Next] button.

- [Series]: [FQ series CR750-Q]



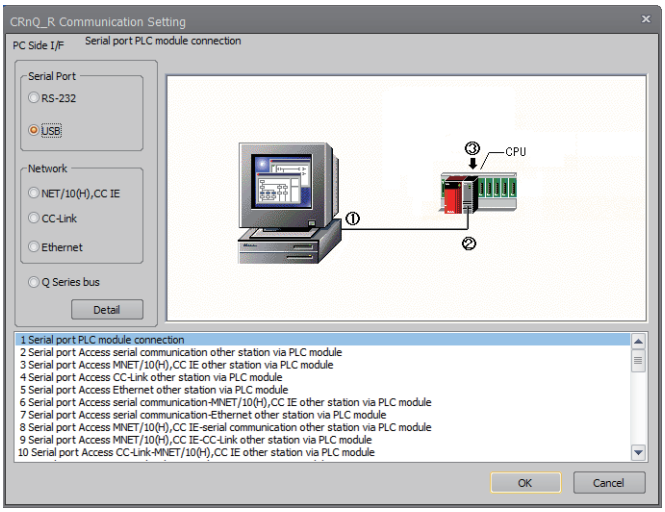
4. Set the following item, and click the [Detail] button to display the [CRnQ_R Communication Setting] dialog.

• [Method]: [CRnQ_R]



5. Set the following item, and click the [Detail] button to display the [CRnQ_R Communication Detail Setting] dialog.

• [Serial Port]: [USB]



6. Select either of the following in [(2)PLC Side I/F Setting of PLC Module].

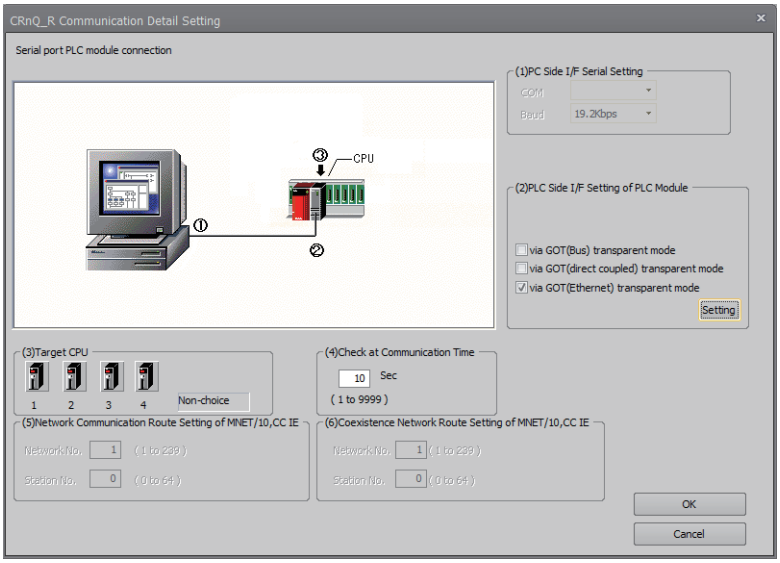
[via GOT(Bus) transparent mode]

[via GOT(direct coupled) transparent mode]

[via GOT(Ethernet) transparent mode]

Here, select [via GOT(Ethernet) transparent mode].

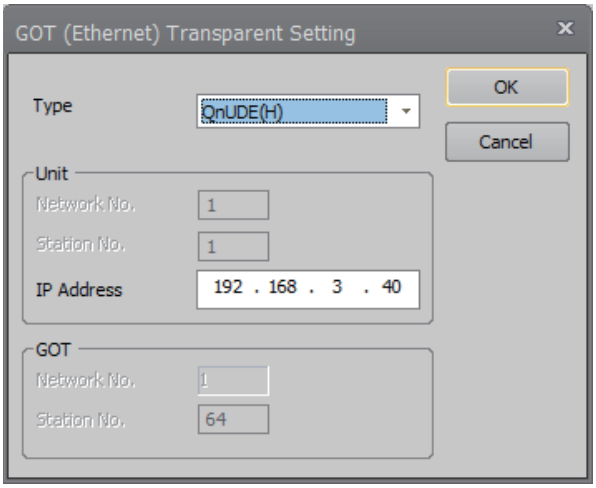
Select the transparent target controller in [(3)Target CPU] as necessary.



7. Click the [Setting] button to display the [GOT (Ethernet) Transparent Setting] dialog.

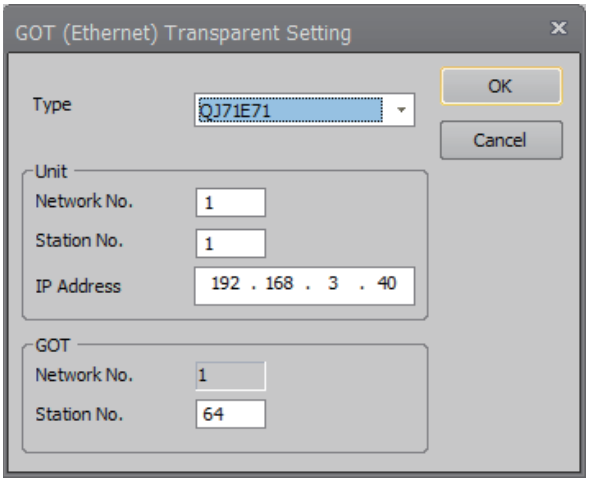
8. Set the following according to the interface of the controller.

• When connecting with an Ethernet port built in a PLC CPU



Item		Setting
[Type]		[QnUDE(H)]
[Unit]	[IP Address]	IP address assigned to QnUDE(H)

• When connecting with an Ethernet module



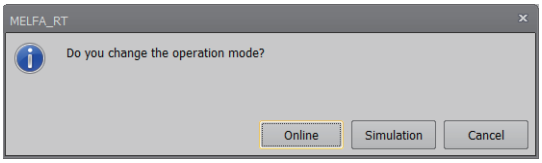
Item		Setting
[Type]		[QJ71E71]
[Unit]	[Network No.]	Network number assigned to the Ethernet module
	[Station No.]	Station number assigned to the Ethernet module
	[IP Address]	IP address assigned to the Ethernet module
[GOT]	[Station No.]	Station number assigned to the GOT

9. Click the [OK] buttons of the dialogs set at Step 5 to 8 to complete the settings.

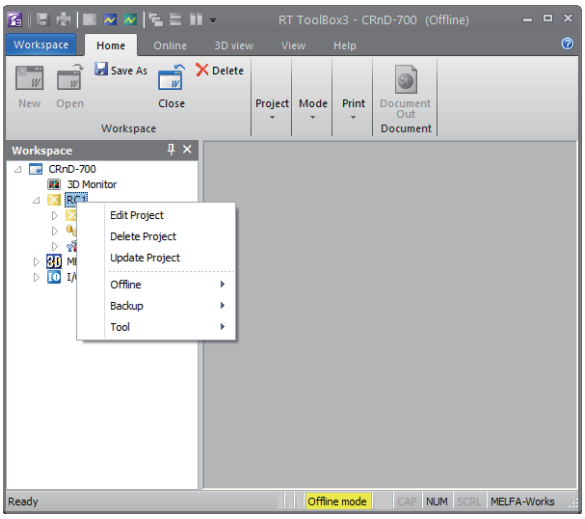
10. Click [Finish] in the [Edit Project] dialog to complete the settings.

After completing the settings, change the operation mode to [Online].

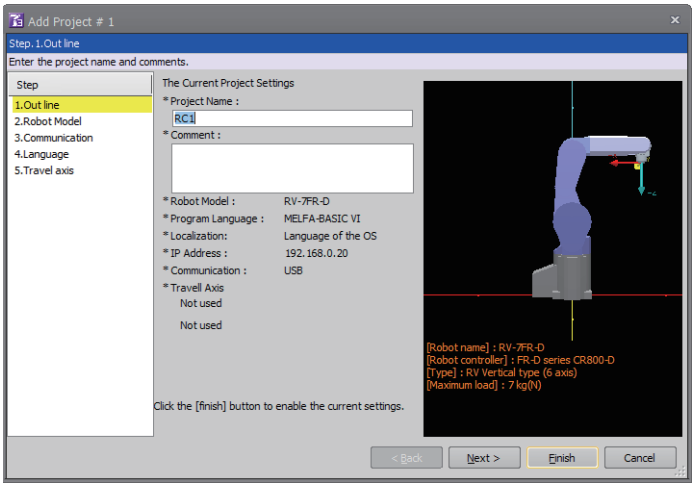
Change the operation mode with the GOT and robot controller connected.



CRnD-700 Series



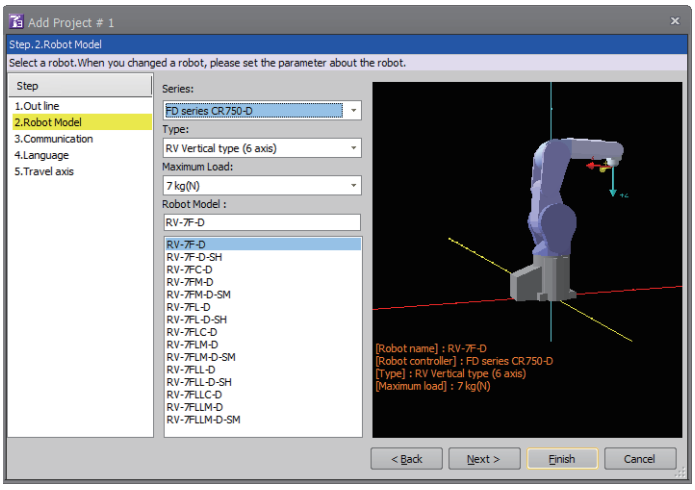
1. Right-click a project name to be a target on the workspace of RT ToolBox3, and click [Edit Project] to display the [Edit Project] dialog.



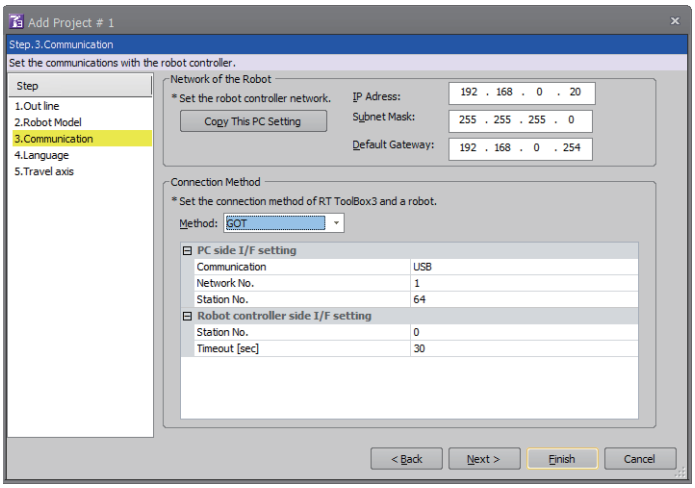
2. Click the [Next] button.

3. Set the following item, and click the [Next] button.

- [Series]: [FD series CR750-D]



4. Set the following items.

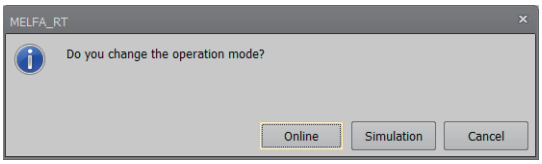


Item		Setting
[Method]		[GOT]
[PC side I/F setting]	[Communication]	[USB]
	[Network No.]	Network number assigned to the GOT
	[Station No.]	Station number assigned to the GOT
[Robot controller side I/F setting]	[Station No.]	Station number assigned to the robot controller
	[Timeout [sec]]	Set this item as necessary.

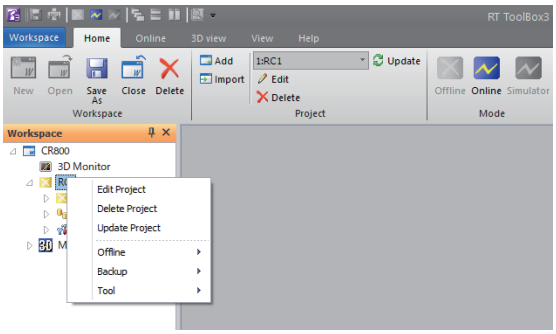
5. Click [Finish] in the [Edit Project] dialog to complete the settings.

After completing the settings, change the operation mode to [Online].

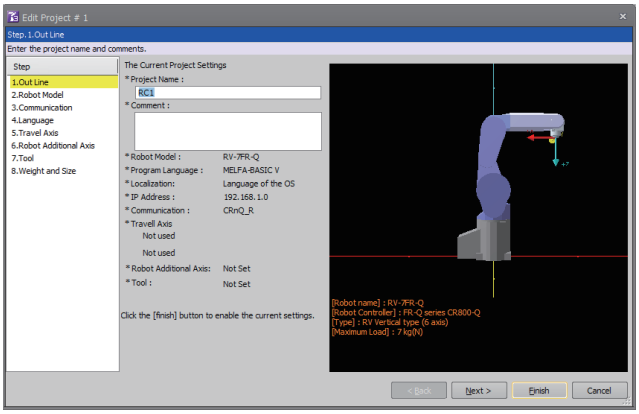
Change the operation mode with the GOT and robot controller connected.



CR800-Q Series



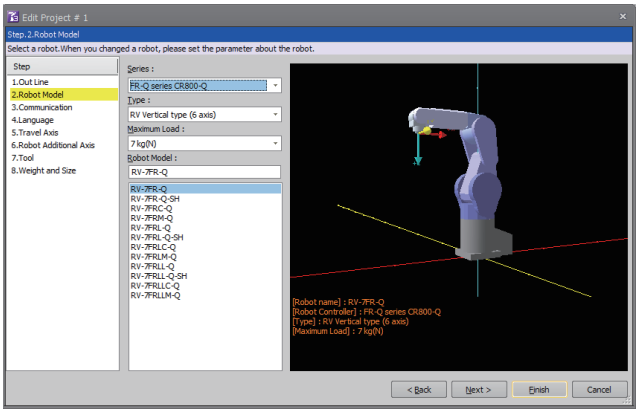
1. Right-click a project name to be a target on the workspace of RT ToolBox3, and click [Edit Project] to display the [Edit Project] dialog.



2. Click the [Next] button.

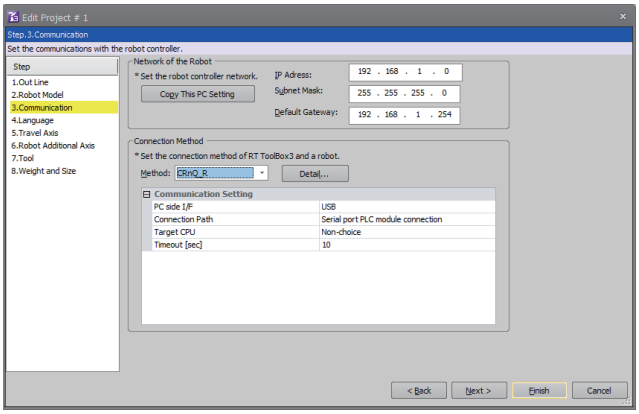
3. Set the following item, and click the [Next] button.

- [Series]: [FR-Q series CR800-Q]



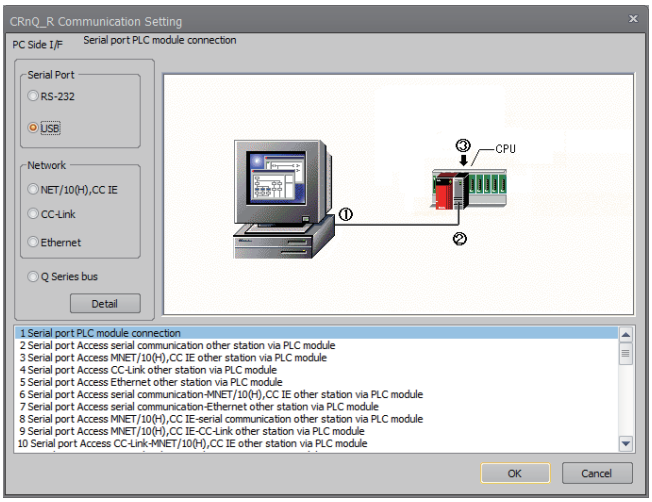
4. Set the following item, and click the [Detail] button to display the [CRnQ_R Communication Setting] dialog.

• [Method]: [CRnQ_R]



5. Set the following item, and click the [Detail] button to display the [CRnQ_R Communication Detail Setting] dialog.

• [Serial Port]: [USB]



6. Select either of the following in [(2)PLC Side I/F Setting of PLC Module].

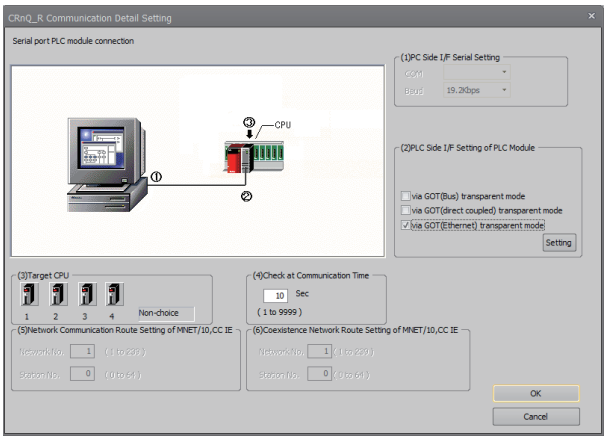
• [via GOT(Bus) transparent mode]

• [via GOT(direct coupled) transparent mode]

• [via GOT(Ethernet) transparent mode]

Here, select [via GOT(Ethernet) transparent mode].

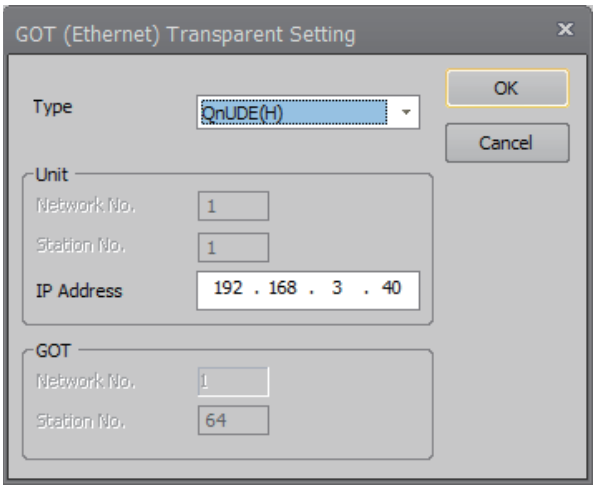
Select the transparent target controller in [(3)Target CPU] as necessary.



7. Click the [Setting] button to display the [GOT (Ethernet) Transparent Setting] dialog.

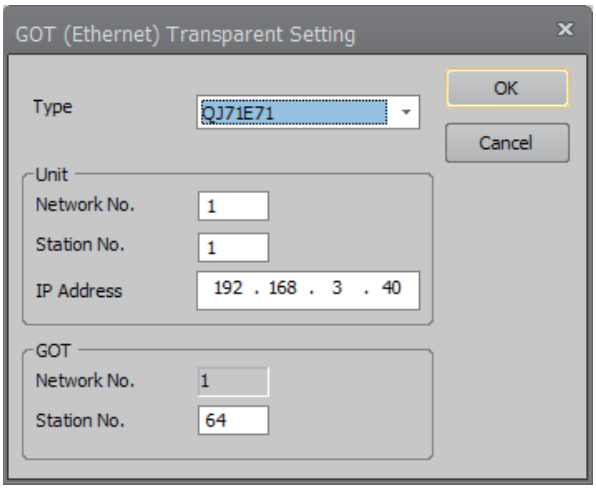
8. Set the following according to the interface of the controller.

• When connecting with an Ethernet port built in a PLC CPU



Item		Setting
[Type]		[QnUDE(H)]
[Unit]	[IP Address]	IP address assigned to QnUDE(H)

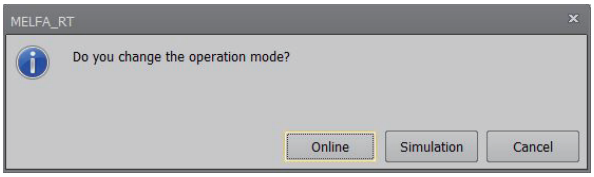
• When connecting with a PERIPHERAL I/F of CR800-Q (Q172DSRCPU) or Ethernet module



Item		Setting
[Type]		[QJ71E71]
[Unit]	[Network No.]	Arbitrary network number
	[Station No.]	Arbitrary station number
	[IP Address]	IP address assigned to the Ethernet module
[GOT]	[Station No.]	Station number assigned to the GOT

9. Click the [OK] buttons of the dialogs set at Step 5 to 8 to complete the settings.

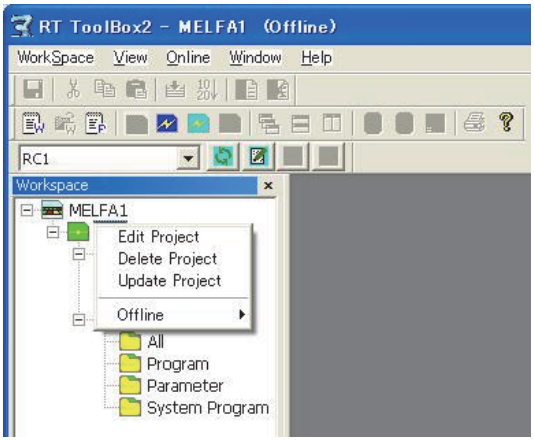
10. Click [Finish] in the [Edit Project] dialog to complete the settings.



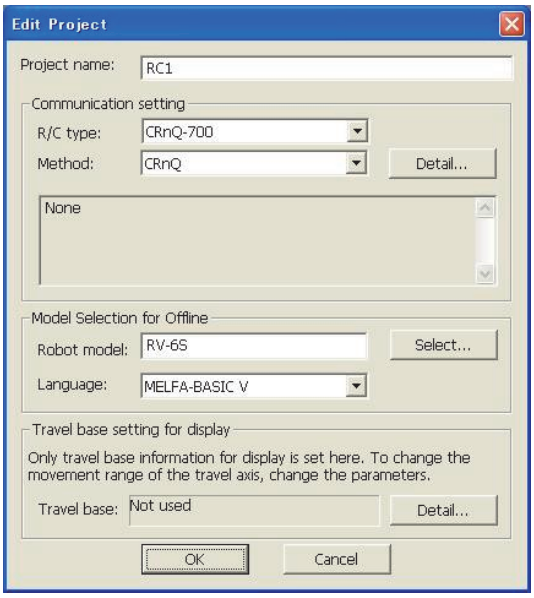
Accessing by RT ToolBox2

This section explains the procedure to set the FA transparent function of RT ToolBox2 with an example of connecting to CRnQ-700.

Connecting the GOT and controller in direct CPU connection (serial) (CRnQ-700)

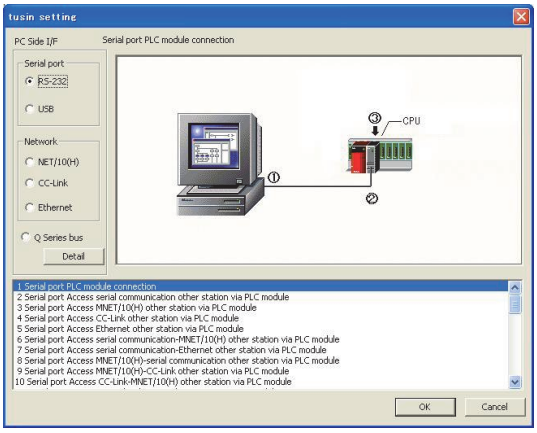


1. Right-click a project name to be a target on the project tree of RT ToolBox2.
Click [Edit Project].



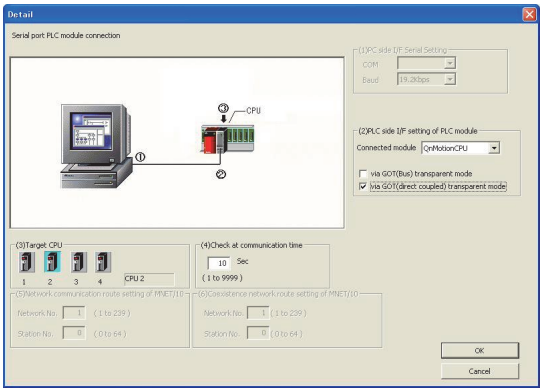
2. Set [Method] to [CRnC].

3. Click [Detail].



4. Select [USB] in [Serial port].

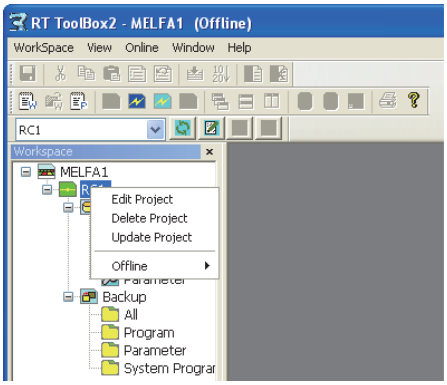
5. Click [Detail].



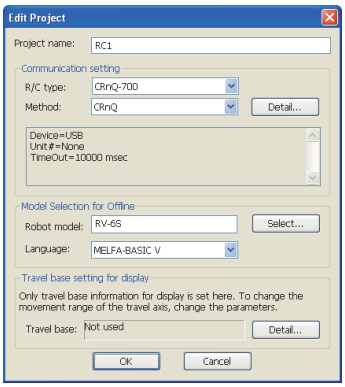
6. Check [via GOT (direct coupled) transparent mode] for [PLC side I/F Detailed setting of PLC module].

7. As necessary, select a CPU that is targeted in [CPU].

Connecting the GOT and Controller in Ethernet connection

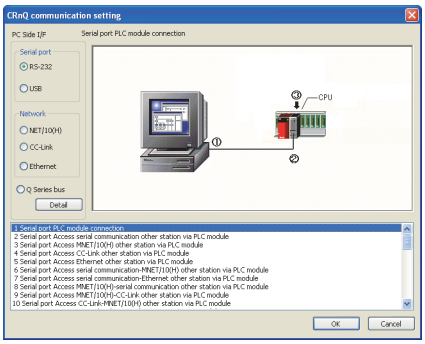


1. Right-click a project name to be a target on the project tree of RT ToolBox2.
Click [Edit Project].



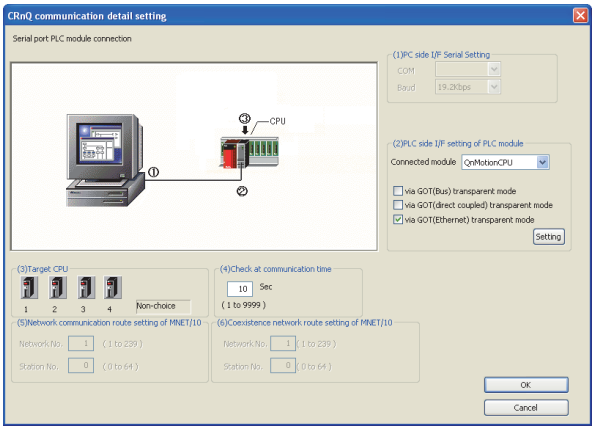
2. Set [Method] to [CRnQ].

3. Click [Detail].

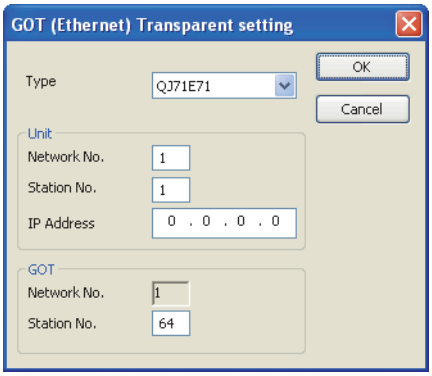


4. Select [USB] in [Serial port].

5. Click [Detail].



6. On the [PLC side I/F setting of PLC module], mark the [via GOT (Ethernet) transparent mode] checkbox and click [Set].



7. Set [QJ71E71] for [Type].

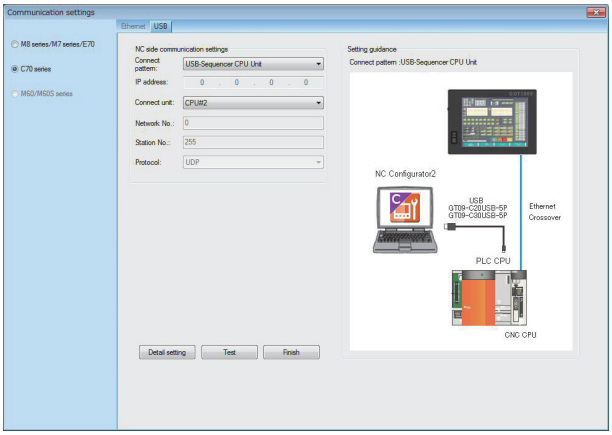
8. Specify the number assigned to the Ethernet module for [Network No.], [Station No.] and [IP Address] in "Module side".

9. Specify the number assigned to the GOT for [Network No.], [Station No.] and [IP Address] in "GOT side".

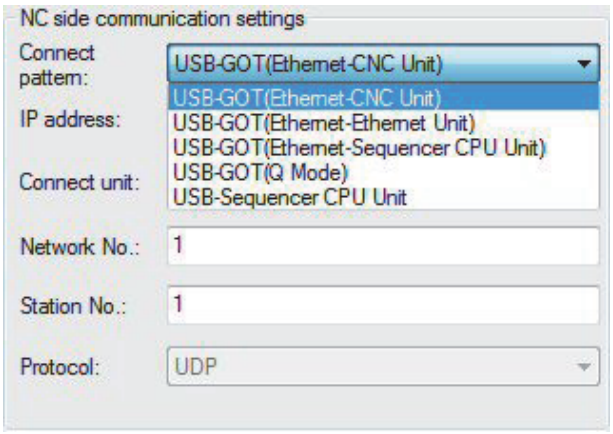
10. As necessary, select a CPU that is targeted in [CPU].

Accessing by NC Configurator2

The following shows the procedure to set the FA transparent function of NC Configurator2.



1. Click [Communicate] → [Communication settings] → [C70 series] → [USB].



2. Depending on the connect pattern, set one of the following in the [Connect pattern].

USB-GOT (Ethernet-CNC Unit)

USB-GOT (Ethernet-Ethernet Unit)

USB-GOT (Ethernet-Sequencer CPU Unit)

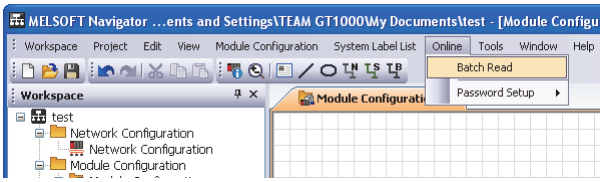
USB-GOT (Q Mode)

3. Set as necessary [IP address], [Network No.] and [Station No.].

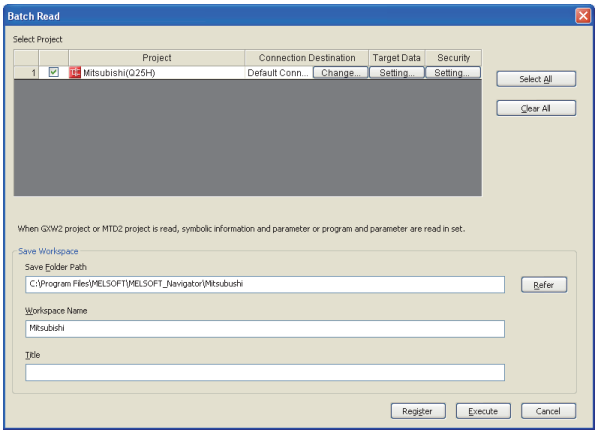
4. check that the GOT is correctly connected to the CNC in [Test].

Accessing by MELSOFT Navigator

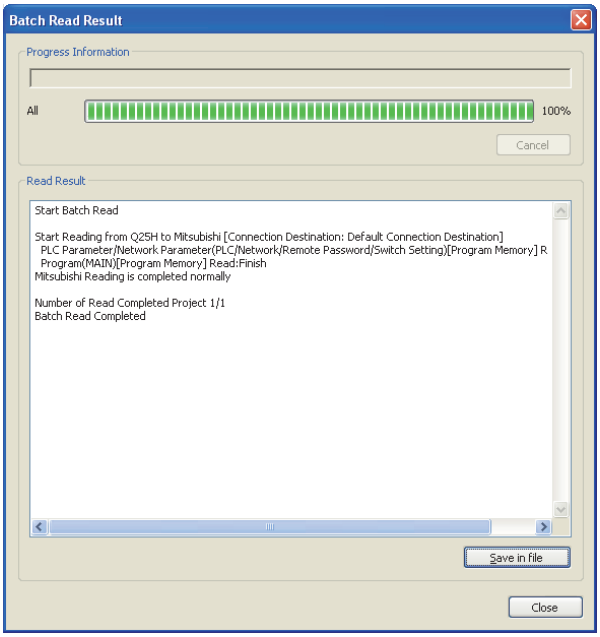
This section explains the procedure to set the FA transparent function of the MELSOFT Navigator.



1. Click [Online] → [Batch Read] in MELSOFT Navigator.
2. The [Batch Read] is displayed.



3. Select the projects to be read from [Select Project], and set the storage destination of the workspace in [Save Workspace].
4. Click [Execute] to read and display the specified project.



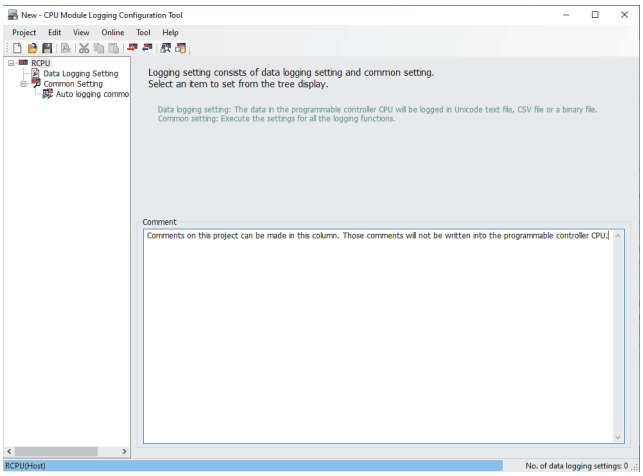
Accessing by CPU Module Logging Configuration Tool

The following shows the procedure to set the FA transparent function of CPU Module Logging Configuration Tool.

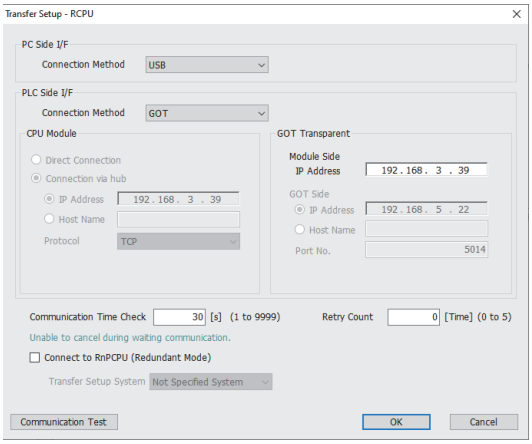
When connecting the GOT and the RCPU or FX5CPU

The following shows an example of connection with the RCPU.

■Connecting the GOT and the personal computer by a USB



1. Click [Online] → [Transfer Setup] in CPU Module Logging Configuration Tool.



2. Set the following items in the [Transfer Setup] dialog.

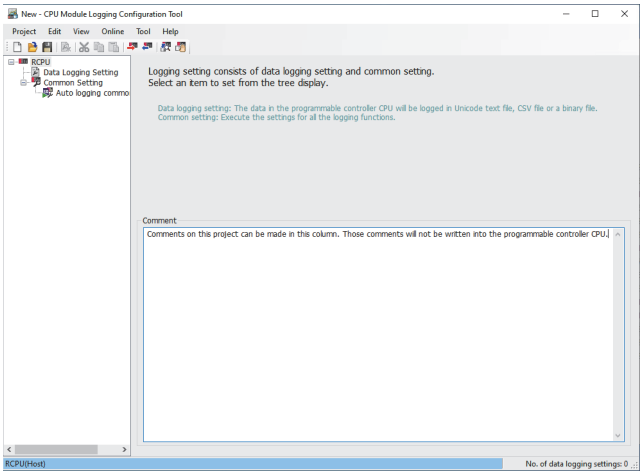
- [PC Side I/F]: [USB]
- [PLC Side I/F]: [GOT]

3. Set the following item in [Module Side] in [GOT Transparent].

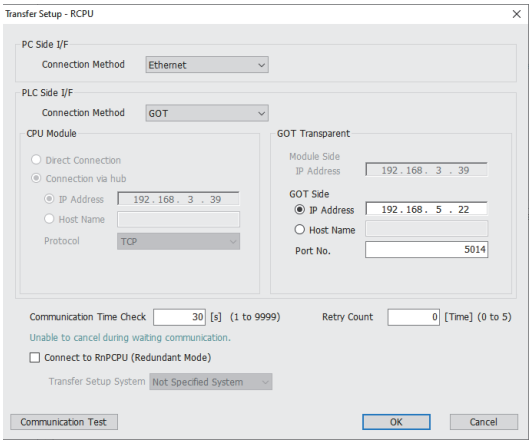
- [IP Address]: IP address of the PLC

4. Click [OK] to complete the setting.

■Connecting the GOT and the personal computer in an Ethernet connection



1. Click [Online] → [Transfer Setup] in CPU Module Logging Configuration Tool.



2. Set the following items in the [Transfer Setup] dialog.

- [PC Side I/F]: [Ethernet]
- [PLC Side I/F]: [GOT]

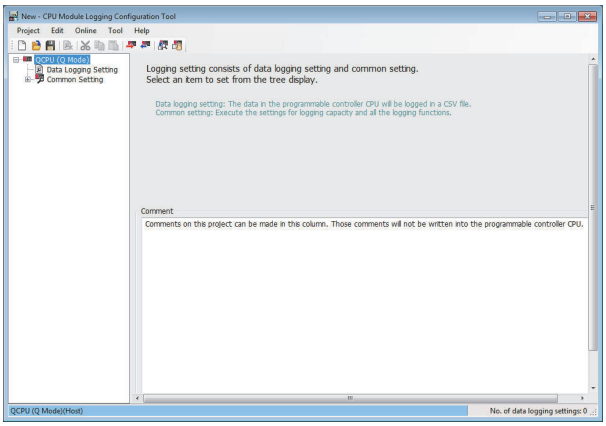
3. Set the following items in [GOT Side] in [GOT Transparent]

Set either [IP Address] or [Host Name].

- [IP Address]: IP address assigned to the GOT
- [Host Name]: Host name assigned to the GOT
- [Port No.]: Port No. for GOT transparent

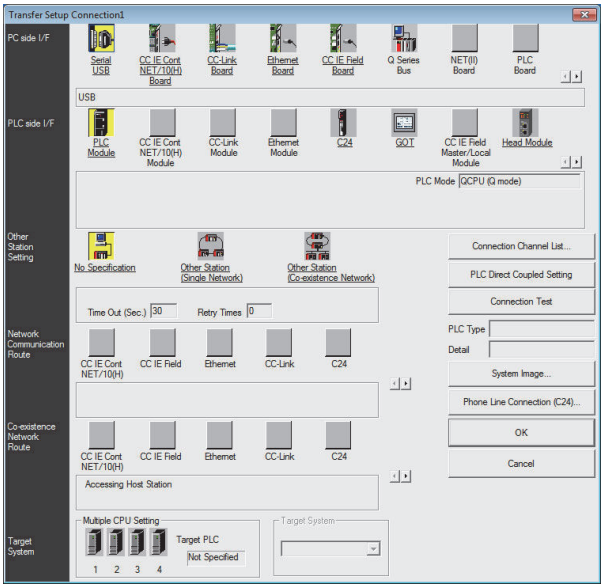
4. Click [OK] to complete the setting.

When connecting the GOT and the QCPU (Q mode) or LCPU



1. Click [Online] → [Transfer Setup...].

2. The [Transfer Setup] is displayed.



3. Set the [Transfer Setup]:

PC side I/F: Serial USB

PLC side I/F: GOT

Other Station Setting: No specification

4. Set [PC side I/F Serial Setting] and [PLC side I/F Detailed Setting of GOT] in [Transfer Setup].

For details, refer to the following.

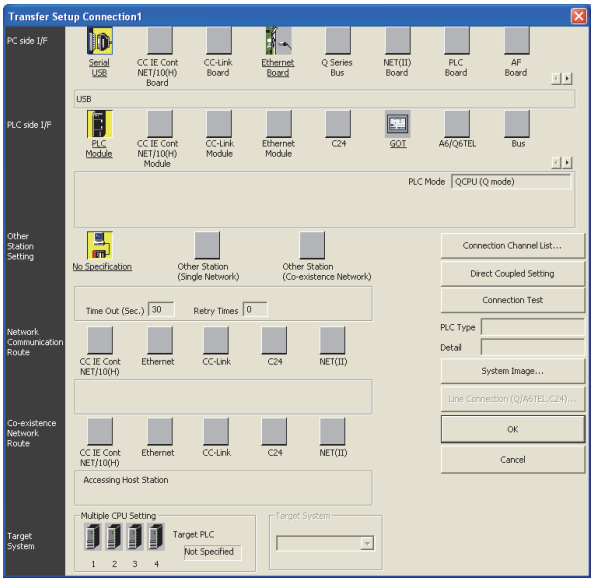
☞ Page 762 Accessing by GX Works2

Accessing by Setting/ Monitoring tool for C Controller module

The following shows the procedure to set the FA transparent function of Setting/Monitoring tool for C Controller module (Q Series) with the C Controller module (Q24DHCCPU-V) connected.

When connecting the GOT and personal computer with USB

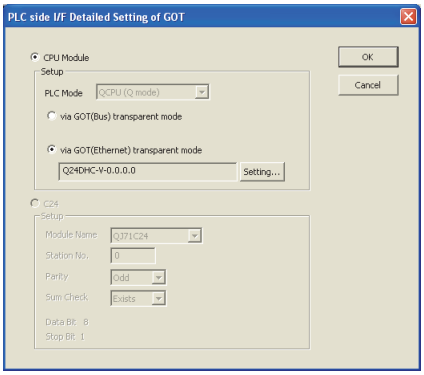
■When connecting the GOT and PLC in Ethernet communication



1. Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of MT Setting/Monitoring tool for C Controller module.
2. The [Transfer Setup] is displayed.
3. Set the [Transfer Setup]:

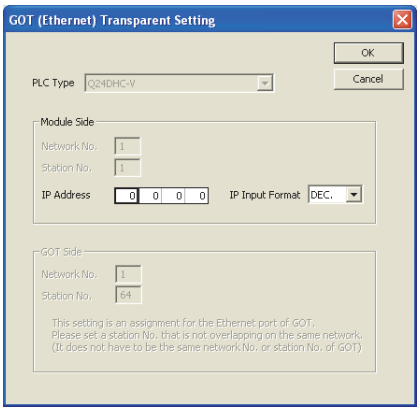
PLC side I/F: GOT

Other station: No specification



4. Double-click [GOT] of the CPU side I/F to display [CPU side I/F Detailed Setting of GOT].

5. Mark the [via GOT(Ethernet) transparent mode] checkbox on the [CPU side I/F Detailed Setting of GOT] screen.



6. By clicking [Set], the [GOT (Ethernet) Transparent Setting] is displayed.

Here, set the C Controller module (Q Series) (Q24DHCCPU-V), which is firstly connected via a GOT.

7. Specify the IP address for [IP address] same as the IP address assigned to the C Controller module (Q Series) (Q24DHCCPU-V).



8. The screen returns to [Transfer Setup].

Click [Connection Test] to check if Setting/Monitoring tool for C Controller module has been connected to the C Controller module (Q Series) (Q24DHCCPU-V).

Accessing by MX Component (MX Sheet)

This section explains the procedure to set the FA transparent function of MX Component (MX Sheet) with an example of MX Sheet Version2.

Point

MX Component (MX Sheet) manuals

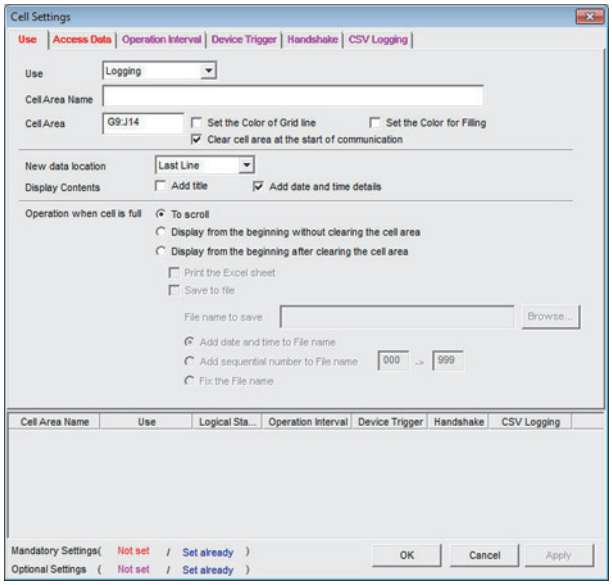
For details of the MX Component (MX Sheet), refer to the following manual.

MX Sheet Version 2 Operating Manual (Introduction)

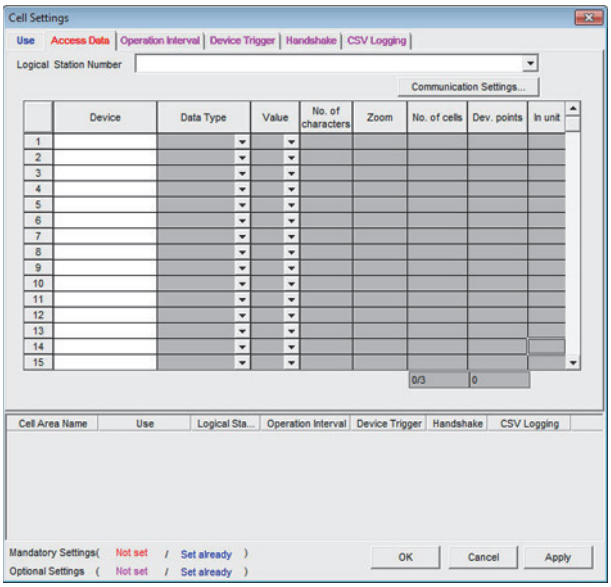
MX Component Version 4 Operating Manual

When MX Component is used alone

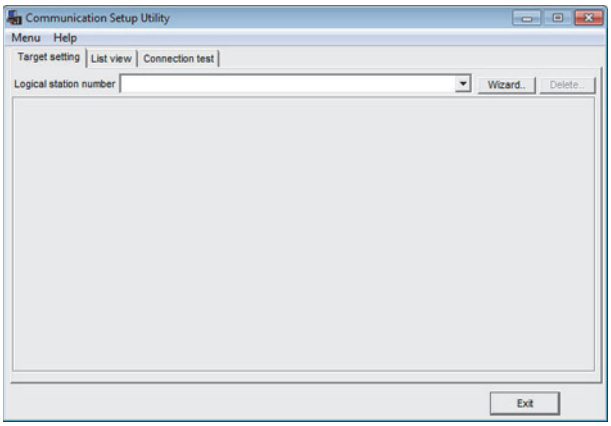
Start [Communication Setting Utility] and start communication setting from the following step 3.



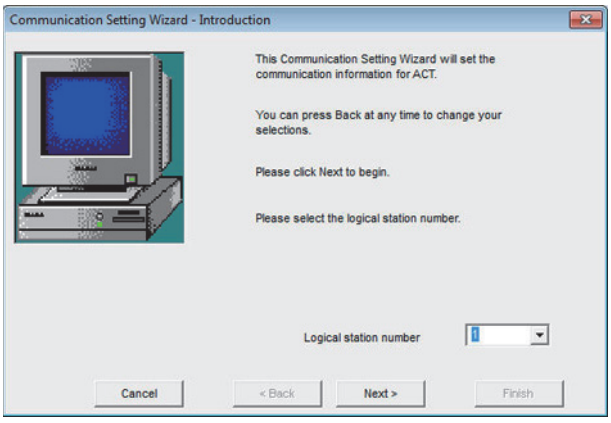
1. Click [MX sheet] of Microsoft Excel → [Cell Settings]. Set [Use] and click [Access Data].



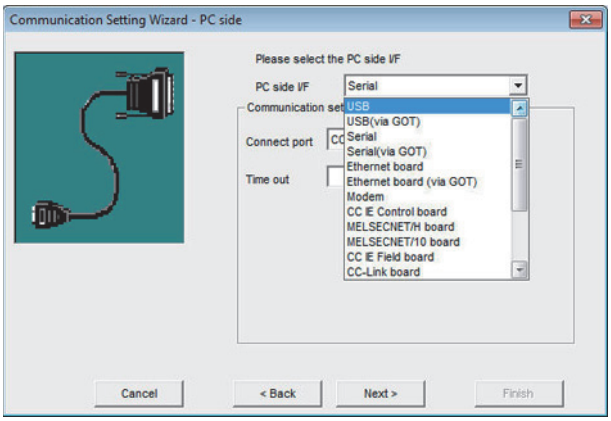
2. Click [Communication Setting].



3. Click [Wizard].



4. Set [Logical station number] and click [Next].



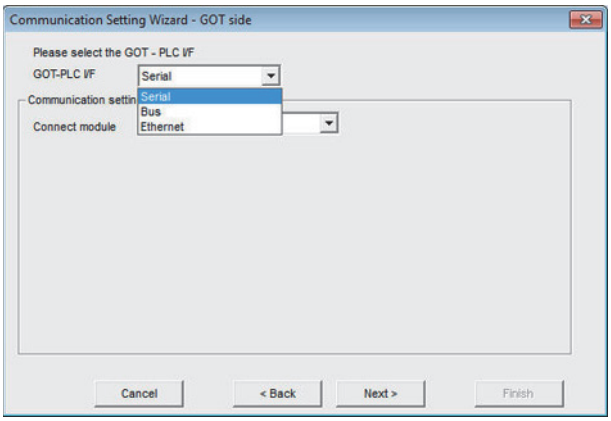
5. Select either of the following option from [PC side I/F] according to the connection configuration and click [Next].

GOT and USB connection

[USB (Via GOT)]

GOT and Ethernet connection

[Ethernet Board (Via GOT)]



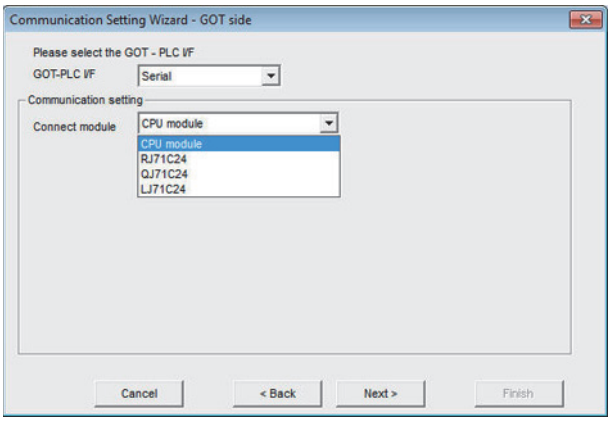
6. Select either of the following option from [GOT PLC I/F] according to the connection configuration.

Direct CPU connection (serial)

[Serial]

Ethernet connection

[Ethernet]



7. Select either of the following option from [Connect module] according to the setting of [GOT PLC I/F] and click [Next].

• For [Serial]

[CPU unit],[RJ71C24],[QJ71C24], [LJ71C24]

• For [Ethernet]

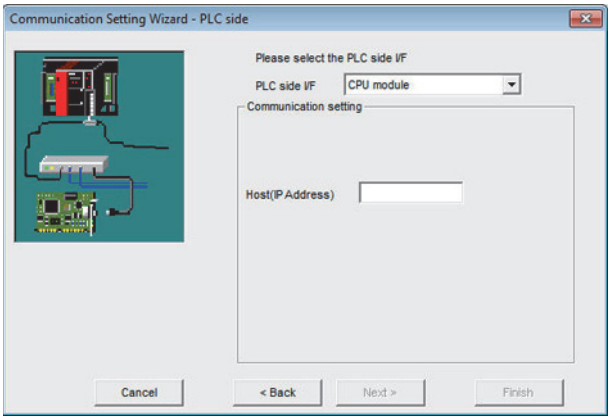
[CPU unit], [QJ71E71], [RJ71E71],[CC IE Field Ethernet adapter], [FX3U-ENET-ADP]

[FX3U-ENET(-L)], [CPU unit(FX5)]

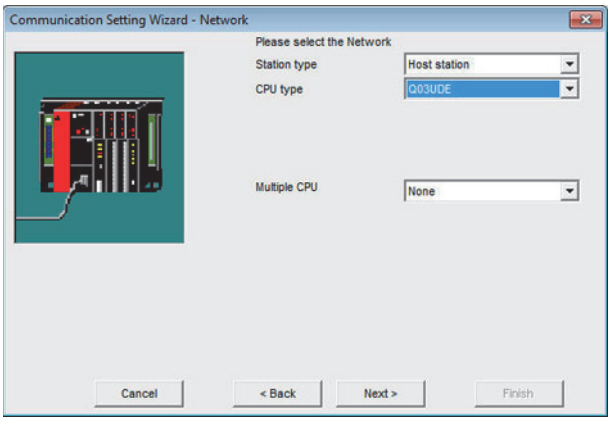
For example, set as shown below and click [Next].

[GOT and PLC I/F]: [Ethernet]

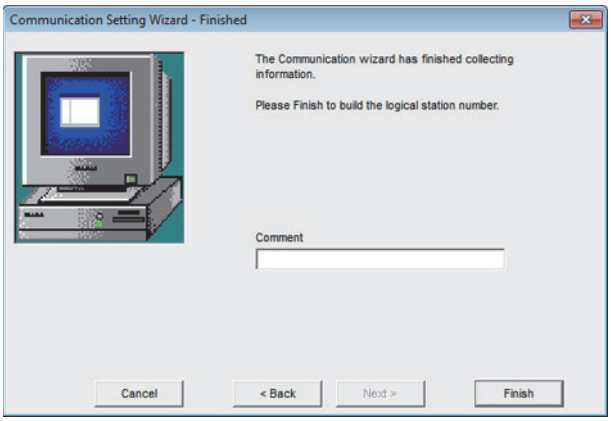
[Connection destination unit type]: [CPU unit]



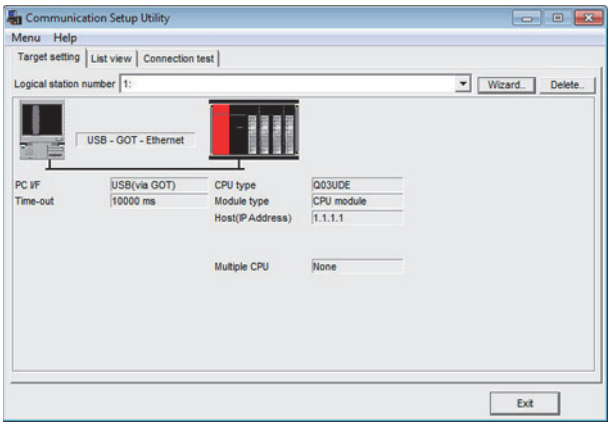
• Select [Host(IP Address)] according to the connection configuration and click [Next].



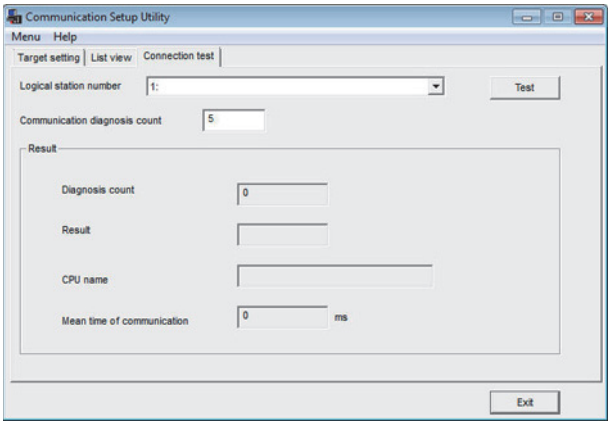
8. Select [Station type], [CPU type], and [Multiple CPU] according to the connection configuration and click [Next].



9. Set [Comment] and click [Finish].



10. Click [Connection test]



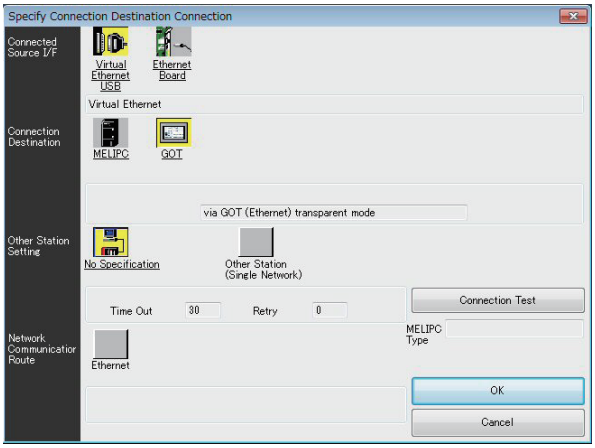
11. Click [Test] and check that normal communication is performed.

Accessing by MI Configurator

This section explains the procedure to set the FA transparent function of the MI Configurator.

When connecting the GOT and personal computer with USB

■When connecting the GOT and PLC in bus connection

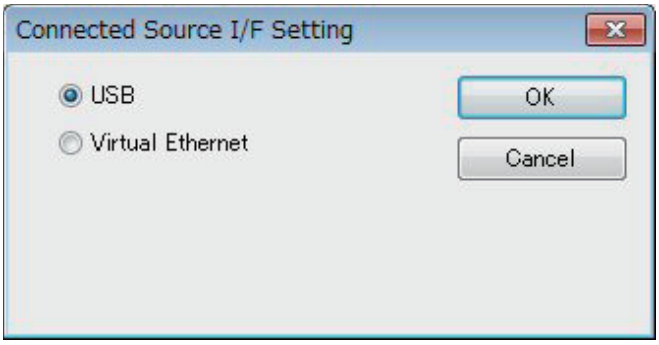


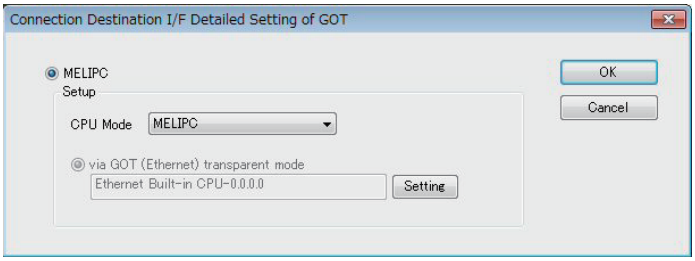
1. Click [Online] → [Transfer Setup] in MI Configurator.
2. The [Transfer Setup] is displayed.
3. Set the [Transfer Setup].

Connection source I/F: USB

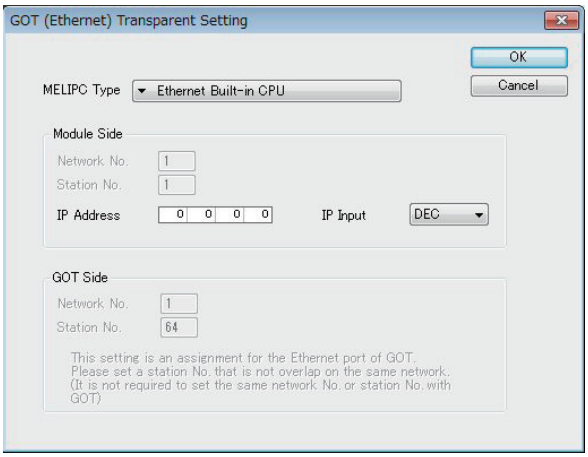
Connection destination I/F: GOT

Other station: No specification



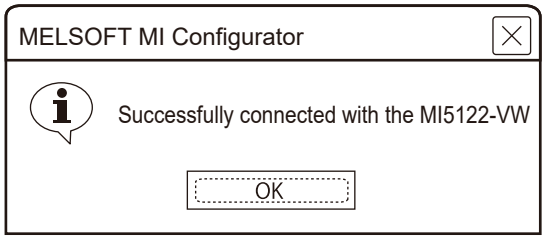


4. Double-click [GOT] of the Connection destination I/F to display [Connection destination I/F Detailed Setting of GOT].



5. By clicking [Set], the [GOT (Ethernet) Transparent Setting] is displayed.

6. Specify the IP address for [IP address] same as the IP address assigned to the MELIPC.



7. The screen returns to the [Transfer Setup].

Click the [Connection Test] to check if MI Configurator has been connected to the MELIPC.

13.7 Precautions

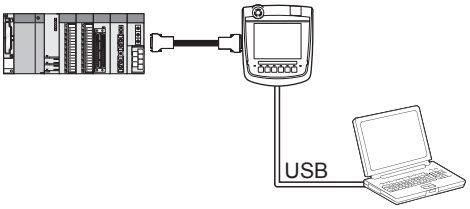
Precautions common to each software

GOT interface required to use the FA transparent function

Connect the personal computer, to which PX Developer or any other relevant software has been installed, to the USB interface of the GOT.

When performing the FA transparent function, use USB interface of the GOT.

Using both of them to perform the FA transparent function concurrently is not allowed.



Conditions for suspending the FA transparent function

The FA transparent function is also suspended when any of the following operations, which stop the GOT monitor, is performed.

Note that the FA transparent function will not be stopped while using the extended function such as the Utility display or ladder monitor function.

- When project data is written/read, or when the OS is written by GT Designer3[*1]
- When the GOT is set up[*1]
- When no communication request (online monitor, etc.) has been issued from PX Developer for 45 minutes

*1 A timeout error occurs in PX Developer.

When GOT monitoring is faulty

The FA transparent function cannot be used in case that the GOT monitoring is faulty due to PLC CPU errors or faulty communication between the PLC CPU and GOT.

When GOT monitoring is faulty, check the following.

■Whether the PLC CPU operates normally

Refer to the User's Manual of the PLC CPU you use.

■Whether the PLC CPU and GOT are connected normally

☞ Page 307 DIRECT CPU CONNECTION (SERIAL)
☞ Page 359 SERIAL COMMUNICATION CONNECTION

When monitoring the PLC CPU from a personal computer

When monitoring the PLC CPU from a personal computer, the GOT and personal computer refresh the display slower.

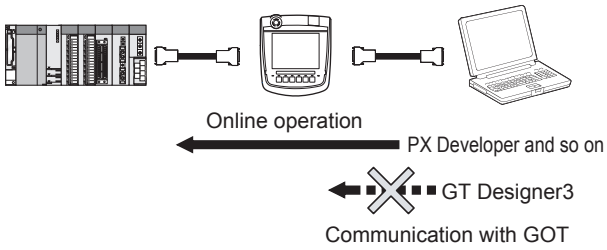
Software available for the FA transparent function

When multiple kinds of software are activated on one personal computer, only one of them is available for communications using the FA transparent function.

Do not concurrently perform any communications using the FA transparent function.

(Offline operation with each software is available)

Also, do not perform communications with the GOT (e.g. downloading project data) from GT Designer3 during execution of communications using the FA transparent function.



When PLC power disconnection occurs with the FA transparent function being used

While the FA transparent function is being used, if the communication between the PLC and the GOT is stopped due to PLC power disconnection or a disconnection of the communication cable between the PLC and the GOT, the GOT waits for timeout against the communication request from the peripheral devices (PX Developer, etc.), and it takes a few minutes to recover the monitoring between the PLC and the GOT.



When the FA transparent function is used in an Ethernet connection

■GX Works3, GX Works2 function

When the FA transparent function is used in an Ethernet connection, the following GX Works3, GX Works2 functions cannot be executed.

The message [The executed function is not supported. Please check the manual and other documentation.] is displayed on GX Works3, GX Works2.

Unsupported functions	Remark
• Remote Reset • Remote system reset	—
• Remote RUN • Remote STOP • Remote PAUSE • Remote STEP-RUN • Remote latch clear • Write clock data • Clear malfunction log	Inexecutable only when specify all stations/groups has been performed.
• Remote password function • MELSECNET diagnostics • CC IE Control diagnostics • CC-Link IE TSN/CC-Link IE Field diagnostics (GX Works3) • CC IE Field diagnostics (GX Works2) • Ethernet diagnostics (PING test/loopback test with the Ethernet module (R/Q series))	—

■GOT station monitoring function

When the FA transparent function is used in an Ethernet connection, GOT station monitoring function cannot be operated. Therefore, in the cases of [no connection target], [PLC power OFF], etc., the monitoring of the GOT delays for the timeout time.

■When connecting to FXCPU

When connecting the GOT and FXCPU in Ethernet communication, and using the FA transparent function, a timeout may occur.

When a timeout occurs, set [Delay Time] in the communication detail settings according to the circumstance of the system.

☞ Page 154 Communication detail settings

When using the FA transparent function in the GOT multi-drop connection

FA transparent function is available for each GOT in the GOT multi-drop connection system.

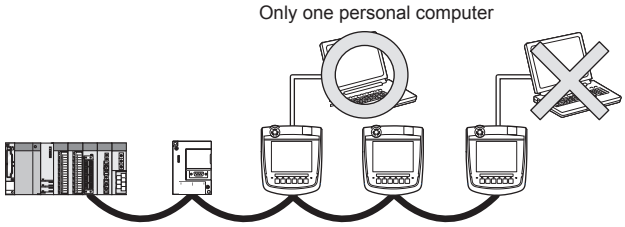
■Installing a system application (standard function) and writing the communication driver

When using the FA transparent function in the GOT multi-drop connection, the writing of the system application (standard function) and communication driver to the GOT, as well as the writing of the standard monitor OS and communication driver to the serial multi-drop connection unit are required.

☞ Page 676 Connecting GOT2000 in multi-drop connection

■Number of personal computers

Only one personal computer can be connected to the multi-drop connection system.



■Monitor speed of GOT

The monitoring performance slows down according to the number of monitoring GOTs.

While using FA transparent function, the monitoring performance of the whole multi-drop system decreases.

As a result, timeout error may occur in GOTs in the system.

When connecting the GOT and the personal computer by USB

When the following operations are executed, the display on the GOT may stop temporarily or a timeout message may appear on GX Works3 or GX Works2.

The operations are executed in the PLC.

Operation	Target station
• Remote Reset	Current station
• Remote RUN • Remote STOP • Remote PAUSE • Remote STEP-RUN • Remote Reset • Remote latch clear • Write clock data	All stations

When using GX Works3, GX Works2

When [monitor conditions] have been set on GX Works3, GX Works2

■Monitoring performance of the GOT is temporarily suspended.

■The GOT cannot respond to the touch switch operation and numerical/ascii inputs.

■Writing to PLC results in a system alarm occurrence and displays the message, "315 Device writing error. Correct device".

■While setting the monitor conditions, do not perform any operation which makes the GOT restart (e.g. downloading project data, changing utility data).

Doing so may display a system alarm, "402 Communication timeout.
Confirm communication pathway or modules." when the GOT restarts.
When the monitor conditions setting for the PLC CPU has not been cancelled, reconnect GX Works3, GX Works2 to cancel the setting.(An error may be output when the monitor conditions setting is cancelled.)

■When the time check of GX Works3, GX Works2 is set to 30 seconds or more in the monitor condition settings, the message "402 Communication timeout. Confirm communication pathway or modules." may appear.

Set the time check time of GX Works3, GX Works2 to 30 seconds or less.

When exiting GX Works3, GX Works2

For 30 seconds after GX Works3, GX Works2 has been exited, the GOT continues monitoring at the same speed as when the FA transparent function is working.

When performing [Read to PLC], [Write to PLC] and other file operations on GX Works3, GX Works2

If any of the following GOT functions is executed during the file operation such as [Read to PLC] or [Write to PLC], an error may occur on the GOT, GX Works3, GX Works2.
In this case, take the following corrective action:

- File reading in the ladder monitor function for MELSEC-Q

Error messages on GOT	Corrective action on GOT side	Error messages on GX Works2	Corrective action on GX Works2
The file is not found.	With no file operation being executed on GX Works2, re-execute the file reading.	File access failure. Please retry.	With no file reading being executed in the ladder monitor function for MELSEC-Q, re-execute the file operation.

- Read/write of values of the file register specified for the recipe function

Error messages on GOT	Corrective action on GOT side	Error messages on GX Works2	Corrective action on GX Works2
358 PLC file access failure. Confirm PLC drive.*1	With no file operation on GX Works3, GX Works2, turn ON the trigger device for the recipe function again.	File access failure. Please retry.	Execute the file access operation again with the recipe in-process signal in GOT system information OFF.
		PLC file system error. Unable to communicate with PLC.	

*1 The numerical indicates the system alarm No.

- Reading TC monitor set value in the system monitor function

Error messages on GOT	Corrective action on GOT side	Error messages on GX Works2	Corrective action on GX Works2
No message is displayed. (The TC set value space is blank.)	With no file operation being executed on GX Works3, GX Works2, re-execute the TC monitor.	File access failure. Please retry.	With no TC set value being read, re-execute the file operation.

• Reading the special module monitor CPU Malfunction log

Error messages on GOT	Corrective action on GOT side	Error messages on GX Works2	Corrective action on GX Works2
Communication error	With no file operation being executed on GX Works3, GX Works2, re-execute the CPU malfunction log reading.	File access failure. Please retry.	With no special module monitor malfunction log being read, execute the file operation.

• Backup/restore

Error messages on GOT	Corrective action on GOT side	Error messages on GX Works2	Corrective action on GX Works2
Backup	With no file operation being executed on GX Works2, re-execute the backup.	-	With no backup being executed, execute the file operation.
Restore	With no file operation being executed on GX Works2, re-execute the restore.	-	With no restore being executed, execute the file operation.

• SFC monitor file reading

Error messages on GOT	Corrective action on GOT side	Error messages on GX Works2	Corrective action on GX Works2
-	With no file operation being executed on GX Works3, GX Works2, re-execute the file reading.	-	With no special module monitor CPU malfunction log being read, execute the file operation.

• Reading/Writing files of ladder edit

Error messages on GOT	Corrective action on GOT side	Error messages on GX Works2	Corrective action on GX Works2
Read	With no file operation being executed on GX Works2, re-execute the file reading.	—	With no file reading being executed on ladder edit, execute the file operation.
Write	With no file operation being executed on GX Works3, GX Works2, re-execute the file writing.	—	With no file writing being executed on ladder edit, execute the file operation.

When PLC write fails while using the FA transparent function

The execution of PLC write using the FA transparent function may fail due to some reason such as cable disconnection.
When this occurs, re-execute the PLC write from the same personal computer, or reset the PLC CPU.

Restrictions on GX Works2 during backup/restoration

■When PLC read, PLC write, or monitoring is executed from GX Works2 using the FA transparent function during backup/restoration of the GOT, the backup/restoration stops.

Check that PLC read, PLC write, or monitoring is not executed from GX Works2 using the FA transparent. Then, execute backup/restoration of the GOT again.

■When backup/restoration is executed from the GOT while PLC read, PLC write, monitoring, or other operation is run with GX Works2 using the FA transparent function, an errors on GX Works2.

Backup/restoration of the GOT is correctly executed.

When using MT Developer, MT Works2

When exiting MT Developer, MT Works2

For 45 seconds after MT Developer, MT Works2 has been exited, the GOT continues monitoring at the same speed as when the FA transparent function is working.

When PLC write fails while using the FA transparent function

The execution of PLC write to the Motion CPU using the FA transparent function may fail due to some reasons such as cable disconnection.
In that case, re-execute the PLC write from the same personal computer, or reset the Motion CPU.

When a cable disconnection has occurred

When the cable between the GOT and the motion CPU is disconnected, it takes time until a timeout error occurs in MT Developer, MT Works2.

When using MR Configurator, MR Configurator2

Unavailable functions and restrictions

For the use via the motion controller, there are unavailable functions and restrictions.
For details on the restrictions, refer to the help screen of MR Configurator.

Monitor speed of GOT

Since the FA transparent function is used via the motion CPU, the monitor speed of GOT is slow.

When using FR Configurator, FR Configurator2

GOT monitoring when using FA transparent function

When FA transparent function is used, GOT suspends monitoring on channels supporting FA transparent function.

Point

Cancelling the suspended GOT monitoring immediately
To cancel the suspended (45 seconds) GOT monitoring immediate30ly after FA transparent is executed, input "1" to device GS457.
Then GOT resumes monitoring.
If FA transparent is resumed even if "1" is already input to device GS457, an error will occur on FR Configurator.
For the details of the device, refer to the following manual.
GT Designer3 (GOT2000) Screen Design Manual

When using the oscilloscope function (When using FR Configurator)

Since the monitoring of the inverter data may be not performed at the specified sampling intervals depending on the settings of oscilloscope function, adjust the communication setting, a sampling interval, etc.

PU mode operation command source selection

On the setting of PU mode operation command source selection (Pr:551) of the inverter, specify the terminal (1:RS-485 terminals, 2:PU connected) connected to GOT.

High speed sampling using FR Configurator2

High speed sampling is unavailable when the FA transparent function is used.

MEMO

PART 7 CONNECTIONS TO NON-MITSUBISHI ELECTRIC PRODUCTS

14 IAI ROBOT CONTROLLER

15 AZBIL CONTROL EQUIPMENT

16 OMRON PLC

17 OMRON TEMPERATURE CONTROLLER

18 KEYENCE PLC

19 KOYO EI PLC

20 JTEKT PLC

21 SHARP PLC

22 SHINKO TECHNOS INDICATING CONTROLLER

23 CHINO CONTROLLER

24 TOSHIBA PLC

25 SHIBAURA MACHINE PLC

26 PANASONIC SERVO AMPLIFIER

27 PANASONIC INDUSTRIAL DEVICES SUNX PLC

28 HITACHI IES PLC

29 HITACHI PLC

30 FUJI PLC

31 FUJI TEMPERATURE CONTROLLER

32 YASKAWA PLC

33 YASKAWA ROBOT CONTROLLER

34 YOKOGAWA PLC

35 YOKOGAWA TEMPERATURE CONTROLLER

36 RKC TEMPERATURE CONTROLLER

37 ALLEN-BRADLEY PLC

38 GE PLC

39 LS INDUSTRIAL SYSTEMS PLC

40 MITSUBISHI ELECTRIC INDIA PLC

41 SICK SAFETY CONTROLLER

42 SIEMENS PLC

43 HIRATA CORPORATION HNC CONTROLLER

44 MURATEC CONTROLLER

14 IAI ROBOT CONTROLLER

- Page 837 Connectable Model List
- Page 843 System Configuration
- Page 865 Connection Diagram
- Page 872 GOT Side Settings
- Page 874 Robot Controller Side Setting
- Page 880 Settable Device Range
- Page 880 Precautions

14.1 Connectable Model List

The following table shows the connectable models.

Series	Model name	Clock	Communication Type	Connectable GOT	Refer to
X-SEL	XSEL-J	×	RS-232	GT 2506 HS GT 2505 HS	☞ Page 843 Connecting to X-SEL, SSEL, ASEL, PSEL, or RSEL
	XSEL-K				
	XSEL-KE				
	XSEL-KT				
	XSEL-KET				
	XSEL-P				
	XSEL-Q				
	XSEL-JX				
	XSEL-KX				
	XSEL-KTX				
	XSEL-PX				
	XSEL-QX				
SSEL	SSEL				
ASEL	ASEL				
PSEL	PSEL				
RSEL	RSEL				

Series	Model name	Clock	Communication Type	Connectable GOT	Refer to
PCON	PCON-C	×	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 845 System Configuration for connecting to PCON, ACON, SCON, ERC2
	PCON-CG				
	PCON-CF				
	PCON-CY				
	PCON-SE				
	PCON-PL				
	PCON-PO				
	PCON-CA				
	PCON-CFA				
	PCON-CFA				
	PCON-CB				
	PCON-CFB				
ACON	ACON-C				
	ACON-CG				
	ACON-CY				
	ACON-SE				
	ACON-PL				
	ACON-PO				
	ACON-CB				
SCON	SCON-C				
	SCON-CA				
	SCON-CB				
ERC2	ERC2-□-□-□-□-□-NP-□-□				
	ERC2-□-□-□-□-□-PN-□-□				
	ERC2-□-□-□-□-□-SE-□-□				
RCON	RCON-GW(GWG)-CC	×	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 863 System Configuration for connecting to RCON
	RCON-GW(GWG)-CIE				
	RCON-GW(GWG)-DV				
	RCON-GW(GWG)-EP				
	RCON-GW(GWG)-PR				
	RCON-GW(GWG)-PRT				

Series	Model name	Clock	Communication Type	Connectable GOT	Refer to
EC	EC-S2	×	RS-232 RS-422	GT 2506 HS GT 2505 HS	*1 *2
	EC-S3				
	EC-S3□CR				
	EC-S3R				
	EC-S3□AR				
	EC-S3□A				
	EC-S4				
	EC-S4□CR				
	EC-S4R				
	EC-S4□AR				
	EC-S4□A				
	EC-S6				
	EC-S6□A				
	EC-S6□AH				
	EC-S6□AHR				
	EC-S6□AHCR				
	EC-S6□AR				
	EC-S6□CR				
	EC-S6□R				
	EC-S6□D				
	EC-S6□W				
	EC-S6X□AH				
	EC-S6X□AHCR				
	EC-S7				
	EC-S7□A				
	EC-S7□AH				
	EC-S7□AHR				
	EC-S7□AHCR				
	EC-S7□AR				
	EC-S7□CR				
	EC-S7□R				
	EC-S7□D				
	EC-S7□W				
	EC-S7X□AH				
	EC-S7X□AHCR				
	EC-S8				
	EC-S8R				
	EC-S8CR				
	EC-S8X				
	EC-S8□A				
	EC-S8□AR				
	EC-S8□AH				
	EC-S8□AHR				
	EC-S8□AHCR				
	EC-S8X□AH				
	EC-S8X□AHR				
	EC-S8X□AHCR				
	EC-S10				

Series	Model name	Clock	Communication Type	Connectable GOT	Refer to
EC	EC-S10X	×	RS-232 RS-422	GT 2506 HS GT 2505 HS	*1 *2
	EC-S13				
	EC-S13X				
	EC-S15				
	EC-S15X				
	EC-S18				
	EC-S18X				
	EC-S18LLPR				
	EC-S18XLLPR				
	EC-S18LFR				
	EC-S18XLFR				
	EC-RR6□AH				
	EC-RR7□AH				
	EC-RR6□AHR				
	EC-RR7□AHR				
	EC-R6				
	EC-R6□W				
	EC-R7				
	EC-R7□W				
	EC-SRG9				
	EC-SRGC9				
	EC-SRG11				
	EC-SRG15				
	EC-CRP3				
	EC-CGD3				
	EC-CRP5				
	EC-CGD5				
	EC-RP3				
	EC-RP4				
	EC-GS4				
	EC-GD3				
	EC-GD4				
	EC-GD5				
	EC-RP5				
	EC-RR2				
	EC-RR3				
	EC-RR3R				
	EC-RR4				
	EC-RR4R				
	EC-RR6				
	EC-RR6□R				
	EC-RR6□W				
	EC-RR7				
	EC-RR7□R				
	EC-RR7□W				
	EC-RR8C				
	EC-RR8□R				
	EC-RR10				
	EC-RR10□R				
	EC-TC3				
	EC-TW3				
	EC-TC4				
	EC-TW4				

Series	Model name	Clock	Communication Type	Connectable GOT	Refer to
EC	EC-TC5	×	RS-232 RS-422	GT 2506 HS GT 2505 HS	*1 *2
	EC-TW5				
	EC-B6				
	EC-B7				
	EC-B6U				
	EC-B7U				
	EC-B8S				
	EC-B8SS				
	EC-ST9				
	EC-STC9				
	EC-ST11				
	EC-ST15				
	EC-ST15ME				
	EC-RTB4				
	EC-RTC9				
	EC-RTC12				
	EC-RTC18				
	EC-RR6X□AH				
	EC-RR7X□AH				
	EC-WS10				
	EC-WS10□R				
	EC-WS10□CR				
	EC-WS12				
	EC-WS12□R				
	EC-WS12□CR				
	EC-GRBP8				
	EC-GRB8M				
	EC-GRBP8W				
	EC-GRBP10				
	EC-GRB10M				
	EC-GRBP10W				
	EC-GRBP13				
	EC-GRB13M				
	EC-GRB13L				
	EC-GRBP13W				
	EC-GRST3				
	EC-GRST6				
	EC-GRST7				
	EC-GRC6				
	EC-GRC7				
	EC-GRTR9M				
	EC-GRTR14				
	EC-SL3				
	EC-GDS3				
	EC-GDB3				
	EC-T3				
	EC-CTC3				
	EC-CTC5				
	EC-WEGR2				
	EC-WEGR2IG				
	EC-WER1SA				

*1 Sample screen data are required for connection with EC series.
To obtain sample screen data, contact your local sales office.
*2 EC series with an ACR option is designed to be connected with RCON-EC. The series cannot be directly connected with the GOT.

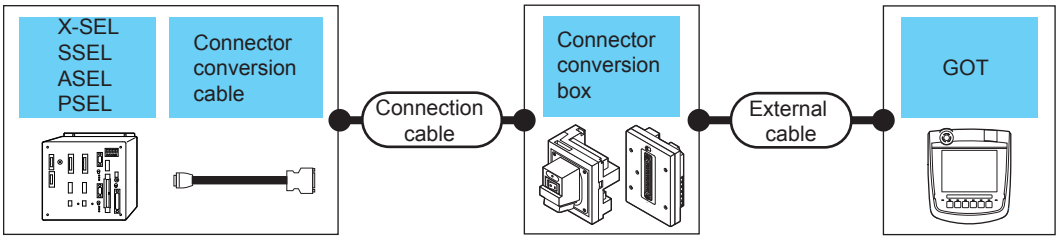
14.2 System Configuration

Connecting to X-SEL, SSEL, ASEL, PSEL, or RSEL

Communication driver

IAI X-SEL

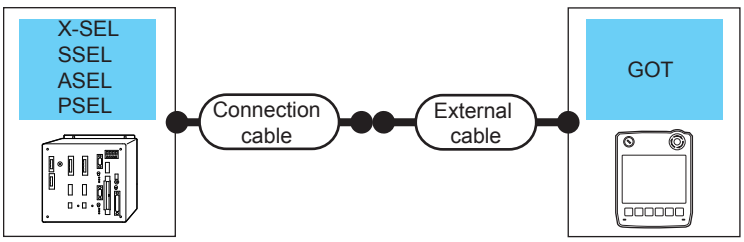
When using the connector conversion box



Controller			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Series	RS-232C adapter	Communication Type	Cable model Connection diagram number					
X-SEL (Teaching connector)	-	RS-232	CB-ST-E1MW050*1 or User preparing Page 865 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 Controller
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
X-SEL (General RS232C port connector)			User preparing Page 866 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
SSEL ASEL PSEL	CB-SEL-SJ002*1		CB-ST-E1MW050*1	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
RSEL	CB-SEL-SJS002*1		CB-ST-E1MW050*1	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

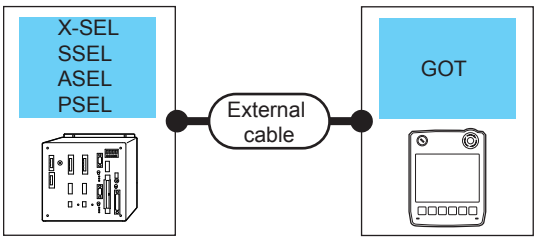
*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.

When using the external cable (GT11H-C□□□-37P)



Controller		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Series	Communication Type	Cable model Connection diagram number				
X-SEL (Teaching connector)	RS-232	User preparing Page 865 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 Controller
X-SEL (General RS232C port connector)			GT11H-C30-37P(3m)	GT 2505HS		

When using the external cable (GT11H-C□□□)



Controller		External cable	GOT Model	Total distance	Number of connectable equipment
Series	Communication Type				
X-SEL (Teaching connector)	RS-232	GT11H-C30(3m) ☞Page 866 RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 Controller
X-SEL (General RS232C port connector)		GT11H-C30(3m) ☞Page 866 RS-232 connection diagram 3)	GT 2505HS		

System Configuration for connecting to PCON, ACON, SCON, ERC2

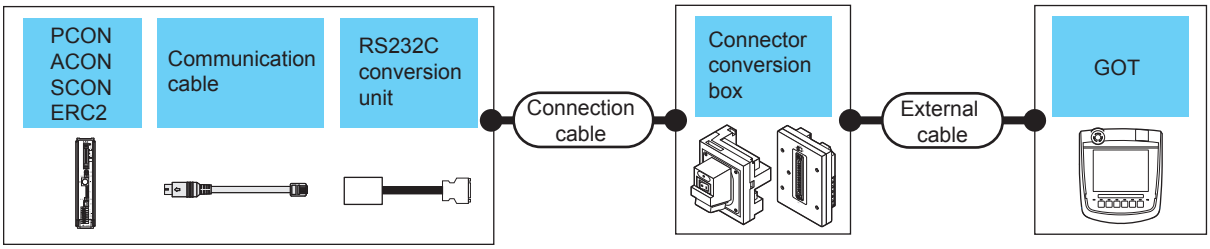
Communication driver

IAI ROBO CYLINDER

When connecting the GOT to a controller via RS-232

■PCON, ACON, SCON, ERC2 (SIO specifications), ERC2 (NP/PN specifications)

• When using the connector conversion box



Controller				Connection cable	Connector conversion box	External cable	GOT Model	Total distance *4	Number of connectable equipment
Series	Communication cable	RS232C conversion unit	Communication Type	Connection diagram number					
PCON ACON SCON ERC2 (NP/PN specifications) *3	CB-RCA-SIO050*1 (5m)	RCB-CV-MW*1 (0.3m)	RS-232	-	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 Controller
					GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
ERC2 (SIO specifications) *2	CB-ERC2-SIO020*1 + CB-ERC2-PWBIO□□□ *1 or CB-ERC2-PWBIO□□□-RB*1	RCB-CV-MW*1 (0.3m)	RS-232		GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
					GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

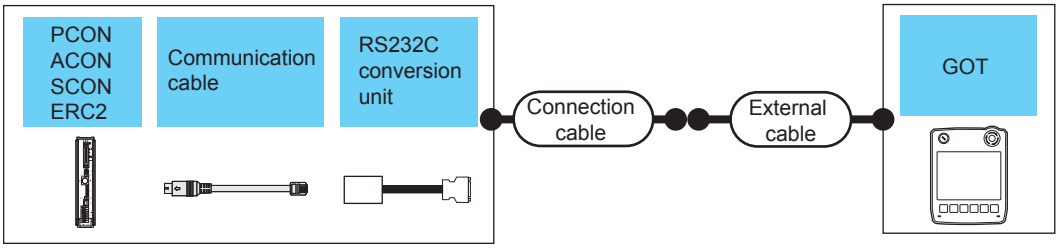
*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.

*2 Use ERC2-□-□-□-□-□-SE-□-□.

*3 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.

*4 The distance from the GOT to the RS-232 conversion adapter (Connection cable + External cable)

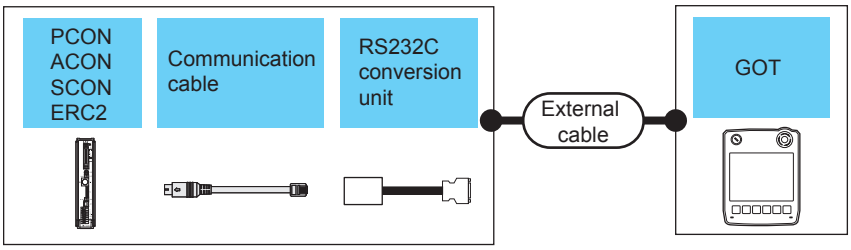
• When using the external cable (GT11H-C□□□-37P)



Controller			Connection cable	External cable	GOT Model	Total distance *4	Number of connectable equipment
Series	Communication cable	RS232C conversion unit	Connection diagram number				
PCON ACON SCON ERC2 (NP/PN specifications)*3	CB-RCA-SIO050*1 (5m)	RCB-CV-MW*1 (0.3m)	User preparing Page 868 RS-232 connection diagram 10)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 Controller
ERC2 (SIO specifications)*2	CB-ERC2-SIO020*1 + CB-ERC2-PWBIO □□□ *1 or CB-ERC2-PWBIO □□□ -RB*1	RCB-CV-MW*1 (0.3m)		GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.
*2 Use ERC2-□-□-□-□-□-SE-□-□.
*3 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.
*4 The distance from the GOT to the RS-232 conversion adapter (Connection cable + External cable)

• When using the external cable (GT11H-C□□□)

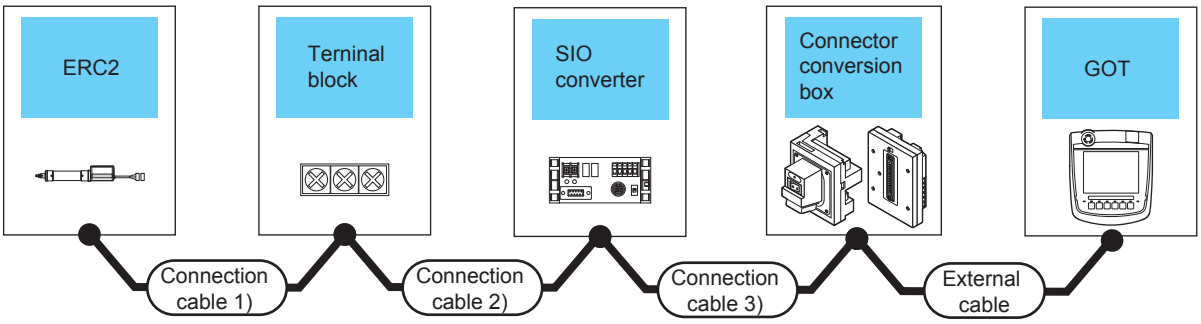


Controller			External cable	GOT Model	Total distance *4	Number of connectable equipment
Series	Communication cable	RS232C conversion unit				
PCON ACON SCON ERC2 (NP/PN specifications)*3	CB-RCA-SIO050*1 (5m)	RCB-CV-MW*1 (0.3m)	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 868 RS-232 connection diagram 11)	GT 2505HS	6m	1 GOT for 1 Controller
ERC2 (SIO specifications)*2	CB-ERC2-SIO020*1 + CB-ERC2-PWBIO □□□ *1 or CB-ERC2-PWBIO □□□ -RB*1	RCB-CV-MW*1 (0.3m)	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 868 RS-232 connection diagram 11)	GT 2505HS		

*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.
*2 Use ERC2-□-□-□-□-□-SE-□-□.
*3 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.
*4 The distance from the GOT to the RS-232 conversion adapter (Connection cable + External cable)

■ERC2 (NP/PN specifications) only

• When using the connector conversion box



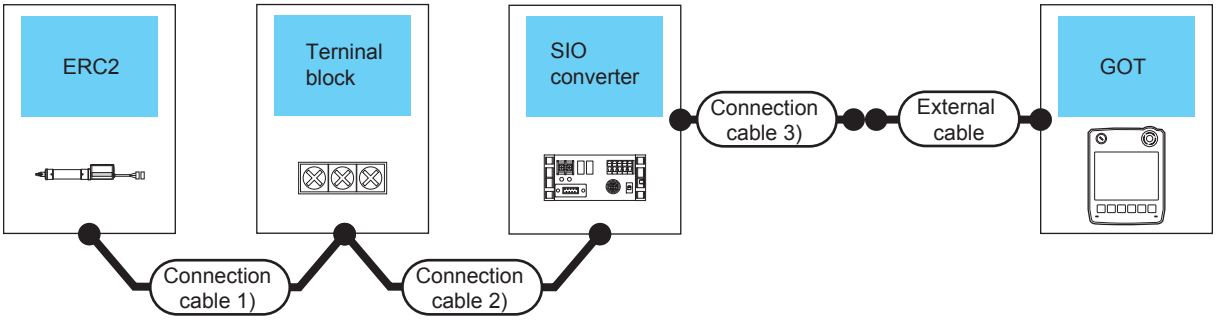
Controller	Connection cable 1)*1	Terminal block	Connection cable 2)	Max. distance	SIO converter*1		Connection cable 3)	Connector conversion box	External cable	GOT Model	Total distance *3	Number of connectable equipment
Series	Cable model		Connection diagram number		Model name	Communication Type	Cable model Connection diagram number					
ERC2 (NP/PN specifications)*2	CB-ERC-PWBIO □□□ or CB-ERC-PWBIO □□□-RB	Terminal block (User preparing)	User preparing Page 870 RS-422/485 connection diagram 5) or User preparing Page 870 RS-422/485 connection diagram 6)	100m	RCB-TU-SIO-□	RS-232	RCB-CV-MW*1 (0.3m) + CB-RCA-SIO050*1 (5m) or User preparing Page 867 RS-232 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	9m	1 GOT for 16 Controller
								GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		RC□-TU-PIO*1	User preparing Page 871 RS-422/485 connection diagram 9)					GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
								GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.

*2 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.

*3 The distance from the GOT to the SIO converter (Connection cable 3) + External cable)

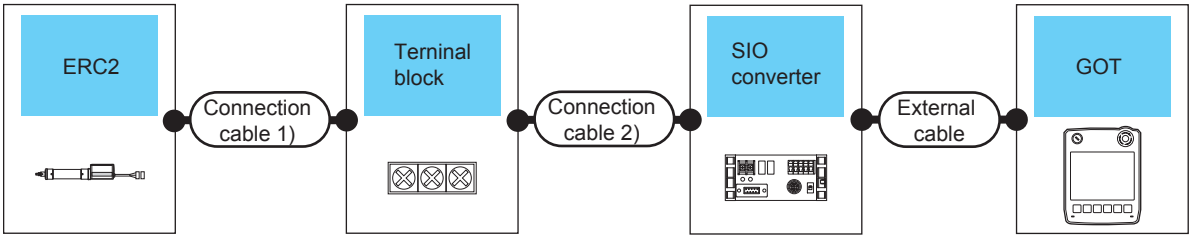
• When using the external cable (GT11H-C□□□-37P)



Controller		Connection cable 1)*1	Terminal block	Connection cable 2)	Max. distance	SIO converter*1		Connection cable 3)	External cable	GOT Model	Total distance *3	Number of connectable equipment
Series	Communication Type	Cable model		Connection diagram number		Model name	Communication Type	Cable model Connection diagram number				
ERC2 (NP/PN specifications)*2	RS-422	CB-ERC-PWBIO □□□ or CB-ERC-PWBIO □□□-RB	Terminal block (User preparing)	User preparing Page 870 RS-422/485 connection diagram 5) or User preparing Page 870 RS-422/485 connection diagram 6)	100m	RCB-TU-SIO-□	RS-232	User preparing Page 867 RS-232 connection diagram 8)	GT11H-C30-37P(3m)	GT 2505HS	9m	1 GOT for 1 Controller
			RC□-TU-PIO*1	User preparing Page 871 RS-422/485 connection diagram 9)					GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.
*2 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.
*3 The distance from the GOT to the SIO converter (Connection cable 3) + External cable)

• When using the external cable (GT11H-C□□□)



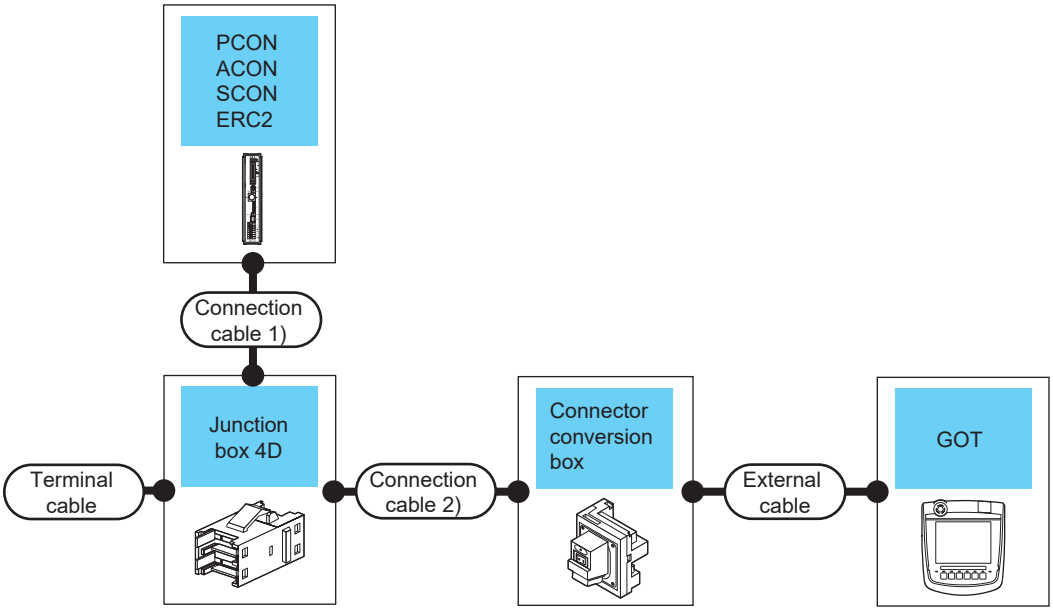
Controller		Connection cable 1)*1	Terminal block	Connection cable 2)	Max. distance	SIO converter*1		External cable	GOT Model	Total distance *3	Number of connectable equipment
Series	Communication Type	Cable model		Connection diagram number		Model name	Communication Type				
ERC2 (NP/PN specifications)*2	RS-422	CB-ERC-PWBIO □□□ or CB-ERC-PWBIO □□□-RB	Terminal block (User preparing)	User preparing Page 867 RS-232 connection diagram 7) or User preparing Page 870 RS-422/485 connection diagram 6)	100m	RCB-TU-SIO-□	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 868 RS-232 connection diagram 9)	GT 2505HS	9m	1 GOT for 1 Controller
			RC□-TU-PIO*1	User preparing Page 871 RS-422/485 connection diagram 9)				GT11H-C30(3m) GT11H-C60(6m) ☞ Page 868 RS-232 connection diagram 9)	GT 2505HS		

*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.
*2 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.
*3 The distance from the GOT to the SIO converter (External cable)

When connecting the GOT to a controller via RS-422/485

■PCON, ACON, SCON, ERC2 (SIO specifications), ERC2 (NP/PN specifications)

• When using the connector conversion box



Controller	Terminal cable	Connection cable 1)*1	Junction box 4D*2	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Series	Connection diagram number	Cable model	Model name	Connection diagram number					
PCON ACON SCON ERC2 (NP/PN specifications) *4	User preparing Page 869 RS-422/485 connection diagram 1)	CB-RCB-CTL002 (0.2m)	5-1473574-4	User preparing Page 869 RS-422/485 connection diagram 3)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	16 Controllers for 1 GOT
ERC2 (SIO specifications) *3	User preparing Page 869 RS-422/485 connection diagram 1)	CB-ERC2-CTL001 + CB-ERC2-PWBIO □□□ or CB-ERC2-PWBIO □□□ -RB	5-1473574-4	User preparing Page 869 RS-422/485 connection diagram 3)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	

*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.

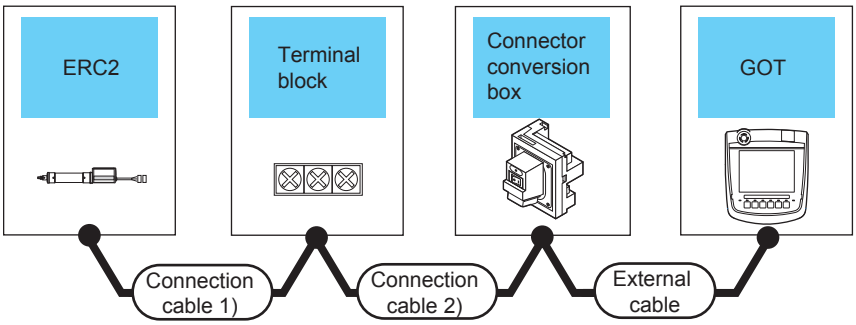
*2 Product manufactured by Tyco Electronics.
For details of the product, contact Tyco Electronics.

*3 Use ERC2-□-□-□-□-□-SE-□-□.

*4 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.

■ERC2 (NP/PN specifications) only

• When using the connector conversion box



Controller	Connection cable 1)*1	Terminal block	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Series	Cable model		Connection diagram number					
ERC2 (NP/PN specifications)*2	CB-ERC-PWBIO □□□ or CB-ERC-PWBIO □□□-RB	Terminal block (User preparing)	User preparing Page 870 RS-422/485 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	16 Controllers for 1 GOT

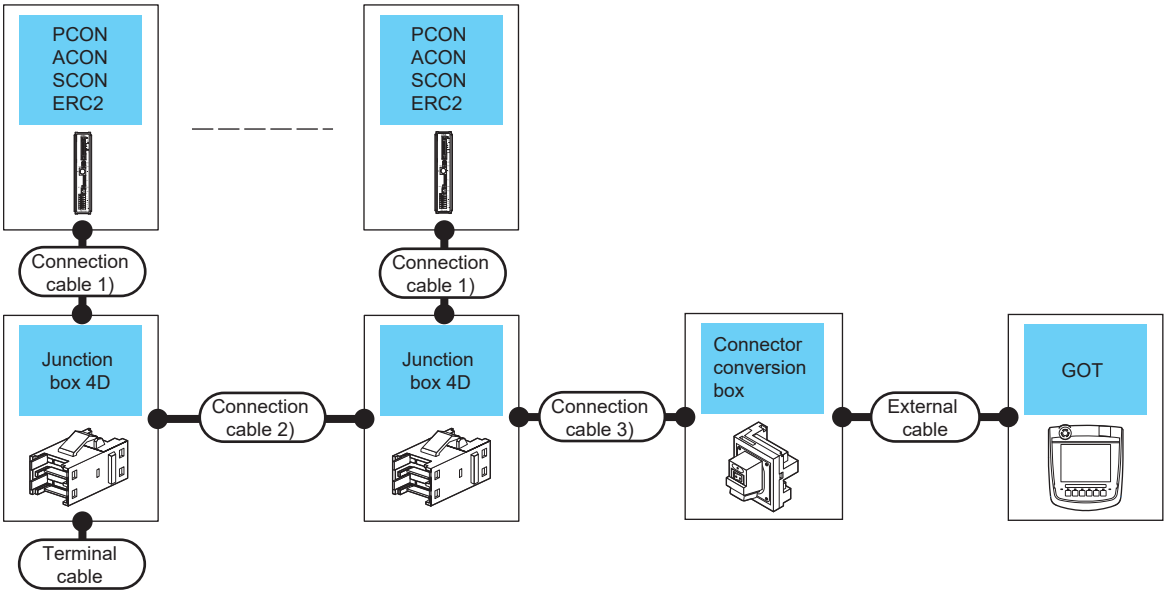
*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.

*2 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.

When connecting to multiple controllers

■PCON, ACON, SCON, ERC2 (SIO specifications), ERC2 (NP/PN specifications)

• When using the connector conversion box



Controller	Terminal cable	Connection cable 1)*1	Junction box 4D*2	Connection cable 2)	Connection cable 3)	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Series	Connection diagram number	Cable model	Model name	Connection diagram number	Connection diagram number					
PCON ACON SCON ERC2 (NP/PN specifications) *4	User preparing Page 869 RS-422/485 connection diagram 1)	CB-RCB-CTL002(0.2 m)	5-1473574-4	User preparing Page 869 RS-422/485 connection diagram 2)	User preparing Page 869 RS-422/485 connection diagram 3)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	16 Controllers for 1 GOT
ERC2 (SIO specifications) *3	User preparing Page 869 RS-422/485 connection diagram 1)	CB-ERC2-CTL001 + CB-ERC2-PWBIO □□□ or CB-ERC2-PWBIO □□□ -RB	5-1473574-4	User preparing Page 869 RS-422/485 connection diagram 2)	User preparing Page 869 RS-422/485 connection diagram 3)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	

*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.

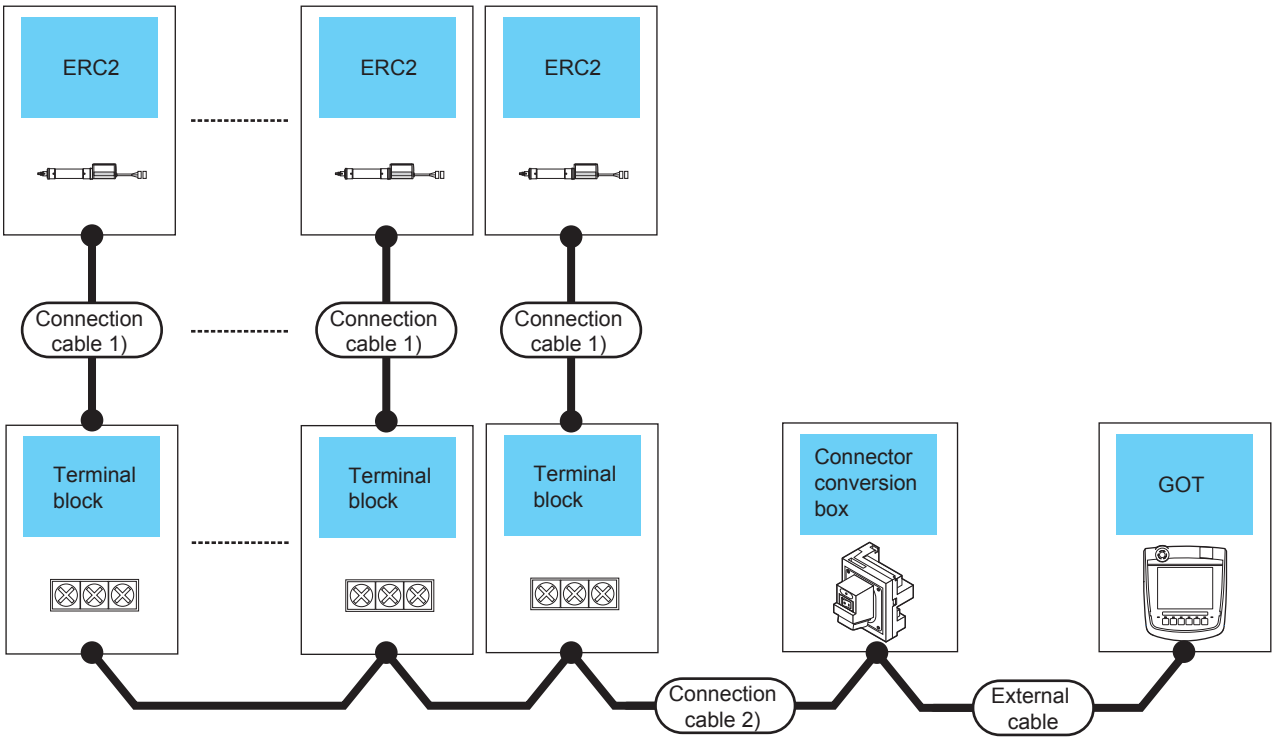
*2 Product manufactured by Tyco Electronics.
For details of the product, contact Tyco Electronics.

*3 Use ERC2-□-□-□-□-□-SE-□-□.

*4 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.

■ERC2 (NP/PN specifications) only

• When using the connector conversion box



Controller	Connection cable 1)*1	Terminal block	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Series	Cable model		Connection diagram number					
ERC2 (NP/PN specifications)*2	CB-ERC-PWBIO □□□ or CB-ERC-PWBIO □□□-RB	Terminal block (User preparing)	User preparing Page 870 RS-422/485 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	16 Controllers for 1 GOT

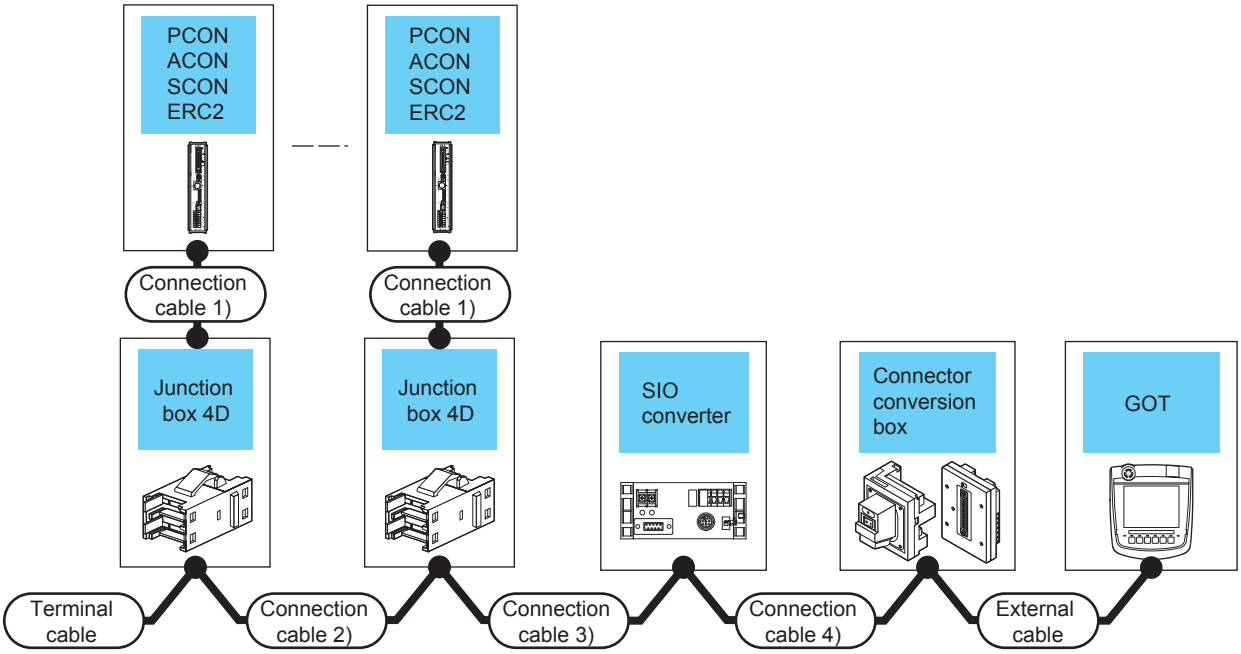
*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.

*2 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.

When connecting to multiple controllers (via SIO converter)

■PCON, ACON, SCON, ERC2 (SIO specifications), ERC2 (NP/PN specifications)

• When using the connector conversion box



Controller	Terminal cable	Connection cable 1)*1	Junction box 4D*2	Connection cable 2)	Connection cable 3)	Max. distance	SIO converter*1		Connection cable 4)	Connector conversion box	External cable	GOT Model	Total distance *6	Number of connectable equipment
Series	Connection diagram number	Cable model	Model name	Connection diagram number	Connection diagram number		Model name	Communication Type	Cable model Connection diagram number					
PCON ACON SCON	User preparing Page 869 RS-422/485 connection diagram 1)	CB-RCB-CTL002 (0.2m)	5-1473574-4	User preparing Page 869 RS-422/485 connection diagram 2)	User preparing Page 869 RS-422/485 connection diagram 2) or User preparing Page 870 RS-422/485 connection diagram 4)	100m	RCB-TU-SIO-□	RS-232	RCB-CV-MW*1 (0.3m) + CB-RCA-SIO050*1 (5m) or User preparing Page 867 RS-232 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	9m	16 Controllers for 1 GOT
										GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	-	CB-RCB-CTL002*3 (0.2m)	-	-	-					GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		2 Controllers for 1 GOT
										GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

Controller	Terminal cable	Connection cable 1)*1	Junction box 4D*2	Connection cable 2)	Connection cable 3)	Max. distance	SIO converter*1		Connection cable 4)	Connector conversion box	External cable	GOT Model	Total distance *6	Number of connectable equipment
Series	Connection diagram number	Cable model	Model name	Connection diagram number	Connection diagram number		Model name	Communication Type	Cable model Connection diagram number					
ERC2 (SIO specifications)*4	User preparing Page 869 RS-422/485 connection diagram 1)	CB-ERC2-CTL001 + CB-ERC2-PWBIO □□□ or CB-ERC2-PWBIO □□□ -RB	5-1473574-4	User preparing Page 869 RS-422/485 connection diagram 2)	User preparing Page 869 RS-422/485 connection diagram 2) or User preparing Page 870 RS-422/485 connection diagram 4)	100m	RCB-TU-SIO-□	RS-232	RCB-CV-MW*1 (0.3m) + CB-RCA-SIO050*1 (5m) or User preparing Page 867 RS-232 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	9m	16 Controllers for 1 GOT
										GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	-		-	-	-					GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		2 Controllers for 1 GOT
										GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
ERC2 (NP/PN specifications)*5	User preparing Page 869 RS-422/485 connection diagram 1)	CB-ERC-PWBIO □□□ or CB-ERC-PWBIO □□□-RB + Terminal block (User preparing) + User preparing Page 871 RS-422/485 connection diagram 8)	5-1473574-4	User preparing Page 869 RS-422/485 connection diagram 2)	User preparing Page 869 RS-422/485 connection diagram 2) or User preparing Page 870 RS-422/485 connection diagram 4)				RCB-CV-MW*1 (0.3m) + CB-RCA-SIO050*1 (5m) or User preparing Page 867 RS-232 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		16 Controllers for 1 GOT
										GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.

*2 Product manufactured by Tyco Electronics.
For details of the product, contact Tyco Electronics.

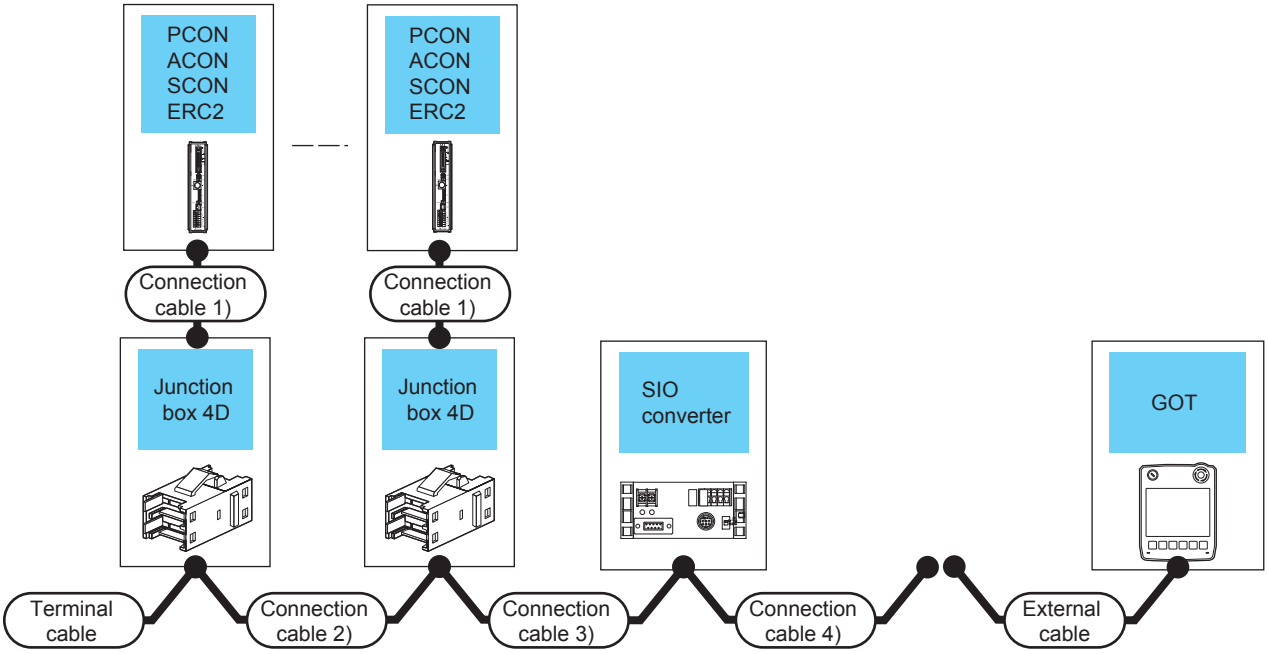
*3 When not using junction box 4D, connection cable 2) or connection cable 3), connect the controller to the SIO converter directly by the cable CR-RCB-CTL002.

*4 Use ERC2-□-□-□-□-□-SE-□-□.

*5 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.

*6 The distance from the GOT to the SIO converter (Connection cable 4) + External cable)

• When using the external cable (GT11H-C□□□-37P)



Controller	Terminal cable	Connection cable 1)*1	Junction box 4D*2	Connection cable 2)	Connection cable 3)	Max. distance	SIO converter*1		Connection cable 4)	External cable	GOT Model	Total distance *6	Number of connectable equipment
Series	Connection diagram number	Cable model	Model name	Connection diagram number	Connection diagram number		Model name	Communication Type	Cable model Connection diagram number				
PCON ACON SCON	User preparing Page 869 RS-422/485 connection diagram 1)	CB-RCB-CTL002 (0.2m)	5-1473574-4	User preparing Page 869 RS-422/485 connection diagram 2)	User preparing Page 869 RS-422/485 connection diagram 2) or User preparing Page 870 RS-422/485 connection diagram 4)	100m	RCB-TU-SIO-□	RS-232	User preparing Page 867 RS-232 connection diagram 8)	GT11H-C30-37P(3m)	GT 2505HS	9m	16 Controllers for 1 GOT
	-	CB-RCB-CTL002*3 (0.2m)	-	-	-					GT11H-C30-37P(3m)	GT 2505HS		2 Controllers for 1 GOT
ERC2 (SIO specifications)*4	User preparing Page 869 RS-422/485 connection diagram 1)	CB-ERC2-CTL001 + CB-ERC2-PWBIO □□□ or CB-ERC2-PWBIO □□□ -RB	5-1473574-4	User preparing Page 869 RS-422/485 connection diagram 2)	User preparing Page 869 RS-422/485 connection diagram 2) or User preparing Page 870 RS-422/485 connection diagram 4)				User preparing Page 867 RS-232 connection diagram 8)	GT11H-C30-37P(3m)	GT 2505HS		16 Controllers for 1 GOT
	-		-	-	-				User preparing Page 867 RS-232 connection diagram 8)	GT11H-C30-37P(3m)	GT 2505HS		2 Controllers for 1 GOT

Controller	Terminal cable	Connection cable 1)*1	Junction box 4D*2	Connection cable 2)	Connection cable 3)	Max. distance	SIO converter*1		Connection cable 4)	External cable	GOT Model	Total distance *6	Number of connectable equipment
Series	Connection diagram number	Cable model	Model name	Connection diagram number	Connection diagram number		Model name	Communication Type	Cable model Connection diagram number				
ERC2 (NP/PN specifications)*5	User preparing Page 869 RS-422/485 connection diagram 1)	CB-ERC-PWBIO □□□ or CB-ERC-PWBIO □□□-RB + Terminal block (User preparing) + User preparing Page 871 RS-422/485 connection diagram 9)	5-1473574-4	User preparing Page 869 RS-422/485 connection diagram 2)	User preparing Page 869 RS-422/485 connection diagram 2) or User preparing Page 870 RS-422/485 connection diagram 4)	100m	RCB-TU-SIO-□	RS-232	User preparing Page 867 RS-232 connection diagram 8)	GT11H-C30-37P(3m)	GT 2505HS	9m	16 Controllers for 1 GOT

*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.

*2 Product manufactured by Tyco Electronics.
For details of the product, contact Tyco Electronics.

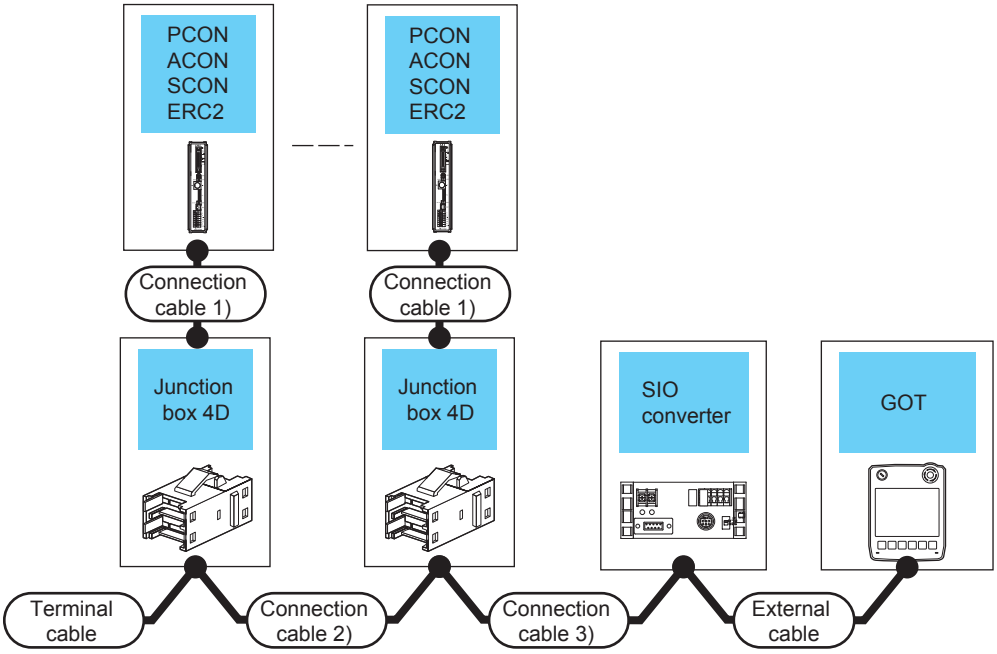
*3 When not using junction box 4D, connection cable 2) or connection cable 3), connect the controller to the SIO converter directly by the cable CR-RCB-CTL002.

*4 Use ERC2-□-□-□-□-□-SE-□-□.

*5 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.

*6 The distance from the GOT to the SIO converter (Connection cable 4) + External cable)

• When using the external cable (GT11H-C□□□)



Controller	Terminal cable	Connection cable 1)*1	Junction box 4D*2	Connection cable 2)	Connection cable 3)	Max. distance	SIO converter*1		External cable	GOT Model	Total distance *6	Number of connectable equipment
Series	Connection diagram number	Cable model	Model name	Connection diagram number	Connection diagram number		Model name	Communication Type				
PCON ACON SCON	User preparing Page 869 RS-422/485 connection diagram 1)	CB-RCB-CTL002 (0.2m)	5-1473574-4	User preparing Page 869 RS-422/485 connection diagram 2)	User preparing Page 869 RS-422/485 connection diagram 2) or User preparing Page 870 RS-422/485 connection diagram 4)	100m	RCB-TU-SIO-□	RS-232	GT11H-C30(3m) ☞ Page 868 RS-232 connection diagram 9)	GT 2505HS	9m	16 Controllers for 1 GOT
	-	CB-RCB-CTL002*3 (0.2m)	-	-	-					GT 2505HS		2 Controllers for 1 GOT
ERC2 (SIO specifications)*4	User preparing Page 869 RS-422/485 connection diagram 1)	CB-ERC2-CTL001 + CB-ERC2-PWBIO □□□ or CB-ERC2-PWBIO □□□-RB	5-1473574-4	User preparing Page 869 RS-422/485 connection diagram 2)	User preparing Page 869 RS-422/485 connection diagram 2) or User preparing Page 870 RS-422/485 connection diagram 4)				GT11H-C30(3m) ☞ Page 868 RS-232 connection diagram 9)	GT 2505HS		16 Controllers for 1 GOT
	-		-	-	-					GT 2505HS		2 Controllers for 1 GOT

Controller	Terminal cable	Connection cable 1)*1	Junction box 4D*2	Connection cable 2)	Connection cable 3)	Max. distance	SIO converter*1		External cable	GOT Model	Total distance *6	Number of connectable equipment
Series	Connection diagram number	Cable model	Model name	Connection diagram number	Connection diagram number		Model name	Communication Type				
ERC2 (NP/PN specifications)*5	User preparing Page 869 RS-422/485 connection diagram 1)	CB-ERC-PWBIO □□□ or CB-ERC-PWBIO □□□-RB + Terminal block (User preparing) + User preparing Page 871 RS-422/485 connection diagram 9)	5-1473574-4	User preparing Page 869 RS-422/485 connection diagram 2)	User preparing Page 869 RS-422/485 connection diagram 2) or User preparing Page 870 RS-422/485 connection diagram 4)	100m	RCB-TU-SIO-□	RS-232	GT11H-C30(3m) ☞ Page 868 RS-232 connection diagram 9)	GT 2505HS	9m	16 Controllers for 1 GOT

*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.

*2 Product manufactured by Tyco Electronics.
For details of the product, contact Tyco Electronics.

*3 When not using junction box 4D, connection cable 2) or connection cable 3), connect the controller to the SIO converter directly by the cable CR-RCB-CTL002.

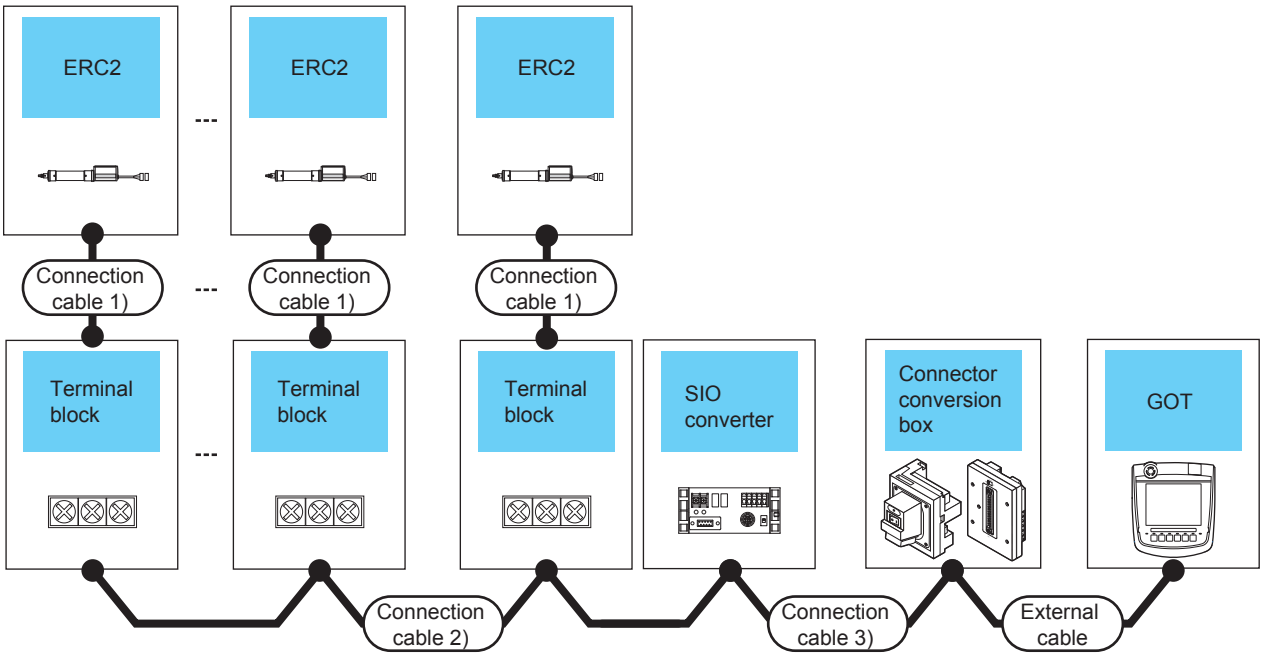
*4 Use ERC2-□-□-□-□-□-SE-□-□.

*5 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.

*6 The distance from the GOT to the SIO converter (Connection cable 4) + External cable)

■ERC2 (NP/PN specifications) only

• When using the connector conversion box



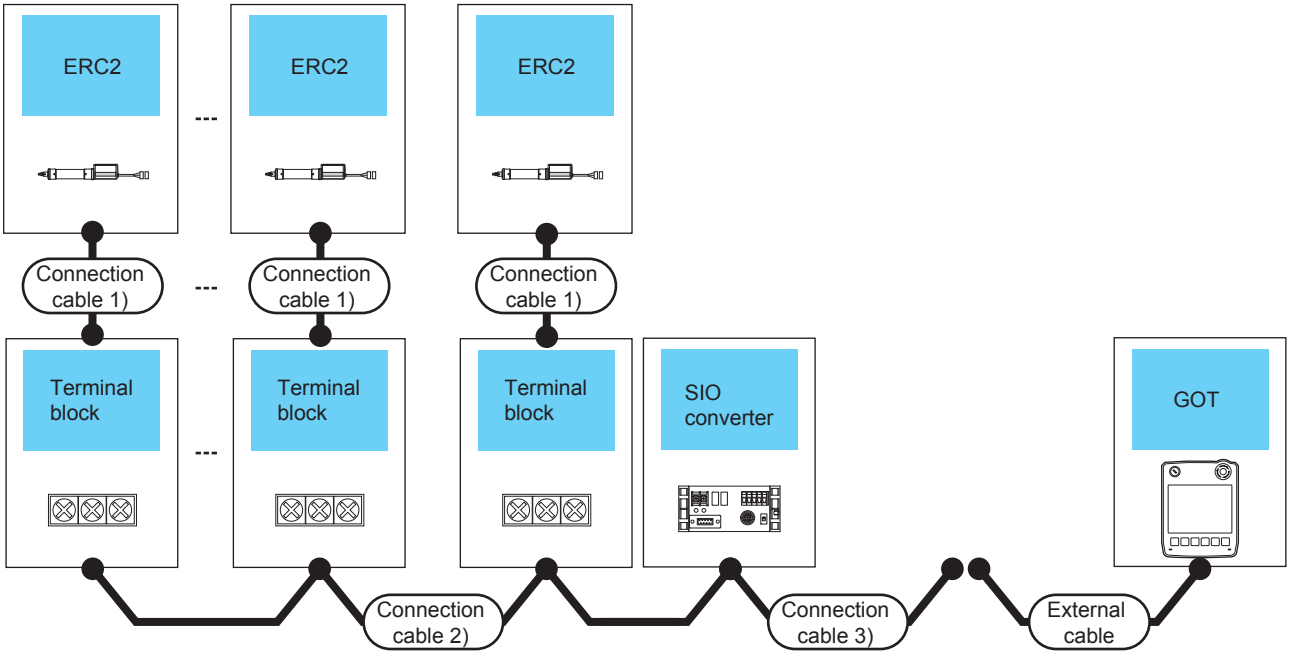
Controller	Connection cable 1)*1	Terminal block	Connection cable 2)	Max. distance	SIO converter*1		Connection cable 3)	Connector conversion box	External cable	GOT Model	Total distance *3	Number of connectable equipment
Series	Cable model		Connection diagram number		Model name	Communication Type	Cable model Connection diagram number					
ERC2 (NP/PN specifications)*2	CB-ERC-PWBIO □□□ or CB-ERC-PWBIO □□□-RB	Terminal block (User preparing)	User preparing Page 871 RS-422/485 connection diagram 9) or User preparing Page 870 RS-422/485 connection diagram 6)	100m	RCB-TU-SIO-□	RS-232	RCB-CV-MW*1 (0.3m) + CB-RCA-SIO050*1 (5m) or User preparing Page 867 RS-232 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	9m	16 Controllers for 1 GOT
								GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		RC□-TU-PIO*1	User preparing Page 871 RS-422/485 connection diagram 9)					GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
								GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.

*2 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.

*3 The distance from the GOT to the SIO converter (Connection cable 3) + External cable)

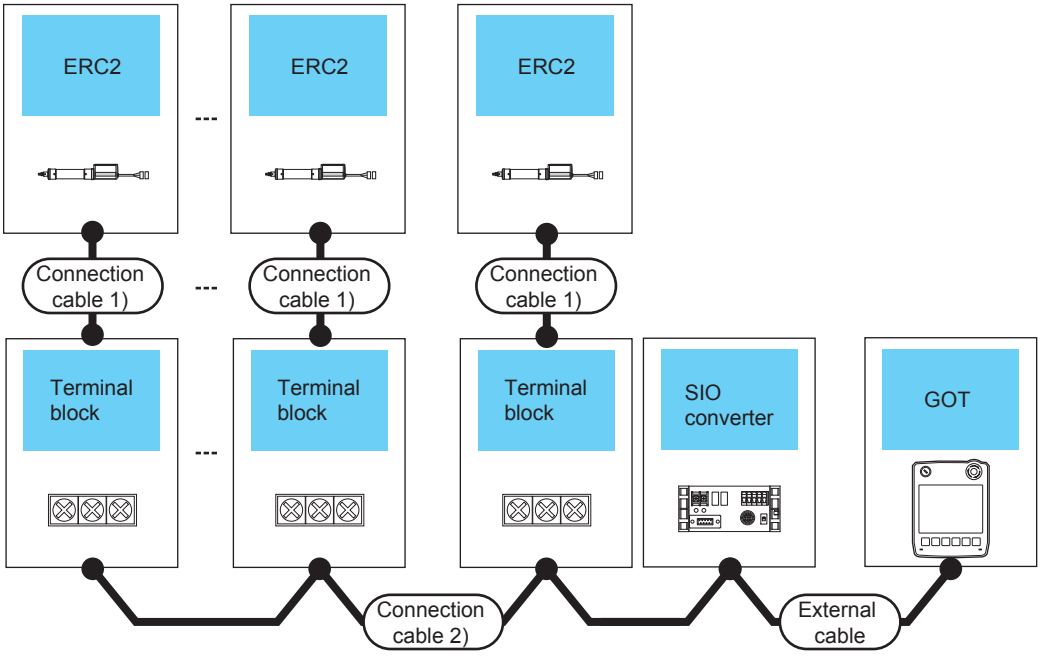
• When using the external cable (GT11H-C□□□-37P)



Controller		Connection cable 1)*1	Terminal block	Connection cable 2)	Max. distance	SIO converter*1		Connection cable 3)	External cable	GOT Model	Total distance *3	Number of connectable equipment
Series	Communication Type	Cable model		Connection diagram number		Model name	Communication Type	Cable model Connection diagram number				
ERC2 (NP/PN specifications)* 2	RS-422	CB-ERC-PWBIO □□□ or CB-ERC-PWBIO □□□-RB	Terminal block (User preparing)	User preparing Page 870 RS-422/485 connection diagram 5) or User preparing Page 870 RS-422/485 connection diagram 6)	100m	RCB-TU-SIO-□	RS-232	User preparing Page 867 RS-232 connection diagram 8)	GT11H-C30-37P(3m)	GT 2505HS	9m	16 Controllers for 1 GOT
			RC□-TU-PIO*1	User preparing Page 871 RS-422/485 connection diagram 9)				User preparing Page 867 RS-232 connection diagram 8)	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.
*2 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.
*3 The distance from the GOT to the SIO converter (Connection cable 3) + External cable)

• When using the external cable (GT11H-C□□□)



Controller		Connection cable 1)*1	Terminal block	Connection cable 2)	Max. distance	SIO converter*1		External cable	GOT Model	Total distance *3	Number of connectable equipment
Series	Communication Type	Cable model		Connection diagram number		Model name	Communication Type				
ERC2 (NP/PN specifications)*2	RS-422	CB-ERC-PWBIO □□□ or CB-ERC-PWBIO □□□-RB	Terminal block (User preparing)	User preparing Page 870 RS-422/485 connection diagram 5) or User preparing Page 870 RS-422/485 connection diagram 6)	100m	RCB-TU-SIO-□	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 868 RS-232 connection diagram 9)	GT 2505HS	9m	16 Controllers for 1 GOT
			RC□-TU-PIO*1	User preparing Page 871 RS-422/485 connection diagram 9)				GT11H-C30(3m) GT11H-C60(6m) ☞ Page 868 RS-232 connection diagram 9)	GT 2505HS		

*1 Product manufactured by IAI Corporation.
For details of the product, contact IAI Corporation.
*2 Use ERC2-□-□-□-□-□-NP-□-□ or ERC2-□-□-□-□-□-PN-□-□.
*3 The distance from the GOT to the SIO converter (External cable)

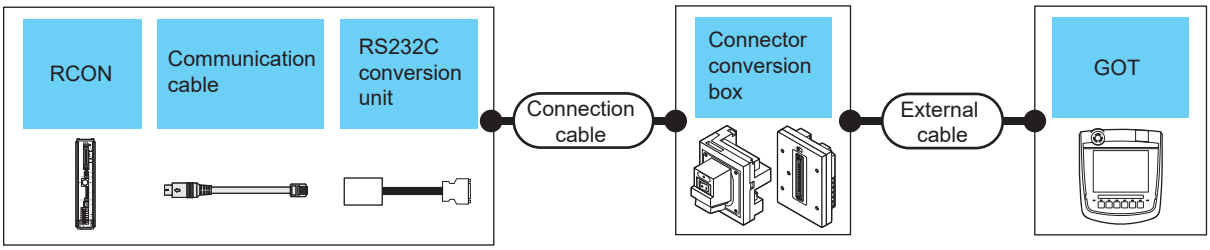
System Configuration for connecting to RCON

Communication driver

IAI ROBO CYLINDER

When using the RS-232 connection

■When using the connector conversion box

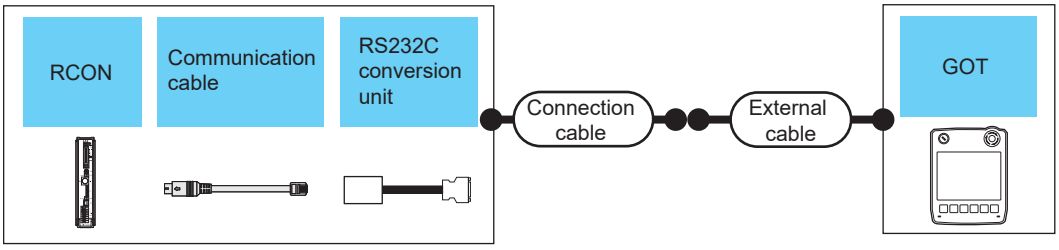


Controller				Connection cable	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Series	Communication cable	RS232C conversion unit	Communication Type	Connection diagram number					
RCON	CB-RCA-SIO050 *1 (5m)	RCB-CV-MW *1 (0.3m)	RS-232	-	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 Controller
					GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by IAI Corporation. For details of the product, contact IAI Corporation.

*2 The distance from the GOT to the RS-232 conversion adapter (Connection cable + External cable)

■When using the external cable (GT11H-C□□□-37P)

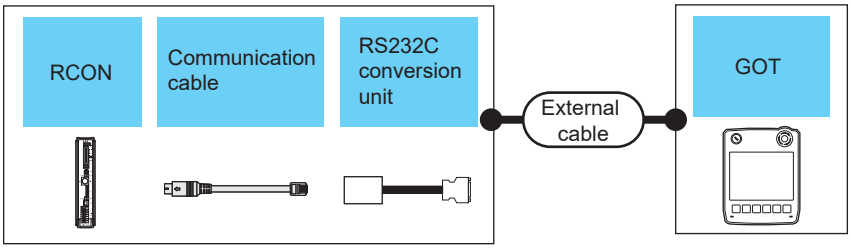


Controller	Communication cable	RS232C conversion unit	Connection cable	External cable	GOT Model	Total distance *2	Number of connectable equipment
Series			Connection diagram number				
RCON	CB-RCA-SIO050*1 (5m)	RCB-CV-MW*1 (0.3m)	User preparing Page 868 RS-232 connection diagram 10)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 Controller

*1 Product manufactured by IAI Corporation. For details of the product, contact IAI Corporation.

*2 The distance from the GOT to the RS-232 conversion adapter (Connection cable + External cable)

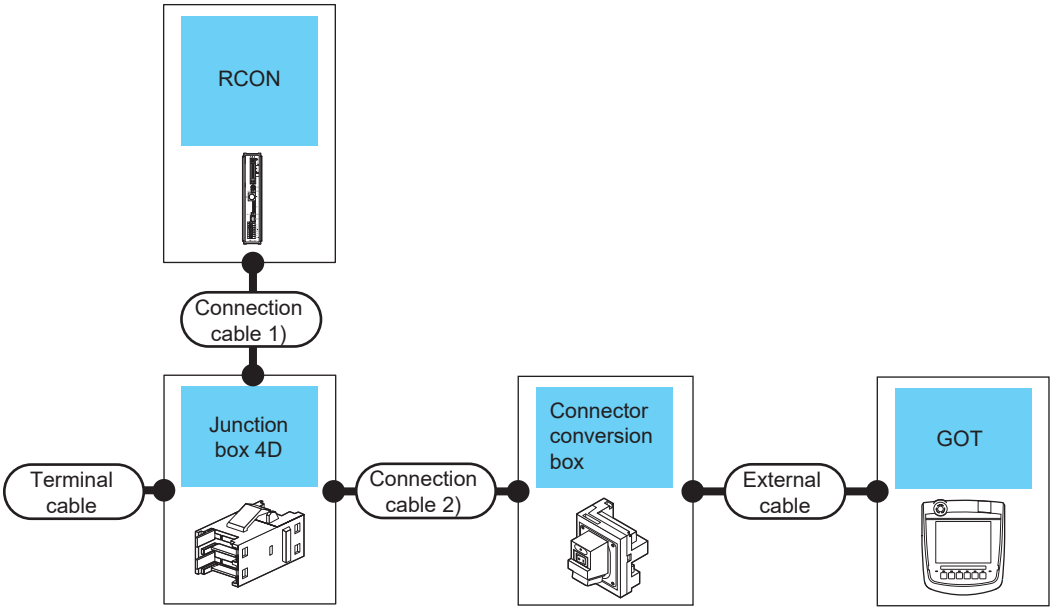
■When using the external cable (GT11H-C□□□)



Controller Series	Communication cable	RS232C conversion unit	External cable	GOT Model	Total distance *2	Number of connectable equipment
RCON	CB-RCA-SIO050*1 (5m)	RCB-CV-MW*1 (0.3m)	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 868 RS-232 connection diagram 11)	GT 2505HS	6m	1 GOT for 1 Controller

*1 Product manufactured by IAI Corporation. For details of the product, contact IAI Corporation.
*2 The distance from the GOT to the RS-232 conversion adapter (Connection cable + External cable)

When using the RS-422/485 connection



Controller Series	Terminal cable Connection diagram number	Connection cable 1)*1 Cable model	Junction box 4D*2 Model name	Connection cable 2) Connection diagram number	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
RCON	User preparing Page 869 RS-422/485 connection diagram 1)	CB-RCB-CTL002 (0.2m)	5-1473574-4	User preparing Page 869 RS-422/485 connection diagram 3)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	16 Controllers for 1 GOT

*1 Product manufactured by IAI Corporation. For details of the product, contact IAI Corporation.
*2 Product manufactured by Tyco Electronics. For details of the product, contact Tyco Electronics.

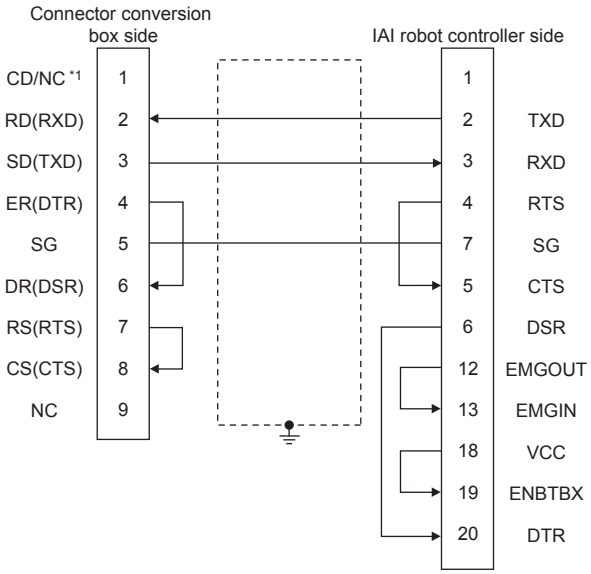
14.3 Connection Diagram

The following diagram shows the connection between the GOT and the controller.

RS-232 cable

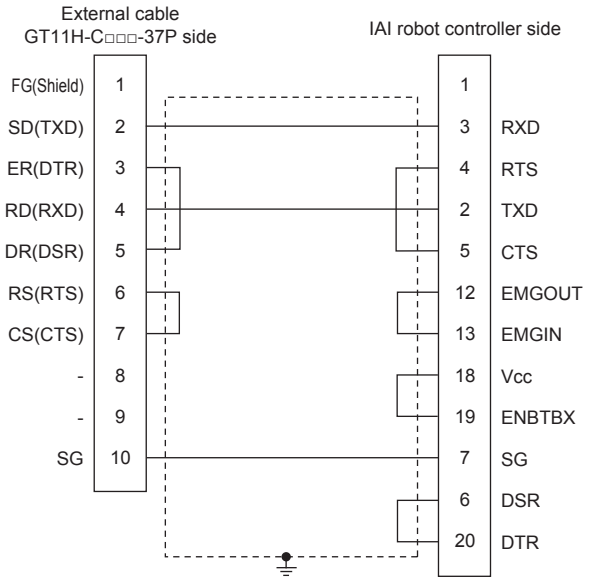
Connection diagram

■RS-232 connection diagram 1)

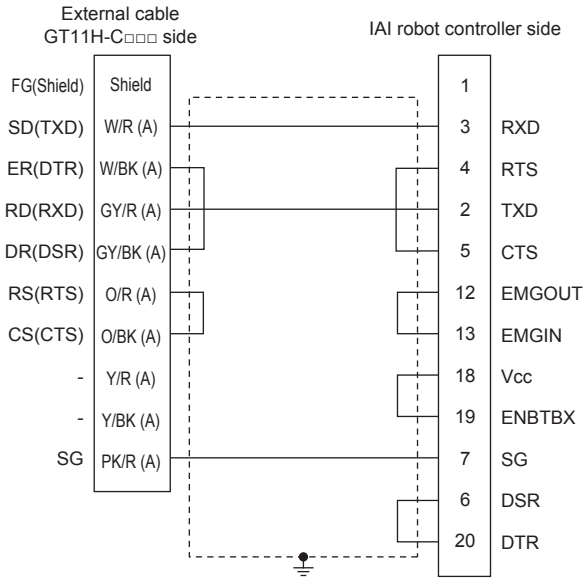


*1 GT2506HS-V: CD, GT2505HS-V: NC

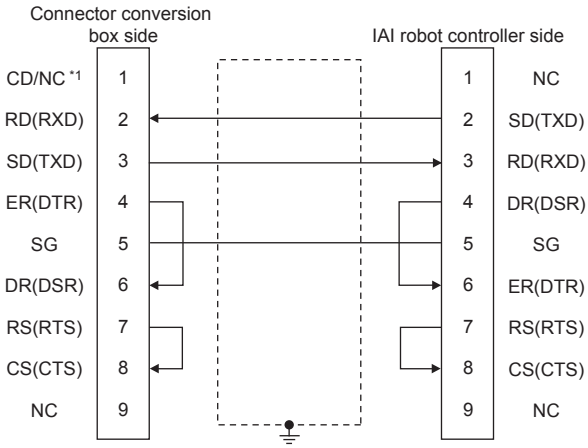
■RS-232 connection diagram 2)



■RS-232 connection diagram 3)

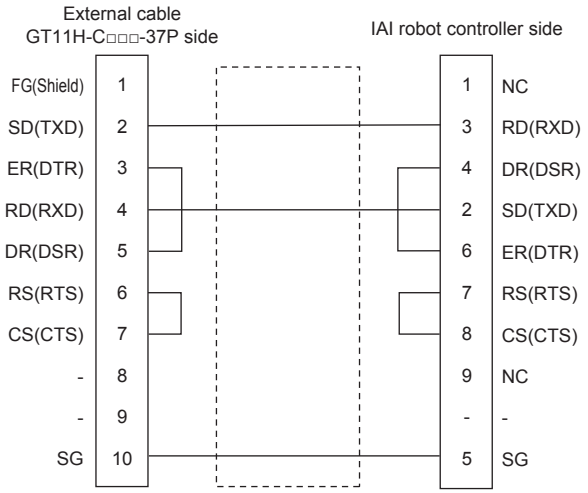


■RS-232 connection diagram 4)

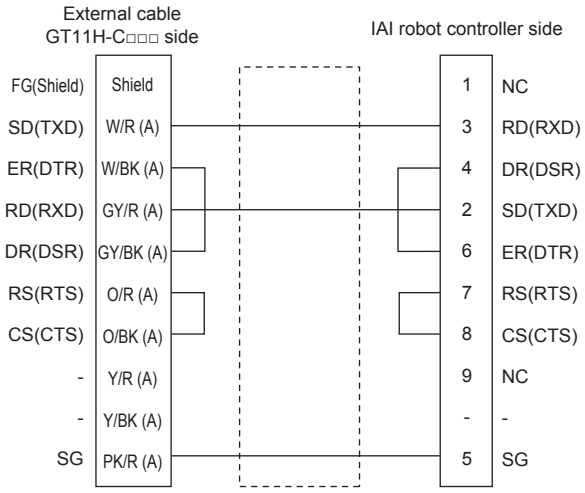


*1 GT2506HS-V: CD, GT2505HS-V: NC

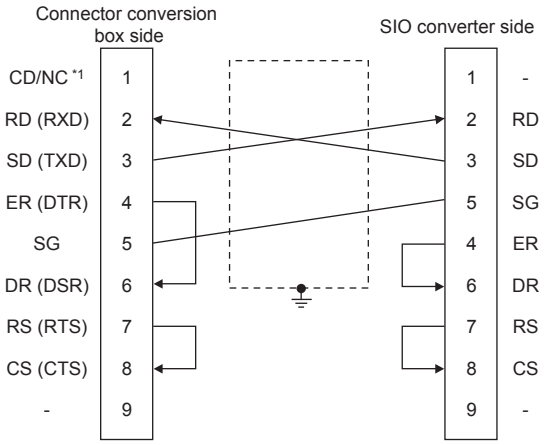
■RS-232 connection diagram 5)



■RS-232 connection diagram 6)

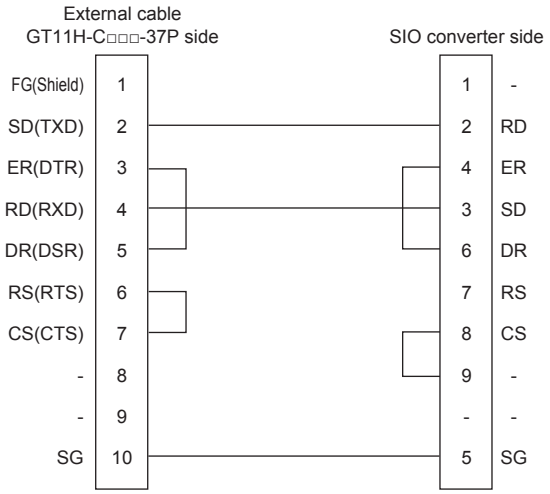


■RS-232 connection diagram 7)

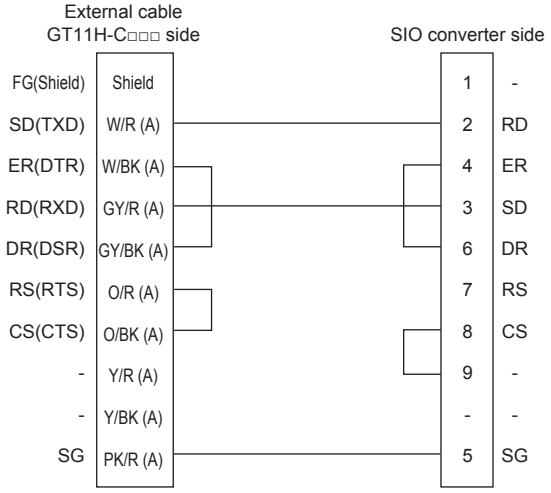


*1 GT2506HS-V: CD, GT2505HS-V: NC

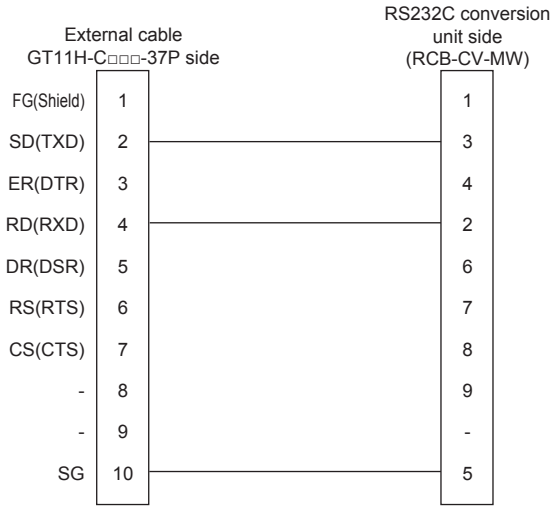
■RS-232 connection diagram 8)



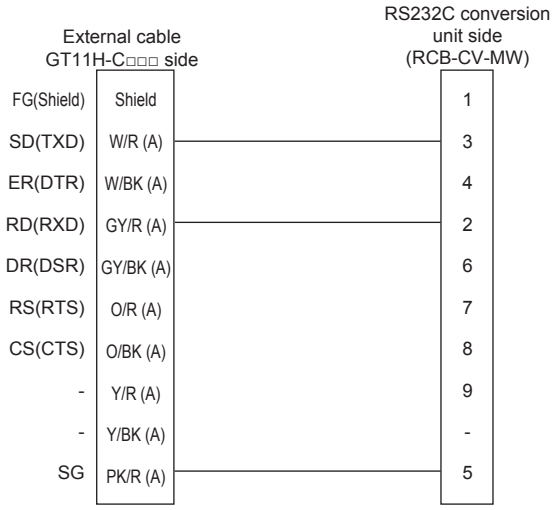
■RS-232 connection diagram 9)



■RS-232 connection diagram 10)



■RS-232 connection diagram 11)



Precautions when preparing a cable

■Cable length

The length of the RS-232 cable must be 3 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■IAI Robot Controller side connector

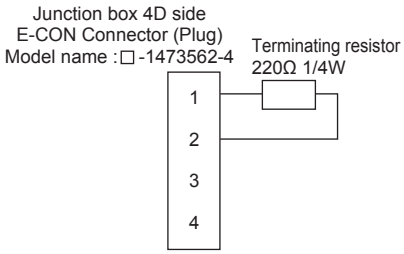
Use the connector compatible with the IAI Robot Controller.

For details, refer to the IAI Robot Controller user's manual.

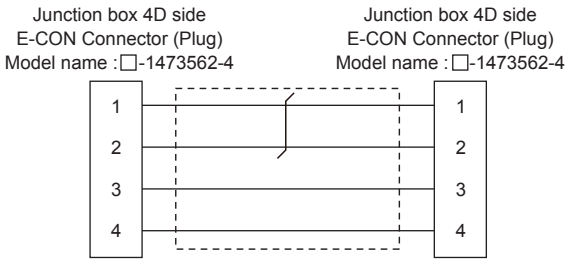
RS-422/485 cable

Connection diagram

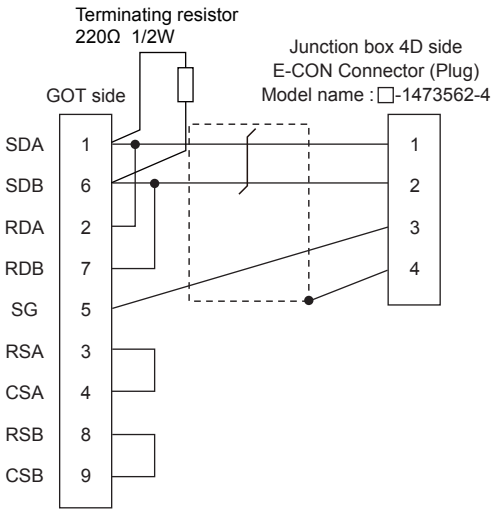
■RS-422/485 connection diagram 1)



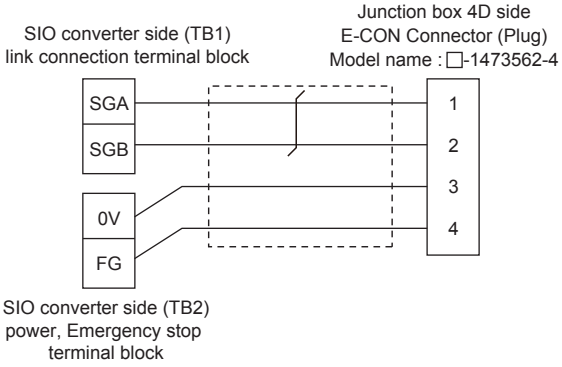
■RS-422/485 connection diagram 2)



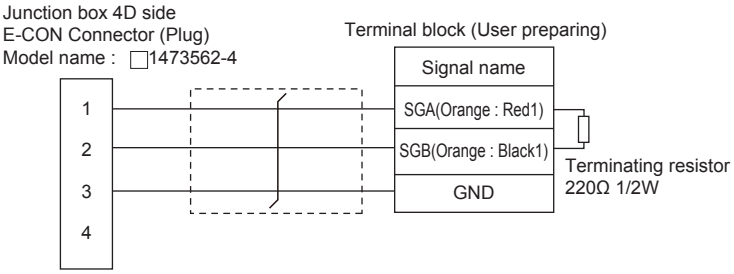
■RS-422/485 connection diagram 3)



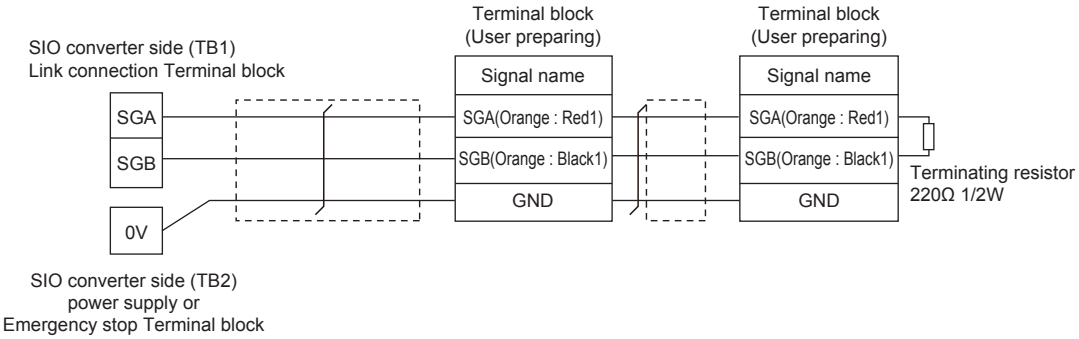
■RS-422/485 connection diagram 4)



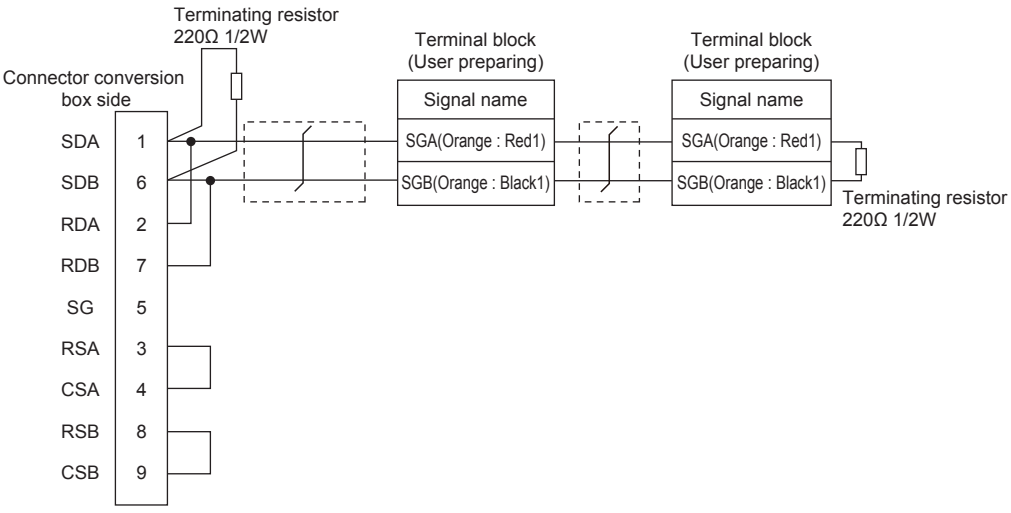
■RS-422/485 connection diagram 5)



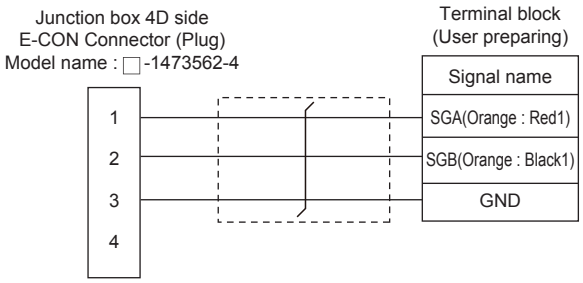
■RS-422/485 connection diagram 6)



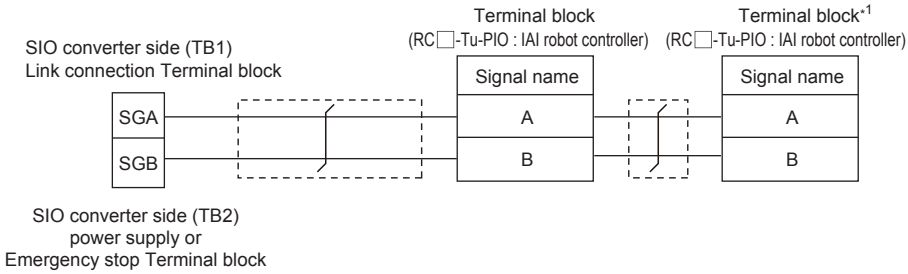
■RS-422/485 connection diagram 7)



■RS-422/485 connection diagram 8)



■RS-422/485 connection diagram 9)



*1 Turn the terminator switch of a terminal block which will be a terminal to "RTON".

Precautions when preparing a cable

■Cable length

• When the communication route between the GOT and the robot controller does not go through the SIO converter

The distance from the robot controller to the Handy GOT converter must be 13 m or less.

• When the communication route between the GOT and the robot controller goes through the SIO converter

The distance from the robot controller to the SIO converter must be 100 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■E-CON connector (plug) (Type name: □-1473562-4)

Product manufactured by Tyco Electronics. For details of the product, contact Tyco Electronics.

Connecting terminating resistors

■GOT side

When connecting the GOT and a controller, a terminating resistor must be connected to the GOT.

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

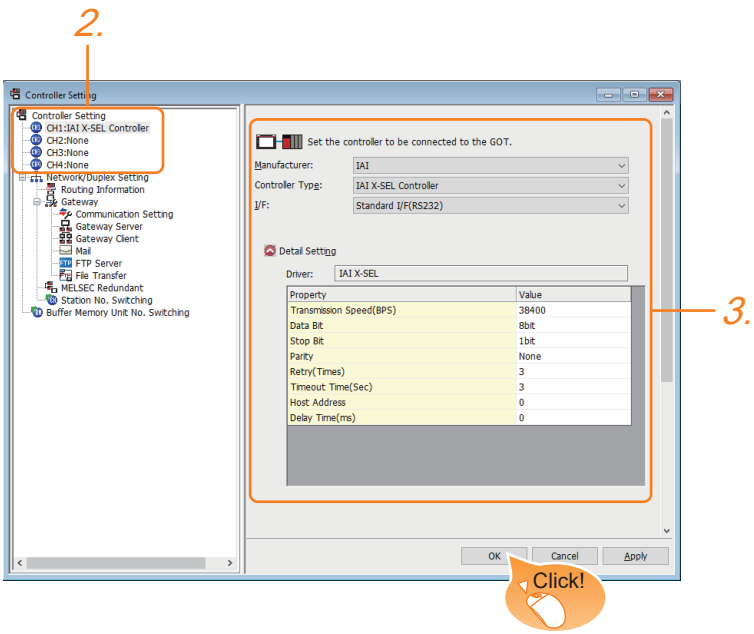
For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

14.4 GOT Side Settings

Setting communication interface (Communication settings)

Set the channel of the equipment to be connected to the GOT.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [IAI]
- [Controller Type]

When connecting to X-SEL, SSEL, ASEL, PSEL, or RSEL: [IAI X-SEL Controller]

When connecting to PCON, ACON, SCON, RCON, or ERC2: [IAI ROBO CYLINDER]

- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 873 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
Transmission Speed(BPS)	38400
Data Bit	8 bit
Stop Bit	1 bit
Parity	None
Retry(Times)	3
Timeout Time(Sec)	3
Host Address	0
Delay Time(ms)	0

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 38400bps)	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bits)	7bit, 8bit
Stop Bit	Specify the stop bit length for communications. (Default: 1bits)	1bit, 2bit
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: None)	None Even Odd
Retry	Set the number of retries to be performed when a communication error occurs. (Default: 3timse)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Host Address	Make the settings according to the station number (station code) of the controller to be monitored. (Default: 0)	<When connecting to X-SEL, SSEL, ASEL, PSEL, or RSEL> 0 to 255 <When connecting to PCON, ACON, SCON, RCON, ERC2> 0 to 15 *1
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300 (ms)

*1 When connecting to RCON, set the axis number of the driver unit to be monitored.

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

14.5 Robot Controller Side Setting

Point

IAI Robot Controller

For details of IAI Robot Controller, refer to the following manuals.

IAI Robot Controller user's Manual

Connecting to X-SEL or RSEL

Parameter setting

Enter the following parameters using peripheral software.

When setting parameters, set the mode switch of the controller to "MANU".

Parameter	Parameter Name	Set Value*4
I/O parameter 90	Usage of SIO channel 1*1 opened to user	• When used in "MANU" Set either of the following. 0: SEL opened program 2: IAI protocol B • When used in "AUTO" 2: IAI protocol B
I/O parameter 91	Station code of SIO channel 1*1 opened to user	0 to 255 153*
I/O parameter 92*2	Baud rate type of SIO channel 1*1 opened to user	0: 9600bps* 1: 19200bps 2: 38400bps 3: 57600bps 5: 115200bps
I/O parameter 93	Data length of SIO channel 1*1 opened to user	7bit, 8bit*
I/O parameter 94	Stop bit length of SIO channel 1*1 opened to user	1bit*, 2bit
I/O parameter 95	Parity type of SIO channel 1 *1 opened to user	0: None* 1: Odd 2: Even
I/O parameter 97 *3	IAI-protocol minimum response delay for SIO channel 1*1 opened to user	0 to 999(ms)
Other parameter 46	Other setting bit pattern 1	bit0 to 3 = 1 (fixed)

*1 For X-SEL(P/Q/PX/QX), the parameter becomes the SIO channel 0 opened to user.

*2 Indicates only the transmission that can be specified on the GOT side.
Specify the transmission speed to match the baud rate of the GOT.

*3 Set it only when a wait time is required before the response and transmission to the GOT request.
Normally, the communication is available using default values.

*4 When using the "MANU" mode, the set value is fixed to the value with *.
Adjust the settings of the GOT side to the * settings.
However, the communication setting of the PC software becomes the setting of X-SEL after the PC software for X-SEL is connected.
In this case, adjust the communication setting of the GOT to the setting of the PC software.

Mode switch

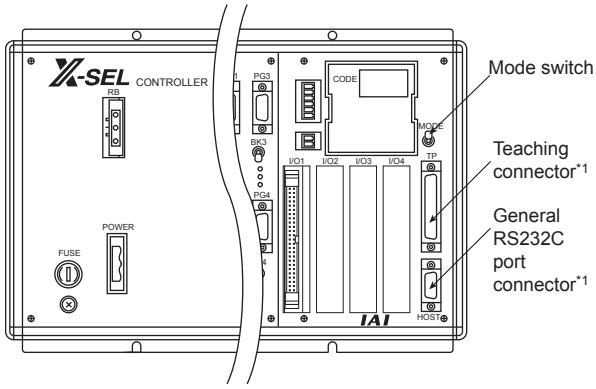
■X-SEL K type

• When setting the mode switch to "MANU"

Connect the GOT to the following teaching connector.

• When setting the mode switch to "AUTO"

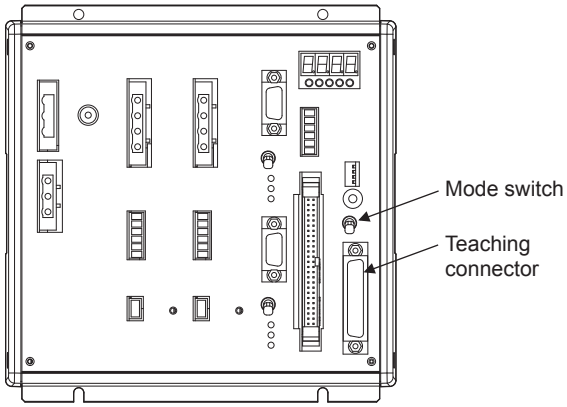
Connect the GOT to the following general RS232C port connector.



*1 The teaching connector and general RS232C port connector cannot be used at the same time.

■Other than X-SEL K type

Set the mode switch to "MANU" or "AUTO" and connect the GOT to the following teaching connector.



Connecting to SSEL, ASEL, PSEL

Parameter setting

Enter the following parameters using peripheral software.

When setting parameters, set the mode switch of the controller to "MANU".

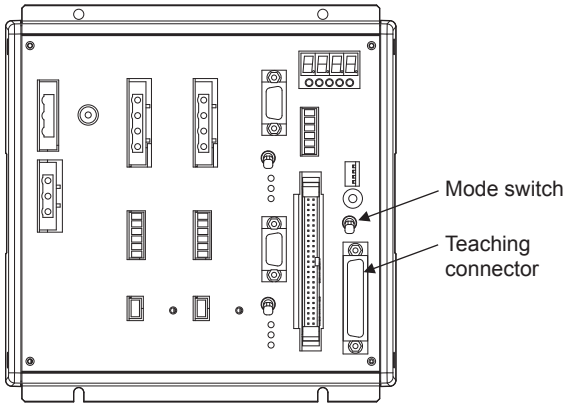
Parameter	Parameter Name	Set Value
I/O parameter 90	Usage of SIO channel 0 opened to user	2: IAI protocol B (fixed)
I/O parameter 91	Station code of SIO channel 0 opened to user	0 to 255
I/O parameter 92*1	Baud rate type of SIO channel 0 opened to user	0: 9600bps 1: 19200bps 2: 38400bps 3: 57600bps 5: 115200bps
I/O parameter 93	Data length of SIO channel 0 opened to user	7bit, 8bit
I/O parameter 94	Stop bit length of SIO channel 0 opened to user	1bit, 2bit
I/O parameter 95	Parity type of SIO channel 0 opened to user	0: None 1: Odd 2: Even
I/O parameter 97 *2	IAI-protocol minimum response delay for SIO channel 0 opened to user	0 to 999(ms)
Other parameter 46	Other setting bit pattern 1	bit0 to 3 = 1 (fixed)

*1 Indicates only the transmission that can be specified on the GOT side.
Specify the transmission speed to match the baud rate of the GOT.

*2 Set it only when a wait time is required before the response and transmission to the GOT request.
Normally, the communication is available using default values.

Mode switch

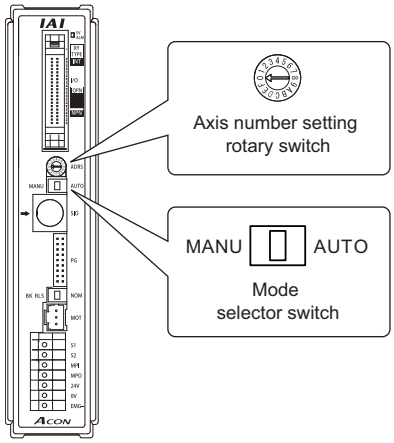
Set the mode switch to "AUTO" and connect the GOT to the following teaching connector.



Connecting to PCON, ACON, SCON

Axis number setting, Mode select

For controllers without the following switches, set from the setting tool (PC software).



Switch	Setting details
Axis number setting rotary switch	0 to 15
Mode selector switch	<Only the monitor> AUTO <monitor, data change> MANU

Transmission speed setting

Set the transmission speed from the setting tool (PC software).

Item	Range
SIO transmission speed*1	9600/19200/38400/57600/115200bps Default: 38400bps

*1 Indicates only the transmission speeds that can be set on the GOT side.
Set the same transmission speed of the GOT.

Connecting to RCON

Communication setting

The communication setting is fixed.

The following shows each setting value.

Item	Set value
Baud rate	115200bps
Data length	8bit
Stop bit	1bit
Parity	None

Axis number setting

Configure the axis number setting using the engineering tool for RCON.

For the setting details, refer to the following.

Manual of the IAI robot controller

Connecting to ERC2

Axis number setting, Mode select

Set from the setting tool (PC software).

Transmission speed setting

Set the transmission speed from the setting tool (PC software).

Item	Range
SIO transmission speed*1	9600/19200/38400/57600/115200bps Default: 38400bps

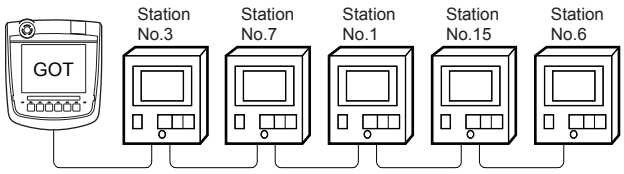
*1 Indicates only the transmission speeds that can be set on the GOT side.
Set the same transmission speed of the GOT.

Station No.settings

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.



Examples of station number setting

Direct specification

When setting the device, specify the station number of the controller of which data is to be changed.

Model name	Specification range	Refer to
PCON, ACON, SCON	0 to 15	☞ Page 877 Connecting to PCON, ACON, SCON
ERC2	0 to 15	☞ Page 878 Connecting to ERC2

Indirect specification

When setting the device, indirectly specify the station number of the controller of which data is to be changed using the 16-bit GOT internal data register (GD10 to GD25).

When specifying the station No. from 100 to 115 on GT Designer3, the value of GD10 to GD25 compatible to the station No. specification will be the station No. of the controller.

Specification station No.	Compatible device	Setting range
100	GD10	0 to 15 (If setting a value out of the range above, a timeout error occurs.)
101	GD11	
102	GD12	
103	GD13	
104	GD14	
105	GD15	
106	GD16	
107	GD17	
108	GD18	
109	GD19	
110	GD20	
111	GD21	
112	GD22	
113	GD23	
114	GD24	
115	GD25	

14.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1

IAI equipment ([IAI X-SEL Controller])

IAI equipment ([IAI ROBO CYLINDER])

14.7 Precautions

Program control device

- When Program Execution Command (0), Program Exit Command (2), or Program Restart Command (4) is written to the program control device (PRG 0), it will be a request for all programs running in the controllers.
- When unsupported write data is input to the program control device, the following error is displayed in the system alarm.

315: Device writing error.

Correct device.

Variable devices

The variable number 99 of Integer device and variable number 199 of Real device are special devices used for operations by the X-SEL controller system.

Do not use these variables for general purpose.

Command trigger compatible device

- For the device whose obtained data No.0 is a command trigger, communication with the controller is performed when the Write(1)/Read(2) is set to the command trigger.

When the command trigger and setting value are written in a batch, the communication is performed based on the value set with batch write.

- When Clear(4) is set to the command trigger, the communication with the controller is not performed and the set value is initialized.
- When an unsupported set value is input to the command trigger, the following error is displayed in the system alarm.

315: Device writing error.

Correct device.

Device reserved for system use

Devices of "Reserved for system use" are devices with indefinite values.

Do not write to these devices.

Write to the flash ROM

- The point data can be written to the flash ROM of the X-SEL controller.

When the point data is written to the flash ROM, it is not cleared even when power supply to the controller is turned off.

However, there are limits in the number of writing.

For details, refer to the user's manual of X-SEL controller used.

- Never turn off the main power supply during the flash ROM write.

Doing so may cause the loss of data and malfunction of controllers.

For details, refer to the user's manual of X-SEL controller used.

Communication disconnection

- Writing to the flash ROM disconnects the communication with controllers until the writing is completed.
- Resetting software restarts the controllers.

During this time, the communication with controllers is disconnected.

Station number setting of the IAI robot controller system

The robot controller with the station number set with the host address must be included.

☞ Page 873 Communication detail settings

Connection of the IAI X-SEL K type

Note the following precaution when using the controller with the mode switch set to MANU.

- After powering up the X-SEL, connecting the GOT before the PC software causes the program startup disabled (A1D alarm) on the X-SEL side.

System area for status (S) devices

■Access to the system area for status (S) devices

Do not access the system area for status (S) devices.

If access is attempted to an area that contains the system area, the response from the accessed robot controller differs depending on the model of the controller or the accessed area.

For the details, refer to the following.

📖IAI Robot Controller user's Manual

■When monitoring multiple status (S) devices

The GOT requests for data in 16-bit chunks.

If the requested data contains the system area, monitoring may not be performed properly.

To monitor multiple status (S) devices, use multiples of 16 to specify the lowest device number.

Example) Monitoring S01A1 and S01AF simultaneously

- When S01A1 is specified as the start device, an error occurs as the specified 16-bit data contains the system area.

Status	Area name
S01A1 (monitoring target)	Press program judgement status register (Servo Press) (PPJD)
S01A2	
S01A3	
S01A4	
:	
S01AE	
S01AF (monitoring target)	
S01B0	Reserved for system

- When S01A0 is specified as the start device, the target devices can be monitored properly as the specified 16-bit data does not contain the system area.

Status	Area name
S01A0	Press program judgement status register (Servo Press) (PPJD)
S01A1 (monitoring target)	
S01A2	
S01A3	
:	
S01AD	
S01AE	
S01AF (monitoring target)	

MEMO

15 AZBIL CONTROL EQUIPMENT

- Page 883 Connectable Model List
- Page 885 System Configuration
- Page 923 Connection Diagram
- Page 934 GOT Side Settings
- Page 937 Control Equipment Side Setting
- Page 950 Settable Device Range
- Page 950 Precautions

15.1 Connectable Model List

The following table shows the connectable models.

Series	Model name	Clock	Communication Type	Connectable model	Refer to
DMC	DMC10	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 885 Connecting to DMC10
	DMC50	○	RS-485	GT2506HS GT2505HS	☞ Page 888 Connecting to DMC50
SDC	SDC15 SDC25 SDC26 SDC35 SDC36	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 890 Connecting to SDC15, SDC25/26 or SDC35/36
	SDC20 SDC21	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 892 Connecting to SDC20/21
	SDC30 SDC31	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 896 Connecting to SDC30/31
	SDC40A SDC40B SDC40G	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 899 Connecting to SDC40A/40B/40G
	SDC45 SDC46	○	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 903 Connecting to SDC45/46
CMS	CMS	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 906 Connecting to CMS, MQV, MPC, MVF, RX
CMF	CMF015 CMF050	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 908 Connecting to CMF015, CMF050
CML	CML	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 912 Connecting to CML, PBC201-VN2
MQV	MQV	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 906 Connecting to CMS, MQV, MPC, MVF, RX
MPC	MPC				☞ Page 906 Connecting to CMS, MQV, MPC, MVF, RX
MVF	MVF				☞ Page 906 Connecting to CMS, MQV, MPC, MVF, RX
PBZ	PBC201-VN2	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 912 Connecting to CML, PBC201-VN2
AUR	AUR350C AUR450C	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 915 Connecting to AUR350C, AUR450C
RX	RX	○	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 906 Connecting to CMS, MQV, MPC, MVF, RX
CMC	CMC10B	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 917 Connecting to CMC10B
AHC2001	AHC2001	○	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 920 Connecting to AHC2001

Series	Model name	Clock	Communication Type	Connectable model	Refer to
NX	NX-D15 NX-D25 NX-D35 NX-DX1 NX-DX2 NX-DY NX-S01 NX-S11 NX-S12 NX-S21	×	RS-232 RS-485 (MODBUS)	GT 2506 HS GT 2505 HS	☞ Page 922 Connecting to NX series
	NX-D15 NX-D25 NX-D35 NX-DX1 NX-DX2 NX-DY NX-S01 NX-S11 NX-S12 NX-S21	×	Ethernet (MODBUS)	GT 2506 HS GT 2505 HS	☞ Page 922 Connecting to NX series

15.2 System Configuration

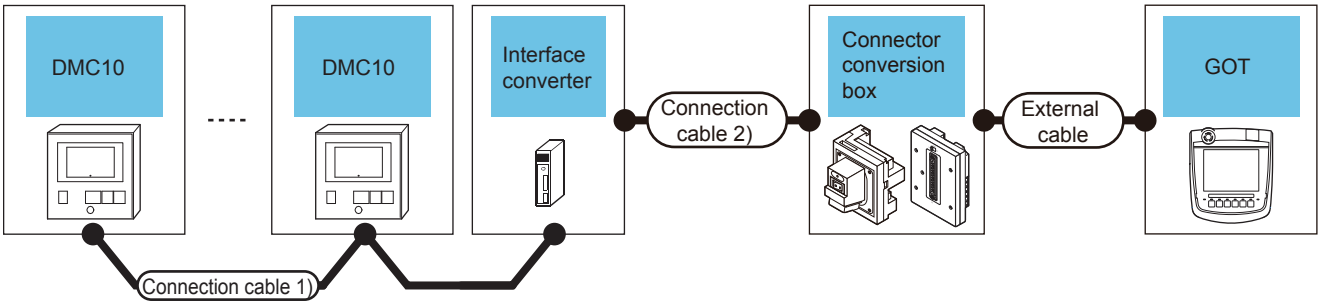
Connecting to DMC10

Communication driver

AZBIL SDC/DMC

When using the Interface converter

■When using the connector conversion box

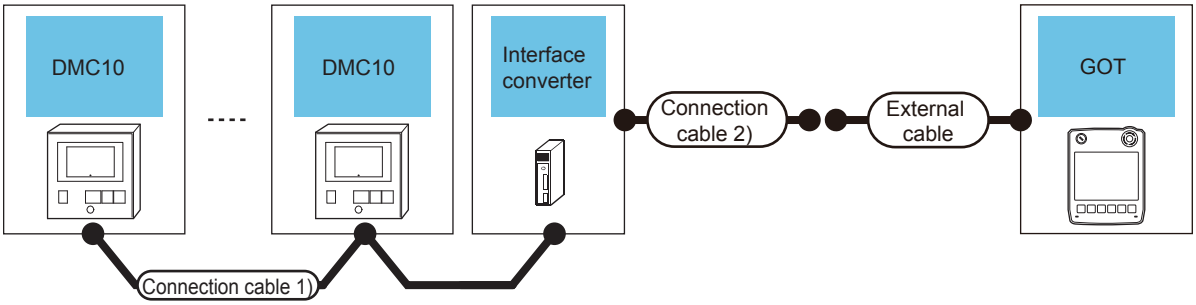


Temperature controller	Connection cable 1)		Interface converter *1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
DMC10	User preparing Page 926 RS485 connection diagram 1)	500m	CMC10L	RS-232	User preparing Page 923 RS232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 15 temperature controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the GOT to the interface converter (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

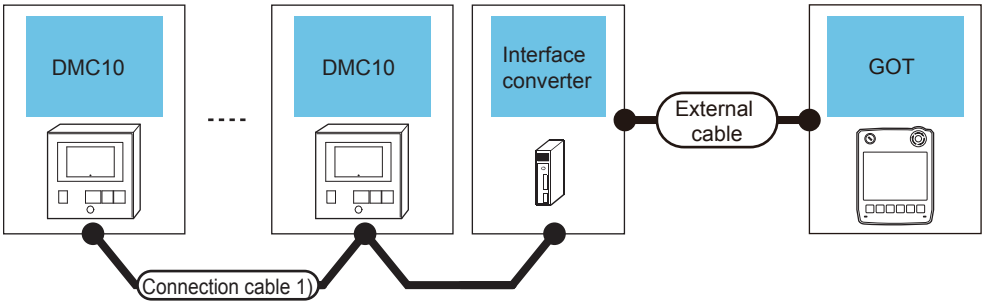


Temperature controller	Connection cable 1)		Interface converter *1		Connection cable 2)	External cable	GOT Model	Total distance*2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
DMC10	User preparing Page 926 RS485 connection diagram 1)	500m	CMC10L	RS-232	User preparing Page 923 RS232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 15 temperature controllers for 1 GOT

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the GOT to the interface converter (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



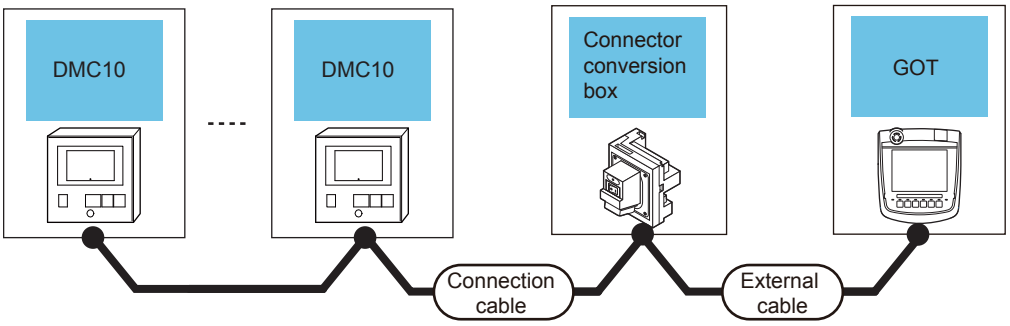
Temperature controller	Connection cable 1)		Interface converter *1		External cable	GOT Model	Total distance*2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
DMC10	User preparing Page 926 RS485 connection diagram 1)	500m	CMC10L	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 924 RS232 connection diagram 3)	GT 2505HS	6m	Up to 15 temperature controllers for 1 GOT

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the GOT to the interface converter (Connection cable 2) + External cable)

When connecting directly

■When using the connector conversion box



Temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
DMC10	RS-485	User preparing Page 930 RS485 connection diagram 9)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 15 temperature controllers for 1 GOT

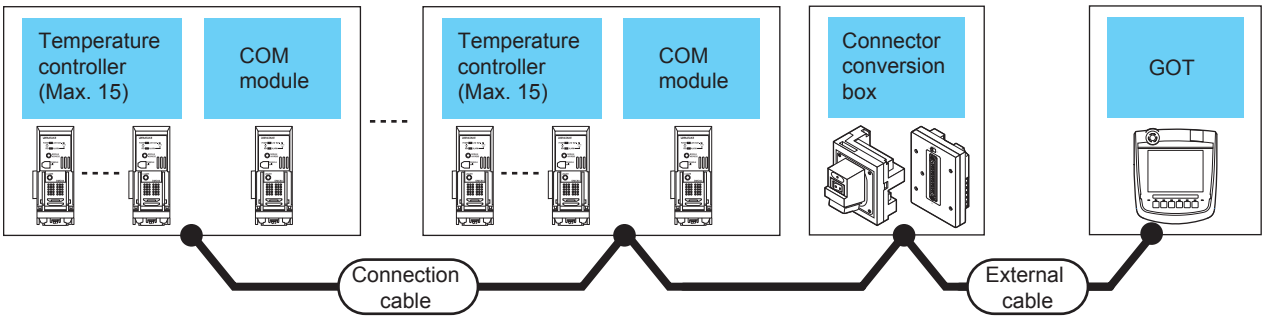
Connecting to DMC50

Communication driver

AZBIL DMC50

When using the COM module

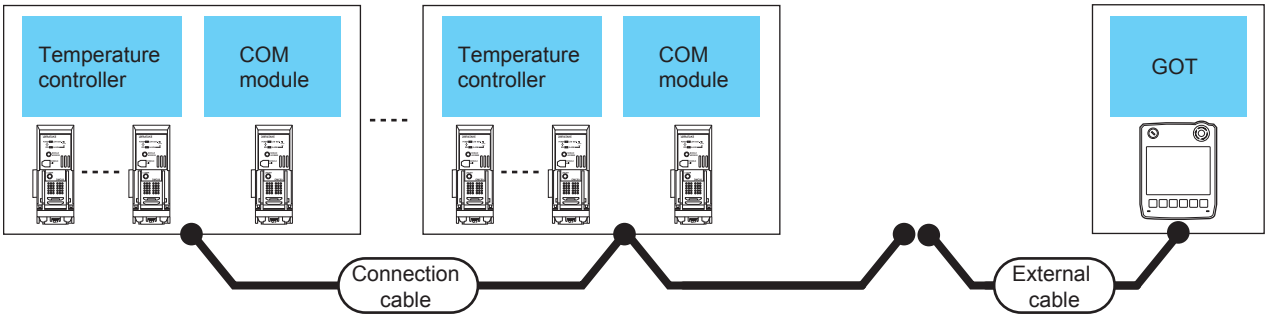
■When using the connector conversion box



Temperature controller	Connection cable	COM module*1		Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Connection diagram number	Model name	Communication Type					
DMC50C□□□X	User preparing Page 929 RS485 connection diagram 6)	DMC50M□20X	RS-485	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 8 COM module for 1 GOT. Up to 120 temperature controllers for 1 COM module.
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by Azbil Corporation. For details on the product, contact Azbil Corporation.

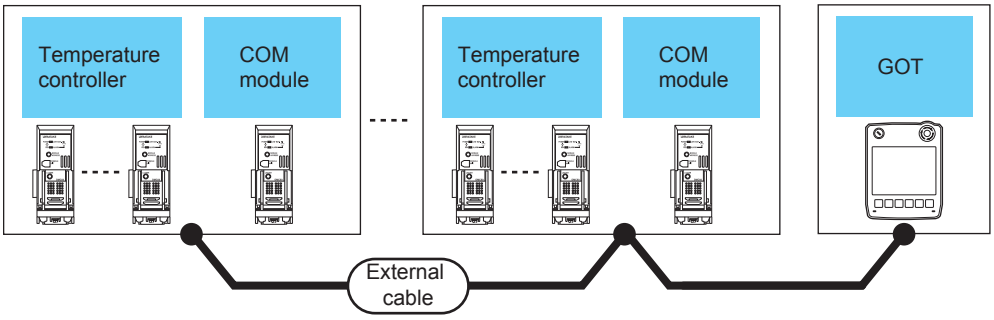
■When using the external cable (GT11H-C□□□-37P)



Temperature controller	Connection cable	COM module*1		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Connection diagram number	Model name	Communication Type				
DMC50C□□□X	User preparing Page 930 RS485 connection diagram 7)	DMC50M□20X	RS-485	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	Up to 10 COM module for 1 GOT. Up to 8 temperature controllers for 1 COM module.

*1 Product manufactured by Azbil Corporation. For details on the product, contact Azbil Corporation.

■When using the external cable (GT11H-C□□□)

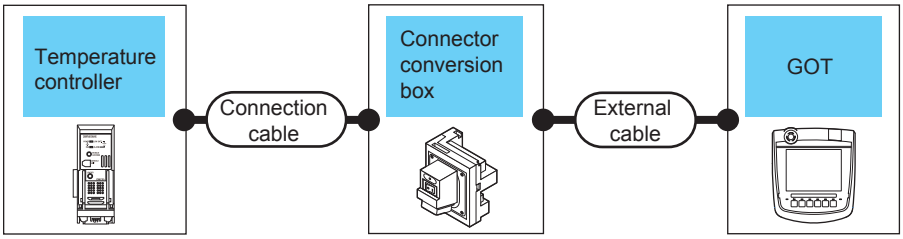


Temperature controller	COM module*1		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Model name	Communication Type				
DMC50C□□□X	DMC50M□20X	RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 930 RS485 connection diagram8)	GT 2505HS	13m	Up to 10 COM module for 1 GOT. Up to 8 temperature controllers for 1 COM module.

*1 Product manufactured by Azbil Corporation. For details on the product, contact Azbil Corporation.

When connecting directly to one temperature controller

■When using the connector conversion box



Temperature controller	Connection cable		Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Connection diagram number	Communication Type					
DMC50CX	(User preparing) Page 931 RS485 connection diagram 10)	RS-485	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 1 temperature controller for 1 GOT

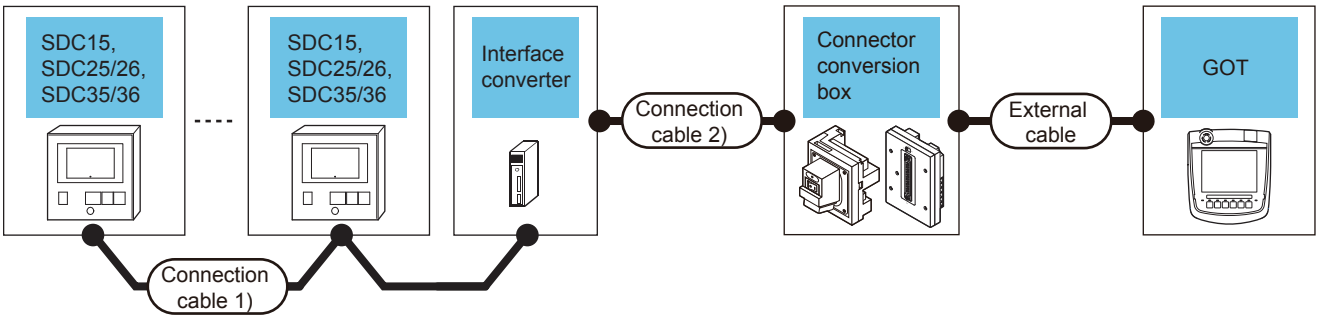
Connecting to SDC15, SDC25/26 or SDC35/36

Communication driver

AZBIL SDC/DMC

When using the Interface converter

■When using the connector conversion box

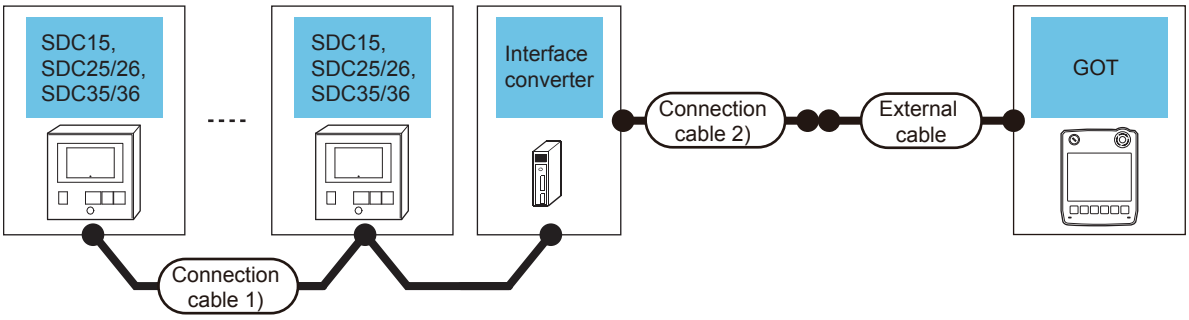


Temperature controller	Connection cable 1)		Interface converter*1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
SDC15 SDC25/26 SDC35/36	User preparing Page 926 RS485 connection diagram 1)	500m	CMC10L	RS-232	User preparing Page 923 RS232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 temperature controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

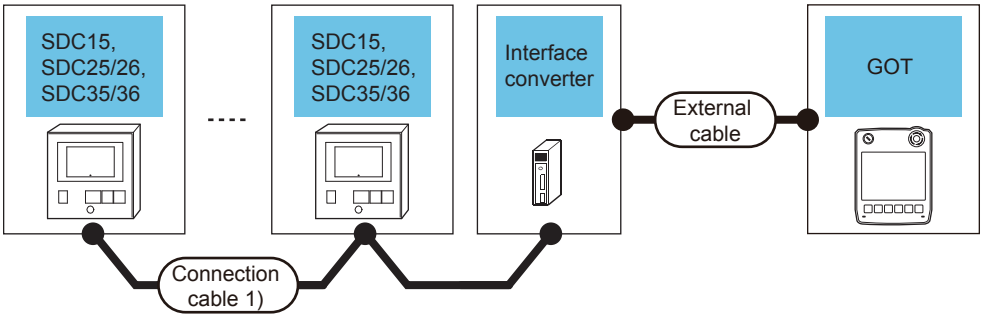


Temperature controller	Connection cable 1)		Interface converter*1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
SDC15 SDC25/26 SDC35/36	User preparing Page 926 RS485 connection diagram 1)	500m	CMC10L	RS-232	User preparing Page 923 RS232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



Temperature controller	Connection cable 1)		Interface converter*1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
SDC15 SDC25/26 SDC35/36	User preparing Page 926 RS485 connection diagram 1)	500m	CMC10L	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 924 RS232 connection diagram 3)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

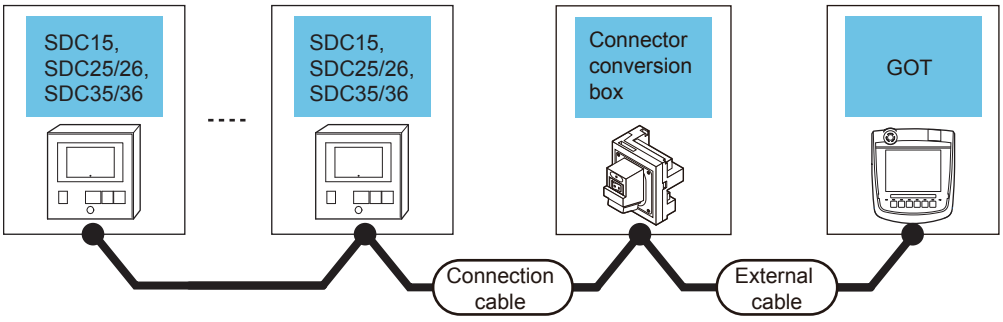
*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (External cable)

15

When connecting directly

■When using the connector conversion box



Temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
SDC15 SDC25/26 SDC35/36	RS-485	User preparing Page 930 RS485 connection diagram 9)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 temperature controllers for 1 GOT

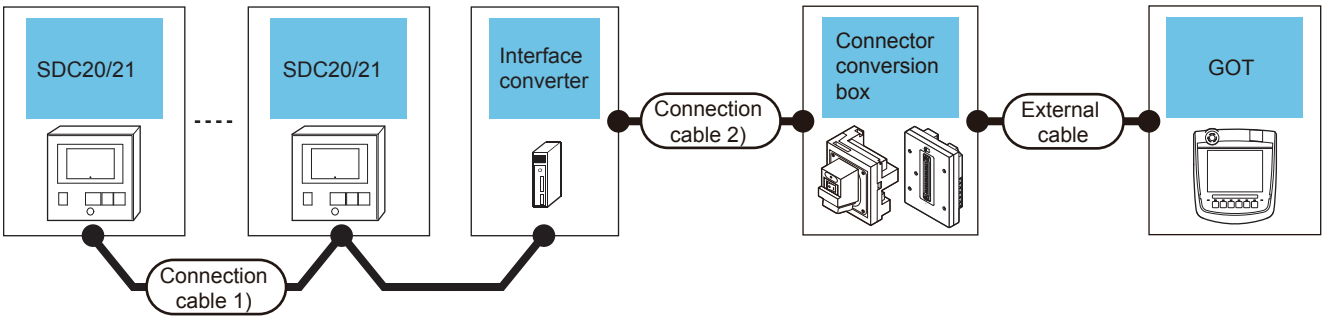
Connecting to SDC20/21

Communication driver

AZBIL SDC/DMC

When using the Interface converter

■When using the connector conversion box

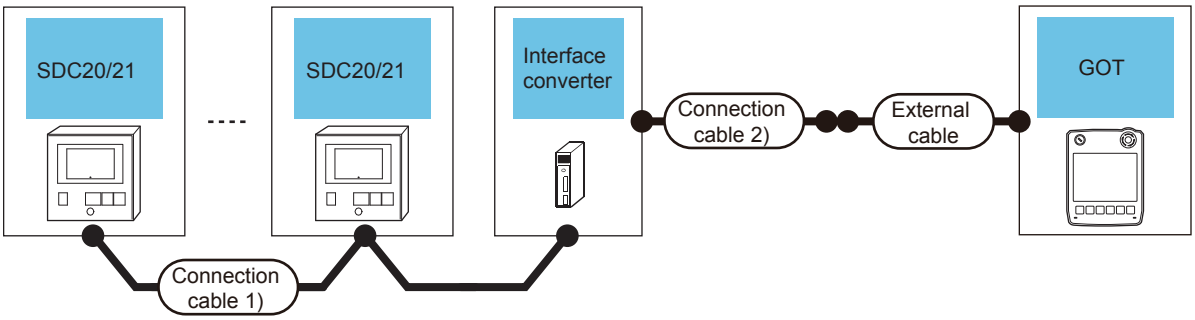


Temperature controller	Connection cable 1)		Interface converter*1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
SDC20/21	User preparing Page 926 RS485 connection diagram 2)	500m	CMC10L	RS-232	User preparing Page 923 RS232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 temperature controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

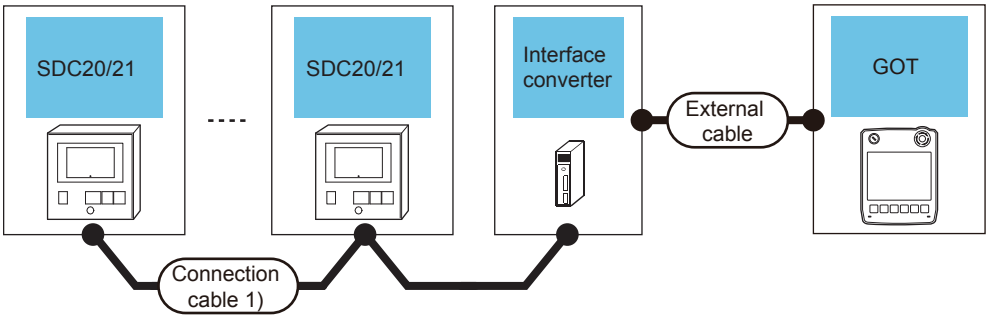


Temperature controller	Connection cable 1)		Interface converter*1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
SDC20/21	User preparing Page 926 RS485 connection diagram 2)	500m	CMC10L	RS-232	User preparing Page 923 RS232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



Temperature controller	Connection cable 1)		Interface converter*1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
SDC20/21	User preparing Page 926 RS485 connection diagram 2)	500m	CMC10L	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 924 RS232 connection diagram 3)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

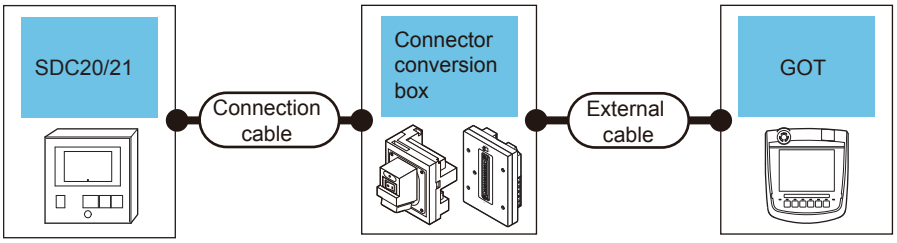
*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (External cable)

15

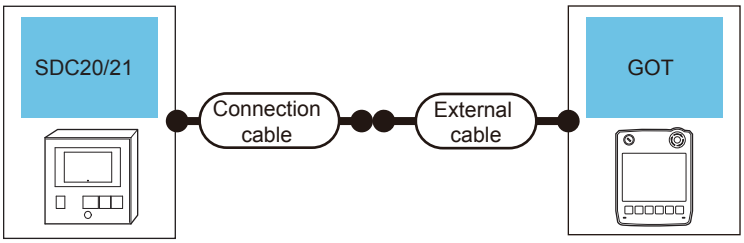
When connecting directly to one temperature controller

■When using the connector conversion box



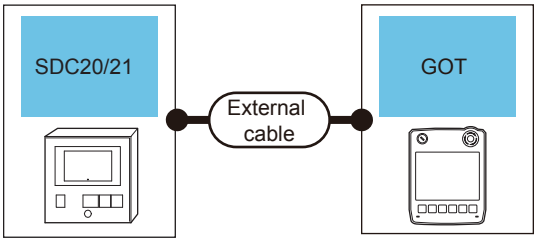
Temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
SDC20/21	RS-232	User preparing Page 924 RS232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 1 temperature controller for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

■When using the external cable (GT11H-C□□□-37P)



Temperature controller		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
SDC20/21	RS-232	User preparing Page 925 RS232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 1 temperature controller for 1 GOT

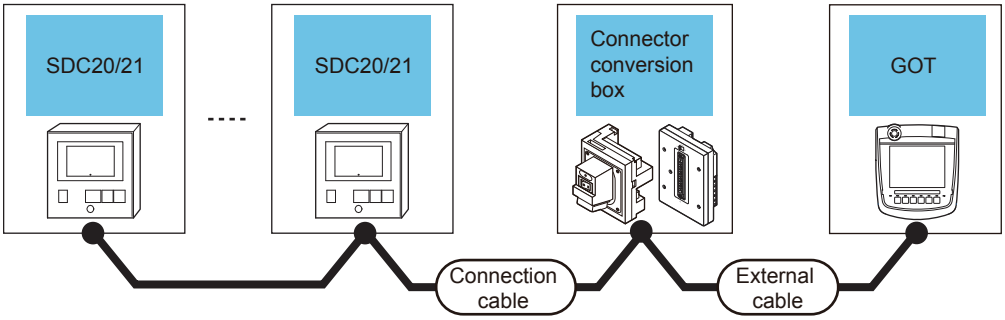
■When using the external cable (GT11H-C□□□)



Temperature controller		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
SDC20/21	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 925 RS232 connection diagram 6)	GT 2505HS	6m	Up to 1 temperature controller for 1 GOT

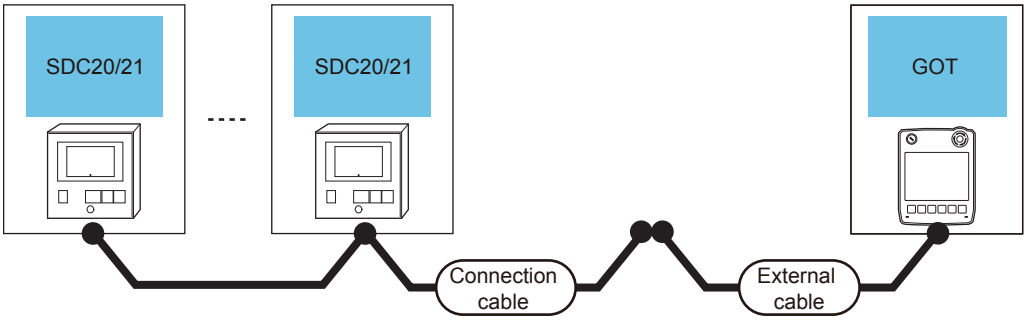
When connecting directly to multiple temperature controllers

■When using the connector conversion box



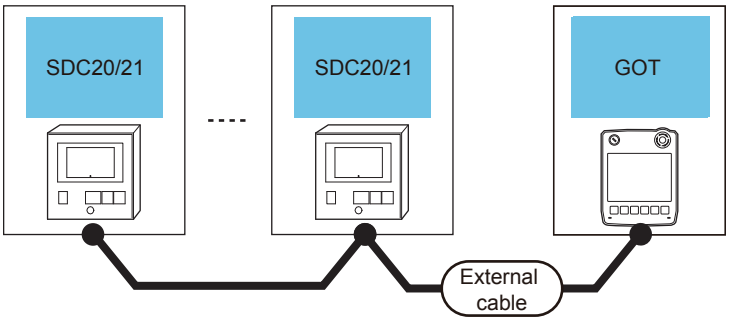
Temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
SDC20/21	RS-485	User preparing Page 927 RS485 connection diagram 3)(4-wire)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 temperature controllers for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		Up to 10 temperature controllers for 1 GOT
		User preparing Page 931 RS485 connection diagram 11)(2-wire)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		Up to 31 temperature controllers for 1 GOT

■When using the external cable (GT11H-C□□□-37P)



Temperature controller		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
SDC20/21	RS-485	User preparing Page 928 RS485 connection diagram 4)(4-wire)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	Up to 10 temperature controllers for 1 GOT

■When using the external cable (GT11H-C□□□)



Temperature controller		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
SDC20/21	RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 929 RS485 connection diagram 5)	GT 2505HS	13m	Up to 10 temperature controllers for 1 GOT

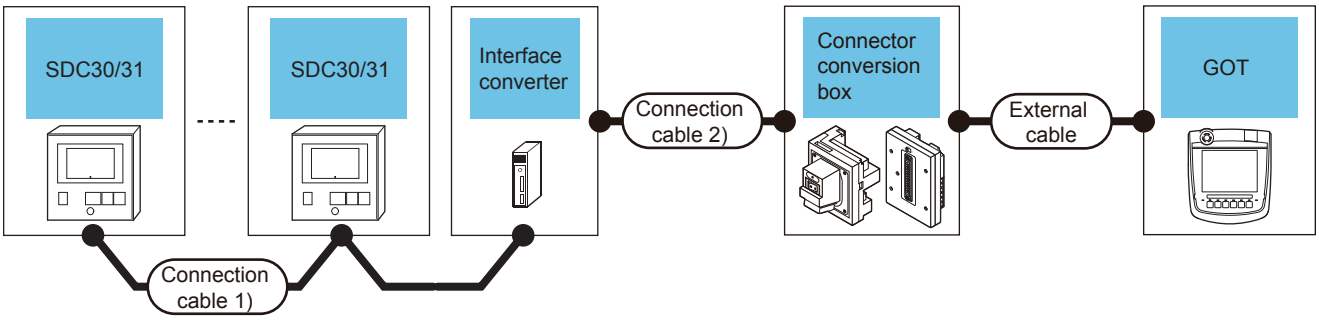
Connecting to SDC30/31

Communication driver

AZBIL SDC/DMC

When using the Interface converter

■When using the connector conversion box

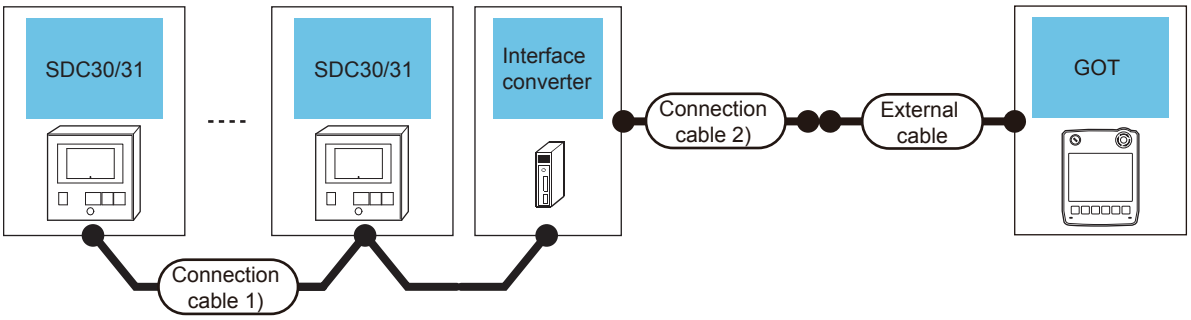


Temperature controller	Connection cable 1)		Interface converter*1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
SDC30/31	User preparing Page 926 RS485 connection diagram 2)	500m	CMC10L	RS-232	User preparing Page 923 RS232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 temperature controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

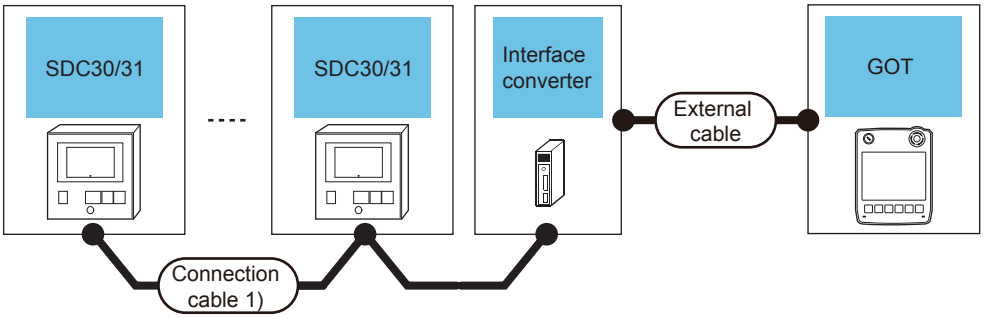


Temperature controller	Connection cable 1)		Interface converter*1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
SDC30/31	User preparing Page 926 RS485 connection diagram 2)	500m	CMC10L	RS-232	User preparing Page 923 RS232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



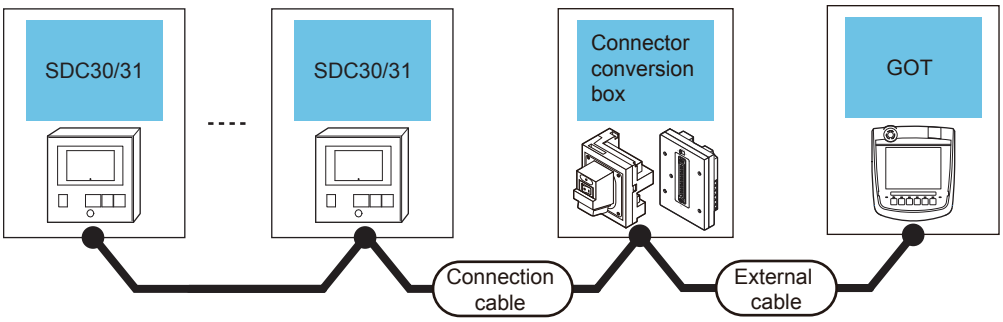
Temperature controller	Connection cable 1)		Interface converter*1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
SDC30/31	User preparing Page 926 RS485 connection diagram 2)	500m	CMC10L	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 924 RS232 connection diagram 3)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (External cable)

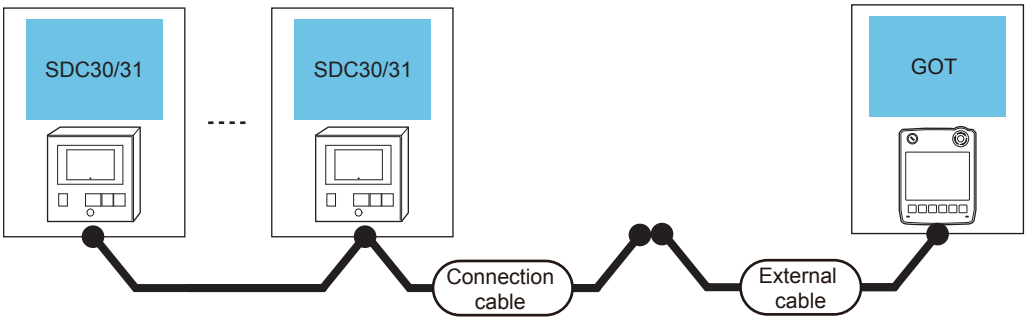
When connecting directly

■When using the connector conversion box



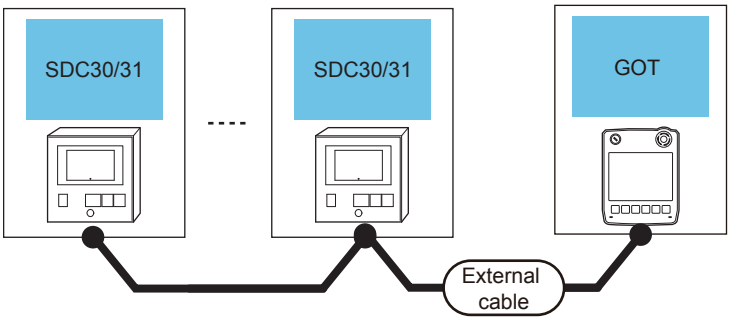
Temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
SDC30/31	RS-485	User preparing Page 927 RS485 connection diagram 3)(4-wire)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 temperature controllers for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		Up to 10 temperature controllers for 1 GOT

■When using the external cable (GT11H-C□□□-37P)



Temperature controller		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
SDC30/31	RS-485	User preparing Page 928 RS485 connection diagram 4)(4-wire)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	Up to 10 temperature controllers for 1 GOT

■When using the external cable (GT11H-C□□□)



Temperature controller		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
SDC30/31	RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 929 RS485 connection diagram 5)	GT 2505HS	13m	Up to 10 temperature controllers for 1 GOT

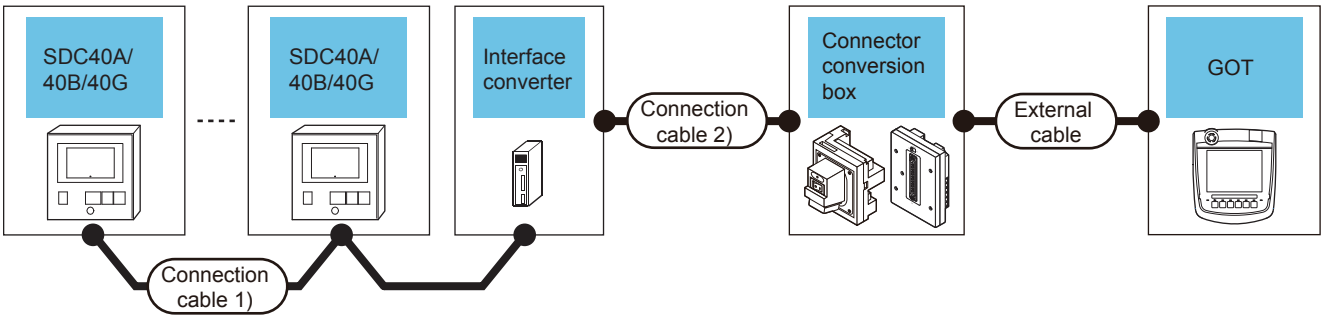
Connecting to SDC40A/40B/40G

Communication driver

AZBIL SDC/DMC

When using the Interface converter

■When using the connector conversion box

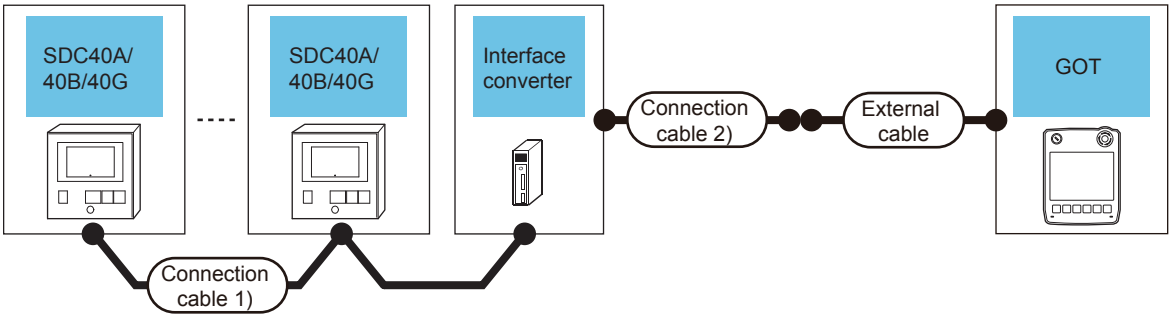


Temperature controller	Connection cable 1)		Interface converter*1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
SDC40A/40B/40G	User preparing Page 926 RS485 connection diagram 2)	500m	CMC10L	RS-232	User preparing Page 923 RS232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 temperature controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

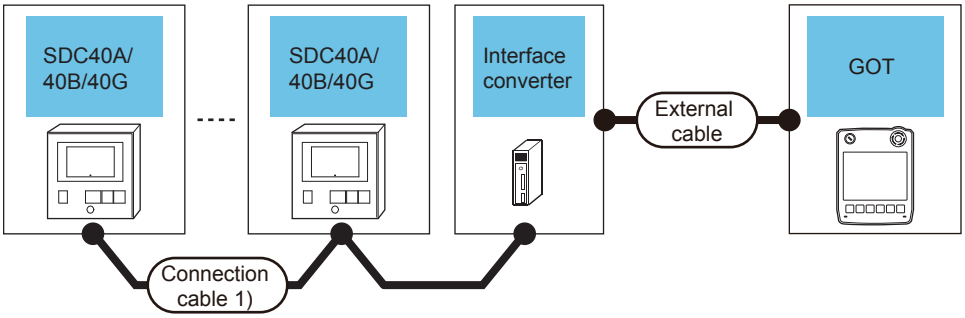


Temperature controller	Connection cable 1)		Interface converter*1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
SDC40A/40B/40G	User preparing Page 926 RS485 connection diagram 2)	500m	CMC10L	RS-232	User preparing Page 923 RS232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)

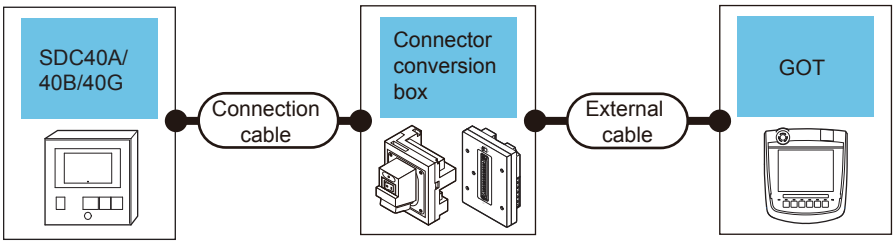


Temperature controller	Connection cable 1)		Interface converter*1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
SDC40A/40B/40G	User preparing Page 926 RS485 connection diagram 2)	500m	CMC10L	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 924 RS232 connection diagram 3)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.
*2 The distance from the converter to the GOT (External cable)

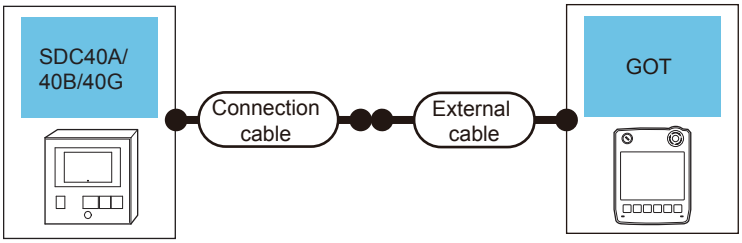
When connecting directly to one temperature controller

■When using the connector conversion box



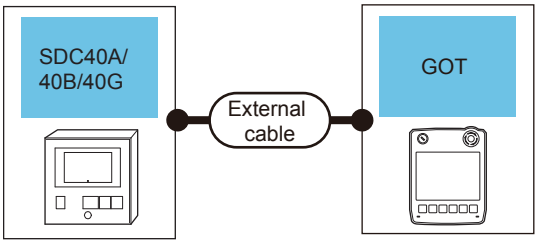
Temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
SDC40A/40B/40G	RS-232	User preparing Page 924 RS232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 1 temperature controller for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

■When using the external cable (GT11H-C□□□-37P)



Temperature controller		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
SDC40A/40B/40G	RS-232	User preparing Page 925 RS232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 1 temperature controller for 1 GOT

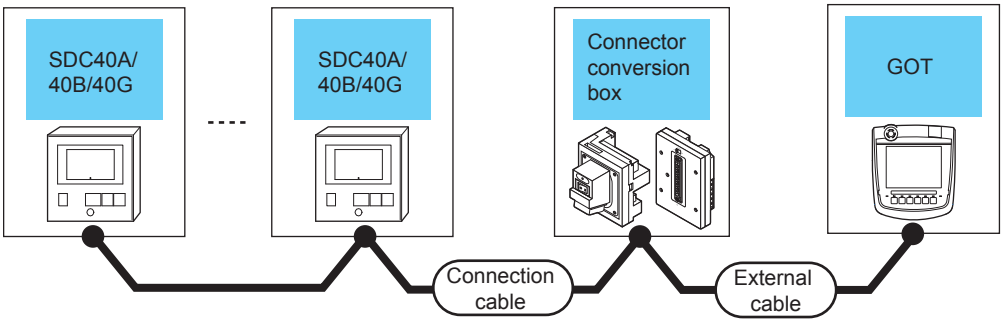
■When using the external cable (GT11H-C□□□)



Temperature controller		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
SDC40A/ 40B/40G	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 925 RS232 connection diagram 6)	GT 2505HS	6m	Up to 1 temperature controller for 1 GOT

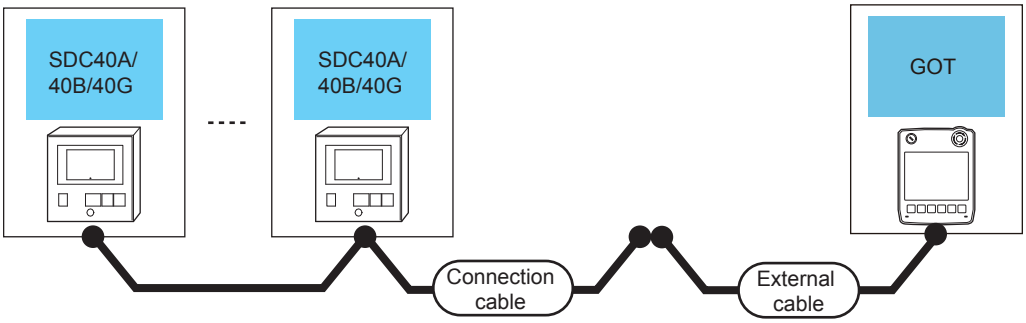
When connecting directly to multiple temperature controllers

■When using the connector conversion box



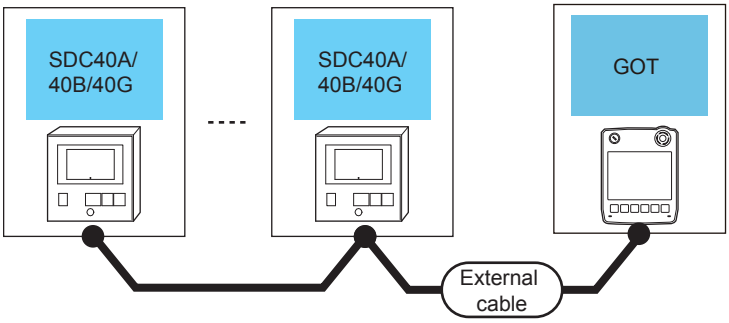
Temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
SDC40A/ 40B/40G	RS-485	User preparing Page 927 RS485 connection diagram 3)(4-wire)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 temperature controllers for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		Up to 10 temperature controllers for 1 GOT
		User preparing Page 931 RS485 connection diagram 11)(2-wire)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		Up to 31 temperature controllers for 1 GOT

■When using the external cable (GT11H-C□□□-37P)



Temperature controller		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
SDC40A/ 40B/40G	RS-485	User preparing Page 928 RS485 connection diagram 4)(4-wire)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	Up to 10 temperature controllers for 1 GOT

■When using the external cable (GT11H-C□□□)



Temperature controller		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
SDC40A/ 40B/40G	RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 929 RS485 connection diagram 5)(4-wire)	GT 2505HS	13m	Up to 10 temperature controllers for 1 GOT

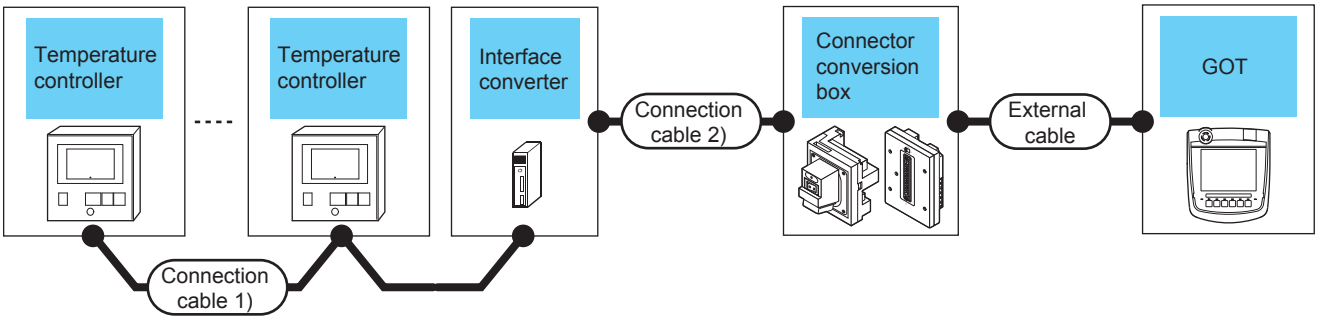
Connecting to SDC45/46

Communication driver

AZBIL SDC/DMC

When using the Interface converter

■When using the connector conversion box

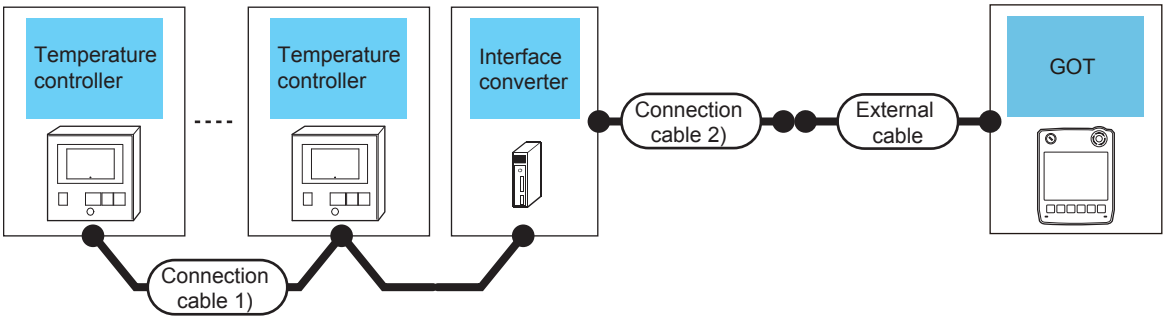


Temperature controller	Connection cable 1)		Interface converter*1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
SDC45/46	User preparing Page 932 RS485 connection diagram 12)	500m	CMC10L	RS-232	User preparing Page 923 RS232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 temperature controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

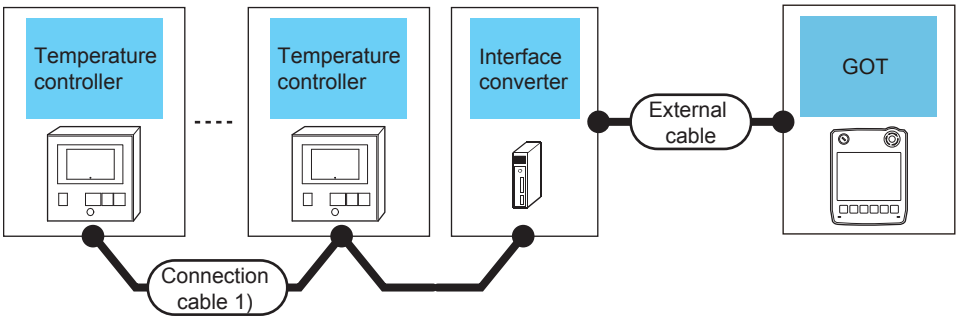


Temperature controller	Connection cable 1)		Interface converter*1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
SDC45/46	User preparing Page 932 RS485 connection diagram 12)	500m	CMC10L	RS-232	User preparing Page 923 RS232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



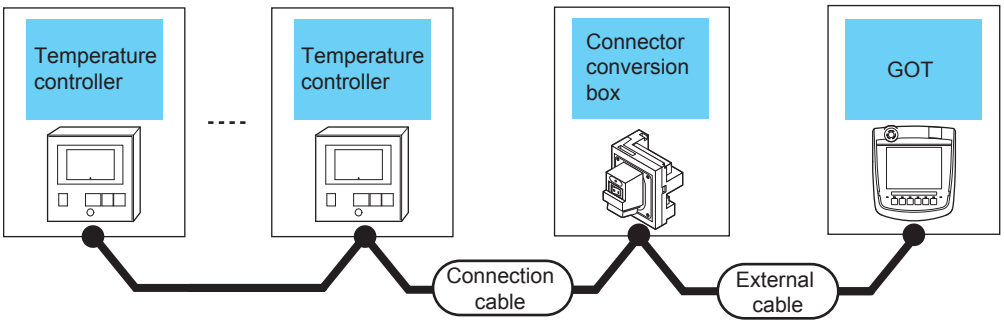
Temperature controller	Connection cable 1)		Interface converter*1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
SDC45/46	User preparing Page 932 RS485 connection diagram 12)	500m	CMC10L	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 924 RS232 connection diagram 3)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (External cable)

When connecting directly to multiple temperature controllers

■When using the connector conversion box



Temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
SDC45/46	RS-485	User preparing Page 932 RS485 connection diagram 13)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 temperature controller for 1 GOT

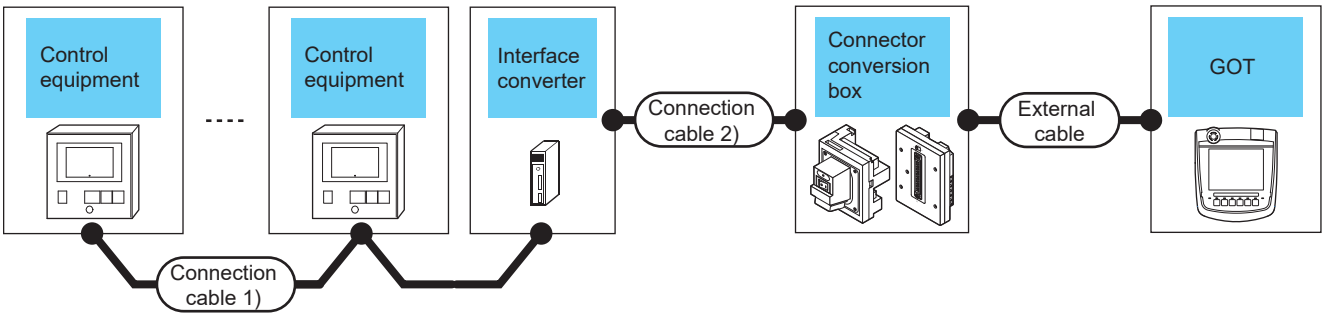
Connecting to CMS, MQV, MPC, MVF, RX

Communication driver

AZBIL SDC/DMC

When using the Interface converter

■When using the connector conversion box

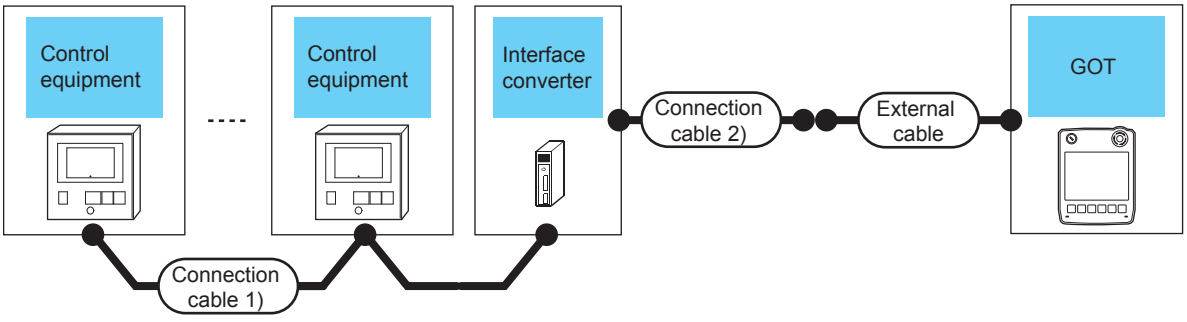


Control equipment	Connection cable 1)		Interface converter*1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
CMS MQV MPC MVF RX	User preparing Page 932 RS485 connection diagram 12)	500m	CMC10L	RS-232	User preparing Page 923 RS232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 control equipment for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

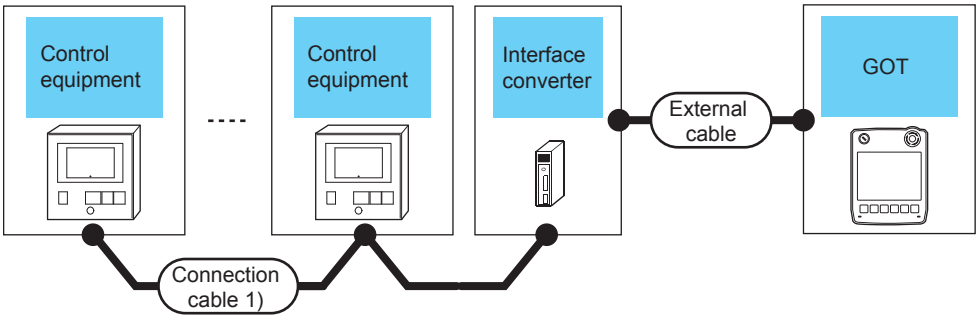


Control equipment	Connection cable 1)		Interface converter*1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
CMS MQV MPC MVF RX	User preparing Page 932 RS485 connection diagram 12)	500m	CMC10L	RS-232	User preparing Page 923 RS232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 control equipment for 1 GOT

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



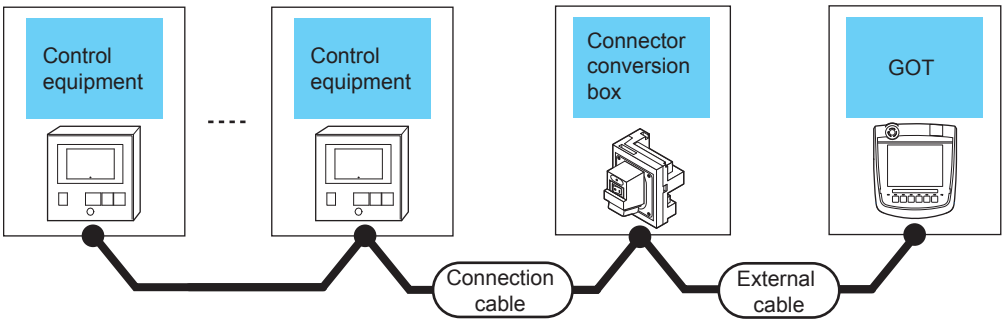
Control equipment	Connection cable 1)		Interface converter*1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
CMS MQV MPC MVF RX	User preparing Page 932 RS485 connection diagram 12)	500m	CMC10L	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 924 RS232 connection diagram 3)	GT 2505HS	6m	Up to 31 control equipment for 1 GOT

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (External cable)

When connecting directly to multiple control equipments

■When using the connector conversion box



Control equipment		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
CMS MQV MPC MVF RX	RS-485	User preparing Page 932 RS485 connection diagram 13)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 1 control equipment for 1 GOT

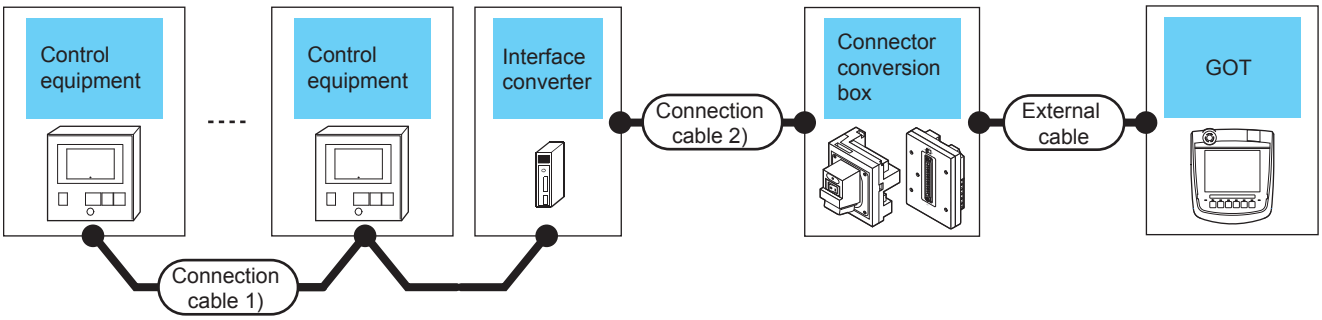
Connecting to CMF015, CMF050

Communication driver

AZBIL SDC/DMC

When using the Interface converter

■When using the connector conversion box

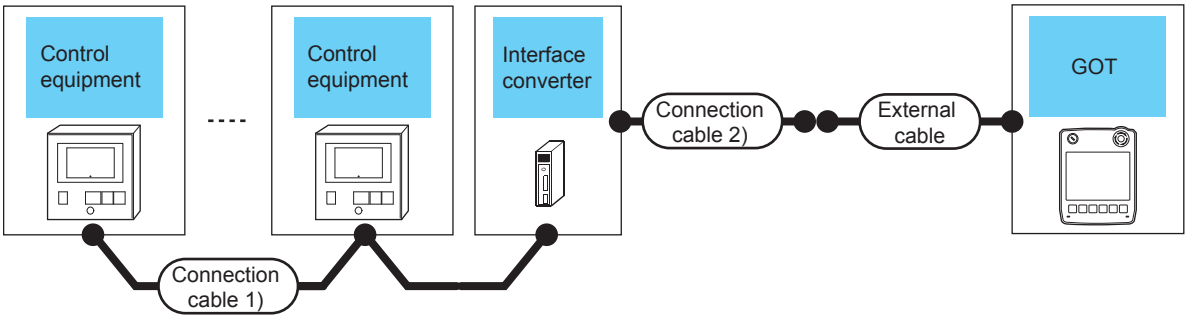


Control equipment	Connection cable 1)		Interface converter*1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
CMF015	User preparing Page 932 RS485 connection diagram 12)	500m	CMC10L	RS-232	User preparing Page 923 RS232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 control equipment for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
CMF050	User preparing Page 926 RS485 connection diagram 2)	500m				GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

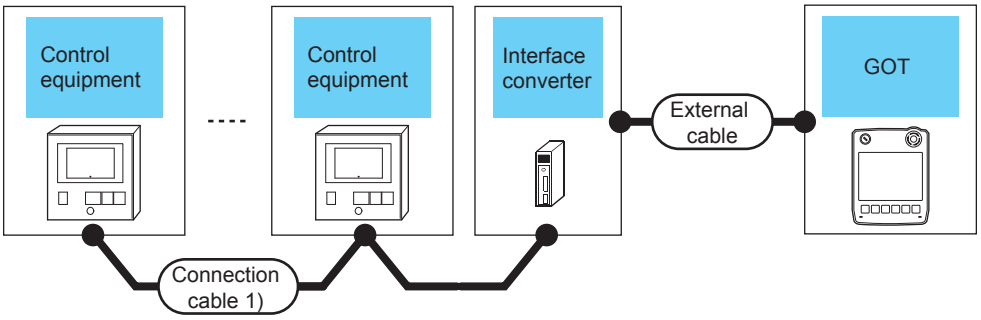


Control equipment	Connection cable 1)		Interface converter*1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
CMF015	User preparing Page 932 RS485 connection diagram 12)	500m	CMC10L	RS-232	User preparing Page 923 RS232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 control equipment for 1 GOT
CMF050	User preparing Page 926 RS485 connection diagram 2)					GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



Control equipment	Connection cable 1)		Interface converter*1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
CMF015	User preparing Page 932 RS485 connection diagram 12)	500m	CMC10L	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 924 RS232 connection diagram 3)	GT 2505HS	6m	Up to 31 control equipment for 1 GOT
CMF050	User preparing Page 926 RS485 connection diagram 2)				GT11H-C30(3m) GT11H-C60(6m) ☞ Page 924 RS232 connection diagram 3)	GT 2505HS		

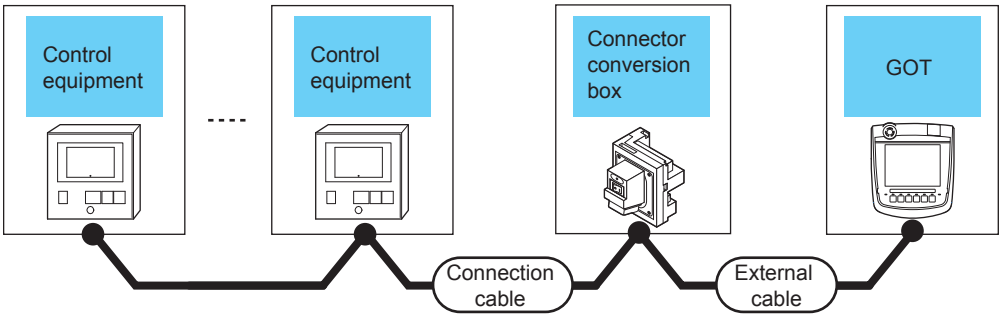
*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (External cable)

When connecting directly

■Connecting to CMF015

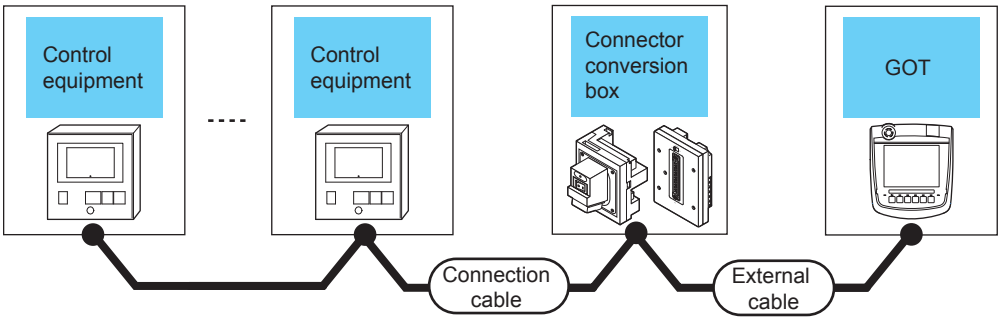
• When using the connector conversion box



Control equipment		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
CMF015	RS-485	User preparing Page 932 RS485 connection diagram 13)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 control equipment for 1 GOT

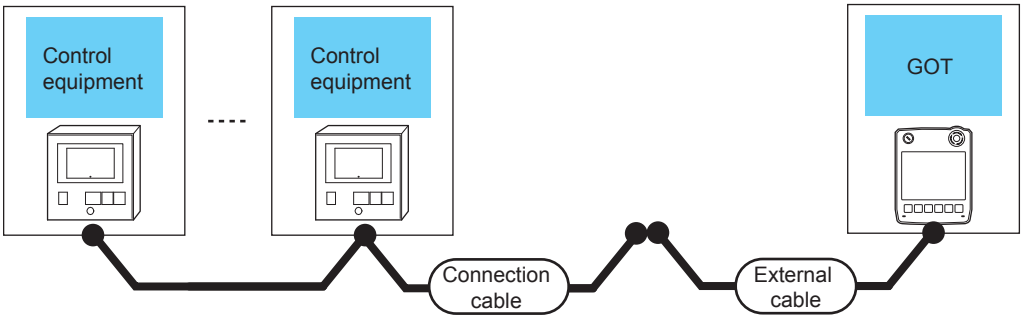
■Connecting to CMF050

• When using the connector conversion box



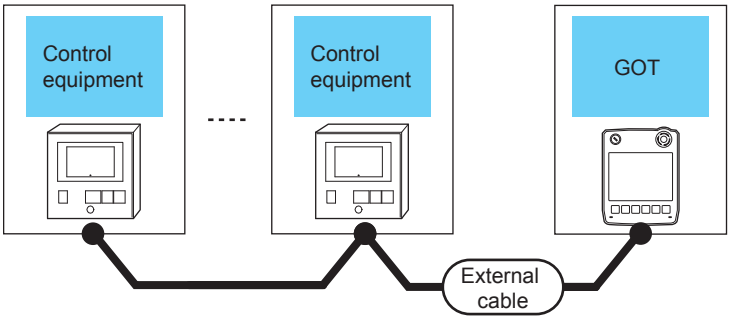
Control equipment		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
CMF050	RS-485	User preparing Page 927 RS485 connection diagram 3)(4-wire)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 control equipment for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		Up to 10 control equipment for 1 GOT
		User preparing Page 931 RS485 connection diagram 11)(2-wire)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		Up to 31 control equipment for 1 GOT

• When using the external cable (GT11H-C□□□-37P)



Control equipment		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
CMF050	RS-485	User preparing Page 928 RS485 connection diagram 4)(4-wire)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	Up to 10 control equipment for 1 GOT

• When using the external cable (GT11H-C□□□)



Control equipment		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
CMF050	RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 929 RS485 connection diagram 5)(4-wire)	GT 2505HS	13m	Up to 10 control equipment for 1 GOT

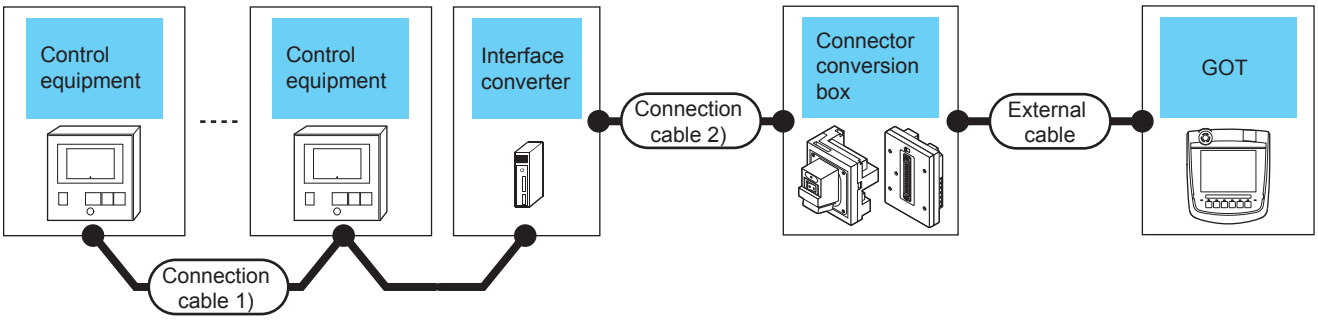
Connecting to CML, PBC201-VN2

Communication driver

AZBIL SDC/DMC

When using the Interface converter

■When using the connector conversion box

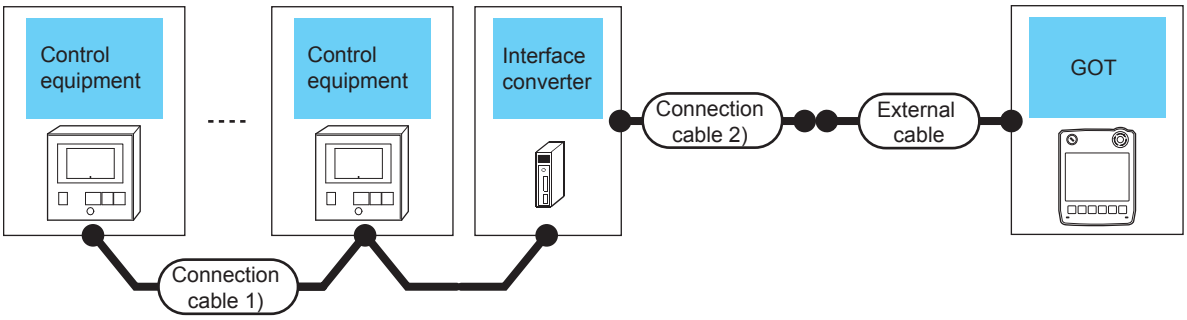


Control equipment	Connection cable 1)		Interface converter*1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
CML PBC201-VN2	User preparing Page 926 RS485 connection diagram 2)	500m	CMC10L	RS-232	User preparing Page 923 RS232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 control equipment for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

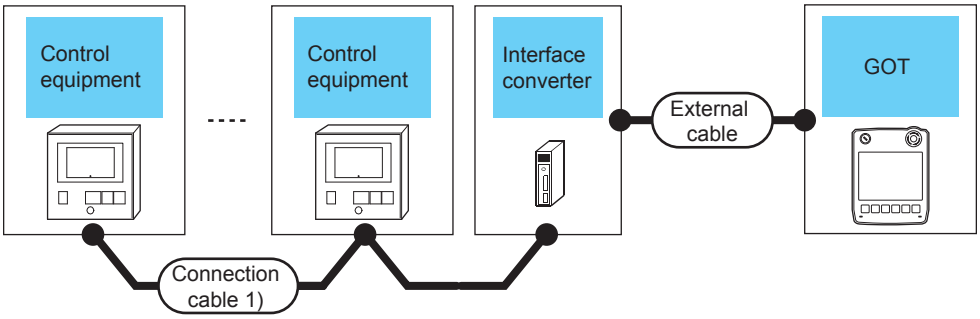


Control equipment	Connection cable 1)		Interface converter*1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
CML PBC201-VN2	User preparing Page 926 RS485 connection diagram 2)	500m	CMC10L	RS-232	User preparing Page 923 RS232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 control equipment for 1 GOT

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)

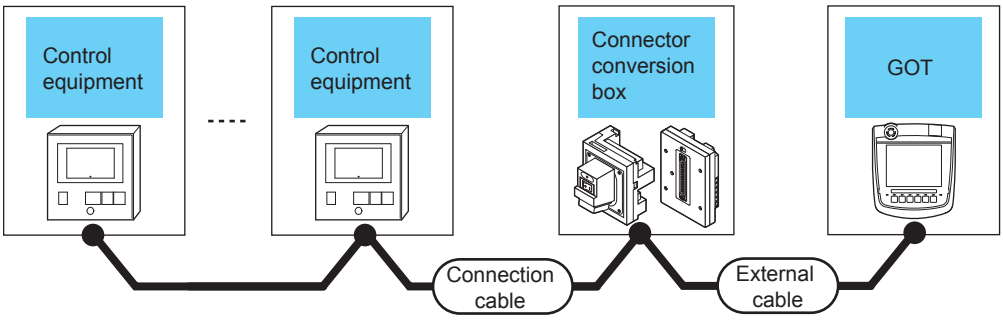


Control equipment	Connection cable 1)		Interface converter*1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
CML PBC201-VN2	User preparing Page 926 RS485 connection diagram 2)	500m	CMC10L	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 924 RS232 connection diagram 3)	GT 2505HS	6m	Up to 31 control equipment for 1 GOT

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.
*2 The distance from the converter to the GOT (External cable)

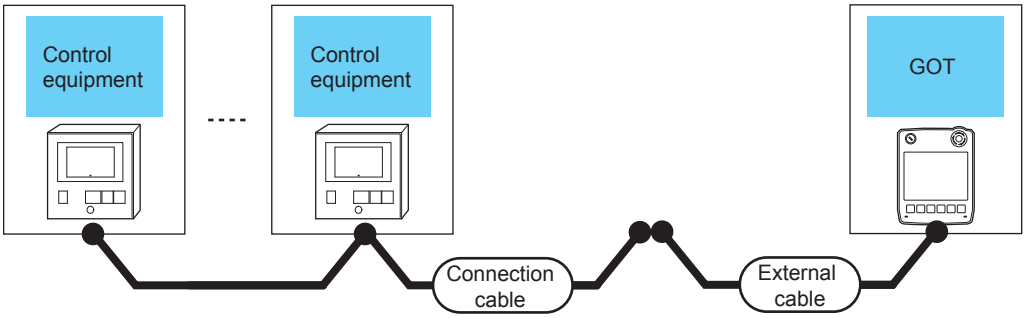
When connecting directly

■When using the connector conversion box



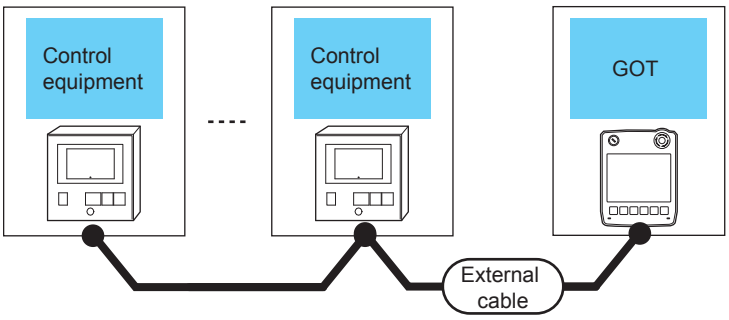
Control equipment		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
CML PBC201-VN2	RS-485	User preparing Page 927 RS485 connection diagram 3)(4-wire)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 control equipment for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		Up to 10 control equipment for 1 GOT
		User preparing Page 931 RS485 connection diagram 11)(2-wire)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		Up to 31 control equipment for 1 GOT

■When using the external cable (GT11H-C□□□-37P)



Control equipment		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
CML PBC201-VN2	RS-485	User preparing Page 928 RS485 connection diagram 4)(4-wire)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	Up to 10 control equipment for 1 GOT

■When using the external cable (GT11H-C□□□)



Control equipment		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
CML PBC201-VN2	RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 929 RS485 connection diagram 5)(4-wire)	GT 2505HS	13m	Up to 10 control equipment for 1 GOT

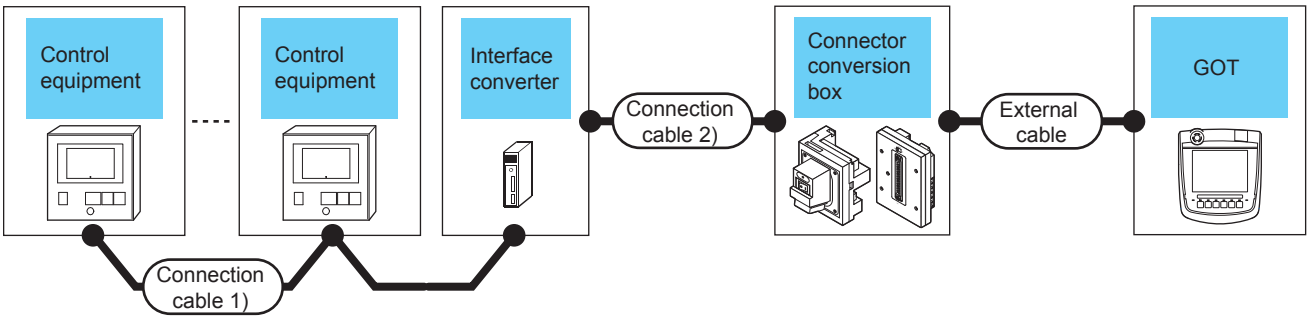
Connecting to AUR350C, AUR450C

Communication driver

AZBIL SDC/DMC

When using the Interface converter

■When using the connector conversion box

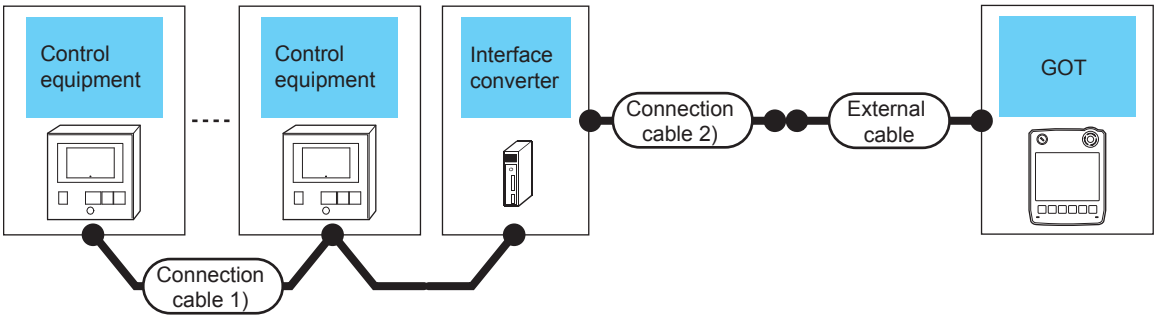


Control equipment	Connection cable 1)		Interface converter*1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
AUR350C AUR450C	User preparing Page 926 RS485 connection diagram 1)	500m	CMC10L	RS-232	User preparing Page 923 RS232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 control equipment for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

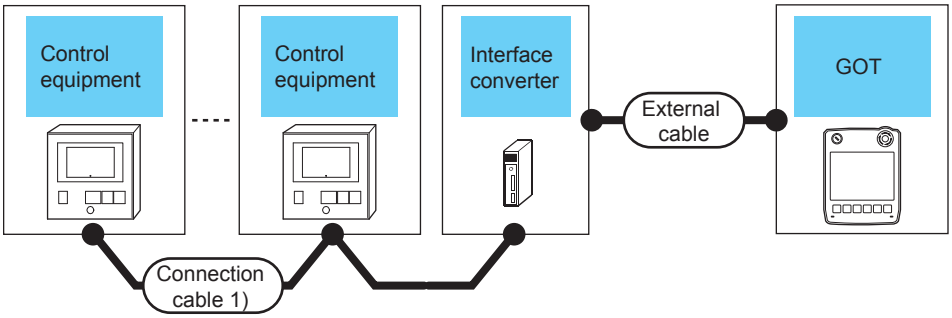


Control equipment	Connection cable 1)		Interface converter*1		Connection cable 2)	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
AUR350C AUR450C	User preparing Page 926 RS485 connection diagram 1)	500m	CMC10L	RS-232	User preparing Page 923 RS232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 control equipment for 1 GOT

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)

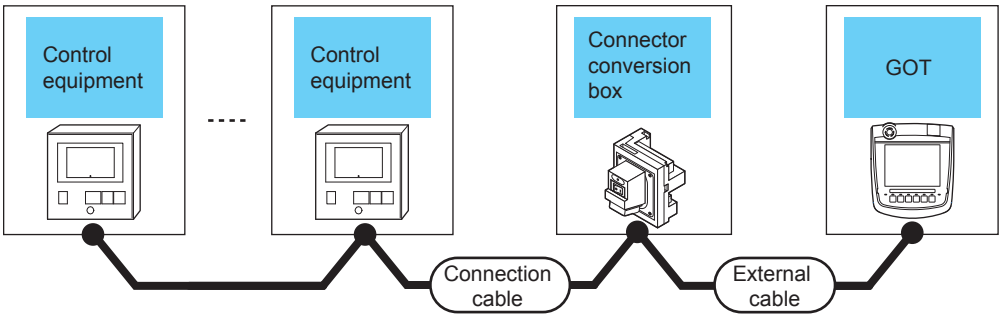


Control equipment	Connection cable 1)		Interface converter*1		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
AUR350C AUR450C	User preparing Page 926 RS485 connection diagram 1)	500m	CMC10L	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 924 RS232 connection diagram 3)	GT 2505HS	6m	Up to 31 control equipment for 1 GOT

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.
*2 The distance from the converter to the GOT (External cable)

When connecting directly

■When using the connector conversion box



Control equipment		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
AUR350C AUR450C	RS-485	User preparing Page 930 RS485 connection diagram 9)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 control equipment for 1 GOT

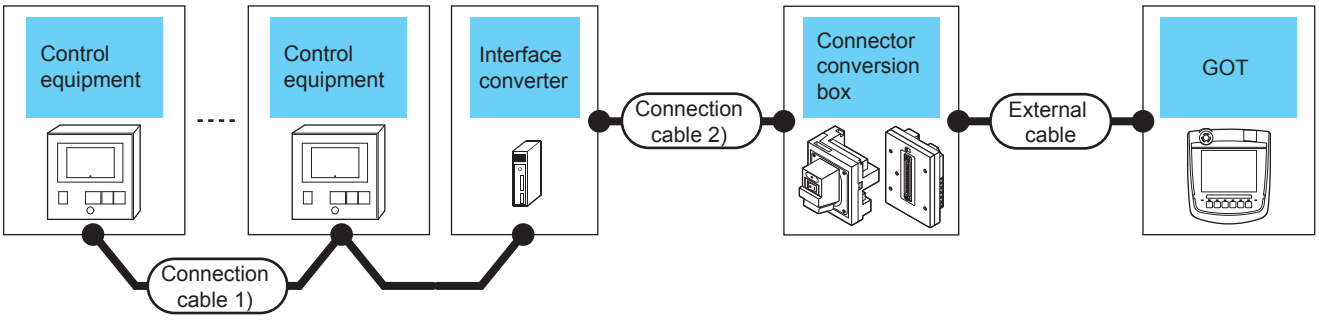
Connecting to CMC10B

Communication driver

AZBIL SDC/DMC

When using the Interface converter

■When using the connector conversion box

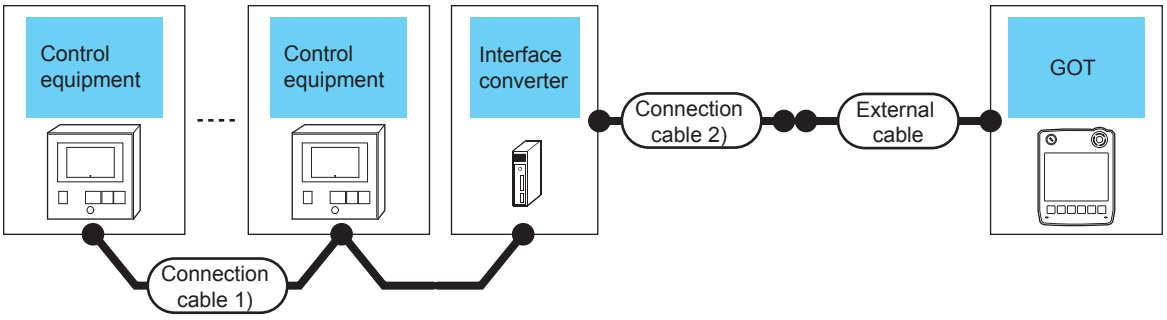


Control equipment	Connection cable 1)		Interface converter*1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
CMC10B	User preparing Page 926 RS485 connection diagram 2)	500m	CMC10L	RS-232	User preparing Page 923 RS232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 control equipment for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

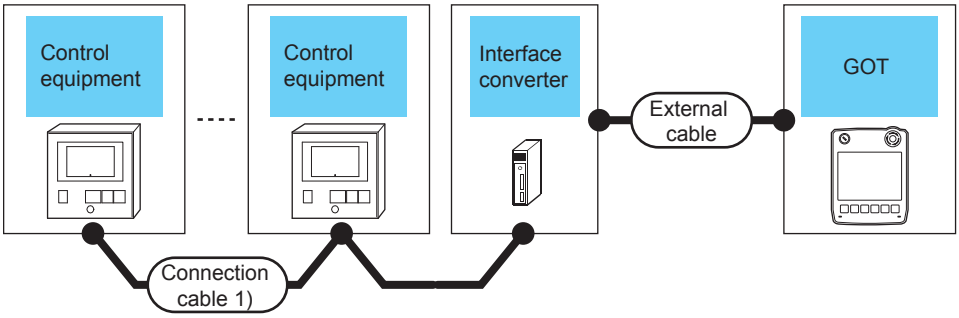


Control equipment	Connection cable 1)		Interface converter*1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
CMC10B	User preparing Page 926 RS485 connection diagram 2)	500m	CMC10L	RS-232	User preparing Page 923 RS232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 control equipment for 1 GOT

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



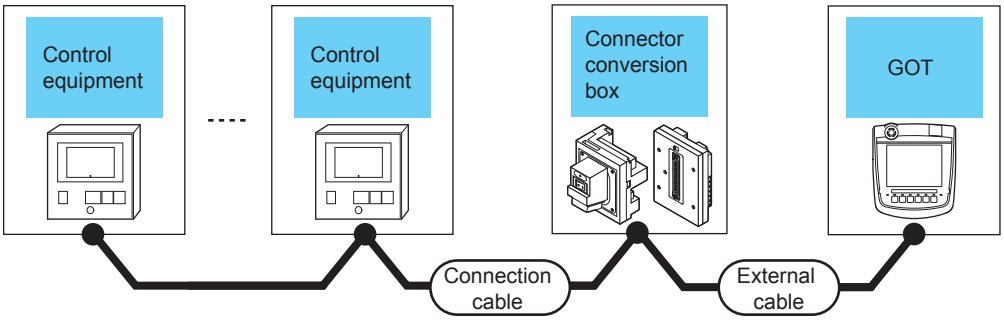
Control equipment	Connection cable 1)		Interface converter*1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
CMC10B	User preparing Page 926 RS485 connection diagram 2)	500m	CMC10L	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 924 RS232 connection diagram 3)	GT 2505HS	6m	Up to 31 control equipment for 1 GOT

*1 Product manufactured by Azbil Corporation.
For details on the product, contact Azbil Corporation.

*2 The distance from the converter to the GOT (External cable)

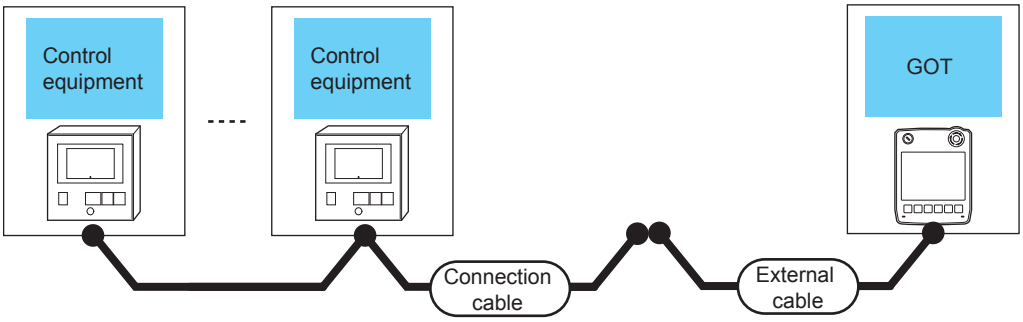
When connecting directly to multiple control equipments

■When using the connector conversion box



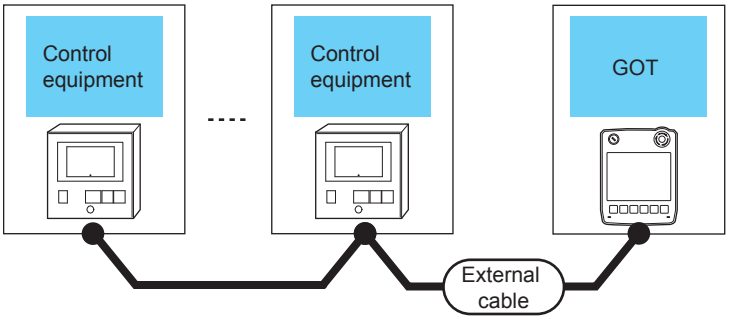
Control equipment		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
CMC10B	RS-485	User preparing Page 927 RS485 connection diagram 3)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 control equipment for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		Up to 10 control equipment for 1 GOT

■When using the external cable (GT11H-C□□□-37P)



Control equipment		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
CMC10B	RS-485	User preparing Page 928 RS485 connection diagram 4)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	Up to 10 control equipment for 1 GOT

■When using the external cable (GT11H-C□□□)



Control equipment		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
CMC10B	RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 929 RS485 connection diagram 5)	GT 2505HS	13m	Up to 10 control equipment for 1 GOT

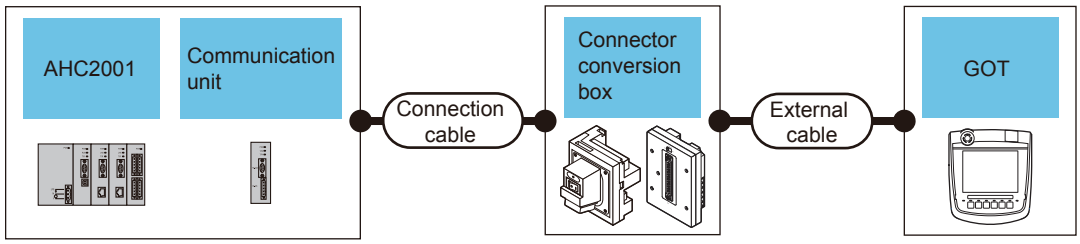
Connecting to AHC2001

Communication driver

AZBIL DMC50

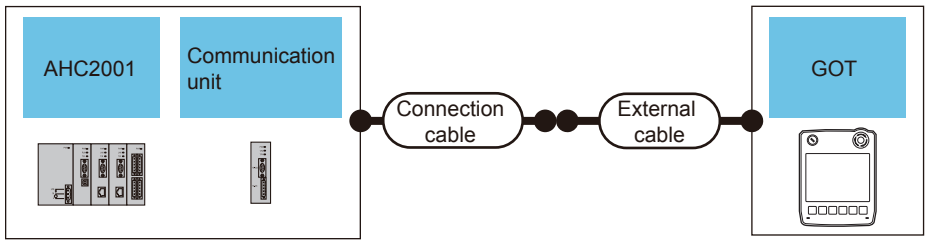
When connecting to one temperature controller

■When using the connector conversion box



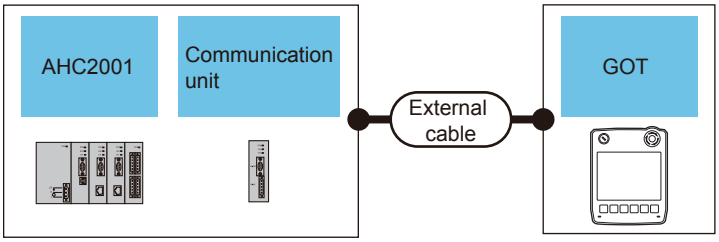
Control equipment			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication unit	Communication Type	Cable model Connection diagram number					
AHC2001	-	RS-232	User preparing Page 924 RS232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 1 temperature controllers for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	SCU			GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		RS-485	User preparing Page 927 RS485 connection diagram 3)(4-wire)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
			User preparing Page 931 RS485 connection diagram 11)(2-wire)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		

■When using the external cable (GT11H-C□□□-37P)



Control equipment			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication unit	Communication Type	Cable model Connection diagram number				
AHC2001	-	RS-232	User preparing Page 925 RS232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 1 temperature controllers for 1 GOT
	SCU			GT11H-C30-37P(3m)	GT 2505HS		
		RS-485	User preparing Page 928 RS485 connection diagram 4)(4-wire)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

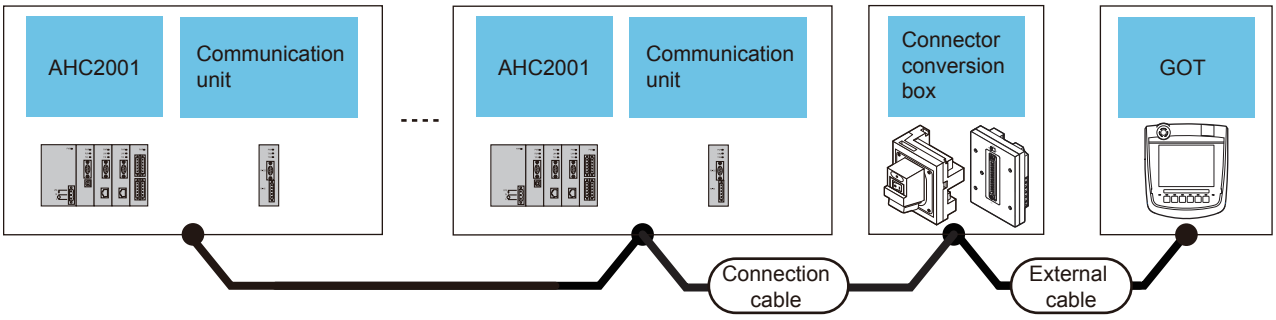
■When using the external cable (GT11H-C□□□)



Control equipment			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication unit	Communication Type				
AHC2001	-	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 925 RS232 connection diagram 6)	GT 2505HS	6m	Up to 1 temperature controllers for 1 GOT
	SCU		GT11H-C30(3m) GT11H-C60(6m) ☞ Page 925 RS232 connection diagram 6)	GT 2505HS		
		RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 929 RS485 connection diagram 5)(4-wire)	GT 2505HS	13m	

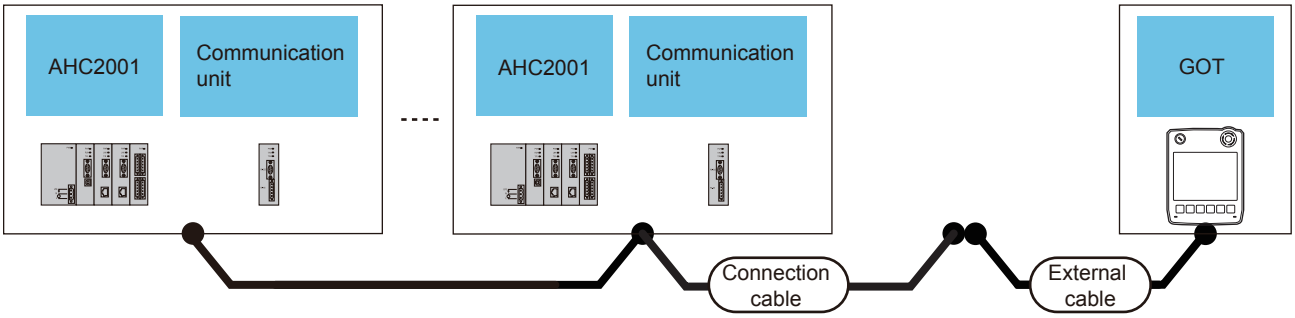
When connecting to multiple temperature controllers

■When using the connector conversion box



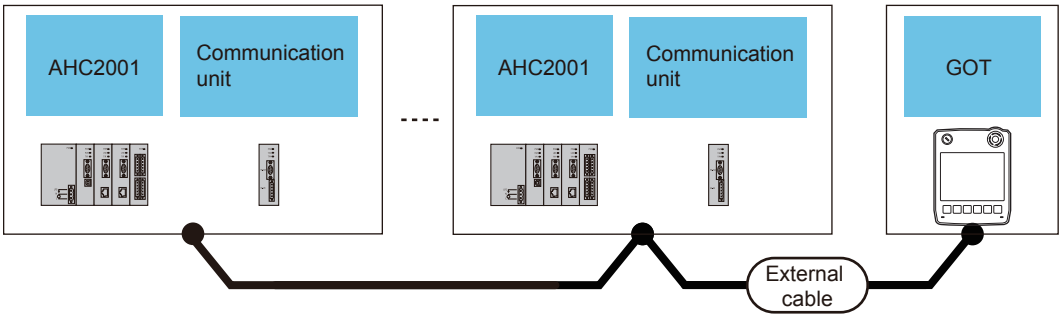
Control equipment			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication unit	Communication Type	Cable model Connection diagram number					
AHC2001	SCU	RS-485	User preparing Page 927 RS485 connection diagram 3)(4-wire)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 temperature controllers for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
			User preparing Page 931 RS485 connection diagram 11)(2-wire)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		

■When using the external cable (GT11H-C□□□-37P)



Control equipment			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication unit	Communication Type	Cable model Connection diagram number				
AHC2001	SCU	RS-485	User preparing Page 928 RS485 connection diagram 4)(4-wire)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	Up to 31 temperature controllers for 1 GOT

■When using the external cable (GT11H-C□□□)



Control equipment			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication unit	Communication Type				
AHC2001	SCU	RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 929 RS485 connection diagram 5)(4-wire)	GT 2505HS	13m	Up to 31 temperature controllers for 1 GOT

Connecting to NX series

Communication driver
MODBUS/RTU
MODBUS/TCP

Use a MODBUS/RTU or MODBUS/TCP communication driver to connect the GOT to NX series.

For the MODBUS/RTU or MODBUS/TCP connection, refer to the following manual.

📖GOT2000 Series Connection Manual (Microcomputer/MODBUS/Peripheral Connection)

5. MODBUS/RTU MASTER CONNECTION

6. MODBUS/TCP MASTER CONNECTION

For the valid devices, refer to the following Technical News.

📖List of Valid Devices Applicable for GOT2000 Series MODBUS Connection for Overseas (GOT-A-0170)

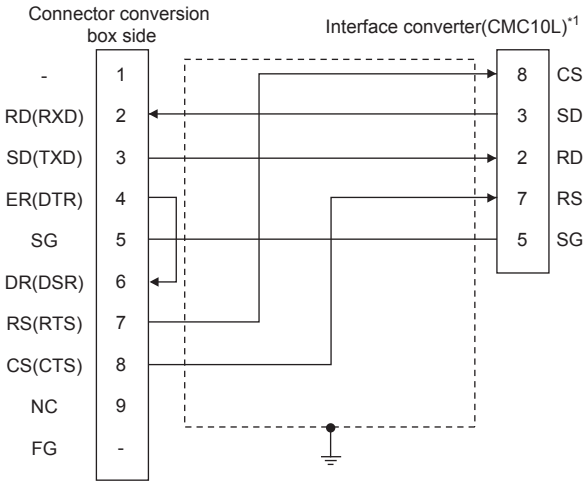
15.3 Connection Diagram

The following diagram shows the connection between the GOT and the control equipment.

RS-232 cable

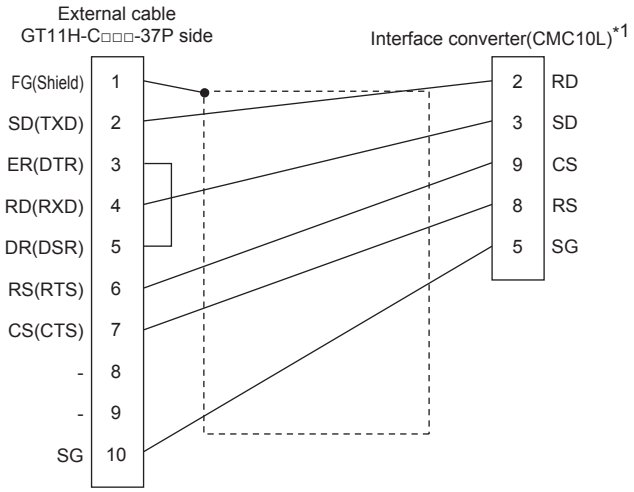
Connection diagram

■RS232 connection diagram 1)



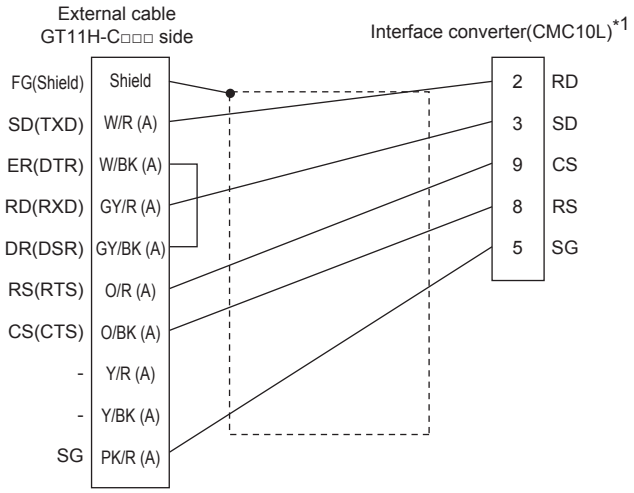
*1 For details on the setting method of the TERMINAL mode, refer to the following.
☞ Page 939 Connecting to CMC10L

■RS232 connection diagram 2)



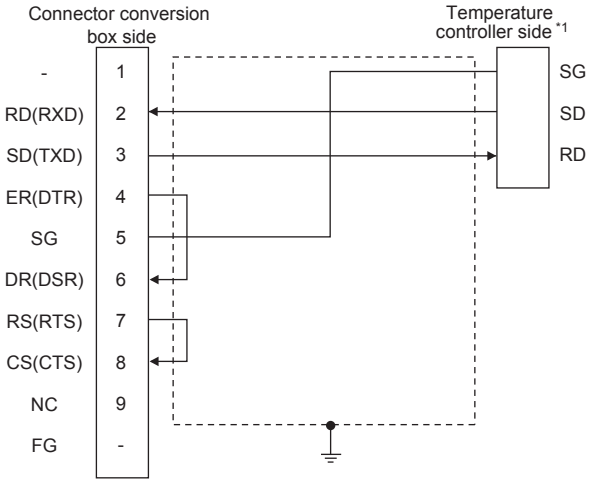
*1 For details on the setting method of the TERMINAL mode, refer to the following.
☞ Page 939 Connecting to CMC10L

■RS232 connection diagram 3)



*1 For details on the setting method of the TERMINAL mode, refer to the following.
☞ Page 939 Connecting to CMC10L

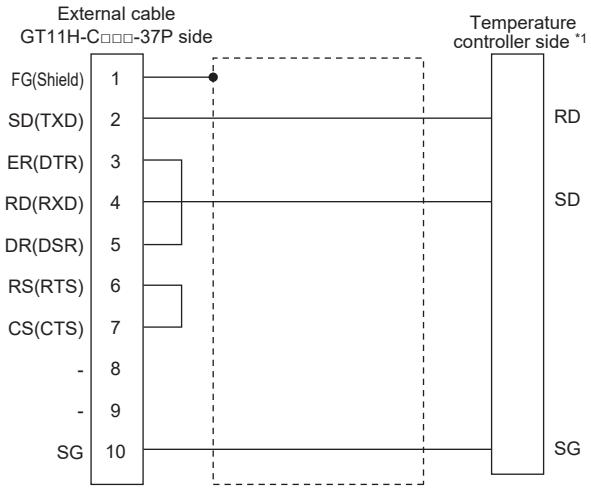
■RS232 connection diagram 4)



*1 Pin No. of temperature controller differs depending on model and optional function model.
Refer to the following table.
The numbers in ( ) of the following table correspond to optional function models.

Signal name	Model of temperature controller					
	SDC20		SDC21	SDC40A, SDC40B, SDC40G	AHC2001	
	(03, 05)	(10)	(04, 07, 09)		CPU	SCU
	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.
SG	5	18	29	61	5	5
SD	17	16	27	60	3	3
RD	18	17	28	59	2	2

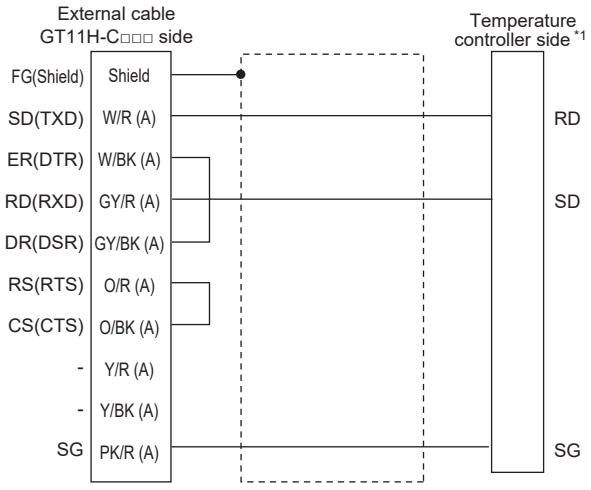
■RS232 connection diagram 5)



*1 Pin No. of temperature controller differs depending on model and optional function model.
Refer to the following table.
The numbers in ( ) of the following table correspond to optional function models.

Signal name	Model of temperature controller					
	SDC20		SDC21	SDC40A, SDC40B, SDC40G	AHC2001	
	(03, 05)	(10)	(04, 07, 09)		CPU	SCU
	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.
SG	5	18	29	61	5	5
SD	17	16	27	60	3	3
RD	18	17	28	59	2	2

■RS232 connection diagram 6)



*1 Pin No. of temperature controller differs depending on model and optional function model.
Refer to the following table.
The numbers in ( ) of the following table correspond to optional function models.

Signal name	Model of temperature controller					
	SDC20		SDC21	SDC40A, SDC40B, SDC40G	AHC2001	
	(03, 05)	(10)	(04, 07, 09)		CPU	SCU
	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.
SG	5	18	29	61	5	5
SD	17	16	27	60	3	3
RD	18	17	28	59	2	2

Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■AZBIL control equipment side connector

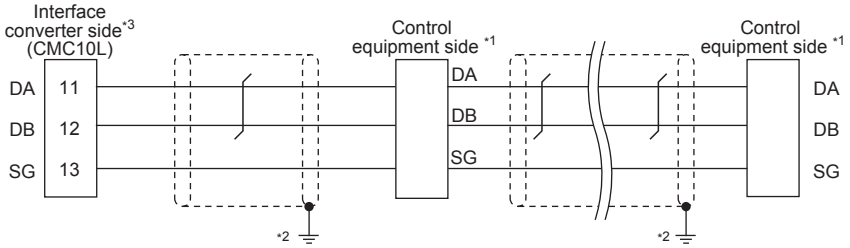
Use the connector compatible with the AZBIL control equipment side module.

For details, refer to the user's manual of the AZBIL control equipment

RS-485 cable

Connection diagram

■RS485 connection diagram 1)



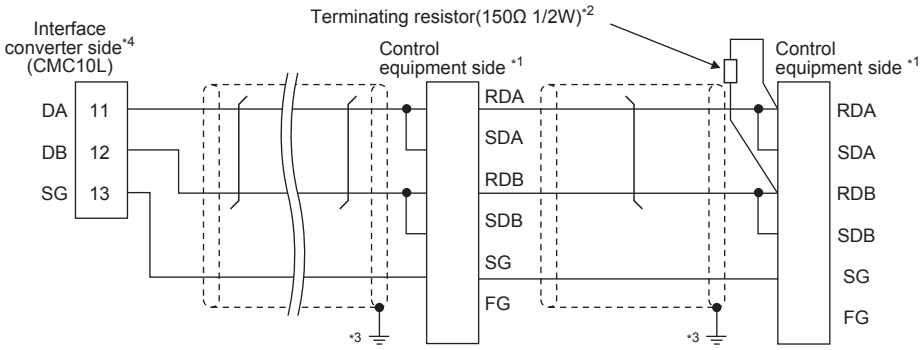
*1 Pin No. of control equipment differs depending on the model.
Refer to the following table.

Signal name	Model of control equipment			
	DMC10	SDC15	SDC25/26 SDC35/36	AUR350C AUR450C
	Pin No.	Pin No.	Pin No.	Pin No.
DA	4	16	22	DA
DB	5	17	23	DB
SG	6	18	24	SG

*2 Connect FG grounding to the single-sided end of a cable shield line.

*3 Set the terminal resistor to "Disable".
For details of terminating resistor settings, refer to the following.
☞ Page 939 Connecting to CMC10L

■RS485 connection diagram 2)

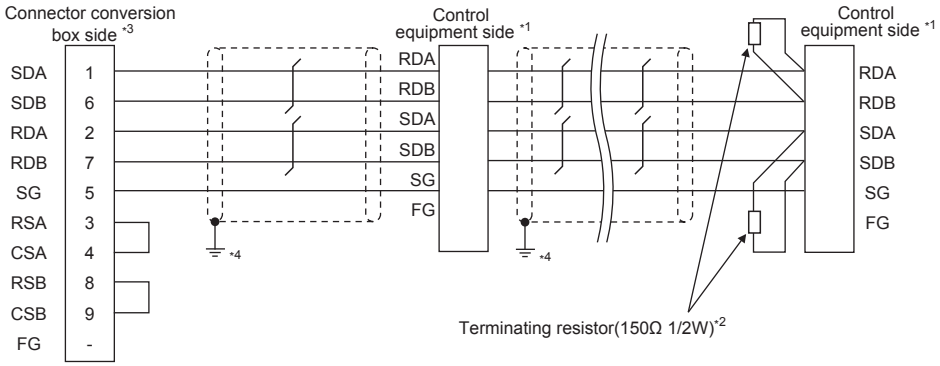


*1 Pin No. of control equipment differs depending on model and optional function model. Refer to the following table.The numbers in ( ) of the following table correspond to optional function models.

Signal name	Model of control equipment									
	SDC20		SDC21	SDC30	SDC31		SDC40A/40B/40G	CMF050CML	PBC201-VN2	CMC10B
	(02, 04)	(09)	(03, 06, 08)	(040, 041)	(045)	(446, 546)				
	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.
RDA	17	18	27	18	18	27	59	7	14	13
RDB	18	19	28	19	19	28	60	8	15	14
SDA	15	16	25	16	16	25	57	9	12	11
SDB	16	17	26	17	17	26	58	10	13	12
SG	5	5	29	5	5	29	61	12	16	15
FG	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3	19	3	-

*2 Terminating resistor should be provided for a Interface converter and a control equipment which will be terminals.
*3 Connect FG grounding to the single-sided end of a cable shield line.
*4 Since the Interface converter has a built-in terminating resistor, set the terminating resistor of GOT to "Enable".
For details of terminating resistor settings, refer to the following.
☞ Page 939 Connecting to CMC10L

■RS485 connection diagram 3)



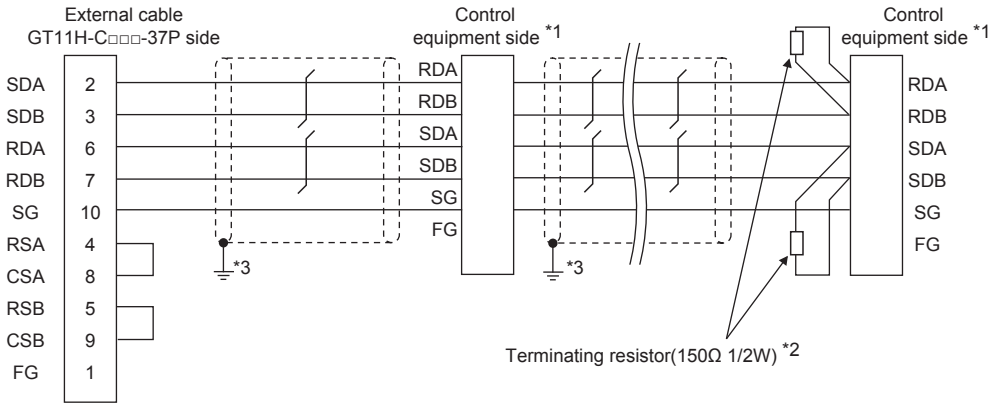
*1 Pin No. of control equipment differs depending on model or optional function model.
Refer to the following table.
The numbers in ( ) of the following table correspond to optional function models.

Signal name	Model of control equipment						
	SDC20		SDC21	SDC30	SDC31		SDC40A/40B/40G
	(02, 04)	(09)	(03, 06, 08)	(040, 041)	(045)	(446, 546)	
	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.
RDA	17	18	27	18	18	27	59
RDB	18	19	28	19	19	28	60
SDA	15	16	25	16	16	25	57
SDB	16	17	26	17	17	26	58
SG	5	5	29	5	5	29	61
FG	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3

Signal name	Model of control equipment			
	CMF050 CML	PBC201-VN2	CMC10B	AHC2001
	Pin No.	Pin No.	Pin No.	Pin No.
RDA	7	14	13	3
RDB	8	15	14	2
SDA	9	12	11	5
SDB	10	13	12	4
SG	12	16	15	1
FG	19	3	-	-

*2 Terminating resistor should be provided for a control equipment which will be a terminal.
*3 Set the terminating resistor of GOT as follows.
Set the terminating resistor setting switch of the GOT main unit to "100 OHM".
Set the terminating resistor selector to "330Ω".
☞ Page 933 Connecting terminating resistors
*4 Connect FG grounding to the single-sided end of a cable shield line.

■RS485 connection diagram 4)



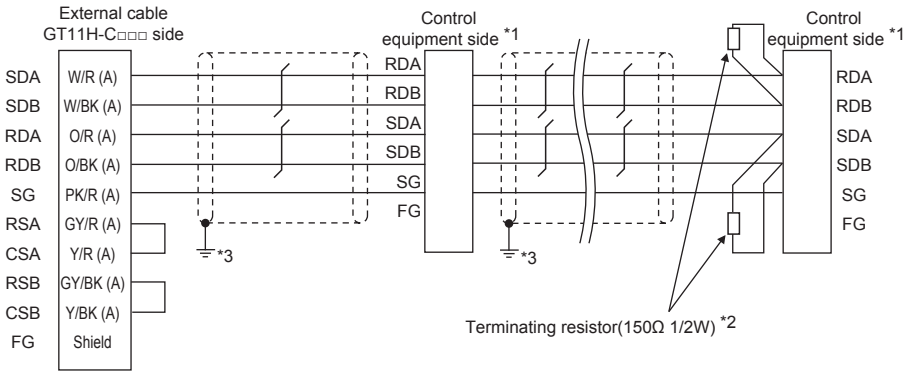
*1 Pin No. of control equipment differs depending on model or optional function model.
Refer to the following table.
The numbers in ( ) of the following table correspond to optional function models.

Signal name	Model of control equipment						
	SDC20		SDC21	SDC30	SDC31		SDC40A/40B/40G
	(02, 04)	(09)	(03, 06, 08)	(040, 041)	(045)	(446, 546)	
	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.
RDA	17	18	27	18	18	27	59
RDB	18	19	28	19	19	28	60
SDA	15	16	25	16	16	25	57
SDB	16	17	26	17	17	26	58
SG	5	5	29	5	5	29	61
FG	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3

Signal name	Model of control equipment			
	CMF050 CML	PBC201-VN2	CMC10B	AHC2001
	Pin No.	Pin No.	Pin No.	Pin No.
RDA	7	14	13	3
RDB	8	15	14	2
SDA	9	12	11	5
SDB	10	13	12	4
SG	12	16	15	1
FG	19	3	-	-

*2 Terminating resistor should be provided for a control equipment which will be a terminal.
*3 Connect FG grounding to the single-sided end of a cable shield line.

■RS485 connection diagram 5)



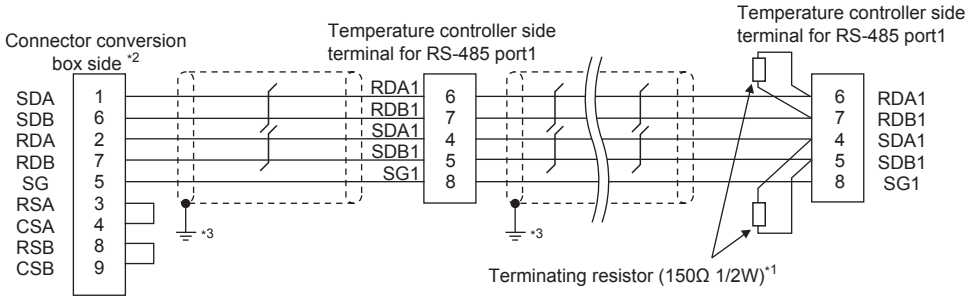
*1 Pin No. of control equipment differs depending on model or optional function model.
Refer to the following table.
The numbers in ( ) of the following table correspond to optional function models.

Signal name	Model of control equipment						
	SDC20		SDC21	SDC30	SDC31		SDC40A/40B/40G
	(02, 04)	(09)	(03, 06, 08)	(040, 041)	(045)	(446, 546)	
	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.
RDA	17	18	27	18	18	27	59
RDB	18	19	28	19	19	28	60
SDA	15	16	25	16	16	25	57
SDB	16	17	26	17	17	26	58
SG	5	5	29	5	5	29	61
FG	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3

Signal name	Model of control equipment			
	CMF050 CML	PBC201-VN2	CMC10B	AHC2001
	Pin No.	Pin No.	Pin No.	Pin No.
RDA	7	14	13	3
RDB	8	15	14	2
SDA	9	12	11	5
SDB	10	13	12	4
SG	12	16	15	1
FG	19	3	-	-

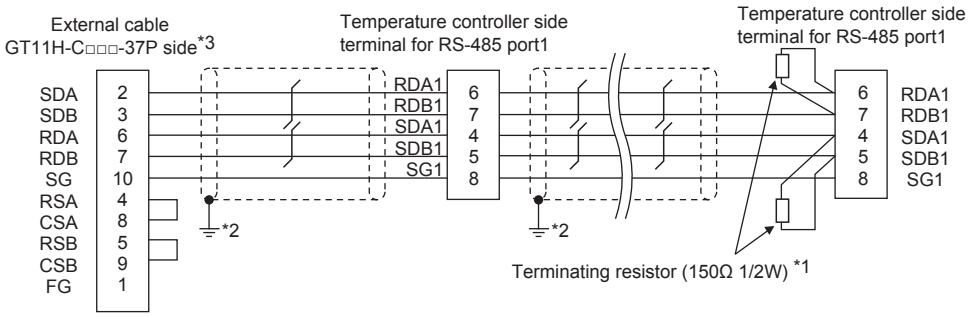
*2 Terminating resistor should be provided for a control equipment which will be a terminal.
*3 Connect FG grounding to the single-sided end of a cable shield line.

■RS485 connection diagram 6)



*1 Terminating resistor should be provided for a temperature controller which will be a terminal.
*2 Set the terminating resistor of GOT as follows.
Set the terminating resistor setting switch of the GOT main unit to "100 OHM".
☞ Page 933 Connecting terminating resistors
*3 Connect FG grounding to the single-sided end of a cable shield line.

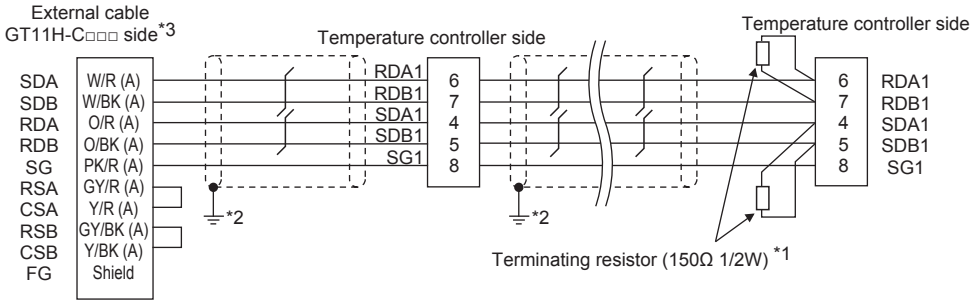
■RS485 connection diagram 7)



*1 Terminating resistor should be provided for a temperature controller which will be a terminal.

*2 Connect FG grounding to the single-sided end of a cable shield line.

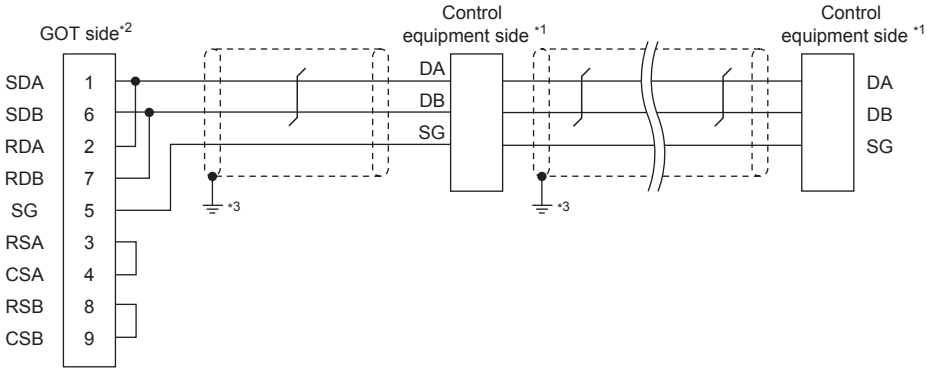
■RS485 connection diagram8)



*1 Terminating resistor should be provided for a temperature controller which will be a terminal.

*2 Connect FG grounding to the single-sided end of a cable shield line.

■RS485 connection diagram 9)



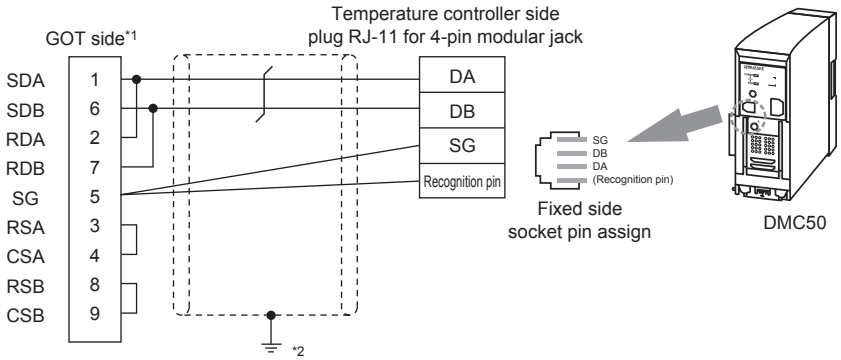
*1 Pin No. of control equipment differs depending on the model.
Refer to the following table.

Signal name	Model of control equipment			
	DMC10	SDC15	SDC25/26 SDC35/36	AUR350C AUR450C
	Pin No.	Pin No.	Pin No.	Pin No.
DA	4	16	22	DA
DB	5	17	23	DB
SG	6	18	24	SG

*2 Set the terminating resistor setting switch of the GOT main unit to "Disable".
☞ Page 933 Connecting terminating resistors

*3 Connect FG grounding to the single-sided end of a cable shield line.

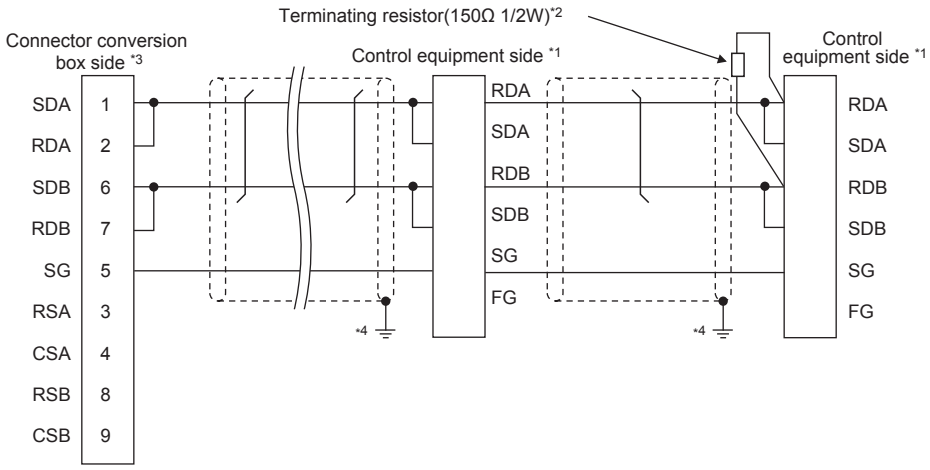
■RS485 connection diagram 10)



*1 Set the terminating resistor setting switch of the GOT main unit to "100 OHM".
☞ Page 933 Connecting terminating resistors

*2 Connect FG grounding to the single-sided end of a cable shield line.

■RS485 connection diagram 11)



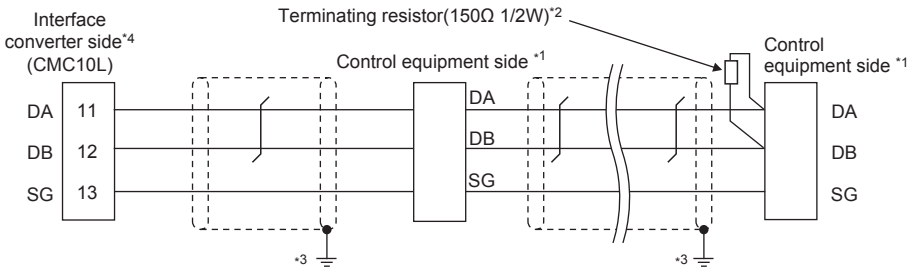
*1 Pin No. of control equipment differs depending on the model.
Refer to the following table.

Signal name	Model of control equipment			
	SDC20		SDC21	SDC40A/40B/40G
	(02, 04)	(09)	(03, 06, 08)	
	Pin No.	Pin No.	Pin No.	Pin No.
RDA	17	18	27	59
RDB	18	19	28	60
SDA	15	16	25	57
SDB	16	17	26	58
SG	5	5	29	61
FG	3, 4	3, 4	3, 4	3

Signal name	Model of control equipment			
	CMF050 CML	PBC201-VN2	CMC10B	AHC2001
	Pin No.	Pin No.	Pin No.	Pin No.
RDA	7	14	13	3
RDB	8	15	14	2
SDA	9	12	11	5
SDB	10	13	12	4
SG	12	16	15	1
FG	19	3	-	-

*2 Terminating resistor should be provided for a control equipment which will be a terminal.
*3 Set the terminating resistor setting switch of the GOT main unit to "100 OHM".
☞ Page 933 Connecting terminating resistors
*4 Connect FG grounding to the single-sided end of a cable shield line.

■RS485 connection diagram 12)

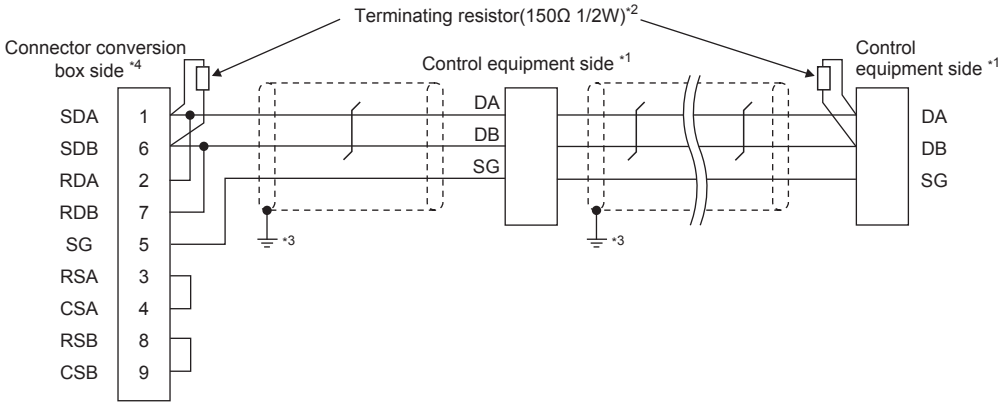


*1 Pin No. of control equipment differs depending on the model.
Refer to the following table

Signal name	Model of control equipment				
	SDC45/46	CMS CMF015	MQV MPC	MVF	RX
	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.
DA	C10	5	7	1	1
DB	C11	6	8	2	2
SG	C12	10	9	7	3

*2 Terminating resistor should be provided for an Interface converter and a control equipment which will be terminals.
*3 Connect FG grounding to the single-sided end of a cable shield line.
*4 Since the Interface converter has a built-in terminating resistor, set the terminating resistor of GOT to "Enable".
For details of terminating resistor settings, refer to the following.
☞ Page 939 Connecting to CMC10L

■RS485 connection diagram 13)



*1 Pin No. of control equipment differs depending on the model.
Refer to the following table

Signal name	Model of control equipment				
	SDC45/46	CMS CMF015	MQV MPC	MVF	RX
	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.
DA	C10	5	7	1	1
DB	C11	6	8	2	2
SG	C12	10	9	7	3

*2 Terminating resistor should be provided for an Interface converter and a control equipment which will be terminals.
*3 Connect FG grounding to the single-sided end of a cable shield line.
*4 Set the terminating resistor of GOT as follows.
Set the terminating resistor setting switch of the GOT main unit to "Disable".
☞ Page 933 Connecting terminating resistors

Precautions when preparing a cable

■Cable length

The length of the RS-485 cable must be within 13m (the total distance between the GOT and a controller).

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■AZBIL control equipment side connector

Use the connector compatible with the AZBIL control equipment side module.

For details, refer to the user's manual of the AZBIL control equipment.

Connecting terminating resistors

■GOT side

• For GT2506HS-V

Set the terminating resistor by operating the terminating resistor setting switch.

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

■AZBIL control equipment side

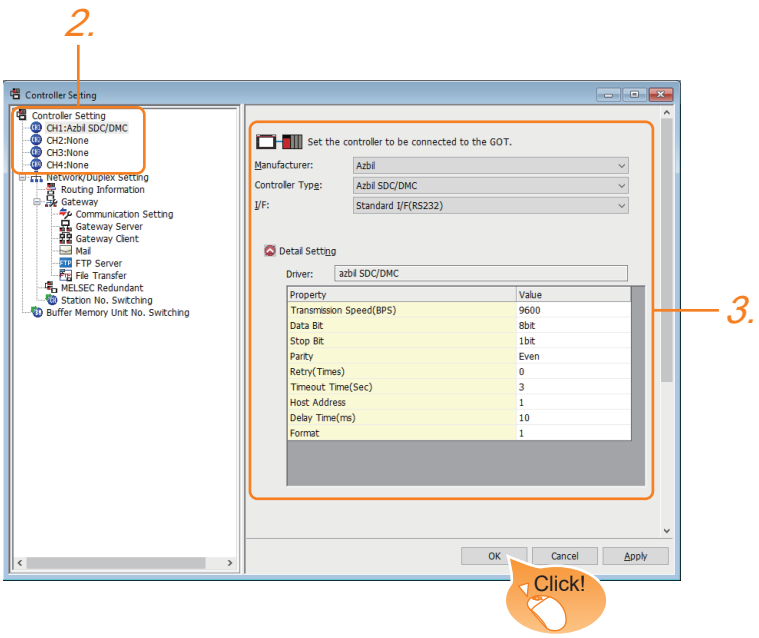
When connecting a AZBIL control equipment to the GOT, a terminating resistor must be connected.

☞ Page 937 Control Equipment Side Setting

15.4 GOT Side Settings

Setting communication interface (Communication settings)

Set the channel of the equipment to be connected to the GOT.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [Azbil]
- [Controller Type]

When connecting to DMC50 or AHC2001: [Azbil DMC50]

When connecting to models other than the above: [Azbil SDC/DMC]

- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 935 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Property	Value
Transmission Speed(BPS)	9600
Data Bit	8 bit
Stop Bit	1 bit
Parity	Even
Retry(Times)	0
Timeout Time(Sec)	3
Host Address	1
Delay Time(ms)	10
Format	1

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 9600bps)	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bits)	7bits/8bits
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit/2bits
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Even)	None Even Odd
Retry	Set the number of retries to be performed when a communication error occurs. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Host Address*3*4	Specify the host address (station No. of the GOT to which the temperature controller is connected) in the connected network. (Default: 1)	1 to 15
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT.*1 (Default: 10ms)	0 to 300ms
Format*2	Select the communication format. (Default: 1) format 1: only continuous access format 2: continuous and random access	1/2

*1 Do not specify "0".
*2 Format is ignored when connecting to DMC50.
*3 Host Address is ignored when connecting to DMC10 or SDC.
*4 Host Address is valid when connecting to DMC50.
Devices to be the target of Host Address setting differ depending on the system configuration.
<When connecting to the temperature controller via COM module>
Specify the station No. of the COM module.
<When connecting to the temperature controller directly>
Specify the station No. of the temperature controller.

Point

Format setting

The compatible format of control equipment differs depending on model.

Model name	Compatible format
SDC20/21, SDC30/31, SDC40A/40B/40G, CMS, CMF, CML, MQV, MPC, MVF, PBC201-VN2, RX	Format 1 only
DMC10, SDC15, SDC25/26, SDC35/36, SDC45/46, AUR350C, AUR450C, CMC10B	Format 1 or Format 2
DMC50, AHC2001	The format setting is invalid.

For the continuous access and random access of the control equipment, refer to the following manual.

User's Manual of the AZBIL control equipment

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

15.5 Control Equipment Side Setting

Point

AZBIL control equipment

For details of AZBIL control equipment, refer to the following manual.

User's Manual of the AZBIL control equipment

Model name		Refer to
Control equipment	DMC10	☞ Page 937 Connecting to DMC10
	SDC15, SDC25/26, SDC35/36	☞ Page 938 Connecting to SDC15, SDC25/26 or SDC35/36
	SDC20/21	☞ Page 939 Connecting to SDC20/21, SDC30/31
	SDC30/31	☞ Page 939 Connecting to SDC20/21, SDC30/31
	SDC40A/40B/40G	☞ Page 938 Connecting to SDC40A/40B/40G
	DMC50	☞ Page 941 Connecting to DMC50
	SDC45/46	☞ Page 941 Connecting to SDC45/46
	CMS, CMF015	☞ Page 942 Connecting to CMS, CMF015
	CML, CMF050	☞ Page 942 Connecting to CML, CMF050
	MQV	☞ Page 942 Connecting to MQV
	MPC	☞ Page 943 Connecting to MPC
	PBC201-VN2	☞ Page 943 Connecting to PBC201-VN2
	MVF	☞ Page 943 Connecting to MVF
	AUR350C, AUR450C	☞ Page 945 Connecting to AUR350C, AUR450C
	RX	☞ Page 946 Connecting to RX
	CMC10B	☞ Page 946 Connecting to CMC10B
	AHC2001 CPU	☞ Page 947 Connecting to AHC2001 CPU
	AHC2001 SCU	☞ Page 947 Connecting to AHC2001 SCU
Interface converter	CMC10L	☞ Page 939 Connecting to CMC10L

Connecting to DMC10

Communication settings

Make the communication settings by operating the Smart Loader Package (SLP-D10) of the temperature controller.

Item	Set value
Transmission speed*1	9600bps, 19200bps
Communication mode*2	CPL
Data bit	8bits
Parity bit*1	Even, none
Stop bit	2bits
Communication minimum response time	1ms, 10ms, 100ms, 200ms
Station address*3*4	0 to F

*1 Adjust the settings with GOT settings.

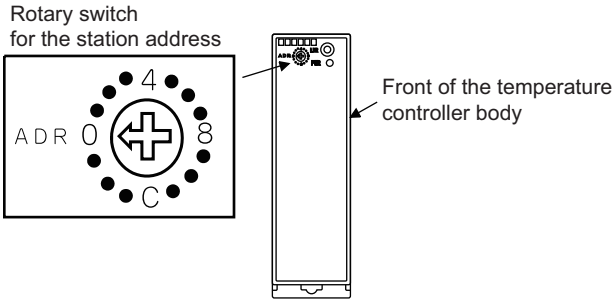
*2 Set to CPL.

*3 Do not set to "0".

*4 Select the station address without overlapping with that of other units.

Station address setting

Set the station address using the rotary switch for the station address.



Connecting to SDC40A/40B/40G

Communication settings

Make the communication settings by operating the key of the temperature controller.

Item	Set value
Transmission speed*1	9600bps
Data Bit	8bits
Parity bit*1	Even, none
Stop bit	1bit, 2bits
Station address*2*3	0 to 127

*1 The transmission speed setting must be consistent with that of the GOT side.
*2 Do not set to "0".
*3 Select the station address without overlapping with that of other units.

Connecting to SDC15, SDC25/26 or SDC35/36

Communication settings

Make the communication settings by operating the key or Smart Loader Package (SLP-C35) of the temperature controller.

Item	Set value
Transmission speed*1	9600bps, 19200bps
Communication mode*2	CPL
Data bit*1	7bits, 8bits
Parity bit*1	Odd, even, none
Stop bit*1	1bit, 2bits
Communication minimum response time	1 to 250ms
Station address*3*4	0 to 127

*1 The transmission speed setting must be consistent with that of the GOT side.
*2 Set to CPL.
*3 Do not set to "0".
*4 Select the station address without overlapping with that of other units.

Connecting to SDC20/21, SDC30/31

Communication settings

Make the communication settings by operating the key of the temperature controller.

Item	Set value
Transmission speed*1	9600bps
Data bit	8bits
Parity bit	Disable
Stop bit	2bits
Station address*2*3	0 to 127

*1 The transmission speed setting must be consistent with that of the GOT side.
*2 Do not set to "0".
*3 Select the station address without overlapping with that of other units.

Connecting to CMC10L

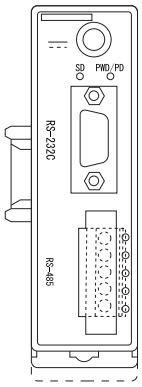
Communication settings

Make the communication settings by operating the DIP switch of the Interface converter

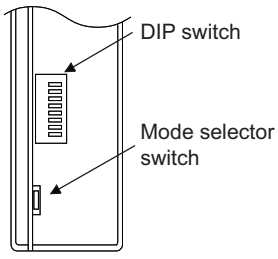
Item	Set value
Transmission speed*1	9600bps, 19200bps, 38400bps
Frame length*2	9 to 15bits

*1 The transmission speed setting must be consistent with that of the GOT side.
*2 The sum of data length, parity bit and stop bit

Settings by switch



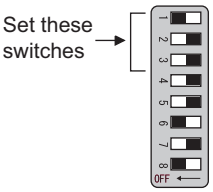
Front view of CMC10L body



Rear view of CMC10L body

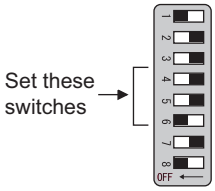
■Setting DIP switches

• Transmission speed settings



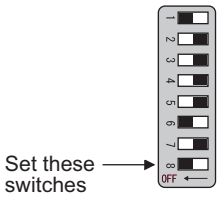
Transmission speed (bps)	Switch No.		
	1	2	3
9600	ON	OFF	ON
19200	OFF	ON	ON
38400	ON	ON	ON

• Frame length settings



Frame length	Switch No.		
	4	5	6
8bits	OFF	OFF	OFF
9bits	ON	OFF	OFF
10bits	OFF	ON	OFF
11bits	ON	ON	OFF
12bits	OFF	OFF	ON
13bits	ON	OFF	ON
14bits	OFF	ON	ON
15bits	ON	ON	ON

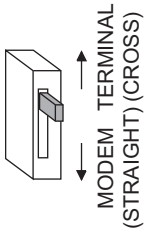
• Connecting terminating resistors



Terminating resistor	Switch No.
	8
Enable	ON
Disable	OFF

■Mode selector switch settings

Set the switch to “TERMINAL”.



Connecting to DMC50

Communication settings

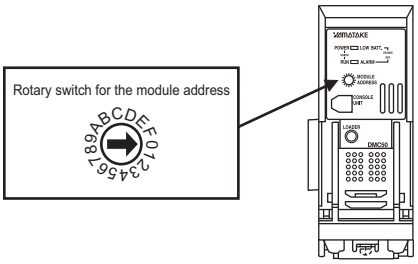
Make the communication settings by operating the Smart Loader Package (SLP-D50/SLP-H21)of the temperature controller.

Item	Set value
Transmission speed*1	9600bps, 19200bps, 38400bps
Communication mode	CPL
Data bit	8bits (fixed)
Parity bit	Even (fixed)
Stop bit	1bit (fixed)
Module address*2*3*4	0 to F

*1 Adjust the settings with GOT settings.
*2 Set the module address using the rotary switch for module address.
*3 Do not set to "0".
*4 Select the module address without overlapping with that of other units.

Module address setting

Set the module address using the rotary switch for module address.



Connecting to SDC45/46

Communication settings

Make the communication settings by operating the Smart Loader Package (SLP-C45) of the temperature controller.

Item	Set value
Transmission speed*1	9600bps, 19200bps, 38400bps
Communication mode*2	CPL
Data bit	7bits, 8bits
Parity bit*1	Odd, even, none
Stop bit	1bit, 2bits
Communication minimum response time*5	1 to 250ms
Station address*3*4	0 to 120

*1 Adjust the settings with GOT settings.
*2 Set to CPL.
*3 Do not set to "0".
*4 Select the station address without overlapping with that of other units.
*5 When using the interface converter CMC10L, set the communication minimum response time to 3ms or more.

Connecting to CMS, CMF015

Communication settings

Make the communication settings by operating the key of the control equipment.

Item	Set value
Transmission speed*1	9600bps
Communication condition selection	0: 8-bit data length, Even parity, Stop bit 1
	1: 8-bit data length, Non parity, Stop bit 2
Station address*2*3	0 to 99

*1 Adjust the settings with GOT settings.
*2 Do not set to "0".
*3 Select the station address without overlapping with that of other units.

Connecting to CML, CMF050

Communication settings

Make the communication settings by operating the key of the control equipment.

Item	Set value
Transmission speed*1	9600bps
Communication condition selection*1	00: 8-bit data length, Even parity, Stop bit 1
	01: 8-bit data length, Non parity, Stop bit 2
Station address*2*3	0 to 7F

*1 Adjust the settings with GOT settings.
*2 Do not set to "0".
*3 Select the station address without overlapping with that of other units.

Connecting to MQV

Communication settings

Make the communication settings by operating the key of the control equipment.

Item	Set value
Transmission speed*1	9600bps, 19200bps, 38400bps
Communication condition selection*1	00: 8-bit data length, Even parity, Stop bit 1
	01: 8-bit data length, Non parity, Stop bit 2
Station address*2*3	0 to 127

*1 Adjust the settings with GOT settings.
*2 Do not set to "0".
*3 Select the station address without overlapping with that of other units.

Connecting to MPC

Communication settings

Make the communication settings by operating the key of the control equipment.

Item	Set value
Transmission speed*1	9600bps, 19200bps, 38400bps
Communication condition selection*1	0: 8-bit data length, Even parity, Stop bit 1
	1: 8-bit data length, Non parity, Stop bit 2
Station address*2*3	0 to 127

*1 Adjust the settings with GOT settings.
*2 Do not set to "0".
*3 Select the station address without overlapping with that of other units.

Connecting to PBC201-VN2

Communication settings

Make the communication settings by operating the key of the control equipment.

Item	Set value
Communication protocol	CPL
Transmission speed*1	9600bps, 19200bps, 38400bps, 115200bps
Communication condition selection*1 (Fixed 8-bit data length)	0:Even parity, Stop bit 1
	1:Odd parity, Stop bit 1
	2:Non parity, Stop bit 2
Station address*2*3	0 to 126

*1 Adjust the settings with GOT settings.
*2 Do not set to "0".
*3 Select the station address without overlapping with that of other units.

Connecting to MVF

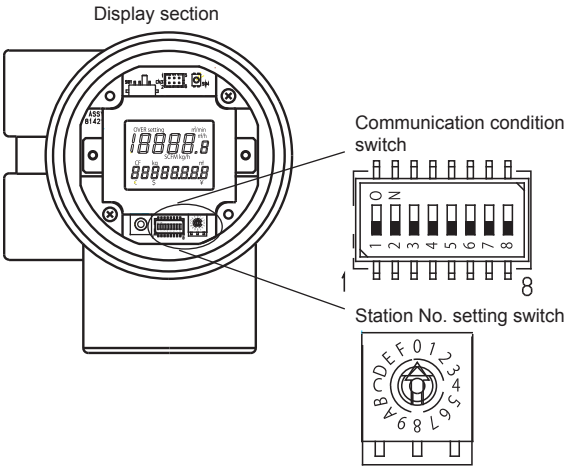
Communication settings

Make the communication settings by operating the switch of the control equipment.

Item	Set value
Transmission speed*1	9600bps, 19200bps
Communication condition selection*1	8-bit data length, Even parity, Stop bit 1
	8-bit data length, Non parity, Stop bit 2
Station address*2*3	0 to F

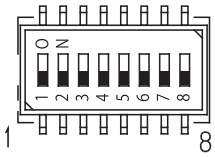
*1 Adjust the settings with GOT settings.
*2 Do not set to "0".
*3 Select the station address without overlapping with that of other units.

Settings by switch



■Transmission speed settings

Set the communication condition switch.



Transmission speed (bps)	Switch No.		
	1	2	3
9600	ON	ON	OFF
19200	ON	OFF	OFF

■Communication condition selection

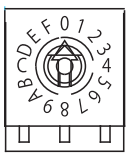
Set the communication condition switch.

Communication condition	Switch No.
	4
8-bit data length, Even parity, Stop bit 1	OFF
8-bit data length, Non parity, Stop bit 2	ON

■Station address setting

Set the station address switch.

Station No. setting switch



Connecting to AUR350C, AUR450C

Communication settings

Make the communication settings by operating the Smart Loader Package (SLP-A35, SLP-A45) of the control equipment.

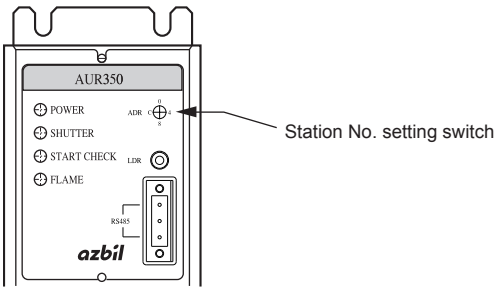
Item	Set value
Transmission speed*1	9600bps, 19200bps
Communication condition selection*1	8-bit data length, Even parity, Stop bit 1
	8-bit data length, Non parity, Stop bit 2
Station address*2*3	0 to F

*1 Adjust the settings with GOT settings.
*2 Do not set to "0".
*3 Select the station address without overlapping with that of other units.

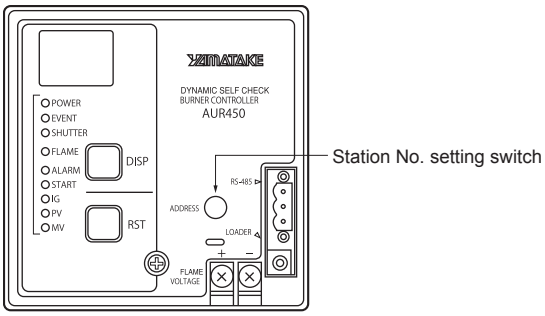
Station address setting

Set the station address switch.

■For AUR350C



■For AUR450C



Connecting to RX

Communication settings

Make the communication settings by operating the Smart Loader Package (SLP-RX) of the control equipment.

Item	Set value
Transmission speed*1	9600bps, 19200bps, 38400bps
Communication condition selection*1	Even parity stop 1 (8-bit data length, Even parity, Stop bit 1)
	Even parity stop 2 (8-bit data length, Even parity, Stop bit 2)
	Odd parity stop 1 (8-bit data length, Odd parity, Stop bit 1)
	Odd parity stop 2 (8-bit data length, Odd parity, Stop bit 2)
Station address*2*3	1 to 32

*1 Adjust the settings with GOT settings.
*2 Do not set to "0".
*3 Select the station address without overlapping with that of other units.

Connecting to CMC10B

Communication settings

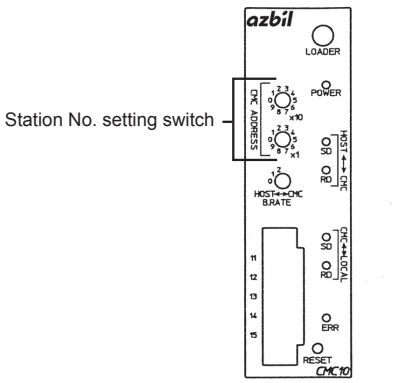
Make the communication settings by operating the Smart Loader Package (SLP-CM1) of the control equipment.

Item	Set value
Transmission speed*1	9600bps, 19200bps
Communication format*1	0:8-bit data length, Even parity, Stop bit 1
	1:8-bit data length, Non parity, Stop bit 2
Station address*2*3	0 to 99

*1 Adjust the settings with GOT settings.
*2 Do not set to "0".
*3 Select the station address without overlapping with that of other units.

Station address setting

Set the station address switch.



Connecting to AHC2001 CPU

Communication settings

Make the communication settings by operating the Smart Loader Package (SLP-D50/SLP-H21)of the temperature controller.

Item	Set value
Transmission speed*1	9600bps, 19200bps, 38400bps, 57600bps
Communication mode*2	0: MODBUS 1: CPL
Data bit	8bits (fixed)
Parity bit	Even (fixed)
Stop bit	1bit (fixed)
Station address*3	1 to 15*4

*1 Adjust the settings with GOT settings.
*2 Set this item to 1: CPL.
*3 Select the station address without overlapping with that of other units.
*4 The station address for AHC2001 ranges from 1 to 127.
However, use station address from 1 to 15, which are the range for DMC50.

Connecting to AHC2001 SCU

Communication settings

Make the communication settings by operating the Smart Loader Package (SLP-D50/SLP-H21)of the temperature controller.

Item	Set value
Transmission speed*1	9600bps, 19200bps, 38400bps
Data bit*1	7bits, 8bits
Parity bit*1	0: None, 1:Even, 2: Odd
Stop bit*1	1bit, 2bits
Half duplex/Full duplex*2	0: Half duplex, 1: Full duplex
Space sending	0 (fixed)
Protocol setup*3	1 to 30

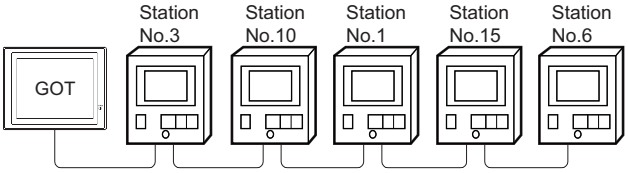
*1 Adjust the settings with GOT settings.
*2 Set this item to 0: Half duplex.
*3 Set this item to 2: CPL.

Station number setting

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.



Examples of station number setting

Direct specification

When setting the device, specify the station number of the control equipment of which data is to be changed.

Model name	Specification range
SDC40A/40B/40G, SDC15, SDC25/26, SDC35/36, SDC20/21, SDC30/31 CML, CMF050, MQV, MPC	1 to 127
PBC201-VN2	1 to 126
SDC45/46	1 to 120
CMS, CMF015, CMC10B	1 to 99
RX	1 to 32
DMC10, DMC50, MVF, AUR350C, AUR450C, AHC2001*1	1 to 15

*1 The station number for AHC2001 ranges from 1 to 127.
However, use station numbers from 1 to 15, which are the range for DMC50.

Indirect specification

When setting the device, indirectly specify the station number of the inverter of which data is to be changed using the 16-bit GOT internal data register (GD10 to GD25).

When specifying the station No. from the following table on GT Designer3, the value of GD10 to GD25 compatible to the station No. specification will be the station No. of the control equipment.

Specification station No.		Compatible device	Setting range
DMC50 AHC2001	Other than DMC50		
100	200	GD10	1 to 127:For SDC40A/40B/40G, SDC15, SDC25/26, SDC35/36, SDC20/21, SDC30/31, CML, CMF050, MQV, MPC 1 to 126: PBC201-VN2 1 to 120: SDC45/46 1 to 99: CMS, CMF015, CMC10B 1 to 32: RX 1 to 15: DMC10, DMC50, MVF, AUR350C, AUR450C, AHC2001*1 For the setting other than the above, error (dedicated device is out of range) will occur.
101	201	GD11	
102	202	GD12	
103	203	GD13	
104	204	GD14	
105	205	GD15	
106	206	GD16	
107	207	GD17	
108	208	GD18	
109	209	GD19	
110	210	GD20	
111	211	GD21	
112	212	GD22	
113	213	GD23	
114	214	GD24	
115	215	GD25	

*1 The station number for AHC2001 ranges from 1 to 127.
However, use station numbers from 1 to 15, which are the range for DMC50.

15.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1
AZBIL equipment ([Azbil SDC/DMC])
AZBIL equipment ([Azbil DMC50])

15.7 Precautions

Station number setting of the temperature controller system

- When connecting to DMC10 or SDC

Make sure to establish temperature controller system with No.1 station.

- When connecting to DMC50 or AHC2001

A COM module or temperature controller with the station number set with the host address must be included.

Page 935 Communication detail settings

GOT clock control

Since the control equipment does not have a clock function, the settings of "time adjusting" or "time broad cast" by GOT clock control will be disabled.

Disconnecting some of multiple connected equipment

The GOT can disconnect some of multiple connected equipment by setting GOT internal device.

For example, the faulty station where a communication timeout error occurs can be disconnected from connected equipment.

For details of GOT internal device setting, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

When DMC50/AHC2001 and DMC10/SDC are mixed

GOT does not support connections with DMC50/AHC2001 and DMC10/SDC mixed.

Station number range for AHC2001

The station number for AHC2001 ranges from 1 to 127.

However, use station numbers from 1 to 15, which are the range for DMC50.

Device range for AHC2001

The GOT only supports some devices for the AHC2001.

Use the devices within the device range for the DMC50.

16 OMRON PLC

- Page 951 Connectable Model List
- Page 953 Serial Connection
- Page 1014 Ethernet Connection
- Page 1027 Settable Device Range

16.1 Connectable Model List

The following table shows the connectable models.

Series	Model name	Clock	Communication Type	Connectable GOT	Refer to
SYSMAC CPM	CPM1	×	RS-232	GT2506HS GT2505HS	☞ Page 953 Connecting to CPM1, CPM1A, CPM2A, CPM2C, or CQM1
	CPM1A	×			
	CPM2A	○			
	CPM2C	○*3			
SYSMAC CQM1	CQM1*1	○*4	RS-232	GT2506HS GT2505HS	☞ Page 953 Connecting to CPM1, CPM1A, CPM2A, CPM2C, or CQM1
SYSMAC CQM1H	CQM1H	○*4*5	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 957 Connecting to CQM1H
SYSMAC CJ1	CJ1H	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 960 Connecting to CJ1H, CJ1G, CJ1M, CJ2H, or CJ2M
	CJ1G				
	CJ1M				
SYSMAC CJ2	CJ2H	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 960 Connecting to CJ1H, CJ1G, CJ1M, CJ2H, or CJ2M
	CJ2M*9				
SYSMAC CP1	CP1H	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 964 Connecting to CP1H, CP1L, CP1E, CP2E-E, CP2E-S, or CP2E-N
	CP1L				
	CP1E (N type)*8				
SYSMAC C200HS	C200HS	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 970 Connecting to C200HS, C200H, C200HX, C200HG, or C200HE
SYSMAC C200H	C200H	○*6			
SYSMAC α	C200HX	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 970 Connecting to C200HS, C200H, C200HX, C200HG, or C200HE
	C200HG				
	C200HE*2	○*7			
SYSMAC CS1	CS1H	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 974 Connecting to CS1H, CS1G, or CS1D
	CS1G				
	CS1D				
SYSMAC CP2	CP2E-E	○	RS-232	GT2506HS GT2505HS	☞ Page 964 Connecting to CP1H, CP1L, CP1E, CP2E-E, CP2E-S, or CP2E-N
	CP2E-S				
	CP2E-N	○	RS-232 RS-422		
SYSMAC C1000H	C1000H	×	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 978 Connecting to C1000H, C2000H
SYSMAC C2000H	C2000H				
SYSMAC CVM1/CV	CV500*10	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 980 Connecting to CV500, CV1000, CV2000, or CVM1
	CV1000*10				
	CV2000*10				
	CVM1*10	○*3			

*1 The CQM1-CPU11 is unable to communicate with GOT since the CQM1-CPU11 has no RS-232C interface.
*2 The C200HE-CPU11 does not support communication board.
Use a host Link unit.
*3 Some models do not have a clock function.
*4 The memory cassette equipped with a clock is required.
*5 The EM device of the CQM-CPU61 cannot be monitored.
*6 To use the C200H-CPU21/CPU22/CPU23, the memory cassette equipped with a clock is required.
The C200H-CPU01/CPU02/CPU03 does not support the clock function.

*7 The C200HE-CPU11 does not support the clock function.
*8 Only the direct CPU connection (serial) is available for CP1E (N type) CPU module with 20 or less I/O points.
*9 The direct CPU connection (serial) is available for CJ2M-CPU1□ only.
*10 Use the CPU module Ver. V1 or later.

Series	Model name	Clock	Communication Type	Connectable GOT	Refer to
SYSMAC CJ1	CJ1H	○	Ethernet	GT 2506 HS GT 2505 HS *1	☞ Page 1014 Connecting to SYSMAC CJ1, CJ2, CS1, or CP2 series
	CJ1G				
	CJ1M				
SYSMAC CJ2	CJ2H				
	CJ2M				
SYSMAC CS1	CS1H				
	CS1G				
	CS1D				
SYSMAC CP2	CP2E-N	○	Ethernet		
NJ	NJ501-1500 NJ501-1400 NJ501-1300 NJ501-1520 NJ501-1420 NJ501-1320 NJ501-1340	○ *2	Ethernet	GT 2506 HS GT 2505 HS	☞ Page 1017 Connecting to NJ or NX series
	NJ301-1200 NJ301-1100				
	NJ101-1000 NJ101-9000 NJ101-1020 NJ101-9020				
NX	NX1P2-1140DT NX1P2-1140DT1 NX1P2-1040DT NX1P2-1040DT1 NX1P2-9024DT NX1P2-9024DT				
	NX701-1700 NX701-1600				
	NX502-1700 NX502-1600 NX502-1500 NX502-1400 NX502-1300				
	NX102-1200 NX102-1100 NX102-1000 NX102-9000				

*1 Not compatible with the redundant Ethernet.
*2 The time setting function of the GOT is supported.

16.2 Serial Connection

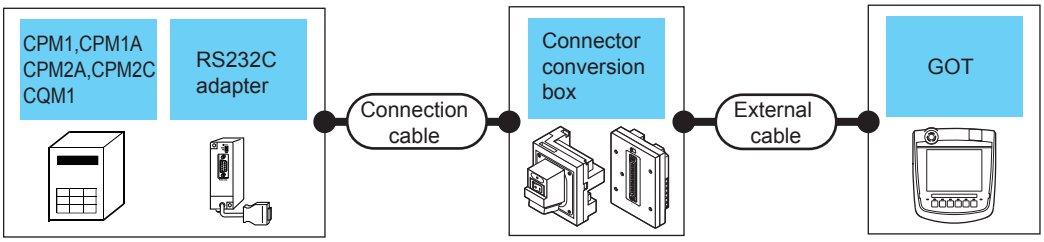
Connecting to CPM1, CPM1A, CPM2A, CPM2C, or CQM1

Communication driver

OMRON SYSMAC

When connecting to PLC or RS-232C

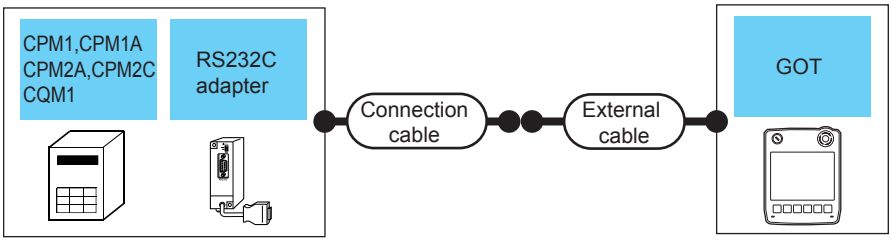
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	RS-232C adapter*1	Communication Type	Cable model Connection diagram number					
CPM2A CQM1	-	RS-232	GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
CPM1 CPM1A CPM2A CPM2C	CPM1-CIF01		GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		1 GOT for 1 RS-232C adapter
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
CPM2C	CPM2C-CIF01-V1		GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

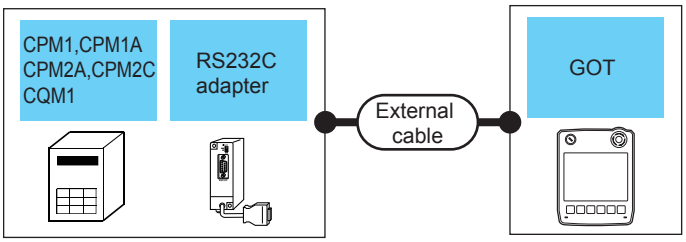
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	RS-232C adapter*1	Communication Type	Cable model Connection diagram number				
CPM2A CQM1	-	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
CPM1 CPM1A CPM2A CPM2C	CPM1-CIF01			GT11H-C30-37P(3m)	GT 2505HS		1 GOT for 1 RS-232C adapter
CPM2C	CPM2C-CIF01-V1			GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

■When using the external cable (GT11H-C□□□)

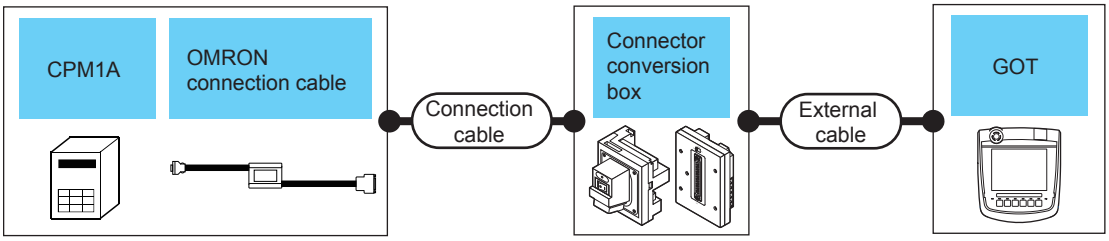


PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	RS-232C adapter*1	Communication Type				
CPM2A CQM1	-	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 PLC
CPM1 CPM1A CPM2A CPM2C	CPM1-CIF01		GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS		1 GOT for 1 RS-232C adapter
CPM2C	CPM2C-CIF01-V1		GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS		

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

When connecting to OMRON connection cable

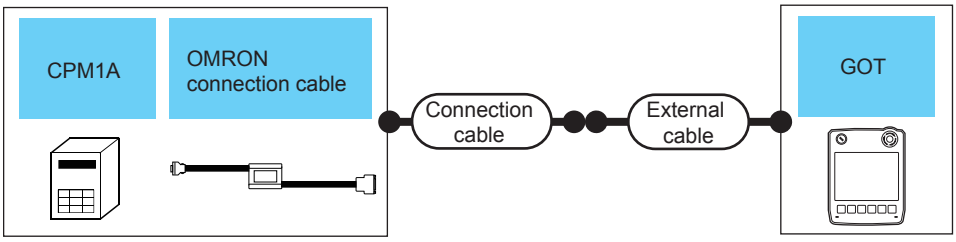
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	OMRON connection cable*1	Communication Type	Cable model Connection diagram number					
CPM1A	CQM1-CIF01	RS-232	GT09-C30R20102-25S(3m) or User preparing RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
CPM2C	CPM2C-CN111		GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

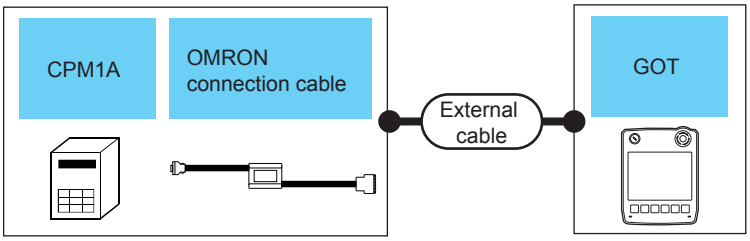
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	OMRON connection cable*1	Communication Type	Cable model Connection diagram number				
CPM1A	CQM1-CIF01	RS-232	User preparing RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
CPM2C	CPM2C-CN111	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

■When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	OMRON connection cable*1	Communication Type				
CPM1A	CQM1-CIF01	RS-232	GT11H-C30(3m) ☞ RS-232 connection diagram 6)	GT 2505HS	6m	1 GOT for 1 PLC
CPM2C	CPM2C-CN111	RS-232	GT11H-C30(3m) ☞ RS-232 connection diagram 3)	GT 2505HS		

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

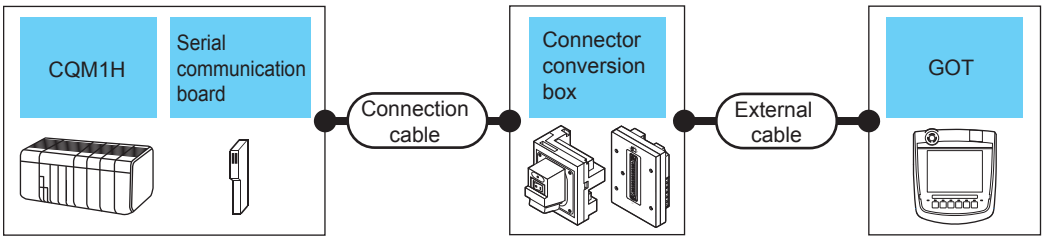
Connecting to CQM1H

Communication driver

OMRON SYSMAC

When connecting to PLC or serial communication board

■When using the connector conversion box

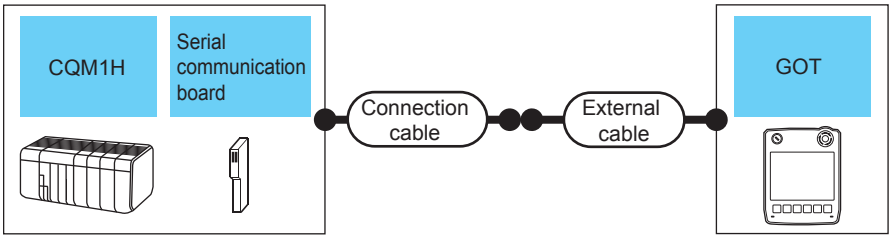


PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication board*1	Communication Type	Cable model Connection diagram number					
CQM 1H	-	RS-232	GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	CQM1H-SCB41			GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		1 GOT for 1 serial communication board
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		RS-422	GT09-C30R40101-9P(3m) GT09-C100R40101-9P(10m) or User preparing RS-422 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

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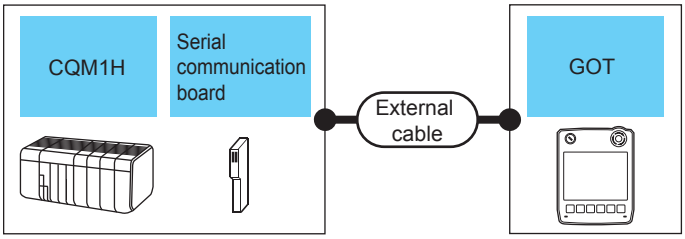
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication board*1	Communication Type	Cable model Connection diagram number				
CQM 1H	-	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
	CQM1H-SCB41			GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 serial communication board
		RS-422	User preparing RS-422 connection diagram 8)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 Product manufactured by OMRON Corporation.
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■When using the external cable (GT11H-C□□□)

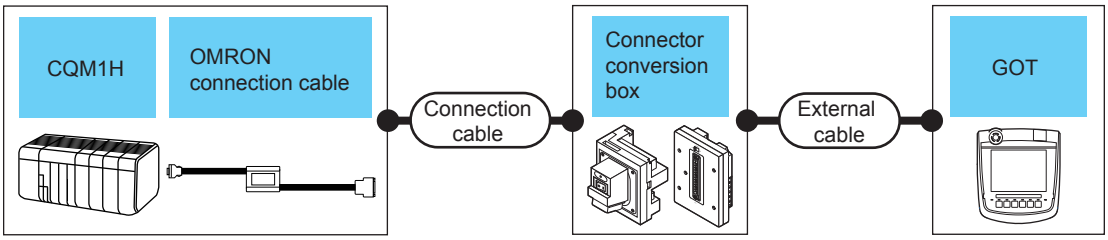


PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication board*1	Communication Type				
CQM 1H	-	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 PLC
	CQM1H-SCB41			GT 2505HS		1 GOT for 1 serial communication board
		RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 9)	GT 2505HS	13m	

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

When connecting to OMRON connection cable

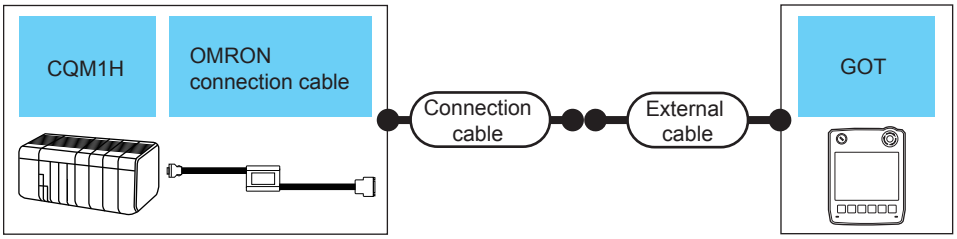
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	OMRON connection cable*1	Communication Type	Cable model Connection diagram number					
CQM 1H	CQM1-CIF02	RS-232	GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

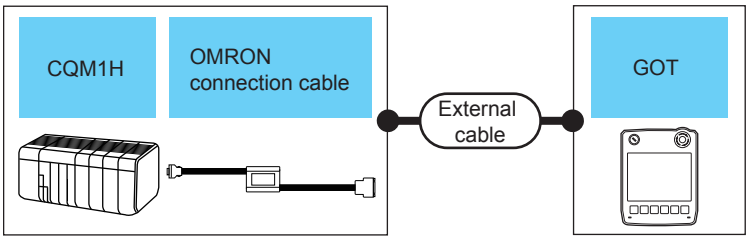
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	OMRON connection cable*1	Communication Type	Cable model Connection diagram number				
CQM 1H	CQM1-CIF02	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

■When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	OMRON connection cable*1	Communication Type				
CQM 1H	CQM1-CIF02	RS-232	GT11H-C30(3m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 PLC

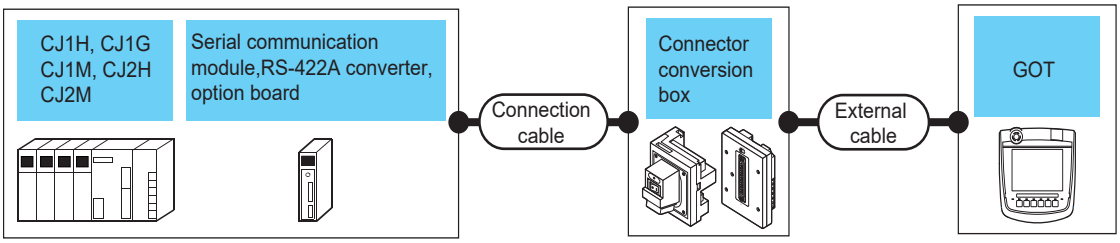
*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

Connecting to CJ1H, CJ1G, CJ1M, CJ2H, or CJ2M

Communication driver

OMRON SYSMAC

When using the connector conversion box

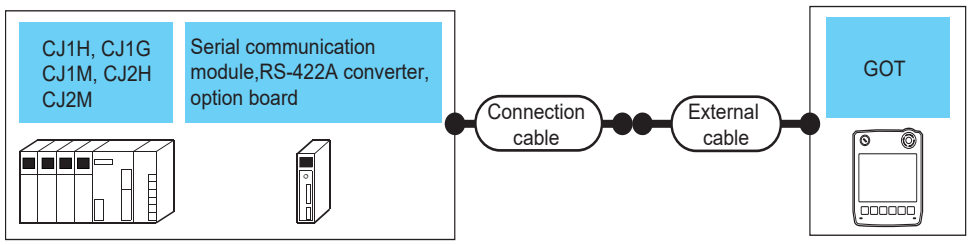


PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication module*1, RS-422A converter*1, option board*1	Communication Type	Cable model Connection diagram number					
CJ1H CJ1G CJ1M CJ2H	-	RS-232	GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	CJ1W-SCU21-V1 CJ1W-SCU41-V1			GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		1 GOT for each port of a serial communication module
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	CJ1W-SCU31-V1 CJ1W-SCU41-V1	RS-422	GT09-C30R40101-9P(3m) GT09-C100R40101-9P(10m) or User preparing RS-422 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for each port of a serial communication module
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
	CJ1W-CIF11		GT09-C30R40103-5T(3m) GT09-C100R40103-5T(10m) or User preparing RS-422 connection diagram 10)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		1 GOT for 1 RS-422A converter
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
CJ1H CJ1G CJ1M	CJ1W-SCU21 CJ1W-SCU41	RS-232	GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for each port of a serial communication module
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	CJ1W-SCU41	RS-422	GT09-C30R40101-9P(3m) GT09-C100R40101-9P(10m) or User preparing RS-422 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication module*1, RS-422A converter*1, option board*1	Communication Type	Cable model Connection diagram number					
CJ2M-CPU1□	-	RS-232	GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	CJ1W-CIF11	RS-422	GT09-C30R40103-5T(3m) GT09-C100R40103-5T(10m) or User preparing RS-422 connection diagram 10)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 RS-422A converter
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
CJ2M-CPU1□ CJ2M-CPU3□	CJ1W-SCU21-V1 CJ1W-SCU41-V1	RS-232	GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for each port of a serial communication module
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	CJ1W-SCU31-V1 CJ1W-SCU41-V1	RS-422	GT09-C30R40101-9P(3m) GT09-C100R40101-9P(10m) or User preparing RS-422 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
CJ2M-CPU3□	CP1W-CIF01	RS-232	GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 RS-232C option board
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	CP1W-CIF11	RS-422	GT09-C30R40103-5T(3m) GT09-C100R40103-5T(10m) or User preparing RS-422 connection diagram 10)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 RS-422A/485 option board
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
	CP1W-CIF12 CP1W-CIF12-V1	RS-422	GT09-C30R40103-5T(3m) GT09-C100R40103-5T(10m) or User preparing RS-422 connection diagram 10)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by OMRON Corporation.
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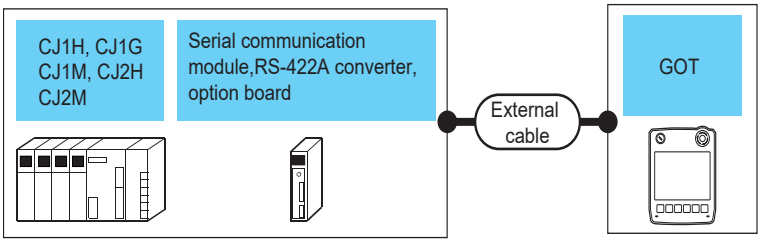
When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	**Serial communication module*1, RS-422A converter*1, option board*1**	**Communication Type**	**Cable model Connection diagram number**				
CJ1H CJ1G CJ1M CJ2H	-	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
	CJ1W-SCU21-V1 CJ1W-SCU41-V1		User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS		1 GOT for each port of a serial communication module
	CJ1W-SCU31-V1 CJ1W-SCU41-V1	RS-422	User preparing RS-422 connection diagram 8)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for each port of a serial communication module
	CJ1W-CIF11		User preparing RS-422 connection diagram 11)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		1 GOT for 1 RS-422A converter
CJ1H CJ1G CJ1M	CJ1W-SCU21 CJ1W-SCU41	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for each port of a serial communication module
	CJ1W-SCU41	RS-422	User preparing RS-422 connection diagram 8)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	
CJ2M-CPU1□	-	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
	CJ1W-CIF11	RS-422	User preparing RS-422 connection diagram 11)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for 1 RS-422A converter
CJ2M-CPU1□ CJ2M-CPU3□	CJ1W-SCU21-V1 CJ1W-SCU41-V1	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for each port of a serial communication module
	CJ1W-SCU31-V1 CJ1W-SCU41-V1	RS-422	User preparing RS-422 connection diagram 8)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	
CJ2M-CPU3□	CP1W-CIF01	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 RS-232C option board
	CP1W-CIF11	RS-422	User preparing RS-422 connection diagram 11)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for 1 RS-422A/485 option board
	CP1W-CIF12 CP1W-CIF12-V1	RS-422		GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication module*1, RS-422A converter*1, option board*1	Communication Type				
CJ1H CJ1G CJ1M CJ2H	-	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 PLC
	CJ1W-SCU21-V1 CJ1W-SCU41-V1			GT 2505HS		1 GOT for each port of a serial communication module
	CJ1W-SCU31-V1 CJ1W-SCU41-V1	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 9)	GT 2505HS	13m	1 GOT for each port of a serial communication module
	CJ1W-CIF11		GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 12)	GT 2505HS	13m	1 GOT for 1 RS-422A converter
CJ1H CJ1G CJ1M	CJ1W-SCU21 CJ1W-SCU41	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for each port of a serial communication module
	CJ1W-SCU41	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 9)	GT 2505HS	13m	
CJ2M-CPU1□	-	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 PLC
	CJ1W-CIF11	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 12)	GT 2505HS	13m	1 GOT for 1 RS-422A converter
CJ2M-CPU1□ CJ2M-CPU3□	CJ1W-SCU21-V1 CJ1W-SCU41-V1	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for each port of a serial communication module
	CJ1W-SCU31-V1 CJ1W-SCU41-V1	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 9)	GT 2505HS	13m	
CJ2M-CPU3□	CP1W-CIF01	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 RS-232C option board
	CP1W-CIF11	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 12)	GT 2505HS	13m	1 GOT for 1 RS-422A/485 option board
	CP1W-CIF12 CP1W-CIF12-V1	RS-422		GT 2505HS		

*1 Product manufactured by OMRON Corporation.
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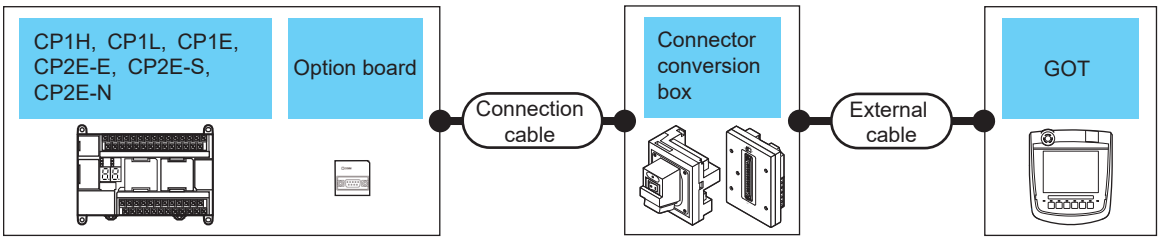
Connecting to CP1H, CP1L, CP1E, CP2E-E, CP2E-S, or CP2E-N

Communication driver

OMRON SYSMAC

When connecting a PLC or option board

■When using the connector conversion box

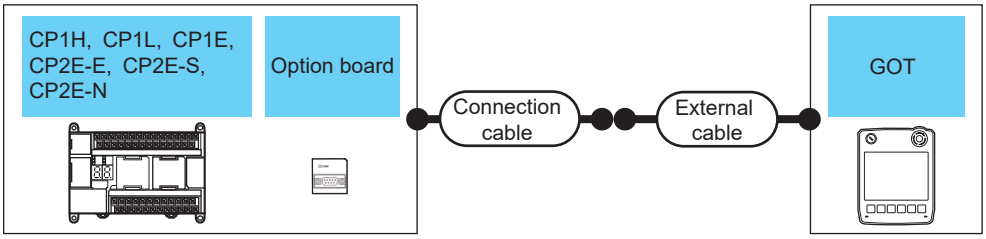


PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Option board*1	Communication Type	Cable model Connection diagram number					
CP1E	-	RS-232	GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
CP2E-E CP2E-S	-	RS-232	User preparing RS-232 connection diagram 10)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
CP1H CP1L CP1E	CP1W-CIF01	RS-232	GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 RS-232C option board
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	CP1W-CIF11	RS-422	GT09-C30R40103-5T(3m) GT09-C100R40103-5T(10m) or User preparing RS-422 connection diagram 10)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 RS-422A/485 option board
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
	CP1W-CIF12 CP1W-CIF12-V1			GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Option board*1	Communication Type	Cable model Connection diagram number					
CP2E-N	CP1W-CIF01	RS-232	GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P (3m)	GT 2506HS	6m	1 GOT for 1 RS-232C option board
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	CP2W-CIFD1		User preparing RS-232 connection diagram 11)	GT16H-CNB-42S	GT16H-C30-42P (3m)	GT 2506HS	6m	1 GOT for 1 RS-232C&RS-232C option board
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	CP2W-CIFD2		User preparing RS-232 connection diagram 11)	GT16H-CNB-42S	GT16H-C30-42P (3m)	GT 2506HS	6m	1 GOT for 1 RS-232C&RS-485 option board
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	CP1W-CIF11	RS-422	GT09-C30R40103-5T(3m) GT09-C100R40103-5T(10m) or User preparing RS422 connection diagram 10)	GT16H-CNB-42S	GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P (10m)	GT 2506HS	13m	1 GOT for 1 RS-422A/485 option board
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
	CP1W-CIF12-V1			GT16H-CNB-42S	GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P (10m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

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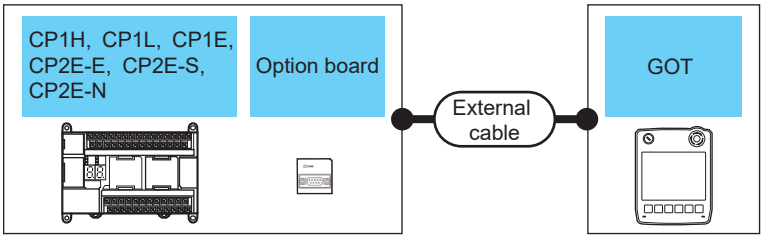
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Option board*1	Communication Type	Cable model Connection diagram number				
CP1E	-	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
CP2E-E CP2E-S	-	RS-232	User preparing RS-232 connection diagram 12)				
CP1H CP1L CP1E	CP1W-CIF01	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)		6m	1 GOT for 1 RS-232C option board
	CP1W-CIF11 CP1W-CIF12 CP1W-CIF12-V1	RS-422	User preparing RS-422 connection diagram 11)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		13m	1 GOT for 1 RS-422A/485 option board
CP2E-N	CP1W-CIF01	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)		6m	1 GOT for 1 RS-232C option board
	CP2W-CIFD1	RS-232	User preparing RS-232 connection diagram 13)	GT11H-C30-37P(3m)		6m	1 GOT for 1 RS-232C&RS-232C option board
	CP2W-CIFD2	RS-232				6m	1 GOT for 1 RS-232C&RS-485 option board
	CP1W-CIF11 CP1W-CIF12-V1	RS-422	User preparing RS-422 connection diagram 11)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		13m	1 GOT for 1 RS-422A/485 option board

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■When using the external cable (GT11H-C□□□)

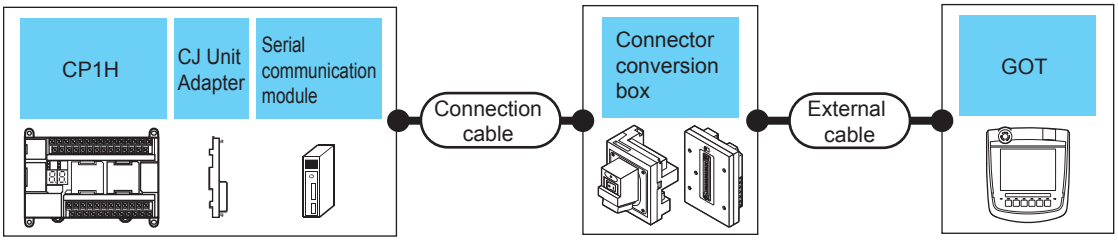


PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Option board*1	Communication Type				
CP1E	-	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 PLC
CP2E-E CP2E-S	-	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 14)		6m	
CP1H CP1L CP1E	CP1W-CIF01	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)		6m	1 GOT for 1 RS-232C option board
	CP1W-CIF11 CP1W-CIF12 CP1W-CIF12-V1	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 12)		13m	1 GOT for 1 RS-422A/485 option board
CP2E-N	CP1W-CIF01	RS-232	GT11H-C30 (3m) GT11H-C60 (6m) ☞ RS-232 connection diagram 3)		6m	1 GOT for 1 RS-232C option board
	CP2W-CIFD1		☞ RS-232 connection diagram 15)			1 GOT for 1 RS-232C&RS-232C option board
	CP2W-CIFD2					1 GOT for 1 RS-232C&RS-485 option board
	CP1W-CIF11 CP1W-CIF12-V1	RS-422	GT11H-C30 (3m) GT11H-C60 (6m) GT11H-C100 (10m) ☞ RS-422 connection diagram 12)		13m	1 GOT for 1 RS-422A/485 option board

*1 Product manufactured by OMRON Corporation.
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When connecting to serial communication module

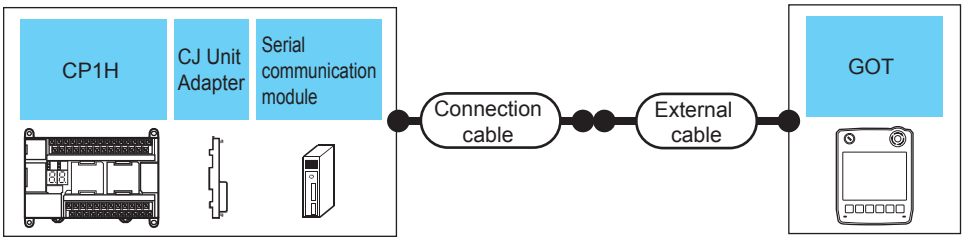
■When using the connector conversion box



PLC				Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	CJ unit adapter*1	Serial communication module*1	Communication Type	Cable model Connection diagram number					
CP1H	CP1W-EXT01	CJ1W-SCU21 CJ1W-SCU41 CJ1W-SCU21-V1 CJ1W-SCU41-V1	RS-232	GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for each port of a serial communication module
					GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		CJ1W-SCU41 CJ1W-SCU31-V1 CJ1W-SCU41-V1	RS-422	GT09-C30R40101-9P(3m) GT09-C100R40101-9P(10m) or User preparing RS-422 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
					GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by OMRON Corporation.
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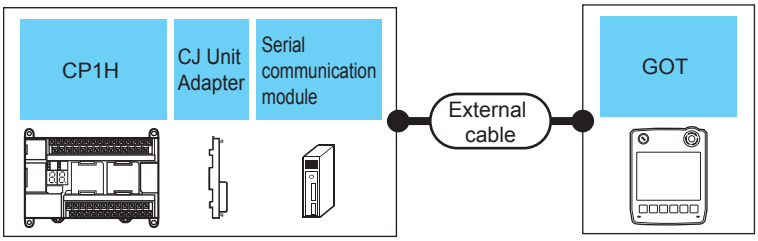
■When using the external cable (GT11H-C□□□-37P)



PLC				Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	CJ unit adapter*1	Serial communication module*1	Communication Type	Cable model Connection diagram number				
CP1H	CP1W-EXT01	CJ1W-SCU21 CJ1W-SCU41 CJ1W-SCU21-V1 CJ1W-SCU41-V1	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for each port of a serial communication module
		CJ1W-SCU41 CJ1W-SCU31-V1 CJ1W-SCU41-V1	RS-422	User preparing RS-422 connection diagram 8)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

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For details on the product, contact OMRON Corporation.

■When using the external cable (GT11H-C□□□)



PLC				External cable	GOT Model	Total distance	Number of connectable equipment
Model name	CJ unit adapter*1	Serial communication module*1	Communication Type				
CP1H	CP1W-EXT01	CJ1W-SCU21 CJ1W-SCU41 CJ1W-SCU21-V1 CJ1W-SCU41-V1	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for each port of a serial communication module
		CJ1W-SCU41 CJ1W-SCU31-V1 CJ1W-SCU41-V1	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 9)	GT 2505HS	13m	

*1 Product manufactured by OMRON Corporation.
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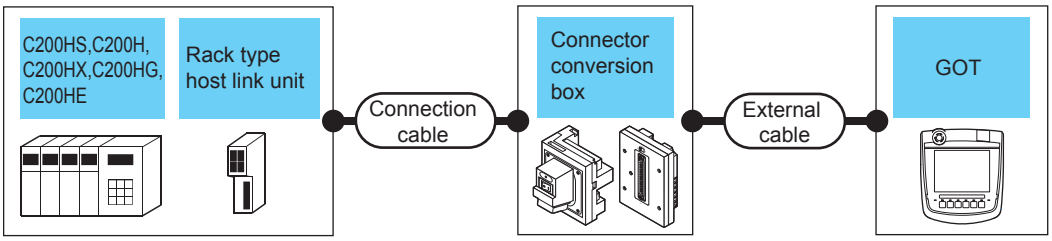
Connecting to C200HS, C200H, C200HX, C200HG, or C200HE

Communication driver

OMRON SYSMAC

When connecting to PLC or rack type host link unit

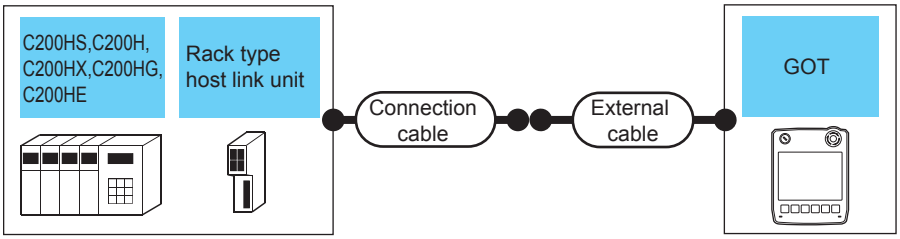
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Rack type host link unit*1	Communication Type	Cable model Connection diagram number					
C200HX C200HG C200HE	-	RS-232	GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
C200HS C200H C200HX C200HG C200HE	C200H-LK201-V1		GT09-C30R20103-25P(3m) or User preparing RS-232 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		1 GOT for 1 rack type host link unit
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
C200HS C200H C200HX C200HG C200HE	C200H-LK202-V1	RS-422	GT09-C30R40102-9P(3m) GT09-C100R40102-9P(10m) or User preparing RS-422 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by OMRON Corporation.
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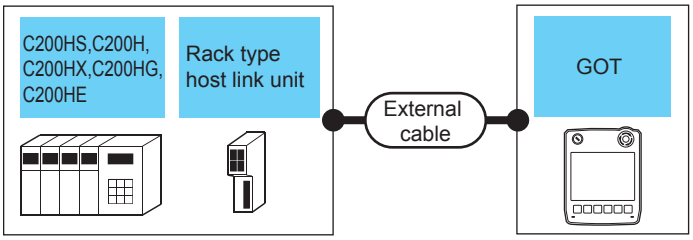
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Rack type host link unit*1	Communication Type	Cable model Connection diagram number				
C200HX C200HG C200HE	-	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
C200HS C200H C200HX C200HG C200HE	C200H-LK201-V1	RS-232	User preparing RS-232 connection diagram 8)	GT11H-C30-37P(3m)	GT 2505HS		1 GOT for 1 rack type host link unit
C200HS C200H C200HX C200HG C200HE	C200H-LK202-V1	RS-422	User preparing RS-422 connection diagram 5)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

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■When using the external cable (GT11H-C□□□)

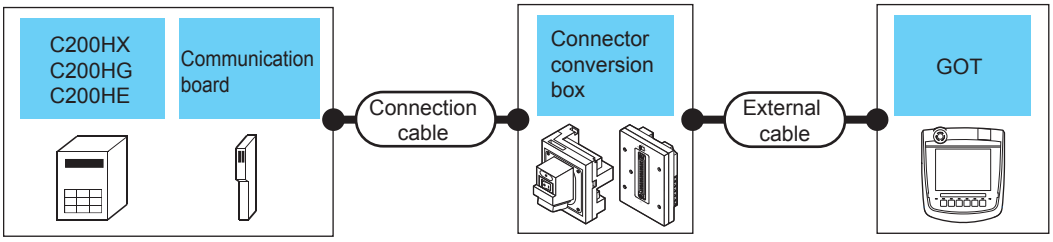


PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Rack type host link unit*1	Communication Type				
C200HX C200HG C200HE	-	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 PLC
C200HS C200H C200HX C200HG C200HE	C200H-LK201-V1	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 9)	GT 2505HS		1 GOT for 1 rack type host link unit
C200HS C200H C200HX C200HG C200HE	C200H-LK202-V1	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 6)	GT 2505HS	13m	

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When connecting to a communication board

■When using the connector conversion box

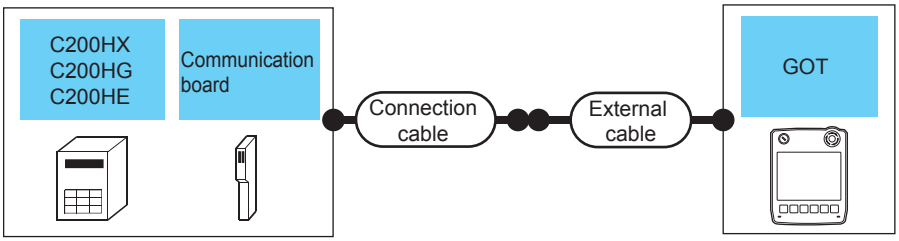


PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication board*1	Communication Type	Cable model Connection diagram number					
C200HX C200HG C200HE*2	C200HW-COM02(-V1) C200HW-COM05(-V1) C200HW-COM06(-V1)	RS-232	GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for each port of a communication board
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	C200HW-COM03(-V1) C200HW-COM06(-V1)	RS-422	GT09-C30R40101-9P(3m) GT09-C100R40101-9P(10m) or User preparing RS-422 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by OMRON Corporation.
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*2 The communication board cannot be mounted to the C2000HE-CPU11.
Use a host Link unit.

■When using the external cable (GT11H-C□□□-37P)

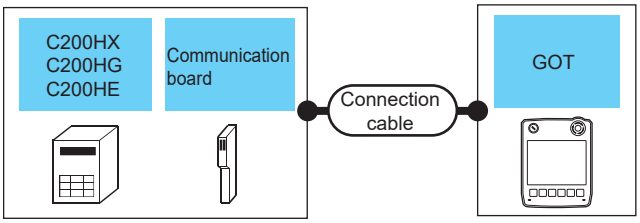


PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication board*1	Communication Type	Cable model Connection diagram number				
C200HX C200HG C200HE*2	C200HW-COM02(-V1) C200HW-COM05(-V1) C200HW-COM06(-V1)	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for each port of a communication board
	C200HW-COM03(-V1) C200HW-COM06(-V1)	RS-422	User preparing RS-422 connection diagram 8)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

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*2 The communication board cannot be mounted to the C2000HE-CPU11.
Use a host Link unit.

■When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication board*1	Communication Type				
C200HX C200HG C200HE*2	C200HW-COM02(-V1) C200HW-COM05(-V1) C200HW-COM06(-V1)	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for each port of a communication board
	C200HW-COM03(-V1) C200HW-COM06(-V1)	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 9)	GT 2505HS	13m	

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*2 The communication board cannot be mounted to the C2000HE-CPU11.
Use a host Link unit.

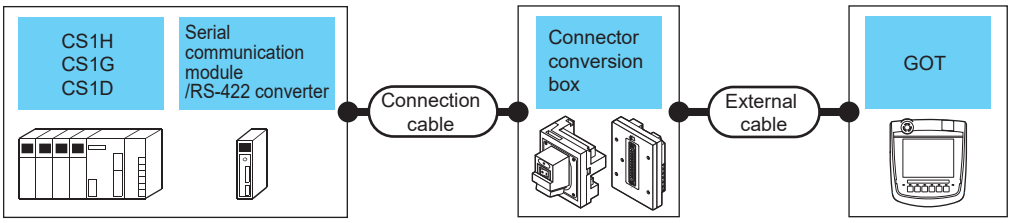
Connecting to CS1H, CS1G, or CS1D

Communication driver

OMRON SYSMAC

When connecting to a PLC or a serial communication module

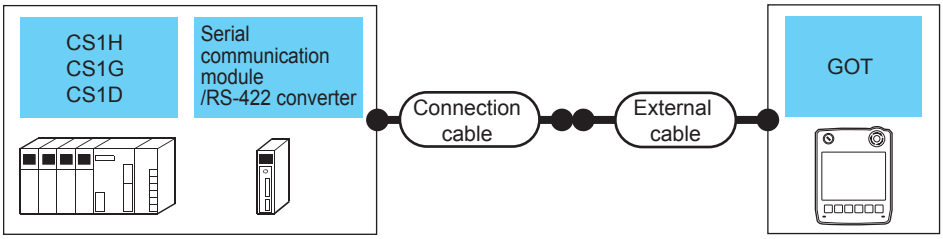
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication module*1 /RS-422A converter	Communication Type	Cable model Connection diagram number					
CS1H CS1G CS1D	-	RS-232	GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	CS1W-SCU21 CS1W-SCU21-V1			GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		1 GOT for 1 serial communication module
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	CJ1W-CIF11	RS-422	GT09-C30R40103-5T(3m) GT09-C100R40103-5T(10m) or User preparing RS-422 connection diagram 10)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 RS-422A converter
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by OMRON Corporation.
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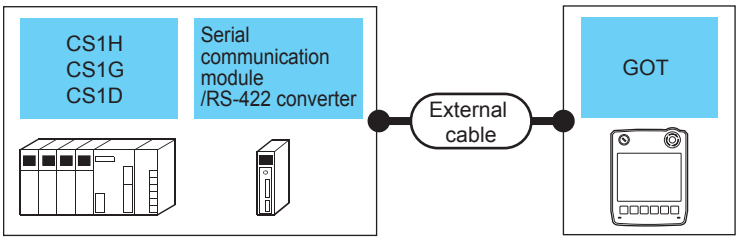
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication module*1 /RS-422A converter	Communication Type	Cable model Connection diagram number				
CS1H CS1G CS1D	-	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
	CS1W-SCU21 CS1W-SCU21-V1			GT11H-C30-37P(3m)	GT 2505HS		1 GOT for 1 serial communication module
	CJ1W-CIF11	RS-422	User preparing RS-422 connection diagram 11)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for 1 RS-422A converter

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

■When using the external cable (GT11H-C□□□)

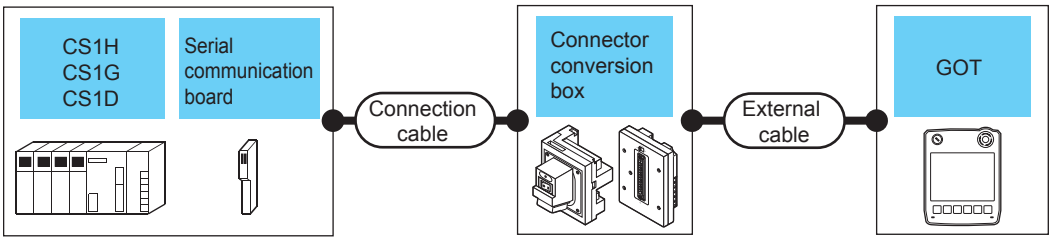


PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication module*1 /RS-422A converter	Communication Type				
CS1H CS1G CS1D	-	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 PLC
	CS1W-SCU21 CS1W-SCU21-V1		GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS		1 GOT for 1 serial communication module
	CJ1W-CIF11	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 12)	GT 2505HS	13m	1 GOT for 1 RS-422A converter

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

When connecting to a serial communication board

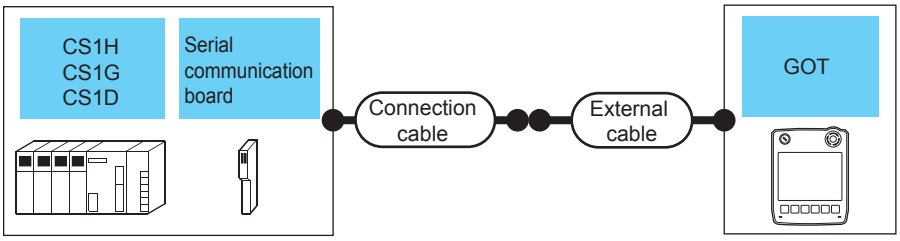
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication board*1	Communication Type	Cable model Connection diagram number					
CS1H CS1G CS1D	CS1W-SCB21 CS1W-SCB41 CS1W-SCB21-V1 CS1W-SCB41-V1	RS-232	GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for each port of a serial communication board
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	CS1W-SCB41 CS1W-SCB41-V1	RS-422	GT09-C30R40101-9P(3m) GT09-C100R40101-9P(10m) or User preparing RS-422 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

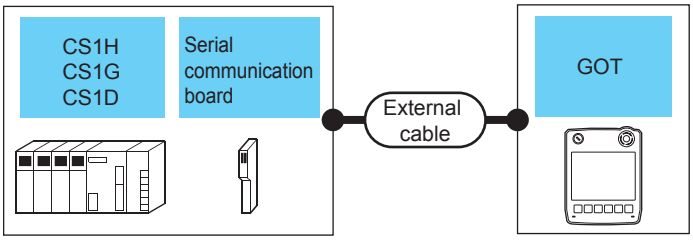
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication board*1	Communication Type	Cable model Connection diagram number				
CS1H CS1G CS1D	CS1W-SCB21 CS1W-SCB41 CS1W-SCB21-V1 CS1W-SCB41-V1	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for each port of a serial communication board
	CS1W-SCB41 CS1W-SCB41-V1	RS-422	User preparing RS-422 connection diagram 8)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

■When using the external cable (GT11H-C□□□)



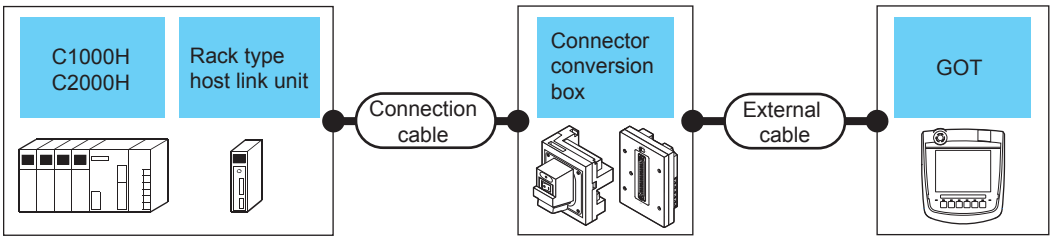
PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication board*1	Communication Type				
CS1H CS1G CS1D	CS1W-SCB21 CS1W-SCB41 CS1W-SCB21-V1 CS1W-SCB41-V1	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for each port of a serial communication board
	CS1W-SCB41 CS1W-SCB41-V1	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 9)	GT 2505HS	13m	

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

Connecting to C1000H, C2000H

Communication driver
OMRON SYSMAC

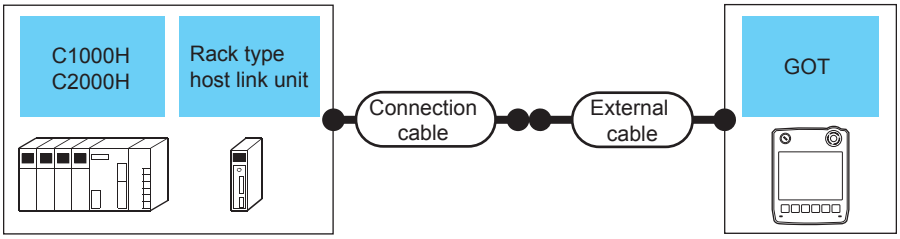
When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Rack type host link unit*1	Communication Type	Cable model Connection diagram number					
C1000H C2000H	C500-LK201-V1	RS-232	GT09-C30R20103-25P(3m) or User preparing RS-232 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 rack type host link unit
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		RS-422	User preparing RS-422 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

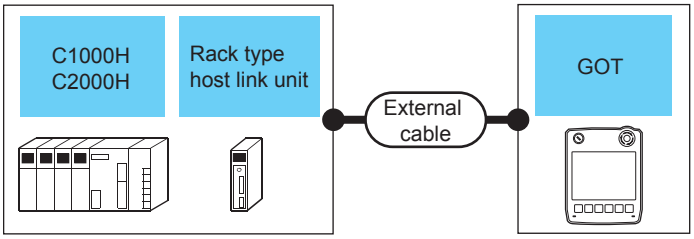
When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Rack type host link unit*1	Communication Type	Cable model Connection diagram number				
C1000H C2000H	C500-LK201-V1	RS-232	User preparing RS-232 connection diagram 8)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 rack type host link unit
		RS-422	User preparing RS-422 connection diagram 5)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Rack type host link unit*1	Communication Type				
C1000H C2000H	C500-LK201-V1	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 9)	GT 2505HS	6m	1 GOT for 1 rack type host link unit
		RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 6)	GT 2505HS	13m	

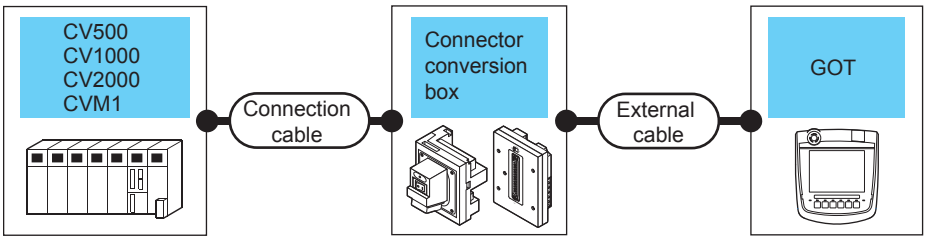
*1 Product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

Connecting to CV500, CV1000, CV2000, or CVM1

Communication driver

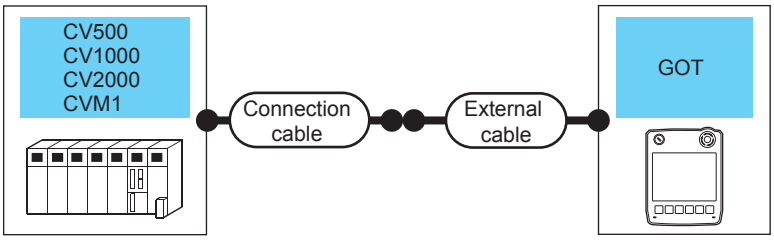
OMRON SYSMAC

When using the connector conversion box



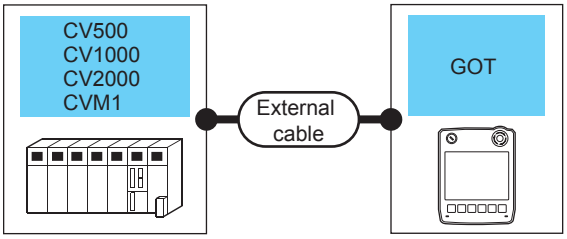
PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
CV500 CV1000 CV2000 CVM1	RS-232	GT09-C30R20101-9P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	RS-422	GT09-C30R40101-9P(3m) GT09-C100R40101-9P(10m) or User preparing RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
CV500 CV1000 CV2000 CVM1	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
	RS-422	User preparing RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

When using the external cable (GT11H-C□□□)



PLC		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
CV500 CV1000 CV2000 CVM1	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 PLC
	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 3)	GT 2505HS	13m	

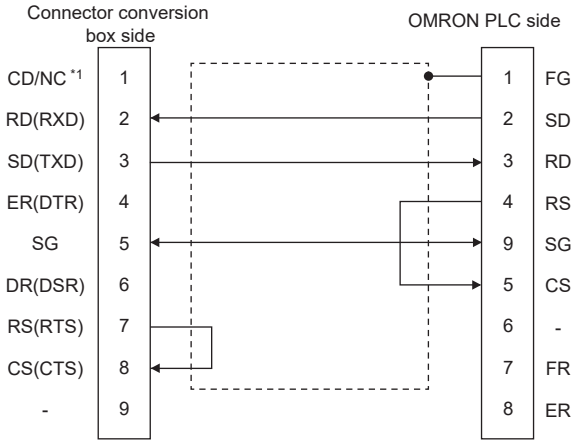
Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

RS-232 cable

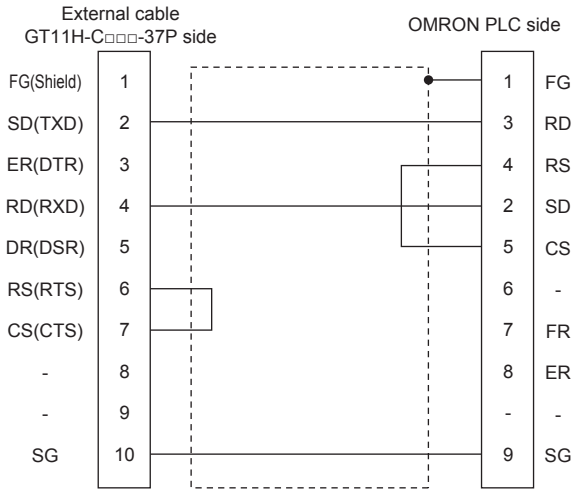
■Connection diagram

• RS-232 connection diagram 1)

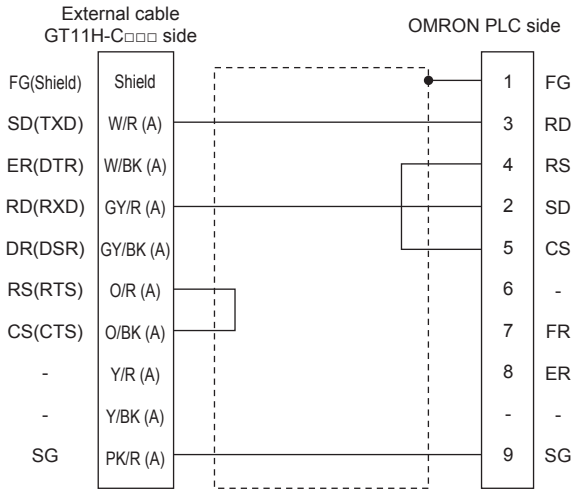


*1 GT2506HS-V: CD, GT2505HS-V: NC

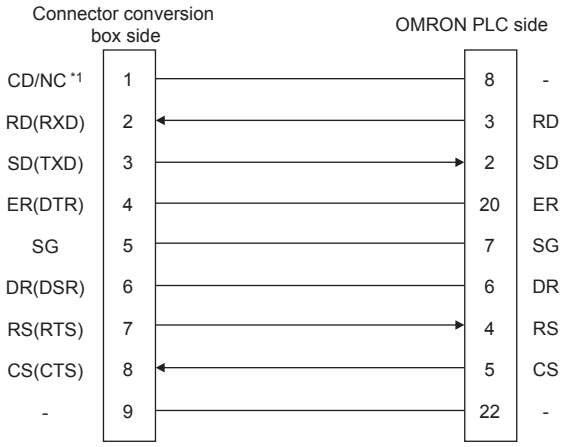
• RS-232 connection diagram 2)



• RS-232 connection diagram 3)

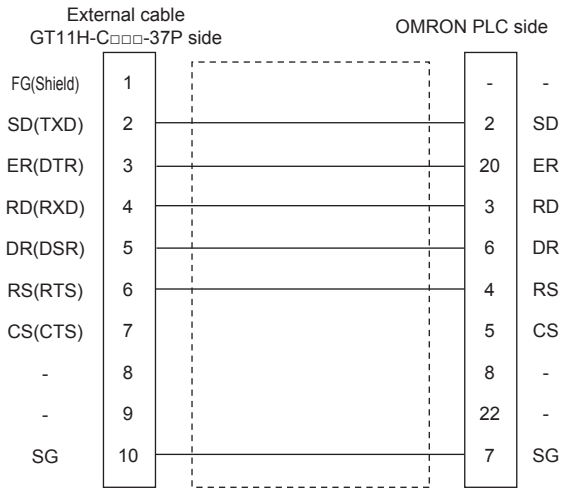


• RS-232 connection diagram 4)

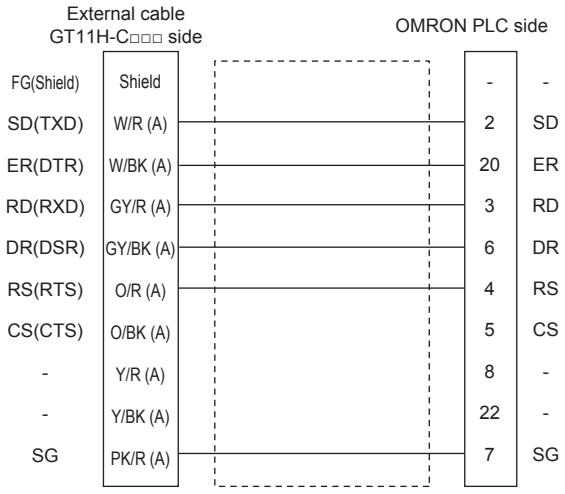


*1 GT2506HS-V: CD, GT2505HS-V: NC

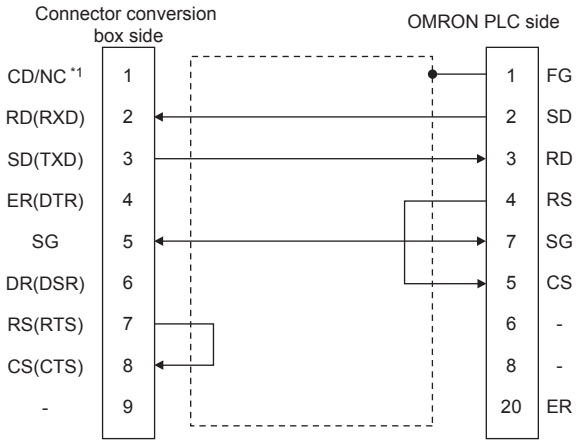
• RS-232 connection diagram 5)



• RS-232 connection diagram 6)

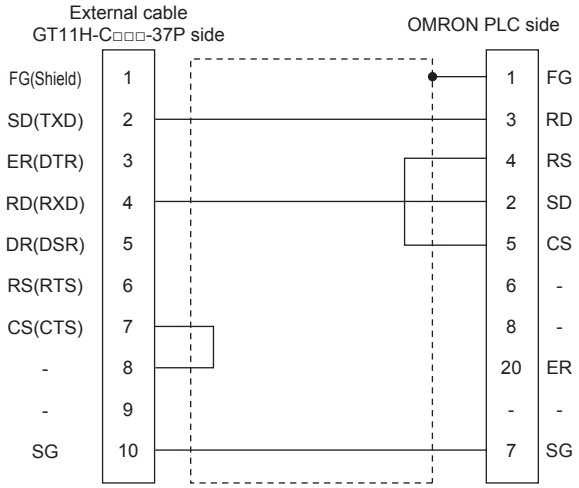


• RS-232 connection diagram 7)

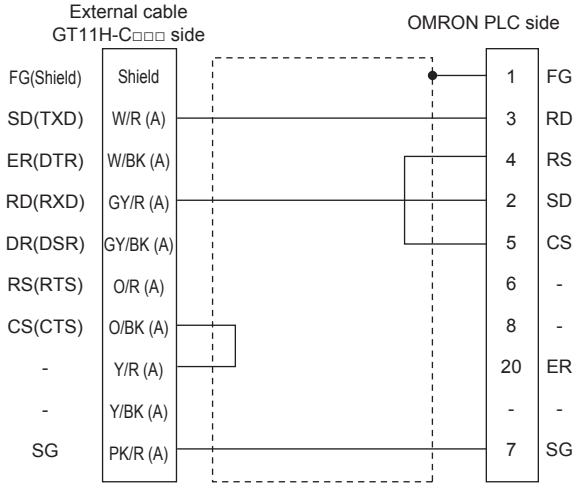


*1 GT2506HS-V: CD, GT2505HS-V: NC

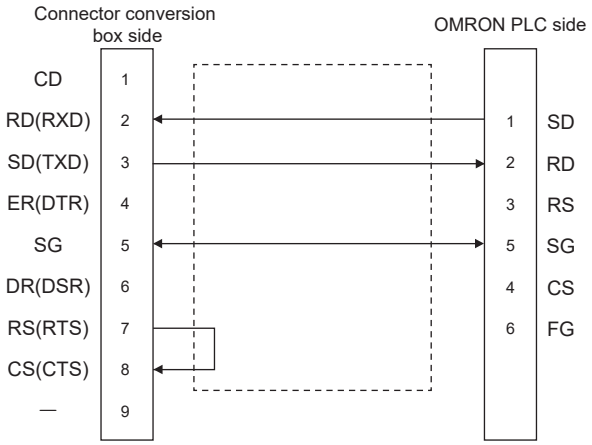
• RS-232 connection diagram 8)



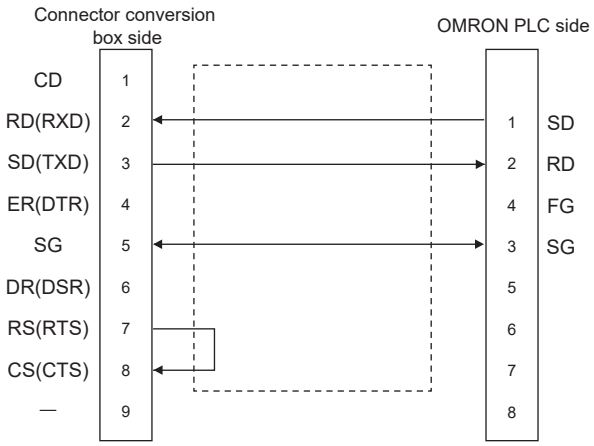
• RS-232 connection diagram 9)



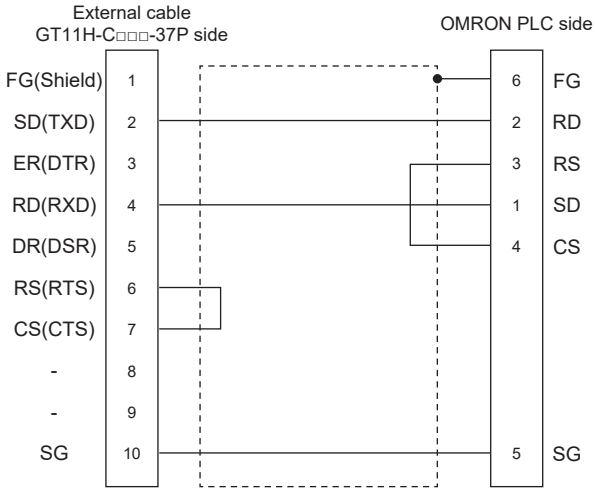
• RS-232 connection diagram 10)



• RS-232 connection diagram 11)

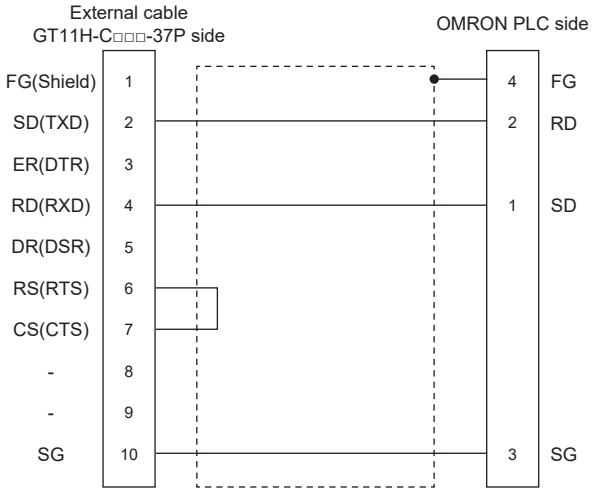


• RS-232 connection diagram 12)

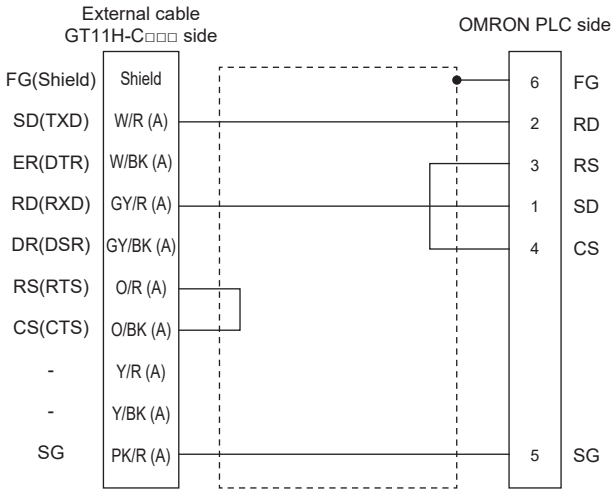


16

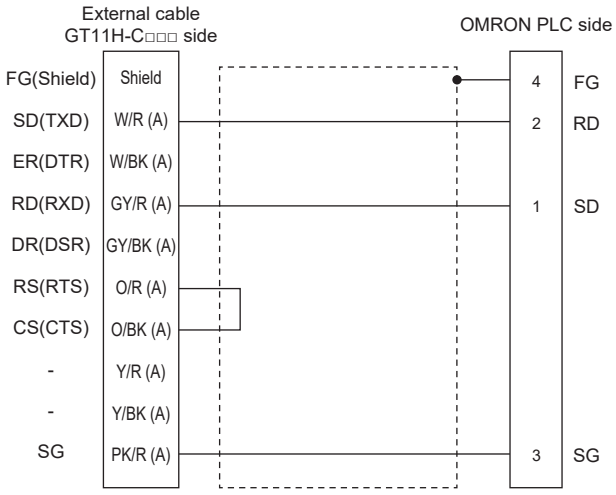
• RS-232 connection diagram 13)



• RS-232 connection diagram 14)



• RS-232 connection diagram 15)



■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

• OMRON PLC side connector

Use the connector compatible with the OMRON PLC.

For details, refer to the OMRON PLC user's manual.

RS-422 cable

Point

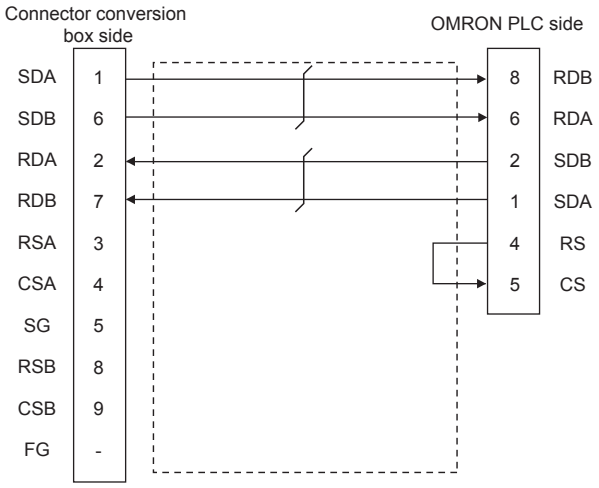
Differences in polarity between GOT and OMRON PLCs

The polarity of poles A and B in signal names is reversed between GOT and OMRON PLCs.

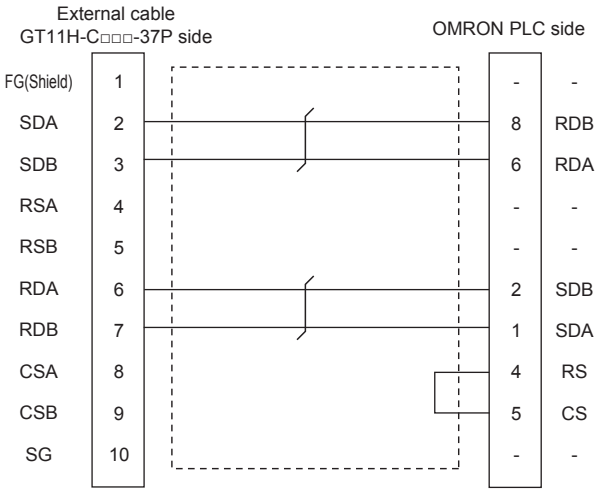
■Connect a cable according to the following connection diagrams.

■Connection diagram

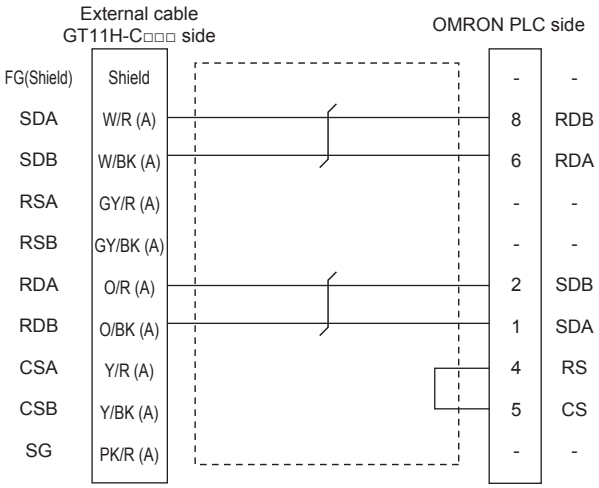
• RS-422 connection diagram 1)



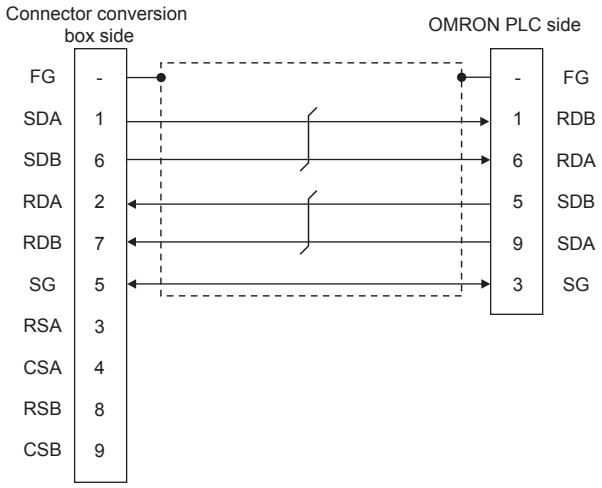
• RS-422 connection diagram 2)



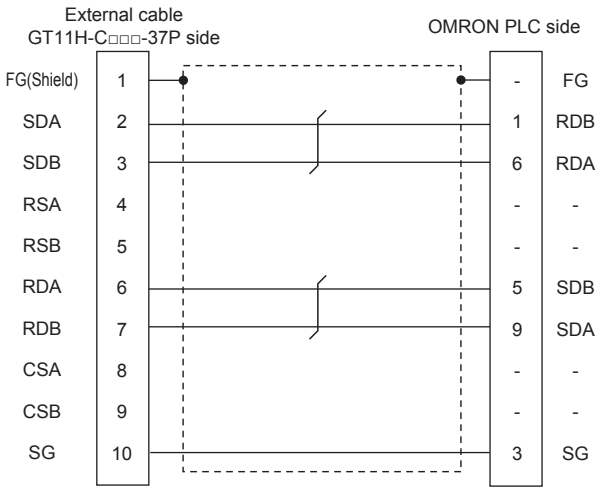
• RS-422 connection diagram 3)



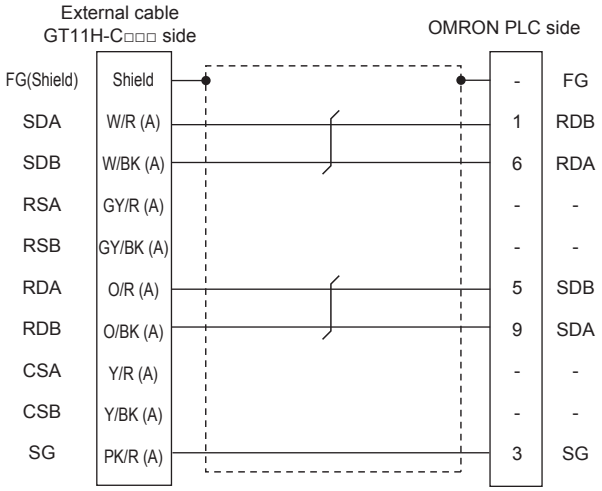
• RS-422 connection diagram 4)



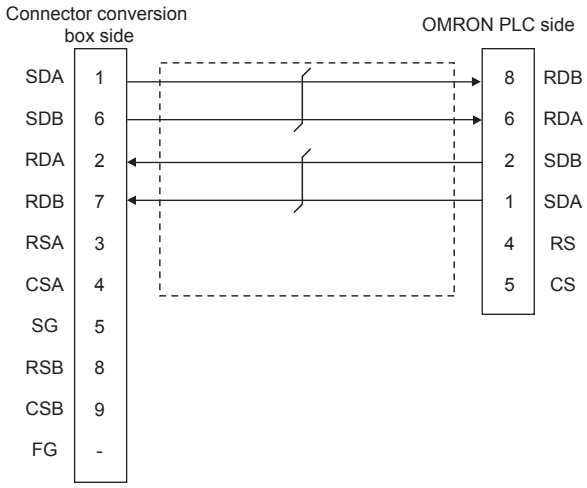
• RS-422 connection diagram 5)



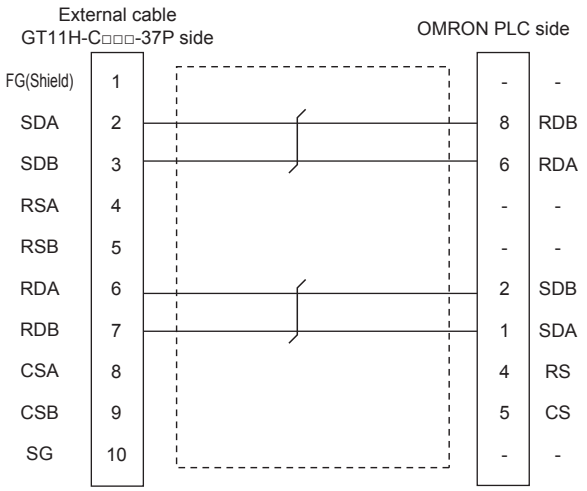
• RS-422 connection diagram 6)



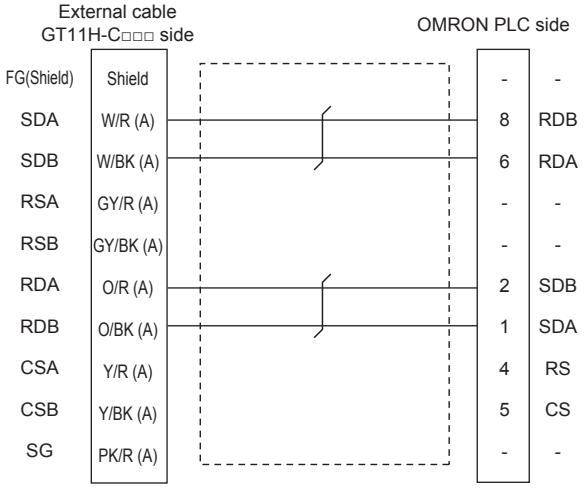
• RS-422 connection diagram 7)



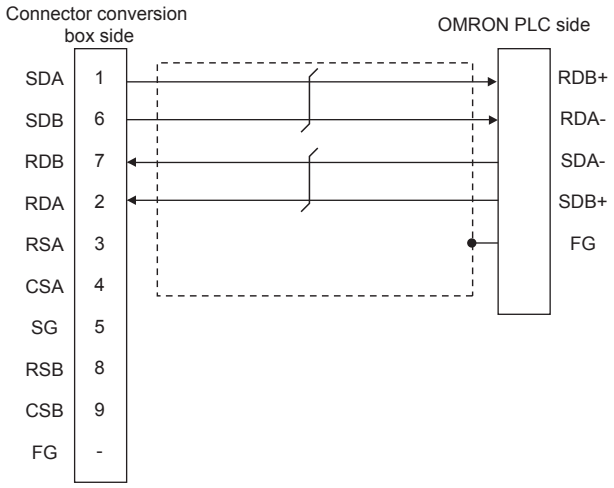
• RS-422 connection diagram 8)



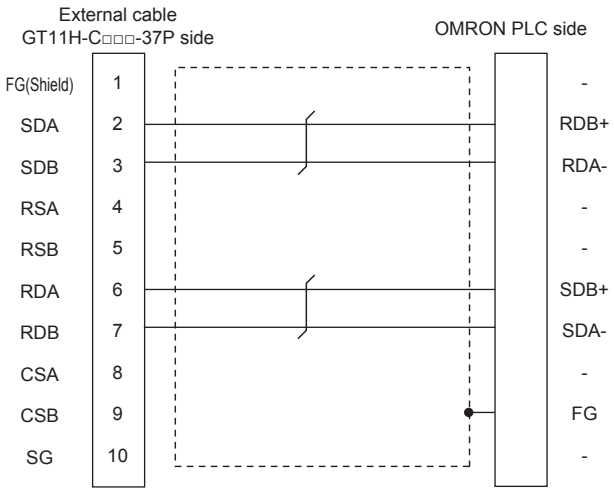
• RS-422 connection diagram 9)



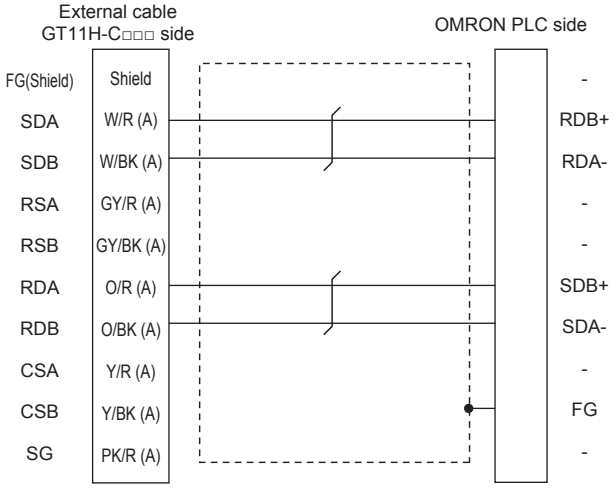
• RS-422 connection diagram 10)



• RS-422 connection diagram 11)



• RS-422 connection diagram 12)



■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

• OMRON PLC side connector

Use the connector compatible with the OMRON PLC.

For details, refer to the OMRON PLC user's manual.

■Setting terminating resistors

• GOT side

◇For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

◇For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

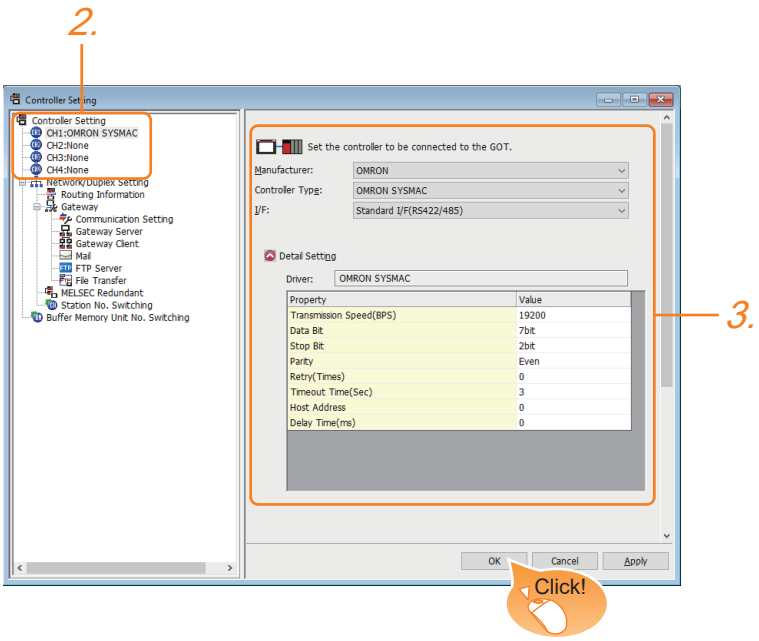
• OMRON PLC side

When connecting an OMRON PLC to a GOT, a terminating resistor must be set to the OMRON PLC.

📖OMRON PLC user's Manual

Setting communication interface (Communication settings)

Set the channel of the equipment to be connected to the GOT.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [OMRON]
- [Controller Type]: [OMRON SYSMAC]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 994 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
Transmission Speed(BPS)	19200
Data Bit	7 bit
Stop Bit	2 bit
Parity	Even
Retry(Times)	0
Timeout Time(Sec)	3
Host Address	0
Delay Time(ms)	0

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 19200bps)	4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 7bits)	7bit (fixed)
Stop Bit	Specify the stop bit length for communications. (Default: 2bits)	2bit (fixed)
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Even)	Even (fixed)
Retry	Set the number of retries to be performed when a communication error occurs. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Host Address	Specify the host address (station No. of the PLC to which the GOT is connected) in the network of the GOT. (Default: 0)	0 to 31
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300 (ms)

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

PLC Side Setting

Point

OMRON PLC

For details of OMRON PLCs, refer to the following manuals.

OMRON PLC user's Manual

Model name		Refer to
PLC CPU	CPM2A	☞ Page 996 Connecting to CPM2A, CQM1, CQM1H, C200Hα or RS-232C adapter
	CQM1, CQM1H	
	CS1, CJ1, CJ2	☞ Page 997 Connecting to CJ1, CJ2, CS1, CP1H, CP1L, CP1E, or CP2E
	CP1H, CP1L, CP1E, CP2E-E, CP2E-S	☞ Page 997 Connecting to CJ1, CJ2, CS1, CP1H, CP1L, CP1E, or CP2E
	C200Hα	☞ Page 996 Connecting to CPM2A, CQM1, CQM1H, C200Hα or RS-232C adapter
	CV500, CV1000, CV2000, CVM1	☞ Page 1000 Connecting to CV500/CV1000/CV2000 or CVM1
RS-232C adapter	CPM1-CIF01, CPM2C-CIF01-V1	☞ Page 996 Connecting to CPM2A, CQM1, CQM1H, C200Hα or RS-232C adapter
Connection cable	CQM1-CIF01	☞ Page 1001 Connecting to connection cable
	CQM1-CIF02	
	CPM2C-CN111	
Rack type host link unit	C200H-LK201-V1	☞ Page 1002 Connecting to rack type host link unit
	C200H-LK202-V1	☞ Page 1002 Connecting to rack type host link unit
	C500-LK201-V1	☞ Page 1002 Connecting to rack type host link unit
Serial communication module	CJ1W-SCU21	☞ Page 1007 Connecting to serial communication unit
	CJ1W-SCU41	
	CJ1W-SCU21-V1	
	CJ1W-SCU31-V1	
	CJ1W-SCU41-V1	
	CS1W-SCU21	
	CS1W-SCU21-V1	
Communication board	C200HW-COM02(-V1)	☞ Page 1008 Connecting to communication board
	C200HW-COM03(-V1)	
	C200HW-COM05(-V1)	
	C200HW-COM06(-V1)	
Serial communication board	CQM1H-SCB41	☞ Page 1010 Connecting to serial communication board
	CS1W-SCB21 CS1W-SCB21-V1	
	CS1W-SCB41 CS1W-SCB41-V1	
RS-422A/485 Option board	CP1W-CIF11	☞ Page 1012 Connecting to RS-422A/485 Option board
	CP1W-CIF12 CP1W-CIF12-V1	
RS-422A converter	CJ1W-CIF11	☞ Page 1012 Connecting to RS-422A converter
RS-232C&RS-485 Option Board	CP2W-CIFD2	☞ Page 1013 Connecting to RS-232C&RS-485 Option Board

Connecting to CPM2A, CQM1, CQM1H, C200Hα or RS-232C adapter

Device settings

Write the following set values to devices of each PLC CPU and initialize each port using a peripheral tool or DM monitor.

Device name	Set value
DM6645	0001H(fixed)
DM6646	b15 to b8 | b7 to b0 2) | 1) 1) RS-232C port transmission speed setting *1*2 02H: 4800bps 03H: 9600bps 04H: 19200bps 2) RS-232C port communication frame format 03H (fixed): The settings are: Start bit : 1 bit Data length: 7 bits Stop bit : 2 bits Parity : Even bits
DM6647	0000 (fixed)
DM6648*3	0000 to 0031
DM6649	0000 (fixed)

*1 Only transmission speeds available on the GOT side are shown.
*2 Set the same transmission speed of the RS-232C port as that of the GOT side.
*3 Set the RS-232C port host link station No. according to the Host Address on the GOT side.

Point

Precautions for changing device values

Before changing the device values, make sure that the switch settings have been changed as follows:

CPM2A:

The communication condition switch to "individual"

Other PLC CPU:

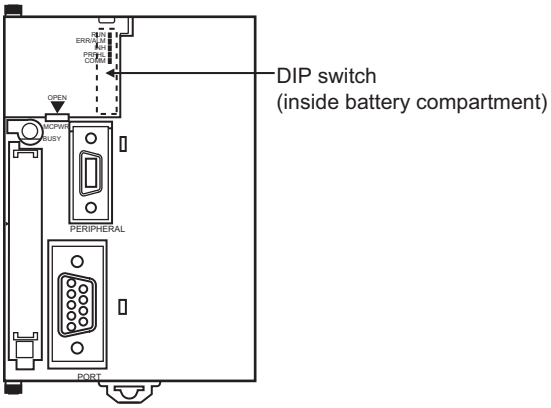
Front panel DIP switch SW5 to "OFF"

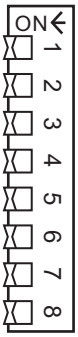
Connecting to CJ1, CJ2, CS1, CP1H, CP1L, CP1E, or CP2E

Setting DIP switches

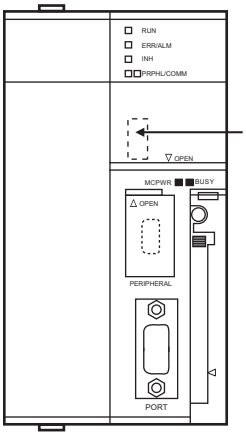
Set the DIP switches.

■Setting on the CJ1, CJ2

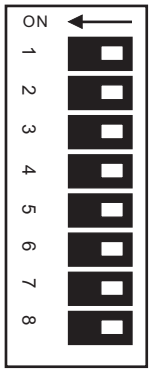


Switch		Description	Settings
	SW1	Enable/disable write to user memory (UM)	OFF
	SW2	Enable/disable automatic transfer of user program at power ON	OFF
	SW3	Free	OFF
	SW4	CJ1: Peripheral port communication condition CJ2: Free	OFF
	SW5	RS-232C communication condition	OFF
	SW6	User customized DIP switch	OFF
	SW7	Type specification for simplified backup	OFF
	SW8	-	OFF

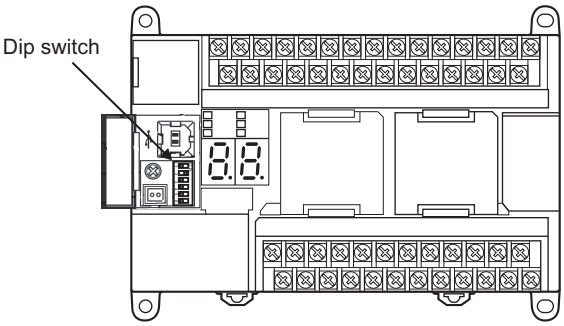
■Setting on the CS1

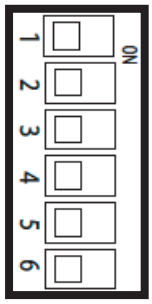


DIP switch
(inside battery compartment)

Switch		Description	Settings
	SW1	Enable/disable write to user memory (UM)	OFF
	SW2	Enable/disable automatic transfer of user program at power ON	OFF
	SW3	Programming console message display language (Japanese/English)	OFF
	SW4	Peripheral port communication condition	OFF
	SW5	RS-232C communication condition	OFF
	SW6	User customized DIP switch	OFF
	SW7	Type specification for simplified backup	OFF
	SW8	-	OFF

■Setting on the CP1H, CP1L



Switch		Description		Settings
	SW4	Option Board Slot1	According to PLC Setup.	OFF
	SW5	Option Board Slot2		OFF

■Setting on the CP1E, CP2E

Settings by DIP switch are not required.

Setting PLC system settings

■CJ1, CJ2, CS1

Make the PLC system settings.

Channel	Bit	Item	Set value
160	15	Arbitrary settings ON/OFF	1H: Arbitrary settings (fixed)
	8 to 11	Serial communication mode	0H: Upper link (fixed)
	3	Data bit	0H: 7bits (fixed)
	2	Stop bit	0H: 2bits (fixed)
	0 to 1	Parity	0H: Even (fixed)
161	0 to 7	Port transmission speed*1*2	00H: 9600bps 05H: 4800bps 06H: 9600bps 07H: 19200bps 08H: 38400bps 09H: 57600bps 0AH: 115200bps
163	0 to 7	Host link station No.*3	0H to 1FH : No.00 to 31

*1 Only transmission speeds available on the GOT side are shown.
*2 Set the same port transmission speed as that of the GOT side.
*3 Set the host link station No. according to the Host Address on the GOT side.

Point

Precautions for changing the PLC system settings

Before changing the PLC system settings, make sure that the switch settings have been changed as follows:

CJ1, CJ2, CS1: Front panel DIP switch SW5 to "OFF"

■CP1H, CP1L, CP1E, CP2E

Set the PLC system settings of the option slot connected to the GOT.

Item	Set value
Mode	Host link
Parameter	7, 2, E
Baud rate*1*2	4800bps, 9600bps, 19200bps 38400bps, 57600bps, 115200bps
Unit number*3	00 to 31

*1 Only transmission speeds available on the GOT side are shown.
*2 Set the same port transmission speed as that of the GOT side.
*3 Set the host link station No. according to the Host Address on the GOT side.

Point

Precautions for changing the PLC system settings

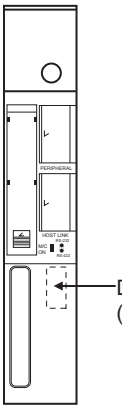
When using the CP1H or CP1L, if you change the PLC system settings, check the settings of the front DIP switch that corresponds to the option slot used to establish communication with the GOT.

☞ Page 998 Setting on the CP1H, CP1L

Connecting to CV500/CV1000/CV2000 or CVM1

Setting DIP switches

Set the DIP switches.



■Host link RS-422/232 switch

RS-232



RS-422

Settings	
For RS-232 communication	For RS-422 communication
RS-232 (up)	RS-422 (down)

■DIP switches



Switch No.	Settings	
	For RS-232 communication	For RS-422 communication
6	OFF (no terminating resistor)	ON (terminating resistor attached)
5	OFF	
4	OFF	
3	OFF	
2	OFF	
1	OFF	

Setting PLC system settings

Make the PLC system settings.

Item	Set value
Transmission speed*1*2	4800bps/9600bps/19200bps
Stop bit	2 stop bits (fixed)
Parity	Even (fixed)
Data bit	7bits (fixed)
Unit number*3	00 to 31

*1 Only transmission speeds available on the GOT side are shown.
*2 Set the same transmission speed of the GOT.
*3 Set the station No. according to the Host Address on the GOT side.

Connecting to connection cable

Device settings

Write the following set values to devices of each PLC CPU and initialize each port using a peripheral tool or DM monitor.

Device name	Set value
DM6650	0001H(fixed)
DM6651	b15 to b8 | b7 to b0 2) | 1) 1) RS-232C port transmission speed setting*1*2 02H: 4800bps 03H: 9600bps 04H: 19200bps 2) RS-232C port communication frame format 03H (fixed): The settings are: Start bit : 1 bit Data length: 7 bits Stop bit : 2 bits Parity : Even bits
DM6652	0000 (fixed)
DM6653*3	0000 to 0031

*1 Only transmission speeds available on the GOT side are shown.
*2 Set the same transmission speed of the peripheral port as that of the GOT side.
*3 Set the peripheral port host link station No. according to the Host Address on the GOT side.

Point

Precautions for changing device values

Before changing the device values, make sure that the switch settings have been changed as follows:

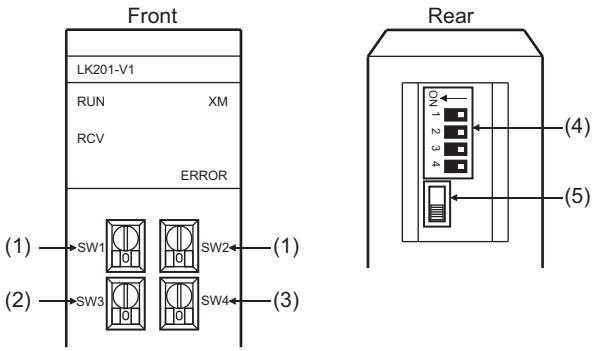
CPM2A: The communication condition switch to "individual"

CPM2C: The communication port function switch to "OFF"

Connecting to rack type host link unit

Switch setting on C200H-LK201-V1

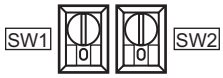
Set the switches accordingly.



■Setting Machine No. (SW1, SW2)

Set the Machine No. within the range of 00 to 31.

Set the station No. according to the Host Address on the GOT side.



Rotary switch	Description	Settings
SW1	Machine No. upper digit ($\times 10^1$)	0 to 3
SW2	Machine No. lower digit ($\times 10^0$)	0 to 9

■Setting transmission speed (SW3)

Set the same transmission speed of the GOT.



Setting*1	Settings
4	4800bps
5	9600bps
6	19200bps

*1 Only transmission speeds available on the GOT side are shown.

■Setting command level/parity/transmission code (SW4)



Settings	Setting details		
	Command level	Parity	Transmission code
2 (fixed)	Levels 1, 2 and 3 enabled	Even	ASCII 7 bits 2 stop bits

■Setting DIP switches



Switch No.	Set value
1	OFF
2	OFF
3	ON (1:N procedure)
4	OFF (no 5V power supply)

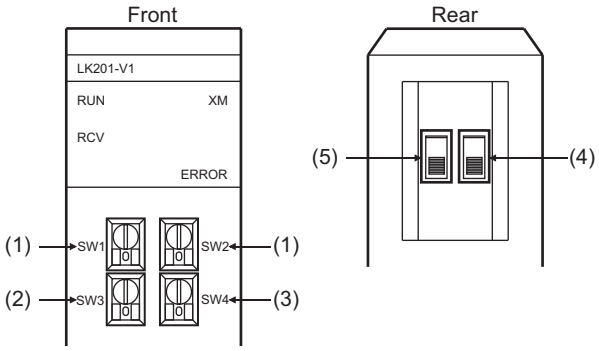
■Setting the CTS switch



Settings
0V

Switch setting on C200H-LK202-V1

Set the switches accordingly.



■Setting Machine No. (SW1, SW2)

Set the Machine No. within the range of 00 to 31.

Set the station No. according to the Host Address on the GOT side.



Rotary switch	Description	Settings
SW1	Machine No. upper digit ($\times 10^1$)	0 to 3
SW2	Machine No. lower digit ($\times 10^0$)	0 to 9

■Setting transmission speed (SW3)

Set the same transmission speed of the GOT.

SW3 

Setting*1	Settings
4	4800bps
5	9600bps
6	19200bps

*1 Only transmission speeds available on the GOT side are shown.

■Setting command level/parity/transmission code (SW4)

 SW4

Settings	Setting details		
	Command level	Parity	Transmission code
2 (fixed)	Levels 1, 2 and 3 enabled	Even	ASCII 7 bits 2 stop bits

■Setting the 1:1/1:N procedure switch



Settings
OFF (1:N procedure)

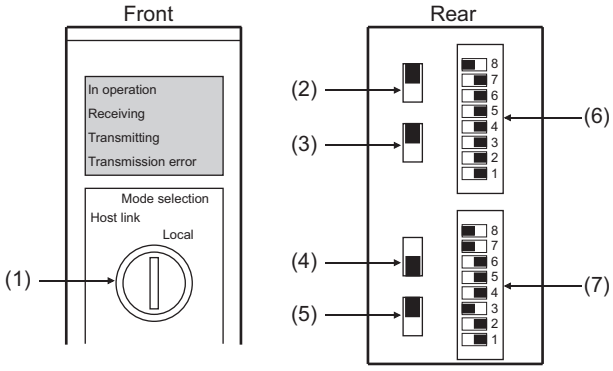
■Setting the terminating resistor connection switch



Settings
ON (terminating resistor attached)

Switch setting on C500-LK201-V1

Set the switches accordingly.



■Setting host link/local



Settings
Host link

■RS-232C/RS-422 switch



Settings	
For RS-232 communication	For RS-422 communication
RS-232 (down)	RS-422 (up)

■Internal/external clock switch



Settings
Internal (up)

■Terminating resistor connection switch



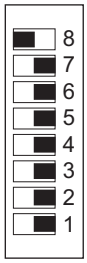
Settings
Attached (down)

■CTS switch

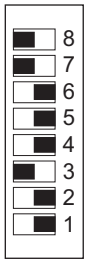


Settings
0V (up)

■Setting SW1 (Station No., Run/Stop)

Switch No.		Settings	Description
	8	ON	Run
	7	OFF	-
	6	OFF	-
	5	Set the station No. within the range of 00 to 31. For details, refer to the following manual. OMRON PLC user's Manual	
	4		
	3		
	2		
	1		

■Setting SW2 (Transmission speed, Procedure, Level)

Switch No.		Settings	Description
	8	ON	Levels 1, 2 and 3 enabled
	7	ON	
	6	OFF	1:N procedure
	5	OFF	-
	4	*1	Transmission speed
	3		
	2		
	1		

*1 Only transmission speeds available on the GOT side are shown.

Transmission speed	Switch No.			
	SW1	SW2	SW3	SW4
4800bps	OFF	ON	ON	OFF
9600bps	ON	OFF	ON	OFF
19200bps	OFF	OFF	ON	OFF

Connecting to serial communication unit

Device settings

Write the following set values to devices of each PLC CPU and initialize each port using a peripheral tool or DM monitor.

Device name		Set value
Port 1	Port 2	
DM (m)	DM (m+10)	8000H(fixed): The settings are: Port setting: Arbitrary setting Serial communication mode: Host link Start bit: 1bit Data bit: 7bits Stop bit: 2bits Parity: Even
DM (m+1)	DM (m+11)	b15 to b8: 0_H b7 to b0: 1) 1) Transmission speed[*1*2] 00_H: 9600bps, 08_H: 38400bps 05_H: 4800bps, 09_H: 57600bps 06_H: 9600bps, $0A_H$: 115200bps 07_H: 19200bps
DM (m+2)	DM (m+12)	8000H(fixed)
DM (m+3)[*3]	DM (m+13)[*3]	8000H to 801FH

m = 30000 + (100 × unit No.)

*1 Only transmission speeds available on the GOT side are shown.

*2 Set the same transmission speed of the GOT.

*3 Set the host link station No. according to the Host Address on the GOT side.

DIP switch setting

Set the DIP switches when connecting to CJ1W-SCU31-V1 or CJ1W-SCU41(-V1) to perform the RS-422 communications.

DIP switch		Set value
Name	Description	
WIRE	Setting(2-wire/4-wire) Switch	4 (4-wire type)
TERM	Terminator ON/OFF switch	OFF (no terminating resistor)

Connecting to communication board

Device settings

Write the following set values to devices of each PLC CPU and initialize each port using a peripheral tool or DM monitor.

Device name		Set value
Port B	Port A	
DM6550	DM6555	0001H(fixed)
DM6551	DM6556	b15 to b8 / b7 to b0 2) / 1) 1) Transmission speed*1*2 02H:4800bps 03H:9600bps 04H:19200bps 2) Frame format setting 03H (fixed): The settings are: Start bit :1 bit Data length:7 bits Stop bit :2 bits Parity :Even bits
DM6552	DM6557	0000 (fixed)
DM6553*3	DM6558*3	0000 to 0031

*1 Only transmission speeds available on the GOT side are shown.

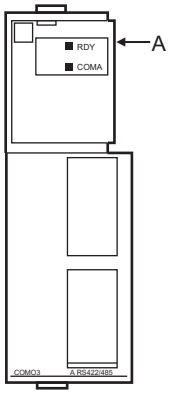
*2 Set the same transmission speed as that of the GOT side.

*3 Set the host link station No. according to the Host Address on the GOT side.

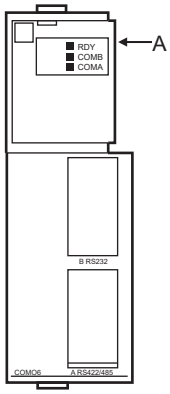
Setting DIP switches (C200HW-COM03(-V1) and C200HW-COM06(-V1) only)

Set the DIP switches when performing the RS-422 communications on the C200HW-COM03(-V1) and C200HW-COM06(-V1).

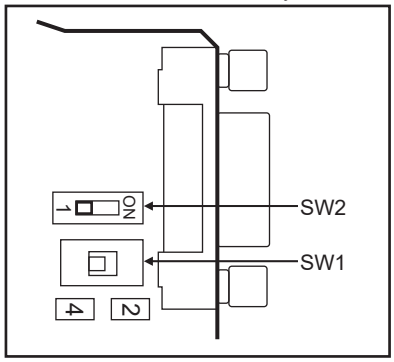
C200HW-COM03(-V1)



C200HW-COM06(-V1)



Side view indicated by A



DIP switch		Set value
No.	Item	
SW1	RS-422/485 cable (2-wire/4-wire type) switching	4 (4-wire type)
SW2	Terminator ON/OFF	1 (no terminating resistor attached)

Connecting to serial communication board

For the setting for connecting to the serial communication board (CQM1H-SCB41), refer to the following.

☞ Page 1008 Connecting to communication board

Device settings

Write the following set values to devices of each PLC CPU and initialize each port using a peripheral tool or DM monitor.

Device name		Set value
Port 1	Port 2	
D32000	D32010	8000H(fixed): The settings are: Port setting: Arbitrary setting Serial communication mode: Host link Start bit: 1bit Data bit: 7bits Stop bit: 2bits Parity: Even
D32001	D32011	b15 to b8 | b7 to b0 0H | 1) 1) Transmission speed*1*2 00H: 9600bps 08H: 38400bps 05H: 4800bps 09H: 57600bps 06H: 9600bps 0AH: 115200bps 07H: 19200bps
D32002	D32012	8000H(fixed)
D32003*3	D32013*3	0000H to 0001FH

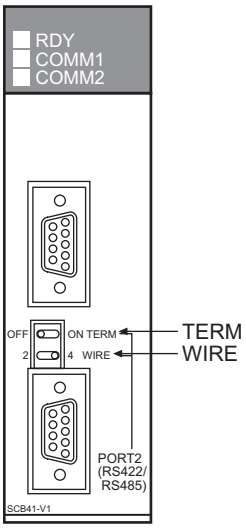
*1 Only transmission speeds available on the GOT side are shown.

*2 Set the same transmission speed of the GOT.

*3 Set the host link station No. according to the Host Address on the GOT side.

Setting the DIP switches (CS1W-SCB41(-V1) only)

Set the DIP switches when performing the RS-422 communications on the CS1W-SCB41(-V1).



DIP switch		Set value
Name	**Description**	
WIRE	Setting(2-wire/4-wire) Switch	4 (4-wire type)
TERM	Terminator ON/OFF switch	OFF (no terminating resistor)

Point

Precautions for changing the DM area

Before changing the DM area, make sure that the switch setting has been changed as follows.

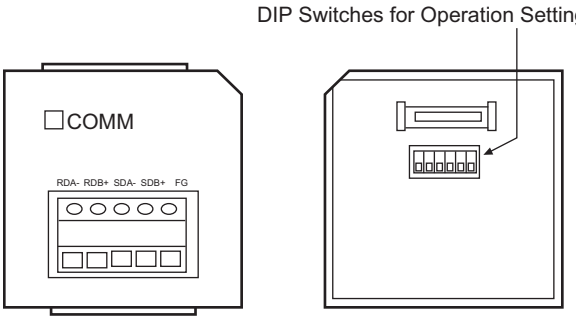
CS1: Front panel DIP switch SW5 to "OFF"

Connecting to RS-422A/485 Option board

Setting DIP switches

Set the DIP switches.

The DIP switch differs according to the type of the option board.

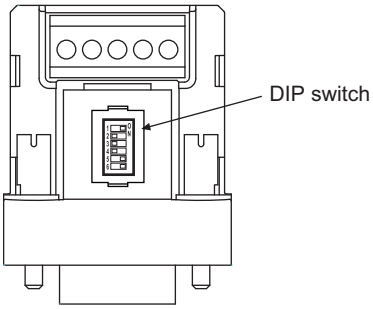


Option board				Settings	Description	
CP1W-CIF11, CP1W-CIF12		CP1W-CIF12-V1				
	Pin No.		Pin No.			
SW1 	1	SW1 	1	ON	Enable	Terminating resistance selection
	2		2	OFF	4-wire type	2-wire or 4-wire selection
	3		3	OFF	4-wire type	2-wire or 4-wire selection
	5	SW2	1	ON	RS control enabled	RS control selection for RD
	6		2	ON	RS control enabled	RS control selection for SD

Connecting to RS-422A converter

Setting DIP switches

Set the DIP switches.

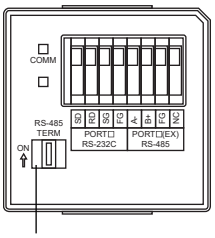


Switch No.		Settings	Description	
	1	ON	Enable	Terminating resistance selection
	2	OFF	4-wire type	2-wire or 4-wire selection
	3	OFF	4-wire type	2-wire or 4-wire selection
	5	ON	RS control enabled	RS control selection for RD
	6	ON	RS control enabled	RS control selection for SD

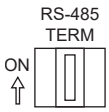
Connecting to RS-232C&RS-485 Option Board

Setting DIP switch

Set whether to enable or disable terminating resistors using the DIP switch.



DIP switch

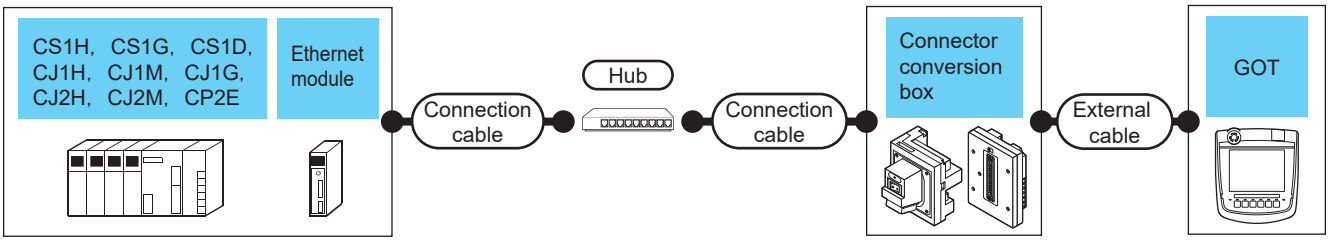
Settings		Description	
	ON	Enable (both terminals)	Terminating resistance selection

16.3 Ethernet Connection

Connecting to SYSMAC CJ1, CJ2, CS1, or CP2 series

Communication driver

Ethernet (OMRON), Gateway



PLC		Connection cable		Connector conversion box	External cable *6	GOT Model	Number of connectable equipment
Series	Ethernet module*3	Cable model*1	Maximum segment length*2				
CS1H CS1G CS1D	CS1W-ETN21 CS1W-EIP21	Twisted pair cable • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When PLC:GOT is N: 1 The following shows the number of PLCs for 1 GOT TCP: 128 or less UDP: 128 or less When PLC:GOT is 1: N The following shows the number of GOTs for 1 PLC TCP: 16 or less*4 UDP: No limit number*5
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
CS1D	CS1D-ETN21D			GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
CJ1H CJ1M	CJ1W-ETN21 CS1W-EIP21			GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

PLC		Connection cable		Connector conversion box	External cable *6	GOT Model	Number of connectable equipment
Series	Ethernet module*3	Cable model*1	Maximum segment length*2				
CJ1G	CJ1W-ETN21 CS1W-EIP21 CJ1W-EIP21S	Twisted pair cable • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When PLC:GOT is N: 1 The following shows the number of PLCs for 1 GOT TCP: 128 or less UDP: 128 or less When PLC:GOT is 1: N The following shows the number of GOTs for 1 PLC TCP: 16 or less*4 UDP: No limit number*5
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
CJ2H-CPU6□-EIP CJ2M-CPU3□	-		100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
	CJ1W-ETN21 CS1W-EIP21 CJ1W-EIP21S			GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
CJ2H-CPU6□ CJ2M-CPU1□	CJ1W-ETN21 CS1W-EIP21 CJ1W-EIP21S			GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
CP2E	-		100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P (3m) GT11H-C60-37P (6m) GT11H-C100-37P(10m)		

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
To connect the target device and hub, use a cable according to the target controller configuration.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

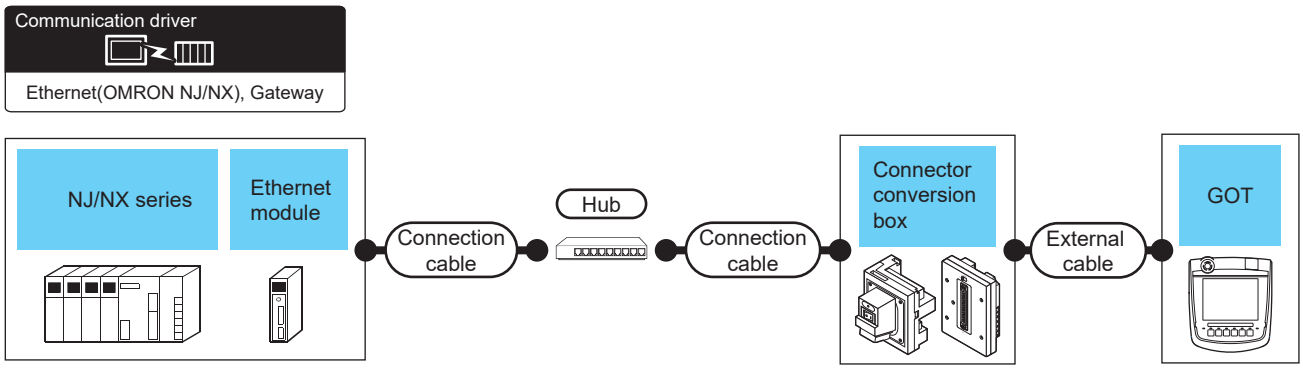
*3 Product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

*4 If it is connected to devices other than the GOT using the connection, the number of connectable GOTs decreases.
For details, refer to the OMRON PLC user's manual.

*5 There is no restriction for the number of GOTs. However, if the number of GOTs increases, the communication becomes high-loaded, and it may affect the communication performance.

*6 Use C or later version of GT11H-C□□-37P.

Connecting to NJ or NX series



PLC		Connection cable		Connector conversion box	External cable *5	GOT Model	Number of connectable equipment
Series	Ethernet module*3	Cable model*1	Maximum segment length*2				
NJ501-1500 NJ501-1400 NJ501-1300 NJ501-1520 NJ501-1420 NJ501-1320 NJ501-1340 NJ301-1200 NJ301-1100 NJ101-1000 NJ101-9000 NJ101-1020 NJ101-9020	CJ1W-EIP21 CJ1W-EIP21S	Shielded twisted pair cable (STP): Category 5 and 5e	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When PLC:GOT is N:1 The following shows the number of PLCs for 1 GOT 128 or less When PLC:GOT is 1:N The following shows the number of GOTs for 1 PLC <Connection: CLASS3> 128 or less *4 <Connection: UCMM> 32 or less *4
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
NJ501-1500 NJ501-1400 NJ501-1300 NJ501-1520 NJ501-1420 NJ501-1320 NJ501-1340 NJ301-1200 NJ301-1100 NJ101-1000 NJ101-9000 NJ101-1020 NJ101-9020 NX1P2-1140DT NX1P2-1140DT1 NX1P2-1040DT NX1P2-1040DT1 NX1P2-9024DT NX1P2-9024DT1	-		100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When PLC:GOT is N:1 The following shows the number of PLCs for 1 GOT 128 or less When PLC:GOT is 1:N The following shows the number of GOTs for 1 PLC <Connection: CLASS3> 32 or less *4 <Connection: UCMM> 32 or less *4
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
NX701-1700 NX701-1600	-	Shielded twisted pair cable (STP): Category 5 and 5e	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When PLC:GOT is N:1 The following shows the number of PLCs for 1 GOT 128 or less When PLC:GOT is 1:N The following shows the number of GOTs for 1 PLC <Connection: CLASS3> 128 or less per port (Total 256 or less for 2 ports) *4 <Connection: UCMM> 32 or less per port (Total 64 or less for 2 ports) *4
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

PLC		Connection cable		Connector conversion box	External cable *5	GOT Model	Number of connectable equipment
Series	Ethernet module*3	Cable model*1	Maximum segment length*2				
NX502-1700 NX502-1600 NX502-1500 NX502-1400 NX502-1300	-	Shielded twisted pair cable (STP): Category 5 and 5e	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When PLC:GOT is N:1 The following shows the number of PLCs for 1 GOT 128 or less When PLC:GOT is 1:N The following shows the number of GOTs for 1 PLC <Connection: CLASS3> 128 or less per port (Total 256 or less for 2 ports) *4 <Connection: UCMM> 32 or less per port (Total 64 or less for 2 ports) *4
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
NX102-1200 NX102-1100 NX102-1000 NX102-9000	-	Shielded twisted pair cable (STP): Category 5 and 5e	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When PLC:GOT is N:1 The following shows the number of PLCs for 1 GOT 128 or less When PLC:GOT is 1:N The following shows the number of GOTs for 1 PLC <Connection: CLASS3> 32 or less per port (Total 64 or less for 2 ports) *4 <Connection: UCMM> 32 or less per port (Total 64 or less for 2 ports) *4
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
To connect the target device and hub, use a cable according to the target controller configuration.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*3 Product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

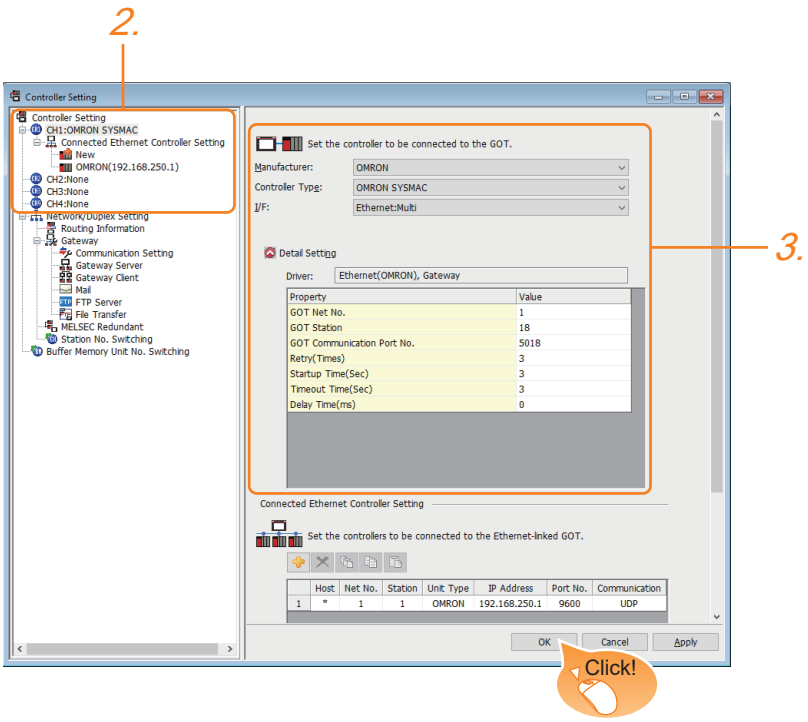
*4 If it is connected to devices other than the GOT using the connection, the number of connectable GOTs decreases.
For details, refer to the OMRON PLC user's manual.

*5 Use C or later version of GT11H-C□□-37P.

GOT side settings

Setting communication interface (Communication settings)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Select the following items and the detail setting is displayed.

- [Manufacturer]: [OMRON]
- [Controller Type]: Depends on the PLC.

SYSMAC CJ1/CJ2/CS1/CP2 series: [OMRON SYSMAC]

NJ/NX series: [OMRON NJ/NX]

- [I/F]: [Ethernet:Multi]
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1020 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

■Ethernet (OMRON), Gateway

Make the settings according to the usage environment.

Property	Value
GOT Net No.	1
GOT Station	18
GOT Communication Port No.	5018
Retry(Times)	3
Startup Time(Sec)	3
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
GOT Net No.	Set the network No. of the GOT. (Default: 1)	1 to 127
GOT Station*2*4*5	Set the station No. of the GOT. (Default: 18)	1 to 254
GOT Communication Port No.*1*4	Set the GOT port No. for the connection with the Ethernet module. (Default: 5018 *3)	1024 to 5010, 5014 to 65534 (Except for 5011, 5012, 5013 and 49153 to 49170)
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 3times)	0 to 5times
Startup Time	Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU. (Default: 3sec)	3 to 255sec
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 90sec
Delay Time	Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms)	0 to 10000(ms)

*1 Set [FINS UDP Port] of OMRON PLC CX-Programmer to the same value that is set in [GOT Communication Port No.].

*2 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1022 Connected Ethernet Controller Setting

*3 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

*4 Set a value within the setting range of the software for the programming apparatus.
☞ Page 1024 CX-Programmer setting

*5 When connecting to CS1H, set the least significant byte of the GOT IP address to [GOT Station].
☞ Page 80 GOT IP Address Setting

■Ethernet (OMRON NJ/NX), Gateway

Make the settings according to the usage environment.

Property	Value
GOT Net No.	1
GOT Station	18
GOT Communication Port No.	5034
Startup Time(Sec)	3
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
GOT Net No.	Set the network No. of the GOT. (Default: 1)	1 to 239
GOT Station*1	Set the station No. of the GOT. (Default: 18)	1 to 64
GOT Communication Port No.	Set the GOT port No. for the connection with the Ethernet module. (Default: 5034 *4)	1024 to 5010, 5014 to 65534 (Except for 5011, 5012, 5013 and 49153 to 49170)
Startup Time*3	Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU. (Default: 3sec)	3 to 255sec
Timeout Time*2	Set the time period for a communication to time out. (Default: 3sec)	1 to 90sec
Delay Time	Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms)	0 to 10000(ms)

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1022 Connected Ethernet Controller Setting

*2 When [CJ1W-EIP21] is set for [Unit Type] in [Connected Ethernet Controller Setting], even if [Timeout Time] is set to 10 seconds or shorter, the GOT operates with the communication timeout period of 10 seconds.
If [CJ1W-EIP21] and [OMRON NJ] are selectable for [Unit Type] in [Connected Ethernet Controller Setting], and [OMRON NJ] (built-in port connecting side) is set, the GOT also operates with the communication timeout period of 10 seconds.
☞ Page 1022 Connected Ethernet Controller Setting

*3 When writing or reading OMRON NJ tag immediately after NJ series setup, a system alarm may occur.
In this case, make the time to start communication with NJ series longer in [Startup Time].
For details, refer to the following manual.
GT Designer3 (GOT2000) Screen Design Manual

*4 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

■GOT IP address setting

Set the following communication port setting.*1

- Standard port

*1 Set a value within the setting range of the software for the programming apparatus.
☞ Page 1024 CX-Programmer setting

■GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

■IP filter setting

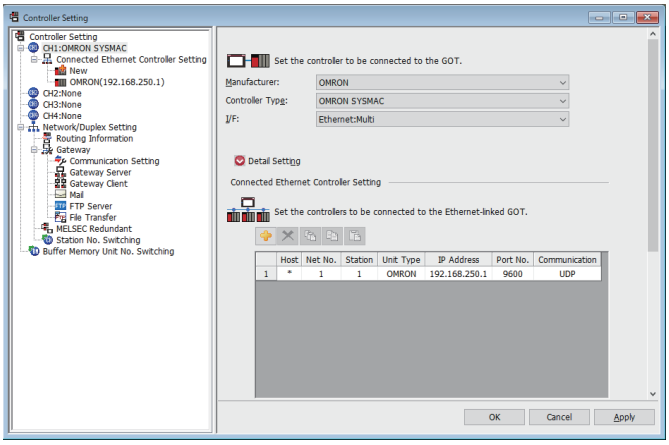
By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 80 GOT Ethernet Setting

Connected Ethernet Controller Setting

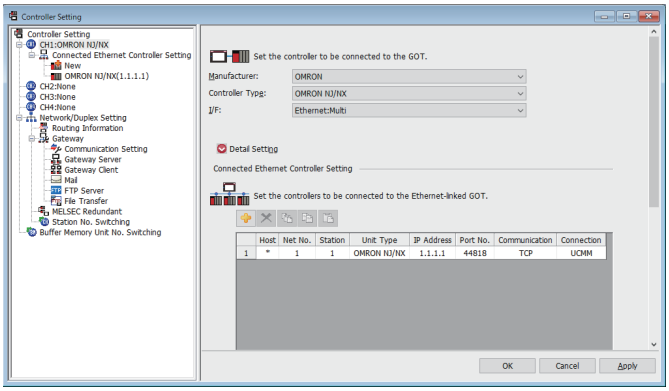
■Ethernet (OMRON), Gateway



Item	Description	Set value
Host	The host is displayed. It refers to a station that can be connected without setting a station number. (The host is indicated with an asterisk (*).)	-
Net No.	Set the network No. of the connected Ethernet module. (Default: 1)	1 to 127
Station *1	Set the station No. of the connected Ethernet module. (Default: 1)	1 to 254
Unit Type	OMRON (fixed)	OMRON (fixed)
IP Address	Set the IP address of the connected Ethernet module. (Default: 192.168.250.1)	PLC side IP address
Port No.	Set the port No. of the connected Ethernet module. (Default: 9600)	256 to 65534
Communication format	Select a communication protocol. (Default: UDP)	UDP, TCP

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1020 Communication detail settings

■Ethernet (OMRON NJ/NX), Gateway



Item	Description	Set value
Host	The host is displayed. It refers to a station that can be connected without setting a station number. (The host is indicated with an asterisk (*).)	-
Net No.	Set the network No. of the connected Ethernet module. (Default: 1)	1 to 239
Station *1	Set the station No. of the connected Ethernet module. (Default: 1)	1 to 64
Unit Type	Select the device according to the connection destination. Built in Ethernet port: OMRON NJ/NX Communication unit: CJ1W-EIP21*2 (Default: OMRON NJ/NX)	OMRON NJ/NX, CJ1W-EIP21
IP Address	Set the IP address of the connected Ethernet module. (Default: 1.1.1.1)	PLC side IP address *3
Port No.	44818 (fixed)	44818 (fixed)
Communication format	TCP (fixed)	TCP (fixed)
Connection	Set the connection. (Default: UCMM)	UCMM, Class3

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1020 Communication detail settings

*2 For the NX series, [CJ1W-EIP21] is not selectable.

*3 NX701, NX502, and NX102 have two built-in EtherNet/IP ports.
Set [IP Address] in [Connected Ethernet Controller Setting] in GT Designer3 according to the port number setting of the NX701, NX502, or NX102 to be connected.

PLC side setting

Communication settings for SYSMAC CJ1/CJ2/CS1/CP2 series

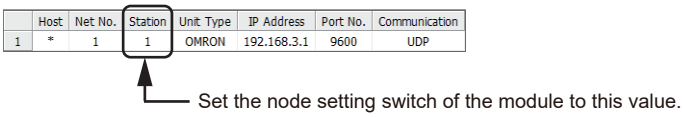
For the communication between OMRON PLC (SYSMAC CJ1/CJ2/CS1/CP2 series) and GOT, use the FINS communication.
For the FINS communication, the node must be specified according to the realm of FINS. However, for the Ethernet network, the data transfer according to the IP address is required.
The following four methods are available for converting the FINS node address to the IP address.

- Automatic generation method (dynamic)
- Automatic generation method (static)
- IP address table conversion method
- Combined method

For details of OMRON PLCs, refer to the following manual.
📖OMRON PLC user's Manual

■Node setting switch

Set the node setting switch of the module to the value of [Station] in [Connected Ethernet Controller Setting] in GT Designer3.
Note that the node setting switch is set in hexadecimal.
Convert this hexadecimal number to decimal, and set the value to [Station].

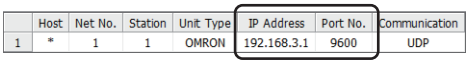


■CX-Programmer setting

For the PLC communication setting, set with a software for programming apparatus (CX-Programmer Ver.3.20 or later).

Item		Setting range			
		Automatic generation method (dynamic)	Automatic generation method (static) *4*5	IP address table method*4*6	Combined method *4
Ethernet module CPU highly-functional module	Global	All 1 (Default)	All 1 (Default)	All 1 (Default)	All 1 (Default)
	IP address*1	192.168.3.1 *3	192.168.3.1 *3	192.168.3.1	192.168.3.1
	Subnet Mask	255.255.255.0	255.255.255.0	255.255.255.0	255.255.255.0
	FINS UDP port*1	9600	9600	9600	9600
	IP address conversion	Automatic generation method (dynamic)	Automatic generation method (static)	IP address table method	Combined method
	IP address table	-	-	Destination node address: 18 *7 Destination IP address: 192.168.3.18	- *8
	Transmission speed	Automatic detection (Default)	Automatic detection (Default)	Automatic detection (Default)	Automatic detection (Default)
	Node IP Address dynamically change*2	Change dynamically (Default)*9	Change dynamically (Default)	Change dynamically (Default)	Change dynamically (Default)

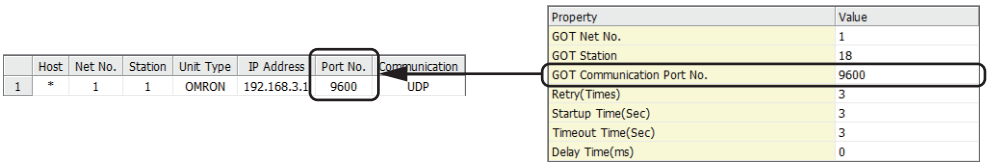
*1 Set the values of [IP Address] and [Port No.] in [Connected Ethernet Controller Setting] in GT Designer3 to [IP address] and [FINS UDP Port].



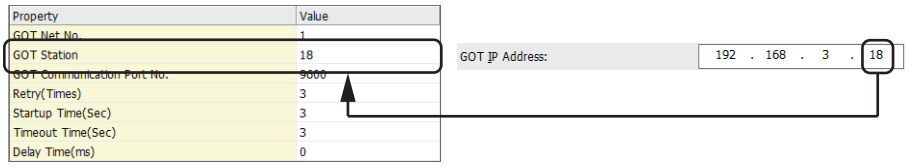
*2 The Node IP Address dynamically change function is available only when the Ethernet module to be used is Ver.1.3 or later.
For the setting, set in the module setting of CX-ProgrammerVer.5.0 or later or in the WEB function.
For details of Node IP Address dynamically change, refer to the following manual.
📖OMRON PLC user's Manual

*3 Set the same lowermost bit of the [IP address] setting as that of the node setting switch of the module.
Note that the node setting switch is set in hexadecimal.
Convert this hexadecimal number to decimal, and set the value to the lowermost bit of [IP Address].

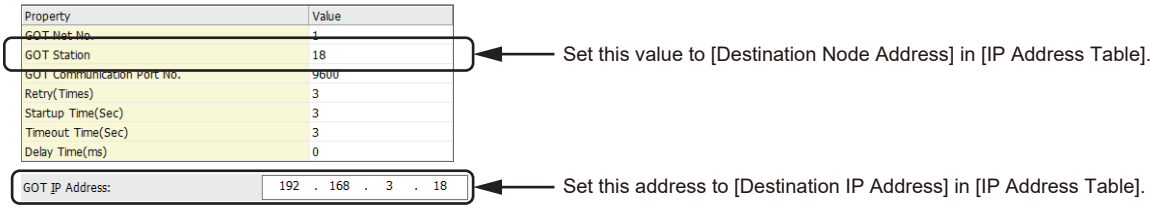
*4 In GT Designer3, set the value of [GOT Communication Port No.] in [Detail Setting] to [Port No.] in [Connected Ethernet Controller Setting].



*5 In GT Designer3, set the value of [GOT Station] in [Detail Setting] to the lowermost byte of [GOT IP address] in [GOT IP Address Setting].



*6 In GT Designer3, set the value of [IP address table] to [GOT IP address] in [GOT IP Address Setting] and to [GOT Station] in [Detail Setting].



*7 Set the lowest byte of [Destination IP Address] to [Destination Node Address].

*8 To use [IP Address Table], apply the settings of the IP address table method.

*9 Not to set the dynamical change, set the same value to [GOT Communication Port No.] in [Detail Setting] and [Port No.] in [Connected Ethernet Controller Setting] in GT Designer3.

Communication Setting for NJ/NX series

For the PLC communication setting, set with an automation software Sysmac Studio.

For the Sysmac Studio compatible versions of the NJ/NX series, refer to the following manual.

OMRON PLC user's Manual

■Setting of an automation software Sysmac Studio

Item	Description	Range
IP address *1*3	Set the IP address.	0.0.0.0 to 255.255.255.255
Subnet Mask *2*3	Set the subnet mask for the sub network. (Only for connection via router) If the sub network is not used, the default value is set. (Default: 255.255.255.0)	0.0.0.0 to 255.255.255.255

*1 Apply the same setting as [Connected Ethernet Controller Setting] of the GOT.
☞ Page 1021 Ethernet (OMRON NJ/NX), Gateway

*2 Apply the same setting as [GOT Ethernet Setting] of the GOT.
☞ Page 80 GOT Ethernet Setting

*3 NX701-□□□□, NX502-□□□□, and NX102-□□□□ have two built-in EtherNet/IP ports that can be set individually.

Precautions

When connecting to multiple GOTs

■Setting station no.

When connecting two or more GOTs in the Ethernet network, set each station no. to the GOT.

☞ Page 1022 Connected Ethernet Controller Setting

■Setting IP address

Do not use the IP address "192.168.0.18" when using multiple GOTs with the GOT 1000 series mixed.

A communication error may occur on the GOT with the IP address.

When setting IP address

Do not use "0" and "255" at the end of an IP address.

(Numbers of *.*.*.0 and *.*.*.255 are used by the system.)

The GOT may not monitor the controller correctly with the above numbers.

Consult with the administrator of the network before setting an IP address to the GOT and controller.

When connecting to the multiple network equipment (including GOT) in a segment

By increasing the network load, the transmission speed between the GOT and PLC may be reduced.

The following actions may improve the communication performance.

- Using a switching hub
- More high speed by 100BASE-TX (100Mbps)
- Reduction of the monitoring points on GOT

NJ/NX series start up

When writing or reading OMRON NJ/NX tag immediately after NJ/NX series setup, a system alarm may occur.

In this case, make the time to start communication with NJ/NX series longer in [Startup Time] for the communication detail settings.

For details, refer to the following manual.

📖GT Designer3 (GOT2000) Screen Design Manual

16.4 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1
OMRON equipment ([OMRON SYSMAC])
OMRON equipment ([OMRON NJ/NX])

MEMO

17 OMRON TEMPERATURE CONTROLLER

- Page 1029 Connectable Model List
- Page 1030 System Configuration
- Page 1043 Connection Diagram
- Page 1049 GOT Side Settings
- Page 1052 Temperature Controller Side Setting
- Page 1057 Settable Device Range
- Page 1057 Precautions

17.1 Connectable Model List

The following table shows the connectable models.

Series	Model name	Communication Type	Connectable GOT	Refer to
THERMAC NEO	E5AN E5EN E5GN E5CN(-H,-HT)	RS-232	GT2506HS GT2505HS	☞ Page 1030 Connecting to the THERMAC NEO series
		RS-485	GT2506HS	
	E5AN-H E5EN-H E5AN-HT E5EN-HT	RS-232 RS-422	GT2506HS GT2505HS	
		RS-485	GT2506HS	
INPANEL NEO	E5ZN	RS-232	GT2506HS GT2505HS	☞ Page 1037 Connecting to the INPANEL NEO
		RS-485	GT2506HS	
E5□C	E5CC(-T,-B) E5DC E5GC E5EC(-T,-B) E5AC(-T)	RS-232	GT2506HS GT2505HS	☞ Page 1039 Connecting to the E5□C series, E5□D series
		RS-485	GT2506HS	
E5□D	E5CD(-B) E5ED(-B)	RS-232	GT2506HS GT2505HS	☞ Page 1039 Connecting to the E5□C series, E5□D series
		RS-485	GT2506HS	
THERMAC R	E5AR(-T) E5ER(-T)	RS-232	GT2506HS GT2505HS	☞ Page 1041 Connecting to the THERMAC R series
		RS-485	GT2506HS	

17.2 System Configuration

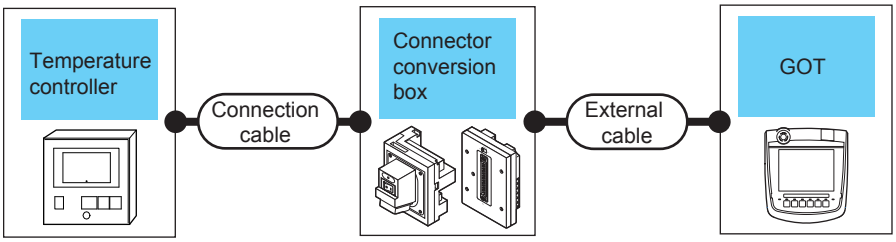
Connecting to the THERMAC NEO series

When connecting to one temperature controller

■When connecting to E5AN, E5EN

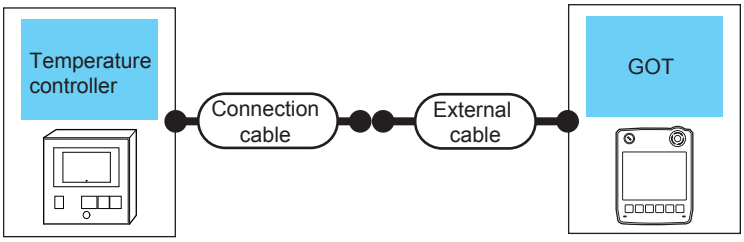
Communication driver
OMRON THERMAC/INPANEL NEO

- When using the connector conversion box



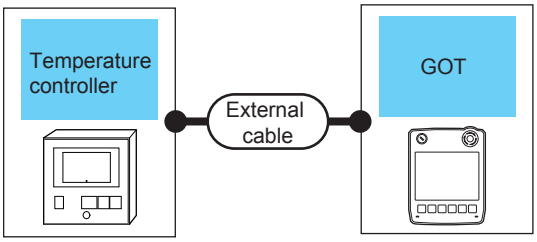
Temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
E5AN E5EN	RS-232	User preparing Page 1043 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 temperature controller for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

- When using the external cable (GT11H-C□□□-37P)



Temperature controller		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
E5AN E5EN	RS-232	User preparing Page 1043 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 temperature controller for 1 GOT

- When using the external cable (GT11H-C□□□)

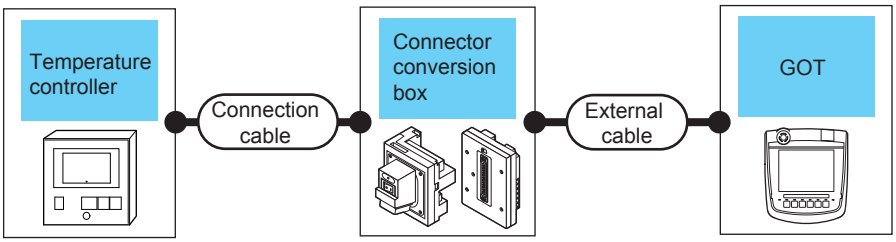


Temperature controller		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
E5AN E5EN	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1043 RS-232 connection diagram 3)	GT 2505HS	6m	1 temperature controller for 1 GOT

■When connecting to E5AN-H, E5CN-H, E5EN-H, E5AN-HT, E5CN-HT, E5EN-HT

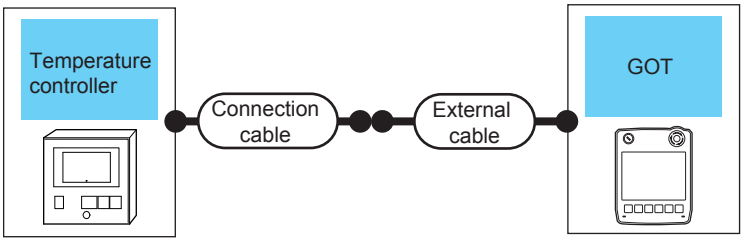
Communication driver
OMRON digital temperature controller

• When using the connector conversion box



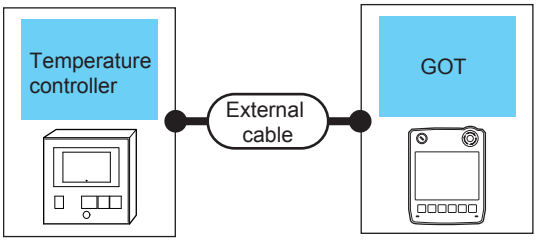
Temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
E5AN-H E5EN-H E5AN-HT E5EN-HT E5CN-H E5CN-HT	RS-232	User preparing Page 1043 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 temperature controller for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

• When using the external cable (GT11H-C□□□-37P)



Temperature controller		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
E5AN-H E5EN-H E5AN-HT E5EN-HT E5CN-H E5CN-HT	RS-232	User preparing Page 1043 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 temperature controller for 1 GOT

• When using the external cable (GT11H-C□□□)



Temperature controller		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
E5AN-H E5EN-H E5AN-HT E5EN-HT E5CN-H E5CN-HT	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1043 RS-232 connection diagram 3)	GT 2505HS	6m	1 temperature controller for 1 GOT

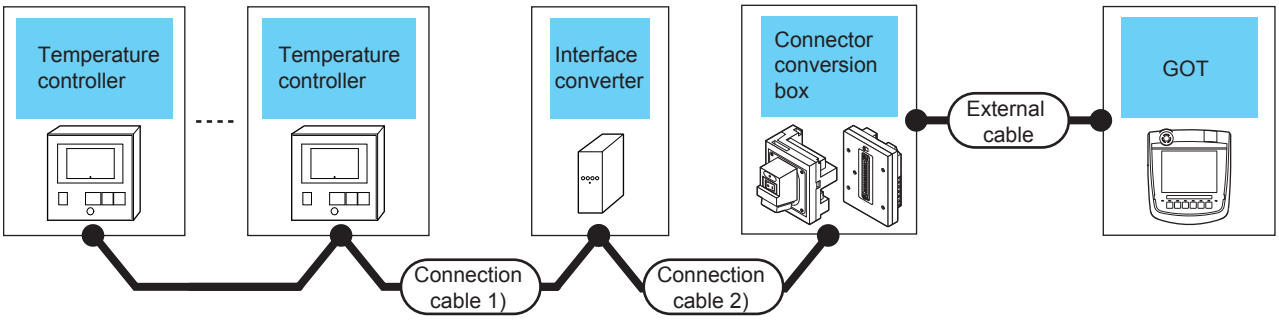
When connecting to multiple temperature controllers (via an interface converter)

■When connecting to E5AN, E5EN, E5CN, E5GN

Communication driver

OMRON THERMAC/INPANEL NEO

- When using the connector conversion box

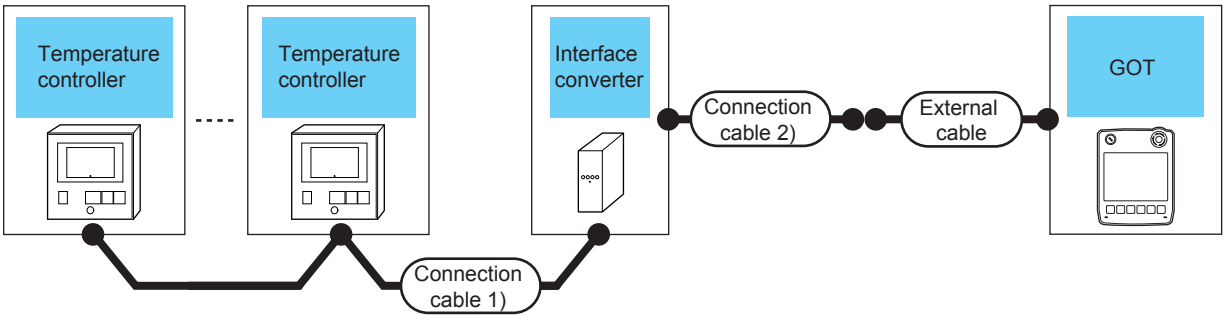


Temperature controller	Connection cable 1)		Interface converter*1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
E5AN E5EN E5CN E5GN	User preparing Page 1047 RS-485 connection diagram 1)	500m	K3SC-10	RS-232	User preparing Page 1044 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	32 temperature controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 The interface converter is a product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

*2 The distance from the GOT to the interface converter (Connection cable 2) + External cable)

- When using the external cable (GT11H-C□□□-37P)

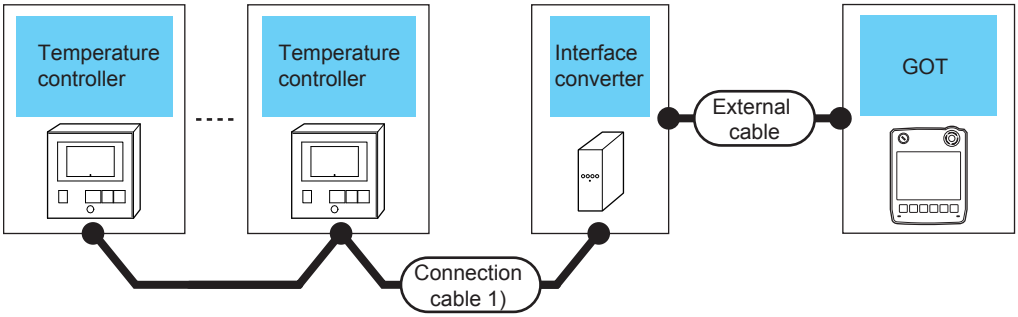


Temperature controller	Connection cable 1)		Interface converter*1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
E5AN E5EN E5CN E5GN	User preparing Page 1047 RS-485 connection diagram 1)	500m	K3SC-10	RS-232	User preparing Page 1044 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	32 temperature controllers for 1 GOT

*1 The interface converter is a product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

*2 The distance from the GOT to the interface converter (Connection cable 2) + External cable)

• When using the external cable (GT11H-C□□□)



Temperature controller	Connection cable 1)		Interface converter*1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
E5AN E5EN E5CN E5GN	User preparing Page 1047 RS-485 connection diagram 1)	500m	K3SC-10	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1044 RS-232 connection diagram 6)	GT 2505HS	6m	32 temperature controllers for 1 GOT

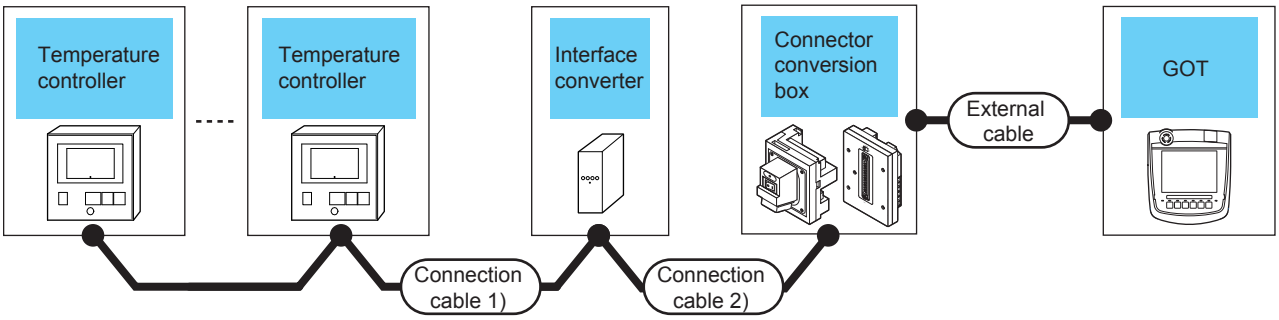
*1 The interface converter is a product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

*2 The distance from the GOT to the interface converter (External cable)

■When connecting to E5AN-H, E5CN-H, E5EN-H, E5AN-HT, E5CN-HT, E5EN-HT

Communication driver
OMRON digital temperature controller

• When using the connector conversion box

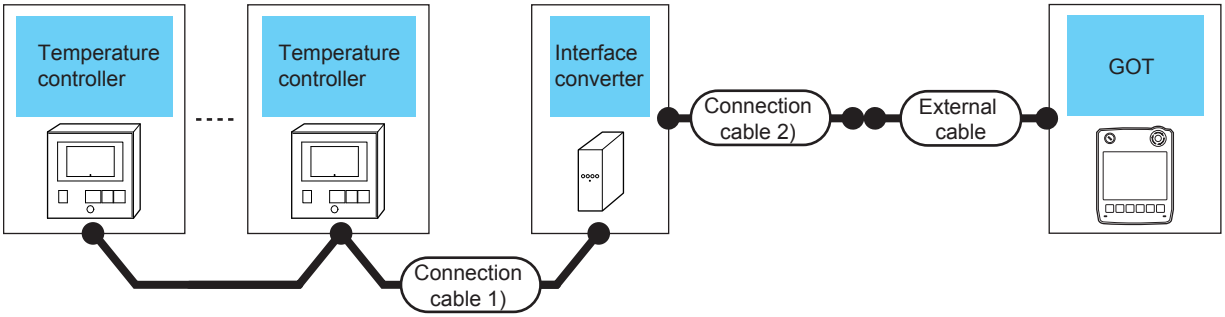


Temperature controller	Connection cable 1)		Interface converter*1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
E5AN-H E5EN-H E5AN-HT E5EN-HT E5CN-H E5CN-HT	User preparing Page 1047 RS-485 connection diagram 1)	500m	K3SC-10	RS-232	User preparing Page 1044 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	32 temperature controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 The interface converter is a product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

*2 The distance from the GOT to the interface converter (Connection cable 2) + External cable)

• When using the external cable (GT11H-C□□□-37P)

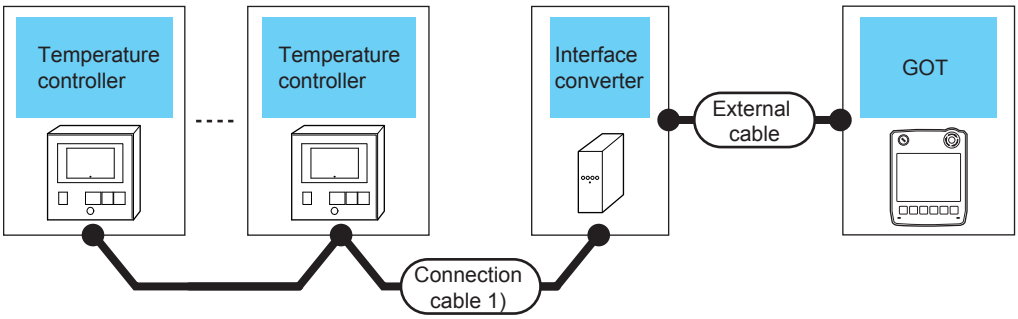


Temperature controller	Connection cable 1)		Interface converter*1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
E5AN-H E5EN-H E5AN-HT E5EN-HT E5CN-H E5CN-HT	User preparing Page 1047 RS-485 connection diagram 1)	500m	K3SC-10	RS-232	User preparing Page 1044 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	32 temperature controllers for 1 GOT

*1 The interface converter is a product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

*2 The distance from the GOT to the interface converter (Connection cable 2) + External cable)

• When using the external cable (GT11H-C□□□)



Temperature controller	Connection cable 1)		Interface converter*1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
E5AN-H E5EN-H E5AN-HT E5EN-HT E5CN-H E5CN-HT	User preparing Page 1047 RS-485 connection diagram 1)	500m	K3SC-10	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1044 RS-232 connection diagram 6)	GT 2505HS	6m	32 temperature controllers for 1 GOT

*1 The interface converter is a product manufactured by OMRON Corporation.
For details on the product, contact OMRON Corporation.

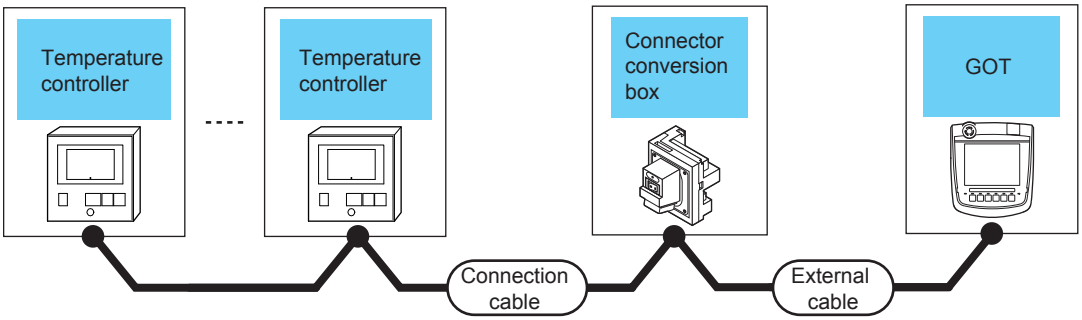
*2 The distance from the GOT to the interface converter (External cable)

When connecting to multiple temperature controllers

■When connecting to E5AN, E5EN, E5CN, E5GN

Communication driver
OMRON THERMAC /INPANEL NEO

- When using the connector conversion box

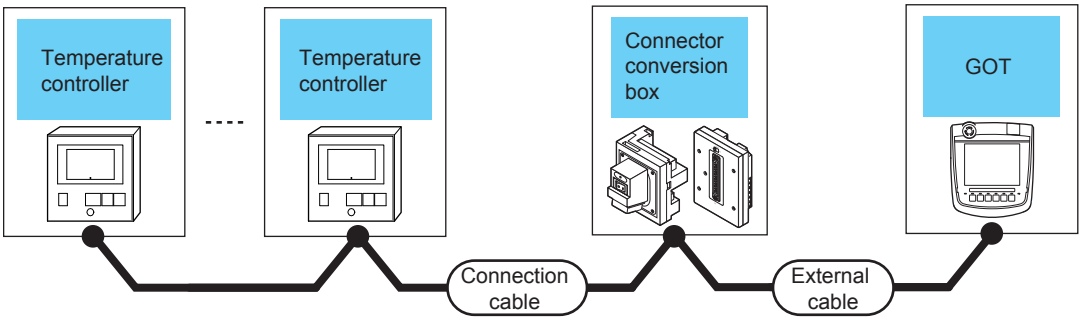


Temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
E5AN E5EN E5CN E5GN	RS-485	User preparing Page 1048 RS-485 connection diagram 2)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	31 temperature controllers for 1 GOT

■When connecting to E5AN-H, E5CN-H, E5EN-H, E5AN-HT, E5CN-HT, E5EN-HT

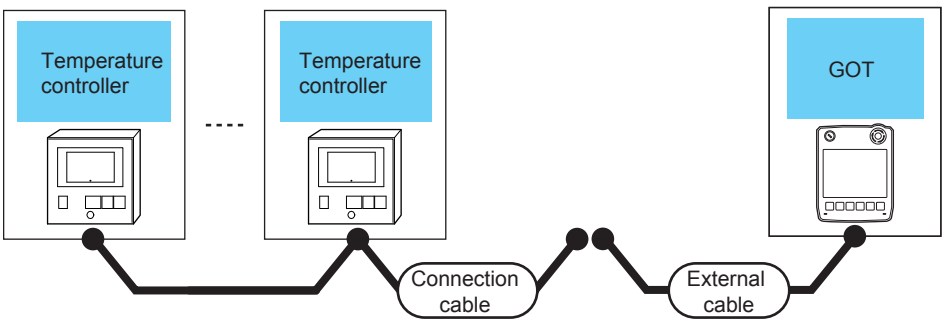
Communication driver
OMRON digital temperature controller

- When using the connector conversion box



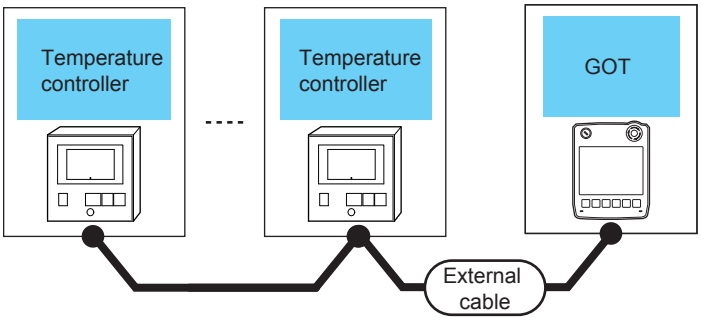
Temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
E5AN-H E5EN-H E5AN-HT E5EN-HT E5CN-H E5CN-HT	RS-485	User preparing Page 1048 RS-485 connection diagram 2)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	31 temperature controllers for 1 GOT
E5AN-H E5EN-H E5AN-HT E5EN-HT	RS-422	User preparing Page 1045 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

• When using the external cable (GT11H-C□□□-37P)



Temperature controller		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
E5AN-H E5EN-H E5AN-HT E5EN-HT	RS-422	User preparing Page 1045 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	31 temperature controllers for 1 GOT

• When using the external cable (GT11H-C□□□)



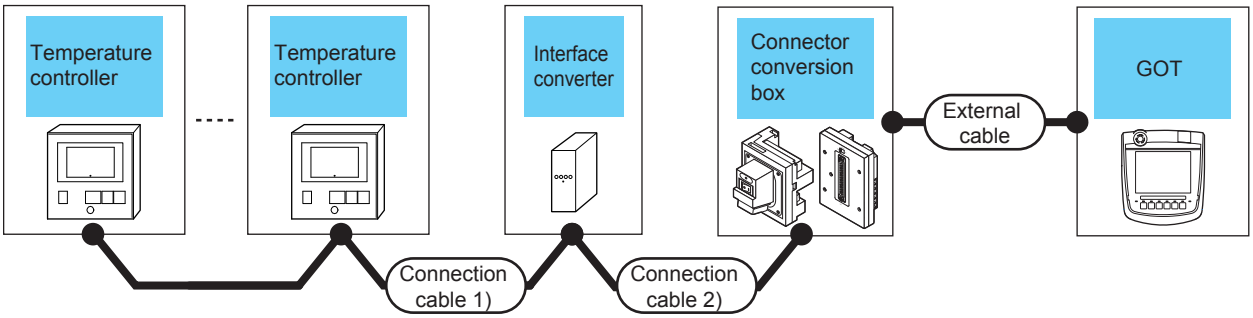
Temperature controller		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
E5AN-H E5EN-H E5AN-HT E5EN-HT	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1046 RS-422 connection diagram 3)	GT 2505HS	13m	31 temperature controllers for 1 GOT

Connecting to the INPANEL NEO

Communication driver
OMRON THERMAC/INPANEL NEO

When connecting to multiple temperature controllers (via interface converter)

■When using the connector conversion box

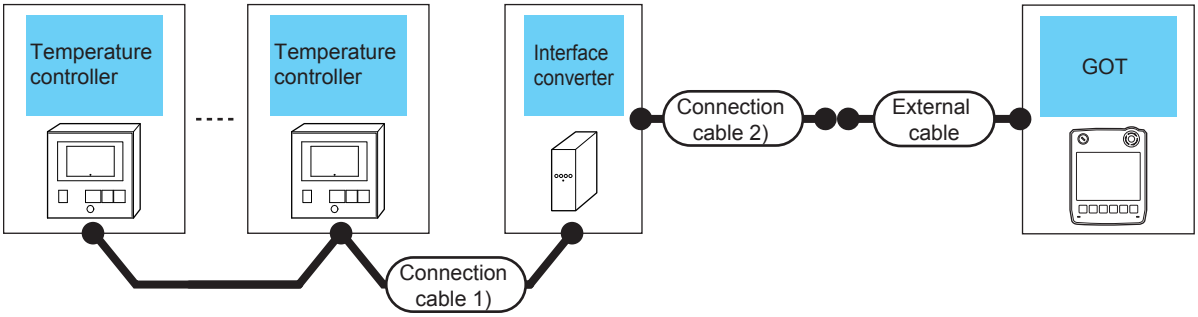


Temperature controller	Connection cable 1)		Interface converter*1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
E5ZN	User preparing Page 1047 RS-485 connection diagram 1)	500m	K3SC-10	RS-232	User preparing Page 1044 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	16 temperature controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 The interface converter is a product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

*2 The distance from the GOT to the interface converter (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

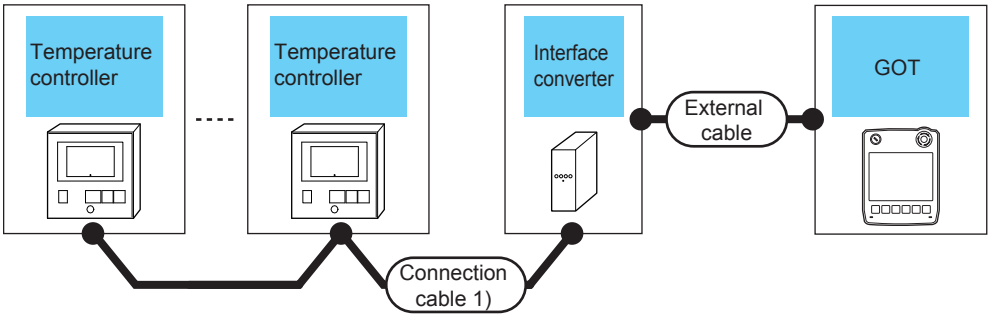


Temperature controller	Connection cable 1)		Interface converter*1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
E5ZN	User preparing Page 1047 RS-485 connection diagram 1)	500m	K3SC-10	RS-232	User preparing Page 1044 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	16 temperature controllers for 1 GOT

*1 The interface converter is a product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

*2 The distance from the GOT to the interface converter (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



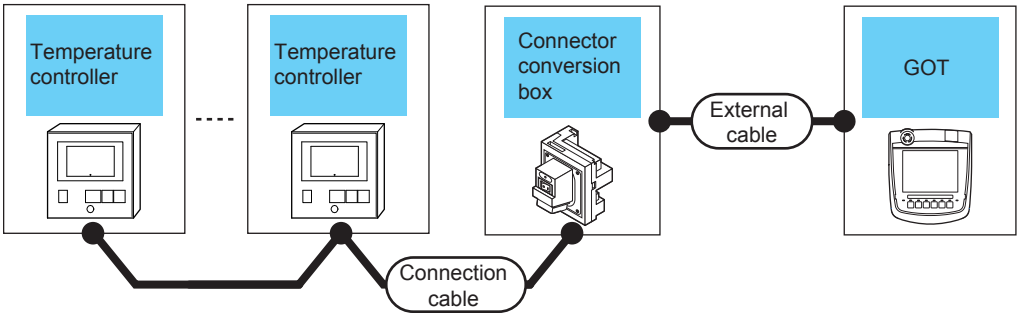
Temperature controller	Connection cable 1)		Interface converter*1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
E5ZN	User preparing Page 1047 RS-485 connection diagram 1)	500m	K3SC-10	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1044 RS-232 connection diagram 6)	GT 2505HS	6m	16 temperature controllers for 1 GOT

*1 The interface converter is a product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

*2 The distance from the GOT to the interface converter (External cable)

When connecting to multiple temperature controllers

■When using the connector conversion box



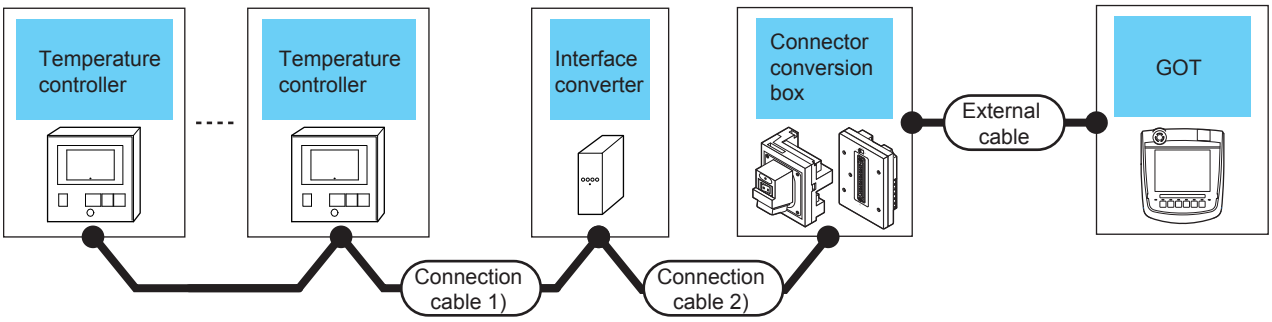
Temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
E5ZN	RS-232	User preparing Page 1048 RS-485 connection diagram 2)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	31 temperature controllers for 1 GOT

Connecting to the E5□C series, E5□D series

Communication driver
OMRON digital temperature controller

When connecting to multiple temperature controllers (via interface converter)

■When using the connector conversion box

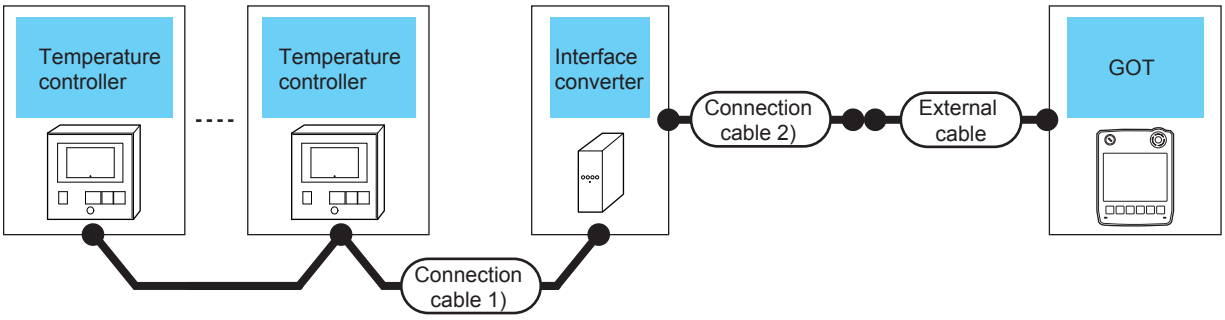


Temperature controller	Connection cable 1)		Interface converter*1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
E5CC(-T,-B) E5DC E5GC E5EC(-T,-B) E5AC(-T) E5CD(-B) E5ED(-B)	User preparing Page 1047 RS-485 connection diagram 1)	500m	K3SC-10	RS-232	User preparing Page 1044 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	32 temperature controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 The interface converter is a product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

*2 The distance from the GOT to the interface converter (Connection cable 2) + External cable)

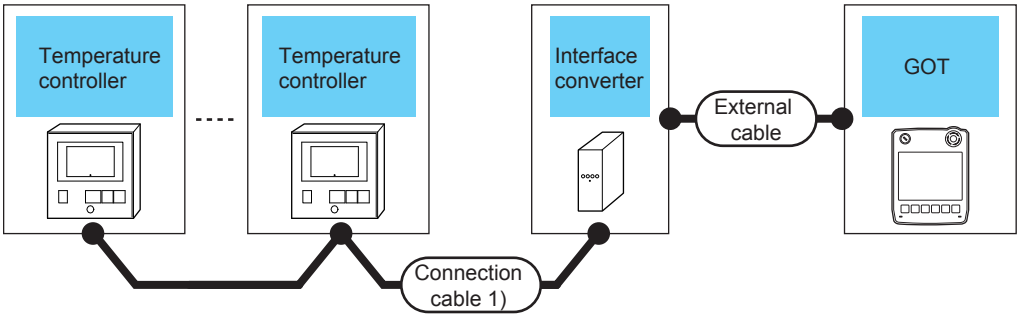
■When using the external cable (GT11H-C□□□-37P)



Temperature controller	Connection cable 1)		Interface converter*1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
E5CC(-T,-B) E5DC E5GC E5EC(-T,-B) E5AC(-T) E5CD(-B) E5ED(-B)	User preparing Page 1047 RS-485 connection diagram 1)	500m	K3SC-10	RS-232	User preparing Page 1044 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	32 temperature controllers for 1 GOT

*1 The interface converter is a product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.
*2 The distance from the GOT to the interface converter (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)

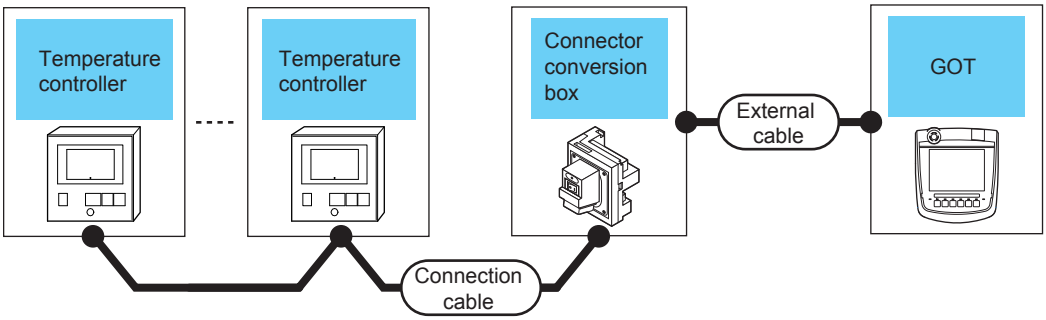


Temperature controller	Connection cable 1)		Interface converter*1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
E5CC(-T,-B) E5DC E5GC E5EC(-T,-B) E5AC(-T) E5CD(-B) E5ED(-B)	User preparing Page 1047 RS-485 connection diagram 1)	500m	K3SC-10	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1044 RS-232 connection diagram 6)	GT 2505HS	6m	32 temperature controllers for 1 GOT

*1 The interface converter is a product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.
*2 The distance from the GOT to the interface converter (External cable)

When connecting to multiple temperature controllers

■When using the connector conversion box



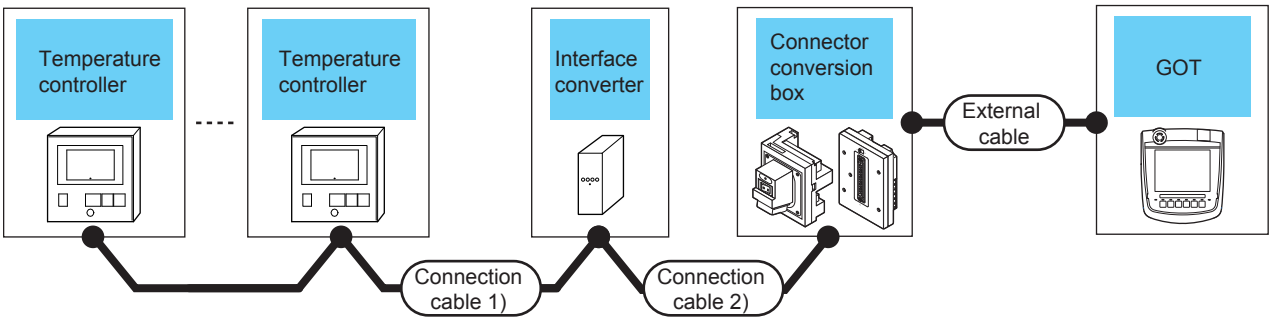
Temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
E5CC(-T,-B) E5DC E5GC E5EC(-T,-B) E5AC(-T) E5CD(-B) E5ED(-B)	RS-485	User preparing Page 1048 RS-485 connection diagram 2)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	31 temperature controllers for 1 GOT

Connecting to the THERMAC R series

Communication driver
OMRON digital temperature controller

When connecting to multiple temperature controllers (via interface converter)

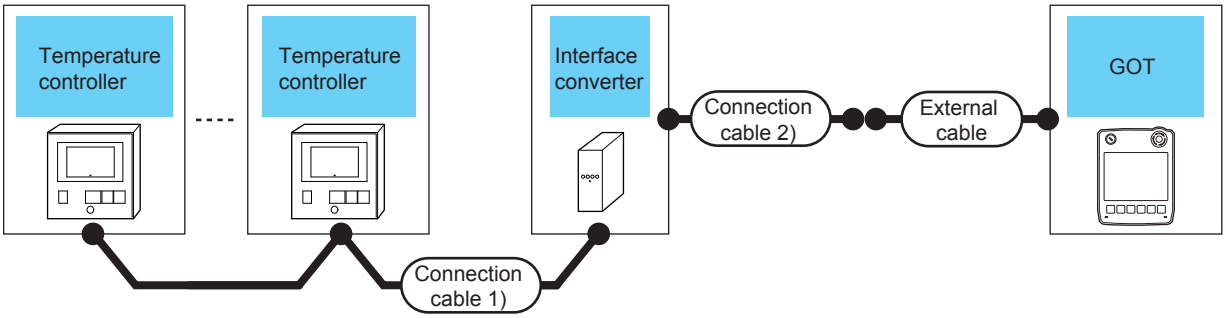
■When using the connector conversion box



Temperature controller	Connection cable 1)		Interface converter*1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
E5AR(-T) E5ER(-T)	User preparing Page 1047 RS-485 connection diagram 1)	500m	K3SC-10	RS-232	User preparing Page 1044 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	32 temperature controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 The interface converter is a product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.
*2 The distance from the GOT to the interface converter (Connection cable 2) + External cable)

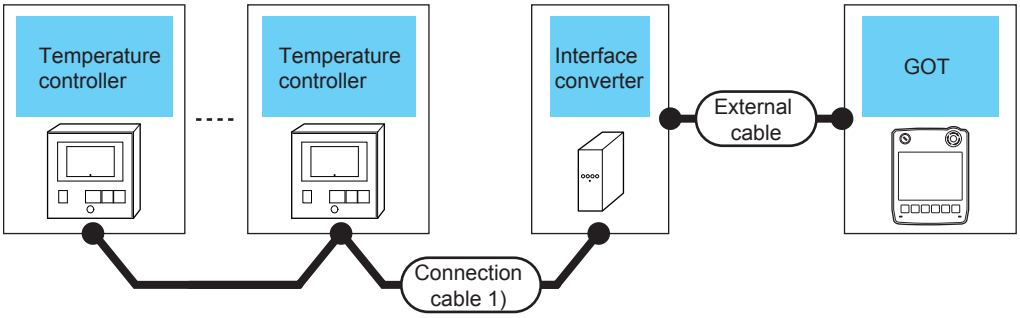
■When using the external cable (GT11H-C□□□-37P)



Temperature controller	Connection cable 1)		Interface converter*1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
E5AR(-T) E5ER(-T)	User preparing Page 1047 RS-485 connection diagram 1)	500m	K3SC-10	RS-232	User preparing Page 1044 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	32 temperature controllers for 1 GOT

*1 The interface converter is a product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.
*2 The distance from the GOT to the interface converter (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



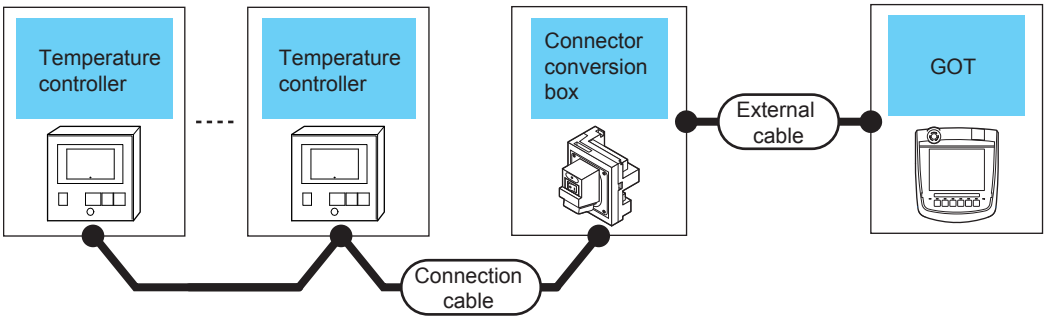
Temperature controller	Connection cable 1)		Interface converter*1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
E5AR(-T) E5ER(-T)	User preparing Page 1047 RS-485 connection diagram 1)	500m	K3SC-10	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1044 RS-232 connection diagram 6)	GT 2505HS	6m	32 temperature controllers for 1 GOT

*1 The interface converter is a product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

*2 The distance from the GOT to the interface converter (External cable)

When connecting to multiple temperature controllers

■When using the connector conversion box



Temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
E5AR(-T) E5ER(-T)	RS-485	User preparing Page 1048 RS-485 connection diagram 2)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	32 temperature controllers for 1 GOT

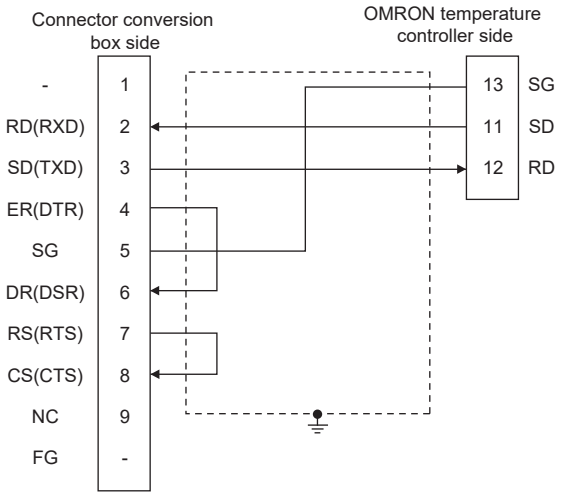
17.3 Connection Diagram

The following diagram shows the connection between the GOT and the controller.

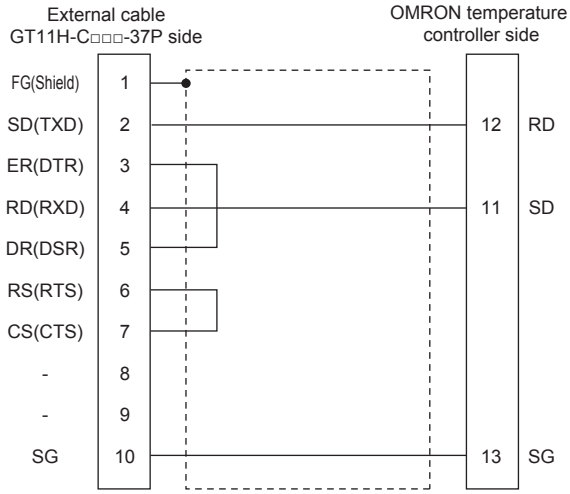
RS-232 cable

Connection diagram

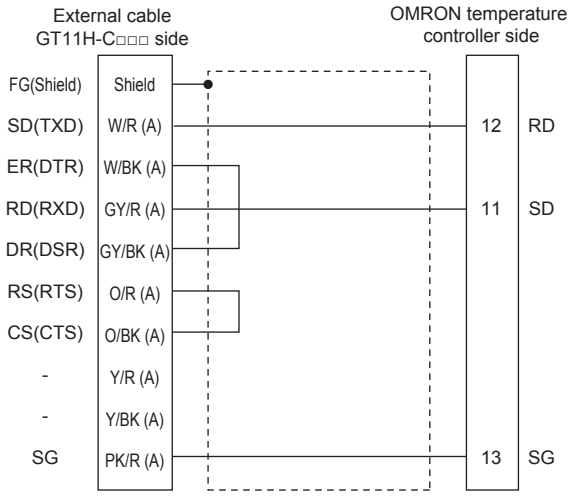
■RS-232 connection diagram 1)



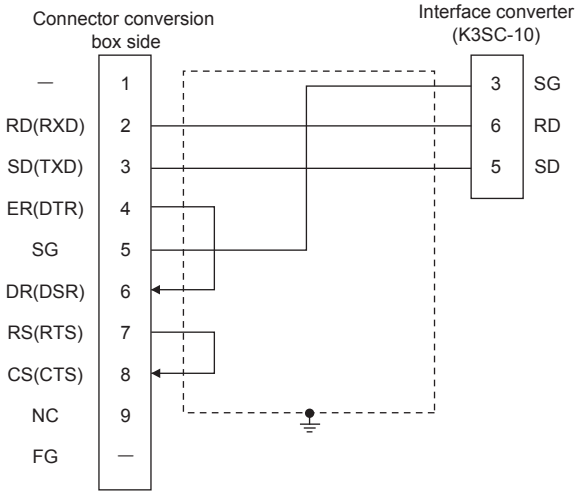
■RS-232 connection diagram 2)



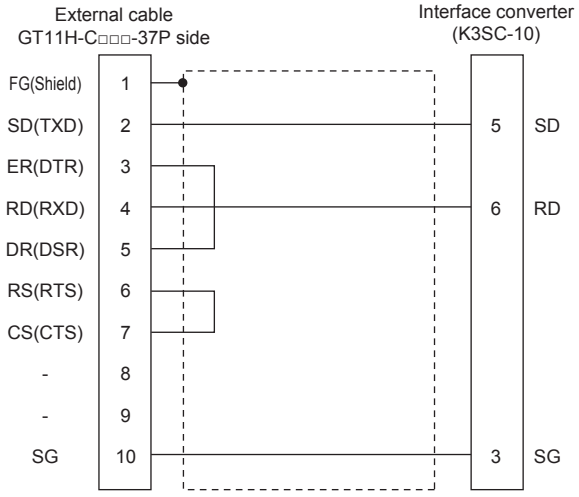
■RS-232 connection diagram 3)



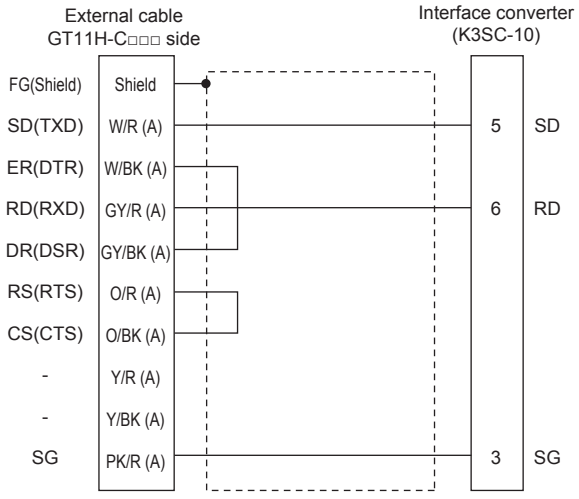
■RS-232 connection diagram 4)



■RS-232 connection diagram 5)



■RS-232 connection diagram 6)



Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■OMRON temperature controller side connector

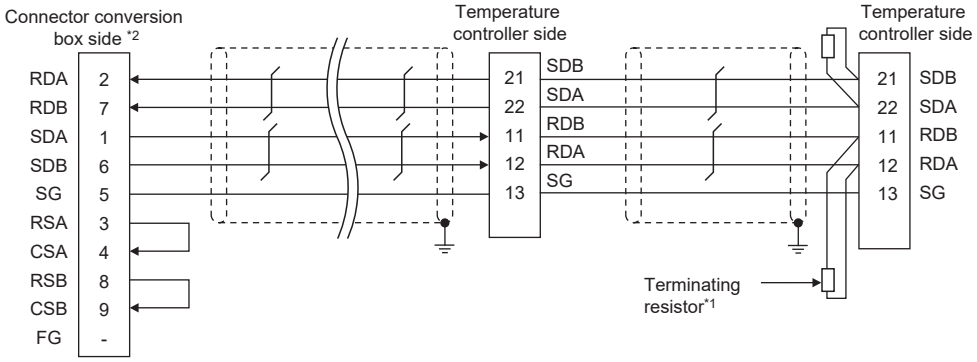
Use the connector compatible with the OMRON temperature controller.

For details, refer to the user's manual of the OMRON temperature controller.

RS-422 cable

Connection diagram

■RS-422 connection diagram 1)

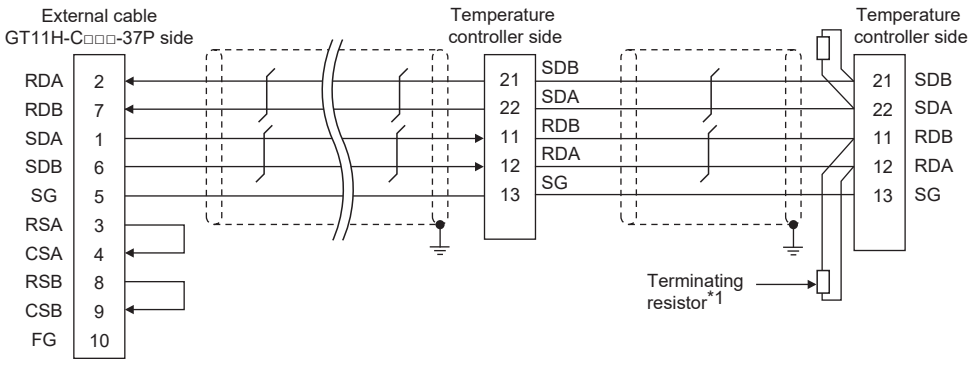


*1 Terminating resistor of 240Ω 1/2W should be provided for a temperature controller which will be a terminal.

*2 Set the terminating resistor of GOT side, which will be a terminal, to "Enable".

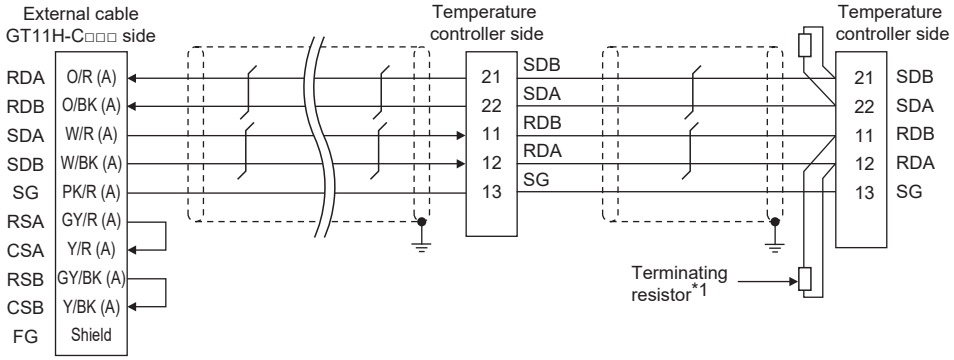
☞ Page 91 Terminating resistors of GOT

■RS-422 connection diagram 2)



*1 Terminating resistor of 240Ω 1/2W should be provided for a temperature controller which will be a terminal.

■RS-422 connection diagram 3)



*1 Terminating resistor of 240Ω 1/2W should be provided for a temperature controller which will be a terminal.

Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■OMRON temperature controller side connector

Use the connector compatible with the OMRON temperature controller.

For details, refer to the user's manual of the OMRON temperature controller.

Setting terminating resistors

■GOT side

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Enable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For details of terminating resistor settings, refer to the following.

☞ Page 91 Terminating resistors of GOT

■OMRON temperature controller side

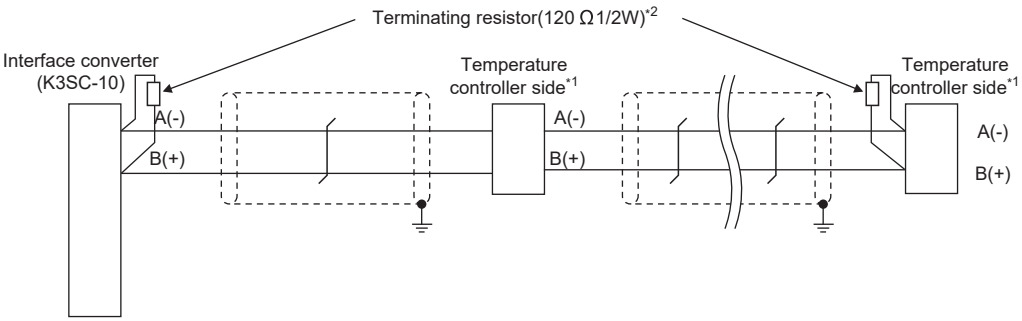
When connecting a OMRON temperature controller to the GOT, the terminating resistor must be connected to the OMRON temperature controller.

📖User's Manual of the OMRON temperature controller

RS-485 cable

Connection diagram

■RS-485 connection diagram 1)

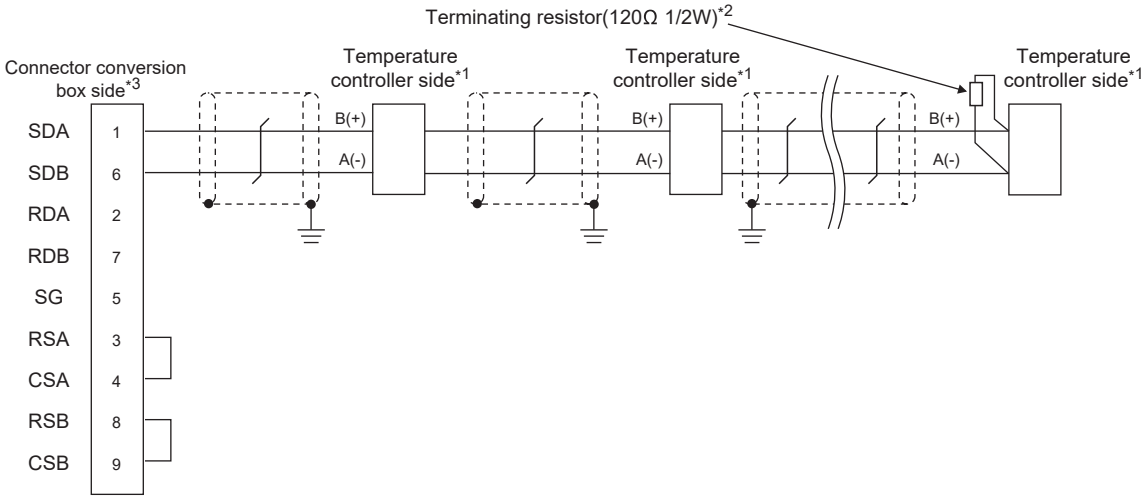


*1 Pin No. of temperature controller differs depending on the model.Refer to the following.

Signal name	Model of temperature controller								Interface converter (K3SC-10)
	E5AN(-H,-HT) E5EN(-H,-HT) E5CN(-H,-HT)	E5GN	E5ZN	E5CC(-T) E5EC(-T) E5AC(-T) E5CD E5ED	E5CC-B E5EC-B E5CD-B E5ED-B	E5DC	E5GC	E5AR(-T) E5ER(-T)	
	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.
A(-)	12	6	24	14	19 or 20	4	8	2	8
B(+)	11	5	23	13	17 or 18	3	7	1	11

*2 Terminating resistor should be provided for a temperature controller and an interface converter which will be terminating resistors.

■RS-485 connection diagram 2)



*1 Pin No. of temperature controller differs depending on the model.Refer to the following.

Signal name	Model of temperature controller							
	E5AN(-H,-HT) E5EN(-H,-HT) E5CN(-H,-HT)	E5GN	E5ZN	E5CC(-T) E5EC(-T) E5AC(-T) E5CD E5ED	E5CC-B E5EC-B E5CD-B E5ED-B	E5DC	E5GC	E5AR(-T) E5ER(-T)
	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.
A(-)	12	6	24	14	19 or 20	4	8	2
B(+)	11	5	23	13	17 or 18	3	7	1

*2 Terminating resistor should be provided for a temperature controller and an interface converter which will be terminating resistors.

*3 Set the terminating resistor to "Enable".

☞ Page 91 Terminating resistors of GOT

Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-485 cable must be 13 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■OMRON temperature controller side connector

Use the connector compatible with the OMRON temperature controller.

For details, refer to the user's manual of the OMRON temperature controller.

Setting terminating resistors

■GOT side

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Enable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For details of terminating resistor settings, refer to the following.

☞ Page 91 Terminating resistors of GOT

■OMRON temperature controller side

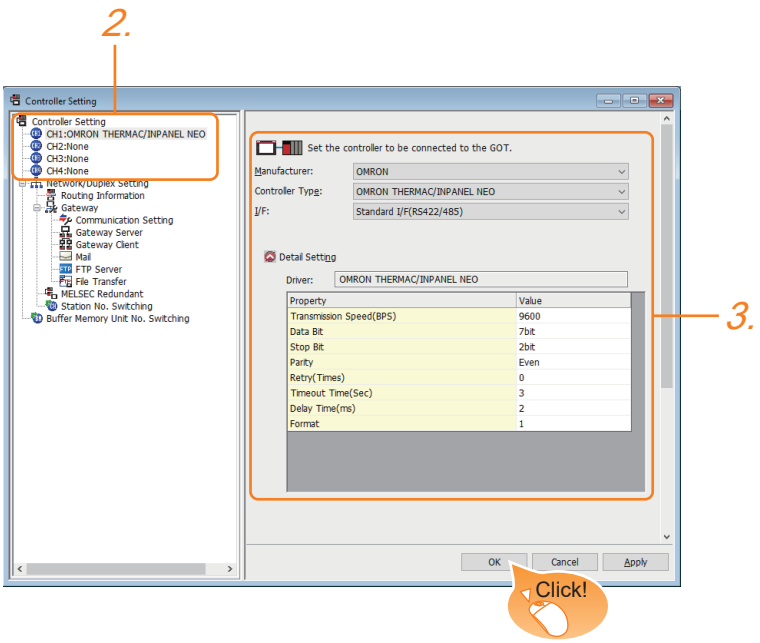
When connecting a OMRON temperature controller to the GOT, the terminating resistor must be connected to the OMRON temperature controller.

📖User's Manual of the OMRON temperature controller

17.4 GOT Side Settings

Setting communication interface (Communication settings)

Set the channel of the equipment to be connected to the GOT.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Select the following items and the detail setting is displayed.

- [Manufacturer]: [OMRON]
- [Controller Type]: Select one of the following items according to the controller to be connected.

Series	Model of temperature controller	Controller Type
THERMAC NEO	E5AN, E5EN, E5CN, E5GN	OMRON THERMAC/INPANEL NEO or OMRON digital temperature controller
	E5AN-H, E5CN-H, E5EN-H, E5AN-HT, E5CN-HT, E5EN-HT	OMRON digital temperature controller
INPANEL NEO	E5ZN	OMRON THERMAC/INPANEL NEO or OMRON digital temperature controller
E5□C	E5CC(-T,-B), E5DC, E5GC, E5EC(-T,-B), E5AC(-T)	OMRON digital temperature controller
E5□D	E5CD(-B), E5ED(-B)	OMRON digital temperature controller
THERMAC R	E5AR(-T), E5ER(-T)	OMRON digital temperature controller

- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1050 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

OMRON THERMAC/INPANEL NEO

Property	Value
Transmission Speed(BPS)	9600
Data Bit	7 bit
Stop Bit	2 bit
Parity	Even
Retry(Times)	0
Timeout Time(Sec)	3
Delay Time(ms)	2
Format	1

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 9600bps)	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 7bits)	7bits/8bits
Stop Bit	Specify the stop bit length for communications. (Default: 2bits)	1bit/2bits
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Even)	None Even Odd
Retry	Set the number of retries to be performed when a communication error occurs. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	3 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 2ms)	0 to 300 (ms)
Format	Select the communication format. (Default: 1) format 1: only continuous access format 2: continuous and random access	1, 2

OMRON Digital temperature controller

Property	Value
Transmission Speed(BPS)	9600
Data Bit	7bit
Stop Bit	2bit
Parity	Even
Retry(Times)	0
Timeout Time(Sec)	3
Host Address	1
Delay Time(ms)	2
Format	2

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 9600bps)	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 7bits)	7bits/8bits
Stop Bit	Specify the stop bit length for communications. (Default: 2bits)	1bit/2bits
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Even)	None Even Odd
Retry	Set the number of retries to be performed when a communication error occurs. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Host Address	Specify the host address (station No. of the GOT to which the temperature controller is connected) in the connected network. (Default: 1)	0 to 99
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 2ms)	0 to 300 (ms)
Format	Select the communication format. (Default: 2) format 1: only continuous access format 2: continuous and random access	1, 2

Point

• Delay Time

When connecting to the temperature controller E5ZN, set the delay time to 5ms or more.

• Format setting

Make sure to select format 1 when connecting with previous models (manufactured in December 2007 or before) of the THERMAC NEO series (E5AN, E5CN, E5EN, E5GN).

For the continuous access and random access of the temperature controller, refer to the following manual.

User's Manual of the OMRON temperature controller

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

17.5 Temperature Controller Side Setting

Point

OMRON temperature controller

For details of OMRON temperature controller, refer to the following manual.

User's Manual of the OMRON temperature controller

Model name		Refer to
Temperature controller	E5AN, E5EN, E5CN, E5GN	☞ Page 1052 Connecting E5AN, E5EN, E5CN, E5GN
	E5CN(-H,-HT), E5AN(-H,-HT), E5EN(-H,-HT)	☞ Page 1052 Connecting to E5CN(-H,-HT), E5AN(-H,-HT), E5EN(-H,-HT)
	E5ZN	☞ Page 1053 Connecting E5ZN
	E5CC(-T,-B), E5DC, E5GC, E5EC(-T,-B), E5AC(-T)	☞ Page 1053 Connecting E5CC(-T,-B), E5DC, E5GC, E5EC(-T,-B), E5AC(-T)
	E5CD(-B), E5ED(-B)	☞ Page 1053 Connecting E5CD(-B), E5ED(-B)
	E5AR(-T), E5ER(-T)	☞ Page 1053 Connecting E5CD(-B), E5ED(-B)
Interface converter	K3SC-10	☞ Page 1054 Connection to interface converter (K3SC-10)

Connecting E5AN, E5EN, E5CN, E5GN

Set the communication data by operating the key of the temperature controller.

Item	Set value
Protocol	CompoWay/F (Sysway)
Transmission speed*1	9600bps, 19200bps
Data bit*1	8 bits, 7 bits
Parity bit*1	Odd, Even, None
Stop bit*1	1bit, 2bits
Communication unit No.*2	0 to 99
CMWT (Communications writing) *3	ON

*1 Adjust the settings with GOT settings.

*2 Select the communication unit No. without overlapping with that of other units.

*3 When changing the device values of the temperature controller from the GOT, turn ON CMWT (Communications writing) in advance.

Connecting to E5CN(-H,-HT), E5AN(-H,-HT), E5EN(-H,-HT)

Set the communication data by operating the key of the temperature controller.

Item	Set value
Protocol	CompoWay/F (Sysway)
Transmission speed*1	9600bps,19200bps,38400bps,57600bps
Data bit*1	8 bits, 7 bits
Parity bit*1	Odd, Even, None
Stop bit*1	1bit, 2bits
Communication unit No.*2	0 to 99
CMWT (Communications writing) *3	ON

*1 Adjust the settings with GOT settings.

*2 Select the communication unit No. without overlapping with that of other units.

*3 When changing the device values of the temperature controller from the GOT, turn ON CMWT (Communications writing) in advance.

Connecting E5ZN

Set the communication data by operating the key of the temperature controller.

Item	Set value
Protocol	CompoWay/F (Sysway)
Transmission speed*1	9600bps, 38400bps
Data bit*1	8 bits, 7 bits
Parity bit*1	Odd, Even, None
Stop bit*1	1bit, 2bits
Communication unit No.*2	0 to 15
CMWT (Communications writing) *3	ON

*1 Adjust the settings with GOT settings.
*2 Select the communication unit No. without overlapping with that of other units.
*3 When changing the device values of the temperature controller from the GOT, turn ON CMWT (Communications writing) in advance.

Connecting E5CC(-T,-B), E5DC, E5GC, E5EC(-T,-B), E5AC(-T)

Set the communication data by operating the key of the temperature controller.

Item	Set value
Protocol	CompoWay/F (Sysway)
Transmission speed*1	9600bps,19200bps,38400bps,57600bps
Data bit*1	8 bits, 7 bits
Parity bit*1	Odd, Even, None
Stop bit*1	1bit, 2bits
Communication unit No.*2	0 to 99
CMWT (Communications writing) *3	ON

*1 Adjust the settings with GOT settings.
*2 Select the communication unit No. without overlapping with that of other units.
*3 When changing the device values of the temperature controller from the GOT, turn ON CMWT (Communications writing) in advance.

Connecting E5CD(-B), E5ED(-B)

Configure the communication data settings by operating the keys of the temperature controller.

Item	Set value
Protocol	CompoWay/F (Sysway)
Transmission speed *1	9600bps,19200bps,38400bps,57600bps,115200bps
Data bit *1	8 bits, 7 bits
Parity bit *1	Odd, Even, None
Stop bit *1	1 bit, 2 bits
Communication unit No. *2	0 to 99
CMWT (Communications writing) *3	ON

*1 Adjust the settings with GOT settings.
*2 Select the communication unit No. without overlapping with that of other units.
*3 When changing the device values of the temperature controller from the GOT, turn on CMWT (Communications writing) in advance.

Connection to interface converter (K3SC-10)

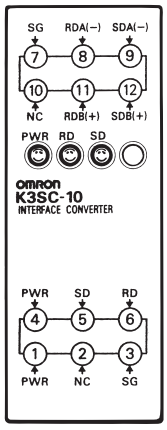
Communication settings

Make the communication settings by operating the DIP switch of the temperature controller.

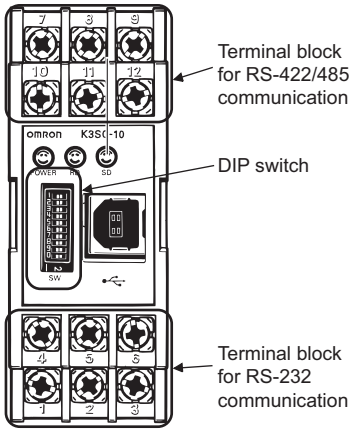
Item	Set value
Protocol	CompoWay/F (Sysway)
Transmission speed*1	19200bps, 38400bps
Data bit*1	7 bits, 8 bits
Parity bit*1	Odd, Even, None
Stop bit*1	1bit, 2bits
Communication Type	RS-232 ↔ RS485
Echo back*2	With, Without

*1 Adjust the settings with GOT settings.
*2 Set to “Without”.

Settings by DIP switch

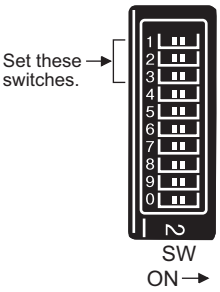


Front of K3SC-10 body



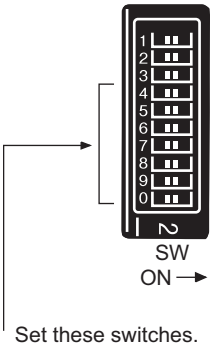
Inside of K3SC-10 body
(When removing the front cover)

■Transmission speed settings



Transmission speed (bps)	Switch No.		
	1	2	3
1200	ON	OFF	OFF
2400	OFF	ON	OFF
4800	ON	ON	OFF
9600	OFF	OFF	OFF
19200	ON	OFF	ON
38400	OFF	ON	ON

■Settings of data length, parity bit, stop bit, master/slave device and echoback



Set these switches.

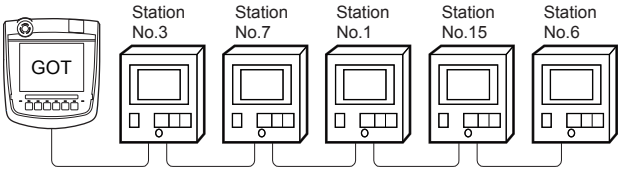
Setting item	Set value	Switch No.						
		4	5	6	7	8	9	0
Data bit	7bits	OFF						
	8bits	ON						
Stop bit	2bits		OFF					
	1bit		ON					
Parity	Even			OFF	OFF			
	Odd			ON	OFF			
	None			OFF	ON			
Communication Type	RS232 ↔ RS422					OFF	ON	
	RS-232 ↔ RS485					OFF	OFF	
Echo back	Without							OFF
	With							ON

Station No. settings

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.



Examples of station number setting

Direct specification

When setting the device, specify the station number of the temperature controller of which data is to be changed.

Model name	Specification range
E5AN, E5EN, E5CN, E5GN	0 to 99
E5ZN	0 to 15

Indirect specification

When setting the device, indirectly specify the station number of the temperature controller of which data is to be changed using the 16-bit GOT internal data register (GD10 to GD25).

When specifying the station No. from 100 to 115 on GT Designer3, the value of GD10 to GD25 compatible to the station No. specification will be the station No. of the temperature controller.

Specification station NO.	Compatible device	Setting range
100	GD10	0 to 99: For E5AN, E5EN, E5CN or E5GN 0 to 15: For E5ZN For the setting other than the above, error (dedicated device is out of range) will occur.
101	GD11	
102	GD12	
103	GD13	
104	GD14	
105	GD15	
106	GD16	
107	GD17	
108	GD18	
109	GD19	
110	GD20	
111	GD21	
112	GD22	
113	GD23	
114	GD24	
115	GD25	

All station specification

Target station differs depending on write-in operation or read-out operation.

- For write-in operation, all station will be a target.
- For read-out operation, only one station will be a target.

17.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1
OMRON equipment ([OMRON THERMAC/INPANEL NEO])
OMRON equipment ([OMRON Digital Temperature Controller])

17.7 Precautions

Station number setting of the temperature controller system

Make sure to establish temperature controller system with No.1 station.

GOT clock control

Since the temperature controller does not have a clock function, the settings of [time adjusting] or [Broadcast] by GOT clock control will be disabled.

Disconnecting some of multiple connected equipment

The GOT can disconnect some of multiple connected equipment by setting GOT internal device.
For example, the faulty station where a communication timeout error occurs can be disconnected from connected equipment.
For details of GOT internal device setting, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

MEMO

18 KEYENCE PLC

- Page 1059 Connectable Model List
- Page 1061 Serial Connection
- Page 1098 Ethernet Connection
- Page 1104 Settable Device Range

18.1 Connectable Model List

The following table shows the connectable models.

Series	Model name	Clock	Communication Type	Connectable GOT	Refer to
KV-X	KV-X500 KV-X520 KV-X530 KV-X550	○	Ethernet	GT2506HS GT2505HS	☞ Page 1098 Ethernet connection
KV-8000	KV-8000	○	RS-232	GT2506HS GT2505HS	☞ Page 1061 Connecting to KV-8000 or KV-7000 series
			RS-422		
			RS-485	GT2506HS GT2505HS	
			Ethernet	GT2506HS GT2505HS	☞ Page 1098 Ethernet connection
KV-7000	KV-7500 KV-7300	○	RS-232	GT2506HS GT2505HS	☞ Page 1061 Connecting to KV-8000 or KV-7000 series
			RS-422		
			RS-485	GT2506HS GT2505HS	
			Ethernet	GT2506HS GT2505HS	☞ Page 1098 Ethernet connection
KV-5000	KV-5500 KV-5000	○	RS-232	GT2506HS GT2505HS	☞ Page 1065 Connecting to KV-5000 series
			RS-422		
			RS-485	GT2506HS GT2505HS	
			Ethernet	GT2506HS GT2505HS	☞ Page 1098 Ethernet connection
KV-3000	KV-3000	○	RS-232	GT2506HS GT2505HS	☞ Page 1067 Connecting to KV-3000 series
			RS-422		
			RS-485	GT2506HS GT2505HS	
			Ethernet	GT2506HS GT2505HS	☞ Page 1098 Ethernet connection
KV-1000	KV-1000	○	RS-232	GT2506HS GT2505HS	☞ Page 1070 Connecting to KV-1000 series
			RS-422		
			RS-485	GT2506HS GT2505HS	
			Ethernet	GT2506HS GT2505HS	☞ Page 1098 Ethernet connection
KV-700	KV-700	○	RS-232	GT2506HS GT2505HS	☞ Page 1073 Connecting to KV-700 series
			RS-422		
			RS-485	GT2506HS GT2505HS	
			Ethernet	GT2506HS GT2505HS	☞ Page 1098 Ethernet connection

Series	Model name	Clock	Communication Type	Connectable GOT	Refer to
KV Nano	KV-N14□□	○	RS-232	GT2506HS GT2505HS	☞ Page 1076 Connecting to KV Nano series
			RS-422		
			RS-485		
	KV-N24□□ KV-N40□□ KV-N60□□ KV-NC32T	○	RS-232	GT2506HS GT2505HS	☞ Page 1076 Connecting to KV Nano series
			RS-422		
			RS-485		
			Ethernet	GT2506HS GT2505HS	☞ Page 1098 Ethernet connection

18.2 Serial Connection

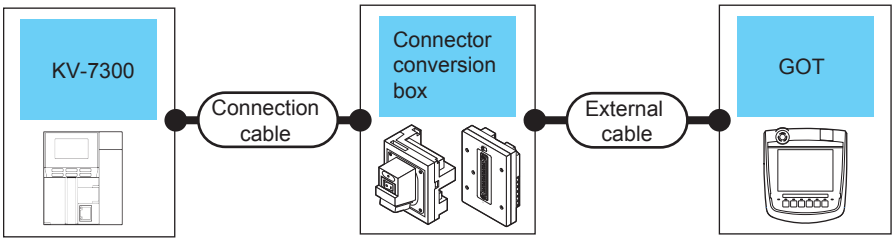
Connecting to KV-8000 or KV-7000 series

Communication driver

Serial (KEYENCE)

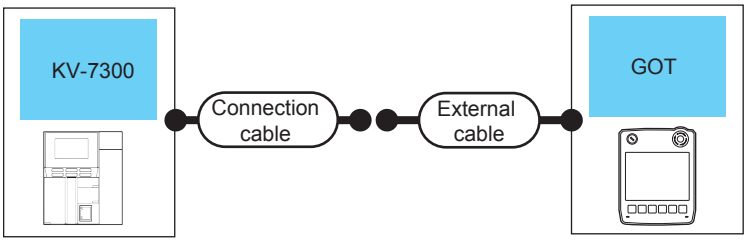
When connecting to a PLC

■When using the connector conversion box



PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
KV-7300	RS-232	GT09-C30R21101-6P or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

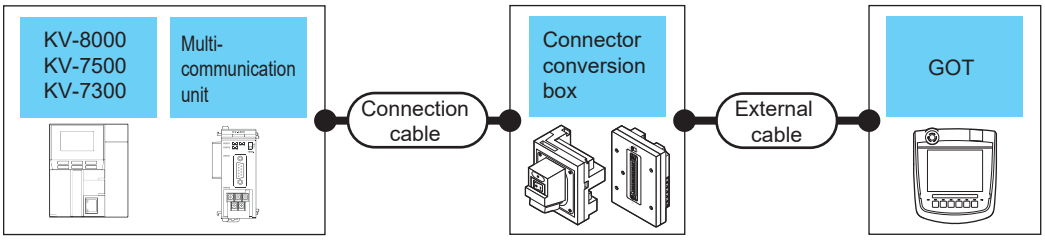
■When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
KV-7300	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC

When connecting to multi-communication unit

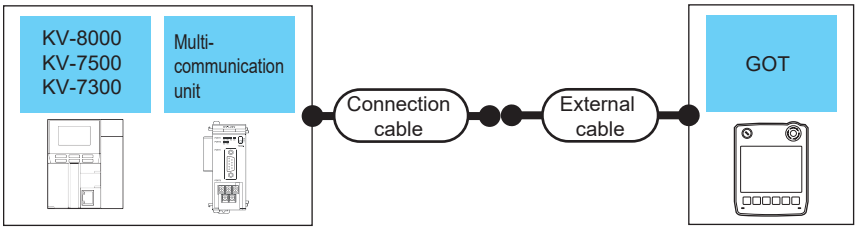
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Multi-communication unit*1	Communication Type	Cable model Connection diagram number					
KV-8000 KV-7500 KV-7300	KV-L20V (port 1) KV-L21V (port 1) KV-XL202	RS-232	GT09-C30R21102-9S(3m) or User preparing RS-232 connection diagram 3)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 multi-communication unit
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	KV-L20V (port 2) KV-L21V (port 2)		GT09-C30R21103-3T(3m) or User preparing RS-232 connection diagram 6)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		RS-422	GT09-C30R41101-5T(3m) GT09-C100R41101-5T(10m) or User preparing RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
		RS-485	User preparing RS-485 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
	KV-XL402	RS-422	User preparing RS422 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
		RS-485	User preparing RS485 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 The multi-communication unit is a product manufactured by KEYENCE CORPORATION.
For details of the product, contact KEYENCE CORPORATION.

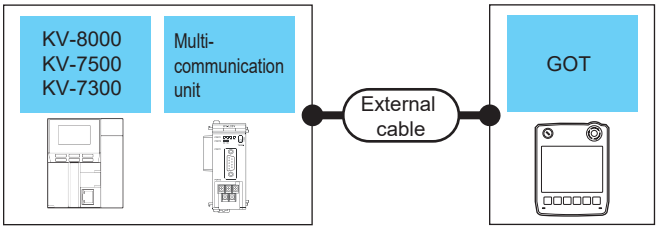
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Multi-communication unit*1	Communication Type	Cable model Connection diagram number				
KV-8000 KV-7500 KV-7300	KV-L20V (port 1) KV-L21V (port 1) KV-XL202	RS-232	User preparing RS-232 connection diagram 4)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 multi-communication unit
	KV-L20V (port 2) KV-L21V (port 2)	RS-232	User preparing RS-232 connection diagram 7)	GT11H-C30-37P(3m)	GT 2505HS		
		RS-422	User preparing RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	
		RS-485	User preparing RS-485 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
	KV-XL402	RS-422	User preparing RS422 connection diagram 8)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	
		RS-485	User preparing RS485 connection diagram 8)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 The multi-communication unit is a product manufactured by KEYENCE CORPORATION.
For details of the product, contact KEYENCE CORPORATION.

■When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Multi-communication unit*1	Communication Type				
KV-8000 KV-7500 KV-7300	KV-L20V (port 1) KV-L21V (port 1) KV-XL202	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 5)	GT 2505HS	6m	1 GOT for 1 multi-communication unit
	KV-L20V (port 2) KV-L21V (port 2)	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 8)	GT 2505HS		
		RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 3)	GT 2505HS	13m	
		RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-485 connection diagram 3)	GT 2505HS		
	KV-XL402	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS422 connection diagram 9)	GT 2505HS	13m	
		RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS485 connection diagram 9)	GT 2505HS		

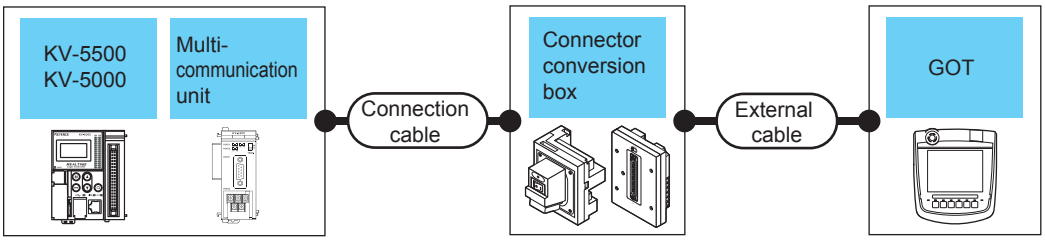
*1 The multi-communication unit is a product manufactured by KEYENCE CORPORATION.
For details of the product, contact KEYENCE CORPORATION.

Connecting to KV-5000 series

Communication driver

Serial (KEYENCE)

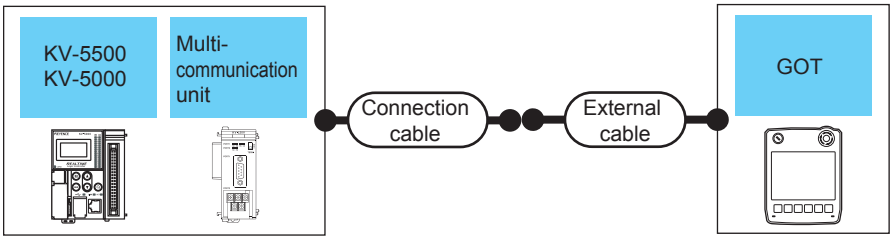
When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Multi-communication unit*1	Communication Type	Cable model Connection diagram number					
KV-5500 KV-5000	KV-L20V (port 1)	RS-232	GT09-C30R21102-9S(3m) or User preparing RS-232 connection diagram 3)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 multi-communication unit
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	KV-L20V (port 2)		GT09-C30R21103-3T(3m) or User preparing RS-232 connection diagram 6)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		RS-422	GT09-C30R41101-5T(3m) GT09-C100R41101-5T(10m) or User preparing RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
			User preparing RS-485 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 The multi-communication unit is a product manufactured by KEYENCE CORPORATION. For details of the product, contact KEYENCE CORPORATION.

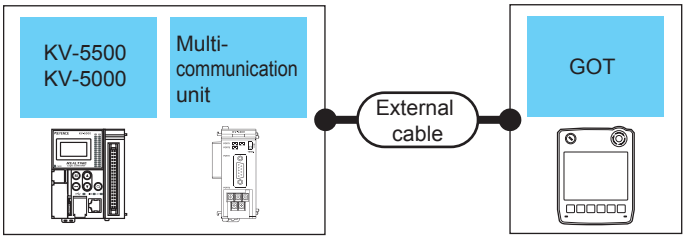
When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Multi-communication unit*1	Communication Type	Cable model Connection diagram number				
KV-5500 KV-5000	KV-L20V (port 1)	RS-232	GT09-C30R21102-9S(3m) or User preparing RS-232 connection diagram 4)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 multi-communication unit
	KV-L20V (port 2)		GT09-C30R21103-3T(3m) or User preparing RS-232 connection diagram 7)	GT11H-C30-37P(3m)	GT 2505HS		
		RS-422	GT09-C30R41101-5T(3m) GT09-C100R41101-5T(10m) or User preparing RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	
		RS-485	User preparing RS-485 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

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When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Multi-communication unit*1	Communication Type				
KV-5500 KV-5000	KV-L20V (port 1)	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 5)	GT 2505HS	6m	1 GOT for 1 multi-communication unit
	KV-L20V (port 2)		GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 8)	GT 2505HS		
		RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 3)	GT 2505HS	13m	
		RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-485 connection diagram 3)	GT 2505HS		

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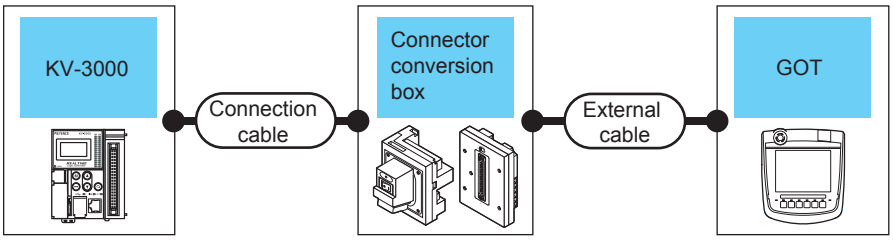
Connecting to KV-3000 series

Communication driver

Serial (KEYENCE)

When connecting to a PLC

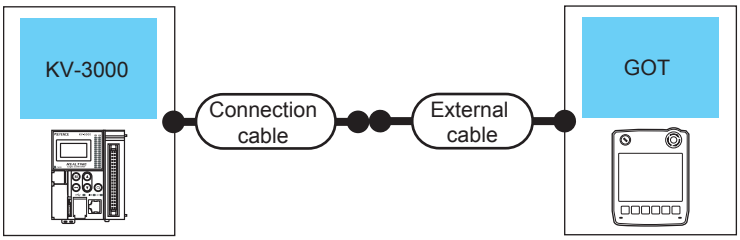
■When using the connector conversion box



PLC		Connection cable		Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Conversion connector*1					
KV-3000	RS-232	GT09-C30R21101-6P or User preparing RS-232 connection diagram 1)	-	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		OP-26487*1	OP-26486	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 The cable and conversion connector are products manufactured by KEYENCE CORPORATION. For details of the product, contact KEYENCE CORPORATION.

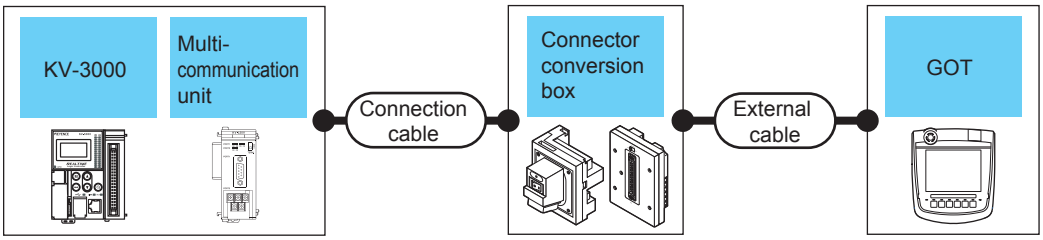
■When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
KV-3000	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC

When connecting to multi-communication unit

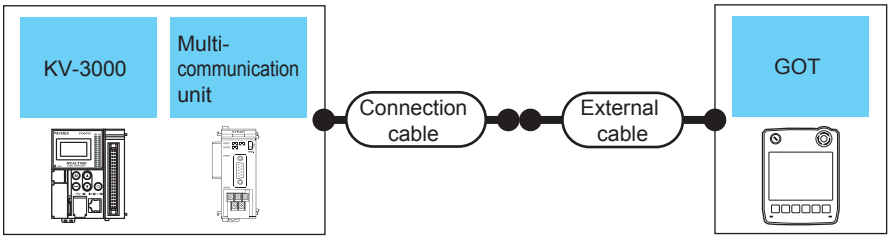
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Multi-communication unit*1	Communication Type	Cable model Connection diagram number					
KV-3000	KV-L20V (port 1)	RS-232	GT09-C30R21102-9S(3m) or User preparing RS-232 connection diagram 3)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 multi-communication unit
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	KV-L20V (port 2)		GT09-C30R21103-3T(3m) or User preparing RS-232 connection diagram 6)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		RS-422	GT09-C30R41101-5T(3m) GT09-C100R41101-5T(10m) or User preparing RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
KV-3000	KV-L20V (port 2)	RS-485	User preparing RS-485 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 multi-communication unit
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 The multi-communication unit is a product manufactured by KEYENCE CORPORATION.
For details of the product, contact KEYENCE CORPORATION.

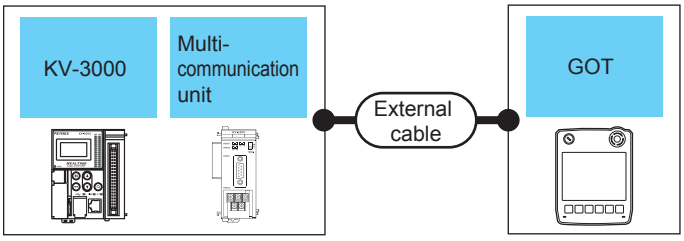
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Multi-communication unit*1	Communication Type	Cable model Connection diagram number				
KV-3000	KV-L20V (port 1)	RS-232	User preparing RS-232 connection diagram 4)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 multi-communication unit
	KV-L20V (port 2)		User preparing RS-232 connection diagram 7)	GT11H-C30-37P(3m)	GT 2505HS		
		RS-422	User preparing RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	
		RS-485	User preparing RS-485 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

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■When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Multi-communication unit*1	Communication Type				
KV-3000	KV-L20V (port 1)	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 5)	GT 2505HS	6m	1 GOT for 1 multi-communication unit
	KV-L20V (port 2)		GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 8)	GT 2505HS		
		RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 3)	GT 2505HS	13m	
		RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-485 connection diagram 3)	GT 2505HS		

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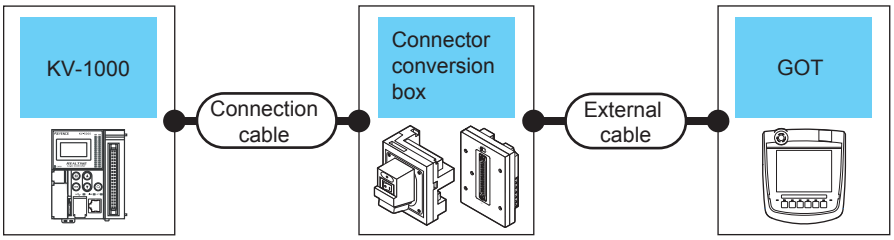
Connecting to KV-1000 series

Communication driver

Serial (KEYENCE)

When connecting to PLC

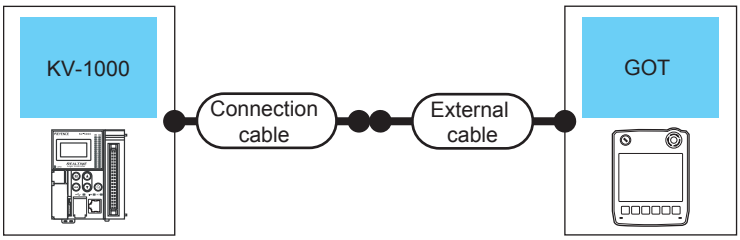
■When using the connector conversion box



PLC		Connection cable		Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Conversion connector*1					
KV-1000	RS-232	GT09-C30R21101-6P or User preparing RS-232 connection diagram 1)	-	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		OP-26487*1	OP-26486	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 The cable and conversion connector are products manufactured by KEYENCE CORPORATION. For details of the product, contact KEYENCE CORPORATION.

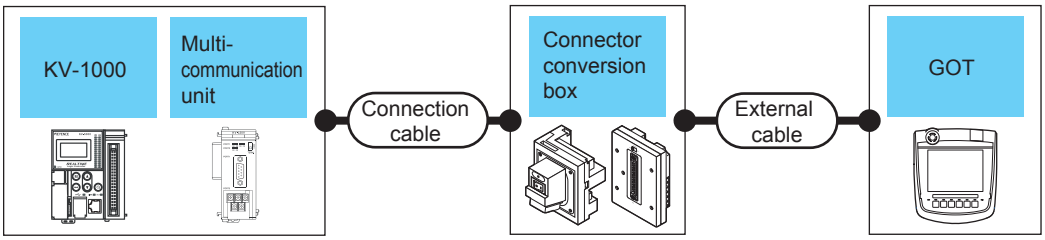
■When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
KV-1000	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC

When connecting to multi-communication unit

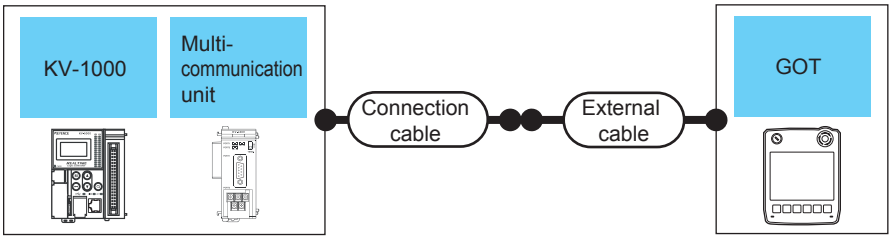
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Multi-communication unit*1	Communication Type	Cable model Connection diagram number					
KV-1000	KV-L20R, KV-L20V (port 1)	RS-232	GT09-C30R21102-9S(3m) or User preparing RS-232 connection diagram 3)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 multi-communication unit
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	KV-L20R, KV-L20V (port 2)		GT09-C30R21103-3T(3m) or User preparing RS-232 connection diagram 6)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		RS-422	GT09-C30R41101-5T(3m) GT09-C100R41101-5T(10m) or User preparing RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
		RS-485	User preparing RS-485 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

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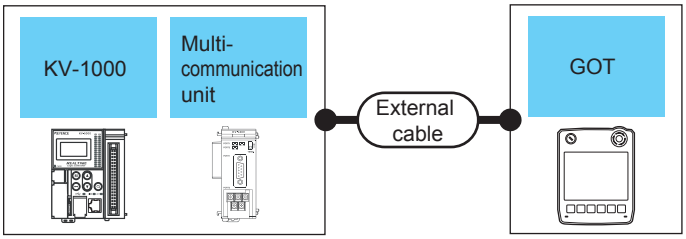
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Multi-communication unit*1	Communication Type	Cable model Connection diagram number				
KV-1000	KV-L20R, KV-L20V (port 1)	RS-232	User preparing RS-232 connection diagram 4)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 multi-communication unit
	KV-L20R, KV-L20V (port 2)		User preparing RS-232 connection diagram 7)	GT11H-C30-37P(3m)	GT 2505HS		
		RS-422	User preparing RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	
		RS-485	User preparing RS-485 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

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For details of the product, contact KEYENCE CORPORATION.

■When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Multi-communication unit*1	Communication Type				
KV-1000	KV-L20R, KV-L20V (port 1)	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 5)	GT 2505HS	6m	1 GOT for 1 multi-communication unit
	KV-L20R, KV-L20V (port 2)		GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 8)	GT 2505HS		
		RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 3)	GT 2505HS	13m	
		RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-485 connection diagram 3)	GT 2505HS		

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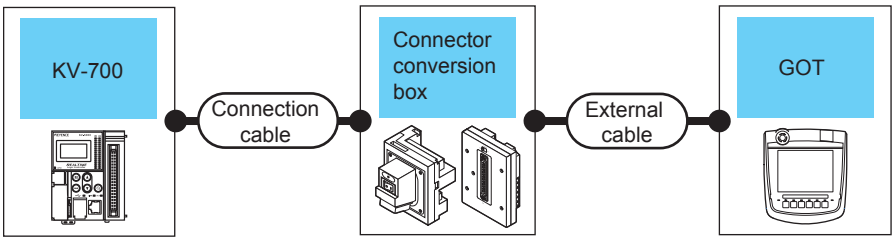
Connecting to KV-700 series

Communication driver

Serial (KEYENCE)

When connecting to PLC

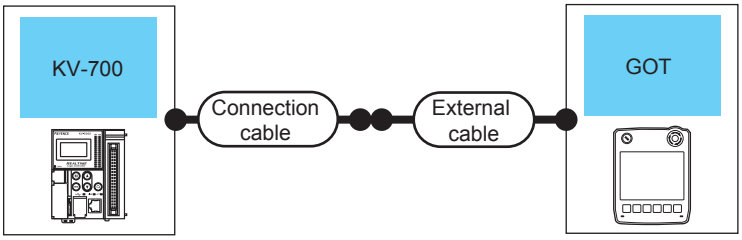
■When using the connector conversion box



PLC		Connection cable		Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Conversion connector*1					
KV-700	RS-232	GT09-C30R21101-6P or User preparing RS-232 connection diagram 1)	-	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		OP-26487*1	OP-26486	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 The cable, conversion connector, and multi-communication unit are products manufactured by KEYENCE CORPORATION. For details of the product, contact KEYENCE CORPORATION.

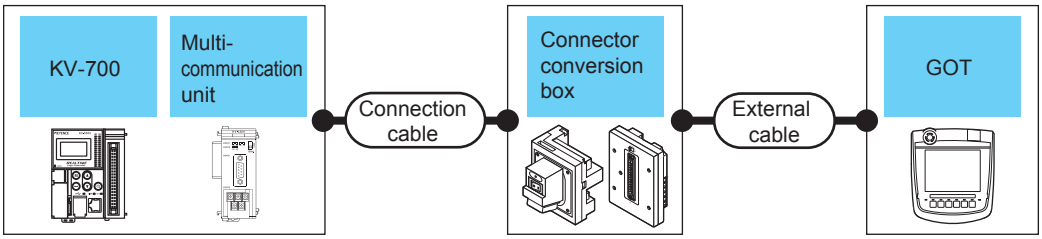
■When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
KV-700	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC

When connecting to multi-communication unit

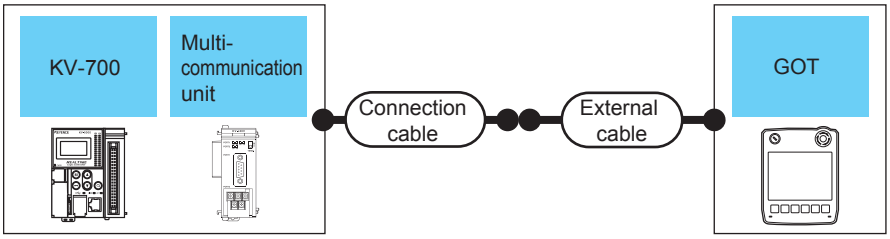
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Multi-communication unit*1	Communication Type	Cable model Connection diagram number					
KV-700	KV-L20R, KV-L20, KV-L20V (port 1)	RS-232	GT09-C30R21102-9S(3m) or User preparing RS-232 connection diagram 3)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 multi-communication unit
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	KV-L20R, KV-L20, KV-L20V (port 2)		GT09-C30R21103-3T(3m) or User preparing RS-232 connection diagram 6)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		RS-422	GT09-C30R41101-5T(3m) GT09-C100R41101-5T(10m) or User preparing RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
KV-700	KV-L20R, KV-L20, KV-L20V (port 2)	RS-485	User preparing RS-485 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 multi-communication unit
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 The conversion connector and multi-communication unit are products manufactured by KEYENCE CORPORATION. For details of the product, contact KEYENCE CORPORATION.

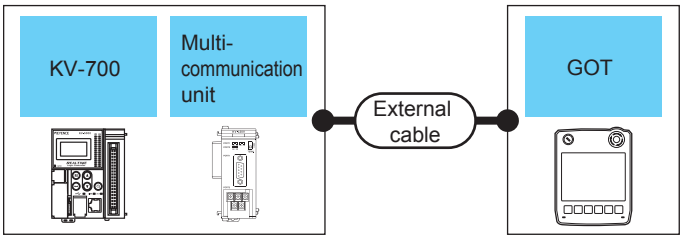
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Multi-communication unit*1	Communication Type	Cable model Connection diagram number				
KV-700	KV-L20R, KV-L20, KV-L20V (port 1)	RS-232	User preparing RS-232 connection diagram 4)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 multi-communication unit
	KV-L20R, KV-L20, KV-L20V (port 2)		User preparing RS-232 connection diagram 7)	GT11H-C30-37P(3m)	GT 2505HS		
		RS-422	User preparing RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	
		RS-485	User preparing RS-485 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 The conversion connector and multi-communication unit are products manufactured by KEYENCE CORPORATION. For details of the product, contact KEYENCE CORPORATION.

■When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Multi-communication unit*1	Communication Type				
KV-700	KV-L20R, KV-L20, KV-L20V (port 1)	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 5)	GT 2505HS	6m	1 GOT for 1 multi-communication unit
	KV-L20R, KV-L20, KV-L20V (port 2)		GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 8)	GT 2505HS		
		RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 3)	GT 2505HS	13m	
		RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-485 connection diagram 3)	GT 2505HS		

*1 The conversion connector and multi-communication unit are products manufactured by KEYENCE CORPORATION. For details of the product, contact KEYENCE CORPORATION.

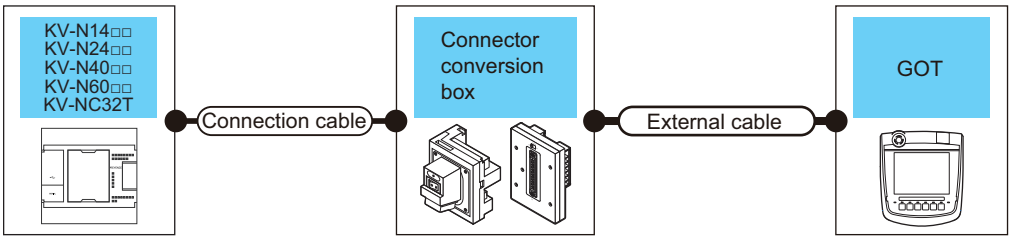
Connecting to KV Nano series

Communication driver

Serial (KEYENCE)

When connecting to PLC

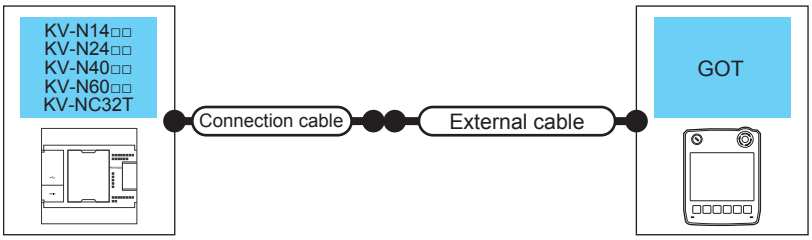
■When using the connector conversion box



PLC		Connection cable		Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Conversion connector*1					
KV-N14□□ KV-N24□□ KV-N40□□ KV-N60□□ KV-NC32T	RS-232	GT09-C30R21101-6P or User preparing RS-232 connection diagram 1)	-	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		OP-26487*1	OP-26486	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 The cable, conversion connector, and multi-communication unit are products manufactured by KEYENCE CORPORATION. For details of the product, contact KEYENCE CORPORATION.

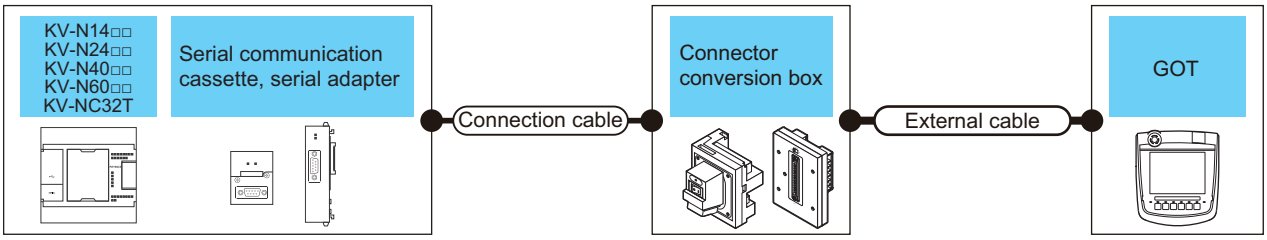
■When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
KV-N14□□ KV-N24□□ KV-N40□□ KV-N60□□ KV-NC32T	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC

Connecting to serial communication cassette or serial adapter

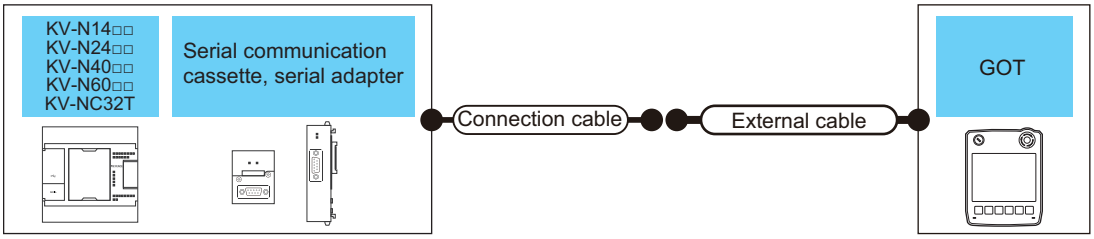
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication cassette, serial adapter *1	Communication Type	Cable model Connection diagram number					
KV-N14□□ KV-N24□□ KV-N40□□ KV-N60□□ KV-NC32T	KV-N10L, KV-NC10L, KV-NC20L (port 1)	RS-232	GT09-C30R21102-9S(3m) or User preparing RS-232 connection diagram 3)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 serial communication cassette or serial adapter
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
KV-NC32T	KV-NC20L (port 2)	RS-232	User preparing RS-232 connection diagram 9)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 serial communication cassette or serial adapter
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
KV-N14□□ KV-N24□□ KV-N40□□ KV-N60□□ KV-NC32T	KV-N11L, KV-NC20L (port 2)	RS-422	User preparing RS-422 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 serial communication cassette or serial adapter
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
		RS-485	User preparing RS-485 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 The serial communication cassette and serial adapter are products manufactured by KEYENCE CORPORATION. For details of the product, contact KEYENCE CORPORATION.

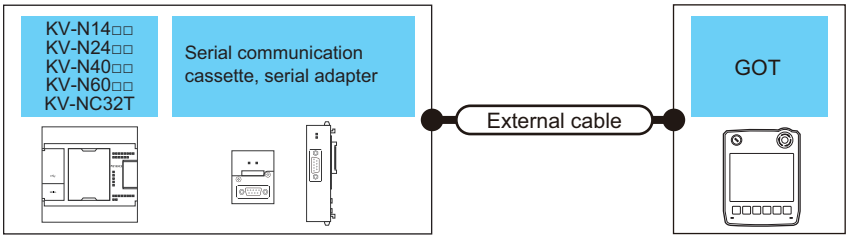
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication cassette, serial adapter *1	Communication Type	Cable model Connection diagram number				
KV-N14□□ KV-N24□□ KV-N40□□ KV-N60□□ KV-NC32T	KV-N10L, KV-NC10L, KV-NC20L (port 1)	RS-232	User preparing RS-232 connection diagram 4)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 serial communication cassette or serial adapter
KV-N14□□ KV-N24□□ KV-N40□□ KV-N60□□ KV-NC32T	KV-NC20L (port 2)	RS-232	User preparing RS-232 connection diagram 10)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 serial communication cassette or serial adapter
	KV-N11L, KV-NC20L (port 2)	RS-422	User preparing RS-422 connection diagram 5)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	
		RS-485	User preparing RS-485 connection diagram 5)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 The serial communication cassette and serial adapter are products manufactured by KEYENCE CORPORATION. For details of the product, contact KEYENCE CORPORATION.

■When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Serial communication cassette, serial adapter *1	Communication Type				
KV-N14□□ KV-N24□□ KV-N40□□ KV-N60□□ KV-NC32T	KV-N10L, KV-NC10L, KV-NC20L (port 1)	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 5)	GT 2505HS	6m	1 GOT for 1 serial communication cassette or serial adapter
KV-N14□□ KV-N24□□ KV-N40□□ KV-N60□□ KV-NC32T	KV-NC20L (port 2)	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 11)	GT 2505HS	6m	1 GOT for 1 serial communication cassette or serial adapter
	KV-N11L, KV-NC20L (port 2)	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 6)	GT 2505HS	13m	
		RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-485 connection diagram 6)	GT 2505HS	13m	

*1 The serial communication cassette and serial adapter are products manufactured by KEYENCE CORPORATION. For details of the product, contact KEYENCE CORPORATION.

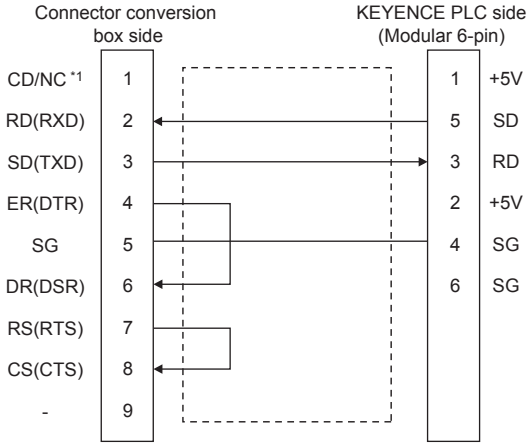
Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

RS-232 cable

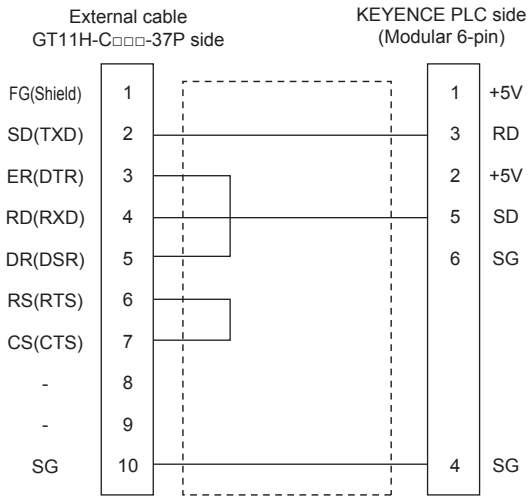
■Connection diagram

• RS-232 connection diagram 1)

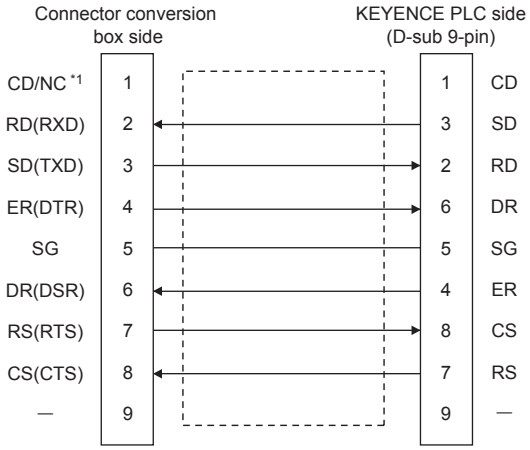


*1 GT2506HS-V: CD, GT2505HS-V: NC

• RS-232 connection diagram 2)

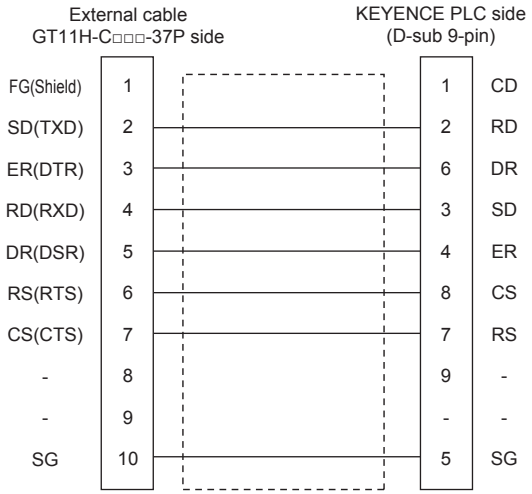


• RS-232 connection diagram 3)

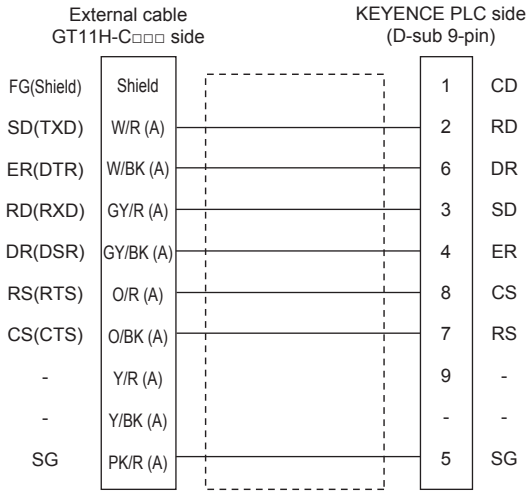


*1 GT2506HS-V: CD, GT2505HS-V: NC

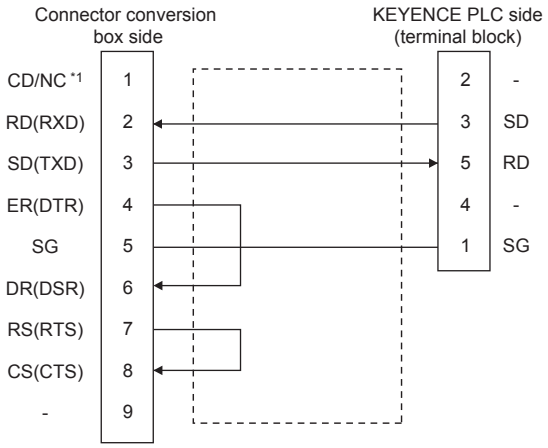
• RS-232 connection diagram 4)



• RS-232 connection diagram 5)

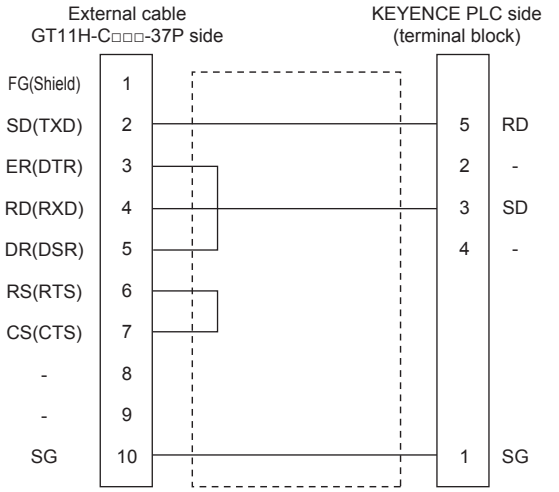


• RS-232 connection diagram 6)

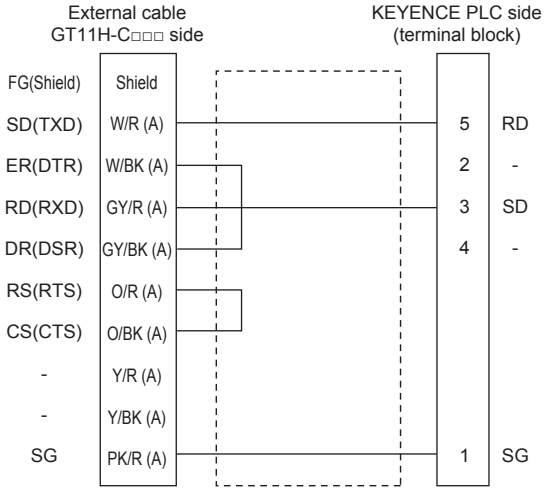


*1 GT2506HS-V: CD, GT2505HS-V: NC

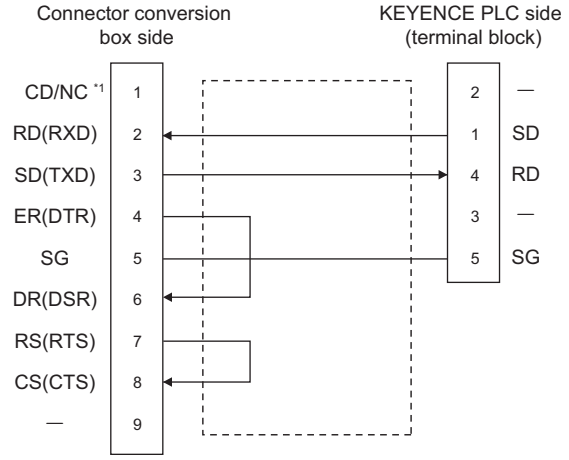
• RS-232 connection diagram 7)



• RS-232 connection diagram 8)

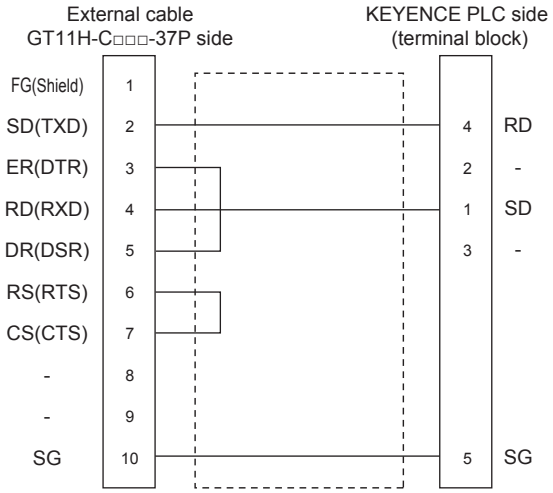


• RS-232 connection diagram 9)

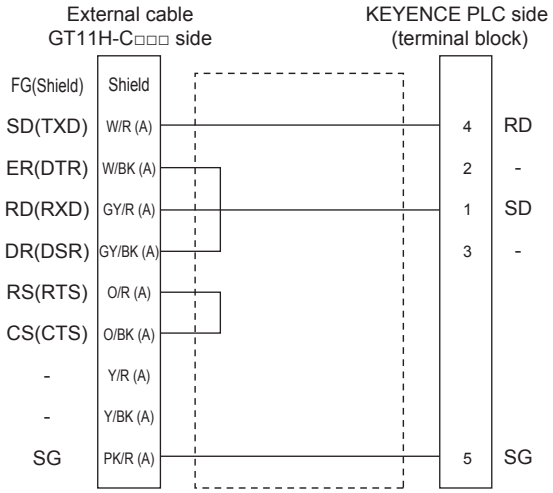


*1 GT2506HS-V: CD, GT2505HS-V: NC

• RS-232 connection diagram 10)



• RS-232 connection diagram 11)



■Precaution when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

• KEYENCE PLC side connector

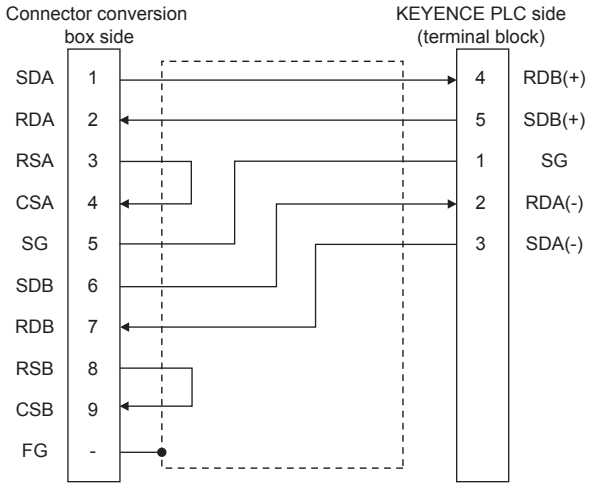
Use the connector compatible with the KEYENCE PLC side module.

For details, refer to the KEYENCE PLC user's manual.

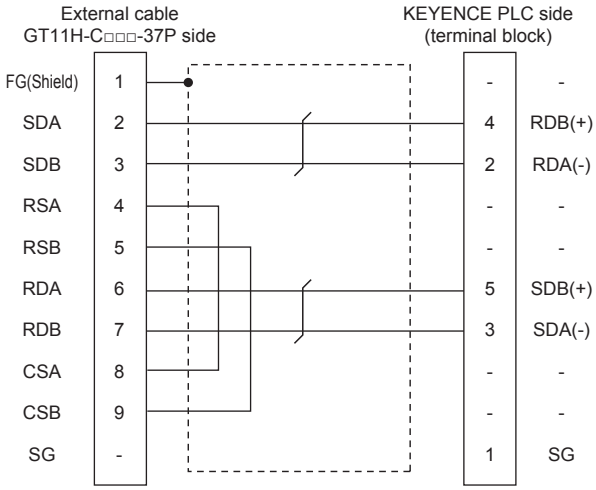
RS-422 cable

■Connection diagram

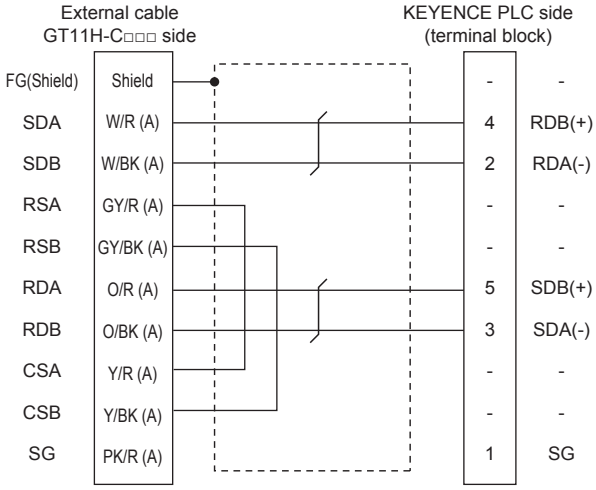
• RS-422 connection diagram 1)



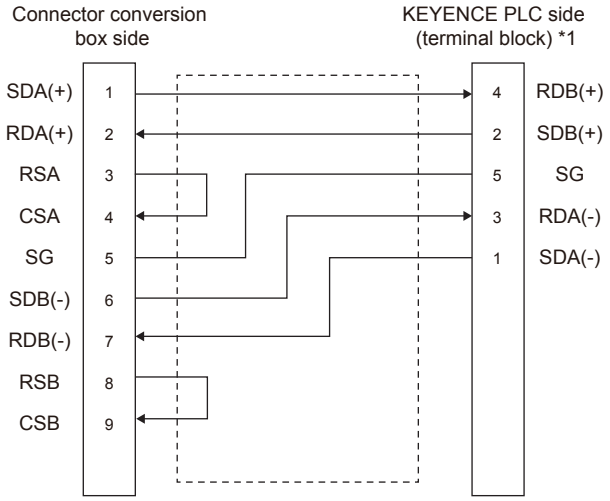
• RS-422 connection diagram 2)



• RS-422 connection diagram 3)

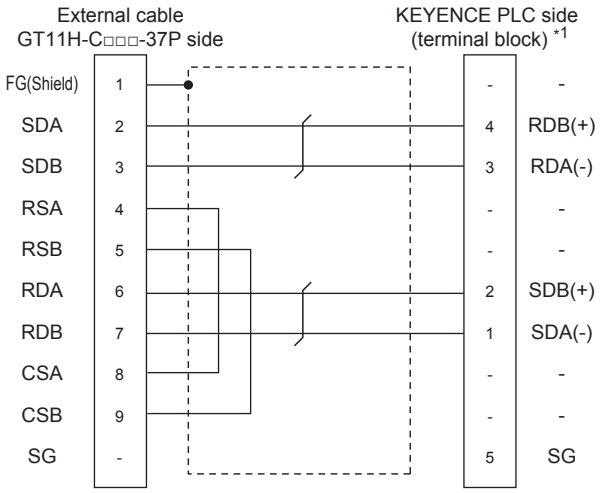


• RS-422 connection diagram 4)



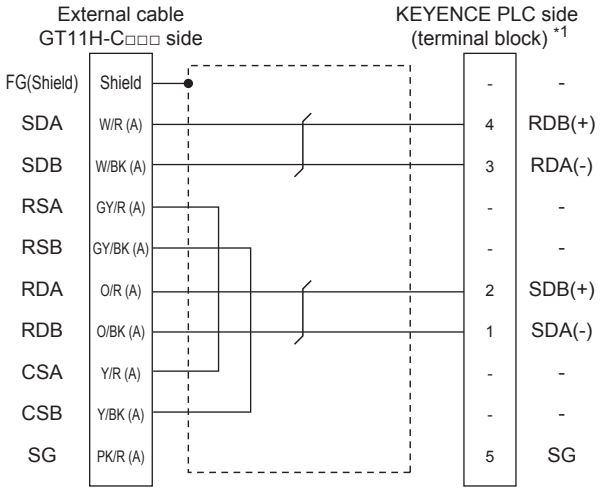
*1 Turn on the terminating resistor selector.

• RS-422 connection diagram 5)



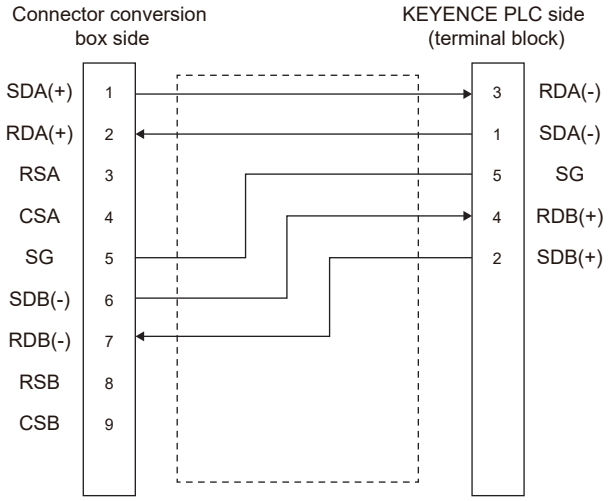
*1 Turn on the terminating resistor selector.

• RS-422 connection diagram 6)

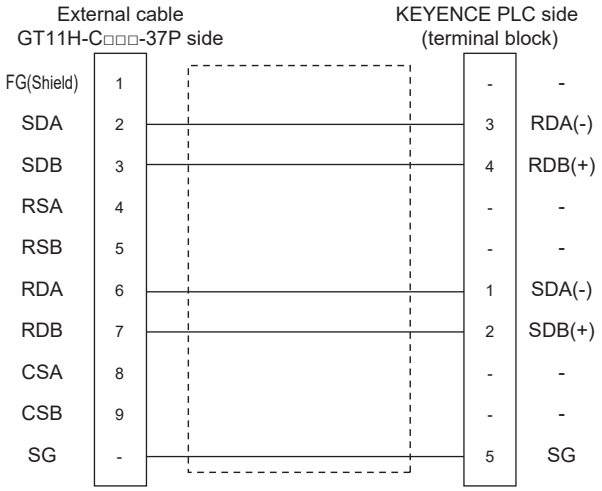


*1 Turn on the terminating resistor selector.

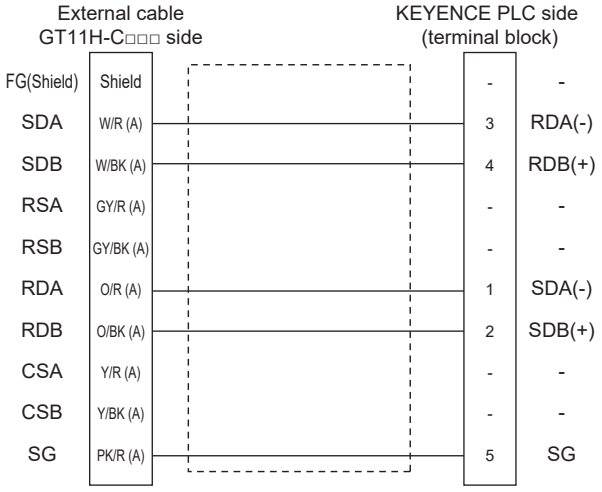
• RS422 connection diagram 7)



• RS422 connection diagram 8)



• RS422 connection diagram 9)



■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

• KEYENCE PLC side connector

Use the connector compatible with the KEYENCE PLC side module.

For details, refer to the KEYENCE PLC user's manual.

■Connecting terminating resistors

• GOT side

When connecting a KEYENCE PLC to the GOT, a terminating resistor must be connected to the GOT.

For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

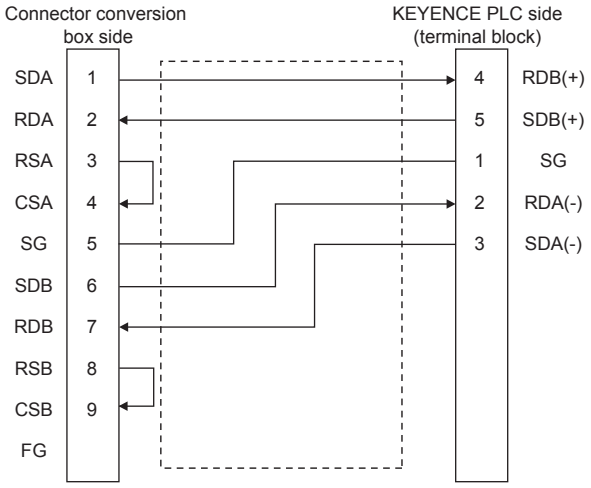
For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

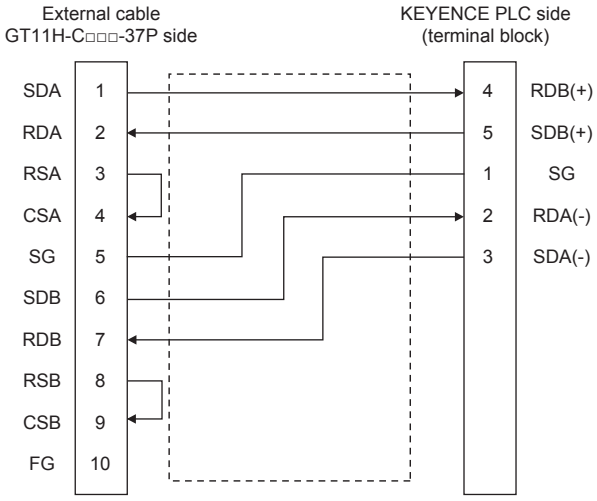
RS-485 cable

■Connection diagram

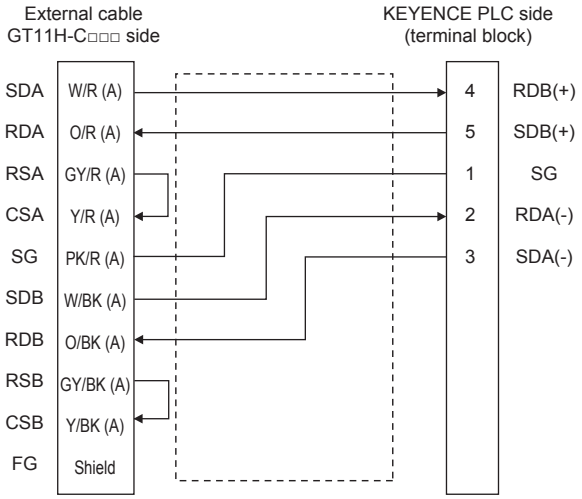
• RS-485 connection diagram 1)



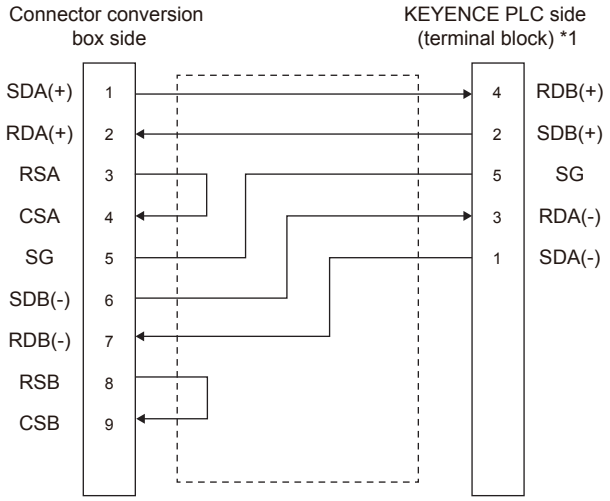
• RS-485 connection diagram 2)



• RS-485 connection diagram 3)

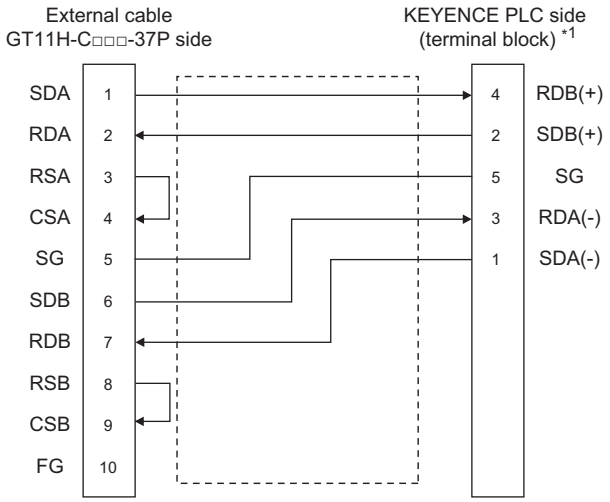


• RS-485 connection diagram 4)



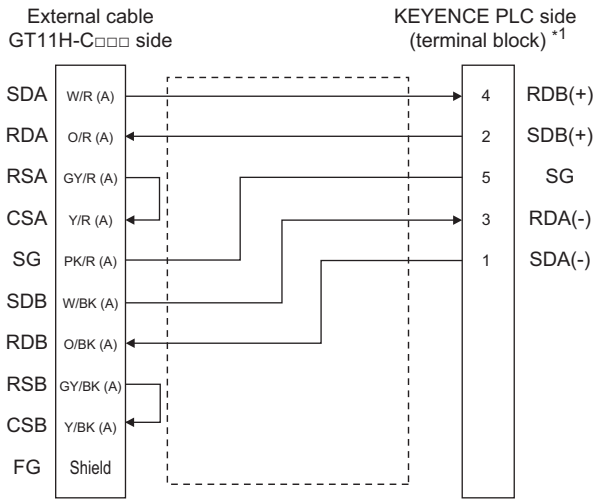
*1 Turn on the terminating resistor selector.

• RS-485 connection diagram 5)



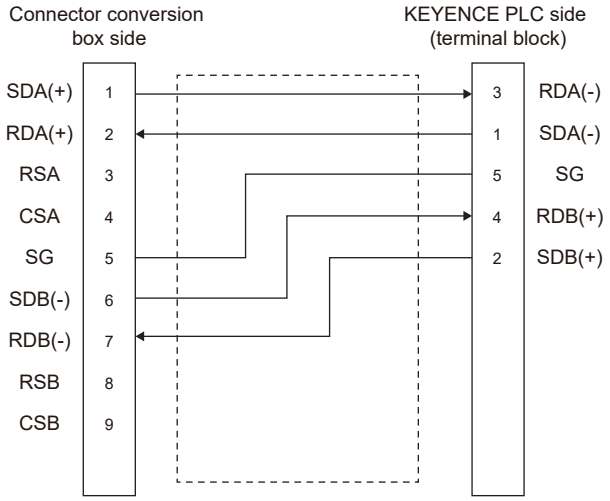
*1 Turn on the terminating resistor selector.

• RS-485 connection diagram 6)

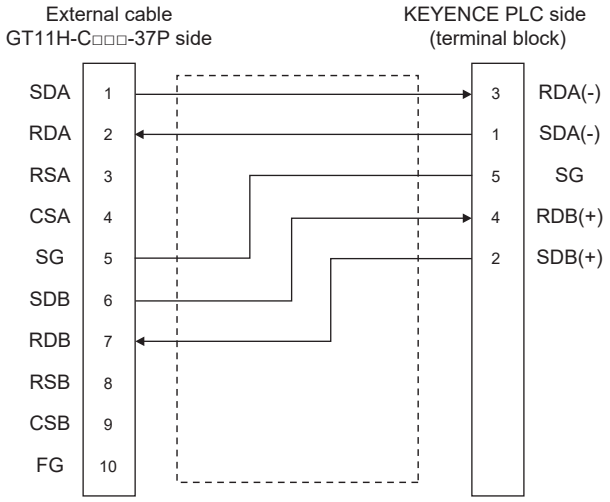


*1 Turn on the terminating resistor selector.

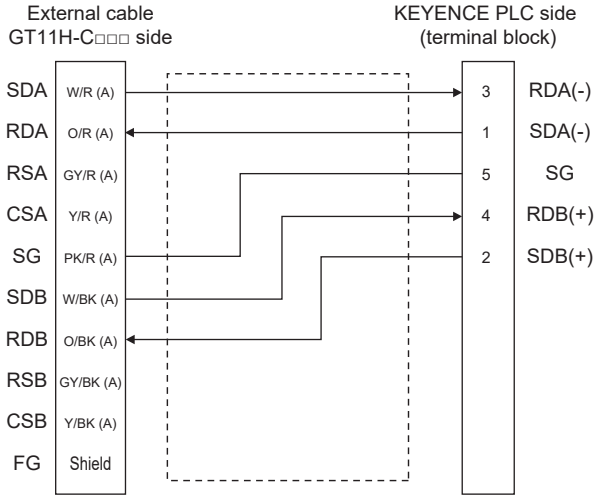
• RS485 connection diagram 7)



• RS485 connection diagram 8)



• RS485 connection diagram 9)



■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-485 cable must be 13 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

• KEYENCE PLC side connector

Use the connector compatible with the KEYENCE PLC side module.

For details, refer to the KEYENCE PLC user's manual.

■Connecting terminating resistors

• GOT

For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Enable".

For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

• KEYENCE PLC

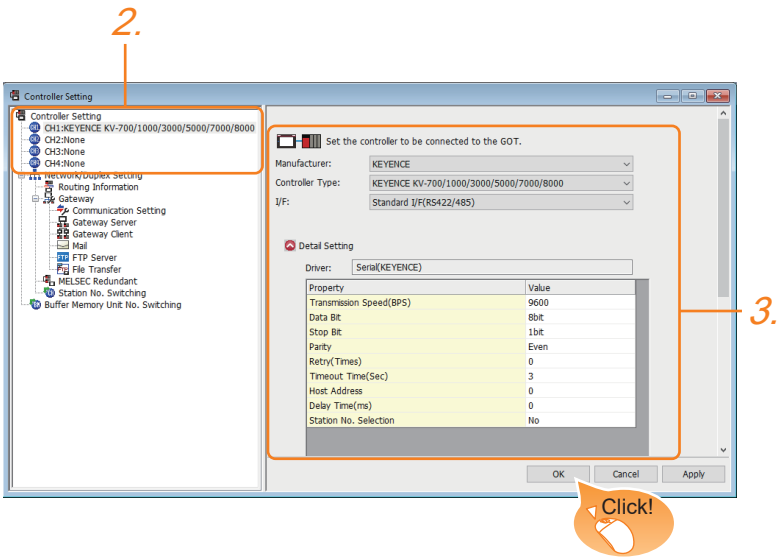
Connect the terminating resistor on the KEYENCE PLC side when connecting a GOT to a KEYENCE PLC.

☞ Page 1094 PLC Side Setting

GOT Side Settings

Setting communication interface (Communication settings)

Set the channel of the equipment to be connected to the GOT.



1. Select [Common] → [Controller Setting] from the menu.
2. In the [Controller Setting] window, select the channel No. to be used from the list menu.
3. Set the following items.

- [Manufacturer]: [KEYENCE]
- [Controller Type]: [KEYENCE KV-700/1000/3000/5000/7000/8000]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1093 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
Transmission Speed(BPS)	9600
Data Bit	8 bit
Stop Bit	1 bit
Parity	Even
Retry(Times)	0
Timeout Time(Sec)	3
Host Address	0
Delay Time(ms)	0
Station No. Selection	No

Item	Contents	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 9600bps)	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bits)	7bits/8bits
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit/2bits
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Even)	None Even Odd
Retry	Set the number of retries to be performed when a communication error occurs. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Host Address	Specify the host address (station No. of the PLC to which the GOT is connected) in the network of the GOT. (Default: 0)	0 to 9
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300ms
Station No. Selection	Specify whether to use the station No. during communication. (Default: No)	Yes or No According to the connection type, configure the setting as shown below. • Select "Yes" for connection through either of the following. Multi-communication unit (port 2) Serial communication adapter (port 2) • Select "No" for connection through one of the following. Direct CPU connection (serial) Multi-communication unit (port 1) Serial communication cassette (port 1) Serial communication adapter (port 1)

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

PLC Side Setting

Point

KEYENCE PLC

For details of KEYENCE PLC, refer to the following manual.

KEYENCE PLC user's Manual

Model name		Reference
PLC CPU	KV-7300	☞ Page 1094 Connecting KV-7300, KV-3000, KV-1000
	KV-3000	☞ Page 1094 Connecting KV-7300, KV-3000, KV-1000
	KV-1000	☞ Page 1094 Connecting KV-7300, KV-3000, KV-1000
	KV-700	☞ Page 1094 Connecting to KV-700
	KV-N14□□	☞ Page 1095 Connecting to KV-N14□□, KV-N24□□, KV-N40□□, KV-N60□□, KV-NC32T
	KV-N24□□	☞ Page 1095 Connecting to KV-N14□□, KV-N24□□, KV-N40□□, KV-N60□□, KV-NC32T
	KV-N40□□	☞ Page 1095 Connecting to KV-N14□□, KV-N24□□, KV-N40□□, KV-N60□□, KV-NC32T
	KV-N60□□	☞ Page 1095 Connecting to KV-N14□□, KV-N24□□, KV-N40□□, KV-N60□□, KV-NC32T
	KV-NC32T	☞ Page 1095 Connecting to KV-N14□□, KV-N24□□, KV-N40□□, KV-N60□□, KV-NC32T
Multi-communication unit	KV-L20R	☞ Page 1095 Connecting to KV-L20R, KV-L20, KV-L20V, KV-L21V, KV-XL202, KV-XL402
	KV-L20	
	KV-L20V	
	KV-L21V	
	KV-XL202	
	KV-XL402	
Serial communication cassette	KV-N10L	☞ Page 1097 Connecting to KV-N10L, KV-N11L, KV-NC10L, KV-NC20L
	KV-N11L	
Serial adapter	KV-NC10L	
	KV-NC20L	

Connecting KV-7300, KV-3000, KV-1000

Setting items	Set value
Communication mode *2	KV mode (Upper link)
Transmission Speed	9600 to 115200 bps*1
Data bit	8bits
Parity bit	Even
Stop bit	1bit

*1 There is no transmission speed setting on the PLC side.
The transmission speed of the PLC side is automatically adjusted to that of the GOT side.

*2 KV-3000 and KV-1000 do not have the communication mode setting.

Connecting to KV-700

Setting items	Set value
Transmission Speed	9600bps
Data bit	8bits
Parity bit	Even
Stop bit	1bit

Connecting to KV-N14□□, KV-N24□□, KV-N40□□, KV-N60□□, KV-NC32T

Setting items	Set value
Communication mode	KV mode (Upper link)
Transmission speed *1*2	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data bit	8bits
Parity bit	Even
Stop bit	1bit

*1 Only transmission speeds available on the GOT side are shown.
*2 The transmission speed setting must be consistent with that of the GOT side.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1092 Setting communication interface (Communication settings)

Connecting to KV-L20R, KV-L20, KV-L20V, KV-L21V, KV-XL202, KV-XL402

■Communication settings

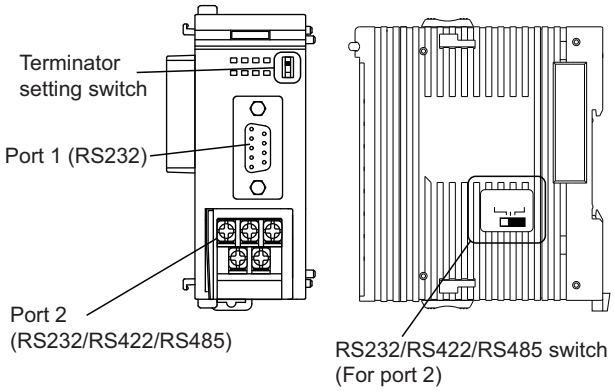
Setting items	Set value
Communication mode	KV mode (Upper link)
Transmission speed*1*2	4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data bit	8bits
Parity bit	Even
Stop bit	1bit
Station No.*3	0 to 9

*1 Only transmission speeds available on the GOT side are shown.
*2 The transmission speed setting must be consistent with that of the GOT side.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1092 Setting communication interface (Communication settings)
*3 Set the station No. according to the host address on the GOT side.
For the Host Address setting on the GOT side, refer to the following.
☞ Page 1092 Setting communication interface (Communication settings)

■Setting DIP switches

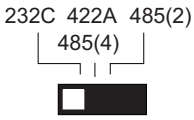
Set the DIP switches.

- When using KV-L20R or KV-L20



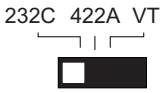
RS232/RS422/RS485 switch (For port 2)

(For KV-L20R)



Settings	
For RS-232 communication	**For RS-422 communication**
RS-232C	RS-422A 485(4)

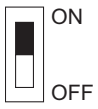
(For KV-L20)



Settings	
For RS-232 communication	**For RS-422 communication**
RS-232C	RS-422A

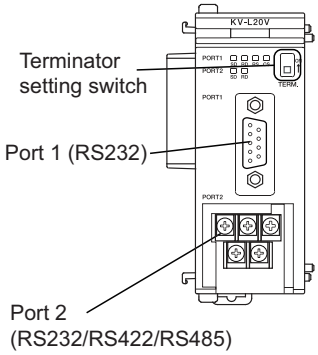
Terminator setting switch

Set when carrying out RS-422 communication.



Settings	
When multi-communication unit is a terminal	**When multi-communication unit is not a terminal**
ON	OFF

• When using KV-L20, KV-L21V



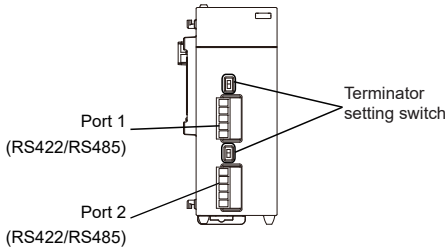
Terminator setting switch

Set when carrying out RS-422 communication.



Settings	
When multi-communication unit is a terminal	**When multi-communication unit is not a terminal**
ON	OFF

• When using KV-XL402



Terminator setting switch

Set when carrying out RS-422 communication.



Settings	
When multi-communication unit is a terminal	**When multi-communication unit is not a terminal**
ON	OFF

Connecting to KV-N10L, KV-N11L, KV-NC10L, KV-NC20L

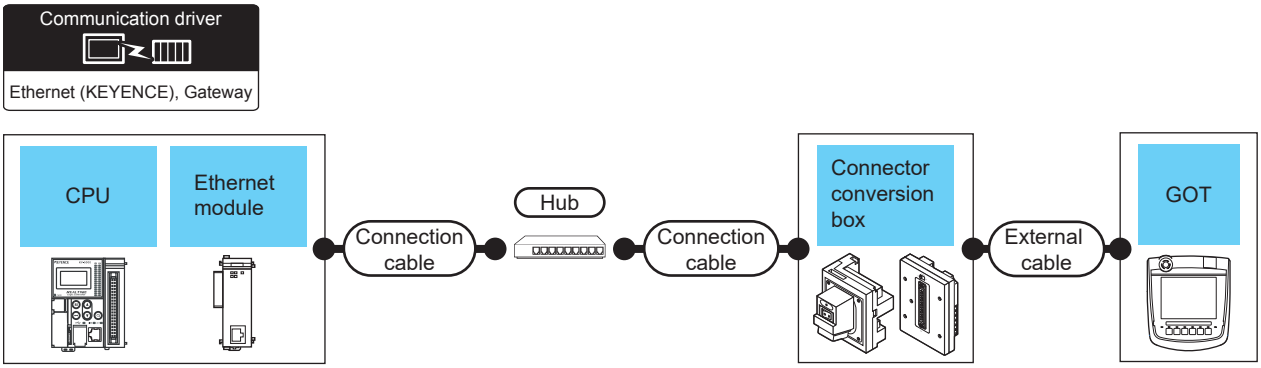
Setting items	Set value
Communication mode	KV mode (Upper link)
Transmission speed *1*2	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data bit	8bits
Parity bit	Even
Stop bit	1bit

*1 Only transmission speeds available on the GOT side are shown.

*2 The transmission speed setting must be consistent with that of the GOT side.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1092 Setting communication interface (Communication settings)

18.3 Ethernet Connection

Ethernet connection



PLC Series	Ethernet module*3	Connection cable		Connector conversion box	External cable *4	GOT Model	Number of connectable equipment
		Cable model *1	Maximum segment length*2				
KV-5000 KV-7500 KV-8000	-	Twisted pair cable*1 • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When PLC:GOT is N: 1 The following shows the number of PLCs for 1 GOT TCP: 128 or less UDP: 128 or less When PLC:GOT is 1: N The following shows the number of GOTs for 1 PLC TCP: 15 or less UDP: 1 or less
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
KV-700 KV-1000 KV-3000 KV-5000 KV-5500 KV-7300 KV-7500 KV-8000	KV-LE20V KV-LE21V			GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
KV-7300 KV-7500 KV-8000	KV-EP21V			GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

PLC Series	Ethernet module*3	Connection cable: Cable model *1	Connection cable: Maximum segment length*2	Connector conversion box	External cable *4	GOT Model	Number of connectable equipment
KV-7300 KV-7500 KV-8000 KV-X	KV-XLE02	Twisted pair cable*1 • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When PLC:GOT is N: 1 The following shows the number of PLCs for 1 GOT TCP: 128 or less UDP: 128 or less When PLC:GOT is 1: N The following shows the number of GOTs for 1 PLC TCP: 15 or less UDP: 1 or less
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
KV-N24□□ KV-N40□□ KV-N60□□	KV-N1 + KV-NC1EP		100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
KV-NC32T	KV-NC1EP		100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the target device and hub, use a cable according to the target controller configuration.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

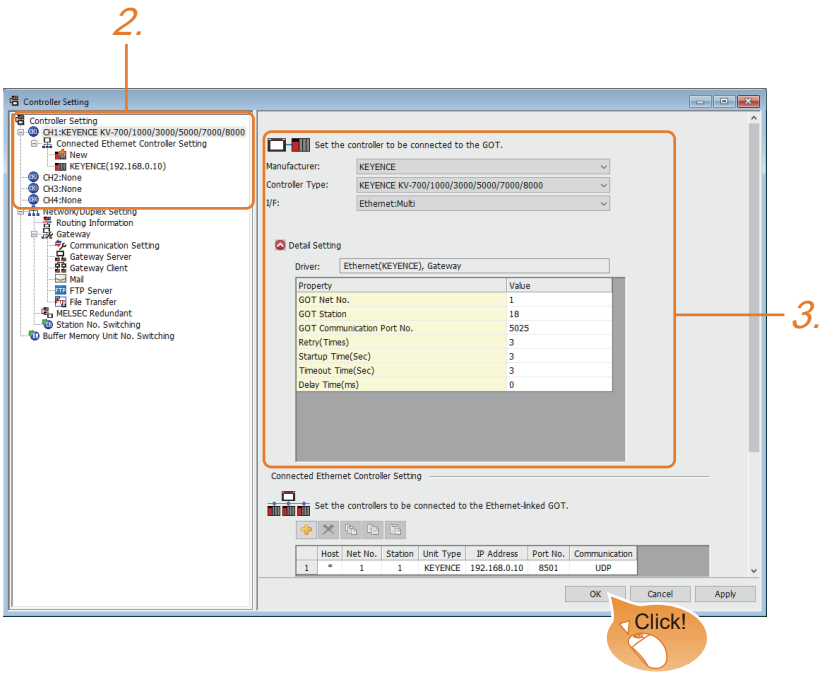
*3 Product manufactured by KEYENCE CORPORATION.
For details of the product, contact KEYENCE CORPORATION.

*4 Use C or later version of GT11H-C□□-37P.

GOT side settings

Setting communication interface (Communication settings)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [KEYENCE]
- [Controller Type]: [KEYENCE KV-700/1000/3000/5000/7000/8000]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1101 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
GOT Net No.	1
GOT Station	18
GOT Communication Port No.	5025
Retry(Times)	3
Startup Time(Sec)	3
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
GOT Net No.	Set the network No. of the GOT. (Default: 1)	1 to 239
GOT Station*1	Set the station No. of the GOT. (Default: 18)	1 to 254
GOT Communication Port No.	Set the GOT port No. for the connection with the Ethernet module. (Default: 5025 *2)	1024 to 5010, 5014 to 65534 (Except for 5011, 5012, 5013, and 49153 to 49170)
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 3times)	0 to 5times
Startup Time	Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU. (Default: 3sec)	3 to 255sec
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 90sec
Delay Time	Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms)	0 to 10000(ms)

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1102 Connected Ethernet Controller Setting

*2 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

■GOT IP address setting

Set the following communication port setting.

- Standard port

■GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

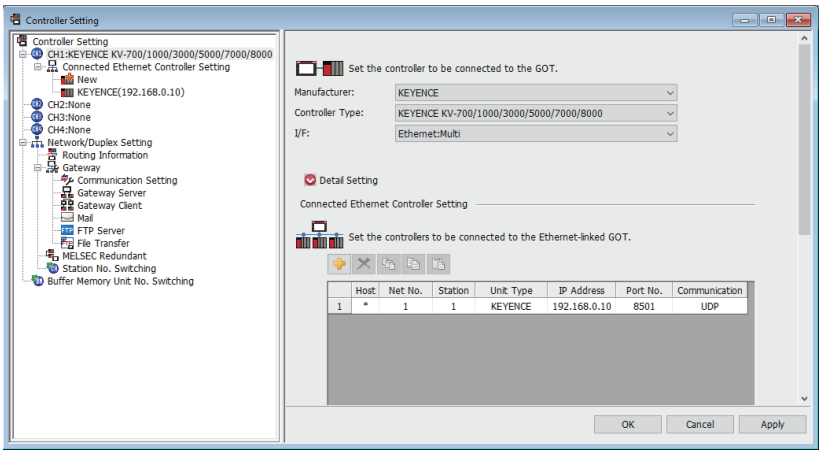
■IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 80 GOT Ethernet Setting

Connected Ethernet Controller Setting



Item	Description	Set value
Host	The host is displayed. It refers to a station that can be connected without setting a station number. (The host is indicated with an asterisk (*).)	-
Net No.	Set the network No. of the connected Ethernet module. (Default: blank)	1 to 239
Station *1	Set the station No. of the connected Ethernet module. (Default: blank)	1 to 254
Unit Type	KEYENCE (fixed)	KEYENCE (fixed)
IP Address	Set the IP address of the connected Ethernet module. (Default: 192.168.0.10)	PLC side IP address
Port No.	Set the port No. of the connected Ethernet module. (Default: 8501)	PLC side port No.
Communication *2	UDP, TCP (Default: UDP)	Adjust the settings with the PLC settings.

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1101 Communication detail settings

*2 During UDP communication, if communications become unstable after a communication error due to noise, network disconnection, or power failure, use TCP communication.

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

PLC side setting

Point

KEYENCE PLC

For details of KEYENCE PLC, refer to the following manual.

KEYENCE PLC user's Manual

Setting of KV-5000, KV-7500, and KV-8000 (built-in Ethernet)

Set the communication mode, IP address, and port No. with the unit editor of KV STUDIO.

Item	Description	Range
Communication mode	Ethernet	-
IP address*1	Set the IP address.	0.0.0.0 to 255.255.255.255
Port No.*1 (Host link)	Set the port No.	256 to 65534

*1 Apply the same setting as [Connected Ethernet Controller Setting] of the GOT.

Page 1102 Connected Ethernet Controller Setting

Setting of KV-LE21V, KV-LE20V, KV-EP21V, KV-XLE02, and KV-NC1EP

Set the IP address and port No. with the unit editor of KV STUDIO.

Item	Description	Range
IP address*1	Set the IP address.	0.0.0.0 to 255.255.255.255
Port No.*1 (Host link)	Set the port No.	256 to 65534

*1 Apply the same setting as [Connected Ethernet Controller Setting] of the GOT.

Page 1102 Connected Ethernet Controller Setting

18.4 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1
KEYENCE equipment ([KEYENCE KV-700/1000/3000/5000/7000/8000])

19 KOYO EI PLC

- Page 1105 Connectable Model List
- Page 1106 System Configuration
- Page 1128 Connection Diagram
- Page 1144 GOT Side Settings
- Page 1146 PLC Side Setting
- Page 1154 Settable Device Range
- Page 1154 Precautions

19.1 Connectable Model List

The following table shows the connectable models.

Series	Model name	Clock*1	Communication Type	Connectable GOT	Refer to
KOSTAC SU Series	SU-5E	×	RS232 RS422	GT2506HS GT2505HS	☞ Page 1106 Connecting to SU-5E or SU-6B
	SU-6B	○			
	SU-5M	○	RS232 RS422	GT2506HS GT2505HS	☞ Page 1110 Connecting to SU-5M or SU-6M
	SU-6M	○			
DirectLOGIC 05 Series	D0-05AA	×	RS232 RS422	GT2506HS GT2505HS	☞ Page 1114 Connecting to DirectLOGIC 05 series
	D0-05AD	×			
	D0-05AR	×			
	D0-05DA	×			
	D0-05DD	×			
	D0-05DD-D	×			
	D0-05DR	×			
	D0-05DR-D	×			
DirectLOGIC 06 Series	D0-06DD1	○	RS232 RS422	GT2506HS GT2505HS	☞ Page 1117 Connecting to DirectLOGIC 06 series
	D0-06DD2	○			
	D0-06DR	○			
	D0-06DA	○			
	D0-06AR	○			
	D0-06AA	○			
	D0-06DD1-D	○			
	D0-06DD2-D	○			
	D0-06DR-D	○			
DirectLOGIC 205 Series	D2-240	○	RS232 RS422	GT2506HS GT2505HS	☞ Page 1121 Connecting to D2-240, D2-250-1 or D2-260
	D2-250-1	○			
	D2-260	○			
PZ series	PZ3	×	RS232 RS422	GT2506HS GT2505HS	☞ Page 1125 Connecting to PZ

*1 The GOT can only read the clock data.In the clock setting, though the adjust is available, the broadcast is not available.

19.2 System Configuration

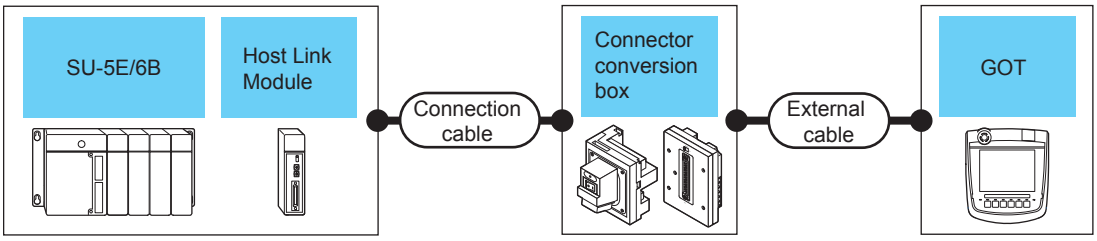
Connecting to SU-5E or SU-6B

Communication driver

KOYO KOSTAC/DL

When connecting to one PLC

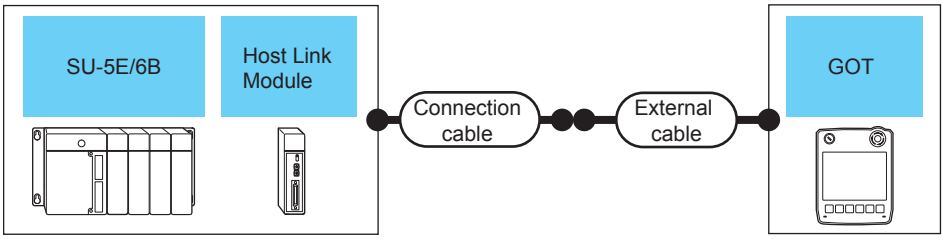
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Host link module *1	Communication Type	Cable model Connection diagram number					
SU-5E/6B (general communication port)	-	RS-232	User preparing Page 1128 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 PLC for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		RS-422	User preparing Page 1131 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
SU-5E/6B	U-01DM	RS-232	User preparing Page 1128 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 host link module for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		RS-422	User preparing Page 1134 RS-422 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD. For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

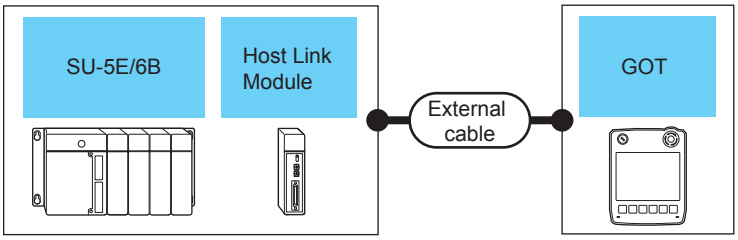
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Host link module*1	Communication Type	Cable model Connection diagram number				
SU-5E/6B (general communication port)	-	RS-232	User preparing Page 1128 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 PLC for 1 GOT
		RS-422	User preparing Page 1131 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	
SU-5E/6B	U-01DM	RS-232	User preparing Page 1128 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 host link module for 1 GOT
		RS-422	User preparing Page 1134 RS-422 connection diagram 8)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

■When using the external cable (GT11H-C□□□)

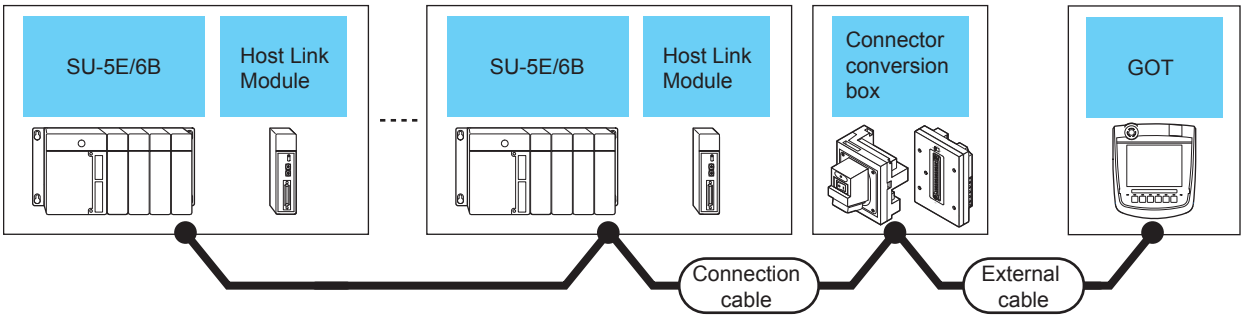


PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Host link module*1	Communication Type				
SU-5E/6B (general communication port)	-	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1129 RS-232 connection diagram 3)	GT 2505HS	6m	1 PLC for 1 GOT
		RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1132 RS-422 connection diagram 3)	GT 2505HS	13m	
SU-5E/6B	U-01DM	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1129 RS-232 connection diagram 3)	GT 2505HS	6m	1 host link module for 1 GOT
		RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1135 RS-422 connection diagram 9)	GT 2505HS	13m	

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

When connecting to multiple PLCs

■When using the connector conversion box

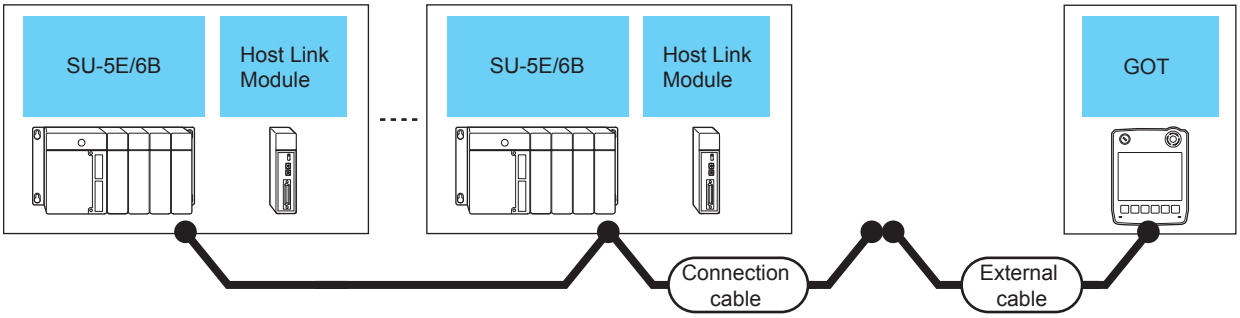


PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Host link module*1	Communication Type	Cable model Connection diagram number					
SU-5E/6B	-	RS-422	User preparing Page 1137 RS-422 connection diagram 13)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	90 PLCs for 1 GOT*2
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
	U-01DM		User preparing Page 1140 RS-422 connection diagram 19)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		90 host link module for 1 GOT*2
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

■When using the external cable (GT11H-C□□□-37P)

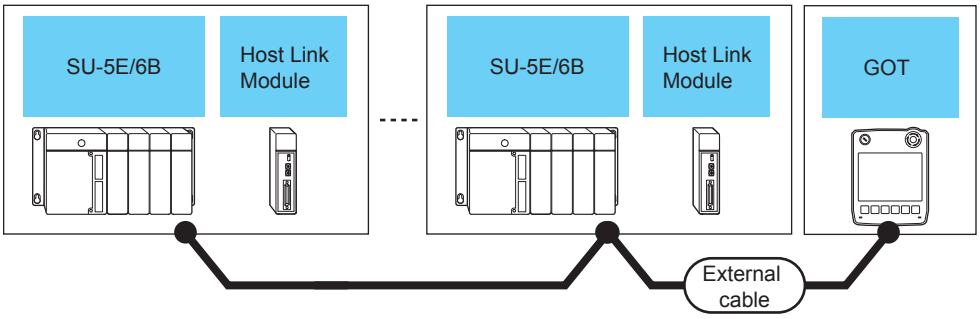


PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Host link module*1	Communication Type	Cable model Connection diagram number				
SU-5E/6B	-	RS-422	User preparing Page 1137 RS-422 connection diagram 14)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	90 PLCs for 1 GOT*2
	U-01DM		User preparing Page 1140 RS-422 connection diagram 20)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		90 host link module for 1 GOT*2

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

■When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Host link module*1	Communication Type				
SU-5E/6B	-	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1138 RS-422 connection diagram 15)	GT 2505HS	13m	90 PLCs for 1 GOT*2
	U-01DM	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1141 RS-422 connection diagram 21)	GT 2505HS		90 host link module for 1 GOT*2

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

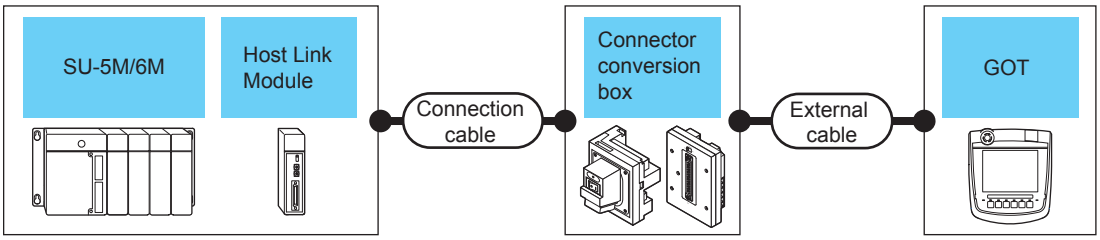
Connecting to SU-5M or SU-6M

Communication driver

KOYO KOSTAC/DL

When connecting to one PLC

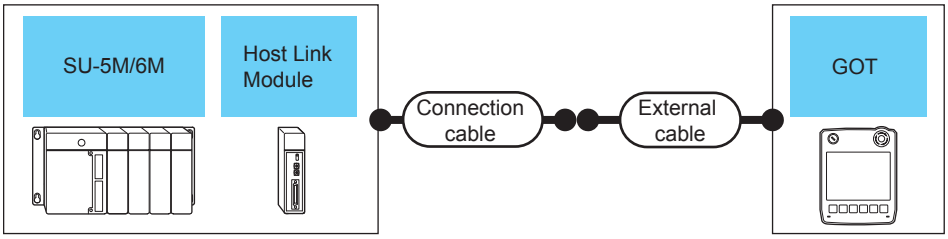
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Host link module*1	Communication Type	Cable model Connection diagram number					
SU-5M/6M (general communication port 1)	-	RS-232	User preparing Page 1128 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 PLC for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		RS-422	User preparing Page 1131 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
SU-5M/6M (general communication port 2)		RS-232	Z-20JP (Programmable connecting cable) + S-9CNS1(Conversion connector)*1	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
SU-5M/6M (general communication port 3)		RS-422	User preparing Page 1132 RS-422 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
SU-5M/6M	U-01DM	RS-232	User preparing Page 1128 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 host link module for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		RS-422	User preparing Page 1134 RS-422 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 The programmable connecting cable and conversion connector are products manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

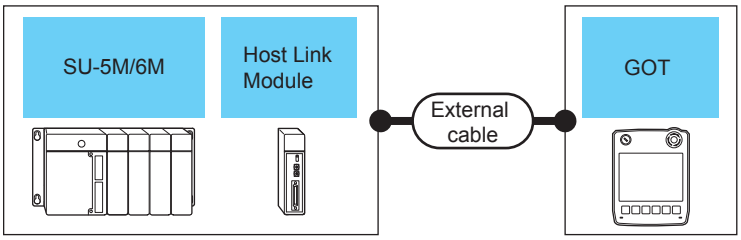
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Host link module*1	Communication Type	Cable model Connection diagram number				
SU-5M/6M (general communication port 1)	-	RS-232	User preparing Page 1128 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 PLC for 1 GOT
		RS-422	User preparing Page 1131 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	
SU-5M/6M (general communication port 3)	-	RS-422	User preparing Page 1133 RS-422 connection diagram 5)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
SU-5M/6M	U-01DM	RS-232	User preparing Page 1128 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 host link module for 1 GOT
		RS-422	User preparing Page 1134 RS-422 connection diagram 8)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 The programmable connecting cable and conversion connector are products manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

■When using the external cable (GT11H-C□□□)



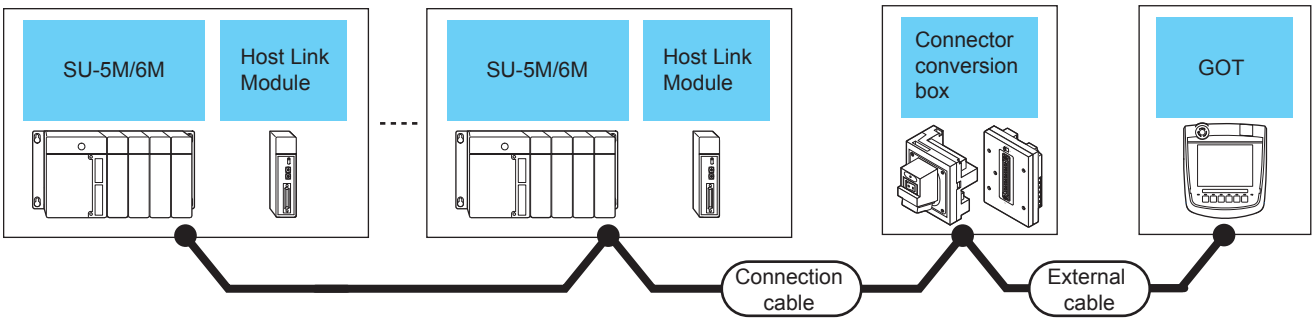
PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Host link module*1	Communication Type				
SU-5M/6M (general communication port 1)	-	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1129 RS-232 connection diagram 3)	GT 2505HS	6m	1 PLC for 1 GOT
		RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1132 RS-422 connection diagram 3)	GT 2505HS	13m	
SU-5M/6M (general communication port 3)	-	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1133 RS-422 connection diagram 6)	GT 2505HS		

PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Host link module*1	Communication Type				
SU-5M/6M	U-01DM	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1129 RS-232 connection diagram 3)	GT 2505HS	6m	1 host link module for 1 GOT
		RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1135 RS-422 connection diagram 9)	GT 2505HS	13m	

*1 The programmable connecting cable and conversion connector are products manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

When connecting to multiple PLCs

■When using the connector conversion box

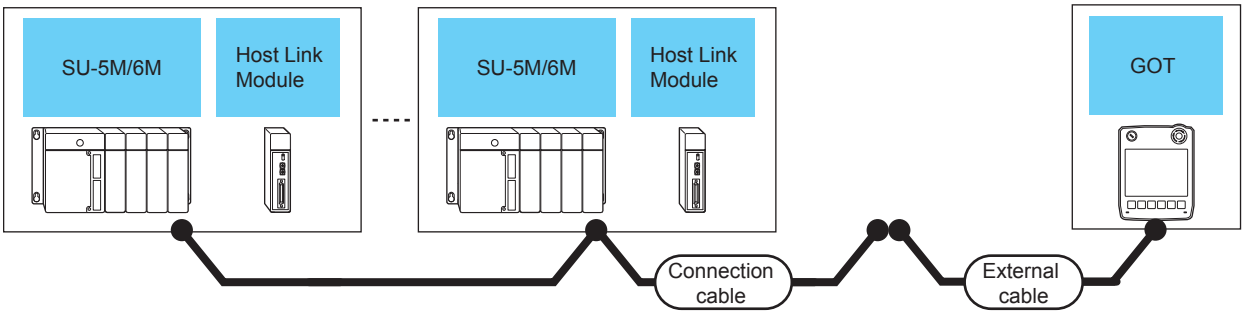


PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Host link module*1	Communication Type	Cable model Connection diagram number					
SU-5M/6M (general communication port 1)	-	RS-422	User preparing Page 1137 RS-422 connection diagram 13)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	90 PLCs for 1 GOT*2
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
SU-5M/6M (general communication port 3)			User preparing Page 1138 RS-422 connection diagram 16)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
SU-5M/6M	U-01DM		User preparing Page 1140 RS-422 connection diagram 19)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		90 host link module for 1 GOT*2
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

■When using the external cable (GT11H-C□□□-37P)

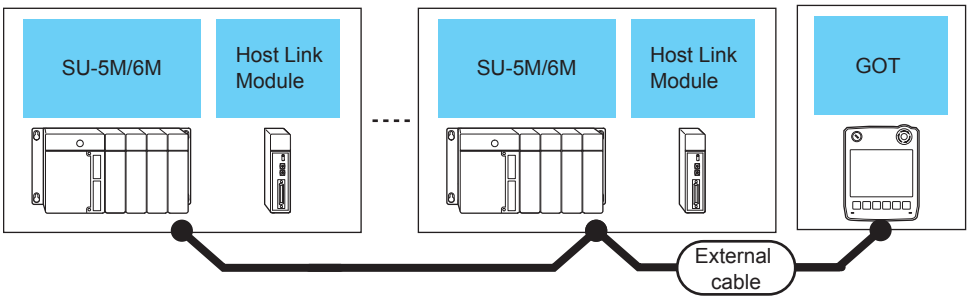


PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Host link module*1	Communication Type	Cable model Connection diagram number				
SU-5M/6M (general communication port 1)	-	RS-422	User preparing Page 1137 RS-422 connection diagram 14)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	90 PLCs for 1 GOT*2
SU-5M/6M (general communication port 3)			User preparing Page 1139 RS-422 connection diagram 17)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
SU-5M/6M	U-01DM		User preparing Page 1140 RS-422 connection diagram 20)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		90 host link module for 1 GOT*2

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

■When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Host link module*1	Communication Type				
SU-5M/6M (general communication port 1)	-	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1138 RS-422 connection diagram 15)	GT 2505HS	13m	90 PLCs for 1 GOT*2
SU-5M/6M (general communication port 3)			GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1139 RS-422 connection diagram 18)	GT 2505HS		
SU-5M/6M	U-01DM		GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1141 RS-422 connection diagram 21)	GT 2505HS		90 host link module for 1 GOT*2

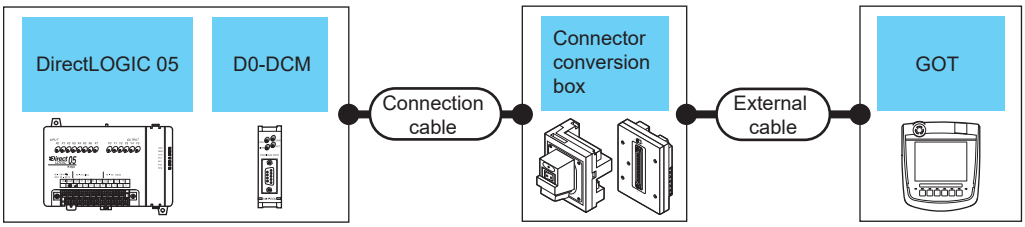
*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

Connecting to DirectLOGIC 05 series

When connecting to one PLC

■When using the connector conversion box

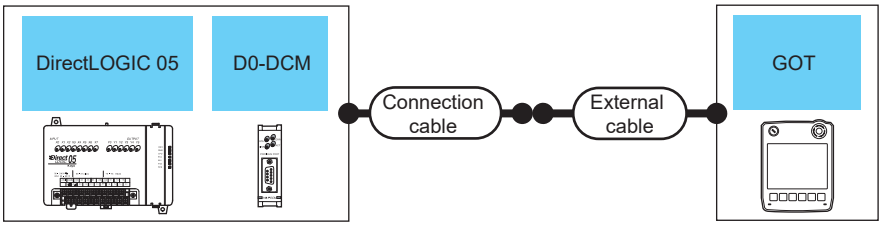


PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Data communications module *2	Communication Type	Cable model Connection diagram number					
Direct LOGIC 05 (communication port 1) (communication port 2)	-	RS-232	Z-20JP (Programmable connecting cable) + S-9CNS1(Conversion connector)*1	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 PLC for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
Direct LOGIC 05	D0-DCM (port 1)			GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		1 data communication module for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
Direct LOGIC 05	D0-DCM (port 2)		User preparing Page 1129 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		RS-422	User preparing Page 1135 RS-422 connection diagram 10)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 The programmable connecting cable and conversion connector are products manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

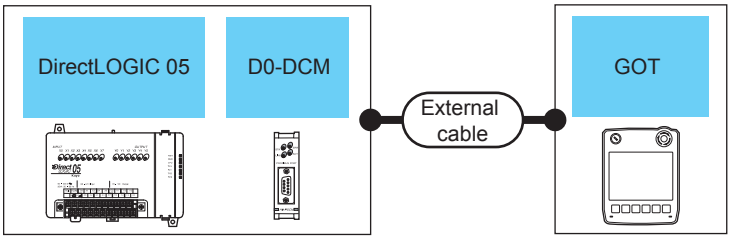
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Data communications module *1	Communication Type	Cable model Connection diagram number				
Direct LOGIC 05	D0-DCM (port 2)	RS-232	User preparing Page 1129 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 data communication module for 1 GOT
		RS-422	User preparing Page 1136 RS-422 connection diagram 11)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

■When using the external cable (GT11H-C□□□)

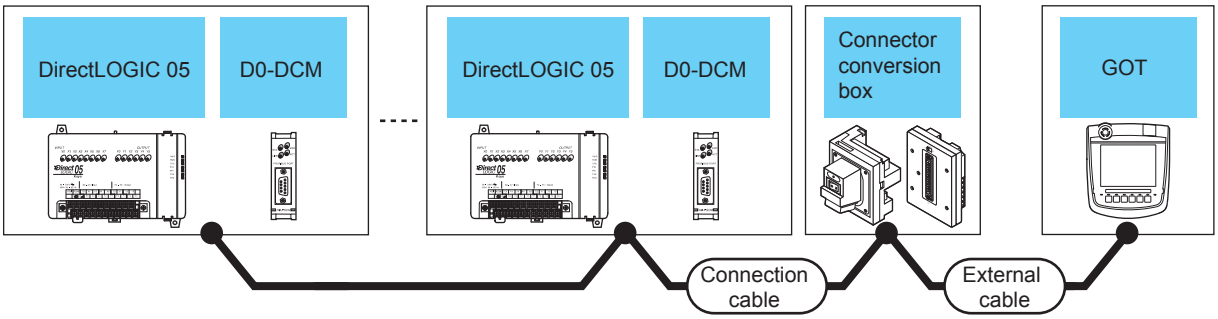


PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Data communications module *1	Communication Type				
Direct LOGIC 05	D0-DCM (port 2)	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1130 RS-232 connection diagram 6)	GT 2505HS	6m	1 data communication module for 1 GOT
		RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1136 RS-422 connection diagram 12)	GT 2505HS	13m	

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

When connecting to multiple PLCs

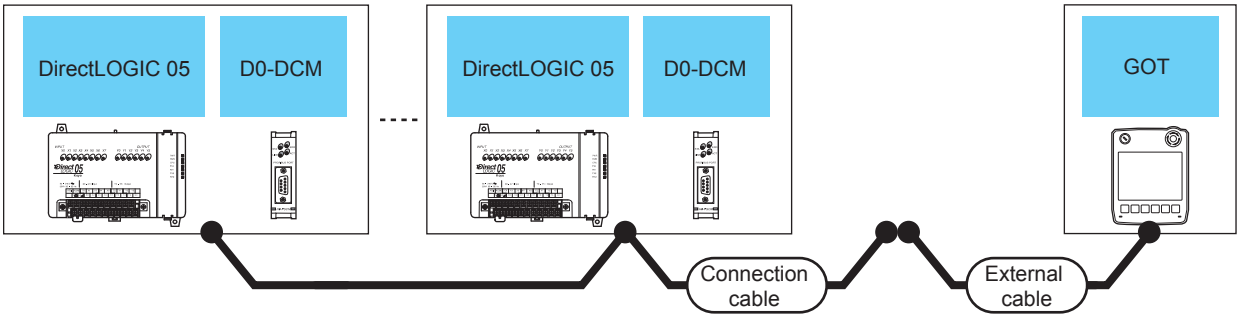
■When using the connector conversion box



PLC			Connection cable		Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Data communications module*1	Communication Type	Cable model Connection diagram number	Max. distance					
Direct LOGIC 05	D0-DCM (port 2)	RS-422	User preparing Page 1141 RS-422 connection diagram 22)	1000m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	90 data communication module for 1 GOT*2
					GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.
*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

■When using the external cable (GT11H-C□□□-37P)

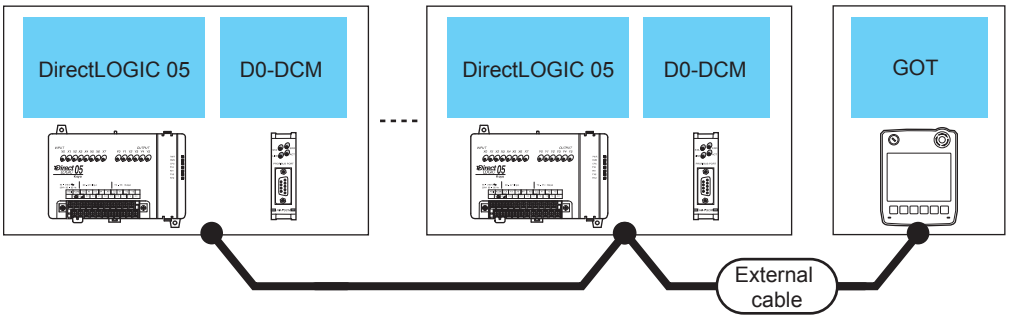


PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Data communications module*1	Communication Type	Cable model Connection diagram number				
Direct LOGIC 05	D0-DCM (port 2)	RS-422	User preparing Page 1142 RS-422 connection diagram 23)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	90 data communication module for 1 GOT*2

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD. For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links. For details, refer to the following manual.
KOYO EI PLC user's Manual

■When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Data communications module*1	Communication Type				
Direct LOGIC 05	D0-DCM (port 2)	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1142 RS-422 connection diagram 24)	GT 2505HS	13m	90 data communication module for 1 GOT*2

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD. For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links. For details, refer to the following manual.
KOYO EI PLC user's Manual

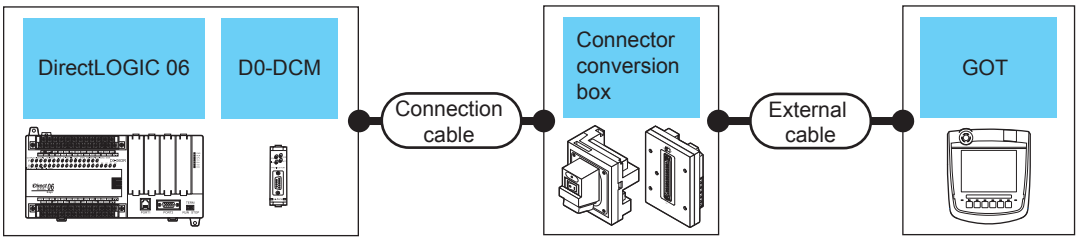
Connecting to DirectLOGIC 06 series

Communication driver

KOYO KOSTAC/DL

When connecting to one PLC

■When using the connector conversion box

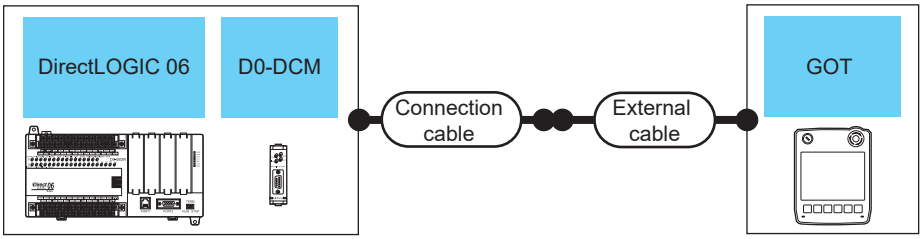


PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Data communications module*1	Communication Type	Cable model Connection diagram number					
Direct LOGIC 06 (communication port 1)	-	RS-232	Z-20JP (Programmable connecting cable) + S-9CNS1(Conversion connector)*2	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 PLC for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
Direct LOGIC 06 (communication port 2)			User preparing Page 1129 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		RS-422	User preparing Page 1135 RS-422 connection diagram 10)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
Direct LOGIC 06	D0-DCM (port 1)	RS-232	Z-20JP (Programmable connecting cable) + S-9CNS1(Conversion connector)*2	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 data communication module for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	D0-DCM (port 2)		User preparing Page 1129 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		RS-422	User preparing Page 1135 RS-422 connection diagram 10)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 The programmable connecting cable and conversion connector are products manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

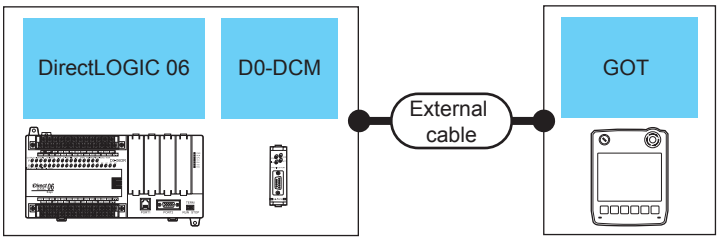
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Data communications module*1	Communication Type	Cable model Connection diagram number				
Direct LOGIC 06 (communication port 2)	-	RS-232	User preparing Page 1129 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 PLC for 1 GOT
		RS-422	User preparing Page 1136 RS-422 connection diagram 11)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	
Direct LOGIC 06	D0-DCM (port 2)	RS-232	User preparing Page 1129 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 data communication module for 1 GOT
		RS-422	User preparing Page 1136 RS-422 connection diagram 11)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 The programmable connecting cable and conversion connector are products manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

■When using the external cable (GT11H-C□□□)

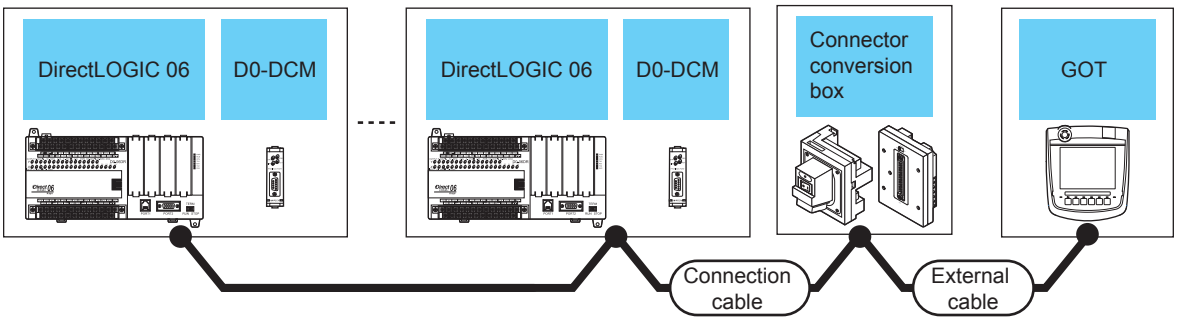


PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Data communications module*1	Communication Type				
Direct LOGIC 06 (communication port 2)	-	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1130 RS-232 connection diagram 6)	GT 2505HS	6m	1 PLC for 1 GOT
		RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1136 RS-422 connection diagram 12)	GT 2505HS	13m	
Direct LOGIC 06	D0-DCM (port 2)	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1130 RS-232 connection diagram 6)	GT 2505HS	6m	1 data communication module for 1 GOT
		RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1136 RS-422 connection diagram 12)	GT 2505HS	13m	

*1 The programmable connecting cable and conversion connector are products manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

When connecting to multiple PLCs

■When using the connector conversion box

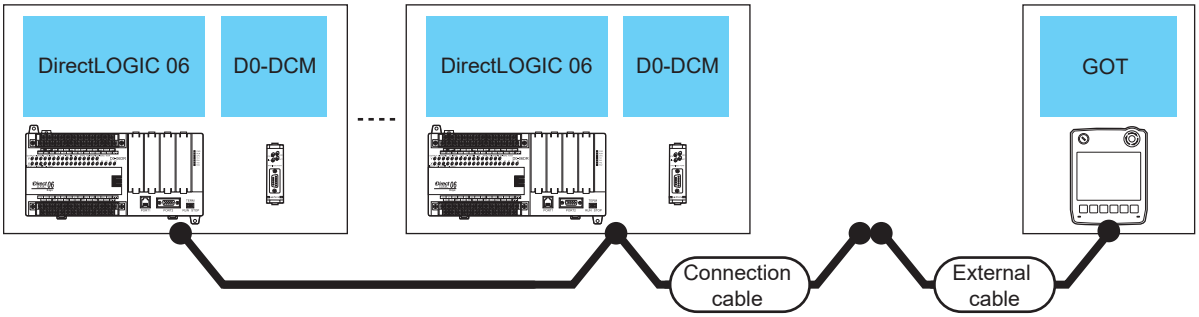


PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Data communication module*1	Communication Type	Cable model Connection diagram number					
Direct LOGIC 06 (communication port 2)	-	RS-422	User preparing Page 1141 RS-422 connection diagram 22)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	90 PLCs for 1 GOT*2
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
Direct LOGIC 06	D0-DCM (port 2)			GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		90 data communication module for 1 GOT*2
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

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For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

■When using the external cable (GT11H-C□□□-37P)

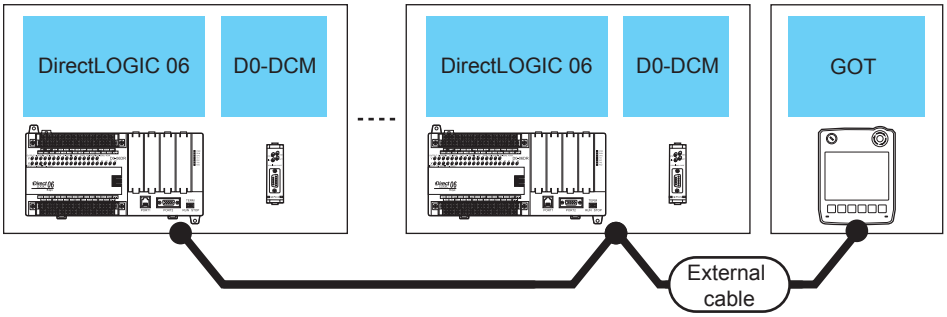


PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Data communication module*1	Communication Type	Cable model Connection diagram number				
Direct LOGIC 06 (communication port 2)	-	RS-422	User preparing Page 1142 RS-422 connection diagram 23)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	90 PLCs for 1 GOT*2
Direct LOGIC 06	D0-DCM (port 2)			GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		90 data communication module for 1 GOT*2

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD. For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links. For details, refer to the following manual.
KOYO EI PLC user's Manual

■When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Data communication module*1	Communication Type				
Direct LOGIC 06 (communication port 2)	-	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1142 RS-422 connection diagram 24)	GT 2505HS	13m	90 PLCs for 1 GOT*2
Direct LOGIC 06	D0-DCM (port 2)		GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1142 RS-422 connection diagram 24)	GT 2505HS		90 data communication module for 1 GOT*2

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD. For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links. For details, refer to the following manual.
KOYO EI PLC user's Manual

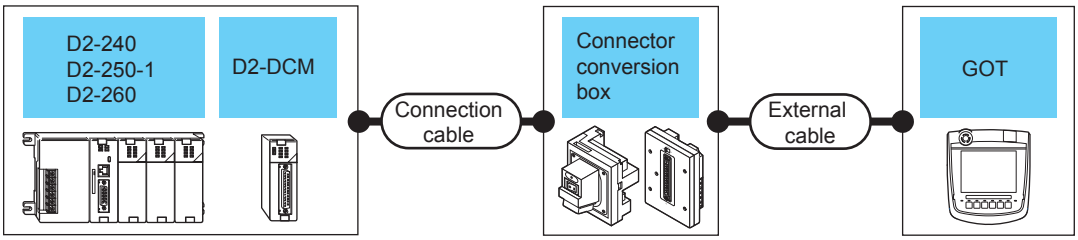
Connecting to D2-240, D2-250-1 or D2-260

Communication driver

KOYO KOSTAC/DL

When connecting to one PLC

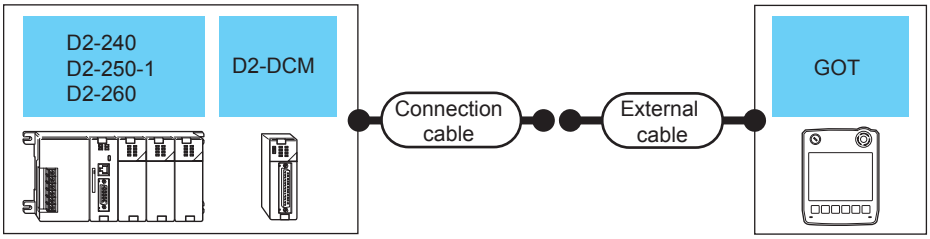
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Data communications module*1	Communication Type	Cable model Connection diagram number					
D2-240 D2-250-1 D2-260 (communication port 2)	-	RS-232	User preparing Page 1129 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 PLC for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
D2-250-1 D2-260 (communication port 2)		RS-422	User preparing Page 1135 RS-422 connection diagram 10)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
D2-240 D2-250-1 D2-260	D2-DCM	RS-232	User preparing Page 1128 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 data communication module for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		RS-422	User preparing Page 1134 RS-422 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 The programmable connecting cable and conversion connector are products manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

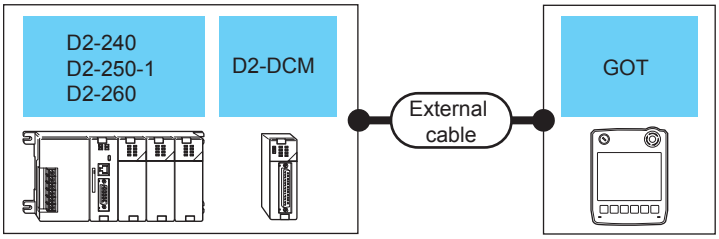
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Data communications module*1	Communication Type	Cable model Connection diagram number				
D2-240 D2-250-1 D2-260 (communication port 2)	-	RS-232	User preparing Page 1129 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 PLC for 1 GOT
D2-250-1 D2-260 (communication port 2)		RS-422	User preparing Page 1136 RS-422 connection diagram 11)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	
D2-240 D2-250-1 D2-260	D2-DCM	RS-232	User preparing Page 1128 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 data communication module for 1 GOT
		RS-422	User preparing Page 1134 RS-422 connection diagram 8)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 The programmable connecting cable and conversion connector are products manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

■When using the external cable (GT11H-C□□□)

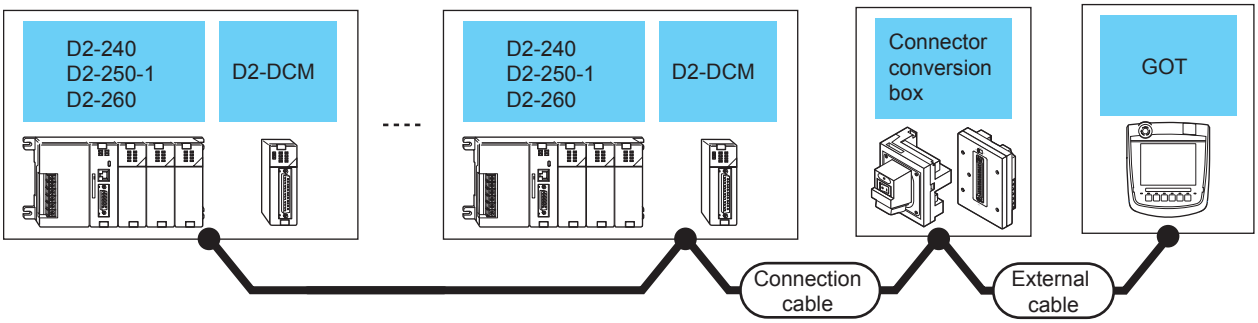


PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Data communications module*1	Communication Type				
D2-240 D2-250-1 D2-260 (communication port 2)	-	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1130 RS-232 connection diagram 6)	GT 2505HS	6m	1 PLC for 1 GOT
D2-250-1 D2-260 (communication port 2)		RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1136 RS-422 connection diagram 12)	GT 2505HS	13m	
D2-240 D2-250-1 D2-260	D2-DCM	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1129 RS-232 connection diagram 3)	GT 2505HS	6m	1 data communication module for 1 GOT
		RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1135 RS-422 connection diagram 9)	GT 2505HS	13m	

*1 The programmable connecting cable and conversion connector are products manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

When connecting to multiple PLCs

■When using the connector conversion box

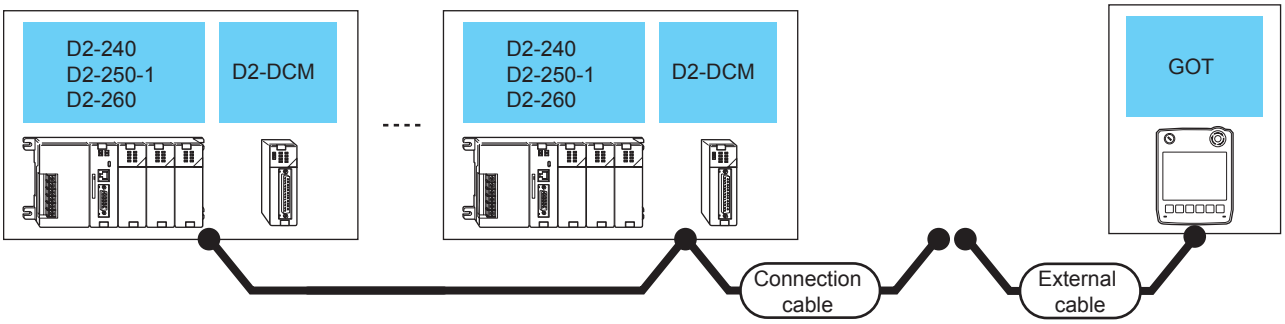


PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Data communications module*1	Communication Type	Cable model Connection diagram number					
D2-250-1 D2-260 (communication port 2)	-	RS-422	User preparing Page 1141 RS-422 connection diagram 22)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	90 PLCs for 1 GOT*2
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
D2-240 D2-250-1 D2-260	D2-DCM		User preparing Page 1140 RS-422 connection diagram 19)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		90 data communication module for 1 GOT*2
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

■When using the external cable (GT11H-C□□□-37P)

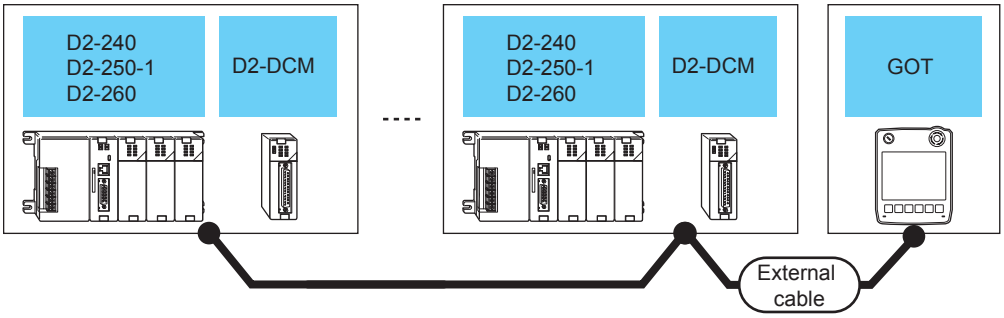


PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Data communications module*1	Communication Type	Cable model Connection diagram number				
D2-250-1 D2-260 (communication port 2)	-	RS-422	User preparing Page 1142 RS-422 connection diagram 23)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	90 PLCs for 1 GOT*2
D2-240 D2-250-1 D2-260	D2-DCM		User preparing Page 1140 RS-422 connection diagram 20)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		90 data communicatio n module for 1 GOT*2

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

■When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Data communications module*1	Communication Type				
D2-250-1 D2-260 (communication port 2)	-	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1142 RS-422 connection diagram 24)	GT 2505HS	13m	90 PLCs for 1 GOT*2
D2-240 D2-250-1 D2-260	D2-DCM		GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1141 RS-422 connection diagram 21)	GT 2505HS		90 data communication module for 1 GOT*2

*1 The data communications module is manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
For details of the product, contact KOYO ELECTRONICS INDUSTRIES CO., LTD.

*2 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

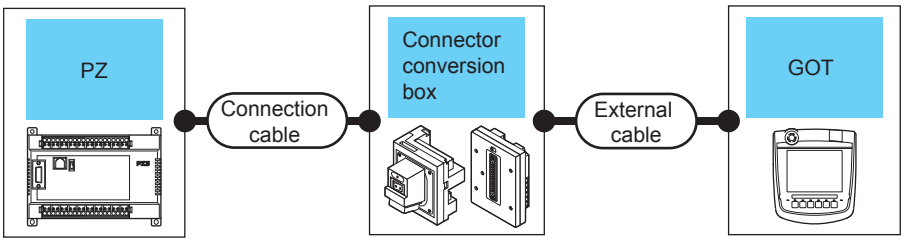
Connecting to PZ

Communication driver

KOYO KOSTAC/DL

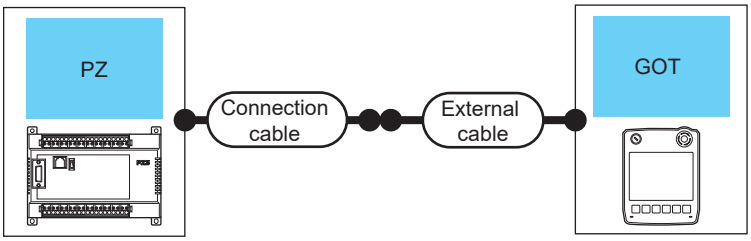
When connecting to one PLC

■When using the connector conversion box



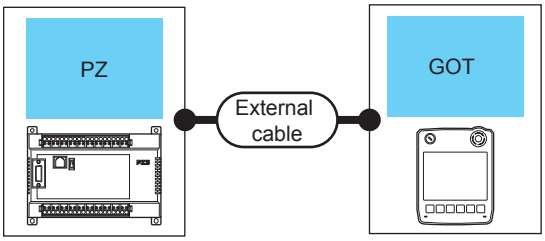
PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
PZ (general communication port 2)	RS-232	User preparing Page 1129 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 PLC for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	RS-422	User preparing Page 1135 RS-422 connection diagram 10)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

■When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
PZ (general communication port 2)	RS-232	User preparing Page 1129 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 PLC for 1 GOT
	RS-422	User preparing Page 1136 RS-422 connection diagram 11)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

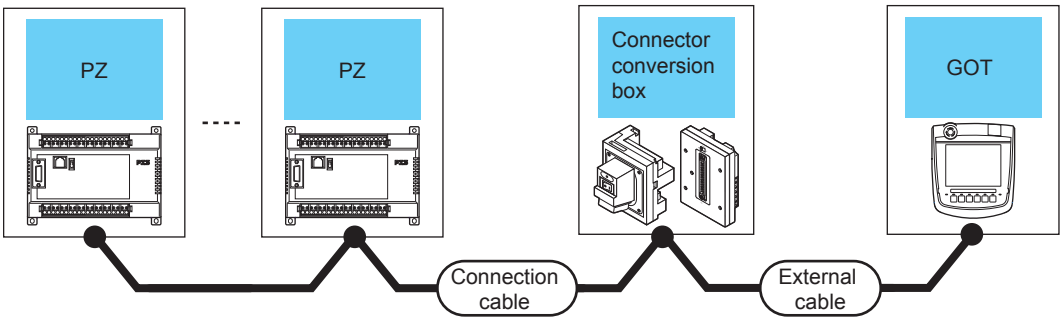
■When using the external cable (GT11H-C□□□)



PLC		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
PZ (general communication port 2)	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1130 RS-232 connection diagram 6)	GT 2505HS	6m	1 PLC for 1 GOT
	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1136 RS-422 connection diagram 12)	GT 2505HS	13m	

When connecting to multiple PLCs

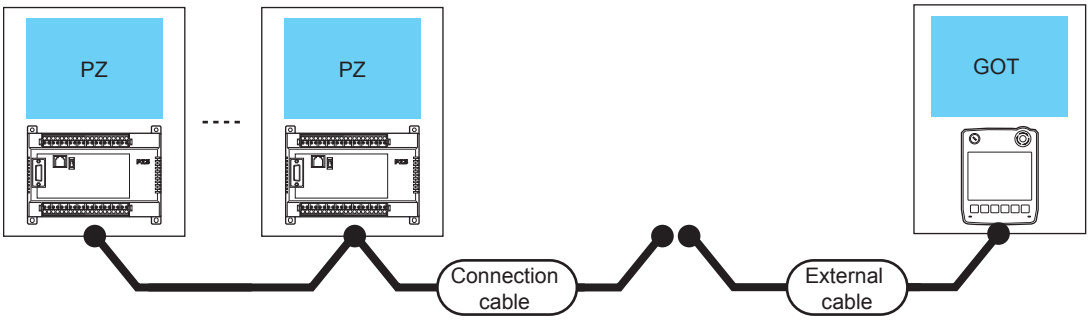
■When using the connector conversion box



PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
PZ (general communication port 2)	RS-422	User preparing Page 1141 RS-422 connection diagram 22)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	90 PLCs for 1 GOT*1
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

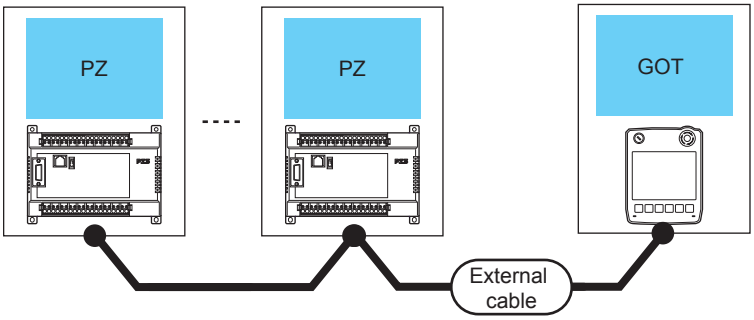
■When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
PZ (general communication port 2)	RS-422	User preparing Page 1142 RS-422 connection diagram 23)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	90 PLCs for 1 GOT*1

*1 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

■When using the external cable (GT11H-C□□□)



PLC		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
PZ (general communication port 2)	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1142 RS-422 connection diagram 24)	GT 2505HS	13m	90 PLCs for 1 GOT*1

*1 When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

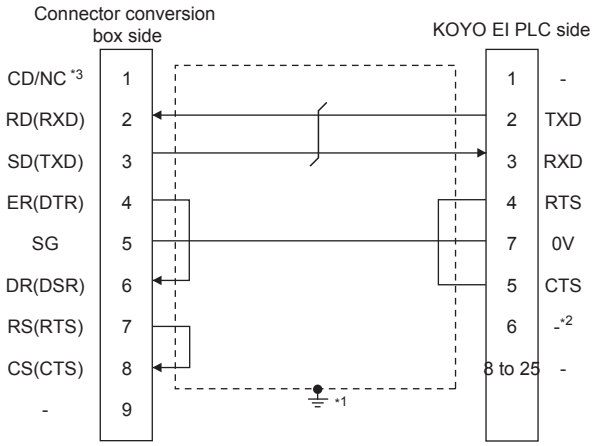
19.3 Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

RS-232 cable

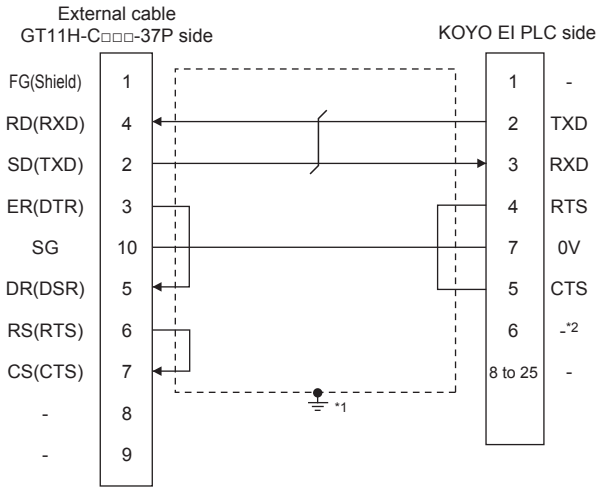
Connection diagram

■RS-232 connection diagram 1)



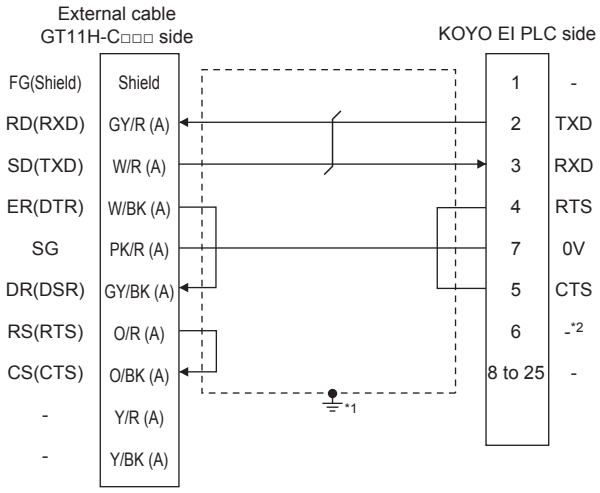
*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 For U-01DM and D2-DCM, the signal name will be +5V.
*3 GT2506HS-V: CD, GT2505HS-V: NC

■RS-232 connection diagram 2)



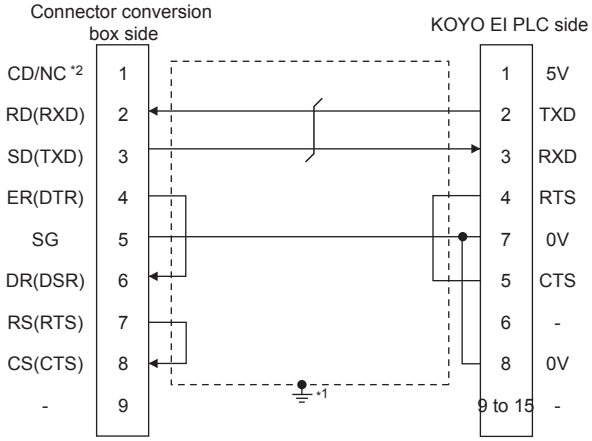
*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 For U-01DM and D2-DCM, the signal name will be +5V.

■RS-232 connection diagram 3)



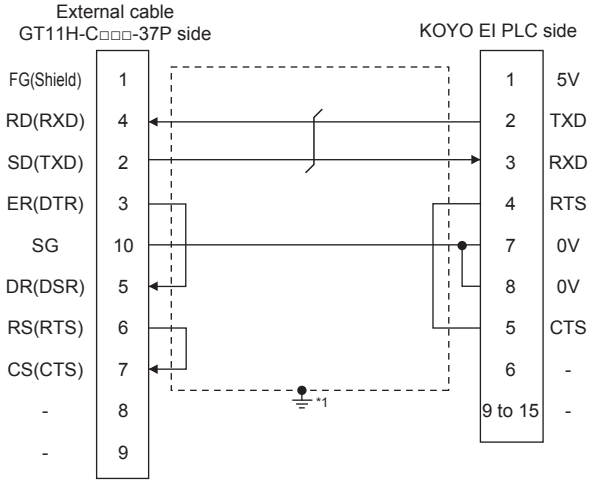
*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 For U-01DM and D2-DCM, the signal name will be +5V.

■RS-232 connection diagram 4)



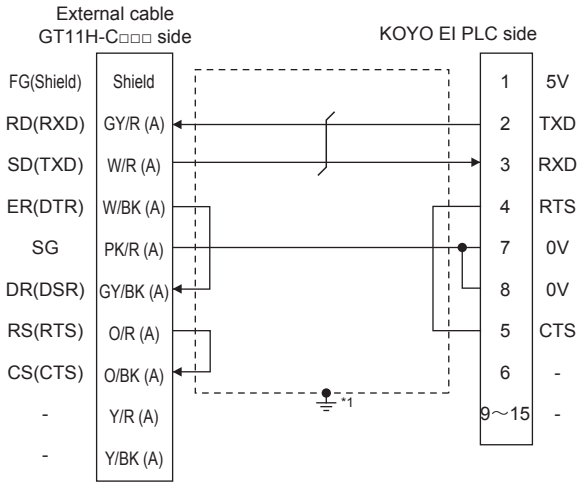
*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 GT2506HS-V: CD, GT2505HS-V: NC

■RS-232 connection diagram 5)



*1 Connect FG grounding to the appropriate part of a cable shield line.

■RS-232 connection diagram 6)



*1 Connect FG grounding to the appropriate part of a cable shield line.

Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■KOYO EI PLC side connector

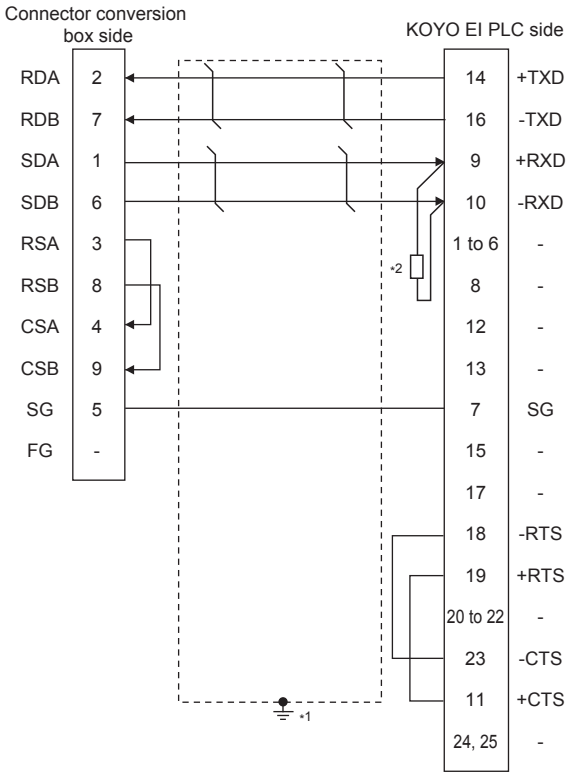
Use the connector compatible with the KOYO EI PLC side.

For details, refer to the KOYO EI PLC user's manual.

RS-422 cable

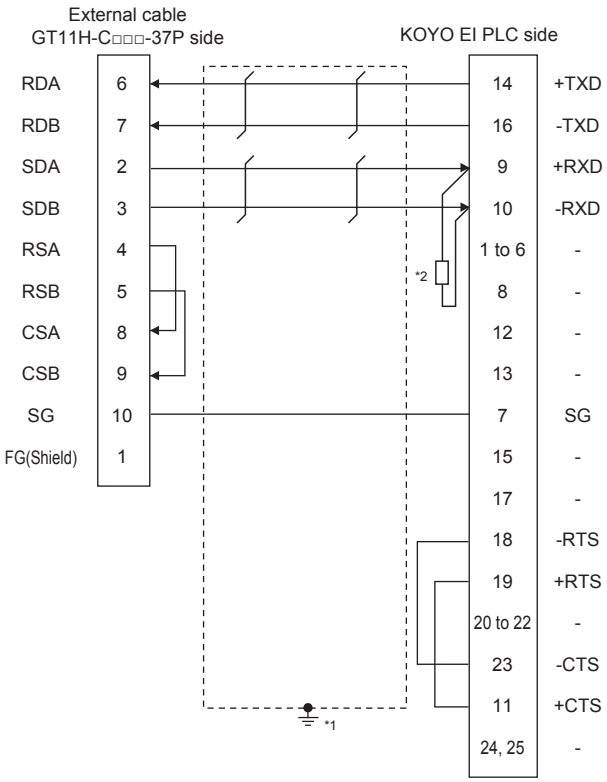
Connection diagram

■RS-422 connection diagram 1)



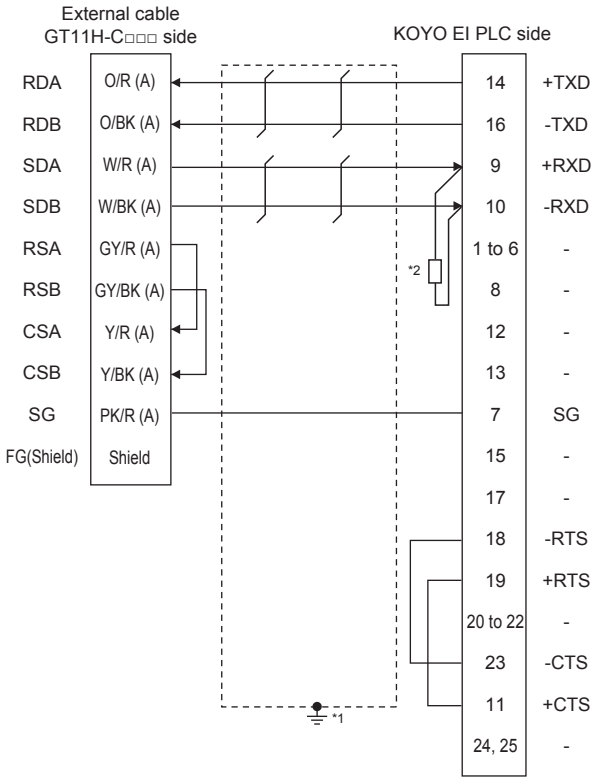
*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.

■RS-422 connection diagram 2)



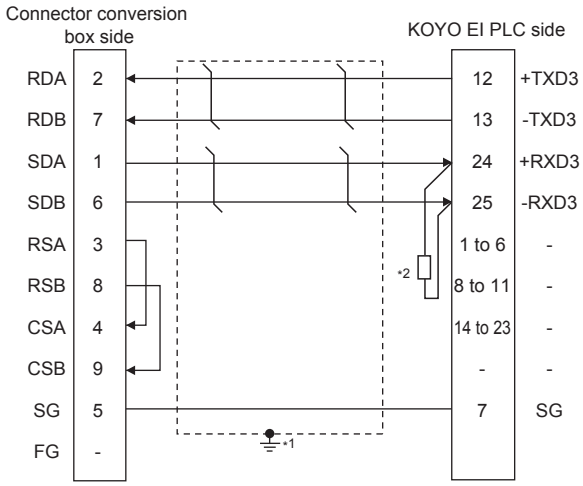
*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.

■RS-422 connection diagram 3)



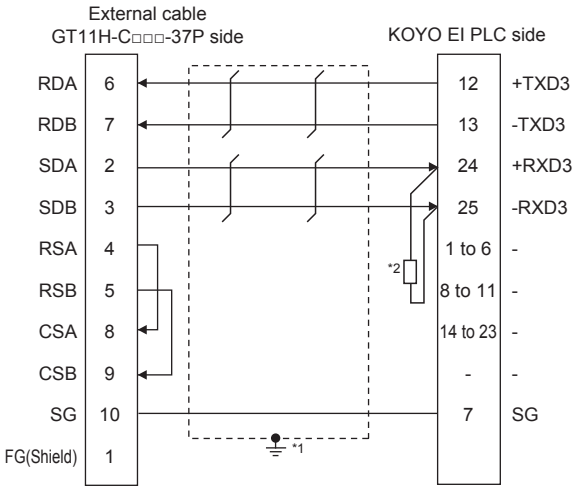
*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.

■RS-422 connection diagram 4)



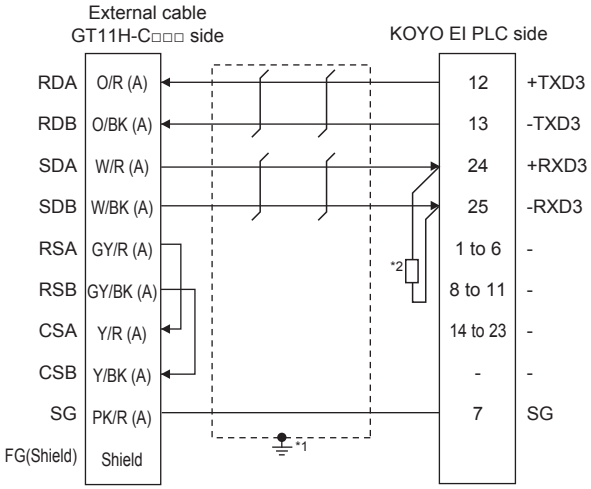
*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.

■RS-422 connection diagram 5)



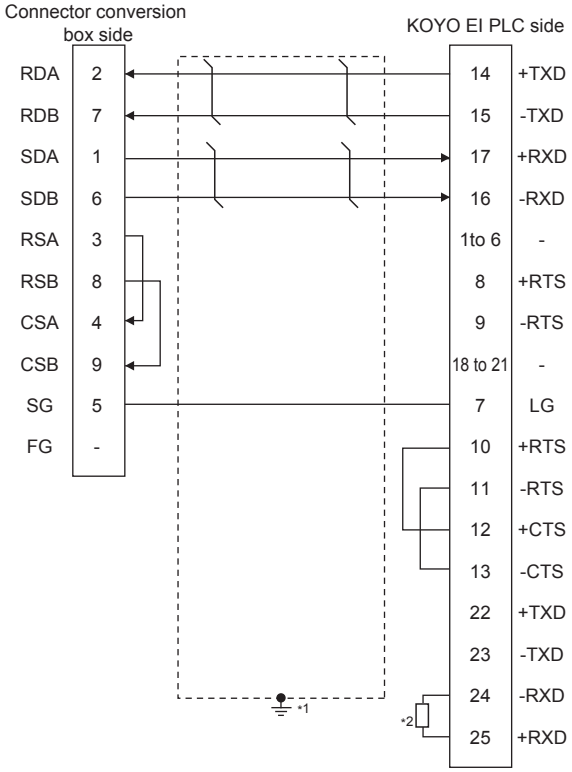
*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.

■RS-422 connection diagram 6)



*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.

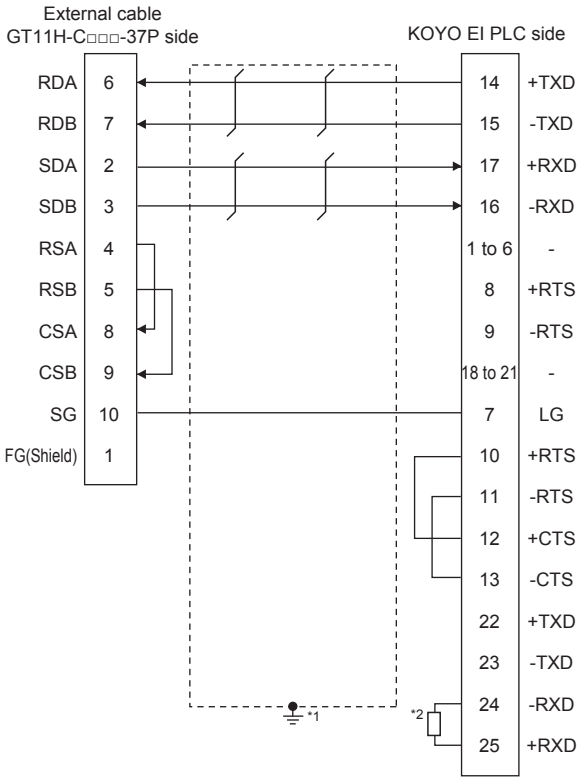
■RS-422 connection diagram 7)



*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.

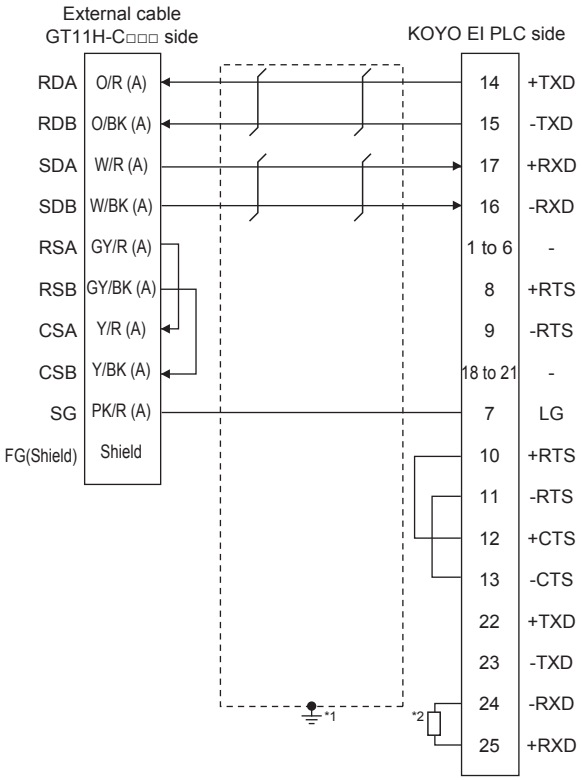
■RS-422 connection diagram 8)



*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.

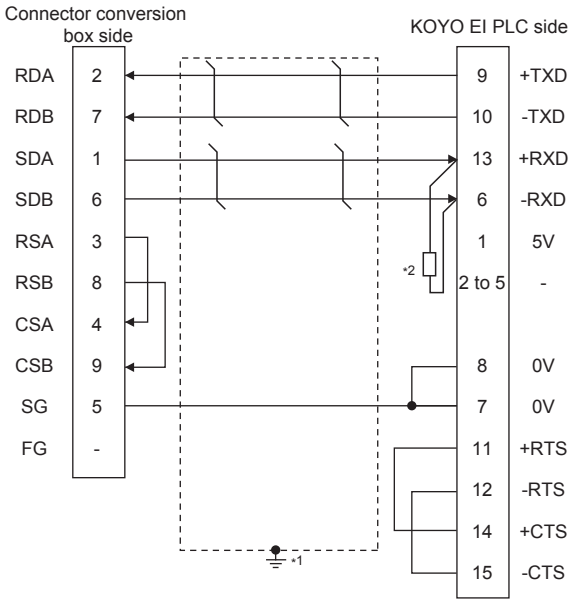
■RS-422 connection diagram 9)



*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.

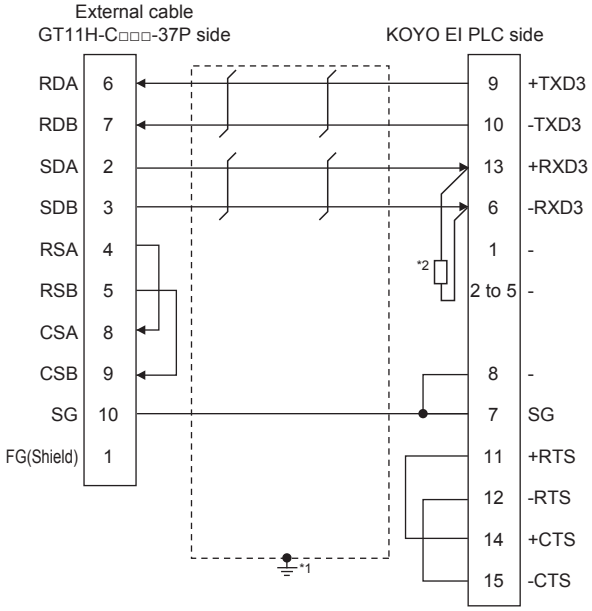
■RS-422 connection diagram 10)



*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Connect a terminating resistor (approximately 100 to 500Ω) to the PLC to be a terminal.

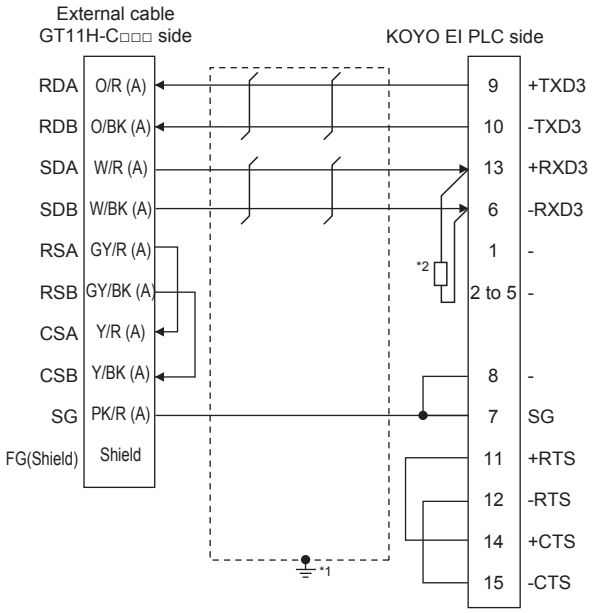
■RS-422 connection diagram 11)



*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Connect a terminating resistor (approximately 100 to 500Ω) to the PLC to be a terminal.

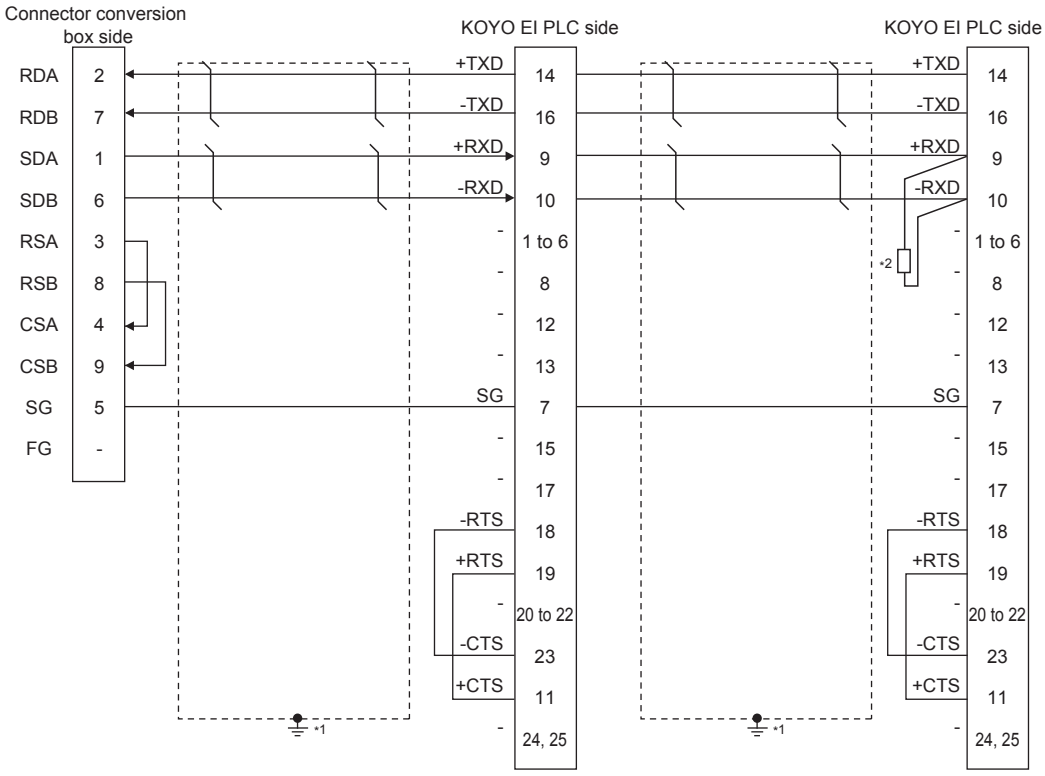
■RS-422 connection diagram 12)



*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Connect a terminating resistor (approximately 100 to 500Ω) to the PLC to be a terminal.

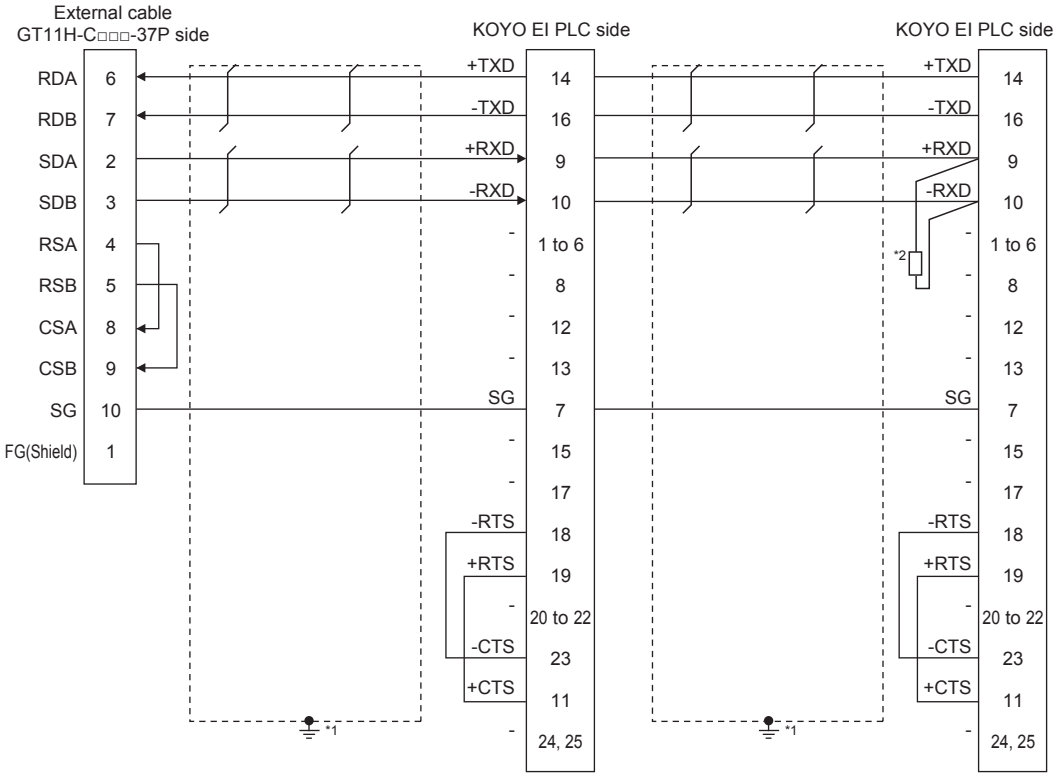
■RS-422 connection diagram 13)



*1 Connect FG grounding to the appropriate part of a cable shield line.

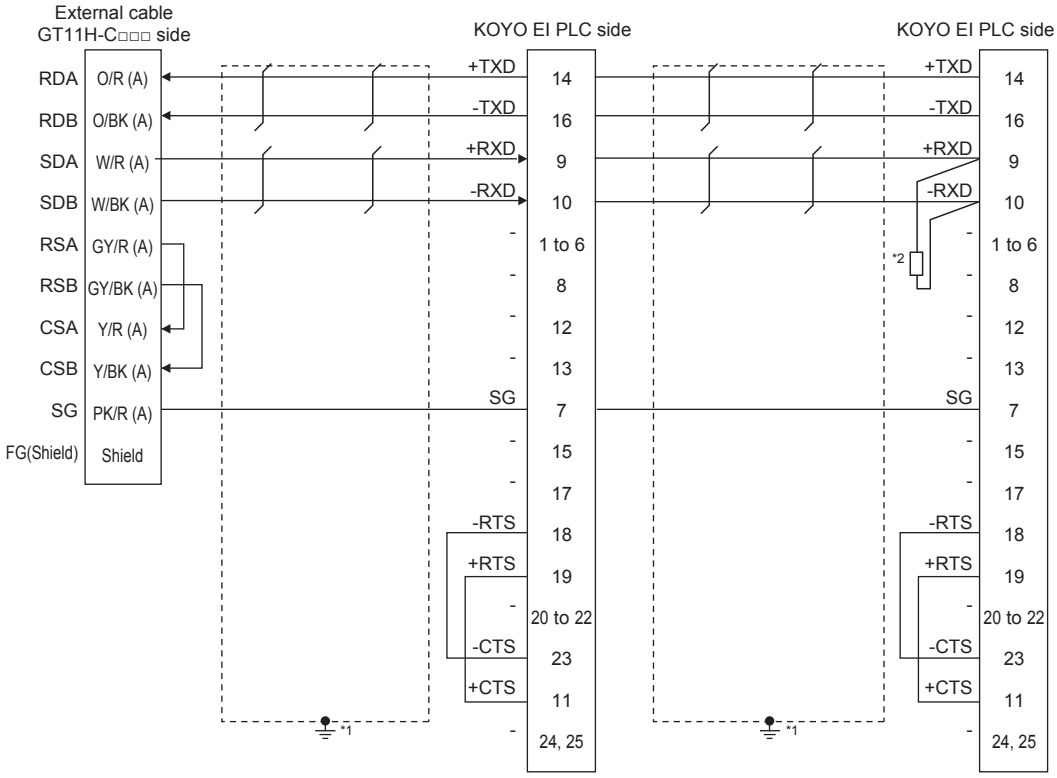
*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.
When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

■RS-422 connection diagram 14)



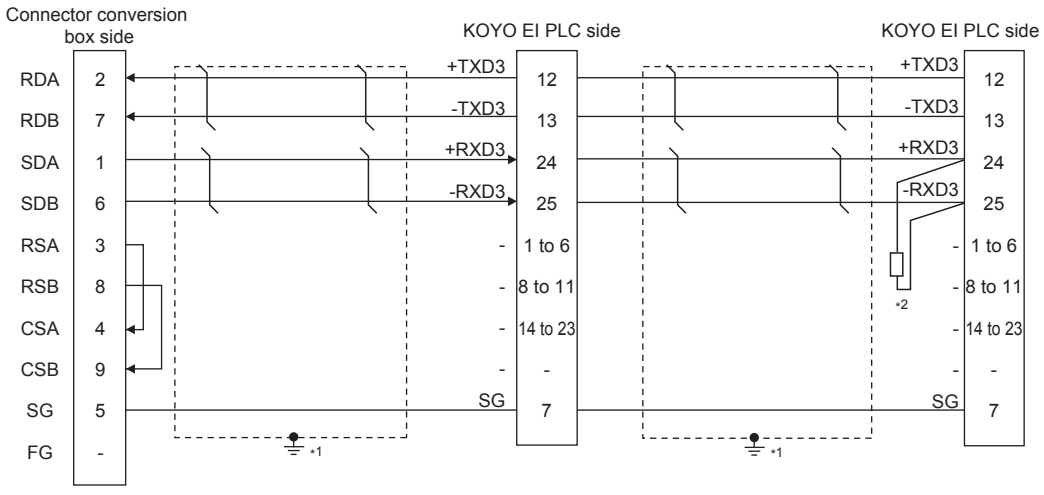
*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.
When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

■RS-422 connection diagram 15)



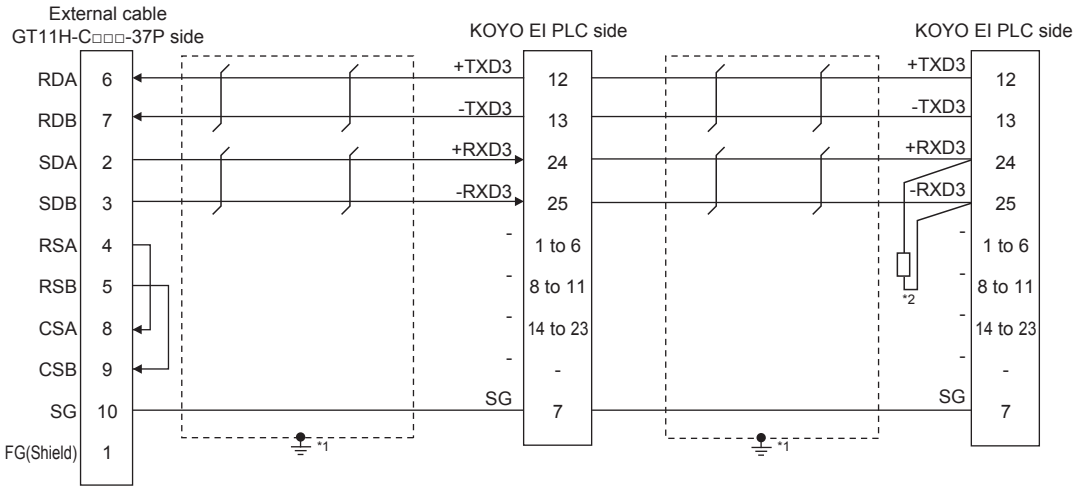
*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.
When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

■RS-422 connection diagram 16)



*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.
When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

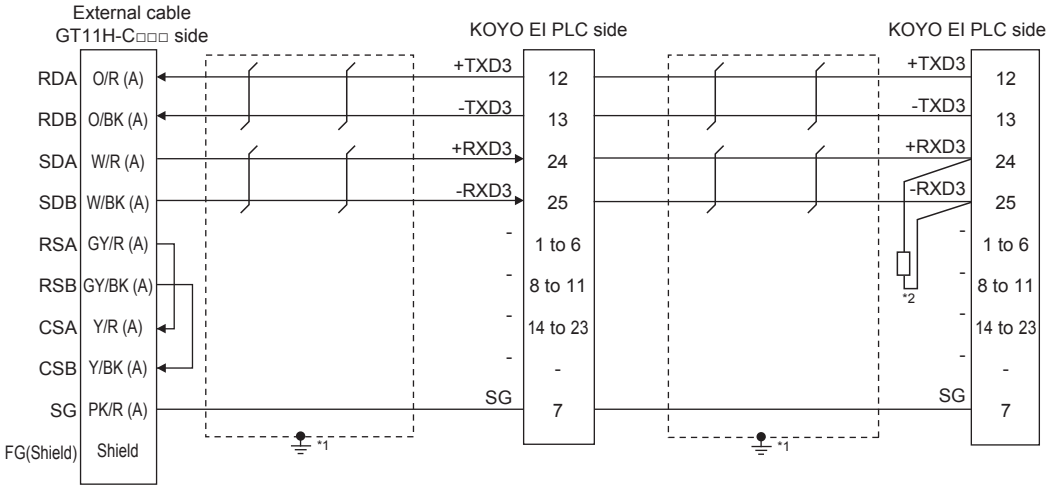
■RS-422 connection diagram 17)



*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.
When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

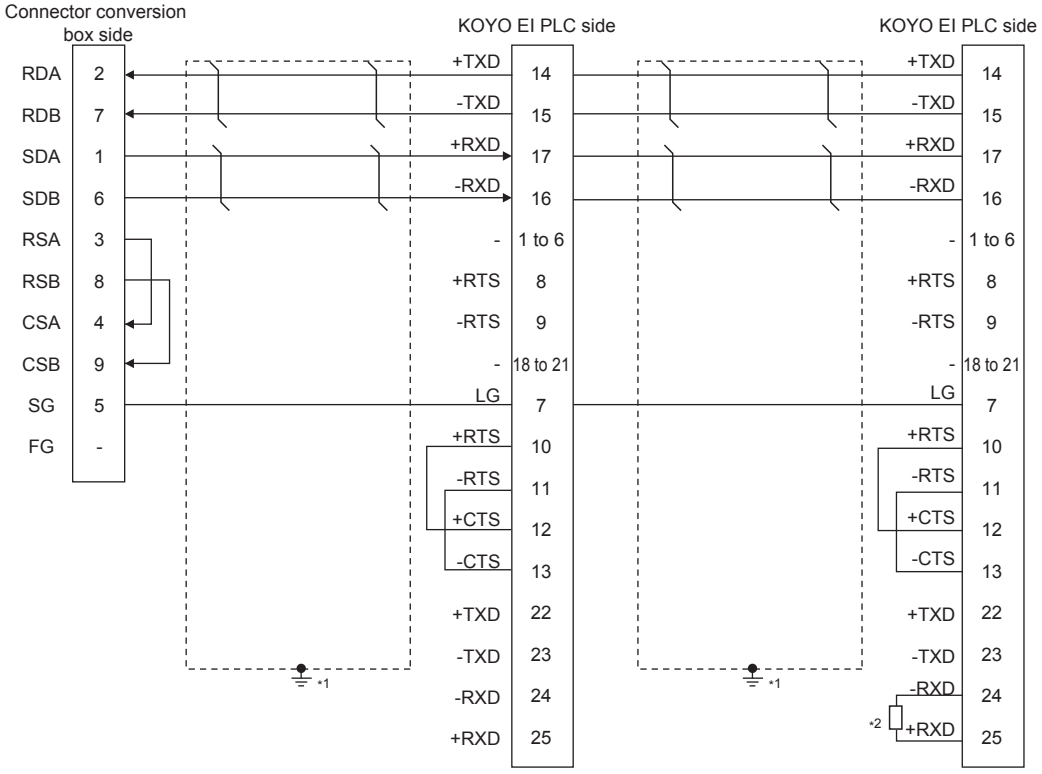
■RS-422 connection diagram 18)



*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.
When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

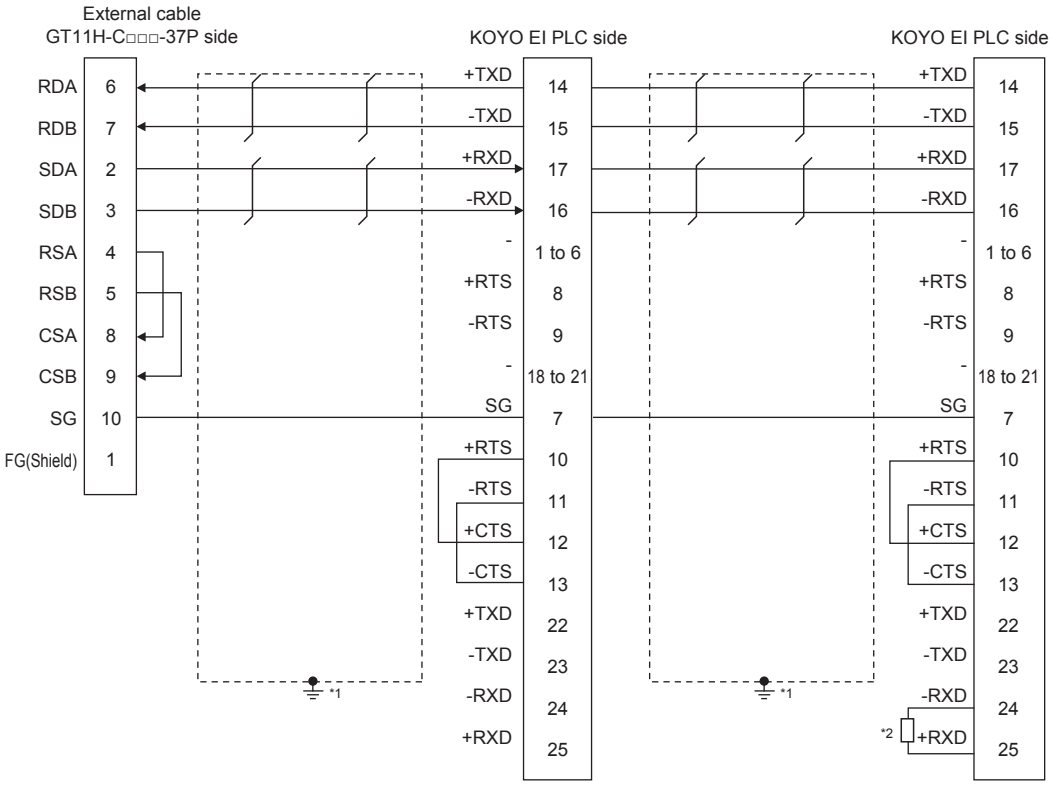
■RS-422 connection diagram 19)



*1 Connect FG grounding to the appropriate part of a cable shield line.

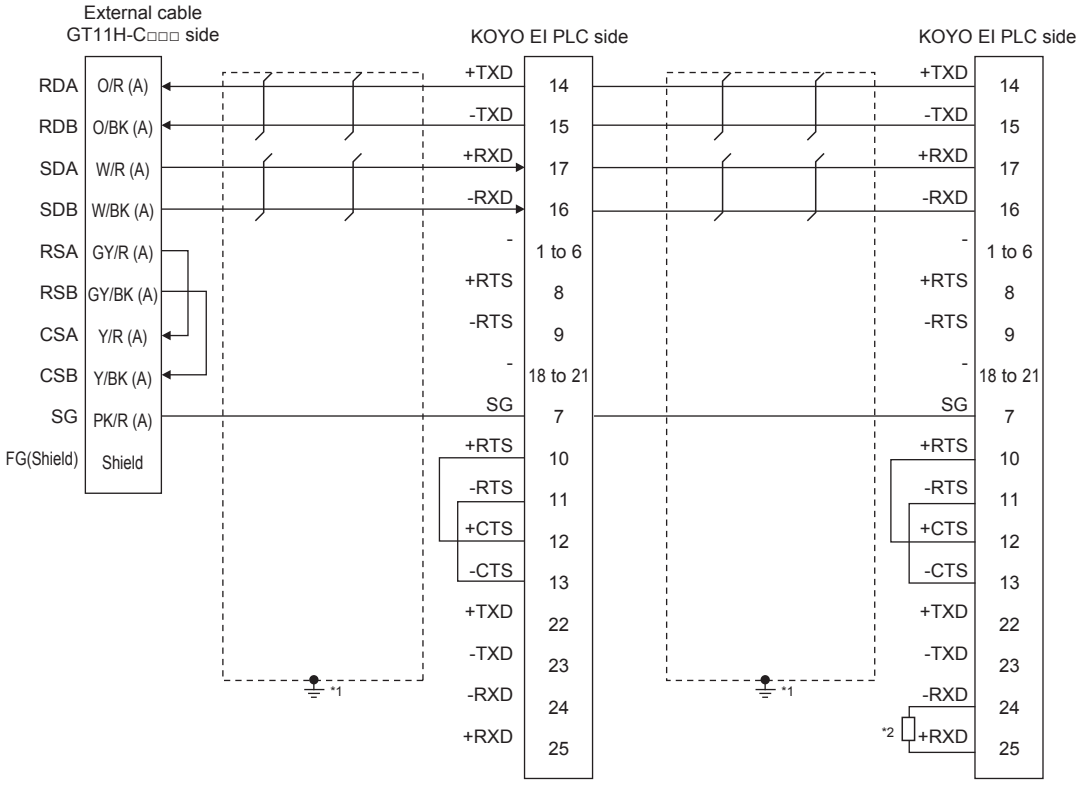
*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.
When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

■RS-422 connection diagram 20)



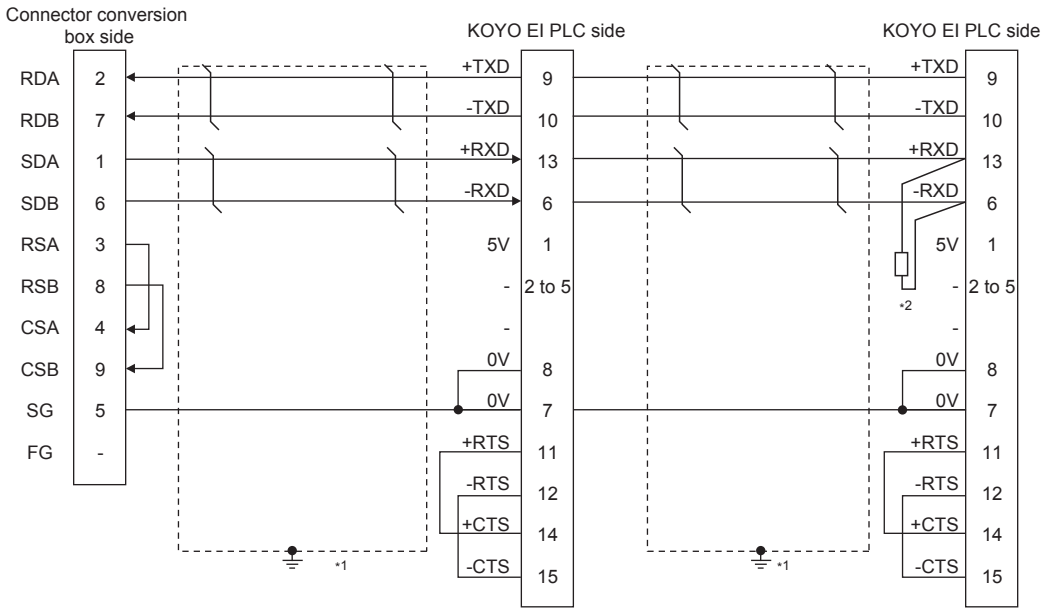
*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.
When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

■RS-422 connection diagram 21)



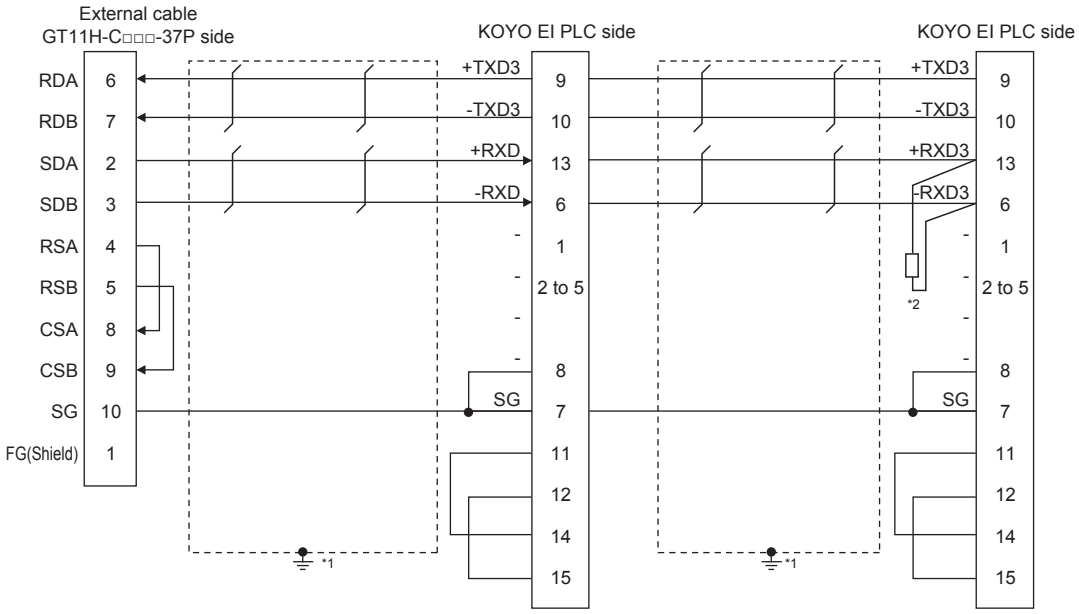
*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 Connect a terminating resistor (approximately 150Ω) to the PLC at a terminal station.
When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

■RS-422 connection diagram 22)



*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 Connect a terminating resistor (approximately 100 to 500Ω) to the PLC to be a terminal.
When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

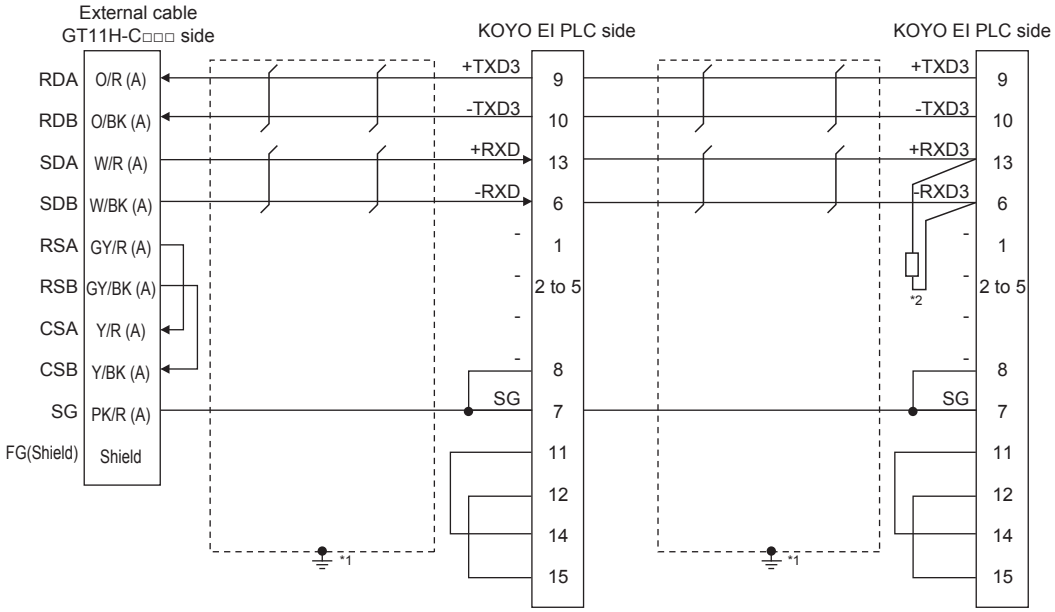
■RS-422 connection diagram 23)



*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Connect a terminating resistor (approximately 100 to 500Ω) to the PLC to be a terminal.
When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

■RS-422 connection diagram 24)



*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Connect a terminating resistor (approximately 100 to 500Ω) to the PLC to be a terminal.
When the number of links exceeds 30, use a transmission line conversion unit D-01CV per 30 links.
For details, refer to the following manual.
KOYO EI PLC user's Manual

Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■KOYO EI PLC side connector

Use the connector compatible with the KOYO EI PLC side.

For details, refer to the KOYO EI PLC user's manual.

Connecting terminating resistors

■GOT side

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

■KOYO EI PLC

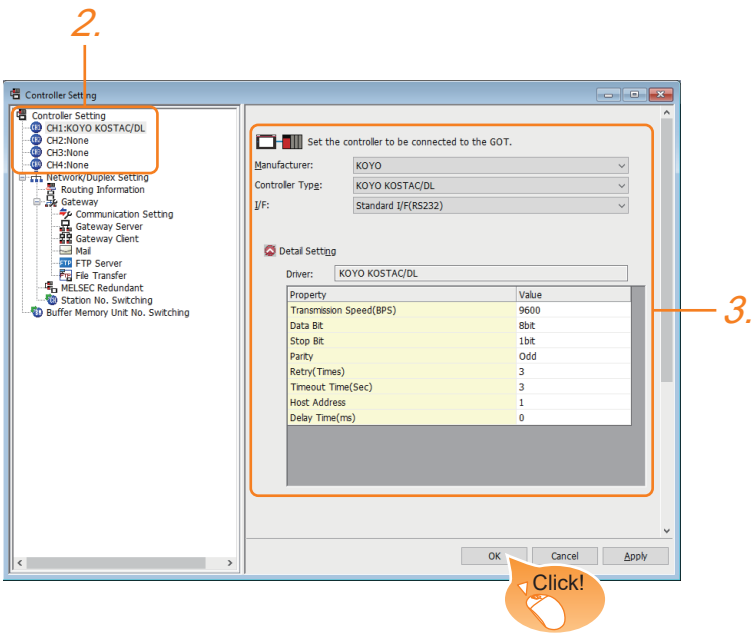
To connect a KOYO EI PLC to a GOT, a terminating resistor must be set to the KOYO EI PLC.

📖KOYO EI PLC user's Manual

19.4 GOT Side Settings

Setting communication interface (Communication settings)

Set the channel of the equipment to be connected to the GOT.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [KOYO]
- [Controller Type]: [KOYO KOSTAC/DL]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1145 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
Transmission Speed(BPS)	9600
Data Bit	8 bit
Stop Bit	1 bit
Parity	Odd
Retry(Times)	3
Timeout Time(Sec)	3
Host Address	1
Delay Time(ms)	0

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 9600bps)	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bits)	7bits/8bits
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit/2bits
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Odd)	None Even Odd
Retry	Set the number of retries to be performed when a communication error occurs. (Default: 3times)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 50sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300ms
Host Address	Specify the host address (station No. of the GOT to which the PLC is connected) in the connected network. (Default: 1)	1 to 90

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

19.5 PLC Side Setting

Point

KOYO EI PLC

For details of KOYO EI PLCs, refer to the following manuals.

KOYO EI PLC user's Manual

Model name			Refer to
PLC CPU	KOSTAC SU Series	SU-5E/6B	☞ Page 1147 Connecting to SU-5E/6B
		SU-5M/6M	☞ Page 1148 Connecting to SU-5M/6M
	DirectLOGIC 05 Series DirectLOGIC 06 Series		☞ Page 1148 Connecting to DirectLOGIC 05 series or DirectLOGIC 06 series
	DirectLOGIC 205 Series		☞ Page 1149 Connecting to DirectLOGIC 205 series
	PZ series		☞ Page 1149 Connecting to PZ Series
Host Link Module	U-01DM		☞ Page 1150 Connecting to U-01DM
Data Communications Module	D0-DCM		☞ Page 1152 Connecting to D0-DCM
	D2-DCM		☞ Page 1153 Connecting to D2-DCM

Connecting to SU-5E/6B

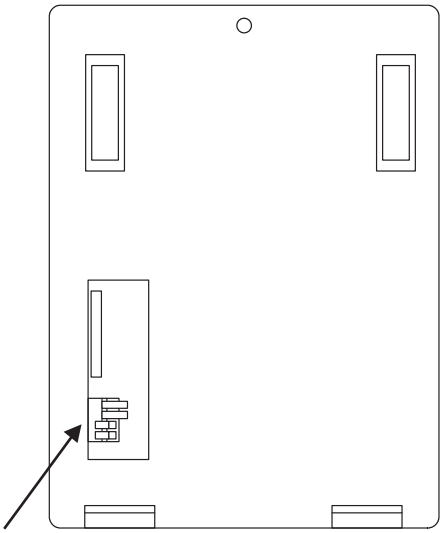
Communication settings

Make the following settings using the programmer system parameter setting.

Item	Set value
Station No.	1 to 90
Transmission mode	HEX
Parity	NONE, ODD
Data bit	8 bit (Fixation)
Stop bit	1 bit (Fixation)

Setting DIP switches

Set the transmission speed using the CPU DIP switch.



CPU DIP switch



Item	Set value	Switch No.	
		3	4
Transmission speed*1	9600bps	ON	OFF
	19200bps	ON	ON

*1 Indicates only the transmission speeds that can be set on the GOT side.
Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1144 Setting communication interface (Communication settings)

Connecting to SU-5M/6M

Communication settings

Make the following settings using the programmer system parameter setting.

Item	Set value
Protocol	CCM
Response delay time	0ms
Timeout Time	800ms/960ms/1200ms/1600ms/4000ms/8000ms/16000ms/40000ms
Station No.	1 to 90
Transmission mode	HEX
Stop bit	1bit, 2bits
Data bit	8bits (Fixed)
Parity	NONE, ODD, EVEN
Transmission speed*1	9600bps, 19200bps, 38400bps

*1 Indicates only the transmission speeds that can be set on the GOT side.
Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1144 Setting communication interface (Communication settings)

Connecting to DirectLOGIC 05 series or DirectLOGIC 06 series

Communication settings

Make the following settings using the programmer system parameter setting.

Item	Set value
Protocol	CCM NET (DirectNET)
Timeout	780ms or more
RTS On Delay Time	0ms*1
RTS Off Delay Time	0ms*1
Station No.	1 to 90
Transmission speed*2	9600bps, 19200bps, 38400bps
Stop bit	1bit, 2bits
Parity	NONE, ODD, EVEN
Communication format	HEX

*1 To use a PLC with multidrop, set the "RTS on delay time" to 5ms or more and the "RTS off delay time" to 2ms or more.
*2 Indicates only the transmission speeds that can be set on the GOT side.
Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1144 Setting communication interface (Communication settings)

Connecting to DirectLOGIC 205 series

Communication settings

Make the following settings using the programmer system parameter setting.

Item	Set value
Protocol	CCM NET (DirectNET)
Station No.	1 to 90
Transmission speed*1	9600bps, 19200bps, 38400bps
Data bit	8bits (fixed)
Stop bit	1bit (fixed)
Parity	NONE, ODD
Self-diagnostic mode	OFF
Response delay time	0ms
Peer to Peer	OFF
Master/Slave	Slave
Timeout	Enable
Transmission mode	HEX
MODBUS	OFF

*1 Indicates only the transmission speeds that can be set on the GOT side.
Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1144 Setting communication interface (Communication settings)

Connecting to PZ Series

Communication settings

Make the following settings using the programmer system parameter setting.

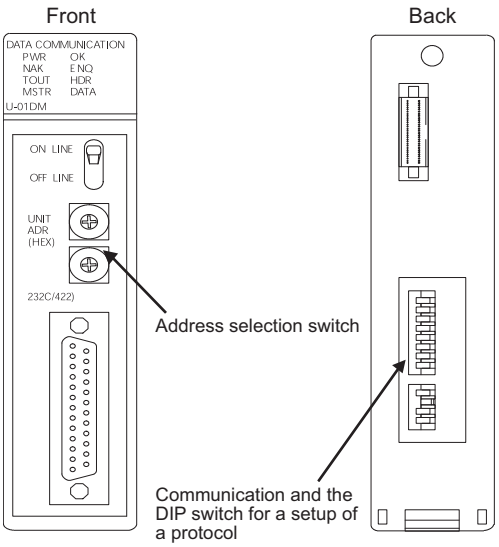
Item	Set value
Protocol	CCM NET
Timeout	800ms/960ms/1200ms/1600ms/4000ms/8000ms/16000ms/40000ms
Response delay time	0ms
Station No.	1 to 90
Communication format	HEX
Transmission speed*1	9600bps, 19200bps, 38400bps
Stop bit	1bit
Parity	NONE, ODD

*1 Indicates only the transmission speeds that can be set on the GOT side.
Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1144 Setting communication interface (Communication settings)

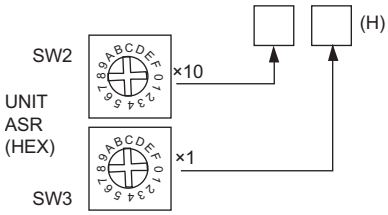
Connecting to U-01DM

Setting switches

Make the communication settings using each setting switch.

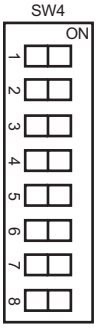


■Address selection switch(SW2, SW3)



Switch No.	Settings	Setting details
SW2	Code higher rank (10^1figures)	01 to 5A
SW3	Code low rank (10^0figures)	

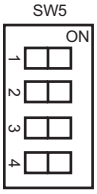
■Communication and the DIP switch for a setup of a protocol(SW4)



Setting item	Set value	Switch No.							
		1	2	3	4	5	6	7	8
Transmission speed*1	9600bps	OFF	ON	ON					
	19200bps	ON	ON	ON					
	38400bps	OFF	OFF	OFF					
Parity	ODD				ON				
	NONE				OFF				
Self-diagnostic	OFF					OFF			
Response delay time	0ms						OFF	OFF	OFF

*1 Indicates only the transmission speeds that can be set on the GOT side.
Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1144 Setting communication interface (Communication settings)

■Communication and the DIP switch for a setup of a protocol(SW5)



Item	Set value	Switch No.			
		1	2	3	4
Peer to Peer	OFF	OFF			
M/S	Slave		OFF		
TOUT existence	Enable			OFF	
ASCII/HEX	HEX				OFF

Connecting to D0-DCM

Communication settings

Write the following communication settings to the specified register using the programmer.For details of the register, refer to the following manual.

📖KOYO EI PLC user's Manual

Item	Set value
Transmission mode	HEX
Protocol	DirectNet
Station No.	1 to 90
Transmission speed*1	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Parity	NONE, ODD, EVEN (Only communication port 2)
RTS On Delay Time (Only communication port 2)	0ms
RTS Off Delay Time (Only communication port 2)	0ms
Timeout (Only communication port 2)	800ms/960ms/1200ms/1600ms/4000ms/8000ms/16000ms/40000ms
485 mode selection (Only communication port 2)	RS232, RS422/485 4 line type
Data bit (Only communication port 2)	8bits, 7bits
Stop bit (Only communication port 2)	1bit, 2bits
The timeout between characters (Only communication port 2)	0 to 9999ms
The completion of a setting	Default use,A preset value is effective
Reset timeout	Invalid,Effective

*1 Indicates only the transmission speeds that can be set on the GOT side.
Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1144 Setting communication interface (Communication settings)

Connecting to D2-DCM

Communication settings

Make the following settings using the programmer.

Item	Set value
Station No.	1 to 90
Transmission speed*1	9600bps, 19200bps, 38400bps
Data bit	8bits (fixed)
Stop bit	1bit (fixed)
Parity	NONE, ODD
Self-diagnostic mode	OFF
Response delay time	0ms
Peer to Peer	OFF
Master/Slave	Slave
Timeout	Enable
Transmission mode	HEX
MODBUS	OFF

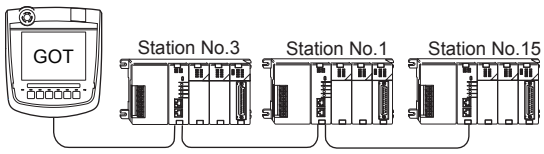
*1 Indicates only the transmission speeds that can be set on the GOT side.
Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1144 Setting communication interface (Communication settings)

Station No. settings

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.



The example of a Station No. setting

Direct specification

Specify the station No. of the PLC to be changed when setting device.

Specification range
1 to 90

19.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1
KOYO EI equipment ([KOYO KOSTAC/DL])

19.7 Precautions

GOT clock control

The GOT clock function is available only for the PLC with a calendar function.

Note: Although the "time adjusting" and "time broadcast" functions can be selected on the GOT, the "time broadcast" function is not available.

Do not select the "time broadcast" function.

If both of the functions are selected, not only the "time broadcast" function but also the "time adjusting" function will be disabled.

20 JTEKT PLC

- Page 1155 Connectable Model List
- Page 1156 System Configuration
- Page 1184 Connection Diagram
- Page 1194 GOT Side Settings
- Page 1196 PLC Side Setting
- Page 1206 Settable Device Range
- Page 1206 Precautions

20.1 Connectable Model List

The following table shows the connectable models.

Model name		Model type	Clock	Communication Type	Connectable GOT	Refer to
PC3JG	PC3JG-P	TIC-6088	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 1156 Connecting to PC3JG, PC3JD
	PC3JG	TIC-6125				
PC3JD	PC3JD	TIC-5642				
	PC3JD-C	TIC-6029				
PC3J	PC3J*1	TIC-5339	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 1161 Connecting to PC3J
	PC3JL	TIC-5783				
PC2J	PC2J	THC-2764	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 1167 Connecting to PC2J (PC2J, PC2JS, or PC2JR)
	PC2JS	THC-2994				
	PC2JR	THC-5053				
	PC2JC	THC-5070	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 1171 Connecting to PC2J (PC2JC, PC2J16P, or PC2J16PR)
	PC2J16P	THC-5169				
	PC2J16PR	THC-5173				
PC10G	PC10G-CPU	TCC-6353	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 1176 Connecting to PC10G

*1 Use PC3J of the version 2.1 or later.

20.2 System Configuration

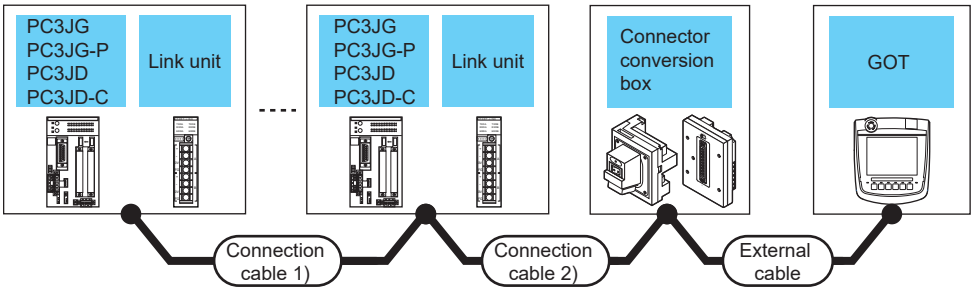
Connecting to PC3JG, PC3JD

Communication driver

JTEKT TOYOPUC-PC

For the RS-422 connection

■When using the connector conversion box



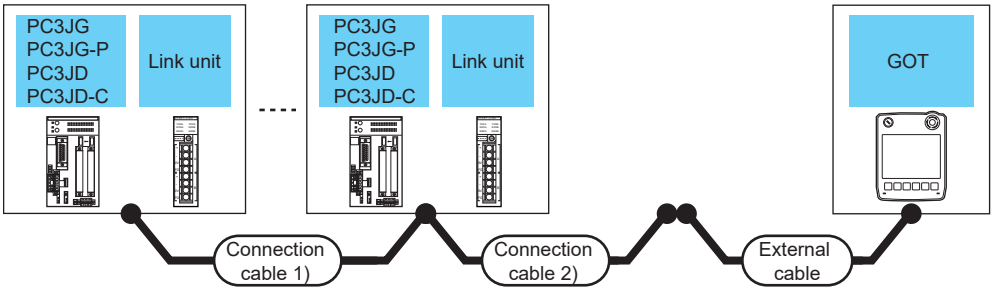
PLC*3				Connection cable 1)	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance*2	Number of connectable equipment
Model name		Link unit*1	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number					
PC3JG PC3JD	PC3JG PC3JG-P PC3JD PC3JD-C	PC/CMP2-LINK (THU-5139)	RS-422	User preparing Page 1189 RS-422 connection diagram 4)	GT09-C30R41201-6C(3m) GT09-C100R41201-6C(10m) or User preparing Page 1190 RS-422 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	32 PLCs for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		10 PLCs for 1 GOT

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

*3 When connecting multiple PLCs, set the same operation mode for all the PLCs.
In GT Designer3, set [Format] in [Detail Setting] according to the operation mode set for the PLCs.
For details, refer to the following.
☞ Page 1195 Communication detail settings

■When using the external cable (GT11H-C□□□-37P)



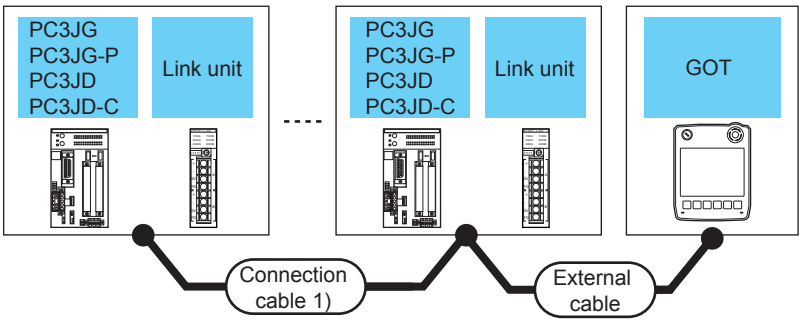
PLC*3				Connection cable 1)	Connection cable 2)	External cable	GOT Model	Total distance*2	Number of connectable equipment
Model name		Link unit*1	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number				
PC3JG PC3JD	PC3JG PC3JG-P PC3JD PC3JD-C	PC/CMP2-LINK (THU-5139)	RS-422	User preparing Page 1189 RS-422 connection diagram 4)	User preparing Page 1190 RS-422 connection diagram 8)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	10 PLCs for 1 GOT

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

*3 When connecting multiple PLCs, set the same operation mode for all the PLCs.
In GT Designer3, set [Format] in [Detail Setting] according to the operation mode set for the PLCs.
For details, refer to the following.
☞ Page 1195 Communication detail settings

■When using the external cable (GT11H-C□□□)



PLC*3				Connection cable 1)	External cable	GOT Model	Total distance*2	Number of connectable equipment
Model name		Link unit*1	Communication Type	Cable model Connection diagram number				
PC3JG PC3JD	PC3JG PC3JG-P PC3JD PC3JD-C	PC/CMP2-LINK (THU-5139)	RS-422	User preparing Page 1189 RS-422 connection diagram 4)	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1191 RS-422 connection diagram 9)	GT 2505HS	13m	10 PLCs for 1 GOT

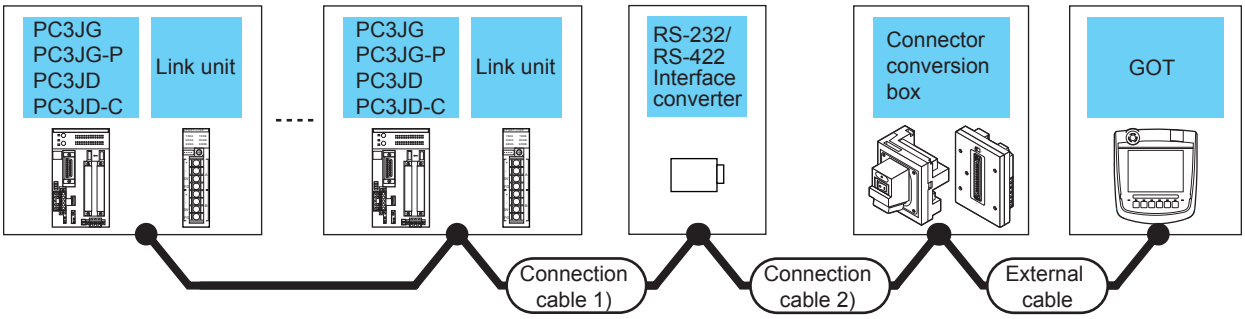
*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + External cable)

*3 When connecting multiple PLCs, set the same operation mode for all the PLCs.
In GT Designer3, set [Format] in [Detail Setting] according to the operation mode set for the PLCs.
For details, refer to the following.
☞ Page 1195 Communication detail settings

For the RS-232 connection (via an interface converter)

■When using the connector conversion box



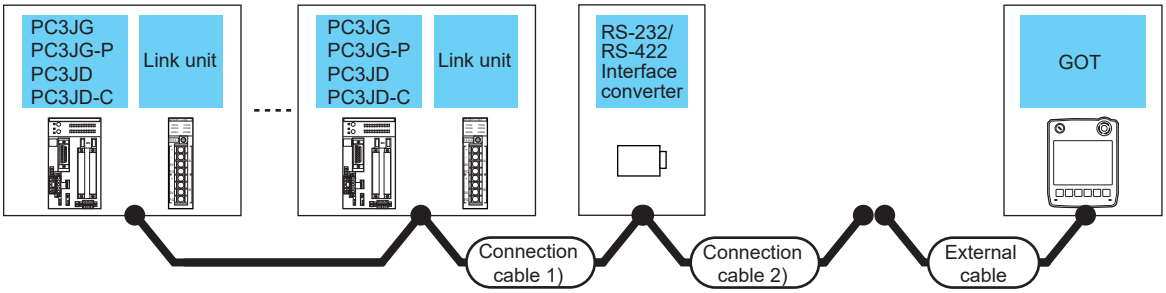
PLC			Connection cable 1)		RS-232/RS-422 interface converter*2		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name		Link unit*1	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
PC3JG PC3JD	PC3JG PC3JG-P PC3JD PC3JD-C	-	User preparing Page 1188 RS-422 connection diagram 1)	500m	TXU-2051	RS-232	GT09-C30R21201-25P(3m) or User preparing Page 1184 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	32 PLCs for 1 GOT
								GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927)	User preparing Page 1188 RS-422 connection diagram 2)					GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
								GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		PC/CMP2-LINK (THU-5139)	User preparing Page 1189 RS-422 connection diagram 3)					GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
								GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The interface converter is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*3 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)



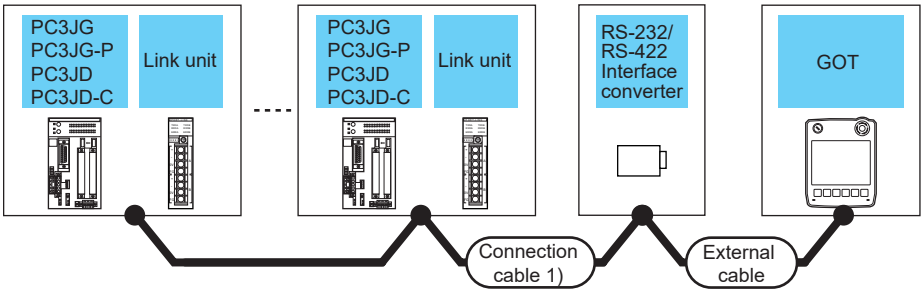
PLC			Connection cable 1)		RS-232/RS-422 interface converter*2		Connection cable 2)	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name		Link unit*1	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
PC3JG PC3JD	PC3JG PC3JG-P PC3JD PC3JD-C	-	User preparing Page 1188 RS-422 connection diagram 1)	500m	TXU-2051	RS-232	User preparing Page 1184 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	32 PLCs for 1 GOT
		PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927)	User preparing Page 1188 RS-422 connection diagram 2)					GT11H-C30-37P(3m)	GT 2505HS		
		PC/CMP2-LINK (THU-5139)	User preparing Page 1189 RS-422 connection diagram 3)					GT11H-C30-37P(3m)	GT 2505HS		

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The interface converter is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*3 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



PLC			Connection cable 1)		RS-232/RS-422 interface converter*2		External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name		Link unit*1	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
PC3JG PC3JD	PC3JG PC3JG-P PC3JD PC3JD-C	-	User preparing Page 1188 RS-422 connection diagram 1)	500m	TXU-2051	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1185 RS-232 connection diagram 3)	GT 2505HS	6m	32 PLCs for 1 GOT
		PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927)	User preparing Page 1188 RS-422 connection diagram 2)				GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1185 RS-232 connection diagram 3)	GT 2505HS		
		PC/CMP2-LINK (THU-5139)	User preparing Page 1189 RS-422 connection diagram 3)				GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1185 RS-232 connection diagram 3)	GT 2505HS		

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For details of the product, contact JTEKT CORPORATION.

*2 The interface converter is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*3 The distance from the converter to the GOT (External cable)

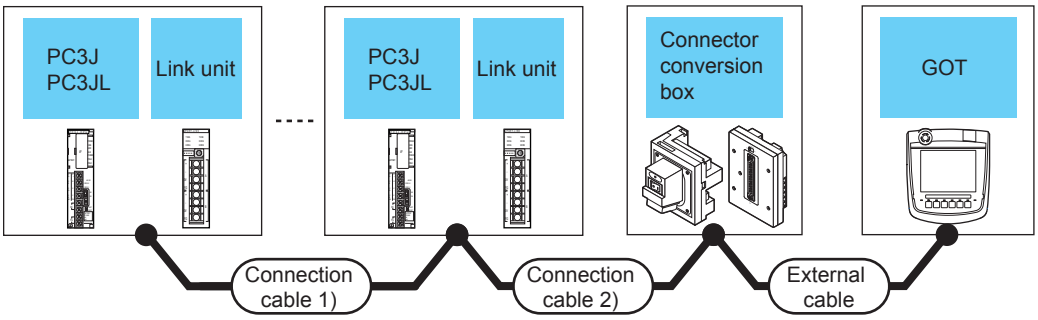
Connecting to PC3J

Communication driver

JTEKT TOYOPUC-PC

For the RS-422 connection

■When using the connector conversion box



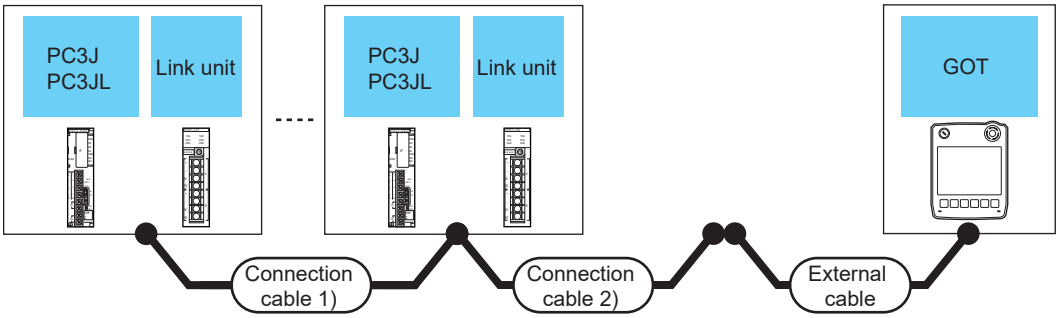
PLC*3				Connection cable 1)	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name		Link unit*1	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number					
PC3J	PC3J PC3JL	-	RS-422	User preparing Page 1189 RS-422 connection diagram 6)	GT09-C30R41201-6C(3m) GT09-C100R41201-6C(10m) or User preparing Page 1190 RS-422 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	32 PLCs for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		10 PLCs for 1 GOT
		PC/CMP2-LINK (THU-5139)		User preparing Page 1189 RS-422 connection diagram 4)	GT09-C30R41201-6C(3m) GT09-C100R41201-6C(10m) or User preparing Page 1190 RS-422 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		32 PLCs for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		10 PLCs for 1 GOT

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

*3 When connecting multiple PLCs, set the same operation mode for all the PLCs.
In GT Designer3, set [Format] in [Detail Setting] according to the operation mode set for the PLCs.
For details, refer to the following.
☞ Page 1195 Communication detail settings

■When using the external cable (GT11H-C□□□-37P)



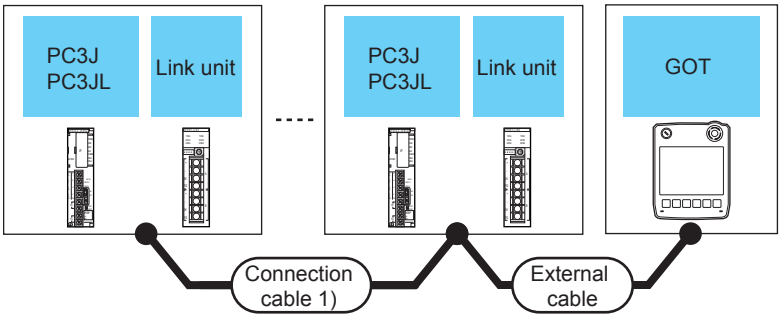
PLC*3				Connection cable 1)	Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name		Link unit*1	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number				
PC3J	PC3J PC3JL	-	RS-422	User preparing Page 1189 RS-422 connection diagram 6)	User preparing Page 1190 RS-422 connection diagram 8)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	10 PLCs for 1 GOT
		PC/CMP2-LINK (THU-5139)		User preparing Page 1189 RS-422 connection diagram 4)		GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

*3 When connecting multiple PLCs, set the same operation mode for all the PLCs.
In GT Designer3, set [Format] in [Detail Setting] according to the operation mode set for the PLCs.
For details, refer to the following.
☞ Page 1195 Communication detail settings

■When using the external cable (GT11H-C□□□)



PLC*3				Connection cable 1)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name		Link unit*1	Communication Type	Cable model Connection diagram number				
PC3J	PC3J PC3JL	-	RS-422	User preparing Page 1189 RS-422 connection diagram 6)	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1191 RS-422 connection diagram 9)	GT 2505HS	13m	10 PLCs for 1 GOT
		PC/CMP2-LINK (THU-5139)		User preparing Page 1189 RS-422 connection diagram 4)	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1191 RS-422 connection diagram 9)	GT 2505HS		

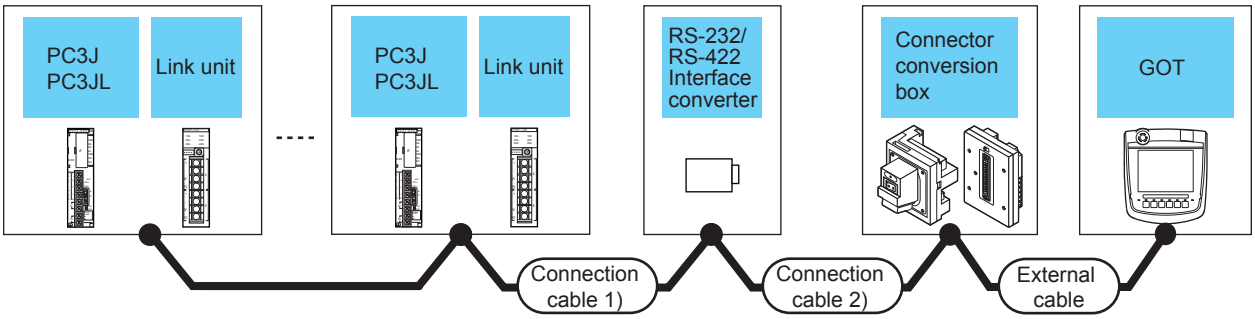
*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + External cable)

*3 When connecting multiple PLCs, set the same operation mode for all the PLCs.
In GT Designer3, set [Format] in [Detail Setting] according to the operation mode set for the PLCs.
For details, refer to the following.
☞ Page 1195 Communication detail settings

For the RS-232 connection (via interface converter)

■When using the connector conversion box



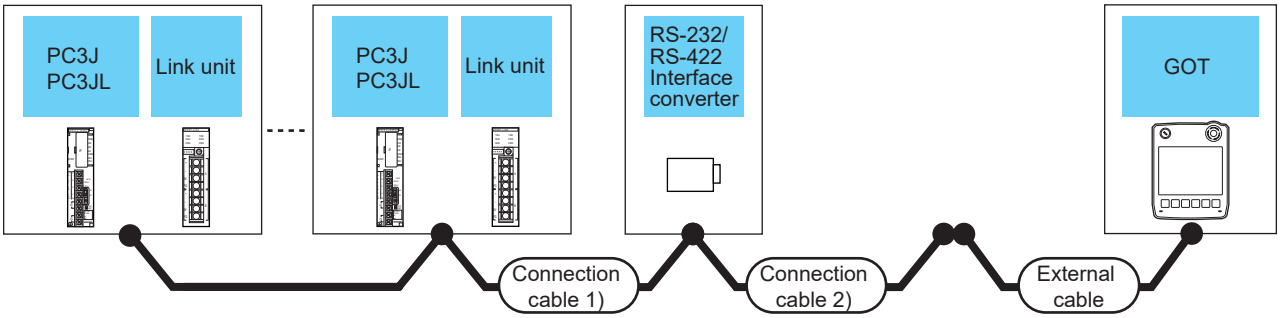
PLC			Connection cable 1)		RS-232/RS-422 interface converter*2		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name		Link unit*1	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
PC3J	PC3J PC3JL	-	User preparing Page 1188 RS-422 connection diagram 1)	500m	TXU-2051	RS-232	GT09-C30R21201-25P(3m) or User preparing Page 1184 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	32 PLCs for 1 GOT
								GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
			User preparing Page 1189 RS-422 connection diagram 5)				GT09-C30R21201-25P(3m) or User preparing Page 1184 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
								GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927)	User preparing Page 1188 RS-422 connection diagram 2)				GT09-C30R21201-25P(3m) or User preparing Page 1184 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
								GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		PC/CMP2-LINK (THU-5139)	User preparing Page 1189 RS-422 connection diagram 3)				GT09-C30R21201-25P(3m) or User preparing Page 1184 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
								GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The interface converter is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*3 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)



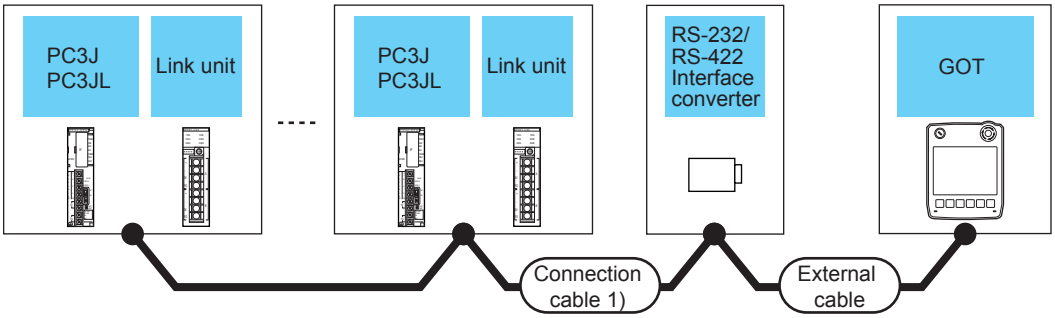
PLC			Connection cable 1)		RS-232/RS-422 interface converter*2		Connection cable 2)	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name		Link unit*1	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
PC3J	PC3J PC3JL	-	User preparing Page 1188 RS-422 connection diagram 1)	500m	TXU-2051	RS-232	User preparing Page 1184 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	32 PLCs for 1 GOT
			User preparing Page 1189 RS-422 connection diagram 5)				User preparing Page 1184 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS		
		PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927)	User preparing Page 1188 RS-422 connection diagram 2)				User preparing Page 1184 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS		
		PC/CMP2-LINK (THU-5139)	User preparing Page 1189 RS-422 connection diagram 3)				User preparing Page 1184 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS		

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*2 The interface converter is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*3 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



PLC			Connection cable 1)		RS-232/RS-422 interface converter*2		External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name		Link unit*1	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
PC3J	PC3J PC3JL	-	User preparing Page 1188 RS-422 connection diagram 1)	500m	TXU-2051	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1185 RS-232 connection diagram 3)	GT 2505HS	6m	32 PLCs for 1 GOT
			User preparing Page 1189 RS-422 connection diagram 5)				GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1185 RS-232 connection diagram 3)	GT 2505HS		
		PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927)	User preparing Page 1188 RS-422 connection diagram 2)				GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1185 RS-232 connection diagram 3)	GT 2505HS		
		PC/CMP2-LINK (THU-5139)	User preparing Page 1189 RS-422 connection diagram 3)				GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1185 RS-232 connection diagram 3)	GT 2505HS		

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*2 The interface converter is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*3 The distance from the converter to the GOT (External cable)

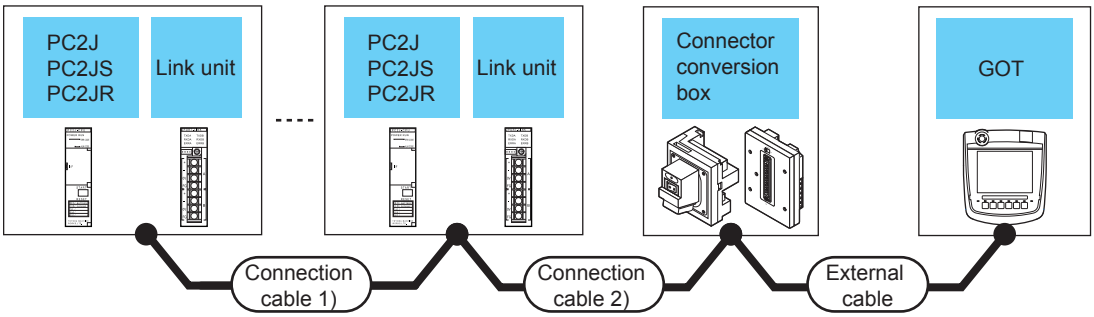
Connecting to PC2J (PC2J, PC2JS, or PC2JR)

Communication driver

JTEKT TOYOPUC-PC

For the RS-422 connection

■When using the connector conversion box

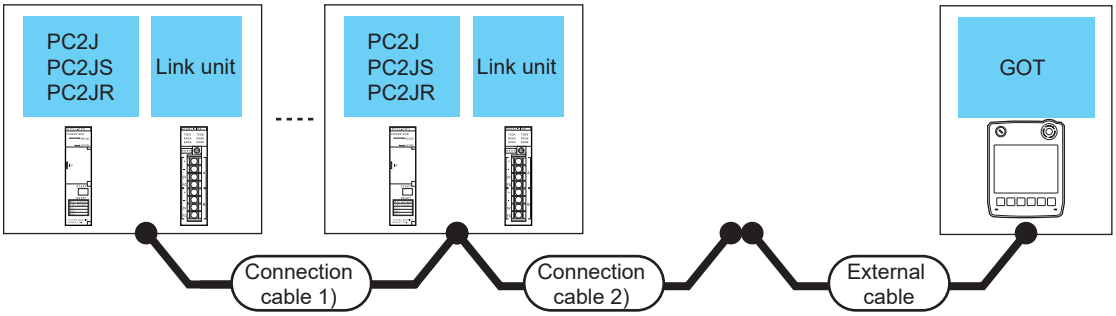


PLC				Connection cable 1)	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name		Link unit*1	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number					
PC2J	PC2J PC2JS PC2JR	PC/CMP2-LINK (THU-5139)	RS-422	User preparing Page 1189 RS-422 connection diagram 4)	GT09-C30R41201-6C(3m) GT09-C100R41201-6C(10m) or User preparing Page 1190 RS-422 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	32 PLCs for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		10 PLCs for 1 GOT

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

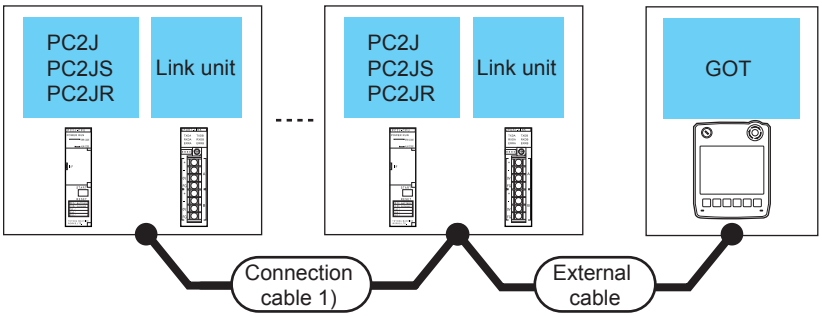


PLC				Connection cable 1)	Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name		Link unit*1	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number				
PC2J	PC2J PC2JS PC2JR	PC/CMP2-LINK (THU-5139)	RS-422	User preparing Page 1189 RS-422 connection diagram 4)	User preparing Page 1190 RS-422 connection diagram 8)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	10 PLCs for 1 GOT

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



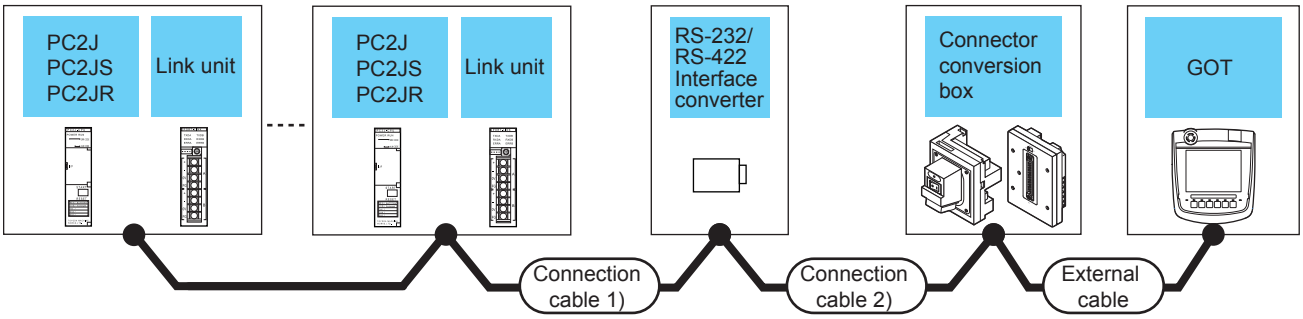
PLC				Connection cable 1)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name		Link unit*1	Communication Type	Cable model Connection diagram number				
PC2J	PC2J PC2JS PC2JR	PC/CMP2-LINK (THU-5139)	RS-422	User preparing Page 1189 RS-422 connection diagram 4)	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1191 RS-422 connection diagram 9)	GT 2505HS	13m	10 PLCs for 1 GOT

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + External cable)

For the RS-232 connection (via interface converter)

■When using the connector conversion box



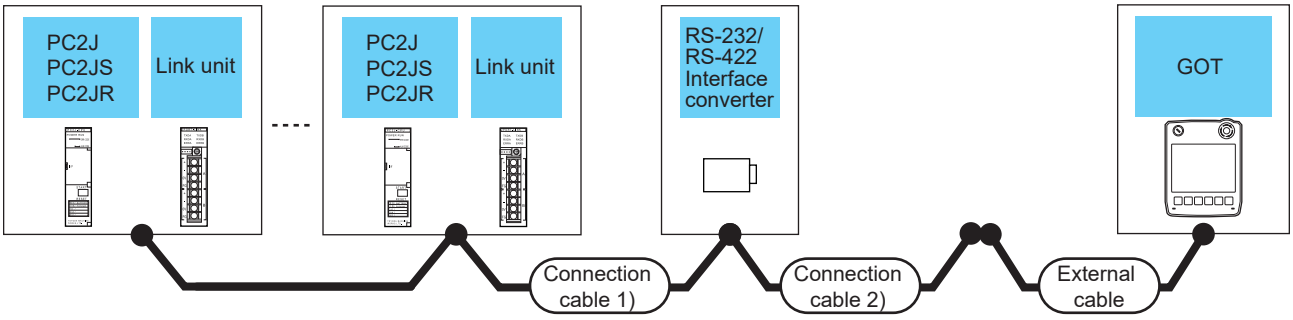
PLC			Connection cable 1)		RS-232/RS-422 interface converter*2		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name		Link unit*1	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
PC2J	PC2J PC2JS PC2JR	PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927)	User preparing Page 1188 RS-422 connection diagram 2)	500m	TXU-2051	RS-232	GT09-C30R21201-25P(3m) or User preparing Page 1184 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	32 PLCs for 1 GOT
								GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		PC/CMP2-LINK (THU-5139)	User preparing Page 1189 RS-422 connection diagram 3)					GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
								GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The interface converter is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*3 The distance from the converter to the GOT (Connection cable 2) + External cable)

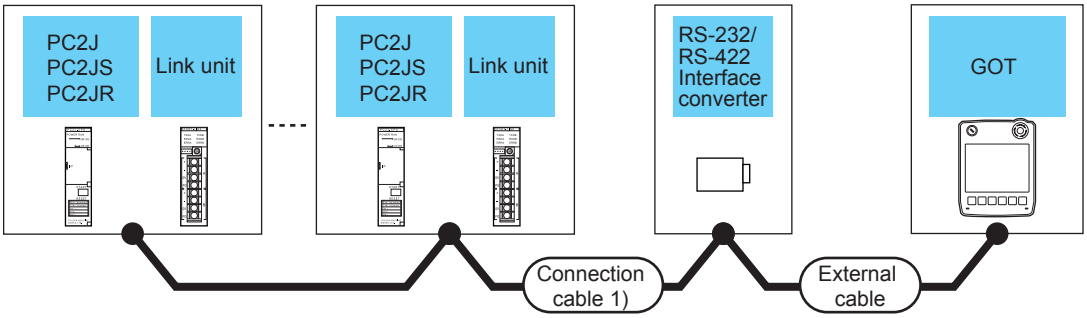
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable 1)		RS-232/RS-422 interface converter*2		Connection cable 2)	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name		Link unit*1	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
PC2J	PC2J PC2JS PC2JR	PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927)	User preparing Page 1188 RS-422 connection diagram 2)	500m	TXU-2051	RS-232	User preparing Page 1184 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	10 PLCs for 1 GOT
		PC/CMP2-LINK (THU-5139)	User preparing Page 1189 RS-422 connection diagram 3)					GT11H-C30-37P(3m)	GT 2505HS		

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.
*2 The interface converter is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.
*3 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



PLC			Connection cable 1)		RS-232/RS-422 interface converter*2		External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name		Link unit*1	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
PC2J	PC2J PC2JS PC2JR	PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927)	User preparing Page 1188 RS-422 connection diagram 2)	500m	TXU-2051	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1185 RS-232 connection diagram 3)	GT 2505HS	6m	10 PLCs for 1 GOT
		PC/CMP2-LINK (THU-5139)	User preparing Page 1189 RS-422 connection diagram 3)				GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1185 RS-232 connection diagram 3)	GT 2505HS		

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.
*2 The interface converter is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.
*3 The distance from the converter to the GOT (External cable)

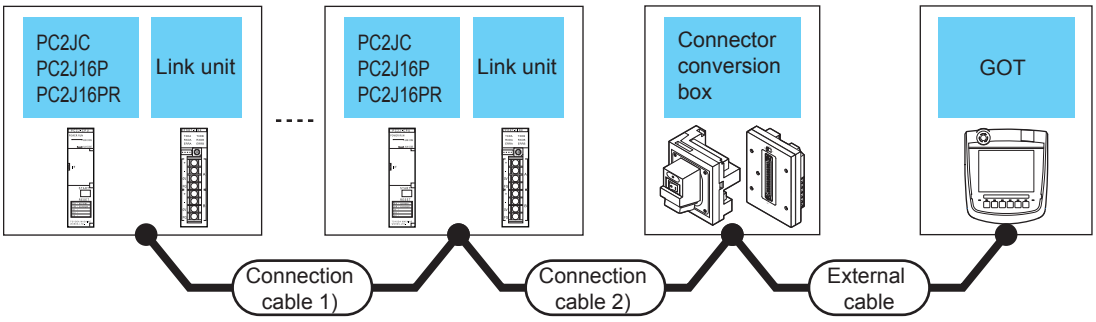
Connecting to PC2J (PC2JC, PC2J16P, or PC2J16PR)

Communication driver

JTEKT TOYOPUC-PC

For the RS-422 connection

■When using the connector conversion box

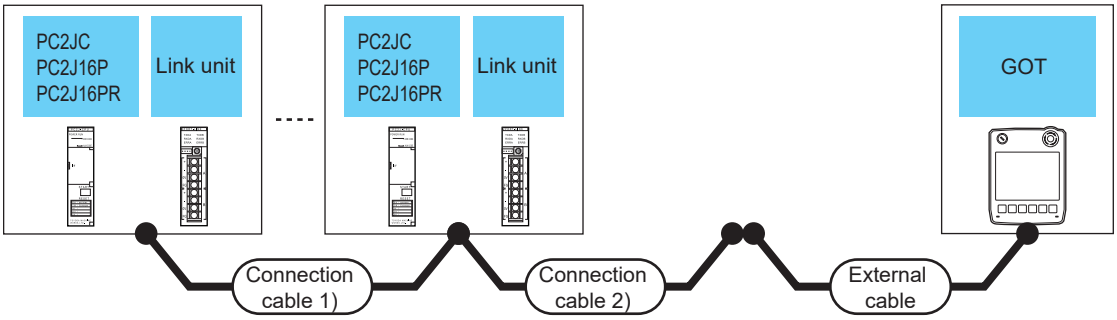


PLC				Connection cable 1)	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name		Link unit*1	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number					
PC2J	PC2JC PC2J16P PC2J16PR	PC/CMP2-LINK (THU-5139)	RS-422	User preparing Page 1189 RS-422 connection diagram 4)	User preparing Page 1190 RS-422 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	32 PLCs for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		10 PLCs for 1 GOT

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

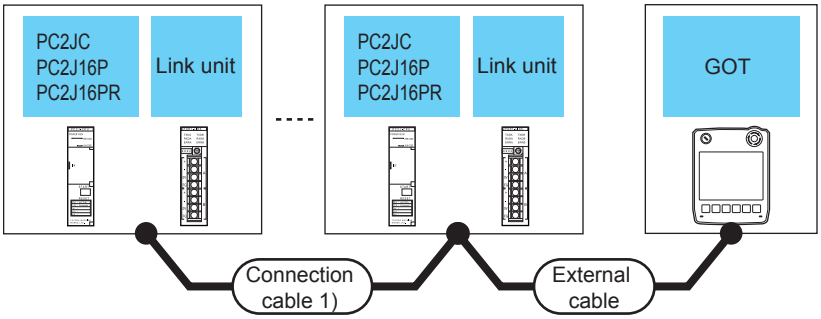


PLC				Connection cable 1)	Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name		Link unit*1	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number				
PC2J	PC2JC PC2J16P PC2J16PR	PC/CMP2-LINK (THU-5139)	RS-422	User preparing Page 1189 RS-422 connection diagram 4)	User preparing Page 1190 RS-422 connection diagram 8)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	10 PLCs for 1 GOT

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



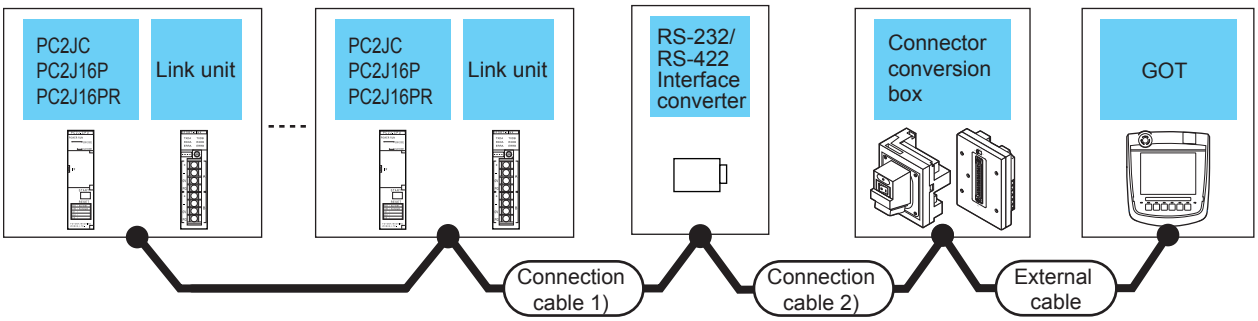
PLC				Connection cable 1)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name		Link unit*1	Communication Type	Cable model Connection diagram number				
PC2J	PC2JC PC2J16P PC2J16PR	PC/CMP2-LINK (THU-5139)	RS-422	User preparing Page 1189 RS-422 connection diagram 4)	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1191 RS-422 connection diagram 9)	GT 2505HS	13m	10 PLCs for 1 GOT

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + External cable)

For the RS-232 connection (via interface converter)

■When using the connector conversion box



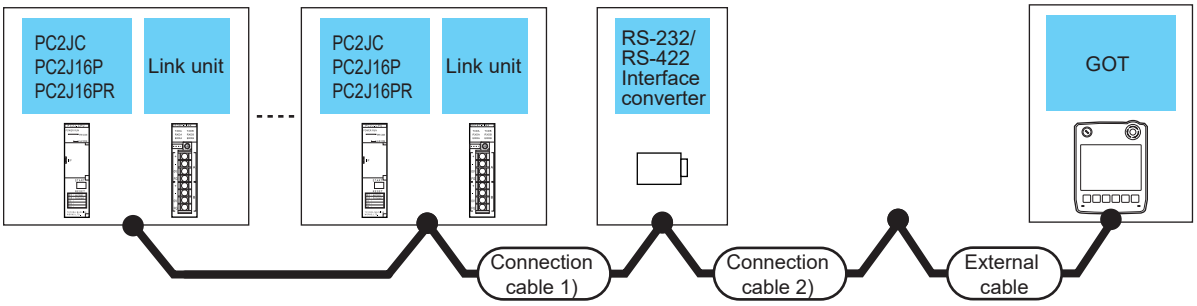
PLC		Connection cable 1)		RS-232/RS-422 interface converter*2		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name	Link unit*1	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
PC2J	PC2JC PC2J16P PC2J16PR	-	(User preparing) Page 1188 RS-422 connection diagram 1)	500m	TXU-2051	RS-232	GT09-C30R21201-25P(3m) or (User preparing) Page 1184 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	32 PLCs for 1 GOT
								GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927)	(User preparing) Page 1188 RS-422 connection diagram 2)					GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
								GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		PC/CMP2-LINK (THU-5139)	(User preparing) Page 1189 RS-422 connection diagram 3)					GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
								GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The interface converter is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*3 The distance from the converter to the GOT (Connection cable 2) + External cable)

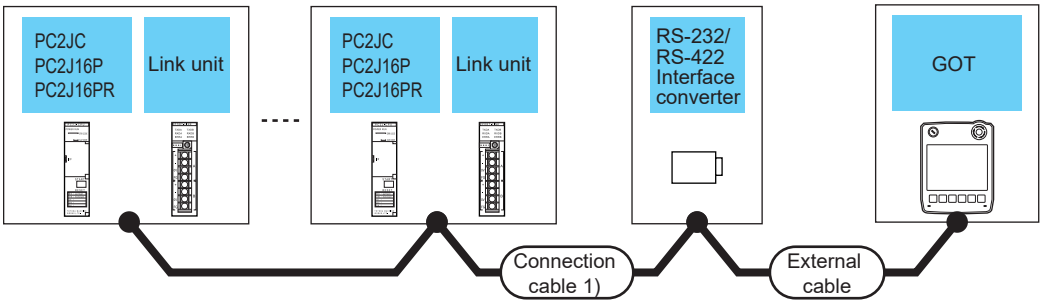
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable 1)		RS-232/RS-422 interface converter*2		Connection cable 2)	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name		Link unit*1	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
PC2J	PC2JC PC2J16P PC2J16PR	-	User preparing Page 1188 RS-422 connection diagram 1)	500m	TXU-2051	RS-232	User preparing Page 1184 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	32 PLCs for 1 GOT
		PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927)	User preparing Page 1188 RS-422 connection diagram 2)				User preparing Page 1184 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS		
		PC/CMP2-LINK (THU-5139)	User preparing Page 1189 RS-422 connection diagram 3)				User preparing Page 1184 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS		

*1 The link unit is a product manufactured by JTEKT CORPORATION. For details of the product, contact JTEKT CORPORATION.
*2 The interface converter is a product manufactured by JTEKT CORPORATION. For details of the product, contact JTEKT CORPORATION.
*3 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



PLC			Connection cable 1)		RS-232/RS-422 interface converter*2		External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name		Link unit*1	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
PC2J	PC2JC PC2J16P PC2J16PR	-	User preparing Page 1188 RS-422 connection diagram 1)	500m	TXU-2051	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1185 RS-232 connection diagram 3)	GT 2505HS	6m	32 PLCs for 1 GOT
		PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927)	User preparing Page 1188 RS-422 connection diagram 2)				GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1185 RS-232 connection diagram 3)	GT 2505HS		
		PC/CMP2-LINK (THU-5139)	User preparing Page 1189 RS-422 connection diagram 3)				GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1185 RS-232 connection diagram 3)	GT 2505HS		

*1 The link unit is a product manufactured by JTEKT CORPORATION. For details of the product, contact JTEKT CORPORATION.

*2 The interface converter is a product manufactured by JTEKT CORPORATION. For details of the product, contact JTEKT CORPORATION.

*3 The distance from the converter to the GOT (External cable)

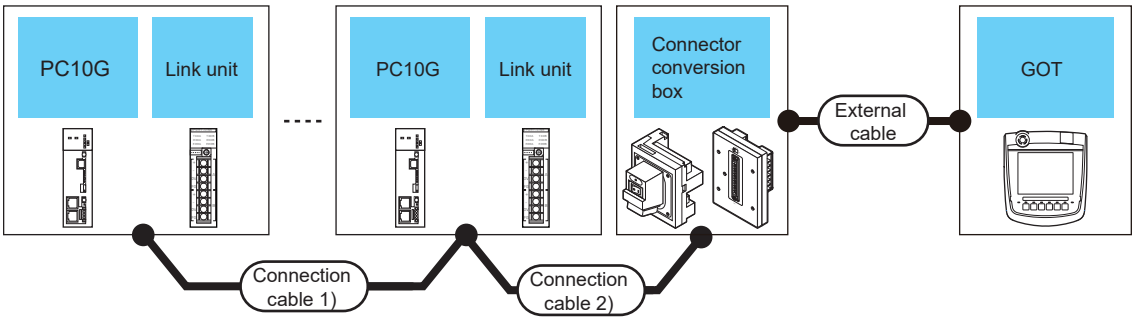
Connecting to PC10G

Communication driver

JTEKT TOYOPUC-PC

For the RS-422 connection

■When using the connector conversion box



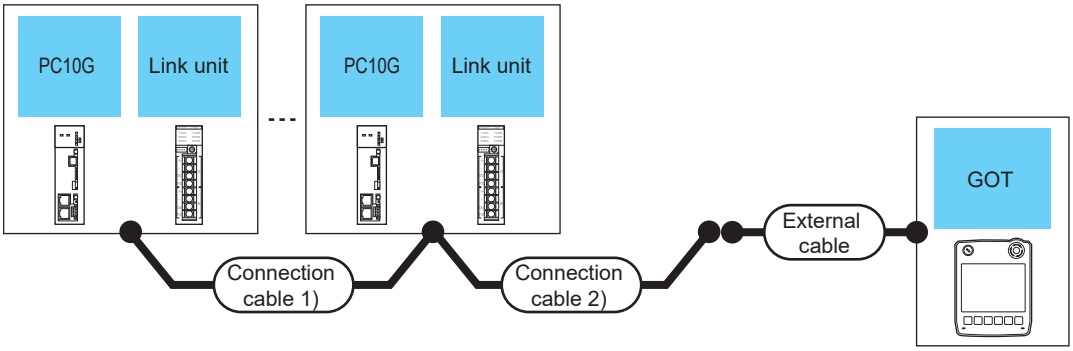
PLC*3				Connection cable 1)	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance*2	Number of connectable equipment
Model name		Link unit*1	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number					
PC10G	PC10G-CPU	PC/CMP2-LINK (THU-5139)	RS-422	User preparing Page 1189 RS-422 connection diagram 4)	GT09-C30R41201-6C(3m) GT09-C100R41201-6C(10m) or User preparing Page 1190 RS-422 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	32 PLCs for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		10 PLCs for 1 GOT
		ML10 (TCU-6903)	RS-422	User preparing Page 1191 RS-422 connection diagram 11)	User preparing Page 1192 RS-422 connection diagram 12)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	32 PLCs for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		10 PLCs for 1 GOT

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

*3 When connecting multiple PLCs, set the same operation mode for all the PLCs.
In GT Designer3, set [Format] in [Detail Setting] according to the operation mode set for the PLCs.
For details, refer to the following.
☞ Page 1195 Communication detail settings

■When using the external cable (GT11H-C□□□-37P)



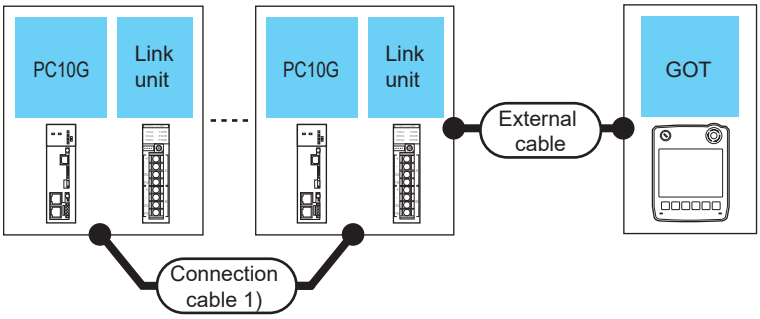
PLC*3				Connection cable 1)	Connection cable 2)	External cable	GOT Model	Total distance*2	Number of connectable equipment
Model name		Link unit*1	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number				
PC10G	PC10G-CPU	PC/CMP2-LINK (THU-5139)	RS-422	User preparing Page 1189 RS-422 connection diagram 4)	User preparing Page 1190 RS-422 connection diagram 8)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	10 PLCs for 1 GOT
		ML10 (TCU-6903)	RS-422	User preparing Page 1191 RS-422 connection diagram 11)	User preparing Page 1192 RS-422 connection diagram 13)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	10 PLCs for 1 GOT

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

*3 When connecting multiple PLCs, set the same operation mode for all the PLCs.
In GT Designer3, set [Format] in [Detail Setting] according to the operation mode set for the PLCs.
For details, refer to the following.
☞ Page 1195 Communication detail settings

■When using the external cable (GT11H-C□□□)



PLC*3				Connection cable 1)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name		Link unit*1	Communication Type	Cable model Connection diagram number				
PC10G	PC10G-CPU	PC/CMP2-LINK (THU-5139)	RS-422	User preparing Page 1189 RS-422 connection diagram 4)	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1191 RS-422 connection diagram 9)	GT 2505HS	13m	10 PLCs for 1 GOT
		ML10 (TCU-6903)	RS-422	User preparing Page 1191 RS-422 connection diagram 11)	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1193 RS-422 connection diagram 14)	GT 2505HS	13m	10 PLCs for 1 GOT

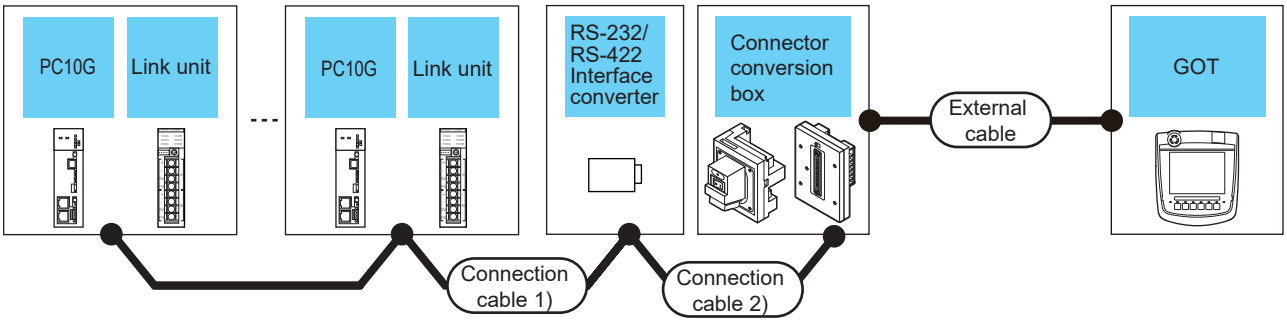
*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the GOT to the PLC (Connection cable 1) + External cable)

*3 When connecting multiple PLCs, set the same operation mode for all the PLCs.
In GT Designer3, set [Format] in [Detail Setting] according to the operation mode set for the PLCs.
For details, refer to the following.
☞ Page 1195 Communication detail settings

For the RS-232 connection (via an interface converter)

■When using the connector conversion box



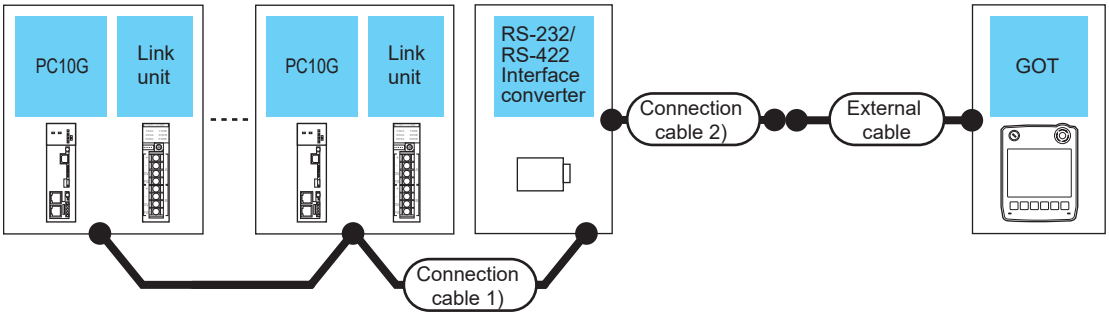
PLC			Connection cable 1)		RS-232/RS-422 interface converter*2		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name		Link unit*1	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
PC10G	PC10G-CPU	-	User preparing Page 1188 RS-422 connection diagram 1)	500m	TXU-2051	RS-232	GT09-C30R21201-25P(3m) or User preparing Page 1184 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	32 PLCs for 1 GOT
								GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927)	User preparing Page 1188 RS-422 connection diagram 2)	500m	TXU-2051	RS-232	GT09-C30R21201-25P(3m) or User preparing Page 1184 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	
								GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		ML10 (TCU-6903)	User preparing Page 1191 RS-422 connection diagram 10)	500m	TXU-2051	RS-232	GT09-C30R21201-25P(3m) or User preparing Page 1184 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	
								GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The interface converter is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*3 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)



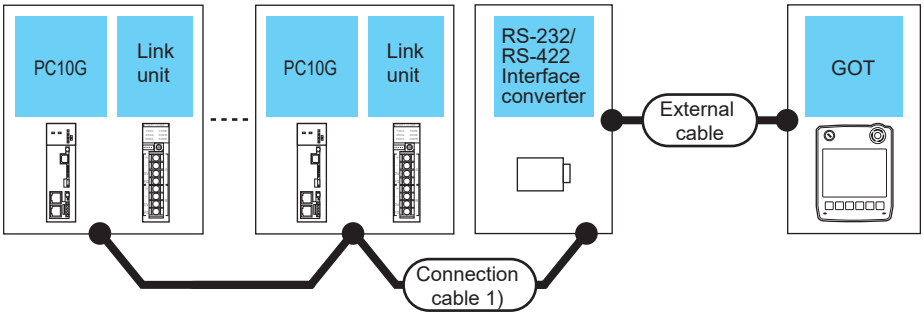
PLC			Connection cable 1)		RS-232/RS-422 interface converter*2		Connection cable 2)	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name		Link unit*1	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
PC10G	PC10G-CPU	-	User preparing Page 1188 RS-422 connection diagram 1)	500m	TXU-2051	RS-232	User preparing Page 1184 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	32 PLCs for 1 GOT
		PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927)	User preparing Page 1188 RS-422 connection diagram 2)					GT11H-C30-37P(3m)	GT 2505HS		
		ML10 (TCU-6903)	User preparing Page 1191 RS-422 connection diagram 10)					GT11H-C30-37P(3m)	GT 2505HS		

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The interface converter is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*3 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



PLC			Connection cable 1)		RS-232/RS-422 interface converter*2		External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name		Link unit*1	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
P10G	PC10G-CPU	-	User preparing Page 1188 RS-422 connection diagram 1)	500m	TXU-2051	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1185 RS-232 connection diagram 3)	GT 2505HS	6m	32 PLCs for 1 GOT
		PC/CMP-LINK (THU-2755) 2PORT-LINK (THU-2927)	User preparing Page 1188 RS-422 connection diagram 2)				GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1185 RS-232 connection diagram 3)	GT 2505HS		
		ML10 (TCU-6903)	User preparing Page 1191 RS-422 connection diagram 10)				GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1185 RS-232 connection diagram 3)	GT 2505HS		

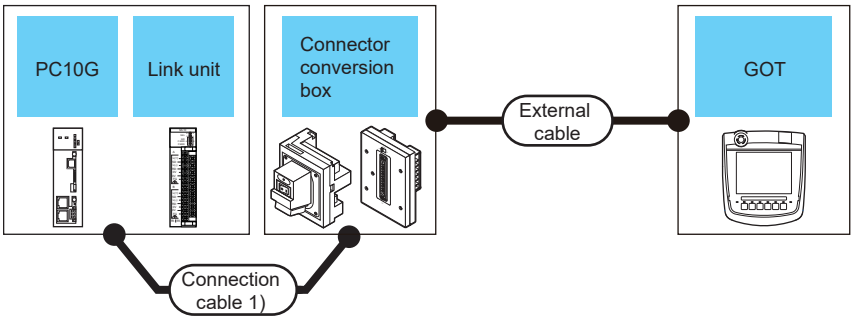
*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The interface converter is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*3 The distance from the converter to the GOT (External cable)

For the RS-232 connection (via link unit)

■When using the connector conversion box

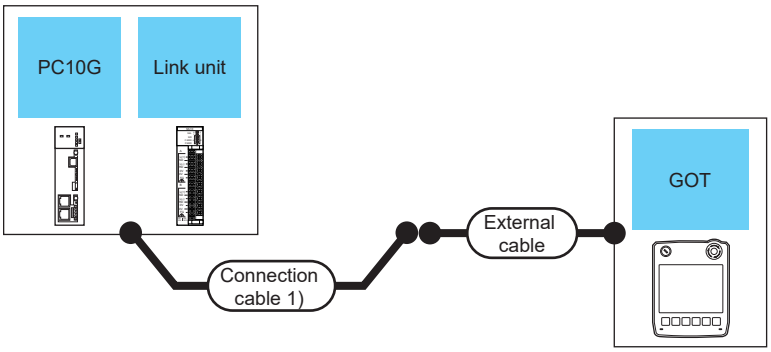


PLC				Connection cable 1)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name		Link unit*1	Communication Type	Cable model Connection diagram number					
PC10G	PC10G-CPU	ML10 (TCU-6903)	RS-232	User preparing Page 1185 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 PLCs for 1 GOT
					GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the converter to the GOT (External cable)

■When using the external cable (GT11H-C□□□-37P)

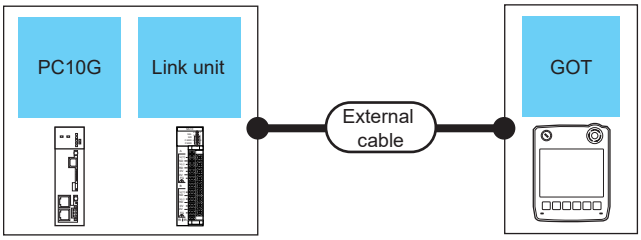


PLC				Connection cable 1)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name		Link unit*1	Communication Type	Cable model Connection diagram number				
PC10G	PC10G-CPU	ML10 (TCU-6903)	RS-232	User preparing Page 1186 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 PLCs for 1 GOT

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the converter to the GOT (External cable)

■When using the external cable (GT11H-C□□□)



PLC				External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name		Link unit*1	Communication Type				
P10G	PC10G-CPU	ML10 (TCU-6903)	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1186 RS-232 connection diagram 6)	GT 2505HS	6m	1 PLCs for 1 GOT

*1 The link unit is a product manufactured by JTEKT CORPORATION.
For details of the product, contact JTEKT CORPORATION.

*2 The distance from the converter to the GOT (External cable)

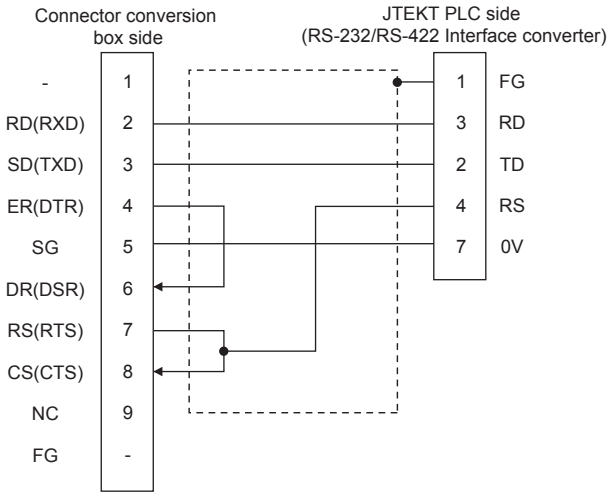
20.3 Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

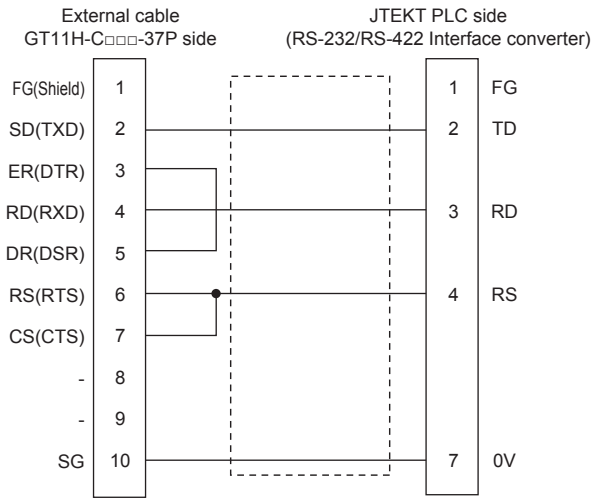
RS-232 cable

Connection diagram

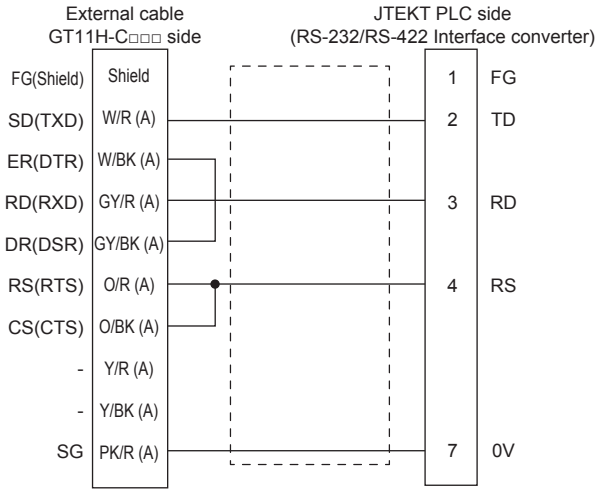
■RS-232 connection diagram 1)



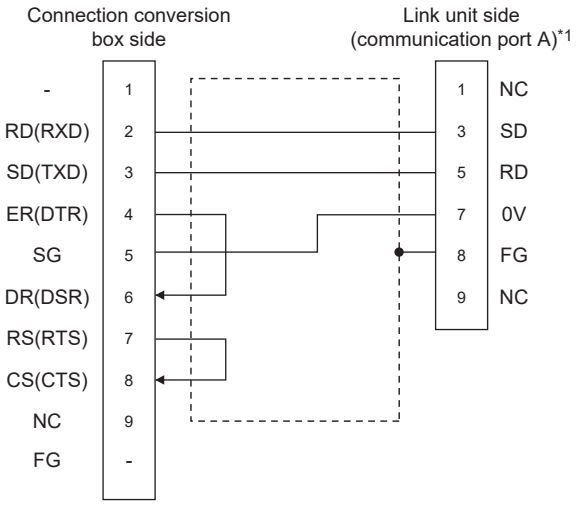
■RS-232 connection diagram 2)



■RS-232 connection diagram 3)



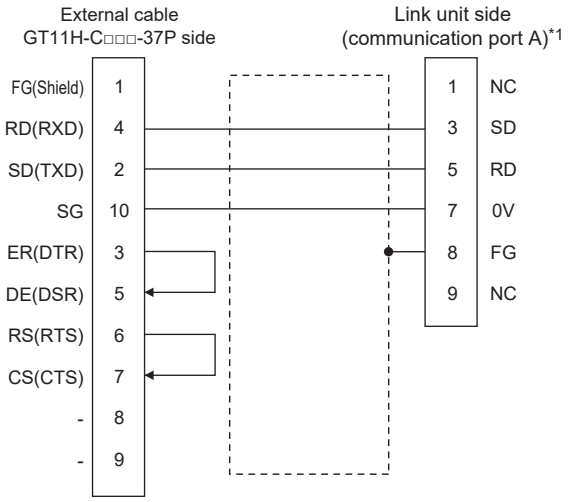
■RS-232 connection diagram 4)



*1 When using communication port B of the ML10, use the following terminal numbers.

Signal name	Terminal No.
SD	13
RD	15
0V	17
FG	18

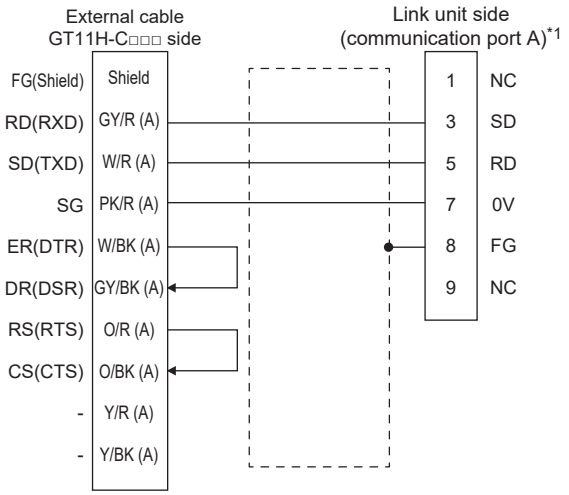
■RS-232 connection diagram 5)



*1 When using communication port B of the ML10, use the following terminal numbers.

Signal name	Terminal No.
SD	13
RD	15
0V	17
FG	18

■RS-232 connection diagram 6)



*1 When using communication port B of the ML10, use the following terminal numbers.

Signal name	Terminal No.
SD	13
RD	15
0V	17
FG	18

Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■JTEKT PLC side connector

Use the connector compatible with the JTEKT PLC side module.

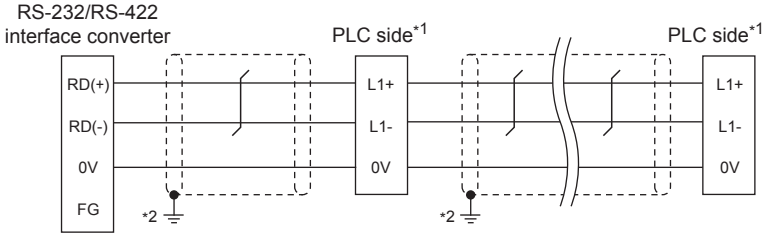
For details, refer to the JTEKT PLC user's manual.

RS-422 cable

Connection diagram

■RS-422 connection diagram 1)

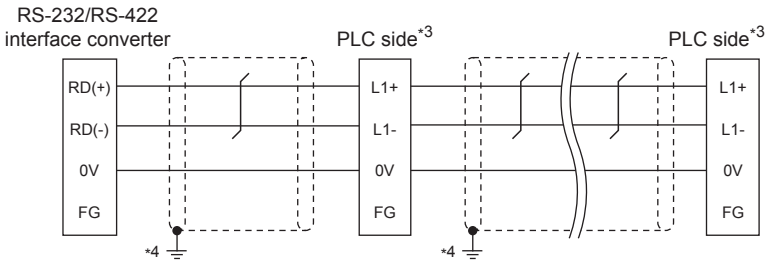
(For PC3JG-P/PC3JG/PC3JD/PC3JD-C)



*1 Terminating resistors should not be provided for a PLC and an RS-232/RS-422 interface converter which will be terminals.

*2 Connect FG grounding to the appropriate part of a cable shield line.

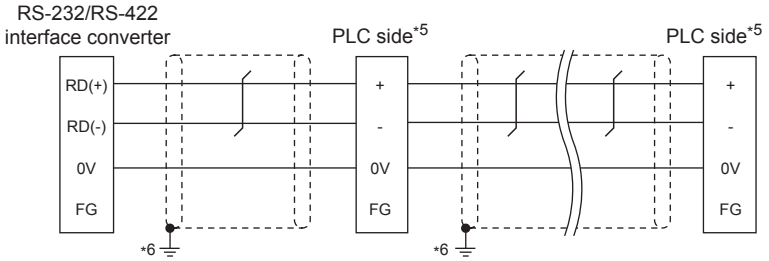
(For PC3J/PC3JL)



*3 Terminating resistors should not be provided for a PLC and an RS-232/RS-422 interface converter which will be terminals.

*4 Connect FG grounding to the appropriate part of a cable shield line.

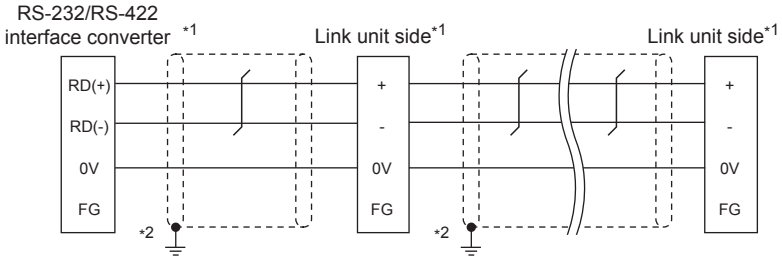
(For PC2JC/PC2J16P, PC2J16PR)



*5 Terminating resistors should not be provided for a PLC and an RS-232/RS-422 interface converter which will be terminals.

*6 Connect FG grounding to the appropriate part of a cable shield line.

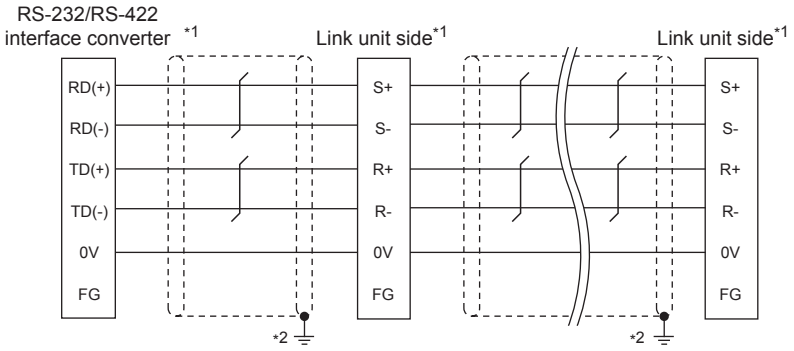
■RS-422 connection diagram 2)



*1 Terminating resistors should not be provided for a PLC and an RS-232/RS-422 interface converter which will be terminals.

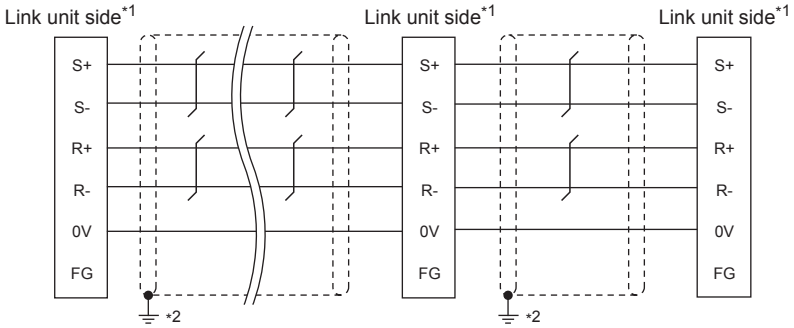
*2 Connect FG grounding to the appropriate part of a cable shield line.

■RS-422 connection diagram 3)



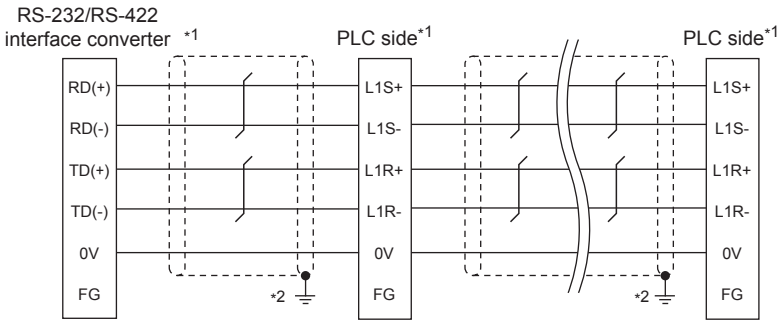
*1 Terminating resistors should not be provided for a PLC and an RS-232/RS-422 interface converter which will be terminals.
*2 Connect FG grounding to the appropriate part of a cable shield line.

■RS-422 connection diagram 4)



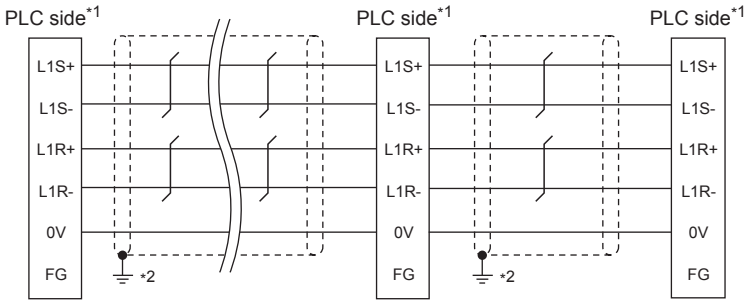
*1 Terminating resistors should not be provided for a PLC and an RS-232/RS-422 interface converter which will be terminals.
*2 Connect FG grounding to the appropriate part of a cable shield line.

■RS-422 connection diagram 5)



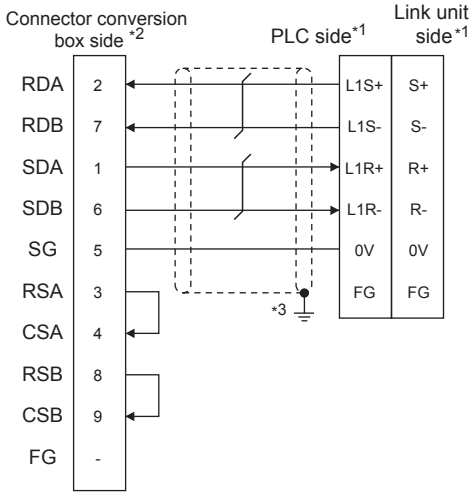
*1 Terminating resistors should not be provided for a PLC and an RS-232/RS-422 interface converter which will be terminals.
*2 Connect FG grounding to the appropriate part of a cable shield line.

■RS-422 connection diagram 6)



*1 Terminating resistors should not be provided for a PLC and an RS-232/RS-422 interface converter which will be terminals.
*2 Connect FG grounding to the appropriate part of a cable shield line.

■RS-422 connection diagram 7)



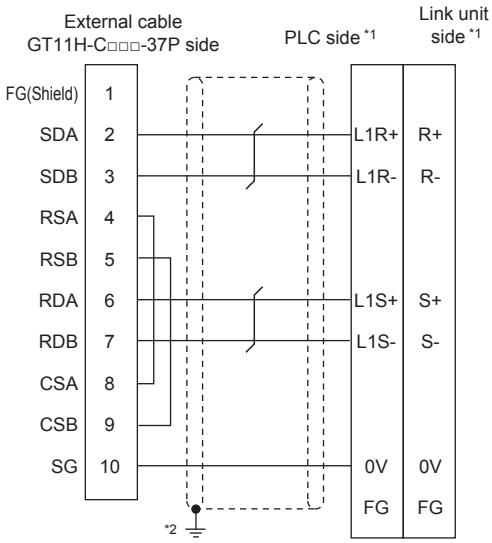
*1 Terminating resistors should not be provided for a PLC and an RS-232/RS-422 interface converter which will be terminals.

*2 Set the terminating resistor of GOT side which will be a terminal.

☞ Page 1193 Connecting terminating resistors

*3 Connect FG grounding to the appropriate part of a cable shield line.

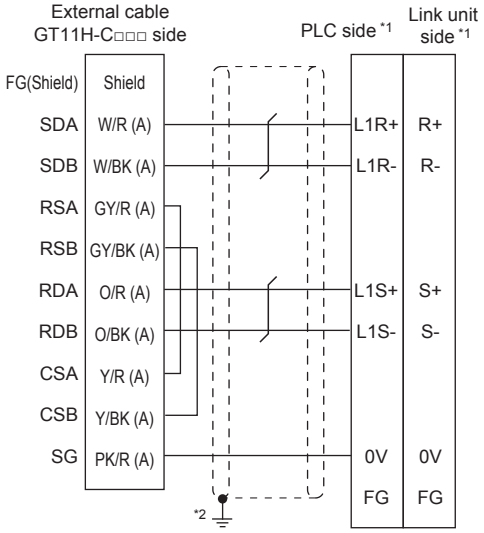
■RS-422 connection diagram 8)



*1 Terminating resistors should not be provided for a PLC and an RS-232/RS-422 interface converter which will be terminals.

*2 Connect FG grounding to the appropriate part of a cable shield line.

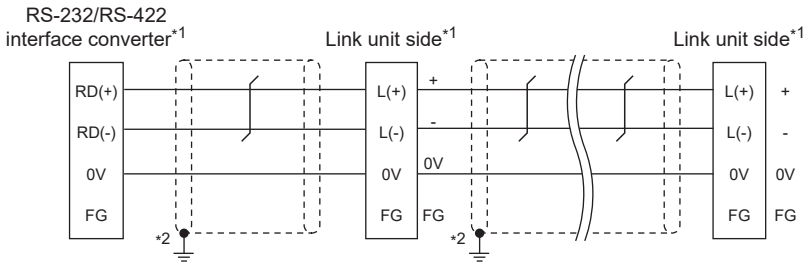
■RS-422 connection diagram 9)



*1 Terminating resistors should not be provided for a PLC and an RS-232/RS-422 interface converter which will be terminals.

*2 Connect FG grounding to the appropriate part of a cable shield line.

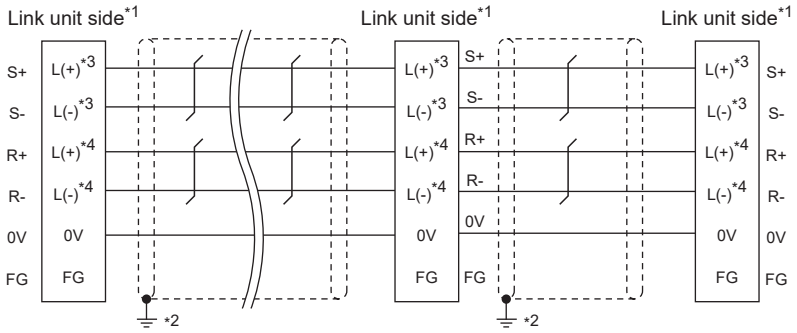
■RS-422 connection diagram 10)



*1 Do not provide terminating resistors for the link unit and RS-232/RS-422 interface converter which will be the terminals.

*2 Connect FG grounding to the appropriate part of a cable shield line.

■RS-422 connection diagram 11)



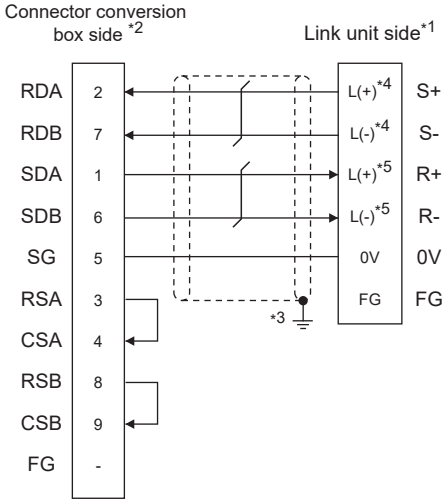
*1 Do not provide terminating resistors for the terminal link units.

*2 Connect FG grounding to the appropriate part of a cable shield line.

*3 Connect the cable to the terminal of communication port A.

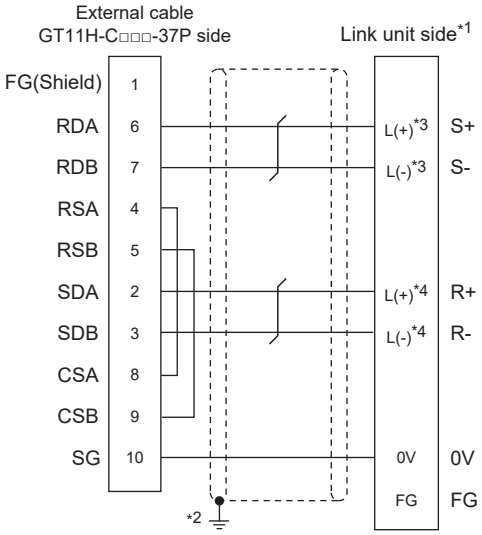
*4 Connect the cable to the terminal of communication port B.

■RS-422 connection diagram 12)



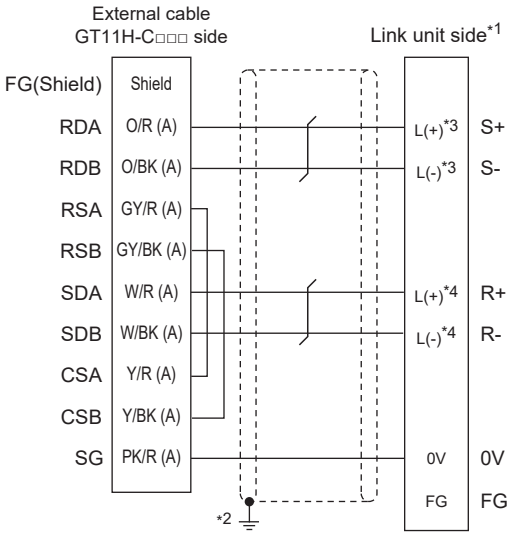
*1 Do not provide a terminating resistor for the terminal link unit.
*2 Set the terminating resistor settings on the terminal GOT.
☞ Page 1193 Connecting terminating resistors
*3 Connect FG grounding to the appropriate part of a cable shield line.
*4 Connect the cable to the terminal of communication port A.
*5 Connect the cable to the terminal of communication port B.

■RS-422 connection diagram 13)



*1 Do not provide a terminating resistor for the terminal link unit.
*2 Connect FG grounding to the appropriate part of a cable shield line.
*3 Connect the cable to the terminal of communication port A.
*4 Connect the cable to the terminal of communication port B.

■RS-422 connection diagram 14)



*1 Do not provide a terminating resistor for the terminal link unit.
*2 Connect FG grounding to the appropriate part of a cable shield line.
*3 Connect the cable to the terminal of communication port A.
*4 Connect the cable to the terminal of communication port B.

Precautions when preparing a cable

■Cable length

• The length of the RS-422 cable used for connecting the connected equipment to the communication converter

The length of the RS-422 cable must be 500 m or less.

• The length of the RS-422 cable used for connecting the connected equipment to the GOT

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■JTEKT PLC side connector

Use the connector compatible with the JTEKT PLC side module.

For details, refer to the JTEKT PLC user's manual.

Connecting terminating resistors

■GOT side

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

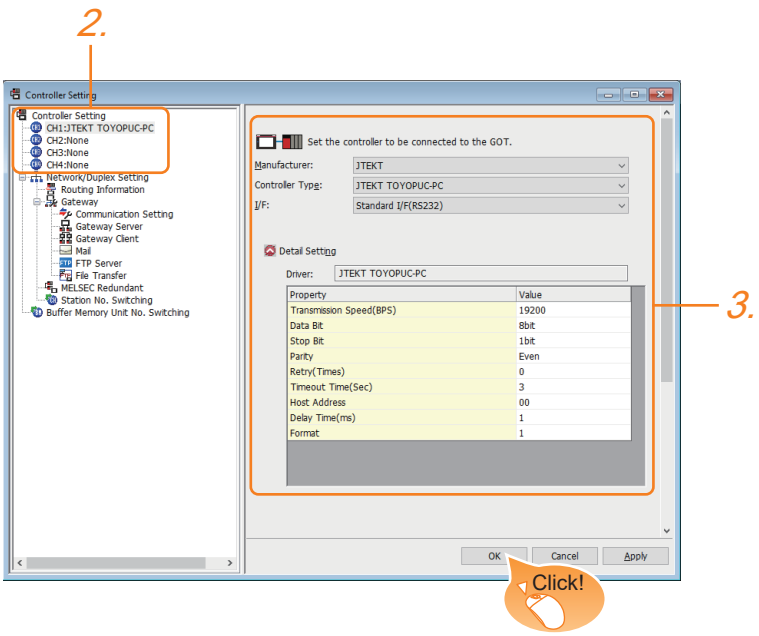
For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

20.4 GOT Side Settings

Setting communication interface (Communication settings)

Set the channel of the equipment to be connected to the GOT.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [JTEKT]
- [Controller Type]: [JTEKT TOYOPUC-PC]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1195 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
Transmission Speed(BPS)	19200
Data Bit	8 bit
Stop Bit	1 bit
Parity	Even
Retry(Times)	0
Timeout Time(Sec)	3
Host Address	00
Delay Time(ms)	1
Format	1

Item	Description	Range
Transmission Speed*1	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 19200bps)	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bits)	7bits/8bits
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit/2bits
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Even)	None Even Odd
Retry	Set the number of retries to be performed when a communication error occurs. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	3 to 30sec
Host Address	Specify the host address (station No. of the GOT to which the PLC is connected) in the connected network. (Default: 00)	00 to 37 (Octal)
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0)	0 to 300ms
Format	Select the communication format. (Default: 1) format 1: PC3J extended function incompliant format 2: PC3J extended function compliant	1/2

*1 When using an RS-232/RS-422 interface converter, set 19200 bps or less for [Transmission Speed(BPS)].

Point

• Format setting

The compatible format of PLC differs depending on model.

Model name	Compatible format
PC2J, PC2JS, PC2JR, PC2JC, PC2J16P, PC2J16PR	Format 1 only
PC3JG, PC3JG-P, PC3JD, PC3JD-C, PC3J, PC3JL, PC10G	Format 1 or Format 2

For details of PC3J extended function, refer to the following manual.

JTEKT PLC user's manual

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

20.5 PLC Side Setting

Point

JTEKT PLC

For details of JTEKT PLCs, refer to the following manuals.

JTEKT PLC user's manual

Model name		Refer to
PLC CPU	PC3JG, PC3JG-P, PC3JD, PC3JD-C, PC2J, PC2JS, PC2JR, PC10G-CPU	☞ Page 1196 Connecting to PC3JG, PC3JD, PC2J (PC2J, PC2JS, or PC2JR), or PC10G
	PC3J, PC3JL	☞ Page 1197 Connecting to PC3J
	PC2JC	☞ Page 1198 Connecting to PC2JC
	PC2J16P, PC2J16PR	☞ Page 1199 Connecting to PC2J16P or PC2J16PR
RS-232/RS-422 interface converter	RS-232/RS-422 interface converter	☞ Page 1200 RS-232/RS-422 interface converter setting
Link unit	PC/CMP-LINK	☞ Page 1201 PC/CMP-LINK, 2PORT-LINK, or PC/CMP2-LINK settings
	2PORT-LINK	
	PC/CMP2-LINK	
	ML10	☞ Page 1203 ML10 settings

Connecting to PC3JG, PC3JD, PC2J (PC2J, PC2JS, or PC2JR), or PC10G

Communication settings

The following shows the communication settings to connect the GOT and a PLC through an RS-232/RS-422 interface converter.

Configure the communication settings using the PLC peripheral device (PCwin).

Item		Set value
Transmission speed*1	Connection via interface converter*2	9600bps, 19200bps
Data bit*1		8bits, 7bits
Parity bit		Even (fixed)
Stop bit*1		1bit, 2bits
Station No.*3		0 to 37 (Octal)
2-wire/4-wire type*4		2-wire type or 4-wire type

*1 Adjust the settings with GOT settings.

*2 When using an RS-232/RS-422 interface converter, set 19200 bps or less for the transmission speed. The value must be the same as the value set for the RS-232/RS-422 interface converter.

*3 Avoid duplication of the station No. with any of the other units.

*4 Make the settings referring to the following connection diagram.

☞ Page 1188 RS-422 cable

Connecting to PC3J

Communication settings

The following shows the communication settings to connect the GOT and a PLC directly or through an RS-232/RS-422 interface converter.

Configure the communication settings using the PLC peripheral device (PCwin).

Item		Set value
Transmission speed*1	Direct connection	9600bps, 19200bps, 38400bps
	Connection via interface converter*2	9600bps, 19200bps
Data bit*1		8bits, 7bits
Parity bit		Even (fixed)
Stop bit*1		1bit, 2bits
Station No.*3		0 to 37 (Octal)
2-wire/4-wire type*4		2-wire type or 4-wire type

*1 Adjust the settings with GOT settings.

*2 When using an RS-232/RS-422 interface converter, set 19200 bps or less for the transmission speed. The value must be the same as the value set for the RS-232/RS-422 interface converter.

*3 Avoid duplication of the station No. with any of the other units.

*4 Make the settings referring to the following connection diagram.

☞ Page 1188 RS-422 cable

Connecting to PC2JC

Communication settings

Make the communication settings using each setting switch.

For the detail settings, refer to the following manual.

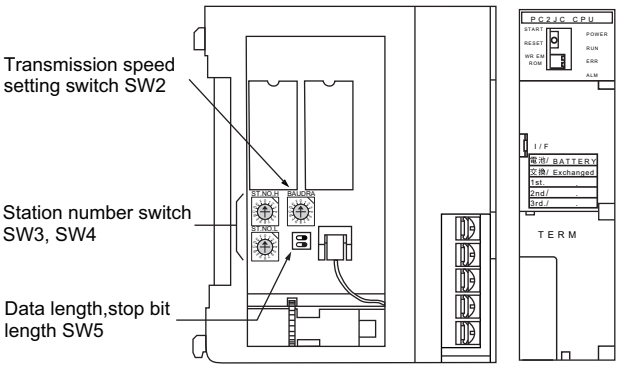
JTEKT PLC user's manual

Item	Set value
Transmission speed*1	9600bps, 19200bps
Data bit*1	8bits, 7bits
Stop bit*1	1bit, 2bits
Station No.*1	0 to 37 (Octal)

*1 Adjust the settings with GOT settings.

Settings by switch

Make the communication settings using each setting switch.



■Setting of the station No.

Set the station No. between 00 and 37 (Octal).

Switch name	Station number setting
SW3	Upper digit
SW4	Lower digit

■Transmission speed settings

Switch name	Switch position	Transmission speed (bps)
SW2	1	19200
	2	9600

■Settings of data length and stop bit length

Switch name	Setting item	Set value	Switch No.	
			2	1
SW5	Data bit	8bits	OFF	
		7bits	ON	
	Stop bit length	2bits		OFF
		1bit		ON

Connecting to PC2J16P or PC2J16PR

Communication settings

Make the communication settings using each setting switch.

For the detail settings, refer to the following manual.

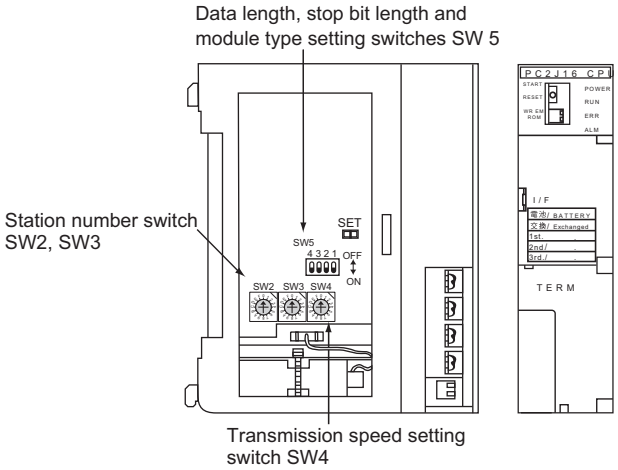
JTEKT PLC user's manual

Item	Set value
Transmission speed*1	9600bps, 19200bps
Data bit*1	8bits, 7bits
Stop bit*1	1bit, 2bits
Station No.*1	0 to 37 (Octal)
Selection of module type	Computer link

*1 Adjust the settings with GOT settings.

Settings by switch

Make the communication settings using each setting switch.



■Setting of the station No.

Set the station No. between 00 and 37 (Octal).

Switch name	Station number setting
SW2	Upper digit
SW3	Lower digit

■Transmission speed settings

Switch name	Switch position	Transmission speed (bps)
SW4	1	19200
	2	9600

■Settings of data length, stop bit length and module type

Switch name	Setting item	Set value	Switch No.		
			4	3	2
SW5	Data bit	8bits	OFF		
		7bits	ON		
	Stop bit length	2bits		OFF	
		1bit		ON	
	Module type	Computer link			OFF

RS-232/RS-422 interface converter setting

Communication settings

Make the communication settings by the setting switch of the RS-232/RS-422 interface converter.

Item	Set value
Transmission speed*1	9600bps, 19200bps
2-wire/4-wire type*2	2-wire type or 4-wire type
Echo back	OFF

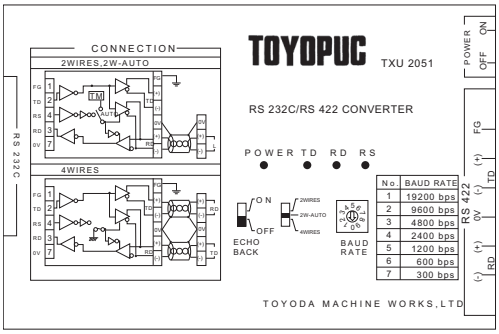
*1 Adjust the settings with GOT settings.

*2 Set referring to the RS-422 connection diagram.For details, refer to the following.

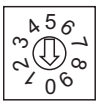
☞ Page 1188 RS-422 cable

Settings by switch

Make the communication settings by each setting switch of the RS-232/RS-422 interface converter.

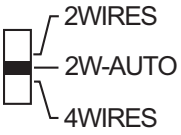


■Transmission speed settings



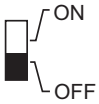
Transmission speed (bps)	Switch position
9600	2
19200	1

■Mode setting switch



Mode	Switch position
2-wire type	2W-AUTO
4-wire type	4 WIRES

■Echoback setting switch



ECHO
BACK

Setting	Switch position
OFF	OFF

PC/CMP-LINK, 2PORT-LINK, or PC/CMP2-LINK settings

Communication settings

Make the communication settings using each setting switch of the link unit.

For the detail settings, refer to the following manual.

User's Manual of the JTEKT link unit

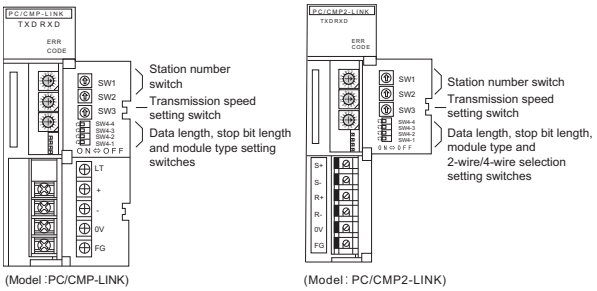
Item	Set value
Transmission speed*1	9600bps, 19200bps
Data bit*1	8bits, 7bits
Stop bit*1	1bit, 2bits
Station No.*1	0 to 37 (Octal)
Selection of module type	Computer link
Selection of 2-wire type or 4- wire type*2	2-wire type or 4-wire type

*1 Adjust the settings with GOT settings.

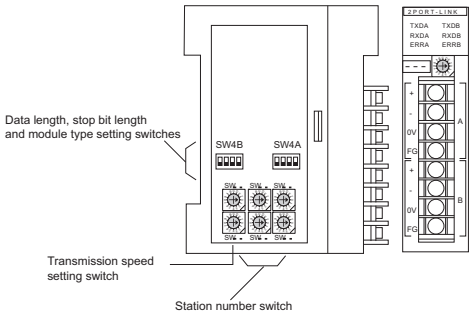
*2 Set referring to the RS-422 connection diagram.For details, refer to the following.

☞ Page 1188 RS-422 cable

Settings by switch



(Model :PC/CMP-LINK) (Model : PC/CMP2-LINK)



(Model :2PORT-LINK)

■Setting of the station No.

Set the station No. between 00 and 37 (Octal).

Switch name	Station number setting
SW1	Upper digit
SW2	Lower digit

■Transmission speed settings

The settings must be consistent with the GOT settings.

Switch name	Switch position	Transmission speed (bps)
SW3	2	9600
	1	19200

■Data length, stop bit length, module type and 2-wire/4-wire type communication selection setting

Switch name	Setting item	Set value	Switch No.			
			4	3	2	1
SW4	Data bit	8bits	OFF			
		7bits	ON			
	Stop bit length	2bits		OFF		
		1bit		ON		
	Module type*1	PC link			OFF	
		Computer link			ON	
	2-wire type/4- wire type communication selection*2	2-wire type communication				OFF
		4-wire type communication				ON

*1 Set to ON (computer link) when connecting the GOT.
*2 The setting is available only for the link unit (Model: PC/CMP2-LINK).

ML10 settings

Communication settings

Make the communication settings using each setting switch of the link unit.

For the detail settings, refer to the following manual.

User's Manual of the JTEKT link unit

Item	Set value
Transmission speed*1*2	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data bit*1	8bits, 7bits
Stop bit*1	1bit, 2bits
Station No.*1	0 to 37 (Octal)
Port function	Computer link
Selection of 2-wire type or 4- wire type*3	2-wire type or 4-wire type

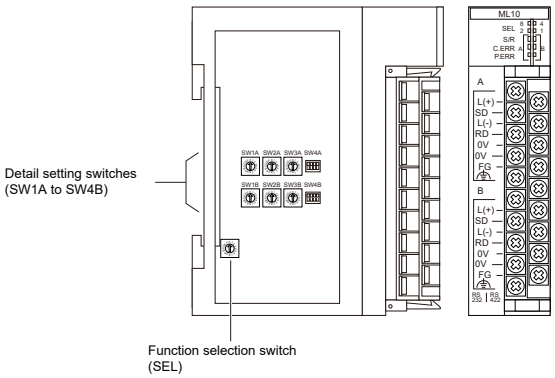
*1 Adjust the settings with GOT settings.

*2 When using an RS-232/RS-422 interface converter, set 19200 bps or less for the transmission speed. The value must be the same as the value set for the RS-232/RS-422 interface converter.

*3 Set referring to the RS-422 connection diagram.For details, refer to the following.

Page 1188 RS-422 cable

Settings by switch



■Function selection switch (SEL)

Configure the communication function settings for communication port A and B.

SEL	Function		2-wire type/ 4-wire type	Detail setting switch to be used
	Communication port A	Communication port B		
0	PC link, computer link*1	-	2-wire type	SW1A to SW4A
1	PC link, computer link (send)*1	PC link, computer link (receive)*1	4-wire type	SW1A to SW4A
8 to E	PC link, computer link*1	PC link, computer link*1	2-wire type	• Communication port A setting: SW1A to SW4A • Communication port B setting: SW1A to SW4A

*1 Set SW4A and SW4B to the computer link when connecting the GOT.
When setting the value of the SEL to 8 to E, also set the unused communication port to the computer link.

■Detail setting switches (SW1A to SW4B)

• Setting of the station No.

Set the station No. between 00 and 37 (Octal).

Switch name		Station number setting
Communication port A or 4-wire type	Communication port B	
SW1A	SW1B	Upper digit
SW2A	SW2B	Lower digit

• Transmission speed settings

The settings must be consistent with the GOT settings.

Switch name		Switch position	Transmission speed (bps)*1
Communication port A or 4-wire type	Communication port B		
SW3A	SW3B	0	57600
		1	19200
		2	9600
		A	38400
		B	115200

*1 When using an RS-232/RS-422 interface converter, set 19200 bps or less for the transmission speed. The value must be the same as the value set for the RS-232/RS-422 interface converter.

• Data length, stop bit length, port function, and 2-wire type/4-wire type settings

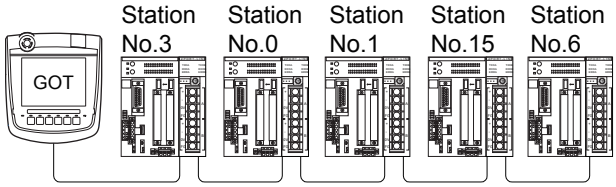
Switch name		Setting item	Set value	Switch No.			
Communication port A or 4-wire type	Communication port B			4	3	2	1
SW4A	SW4B	Data length	8bits	OFF			
			7bits	ON			
		Stop bit length	2bits		OFF		
			1bit		ON		
		Port function*1	PC link			OFF	
			Computer link			ON	
		2-wire type/4-wire type	2-wire type				OFF
			4-wire type				ON

*1 Set to ON (computer link) when connecting the GOT.

Station number setting

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order. There is no problem even if station numbers are not consecutive.



Examples of station number setting

Direct specification

Specify the station No. of the PLC to be changed when setting device.

Specification range
00 to 37 (Octal)

20.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1
JTEKT equipment ([JTEKT TOYOPUC-PC])

20.7 Precautions

Station No. settings of the PLC side

In the system configuration, the PLC with the station number set with the host address must be included.

For details of host address setting, refer to the following.

☞ Page 1194 Setting communication interface (Communication settings)

GOT clock control

The GOT clock function is available only for the PLC with the station number set with the host address.

For details of host address setting, refer to the following.

☞ Page 1194 Setting communication interface (Communication settings)

System configuration

If the system is configured by mixing the PC3J extended function compliant PLC with the PC3J extended function incompliant PLC, normal communication may not be performed.

Unify the PLCs into PC3J extended function compliant or PC3J extended function incompliant to configure the system.

System alarm

The system alarm can be displayed only for the PLC set with a host address.

When connected to the PC3J extended function compliant PLC, only the system alarm of program No. 1 can be displayed.

21 SHARP PLC

- Page 1207 Connectable Model List
- Page 1208 System Configuration
- Page 1216 Connection Diagram
- Page 1222 GOT Side Settings
- Page 1224 PLC Side Setting
- Page 1231 Settable Device Range

21.1 Connectable Model List

The following table shows the connectable models.

Model name	Clock	Communication Type	Connectable GOT	Refer to
JW-21CU	×	RS-422	GT2506HS GT2505HS	☞ Page 1208 Connecting to JW-21CU or JW-22CU
JW-22CU	○	RS-232 RS-422		
JW-31CUH	×	RS-422	GT2506HS GT2505HS	☞ Page 1210 Connecting to JW-31CUH, JW-32CUH or JW-33CUH
JW-32CUH	○	RS-232 RS-422		
JW-33CUH	○			
JW-50CUH	×	RS-422	GT2506HS GT2505HS	☞ Page 1212 Connecting to JW-50CUH, JW-70CUH, JW-100CUH, or JW-100CU
JW-70CUH	○*1	RS-232 RS-422		
JW-100CUH	○*1			
JW-100CU	○			
Z-512J	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 1214 Connecting to Z-512J

*1 When the link unit (ZW-10CM) is used in JW-70CUH/100CUH, the clock function is not available.

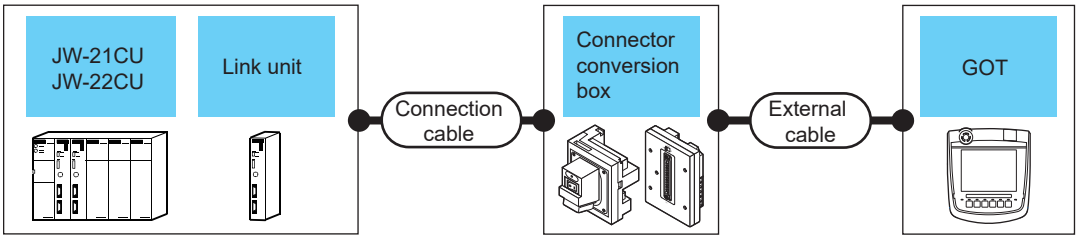
21.2 System Configuration

Connecting to JW-21CU or JW-22CU

Communication driver

SHARP JW

When using the connector conversion box

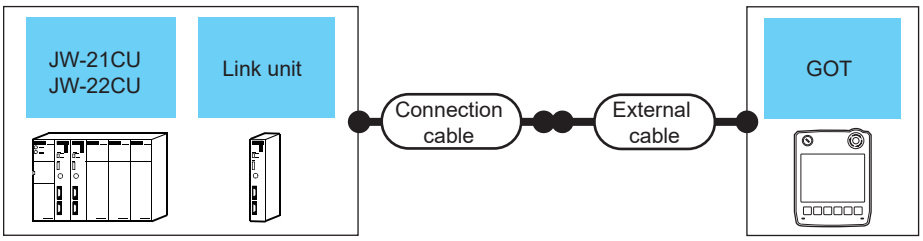


PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Link unit*1	Communication Type	Cable model Connection diagram number					
JW-22CU	-	RS-232	GT09-C30R20601-15P(3m) or Page 1216 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		RS-422	GT09-C30R40601-15P(3m) GT09-C100R40601-15P(10m) or Page 1218 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
JW-21CU JW-22CU	JW-21CM		GT09-C30R40603-6T(3m) GT09-C100R40603-6T(10m) or Page 1220 RS-422 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 link unit*2
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 The link unit is a product manufactured by SHARP Corporation.
For details of this product, contact SHARP Corporation.

*2 Up to two GOTs in the system configuration have been validated by Mitsubishi Electric Corporation.

When using the external cable (GT11H-C□□□-37P)

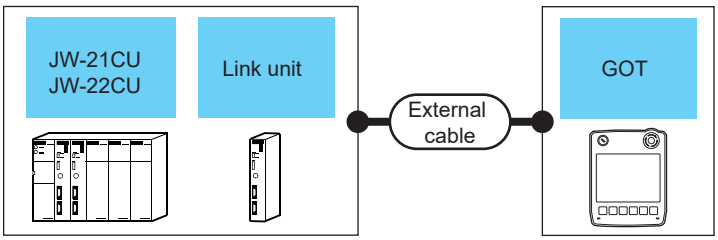


PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Link unit*1	Communication Type	Cable model Connection diagram number				
JW-22CU	-	RS-232	User preparing Page 1216 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
		RS-422	User preparing Page 1218 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		13m	
JW-21CU JW-22CU	JW-21CM		User preparing Page 1220 RS-422 connection diagram 8)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		13m	1 GOT for 1 link unit*2

*1 The link unit is a product manufactured by SHARP Corporation.
For details of this product, contact SHARP Corporation.

*2 Up to two GOTs in the system configuration have been validated by Mitsubishi Electric Corporation.

When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Link unit*1	Communication Type				
JW-22CU	-	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1216 RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 PLC
		RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1219 RS-422 connection diagram 3)		13m	
JW-21CU JW-22CU	JW-21CM		GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1221 RS-422 connection diagram 9)		13m	1 GOT for 1 link unit*2

*1 The link unit is a product manufactured by SHARP Corporation.
For details of this product, contact SHARP Corporation.

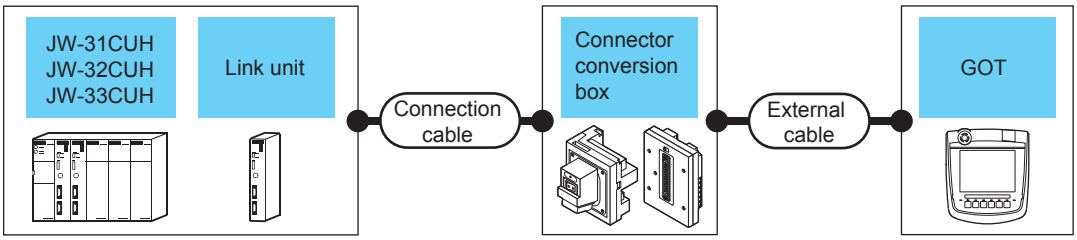
*2 Up to two GOTs in the system configuration have been validated by Mitsubishi Electric Corporation.

Connecting to JW-31CUH, JW-32CUH or JW-33CUH

Communication driver

SHARP JW

When using the connector conversion box

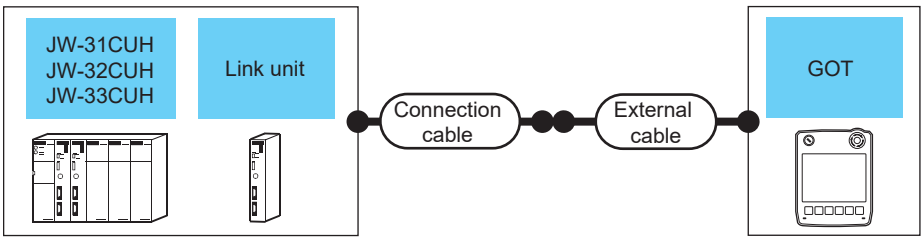


PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Link unit*1	Communication Type	Cable model Connection diagram number					
JW-32CUH JW-33CUH	-	RS-232	GT09-C30R20602-15P(3m) or User preparing Page 1217 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		RS-422	GT09-C30R40602-15P(3m) GT09-C100R40602-15P(10m) or User preparing Page 1219 RS-422 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
JW-31CUH JW-32CUH JW-33CUH	JW-21CM	RS-422	GT09-C30R40603-6T(3m) GT09-C100R40603-6T(10m) or User preparing Page 1220 RS-422 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 link unit*2
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Use the link unit supporting JW-31CUH, JW-32CUH or JW-33CUH.
The link unit is a product manufactured by SHARP Corporation.
For details of this product, contact SHARP Corporation.

*2 Up to two GOTs in the system configuration have been validated by Mitsubishi Electric Corporation.

When using the external cable (GT11H-C□□□-37P)

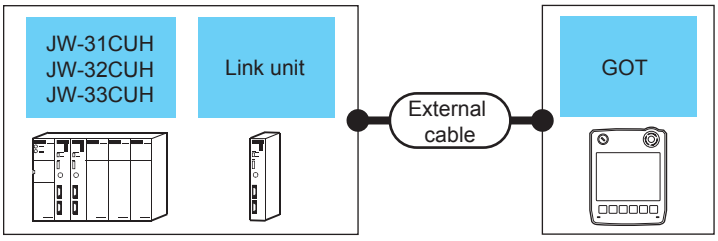


PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Link unit*1	Communication Type	Cable model Connection diagram number				
JW-32CUH JW-33CUH	-	RS-232	User preparing Page 1217 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
		RS-422	User preparing Page 1219 RS-422 connection diagram 5)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		13m	
JW-31CUH JW-32CUH JW-33CUH	JW-21CM	RS-422	User preparing Page 1220 RS-422 connection diagram 8)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		13m	1 GOT for 1 link unit*2

*1 Use the link unit supporting JW-31CUH, JW-32CUH or JW-33CUH.
The link unit is a product manufactured by SHARP Corporation.
For details of this product, contact SHARP Corporation.

*2 Up to two GOTs in the system configuration have been validated by Mitsubishi Electric Corporation.

When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Link unit*1	Communication Type				
JW-32CUH JW-33CUH	-	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1217 RS-232 connection diagram 6)	GT 2505HS	6m	1 GOT for 1 PLC
		RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1220 RS-422 connection diagram 6)		13m	
JW-31CUH JW-32CUH JW-33CUH	JW-21CM	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1221 RS-422 connection diagram 9)		13m	1 GOT for 1 link unit*2

*1 Use the link unit supporting JW-31CUH, JW-32CUH or JW-33CUH.
The link unit is a product manufactured by SHARP Corporation.
For details of this product, contact SHARP Corporation.

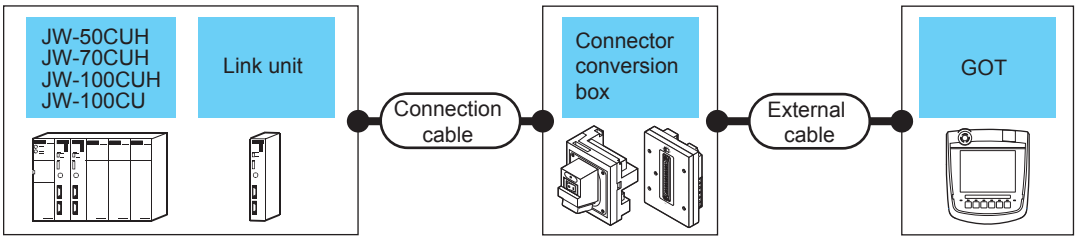
*2 Up to two GOTs in the system configuration have been validated by Mitsubishi Electric Corporation.

Connecting to JW-50CUH, JW-70CUH, JW-100CUH, or JW-100CU

Communication driver

SHARP JW

When using the connector conversion box

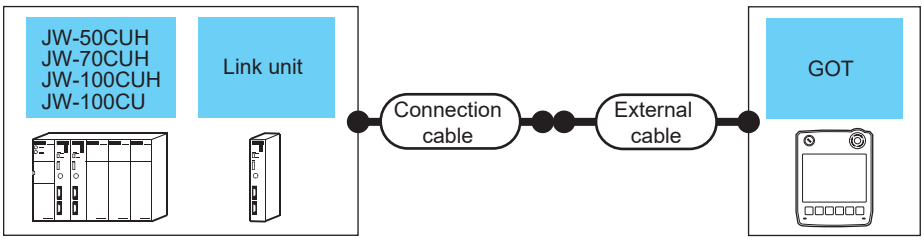


PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Link unit*1	Communication Type	Cable model Connection diagram number					
JW-70CUH JW-100CUH JW-100CU	-	RS-232	GT09-C30R20601-15P(3m) or User preparing Page 1216 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT2505HS		
		RS-422	GT09-C30R40601-15P(3m) GT09-C100R40601-15P(10m) or User preparing Page 1218 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT2505HS		
JW-50CUH JW-70CUH JW-100CUH JW-100CU	JW-10CM ZW-10CM	RS-422	GT09-C30R40603-6T(3m) GT09-C100R40603-6T(10m) or User preparing Page 1220 RS-422 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT2506HS	13m	1 GOT for 1 link unit*2
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT2505HS		

*1 The link unit is a product manufactured by SHARP Corporation.
For details of this product, contact SHARP Corporation.

*2 Up to two GOTs in the system configuration have been validated by Mitsubishi Electric Corporation.

When using the external cable (GT11H-C□□□-37P)

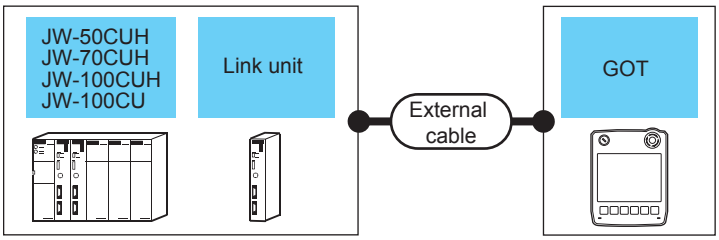


PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Link unit*1	Communication Type	Cable model Connection diagram number				
JW-70CUH JW-100CUH JW-100CU	-	RS-232	User preparing Page 1216 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
		RS-422	User preparing Page 1218 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		13m	
JW-50CUH JW-70CUH JW-100CUH JW-100CU	JW-10CM ZW-10CM	RS-422	User preparing Page 1220 RS-422 connection diagram 8)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		13m	1 GOT for 1 link unit*2

*1 The link unit is a product manufactured by SHARP Corporation.
For details of this product, contact SHARP Corporation.

*2 Up to two GOTs in the system configuration have been validated by Mitsubishi Electric Corporation.

When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Link unit*1	Communication Type				
JW-70CUH JW-100CUH JW-100CU	-	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1216 RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 PLC
		RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1219 RS-422 connection diagram 3)		13m	
JW-50CUH JW-70CUH JW-100CUH JW-100CU	JW-10CM ZW-10CM	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1221 RS-422 connection diagram 9)		13m	1 GOT for 1 link unit*2

*1 The link unit is a product manufactured by SHARP Corporation.
For details of this product, contact SHARP Corporation.

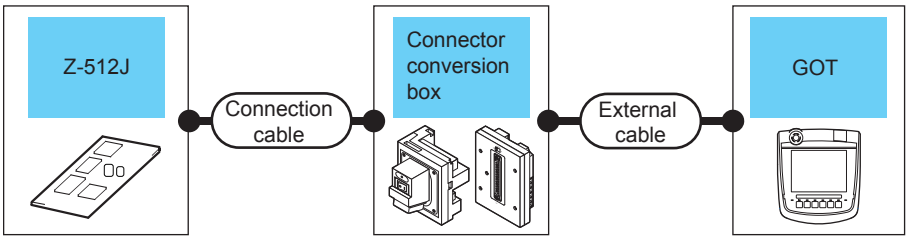
*2 Up to two GOTs in the system configuration have been validated by Mitsubishi Electric Corporation.

Connecting to Z-512J

Communication driver

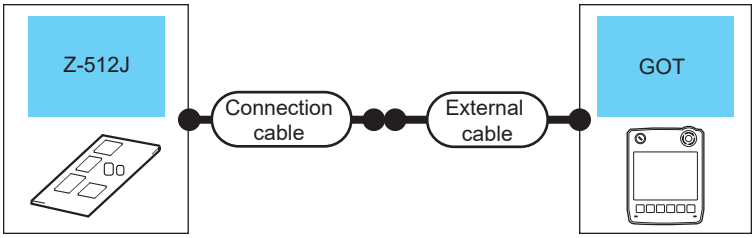
SHARP JW

When using the connector conversion box



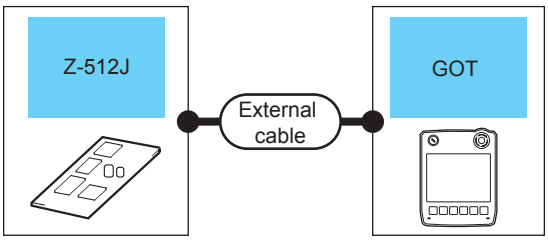
PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
Z-512J	RS-232	GT09-C30R20602-15P(3m) or User preparing Page 1217 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	RS-422	GT09-C30R40602-15P(3m) GT09-C100R40602-15P(10m) or User preparing Page 1219 RS-422 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
Z-512J	RS-232	User preparing Page 1217 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
	RS-422	User preparing Page 1219 RS-422 connection diagram 5)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

When using the external cable (GT11H-C□□□)



PLC		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
Z-512J	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1217 RS-232 connection diagram 6)	GT 2505HS	6m	1 GOT for 1 PLC
	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1220 RS-422 connection diagram 6)	GT 2505HS	13m	

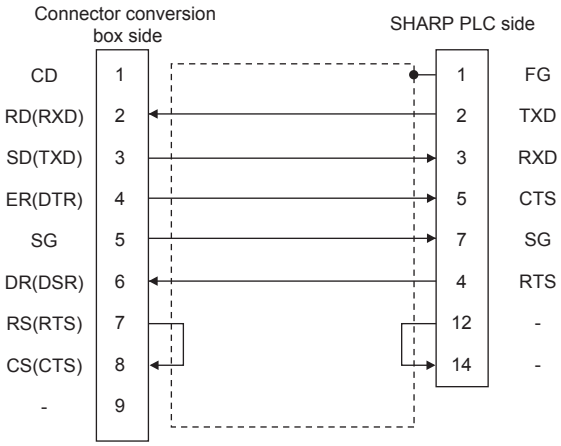
21.3 Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

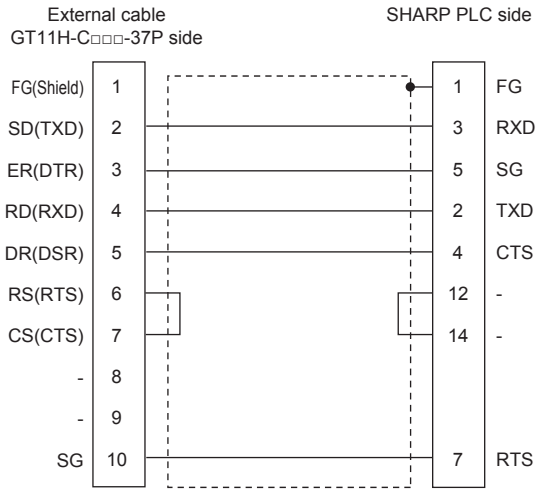
RS-232 cable

Connection diagram

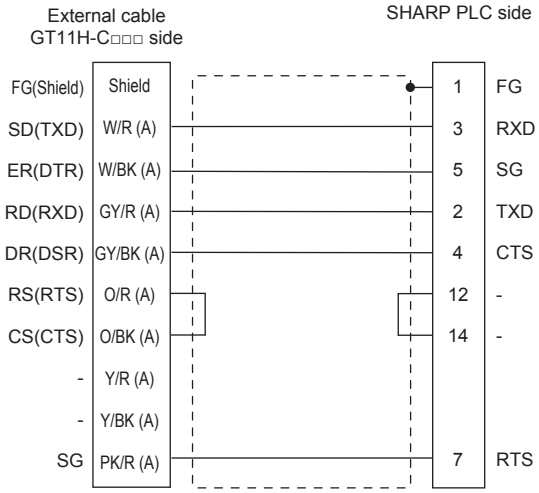
■RS-232 connection diagram 1)



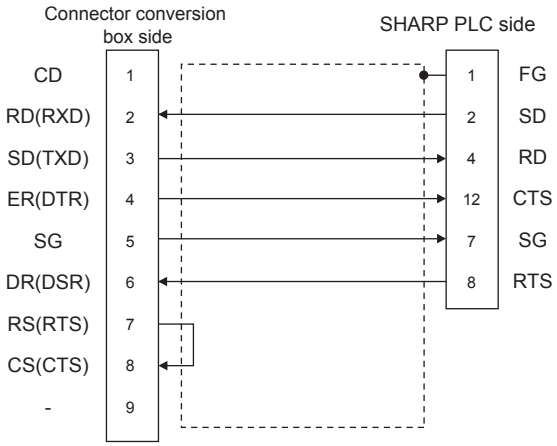
■RS-232 connection diagram 2)



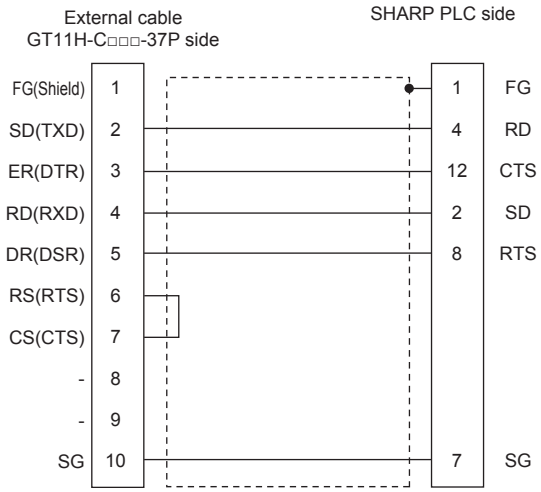
■RS-232 connection diagram 3)



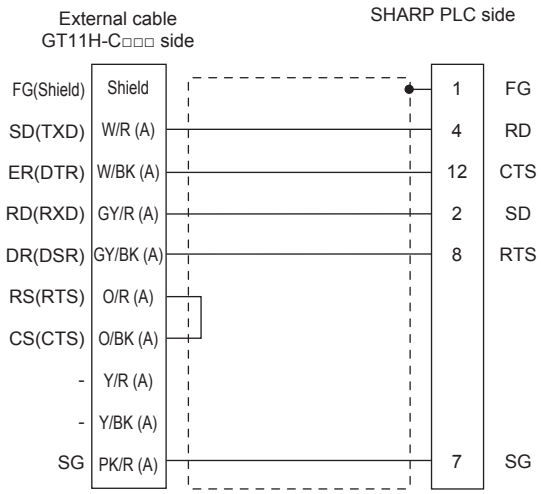
■RS-232 connection diagram 4)



■RS-232 connection diagram 5)



■RS-232 connection diagram 6)



Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■SHARP PLC side connector

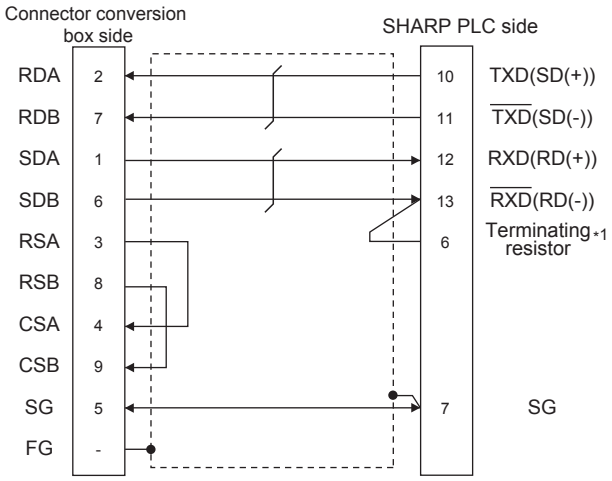
Use the connector compatible with the SHARP PLC side module.

For details, refer to the SHARP PLC user's manual.

RS-422 cable

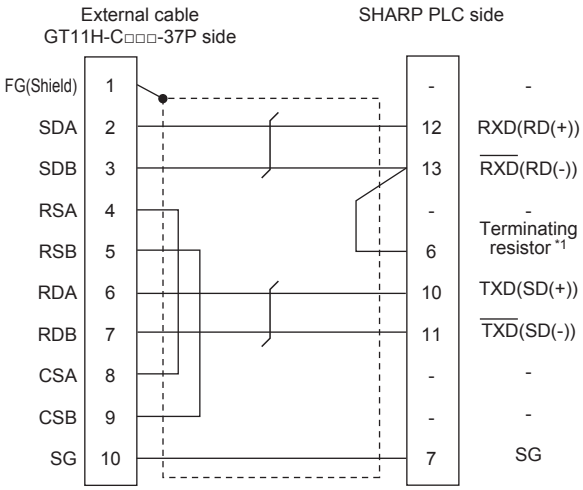
Connection diagram

■RS-422 connection diagram 1)



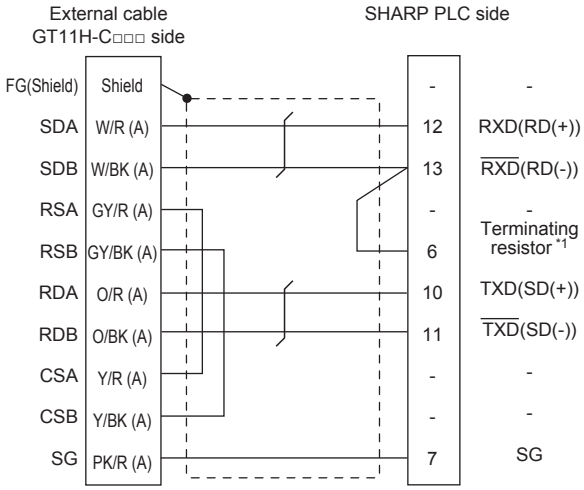
*1 Connect the terminating resistor at pin 6 with pin 13 (RXD) only at the terminal station.
(Valid for JW-70CUH and JW-100CUH. The terminating resistor does not exist in JW-22CU and JW-100CU.)

■RS-422 connection diagram 2)



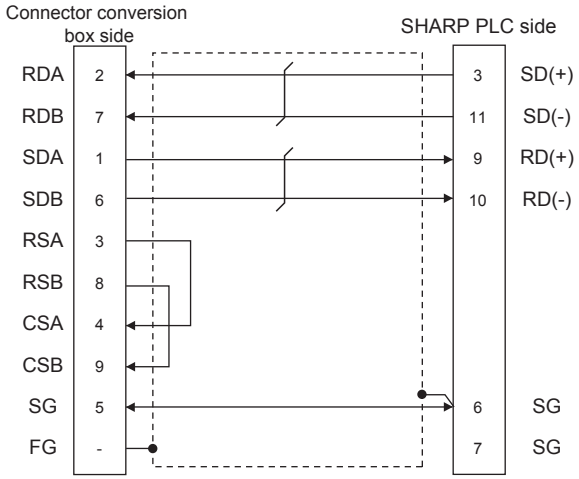
*1 Connect the terminating resistor at pin 6 with pin 13 (RXD) only at the terminal station.
(Valid for JW-70CUH and JW-100CUH. The terminating resistor does not exist in JW-22CU and JW-100CU.)

■RS-422 connection diagram 3)

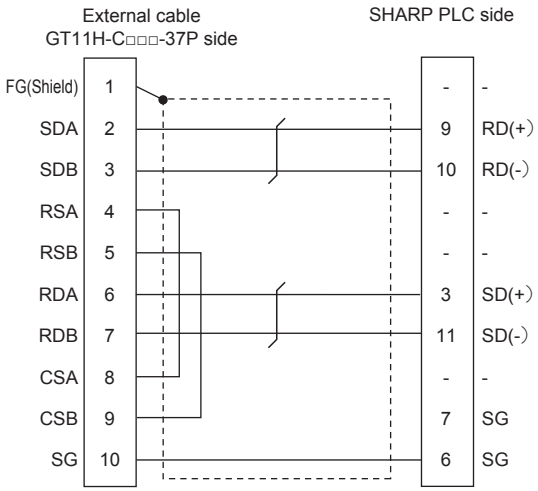


*1 Connect the terminating resistor at pin 6 with pin 13 (RXD) only at the terminal station.
(Valid for JW-70CUH and JW-100CUH. The terminating resistor does not exist in JW-22CU and JW-100CU.)

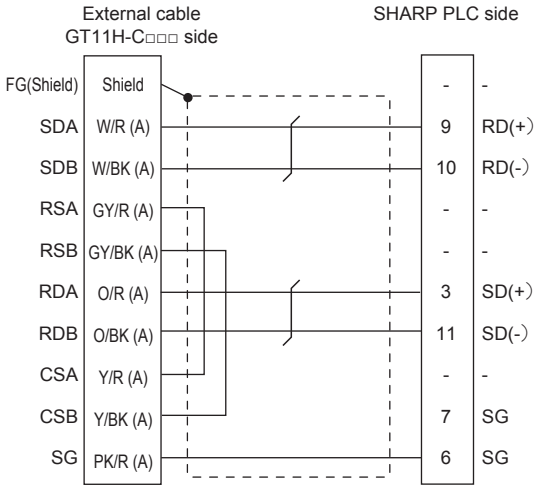
■RS-422 connection diagram 4)



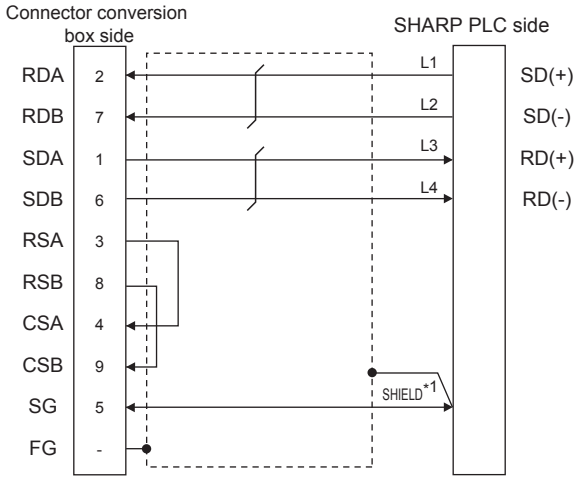
■RS-422 connection diagram 5)



■RS-422 connection diagram 6)

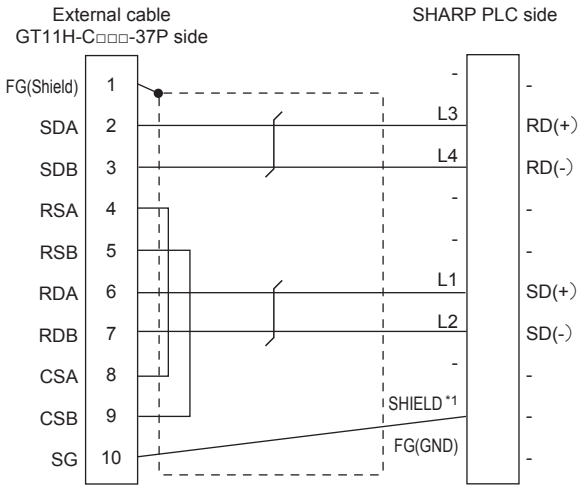


■RS-422 connection diagram 7)



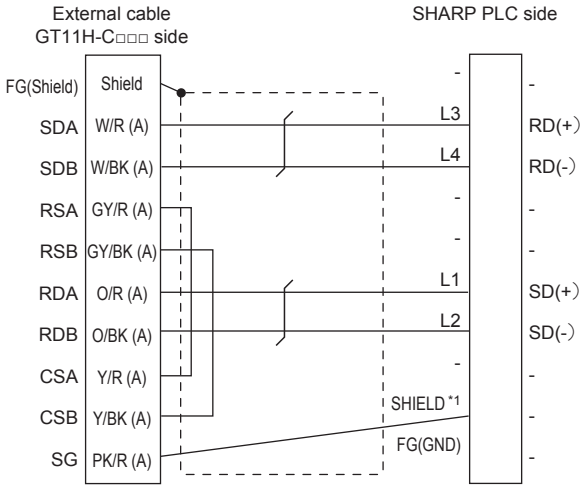
*1 Two SHIELD terminals are provided for JW-10CM and ZW-10CM.Connect to either SHIELD terminal.

■RS-422 connection diagram 8)



*1 Two SHIELD terminals are provided for JW-10CM and ZW-10CM.Connect to either SHIELD terminal.

■RS-422 connection diagram 9)



*1 Two SHIELD terminals are provided for JW-10CM and ZW-10CM.Connect to either SHIELD terminal.

Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■SHARP PLC side connector

Use the connector compatible with the SHARP PLC side module.

For details, refer to the SHARP PLC user's manual.

Connecting terminating resistors

■GOT side

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

■SHARP PLC side

Connect the terminating resistor on the SHARP PLC side when connecting a GOT to a SHARP PLC.

The PLC CPUs and the modules on the PLC CPU side requiring a terminating resistor are shown below.

• JW-22CU

Turn "ON" the terminating resistor setting switch (SW1) on the back of JW-22CU to validate the terminating resistor.

• JW-70CUH and JW-100CUH

Connect the pin 6 (terminating resistor) of the communication port connection connector with the pin 13 (RXD) only at the terminal station to validate the terminating resistor.

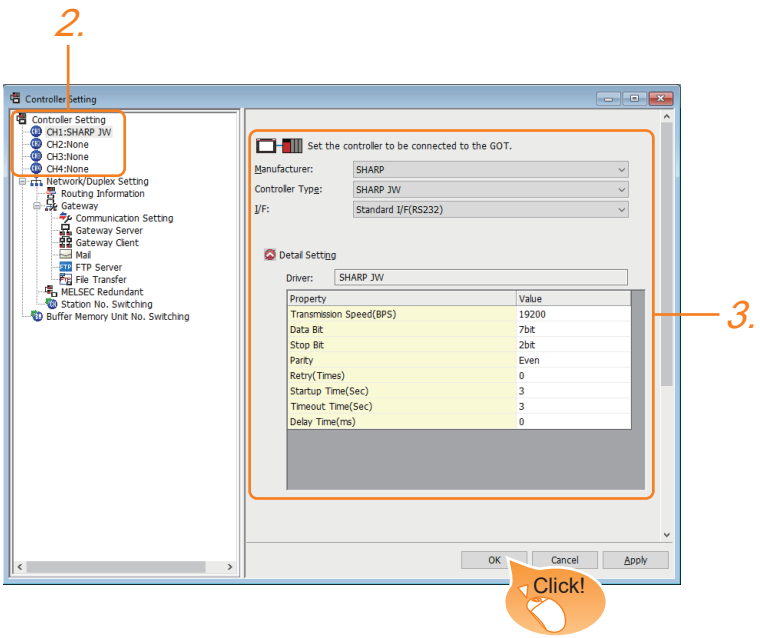
• JW-21CM, JW-10CM and ZW-10CM

Turn "ON" the terminator switch (SW7) on the front panel only at the terminal station to validate the terminating resistor.

21.4 GOT Side Settings

Setting communication interface (Communication settings)

Set the channel of the equipment to be connected to the GOT.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [SHARP]
- [Controller Type]: [SHARP JW]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1223 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
Transmission Speed(BPS)	19200
Data Bit	7 bit
Stop Bit	2 bit
Parity	Even
Retry(Times)	0
Startup Time(Sec)	3
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 19200bps)	4800bps, 9600bps, 19200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 7bits)	7bit (fixed)
Stop Bit	Specify the stop bit length for communications. (Default: 2bit)	2bit (fixed)
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Even)	Even (fixed)
Retry	Set the number of retries to be performed when a communication error occurs. (Default: 0time)	0 to 5times
Startup Time	Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU. (Default: 3sec)	3 to 30sec
Timeout Time*1	Set the time period for a communication to time out. (Default: 3sec)	3 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300ms

*1 When connecting to the communication port or link module, set [Delay Time] of the GOT side to 30ms or more.

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

21.5 PLC Side Setting

Point

SHARP PLC

For details of the SHARP PLC, refer to the following manual.

SHARP PLC user's Manual

Model name		Refer to
PLC CPU	JW-22CU	Page 1224 Connecting to JW-22CU, JW-70CUH, JW-100CUH or JW-100CU
	JW-32CUH, JW-33CUH	Page 1226 Connecting to JW-32CUH, JW-33CUH or Z-512J
	JW-70CUH, JW-100CUH, JW-100CU	Page 1224 Connecting to JW-22CU, JW-70CUH, JW-100CUH or JW-100CU
	Z-512J	Page 1226 Connecting to JW-32CUH, JW-33CUH or Z-512J
Link unit	JW-21CM	Page 1227 Connecting to the link unit (JW-21CM)
	JW-10CM, ZW-10CM	Page 1229 Connecting to the link unit (JW-10CM or ZW-10CM)

Connecting to JW-22CU, JW-70CUH, JW-100CUH or JW-100CU

System memory setting

Set the system memory.

System memory No.	Item	Set value
#236	Transmission speed, parity and stop bit	D7 D6 D5 D4 D3 D2 to D0 0 0 (3) (2) (1) (1) Transmission speed *1 *2 000: 19200bps 001: 9600bps 010: 4800bps (2) Parity 10 (fixed): Even (3) Stop bit 1 (fixed): 2 bits
#237	Station No.	1: Station No. 1 (fixed)

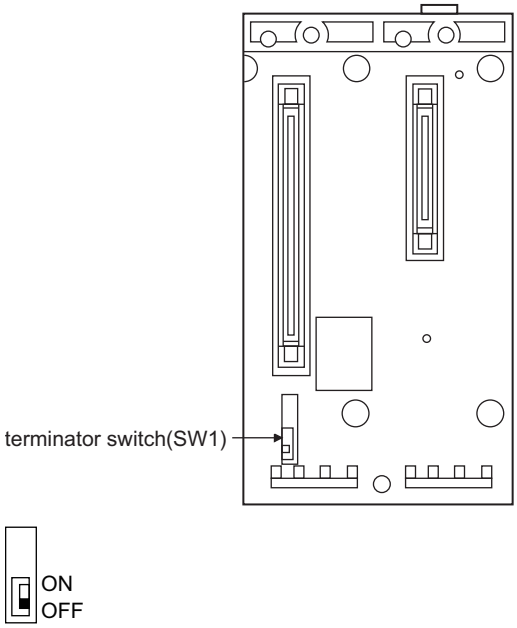
*1 Indicates only the transmission speeds that can be set on the GOT side.

*2 Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
Page 1222 Setting communication interface (Communication settings)

Terminating resistor setting switch (For JW-22CU only)

Set the terminating resistor setting switch.

■When using KV-L20R or KV-L20



Settings	
For RS-232 communication	**RS-422 communication**
OFF (no terminating resistor)	ON (terminating resistor attached)

Connecting to JW-32CUH, JW-33CUH or Z-512J

Settings for connecting to communication port 1 (PG/COMM1 port)

Set the system memory.

System memory No.	Item	Set value
#234	Transmission speed, parity and stop bit	D7 D6 D5 D4 D3 D2 to D0 0 0 (3) (2) (1) (1) Transmission speed *1 *2 000: 19200bps 001: 9600bps 010: 4800bps (2) Parity 10 (fixed): Even (3) Stop bit 1 (fixed): 2 bits
#235	Station No.	1: Station No. 1 (fixed)

*1 Indicates only the transmission speeds that can be set on the GOT side.

*2 Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1222 Setting communication interface (Communication settings)

Settings for connecting to communication port 2 (PG/COMM2 port)

Set the system memory.

System memory No.	Item	Set value
#236	Transmission speed, parity and stop bit	D7 D6 D5 D4 D3 D2 to D0 0 0 (3) (2) (1) (1) Transmission speed *1 *2 000: 19200bps 001: 9600bps 010: 4800bps (2) Parity 10 (fixed): Even (3) Stop bit 1 (fixed): 2 bits
#237	Station No.	1: Station No. 1 (fixed)

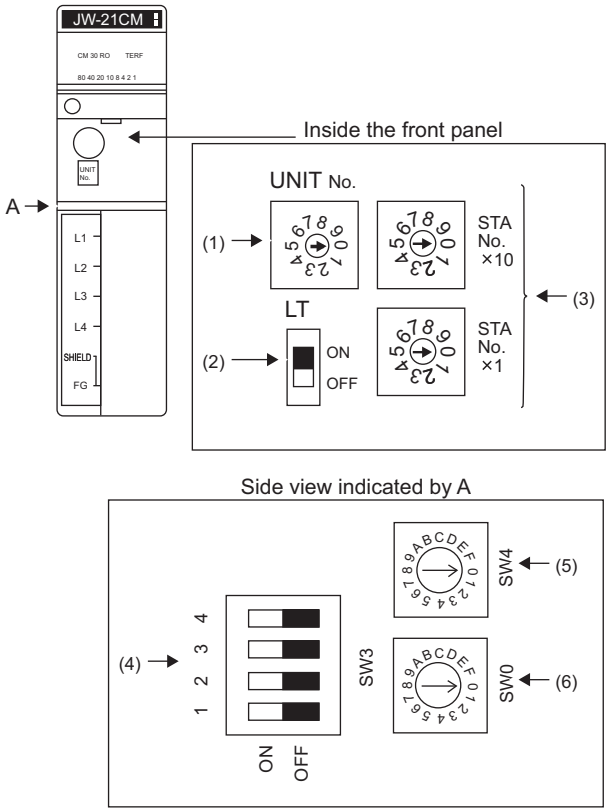
*1 Indicates only the transmission speeds that can be set on the GOT side.

*2 Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1222 Setting communication interface (Communication settings)

Connecting to the link unit (JW-21CM)

Switch setting of the link unit (JW-21CM)

Make setting for each switch.

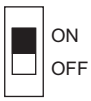


■Module No. switch (SW8)

The module No. switch is not used for communication with the GOT.

■Terminator switch(SW7)

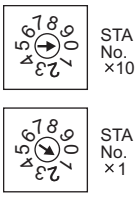
LT



Settings	Setting details
ON*1	Terminating resistor validated

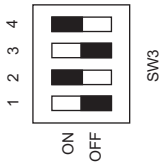
*1 Turn on only for the terminal station.

■Station number setting switch(SW1,SW2)



Switch No.	Settings	Setting details
SW1	Station No. lower digit (10^0 digit)	1 (fixed)
SW2	Station No. upper digit (10^1 digit)	0 (fixed)

■Operation mode setting switch(SW3)



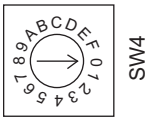
Switch No.	Settings	Setting details
SW3-1	OFF (fixed)	Invalid
SW3-2	ON (fixed)	4-wire type
SW3-3	OFF (fixed)	Invalid
SW3-4	ON (fixed)	Even

■Transmission speed setting switch (SW4)

Set the same transmission speed of the GOT.

For the transmission speed setting on the GOT side, refer to the following.

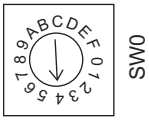
☞ Page 1222 Setting communication interface (Communication settings)



Setting*1	Setting details
0	19200bps
1	9600bps
2	4800bps

*1 Indicates only the transmission speeds that can be set on the GOT side.

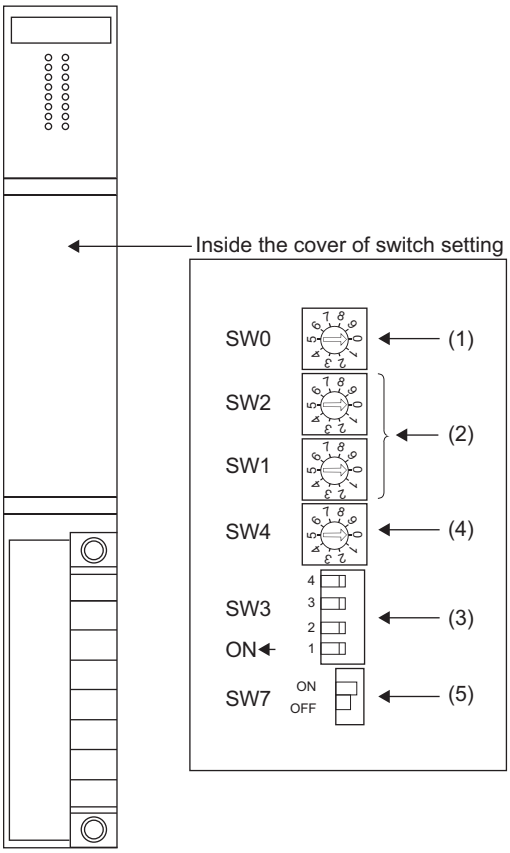
■Function setting switch(SW0)



Settings	Setting details
4 (fixed)	Computer link

Connecting to the link unit (JW-10CM or ZW-10CM)

Switch setting of link unit (JW-10CM and ZW-10CM)



■Function setting switch(SW0)

SW0 

Settings	Setting details
4 (fixed)	Computer link (command mode)

■Station number switch(SW1,SW2)

SW2 

SW1 

Switch No.	Settings	Setting details
SW1	Station No. lower digit (10^0 digit)	1 (fixed)
SW2	Station No. upper digit (10^1 digit)	0 (fixed)

■Operation mode setting switch(SW3)

SW3 

Switch No.	Settings	Setting details
SW3-1	OFF (fixed)	Invalid
SW3-2	ON (fixed)	4-wire type
SW3-3	OFF (fixed)	Invalid
SW3-4	ON (fixed)	Even

■Transmission speed setting switch (SW4)

Set the same transmission speed of the GOT.

For the transmission speed setting on the GOT side, refer to the following.

☞ Page 1222 Setting communication interface (Communication settings)

SW4 

Setting*1	Setting details
0	19200bps
1	9600bps
2	4800bps

*1 Indicates only the transmission speeds that can be set on the GOT side.

■Terminator switch(SW7)

SW7 

Settings	Setting details
ON*2	Terminating resistor validated

*1 Set to ON only for the terminal station.

21.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

📖GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1
SHARP equipment ([SHARP JW])

21.7 Precautions

Connecting to the communication port or link module

When connecting to the communication port or link module, the send delay time of 30ms is required.

In the communication detail settings, set [Delay Time] to 30ms or more.

If a communication timeout error occurs even when [Delay Time] is set to 30ms or more, adjust the following settings so that no communication timeout error occurs.

- [Retry]
- [Startup Time]
- [Timeout Time]

For the details of each setting, refer to the following.

☞ Page 1223 Communication detail settings

MEMO

22 SHINKO TECHNOS INDICATING CONTROLLER

- Page 1233 Connectable Model List
- Page 1235 System Configuration
- Page 1242 Connection Diagram
- Page 1247 GOT Side Settings
- Page 1249 Indicating Controller Side Setting
- Page 1251 Settable Device Range
- Page 1252 Precautions

22.1 Connectable Model List

The following table shows the connectable models.

Series	Model name	Clock	Communication Type	Connectable GOT	Refer to
ACS-13A Series	ACS-13A□/□,□,C5*2	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 1235 Connecting to ACS-13A, JC, JCM-33A, JIR-301-M, PCD-300, PC-900, ACD-13A, ACR-13A, or BC□2
JC Series	JCS-33A-□/□□,C5*2	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 1235 Connecting to ACS-13A, JC, JCM-33A, JIR-301-M, PCD-300, PC-900, ACD-13A, ACR-13A, or BC□2
	JCR-33A-□/□□,C5*2				
	JCD-33A-□/□□,C5*2				
JCM-33A Series	JCM-33A□/□,□C5*2	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 1235 Connecting to ACS-13A, JC, JCM-33A, JIR-301-M, PCD-300, PC-900, ACD-13A, ACR-13A, or BC□2
JIR-301-M Series	JIR-301-M□,C5*2	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 1235 Connecting to ACS-13A, JC, JCM-33A, JIR-301-M, PCD-300, PC-900, ACD-13A, ACR-13A, or BC□2
PCD-300 Series	PCD-33A-□/M,C5*2	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 1235 Connecting to ACS-13A, JC, JCM-33A, JIR-301-M, PCD-300, PC-900, ACD-13A, ACR-13A, or BC□2
PC-900 Series	PC935-□/M,C5*2	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 1235 Connecting to ACS-13A, JC, JCM-33A, JIR-301-M, PCD-300, PC-900, ACD-13A, ACR-13A, or BC□2
	PC955-□/M,C5*2				
	PC935-□/M,C*1	×	RS-232	GT2506HS GT2505HS	☞ Page 1238 Connecting to FCD-100, FCR-100, FCR-23A, FIR, PC-900, ACD-13A, or ACR-13A
	PC955-□/M,C*1				
FCD-100 Series*1	FCD-13A-□/M,C	×	RS-232	GT2506HS GT2505HS	☞ Page 1238 Connecting to FCD-100, FCR-100, FCR-23A, FIR, PC-900, ACD-13A, or ACR-13A
	FCD-15A-□/M,C				
FCR-100 Series*1	FCR-13A-□/M,C	×	RS-232	GT2506HS GT2505HS	☞ Page 1238 Connecting to FCD-100, FCR-100, FCR-23A, FIR, PC-900, ACD-13A, or ACR-13A
	FCR-15A-□/M,C				
FCR-23A Series*1	FCR-23A-□/M,C	×	RS-232	GT2506HS GT2505HS	☞ Page 1238 Connecting to FCD-100, FCR-100, FCR-23A, FIR, PC-900, ACD-13A, or ACR-13A
	FCR-23A-□/M,C5			GT2506HS GT2505HS	
FIR Series*1	FIR-201-M,C	×	RS-232	GT2506HS GT2505HS	☞ Page 1238 Connecting to FCD-100, FCR-100, FCR-23A, FIR, PC-900, ACD-13A, or ACR-13A
DCL-33A Series	DCL-33A-□/M,□,C5*2	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 1239 When connecting to DCL-33A Series
ACD-13A ACR-13A	ACD-13A-□/M□,C5 ACR-13A-□/M□,C5	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 1235 Connecting to ACS-13A, JC, JCM-33A, JIR-301-M, PCD-300, PC-900, ACD-13A, ACR-13A, or BC□2
	ACD-13A-□/M□,C ACR-13A-□/M□,C	×	RS-232	GT2506HS GT2505HS	☞ Page 1238 Connecting to FCD-100, FCR-100, FCR-23A, FIR, PC-900, ACD-13A, or ACR-13A

Series	Model name	Clock	Communication Type	Connectable GOT	Refer to
BC□2 Series	BCD2□□□-□□ BCR2□□□-□□ BCS2□□□-□□	×	RS-232 RS-485	GT 2506 HS GT 2505 HS	☞ Page 1235 Connecting to ACS-13A, JC, JCM-33A, JIR-301-M, PCD-300, PC-900, ACD-13A, ACR-13A, or BC□2

*1 Only the indicating controller equipped with RS-232 communication function can be connected.

*2 The indicating controller of the following version or later can be connected.

Series	Model name	Version
ACS-13A Series	ACS-13A□/□,□,C5	Products manufactured in October 2007 or later (Indicating controllers with the serial numbers 07Axxxxxx, 07Kxxxxxx, and 07Xxxxxxx or later) (The first two digits of the serial numbers show the last two digits of the year.)
JC Series	JCS-33A-□/□□,C5	
	JCR-33A-□/□□,C5	
	JCD-33A-□/□□,C5	
JCM-33A Series	JCM-33A-□/□,□C5	
JIR-301-M Series	JIR-301-M□,C5	
PCD-300 Series	PCD-33A-□/M,C5	
PC-900 Series	PC935-□/M,C5	
	PC955-□/M,C5	
DCL-33A Series	DCL-33A-□/M,□,C5	

22.2 System Configuration

Connecting to ACS-13A, JC, JCM-33A, JIR-301-M, PCD-300, PC-900, ACD-13A, ACR-13A, or BC□2

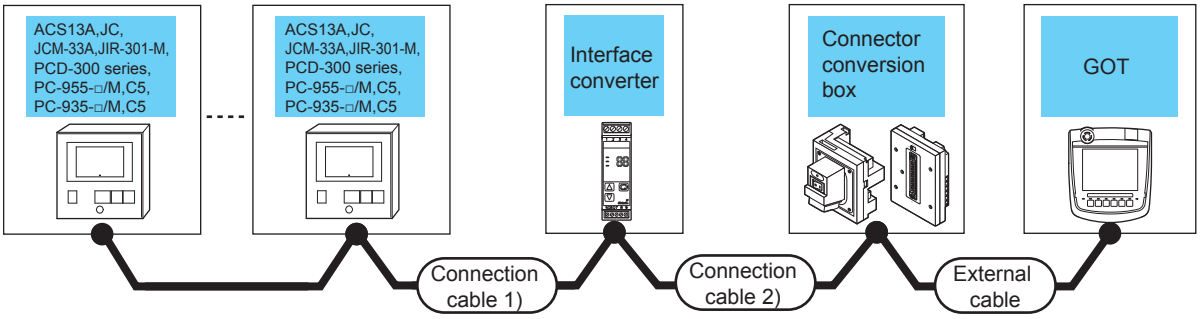
In this section,

- PC-900 series represents PC-955-□/M,C5 and PC-935-□/M,C5.
- ACD-13A represents ACD-13A-□/M□,C5.
- ACR-13A represents ACR-13A□/M□,C5.



For the RS-232 connection (via interface converter)

■When using the connector conversion box

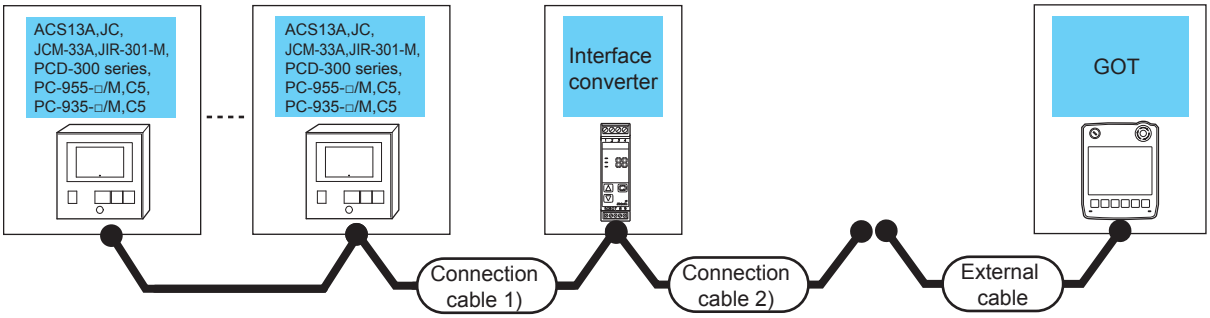


Indicating controller		Connection cable 1)		Communication converter *1	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Max. distance		Cable model Connection diagram number					
ACS13A JC JCM-33A JIR-301-M PCD-300 Series PC-955-□/M,C5 PC-935-□/M,C5 ACD-13A-□/M□,C5 ACR-13A-□/M□,C5 BC□2	RS-232	User preparing Page 1244 RS-485 connection diagram 1)	1,200m	IF-400	RS-232C CFP-C2*1	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	31 indicating controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 The communication converter is a product manufactured by Shinko Technos Co., Ltd.
For details of the product, contact Shinko Technos Co., Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

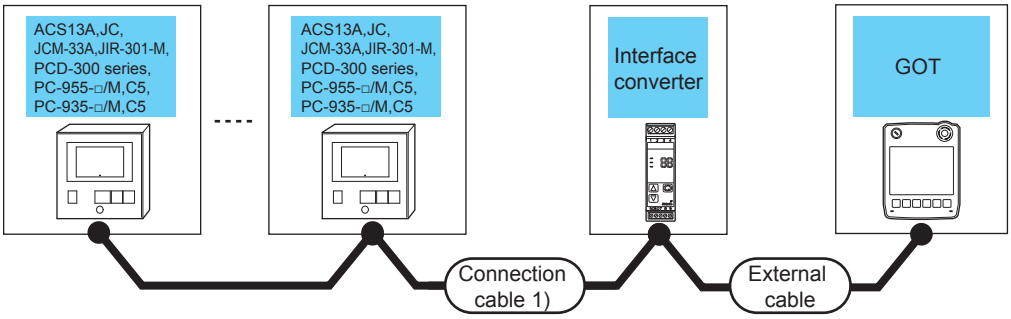


Indicating controller		Connection cable 1)		Communication converter*1	Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Max. distance		Cable model Connection diagram number				
ACS13A JC JCM-33A JIR-301-M PCD-300 Series PC-955-□/M,C5 PC-935-□/M,C5 ACD-13A-□/M□,C5 ACR-13A-□/M□,C5 BC□2	RS-232	User preparing Page 1244 RS-485 connection diagram 1)	1,200m	IF-400	User preparing Page 1242 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	31 indicating controllers for 1 GOT

*1 The communication converter is a product manufactured by Shinko Technos Co., Ltd.
For details of the product, contact Shinko Technos Co., Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



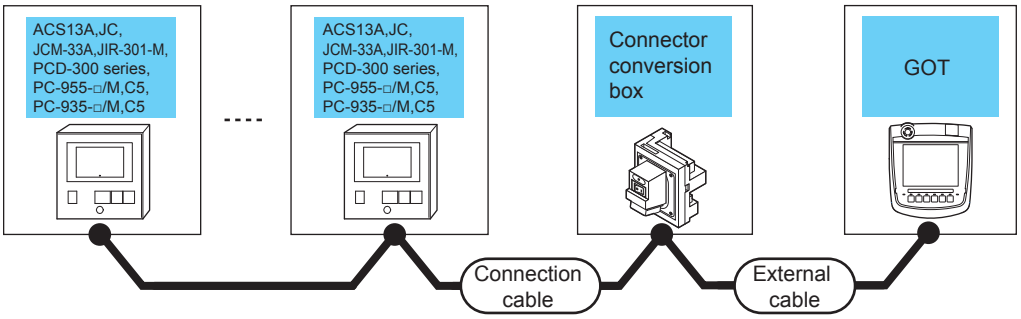
Indicating controller		Connection cable 1)		Communication converter*1	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Max. distance					
ACS13A JC JCM-33A JIR-301-M PCD-300 Series PC-955-□/M,C5 PC-935-□/M,C5 ACD-13A-□/M□,C5 ACR-13A-□/M□,C5 BC□2	RS-232	User preparing Page 1244 RS-485 connection diagram 1)	1,200m	IF-400	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1243 RS-232 connection diagram 3)	GT 2505HS	6m	31 indicating controllers for 1 GOT

*1 The communication converter is a product manufactured by Shinko Technos Co., Ltd.
For details of the product, contact Shinko Technos Co., Ltd.

*2 The distance from the converter to the GOT (External cable)

For the RS-485 connection

■When using the connector conversion box



Indicating controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
ACS13A JC JCM-33A JIR-301-M PCD-300 Series PC-955-□/M,C5 PC-935-□/M,C5 ACD-13A-□/M□,C5 ACR-13A-□/M□,C5 BC□2	RS-485	User preparing Page 1245 RS-485 connection diagram 3)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	31 indicating controllers for 1 GOT

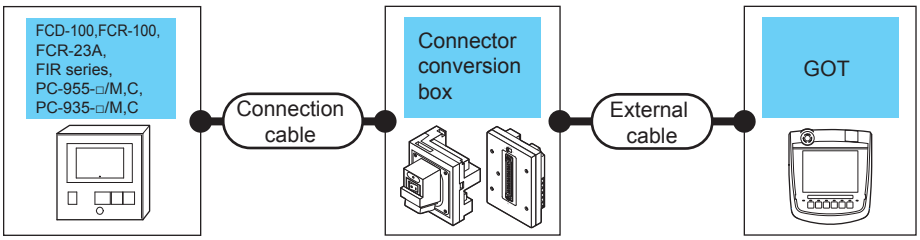
Connecting to FCD-100, FCR-100, FCR-23A, FIR, PC-900, ACD-13A, or ACR-13A

In this section,

- PC-900 series represents PC-955-□/M,C and PC-935-□/M,C.
- ACD-13A represents ACD-13A-□/M□,C.
- ACR-13A represents ACR-13A□/M□,C.



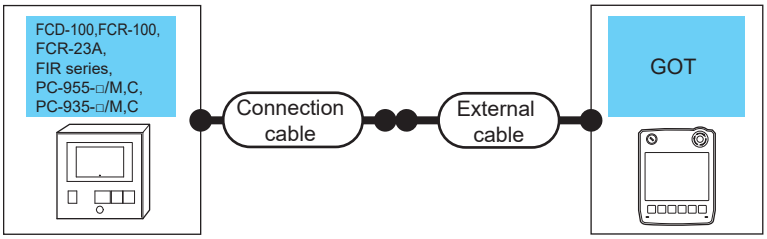
When using the connector conversion box



Indicating controller*1		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
FCD-100 FCR-100 FCR-23A FIR Series PC-955-□/M,C PC-935-□/M,C ACD-13A-□/M□,C ACR-13A-□/M□,C	RS-232	GT09-C30R21401-4T(3m) or User preparing Page 1242 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 indicating controllers for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Only the indicating controller equipped with RS-232 communication function can be connected.

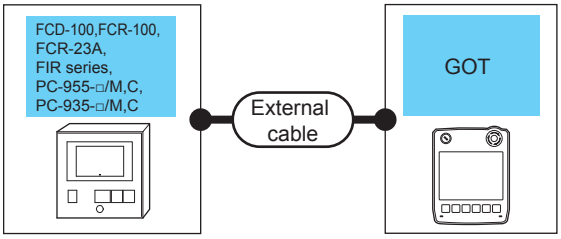
When using the external cable (GT11H-C□□□-37P)



Indicating controller*1		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
FCD-100 FCR-100 FCR-23A FIR Series PC-955-□/M,C PC-935-□/M,C ACD-13A-□/M□,C ACR-13A-□/M□,C	RS-232	User preparing Page 1242 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 indicating controllers for 1 GOT

*1 Only the indicating controller equipped with RS-232 communication function can be connected.

When using the external cable (GT11H-C□□□)



Indicating controller*1		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
FCD-100 FCR-100 FCR-23A FIR Series PC-955-□/M,C PC-935-□/M,C ACD-13A-□/M□,C ACR-13A-□/M□,C	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1243 RS-232 connection diagram 3)	GT 2505HS	6m	1 indicating controllers for 1 GOT

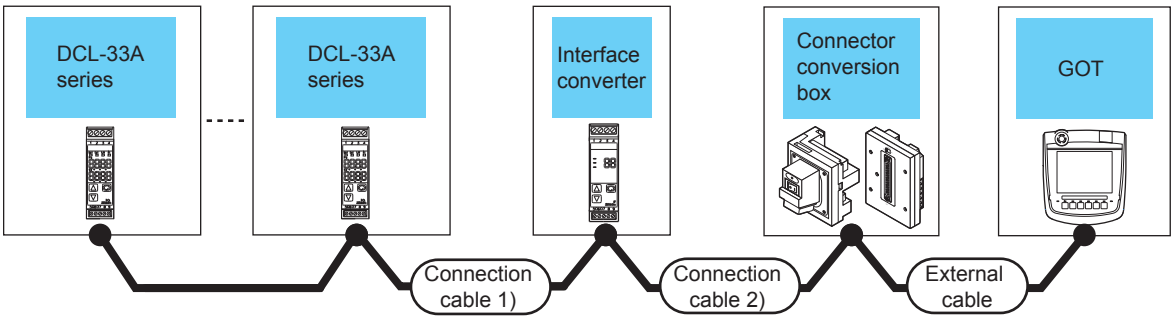
*1 Only the indicating controller equipped with RS-232 communication function can be connected.

When connecting to DCL-33A Series



For the RS-232 connection (via communication converter)

■When using the connector conversion box

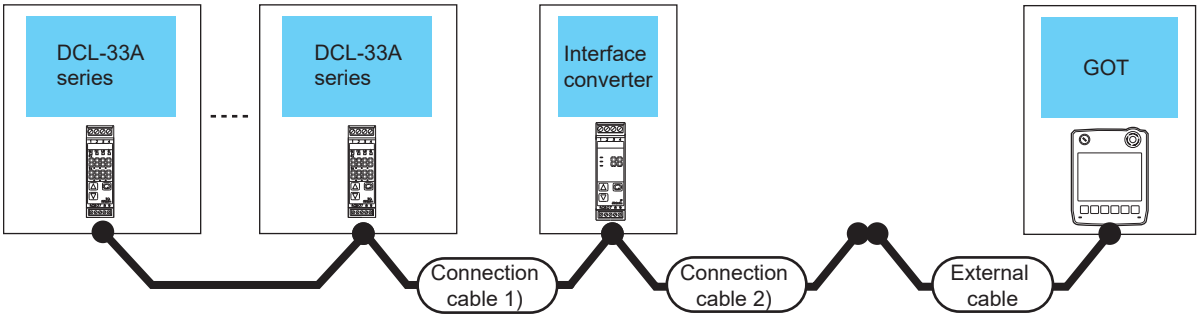


Indicating controller		Connection cable 1)		Communication converter *1	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Max. distance		Cable model Connection diagram number					
DCL-33A Series	RS-232	RS485-CPP *1	1,200m	IF-400	RS-232CCFP-C2 *1	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	31 indicating controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Shinko Technos Co., Ltd.
For details of the product, contact Shinko Technos Co., Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

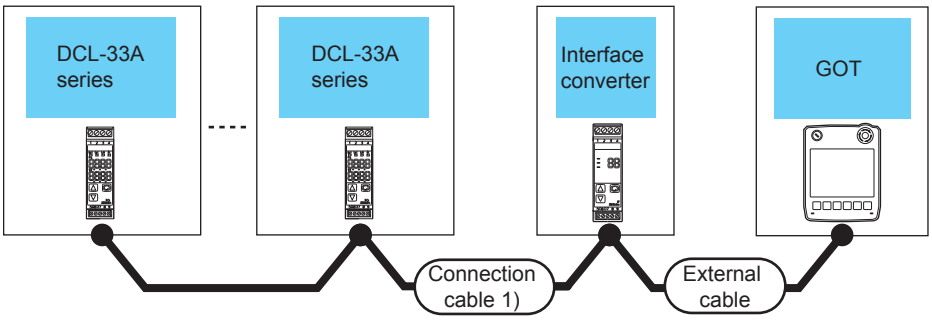


Indicating controller		Connection cable 1)		Communication converter*1	Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Max. distance		Cable model Connection diagram number				
DCL-33A Series	RS-232	RS485-CPP *1	1,200m	IF-400	User preparing Page 1242 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	31 indicating controllers for 1 GOT

*1 Product manufactured by Shinko Technos Co., Ltd.
For details of the product, contact Shinko Technos Co., Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



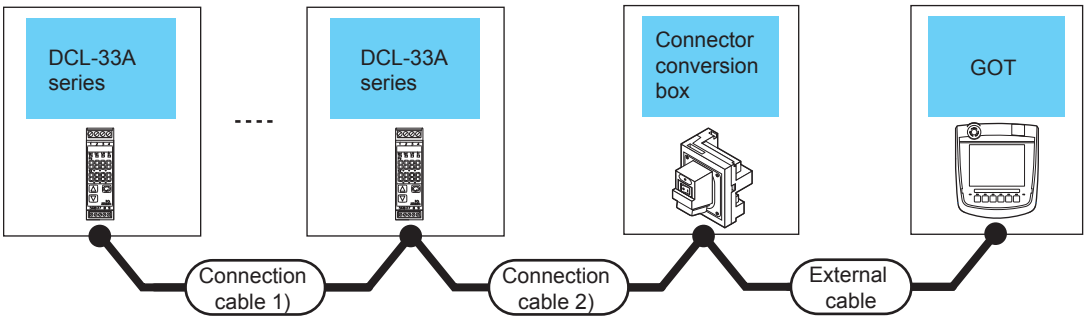
Indicating controller		Connection cable 1)		Communication converter*1	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Max. distance					
DCL-33A Series	RS-232	RS485-CPP *1	1,200m	IF-400	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1243 RS-232 connection diagram 3)	GT 2505HS	6m	31 indicating controllers for 1 GOT

*1 Product manufactured by Shinko Technos Co., Ltd.
For details of the product, contact Shinko Technos Co., Ltd.

*2 The distance from the converter to the GOT (External cable)

For the RS-485 connection

■When using the connector conversion box



Indicating controller		Connection cable 1)	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number					
DCL-33A Series	RS-485	RS-485 CPP*1	User preparing Page 1244 RS-485 connection diagram 2)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	31 indicating controllers for 1 GOT

*1 Product manufactured by Shinko Technos Co., Ltd.
For details of the product, contact Shinko Technos Co., Ltd.

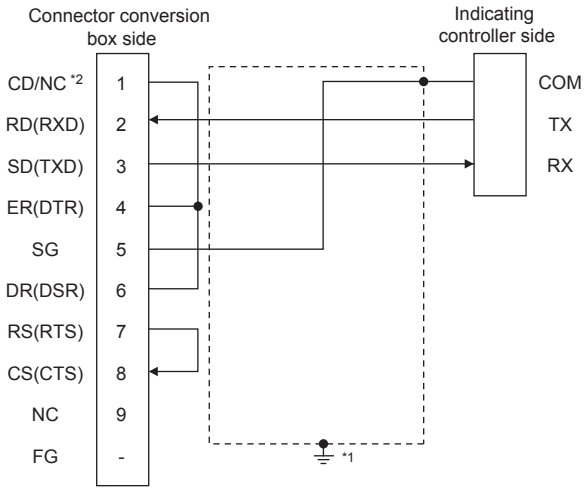
22.3 Connection Diagram

The following diagram shows the connection between the GOT and the controller.

RS-232 cable

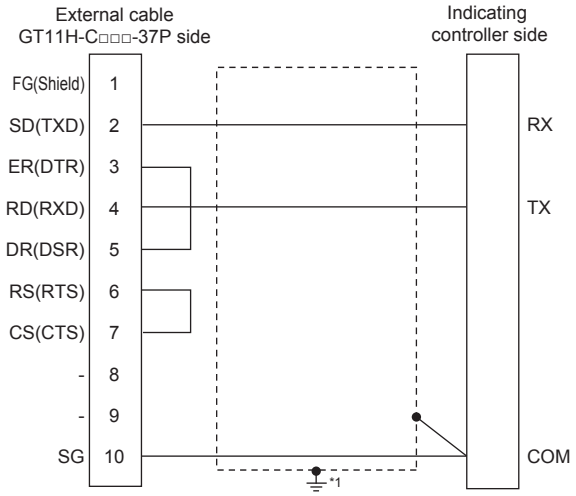
Connection diagram

■RS-232 connection diagram 1)



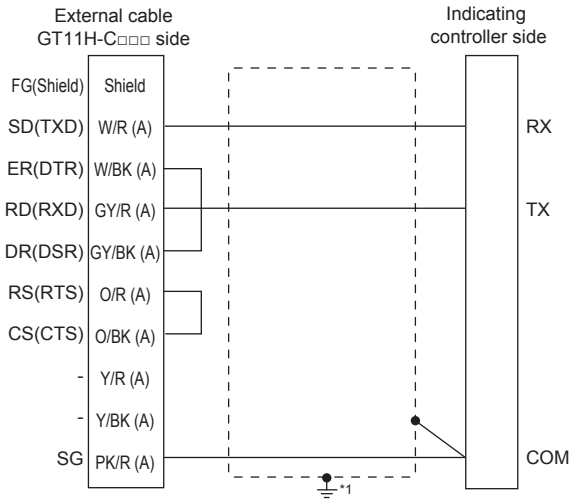
*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 GT2506HS-V: CD, GT2505HS-V: NC

■RS-232 connection diagram 2)



*1 Connect FG grounding to the appropriate part of a cable shield line.

■RS-232 connection diagram 3)



*1 Connect FG grounding to the appropriate part of a cable shield line.

Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■Shinko Technos indicating controller side connector

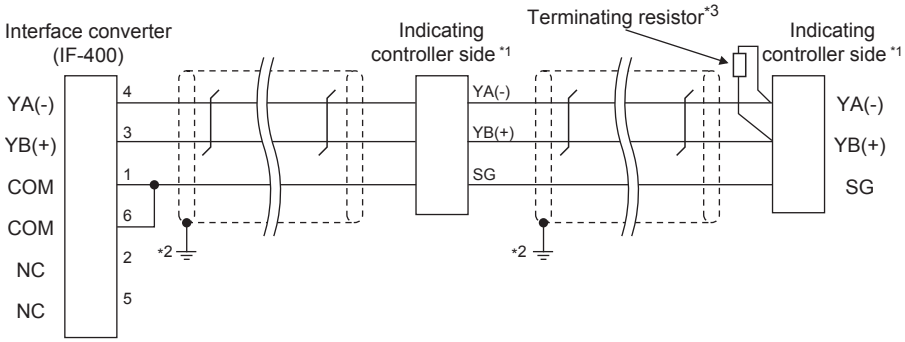
Use the connector compatible with the Shinko Technos indicating controller side.

For details, refer to the user's manual of the Shinko Technos indicating controller.

RS-485 cable

Connection diagram

■RS-485 connection diagram 1)



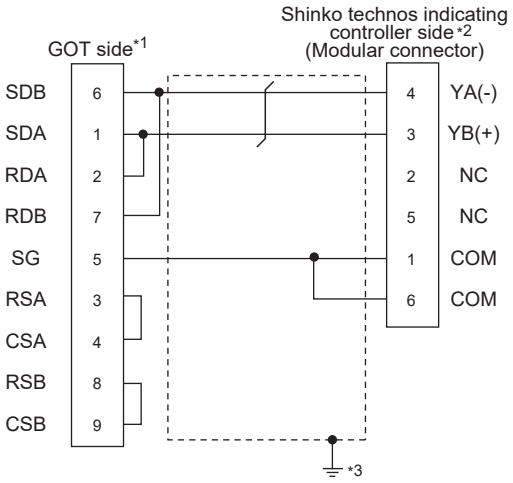
*1 Pin No. of communication converter differs depending on the model.
Refer to the following table.

Signal name	Model of indicating controller					
	JCS-33A	JCR-33A	JCD-33A	JCM-33A	JIR-301-M	ACS-13A
	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.
YA(-)	13	11	11	10	11	16
YB(+)	14	14	14	13	14	17
SG	15	17	17	14	17	18

Signal name	Model of indicating controller					
	PCD-33A	PC-955	PC-935	ACD-13A	ACR-13A	BC□2
	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.
YA(-)	11	11	11	13	13	16
YB(+)	14	12	12	14	14	17
SG	17	16	16	15	15	18

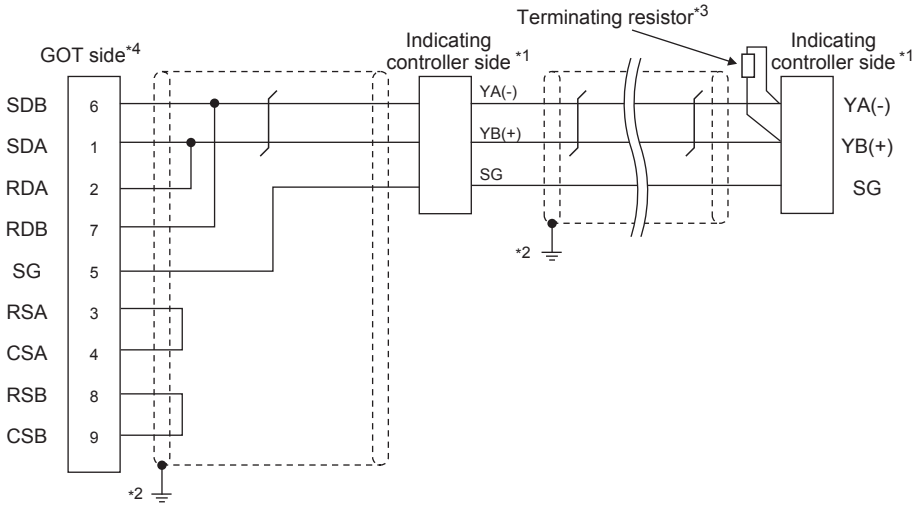
*2 Connect FG grounding to the appropriate part of a cable shield line.
*3 For details of the terminating resistor specifications, refer to the following manual.
User's Manual of the Shinko Technos indicating controller

■RS-485 connection diagram 2)



*1 Set the terminating resistor of GOT side.
Page 1246 Connecting terminating resistors
*2 For details of the pin assignment, refer to the following manual.
User's Manual of the Shinko Technos indicating controller
*3 Connect FG grounding to the appropriate part of a cable shield line.

■RS-485 connection diagram 3)



*1 Pin No. of communication converter differs depending on the model.
Refer to the following table.

Signal name	Model of indicating controller					
	JCS-33A	JCR-33A	JCD-33A	JCM-33A	JIR-301-M	ACS-13A
	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.
YA(-)	13	11	11	10	11	16
YB(+)	14	14	14	13	14	17
SG	15	17	17	14	17	18

Signal name	Model of indicating controller					
	PCD-33A	PC-955	PC-935	ACD-13A	ACR-13A	BC□2
	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.
YA(-)	11	11	11	13	13	16
YB(+)	14	12	12	14	14	17
SG	17	16	16	15	15	18

*2 Connect FG grounding to the appropriate part of a cable shield line.
*3 For details of the terminating resistor specifications, refer to the following manual.
User's Manual of the Shinko Technos indicating controller
*4 Set the terminating resistor of GOT side which will be a terminal.
☞ Page 1246 Connecting terminating resistors

Precautions when preparing a cable

■Cable length

• The length of the RS-485 cable used for direct connecting the indicating controller to the communication converter

The length of the RS-485 cable must be 1200 m or less.

• The length of the RS-485 cable used for direct connecting the indicating controller to GOT

The total distance (between GOT and controllers) of the RS-485 cable must be 13 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■Shinko Technos indicating controller side connector

Use the connector compatible with the Shinko Technos indicating controller side.

For details, refer to the user's manual of the Shinko Technos indicating controller.

Connecting terminating resistors

■GOT side

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Enable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

■Shinko Technos indicating controller side

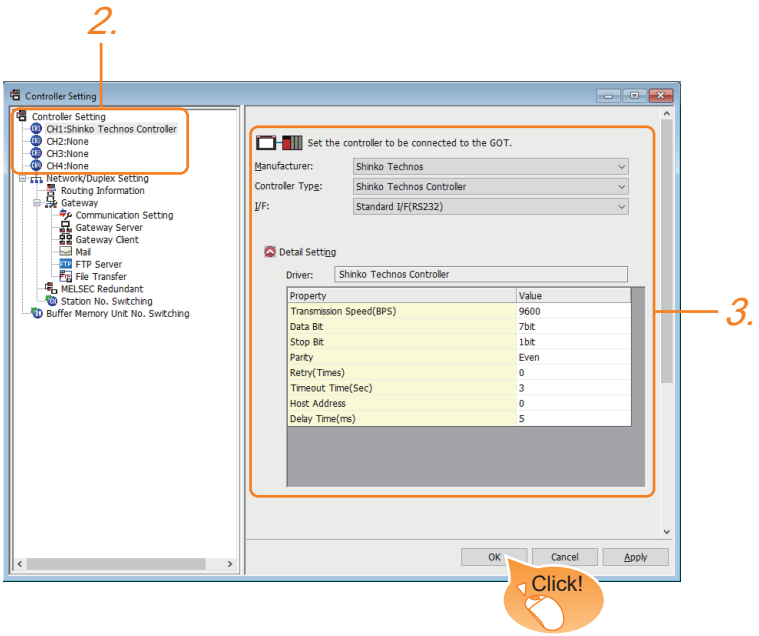
When connecting a Shinko Technos indicating controller to the GOT, a terminating resistor must be connected to the Shinko Technos indicating controller.

📖User's Manual of the Shinko Technos indicating controller

22.4 GOT Side Settings

Setting communication interface (Communication settings)

Set the channel of the equipment to be connected to the GOT.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [Shinko Technos]
- [Controller Type]: [Shinko Technos Controller]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1248 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
Transmission Speed(BPS)	9600
Data Bit	7 bit
Stop Bit	1 bit
Parity	Even
Retry(Times)	0
Timeout Time(Sec)	3
Host Address	0
Delay Time(ms)	5

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 9600bps)	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 7bits)	7bits/8bits
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit/2bits
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Even)	None Even Odd
Retry	Set the number of retries to be performed when a communication error occurs. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	3 to 30sec
Host Address	Specify the host address (station No. of the GOT to which the indicating controller is connected) in the connected network. (Default: 0)	0 to 94
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 5ms)	0 to 300ms

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

22.5 Indicating Controller Side Setting

Point

• Shinko Technos indicating controller

For details of Shinko Technos indicating controller, refer to the following manual.

User's Manual of the Shinko Technos indicating controller

• Communication converter

For details on communication settings of the communication converter, refer to the following manual.

User's Manual of communication converter

Model name		Refer to
Indicating controller	ACS-13A, DCL-33A, JC, JCM-33A, JIR-301-M, PCD-300, PC-900, FCD-100, FCR-100, FCR-23A, FIR, ACD-13A, ACR-13A, BC□2 Series	☞ Page 1249 Connecting to indicating controller
Communication converter	IF-400	☞ Page 1249 Connecting to communication converter

Connecting to indicating controller

Make the communication settings by operating the key of the indicating controller.

Item	Set value
Transmission speed*1	9600bps, 19200bps, 38400bps*4
Data bit	7bits (fixed)
Parity bit	Even (fixed)
Stop bit	1bit (fixed)
Station No. *1*2*3	0 to 95
Communication protocol	Shinko protocol

*1 Adjust the settings with GOT settings.
*2 Avoid duplication of the station No. with any of the other units.
*3 When setting the "95" to the station No., the read-out of data cannot be performed.
*4 The speed (38400bps) is available for ACD-13A, ACR-13A, and BC□2 series only.
However, select 9600bps or19200bps to use a converter (IF-400).

Connecting to communication converter

Make the communication settings by operating the key of the communication converter.

Item	Set value
Transmission speed*1	9600bps, 19200bps
Sending/Receiving switching period*2	1 character, 2 character

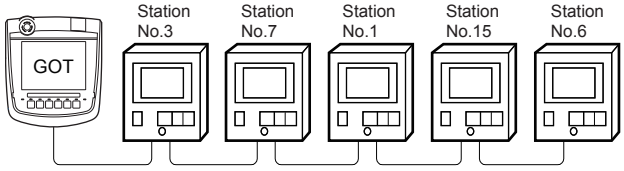
*1 Adjust the settings with GOT and the indicating controller settings.
*2 The setting of 1 character is recommended.

Station No. settings

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.



Examples of station number setting

Direct specification

When setting the device, specify the station number of the indicating controller of which data is to be changed.

Specification range
0 to 94

Indirect specification

When setting the device, indirectly specify the station number of the indicating controller of which data is to be changed using the 16-bit GOT internal data register (GD10 to GD25).

When specifying the station No. from 100 to 115 on GT Designer3, the value of GD10 to GD25 compatible to the station No. specification will be the station No. of the indicating controller.

Specification station NO.	Compatible device	Setting range
100	GD10	0 to 94 For the setting other than the above, error (dedicated device is out of range) will occur.
101	GD11	
102	GD12	
103	GD13	
104	GD14	
105	GD15	
106	GD16	
107	GD17	
108	GD18	
109	GD19	
110	GD20	
111	GD21	
112	GD22	
113	GD23	
114	GD24	
115	GD25	

All station specification

Target station differs depending on write-in operation or read-out operation.

• For write-in operation, all station will be a target.

In the WORD BIT write-in operation, only the indicating controller whose station No. is the same as host address is applicable.

For details of host address setting, refer to the following.

☞ Page 1247 Setting communication interface (Communication settings)

• In the read-out operation, only the indicating controller whose station No. is the same as host address is applicable.

For details of host address setting, refer to the following.

☞ Page 1247 Setting communication interface (Communication settings)

22.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1
SHINKO equipment ([Shinko Technos Controller])

22.7 Precautions

Station number settings of indicating controller

In the system configuration, the indicating controller with the station number set with the host address must be included.
For details of host address setting, refer to the following.
☞ Page 1247 Setting communication interface (Communication settings)

GOT clock control

Since the indicating controller does not have a clock function, the settings of [time adjusting] or [time broad cast] by GOT clock control will be disabled.

When using the communication converter IF-400

When using the communication converter IF-400, some communication error may occur.
Set the number of retries to more than one time.

Disconnecting some of multiple connected equipment

The GOT can disconnect some of multiple connected equipment by setting GOT internal device.
For example, the faulty station where a communication timeout error occurs can be disconnected from connected equipment.
For details of GOT internal device setting, refer to the following manual.
📖GT Designer3 (GOT2000) Screen Design Manual

23 CHINO CONTROLLER

- Page 1253 Connectable Model List
- Page 1254 System Configuration
- Page 1270 Connection Diagram
- Page 1283 GOT Side Settings
- Page 1285 Controller Side Setting
- Page 1295 Settable Device Range
- Page 1295 Precautions

23.1 Connectable Model List

The following table shows the connectable models.

Series	Model name*1	Clock	Communication Type	Connectable GOT	Refer to
LT230 Series	LT230	×	RS-232	GT 2506 HS GT 2505 HS	☞ Page 1254 Connecting to LT230, LT300, LT400, LT830, DZ, DB series
LT300 Series	LT350	×	RS-232 RS-422		
	LT370				
LT400 Series	LT450	×			
	LT470				
LT830 Series	LT830	×	RS-232		
DZ Series	DZ1000 DZ2000	×	RS-232 RS-422		
DB Series	DB1000 DB2000	×			
KP Series	KP1000 KP2000	×	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 1259 Connecting to KP, AL3000, AH3000 series
AL3000 Series	AL3000	×			
AH3000 Series	AH3000	×			
SE3000 Series	SE3000	×	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 1263 Connecting to SE3000, JU, KE3000, LE5000 series
JU Series	JU	×	RS-422		
KE Series	KE3000	×			
LE5000 Series	LE5000	×			
GT120 Series	GT120	×	RS-232	GT 2506 HS GT 2505 HS	☞ Page 1267 Connecting to GT120 Series

*1 From the models of controller, select the detailed model name which supports each communication type.
For details of CHINO controller detailed model names, refer to the following catalog.
☞ Catalog of CHINO controllers

23.2 System Configuration

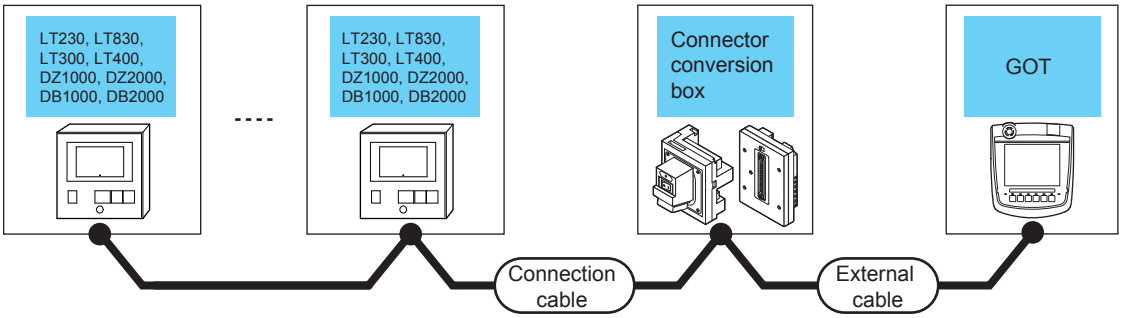
Connecting to LT230, LT300, LT400, LT830, DZ, DB series

Communication driver

CHINO MODBUS device

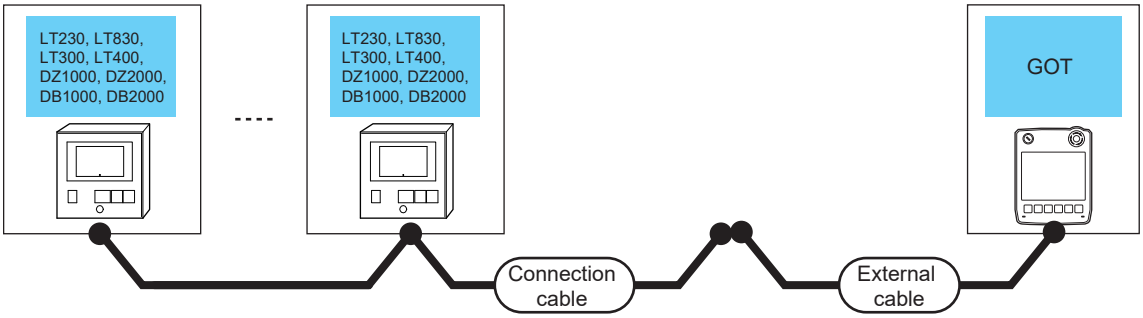
When connecting to controller

■When using the connector conversion box



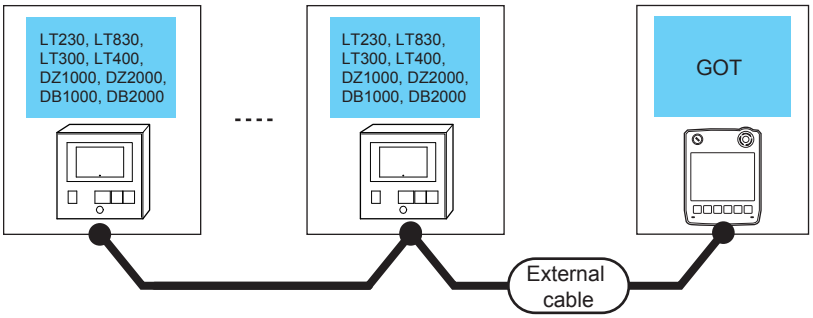
Indicating controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
LT300 LT400 DZ1000 DZ2000 DB1000 DB2000	RS-232	User preparing Page 1270 RS232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 controller for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	RS-422	User preparing Page 1274 RS422 connection diagram 2)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	31 controllers for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		10 controllers for 1 GOT
LT230 LT300 LT400 LT830 DZ1000 DZ2000 DB1000 DB2000	RS-485	User preparing Page 1280 RS485 connection diagram 6)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		31 controllers for 1 GOT

■When using the external cable (GT11H-C□□□-37P)



Indicating controller		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
LT300 LT400 DZ1000 DZ2000 DB1000 DB2000	RS-232	User preparing Page 1271 RS232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 controller for 1 GOT
	RS-422	User preparing Page 1275 RS422 connection diagram 3)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	10 controllers for 1 GOT

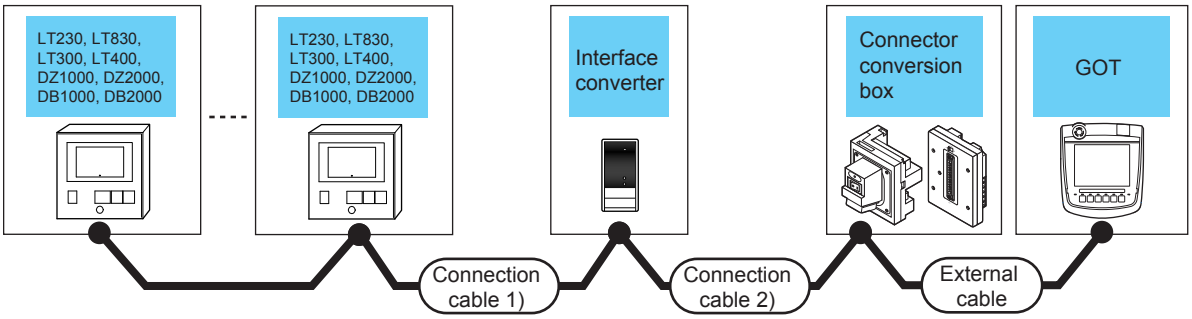
■When using the external cable (GT11H-C□□□)



Indicating controller		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
LT300 LT400 DZ1000 DZ2000 DB1000 DB2000	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1272 RS232 connection diagram 3)	GT 2505HS	6m	1 controller for 1 GOT
	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1276 RS422 connection diagram 4)	GT 2505HS	13m	10 controllers for 1 GOT

When connecting to converter

■When using the connector conversion box

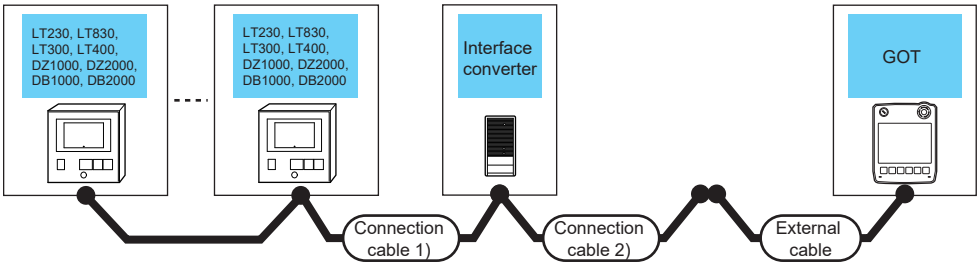


Indicating controller	Connection cable 1)		Converter*1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
LT300 LT400 DZ1000 DZ2000 DB1000 DB2000	User preparing Page 1273 RS422 connection diagram 1)	1200m	SC8-10	RS-232	User preparing Page 1270 RS232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	31 controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
LT230 LT300 LT400 LT830 DZ1000 DZ2000 DB1000 DB2000	User preparing Page 1278 RS485 connection diagram 1)					GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 The converter is a product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

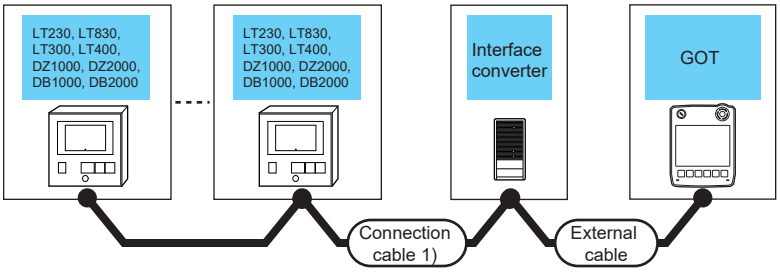


Indicating controller	Connection cable 1)		Converter*1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
LT300 LT400 DZ1000 DZ2000 DB1000 DB2000	User preparing Page 1273 RS422 connection diagram 1)	1200m	SC8-10	RS-232	User preparing Page 1271 RS232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	31 controllers for 1 GOT
LT230 LT300 LT400 LT830 DZ1000 DZ2000 DB1000 DB2000	User preparing Page 1278 RS485 connection diagram 1)					GT11H-C30-37P(3m)	GT 2505HS		

*1 The converter is a product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



Indicating controller	Connection cable 1)		Converter*1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
LT300 LT400 DZ1000 DZ2000 DB1000 DB2000	User preparing Page 1273 RS422 connection diagram 1)	1200m	SC8-10	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1272 RS232 connection diagram 3)	GT 2505HS	6m	31 controllers for 1 GOT
LT230 LT300 LT400 LT830 DZ1000 DZ2000 DB1000 DB2000	User preparing Page 1278 RS485 connection diagram 1)				GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1272 RS232 connection diagram 3)	GT 2505HS		

*1 The converter is a product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.

*2 The distance from the converter to the GOT (External cable)

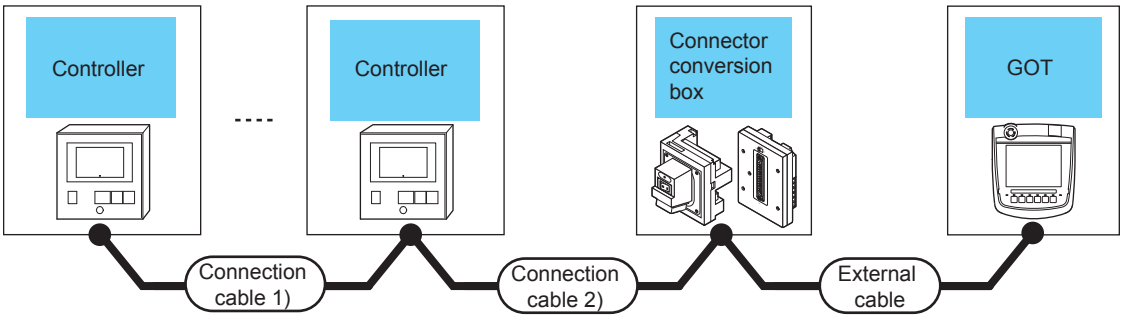
Connecting to KP, AL3000, AH3000 series

Communication driver

CHINO MODBUS device

When connecting to controller

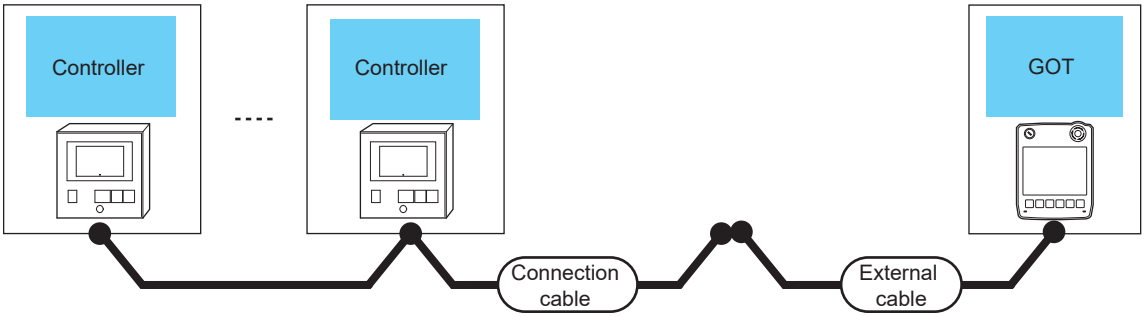
■When using the connector conversion box



Indicating controller		Connection cable 1)	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model*1 Connection diagram number	Cable model*1 Connection diagram number					
KP1000 KP2000 AL3000 AH3000	RS-232	-	RZ-CRS6□□ or User preparing Page 1270 RS232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 controller for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	RS-422	RZ-CRA1□□	User preparing Page 1274 RS422 connection diagram 2)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	31 controllers for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
		User preparing Page 1274 RS422 connection diagram 2)		GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		10 controllers for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
	RS-485	User preparing Page 1280 RS485 connection diagram 6)		GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		31 controllers for 1 GOT

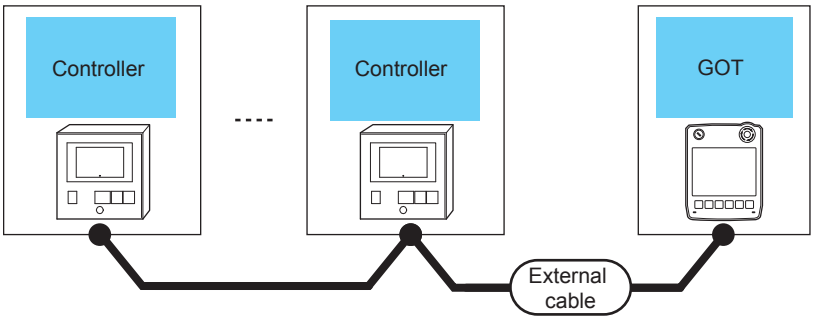
*1 Product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.

■When using the external cable (GT11H-C□□□-37P)



Indicating controller		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
KP1000 KP2000 AL3000 AH3000	RS-232	User preparing Page 1271 RS232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 controller for 1 GOT
	RS-422	User preparing Page 1275 RS422 connection diagram 3)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	10 controllers for 1 GOT

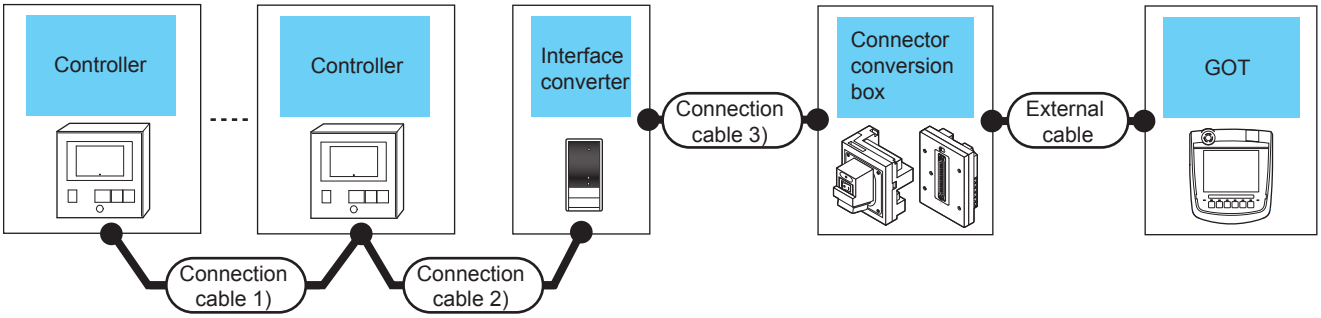
■When using the external cable (GT11H-C□□□)



Indicating controller		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
KP1000 KP2000 AL3000 AH3000	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1272 RS232 connection diagram 3)	GT 2505HS	6m	1 controller for 1 GOT
	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1276 RS422 connection diagram 4)	GT 2505HS	13m	10 controllers for 1 GOT

When connecting to converter

■When using the connector conversion box

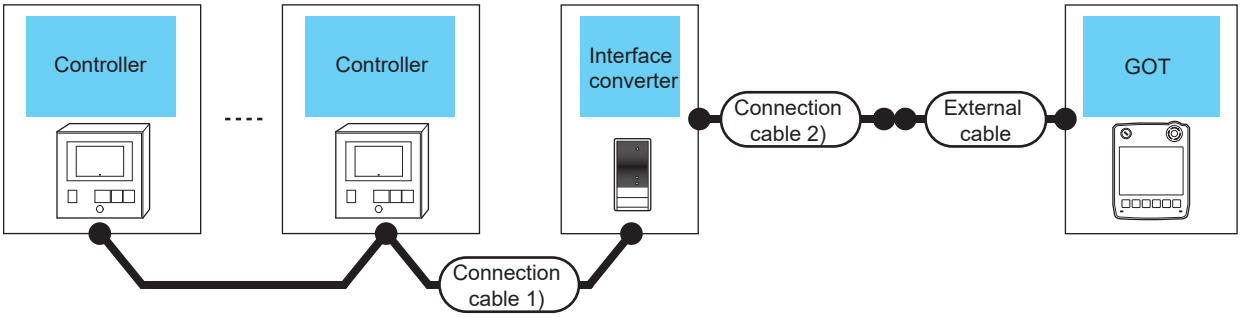


Indicating controller	Connection cable 1)	Connection cable 2)	Max. distance	Converter*1		Connection cable 3)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model*1 Connection diagram number	Cable model*1 Connection diagram number		Model name	Communication Type	Cable model Connection diagram number					
KP1000 KP2000 AL3000 AH3000	RZ-CRA1□□ or User preparing Page 1273 RS422 connection diagram 1)	RZ-CRA2□□ or User preparing Page 1273 RS422 connection diagram 1)	1200m	SC8-10	RS-232	RZ-CRS6□ or User preparing Page 1270 RS232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	31 controllers for 1 GOT
							GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	RZ-LEC□□□ or User preparing Page 1278 RS485 connection diagram 1)	RZ-LEC□□□ (only KP1000, KP2000) RZ-LED□□□ (only AL3000, AH3000) or User preparing Page 1278 RS485 connection diagram 1)				RZ-CRS6□ or User preparing Page 1270 RS232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
							GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.

*2 The distance from the GOT to the PLC (Connection cable 3) + External cable)

■When using the external cable (GT11H-C□□□-37P)

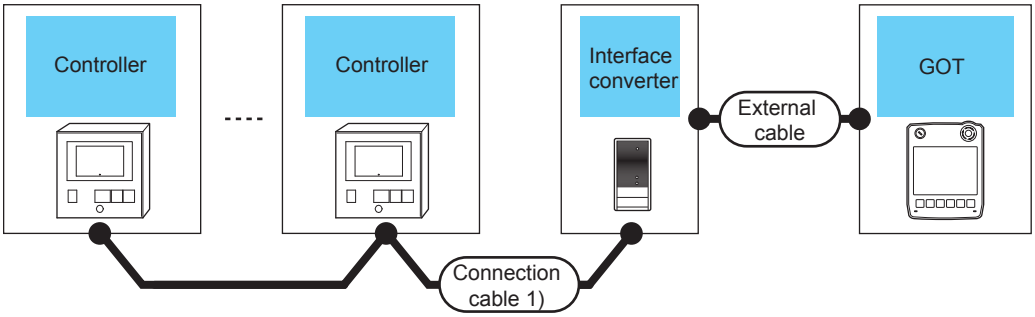


Indicating controller	Connection cable 1)	Max. distance	Converter*1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model*1 Connection diagram number		Model name	Communication Type	Cable model Connection diagram number				
KP1000 KP2000 AL3000 AH3000	User preparing Page 1273 RS422 connection diagram 1)	1200m	SC8-10	RS-232	User preparing Page 1271 RS232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	31 controllers for 1 GOT
	User preparing Page 1278 RS485 connection diagram 1)					GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.

*2 The distance from the GOT to the PLC (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



Indicating controller	Connection cable 1)	Max. distance	Converter*1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model*1 Connection diagram number		Model name	Communication Type				
KP1000 KP2000 AL3000 AH3000	User preparing Page 1273 RS422 connection diagram 1)	1200m	SC8-10	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1272 RS232 connection diagram 3)	GT 2505HS	6m	31 controllers for 1 GOT
	User preparing Page 1278 RS485 connection diagram 1)				GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1272 RS232 connection diagram 3)	GT 2505HS		

*1 Product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.

*2 The distance from the GOT to the PLC (External cable)

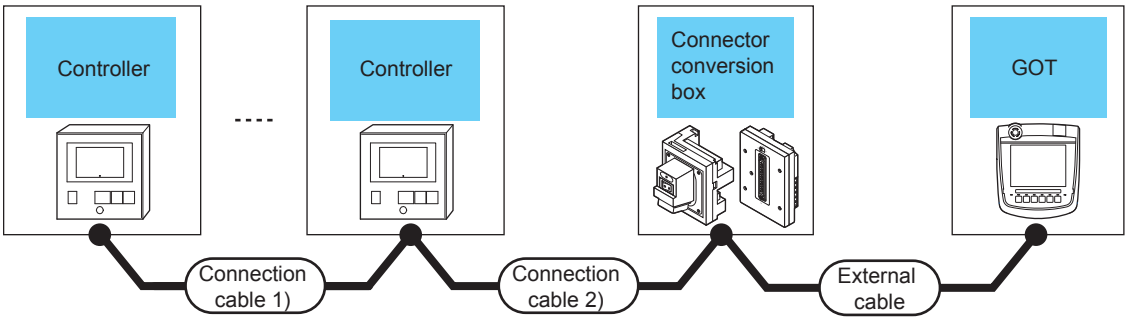
Connecting to SE3000, JU, KE3000, LE5000 series

Communication driver

CHINO MODBUS device

When connecting to controller

■When using the connector conversion box

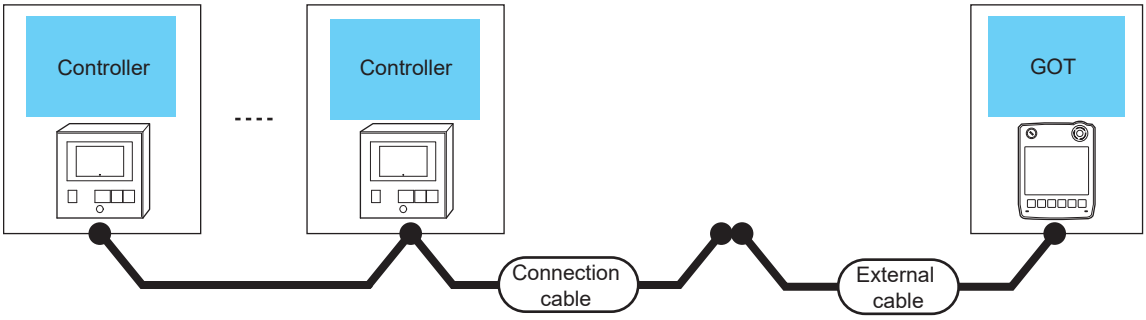


Indicating controller		Connection cable 1)	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model*1 Connection diagram number	Cable model*1 Connection diagram number					
SE3000	RS-232	--	RZ-CRS6□□ or (User preparing) Page 1270 RS232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 controller for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
SE3000 JU KE3000 LE5000	RS-422	RZ-CRA1□□*2	(User preparing) Page 1274 RS422 connection diagram 2)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	31 controllers for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		10 controllers for 1 GOT
		(User preparing) Page 1274 RS422 connection diagram 2)		GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		31 controllers for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		10 controllers for 1 GOT
	RS-485	(User preparing) Page 1281 RS485 connection diagram 7)		GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		31 controllers for 1 GOT

*1 Product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.

*2 RZ-CRA1□□ and RZ-LEC□□□ can be used in SE3000, JU or LE5000 series only.

■When using the external cable (GT11H-C□□□-37P)

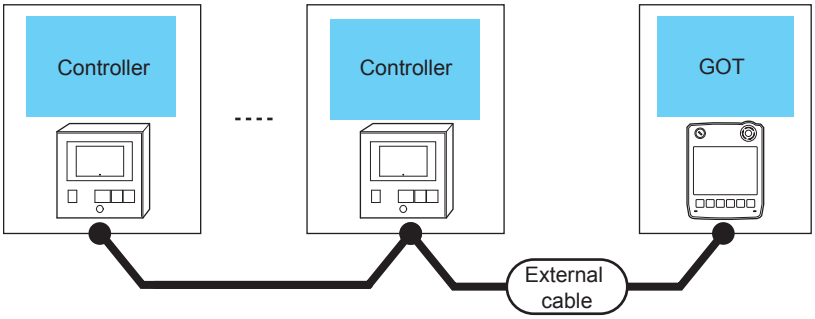


Indicating controller		Connection cable	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Communication Type	Cable model*1 Connection diagram number				
SE3000 JU KE3000 LE5000	RS-232	User preparing Page 1271 RS232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 controller for 1 GOT
	RS-422	User preparing Page 1275 RS422 connection diagram 3)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	10 controllers for 1 GOT

*1 Product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.

*2 The distance from the GOT to the PLC (Connection cable + External cable)

■When using the external cable (GT11H-C□□□)

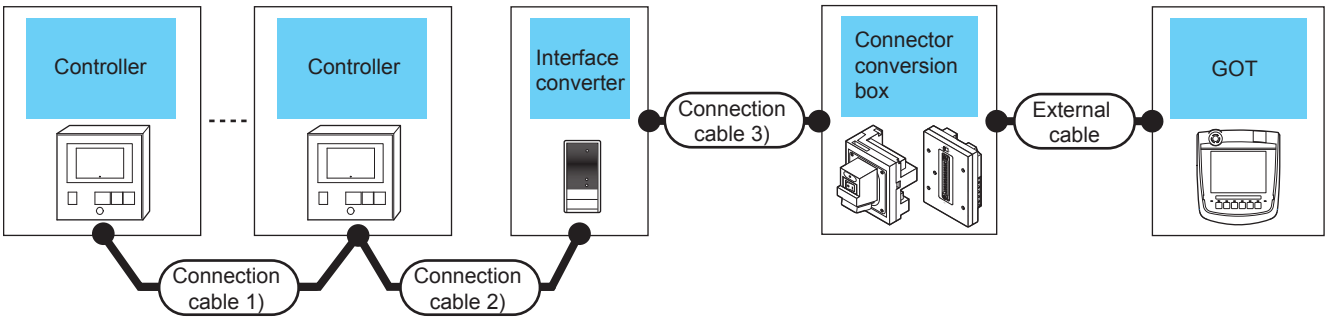


Indicating controller		External cable	GOT Model	Total distance *1	Number of connectable equipment
Model name	Communication Type				
SE3000 JU KE3000 LE5000	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1272 RS232 connection diagram 3)	GT 2505HS	6m	1 controller for 1 GOT
	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1276 RS422 connection diagram 4)	GT 2505HS	13m	10 controllers for 1 GOT

*1 The distance from the GOT to the PLC (External cable)

When connecting to converter

■When using the connector conversion box



Indicating controller	Connection cable 1)	Connection cable 2)	Max. distance	Converter*1		Connection cable 3)	Connector conversion box	External cable	GOT Model	Total distance *4	Number of connectable equipment
Model name	Cable model*1 Connection diagram number	Cable model*1 Connection diagram number		Model name	Communication Type	Cable model Connection diagram number					
SE3000 JU KE3000 LE5000	RZ-CRA1□□*2 or User preparing Page 1273 RS422 connection diagram 1)	RZ-CRA2□□*2 or User preparing Page 1273 RS422 connection diagram 1)	1200m	SC8-10	RS-232	RZ-CRS6□ or User preparing Page 1270 RS232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	31 controllers for 1 GOT
							GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	RZ-LEC□□□ (only SE3000, JU, LE5000) or RZ-CSS1Z2*3 or User preparing Page 1279 RS485 connection diagram 5)	RZ-LEC□□□ (only JU, LE5000) RZ-LED□□□ (only SE3000) or User preparing Page 1279 RS485 connection diagram 5)				RZ-CRS6□ or User preparing Page 1270 RS232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
							GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

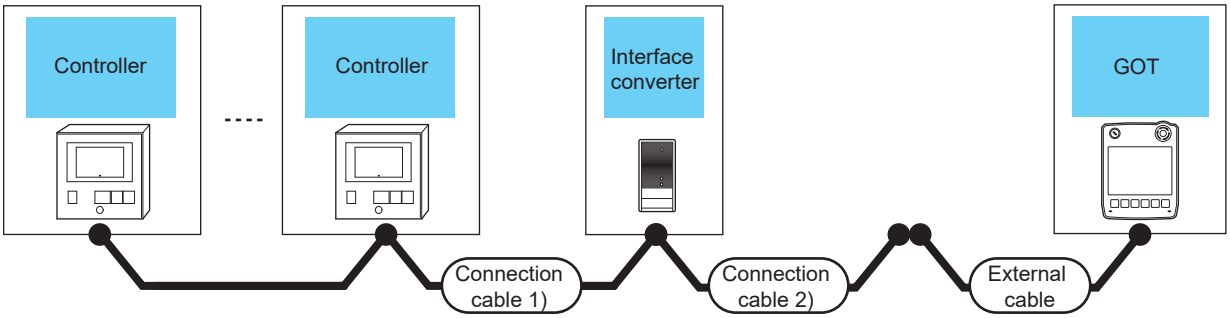
*1 Product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.

*2 RZ-CRA1□□ and RZ-CRA2□□ can be used in SE3000, JU or LE5000 series only.

*3 RZ-CSS1Z2 can be used in JU series only.

*4 The distance from the GOT to the PLC (Connection cable 3) + External cable)

■When using the external cable (GT11H-C□□□-37P)

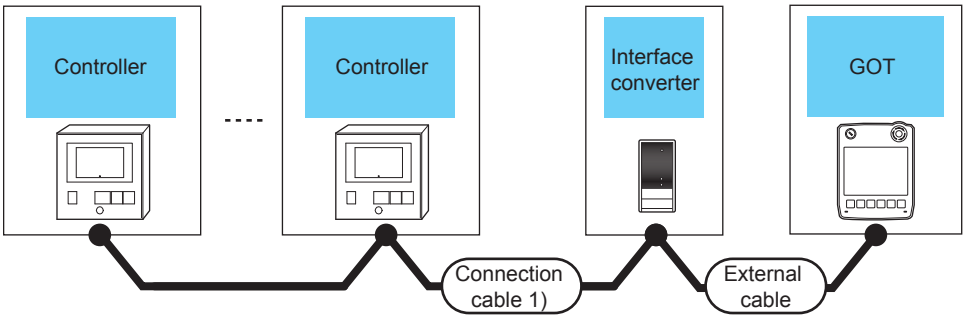


Indicating controller	Connection cable 1)	Max. distance	Converter*1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model*1 Connection diagram number		Model name	Communication Type	Cable model Connection diagram number				
SE3000 JU KE3000 LE5000	User preparing Page 1273 RS422 connection diagram 1)	1200m	SC8-10	RS-232	User preparing Page 1271 RS232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	31 controllers for 1 GOT
	User preparing Page 1279 RS485 connection diagram 5)				User preparing Page 1271 RS232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.

*2 The distance from the GOT to the PLC (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



Indicating controller	Connection cable 1)	Max. distance	Converter*1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model*1 Connection diagram number		Model name	Communication Type				
SE3000 JU KE3000 LE5000	User preparing Page 1273 RS422 connection diagram 1)	1200m	SC8-10	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1272 RS232 connection diagram 3)	GT 2505HS	6m	31 controllers for 1 GOT
	User preparing Page 1279 RS485 connection diagram 5)				GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1272 RS232 connection diagram 3)	GT 2505HS		

*1 Product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.

*2 The distance from the GOT to the PLC (External cable)

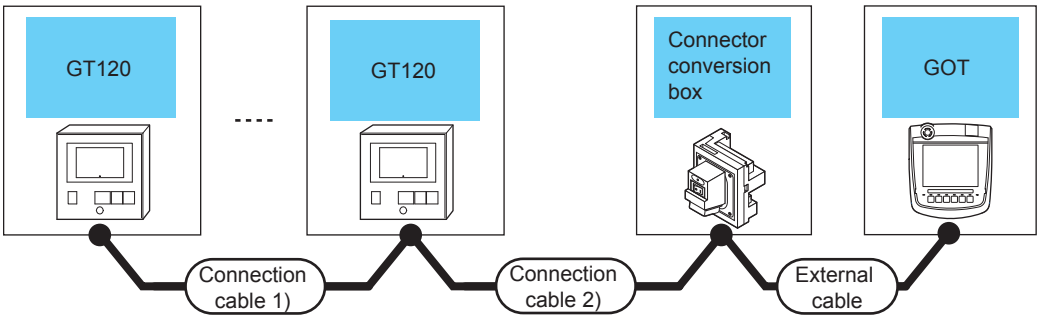
Connecting to GT120 Series

Communication driver

CHINO MODBUS device

When connecting to controller

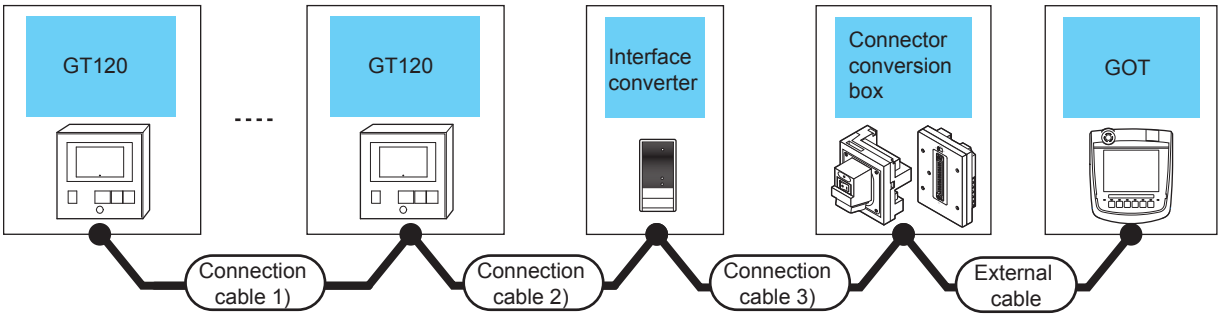
■When using the connector conversion box



Indicating controller		Connection cable 1)	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number					
GT120	RS-485	GT8-CDD(60mm) or User preparing Page 1278 RS485 connection diagram 2)	User preparing Page 1279 RS485 connection diagram 3)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	31 controllers for 1 GOT

When connecting to converter

■When using the connector conversion box

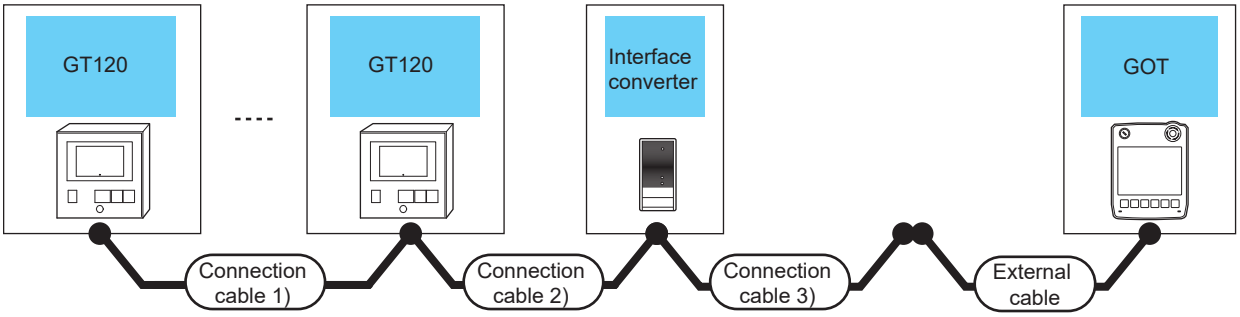


Indicating controller	Connection cable 1)	Connection cable 2)	Max. distance	Converter*1		Connection cable 3)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Cable model Connection diagram number		Model name	Communication Type	Cable model Connection diagram number					
GT120	GT8-CDD(60mm) or User preparing Page 1278 RS485 connection diagram 2)	GT8-CDM(3m) or User preparing Page 1279 RS485 connection diagram 4)	1200m	SC8-10	RS-232	User preparing Page 1270 RS232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	31 controllers for 1 GOT
							GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 The converter is a product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.

*2 The distance from the GOT to the PLC (Connection cable 3) + External cable)

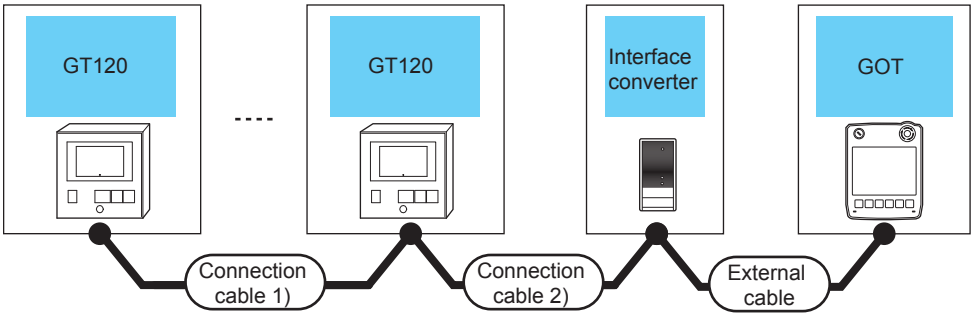
■When using the external cable (GT11H-C□□□-37P)



Indicating controller	Connection cable 1)	Connection cable 2)	Max. distance	Converter*1		Connection cable 3)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Cable model Connection diagram number		Model name	Communication Type	Cable model Connection diagram number				
GT120	GT8-CDD(60mm) or User preparing Page 1278 RS485 connection diagram 2)	GT8-CDM(3m) or User preparing Page 1279 RS485 connection diagram 4)	1200m	SC8-10	RS-232	User preparing Page 1270 RS232 connection diagram 1)	GT11H-C30-37P(3m)	GT 2505HS	6m	31 controllers for 1 GOT

*1 The converter is a product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.
*2 The distance from the GOT to the PLC (Connection cable 3) + External cable)

■When using the external cable (GT11H-C□□□)



Indicating controller	Connection cable 1)	Connection cable 2)	Max. distance	Converter*1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Cable model Connection diagram number		Model name	Communication Type				
GT120	GT8-CDD(60mm) or User preparing Page 1278 RS485 connection diagram 2)	GT8-CDM(3m) or User preparing Page 1279 RS485 connection diagram 4)	1200m	SC8-10	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1272 RS232 connection diagram 3)	GT 2505HS	6m	31 controllers for 1 GOT

*1 The converter is a product manufactured by CHINO corporation.
For details of the product, contact CHINO corporation.
*2 The distance from the GOT to the PLC (External cable)

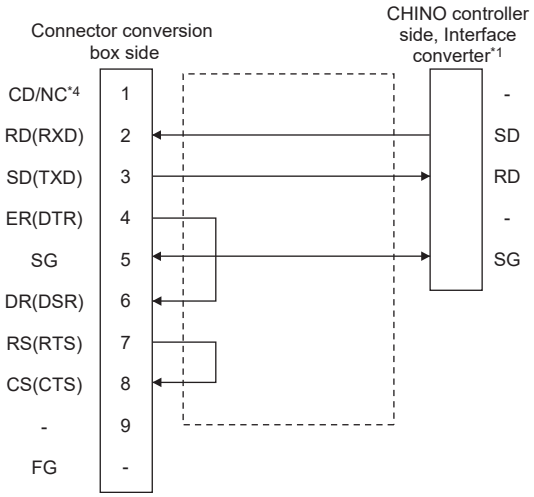
23.3 Connection Diagram

The following diagram shows the connection between the GOT and the controller.

RS-232 cable

Connection diagram

■RS232 connection diagram 1)



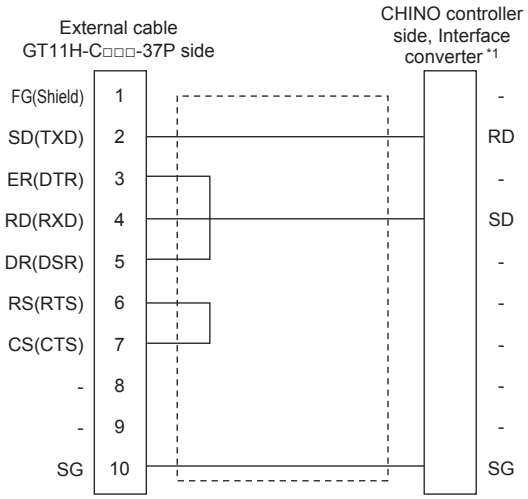
*1 Terminal number of the controller and the converter differ depending on the model.
Refer to the following table.

Signal name	Controller					Converter
	LT300	LT400	DZ1000, DZ2000	DB1000	DB2000	SC8-10
	Terminal No.	Terminal No.	Terminal No.	Terminal No.	Terminal No.	Terminal No.
SD	11	11	19	13	27	2
RD	13	13	21	12	26	1
SG	15	15	23	14	28	3

Signal name	Controller				
	KP1000	KP2000		SE3000	AL3000 AH3000
	Terminal No.	Terminal No.*2		Terminal name	Terminal name
		R*3, B*3, C*3, D*3	B*3, E*3		
SD	13	27	30	SD	SD
RD	12	26	29	RD	RD
SG	14	28	31	SG	SG

*2 For KP2000 series, the terminal No. differs according to the model.
*3 This indicates the symbols of the position 10) (third zone) of the following models.
Model: KP2 4) 5) 6) 7) 8) 9) 10) – 12) 13) 14)
For the symbol B, two terminal numbers are available. Select as necessary.
*4 GT2506HS-V: CD, GT2505HS-V: NC

■RS232 connection diagram 2)



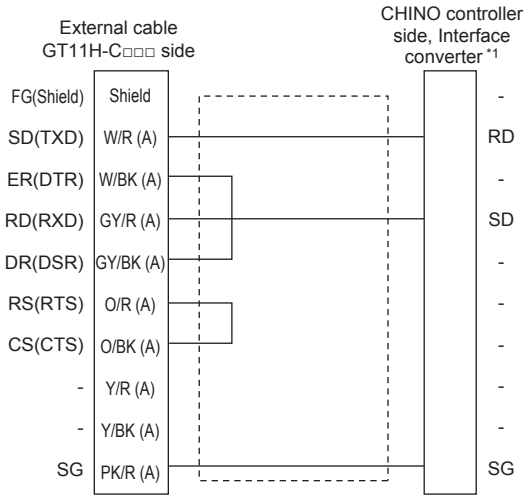
*1 Terminal number of the controller and the converter differ depending on the model.
Refer to the following table.

Signal name	Controller					Converter
	LT300	LT400	DZ1000, DZ2000	DB1000	DB2000	SC8-10
	Terminal No.	Terminal No.	Terminal No.	Terminal No.	Terminal No.	Terminal No.
SD	11	11	19	13	27	2
RD	13	13	21	12	26	1
SG	15	15	23	14	28	3

Signal name	Controller				
	KP1000	KP2000		SE3000	AL3000 AH3000
	Terminal No.	Terminal No.*2		Terminal name	Terminal name
		R*3, B*3, C*3, D*3	B*3, E*3		
SD	13	27	30	SD	SD
RD	12	26	29	RD	RD
SG	14	28	31	SG	SG

*2 For KP2000 series, the terminal No. differs according to the model.
*3 This indicates the symbols of the position 10) (third zone) of the following models.
Model: KP2 4) 5) 6) 7) 8) 9) 10) – 12) 13) 14)
For the symbol B, two terminal numbers are available.
Select as necessary.

■RS232 connection diagram 3)



*1 Terminal number of the controller and the converter differ depending on the model.
Refer to the following table.

Signal name	Controller					Converter
	LT300	LT400	DZ1000, DZ2000	DB1000	DB2000	SC8-10
	Terminal No.	Terminal No.	Terminal No.	Terminal No.	Terminal No.	Terminal No.
SD	11	11	19	13	27	2
RD	13	13	21	12	26	1
SG	15	15	23	14	28	3

Signal name	Controller				
	KP1000	KP2000		SE3000	AL3000 AH3000
	Terminal No.	Terminal No.*2		Terminal name	Terminal name
		R*3, B*3, C*3, D*3	B*3, E*3		
SD	13	27	30	SD	SD
RD	12	26	29	RD	RD
SG	14	28	31	SG	SG

*2 For KP2000 series, the terminal No. differs according to the model.
*3 This indicates the symbols of the position 10) (third zone) of the following models.
Model: KP2 4) 5) 6) 7) 8) 9) 10) – 12) 13) 14)
For the symbol B, two terminal numbers are available.
Select as necessary.

Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■CHINO controller side connector

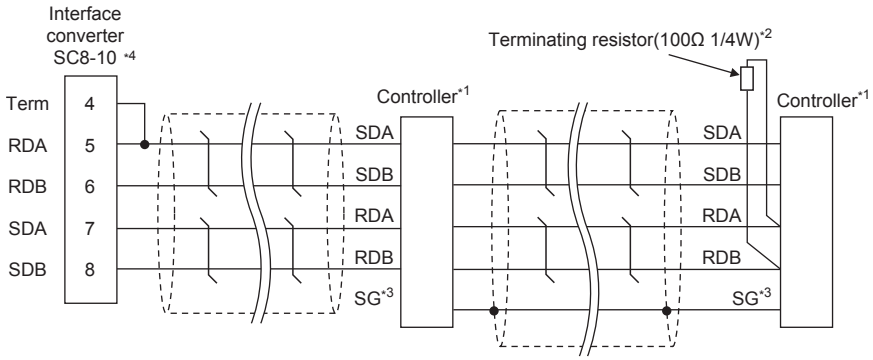
Use the connector compatible with the CHINO controller side module.

For details, refer to the user's manual of the CHINO controller.

RS-422 cable

Connection diagram

■RS422 connection diagram 1)



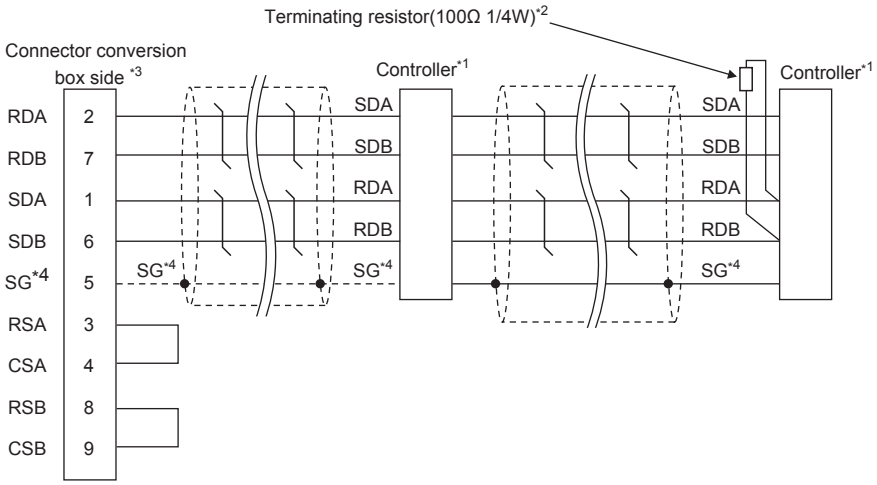
*1 Pin No. of controller differs depending on the model.
Refer to the following table.

Signal name	Controller type				
	LT300	LT400	DZ1000, DZ2000	DB1000	DB2000
	Terminal No.	Terminal No.	Terminal No.	Terminal No.	Terminal No.
SDA	11	11	19	14	28
SDB	12	12	20	15	29
RDA	13	13	21	12	26
RDB	14	14	22	13	27
SG	15	15	23	16	30

Signal name	Controller type							
	KP1000	KP2000		SE3000	AL3000 AH3000	JU	KE3000	LE5000
	Terminal No.	Terminal No.*5		Terminal name	Terminal name	Terminal No.	Terminal name	Terminal name
		A*6	C*6, F*6					
SDA	14	28	31	SDA	SDA	1	SDA	SDA
SDB	15	29	32	SDB	SDB	2	SDB	SDB
RDA	12	26	29	RDA	RDA	3	RDA	RDA
RDB	13	27	30	RDB	RDB	4	RDB	RDB
SG	16	30	28	SG	SG	5	SG	SG

*2 Terminating resistor should be provided for a controller which will be a terminal.
*3 Do not connect SG of the controller and SG of the converter.
*4 Set the Communication Type switch of the converter to RS-422.
*5 For KP2000 series, the terminal No. differs according to the model.
*6 This indicates the symbols of the position 10) (third zone) of the following models.
Model: KP2 4) 5) 6) 7) 8) 9) 10) – 12) 13) 14)

■RS422 connection diagram 2)



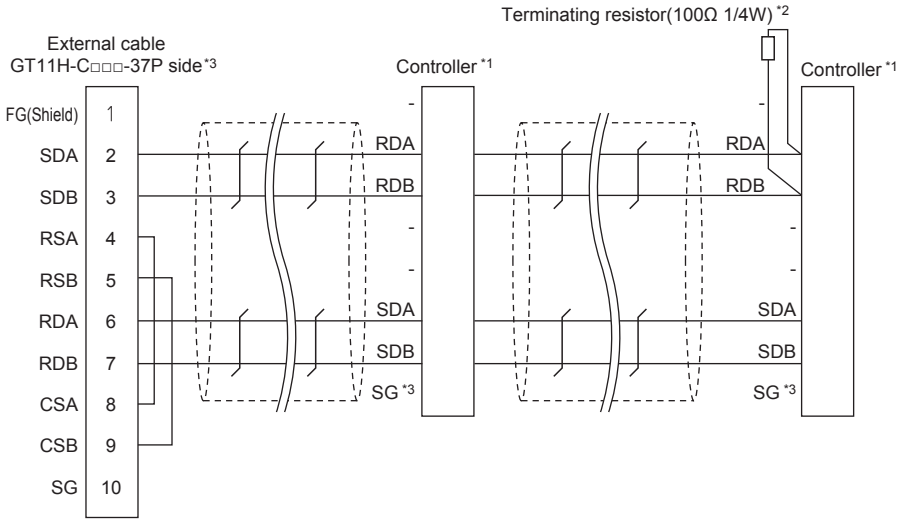
*1 Pin No. of controller differs depending on the model.
Refer to the following table.

Signal name	Controller type				
	LT300	LT400	DZ1000, DZ2000	DB1000	DB2000
	Terminal No.	Terminal No.	Terminal No.	Terminal No.	Terminal No.
SDA	11	11	19	14	28
SDB	12	12	20	15	29
RDA	13	13	21	12	26
RDB	14	14	22	13	27
SG	15	15	23	16	30

Signal name	Controller type							
	KP1000	KP2000		SE3000	AL3000 AH3000	JU	KE3000	LE5000
	Terminal No.	Terminal No.*5		Terminal name	Terminal name	Terminal No.	Terminal name	Terminal name
		A*6	C*6, F*6					
SDA	14	28	31	SDA	SDA	1	SDA	SDA
SDB	15	29	32	SDB	SDB	2	SDB	SDB
RDA	12	26	29	RDA	RDA	3	RDA	RDA
RDB	13	27	30	RDB	RDB	4	RDB	RDB
SG	16	30	28	SG	SG	5	SG	SG

*2 Terminating resistor should be provided for a controller which will be a terminal.
*3 Set the terminating resistor of GOT side.
☞ Page 1277 Connecting terminating resistors
*4 When connecting to DB1000 or DB200 Series, connect SG of the controller and SG of the GOT.
*5 For KP2000 series, the terminal No. differs according to the model.
*6 This indicates the symbols of the position 10) (third zone) of the following models.
Model: KP2 4) 5) 6) 7) 8) 9) 10) – 12) 13) 14)

■RS422 connection diagram 3)



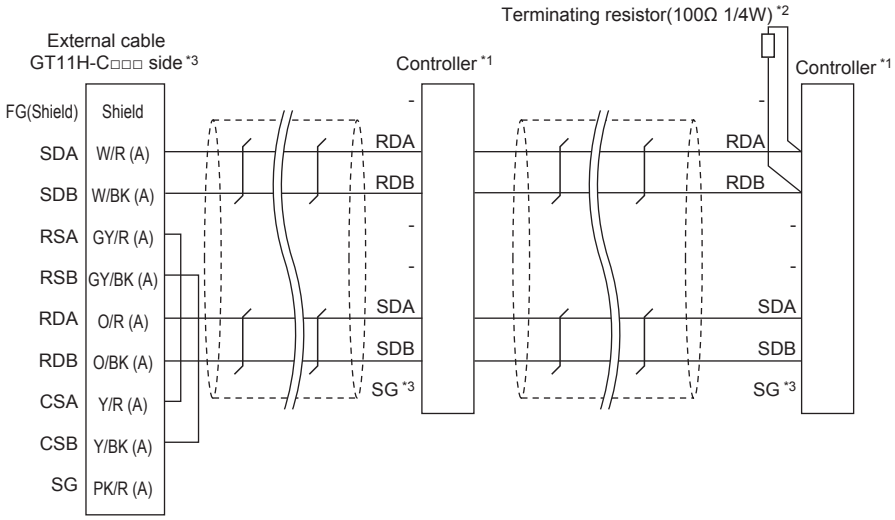
*1 Pin No. of controller differs depending on the model.
Refer to the following table.

Signal name	Controller type				
	LT300	LT400	DZ1000, DZ2000	DB1000	DB2000
	Terminal No.	Terminal No.	Terminal No.	Terminal No.	Terminal No.
SDA	11	11	19	14	28
SDB	12	12	20	15	29
RDA	13	13	21	12	26
RDB	14	14	22	13	27
SG	15	15	23	16	30

Signal name	Controller type							
	KP1000	KP2000		SE3000	AL3000 AH3000	JU	KE3000	LE5000
	Terminal No.	Terminal No.*4		Terminal name	Terminal name	Terminal No.	Terminal name	Terminal name
		A*5	C*5, F*5					
SDA	14	28	31	SDA	SDA	1	SDA	SDA
SDB	15	29	32	SDB	SDB	2	SDB	SDB
RDA	12	26	29	RDA	RDA	3	RDA	RDA
RDB	13	27	30	RDB	RDB	4	RDB	RDB
SG	16	30	28	SG	SG	5	SG	SG

*2 Terminating resistor should be provided for a controller which will be a terminal.
*3 When connecting to DB1000 or DB200 Series, connect SG of the controller and SG of the GOT.
*4 For KP2000 series, the terminal No. differs according to the model.
*5 This indicates the symbols of the position 10) (third zone) of the following models.
Model: KP2 4) 5) 6) 7) 8) 9) 10) – 12) 13) 14)

■RS422 connection diagram 4)



*1 Pin No. of controller differs depending on the model.
Refer to the following table.

Signal name	Controller type				
	LT300	LT400	DZ1000, DZ2000	DB1000	DB2000
	Terminal No.	Terminal No.	Terminal No.	Terminal No.	Terminal No.
SDA	11	11	19	14	28
SDB	12	12	20	15	29
RDA	13	13	21	12	26
RDB	14	14	22	13	27
SG	15	15	23	16	30

Signal name	Controller type							
	KP1000	KP2000		SE3000	AL3000 AH3000	JU	KE3000	LE5000
	Terminal No.	Terminal No.*4		Terminal name	Terminal name	Terminal No.	Terminal name	Terminal name
		A*5	C*5, F*5					
SDA	14	28	31	SDA	SDA	1	SDA	SDA
SDB	15	29	32	SDB	SDB	2	SDB	SDB
RDA	12	26	29	RDA	RDA	3	RDA	RDA
RDB	13	27	30	RDB	RDB	4	RDB	RDB
SG	16	30	28	SG	SG	5	SG	SG

*2 Terminating resistor should be provided for a controller which will be a terminal.
*3 When connecting to DB1000 or DB200 Series, connect SG of the controller and SG of the GOT.
*4 For KP2000 series, the terminal No. differs according to the model.
*5 This indicates the symbols of the position 10) (third zone) of the following models.
Model: KP2 4) 5) 6) 7) 8) 9) 10) – 12) 13) 14)

Precautions when preparing a cable

■Cable length

• The length of the RS-422 cable used for connecting the controller to the converter

The length of the RS-422 cable must be 1200 m or less.

• The length of the RS-422 cable used for connecting the controller to the GOT

The total distance (between GOT and the controller) of the RS-422 cable must be 13 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■CHINO controller side connector

Use the connector compatible with the CHINO controller side module.

For details, refer to the user's manual of the CHINO controller.

Connecting terminating resistors

■GOT side

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Enable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

■CHINO controller side

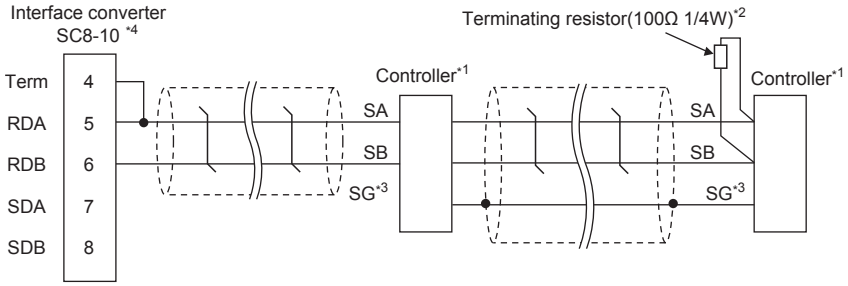
When connecting a CHINO controller to the GOT, a terminating resistor must be connected to the CHINO controller.

📖User's Manual of the CHINO controller

RS-485 cable

Connection diagram

■RS485 connection diagram 1)



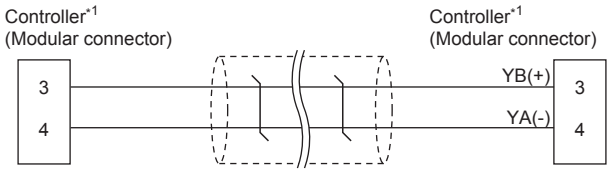
*1 Pin No. of controller differs depending on the model.
Refer to the following table.

Signal name	Controller type						
	LT230	LT300	LT400	LT830	DZ1000, DZ2000	DB1000	DB2000
	Terminal No.	Terminal No.	Terminal No.	Terminal No.	Terminal No.	Terminal No.	Terminal No.
SA	6	11	11	6	19	12	26
SB	7	12	12	7	20	13	27
SG	8	15	15	8	23	14	28

Signal name	Controller type			
	KP1000	KP2000		AL3000 AH3000
	Terminal No.	Terminal No.*5		Terminal name
		S*6, E*6, F*6, G*6	D*6, G*6	
SA	12	26	29	SA
SB	13	27	30	SB
SG	14	28	31	SG

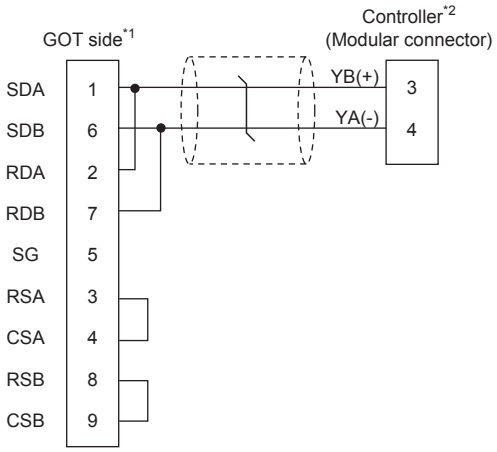
*2 Terminating resistor should be provided for a controller which will be a terminal.
*3 Do not connect SG of the controller and SG of the GOT.
*4 Set the Communication Type switch of the converter to RS-485.
*5 For KP2000 series, the terminal No. differs according to the model.
*6 This indicates the symbols of the position 10) (third zone) of the following models.
Model: KP2 4) 5) 6) 7) 8) 9) 10) – 12) 13) 14)
For the symbol G, two terminal numbers are available.
Select as necessary.

■RS485 connection diagram 2)



*1 For details of the pin assignment, refer to the following manual.
User's Manual of the CHINO controller

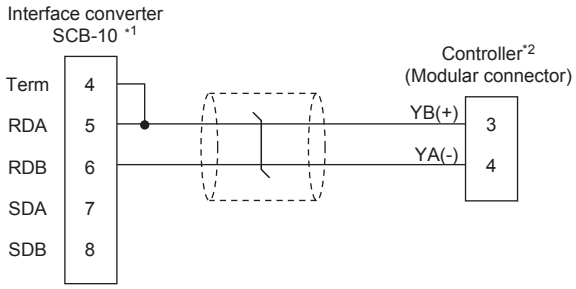
■RS485 connection diagram 3)



*1 Set the terminating resistor of GOT side.
☞ Page 1277 Connecting terminating resistors

*2 For details of the pin assignment, refer to the following manual.
User's Manual of the CHINO controller

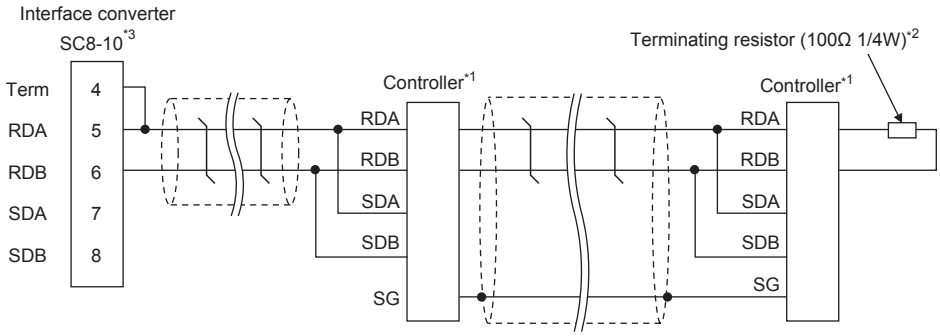
■RS485 connection diagram 4)



*1 Set the Communication Type switch of the converter to RS-485.

*2 For details of the pin assignment, refer to the following manual.
User's Manual of the CHINO controller

■RS485 connection diagram 5)



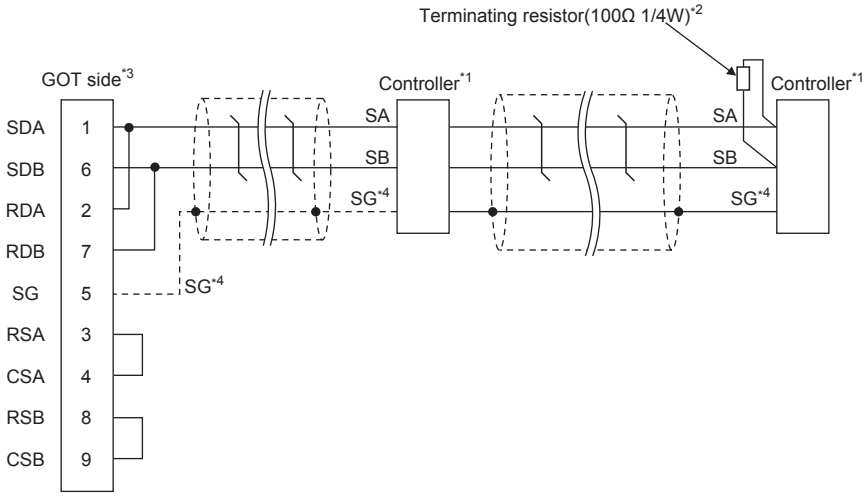
*1 Pin No. of controller differs depending on the model.
Refer to the following table.

*2 Terminating resistor should be provided for a controller which will be terminating resistors.

*3 Set the Communication Type switch of the converter to RS-485.

Signal name	Controller type			
	SE3000	JU	KE3000	LE5000
	Terminal name	Terminal No.	Terminal name	Terminal name
RDA	RDA	3	RDA	RDA
RDB	RDB	4	RDB	RDB
SDA	SDA	1	SDA	SDA
SDB	SDB	2	SDB	SDB
SG	SG	5	SG	SG

■RS485 connection diagram 6)



*1 Pin No. of controller differs depending on the model.
Refer to the following table.

*2 Terminating resistor should be provided for a controller which will be terminating resistors.

*3 Set the terminating resistor of The GOT side.
☞ Page 1277 Connecting terminating resistors

*4 When connecting to DB1000 or DB200 Series, connect SG of the controller and SG of the GOT.

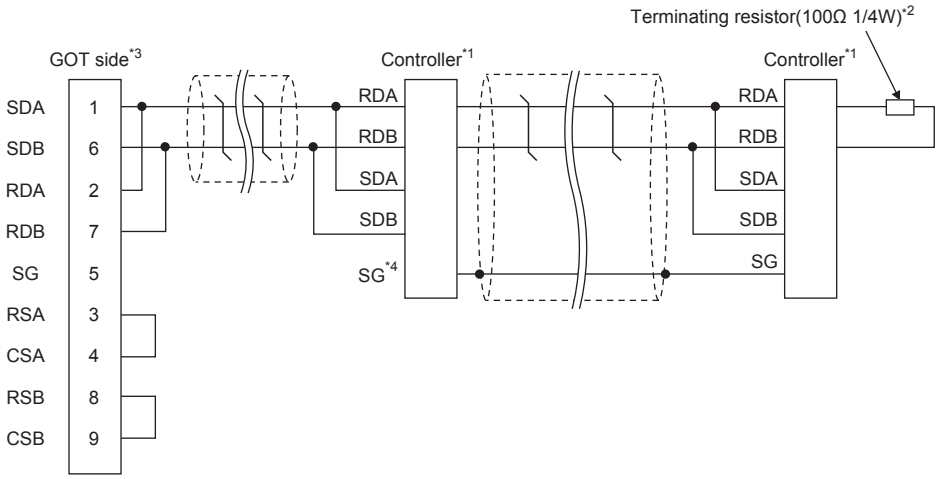
Signal name	Controller type						
	LT230	LT300	LT400	LT830	DZ1000, DZ2000	DB1000	DB2000
	Terminal No.	Terminal No.	Terminal No.	Terminal No.	Terminal No.	Terminal No.	Terminal No.
SA	6	11	11	6	19	12	26
SB	7	12	12	7	20	13	27
SG	8	15	15	8	23	14	28

Signal name	Controller type			
	KP1000	KP2000		AL3000 AH3000
	Terminal No.	Terminal No.*5		Terminal name
		S*6, E*6, F*6, G*6	D*6, G*6	
SA	12	26	29	SA
SB	13	27	30	SB
SG	14	28	31	SG

*5 For KP2000 series, the terminal No. differs according to the model.

*6 This indicates the symbols of the position 10) (third zone) of the following models.
Model: KP2 4) 5) 6) 7) 8) 9) 10) - 12) 13) 14)
For the symbol G, two terminal numbers are available.
Select as necessary.

■RS485 connection diagram 7)



*1 Pin No. of controller differs depending on the model.
Refer to the following table.

*2 Terminating resistor should be provided for a controller which will be terminating resistors.

*3 Set the terminating resistor of The GOT side.
☞ Page 1277 Connecting terminating resistors

*4 Do not connect SG of the controller and SG of the GOT.

Signal name	Controller type			
	SE3000	JU	KE3000	LE5000
	Terminal name	Terminal No.	Terminal name	Terminal name
RDA	RDA	3	RDA	RDA
RDB	RDB	4	RDB	RDB
SDA	SDA	1	SDA	SDA
SDB	SDB	2	SDB	SDB
SG	SG	5	SG	SG

Precautions when preparing a cable

■Cable length

• The length of the RS-485 cable used for connecting the controller to the converter

The length of the RS-485 cable must be 1200 m or less.

• The length of the RS-485 cable used for connecting the controller to the GOT

The total distance (between GOT and the controller) of the RS-485 cable must be 13 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■CHINO controller side connector

Use the connector compatible with the CHINO controller side module.

For details, refer to the user's manual of the CHINO controller.

Connecting terminating resistors

■GOT side

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Enable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

■CHINO controller side

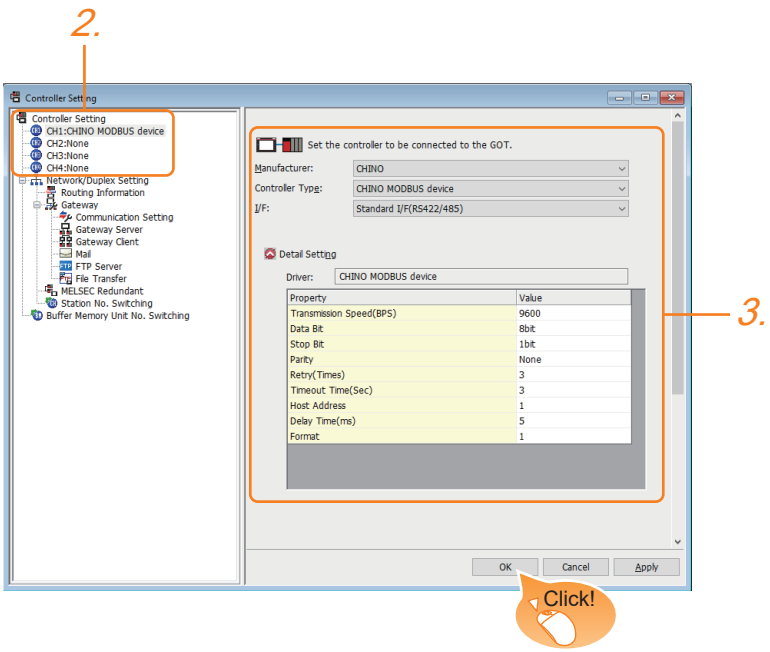
When connecting a CHINO controller to the GOT, a terminating resistor must be connected to the CHINO controller.

📖User's Manual of the CHINO controller

23.4 GOT Side Settings

Setting communication interface (Communication settings)

Set the channel of the equipment to be connected to the GOT.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [CHINO]
- [Controller Type]: [CHINO MODBUS device]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1284 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
Transmission Speed(BPS)	9600
Data Bit	8 bit
Stop Bit	1 bit
Parity	None
Retry(Times)	3
Timeout Time(Sec)	3
Host Address	1
Delay Time(ms)	5
Format	1

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 9600bps)	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bits)	7bits/8bits
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit/2bits
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: None)	None Even Odd
Retry	Set the number of retries to be performed when a communication error occurs. (Default: 3times)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 1sec)	1 to 30sec
Host Address	Specify the host address (station No. of the GOT to which the controller is connected) in the connected network. (Default: 1)	1 to 99
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 5ms)	0 to 300ms
Format	Select the communication format. (Default: 1) Format 1: Accessible to LT230/300/400/830, DZ1000/2000, Not accessible to GT120 Format 2: Accessible to GT120	1/2

Point

• Format

When connecting to GT120, specify format 2.

• Delay Time

When connecting to the following models, set the send delay time to 30ms or more.

Model name
DZ1000, DZ2000

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

23.5 Controller Side Setting

Point

• CHINO controller

For details of CHINO controller, refer to the following manual.

User's Manual of the CHINO controller

• Converter

For details on communication settings of the converter, refer to the following manual.

User's Manual for converter

Model name		Refer to
Controller	LT230, LT300	☞ Page 1285 Connecting to LT230, LT300 Series
	LT400, LT830	☞ Page 1286 Connecting to LT400, LT830 Series
	DZ1000, DZ2000	☞ Page 1286 Connecting to DZ1000, DZ2000 Series
	DB1000, DB2000	☞ Page 1287 Connecting to DB1000, DB2000 Series
	GT120	☞ Page 1287 Connecting to GT120 Series
	KP1000, KP2000	☞ Page 1288 Connecting to KP1000, KP2000
	AL3000, AH3000	☞ Page 1288 Connecting to AL3000, AH3000
	SE3000	☞ Page 1289 Connecting to SE3000
	JU	☞ Page 1290 Connecting to JU
	KE3000	☞ Page 1291 Connecting to KE3000
	LE5000	☞ Page 1292 Connecting to LE5000
Converter	SC8-10	☞ Page 1292 Connecting to converter SC8-10

Connecting to LT230, LT300 Series

Key Lock setting

To write the Digital and the Analog parameters, set the Key Lock setting to Lock 4.

Communication settings

Set the communication settings with controller key operation.

Item	Set value
Protocol	rtU: MODBUS RTU
Function	Com: Upper communication
Station No.*1	1 to 99
Transmission speed*2	9600bps, 19200bps
Character*2 (Bit length, Parity bit, Stop bit)	5: 8bit, None, 1bit 6: 8bit, None, 2bit 7: 8bit, Even, 1bit 8: 8bit, Even, 2bit 9: 8bit, Odd, 1bit 10: 8bit, Odd, 2bit

*1 Avoid duplication of the station No. with any of the other units.

*2 Adjust the settings with GOT settings.

Connecting to LT400, LT830 Series

Key Lock setting

To write the Digital and the Analog parameters, set thefollowing Key Lock setting

- LT400: Lock4
- LT830: Lock3

Communication settings

Set the communication settings with controller key operation.

Item	Set value
Protocol	rtU: MODBUS RTU
Function	Com: Upper communication
Station No.*1	1 to 99
Transmission speed*2	9600bps, 19200bps
Character*2 (Bit length, Parity bit, Stop bit)	8N1: 8bit, None, 1bit 8N2: 8bit, None, 2bit 8E1: 8bit, Even, 1bit 8E2: 8bit, Even, 2bit 8O1: 8bit, Odd, 1bit 8O2: 8bit, Odd, 2bit

*1 Avoid duplication of the station No. with any of the other units.
*2 Adjust the settings with GOT settings.

Connecting to DZ1000, DZ2000 Series

Key Lock setting

To write the Digital and the Analog parameters, set the Key Lock setting to Lock 2.

Communication settings

Set the communication settings with controller key operation.

Item	Set value
Protocol	rtU: MODBUS RTU
Function	Com: Upper communication
Station No.*1	1 to 31
Transmission speed*2	9600bps, 19200bps
Data bit	8bits (fixed)
Stop bit	1bit (fixed)
Parity bit	None (fixed)

*1 Avoid duplication of the station No. with any of the other units.
*2 Adjust the settings with GOT settings.

Connecting to DB1000, DB2000 Series

Communication settings

Set the communication settings with controller key operation.

Item	Set value
Protocol	MODBUS (RTU)
Function	Com: Upper communication
Station No.*1	01 to 99
Transmission speed*2	9600bps, 19200bps, 38400bps
Character	7BIT/EVEN/STOP1 7BIT/EVEN/STOP2 7BIT/ODD/STOP1 7BIT/ODD/STOP2 8BIT/NON/STOP1 8BIT/NON/STOP2 8BIT/EVEN/STOP1 8BIT/EVEN/STOP2 8BIT/ODD/STOP1 8BIT/ODD/STOP2

*1 Avoid duplication of the station No. with any of the other units.
*2 Adjust the settings with GOT settings.

Connecting to GT120 Series

Key Lock setting

To write the Digital and the Analog parameters, set the Key Lock setting to Lock 3.

Communication settings

Release the controller lock function in advance and set the following communication settings.

After completing the communication settings, set the Key Lock setting to Lock 3.

Item	Set value
Communication protocol	comr: MODBUS RTU
Station No.*1	1 to 95
Transmission speed*2	96: 9600bps 192: 19200bps
Data bit	8bits (fixed)
Stop bit*2	1bit, 2bits
Parity bit*2	nonE: None EVEn: Even odd: Odd

*1 Avoid duplication of the station No. with any of the other units.
*2 Adjust the settings with GOT settings.

Connecting to KP1000, KP2000

Key Lock setting

To write the Digital and the Analog parameters, set the Key Lock setting.

Communication settings

Set the communication settings with controller key operation.

Item	Set value
Protocol	MODBUS (RTU)
Function	COM
Station No.*1	1 to 99
Transmission speed*2	2400bps, 4800bps, 9600bps, 19200bps, 38400bps
Character*2 (Bit length, Parity bit, Stop bit)	8BIT/NON/STOP1 8BIT/NON/STOP2 8BIT/EVEN/STOP1 8BIT/EVEN/STOP2 8BIT/ODD/STOP1 8BIT/ODD/STOP2

*1 Avoid duplication of the station No. with any of the other units.
*2 Adjust the settings with GOT settings.

Connecting to AL3000, AH3000

Key Lock setting

To write the Digital and the Analog parameters, set the Key Lock setting.

Communication settings

Set the communication settings with controller key operation.

Item	Set value
Protocol	MODBUS
Transmission code	rtu
Communication type	RS232C, RS-422A, RS-485
Station No.*1	1 to 31
Transmission speed*2	2400bps, 4800bps, 9600bps, 19200bps
Character*2 (Bit length, Parity bit, Stop bit)	[8N1]: 8bit, None, 1bit [8N2]: 8bit, None, 2bit [8E1]: 8bit, Even, 1bit [8E2]: 8bit, Even, 2bit [8O1]: 8bit, Odd, 1bit [8O2]: 8bit, Odd, 2bit

*1 Avoid duplication of the station No. with any of the other units.
*2 Adjust the settings with GOT settings.

Connecting to SE3000

Key Lock setting

To write the Digital and the Analog parameters, set the Key Lock setting.

Communication settings

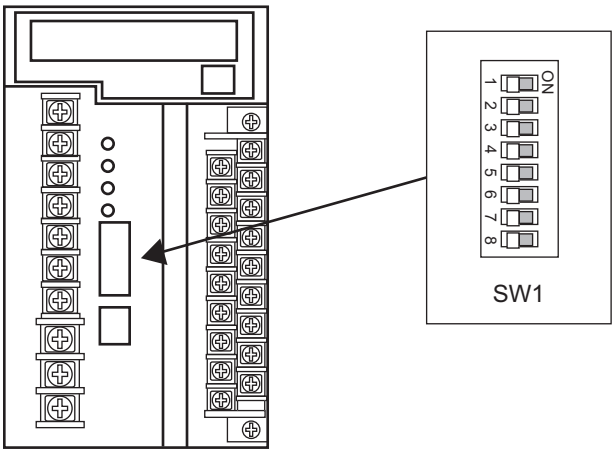
Make the communication settings using the engineering software package (PASS)

Item	Set value
Protocol	MODBUS RTU
Station No.*1*3	1 to 31
Transmission speed*2*3	9600bps, 19200bps
Data bit	8bits (fixed)
Parity bit*2	Even, Odd, Non
Stop bit*2	1bit, 2bits
Transmission code	Binary (fixed)
Error check	CRC-16 (fixed)

*1 Avoid duplication of the station No. with any of the other units.
*2 Adjust the settings with GOT settings.
*3 Station No. and Transmission speed can also be set by switch SW1.

Setting by Switch (SW1)

Station No. and Transmission speed can be set.



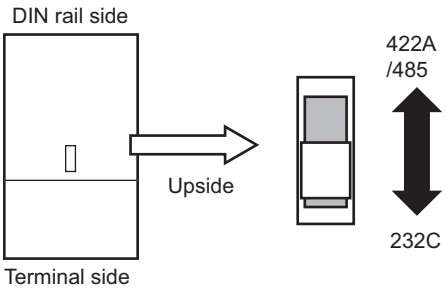
■Station No.

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	Station No.
OFF	OFF	OFF	OFF	OFF	1
ON	OFF	OFF	OFF	OFF	1
OFF	ON	OFF	OFF	OFF	2
ON	ON	OFF	OFF	OFF	3
:					
:					
ON	OFF	ON	ON	ON	29
OFF	ON	ON	ON	ON	30
ON	ON	ON	ON	ON	31

■Transmission speed

SW1-6	SW1-7	communication port	Transmission speed
OFF	OFF	Upper communication	9600bps
OFF	ON	Upper communication	19200bps
ON	OFF	ENG	-
ON	ON	User setting inhibited	

Setting by Switch (SW2)



SW2	
Front side (Terminal side)	Rear side (DIN rail side)
RS232C	RS422A/485

Connecting to JU

Key Lock setting

To write the Digital and the Analog parameters, set the Key Lock setting.

Communication settings

Set the communication settings with controller key operation.

Item	Set value
Protocol	rtU
Station No.*1	1 to 99
Transmission speed*2	9600bps, 19200bps
Character*2 (Bit length, Parity bit, Stop bit)	[8N1]: 8bit, None, 1bit [8N2]: 8bit, None, 2bit [8E1]: 8bit, Even, 1bit [8E2]: 8bit, Even, 2bit [8O1]: 8bit, Odd, 1bit [8O2]: 8bit, Odd, 2bit

*1 Avoid duplication of the station No. with any of the other units.
*2 Adjust the settings with GOT settings.

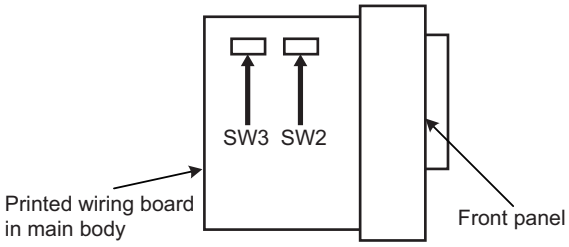
Connecting to KE3000

Key Lock setting

To write the Digital and the Analog parameters, set the Key Lock setting.

Communication settings

Make the communication settings by operating the switches SW2 and SW3 of the module.



■Setting by SW2

Item	Set value	SW2-2	SW2-3
Transmission code*2	MODBUS RTU	OFF	-
Transmission speed*1	9600bps	-	OFF
	19200bps	-	ON
Transmission character structure*2	8bits, None, 1bit (fixed)	-	-

*1 Adjust the settings with GOT settings.
*2 When the transmission code is MODBUS RTU, the setting of the transmission character structure is fixed.

■Setting by SW3

Set the station No. as follows.

SW3-4	SW3-5	SW3-6	SW3-7	SW3-8	Station No.*1
OFF	OFF	OFF	OFF	OFF	1
ON	OFF	OFF	OFF	OFF	1
OFF	ON	OFF	OFF	OFF	2
ON	ON	OFF	OFF	OFF	3
:					
:					
ON	OFF	ON	ON	ON	29
OFF	ON	ON	ON	ON	30
ON	ON	ON	ON	ON	31

*1 Avoid duplication of the station No. with any of the other units.

Connecting to LE5000

Key Lock setting

To write the Digital and the Analog parameters, set the Key Lock setting.

Communication settings

Set the communication settings with controller key operation.

Item	Set value
RTU/ASCII	RTU
Station No.*1	1 to 99
Transmission speed*2	9600bps, 19200bps
Character*2 (Bit length, Parity bit, Stop bit)	[8N1]: 8bit, None, 1bit [8N2]: 8bit, None, 2bit [8E1]: 8bit, Even, 1bit [8E2]: 8bit, Even, 2bit [8O1]: 8bit, Odd, 1bit [8O2]: 8bit, Odd, 2bit

*1 Avoid duplication of the station No. with any of the other units.
*2 Adjust the settings with GOT settings.

Connecting to converter SC8-10

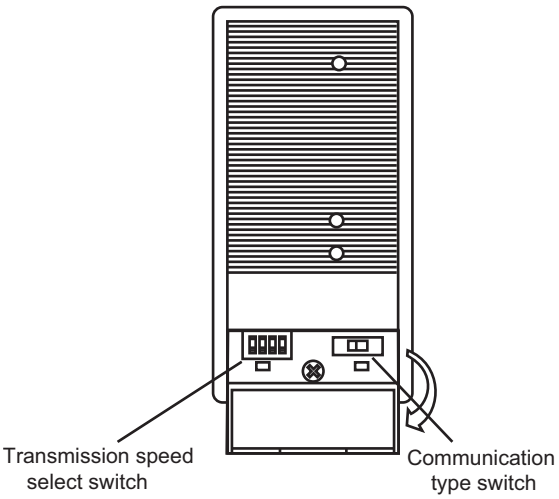
Communication settings

Make the communication settings using setting switches.

Item	Set value
Transmission speed select switch*1	9600bps, 19200bps
Communication type switch	RS-485, RS-422

*1 Adjust the settings with GOT and controller settings.

Settings by switch



■Transmission speed setting



Setting item	Set value	Switch No.			
		1	2	3	4
Transmission speed	9600bps	OFF	ON	OFF	OFF
	19200bps	OFF	OFF	ON	OFF

■Communication type setting



RS-485 ◄► RS-422A

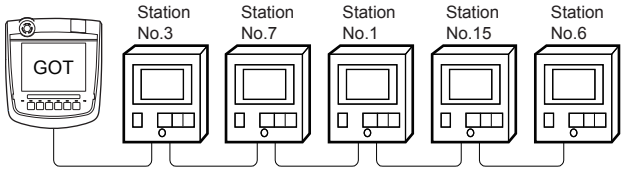
Setting item
RS-485/RS-422

Station number setting

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.



Examples of station number setting

Direct specification

When setting the device, specify the station number of the controller of which data is to be changed.

Model name	Specification range	Refer to
LT230, LT300, LT400, LT830	1 to 99	☞ Page 1285 Connecting to LT230, LT300 Series ☞ Page 1286 Connecting to LT400, LT830 Series
DZ1000, DZ2000	1 to 31	☞ Page 1286 Connecting to DZ1000, DZ2000 Series
DB1000, DB2000	1 to 99	☞ Page 1287 Connecting to DB1000, DB2000 Series
GT120	1 to 95	☞ Page 1287 Connecting to GT120 Series
KP1000, KP2000	1 to 99	☞ Page 1288 Connecting to KP1000, KP2000
AL3000, AH3000	1 to 31	☞ Page 1288 Connecting to AL3000, AH3000
SE3000	1 to 31	☞ Page 1289 Connecting to SE3000
JU	1 to 99	☞ Page 1290 Connecting to JU
KE3000	1 to 31	☞ Page 1291 Connecting to KE3000
LE5000	1 to 99	☞ Page 1292 Connecting to LE5000

Indirect specification

When setting the device, indirectly specify the station number of the controller of which data is to be changed using the 16-bit GOT internal data register (GD10 to GD25).

When specifying the station No. from 100 to 115 on GT Designer3, the value of GD10 to GD25 compatible to the station No. specification will be the station No. of the controller.

Specification station NO.	Compatible device	Setting range
100	GD10	1 to 99: LT230, LT300, LT400, LT830, DB1000, DB2000, KP1000, KP2000, JU, LE5000 1 to 31: DZ1000, DZ2000, AL3000, AH3000, KE3000, SE3000 1 to 95: GT120 For the setting other than the above, error (dedicated device is out of range) will occur.
101	GD11	
102	GD12	
103	GD13	
104	GD14	
105	GD15	
106	GD16	
107	GD17	
108	GD18	
109	GD19	
110	GD20	
111	GD21	
112	GD22	
113	GD23	
114	GD24	
115	GD25	

All station specification

Target station differs depending on write-in operation or read-out operation.

- For write-in operation, all station will be a target.
- For read-out operation, only one station will be a target.
- All station specification is not available for KE3000.

Do not use the all station specification for systems which include KE3000.

23.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

📖GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1

CHINO equipment ([CHINO MODBUS device])

23.7 Precautions

Station number settings of temperature controller

In the system configuration, the controller with the station number set with the host address must be included.

For details of host address setting, refer to the following.

☞ Page 1283 Setting communication interface (Communication settings)

GOT clock control

Since the controller does not have a clock function, the settings of [time adjusting] or [time broad cast] by GOT clock control will be disabled.

Disconnecting some of multiple connected equipment

The GOT can disconnect some of multiple connected equipment by setting GOT internal device.For example, the faulty station where a communication timeout error occurs can be disconnected from connected equipment.

For details of GOT internal device setting, refer to the following manual.

📖GT Designer3 (GOT2000) Screen Design Manual

MEMO

24 TOSHIBA PLC

- Page 1297 Connectable Model List
- Page 1298 Serial Connection
- Page 1312 Settable Device Range

24.1 Connectable Model List

The following table shows the connectable models.

Series	Model name	Clock	Communication Type	Connectable GOT	Refer to
PROSEC T Series	T2 (PU224)	○	RS-422	GT2506HS GT2505HS	☞ Page 1298 Connecting to PROSEC T series
	T3	○			
	T3H	○			
	T2E	○	RS-232 RS-422		
	T2N	○			
PROSEC V Series	model 2000(S2)	○	RS-422	GT2506HS GT2505HS	☞ Page 1300 Connecting to PROSEC V series
	model 2000(S2T)	○			
	model 2000(S2E)	○			
	model 3000 (S3)	○			

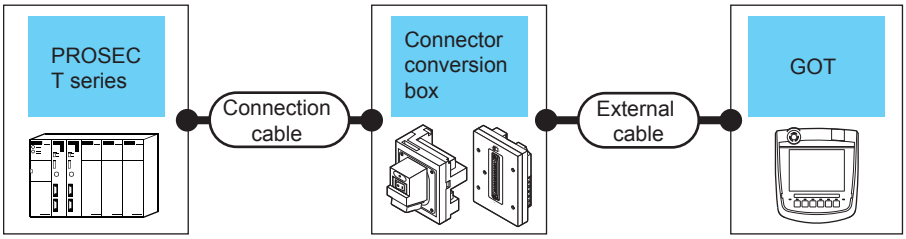
24.2 Serial Connection

Connecting to PROSEC T series

Communication driver

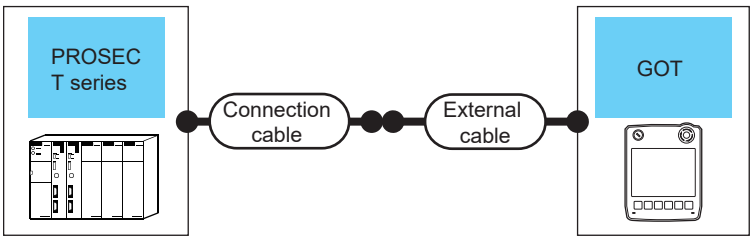
TOSHIBA PROSEC T/V

When using the connector conversion box



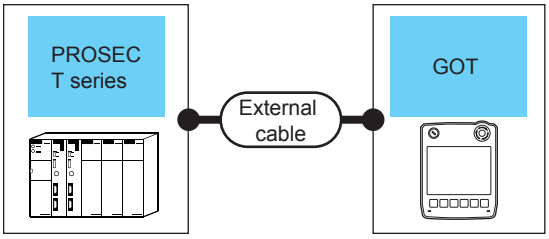
PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
T2 (PU224) T3 T3H	RS-422	GT09-C30R40501-15P(3m) GT09-C100R40501-15P(10m) or User preparing RS422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 PLC
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
T2E	RS-232	GT09-C30R40102-9P(3m) or User preparing RS232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	RS-422	GT09-C30R40502-6C(3m) GT09-C100R40502-6C(10m) or User preparing RS422 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
T2N	RS-232	GT09-C30R20502-15P(3m) or User preparing RS232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	RS-422	GT09-C30R40503-15P(3m) GT09-C100R40503-15P(10m) or User preparing RS422 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
T2 (PU224) T3 T3H	RS-422	User preparing RS422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for 1 PLC
T2E	RS-232	User preparing RS232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	
	RS-422	User preparing RS422 connection diagram 5)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	
T2N	RS-232	User preparing RS232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	
	RS-422	User preparing RS422 connection diagram 8)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

When using the external cable (GT11H-C□□□)



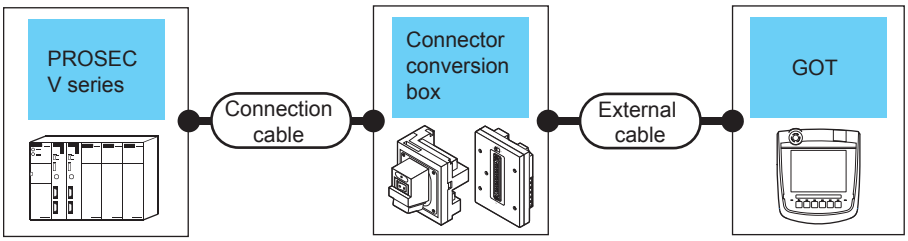
PLC		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
T2 (PU224) T3 T3H	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS422 connection diagram 3)	GT 2505HS	13m	1 GOT for 1 PLC
T2E	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS232 connection diagram 3)	GT 2505HS	6m	
	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS422 connection diagram 6)	GT 2505HS	13m	
T2N	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS232 connection diagram 6)	GT 2505HS	6m	
	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS422 connection diagram 9)	GT 2505HS	13m	

Connecting to PROSEC V series

Communication driver

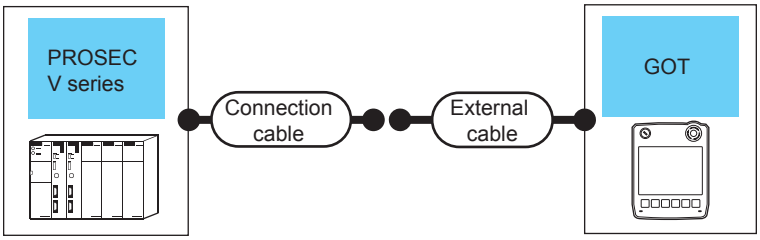
TOSHIBA PROSEC T/V

When using the connector conversion box



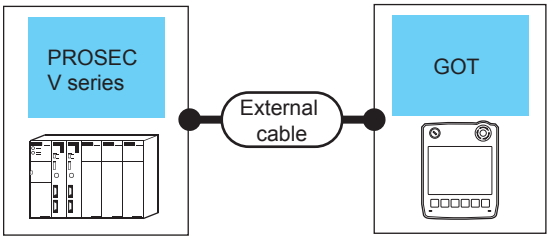
PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
model 2000 (S2) model 2000 (S2T) model 2000 (S2E)	RS-422	GT09-C30R40502-6C(3m) GT09-C100R40502-6C(10m) or User preparing RS422 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 PLC
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
model 3000 (S3)		GT09-C30R40501-15P(3m) GT09-C100R40501-15P(10m) or User preparing RS422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
model 2000 (S2) model 2000 (S2T) model 2000 (S2E)	RS-422	User preparing RS422 connection diagram 5)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for 1 PLC
model 3000 (S3)	RS-422	User preparing RS422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

When using the external cable (GT11H-C□□□)



PLC		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
model 2000 (S2) model 2000 (S2T) model 2000 (S2E)	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS422 connection diagram 6)	GT 2505HS	13m	1 GOT for 1 PLC
model 3000 (S3)	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS422 connection diagram 3)	GT 2505HS	13m	

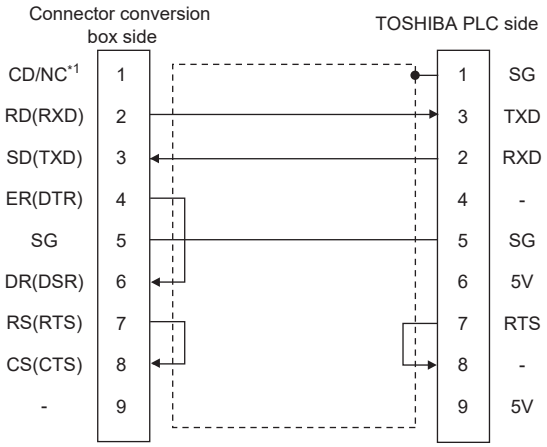
Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

RS-232 cable

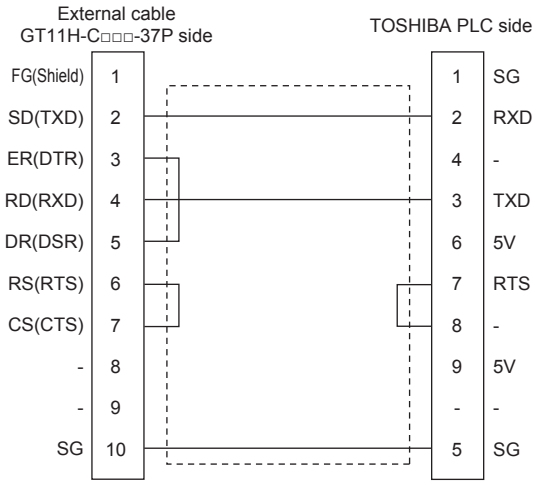
■Connection diagram

- RS232 connection diagram 1)

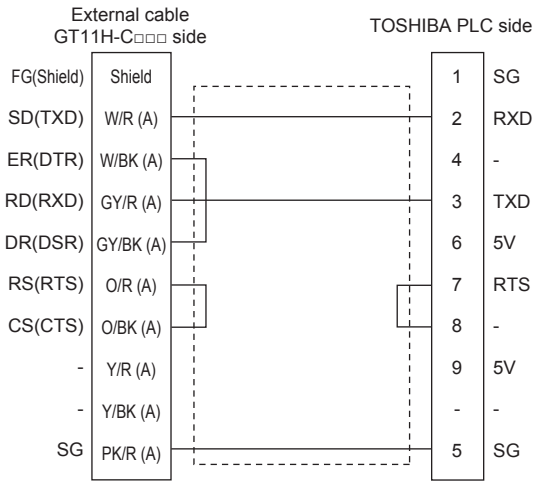


*1 GT2506HS-V: CD, GT2505HS-V: NC

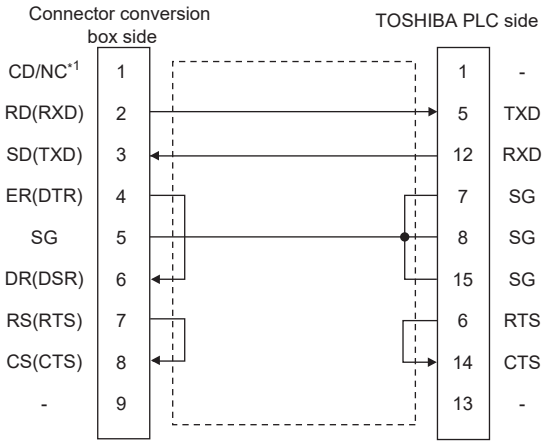
• RS232 connection diagram 2)



• RS232 connection diagram 3)

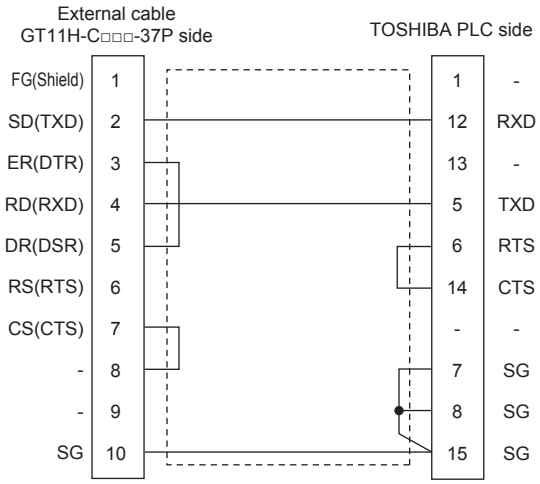


• RS232 connection diagram 4)

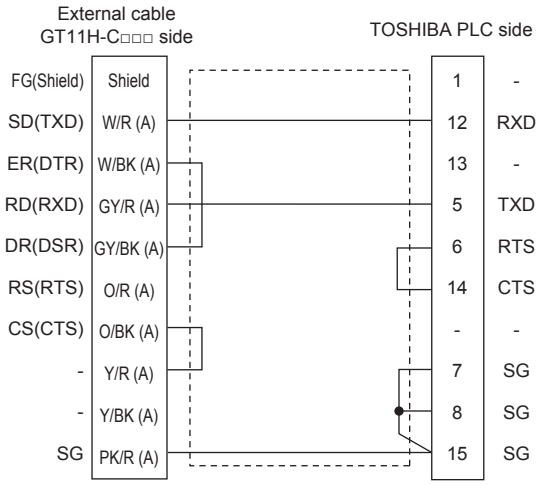


*1 GT2506HS-V: CD, GT2505HS-V: NC

• RS232 connection diagram 5)



• RS232 connection diagram 6)



■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

• TOSHIBA PLC side connector

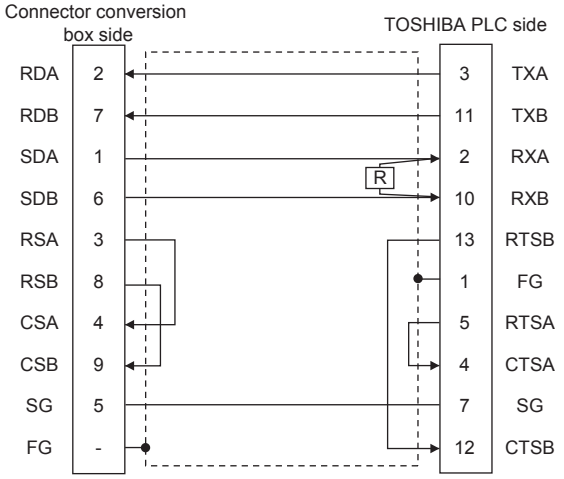
Use the connector compatible with the TOSHIBA PLC.

For details, refer to the TOSHIBA PLC user's manual.

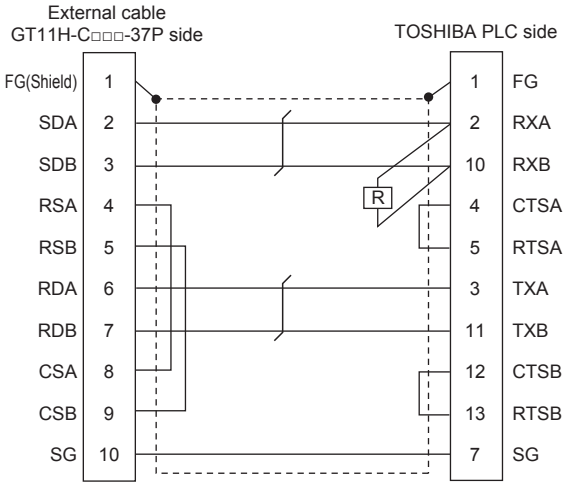
RS-422 cable

■Connection diagram

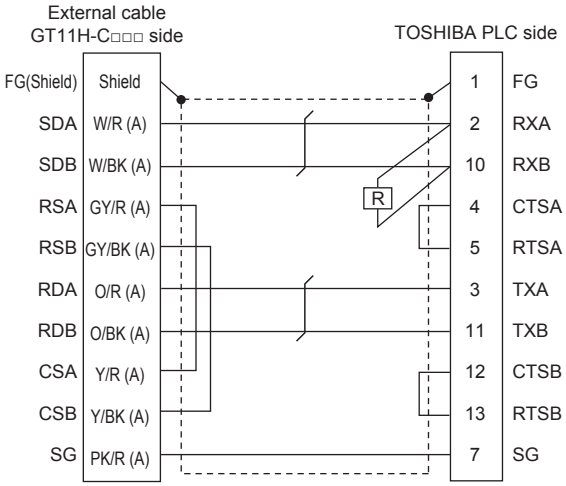
• RS422 connection diagram 1)



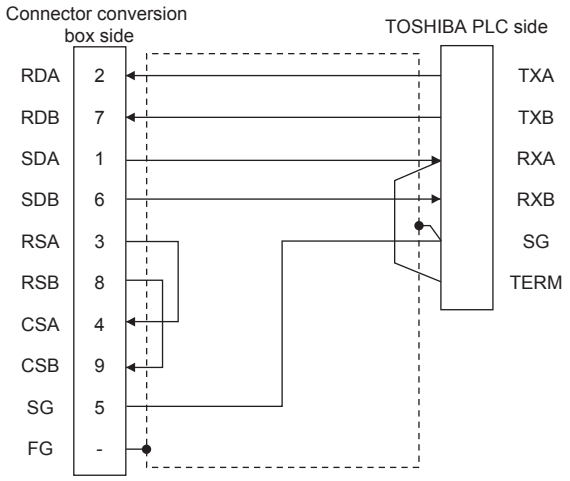
• RS422 connection diagram 2)



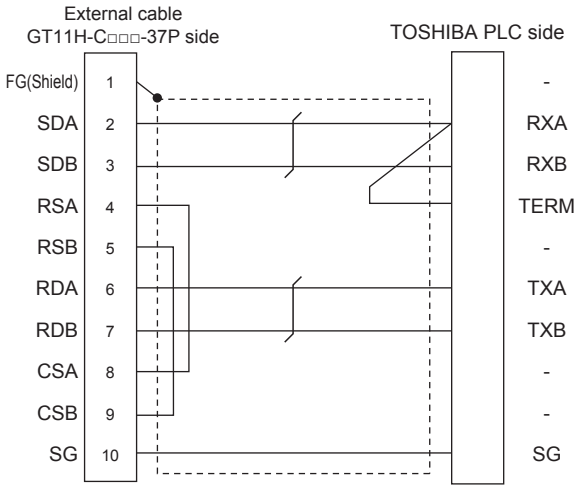
• RS422 connection diagram 3)



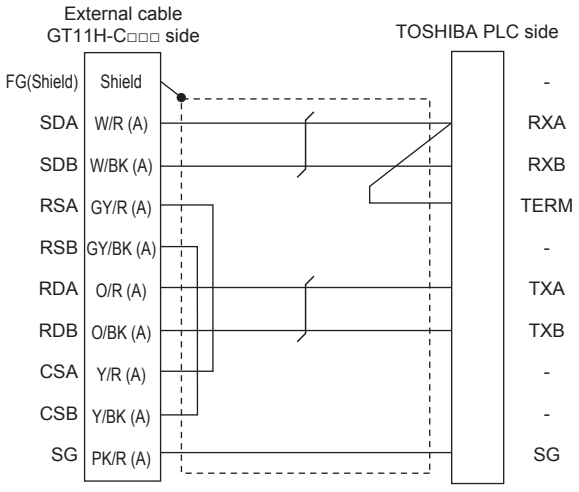
• RS422 connection diagram 4)



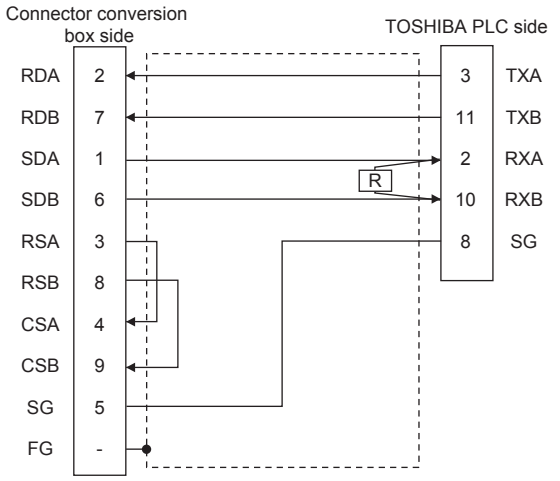
• RS422 connection diagram 5)



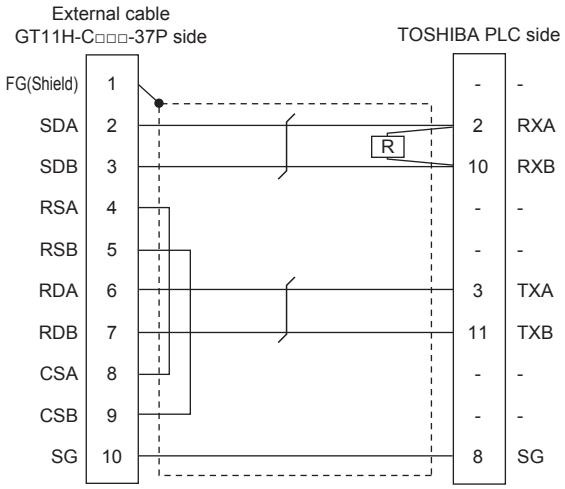
• RS422 connection diagram 6)



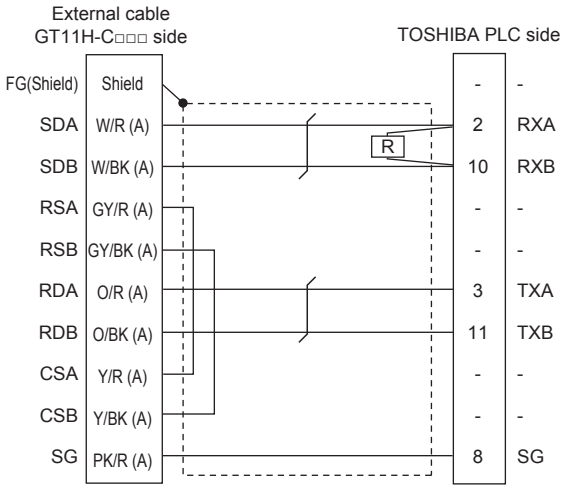
• RS422 connection diagram 7)



• RS422 connection diagram 8)



• RS422 connection diagram 9)



■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

• TOSHIBA PLC side connector

Use the connector compatible with the TOSHIBA PLC.

For details, refer to the TOSHIBA PLC user's manual.

■Setting terminating resistors

• GOT side

For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For details of terminating resistor settings, refer to the following.

☞ Page 91 Terminating resistors of GOT

• TOSHIBA PLC side

When connecting an TOSHIBA PLC to a GOT, a terminating resistor must be set to the TOSHIBA PLC.

For the setting of the terminating resistor, refer to the following manual.

📖TOSHIBA PLC user's Manual

T2 (PU224), T2N, T3, T3H, model 3000 (S3)

Connect the terminating resistor (1/2W-120Ω) across RXA and RXB.

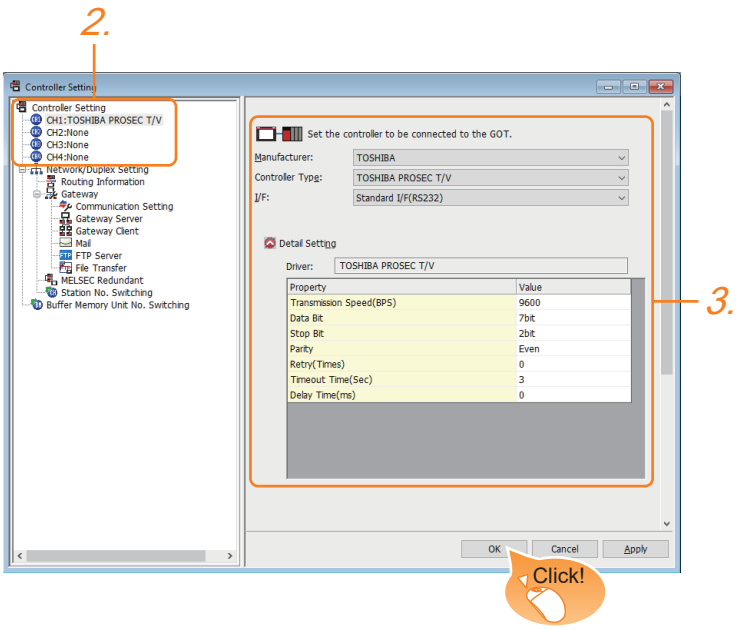
T2E, model 2000 (S2, S2T)

Short across the RXA and TERM terminals.

GOT Side Settings

Setting communication interface (Communication settings)

Set the channel of the equipment to be connected to the GOT.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [TOSHIBA]
- [Controller Type]: [TOSHIBA PROSEC T/V]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1309 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
Transmission Speed(BPS)	9600
Data Bit	7 bit
Stop Bit	2 bit
Parity	Even
Retry(Times)	0
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 9600bps)	4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 7bits)	7bit, 8bit
Stop Bit	Specify the stop bit length for communications. (Default: 2bit)	1bit, 2bit
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Even)	None, Even, Odd
Retry	Set the number of retries to be performed when a communication error occurs. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300 (ms)

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

PLC Side Setting

Point

TOSHIBA PLC

For details of the TOSHIBA PLC, refer to the following manual.

TOSHIBA PLC user's Manual

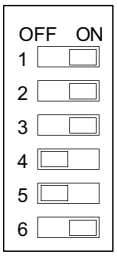
Model name		Refer to
PLC CPU	T2 (PU224), T2E, T2N	Page 1310 Connecting to T2 (PU224), T2E or T2N
	T3, T3H	Page 1311 Connecting to T3 or T3H
	model 2000 (S2, S2T, S2E), model 3000 (S3)	Page 1311 Connecting to model 2000 (S2, S2T, S2E), model 3000 (S3)

Connecting to T2 (PU224), T2E or T2N

■Switch setting

Set the switches accordingly.

- Operation mode setting switch



Switch No.	Settings	Setting details
4	OFF (fixed)	Computer link
5	OFF (fixed)	

- DIP switch on module PCB (T2N only)

Switch No.	Set value	
	For RS-232 communication	For RS-422 communication
DIP switch: No. 1	ON (RS-232C)	OFF (RS-485*1)

*1 Can be used as RS-422.

■Transmission parameter setting

Enter the transmission parameters.

Item	Set value
Transmission speed*1*2*3	4800bps, 9600bps, 19200bps
Data bit	7bit
Stop bit	2bit
Parity bit	Even
Station No.	1

*1 Indicates only the transmission speeds that can be set on the GOT side.

*2 Fixed to 9600bps for T2E only.

*3 The transmission speed setting must be consistent with that of the GOT side.
For the transmission speed setting on the GOT side, refer to the following.
Page 1308 Setting communication interface (Communication settings)

Connecting to T3 or T3H

Enter the transmission parameters.

Item	Set value
Transmission speed*1*2	4800bps, 9600bps, 19200bps
Data bit	7bit
Stop bit	2bit
Parity bit	Even
Station No.	1

*1 Indicates only the transmission speeds that can be set on the GOT side.
*2 The transmission speed setting must be consistent with that of the GOT side.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1308 Setting communication interface (Communication settings)

Connecting to model 2000 (S2, S2T, S2E), model 3000 (S3)

Enter the transmission parameters.

Item	Set value
Transmission method	RS485*1
RS485	COM1
Timeout time	5sec
Transmission speed*2*3	4800bps, 9600bps, 19200bps
Data bit	7bit
Stop bit	2bit
Parity bit	Even
Station No.	1

*1 Can be used as RS-422.
*2 Indicates only the transmission speeds that can be set on the GOT side.
*3 The transmission speed setting must be consistent with that of the GOT side.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1308 Setting communication interface (Communication settings)

24.3 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1
TOSHIBA equipment ([TOSHIBA PROSEC T/V])

25 SHIBAURA MACHINE PLC

- Page 1313 Connectable Model List
- Page 1314 System Configuration
- Page 1317 Connection Diagram
- Page 1320 GOT Side Settings
- Page 1322 PLC Side Setting
- Page 1322 Settable Device Range

25.1 Connectable Model List

The following table shows the connectable models.

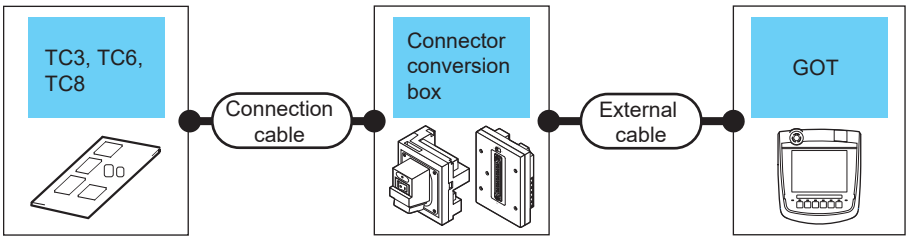
Series	Model name	Clock	Communication Type	Connectable GOT	Refer to
TCmini Series	TC3-01	○	RS-232	GT2506HS GT2505HS	☞ Page 1314 Connecting to TC3, TC6, TC8
	TC3-02	○			
	TC6-00	○			
	TC8-00	○			
Robot controller	TS2000	×	RS-232	GT2506HS GT2505HS	☞ Page 1316 Connecting to TS2000, TS2100
	TS2100	×			

25.2 System Configuration

Connecting to TC3, TC6, TC8

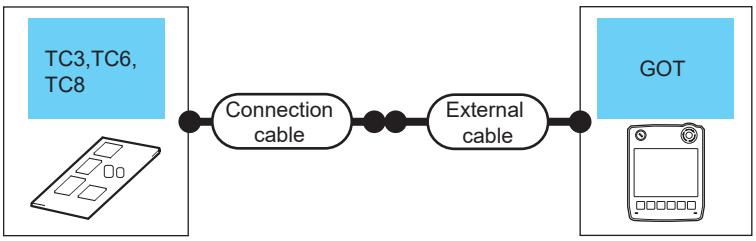
Communication driver
SHIBAURA MACHINE
TCmini

When using the connector conversion box



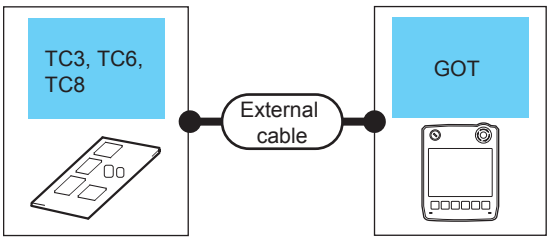
PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
TC3, TC6, TC8	RS-232	User preparing Page 1317 RS232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
TC3, TC6, TC8	RS-232	User preparing Page 1317 RS232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC

When using the external cable (GT11H-C□□□)

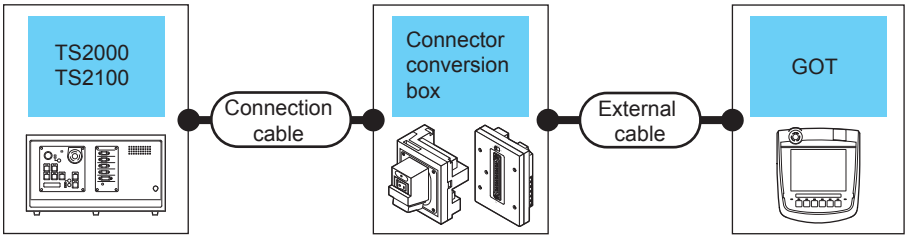


PLC		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
TC3, TC6, TC8	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1317 RS232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 PLC

Connecting to TS2000, TS2100

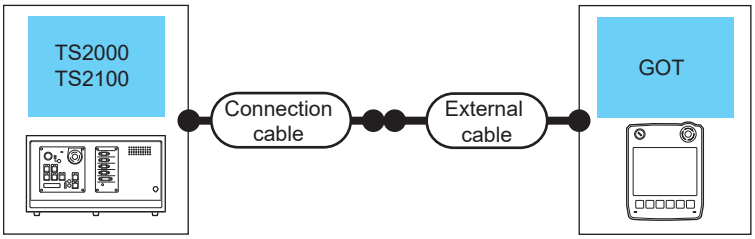
Communication driver
SHIBAURA MACHINE
TCmini

When using the connector conversion box



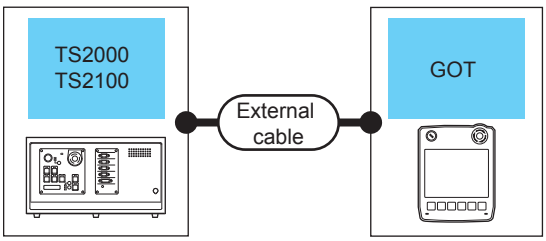
Robot controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
TS2000 TS2100 (POD port)	RS-232	User preparing Page 1318 RS232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 robot controller
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

When using the external cable (GT11H-C□□□-37P)



Robot controller		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
TS2000 TS2100 (POD port)	RS-232	User preparing Page 1318 RS232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 robot controller

When using the external cable (GT11H-C□□□)



Robot controller		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
TS2000 TS2100 (POD port)	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1318 RS232 connection diagram 6)	GT 2505HS	6m	1 GOT for 1 robot controller

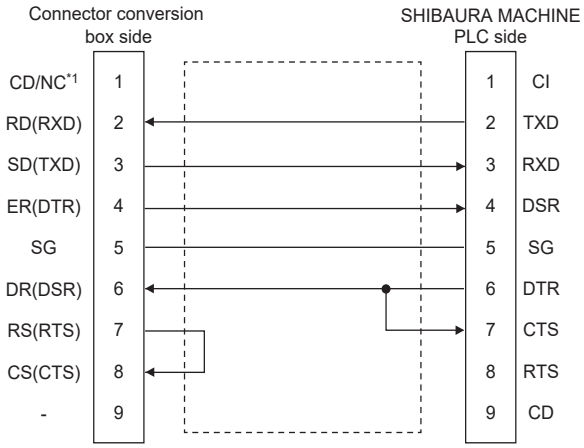
25.3 Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

RS-232 cable

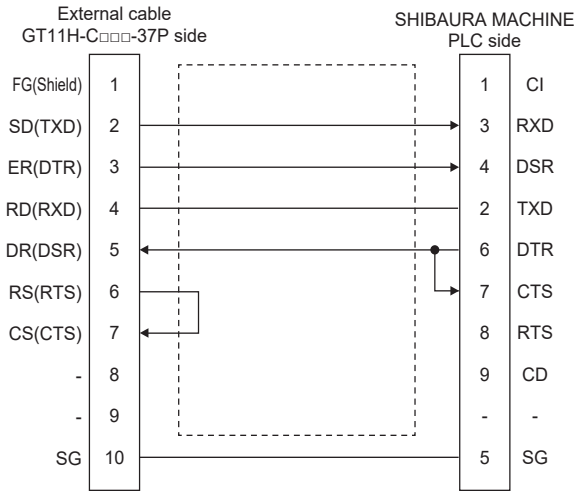
Connection diagram

■RS232 connection diagram 1)

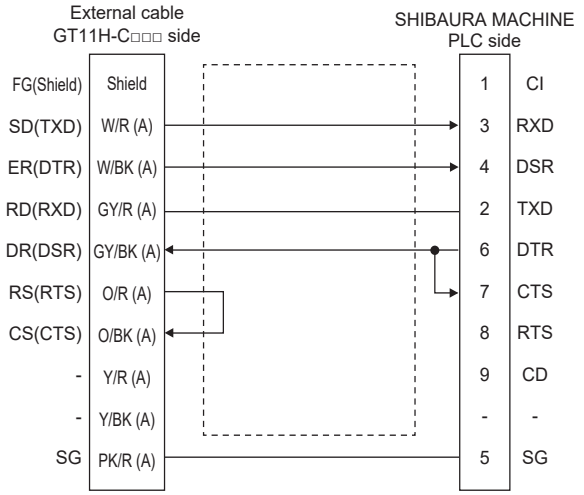


*1 GT2506HS-V: CD, GT2505HS-V: NC

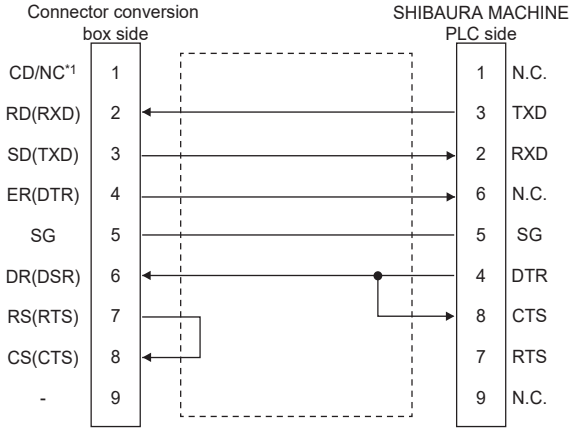
■RS232 connection diagram 2)



■RS232 connection diagram 3)

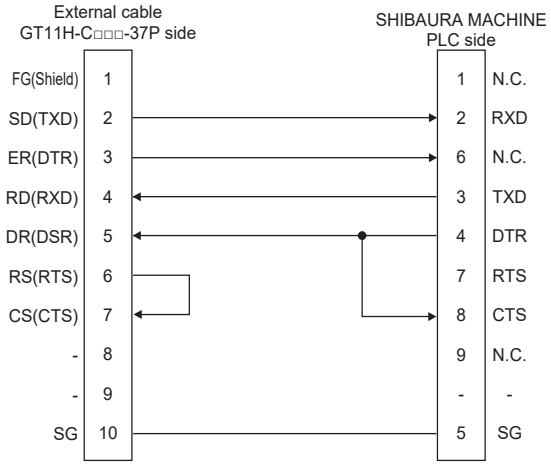


■RS232 connection diagram 4)

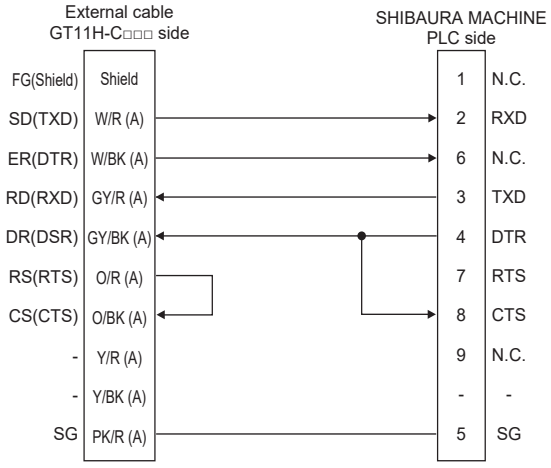


*1 GT2506HS-V: CD, GT2505HS-V: NC

■RS232 connection diagram 5)



■RS232 connection diagram 6)



Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■Connector for the SHIBAURA MACHINE PLC

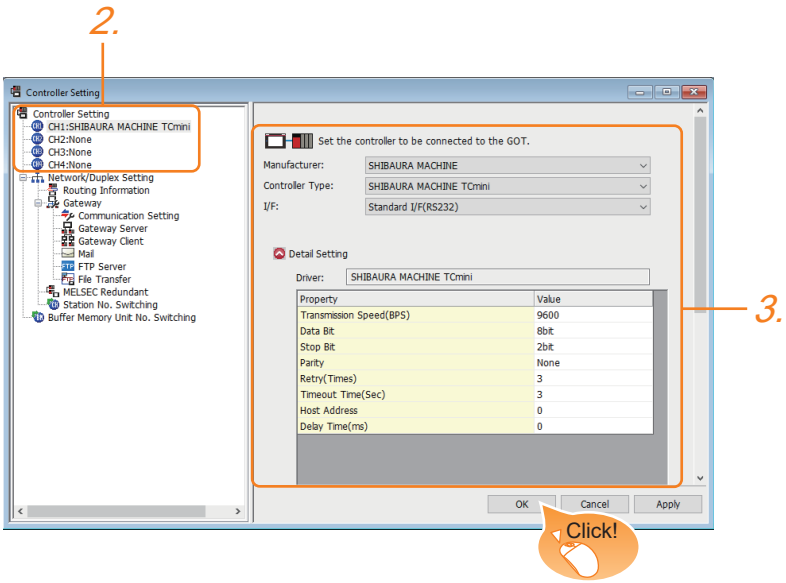
Use a connector applicable to the SHIBAURA MACHINE PLC.

For the details, refer to the manual of the SHIBAURA MACHINE PLC.

25.4 GOT Side Settings

Setting communication interface (Communication settings)

Set the channel of the equipment to be connected to the GOT.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] Pwindow, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [SHIBAURA MACHINE]
- [Controller Type]: [SHIBAURA MACHINE TCmini]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1321 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
Transmission Speed(BPS)	9600
Data Bit	8 bit
Stop Bit	2 bit
Parity	None
Retry(Times)	3
Timeout Time(Sec)	3
Host Address	0
Delay Time(ms)	0

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 9600bps)	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bit)	7bits/8bits
Stop Bit	Specify the stop bit length for communications. (Default: 2bits)	1bit/2bits
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: None)	None Even Odd
Retry	Set the number of retries to be performed when a communication error occurs. (Default: 3times)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Host Address	Specify the host address (station No. of the GOT to which the PLC is connected) in the connected network. (Default: 0)	0 to 63
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300 (ms)

Point

• Delay Time

When connecting to the PLC and RS-485, set the delay time to 1ms or more.

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

25.5 PLC Side Setting

Point

SHIBAURA MACHINE PLC

For details on the SHIBAURA MACHINE PLC, refer to the following manual.

Manual of the SHIBAURA MACHINE PLC

Model name		Refer to
PLC CPU	TC3, TC8	☞ Page 1322 Connecting to TC3, TC8 series
	TC6	☞ Page 1322 Connecting to TC6 series
Robot controller	TS2000, TS2100	☞ Page 1322 Connecting to TS2000, TS2100

Connecting to TC3, TC8 series

No communication settings.

Communication is available using default value of the PLC.

Connecting to TC6 series

The setting of transmission speed is changeable.

Set the following Special AUX Relay (A) using engineering tool.

The communication may not work properly if the settings are made using the GOT.

Transmission speed*1	Special AUX Relay		
	A158	A159	A15A
9600bps	OFF	OFF	OFF
19200bps	ON	OFF	OFF
38400bps	-	ON	OFF
57600bps	-	OFF	ON
115200bps	-	ON	ON

*1 The transmission speed setting must be consistent with that of the GOT side.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1320 Setting communication interface (Communication settings)

Connecting to TS2000, TS2100

No communication settings.

Communication is available using the default value of the robot controller.

25.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1

SHIBAURA MACHINE equipment ([SHIBAURA MACHINE TCmini])

26 PANASONIC SERVO AMPLIFIER

- Page 1323 Connectable Model List
- Page 1324 System Configuration
- Page 1328 Connection Diagram
- Page 1331 GOT Side Settings
- Page 1333 Servo Amplifier Side Setting
- Page 1335 Settable Device Range
- Page 1335 Precautions

26.1 Connectable Model List

The following table shows the connectable models.

Model name	Clock	Communication Type	Connectable GOT	Refer to
MINAS A4	×	RS-232	GT2506HS GT2505HS	☞ Page 1324 Connecting to MINAS A4, MINAS A4F, MINAS A4L series
MINAS A4F	×			
MINAS A4L	×			
MINAS A5				☞ Page 1326 Connecting to MINAS A5 series

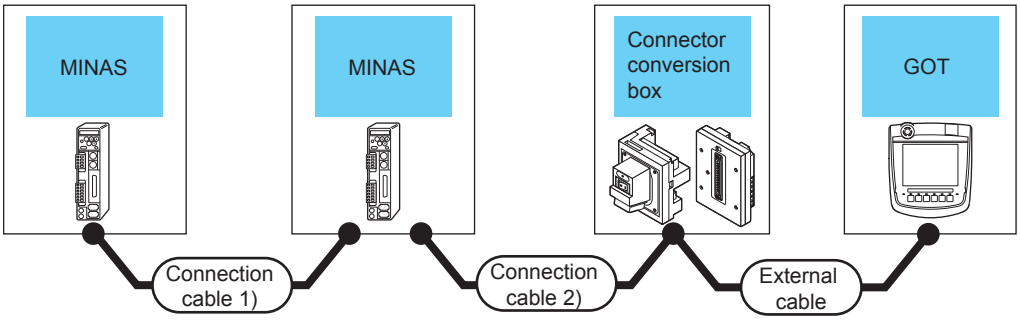
26.2 System Configuration

Connecting to MINAS A4, MINAS A4F, MINAS A4L series

Communication driver

PANASONIC MINAS

When using the connector conversion box

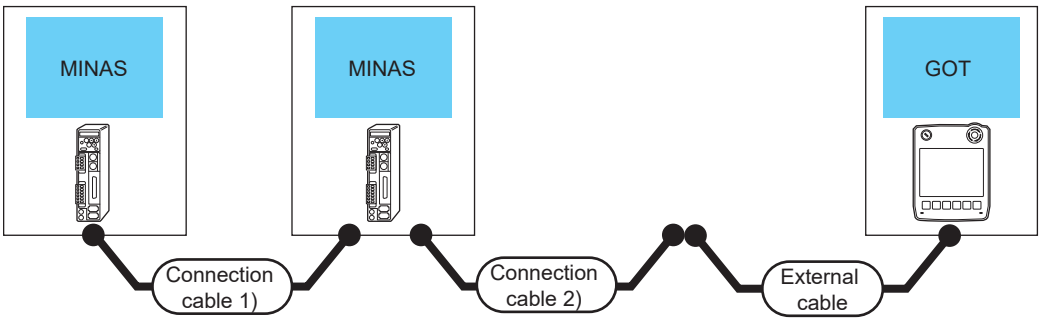


Servo amplifier		Connection cable 1)	Servo amplifier		Connection cable 2)		Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Communication Type	Cable model*1	Model name	Communication Type	Cable model Connection diagram number	Max. distance					
MINAS A4 MINAS A4F MINAS A4L	RS-485	DVOP1970 (0.2m) DVOP1971 (0.5m) DVOP1972 (1m)	MINAS A4 MINAS A4F MINAS A4L	RS-232	DVOP1960*1 or User's manual Page 1328 RS-232 connection diagram 1)	2m	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	17m	16 servo amplifiers for 1 GOT
							GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 The link unit is a product manufactured by PANASONIC Corporation.
For details of this product, contact PANASONIC Corporation.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

When using the external cable (GT11H-C□□□-37P)

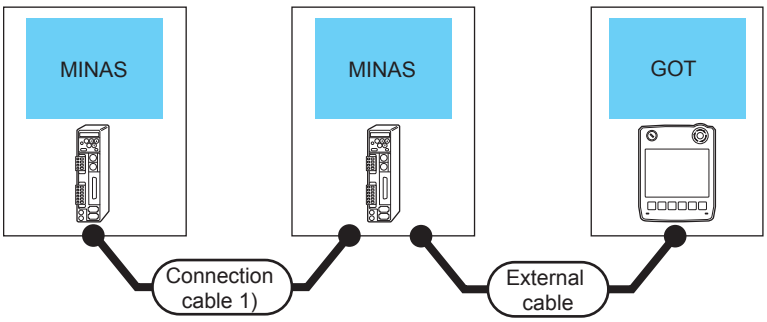


Servo amplifier		Connection cable 1)	Servo amplifier		Connection cable 2)		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Communication Type	Cable model*1	Model name	Communication Type	Cable model Connection diagram number	Max. distance				
MINAS A4 MINAS A4F MINAS A4L	RS-485	DVOP1970 (0.2m) DVOP1971 (0.5m) DVOP1972 (1m)	MINAS A4 MINAS A4F MINAS A4L	RS-232	User preparing Page 1328 RS-232 connection diagram 2)	2m	GT11H-C30-37P(3m)	GT 2505HS	17m	16 servo amplifiers for 1 GOT

*1 The link unit is a product manufactured by PANASONIC Corporation.
For details of this product, contact PANASONIC Corporation.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

When using the external cable (GT11H-C□□□)



Servo amplifier		Connection cable 1)	Servo amplifier		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Communication Type	Cable model*1	Model name	Communication Type				
MINAS A4 MINAS A4F MINAS A4L	RS-485	DVOP1970(0.2m) DVOP1971(0.5m) DVOP1972(1m)	MINAS A4 MINAS A4F MINAS A4L	RS-232	GT11H-C30(3m) ☞ Page 1328 RS-232 connection diagram 3)	GT 2505HS	17m	16 servo amplifiers for 1 GOT

*1 The link unit is a product manufactured by PANASONIC Corporation.
For details of this product, contact PANASONIC Corporation.

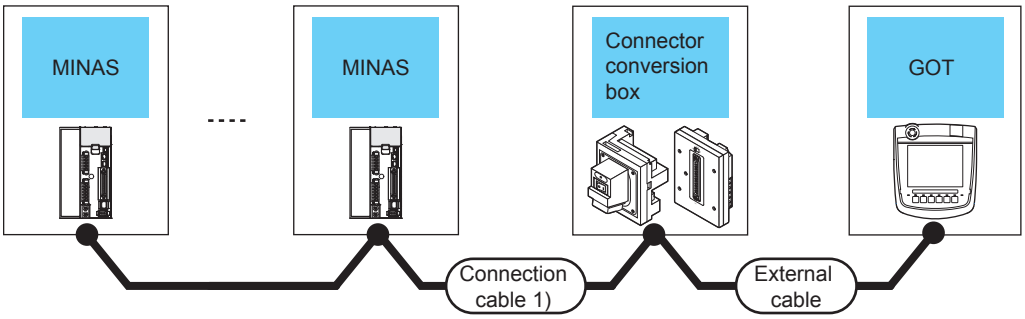
*2 The distance from the GOT to the PLC (Connection cable 1) + External cable)

Connecting to MINAS A5 series

Communication driver

PANASONIC MINAS

When using the connector conversion box

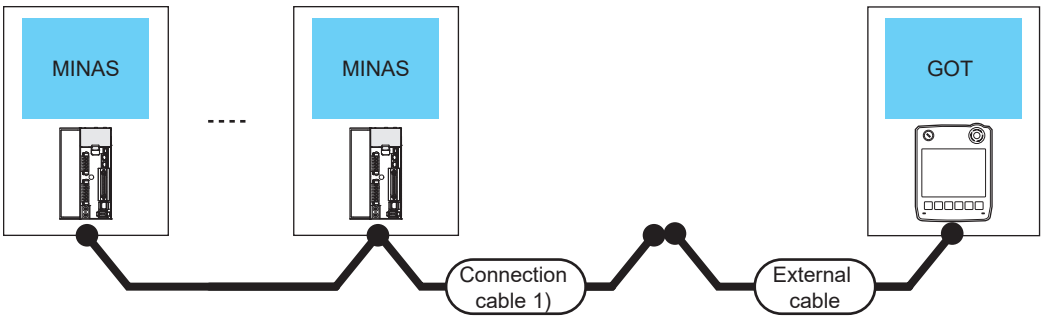


Servo amplifier		Connection cable 1)		Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Max. distance					
MINAS A5	• Between MINAS and GOT:RS-232 • Between MINAS and MINAS:RS-485	User preparing Page 1329 RS-232/485 connection diagram 1)	*1	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	33m	32 servo amplifiers for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 The following shows the maximum distance.
- Between MINAS and GOT : 2m
- Between MINAS and MINAS : 1m

*2 The distance from the GOT to the PLC (Connection cable 1) + External cable)

When using the external cable (GT11H-C□□□-37P)

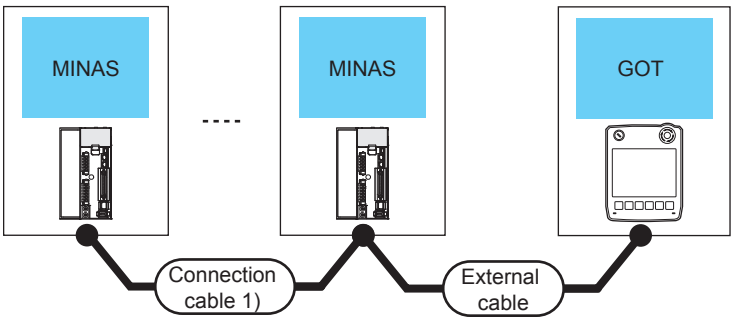


Servo amplifier		Connection cable 1)		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Max. distance				
MINAS A5	• Between MINAS and GOT:RS-232 • Between MINAS and MINAS:RS-485	User preparing Page 1329 RS-232/485 connection diagram 2)	*1	GT11H-C30-37P(3m)	GT 2505HS	33m	32 servo amplifiers for 1 GOT

*1 The following shows the maximum distance.
- Between MINAS and GOT : 2m
- Between MINAS and MINAS : 1m

*2 The distance from the GOT to the PLC (Connection cable 1) + External cable)

When using the external cable (GT11H-C□□□)



Servo amplifier		Connection cable 1)		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Max. distance				
MINAS A5	• Between MINAS and GOT: RS-232 • Between MINAS and MINAS: RS-485	User preparing Page 1330 RS-232/485 connection diagram 3)	*1	GT11H-C30(3m)	GT 2505HS	33m	32 servo amplifiers for 1 GOT

*1 The following shows the maximum distance.
- Between MINAS and GOT : 2m
- Between MINAS and MINAS : 1m

*2 The distance from the GOT to the PLC (External cable)

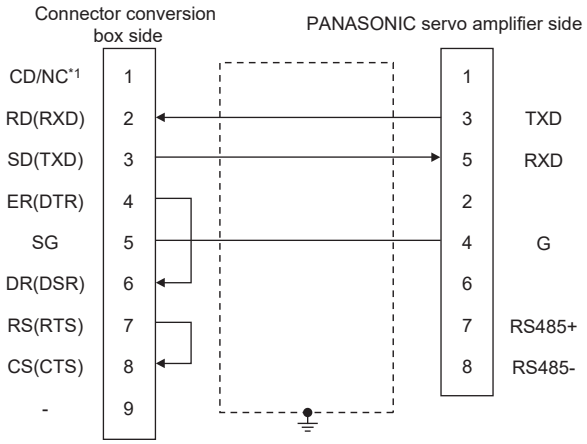
26.3 Connection Diagram

The following diagram shows the connection between the GOT and the Servo amplifier.

RS-232 cable

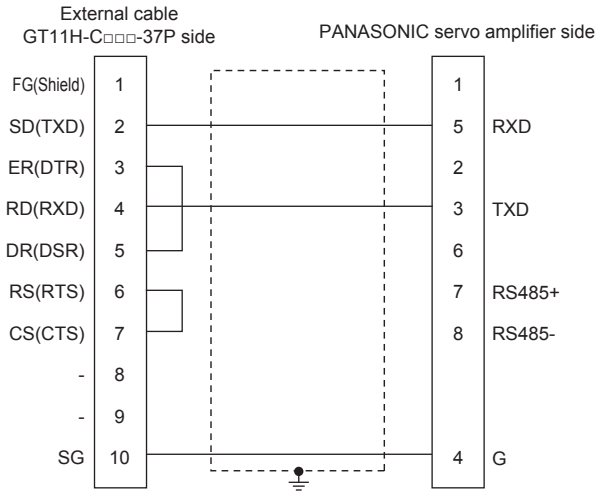
Connection diagram

■RS-232 connection diagram 1)

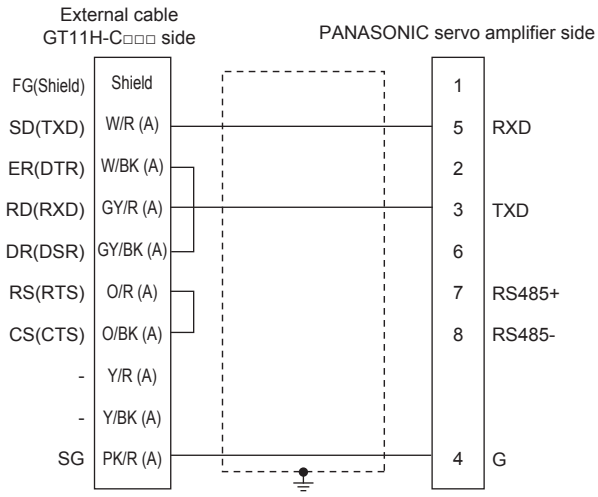


*1 GT2506HS-V: CD, GT2505HS-V: NC

■RS-232 connection diagram 2)



■RS-232 connection diagram 3)



Precautions when preparing a cable

■Cable length

The length of the RS-232 cable must be 2m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■PANASONIC servo amplifier side connector

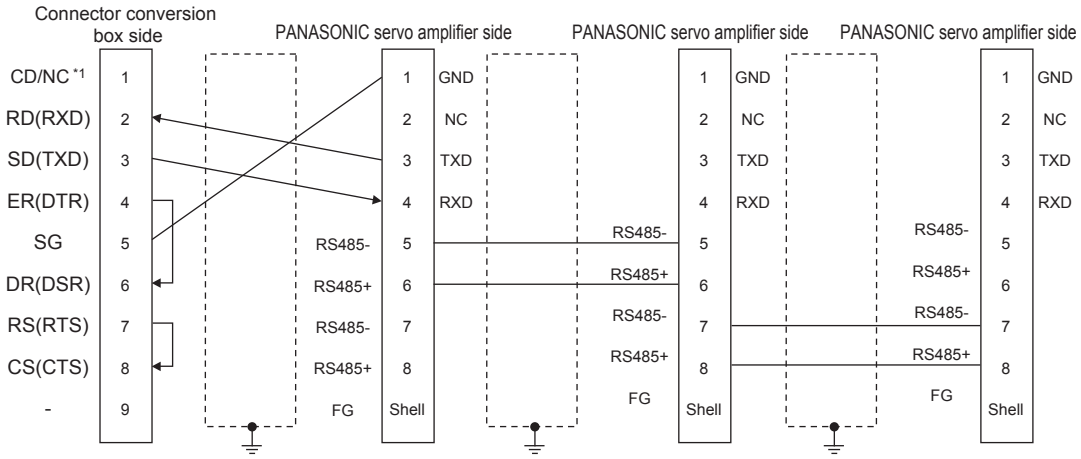
Use the connector compatible with the PANASONIC servo amplifier.

For details, refer to the user's manual of the PANASONIC servo amplifier.

RS-232/RS-485 cable

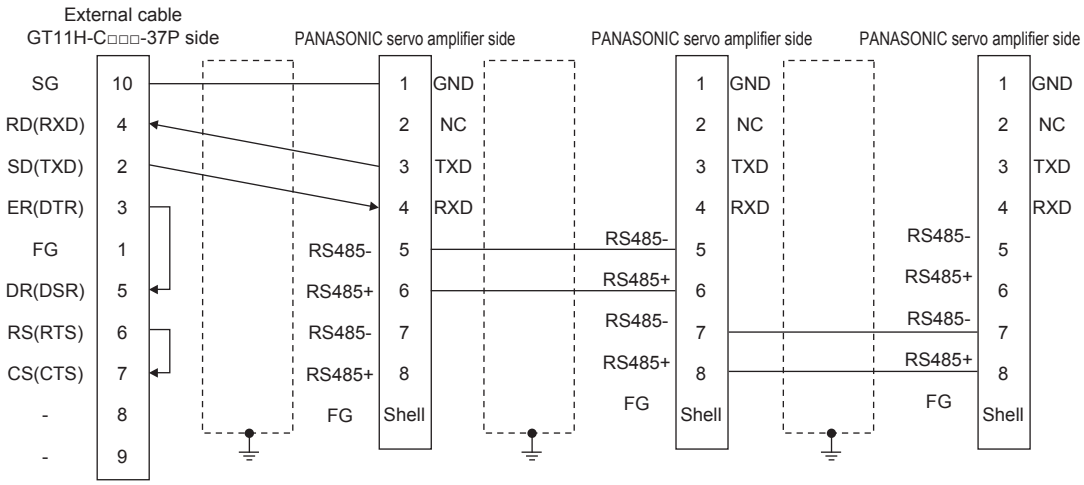
Connection diagram

■RS-232/485 connection diagram 1)

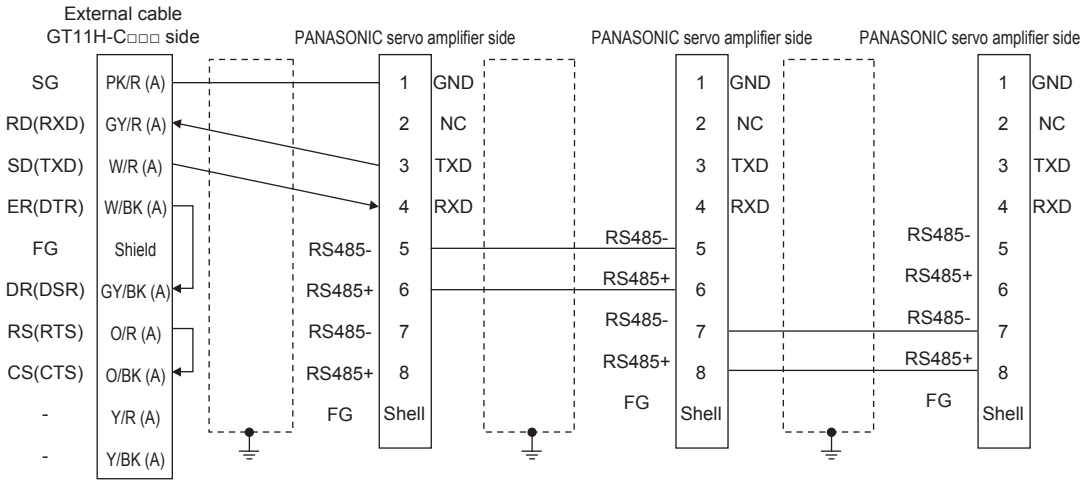


*1 GT2506HS-V: CD, GT2505HS-V: NC

■RS-232/485 connection diagram 2)



■RS-232/485 connection diagram 3)



Precautions when preparing a cable

■Cable length

- The length of the cable between GOT and MINAS must be 2m or less.
- The length of the cable between MINAS and MINAS must be 1m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■PANASONIC servo amplifier side connector

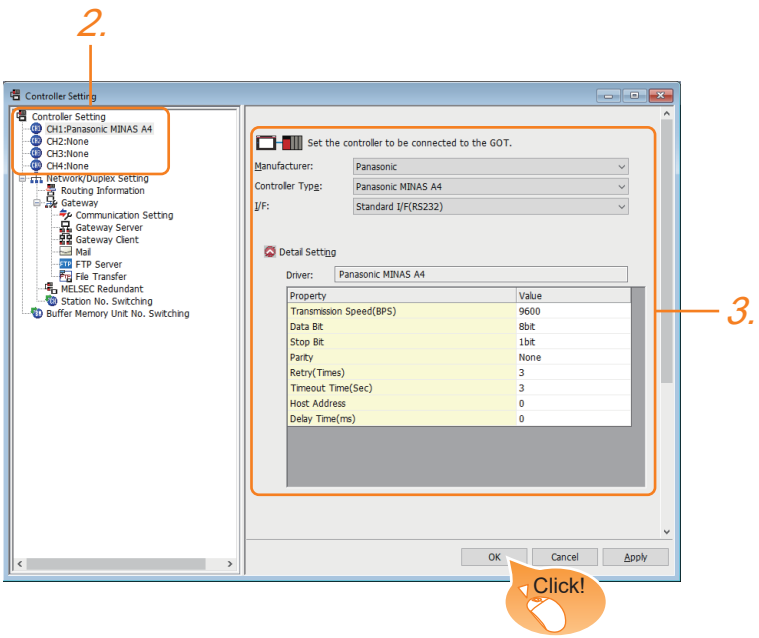
Use the connector compatible with the PANASONIC servo amplifier.

For details, refer to the user's manual of the PANASONIC servo amplifier.

26.4 GOT Side Settings

Setting communication interface (Communication settings)

Set the channel of the equipment to be connected to the GOT.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [Panasonic]
- [Controller Type]: Select one of the following items according to the controller to be connected.

[Panasonic MINAS A4]

[Panasonic MINAS A5]

- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1332 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
Transmission Speed(BPS)	9600
Data Bit	8 bit
Stop Bit	1 bit
Parity	None
Retry(Times)	3
Timeout Time(Sec)	3
Host Address	0
Delay Time(ms)	0

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 9600bps)	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bits)	7bit/8bit
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit/2bit
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: None)	None Even Odd
Retry	Set the number of retries to be performed when a communication error occurs. (Default:3times)	0 to 5times
Timeout Time*1	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Host Address	Specify the station No. of the servo amplifier to connect the GOT. (Default: 0)	0 to 31
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300ms

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

26.5 Servo Amplifier Side Setting

Point

PANASONIC Servo Amplifier

For details of the PANASONIC Servo Amplifier, refer to the following manual.

PANASONIC Servo Amplifier user's Manual

Connecting to MINAS A4/A4F/A4L

MINAS A4/A4F/A4L communication settings

Set them from the main unit front panel of MINAS A4/A4F/A4L or using the setup support software.

Pr No.	Set value
Address of axis (Parameter No.00)	0 to 15
Baud rate setup of RS232*1 (Parameter No.0C)	2: 9600bps 3: 19200bps 4: 38400bps 5: 57600bps
Baud rate setup of RS485*1 (Parameter No.0D)	2: 9600bps 3: 19200bps 4: 38400bps 5: 57600bps

*1 Only transmission speeds available on the GOT side are shown.
Adjust the settings with GOT settings.

Point

Axis name setting

- The axis name is determined according to the rotary switch ID set value when the power supply to the servo amplifier is turned on.

This value will be the station number (axis number) during communication.

- The axis name setting can be changed only with the rotary switch ID.

Connecting to MINAS A5

MINAS A5 communication settings

Set them from the main unit front panel of MINAS A5 or using the setup support software.

Pr No.	Set value
Address of axis (Parameter No.00)	0 to 31
Baud rate setup of RS232*1 (Parameter No.5.29)	2: 9600bps 3: 19200bps 4: 38400bps 5: 57600bps
Baud rate setup of RS485*1 (Parameter No.5.30)	2: 9600bps 3: 19200bps 4: 38400bps 5: 57600bps

*1 Only transmission speeds available on the GOT side are shown.
Adjust the settings with GOT settings.

Station number setting

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.

• When connecting the GOT and servo amplifier with RS-232

Set the station number (axis number) of the servo amplifier connected to the GOT to 0.

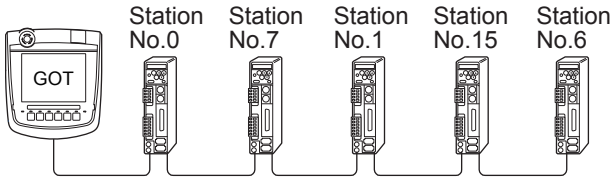
Set the station numbers (axis numbers) of other servo amplifiers connected to the GOT to other than 0.

• When connecting the GOT and servo amplifier with RS-485

The GOT will be the station number (axis number) 0.

Set the station numbers (axis numbers) of other connected servo amplifiers to other than 0.

Example of RS-232 connection between GOT-servo amplifier



Examples of station number setting

Direct specification

When setting the device, specify the station number of the servo amplifier of which data is to be changed.

Model name	Specification range
MINAS A4, MINAS A4F, MINAS A4L	0 to 15
MINAS A5	0 to 31

Indirect specification

When setting the device, indirectly specify the station number of the inverter of which data is to be changed using the 16-bit GOT internal data register (GD10 to GD25).

When specifying the station No. from 100 to 115 on drawing software, the value of GD10 to GD25 compatible to the station No. specification will be the station No. of the servo amplifier.

Specification Station No.	Compatible device	Setting range
100	GD10	• MINAS A4, MINAS A4F, MINAS A4L 0 to 15 • MINAS A5 0 to 31 For the setting other than the above, a communication timeout error will occur.
101	GD11	
102	GD12	
103	GD13	
104	GD14	
105	GD15	
106	GD16	
107	GD17	
108	GD18	
109	GD19	
110	GD20	
111	GD21	
112	GD22	
113	GD23	
114	GD24	
115	GD25	

26.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

📖GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1

PANASONIC equipment ([Panasonic MINAS A4])

PANASONIC equipment ([Panasonic MINAS A5])

26.7 Precautions

Station number setting in the servo system

Configure the servo system so that there is a servo amplifier with a station number set with a host address.

For details of host address setting, refer to the following manual.

☞ Page 1332 Communication detail settings

Monitor speed

When monitoring multiple station devices placed on the same GOT screen, the monitor speed is slow.

Even when monitoring a single station, the monitor speed is slow if the device points is large.

Mixing of MINAS A4 series and MINAS A5 series

MINAS A4 series and MINAS A5 series cannot be mixed.

The multiple MINAS A4 series can be used together.

MEMO

27 PANASONIC INDUSTRIAL DEVICES SUNX PLC

- Page 1337 Connectable Model List
- Page 1338 System Configuration
- Page 1377 Connection Diagram
- Page 1398 GOT Side Settings
- Page 1401 PLC Side Setting
- Page 1404 Settable Device Range

27.1 Connectable Model List

The following table shows the connectable models.

Model name		Clock	Communication Type	Connectable GOT	Refer to
FP0	FP0-C16CT	×	RS-232	GT2506HS GT2505HS	☞ Page 1338 Connecting to FP0-C16CT, FP0-C32CT, or FP0R
	FP0-C32CT				
FP0R		○			
FP1	FP1-C24C	○	RS-232	GT2506HS GT2505HS	☞ Page 1340 Connecting to FP1-C24C or FP1-C40C
	FP1-C40C				
FP2		○*1	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 1342 Connecting to FP2 or FP2SH
FP2SH		○			
FP3		○*2	RS-232	GT2506HS GT2505HS	☞ Page 1347 Connecting to FP3 or FP5
FP5		○			
FP10(S)		○	RS-232	GT2506HS GT2505HS	☞ Page 1351 Connecting to FP10(S)
FP10SH		○	RS-232	GT2506HS GT2505HS	☞ Page 1355 Connecting to FP10SH
FP-M	FP-M(C20TC)	○	RS-232	GT2506HS GT2505HS	☞ Page 1358 Connecting to FP-M(C20TC) or FP-M(C32TC)
	FP-M(C32TC)	○			
FPΣ		○	RS-232	GT2506HS GT2505HS	☞ Page 1360 Connecting to FPΣ
FP-X		○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 1363 Connecting to FP-X
FP7		○*3	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 1367 Connecting to FP7
			RS-485	GT2506HS	
FP0H	AFP0H32T	○	RS-232	GT2506HS GT2505HS	☞ Page 1371 Connecting to FP0H
	AFP0H32P				
	AFP0H32ET				
	AFP0H32EP				
FP-XH		○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 1374 System configuration for connecting to FP-XH

*1 Any of the extension memory unit FP2-EM1, FP2-EM2 or FP2-EM3 is required.

*2 The clock function is available for the AFP3210C-F, AFP3211C-F, AFP3212C-F and AFP3220C-F.

*3 The GOT can only read the clock data.
In the clock setting, though the adjust is available, the broadcast is not available.

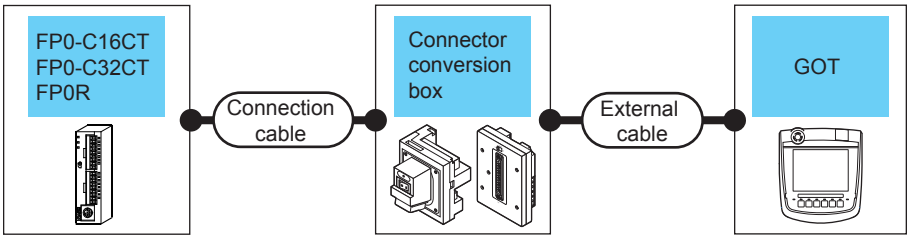
27.2 System Configuration

Connecting to FP0-C16CT, FP0-C32CT, or FP0R

Communication driver

Panasonic MEWNET-FP

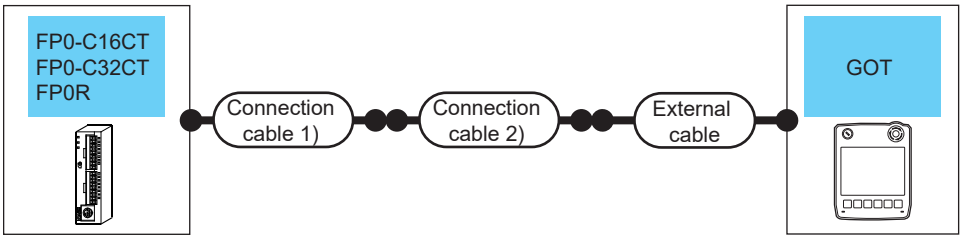
When using the connector conversion box



PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
FP0-C16CT FP0-C32CT FP0R (Tool port)	RS-232	AFC8503(3m)*1	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
FP0-C16CT FP0-C32CT FP0R (RS232C port)		GT09-C30R20904-3C(3m) or User preparing Page 1380 RS-232 connection diagram 10)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

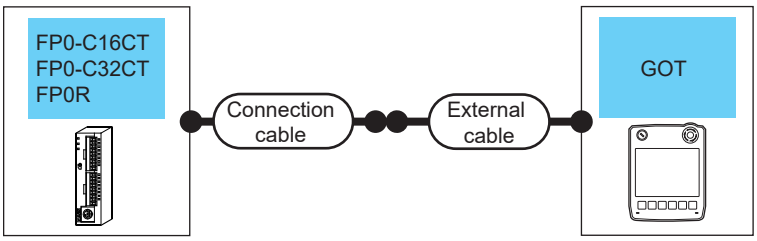
When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable 1)	Connection cable 2)	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model	Connection diagram number				
FP0-C16CT FP0-C32CT FP0R (Tool port)	RS-232	AFC8503(3m)*1	User preparing Page 1385 RS-232 connection diagram 25)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
FP0-C16CT FP0-C32CT FP0R (RS232C port)		-	User preparing Page 1380 RS-232 connection diagram 11)	GT11H-C30-37P(3m)	GT 2505HS		

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When using the external cable (GT11H-C□□□)



PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model				
FP0-C16CT FP0-C32CT FP0R (Tool port)	RS-232	AFC8503(3m)*1	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1385 RS-232 connection diagram 26)	GT 2505HS	6m	1 GOT for 1 PLC
FP0-C16CT FP0-C32CT FP0R (RS232C port)		-	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1380 RS-232 connection diagram 12)	GT 2505HS		

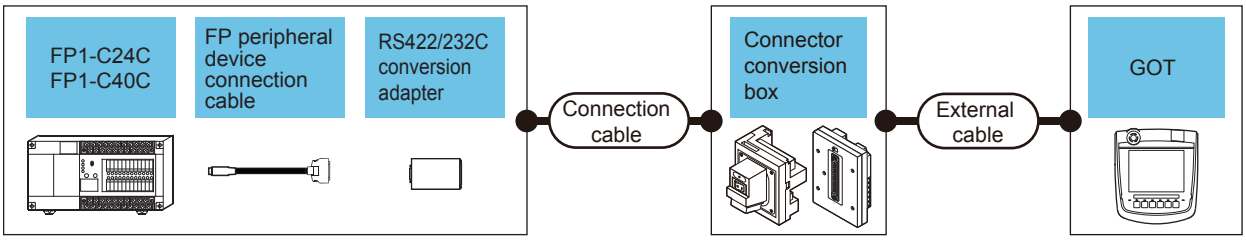
*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
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Connecting to FP1-C24C or FP1-C40C

Communication driver

Panasonic MEWNET-FP

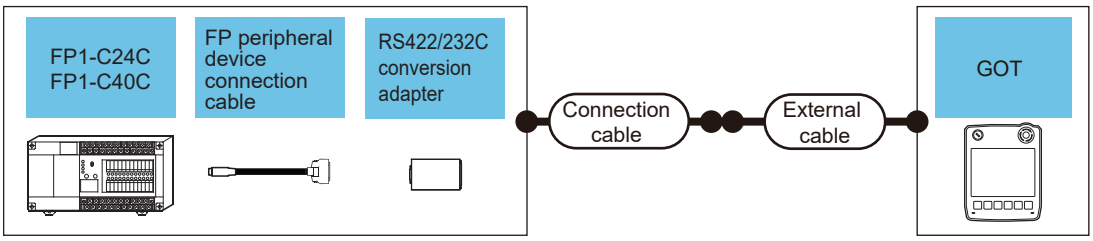
When using the connector conversion box



PLC				Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	FP peripheral device connection cable*1	RS422/232C conversion adapter*1	Cable model Connection diagram number					
		Cable model Connection diagram number							
FP1-C24C FP1-C40C (Tool port)	RS-232	AFP15205 (0.5m)	AFP8550	GT09-C30R20901-25P(3m) or User preparing Page 1377 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
					GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
FP1-C24C FP1-C40C (RS232C port)		-	-	GT09-C30R20903-9P(3m) or User preparing Page 1379 RS-232 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
					GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

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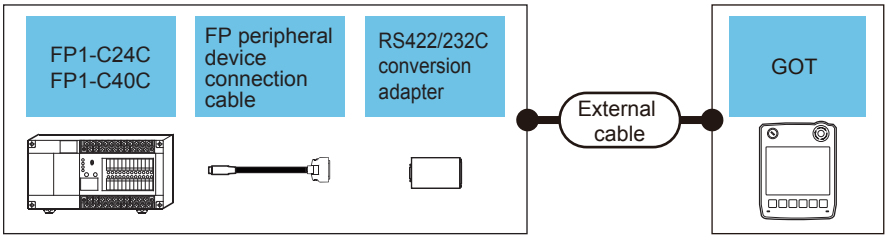
When using the external cable (GT11H-C□□□-37P)



PLC				Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	FP peripheral device connection cable*1 Cable model Connection diagram number	RS422/232C conversion adapter*1	Cable model Connection diagram number				
FP1-C24C FP1-C40C (Tool port)	RS-232	AFP15205 (0.5m)	AFP8550	User preparing Page 1377 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
FP1-C24C FP1-C40C (RS232C port)		-	-	User preparing Page 1379 RS-232 connection diagram 8)	GT11H-C30-37P(3m)	GT 2505HS		

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When using the external cable (GT11H-C□□□)



PLC				External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	FP peripheral device connection cable*1 Cable model Connection diagram number	RS422/232C conversion adapter*1				
FP1-C24C FP1-C40C (Tool port)	RS-232	AFP15205 (0.5m)	AFP8550	GT11H-C30(3m) ☞ Page 1377 RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 PLC
FP1-C24C FP1-C40C (RS232C port)		-	-	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1379 RS-232 connection diagram 9)	GT 2505HS		

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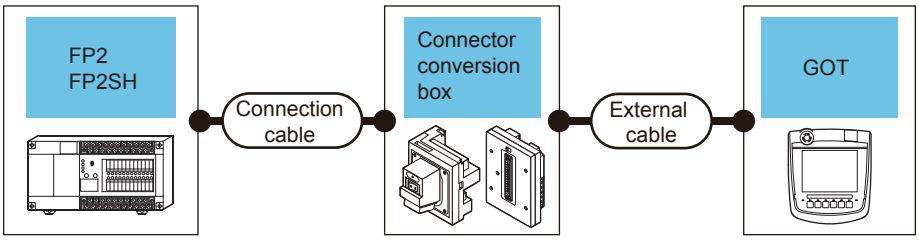
Connecting to FP2 or FP2SH

Communication driver

Panasonic MEWNET-FP

When connecting to tool port or RS232C port

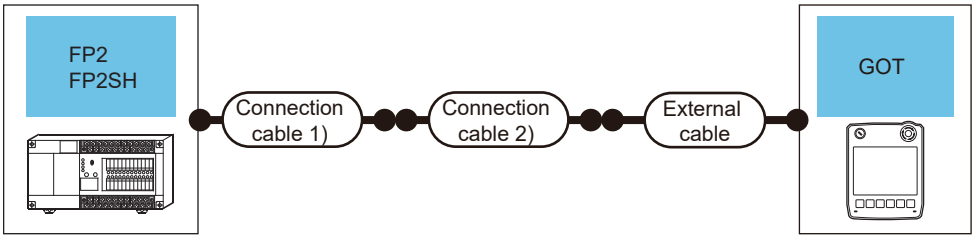
■When using the connector conversion box



PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
FP2 FP2SH (Tool port)	RS-232	AFC8503(3m)*1	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
FP2 FP2SH (RS232C port)		AFB85853(3m)*1 GT09-C30R20902-9P(3m) or User preparing Page 1378 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

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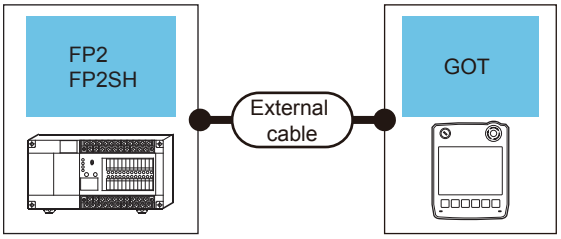
■When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable 1)	Connection cable 2)	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model	Connection diagram number				
FP2 FP2SH (Tool port)	RS-232	AFC8503(3m)*1	User preparing Page 1385 RS-232 connection diagram 25)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
FP2 FP2SH (RS232C port)		-	User preparing Page 1378 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS		

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■When using the external cable (GT11H-C□□□)

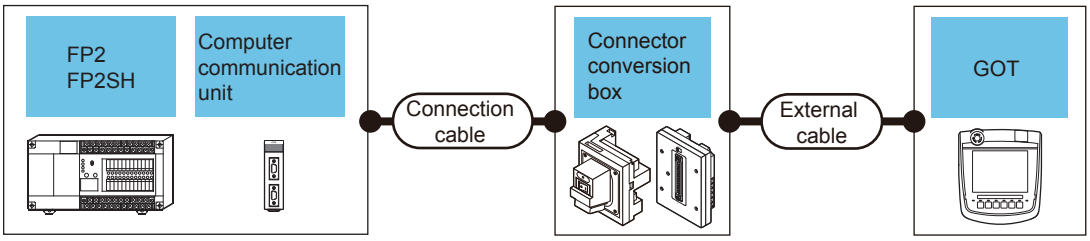


PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model				
FP2 FP2SH (Tool port)	RS-232	AFC8503(3m)*1	GT11H-C30(3m) ☞ Page 1385 RS-232 connection diagram 26)	GT 2505HS	6m	1 GOT for 1 PLC
FP2 FP2SH (RS232C port)		-	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1378 RS-232 connection diagram 6)	GT 2505HS		

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When connecting to computer communication unit

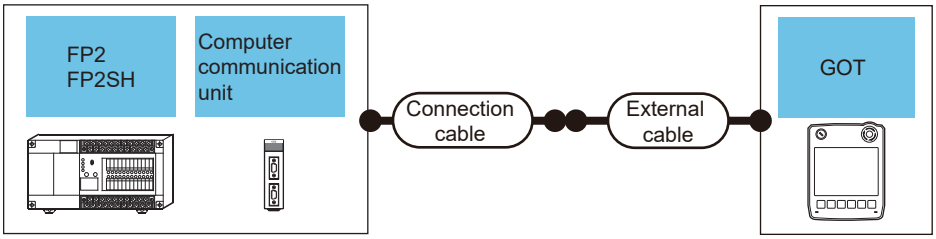
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Computer communication unit*1	Communication Type	Cable model Connection diagram number					
FP2 FP2SH	AFP2462	RS-232	AFB85853(3m)*1 GT09-C30R20902-9P(3m) or User preparing Page 1378 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 computer communication unit
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

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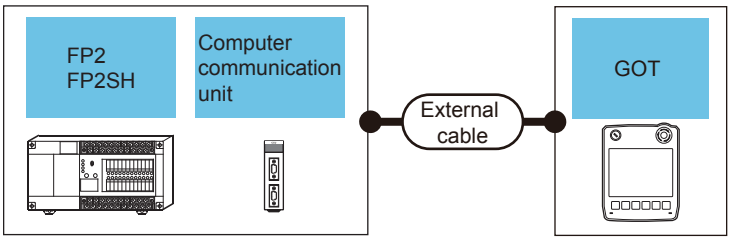
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Computer communication unit*1	Communication Type	Cable model Connection diagram number				
FP2 FP2SH	AFP2462	RS-232	User preparing Page 1378 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 computer communication unit

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■When using the external cable (GT11H-C□□□)

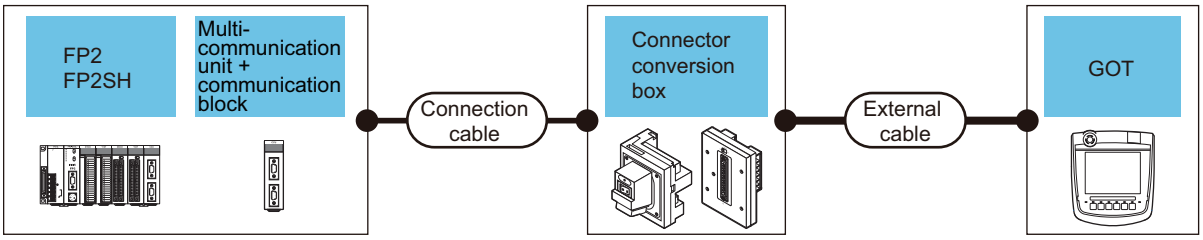


PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Computer communication unit*1	Communication Type				
FP2 FP2SH	AFP2462	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1378 RS-232 connection diagram 6)	GT 2505HS	6m	1 GOT for 1 computer communication unit

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Connecting to multi-communication unit and communication block

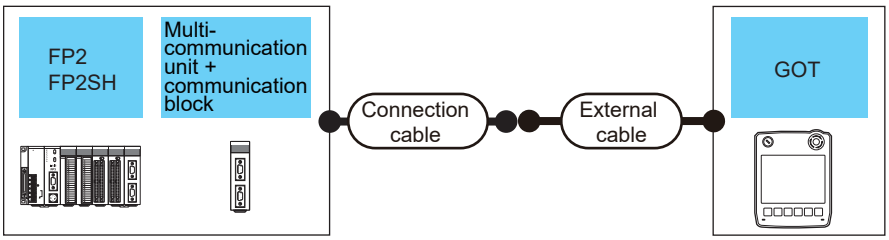
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Multi-communication unit + communication block *1	Communication Type	Cable model Connection diagram number					
FP2 FP2SH	AFP2465 + AFP2803	RS-232	AFB85853(3m)*1 GT09-C30R20902-9P(3m) or (User preparing)Page 1391 RS-232 connection diagram 42)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 multi-communication unit + communication block
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	AFP2465 + AFP2804	RS-422	(User preparing)Page 1395 RS-422 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P (10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

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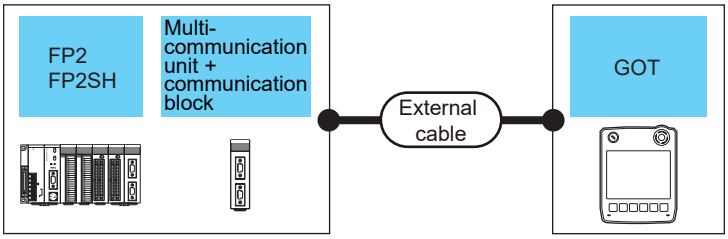
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Multi-communication unit + communication block *1	Communication Type	Cable model Connection diagram number				
FP2 FP2SH	AFP2465 + AFP2803	RS-232	(User preparing)Page 1391 RS-232 connection diagram 43)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 multi-communication unit + communication block
	AFP2465 + AFP2804	RS-422	(User preparing)Page 1395 RS-422 connection diagram 8)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

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■When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Multi-communication unit + communication block *1	Communication Type				
FP2 FP2SH	AFP2465 + AFP2803	RS-232	GT11H-C30(3m) ☞ Page 1391 RS-232 connection diagram 44)	GT 2505HS	6m	1 GOT for 1 multi-communication unit + communication block
	AFP2465 + AFP2804	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1396 RS-422 connection diagram 9)	GT 2505HS	13m	

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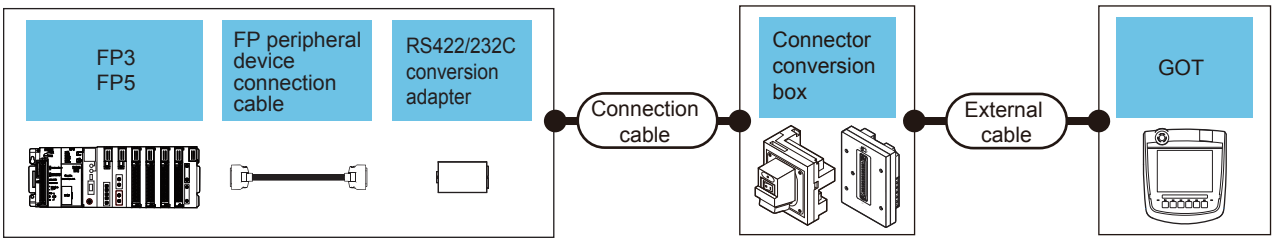
Connecting to FP3 or FP5

Communication driver

Panasonic MEWNET-FP

When connecting to tool port

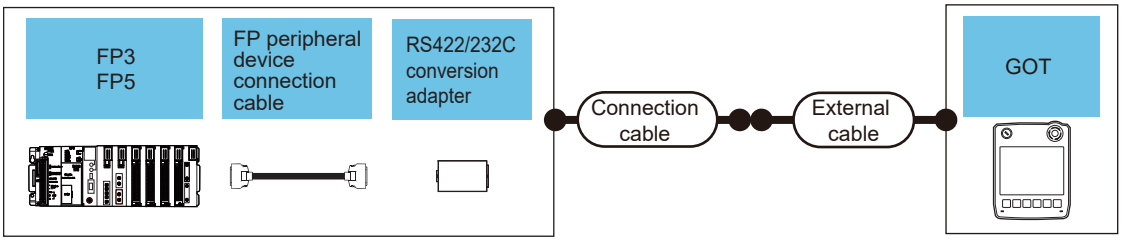
■When using the connector conversion box



PLC				Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	FP peripheral device connection cable*1 Cable model Connection diagram number	RS422/232C conversion adapter*1	Communication Type	Cable model Connection diagram number					
FP3 FP5	AFP5520 (0.5m)	AFP8550	RS-232	GT09-C30R20901-25P(3m) or User preparing Page 1377 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 RS422/232 conversion adapter
					GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

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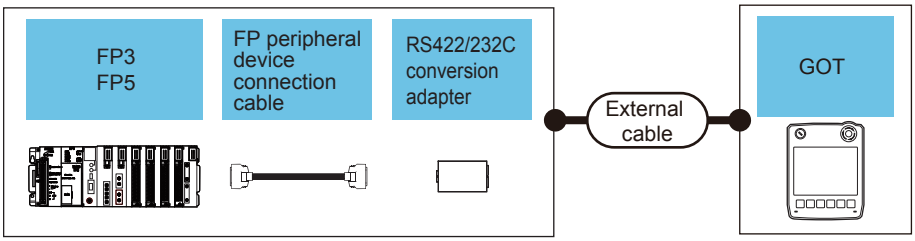
■When using the external cable (GT11H-C□□□-37P)



PLC				Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	FP peripheral device connection cable*1 Cable model Connection diagram number	RS422/232C conversion adapter*1	Communication Type	Cable model Connection diagram number				
FP3 FP5	AFP5520 (0.5m)	AFP8550	RS-232	User's manual Page 1377 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 RS422/232 conversion adapter

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■When using the external cable (GT11H-C□□□)

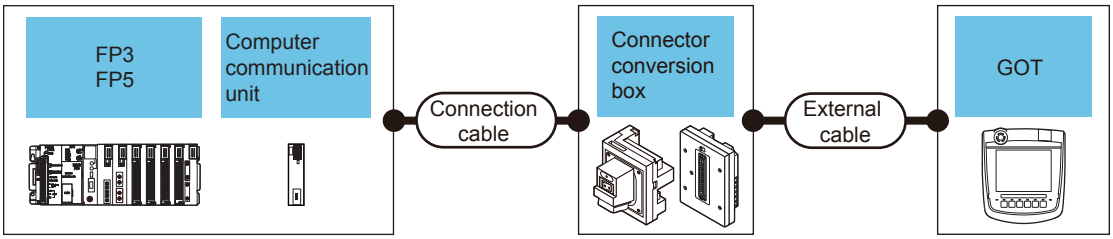


PLC				External cable	GOT Model	Total distance	Number of connectable equipment
Model name	FP peripheral device connection cable*1 Cable model Connection diagram number	RS422/232C conversion adapter*1	Communication Type				
FP3 FP5	AFP5520 (0.5m)	AFP8550	RS-232	GT11H-C30(3m) ☞ Page 1377 RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 RS422/232 conversion adapter

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When connecting to computer communication unit

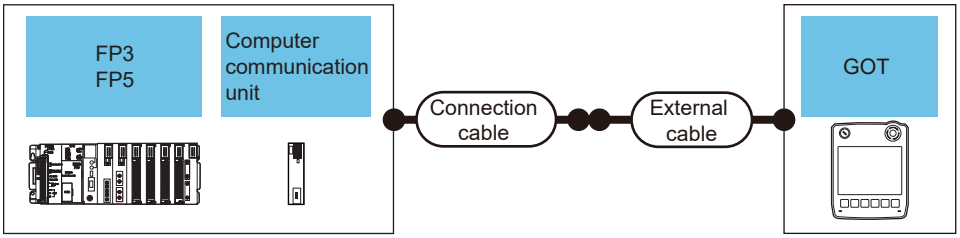
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Computer communication unit*1	Communication Type	Cable model Connection diagram number					
FP3	AFP3462	RS-232	AFB85853(3m)*1 GT09-C30R20902-9P(3m) or User preparing Page 1378 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 computer communication unit
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
FP5	AFP5462		AFB85853(3m)*1 GT09-C30R20902-9P(3m) or User preparing Page 1378 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

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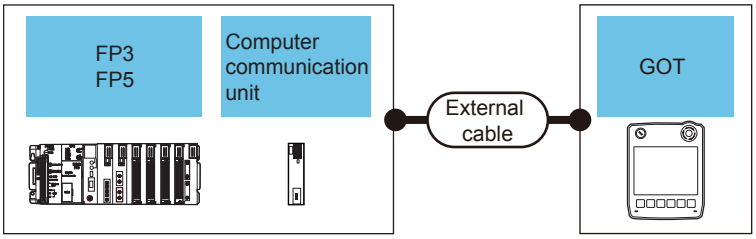
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Computer communication unit*1	Communication Type	Cable model Connection diagram number				
FP3	AFP3462	RS-232	User preparing Page 1378 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 computer communication unit
FP5	AFP5462		User preparing Page 1378 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
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■When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Computer communication unit*1	Communication Type				
FP3	AFP3462	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1378 RS-232 connection diagram 6)	GT 2505HS	6m	1 GOT for 1 computer communication unit
FP5	AFP5462		GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1378 RS-232 connection diagram 6)	GT 2505HS	6m	

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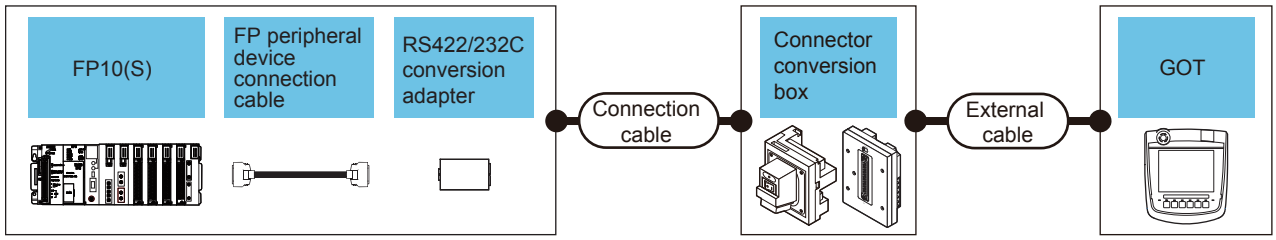
Connecting to FP10(S)

Communication driver

Panasonic MEWNET-FP

When connecting to tool port

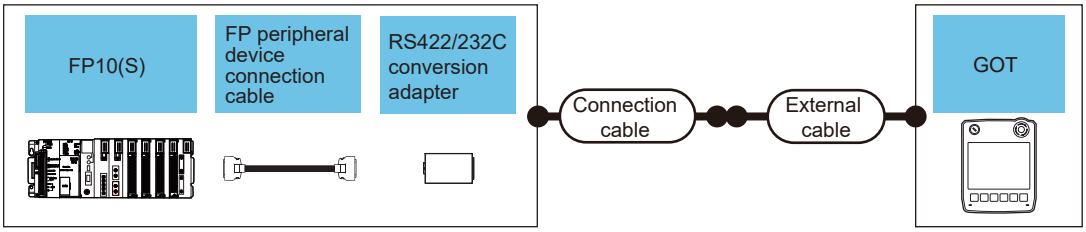
■When using the connector conversion box



PLC				Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	FP peripheral device connection cable*1 Cable model Connection diagram number	RS422/232C conversion adapter*1	Communication Type	Cable model Connection diagram number					
FP10(S)	AFP5520(0.5m)	AFP8550	RS-232	GT09-C30R20901-25P or User preparing Page 1377 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 RS422/232 conversion adapter
					GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

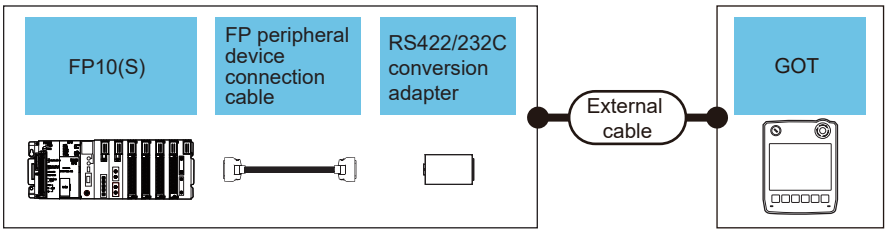
■When using the external cable (GT11H-C□□□-37P)



PLC				Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	FP peripheral device connection cable*1 Cable model Connection diagram number	RS422/232C conversion adapter*1	Communication Type	Cable model Connection diagram number				
FP10(S)	AFP5520(0.5m)	AFP8550	RS-232	User preparing Page 1377 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 RS422/232 conversion adapter

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

■When using the external cable (GT11H-C□□□)

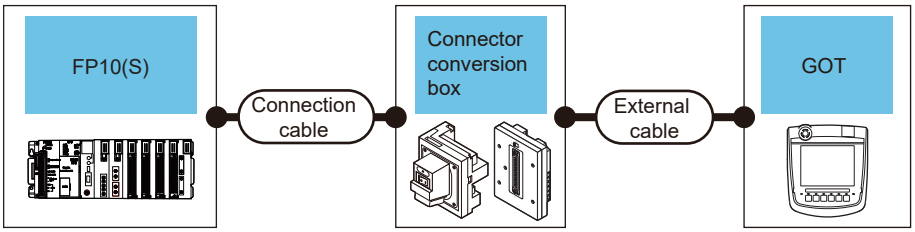


PLC				External cable	GOT Model	Total distance	Number of connectable equipment
Model name	FP peripheral device connection cable*1 Cable model Connection diagram number	RS422/232C conversion adapter*1	Communication Type				
FP10(S)	AFP5520(0.5m)	AFP8550	RS-232	GT11H-C30(3m) ☞ Page 1377 RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 RS422/232 conversion adapter

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

When connecting to RS232C port

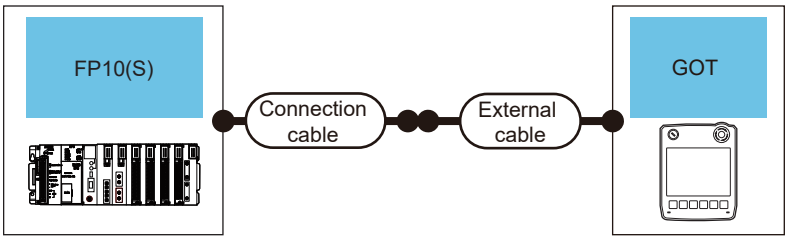
■When using the connector conversion box



PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
FP10(S)	RS-232	AFB85853(3m)*1 GT09-C30R20902-9P(3m) or User preparing Page 1378 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

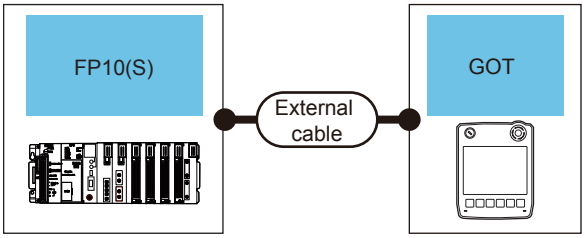
*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

■When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
FP10(S)	RS-232	User preparing Page 1378 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC

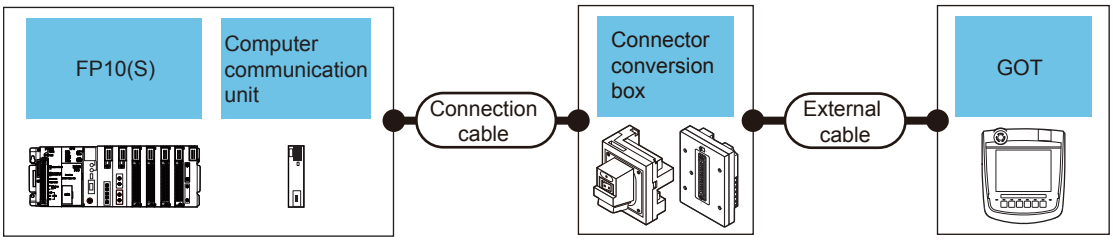
■When using the external cable (GT11H-C□□□)



PLC		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
FP10(S)	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1378 RS-232 connection diagram 6)	GT 2505HS	6m	1 GOT for 1 PLC

When connecting to computer communication unit

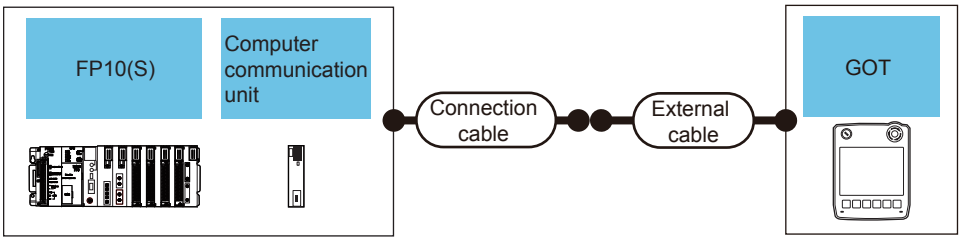
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Computer communication unit*1	Communication Type	Cable model Connection diagram number					
FP10(S)	AFP3462	RS-232	AFB85853(3m)*1 GT09-C30R20902-9P(3m) or User preparing Page 1378 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 computer communication unit
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
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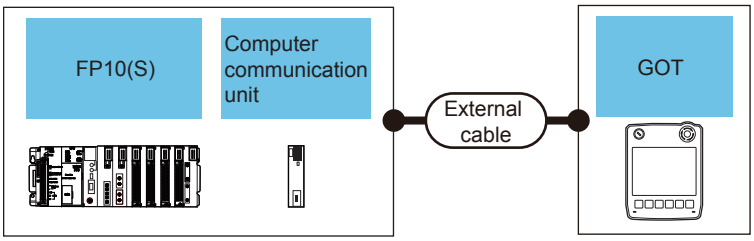
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Computer communication unit*1	Communication Type	Cable model Connection diagram number				
FP10(S)	AFP3462	RS-232	User preparing Page 1378 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 computer communication unit

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

■When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Computer communication unit*1	Communication Type				
FP10(S)	AFP3462	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1378 RS-232 connection diagram 6)	GT 2505HS	6m	1 GOT for 1 computer communication unit

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
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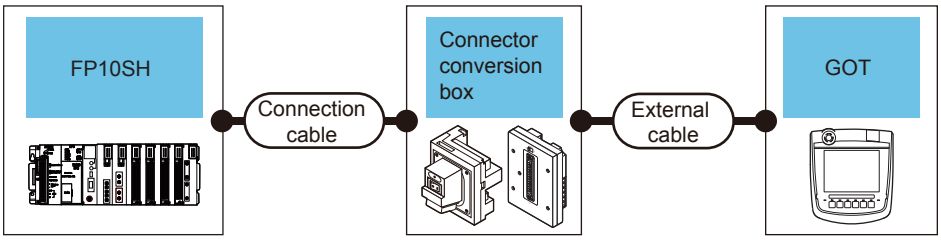
Connecting to FP10SH

Communication driver

Panasonic MEWNET-FP

When connecting to tool port or RS232C port

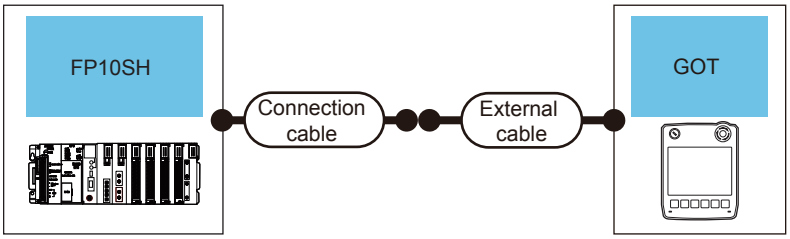
■When using the connector conversion box



PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
FP10SH	RS-232	AFB85853(3m)*1 GT09-C30R20902-9P(3m) or User preparing Page 1378 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

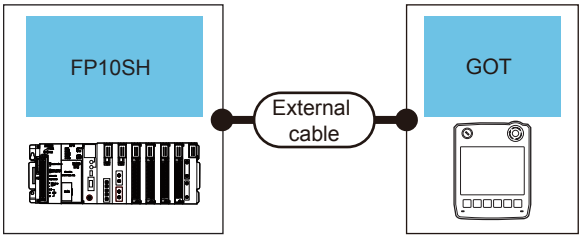
*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

■When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
FP10SH	RS-232	User preparing Page 1378 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC

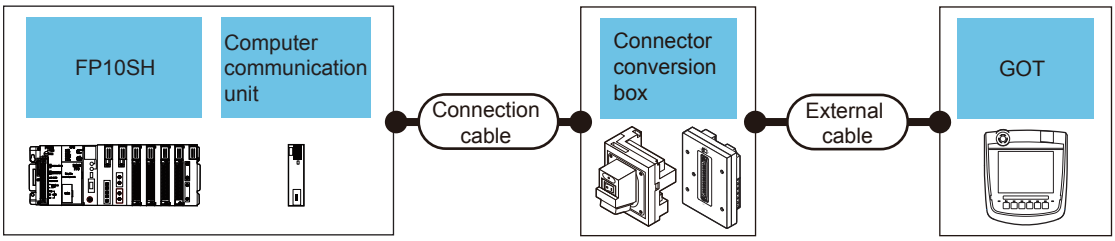
■When using the external cable (GT11H-C□□□)



PLC		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
FP10SH	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1378 RS-232 connection diagram 6)	GT 2505HS	6m	1 GOT for 1 PLC

When connecting to computer communication unit

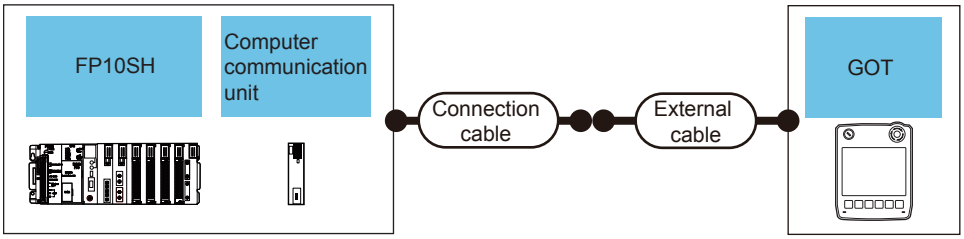
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Computer communication unit*1	Communication Type	Cable model Connection diagram number					
FP10SH	AFP3462	RS-232	AFB85853(3m)*1 GT09-C30R20902-9P(3m) or User preparing Page 1378 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 computer communication unit
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

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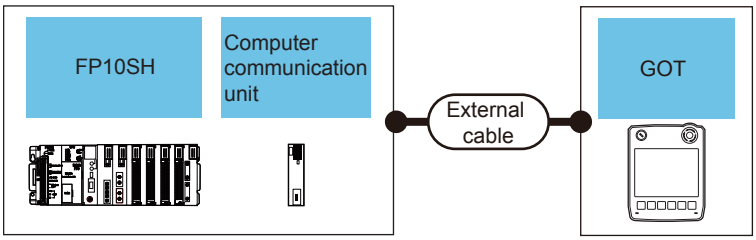
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Computer communication unit*1	Communication Type	Cable model Connection diagram number				
FP10SH	AFP3462	RS-232	User preparing Page 1378 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 computer communication unit

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

■When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Computer communication unit*1	Communication Type				
FP10SH	AFP3462	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1378 RS-232 connection diagram 6)	GT 2505HS	6m	1 GOT for 1 computer communication unit

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
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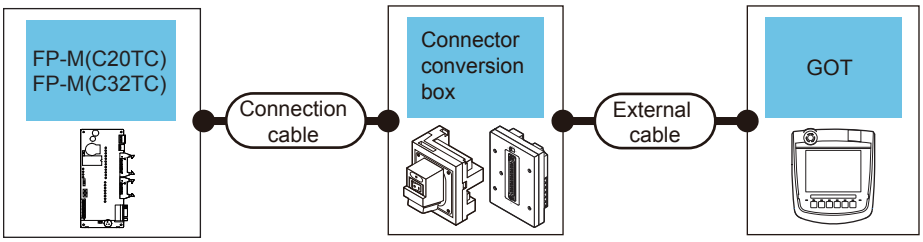
Connecting to FP-M(C20TC) or FP-M(C32TC)

Communication driver

Panasonic MEWNET-FP

When connecting to tool port or RS232C port

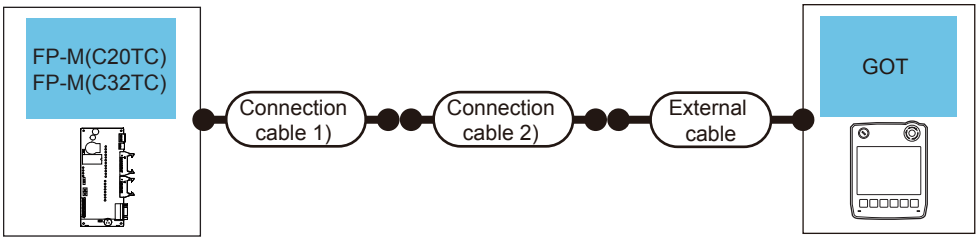
■When using the connector conversion box



PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
FP-M(C20TC), FP-M(C32TC) (Tool port)	RS-232	AFC8503(3m)*1	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
FP-M(C20TC), FP-M(C32TC) (RS232C port)		AFB85853(3m)*1 GT09-C30R20902-9P(3m) or User preparing Page 1378 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

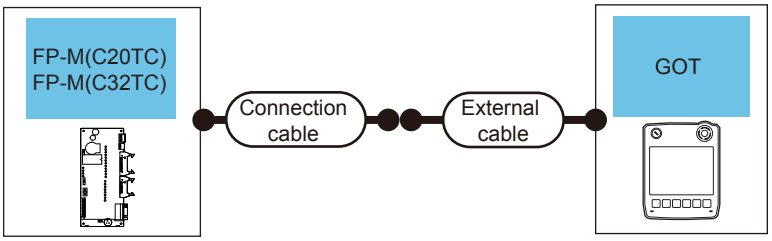
■When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable 1)	Connection cable 2)	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model	Connection diagram number				
FP-M(C20TC), FP-M(C32TC) (Tool port)	RS-232	AFC8503(3m)*1	User preparing Page 1385 RS-232 connection diagram 25)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
FP-M(C20TC), FP-M(C32TC) (RS232C port)		-	User preparing Page 1378 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

■When using the external cable (GT11H-C□□□)



PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model				
FP-M(C20TC), FP-M(C32TC) (Tool port)	RS-232	AFC8503(3m)*1	GT11H-C30(3m) ☞ Page 1385 RS-232 connection diagram 26)	GT 2505HS	6m	1 GOT for 1 PLC
FP-M(C20TC), FP-M(C32TC) (RS232C port)		-	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1378 RS-232 connection diagram 6)	GT 2505HS		

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
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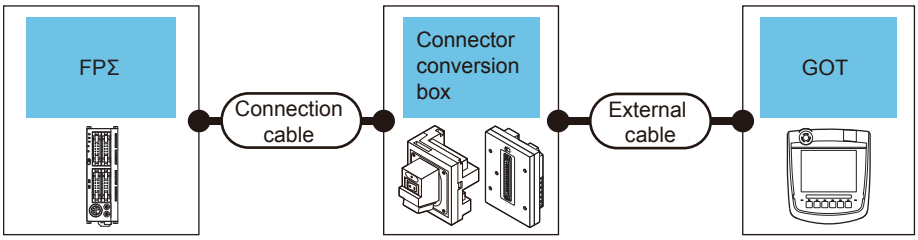
Connecting to FPΣ

Communication driver

Panasonic MEWNET-FP

When connecting to tool port

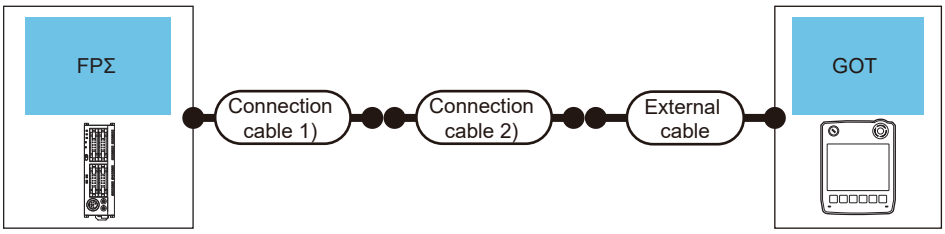
■When using the connector conversion box



PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
FPΣ	RS-232	AFC8503(3m)*1	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

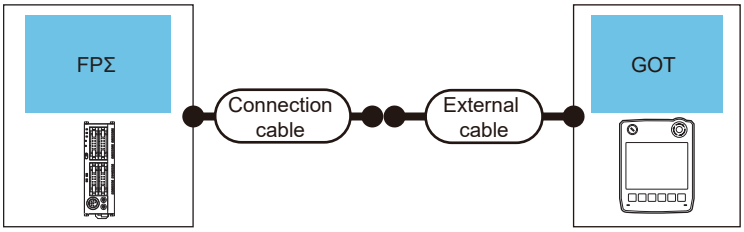
■When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable 1)	Connection cable 2)	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model	Connection diagram number				
FPΣ	RS-232	AFC8503(3m)*1	User preparing Page 1385 RS-232 connection diagram 25)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC

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For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

■When using the external cable (GT11H-C□□□)

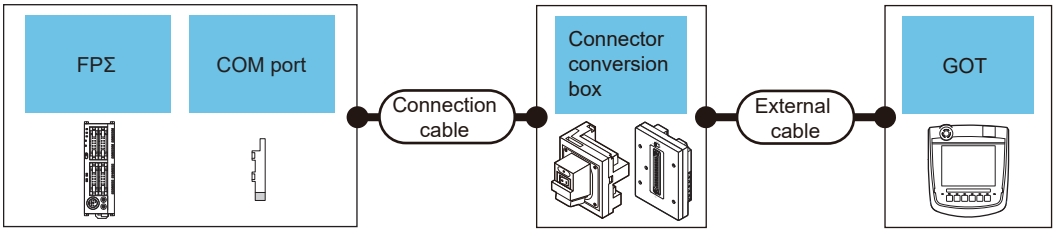


PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model				
FPΣ	RS-232	AFC8503(3m)*1	GT11H-C30(3m) ☞ Page 1385 RS-232 connection diagram 26)	GT 2505HS	6m	1 GOT for 1 PLC

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

When connecting to COM port

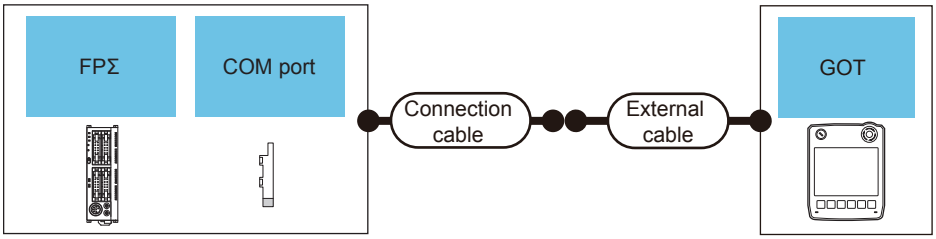
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	COM port*1	Communication Type	Cable model Connection diagram number					
FPΣ	AFPG801	RS-232	User preparing Page 1381 RS-232 connection diagram 13)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	AFPG802		User preparing Page 1382 RS-232 connection diagram 16)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
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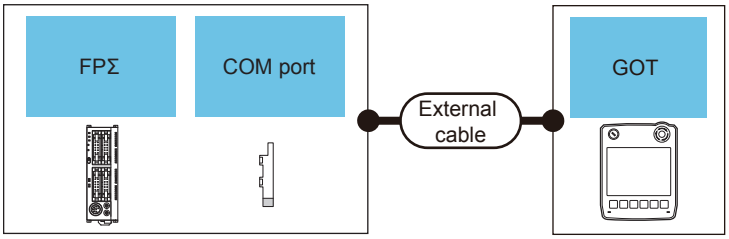
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	COM port*1	Communication Type	Cable model Connection diagram number				
FPΣ	AFPG801	RS-232	User preparing Page 1381 RS-232 connection diagram 14)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
	AFPG802		User preparing Page 1382 RS-232 connection diagram 17)	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

■When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	COM port*1	Communication Type				
FPΣ	AFPG801	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1381 RS-232 connection diagram 15)	GT 2505HS	6m	1 GOT for 1 PLC
	AFPG802		GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1382 RS-232 connection diagram 18)	GT 2505HS		

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
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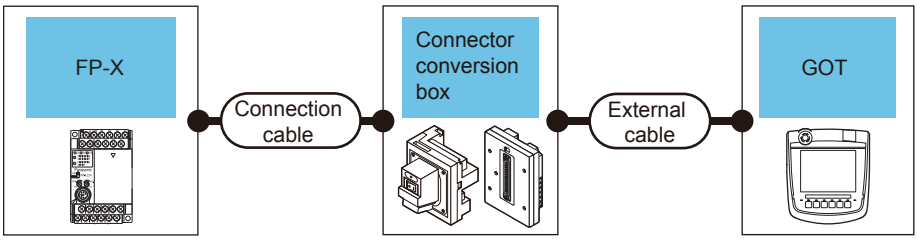
Connecting to FP-X

Communication driver

Panasonic MEWNET-FP

When connecting to tool port

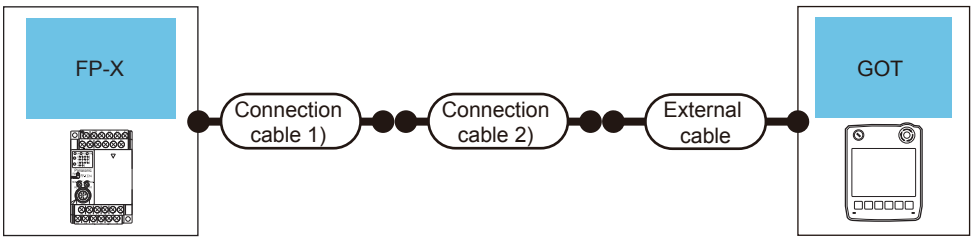
■When using the connector conversion box



PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
FP-X	RS-232	AFC8503(3m)*1	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

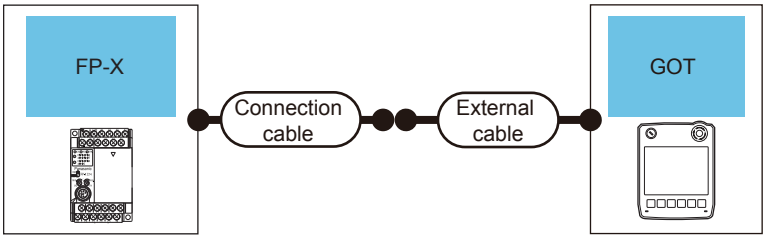
■When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable 1)	Connection cable 2)	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model	Connection diagram number				
FP-X	RS-232	AFC8503(3m)*1	User preparing Page 1385 RS-232 connection diagram 25)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

■When using the external cable (GT11H-C□□□)

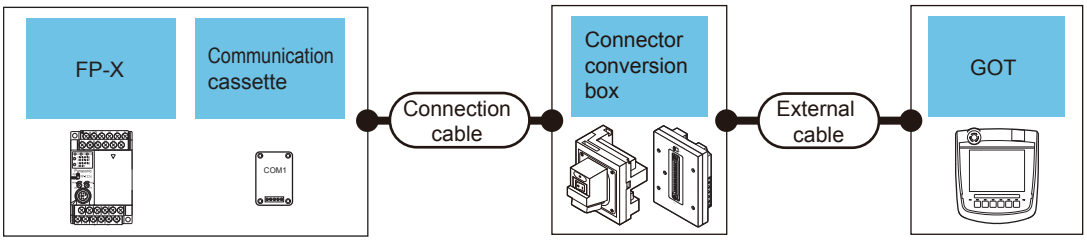


PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model				
FP-X	RS-232	AFC8503(3m)*1	GT11H-C30(3m) ☞ Page 1385 RS-232 connection diagram 26)	GT 2505HS	6m	1 GOT for 1 PLC

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

When connecting to communication cassette

■When using the connector conversion box

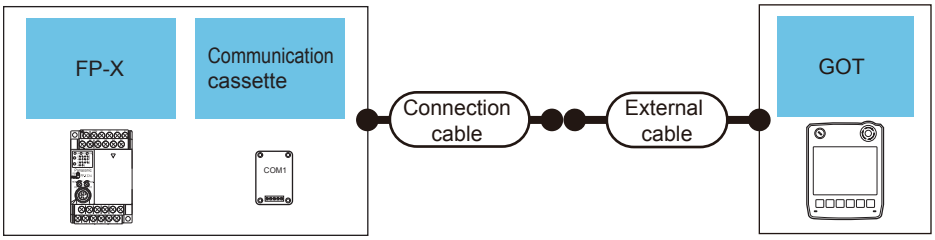


PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication cassette*1	Communication Type	Cable model Connection diagram number					
FP-X	AFPX-COM1 (RS232C one channel type)	RS-232	User preparing Page 1381 RS-232 connection diagram 13)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	AFPX-COM2*2 (RS232C two channel type)		User preparing Page 1382 RS-232 connection diagram 16)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	AFPX-COM3 (RS485/RS422 one channel type)	RS-422	User preparing Page 1393 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
	AFPX-COM4*2 (RS485 one channel and RS232C one channel mixed type)	RS-232	User preparing Page 1383 RS-232 connection diagram 19)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

*2 To connect C30 and C60, USB port may set at the COM2 port on AFPX-COM2 and AFPX-COM4.
In this case, set the COM2 port to RS232C.

■When using the external cable (GT11H-C□□□-37P)

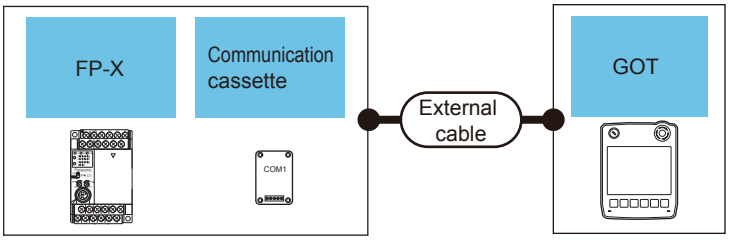


PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication cassette*1	Communication Type	Cable model Connection diagram number				
FP-X	AFPX-COM1 (RS232C one channel type)	RS-232	User preparing Page 1381 RS-232 connection diagram 14)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
	AFPX-COM2*2 (RS232C two channel type)		User preparing Page 1382 RS-232 connection diagram 17)	GT11H-C30-37P(3m)	GT 2505HS		
	AFPX-COM3 (RS485/RS422 one channel type)	RS-422	User preparing Page 1393 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	
	AFPX-COM4*2 (RS485 one channel and RS232C one channel mixed type)	RS-232	User preparing Page 1383 RS-232 connection diagram 20)	GT11H-C30-37P(3m)	GT 2505HS	6m	

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

*2 To connect C30 and C60, USB port may set at the COM2 port on AFPX-COM2 and AFPX-COM4.
In this case, set the COM2 port to RS232C.

■When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication cassette*1	Communication Type				
FP-X	AFPX-COM1 (RS232C one channel type)	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1381 RS-232 connection diagram 15)	GT 2505HS	6m	1 GOT for 1 PLC
	AFPX-COM2*2 (RS232C two channel type)		GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1382 RS-232 connection diagram 18)	GT 2505HS		
	AFPX-COM3 (RS485/RS422 one channel type)	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1393 RS-422 connection diagram 3)	GT 2505HS	13m	
	AFPX-COM4*2 (RS485 one channel and RS232C one channel mixed type)	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1383 RS-232 connection diagram 21)	GT 2505HS	6m	

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
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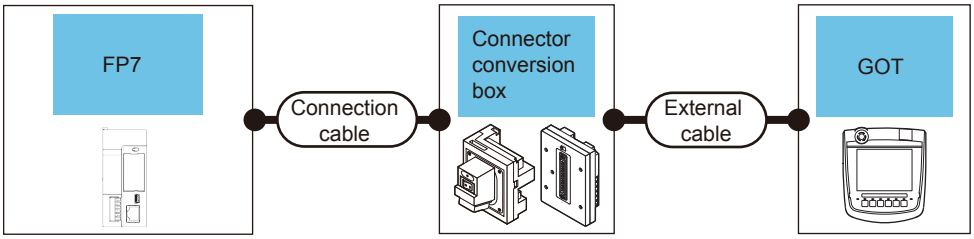
*2 To connect C30 and C60, USB port may set at the COM2 port on AFPX-COM2 and AFPX-COM4.
In this case, set the COM2 port to RS232C.

Connecting to FP7

Communication driver
Panasonic
MEWTOCOL-7

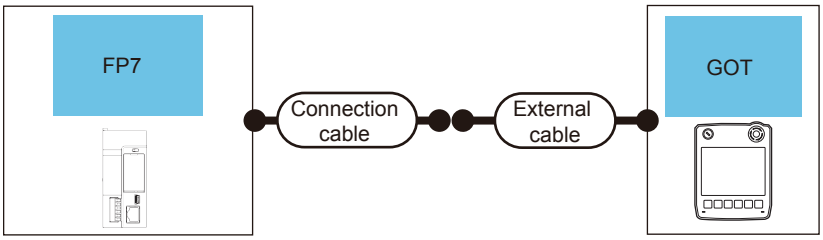
When connecting to Serial port built into CPU module

■When using the connector conversion box



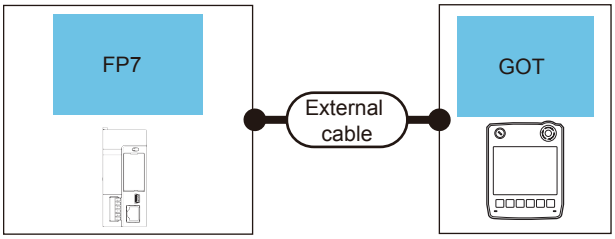
PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
FP7	RS-232	User preparing Page 1385 RS-232 connection diagram 27)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

■When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
FP7	RS-232	User preparing Page 1386 RS-232 connection diagram 28)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC

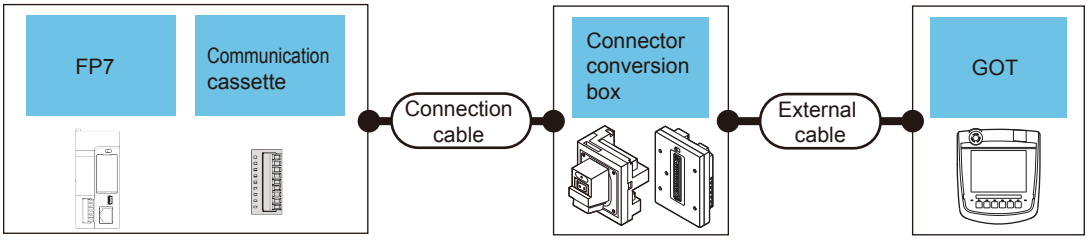
■When using the external cable (GT11H-C□□□)



PLC		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
FP7	RS-232	GT11H-C30(3m) ☞ Page 1386 RS-232 connection diagram 29)	GT 2505HS	6m	1 GOT for 1 PLC

When connecting to communication cassette

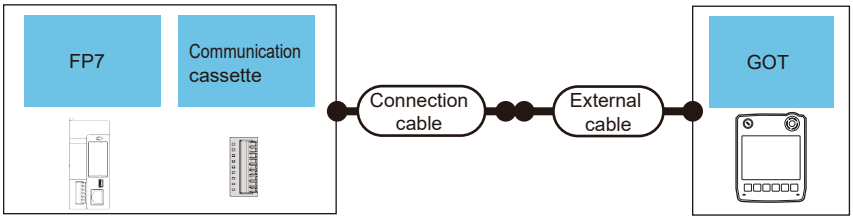
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication cassette*1	Communication Type	Cable model Connection diagram number					
FP7	AFP7CCS1	RS-232	User preparing Page 1385 RS-232 connection diagram 27)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	AFP7CCS2 ([3 Wire] is selected)		User preparing Page 1385 RS-232 connection diagram 27) (3 Wire)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	AFP7CCS2 ([5 Wire] is selected)		User preparing Page 1387 RS-232 connection diagram 30) (5 Wire)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	AFP7CCS1M1 ([RS-422] is selected)	RS-422	User preparing Page 1394 RS-422 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
	AFP7CCS1M1 ([RS-485] is selected)	RS-485	User preparing Page 1397 RS-485 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		
	AFP7CCS1M2 ([RS-422] is selected)	RS-422	User preparing Page 1394 RS-422 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
	AFP7CCS1M2 ([RS-485] is selected)	RS-485	User preparing Page 1397 RS-485 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		
	AFP7CCS1M1	RS-232	User preparing Page 1385 RS-232 connection diagram 27)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		RS-485	User preparing Page 1397 RS-485 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

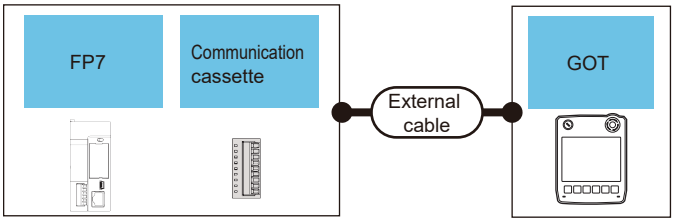
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication cassette*1	Communication Type	Cable model Connection diagram number				
FP7	AFP7CCS1	RS-232	User preparing Page 1386 RS-232 connection diagram 28)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
	AFP7CCS2 ([3 Wire] is selected)		User preparing Page 1386 RS-232 connection diagram 28) (3 Wire)	GT11H-C30-37P(3m)	GT 2505HS		
	AFP7CCS2 ([5 Wire] is selected)		User preparing Page 1387 RS-232 connection diagram 31) (5 Wire)	GT11H-C30-37P(3m)	GT 2505HS		
	AFP7CCS1M1 ([RS-422] is selected)	RS-422	User preparing Page 1394 RS-422 connection diagram 5)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	
	AFP7CCS1M2 ([RS-422] is selected)	RS-422	User preparing Page 1394 RS-422 connection diagram 5)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
	AFP7CCS1M1	RS-232	User preparing Page 1386 RS-232 connection diagram 28)	GT11H-C30-37P(3m)	GT 2505HS	6m	

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

■When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication cassette*1	Communication Type				
FP7	AFP7CCS1	RS-232	GT11H-C30(3m) ☞ Page 1386 RS-232 connection diagram 29)	GT 2505HS	6m	1 GOT for 1 PLC
	AFP7CCS2 ([3 Wire] is selected)		GT11H-C30(3m) ☞ Page 1386 RS-232 connection diagram 29)	GT 2505HS		
	AFP7CCS2 ([5 Wire] is selected)		GT11H-C30(3m) ☞ Page 1387 RS-232 connection diagram 32)	GT 2505HS		
	AFP7CCS1M1 ([RS-422] is selected)	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1395 RS-422 connection diagram 6)	GT 2505HS	13m	
	AFP7CCS1M2 ([RS-422] is selected)	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1395 RS-422 connection diagram 6)	GT 2505HS		
	AFP7CCS1M1	RS-232	GT11H-C30(3m) ☞ Page 1386 RS-232 connection diagram 29)	GT 2505HS	6m	

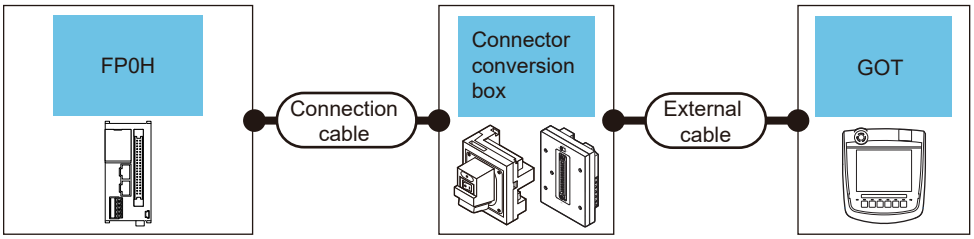
*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

Connecting to FP0H

Communication driver
Panasonic
MEWTOCOL-7

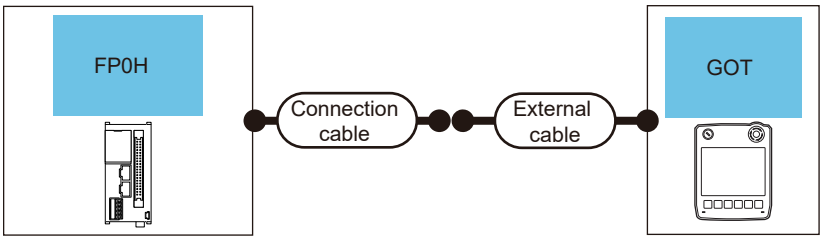
When connecting to Serial port built into CPU module

■When using the connector conversion box



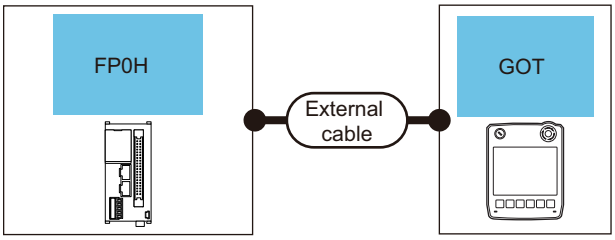
PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
FP0H	RS-232	(User preparing) Page 1388 RS-232 connection diagram 33)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

■When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
FP0H	RS-232	(User preparing) Page 1388 RS-232 connection diagram 34)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC

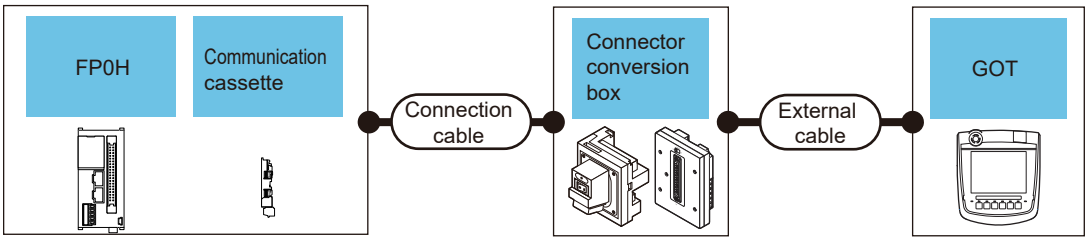
■When using the external cable (GT11H-C□□□)



PLC		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
FP0H	RS-232	GT11H-C30(3m) (User preparing) Page 1388 RS-232 connection diagram 35)	GT 2505HS	6m	1 GOT for 1 PLC

When connecting to communication cassette

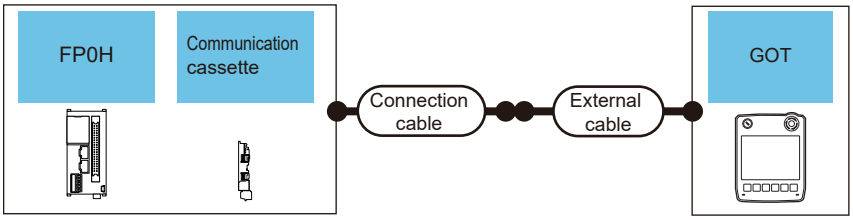
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication cassette*1	Communication Type	Cable model Connection diagram number					
FP0H	AFP0HCCS1 AFP0HCCS2	RS-232	User preparing Page 1389 RS-232 connection diagram 36)	GT16H-CNB-42S	GT16H-C30-42P (3m)	GT 2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	AFP0HCCS1M1	RS-232	User preparing Page 1389 RS-232 connection diagram 37)	GT16H-CNB-42S	GT16H-C30-42P (3m)	GT 2506HS	6m	
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

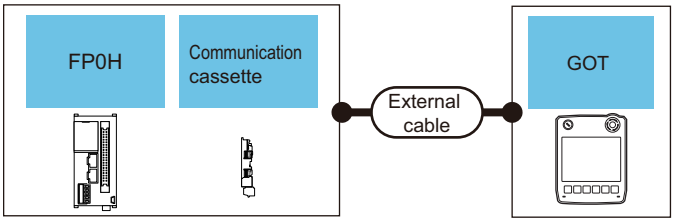
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication cassette*1	Communication Type	Cable model Connection diagram number				
FP0H	AFP0HCCS1 AFP0HCCS2	RS-232	User preparing Page 1389 RS-232 connection diagram 38)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
	AFP0HCCS1M1	RS-232	User preparing Page 1390 RS-232 connection diagram 39)	GT11H-C30-37P(3m)	GT 2505HS	6m	

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

■When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication cassette*1	Communication Type				
FP0H	AFP0HCCS1 AFP0HCCS2	RS-232	GT11H-C30(3m) (User preparing) Page 1390 RS-232 connection diagram 40)	GT 2505HS	6m	1 GOT for 1 PLC
	AFP0HCCS1M1	RS-232	GT11H-C30(3m) (User preparing) Page 1390 RS-232 connection diagram 41)	GT 2505HS	6m	

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd.
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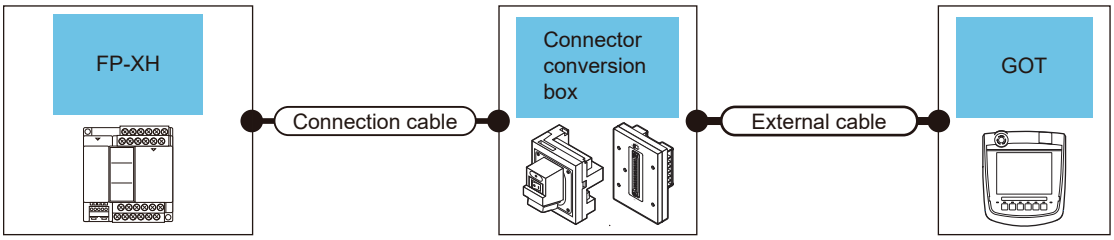
System configuration for connecting to FP-XH

Communication driver

Panasonic MEWNET-FP

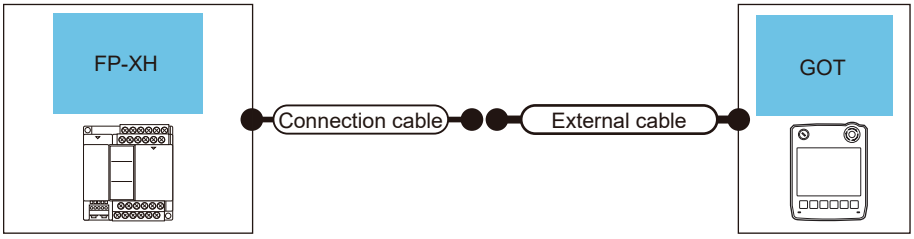
When connecting to COM0 port

■When using the connector conversion box



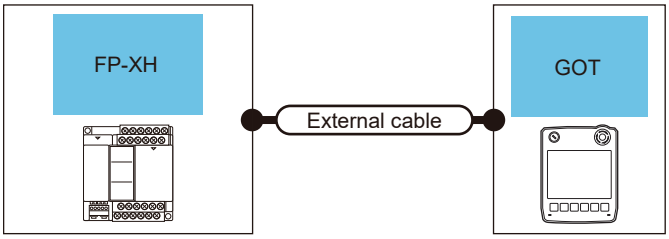
PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
FP-XH	RS-232	User preparing Page 1388 RS-232 connection diagram 33)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

■When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
FP-XH	RS-232	User preparing Page 1388 RS-232 connection diagram 34)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC

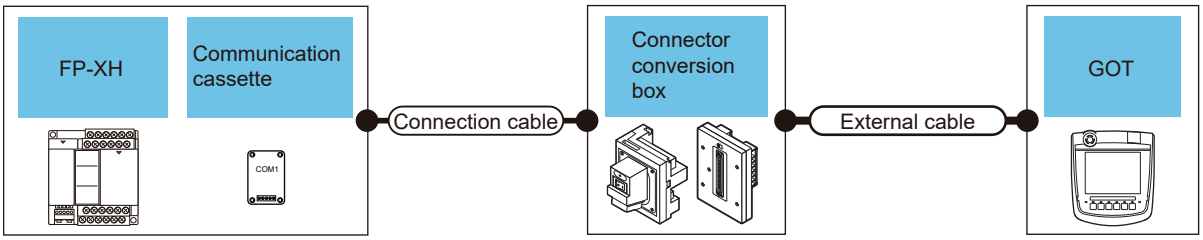
■When using the external cable (GT11H-C□□□)



PLC		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
FP-XH	RS-232	GT11H-C30(3m) User preparing Page 1388 RS-232 connection diagram 35)	GT 2505HS	6m	1 GOT for 1 PLC

When connecting to communication cassette

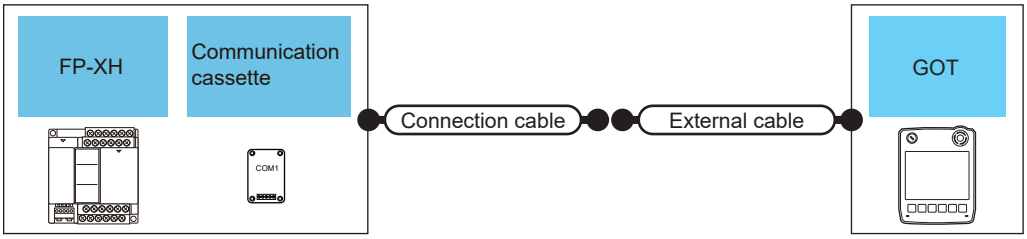
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication cassette*1	Communication Type	Cable model Connection diagram number					
FP-XH	AFPX-COM1 (RS232C one channel type)	RS-232	User preparing Page 1381 RS-232 connection diagram 13)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	AFPX-COM2 (RS232C two channel type)		User preparing Page 1382 RS-232 connection diagram 16)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	AFPX-COM3 (RS485/RS422 one channel type)	RS-422	User preparing Page 1393 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
	AFPX-COM4 (RS485 one channel and RS232C one channel mixed type)	RS-232	User preparing Page 1383 RS-232 connection diagram 19)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd. For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

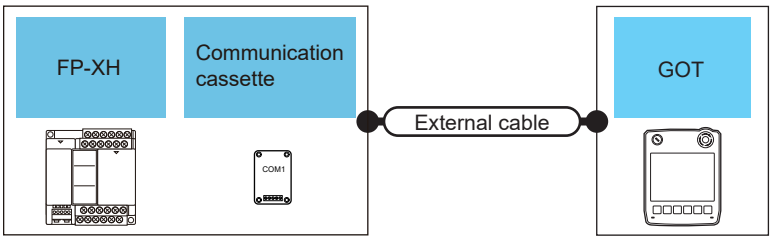
■When using the external cable (GT11H-C□□□-37P)



PLC		Communication cassette*1	Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type		Cable model Connection diagram number				
FP-XH	RS-232	AFPX-COM1 (RS232C one channel type)	User preparing Page 1381 RS-232 connection diagram 14)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
		AFPX-COM2 (RS232C two channel type)	User preparing Page 1382 RS-232 connection diagram 17)	GT11H-C30-37P(3m)		6m	
	RS-422	AFPX-COM3 (RS485/RS422 one channel type)	User preparing Page 1393 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		13m	
	RS-232	AFPX-COM4 (RS485 one channel and RS232C one channel mixed type)	User preparing Page 1383 RS-232 connection diagram 20)	GT11H-C30-37P(3m)		6m	

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd. For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

■When using the external cable (GT11H-C□□□)



PLC		Communication cassette*1	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type					
FP-XH	RS-232	AFPX-COM1 (RS232C one channel type)	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1381 RS-232 connection diagram 15)	GT 2505HS	6m	1 GOT for 1 PLC
		AFPX-COM2 (RS232C two channel type)	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1382 RS-232 connection diagram 18)		6m	
	RS-422	AFPX-COM3 (RS485/RS422 one channel type)	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1393 RS-422 connection diagram 3)		13m	
	RS-232	AFPX-COM4 (RS485 one channel and RS232C one channel mixed type)	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1383 RS-232 connection diagram 21)		6m	

*1 Product manufactured by Panasonic Industrial Devices SUNX Co., Ltd. For details of this product, contact Panasonic Industrial Devices SUNX Co., Ltd.

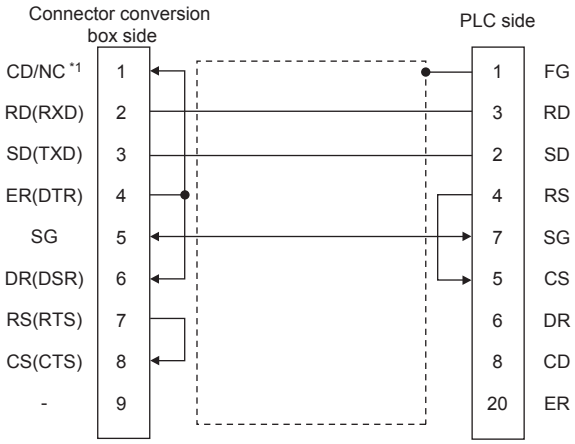
27.3 Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

RS-232 cable

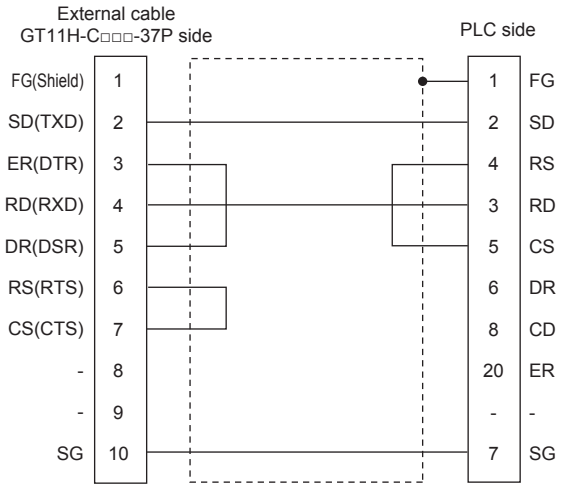
Connection diagram

■RS-232 connection diagram 1)

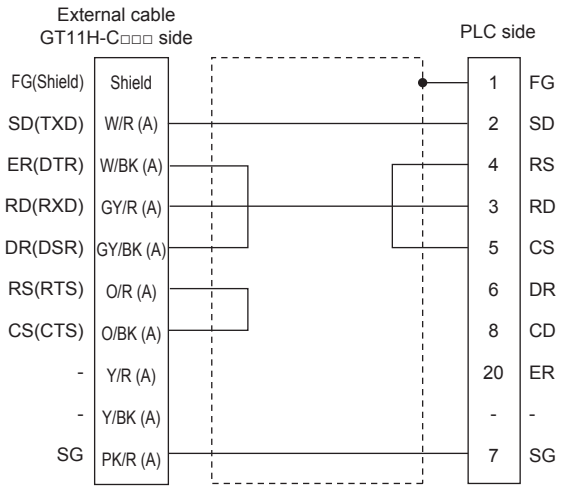


*1 GT2506HS-V: CD, GT2505HS-V: NC

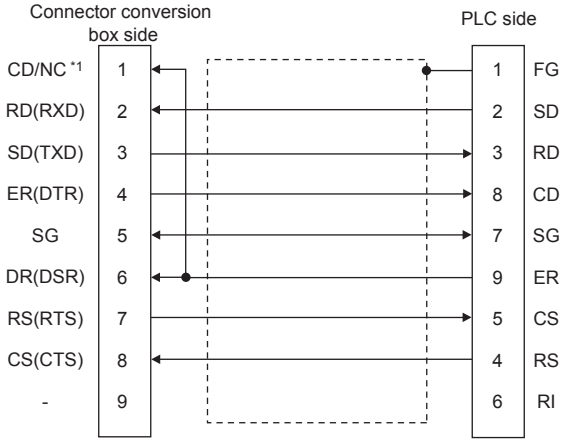
■RS-232 connection diagram 2)



■RS-232 connection diagram 3)

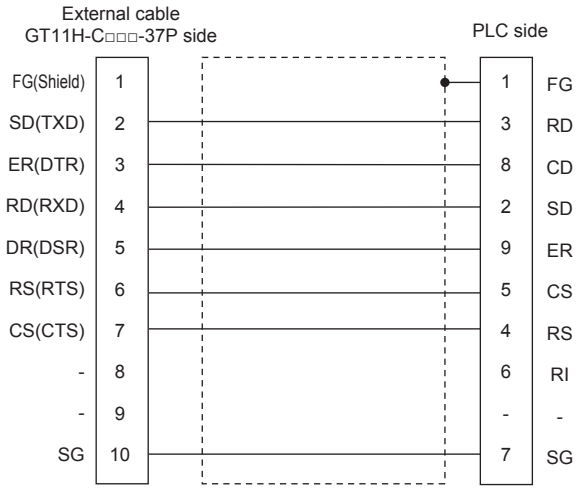


■RS-232 connection diagram 4)

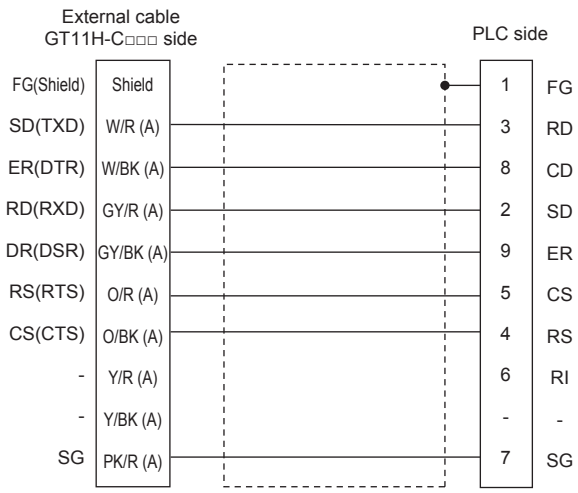


*1 GT2506HS-V: CD, GT2505HS-V: NC

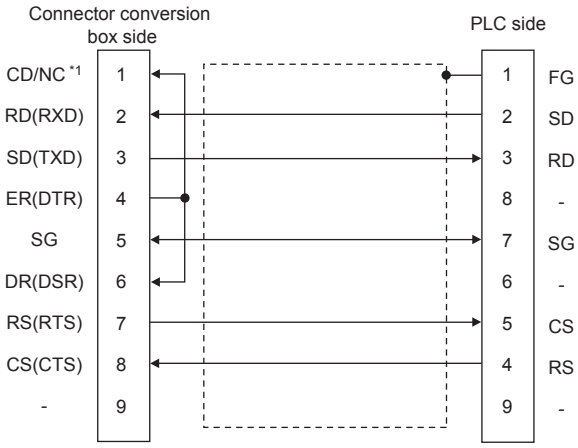
■RS-232 connection diagram 5)



■RS-232 connection diagram 6)

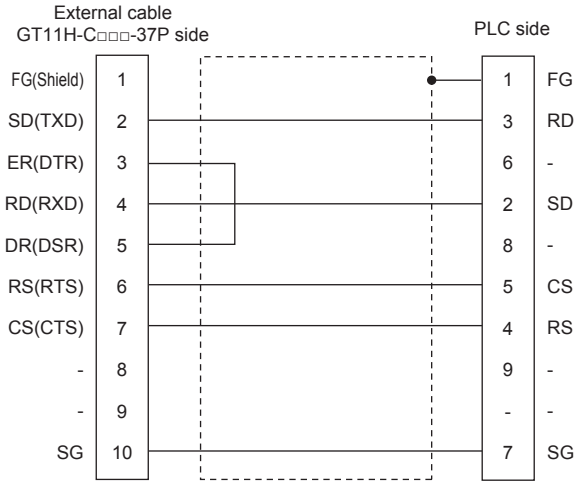


■RS-232 connection diagram 7)

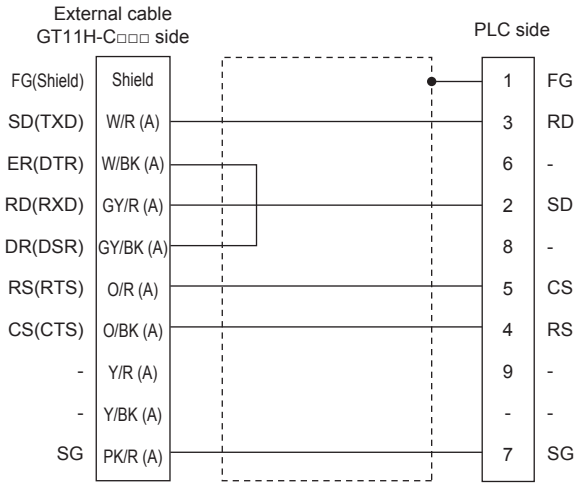


*1 GT2506HS-V: CD, GT2505HS-V: NC

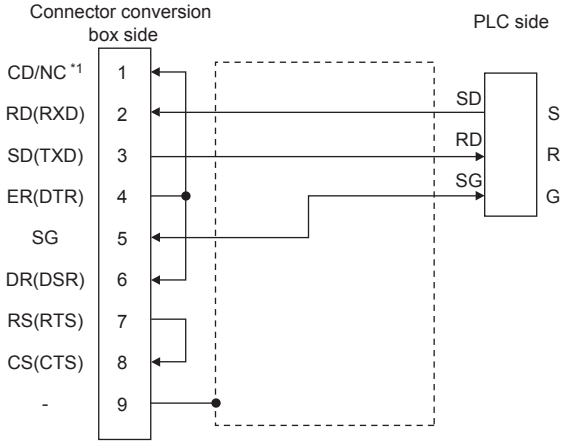
■RS-232 connection diagram 8)



■RS-232 connection diagram 9)

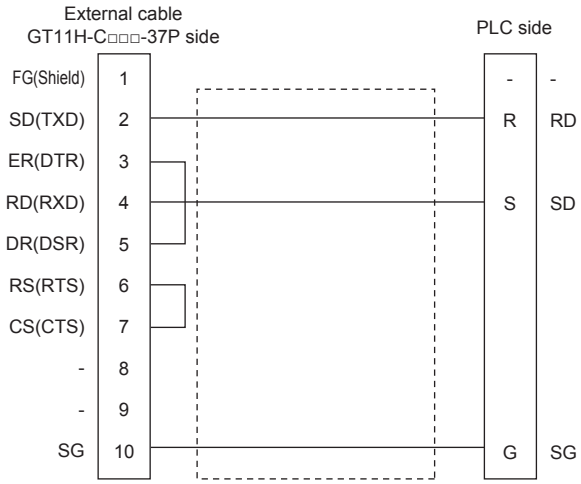


■RS-232 connection diagram 10)

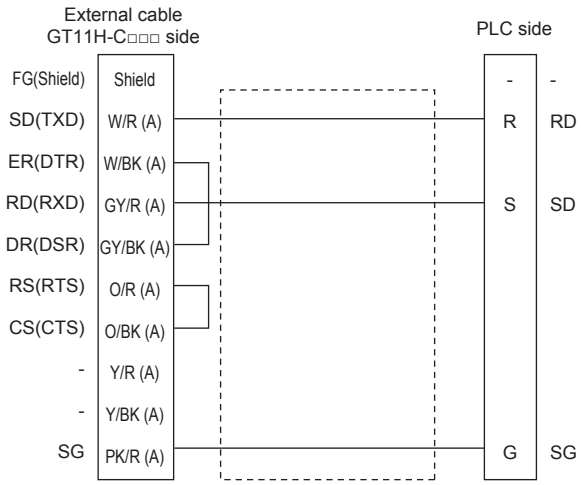


*1 GT2506HS-V: CD, GT2505HS-V: NC

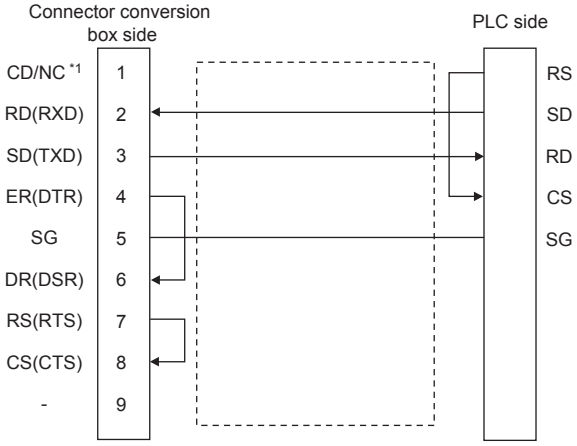
■RS-232 connection diagram 11)



■RS-232 connection diagram 12)

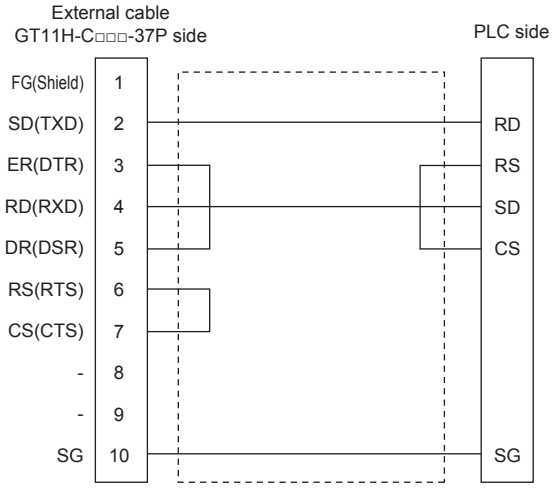


■RS-232 connection diagram 13)

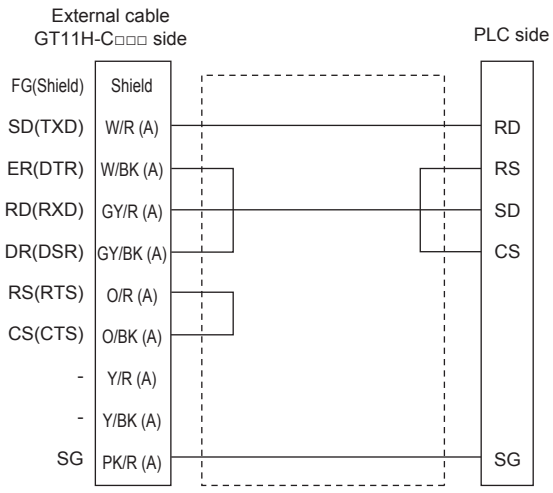


*1 GT2506HS-V: CD, GT2505HS-V: NC

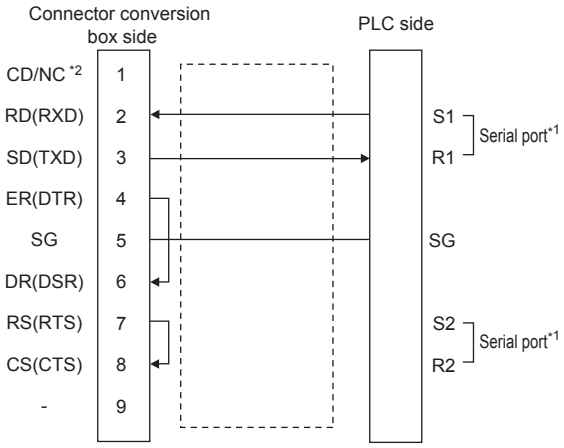
■RS-232 connection diagram 14)



■RS-232 connection diagram 15)



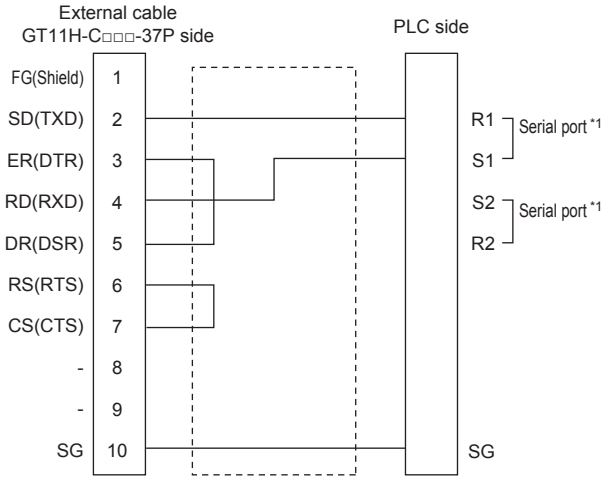
■RS-232 connection diagram 16)



*1 PANASONIC PLC Side has two serial ports.
S1 and R1, S2 and R2 constitute the serial port, respectively.
Use one of the serial ports.

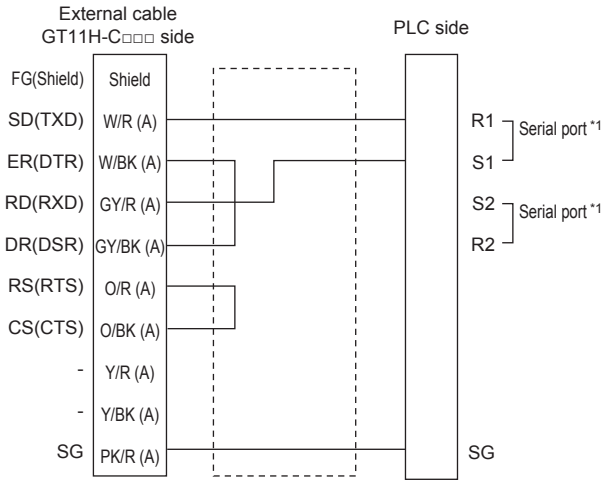
*2 GT2506HS-V: CD, GT2505HS-V: NC

■RS-232 connection diagram 17)



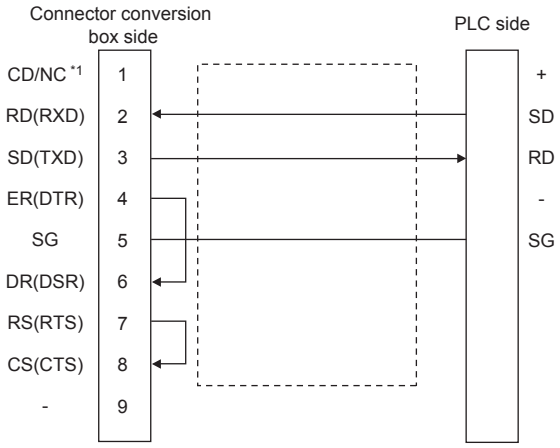
*1 PANASONIC PLC Side has two serial ports.
S1 and R1, S2 and R2 constitute the serial port, respectively.
Use one of the serial ports.

■RS-232 connection diagram 18)



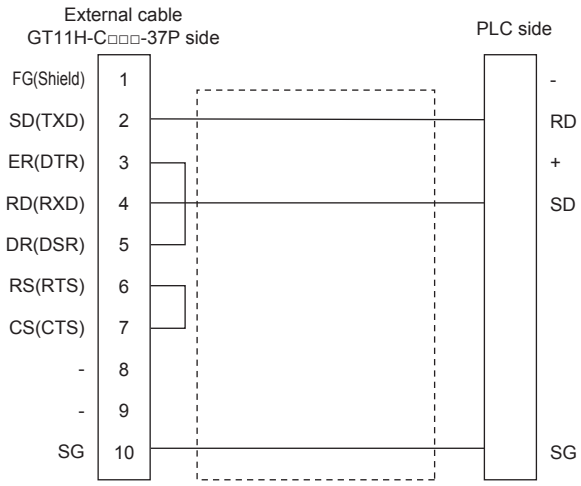
*1 PANASONIC PLC Side has two serial ports.
S1 and R1, S2 and R2 constitute the serial port, respectively.
Use one of the serial ports.

■RS-232 connection diagram 19)

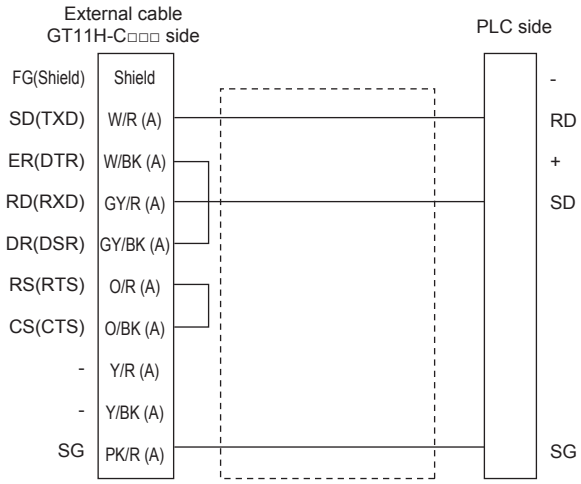


*1 GT2506HS-V: CD, GT2505HS-V: NC

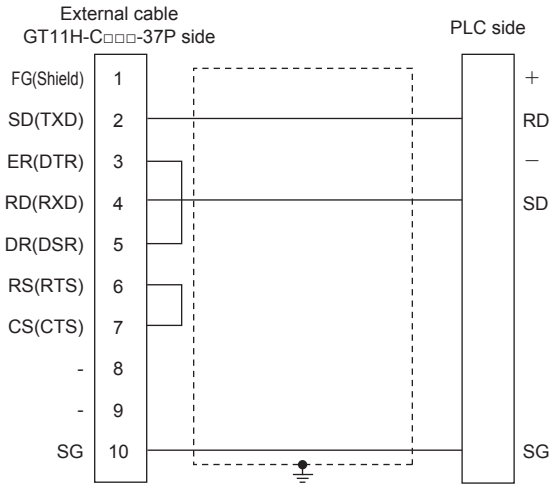
■RS-232 connection diagram 20)



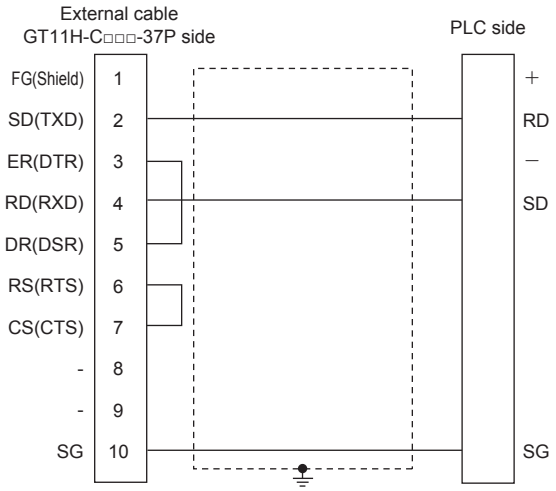
■RS-232 connection diagram 21)



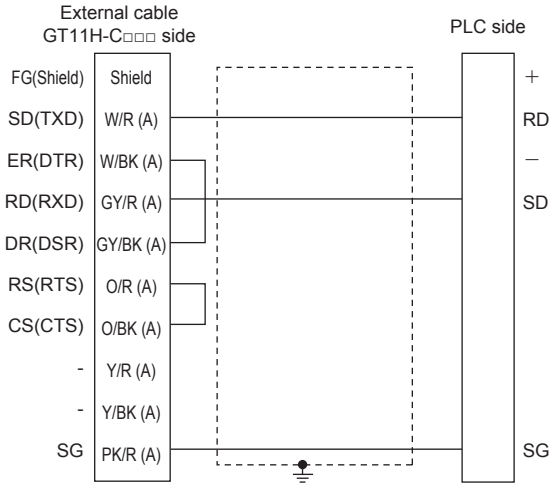
■RS-232 connection diagram 22)



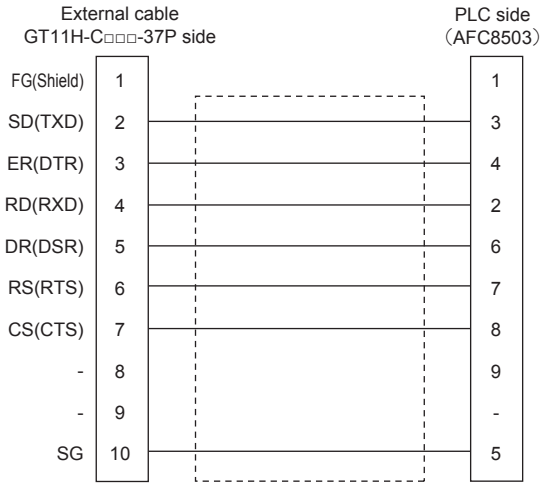
■RS-232 connection diagram 23)



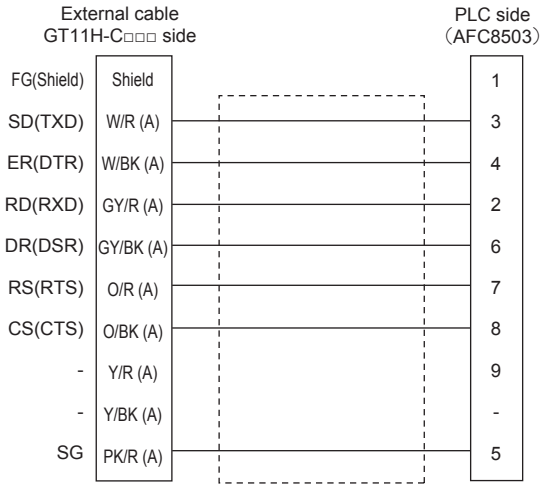
■RS-232 connection diagram 24)



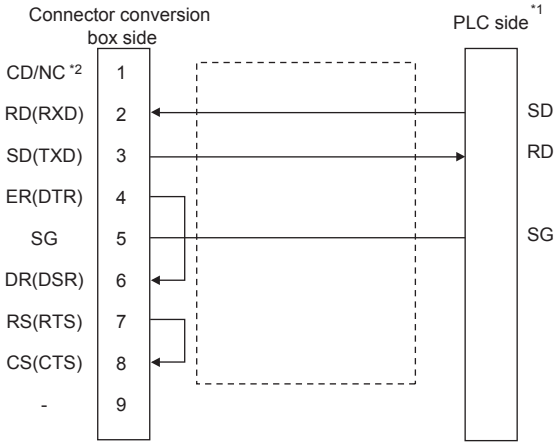
■RS-232 connection diagram 25)



■RS-232 connection diagram 26)



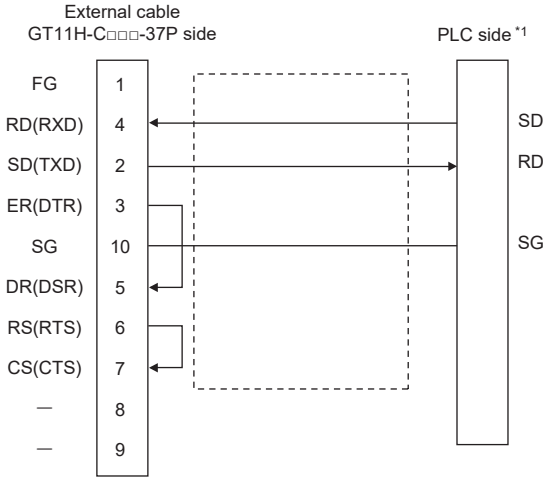
■RS-232 connection diagram 27)



*1 The details of the connection on the PLC are shown below.
Built-in port: COM.0
Communication cassette: AFP7CCS1, AFP7CCS2 of CH1([3 Wire] is selected), AFP7CCS2 of CH2([3 Wire] is selected), AFP7CCS1M1

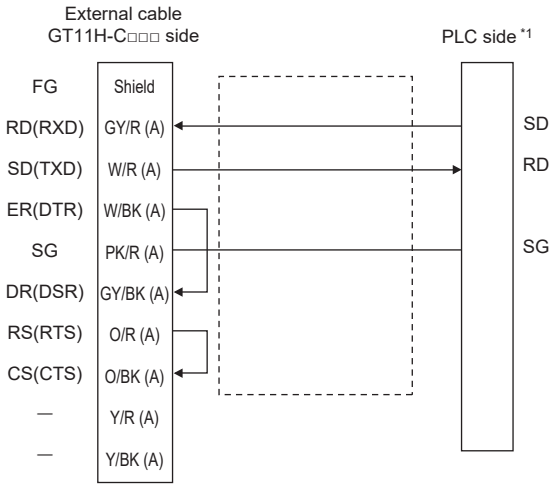
*2 GT2506HS-V: CD, GT2505HS-V: NC

■RS-232 connection diagram 28)



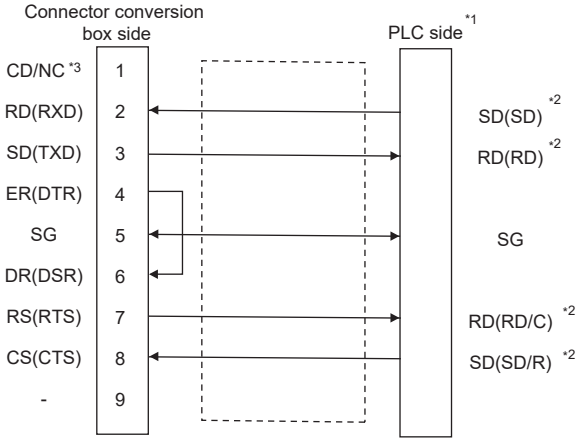
*1 The details of the connection on the PLC are shown below.
Built-in port: COM.0
Communication cassette: AFP7CCS1, AFP7CCS2 of CH1([3 Wire] is selected), AFP7CCS2 of CH2([3 Wire] is selected), AFP7CCS1M1

■RS-232 connection diagram 29)



*1 The details of the connection on the PLC are shown below.
Built-in port: COM.0
Communication cassette: AFP7CCS1, AFP7CCS2 of CH1([3 Wire] is selected), AFP7CCS2 of CH2([3 Wire] is selected), AFP7CCS1M1

■RS-232 connection diagram 30)

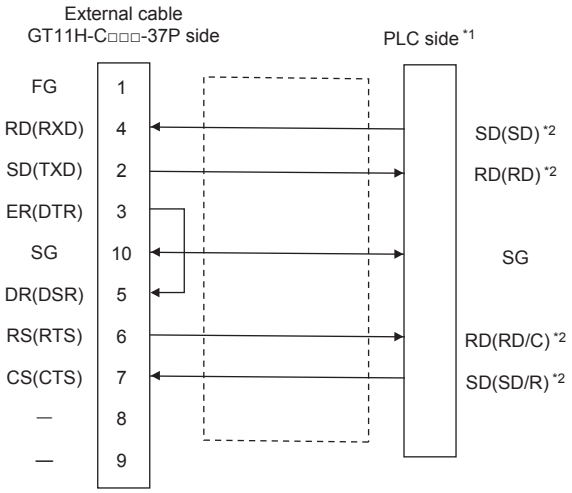


*1 The details of the connection on the PLC are shown below.
Communication cassette: AFP7CCS2([5 Wire] is selected)

*2 Connect to the terminal for which the front panel LED of the communication cassette shown in parentheses is ON.

*3 GT2506HS-V: CD, GT2505HS-V: NC

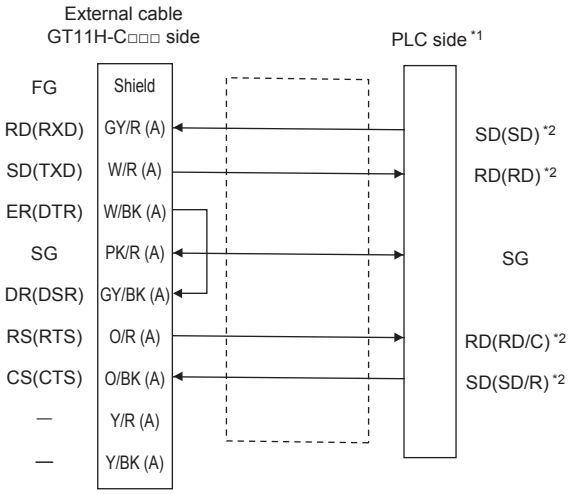
■RS-232 connection diagram 31)



*1 The details of the connection on the PLC are shown below.
Communication cassette: AFP7CCS2([5 Wire] is selected)

*2 Connect to the terminal for which the front panel LED of the communication cassette shown in parentheses is ON.

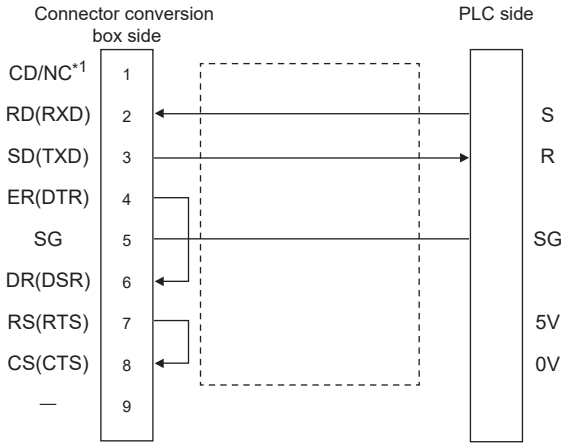
■RS-232 connection diagram 32)



*1 The details of the connection on the PLC are shown below.
Communication cassette: AFP7CCS2([5 Wire] is selected)

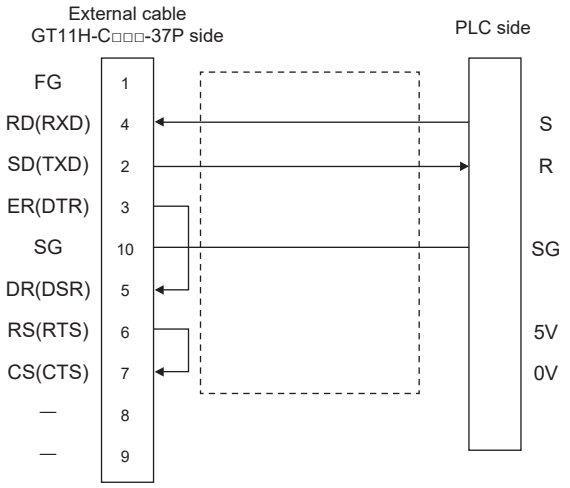
*2 Connect to the terminal for which the front panel LED of the communication cassette shown in parentheses is ON.

■RS-232 connection diagram 33)

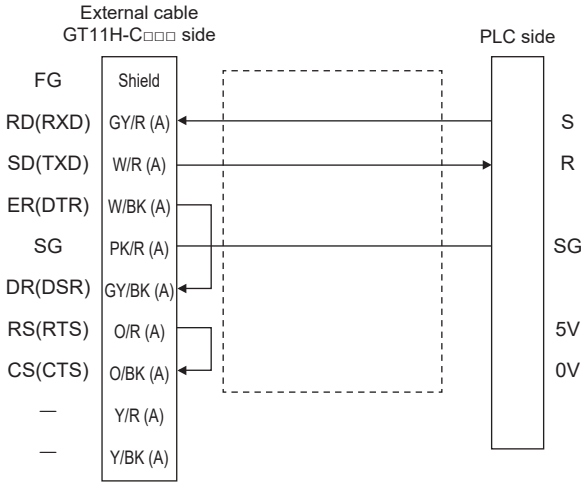


*1 GT2506HS-V:CD, GT2505HS-V: NC

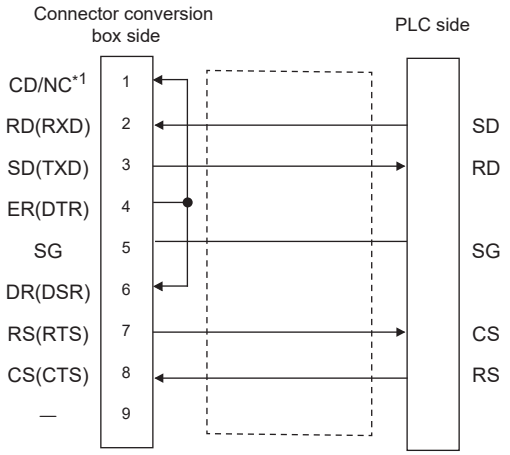
■RS-232 connection diagram 34)



■RS-232 connection diagram 35)

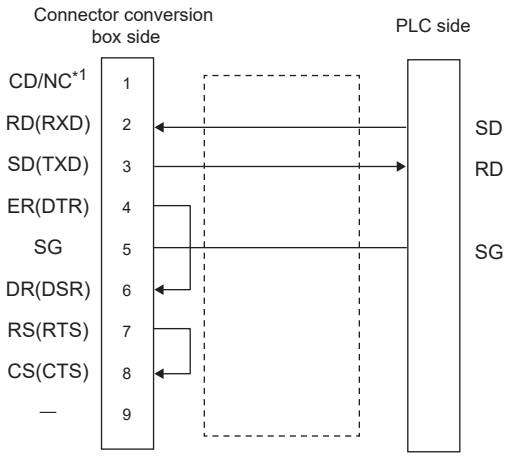


■RS-232 connection diagram 36)



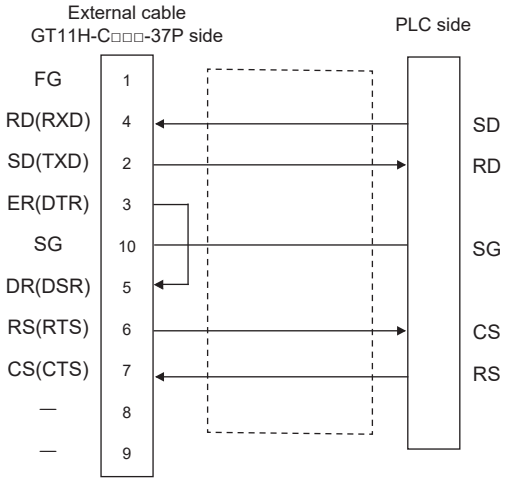
*1 GT2506HS-V:CD, GT2505HS-V: NC

■RS-232 connection diagram 37)

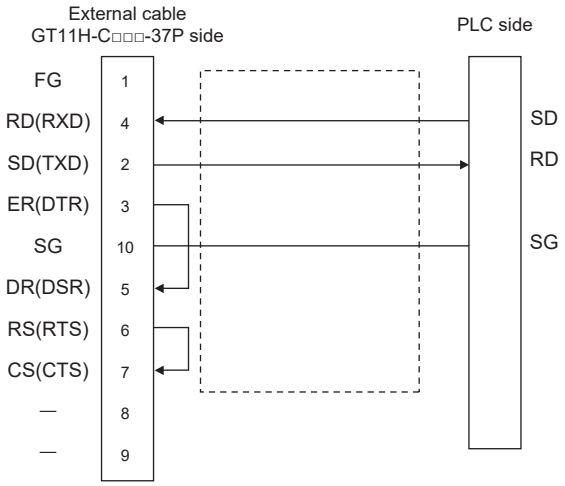


*1 GT2506HS-V:CD, GT2505HS-V: NC

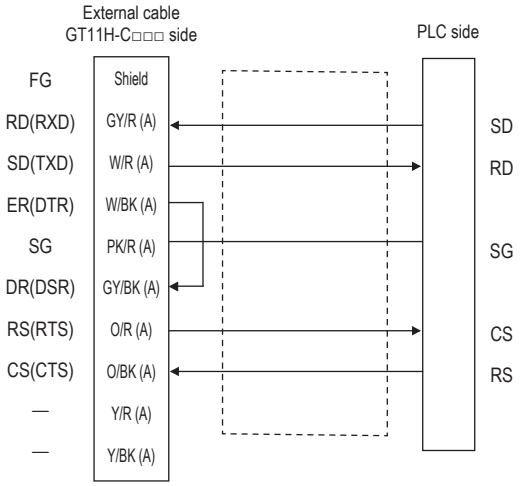
■RS-232 connection diagram 38)



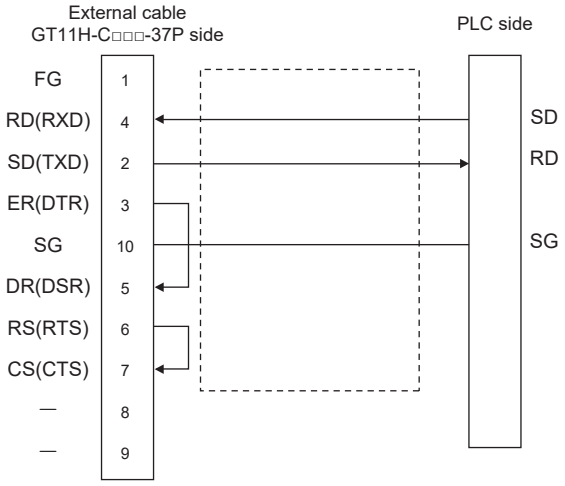
■RS-232 connection diagram 39)



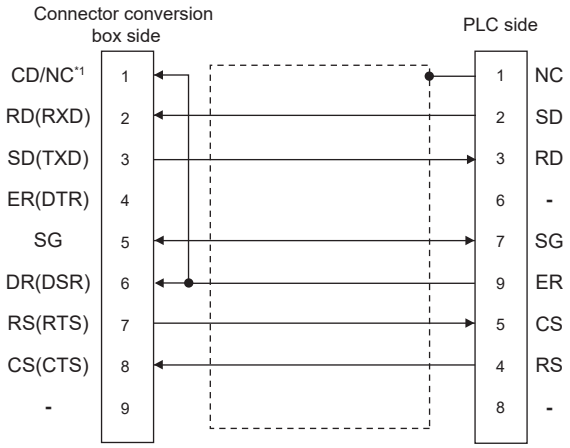
■RS-232 connection diagram 40)



■RS-232 connection diagram 41)

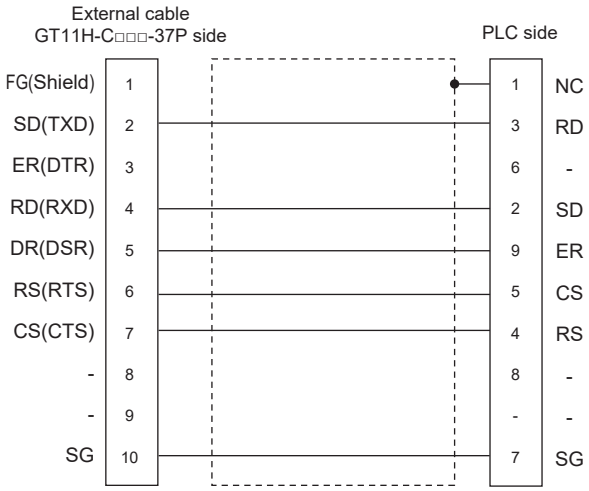


■RS-232 connection diagram 42)

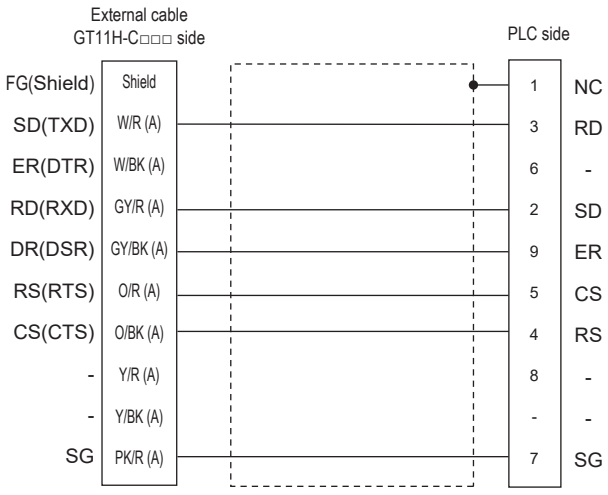


*1 GT2506HS-V: CD, GT2505HS-V: NC

■RS-232 connection diagram 43)



■RS-232 connection diagram 44)



Precautions when preparing a cable

■Cable length

The total distance (between the GOT and a controller) of the RS-232 cable must be 6 m or less.

The length of the cable must be 3 m or less with a transmission speed of 38400 bps.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■Connector for Panasonic Industrial Devices SUNX PLC

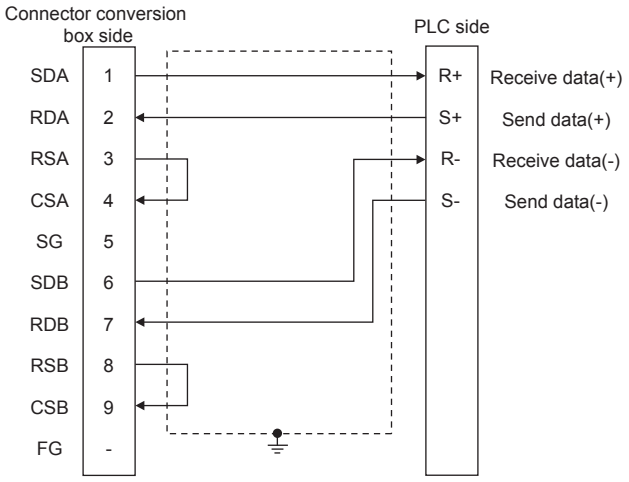
Use the connector applicable to the Panasonic Industrial Devices SUNX PLC.

For details, refer to the Panasonic Industrial Devices SUNX PLC user's manual.

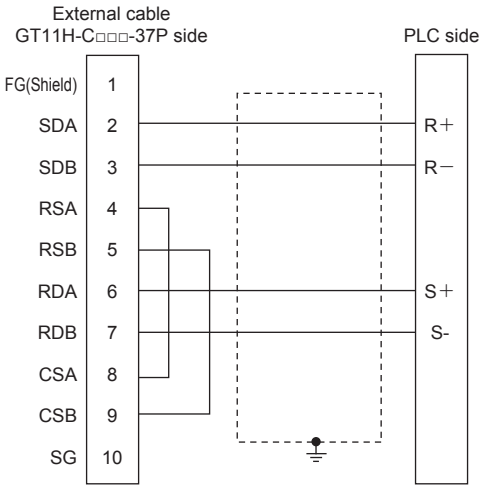
RS-422 cable

Connection diagram

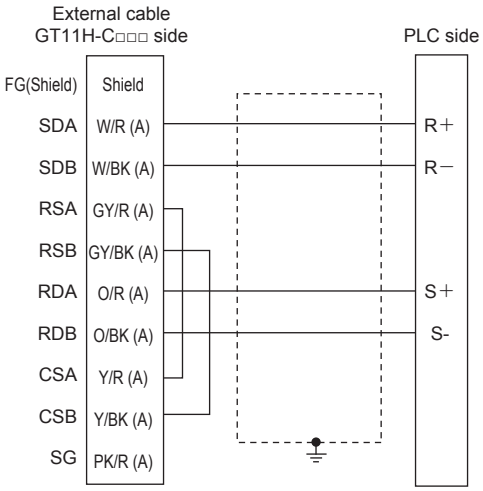
■RS-422 connection diagram 1)



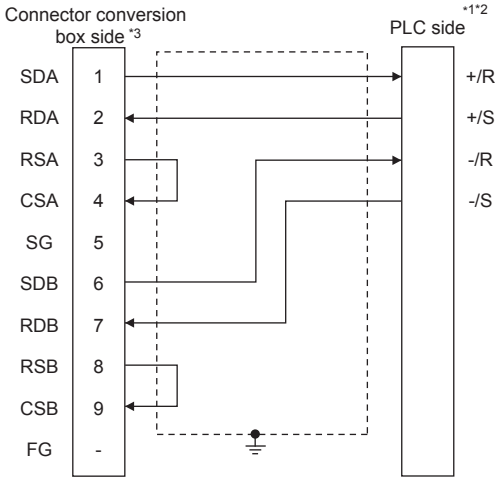
■RS-422 connection diagram 2)



■RS-422 connection diagram 3)

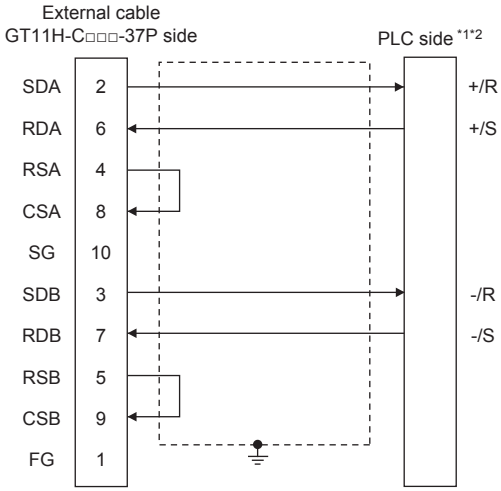


■RS-422 connection diagram 4)



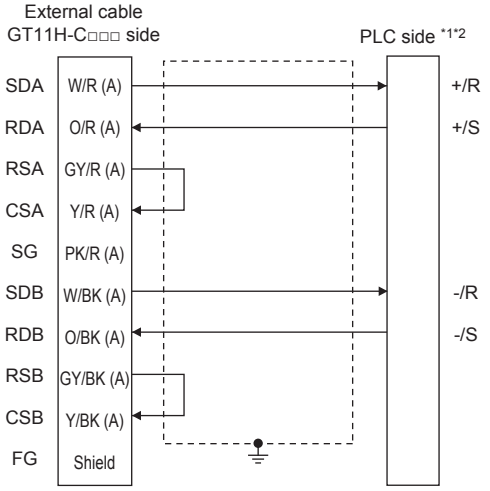
*1 The details of the connection on the PLC are shown below.
Communication cassette: AFP7CCM1, AFP7CCM2 of CH1([RS-422] is selected), AFP7CCM2 of CH2([RS-422] is selected)
*2 Set the terminating resistor of the PLC to [ON].
*3 Set the terminating resistor of the GOT as follows.
For GT2506HS-V: Set the terminating resistor to "Disable".

■RS-422 connection diagram 5)



*1 The details of the connection on the PLC are shown below.
Communication cassette: AFP7CCM1, AFP7CCM2 of CH1([RS-422] is selected), AFP7CCM2 of CH2([RS-422] is selected)
*2 Set the terminating resistor of the PLC to [ON].

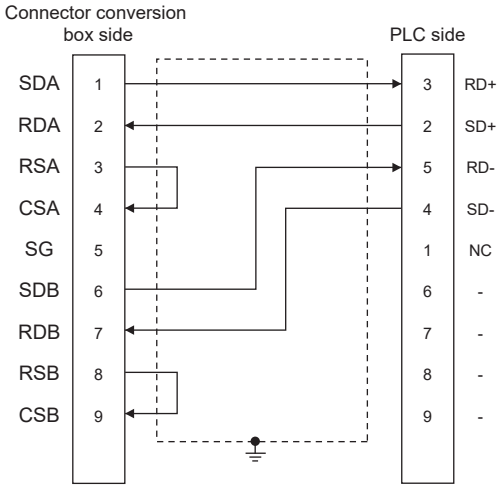
■RS-422 connection diagram 6)



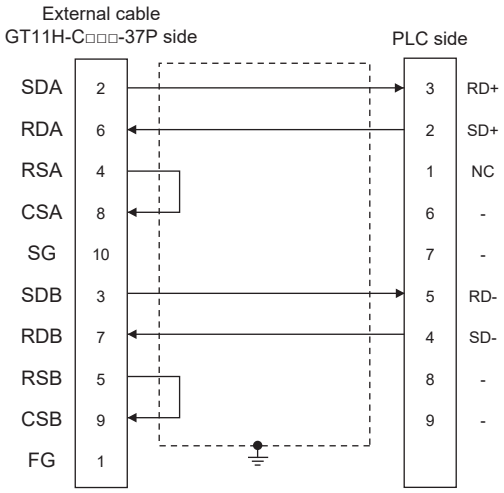
*1 The details of the connection on the PLC are shown below.
Communication cassette: AFP7CCM1, AFP7CCM2 of CH1([RS-422] is selected), AFP7CCM2 of CH2([RS-422] is selected)

*2 Set the terminating resistor of the PLC to [ON].

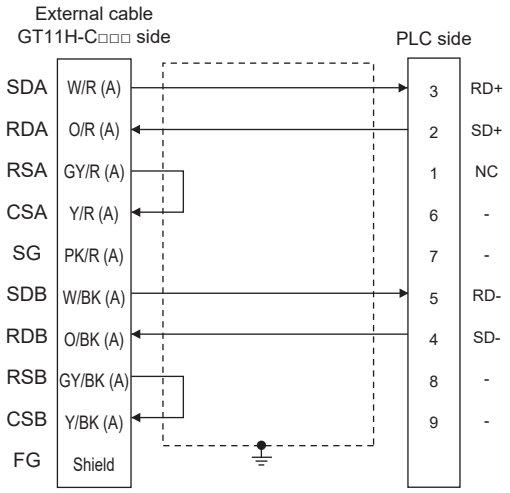
■RS-422 connection diagram 7)



■RS-422 connection diagram 8)



■RS-422 connection diagram 9)



Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■Connector for Panasonic Industrial Devices SUNX PLC

Use the connector applicable to the Panasonic Industrial Devices SUNX PLC.

For details, refer to the Panasonic Industrial Devices SUNX PLC user's manual.

Connecting terminating resistors

■GOT side

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

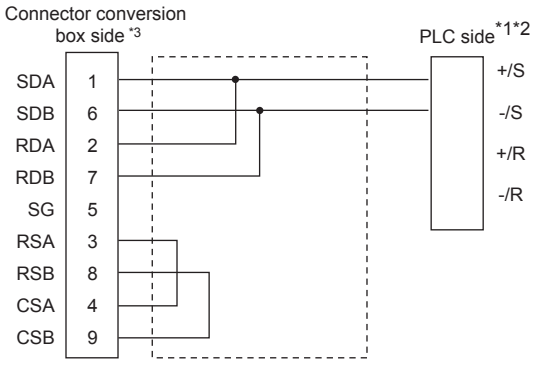
For details of terminating resistor settings, refer to the following.

☞ Page 91 Terminating resistors of GOT

RS-485 cable

Connection diagram

■RS-485 connection diagram 1)



*1 The details of the connection on the PLC are shown below.
Communication cassette: AFP7CCM1 ([RS-485] is selected), AFP7CCM2 of CH1([RS-485] is selected), AFP7CCM2 of CH2 ([RS-485] is selected)

*2 Set the terminating resistor of the PLC to [ON].

*3 Set the terminating resistor of the GOT as follows.
For GT2506HS-V: Set the terminating resistor to "Disable".

Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-485 cable must be 13 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■Connector for Panasonic Industrial Devices SUNX PLC

Use the connector applicable to the Panasonic Industrial Devices SUNX PLC.

For details, refer to the Panasonic Industrial Devices SUNX PLC user's manual.

Connecting terminating resistors

■GOT side

- For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

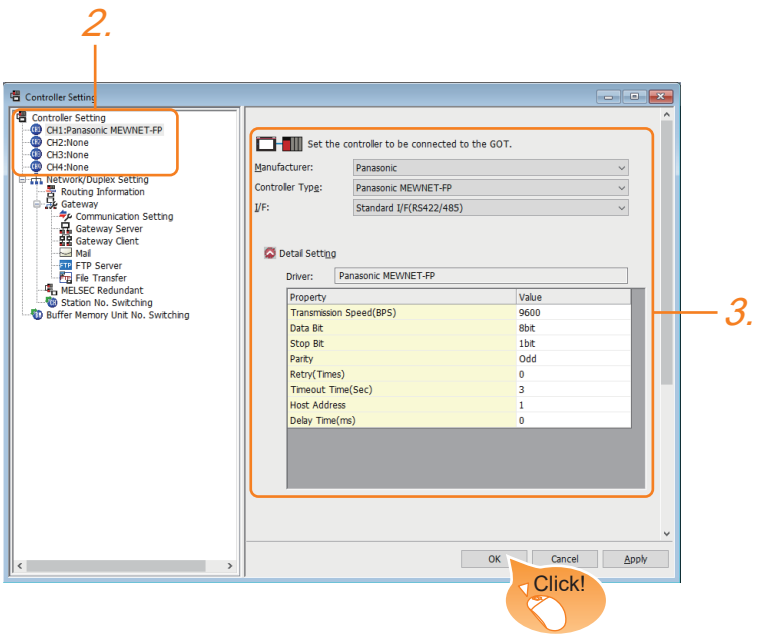
For details of terminating resistor settings, refer to the following.

☞ Page 91 Terminating resistors of GOT

27.4 GOT Side Settings

Setting communication interface (Communication settings)

Set the channel of the equipment to be connected to the GOT.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [Panasonic]
- [Controller Type]: Select one of the following items according to the controller to be connected.

When connecting to FP0/1/2/3/5, FP0H, FP-M, FPΣ, or FP-X: [Panasonic MEWNET-FP]

When connecting to FP7: [Panasonic FP7]

- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1399 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

[Panasonic MEWNET-FP]

Property	Value
Transmission Speed(BPS)	9600
Data Bit	8 bit
Stop Bit	1 bit
Parity	Odd
Retry(Times)	0
Timeout Time(Sec)	3
Host Address	1
Delay Time(ms)	0

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 9600bps)	4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bits)	7bits/8bits
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Host Address	Specify the host address (station No. of the PLC to which the GOT is connected) in the network of the GOT. (Default: 1)	1 to 31
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300 (ms)

[Panasonic MEWTOCOL-7]

Property	Value
Transmission Speed(BPS)	9600
Data Bit	8bit
Stop Bit	1bit
Parity	Odd
Retry(Times)	0
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 9600bps)	4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bits)	7bits/8bits
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300 (ms)

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

27.5 PLC Side Setting

Point

Panasonic Industrial Devices SUNX PLC

For details of the Panasonic Industrial Devices SUNX PLC, refer to the following manual.

Panasonic Industrial Devices SUNX PLC user's Manual

Connecting to FP0/1/2/3/5, FP0H, FP-M, FPΣ, FP-X

Connecting to the tool port of the PLC CPU

Item	Set value
Transmission speed*1	4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data bit	7bit, 8bit
Stop bit	1bit
Parity bit	Odd
Modem connection	No
Module No.	1

*1 Indicates only the transmission speeds that can be set on the GOT side.
Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1398 Setting communication interface (Communication settings)
The setting range varies with the connected PLC.

Connecting to the RS232C and COM port of the PLC CPU

Item	Set value
Transmission speed*1	4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data bit	7bit, 8bit
Stop bit	1bit
Parity bit	Odd
Modem connection	No
Serial port action selection*2	1 (Computer link)
Module No.	1

*1 Indicates only the transmission speeds that can be set on the GOT side.
Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1398 Setting communication interface (Communication settings)
The setting range varies with the connected PLC.

*2 Set when connecting to FP0, FP1, FP2 or FP-M.

Connecting to the computer communication unit

Item	Set value
Transmission speed*1	4800bps, 9600bps, 19200bps
Data bit	7bit, 8bit
Stop bit	1bit
Parity bit	Odd
Parity check	Yes
Control signal	Invalidate CS, CD

*1 Indicates only the transmission speeds that can be set on the GOT side.
Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1398 Setting communication interface (Communication settings)
The setting range varies with the connected PLC.

Connecting to the communication cassette

■Communication settings

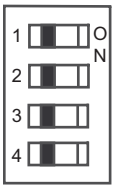
Set the commnumication settings for the COM 1 port and COM2 port to connect GOT.

Item	Set value
Communication mode	Computer link
Transmission speed*1	4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Modem connection	No
Data bit	7bit, 8bit
Parity check	Odd
Stop bit	1bit
Unit No.	1
Port selection*2	Communication cassette

*1 Indicates only the transmission speeds that can be set on the GOT side.
Set the same transmission speed of the GOT.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1398 Setting communication interface (Communication settings)
*2 Set the COM2 port only.

■Switch setting on the Communication cassette (AFPX-COM3)

Set the switch on the back.



Switch No.	Setting	Setting details
1	OFF	RS422
2	OFF	
3	OFF	
4	OFF	Terminating resistor OFF

Connecting to FP7

Set the communication using the ladder software "FPWIN GR7".
Assign COM numbers to the CPU module's built-in SCU and communication cassette, and then set the communication settings.

Item	Set value
Communication mode	MEWTOCOL7-COM
Station No.	1
Transmission speed*1	4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data bit*1	7bit, 8bit
Parity bit*1	Odd
Stop bit*1	1bit
RS/CS	Invalid
Send wait time (Set value × 0.01ms)	0
Terminator code STX	Invalid
Termination setting	CR
Modem initialization	Do not initialize

*1 Adjust the settings with GOT settings.
For the setting on the GOT side, refer to the following.
☞ Page 1398 Setting communication interface (Communication settings)

27.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1

PANASONIC IDS equipment ([Panasonic MEWNET-FP])

PANASONIC IDS equipment ([Panasonic FP7])

28 HITACHI IES PLC

- Page 1405 Connectable Model List
- Page 1406 Serial Connection
- Page 1422 Ethernet Connection
- Page 1431 Settable Device Range

28.1 Connectable Model List

The following table shows the connectable models.

Series	Model name	Clock	Communication Type	Connectable model	Refer to
Large-sized H Series	H-302	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 1406 Connection to large-sized H series
	H-702				
	H-1002				
	H-2002				
	H-4010				
	H-300	×			
	H-700				
	H-2000				
H-200 to 252 Series	H-200	○	RS-232	GT2506HS GT2505HS	☞ Page 1410 Connecting to H-200 to 252, H series board type, or EH-150
	H-250				
	H-252				
	H-252B				
	H-252C				
H Series board type	H-20DR	○	RS-232	GT2506HS GT2505HS	☞ Page 1410 Connecting to H-200 to 252, H series board type, or EH-150
	H-28DR				
	H-40DR				
	H-64DR				
	H-20DT				
	H-28DT				
	H-40DT				
	H-64DT				
	HL-40DR				
	HL-64DR				
EH-150 series	EH-CPU104	×	RS-232	GT2506HS GT2505HS	☞ Page 1410 Connecting to H-200 to 252, H series board type, or EH-150
	EH-CPU208	○			
	EH-CPU308				
	EH-CPU316				
	EH-CPU516				
	EH-CPU548				
EHV series	EHV-CPU08	○	Ethernet	GT2506HS GT2505HS	☞ Page 1422 Connecting to EHV or MICRO-EHV series
	EHV-CPU16				
	EHV-CPU32				
	EHV-CPU64				
	EHV-CPU128				
MICRO-EHV series	MVH-A40□□□	○	Ethernet	GT2506HS GT2505HS	☞ Page 1422 Connecting to EHV or MICRO-EHV series
	MVH-D40□□□				
	MVH-A64□□□				
	MVH-D64□□□				

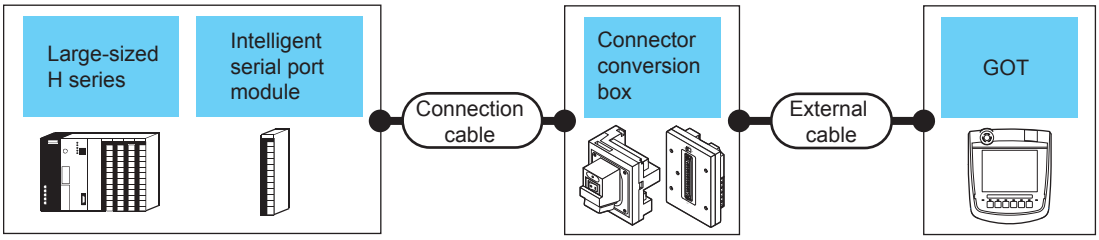
28.2 Serial Connection

Connection to large-sized H series

Communication driver

· HITACHI IES HIDIC H
· HITACHI IES HIDIC H(Protocol2)

When using the connector conversion box



To use transmission control procedure 2 as a protocol, select [HITACHI IES HIDIC H(Protocol2)] for the communication driver.

PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Intelligent serial port module*1	Communication Type	Cable model Connection diagram number					
H-302*2 H-702*2 H-1002*2 H-2002*2 H-300 H-700 H-2000	-	RS-232	GT09-C30R20401-15P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
H-4010			• Specified transmission speed: 4800bps GT09-C30R20401-15P(3m) or User preparing RS-232 connection diagram 1) • Specified transmission speed: 19200bps GT09-C30R20402-15P(3m) or User preparing RS-232 connection diagram 4) • Specified transmission speed: 38400bps*3 GT09-C30R20402-15P(3m) or User preparing RS-232 connection diagram 4) • Transmission speed other than the above GT09-C30R20401-15P(3m) or User preparing RS-232 connection diagram 1) GT09-C30R20402-15P(3m) or User preparing RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

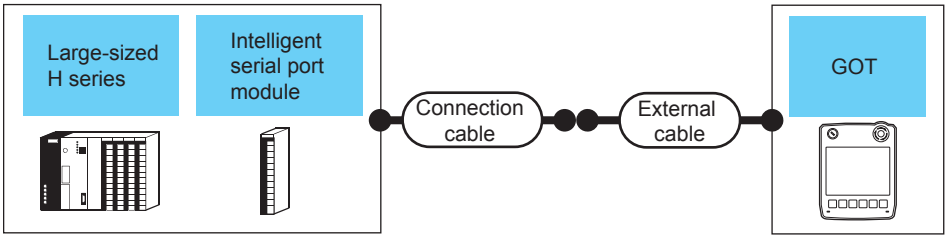
PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Intelligent serial port module*1	Communication Type	Cable model Connection diagram number					
H-302 H-702 H-1002 H-2002 H-4010 H-300 H-700 H-2000	COMM-H COMM-2H	RS-232	GT09-C30R20401-15P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 intelligent serial port module
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		RS-422	GT09-C30R40401-7T(3m) GT09-C100R40401-7T(10m) or User preparing RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by HITACHI Industrial Equipment Systems Co., Ltd.
For details of this product, contact HITACHI Industrial Equipment Systems Co., Ltd.

*2 Connect to the peripheral port of the CPU module.

*3 Can be specified with the CPU software of revision "J" or later.

When using the external cable (GT11H-C□□□-37P)



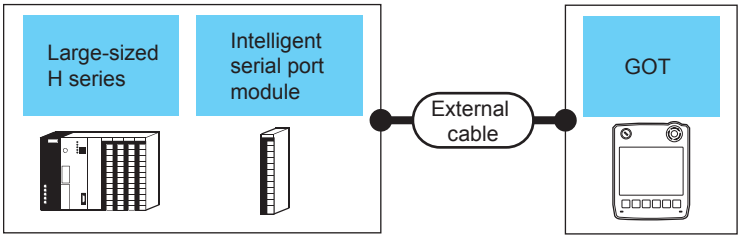
PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Intelligent serial port module*1	Communication Type	Cable model Connection diagram number				
H-302*2 H-702*2 H-1002*2 H-2002*2 H-300 H-700 H-2000	-	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
H-4010	-	RS-232	• Specified transmission speed: 4800bps User preparing RS-232 connection diagram 2) • Specified transmission speed: 19200bps User preparing RS-232 connection diagram 5) • Specified transmission speed: 38400bps*3 User preparing RS-232 connection diagram 5) • Transmission speed other than the above User preparing RS-232 connection diagram 2) User preparing RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
H-302 H-702 H-1002 H-2002 H-4010 H-300 H-700 H-2000	COMM-H COMM-2H	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 intelligent serial port module
		RS-422	User preparing RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 Product manufactured by HITACHI Industrial Equipment Systems Co., Ltd.
For details of this product, contact HITACHI Industrial Equipment Systems Co., Ltd.

*2 Connect to the peripheral port of the CPU module.

*3 Can be specified with the CPU software of revision "J" or later.

When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Intelligent serial port module*1	Communication Type				
H-302*2 H-702*2 H-1002*2 H-2002*2 H-300 H-700 H-2000	-	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 PLC
H-4010	-	RS-232	• Specified transmission speed: 4800bps GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3) • Specified transmission speed: 19200bps GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 6) • Specified transmission speed: 38400bps*3 GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 6) • Transmission speed other than the above GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3) ☞ RS-232 connection diagram 6)	GT 2505HS	6m	1 GOT for 1 PLC
H-302 H-702 H-1002 H-2002 H-4010 H-300 H-700 H-2000	COMM-H COMM-2H	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 intelligent serial port module
		RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 3)	GT 2505HS	13m	

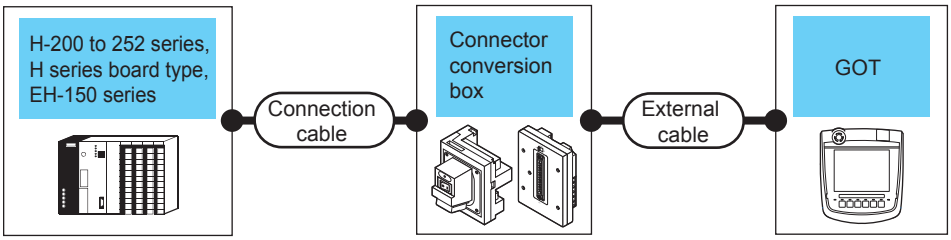
*1 Product manufactured by HITACHI Industrial Equipment Systems Co., Ltd.
For details of this product, contact HITACHI Industrial Equipment Systems Co., Ltd.
*2 Connect to the peripheral port of the CPU module.
*3 Can be specified with the CPU software of revision "J" or later.

Connecting to H-200 to 252, H series board type, or EH-150

Communication driver

- HITACHI IES HIDIC H
- HITACHI IES HIDIC H(Protocol2)

When using the connector conversion box



To use transmission control procedure 2 as a protocol, select [HITACHI IES HIDIC H(Protocol2)] for the communication driver.

PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
H-200*1, H-250*1 H-252*1, H-252B*1 H-20DR, H-28DR H-40DR, H-64DR H-20DT, H-28DT H-40DT, H-64DT HL-40DR, HL-64DR	RS-232	GT09-C30R20401-15P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
H-252C*1*2		• Specified transmission speed: 4800bps GT09-C30R20401-15P(3m) or User preparing RS-232 connection diagram 1) • Specified transmission speed: 19200bps GT09-C30R20402-15P(3m) or User preparing RS-232 connection diagram 4) • Transmission speed other than the above GT09-C30R20401-15P(3m) or User preparing RS-232 connection diagram 1) GT09-C30R20402-15P(3m) or User preparing RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

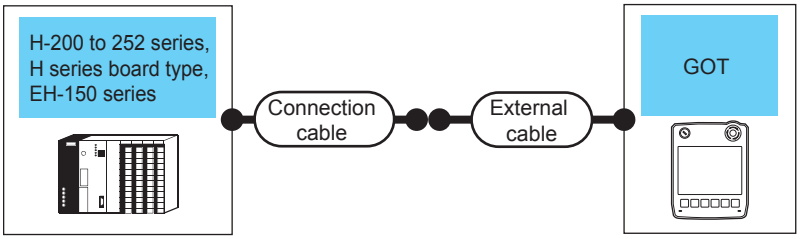
PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
EH-CPU104*3 EH-CPU208*3 EH-CPU308*3 EH-CPU316*3 EH-CPU516*3 EH-CPU548*3	RS-232	• Specified transmission speed: 4800bps GT09-C30R20401-15P(3m) or User preparing RS-232 connection diagram 1) • Specified transmission speed: 19200bps GT09-C30R20402-15P(3m) or User preparing RS-232 connection diagram 4) • Specified transmission speed: 38400bps GT09-C30R20402-15P(3m) or User preparing RS-232 connection diagram 4) • Transmission speed other than the above GT09-C30R20401-15P(3m) or User preparing RS-232 connection diagram 1) GT09-C30R20402-15P(3m) or User preparing RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 To connect to H-200 to 252 series, connect to the peripheral port of the CPU module.

*2 To connect to serial port 2 of H-252C (CPU22-02HC, CPE22-02HC), the round connector (8 pins)/D-sub connector (15 pins) conversion cable (CNCOM-05 made by HITACHI Industrial Equipment Systems Co., Ltd.) is necessary.

*3 To connect to the EH-150 series, connect to the serial port of the CPU module.
The module jack (8 pins)/D-sub connector (15 pins) conversion cable (EHRS05 made by HITACHI Industrial Equipment Systems Co., Ltd.) is necessary.

When using the external cable (GT11H-C□□□-37P)



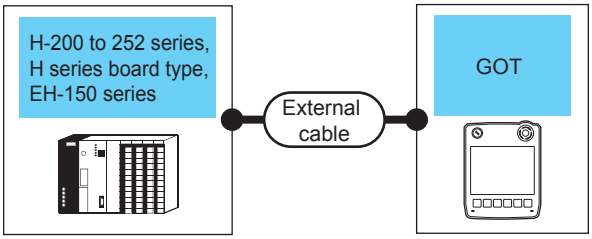
PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
H-200*1, H-250*1 H-252*1, H-252B*1 H-20DR, H-28DR H-40DR, H-64DR H-20DT, H-28DT H-40DT, H-64DT HL-40DR, HL-64DR	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC7
H-252C*1*2		• Specified transmission speed: 4800bps User preparing RS-232 connection diagram 2) • Specified transmission speed: 19200bps User preparing RS-232 connection diagram 5) • Transmission speed other than the above User preparing RS-232 connection diagram 2) User preparing RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	
EH-CPU104*3 EH-CPU208*3 EH-CPU308*3 EH-CPU316*3 EH-CPU516*3 EH-CPU548*3	RS-232	• Specified transmission speed: 4800bps User preparing RS-232 connection diagram 2) • Specified transmission speed: 19200bps User preparing RS-232 connection diagram 5) • Specified transmission speed: 38400bps User preparing RS-232 connection diagram 5) • Transmission speed other than the above User preparing RS-232 connection diagram 2) User preparing RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC

*1 To connect to H-200 to 252 series, connect to the peripheral port of the CPU module.

*2 To connect to serial port 2 of H-252C (CPU22-02HC, CPE22-02HC), the round connector (8 pins)/D-sub connector (15 pins) conversion cable (CNCOM-05 made by HITACHI Industrial Equipment Systems Co., Ltd.) is necessary.

*3 To connect to the EH-150 series, connect to the serial port of the CPU module.
The module jack (8 pins)/D-sub connector (15 pins) conversion cable (EHRS05 made by HITACHI Industrial Equipment Systems Co., Ltd.) is necessary.

When using the external cable (GT11H-C□□□)



PLC		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
H-200[*1], H-250[*1] H-252[*1], H-252B[*1] H-20DR, H-28DR H-40DR, H-64DR H-20DT, H-28DT H-40DT, H-64DT HL-40DR, HL-64DR	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 PLC
H-252C[*1*2]		• Specified transmission speed: 4800bps GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3) • Specified transmission speed: 19200bps GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 6) • Transmission speed other than the above GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3) ☞ RS-232 connection diagram 6)	GT 2505HS		
EH-CPU104[*3] EH-CPU208[*3] EH-CPU308[*3] EH-CPU316[*3] EH-CPU516[*3] EH-CPU548[*3]	RS-232	• Specified transmission speed: 4800bps GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3) • Specified transmission speed: 19200bps GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 6) • Specified transmission speed: 38400bps[*3] GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 6) • Transmission speed other than the above GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3) ☞ RS-232 connection diagram 6)	GT 2505HS	6m	1 GOT for 1 PLC

*1 To connect to H-200 to 252 series, connect to the peripheral port of the CPU module.

*2 To connect to serial port 2 of H-252C (CPU22-02HC, CPE22-02HC), the round connector (8 pins)/D-sub connector (15 pins) conversion cable (CNCOM-05 made by HITACHI Industrial Equipment Systems Co., Ltd.) is necessary.

*3 To connect to the EH-150 series, connect to the serial port of the CPU module.
The module jack (8 pins)/D-sub connector (15 pins) conversion cable (EHRS05 made by HITACHI Industrial Equipment Systems Co., Ltd.) is necessary.

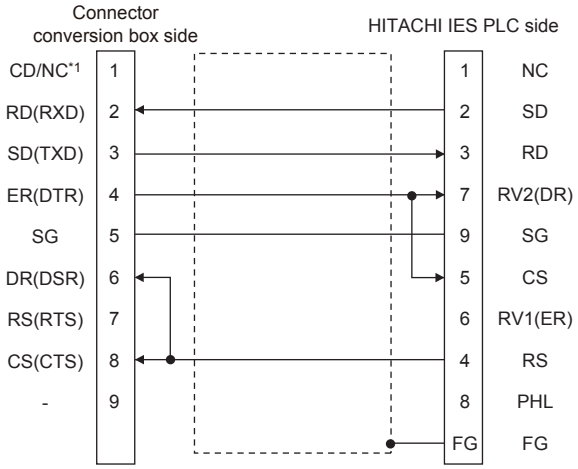
Connection diagram

The following diagram shows the connection between the GOT and the PLC.

RS-232 cable

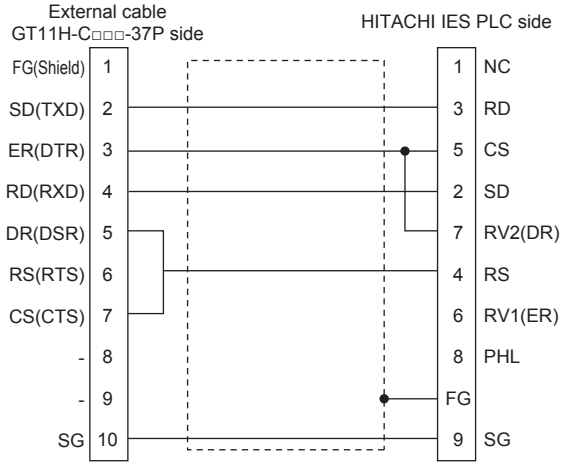
■Connection diagram

• RS-232 connection diagram 1)

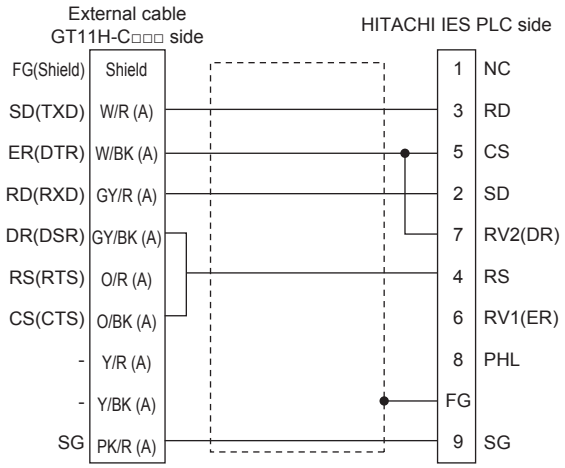


*1 GT2506HS-V: CD, GT2505HS-V: NC

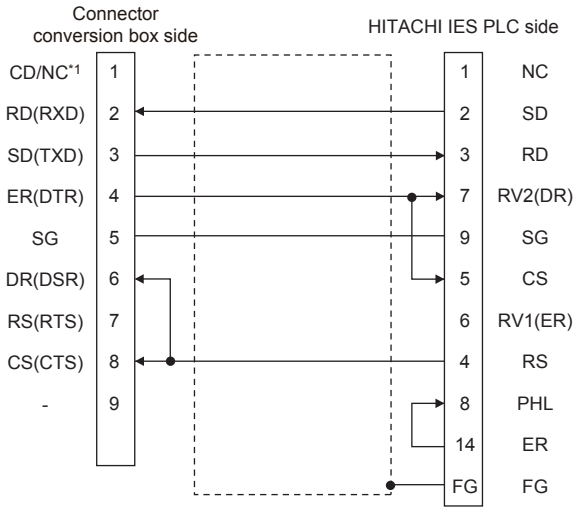
• RS-232 connection diagram 2)



• RS-232 connection diagram 3)

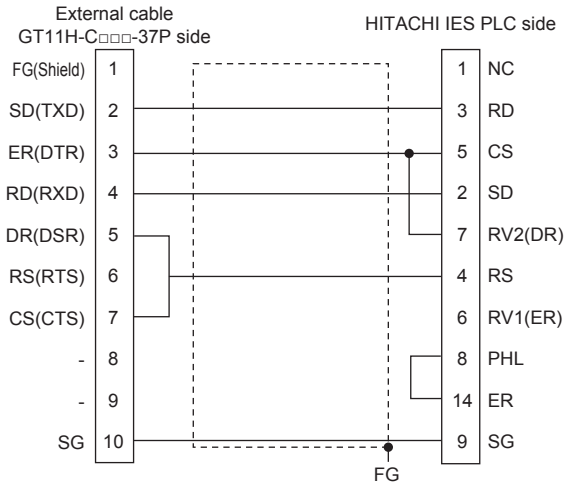


• RS-232 connection diagram 4)

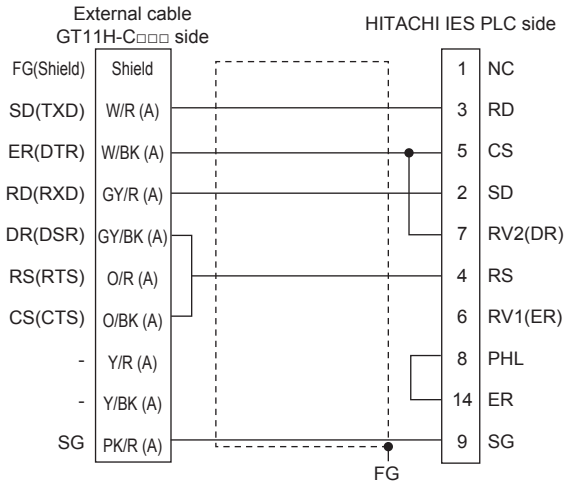


*1 GT2506HS-V: CD, GT2505HS-V: NC

• RS-232 connection diagram 5)



• RS-232 connection diagram 6)



■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

• HITACHI IES PLC side connector

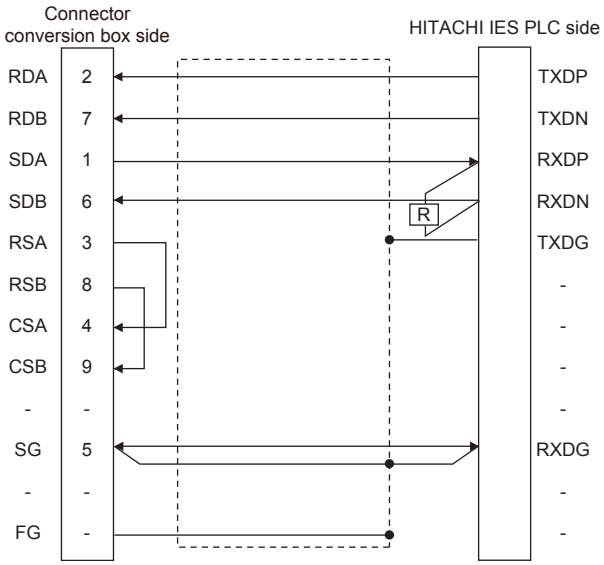
Use the connector compatible with the HITACHI IES PLC side module.

For details, refer to the HITACHI IES PLC user's manual.

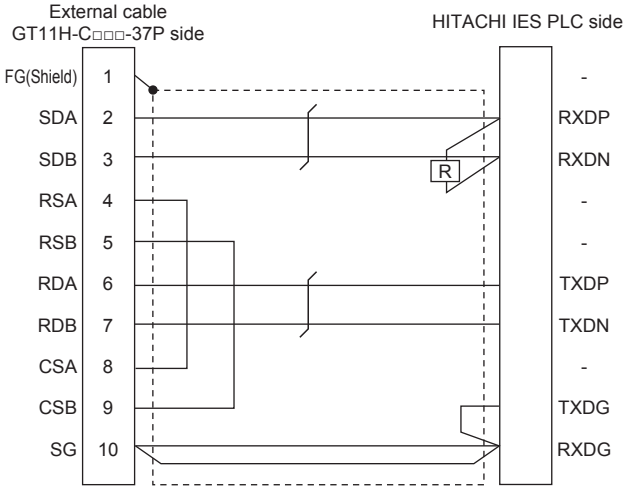
RS-422 cable

■Connection diagram

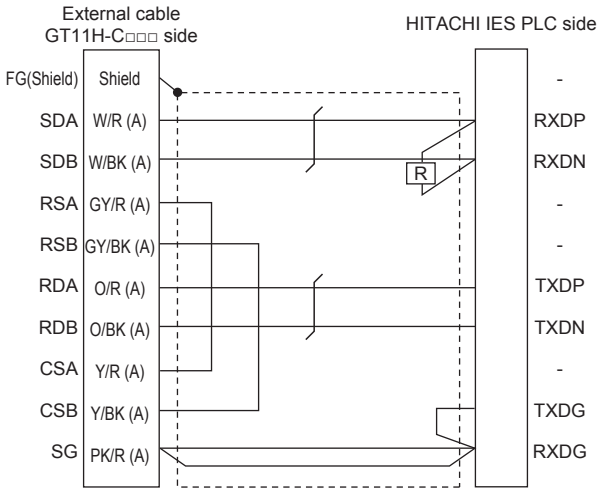
• RS-422 connection diagram 1)



• RS-422 connection diagram 2)



• RS-422 connection diagram 3)



■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

• HITACHI IES PLC side connector

Use the connector compatible with the HITACHI IES PLC side module.

For details, refer to the HITACHI IES PLC user's manual.

■Connecting terminating resistors

• GOT side

◇For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

◇For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

• HITACHI IES PLC side

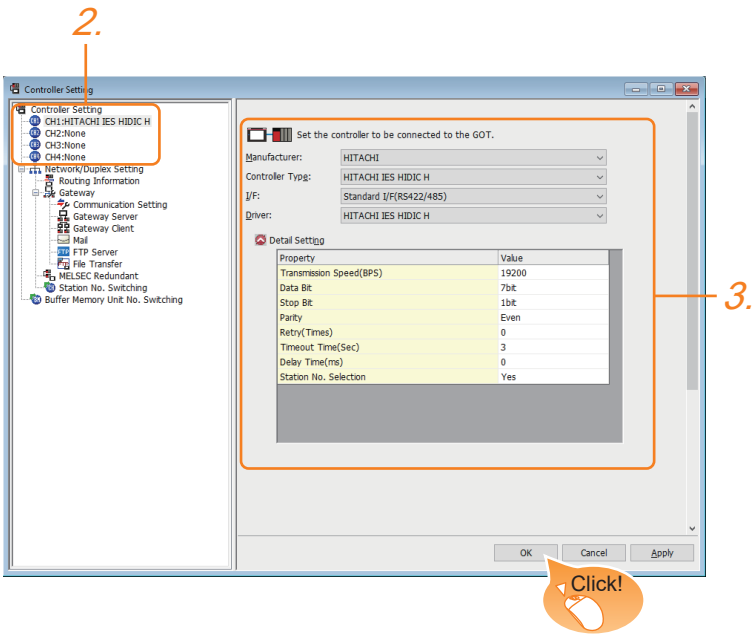
When connecting an intelligent serial port module to a GOT, a terminating resistor has to be connected to the intelligent serial port module.

📖HITACHI IES PLC user's Manual

GOT side settings

Setting communication interface (Communication settings)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [HITACHI]
- [Controller Type]: [HITACHI IES HIDIC H]
- [I/F]: Interface to be used
- [Driver]: Select one of the following items according to the controller to be connected.

[HITACHI IES HIDIC H]

[HITACHI IES HIDIC H(Protocol2)]

- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1419 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

■HITACHI IES HIDIC H

Property	Value
Transmission Speed(BPS)	19200
Data Bit	7 bit
Stop Bit	1 bit
Parity	Even
Retry(Times)	0
Timeout Time(Sec)	3
Delay Time(ms)	0
Station No. Selection	Yes

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 19200bps)	4800bps, 9600bps, 19200bps, 38400bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 7bit)	7bit (fixed)
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit (fixed)
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Even)	Even (fixed)
Retry	Set the number of retries to be performed when a communication error occurs. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300 (ms)
Station No. Selection*1	Specify whether to use the station No. during communication. If [Yes] is selected, the station No. is fixed to "0". (Default: Yes)	Yes or No

*1 By PLC port that is connected to the GOT, different [Station No. Selection] of the set as follows.
When a PLC port is RS422 port: [Yes]
When a PLC port is S232C port: [No]

■HITACHI IES HIDIC H(Protocol2)

Property	Value
Transmission Speed(BPS)	19200
Data Bit	7 bit
Stop Bit	1 bit
Parity	Even
Retry(Times)	0
Timeout Time(Sec)	3
Delay Time(ms)	0
Station No. Selection	Yes

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 19200bps)	4800bps, 9600bps, 19200bps, 38400bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 7bit)	7bit (fixed)
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit (fixed)
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Even)	Even (fixed)
Retry	Set the number of retries to be performed when a communication error occurs. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300 (ms)
Station No. Selection*1	Specify whether to use the station No. during communication. If [Yes] is selected, the station No. is fixed to "0". (Default: Yes)	Yes or No

*1 By PLC port that is connected to the GOT, different [Station No. Selection] of the set as follows.
When a PLC port is RS422 port: [Yes]
When a PLC port is S232C port: [No]

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

PLC side setting

Point

HITACHI IES PLC

For details of the HITACHI IES PLC, refer to the following manual.

HITACHI IES PLC user's Manual

Direct CPU connection (serial)

Item	Set value
Transmission speed*1*2*3	4800bps, 9600bps, 19200bps, 38400bps
Station No.	0
Data bit	7bit
Stop bit	1bit
Parity bit	Even
Control Method	DTR control
Communication format	RS-232
Sum check	Done
Protocol	transmission control procedure 1

*1 Indicates only the transmission speeds that can be set on the GOT side.

*2 The transmission speed setting must be consistent with that of the GOT side.
For the transmission speed setting on the GOT side, refer to the following.
Page 1419 Communication detail settings

*3 The setting range varies with the connected PLC.

Connecting to the intelligent serial port module

■For transmission control procedure1

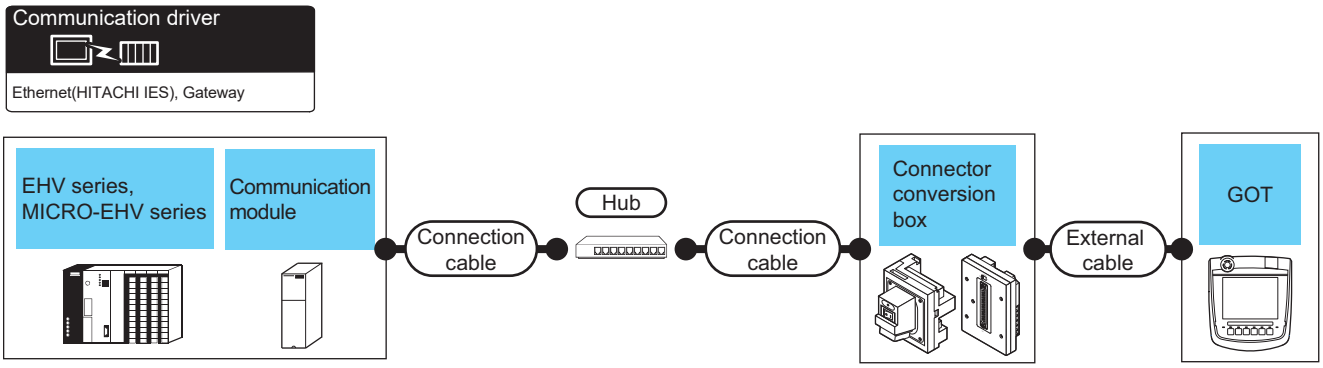
Item	Set value
Transmission speed	19200bps
Station No.	0
Data bit	7bit
Stop bit	1bit
Parity bit	Even
Control Method	None
Communication format	For RS-232 communication: RS-232 MODE switch 2 For RS-422 communication: RS-422 MODE switch 2
Sum check	Done

■For transmission control procedure2

Item	Set value
Transmission speed	19200bps
Station No.	0
Data bit	7bit
Stop bit	1bit
Parity bit	Even
Control Method	None
Communication format	For RS-232 communication: RS-232 MODE switch 9 For RS-422 communication: RS-422 MODE switch 9
Sum check	Done

28.3 Ethernet Connection

Connecting to EHV or MICRO-EHV series



PLC		Connection cable *2	Maximum segment length *3	Connector conversion box	External cable *4	GOT Model	Number of connectable equipment
Model name	Communication module *1						
EHV-CPU08 EHV-CPU16 EHV-CPU32 EHV-CPU64 EHV-CPU128	-	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When PLC: GOT is N:1 128 PLCs or less for 1 GOT When PLC: GOT is 1: N 4 GOTs or less for 1 PLC
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P (3m) GT11H-C60-37P (6m) GT11H-C100-37P(10m)		
	EH-ETH EH-ETH2 EH-ELK EH-ORML EH-R2LH EH-OR2LH		100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When PLC: GOT is N:1 128 PLCs or less for 1 GOT When PLC: GOT is 1: N 36 GOTs or less for 1 PLC *5
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P (3m) GT11H-C60-37P (6m) GT11H-C100-37P(10m)		
MVH-A40□□□ MVH-D40□□□ MVH-A64□□□ MVH-D64□□□	-		100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When PLC: GOT is N:1 128 PLCs or less for 1 GOT When PLC: GOT is 1: N 4 GOTs or less for 1 PLC
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P (3m) GT11H-C60-37P (6m) GT11H-C100-37P(10m)		

*1 Product manufactured by HITACHI Industrial Equipment Systems Co., Ltd. For details of this product, contact HITACHI Industrial Equipment Systems Co., Ltd.

*2 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the target device and hub, use a cable according to the target controller configuration.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

*4 Use C or later version of GT11H-C□□-37P.

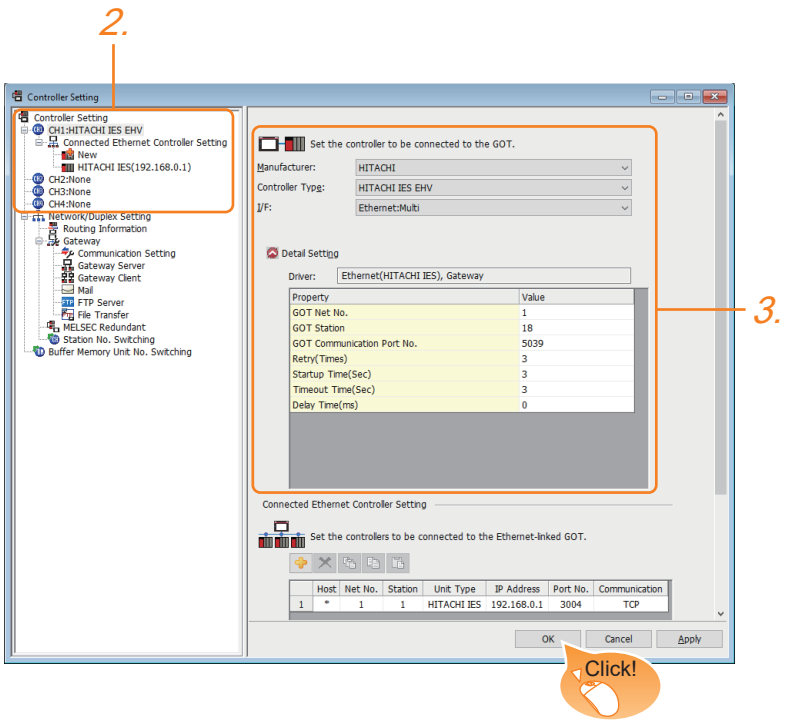
*5 The number of connectable GOTs differs depending on the communication module to be used.
The number of GOTs connectable to one PLC can be calculated as follows.
[Number of logical port] × ([Built-in Ethernet port of PLC] + [Communication module])

Model name	Description	Number of logical ports	Number of communication modules that can be used together for one PLC
EH-ETH	Ethernet module	4	2
EH-ETH2	Ethernet module	4	8
EH-ELK	Ethernet large capacity CPU link module	2	2
EH-ORML	Optical remote module (Slave station)	4	1
EH-R2LH	H series compatible coaxial remote module (Slave station)	4	1
EH-OR2LH	H series compatible optical remote module (Slave station)	4	1

GOT side settings

Setting communication interface (Communication settings)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [HITACHI]
- [Controller Type]: [HITACHI IES EHV]
- [I/F]: [Ethernet: Multi]
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1425 Communication detail settings

4. When you have completed the setting, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
GOT Net No.	1
GOT Station	18
GOT Communication Port No.	5039
Retry(Times)	3
Startup Time(Sec)	3
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
GOT Net No.	Set the network No. of the GOT. (Default: 1)	1 to 239
GOT Station *1	Set the station No. of the GOT. (Default: 18)	1 to 254
GOT Communication Port No.	Set the GOT port No. for the connection with the Ethernet equipment. (Default: 5039 *2)	1024 to 5010, 5014 to 49152, 49171 to 65534
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 3times)	0 to 5times
Startup Time	Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU. (Default: 3sec)	3 to 255sec
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 90sec
Delay Time	Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms)	0 to 10000(ms)

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1427 Connected Ethernet controller setting

*2 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

■GOT IP address setting

Set the following communication port setting.

- Standard port
- Extension port

■GOT Ethernet common setting

Set the following setting which is common to the standard port and the extension port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

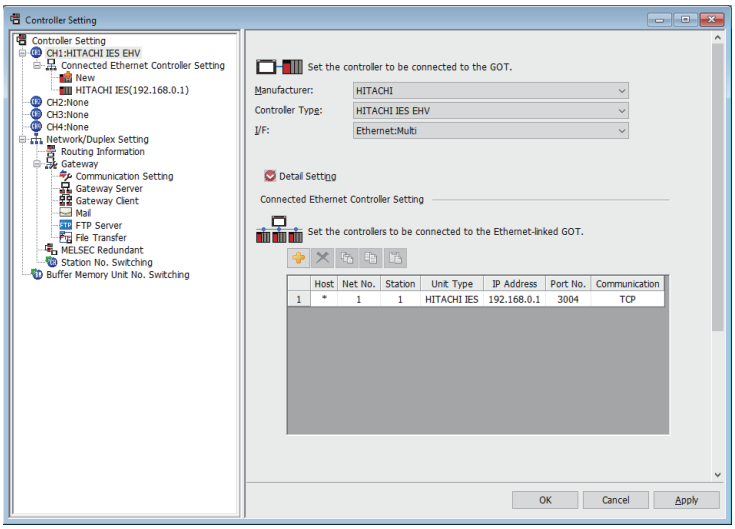
■IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 80 GOT Ethernet Setting

Connected Ethernet controller setting



Item	Description	Set value
Host	The host is displayed. It refers to a station that can be connected without setting a station number. (The host is indicated with an asterisk (*).)	-
Net No. *3	Set the network No. of the connected Ethernet equipment. (Default: 1)	1 to 239
Station *2*3	Set the station No. of the connected Ethernet equipment. (Default: 1)	1 to 254
Unit Type	HITACHI IES (fixed)	HITACHI IES (fixed)
IP address *1	Set the IP address of the connected Ethernet equipment. (Default: 192.168.0.1)	PLC side IP address
Port No. *4	Set the port No. of the connected Ethernet equipment. (Default: 3004)	1024 to 65534
Communication format	Select a communication protocol. (Default: TCP)	UDP, TCP

*1 Connection with the PLC is unavailable if the IP address is the default value.
Set the value to the IP address of the PLC to be connected.

*2 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1425 Communication detail settings

*3 It is used to identify the connected Ethernet equipment, but not used for the actual communication with the connected Ethernet equipment.

*4 Four communication ports can be set for the PLC and communication module.
Since a piece of equipment can be connected to one port, set the port No. for each controller.

PLC side setting

Point

For details of the HITACHI IES PLC, refer to the following manual.

HITACHI IES PLC user's Manual

Model name		Refer to
EHV series (built-in Ethernet interface) MICRO-EHV series (built-in Ethernet interface)		Page 1428 When connecting to EHV series and MICRO-EHV series (built-in Ethernet interface)
Ethernet module	EH-ETH2	Page 1429 When connecting to Ethernet module (EH-ETH2)

When connecting to EHV series and MICRO-EHV series (built-in Ethernet interface)

Configure the settings using the engineering tool for the EHV series.

The following shows examples of settings.

Item		Set value	Range
IP Address *1		[ ].[ ].[ ].[ ]	PLC side IP address
Subnet Mask		[ ].[ ].[ ].[ ]	PLC side setting
Default Gateway		[ ].[ ].[ ].[ ]	
Transmission speed/method		AUTO	AUTO, 100M/Full duplex, 10M/Half duplex
Port 1	Valid / Invalid	Valid	PLC side setting
	Port No.	3004	
	Protocol	TCP/IP	
Port 2	Valid / Invalid	Valid	
	Port No.	3005	
	Protocol	TCP/IP	
Port 3	Valid / Invalid	Valid	
	Port No.	3006	
	Protocol	TCP/IP	
Port 4	Valid / Invalid	Valid	
	Port No.	3007	
	Protocol	TCP/IP	
Time out *2		30(sec)	

*1 Adjust the settings with GOT settings.
Page 1427 Connected Ethernet controller setting

*2 Set a value greater than 3 seconds.
When it is set to three seconds or less, a timeout may occur even when there is no network failure due to cable disconnection.

When connecting to Ethernet module (EH-ETH2)

■Setting DIP switches

Set the operation mode using DIP switches.

Setting DIP switches	Operation mode	Description
All switches OFF 	Normal operation mode	Normal operation is performed.
No.5, 6 ON 	Utility mode	A transmission/reception test is performed.
No.4, 6 ON 		Set the Ethernet information using a ladder program.
No.1 ON No.4 to 8: Fourth octet of IP address 	Communication parameter setting mode	Set the Ethernet information and ASR information using the engineering tool for EH-ETH2. Nos. 4 to 8 are assigned as the temporary IP address for the communication parameter setting mode. For details, refer to the following. ☞ Page 1429 Communication parameter setting mode

■Communication parameter setting mode

When the DIP switch No.1 of EH-ETH2 is ON and Nos.2 and 3 are OFF, Nos. 4 to 8 are assigned as the temporary IP address for the communication parameter setting mode.

Up to the third octet of the temporary IP address is fixed to [192.168.0.**], and the forth octet (lower 5 bits) is determined with by the ON or OFF status of Nos.4 to 8.

The values that can be set are [192.168.0.1] to [192.168.0.31]. [192.168.0.0] cannot be set.

After changing the DIP switches, turn on and then off the PLC.

When an IP address that can be connected to a personal computer has already been set, setting the temporary IP address is not required.

The following describes the IP address for communication parameter setting mode corresponding to the ON or OFF status of the DIP switch Nos.4 to 8.

DIP switch status					Binary	Hexadecimal	Decimal	IP address for communication parameter setting mode
4	5	6	7	8				
OFF	OFF	OFF	OFF	ON	b'00001	H'01	1	192.168.0.1
ON	OFF	ON	ON	ON	b'10110	H'16	22	192.168.0.22
ON	ON	ON	ON	ON	b'11111	H'1F	31	192.168.0.31

■Network setting using the engineering tool for EH-ETH2

Use the engineering tool for EH-ETH2 to set the IP address, subnet mask, and others.

When the temporary IP address has been set, input the temporary IP address when starting the engineering tool for EH-ETH2.

After the network setting, when the temporary IP address has been set, return all DIP switches to their original positions and turn on and then off the PLC again.

The following shows examples of settings.

Item		Set value	Range
IP address setting	IP Address *1	[ ].[ ].[ ].[ ]	PLC side IP address
	Subnet Mask	[ ].[ ].[ ].[ ]	PLC side setting
	Default Gateway	[ ].[ ].[ ].[ ]	
	Communication speed/mode	Auto Negotiation	Auto Negotiation, 100Mbps/Full Duplex, 10Mbps/Half Duplex
Connection destination setting for communication check	IP address	[ ].[ ].[ ].[ ]	Connection destination setting
	Port No.	4000	
Task code communication port setting	Task code port timeout	Enable	Enable, Disable
	Timeout time *2	30(sec)	PLC side setting
Port 1	Port No.	3004	
	Protocol	TCP/IP	
Port 2	Port No.	3005	
	Protocol	TCP/IP	
Port 3	Port No.	3006	
	Protocol	TCP/IP	
Port 4	Port No.	3007	
	Protocol	TCP/IP	

*1 Adjust the settings with GOT settings.
☞ Page 1427 Connected Ethernet controller setting

*2 Set a value greater than 3 seconds.
When it is set to three seconds or less, a timeout may occur even when there is no network failure due to cable disconnection.

28.4 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1
HITACHI IES equipment ([HITACHI IES EHV])
HITACHI IES equipment ([HITACHI IES HIDIC H])

MEMO

29 HITACHI PLC

- Page 1433 Connectable Model List
- Page 1434 Serial connection
- Page 1446 Ethernet Connection
- Page 1452 Settable Device Range

29.1 Connectable Model List

The following table shows the connectable models.

Series	Model name	Clock	Communication Type	Connectable model	Refer to
S10V	LQP510	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 1434 Connecting to S10V
	LQP520				
S10mini	LQP800	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 1436 Connecting to S10mini
	LQP000				
	LQP010				
	LQP011				
	LQP120				
S10VE	LQP600	○	Ethernet	GT2506HS GT2505HS	☞ Page 1446 Connecting to S10VE

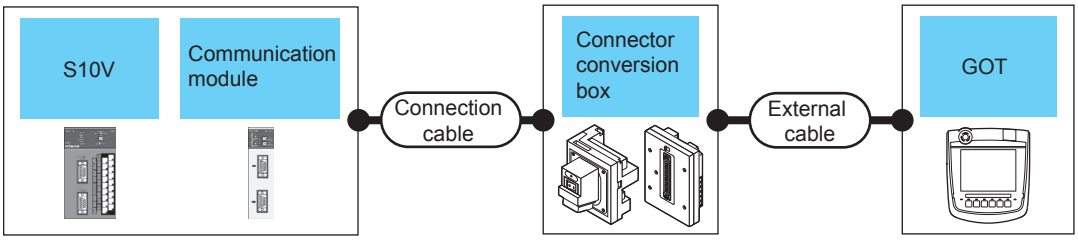
29.2 Serial connection

Connecting to S10V

Communication driver

HITACHI S10mini/S10V

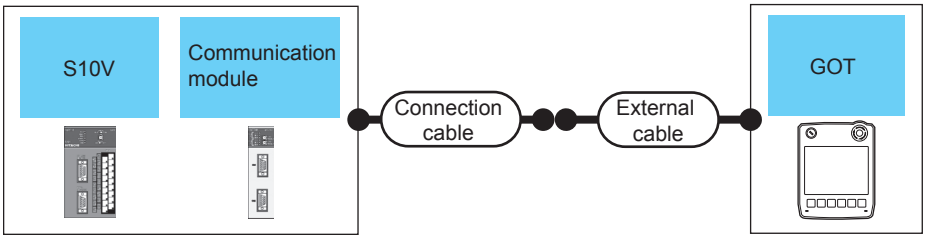
When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication module*1	Communication Type	Cable model Connection diagram number					
LQP510 LQP520	LQE560	RS-232	GT09-C30R21301-9S (3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 communication module
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	LQE565	RS-422	GT09-C30R41301-9S (3m) GT09-C100R41301-9S(10m) or User preparing RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
LQP510	-		GT09-C30R41301-9S (3m) GT09-C100R41301-9S(10m) or User preparing RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by Hitachi, Ltd.
For details of the product, contact Hitachi, Ltd.

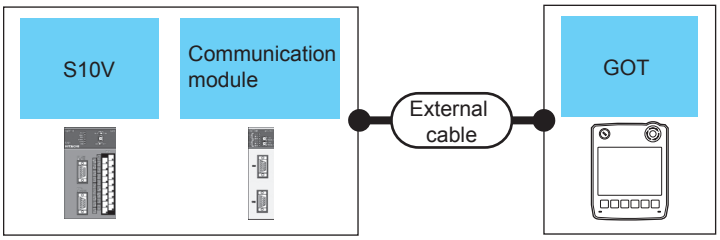
When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication module*1	Communication Type	Cable model Connection diagram number				
LQP510 LQP520	LQE560	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 communication module
	LQE565	RS-422	User preparing RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	
LQP510	-		User preparing RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		1 GOT for 1 PLC

*1 Product manufactured by Hitachi, Ltd.
For details of the product, contact Hitachi, Ltd.

When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication module*1	Communication Type				
LQP510 LQP520	LQE560	RS-232	GT11H-C30(3m) GT11H-C60(6m) User preparing RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 communication module
	LQE565	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) User preparing RS-422 connection diagram 3)	GT 2505HS	13m	
LQP510	-		GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) User preparing RS-422 connection diagram 3)	GT 2505HS		1 GOT for 1 PLC

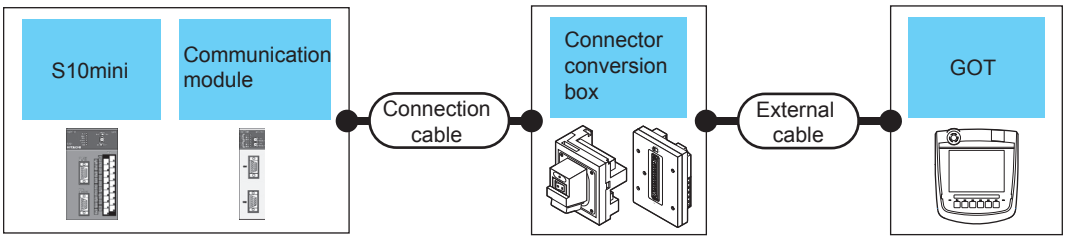
*1 Product manufactured by Hitachi, Ltd.
For details of the product, contact Hitachi, Ltd.

Connecting to S10mini

Communication driver

HITACHI S10mini/S10V

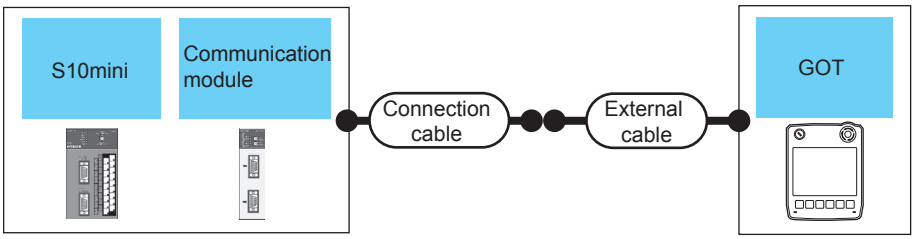
When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Series	Communication module*1	Communication Type	Cable model Connection diagram number					
S10mini	LQE560 LQE060 LQE160	RS-232	GT09-C30R21301-9S (3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 communication module
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	LQE565 LQE165	RS-422	GT09-C30R41301-9S (3m) GT09-C100R41301-9S(10m) or User preparing RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by Hitachi, Ltd.
For details of the product, contact Hitachi, Ltd.

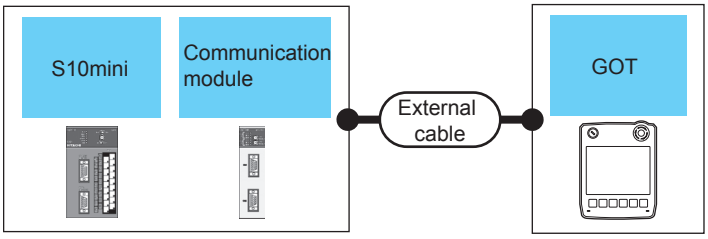
When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Series	Communication module*1	Communication Type	Cable model Connection diagram number				
S10mini	LQE560 LQE060 LQE160	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 communication module
	LQE565 LQE165	RS-422	User preparing RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 Product manufactured by Hitachi, Ltd.
For details of the product, contact Hitachi, Ltd.

When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Series	Communication module*1	Communication Type				
S10mini	LQE560 LQE060 LQE160	RS-232	GT11H-C30(3m) GT11H-C60(6m) User preparing RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 communication module
	LQE565 LQE165	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) User preparing RS-422 connection diagram 3)	GT 2505HS	13m	

*1 Product manufactured by Hitachi, Ltd.
For details of the product, contact Hitachi, Ltd.

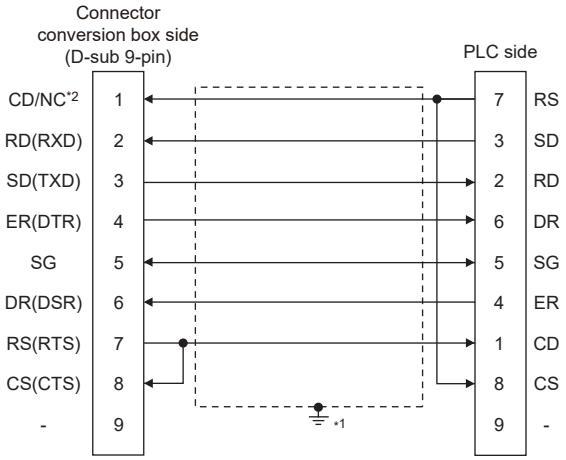
Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

RS-232 cable

■Connection diagram

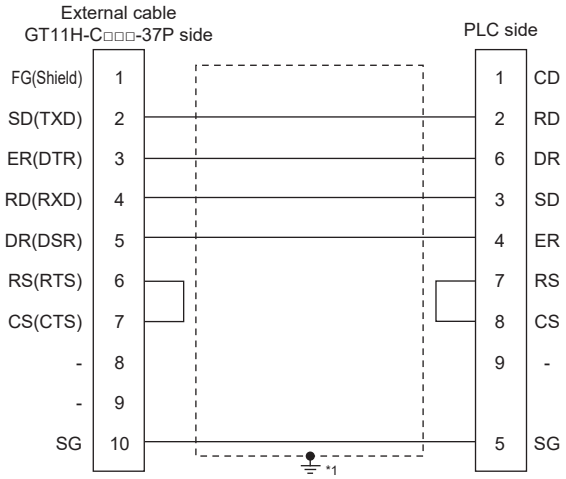
• RS-232 connection diagram 1)



*1 Connect FG grounding to the appropriate part of a cable shield line.

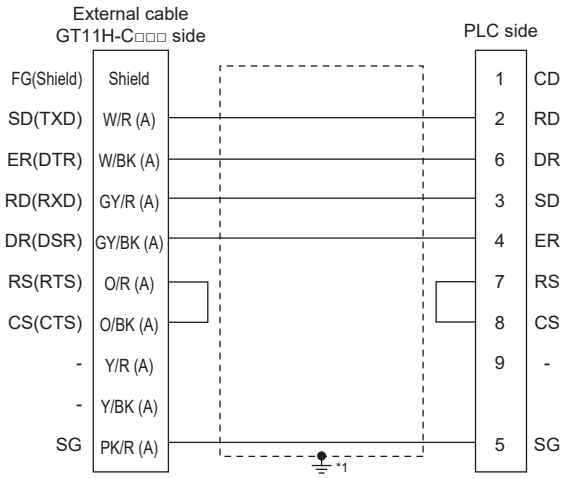
*2 GT2506HS-V: CD, GT2505HS-V: NC

• RS-232 connection diagram 2)



*1 Connect FG grounding to the appropriate part of a cable shield line.

• RS-232 connection diagram 3)



*1 Connect FG grounding to the appropriate part of a cable shield line.

■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

• HITACHI PLC side connector

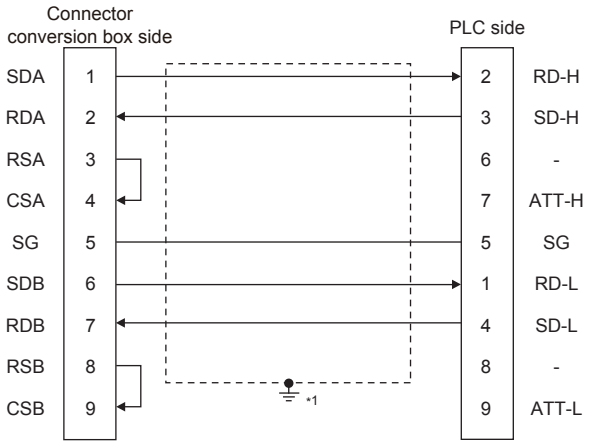
Use the connector supporting the HITACHI PLC side module.

For details, refer to the HITACHI PLC user's manual.

RS-422 cable

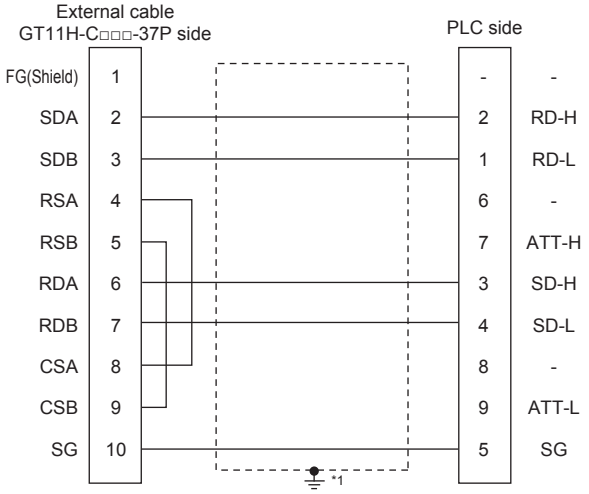
■Connection diagram

• RS-422 connection diagram 1)



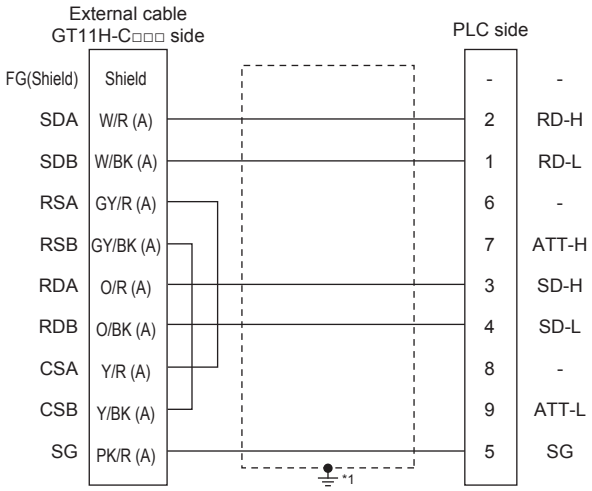
*1 Connect FG grounding to the appropriate part of a cable shield line.

• RS-422 connection diagram 2)



*1 Connect FG grounding to the appropriate part of a cable shield line.

• RS-422 connection diagram 3)



*1 Connect FG grounding to the appropriate part of a cable shield line.

■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

• HITACHI PLC side connector

Use the connector compatible with the HITACHI PLC side module.

For details, refer to the HITACHI PLC user's manual.

■Connecting terminating resistors

• GOT side

◇For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

◇For GT2505HS-V

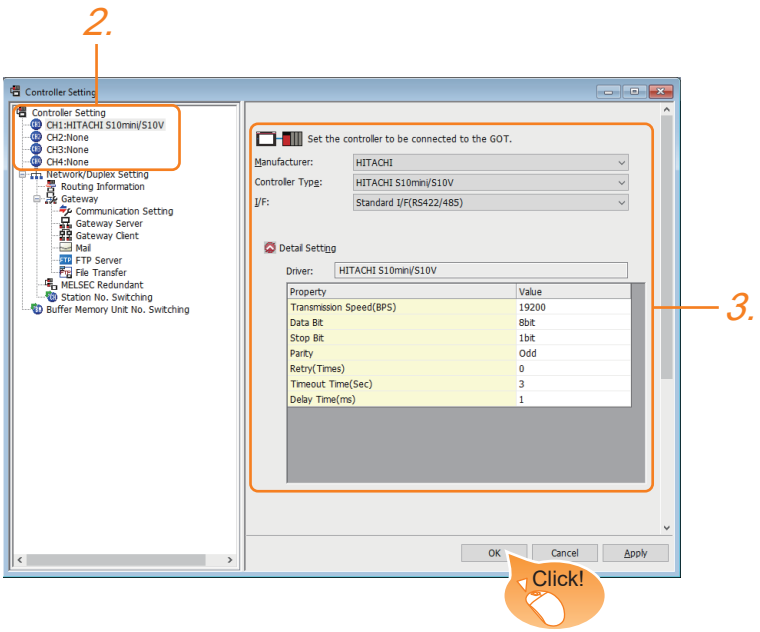
The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

Setting communication interface (Communication settings)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [HITACHI]
- [Controller Type]: [HITACHI S10mini/S10V]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1443 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
Transmission Speed(BPS)	19200
Data Bit	8 bit
Stop Bit	1 bit
Parity	Odd
Retry(Times)	0
Timeout Time(Sec)	3
Delay Time(ms)	1

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 19200bps)	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bits)	7bits/8bits
Stop Bit	Specify the stop bit length for communications. (Default: 8bits)	1bit/2bits
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Odd)	None Even Odd
Retry	Set the number of retries to be performed when a communication error occurs. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300(ms)

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

PLC Side Setting

Point

HITACHI PLC

For details of HITACHI PLCs, refer to the following manuals.

HITACHI PLC user's Manual

Model name		Refer to
Communication module	LQE560	Page 1444 Connecting to communication module
	LQE060	
	LQE160	
	LQE565	
	LQE165	

Connecting to communication module

■Communication settings

Make the communication settings of the Communication module.

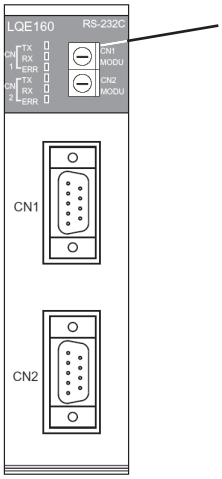
Item	Set value
Channel No. setting*1*2	#0 to #3
Protocol setting	H-7338 protocol
Transmission speed	19200bps (fixed)
Data bit	8bits (fixed)
Parity bit	Odd (fixed)
Start bit	1 bit (fixed)
Stop bit	1 bit (fixed)

*1 The ranges of available channel No. differ depending on the model of communication module.

*2 Avoid duplication of the channel No.

■Settings by switch

Make the communication settings using each setting switch.



Setting switches for the channel No. and the protocol
CN1 MODU, CN2 MODU

- Settings of the channel No. and the protocol



CN1
MODU



CN2
MODU

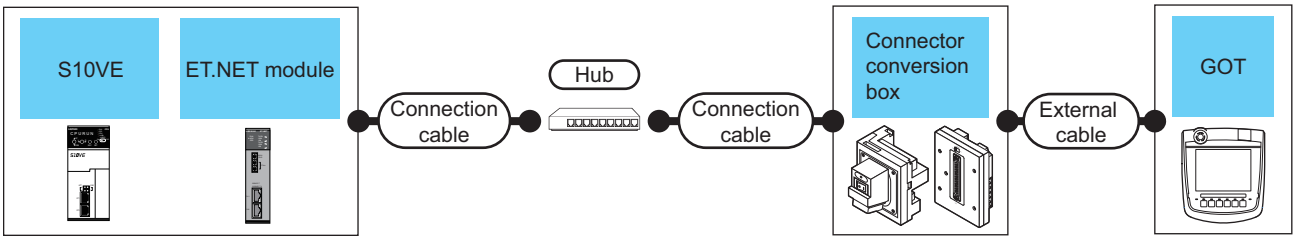
Switch position	Protocol	Channel No.
8	H-7338	#0
9		#1
A		#2
B		#3

29.3 Ethernet Connection

Connecting to S10VE

Communication driver

Ethernet(HITACHI), Gateway



PLC		Connection cable *2	Max. distance	Connector conversion box	External cable *3	GOT Model	Number of connectable equipment
Model name	ET.NET module *1						
LQP600	-	• 100BASE-TX Unshielded twisted pair cable (UTP): Category 5e or higher • 10BASE-T Unshielded twisted pair cable (UTP): Category 5e or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	1 CPU for up to 2 GOTs
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
	LQE260-E		100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	1 module for up to 2 GOTs
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

*1 Product manufactured by Hitachi, Ltd. For details of the product, contact Hitachi, Ltd.

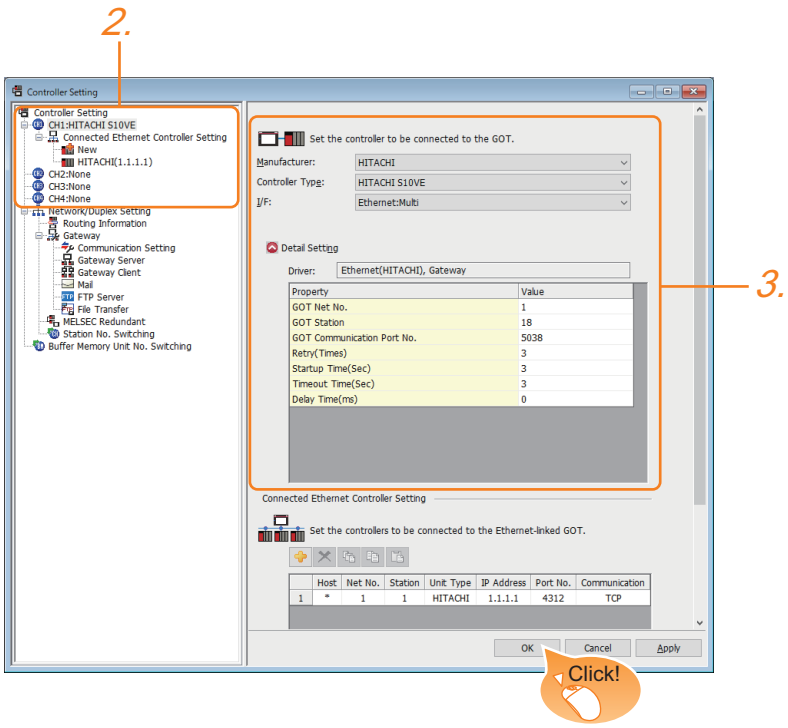
*2 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the target device and hub, use a cable according to the target controller configuration.
When the GOT is directly connected to the CPU with an Ethernet cable, use a cross cable.

*3 Use C or later version of GT11H-C□□-37P.

GOT Side Settings

Setting communication interface (Communication settings)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [HITACHI]
- [Controller Type]: [HITACHI S10VE]
- [I/F]: [Ethernet:Multi]
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1448 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
GOT Net No.	1
GOT Station	18
GOT Communication Port No.	5038
Retry(Times)	3
Startup Time(Sec)	3
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
GOT Net No.	Set the network No. of the GOT. (Default: 1)	1 to 239
GOT Station *1	Set the station No. of the GOT. (Default: 18)	1 to 254
GOT Communication Port No.	Set the GOT port No. for the connection with the Ethernet equipment. (Default: 5038*2)	1024 to 5010, 5014 to 49152, 49171 to 65534
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 3times)	0 to 5times
Startup Time	Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU. (Default: 3sec)	3 to 255sec
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 90sec
Delay Time	Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms)	0 to 10000(ms)

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1449 Connected Ethernet Controller Setting

*2 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

■GOT IP address setting

Set the following communication port setting.

- Standard port
- Extension port

■GOT Ethernet common setting

Set the following setting which is common to the standard port and the extension port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

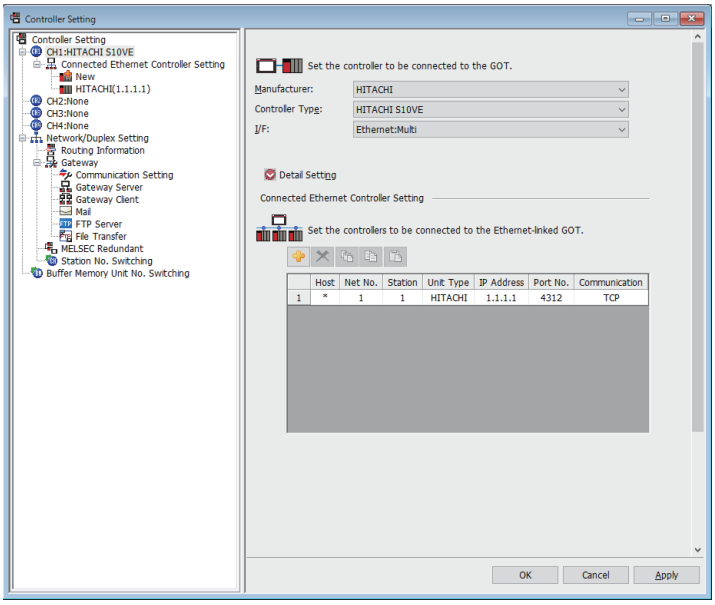
■IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 80 GOT Ethernet Setting

Connected Ethernet Controller Setting



Item	Description	Set value
Host	The host is displayed. It refers to a station that can be connected without setting a station number. (The host is indicated with an asterisk (*).)	—
Net No.	Set the network No. of the connected Ethernet equipment. (Default: 1)	1 to 239
Station *2	Set the station No. of the connected Ethernet equipment. (Default: 1)	1 to 254
Unit Type	HITACHI (fixed)	HITACHI (fixed)
IP address *1	Set the IP address of the connected Ethernet equipment. (Default: 1.1.1.1)	PLC side IP address
Port No.	Set the port No. of the connected Ethernet equipment. (Default: 4312)	4311 to 4315 *3
Communication format	TCP (fixed)	TCP (fixed)

*1 Connection with the PLC is unavailable if the IP address is the default value.
Set the value to the IP address of the PLC to be connected.

*2 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1448 Communication detail settings

*3 When the GOT is directly connected to the CPU, 4311 cannot be set.

PLC side setting

Point

HITACHI PLC

For details of HITACHI PLCs, refer to the following manuals.

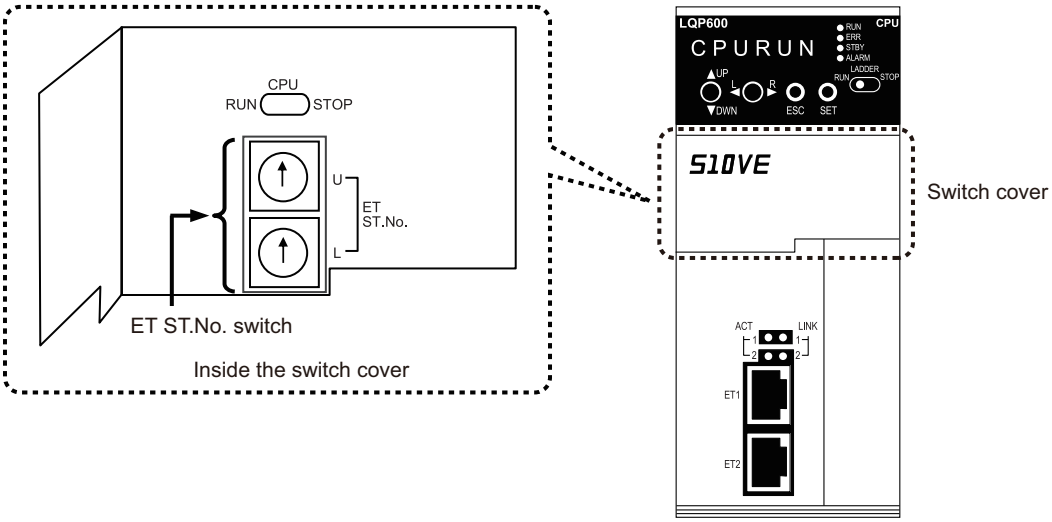
HITACHI PLC user's Manual

Model name		Refer to
LQP600 (built-in Ethernet interface)		Page 1450 When connecting to LQP600 (built-in Ethernet interface)
ET.NET module	LQE260-E	Page 1451 When connecting to the ET.NET module (LQE260-E)

When connecting to LQP600 (built-in Ethernet interface)

■ET ST.No. switch setting

Set the IP address.



Setting value		Description
U	L	
F	F	ET1: 192.192.192.1 (fixed) ET2: 192.192.193.1 (fixed)
Other than the above combination		Set the IP address using the engineering tool for S10VE.

■Network setting using the engineering tool for S10VE

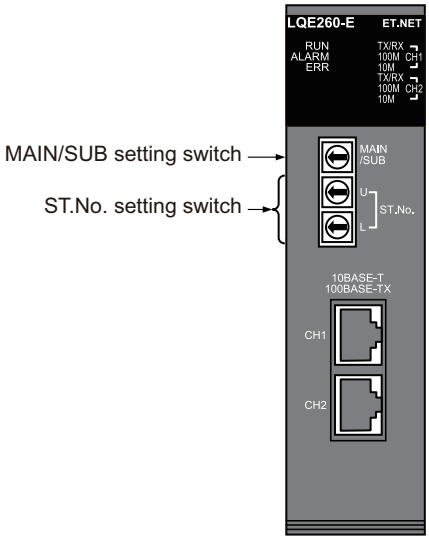
Use the engineering tool for S10VE to set the station No., IP address, and others.

For the station No., set the same value as the setting value of the ET ST.No. switch of the CPU module.

When connecting to the ET.NET module (LQE260-E)

■Switch setting

Set the switches accordingly.



- MAIN/SUB setting switch

Set MAIN or SUB.

Setting value	Description
0	MAIN setting (normal mode) *1
1	SUB setting (normal mode) *1
2	MAIN setting (port open mode) *2
3	SUB setting (port open mode) *2
4 to F	Setting prohibited

*1 Configure different settings for MAIN and SUB in the same module.

*2 In this mode, port No. 5000 or later is opened.
When the port open mode is set, connection to the ET.NET module using a tool is not available.

- ST.No. setting switch

Set the IP address.

Setting value		Description
U	L	
0	0	Set the IP address using the engineering tool for S10VE.
F	F	CH1: 192.192.192.1 (fixed) CH2: 192.192.193.1 (fixed)
Other than the above combination		Setting prohibited

■Network setting using the engineering tool for S10VE

Use the engineering tool for S10VE to set the station No., IP address, and others.

29.4 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1

HITACHI equipment ([HITACHI S10VE])

HITACHI equipment ([HITACHI S10mini/S10V])

30 FUJI PLC

- Page 1453 Connectable Model List
- Page 1454 Serial connection
- Page 1493 Ethernet Connection
- Page 1498 Settable Device Range
- Page 1498 Precautions

30.1 Connectable Model List

The following table shows the connectable models.

Series	Model name	Clock	Communication Type	Connectable model	Refer to
MICREX-F	F55	×	RS-232 RS-485	GT 2506 HS GT 2505 HS	☞ Page 1454 Connecting to MICREX-F55
	F70	×	RS-232 RS-485	GT 2506 HS GT 2505 HS	☞ Page 1459 Connecting to MICREX-F70
	F120S	×	RS-232 RS-485	GT 2506 HS GT 2505 HS	☞ Page 1466 Connecting to MICREX-F120S/140S/15□S
	F140S				
	F15□S				
MICREX-SX SPH	SPH200	×	RS-232 RS-485	GT 2506 HS GT 2505 HS	☞ Page 1472 Connecting to MICREX-SX SPH
	SPH300				
	SPH2000				
	SPH3000				
	SPH200	×	Ethernet	GT 2506 HS GT 2505 HS	☞ Page 1493 Connecting to MICREX-SX SPH
	SPH300				
	SPH2000				
	SPH3000				

30.2 Serial connection

Connecting to MICREX-F55

Communication driver

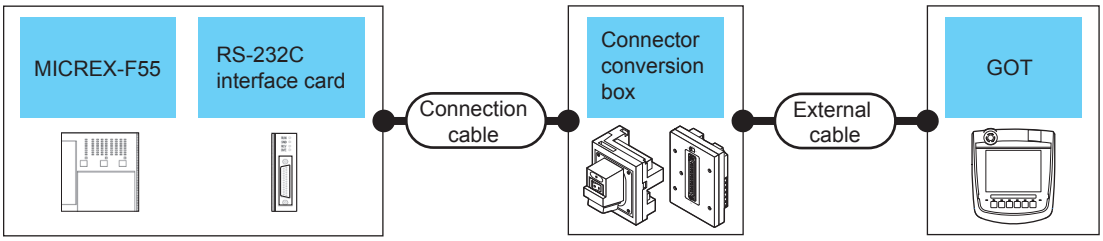
FUJI MICREX-F

For details on the system configuration on the PLC side, refer to the following section.

☞ Page 1498 Precautions

When using the RS-232 interface card

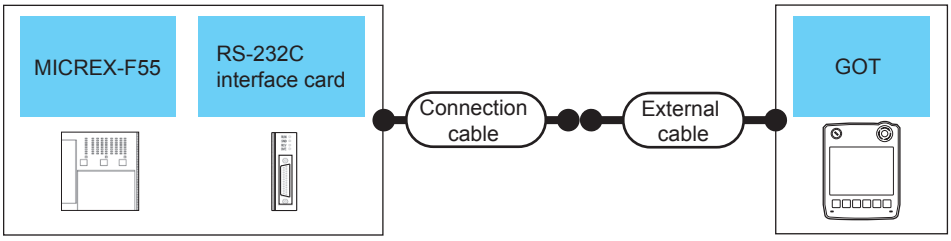
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	RS-232C interface card*1	Communication Type	Cable model Connection diagram number					
F55	NV1L-RS2	RS-232	GT09-C30R21003-25P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 RS-232C interface card
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

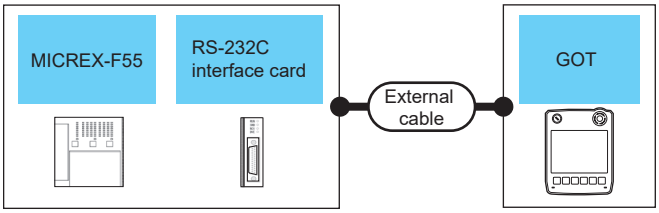
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	RS-232C interface card*1	Communication Type	Cable model Connection diagram number				
F55	NV1L-RS2	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 RS-232C interface card

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

■When using the external cable (GT11H-C□□□)

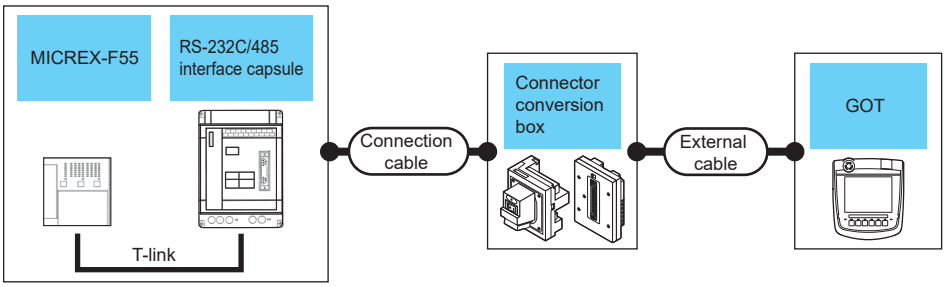


PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	RS-232C interface card*1	Communication Type				
F55	NV1L-RS2	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 RS-232C interface card

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

When using the RS-232C/485 interface capsule

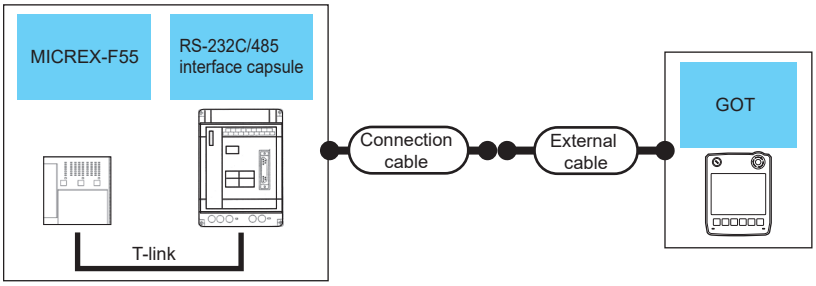
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	RS-232C/485 interface capsule*1	Communication Type	Cable model Connection diagram number					
F55	FFK120A-C10	RS-232	GT09-C30R21003-25P(3m) or (User preparing) RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 RS-232C/485 interface capsule
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.
*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

■When using the external cable (GT11H-C□□□-37P)

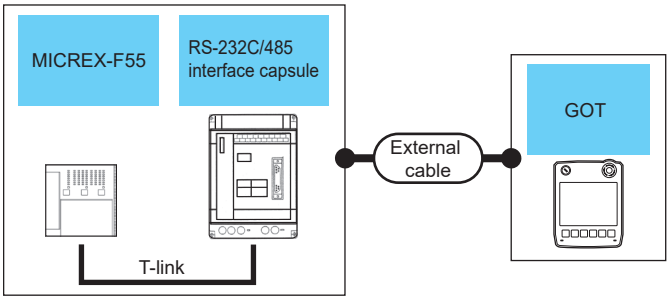


PLC			Connection cable	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	RS-232C/485 interface capsule*1	Communication Type	Cable model Connection diagram number				
F55	FFK120A-C10	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 RS-232C/485 interface capsule

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

■When using the external cable (GT11H-C□□□)



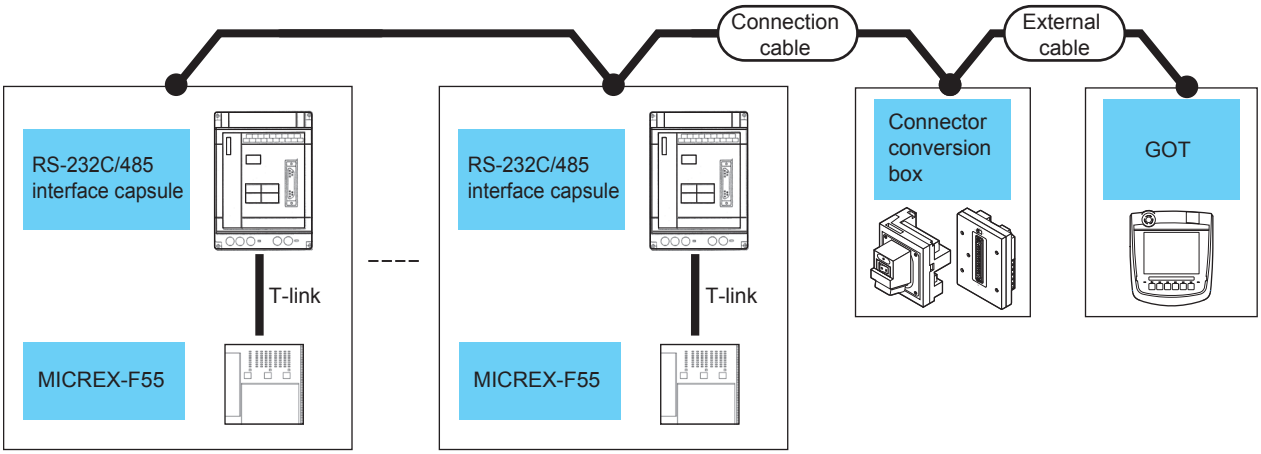
PLC			External cable	GOT Model	Total distance*2	Number of connectable equipment
Model name	RS-232C/485 interface capsule*1	Communication Type				
F55	FFK120A-C10	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 RS-232C/485 interface capsule

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (external cable) from GOT to RS-232C/485 interface capsule.

When connecting to multiple PLCs

■When using the connector conversion box

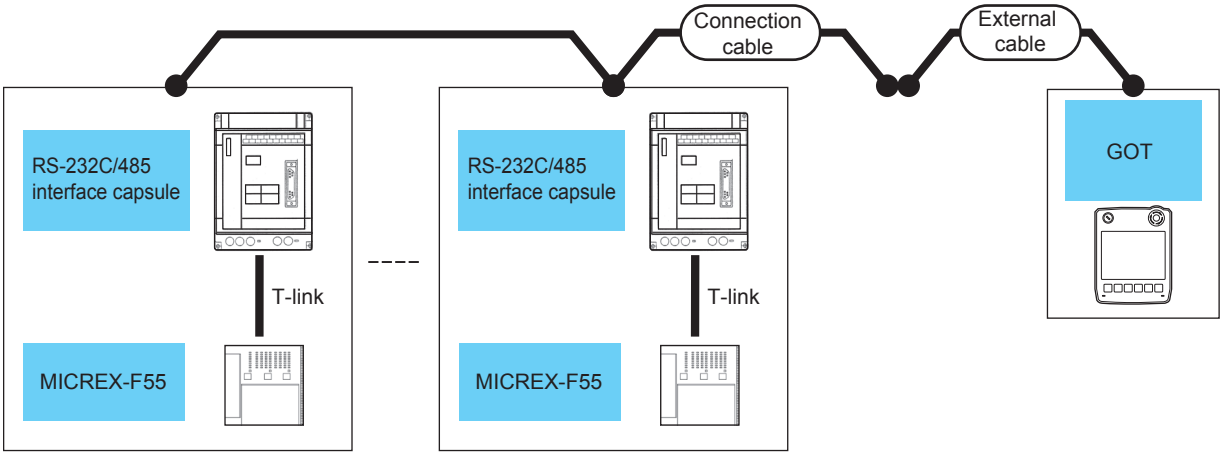


PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	RS-232C/485 interface capsule*1	Communication Type	Cable model Connection diagram number					
F55	FFK120A-C10	RS-485	GT09-C30R41001-6T(3m) GT09-C100R41001-6T(10m) or User preparing RS-485 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for up to 6 PLCs (RS-232C/485 interface capsules)
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

■When using the external cable (GT11H-C□□□-37P)

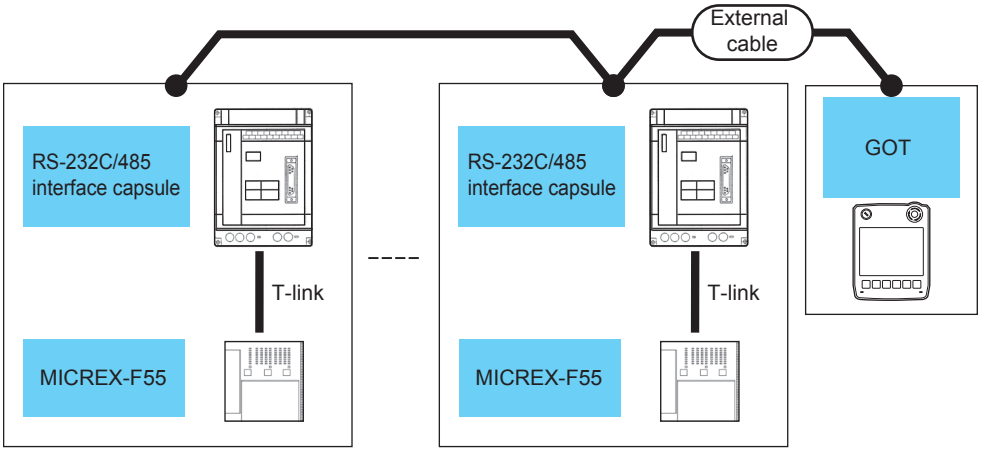


PLC			Connection cable	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	RS-232C/485 interface capsule*1	Communication Type	Cable model Connection diagram number				
F55	FFK120A-C10	RS-485	User preparing RS-485 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for up to 6 PLCs (RS-232C/485 interface capsules)

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

■When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	RS-232C/485 interface capsule*1	Communication Type				
F55	FFK120A-C10	RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-485 connection diagram 3)	GT 2505HS	13m	1 GOT for up to 6 PLCs (RS-232C/485 interface capsules)

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (external cable) from GOT to RS-232C/485 interface capsule.

Connecting to MICREX-F70

Communication driver

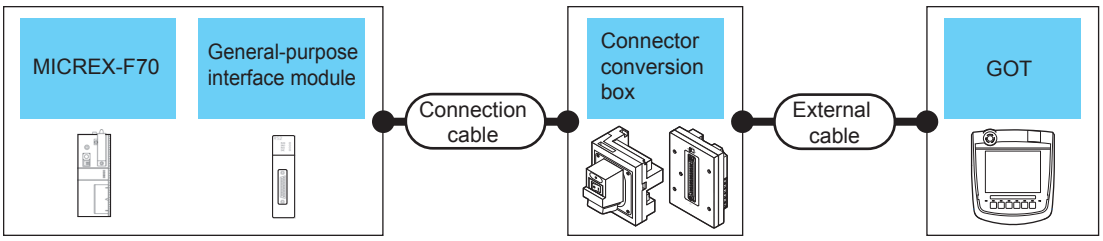
FUJI MICREX-F

For details on the system configuration on the PLC side, refer to the following.

☞ Page 1498 Precautions

When using general-purpose interface modules

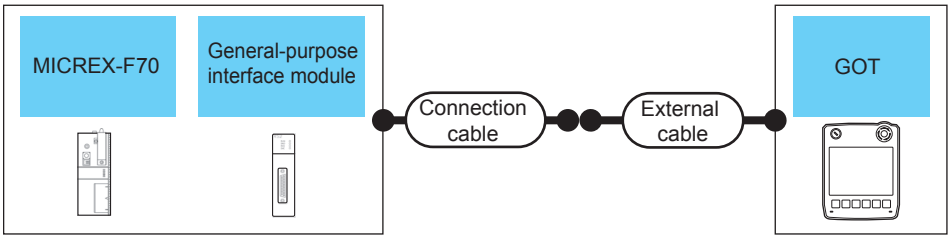
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	General-purpose interface module*1	Communication Type	Cable model Connection diagram number					
F70	NC1L-RS2	RS-232	GT09-C30R21003-25P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 general-purpose interface module
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

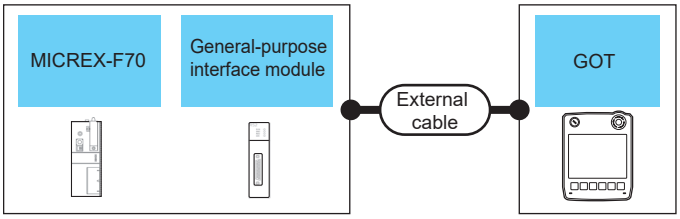
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	General-purpose interface module*1	Communication Type	Cable model Connection diagram number				
F70	NC1L-RS2	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 general-purpose interface module

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

■When using the external cable (GT11H-C□□□)

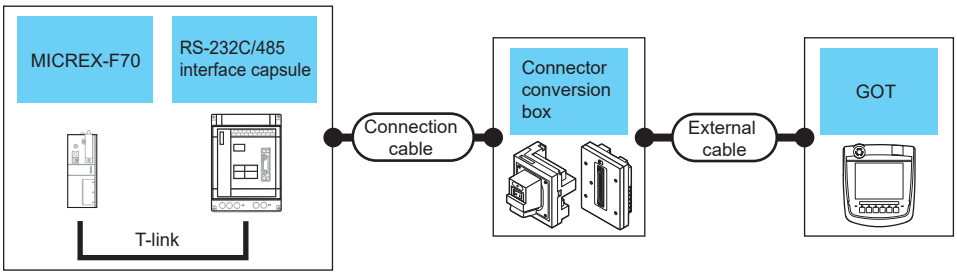


PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	General-purpose interface module*1	Communication Type				
F70	NC1L-RS2	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 general-purpose interface module

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

When using the RS-232C/485 interface capsule

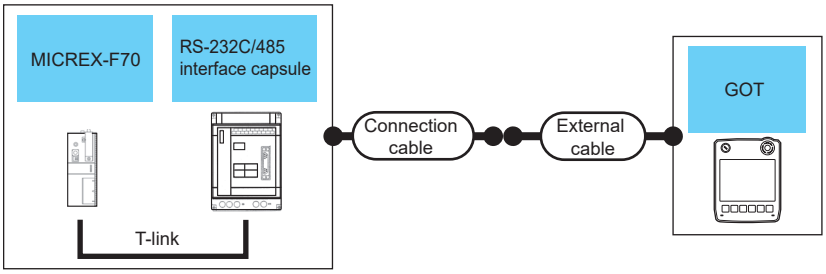
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	RS-232C/485 interface capsule*1	Communication Type	Cable model Connection diagram number					
F70	FFK120A-C10	RS-232	GT09-C30R21003-25P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 RS-232C/485 interface capsule
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.
*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

■When using the external cable (GT11H-C□□□-37P)

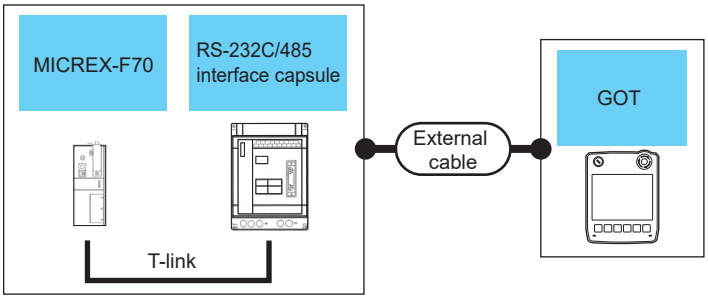


PLC			Connection cable	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	RS-232C/485 interface capsule*1	Communication Type	Cable model Connection diagram number				
F70	FFK120A-C10	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 RS-232C/485 interface capsule

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

■When using the external cable (GT11H-C□□□)



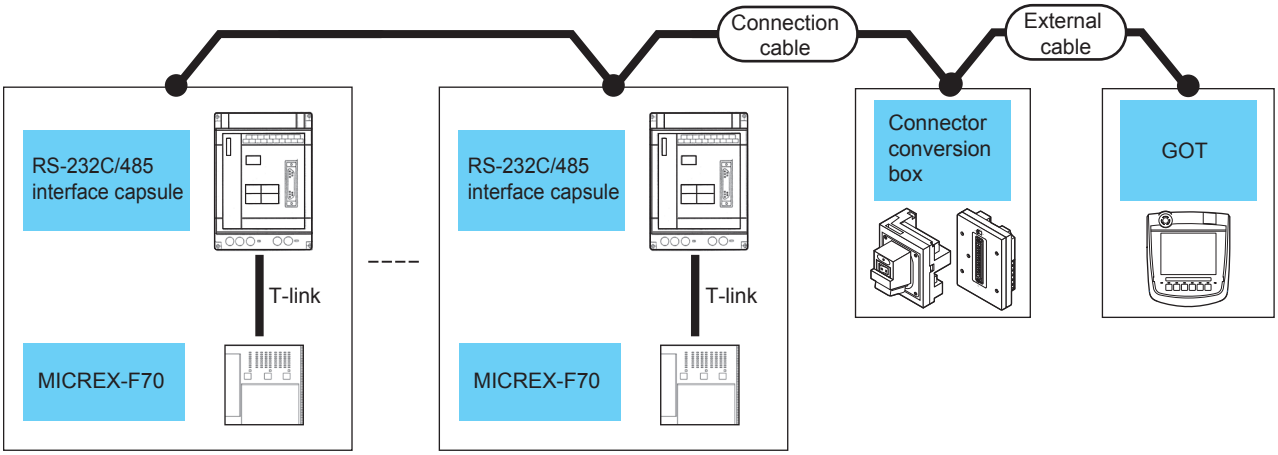
PLC			External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	RS-232C/485 interface capsule*1	Communication Type				
F70	FFK120A-C10	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 RS-232C/485 interface capsule

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (external cable) from GOT to RS-232C/485 interface capsule.

When connecting to multiple PLCs (using RS-232C/485 interface capsules)

■When using the connector conversion box

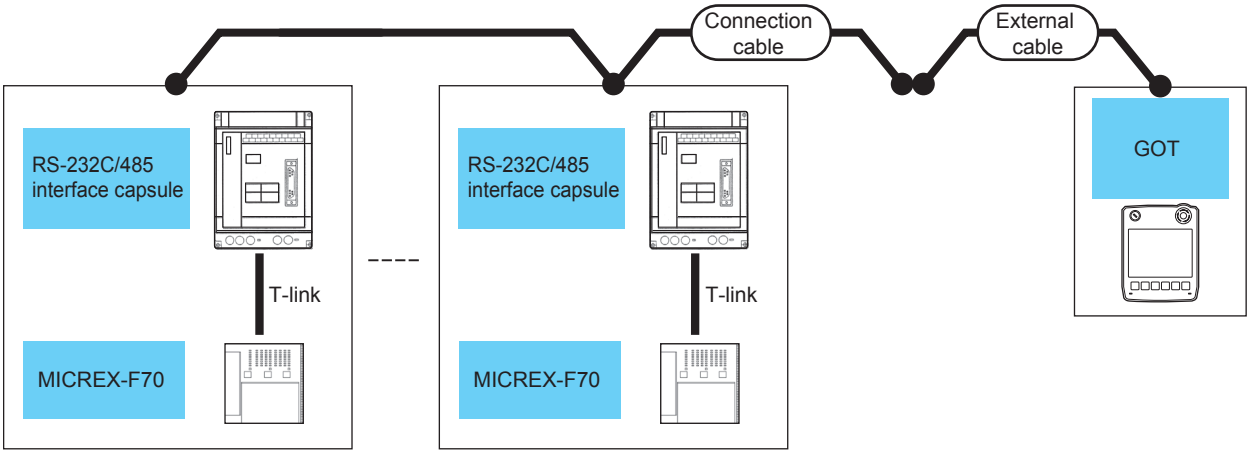


PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	RS-232C/485 interface capsule*1	Communication Type	Cable model Connection diagram number					
F70	FFK120A-C10	RS-485	GT09-C30R41001-6T(3m) GT09-C100R41001-6T(10m) or User preparing RS-485 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for up to 6 PLCs (RS-232C/485 interface capsules)
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

■When using the external cable (GT11H-C□□□-37P)

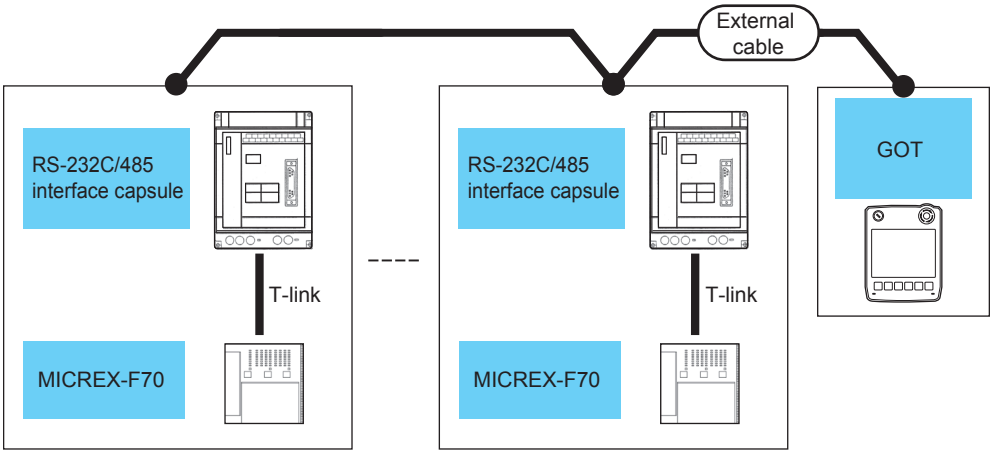


PLC			Connection cable	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	RS-232C/485 interface capsule*1	Communication Type	Cable model Connection diagram number				
F70	FFK120A-C10	RS-485	User preparing RS-485 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for up to 6 PLCs (RS-232C/485 interface capsules)

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

■When using the external cable (GT11H-C□□□)



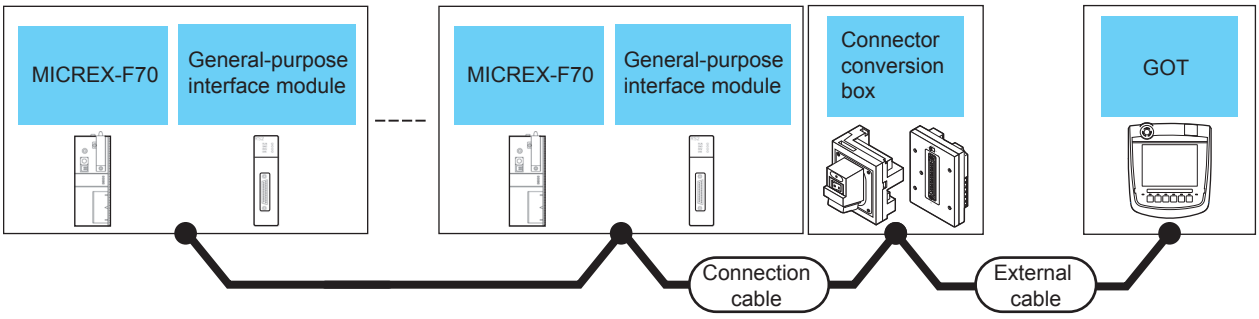
PLC			External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	RS-232C/485 interface capsule*1	Communication Type				
F70	FFK120A-C10	RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-485 connection diagram 3)	GT 2505HS	13m	1 GOT for up to 6 PLCs (RS-232C/485 interface capsules)

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (external cable) from GOT to RS-232C/485 interface capsule.

When connecting to multiple PLCs (using general-purpose interface modules)

■When using the connector conversion box

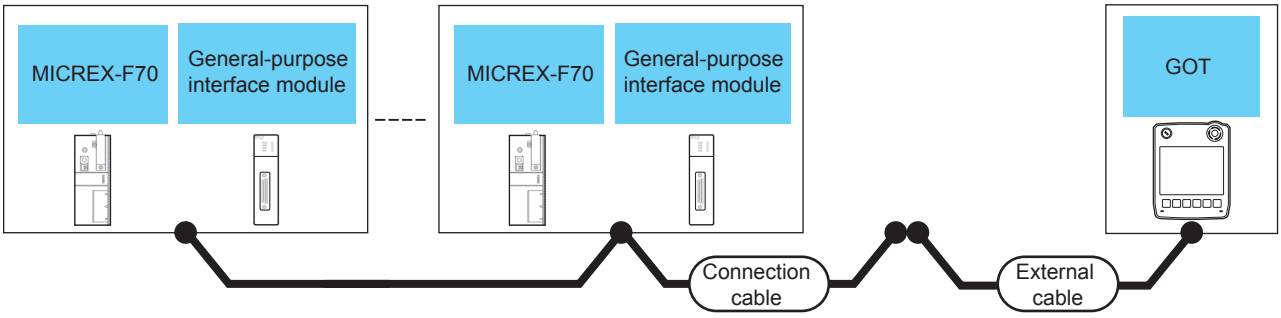


PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	General-purpose interface module*1	Communication Type	Cable model Connection diagram number					
F70	NC1L-RS4	RS-485	GT09-C30R41001-6T(3m) GT09-C100R41001-6T(10m) or User preparing RS-485 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for up to 31 PLCs (general-purpose interface modules)
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

■When using the external cable (GT11H-C□□□-37P)

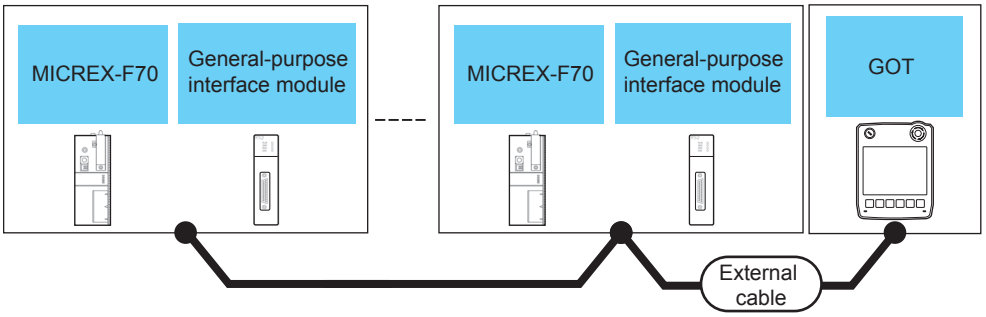


PLC			Connection cable	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	General-purpose interface module*1	Communication Type	Cable model Connection diagram number				
F70	NC1L-RS4	RS-485	User preparing RS-485 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for up to 31 PLCs (general-purpose interface modules)

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

■When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	General-purpose interface module*1	Communication Type				
F70	NC1L-RS4	RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-485 connection diagram 3)	GT 2505HS	13m	1 GOT for up to 31 PLCs (general-purpose interface modules)

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (external cable) from GOT to RS-232C/485 interface capsule.

Connecting to MICREX-F120S/140S/15□S

Communication driver

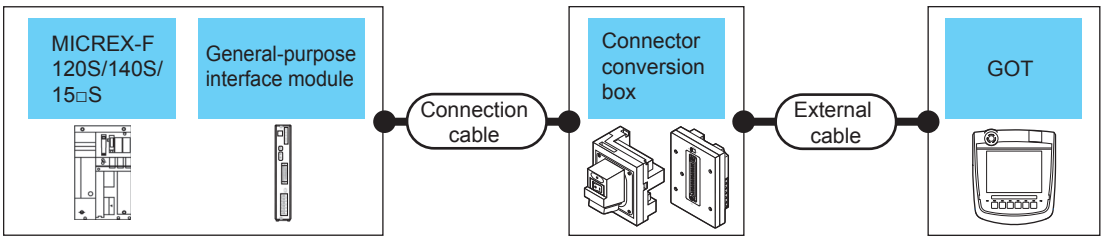
FUJI MICREX-F

For details on the system configuration on the PLC side, refer to the following.

☞ Page 1498 Precautions

When using general-purpose interface modules

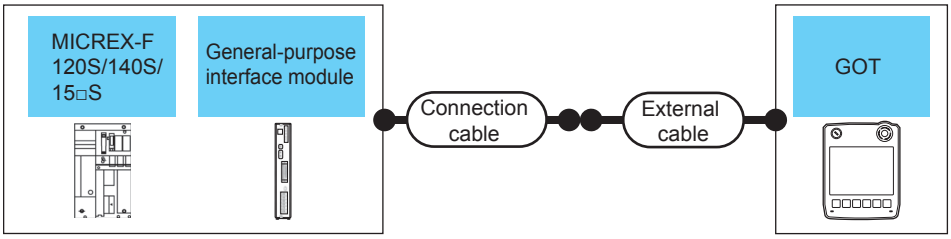
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	General-purpose interface module*1	Communication Type	Cable model Connection diagram number					
F120S F140S F15□S	FFU120B	RS-232	GT09-C30R21003-25P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 general-purpose interface module
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

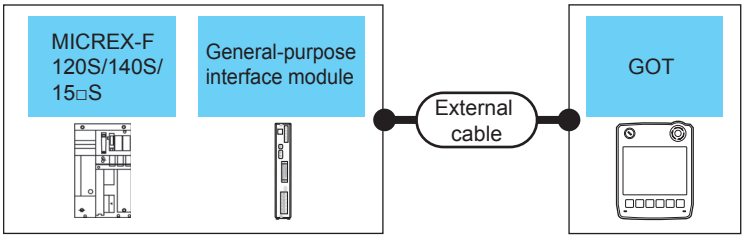
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	General-purpose interface module*1	Communication Type	Cable model Connection diagram number				
F120S F140S F15□S	FFU120B	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 general-purpose interface module

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

■When using the external cable (GT11H-C□□□)

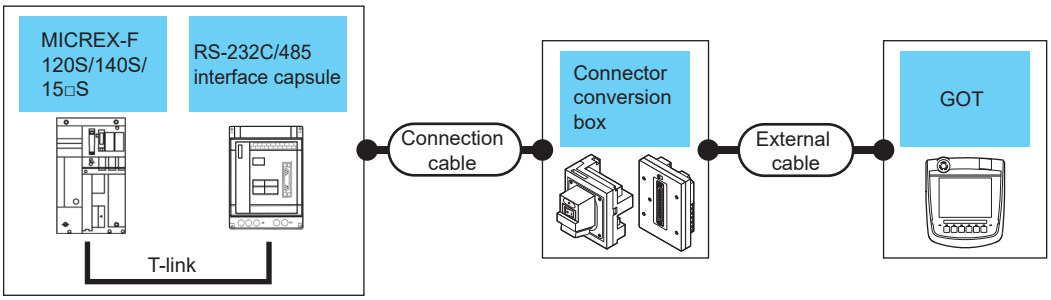


PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	General-purpose interface module*1	Communication Type				
F120S F140S F15□S	FFU120B	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 general-purpose interface module

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

When using the RS-232C/485 interface capsule

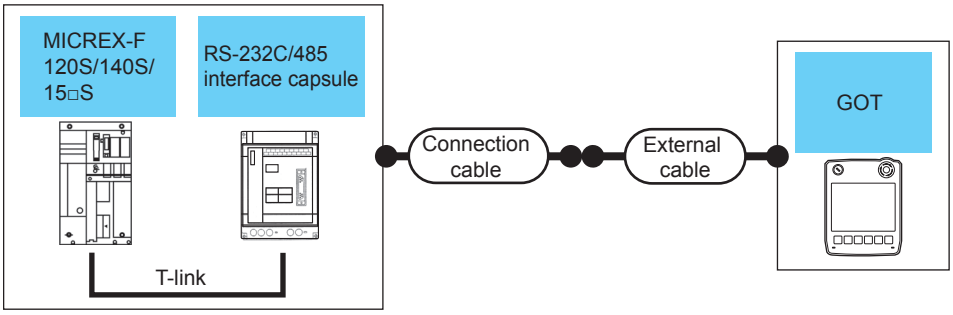
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	RS-232C/485 interface capsule*1	Communication Type	Cable model Connection diagram number					
F120S F140S F15□S	FFK120A-C10	RS-232	GT09-C30R21003-25P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 RS-232C/485 interface capsule
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.
*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

■When using the external cable (GT11H-C□□□-37P)

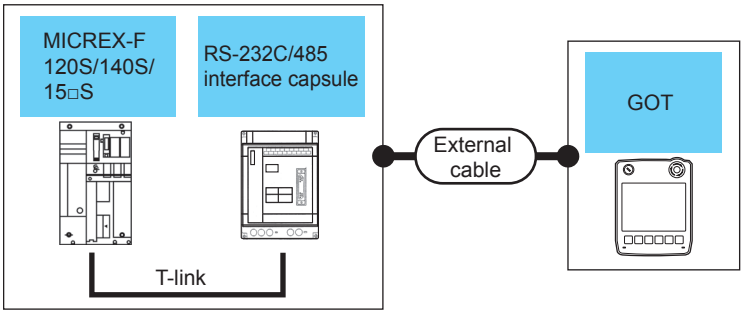


PLC			Connection cable	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	RS-232C/485 interface capsule*1	Communication Type	Cable model Connection diagram number				
F120S F140S F15□S	FFK120A-C10	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 RS-232C/485 interface capsule

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

■When using the external cable (GT11H-C□□□)



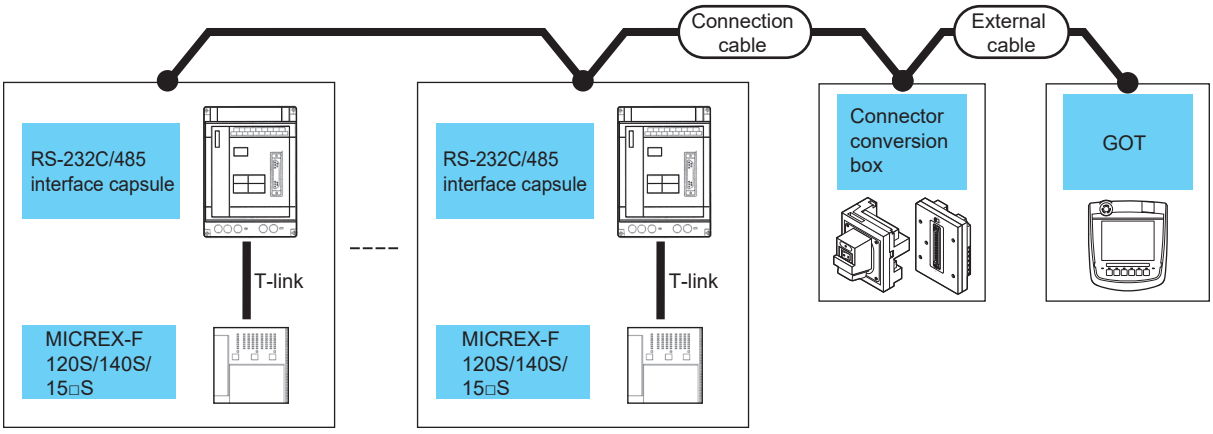
PLC			External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	RS-232C/485 interface capsule*1	Communication Type				
F120S F140S F15□S	FFK120A-C10	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 RS-232C/485 interface capsule

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (external cable) from GOT to RS-232C/485 interface capsule.

When connecting to multiple PLCs (using RS-232C/485 interface capsules)

■When using the connector conversion box

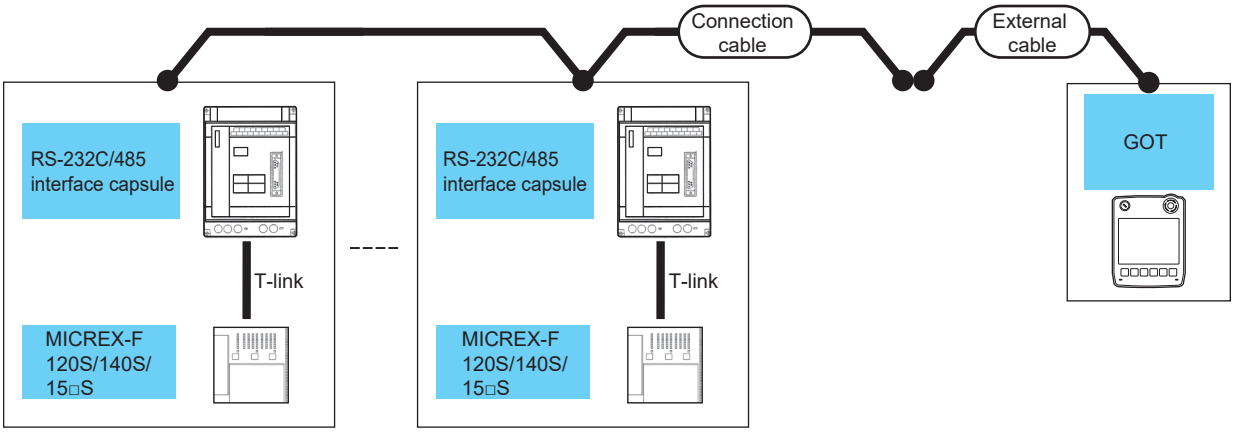


PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	RS-232C/485 interface capsule*1	Communication Type	Cable model Connection diagram number					
F120S F140S F15□S	FFK120A-C10	RS-485	GT09-C30R41001-6T(3m) GT09-C100R41001-6T(10m) or User preparing RS-485 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for up to 6 PLCs (RS-232C/485 interface capsules)
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

■When using the external cable (GT11H-C□□□-37P)

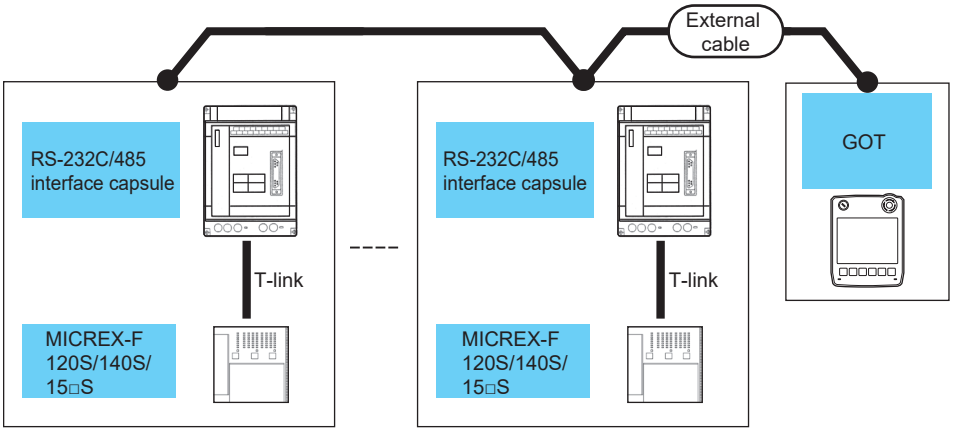


PLC			Connection cable	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	RS-232C/485 interface capsule*1	Communication Type	Cable model Connection diagram number				
F120S F140S F15□S	FFK120A-C10	RS-485	User preparing RS-485 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for up to 6 PLCs (RS-232C/485 interface capsules)

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

■When using the external cable (GT11H-C□□□)



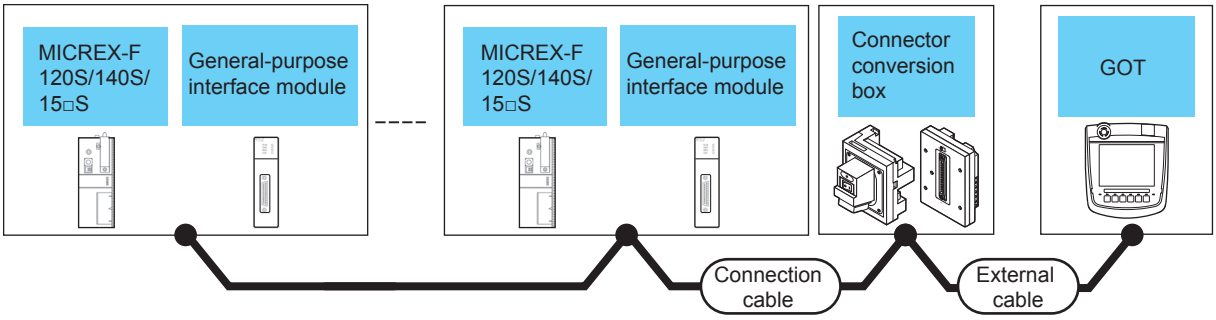
PLC			External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	RS-232C/485 interface capsule*1	Communication Type				
F120S F140S F15□S	FFK120A-C10	RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-485 connection diagram 3)	GT 2505HS	13m	1 GOT for up to 6 PLCs (RS-232C/485 interface capsules)

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (external cable) from GOT to RS-232C/485 interface capsule.

When connecting to multiple PLCs (using general-purpose interface modules)

■When using the connector conversion box

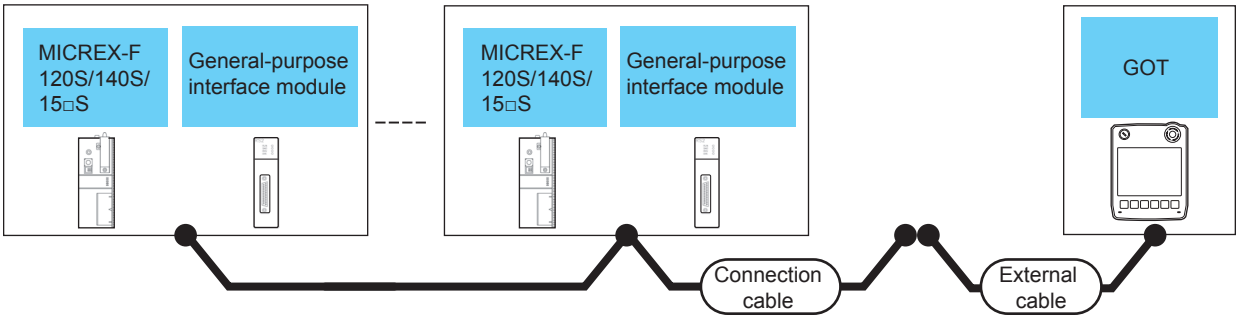


PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	General-purpose interface module*1	Communication Type	Cable model Connection diagram number					
F120S F140S F15□S	FFU120B	RS-485	GT09-C30R41001-6T(3m) GT09-C100R41001-6T(10m) or (User preparing) RS-485 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for up to 31 PLCs (general-purpose interface modules)
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

■When using the external cable (GT11H-C□□□-37P)

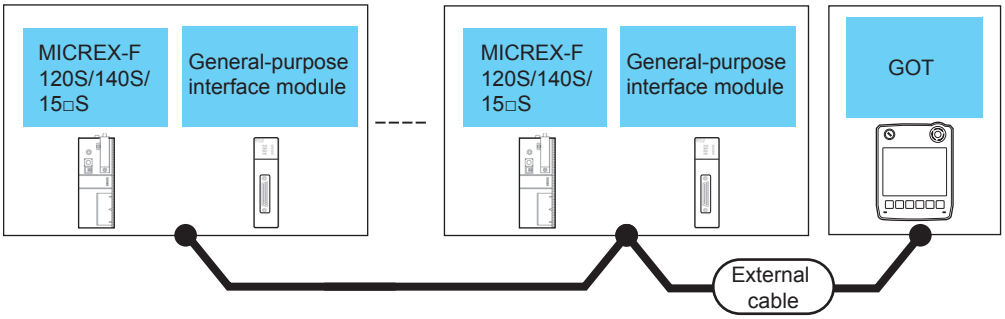


PLC			Connection cable	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	General-purpose interface module*1	Communication Type	Cable model Connection diagram number				
F120S F140S F15□S	FFU120B	RS-485	User preparing RS-485 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for up to 10 PLCs (general-purpose interface modules)

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 The distance (connection cable + external cable) from GOT to RS-232C/485 interface capsule.

■When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	General-purpose interface module*1	Communication Type				
F120S F140S F15□S	FFU120B	RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-485 connection diagram 3)	GT 2505HS	13m	1 GOT for up to 10 PLCs (general-purpose interface modules)

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

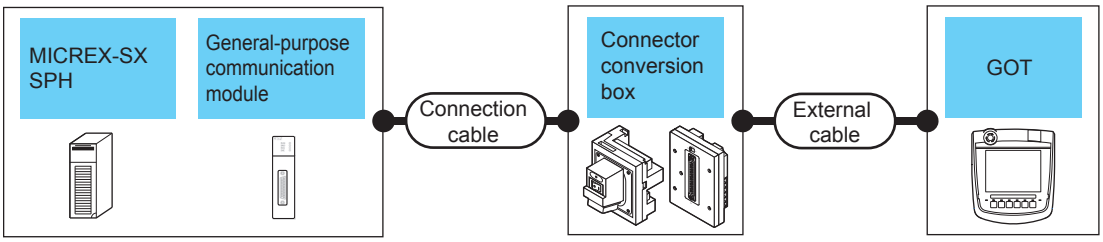
*2 The distance (external cable) from GOT to RS-232C/485 interface capsule.

Connecting to MICREX-SX SPH

Communication driver

FUJI MICREX-SX SPH

When using the connector conversion box



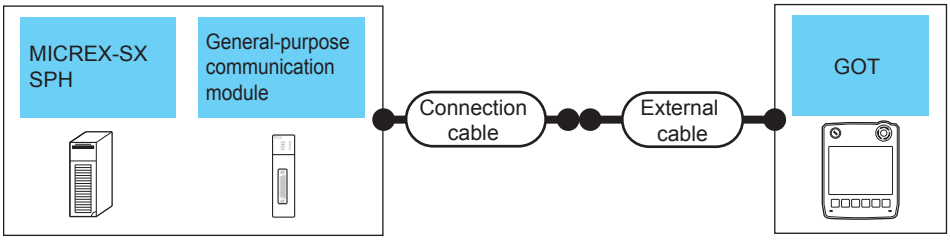
PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	General-purpose interface module*1	Communication Type	Cable model Connection diagram number					
MICREX-SX SPH *2	-	RS-232	NP4H-CB2*1 + NW0H-CNV*1	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
			NP4H-CB2(2m) *1 + NW0H-CNV*1	GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS	5m	1 GOT for 1 General-purpose communication module
MICREX-SX SPH	NP1L-RS1 NP1L-RS2 NP1L-RS3		User preparing RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for Communication port of general-purpose communication module
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	NP1L-RS1 NP1L-RS4	RS-485	User preparing RS-485 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
	NP1L-RS5		User preparing RS-485 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*2 Depending on the hardware version of the PLC, the GOT cannot be connected.
The following shows the hardware versions of the PLCs that can be connected.

Model	Type	Hardware version
SPH200	NP1PH-08 NP1PH-16	V21 or earlier
SPH300	NP1PS-32 NP1PS-32R NP1PS-74R NP1PS-117R	V25 or earlier
	NP1PS-245R	V22 or earlier
SPH2000	NP1PM-48R NP1PM-48E NP1PM-256E NP1PM-256H	V24 or earlier
SPH3000	NP1PU-048E NP1PU-128E NP1PU-256E	V21 or earlier

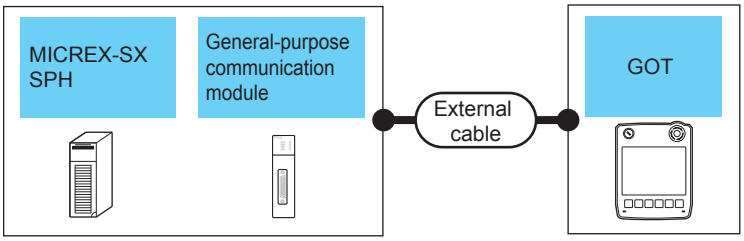
When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	General-purpose interface module*1	Communication Type	Cable model Connection diagram number				
MICREX-SX SPH	NP1L-RS1 NP1L-RS2 NP1L-RS3	RS-232	User preparing RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for Communication port of general-purpose communication module
	NP1L-RS1 NP1L-RS4	RS-485	User preparing RS-485 connection diagram 5)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	
	NP1L-RS5	RS-485	User preparing RS-485 connection diagram 8)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	General-purpose interface module*1	Communication Type				
MICREX-SX SPH	NP1L-RS1 NP1L-RS2 NP1L-RS3	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 6)	GT 2505HS	6m	1 GOT for Communication port of general-purpose communication module
	NP1L-RS1 NP1L-RS4	RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-485 connection diagram 6)	GT 2505HS	13m	
	NP1L-RS5	RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-485 connection diagram 9)	GT 2505HS		

*1 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

Connection Diagram

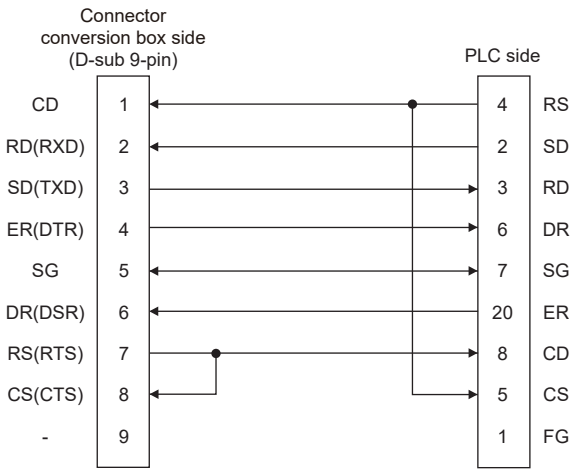
The following diagram shows the connection between the GOT and the PLC.

RS-232 cable

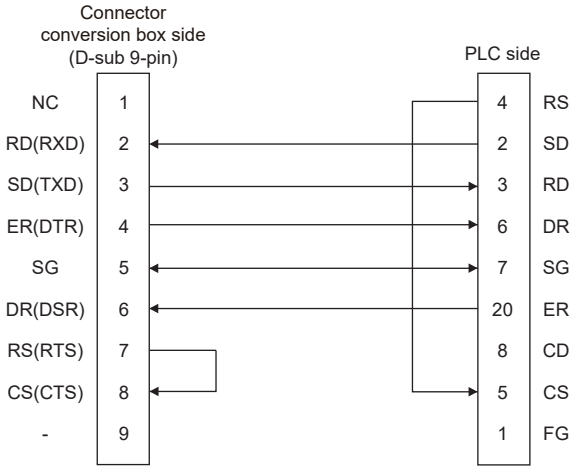
■Connection diagram

• RS-232 connection diagram 1)

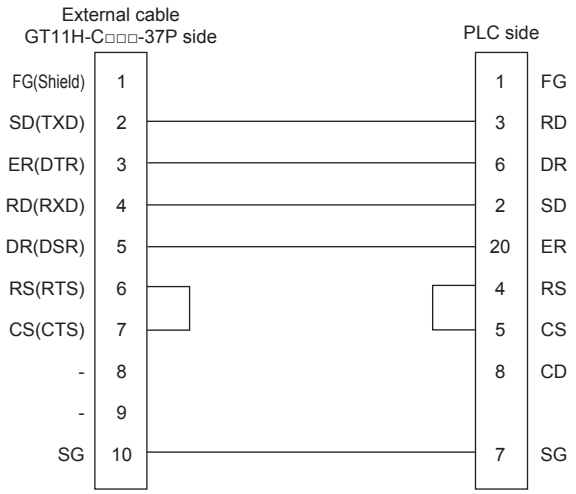
For GT2506HS-VTBD



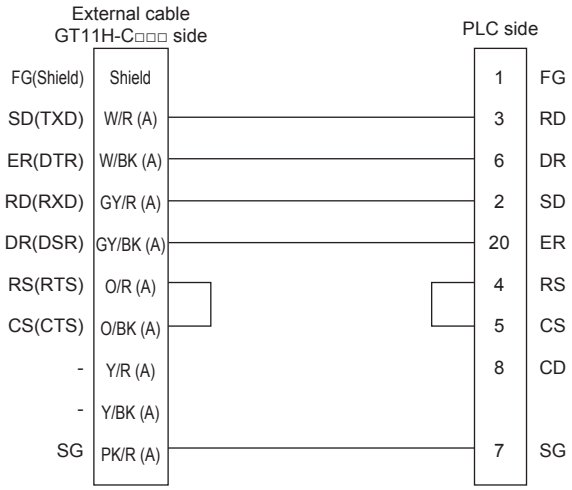
For GT2505HS-VTBD



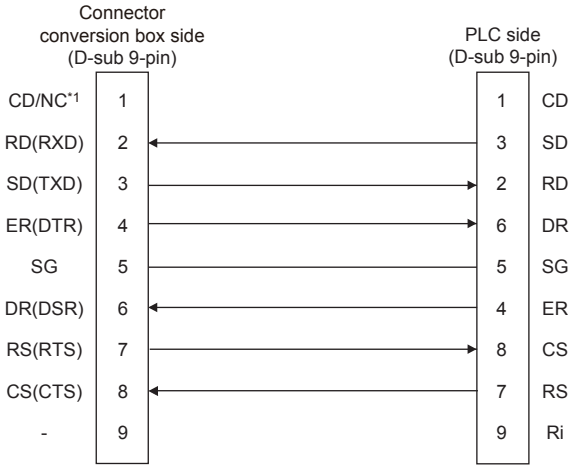
• RS-232 connection diagram 2)



• RS-232 connection diagram 3)

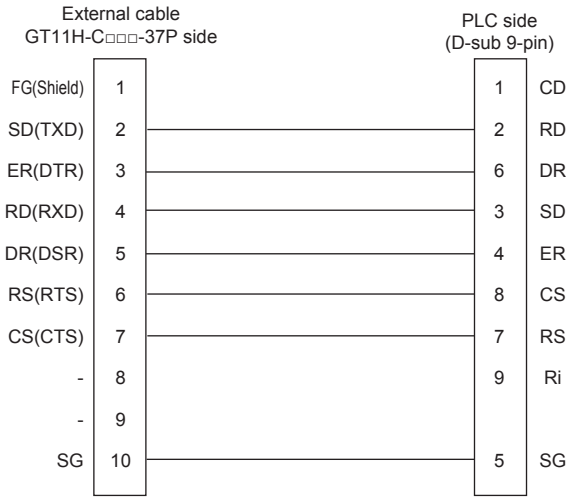


• RS-232 connection diagram 4)

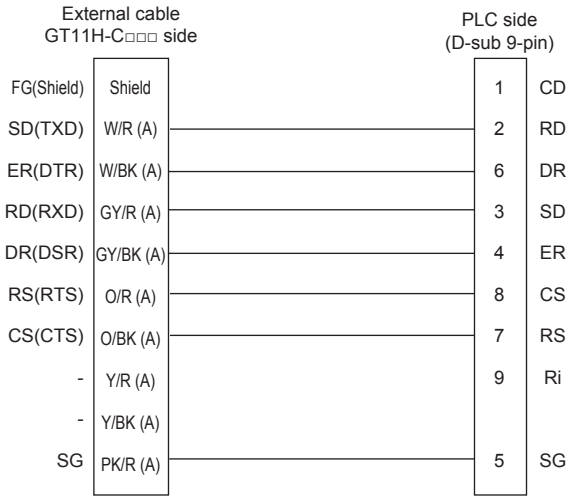


*1 GT2506HS-V: CD, GT2505HS-V: NC

• RS-232 connection diagram 5)



• RS-232 connection diagram 6)



■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

• FUJI PLC side connector

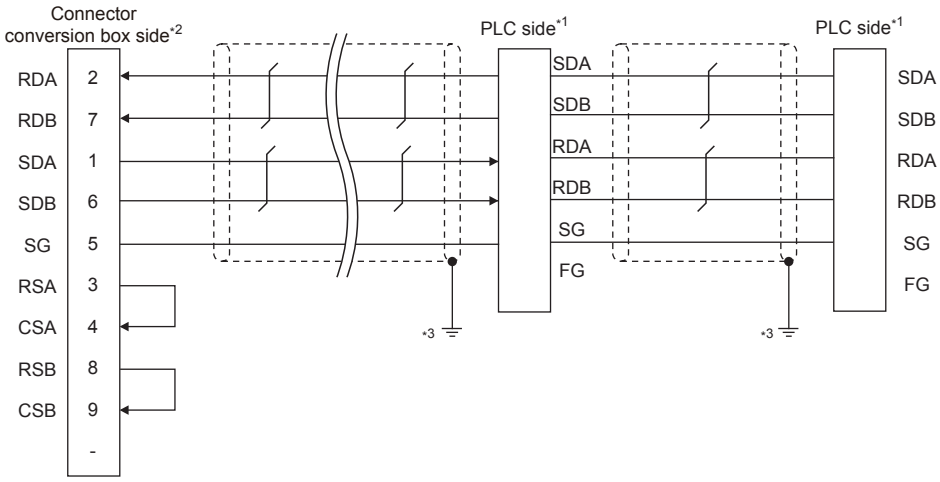
Use the connector compatible with the FUJI PLC side module.

For details, refer to the user's FUJI PLC manual.

RS-485 cable

■Connection diagram

• RS-485 connection diagram 1)



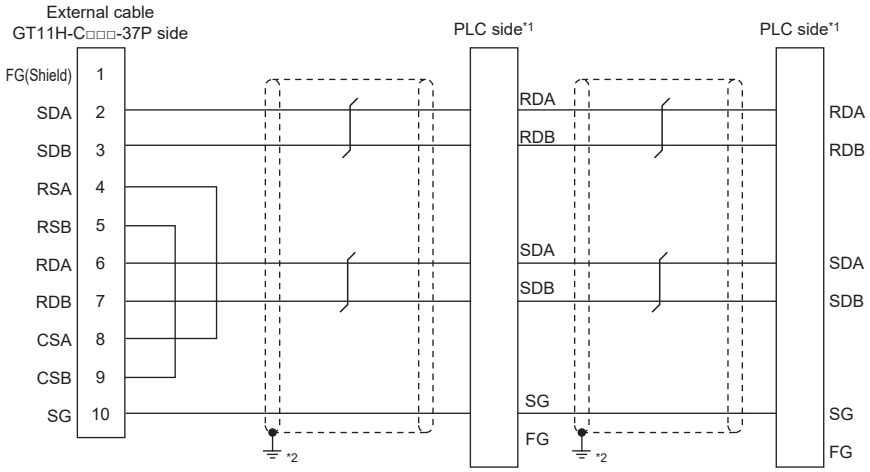
*1 Turn ON the terminating switch of a interface converter which will be a terminal.

*2 Set the terminating resistor of GOT side which will be a terminal.

☞ Page 1480 Connecting terminating resistors

*3 Connect FG grounding to the appropriate part of a cable shield line.

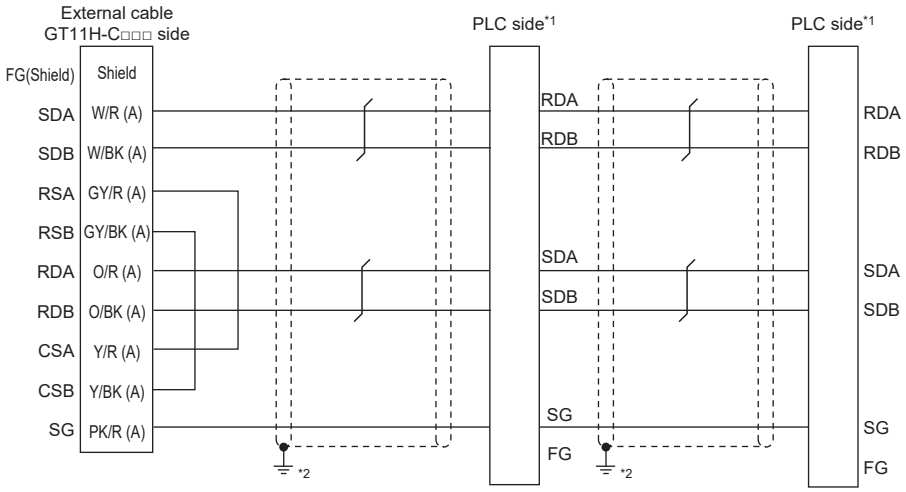
• RS-485 connection diagram 2)



*1 Turn ON the terminating switch of a interface converter which will be a terminal.

*2 Connect FG grounding to the appropriate part of a cable shield line.

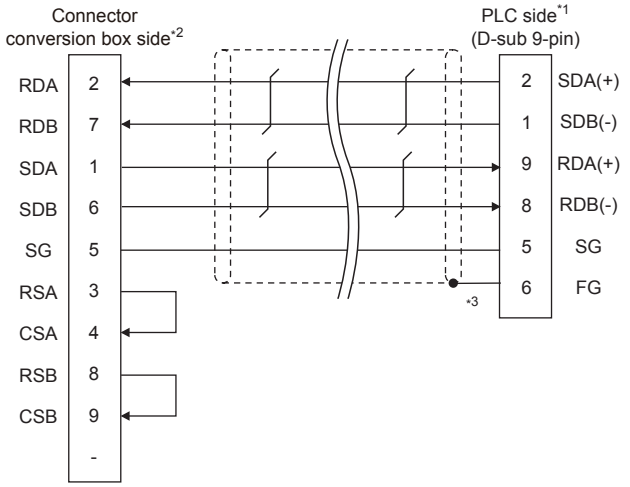
• RS-485 connection diagram 3)



*1 Turn ON the terminating switch of a interface converter which will be a terminal.

*2 Connect FG grounding to the appropriate part of a cable shield line.

• RS-485 connection diagram 4)



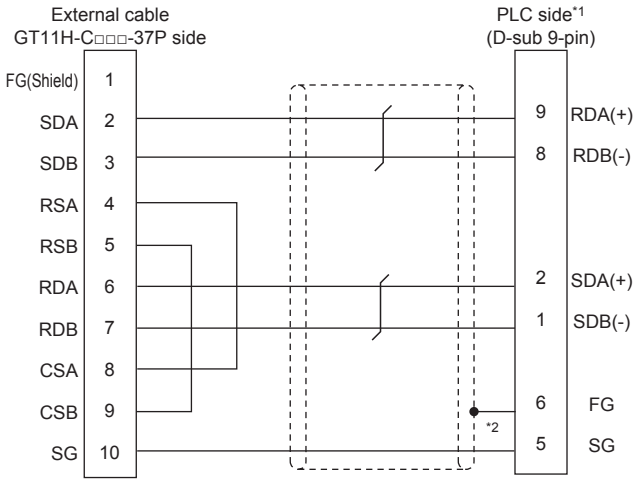
*1 Turn ON the terminating switch of a interface converter which will be a terminal.

*2 Set the terminating resistor of GOT side which will be a terminal.

☞ Page 1480 Connecting terminating resistors

*3 Make sure to pull the cable shield line into inside the connector cover, and treat the line end for obtaining shield effect.

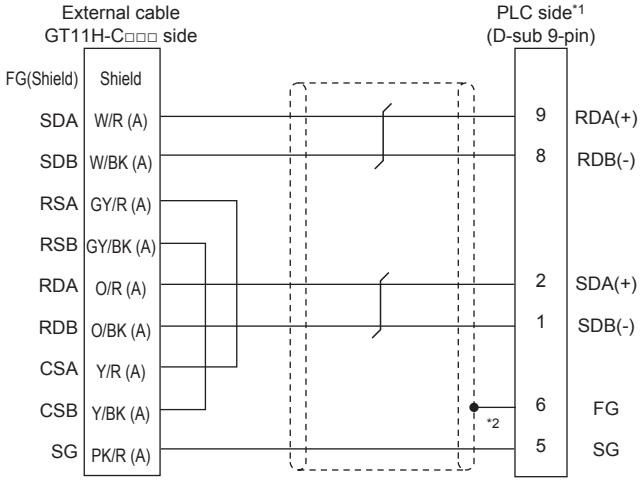
• RS-485 connection diagram 5)



*1 Turn ON the terminating switch of a interface converter which will be a terminal.

*2 Make sure to pull the cable shield line into inside the connector cover, and treat the line end for obtaining shield effect.

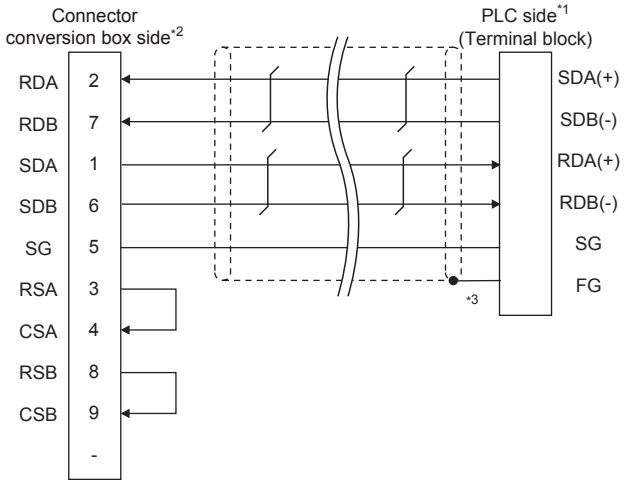
• RS-485 connection diagram 6)



*1 Turn ON the terminating switch of a interface converter which will be a terminal.

*2 Make sure to pull the cable shield line into inside the connector cover, and treat the line end for obtaining shield effect.

• RS-485 connection diagram 7)



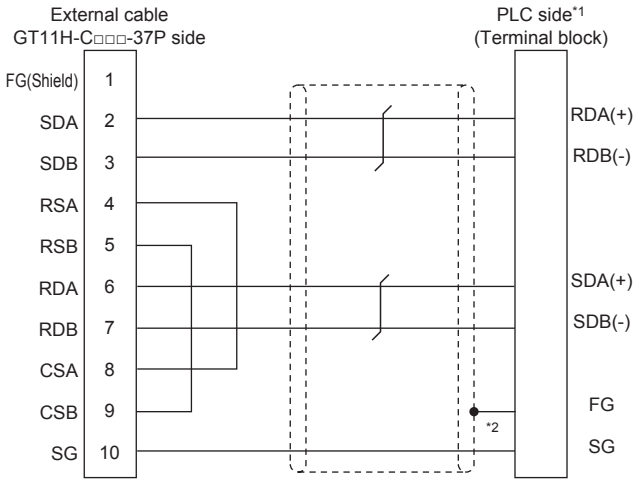
*1 Turn ON the terminating switch of a interface converter which will be a terminal.

*2 Set the terminating resistor of GOT side which will be a terminal.

☞ Page 1480 Connecting terminating resistors

*3 Make sure to pull the cable shield line into inside the connector cover, and treat the line end for obtaining shield effect.

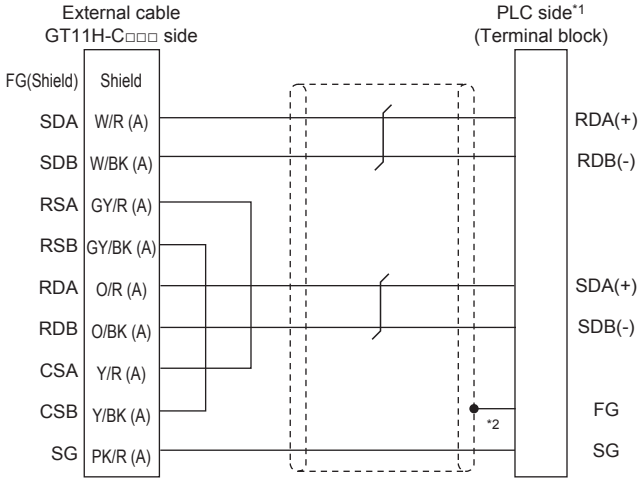
• RS-485 connection diagram 8)



*1 Turn ON the terminating switch of a interface converter which will be a terminal.

*2 Make sure to pull the cable shield line into inside the connector cover, and treat the line end for obtaining shield effect.

• RS-485 connection diagram 9)



*1 Turn ON the terminating switch of a interface converter which will be a terminal.

*2 Make sure to pull the cable shield line into inside the connector cover, and treat the line end for obtaining shield effect.

■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-485 cable must be 13 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

• FUJI PLC side connector

Use the connector compatible with the FUJI PLC side module.

For details, refer to the user's FUJI PLC manual.

■Connecting terminating resistors

• GOT side

For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Enable".

For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

• FUJI PLC side

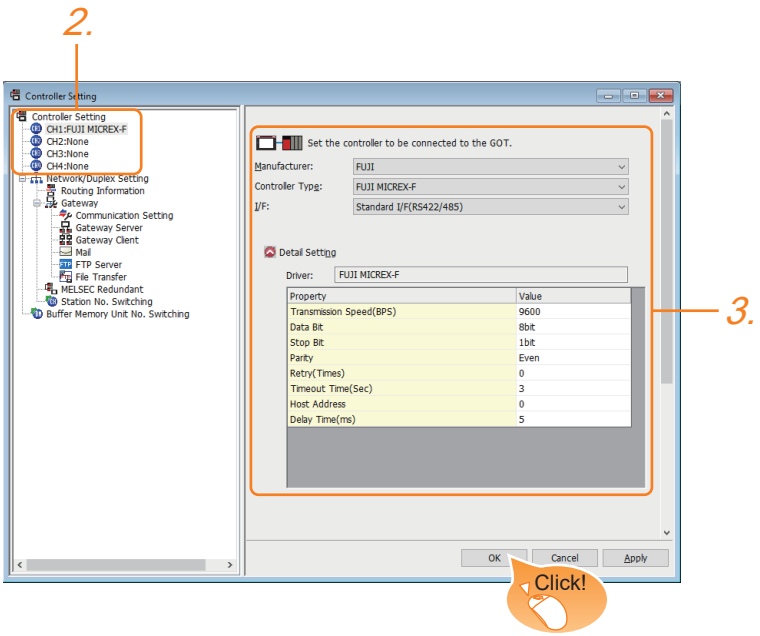
When connecting a FUJI PLC to the GOT, a terminating resistor must be connected.

☞ Page 1484 PLC Side Setting

GOT Side Settings

Setting communication interface (Communication settings)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [FUJI]
- [Controller Type]: Select one of the following items.

[FUJI MICREX-F]

[FUJI MICREX-SX SPH]

- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1482 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

(For FUJI MICREX-F)

Property	Value
Transmission Speed(BPS)	9600
Data Bit	8 bit
Stop Bit	1 bit
Parity	Even
Retry(Times)	0
Timeout Time(Sec)	3
Host Address	0
Delay Time(ms)	5

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 9600bps)	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bits)	7bits/8bits
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit/2bits
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Even)	None Even Odd
Retry	Set the number of retries to be performed when a communication error occurs. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Host Address	Specify the host address (station No. of the GOT to which the PLC is connected) in the connected network. (Default: 0)	0 to 99
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 5ms)	0 to 300ms

(For FUJI MICREX-SX SPH)

Property	Value
Transmission Speed(BPS)	38400
Data Bit	8bit
Stop Bit	1bit
Parity	Even
Retry(Times)	3
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
Transmission Speed*1	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 38400bps)	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit*1	Set this item when change the data length used for communication with the connected equipment. (Default: 8bits)	7bits/8bits
Stop Bit*1	Specify the stop bit length for communications. (Default: 1bit)	1bit/2bits
Parity*1	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Even)	None Even Odd
Retry	Set the number of retries to be performed when a communication error occurs. (Default: 3time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300ms

*1 Leave the setting as default. If the set value is changed, communication with the PLC is disabled.

Point

• Host address

When connecting to PLC by RS-232 communication, set the Host Address to "0".

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

PLC Side Setting

Point

FUJI PLC

For details of FUJI PLCs, refer to the following manuals.

FUJI PLC user's Manual

Model name		Refer to
RS-232C interface card	NV1L-RS2	☞ Page 1484 Connecting to NV1L-RS2, NC1L-RS2
General-purpose interface module	NC1L-RS2	
	NC1L-RS4	☞ Page 1485 Connecting to NC1L-RS4
	FFU120B	☞ Page 1487 Connecting to FFU120B
RS-232C/485 interface capsule	FFK120A-C10	☞ Page 1489 Connecting to FFK120A-C10

Connecting to NV1L-RS2, NC1L-RS2

■Communication settings

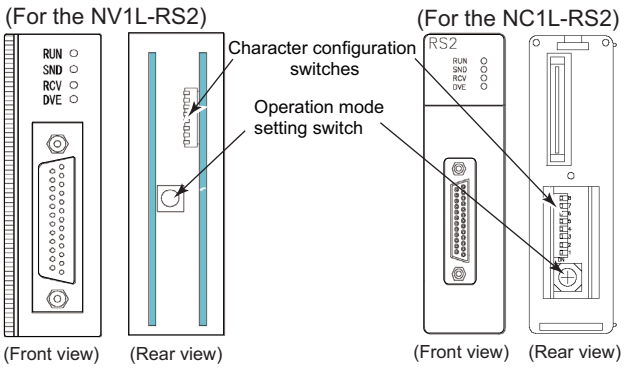
Make the communication settings using setting switches.

Item	Set value
MODE	Command-setting-type start-stop synchronization, nonsequence format
Transmission speed*1	9600bps, 19200bps
Data bit*1	8bits or 7bits
Parity bit*1	Even or Odd
	Done, None
Stop bit*1	1bit, 2bits
Initializing method	By switch

*1 Adjust the settings with GOT settings.

■Settings by switch

Make the communication settings using each setting switch.



• Setting of the MODE

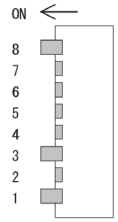
Make the MODE settings using the MODE switch.



MODE	Switch position	
	NV1L-RS2	NC1L-RS2
Command-setting-type start-stop synchronization, nonsequence format	1	1

• Setting of Transmission speed, Stop bit, Data bit, Parity bit, Initializing method

For the NV1L-RS2



For the NC1L-RS2



Setting item	Set value	Switch No.							
		1	2	3	4	5	6	7	8
Transmission speed	9600bps	ON	OFF	ON					
	19200bps	OFF	ON	ON					
Stop bit	1bit				ON				
	2bits				OFF				
Data bit	7bits					ON			
	8bits					OFF			
Parity bit	Even						ON		
	Odd						OFF		
	Done							ON	
	None							OFF	
Initializing method	By switch								ON

Connecting to NC1L-RS4

■Communication settings

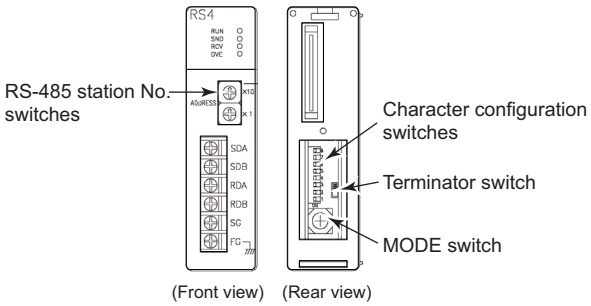
Make the communication settings using setting switches.

Item	Set value
MODE	Command-setting-type start-stop synchronization, nonsequence format
Transmission speed*1	9600bps, 19200bps
Data bit*1	8bits or 7bits
Parity bit*1	Even or Odd
	Done, None
Stop bit*1	1bit, 2bits
Initializing method	By switch
Station No.*1*2	0 to 99
Terminating resistor*3	ON or OFF

*1 Adjust the settings with GOT settings.
*2 Avoid duplication of the station No. with any of the other units.
*3 Turn ON the terminating switch of a general-purpose interface module which will be a terminal.

■Settings by switch

Make the communication settings using each setting switch.



- Setting of the MODE

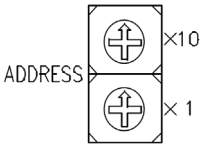
Make the MODE settings using the MODE switch.



MODE	Switch position
Command-setting-type start-stop synchronization, nonsequence format	3

- Setting of the station No.

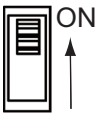
Make the station No. using RS-485 station No. switches.



Station No.
0 to 99

- Connecting terminating resistors

Turn ON/OFF the terminating resistor using RS-485 terminating resistor ON/OFF switch.



• Setting of Transmission speed, Stop bit, Data bit, Parity bit, Initializing method

Make the settings using the character configuration switches.



Setting item	Set value	Switch No.							
		1	2	3	4	5	6	7	8
Transmission speed	9600bps	ON	OFF	ON					
	19200bps	OFF	ON	ON					
Stop bit	1bit				ON				
	2bits				OFF				
Data bit	7bits					ON			
	8bits					OFF			
Parity bit	Even						ON		
	Odd						OFF		
	Done							ON	
	None							OFF	
Initializing method	By switch								ON

Connecting to FFU120B

■Communication settings

Make the communication settings using setting switches.

Item	Set value
MODE	Command-setting-type start-stop synchronization, nonsequence format
Transmission speed*1	9600bps, 19200bps
Data bit*1	8bits or 7bits
Parity bit*1	Even or Odd
	Done, None
Stop bit*1	1bit, 2bits
Initializing method	By switch
Station No.*1*2	0 to 99
Terminating resistor*3	ON or OFF

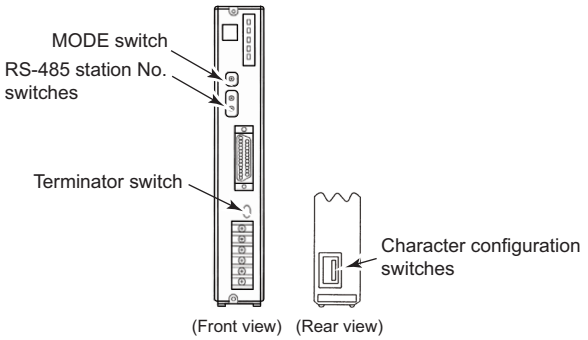
*1 Adjust the settings with GOT settings.

*2 Avoid duplication of the station No. with any of the other units.

*3 Turn ON the terminating switch of a general-purpose interface module which will be a terminal.

■Settings by switch

Make the communication settings using each setting switch.



• Setting of the MODE

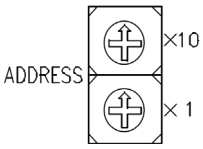
Make the MODE settings using the MODE switch.



MODE	Switch position
Command-setting-type start-stop synchronization, nonsequence format RS-232C 1:1	1
Command-setting-type start-stop synchronization, nonsequence format RS-232C 1:1, and RS-485 1:N	2
Command-setting-type start-stop synchronization, nonsequence format RS-485 1:N	3

• Setting of the station No.

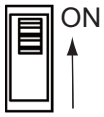
Make the station No. using RS-485 station No. switches.



Station No.
0 to 99

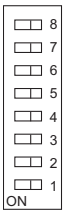
• Connecting terminating resistors

Turn ON/OFF the terminating resistor using RS-485 terminating resistor ON/OFF switch.



• Setting of Transmission speed, Stop bit, Data bit, Parity bit, Initializing method

Make the settings using the character configuration switches.



Setting item	Set value	Switch No.							
		1	2	3	4	5	6	7	8
Transmission speed	9600bps	ON	OFF	ON					
	19200bps	OFF	ON	ON					
Stop bit	1bit				ON				
	2bits				OFF				
Data bit	7bits					ON			
	8bits					OFF			
Parity bit	Even						ON		
	Odd						OFF		
	Done							ON	
	None							OFF	
Initializing method	By switch								ON

Connecting to FFK120A-C10

■Communication settings

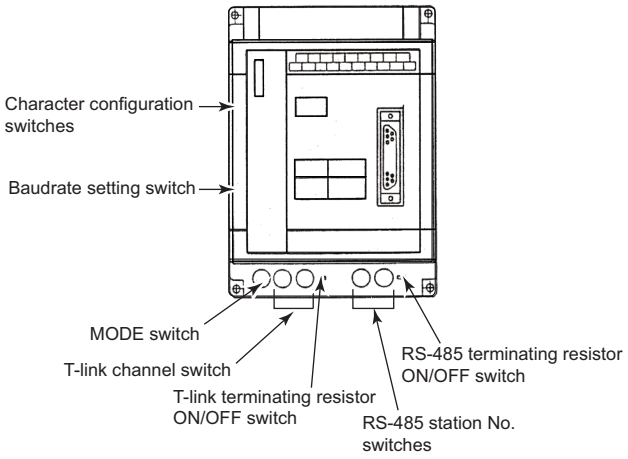
Make the communication settings using setting switches.

Item	Set value
MODE*4	Command-setting-type start-stop synchronization, nonsequence format RS-232C 1:1
	Command-setting-type start-stop synchronization, nonsequence format RS-232C 1:1, and RS-485 1:N
	Command-setting-type start-stop synchronization, nonsequence format RS-485 1:N
Transmission speed*1	9600bps, 19200bps
Data bit*1	8bits or 7bits
Parity bit*1	Even or Odd
	Done, None
Stop bit*1	1bit, 2bits
Initializing method	By switch
Station No.*1*2	0 to 99
Terminating resistor*3	ON or OFF
T-link channel switch	FUJI PLC user's Manual
T-link terminating resistor	

*1 Adjust the settings with GOT settings.
*2 Avoid duplication of the station No. with any of the other units.
*3 Turn ON the terminating switch of a general-purpose interface module which will be a terminal.
*4 Set as necessary.

■Settings by switch

Make the communication settings using each setting switch.



- Setting of the MODE

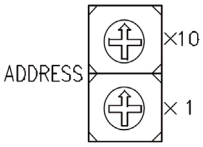
Make the MODE settings using the MODE switch.



MODE	Switch position
Command-setting-type start-stop synchronization, nonsequence format RS-232C 1:1	1
Command-setting-type start-stop synchronization, nonsequence format RS-232C 1:1, and RS-485 1:N	2
Command-setting-type start-stop synchronization, nonsequence format RS-485 1:N	3

- Setting of the station No.

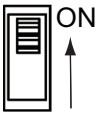
Make the station No. using RS-485 station No. switches.



Station No.
0 to 99

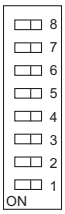
- Connecting terminating resistors

Turn ON/OFF the terminating resistor using RS-485 terminating resistor ON/OFF switch.



• Setting of Stop bit, Data bit, Parity bit, Initializing method

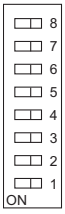
Make the settings using the character configuration switches.



Setting item	Set value	Switch No.							
		1	2	3	4	5	6	7	8
disable		OFF	OFF	OFF					
Stop bit	1bit				ON				
	2bits				OFF				
Data bit	7bits					ON			
	8bits					OFF			
Parity bit	Even						ON		
	Odd						OFF		
	Done							ON	
	None							OFF	
Initializing method	By switch								ON

• Transmission speed settings

Make the settings using the baudrate setting switches.

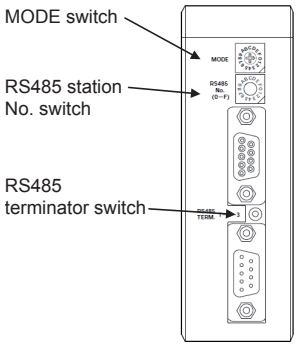


Setting item	Set value	Switch No.							
		1	2	3	4	5	6	7	8
Transmission speed	9600bps	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF
	19200bps	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF

Connecting to NP1L-RS1, NP1L-RS2, NP1L-RS3, NP1L-RS4, NP1L-RS5

■Communication settings

Make the communication settings using setting switches.



Switch	Item	Set value
MODE switch	MODE	1 to 3*1
RS485 station No. switch	Station No.	*2
RS485 terminator switch	Terminator	*3

*1 Set the MODE switch so that the communication port of the general communication module to be connected to the GOT operates as a loader.

*2 The switch is not used for connection with the GOT.

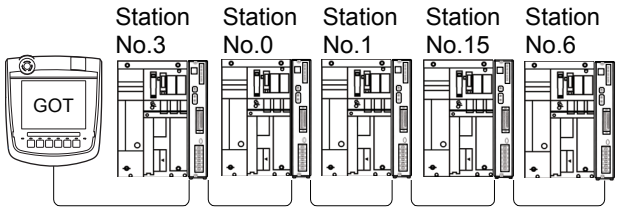
*3 Turn ON the terminating switch of the general communication module which will be a terminal.

Station number setting

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.



Examples of station number setting

Direct specification

Specify the station No. of the PLC to be changed when setting device.

Specification range
0 to 99

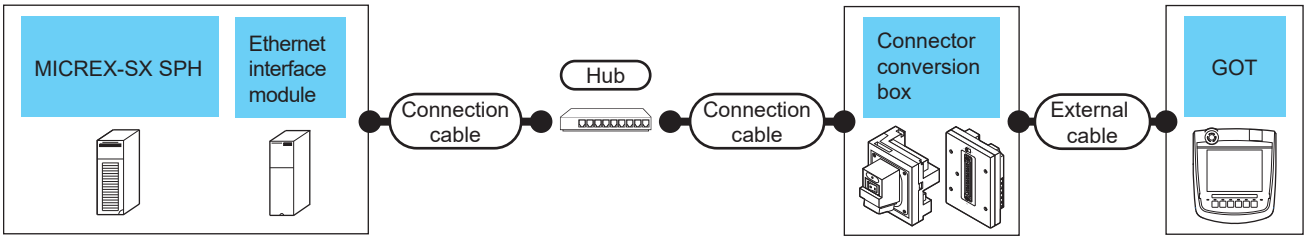
30.3 Ethernet Connection

Connecting to MICREX-SX SPH

Communication driver

Ethernet(FUJI), Gateway

When using the connector conversion box



PLC		Connection cable		Connector conversion box	External cable *4	GOT Model	Number of connectable equipment
Model name	Ethernet interface module*3	Cable model*1 Connection diagram number	Max. distance *2				
SPH200 SPH300 SPH2000 SPH3000	NP1L-ET1	• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When PLC: GOT is 1: N 128 GOTs or less for 1 PLC When PLC: GOT is 1: N 8 GOTs or less for 1 PLC
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
SPH2000 SPH3000	-	• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When PLC: GOT is 1: N 128 GOTs or less for 1 PLC When PLC: GOT is 1: N 10 GOTs or less for 1 PLC
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the target device and hub, use a cable according to the target controller configuration.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

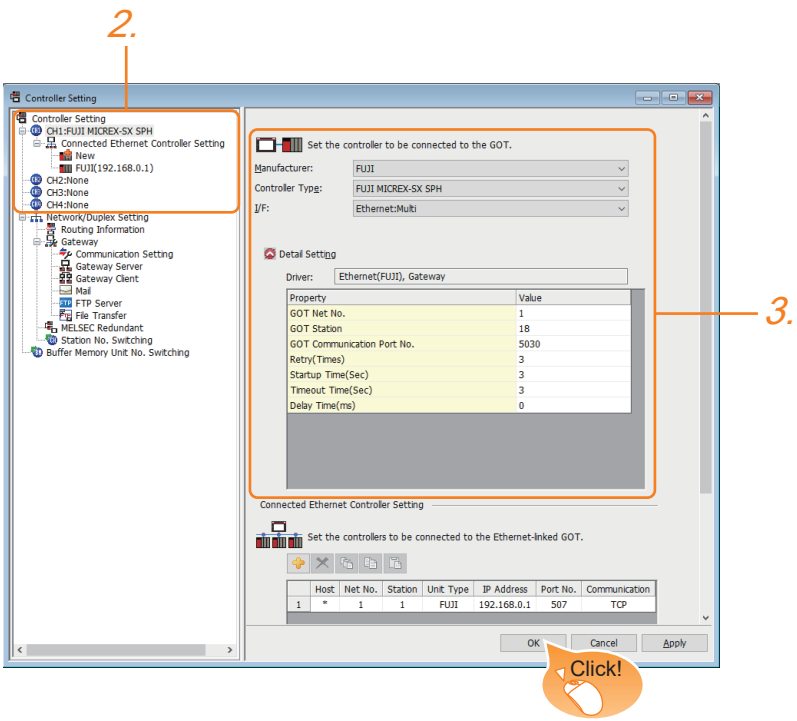
*3 Product manufactured by Fuji Electric Co., Ltd.
For details of the product, contact Fuji Electric Co., Ltd.

*4 Use C or later version of GT11H-C□□-37P.

GOT Side Settings

Setting communication interface (Communication settings)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [FUJI]
- [Controller Type]: [FUJI MICREX-SX SPH]
- [I/F]: [Ethernet:Multi]
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1495 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
GOT Net No.	1
GOT Station	18
GOT Communication Port No.	5030
Retry(Times)	3
Startup Time(Sec)	3
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
GOT Net No.	Set the network No. of the GOT. (Default: 1)	1 to 239
GOT Station*1	Set the station No. of the GOT. (Default: 1)	1 to 254
GOT Communication Port No.	Set the GOT port No. for the connection with the Ethernet equipment. (Default: 5030 *2)	1024 to 5010, 5014 to 49152, 49171 to 65534
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 3times)	0 to 5times
Startup Time	Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU. (Default: 3sec)	3 to 255sec
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 90sec
Delay Time	Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms)	0 to 10000(ms)

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1496 Connected Ethernet Controller Setting

*2 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

■GOT IP address setting

Set the following communication port setting.

- Standard port

■GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

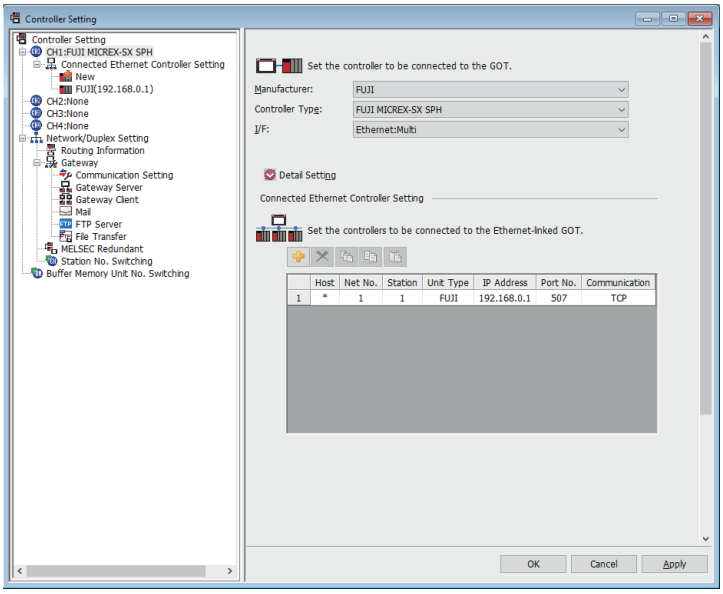
■IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 80 GOT Ethernet Setting

Connected Ethernet Controller Setting



Item	Description	Set value
Host	The host is displayed. It refers to a station that can be connected without setting a station number. (The host is indicated with an asterisk (*).)	—
Net No.	Set the network No. of the connected Ethernet equipment. (Default: 1)	1 to 239
Station *2	Set the station No. of the connected Ethernet equipment. (Default: 1)	1 to 254
Unit Type	FUJI (fixed)	FUJI (fixed)
IP address *1	Set the IP address of the connected Ethernet equipment. (Default: 192.168.0.1	PLC side IP address
Port No.	Set the port No. of the connected Ethernet equipment. (Default: 507)	251 to 65531
Communication format	TCP (fixed)	TCP (fixed)

*1 Connection with the PLC is unavailable if the IP address is the default value.
Set the value to the IP address of the PLC to be connected.

*2 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1495 Communication detail settings

PLC side setting (MICREX-SX SPH)

Point

FUJI PLC

For details of FUJI PLCs, refer to the following manuals.

FUJI PLC user's Manual

Setting the IP address and self port reference No.

Set the IP address and self port reference No. using a peripheral tool of the PLC.

Item	Set value	Range
IP Address*1	[ ].[ ].[ ].[ ]	PLC side IP address
Subnet Mask	[ ].[ ].[ ].[ ]	PLC side setting
Default Gateway IP Address	[ ].[ ].[ ].[ ]	
Self port reference No.*2	0 to 65280	

*1 Adjust the settings with GOT settings.

Page 1496 Connected Ethernet Controller Setting

*2 Make sure that "Self port reference No. + 251" is equivalent to the port No. in the GOT.

Page 1496 Connected Ethernet Controller Setting

30.4 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1

FUJI equipment ([FUJI MICREX-F])

FUJI equipment ([FUJI MICREX-SX SPH])

30.5 Precautions

Station No. settings of the PLC side

In the system configuration, the PLC with the station number set with the host address must be included.

For details of host address setting, refer to the following.

Page 1482 Communication detail settings

System configuration of the PLC side

GOT can communicate in a system configuration where NC1L-PS4, FFU120B and FFK120A-C10 are mixed.

When using FFK120A-C10, the number of PLCs that can communicate is at most 6 units.

GOT clock control

The GOT clock function is available only for the PLC with the station number set with the host address.

For details of host address setting, refer to the following.

Page 1482 Communication detail settings

31 FUJI TEMPERATURE CONTROLLER

- Page 1499 Connectable Model List
- Page 1500 System Configuration
- Page 1512 Connection Diagram
- Page 1519 GOT Side Settings
- Page 1521 Temperature Controller Side Setting
- Page 1529 Settable Device Range
- Page 1529 Precautions

31.1 Connectable Model List

The following table shows the connectable models.

Series	Model name	Clock	Communication Type	Connectable model	Refer to
Temperature controller	PXR3	×	RS-232	GT2506-HS GT2505-HS	☞ Page 1500 Connecting to PXR3, PXR4, PXR5 or PXR9
	PXR4				
	PXR5				
	PXR9				
	PXG4	×	RS-232 RS-485	GT2506-HS GT2505-HS	☞ Page 1503 Connecting to PXG4, PXG5, PXG9 or PXH9
	PXG5				
	PXG9				
	PXF4	×	RS-232 RS-485	GT2506-HS GT2505-HS	☞ Page 1507 Connecting to PXF4, PXF5 or PXF9
	PXF5				
	PXF9				
Digital indication controller	PXH9	×	RS-232 RS-485	GT2506-HS GT2505-HS	☞ Page 1503 Connecting to PXG4, PXG5, PXG9 or PXH9
Multi-loop/module type temperature controller	PUMA	×	RS-232 RS-485	GT2506-HS GT2505-HS	☞ Page 1509 Connecting to PUMA or PUMB
	PUMB				

31.2 System Configuration

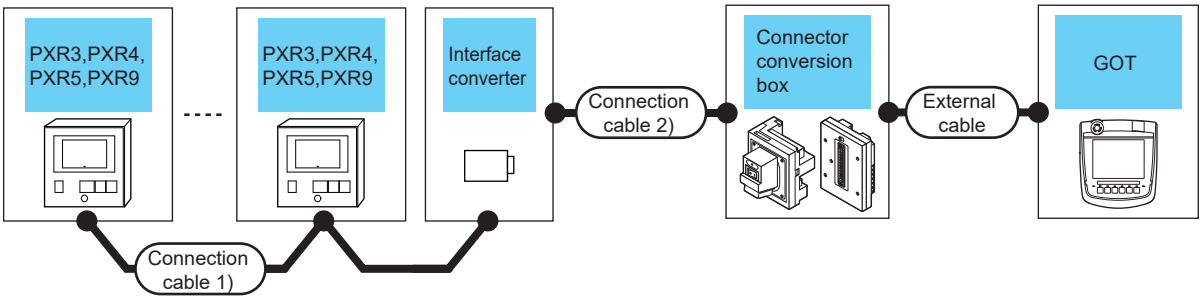
Connecting to PXR3, PXR4, PXR5 or PXR9

Communication driver

FUJITemperature controller/Digital indication controller

When connecting via the RS-232 communication

■When using the connector conversion box



Temperature controller	Connection cable 1)		Interface converter		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *4	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
PXR3 PXR4 PXR5 PXR9	User preparing Page 1516 RS-485 connection diagram 1)	500m	RC-77*1	RS-232	User preparing Page 1512 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 temperature controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	User preparing Page 1516 RS-485 connection diagram 2)		SI-30A*2		User preparing Page 1513 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	User preparing Page 1517 RS-485 connection diagram 3)		KS-485*3			GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

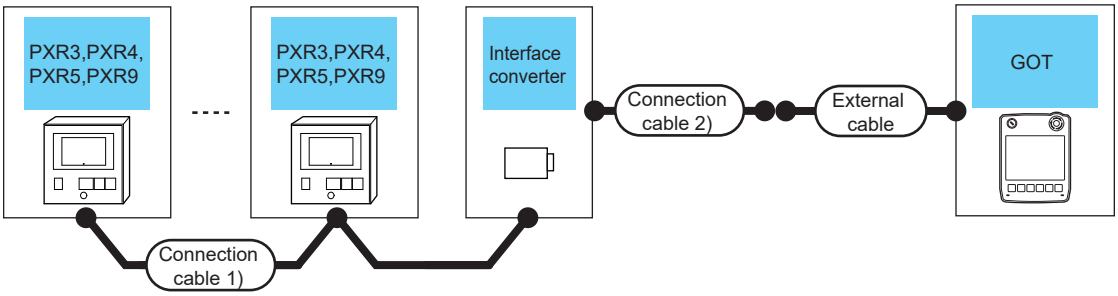
*1 Product manufactured by SYSMEXRA CO., LTD.
For details of the product, contact SYSMEXRA CO., LTD.

*2 Product manufactured by LINEEYE CO., LTD.
For details of the product, contact LINEEYE CO., LTD.

*3 Product manufactured by System Sacom corp.
For details of the product, contact System Sacom corp.

*4 The distance from the converter to the GOT.

■When using the external cable (GT11H-C□□□-37P)



Temperature controller	Connection cable 1)		Interface converter		Connection cable 2)	External cable	GOT Model	Total distance *4	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
PXR3 PXR4 PXR5 PXR9	User preparing Page 1516 RS-485 connection diagram 1)	500m	RC-77*1	RS-232	User preparing Page 1512 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT
	User preparing Page 1516 RS-485 connection diagram 2)		SI-30A*2		User preparing Page 1513 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	
	User preparing Page 1517 RS-485 connection diagram 3)		KS-485*3			GT11H-C30-37P(3m)	GT 2505HS	6m	

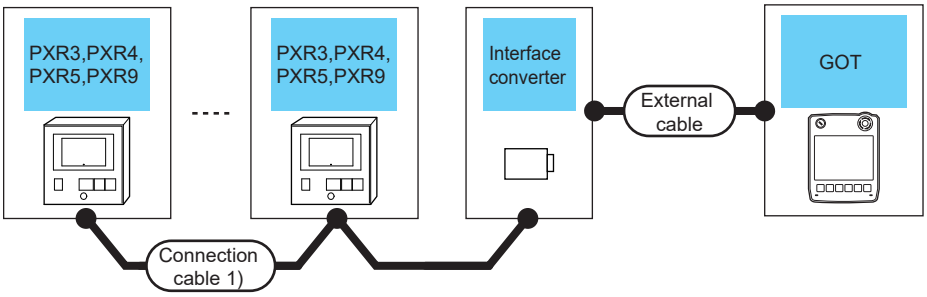
*1 Product manufactured by SYSMEXRA CO., LTD.
For details of the product, contact SYSMEXRA CO., LTD.

*2 Product manufactured by LINEEYE CO., LTD.
For details of the product, contact LINEEYE CO., LTD.

*3 Product manufactured by System Sacom corp.
For details of the product, contact System Sacom corp.

*4 The distance from the converter to the GOT.

■When using the external cable (GT11H-C□□□)



Temperature controller	Connection cable 1)		Interface converter		External cable	GOT Model	Total distance *4	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
PXR3 PXR4 PXR5 PXR9	User preparing Page 1516 RS-485 connection diagram 1)	500m	RC-77*1	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1513 RS-232 connection diagram 3)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT
	User preparing Page 1516 RS-485 connection diagram 2)		SI-30A*2		GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1514 RS-232 connection diagram 6)	GT 2505HS	6m	
	User preparing Page 1517 RS-485 connection diagram 3)		KS-485*3		GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1514 RS-232 connection diagram 6)	GT 2505HS	6m	

*1 Product manufactured by SYSMEXRA CO., LTD.
For details of the product, contact SYSMEXRA CO., LTD.
*2 Product manufactured by LINEEYE CO., LTD.
For details of the product, contact LINEEYE CO., LTD.
*3 Product manufactured by System Sacom corp.
For details of the product, contact System Sacom corp.
*4 The distance from the converter to the GOT.

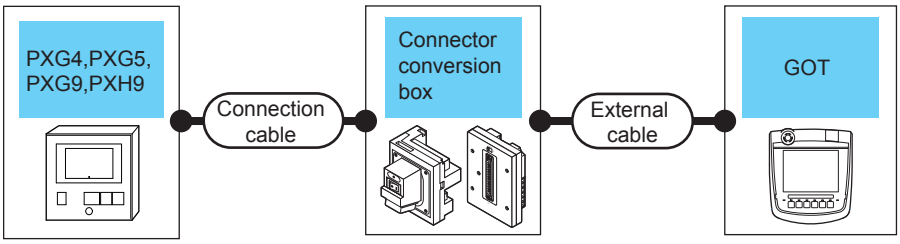
Connecting to PXG4, PXG5, PXG9 or PXH9

Communication driver

FUJITemperature controller/Digital indication controller

When connecting to one Temperature controller/Digital indication controller

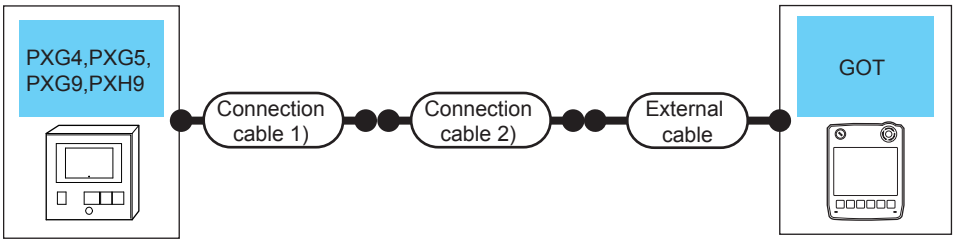
■When using the connector conversion box



Temperature controller/ Digital indication controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
PXG4 PXG5 PXG9 PXH9	RS-232	ZZPPXH1*TK4H4563*1	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 Temperature controller/Digital indication controller for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by FUJI CO., LTD.
For details of the product, contact FUJI CO., LTD.

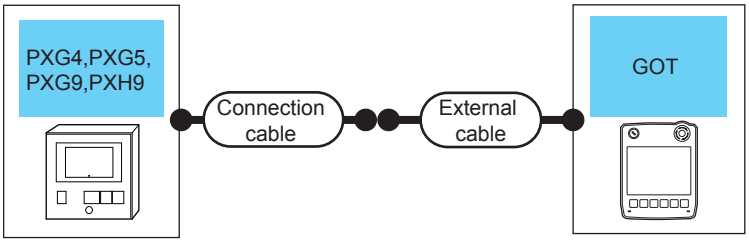
■When using the external cable (GT11H-C□□□-37P)



Temperature controller/ Digital indication controller		Connection cable 1)	Connection cable 2)	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model	Connection diagram number				
PXG4 PXG5 PXG9 PXH9	RS-232	ZZPPXH1*TK4H4563*1	(User preparing) Page 1515 RS-232 connection diagram 10)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 Temperature controller/ Digital indication controller for 1 GOT

*1 Product manufactured by FUJI CO., LTD.
For details of the product, contact FUJI CO., LTD.

■When using the external cable (GT11H-C□□□)

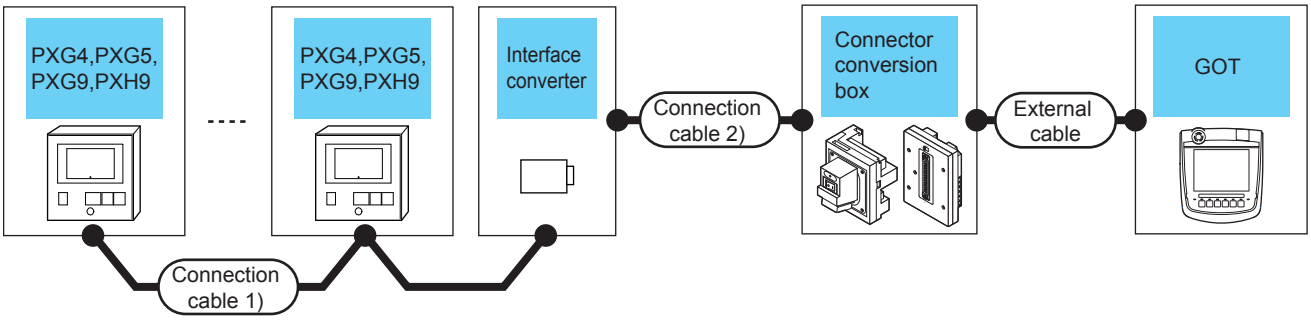


Temperature controller/Digital indication controller		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model				
PXG4 PXG5 PXG9 PXH9	RS-232	ZZPPXH1*TK4H4563*1	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1515 RS-232 connection diagram 11)	GT 2505HS	6m	1 Temperature controller/ Digital indication controller for 1 GOT

*1 Product manufactured by FUJI CO., LTD.
For details of the product, contact FUJI CO., LTD.

When connecting to multiple Temperature controllers/Digital indication controllers (RS-232 communication)

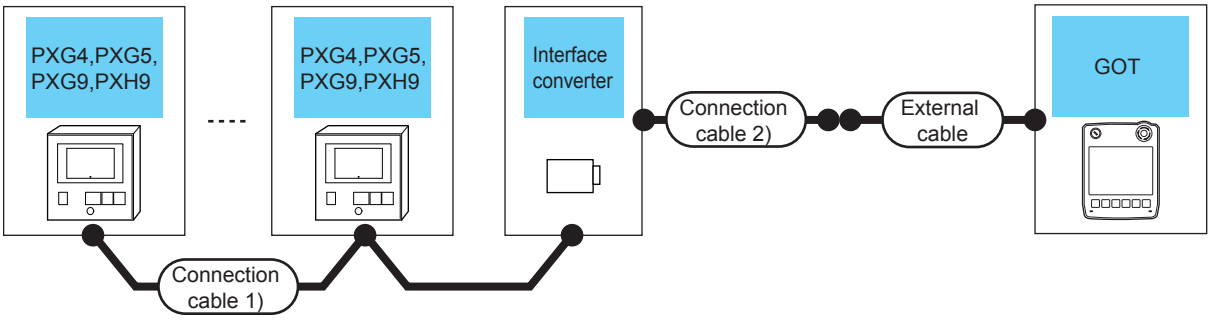
■When using the connector conversion box



Temperature controller/ Digital indication controller	Connection cable 1)		Interface converter		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Model name	Cable model Connection diagram number					
PXG4 PXG5 PXG9 PXH9	User preparing Page 1516 RS-485 connection diagram 1)	500m	RC-77*1	RS-232	User preparing Page 1512 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 Temperature controllers/ Digital indication controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	User preparing Page 1517 RS-485 connection diagram 4)		K3SC-10*2		User preparing Page 1514 RS-232 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by SYSMEXRA CO., LTD.
For details of the product, contact SYSMEXRA CO., LTD.
*2 Product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

■When using the external cable (GT11H-C□□□-37P)

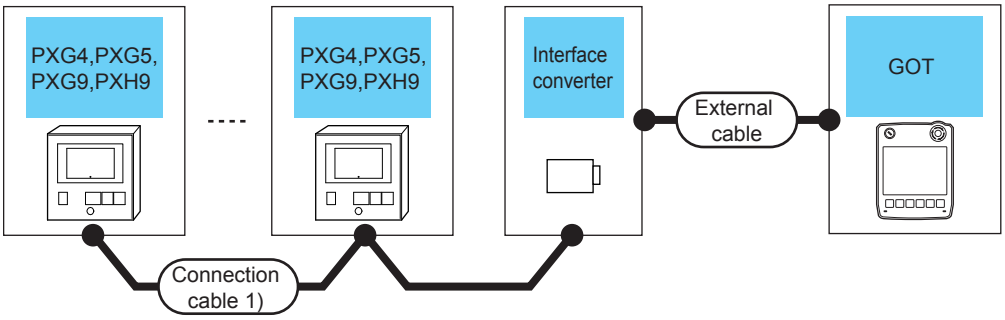


Temperature controller/ Digital indication controller	Connection cable 1)		Interface converter		Connection cable 2)	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Model name	Cable model Connection diagram number				
PXG4 PXG5 PXG9 PXH9	User preparing Page 1516 RS-485 connection diagram 1)	500m	RC-77*1	RS-232	User preparing Page 1512 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 Temperature controllers/ Digital indication controllers for 1 GOT
	User preparing Page 1517 RS-485 connection diagram 4)		K3SC-10*2		User preparing Page 1514 RS-232 connection diagram 8)	GT11H-C30-37P(3m)	GT 2505HS	6m	

*1 Product manufactured by SYSMEXRA CO., LTD.
For details of the product, contact SYSMEXRA CO., LTD.

*2 Product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

■When using the external cable (GT11H-C□□□)



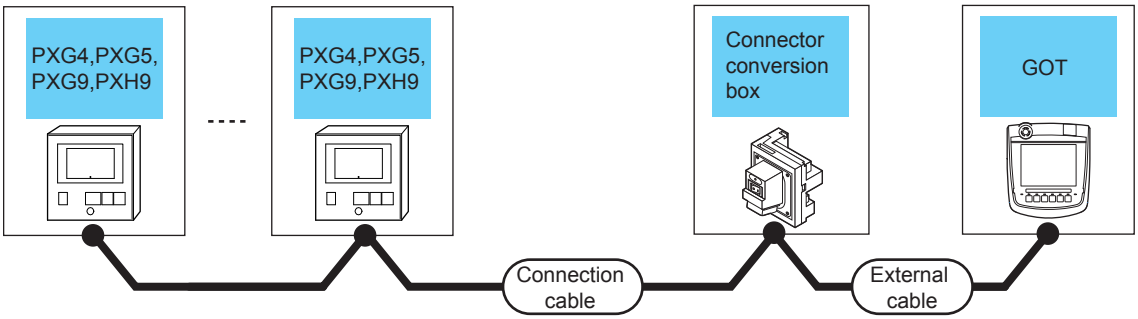
Temperature controller/Digital indication controller	Connection cable 1)		Interface converter		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Model name				
PXG4 PXG5 PXG9 PXH9	User preparing Page 1516 RS-485 connection diagram 1)	500m	RC-77*1	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1513 RS-232 connection diagram 3)	GT 2505HS	6m	Up to 31 Temperature controllers/Digital indication controllers for 1 GOT
	User preparing Page 1517 RS-485 connection diagram 4)		K3SC-10*2		GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1515 RS-232 connection diagram 9)	GT 2505HS	6m	

*1 Product manufactured by SYSMEXRA CO., LTD.
For details of the product, contact SYSMEXRA CO., LTD.

*2 Product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

When connecting to multiple Temperature controllers/Digital indication controllers (RS-485 communication)

■When using the connector conversion box



Temperature controllers/ Digital indication controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
PXG4 PXG5 PXG9 PXH9	RS-485	User preparing Page 1518 RS-485 connection diagram 5)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 Temperature controllers/Digital indication controllers for 1 GOT

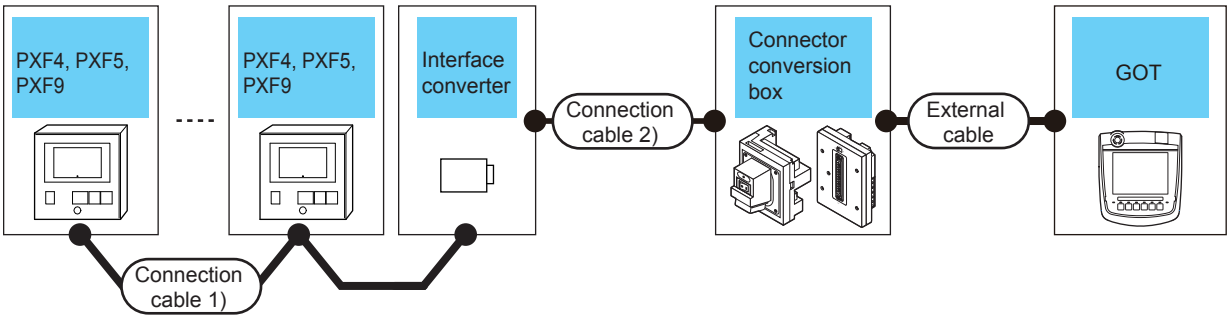
Connecting to PXF4, PXF5 or PXF9

Communication driver

FUJITemperature controller/Digital indication controller

When connecting via the RS-232 communication

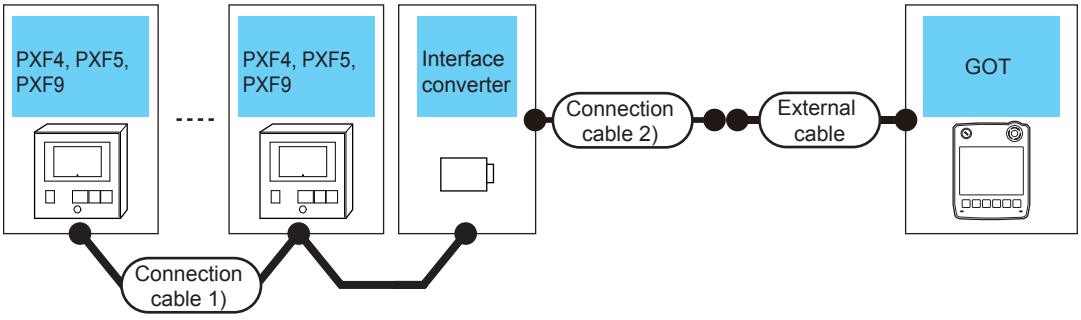
■When using the connector conversion box



Temperature controller	Connection cable 1)		Interface converter		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
PXF4 PXF5 PXF9	User preparing Page 1517 RS-485 connection diagram 4)	500 m	K3SC-10*1	RS-232	User preparing Page 1514 RS-232 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P (3m)	GT 2506HS	6 m	Up to 31 temperature controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

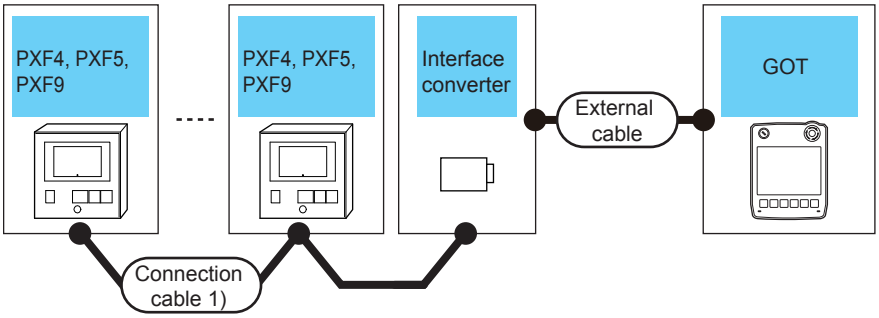
■When using the external cable (GT11H-C□□□-37P)



Temperature controller	Connection cable 1)		Interface converter		Connection cable 2)	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
PXF4 PXF5 PXF9	User preparing Page 1517 RS-485 connection diagram 4)	500 m	K3SC-10*1	RS-232	User preparing Page 1514 RS-232 connection diagram 8)	GT11H-C30-37P(3m)	GT 2505HS	6 m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

■When using the external cable (GT11H-C□□□)

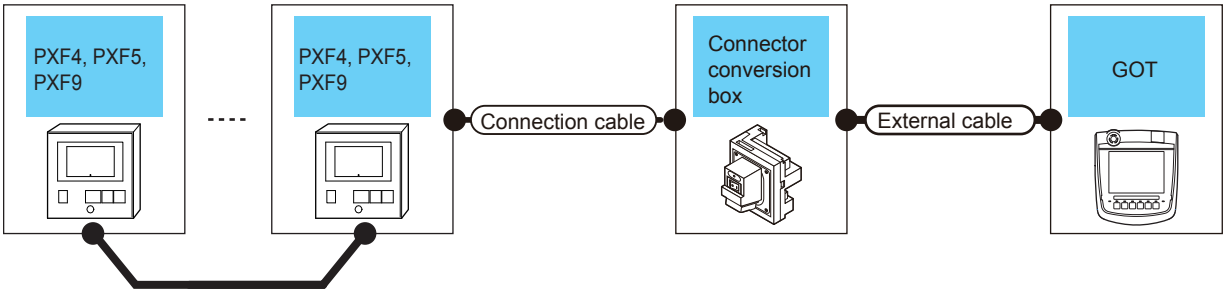


Temperature controller	Connection cable 1)		Interface converter		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
PXF4 PXF5 PXF9	User preparing Page 1517 RS-485 connection diagram 4)	500 m	K3SC-10*1	RS-232	GT11H-C30(3m) ☞ Page 1515 RS-232 connection diagram 9)	GT 2505HS	6 m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

When connecting via RS-485 communication

■When using the connector conversion box



Temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
PXF4 PXF5 PXF9	RS-485	User preparing Page 1518 RS-485 connection diagram 5)	GT16HCNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13 m	Up to 31 temperature controllers for 1 GOT

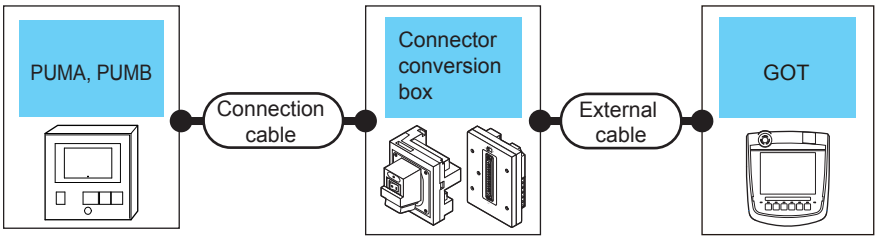
Connecting to PUMA or PUMB

Communication driver

FUJITemperature controller/Digital indication controller

When connecting to one Multi-loop/module type temperature controller

■When using the connector conversion box

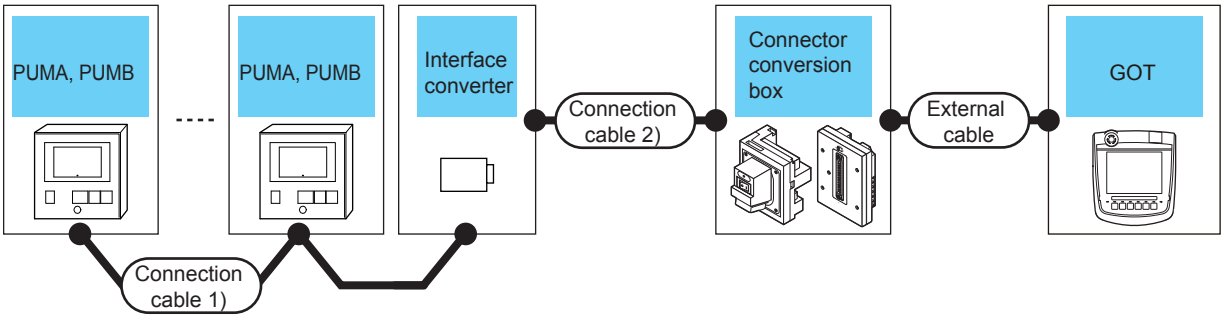


Multi-loop/module type temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
PUMA PUMB	RS-232	PUMZ*L01*1 (ZPC loader communication cable (RS232))	GT16H-CNB-42S	GT16H-C30-42P (3m)	GT 2506HS	6 m	1 Multi-loop/module type temperature controller for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by FUJI CO., LTD.
For details of the product, contact FUJI CO., LTD.

When connecting to multiple temperature controllers (RS-232 communication)

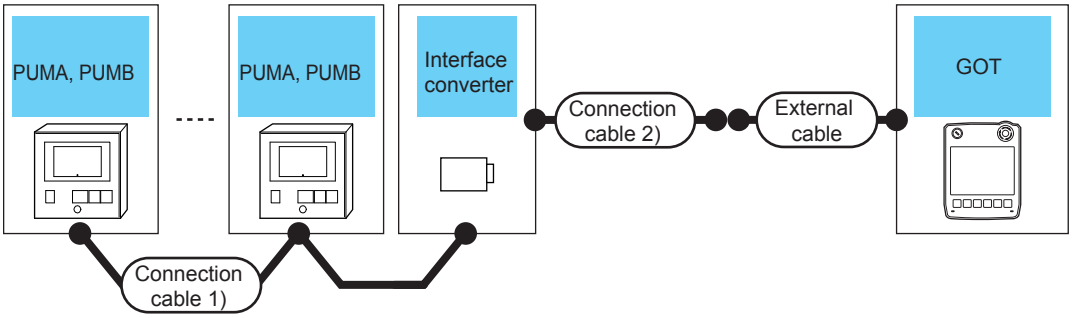
■When using the connector conversion box



Multi-loop/module type temperature controller	Connection cable 1)		Interface converter		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
PUMA PUMB	User preparing Page 1517 RS-485 connection diagram 4)	500 m	K3SC-10*1	RS-232	User preparing Page 1514 RS-232 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P (3m)	GT 2506HS	6 m	Up to 31 Multi-loop/module type temperature controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

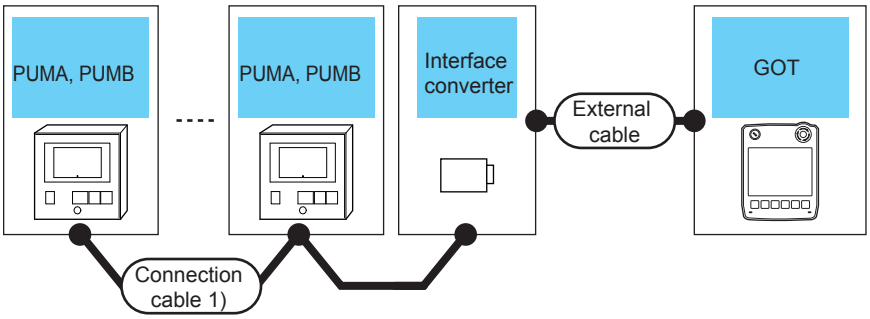
■When using the external cable (GT11H-C□□□-37P)



Multi-loop/ module type temperature controller	Connection cable 1)		Interface converter		Connection cable 2)	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
PUMA PUMB	User preparing Page 1517 RS-485 connection diagram 4)	500 m	K3SC-10*1	RS-232	User preparing Page 1514 RS-232 connection diagram 8)	GT11H-C30-37P(3m)	GT 2505HS	6 m	Up to 31 Multi-loop/module type temperature controllers for 1 GOT

*1 Product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

■When using the external cable (GT11H-C□□□)

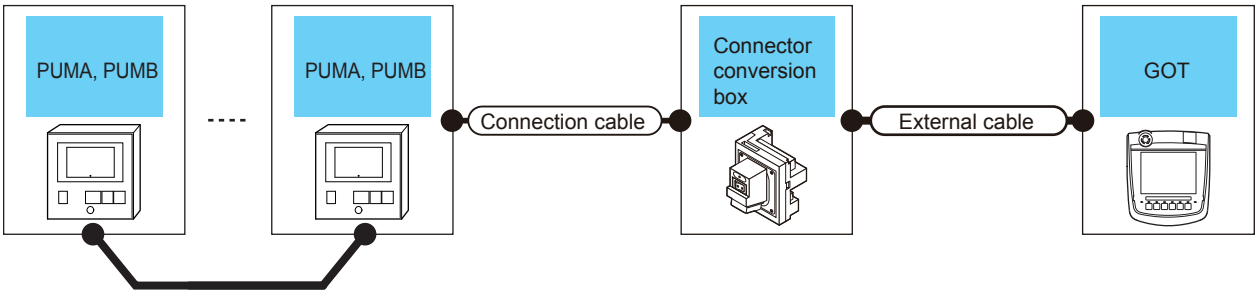


Multi-loop/ module type temperature controller	Connection cable 1)		Interface converter		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
PUMA PUMB	User preparing Page 1517 RS-485 connection diagram 4)	500 m	K3SC-10*1	RS-232	GT11H-C30(3m) ☞ Page 1515 RS-232 connection diagram 9)	GT 2505HS	6 m	Up to 31 Multi-loop/ module type temperature controllers for 1 GOT

*1 Product manufactured by OMRON Corporation.
For details of the product, contact OMRON Corporation.

When connecting to multiple temperature controllers (RS-485 communication)

■When using the connector conversion box



Multi-loop/module type temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
PUMA PUMB	RS-485	User preparing Page 1518 RS-485 connection diagram 5)	GT16H-CNB-42S	GT16H-C30-42P (3m) GT16H-C60-42P (6m) GT16H-C100-42P (10m)	GT 2506HS	13m	Up to 31 Multi-loop/ module type temperature controllers for 1 GOT

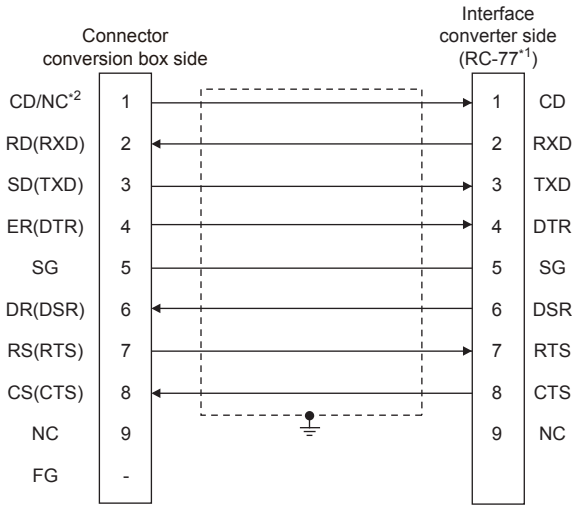
31.3 Connection Diagram

The following diagram shows the connection between the GOT and the temperature controller.

RS-232 cable

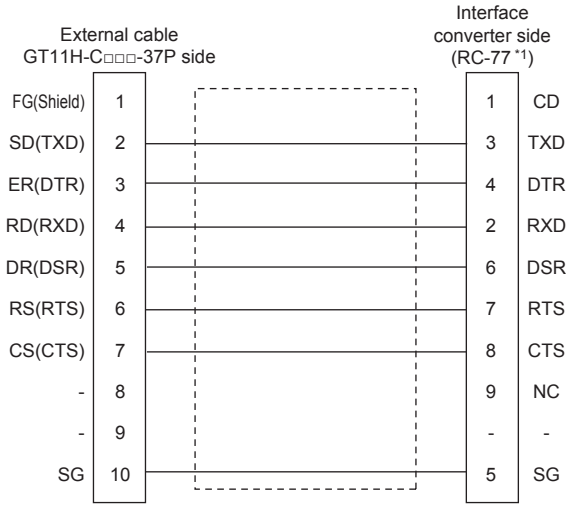
Connection diagram

■RS-232 connection diagram 1)



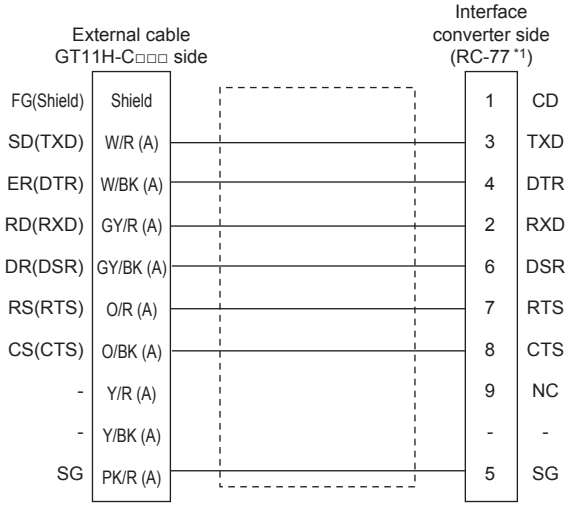
*1 Use the interface converter in the DCE mode.
*2 GT2506HS-V: CD, GT2505HS-V: NC

■RS-232 connection diagram 2)



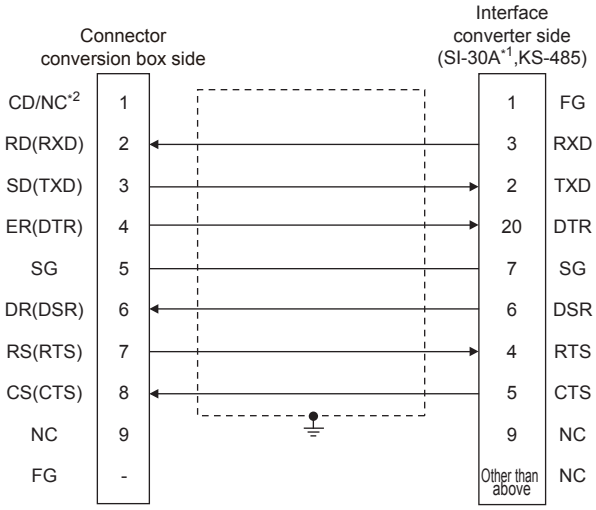
*1 Use the interface converter in the DCE mode.

■RS-232 connection diagram 3)



*1 Use the interface converter in the DCE mode.

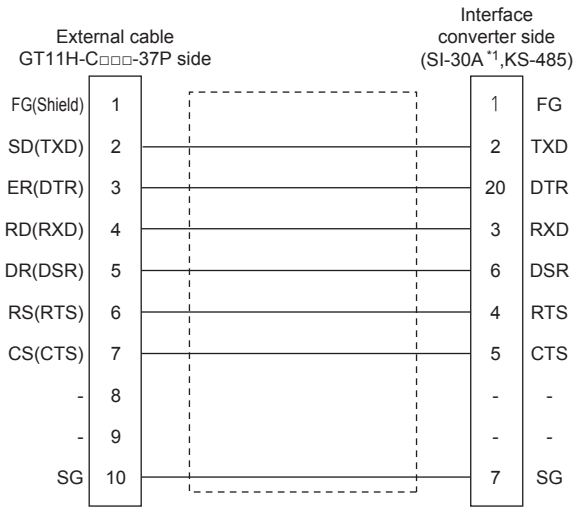
■RS-232 connection diagram 4)



*1 Use the interface converter in the DCE mode.

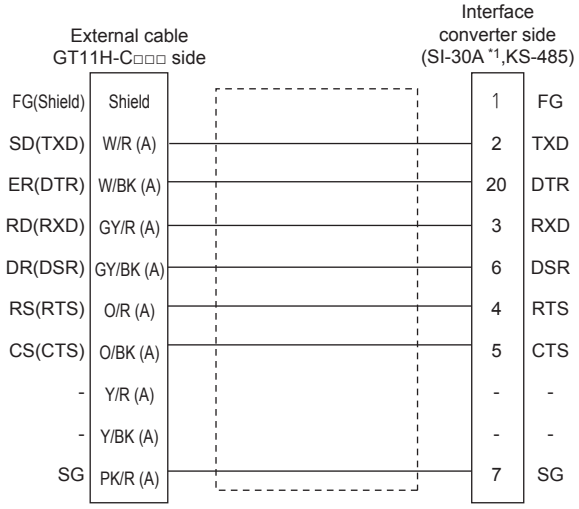
*2 GT2506HS-V: CD, GT2505HS-V: NC

■RS-232 connection diagram 5)



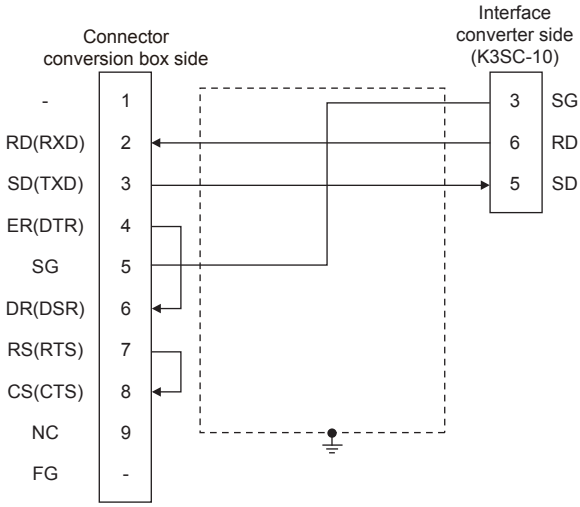
*1 Use the interface converter in the DCE mode.

■RS-232 connection diagram 6)

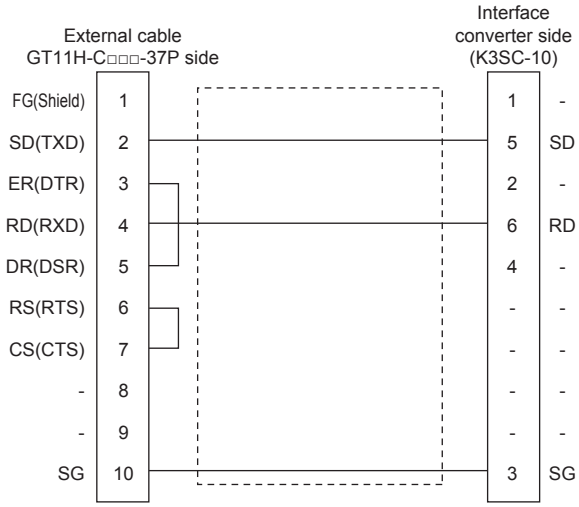


*1 Use the interface converter in the DCE mode.

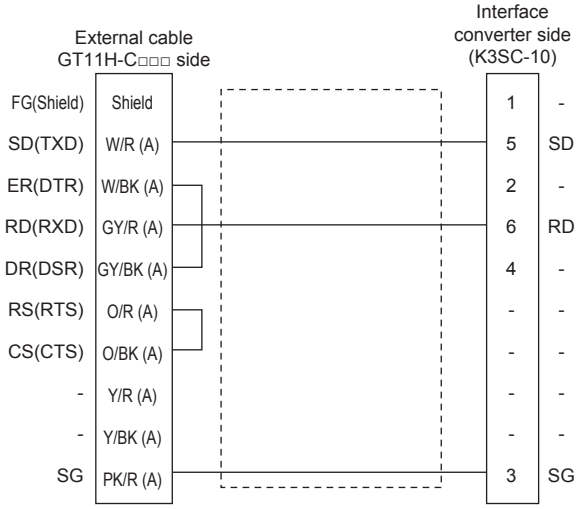
■RS-232 connection diagram 7)



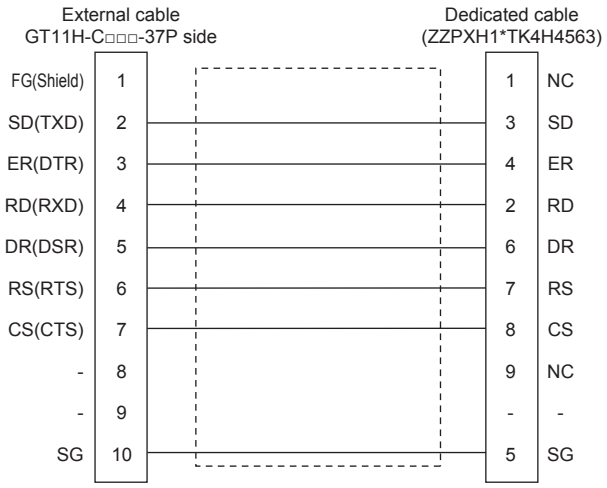
■RS-232 connection diagram 8)



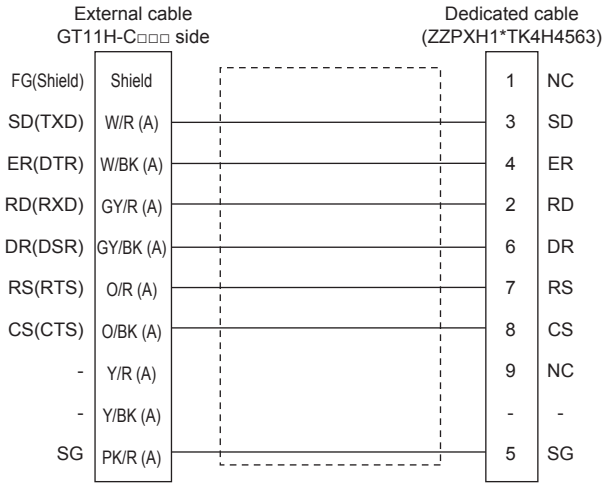
■RS-232 connection diagram 9)



■RS-232 connection diagram 10)



■RS-232 connection diagram 11)



Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■FUJI temperature controller side connector

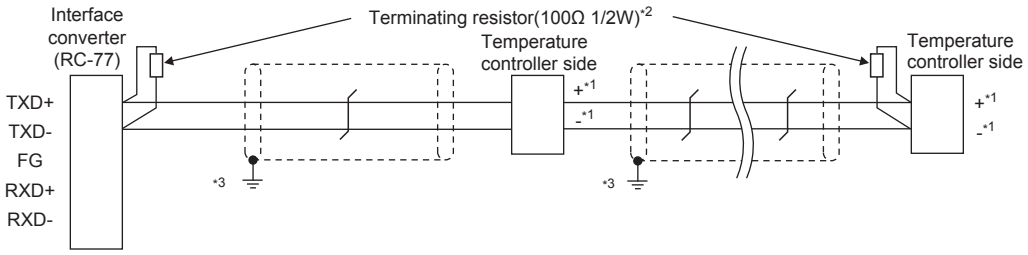
Use the connector compatible with the FUJI temperature controller side.

For details, refer to the user's manual of the FUJI temperature controller.

RS-485 cable

Connection diagram

■RS-485 connection diagram 1)



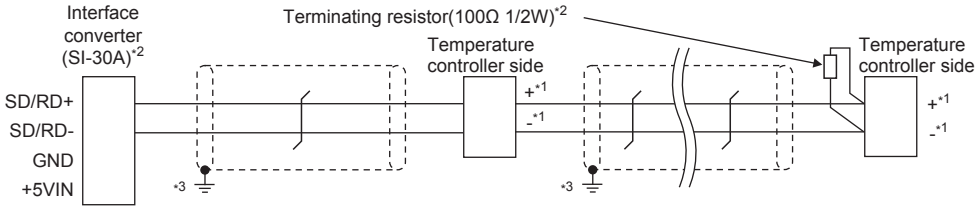
*1 Pin No. of temperature controller differs depending on the model.
Refer to the following table.

Signal name	Model of temperature controller					
	PXR3	PXR4	PXR5/9	PXG4	PXG5/9	PXH9
	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.
+	15	7	1	7	1	14
-	14	8	2	8	2	16

*2 Terminating resistor should be provided for a temperature controller which will be a terminal.
Terminating resistor should be provided outside for a interface converter which will be a terminal, with the terminating switch turned OFF.

*3 Connect FG grounding to the appropriate part of a cable shield line.

■RS-485 connection diagram 2)



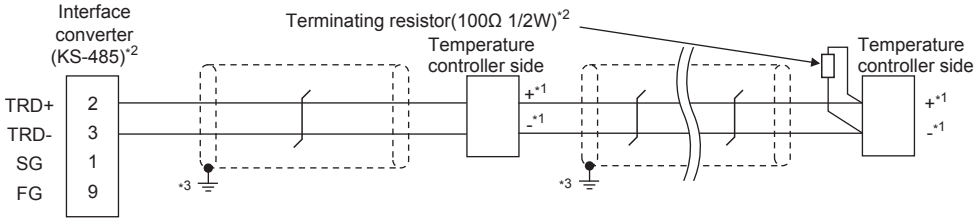
*1 Pin No. of temperature controller differs depending on the model.
Refer to the following table.

Signal name	Model of temperature controller					
	PXR3	PXR4	PXR5/9	PXG4	PXG5/9	PXH9
	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.
+	15	7	1	7	1	14
-	14	8	2	8	2	16

*2 Terminating resistor should be provided for a temperature controller which will be a terminal.
Turn ON the terminating switch of an interface converter which will be a terminal.

*3 Connect FG grounding to the appropriate part of a cable shield line.

■RS-485 connection diagram 3)



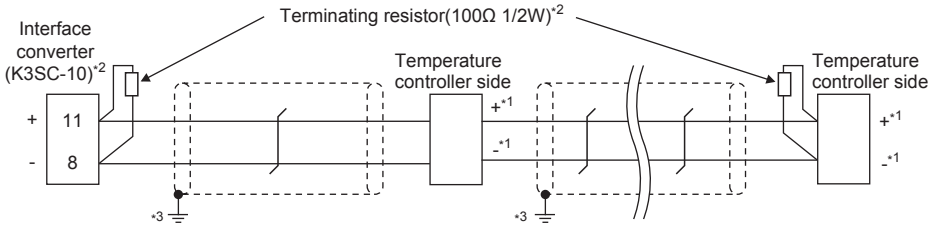
*1 Pin No. of temperature controller differs depending on the model.
Refer to the following table.

Signal name	Model of temperature controller					
	PXR3	PXR4	PXR5/9	PXG4	PXG5/9	PXH9
	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.
+	15	7	1	7	1	14
-	14	8	2	8	2	16

*2 Terminating resistor should be provided for a temperature controller which will be a terminal.
Turn ON the terminating switch of an interface converter which will be a terminal.

*3 Connect FG grounding to the appropriate part of a cable shield line.

■RS-485 connection diagram 4)



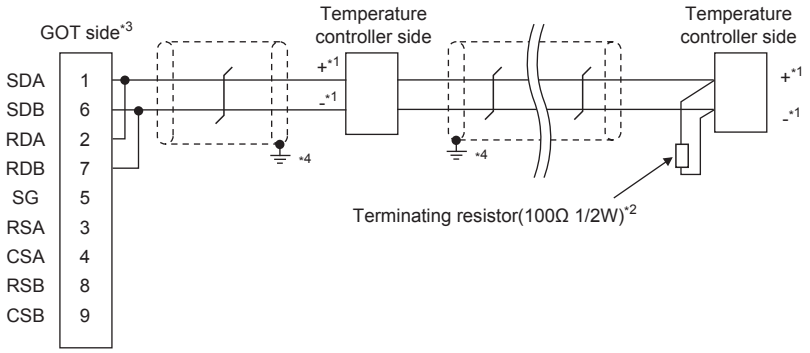
*1 Pin No. of temperature controller differs depending on the model.
Refer to the following table.

Signal name	Model of temperature controller								
	PXR3	PXR4	PXR5/9	PXG4	PXG5/9	PXH9	PXF4	PXF5/9	PUMA/B
	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.
+	15	7	1	7	1	14	7	25	3
-	14	8	2	8	2	16	8	26	4

*2 Terminating resistor should be provided for a temperature controller and an interface converter which will be terminals.

*3 Connect FG grounding to the appropriate part of a cable shield line.

■RS-485 connection diagram 5)



*1 Pin No. of temperature controller differs depending on the model.
Refer to the following table.

Signal name	Model of temperature controller								
	PXR3	PXR4	PXR5/9	PXG4	PXG5/9	PXH9	PXF4	PXF5/9	PUMA/B
	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.
+	15	7	1	7	1	14	7	25	3
-	14	8	2	8	2	16	8	26	4

*2 Terminating resistor should be provided for a temperature controller which will be a terminal.
*3 Set the terminating resistor of GOT side which will be a terminal.
☞ Page 1518 Connecting terminating resistors
*4 Connect FG grounding to the appropriate part of a cable shield line.

Precautions when preparing a cable

■Cable length

The length of the RS-485 cable must be within 13m (the total distance between the GOT and a controller).

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■FUJI temperature controller side connector

Use the connector compatible with the FUJI temperature controller side.

For details, refer to the user's manual of the FUJI temperature controller.

Connecting terminating resistors

■GOT side

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Enable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

■FUJI temperature controller side

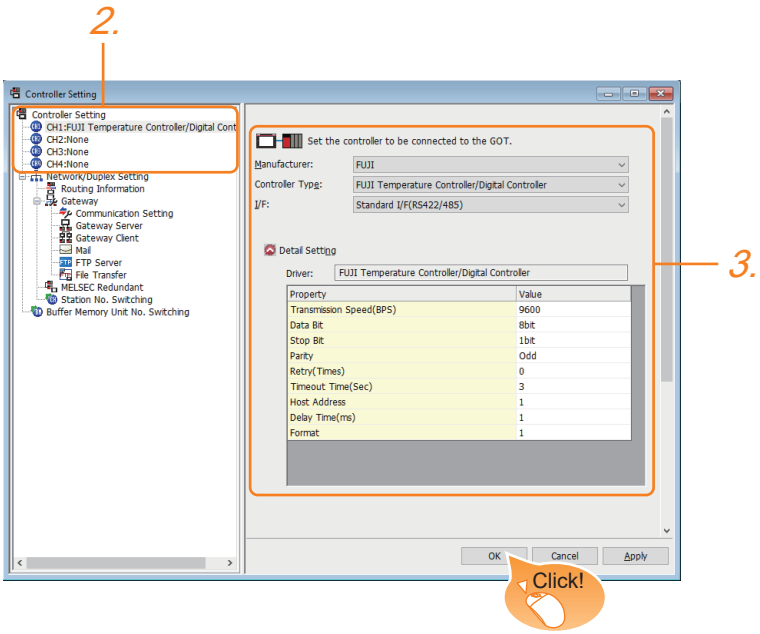
When connecting a FUJI temperature controller to the GOT, a terminating resistor must be connected.

☞ Page 1521 Temperature Controller Side Setting

31.4 GOT Side Settings

Setting communication interface (Communication settings)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [FUJI]
- [Controller Type]: [FUJI Temperature Controller/Digital Controller]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1520 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
Transmission Speed(BPS)	9600
Data Bit	8 bit
Stop Bit	1 bit
Parity	Odd
Retry(Times)	0
Timeout Time(Sec)	3
Host Address	1
Delay Time(ms)	1
Format	1

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 9600bps)	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bits)	7bits/8bits
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit/2bits
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Odd)	None Even Odd
Retry	Set the number of retries to be performed when a communication error occurs. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Host Address	Specify the host address (station No. of the GOT to which the temperature controller is connected) in the connected network. (Default: 1)	1 to 255
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 5ms)	0 to 300ms
Format	Select the communication format. (Default: 1) Format 1: Accessible to PXF/PXR/PXG/PXH/PUM Format 2: Accessible to PXF/PXR/PXG, Not accessible to PXH/PUM Format 3: Accessible to PXF, Not accessible to PXR/PXG/PXH/PUM	1/2/3

Point

• Host address

Do not specify a number between 200 and 215.

• Format

When connecting to PXH/PUM specify the [Format 1].

When connecting to only PXR/PXG specifying the [Format 2] is recommended.

When connecting to only PXF specifying the [Format 3] is recommended.

• Delay Time

Set the delay time to 5ms or more.

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

31.5 Temperature Controller Side Setting

Point

• FUJI temperature controller

For details of FUJI temperature controller, refer to the following manual.

User's Manual of the FUJI temperature controller

• Interface converter

For details on communication settings of the interface converter, refer to the following manual.

User's Manual of interface converter

Model name		Refer to
Temperature controller	PXR3, PXR4, PXR5, PXR9	☞ Page 1521 Connecting to PXR3/4/5/9
	PXG4, PXG5, PXG9	☞ Page 1522 Connecting to PXG4, PXG5 or PXG9
	PXF4, PXF5, PXF9	☞ Page 1523 Communication settings
Digital indication controller	PXH9	☞ Page 1522 Connecting to PXH9
Multi-loop/module type temperature controller	PUMA, PUMB	☞ Page 1523 Connecting to PUMA or PUMB
Interface converter	RC-77	☞ Page 1524 Connecting to interface converter (RC-77)
	SI-30A	☞ Page 1525 Connecting to interface converter (SI-30A)
	KS-485	☞ Page 1526 Connecting to interface converter (KS-485)
	K3SC-10	☞ Page 1526 Connecting to interface converter (K3SC-10)

Connecting to PXR3/4/5/9

Communication settings

Make the communication settings by operating the key of the temperature controller.

Item	Set value
Transmission speed	9600bps (fixed)
Data bit	8bits (fixed)
Parity bit*1	Even, Odd, None
Stop bit	1bit (fixed)
Station No.*2	1 to 255
Communication protocol	MODBUS

*1 Adjust the settings with GOT settings.

*2 Avoid duplication of the station No. with any of the other units.

Connecting to PXG4, PXG5 or PXG9

Communication settings

Make the communication settings by operating the key of the temperature controller.

■RS-485 communication settings

Item	Set value
Transmission speed*1	9600bps, 19200bps
Data bit	8bits (fixed)
Parity bit*1	Even, Odd, None
Stop bit*1	1bit (fixed)
Station No.*2	1 to 255
Communication permissions*3	Read only permission or read and overwrite permission

*1 Adjust the settings with GOT settings.
*2 Avoid duplication of the station No. with any of the other units.
*3 Set as necessary.

■RS-232 communication settings (PC loader communication)

Item	Set value
Transmission speed	9600bps (fixed)
Data bit	8bits (fixed)
Parity bit	None (fixed)
Stop bit	1bit (fixed)

Connecting to PXH9

Communication settings

Make the communication settings by operating the key of the temperature controller.

■RS-485 communication settings

Item	Set value
Transmission speed*1	9600bps, 19200bps, 38400bps
Data bit	8bits (fixed)
Parity bit*1	Even, Odd, None
Stop bit	1bit (fixed)
Station No.*2	1 to 255

*1 Adjust the settings with GOT settings.
*2 Avoid duplication of the station No. with any of the other units.

■RS-232 communication settings (PC loader communication)

Item	Set value
Transmission speed*1	9600bps, 19200bps, 38400bps
Data bit	8bits (fixed)
Parity bit*1	Even, Odd, None
Stop bit	1bit (fixed)
Station No.	1 (fixed)

*1 Adjust the settings with GOT settings.

Communication settings

Communication settings

Make the communication settings by operating the key of the temperature controller.

Item	Set value
Transmission speed*1	9600bps, 19200bps, 38400bps, 115200bps
Data bit	8bits (fixed)
Parity bit*1	Even, Odd, None
Stop bit*1	1bit (fixed)
Station No.*2	1 to 255
Communication permissions*3	Read only permission or read and overwrite permission
Communication type selection	MODBUS RTU

*1 Adjust the settings with GOT settings.
*2 Avoid duplication of the station No. with any of the other units.
*3 Set as necessary.

Connecting to PUMA or PUMB

Communication settings

Make the communication settings by the PC loader software for PUM series.

■RS-485 communication settings

Item	Set value
Transmission speed*1	9600bps, 19200bps, 38400bps, 115200bps
Data bit	8bits (fixed)
Parity bit*1	Even, Odd, None
Stop bit*1	1bit (fixed)
Station No.*2*3	1 to 16
Communication permissions*4	Read only permission or read and overwrite permission

*1 Adjust the settings with GOT settings.
*2 Avoid duplication of the station No. with any of the other units.
*3 Cannot be set by the PC loader software for PUM series. Set the station number by operating the key of the temperature controller.
*4 Set as necessary.

■RS-232 communication settings (PC loader communication)

Item	Set value
Transmission speed	19200bps (fixed)
Data bit	8bits (fixed)
Parity bit	None (fixed)
Stop bit	1bit (fixed)
Station No.*1	1 to 16

*1 Avoid duplication of the station No. with any of the other units.

Connecting to interface converter (RC-77)

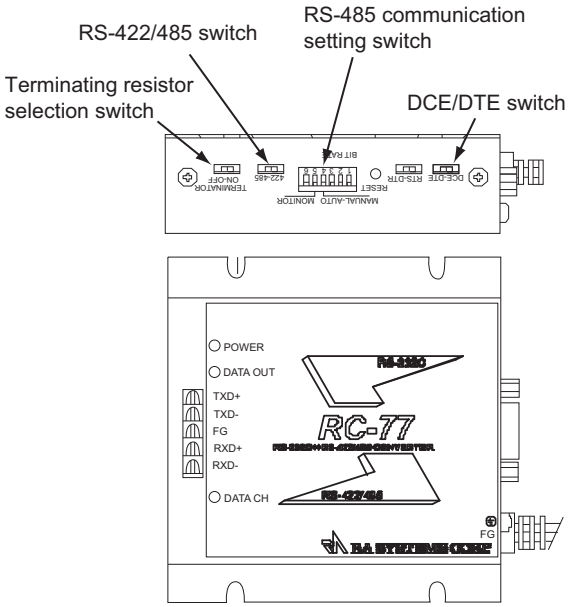
Communication settings

Make the communication settings using setting switches.

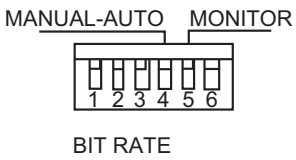
Item	Set value
Transmission speed*1	9600bps, 19200bps, 38400bps
MANUAL-AUTO	AUTO
DCE/DTE switching	DCE
RS-422/485 switching	RS-485
Terminating resistor selection	OFF

*1 Adjust with GOT and temperature controller settings.

Settings by switch



■Settings of transmission speed and MANUAL-AUTO



Setting item	Set value	Switch No.			
		1	2	3	4
Transmission speed	9600bps	ON	ON	OFF	
	19200bps	OFF	OFF	ON	
	38400bps	ON	OFF	ON	
MANUAL-AUTO	AUTO				ON

■Settings of DCE/DTE, RS-422/485 and terminating resistor selection



Setting item	Set value
DCE/DTE	DCE
RS-422/485	RS-485
Terminating resistor selection	OFF

Connecting to interface converter (SI-30A)

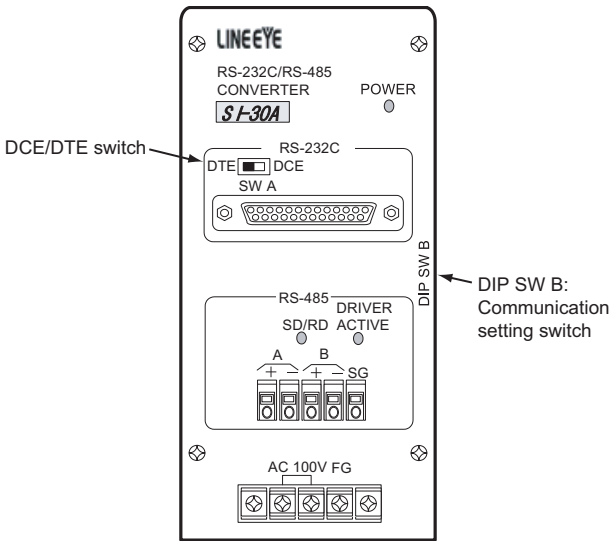
Communication settings

Make the communication settings using setting switches.

Item	Set value
Transmission speed	9600bps
MANUAL-AUTO	AUTO
DCE/DTE switching	DCE
Terminating resistor selection*1	ON/OFF

*1 Set as necessary.

Settings by switch



■Settings of transmission speed, MANUAL-AUTO and terminating resistor selection

Setting item	Set value	Switch No. of DIP SWB				
		1	2	3	4	5
Transmission speed	9600bps	ON	ON	OFF		
MANUAL-AUTO	AUTO				ON	
Terminating resistor selection*1	Enable					ON
	Disable					OFF

*1 Set as necessary.

■Setting of DCE/DTE switching

DTE [■□] DCE
SW A

Setting item	Set value
DCE/DTE	DCE

Connecting to interface converter (KS-485)

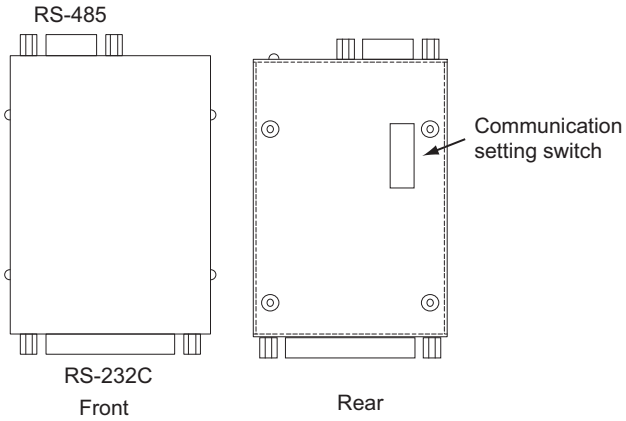
Communication settings

Make the communication settings using setting switches.

Item	Set value
Transmission speed	9600bps
Terminating resistor selection*1	ON/OFF

*1 Set as necessary.

Settings by switch



■Settings of transmission speed and terminating resistor selection

Setting item	Set value	Switch No.							
		1	2	3	4*2	5	6*2	7	8
Transmission speed	9600bps	ON	OFF	ON	—	ON	—		
Terminating resistor selection*1	Enable							ON	ON
	Disable							OFF	OFF

*1 Set as necessary.
*2 Disabled.

Connecting to interface converter (K3SC-10)

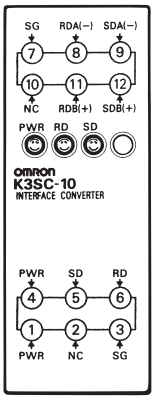
Communication settings

Make the communication settings by operating the DIP switch of the temperature controller.

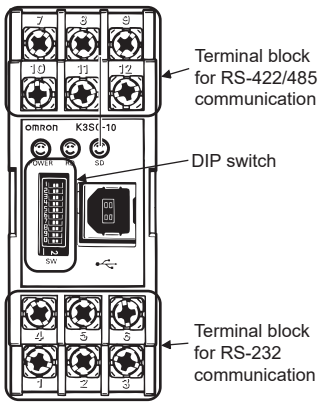
Item	Set value
Transmission speed*1	9600bps, 19200bps, 38400bps
Data bit	8bits
Parity bit*1	Odd, even, none
Stop bit	1bit
Communication Type	RS-232C ↔ RS-485
Echo back	Without

*1 Make the same setting as that of GOT side.

Settings by DIP switch

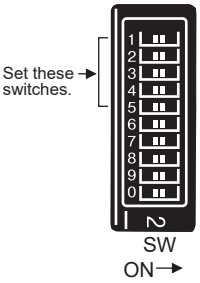


Front of K3SC-10 body



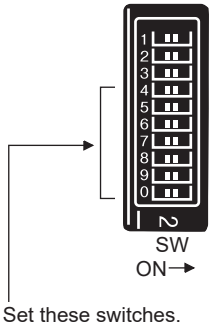
Inside of K3SC-10 body
(When removing the front cover)

■Transmission speed settings



Transmission speed (bps)	Switch No.		
	1	2	3
9600	OFF	OFF	OFF
19200	ON	OFF	ON
38400	OFF	ON	ON

■Settings of data length, parity bit, stop bit, master/slave device and echoback



Set these switches.

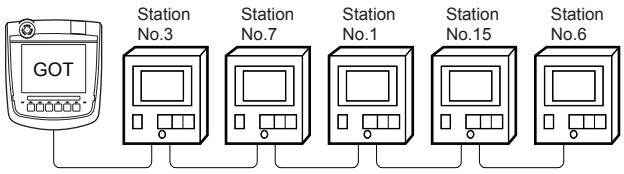
Setting item	Set value	Switch No.						
		4	5	6	7	8	9	0
Stop bit	1bit		ON					
Parity bit	Even			OFF	OFF			
	Odd			ON	OFF			
	None			OFF	ON			
Communication Type	RS-232C ↔ RS-485					OFF	OFF	
Echo back	Without							OFF

Station number setting

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.



Examples of station number setting

Direct specification

When setting the device, specify the station number of the temperature controller of which data is to be changed.

Specification range
1 to 199
216 to 255

Point

Specifying a station No. between 200 and 215

(Example of specifying the station No. 215)

Step.1 Set the station No. to "200".

Step.2 Input "215" to the internal device GD10.

Step.3 The station No. 215 is specified.

For details, refer to (2) Indirect specification shown below.

Indirect specification

When setting the device, indirectly specify the station number of the inverter of which data is to be changed using the 16-bit GOT internal data register (GD10 to GD25).

When specifying the station No. from 200 to 215 on GT Designer3, the value of GD10 to GD25 compatible to the station No. specification will be the station No. of the temperature controller.

Specification station NO.	Compatible device	Setting range
200	GD10	1 to 255 For the setting other than the above, error (dedicated device is out of range) will occur.
201	GD11	
202	GD12	
203	GD13	
204	GD14	
205	GD15	
206	GD16	
207	GD17	
208	GD18	
209	GD19	
210	GD20	
211	GD21	
212	GD22	
213	GD23	
214	GD24	
215	GD25	

31.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

📖GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1

FUJI equipment ([FUJI Temperature Controller/Digital Controller])

31.7 Precautions

Station number settings of temperature controller

In the system configuration, the temperature controller with the station number set with the host address must be included.

For details of host address setting, refer to the following.

☞ Page 1520 Communication detail settings

FIX processing of temperature controller

The temperature controller power must not be turned off during the FIX processing.

Otherwise, data within the non-volatile memory will corrupt and the temperature controller will be unavailable.

GOT clock control

Since the temperature controller does not have a clock function, the settings of "time adjusting" or "time broad cast" by GOT clock control will be disabled.

Disconnecting some of multiple connected equipment

The GOT can disconnect some of multiple connected equipment by setting GOT internal device.

For example, the faulty station where a communication timeout error occurs can be disconnected from connected equipment.

For details of GOT internal device setting, refer to the following manual.

📖GT Designer3 (GOT2000) Screen Design Manual

Writing multiple points

If the GOT writes multiple points simultaneously, a system alarm may occur and writing cannot be executed correctly.

In this case, take the following corrective action.

■Refer to the manual of temperature controller to be used, set the points to be written by the GOT simultaneously up to " The maximum numbers of words to be written per 1 message" specified depending on the temperature controllers.

■Set the delay time of communication detail settings.

☞ Page 1520 Communication detail settings

MEMO

32 YASKAWA PLC

- Page 1531 Connectable Model List
- Page 1532 Serial Connection
- Page 1562 Ethernet Connection
- Page 1585 Settable Device Range

32.1 Connectable Model List

The following table shows the connectable models.

Model name*1	Clock	Communication	Connectable model	Refer to
GL120 GL130	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 1532 Connecting to GL120 or GL130
GL60S GL60H GL70H	×	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 1534 Connecting to GL60S, GL60H, or GL70H
MP920 MP930	×	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 1536 Connecting to MP920/930, CP-9300MS/9200(H), or PROGIC-8
CP-9300MS CP-9200(H) PROGIC-8	×	RS-232	GT2506HS GT2505HS	
MP940	×	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 1539 Connecting to MP940
CP-9200SH CP-317	×	RS-232	GT2506HS GT2505HS	☞ Page 1540 Connecting to CP-9200SH or CP-317
MP2200 MP2300 MP2300S	×	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 1542 Connecting to MP2200, MP2300, or MP2300S
MP920 MP2200 MP2300 MP2300S	×	Ethernet	GT2506HS GT2505HS	☞ Page 1562 Connecting to MP920, MP2200, MP2300, or MP2300S
CP-9200SH CP-312 CP-317	×	Ethernet	GT2506HS GT2505HS	☞ Page 1562 Connecting to MP920, MP2200, MP2300, or MP2300S
MP3200 MP3300	×	Ethernet	GT2506HS GT2505HS	☞ Page 1566 Connecting to MP3200 or MP3300

*1 GOT is not applicable to the multiple CPU system configuration of YASKAWA PLC.

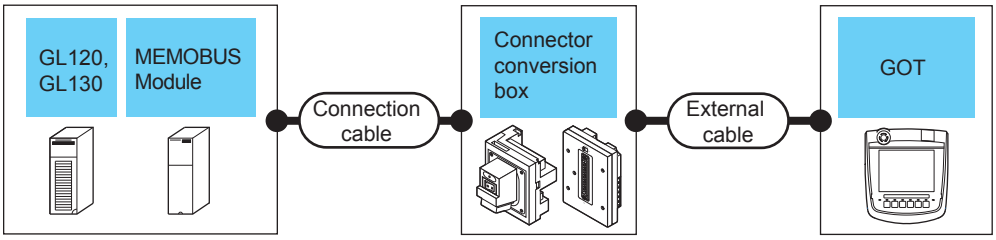
32.2 Serial Connection

Connecting to GL120 or GL130

Communication driver

YASKAWA GL

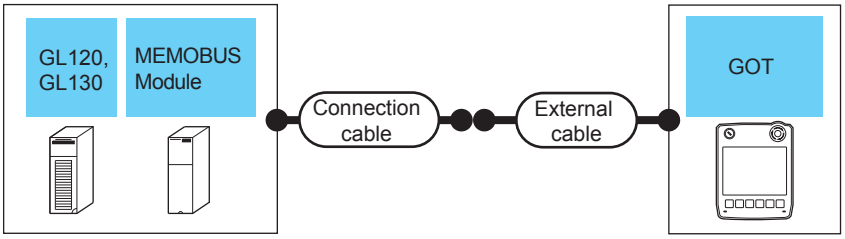
When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	MEMOBUS module*1	Communication Type	Cable model Connection diagram number					
GL120 GL130	-	RS-232	GT09-C30R20201-9P (3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	JAMSC-120NOM27100	RS-422	GT09-C30R40201-9P (3m) GT09-C100R40201-9P (10m) or User preparing RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	1 GOT for 1 MEMOBUS module
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

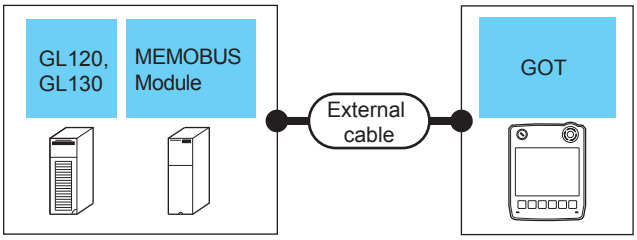
When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	MEMOBUS module*1	Communication Type	Cable model Connection diagram number				
GL120 GL130	-	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
	JAMSC-120NOM27100	RS-422	User preparing RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	1 GOT for 1 MEMOBUS module

*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	MEMOBUS module*1	Communication Type				
GL120 GL130	-	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 PLC
	JAMSC-120NOM27100	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 3)	GT 2505HS	13m	1 GOT for 1 MEMOBUS module

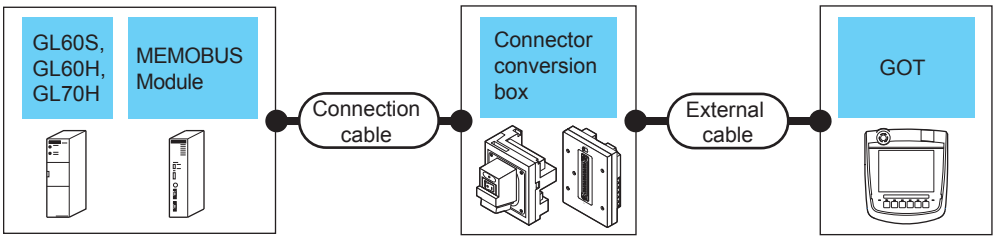
*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

Connecting to GL60S, GL60H, or GL70H

Communication driver

YASKAWA GL

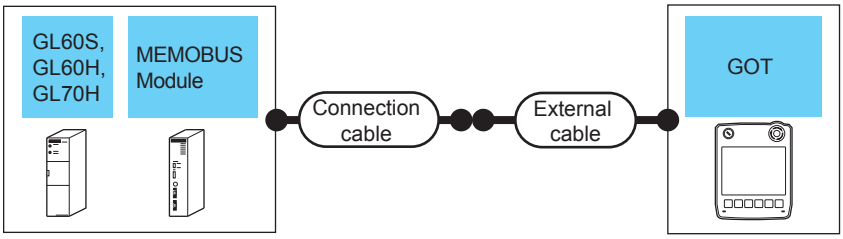
When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	MEMOBUS module*1	Communication Type	Cable model Connection diagram number					
GL60S GL60H GL70H	JAMSC-IF60 JAMSC-IF61	RS-232	GT09-C30R20201-9P (3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 MEMOBUS module
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	JAMSC-IF612	RS-422	GT09-C30R40201-9P (3m) GT09-C100R40201-9P (10m) or User preparing RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

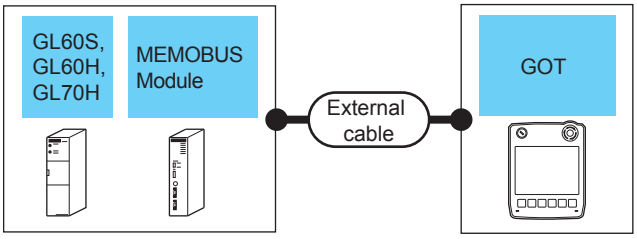
When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	MEMOBUS module*1	Communication Type	Cable model Connection diagram number				
GL60S GL60H GL70H	JAMSC-IF60 JAMSC-IF61	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 MEMOBUS module
	JAMSC-IF612	RS-422	User preparing RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	MEMOBUS module*1	Communication Type				
GL60S GL60H GL70H	JAMSC-IF60 JAMSC-IF61	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 MEMOBUS module
	JAMSC-IF612	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 3)	GT 2505HS	13m	

*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

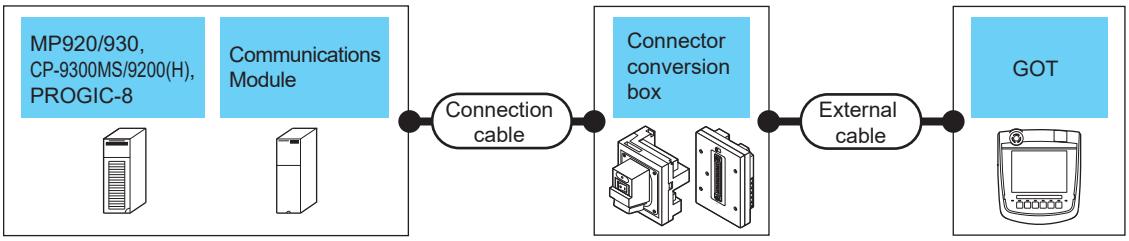
Connecting to MP920/930, CP-9300MS/9200(H), or PROGIC-8

Communication driver
YASKAWA MP2000/MP900/CP9200SH

Communication driver
YASKAWA CP9300MS(MC compatible)

Communication driver
YASKAWA GL

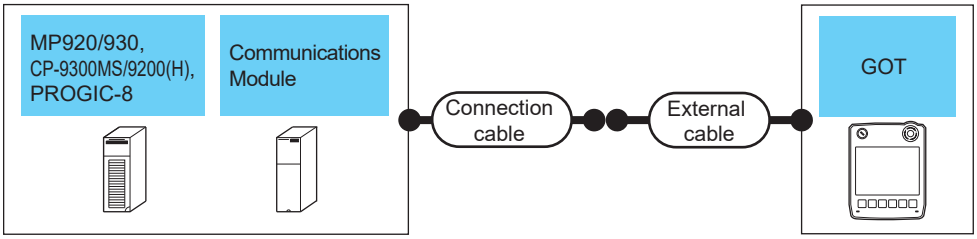
When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication module *1	Communication Type	Cable model Connection diagram number					
MP920 MP930	-	RS-232	GT09-C30R20201-9P (3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
CP-9200(H) PROGIC-8 (connecting to port1)				GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
PROGIC-8 (connecting to port2)			GT09-C30R20202-15P (3m) or User preparing RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
CP-9300MS (CP-9300MC compatible/ non-compatible)			GT09-C30R20203-9P (3m) or User preparing RS-232 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
MP920 (connecting to 217IF)	217IF	RS-232	GT09-C30R20201-9P (3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 communication module
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		RS-422	User preparing RS-422 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

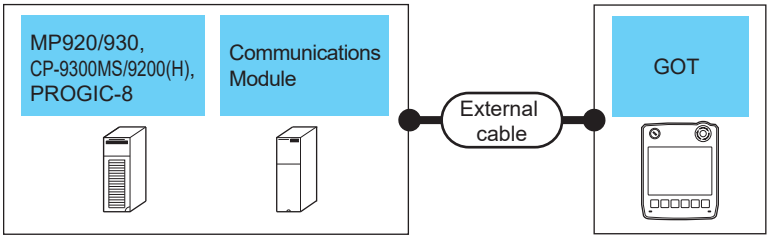
When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication module *1	Communication Type	Cable model Connection diagram number				
MP920 MP930	-	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
CP-9200(H) PROGIC-8 (connecting to port1)				GT11H-C30-37P(3m)	GT 2505HS		
PROGIC-8 (connecting to port2)			User preparing RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS		
CP-9300MS (CP-9300MC compatible/ non-compatible)			User preparing RS-232 connection diagram 8)	GT11H-C30-37P(3m)	GT 2505HS		
MP920 (connecting to 217IF)	217IF	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 communication module
		RS-422	User preparing RS-422 connection diagram 5)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication module *1	Communication Type				
MP920 MP930	-	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 PLC
CP-9200(H) PROGIC-8 (connecting to port1)			GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS		
PROGIC-8 (connecting to port2)			GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 6)	GT 2505HS		
CP-9300MS (CP-9300MC compatible/non-compatible)			GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 9)	GT 2505HS		
MP920 (connecting to 217IF)	217IF	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 communication module
		RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 6)	GT 2505HS	13m	

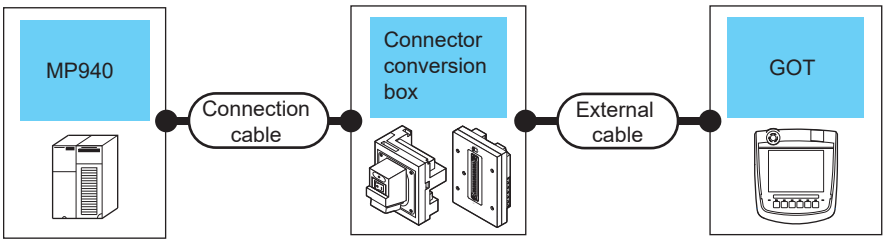
*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

Connecting to MP940

Communication driver

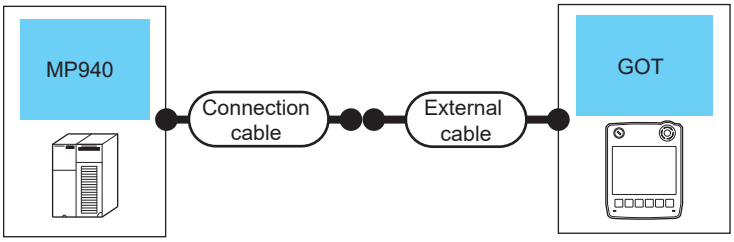
YASKAWA MP2000/MP900/CP9200SH

When using the connector conversion box



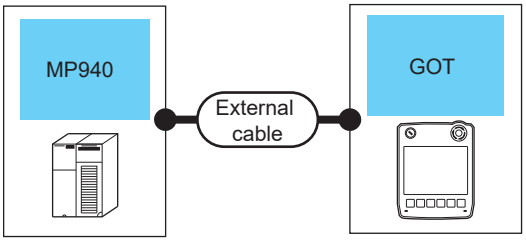
PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
MP940	RS-232	GT09-C30R20204-14P (3m) or User preparing RS-232 connection diagram 10)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	RS-422	GT09-C30R40202-14P (3m) GT09-C100R40202-14P (10m) or User preparing RS-422 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
MP940	RS-232	User preparing RS-232 connection diagram 11)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
	RS-422	User preparing RS-422 connection diagram 8)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

When using the external cable (GT11H-C□□□)

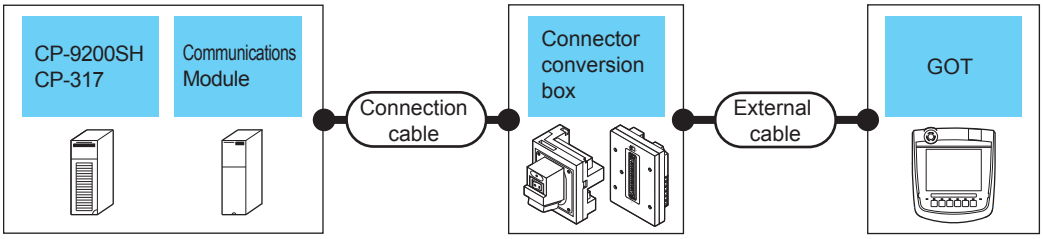


PLC		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
MP940	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 12)	GT 2505HS	6m	1 GOT for 1 PLC
	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 9)	GT 2505HS	13m	

Connecting to CP-9200SH or CP-317



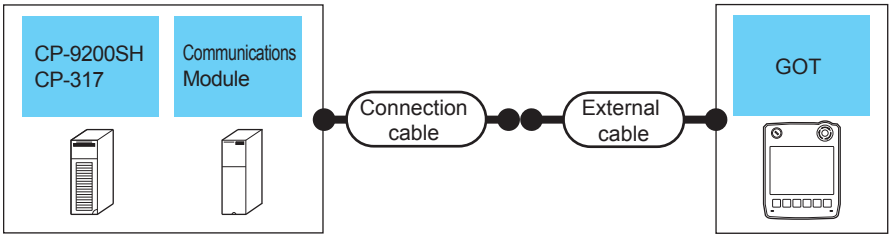
When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication module*1	Communication Type	Cable model Connection diagram number					
CP-9200SH CP-317	CP-217IF (CN1 connection)	RS-232	GT09-C30R20203-9P(3m) or User preparing RS-232 connection diagram 16)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 communication module
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	CP-217IF (CN2 connection)		GT09-C30R20205-25P (3m) or User preparing RS-232 connection diagram 13)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

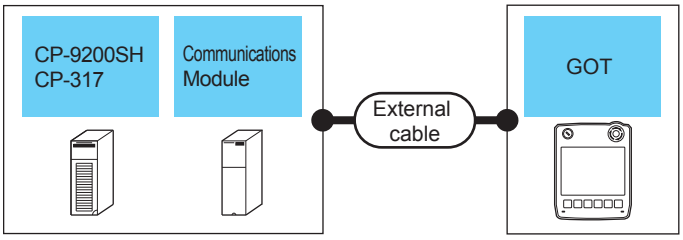
When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication module*1	Communication Type	Cable model Connection diagram number				
CP-9200SH CP-317	CP-217IF (CN1 connection)	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 communication module
	CP-217IF (CN2 connection)		User preparing RS-232 connection diagram 14)	GT11H-C30-37P(3m)	GT 2505HS	6m	

*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication module*1	Communication Type				
CP-9200SH CP-317	CP-217IF (CN1 connection)	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 communication module
	CP-217IF (CN2 connection)		GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 15)	GT 2505HS		

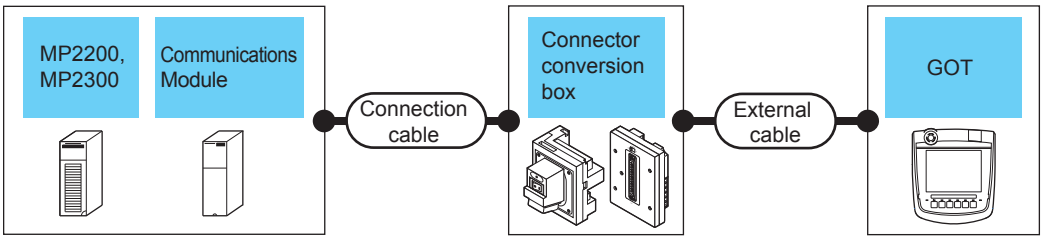
*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

Connecting to MP2200, MP2300, or MP2300S

Communication driver

YASKAWA MP2000/MP900/CP9200SH

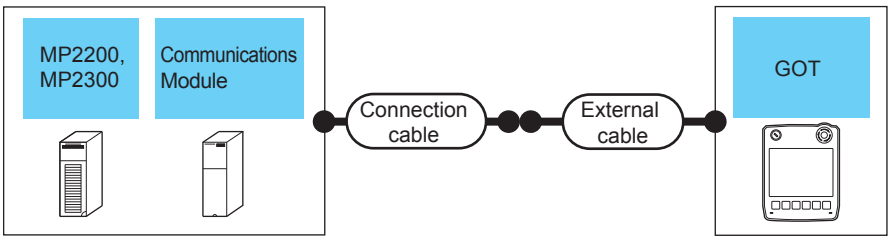
When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication module*1	Communication Type	Cable model Connection diagram number					
MP2200 MP2300 MP2300S	217IF-01 218IF-01 218IF-02	RS-232	GT09-C30R20201-9P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 communication module
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	217IF-01	RS-422	User preparing RS-422 connection diagram 10)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

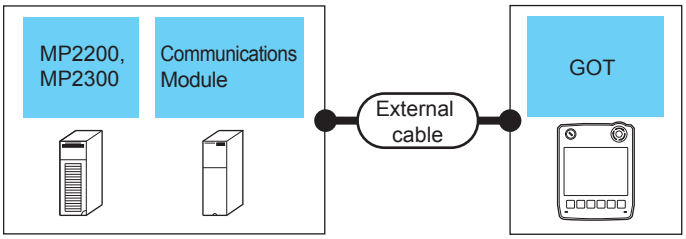
When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication module*1	Communication Type	Cable model Connection diagram number				
MP2200 MP2300 MP2300S	217IF-01 218IF-01 218IF-02	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 communication module
	217IF-01	RS-422	User preparing RS-422 connection diagram 11)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication module*1	Communication Type				
MP2200 MP2300 MP2300S	217IF-01 218IF-01 218IF-02	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 communication module
	217IF-01	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 12)	GT 2505HS	13m	

*1 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

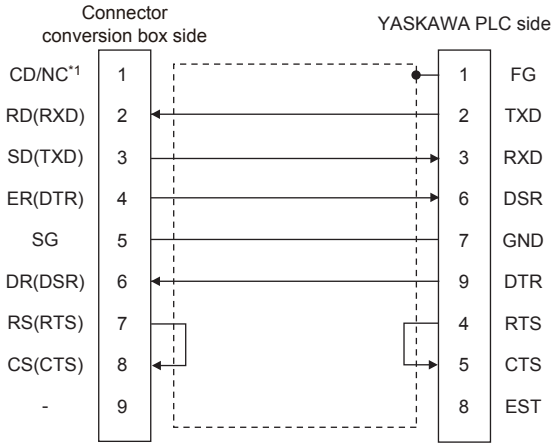
Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

RS-232 cable

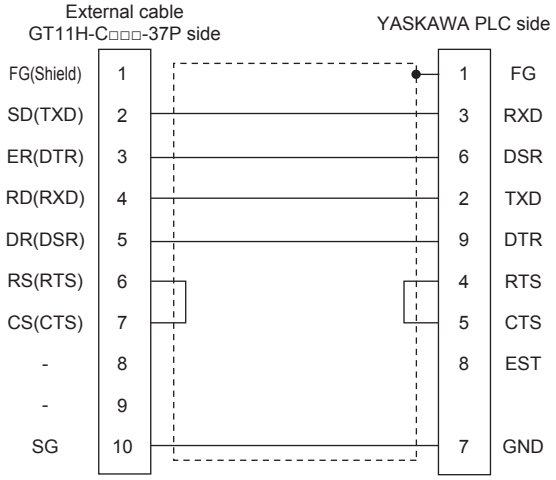
■Connection diagram

• RS-232 connection diagram 1)

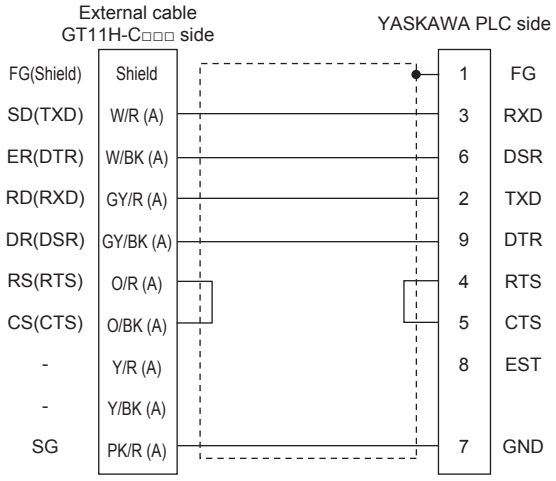


*1 GT2506HS-V: CD, GT2505HS-V: NC

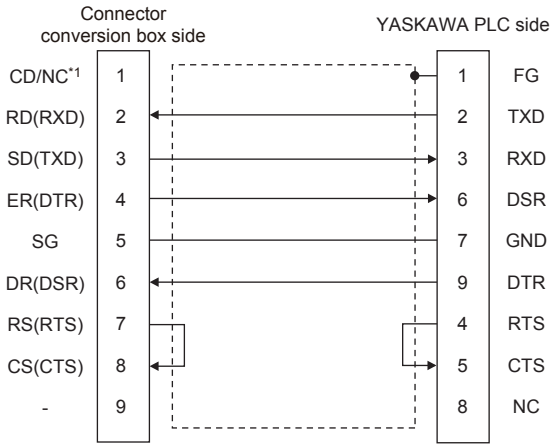
• RS-232 connection diagram 2)



• RS-232 connection diagram 3)

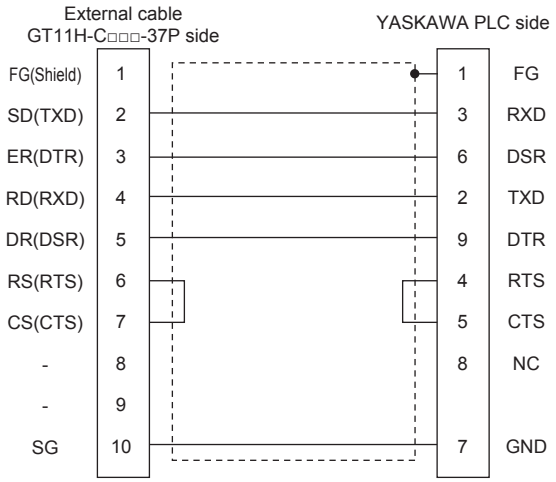


• RS-232 connection diagram 4)

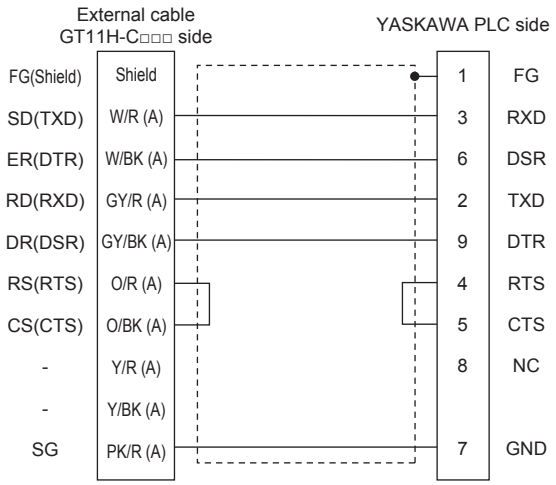


*1 GT2506HS-V: CD, GT2505HS-V: NC

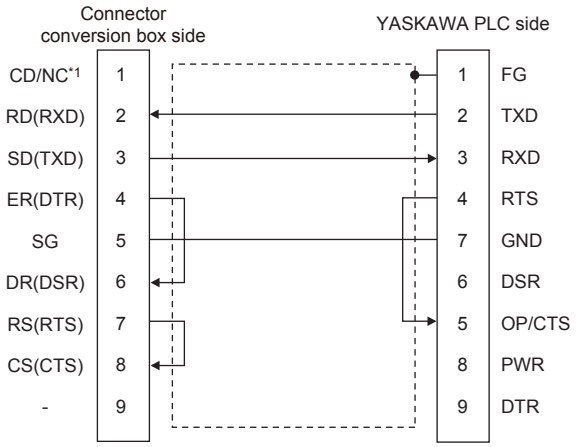
• RS-232 connection diagram 5)



• RS-232 connection diagram 6)

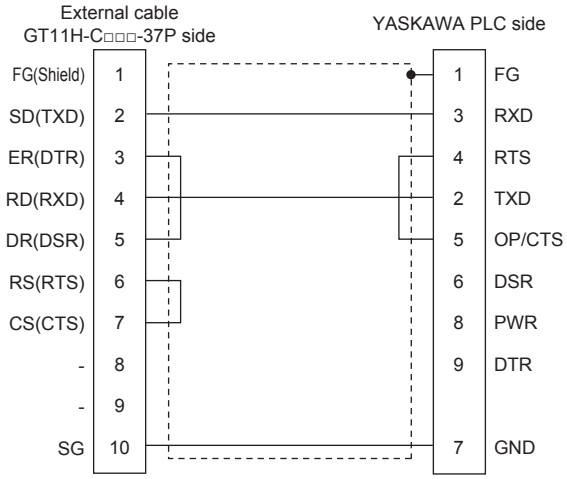


• RS-232 connection diagram 7)

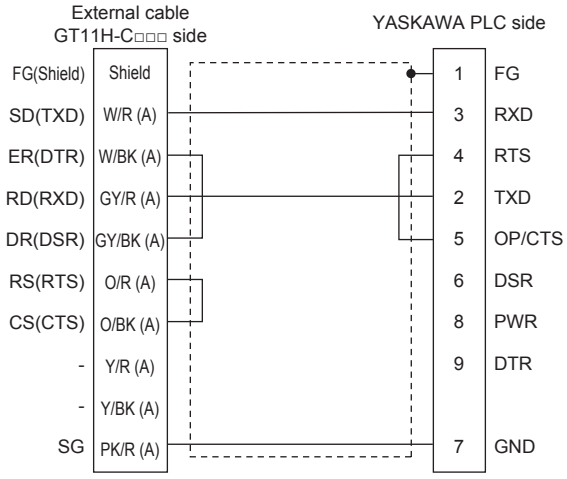


*1 GT2506HS-V: CD, GT2505HS-V: NC

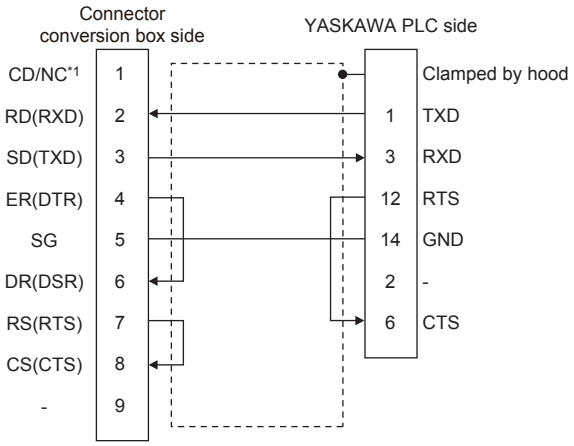
• RS-232 connection diagram 8)



• RS-232 connection diagram 9)

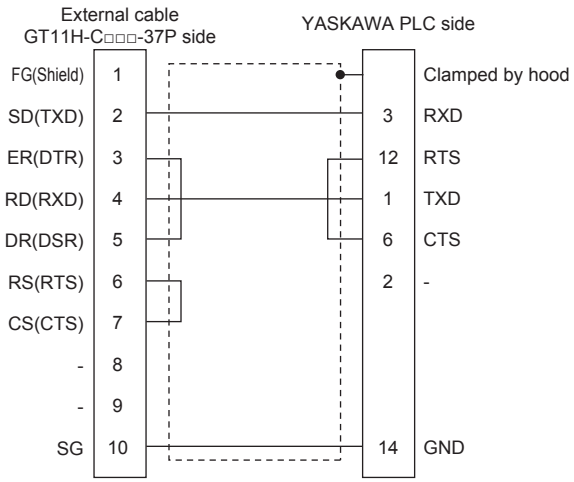


• RS-232 connection diagram 10)

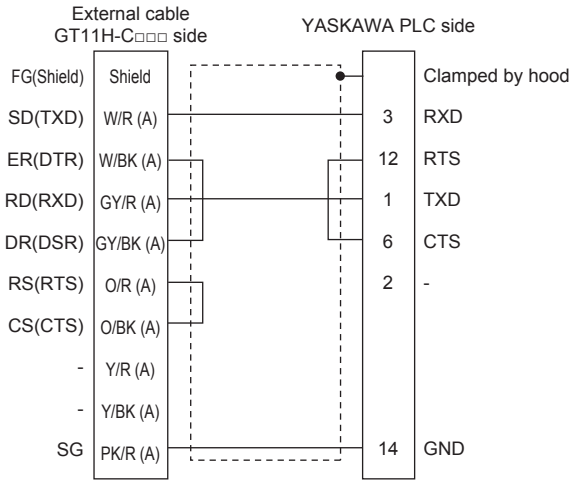


*1 GT2506HS-V: CD, GT2505HS-V: NC

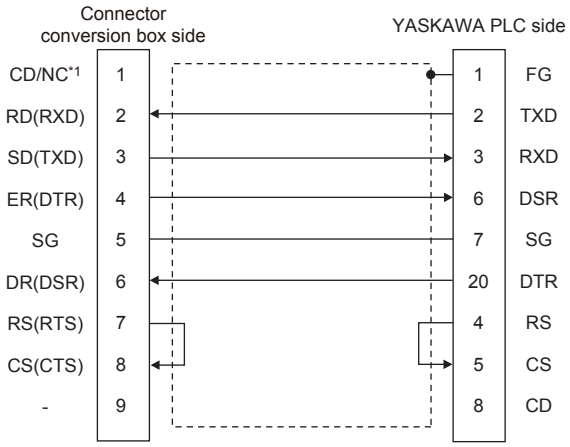
• RS-232 connection diagram 11)



• RS-232 connection diagram 12)

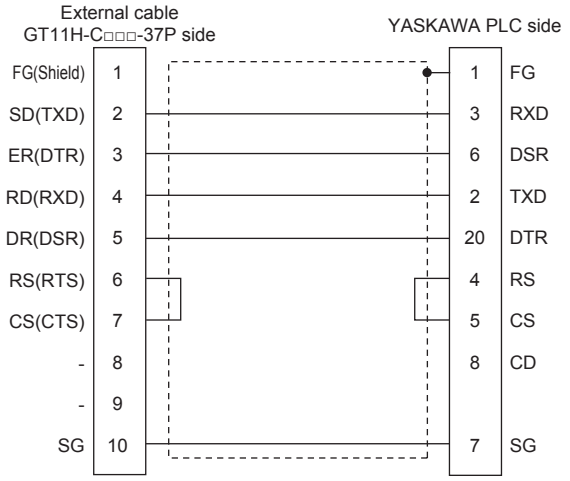


• RS-232 connection diagram 13)

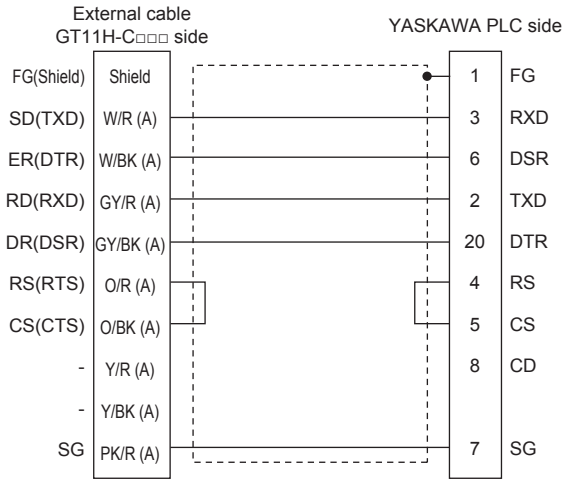


*1 GT2506HS-V: CD, GT2505HS-V: NC

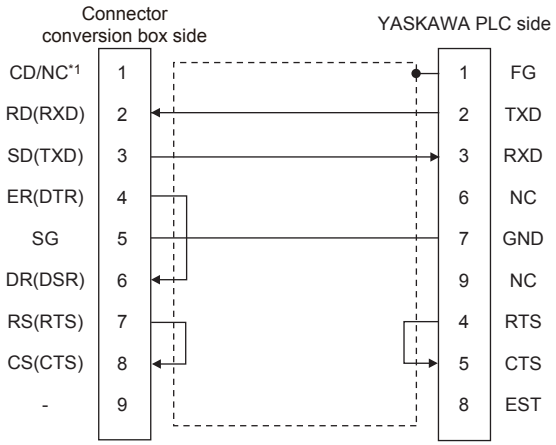
• RS-232 connection diagram 14)



• RS-232 connection diagram 15)

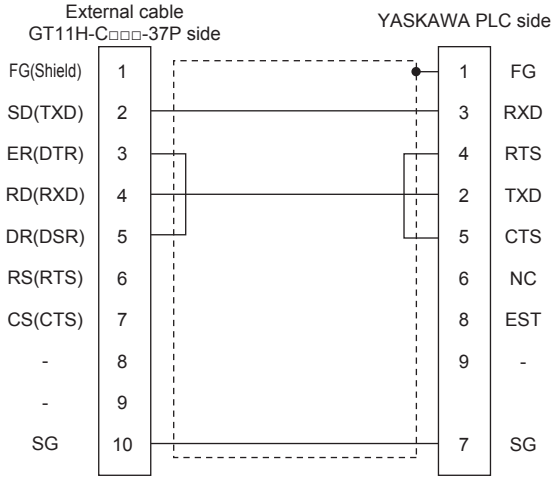


• RS-232 connection diagram 16)

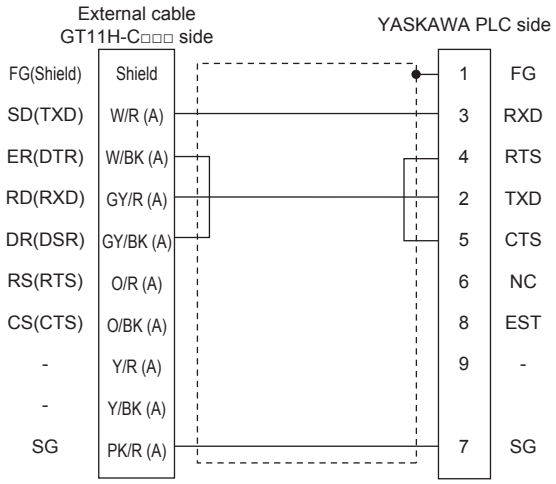


*1 GT2506HS-V: CD, GT2505HS-V: NC

• RS-232 connection diagram 17)



• RS-232 connection diagram 18)



■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

• YASKAWA PLC side connector

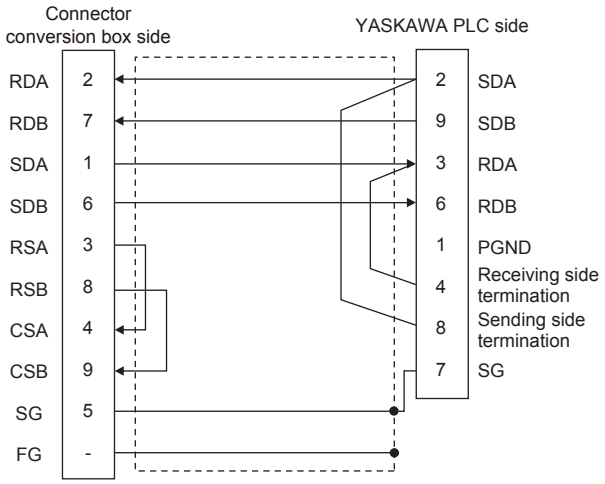
Use the connector compatible with the YASKAWA PLC side module.

For details, refer to the YASKAWA PLC user's manual.

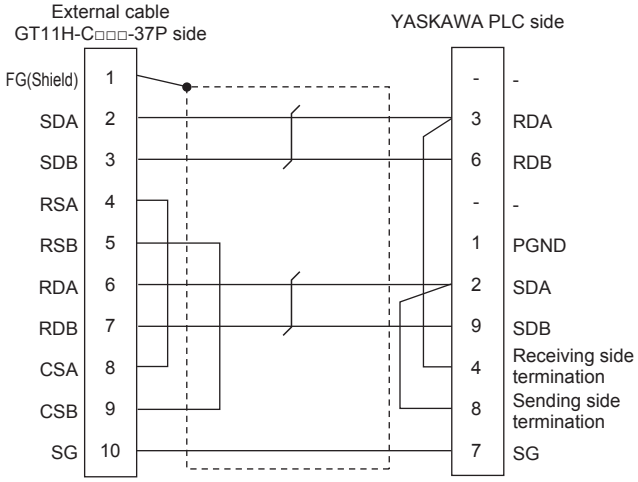
RS-422 cable

■Connection diagram

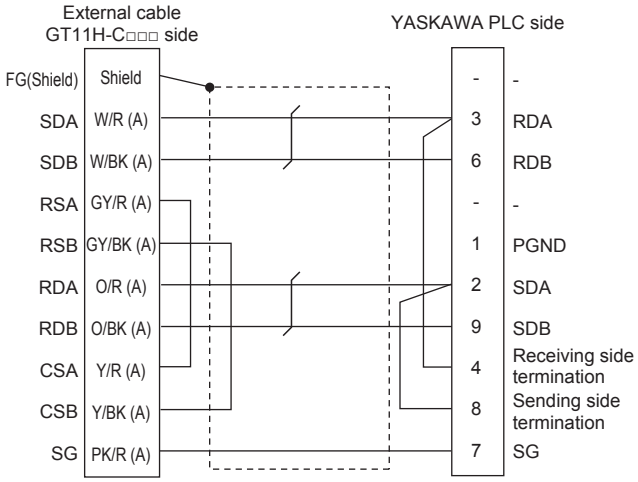
• RS-422 connection diagram 1)



• RS-422 connection diagram 2)

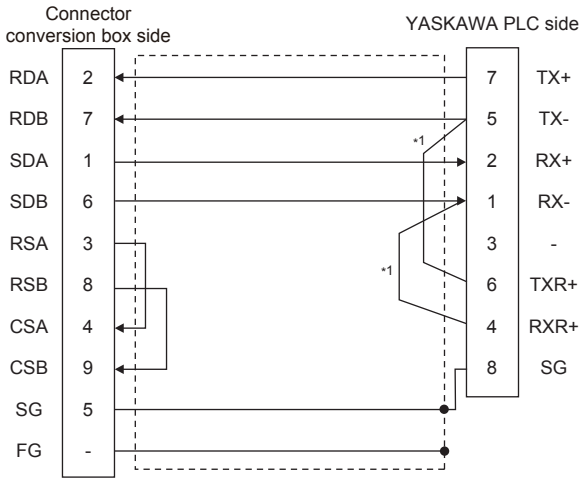


• RS-422 connection diagram 3)



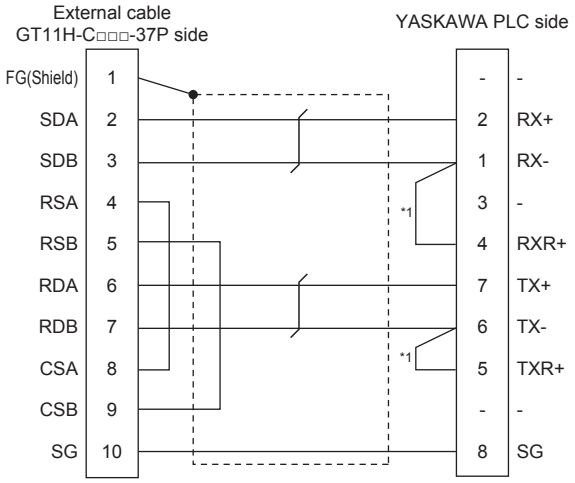
32

• RS-422 connection diagram 4)



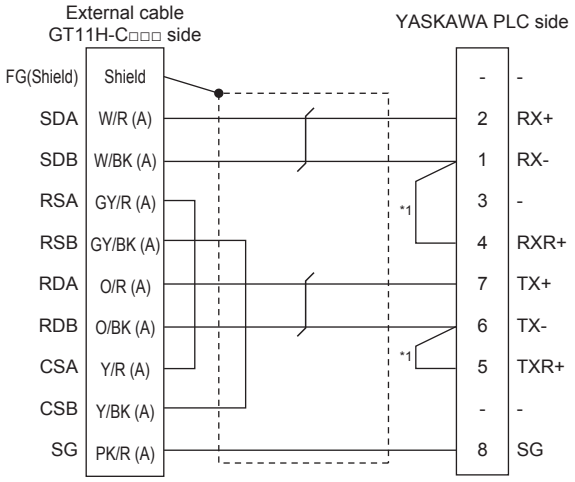
*1 The terminating resistor (120Ω) is valid by connecting pin 1 with pin 4 and pin 5 with pin 6 of the YASKAWA PLC side.

• RS-422 connection diagram 5)



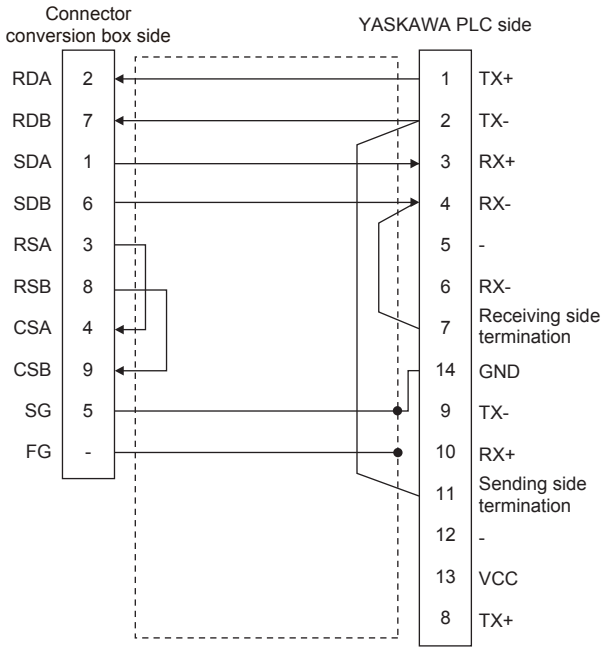
*1 The terminating resistor (120Ω) is valid by connecting pin 1 with pin 4 and pin 5 with pin 6 of the YASKAWA PLC side.

• RS-422 connection diagram 6)

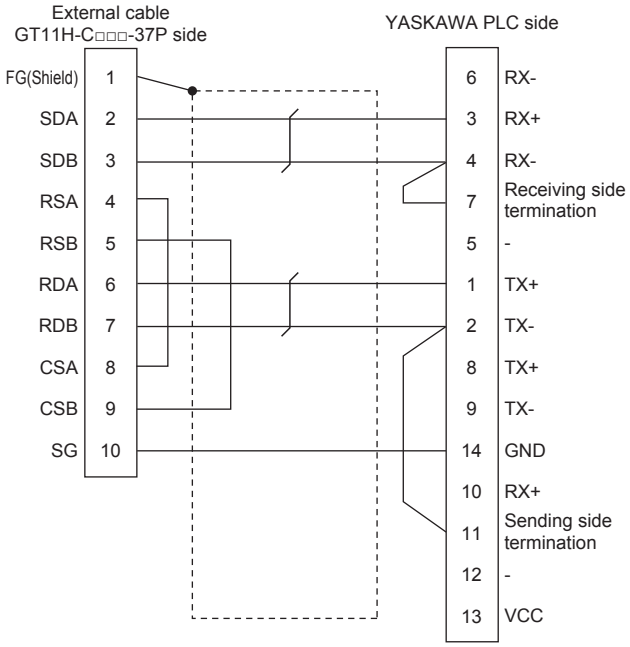


*1 The terminating resistor (120Ω) is valid by connecting pin 1 with pin 4 and pin 5 with pin 6 of the YASKAWA PLC side.

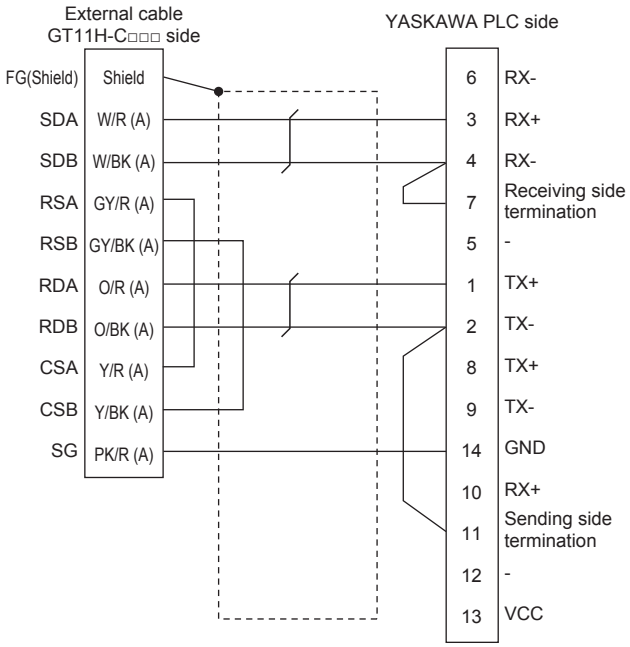
• RS-422 connection diagram 7)



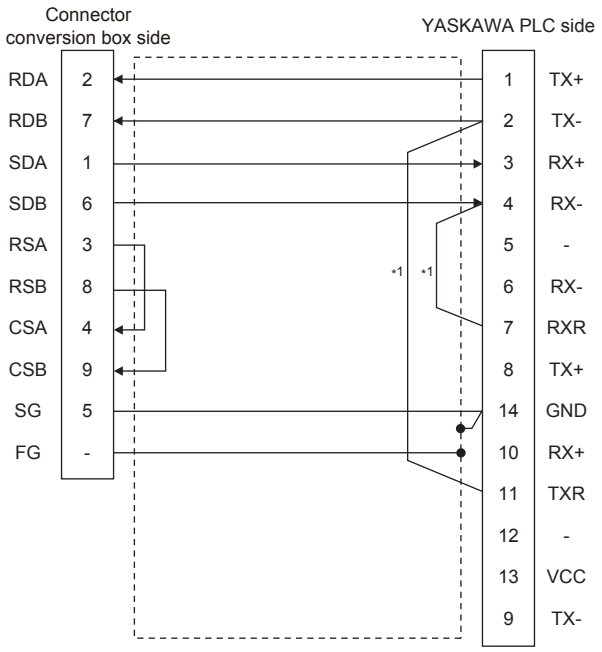
• RS-422 connection diagram 8)



• RS-422 connection diagram 9)

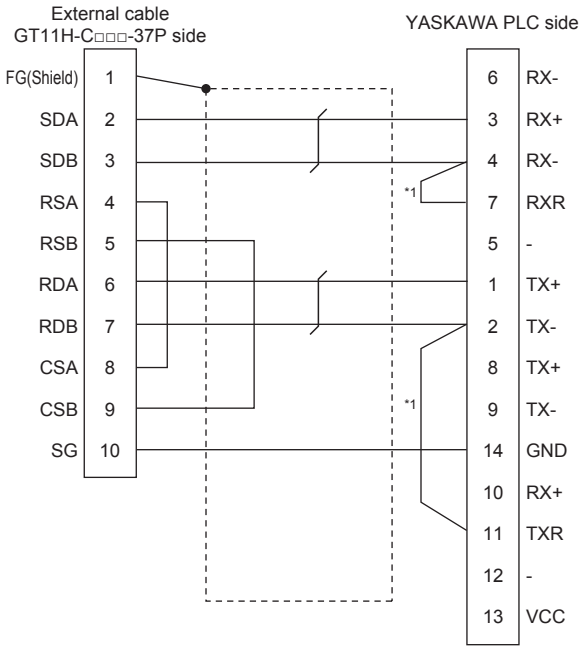


• RS-422 connection diagram 10)



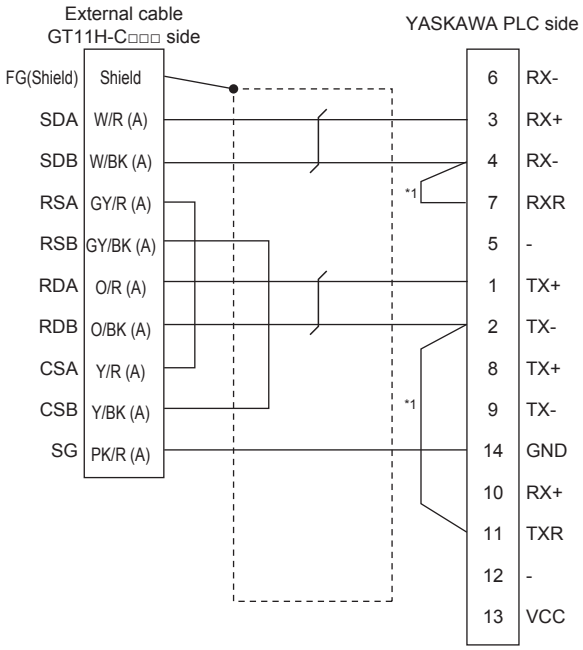
*1 Connect RXR with RX(-) and TXR with TX(-) of 217IF01, and insert the terminating resistor.

• RS-422 connection diagram 11)



*1 Connect RXR with RX(-) and TXR with TX(-) of 217IF01, and insert the terminating resistor.

• RS-422 connection diagram 12)



*1 Connect RXR with RX(-) and TXR with TX(-) of 217IF01, and insert the terminating resistor.

■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

• YASKAWA PLC side connector

Use the connector compatible with the YASKAWA PLC side module.

For details, refer to the YASKAWA PLC user's manual.

■Connecting terminating resistors

• GOT side

When connecting a PLC to the GOT, a terminating resistor must be connected to the GOT.

For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

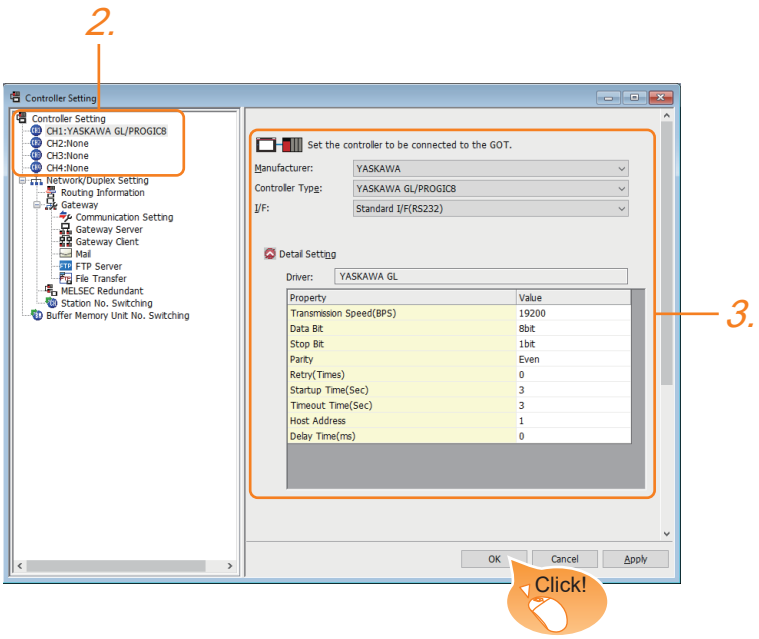
• YASKAWA PLC side

When connecting a YASKAWA PLC to a GOT, connect a terminating resistor to the YASKAWA PLC if required.

📖YASKAWA PLC user's Manual

Setting communication interface (Communication settings)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [YASKAWA]
- [Controller Type]: Select one of the following items.

[YASKAWA GL/PROGIC8]
[YASKAWA CP9200(H)]
[YASKAWA CP9300MS(MC compatible)]
[YASKAWA MP2000/MP900/CP9200SH]

- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1558 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
Transmission Speed(BPS)	19200
Data Bit	8 bit
Stop Bit	1 bit
Parity	Even
Retry(Times)	0
Startup Time(Sec)	3
Timeout Time(Sec)	3
Host Address	1
Delay Time(ms)	0

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 19200bps)	4800bps, 9600bps, 19200bps, 38400bps, 57600bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bit)	8bit (fixed)
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit (fixed)
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Even)	Even (fixed)
Retry	Set the number of retries to be performed when a communication error occurs. (Default: 0time)	0 to 5times
Startup Time	Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU. (Default: 3sec)	3 to 30sec
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Host Address	Specify the host address (station No. of the PLC to which the GOT is connected) in the network of the GOT. (Default: 1)	1 to 31
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300(ms)

Point

• Delay Time

When connecting to PLC CP-9200(H) and CP-9300MS, set the following.

Model name		Delay Time
CP-9200(H)		30ms or more
CP-9300MS	port:0	10ms or more
	port:1	30ms or more

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

PLC Side Settings

Point

YASKAWA PLC

For details of YASKAWA PLCs, refer to the following manuals.

YASKAWA PLC user's Manual

Communication and port settings

Make the communication and port settings with a peripheral tool.

Device name	Set value
Address*1	1 to 31
Protocol	MEMOBUS
Mode	RTU
Transmission speed*2*3	4800bps, 9600bps, 19200bps, 38400bps, 57600bps
Data bit	8bits
Stop bit	1bit
Parity bit	Even
Error check	CRC16

*1 Set the address according to the Host Address setting on the GOT side.
For the Host Address setting on the GOT side, refer to the following.
Page 1558 Communication detail settings

*2 Only transmission speeds available on the GOT side are shown.
Also, the setting range differs depending on the YASKAWA PLC model.

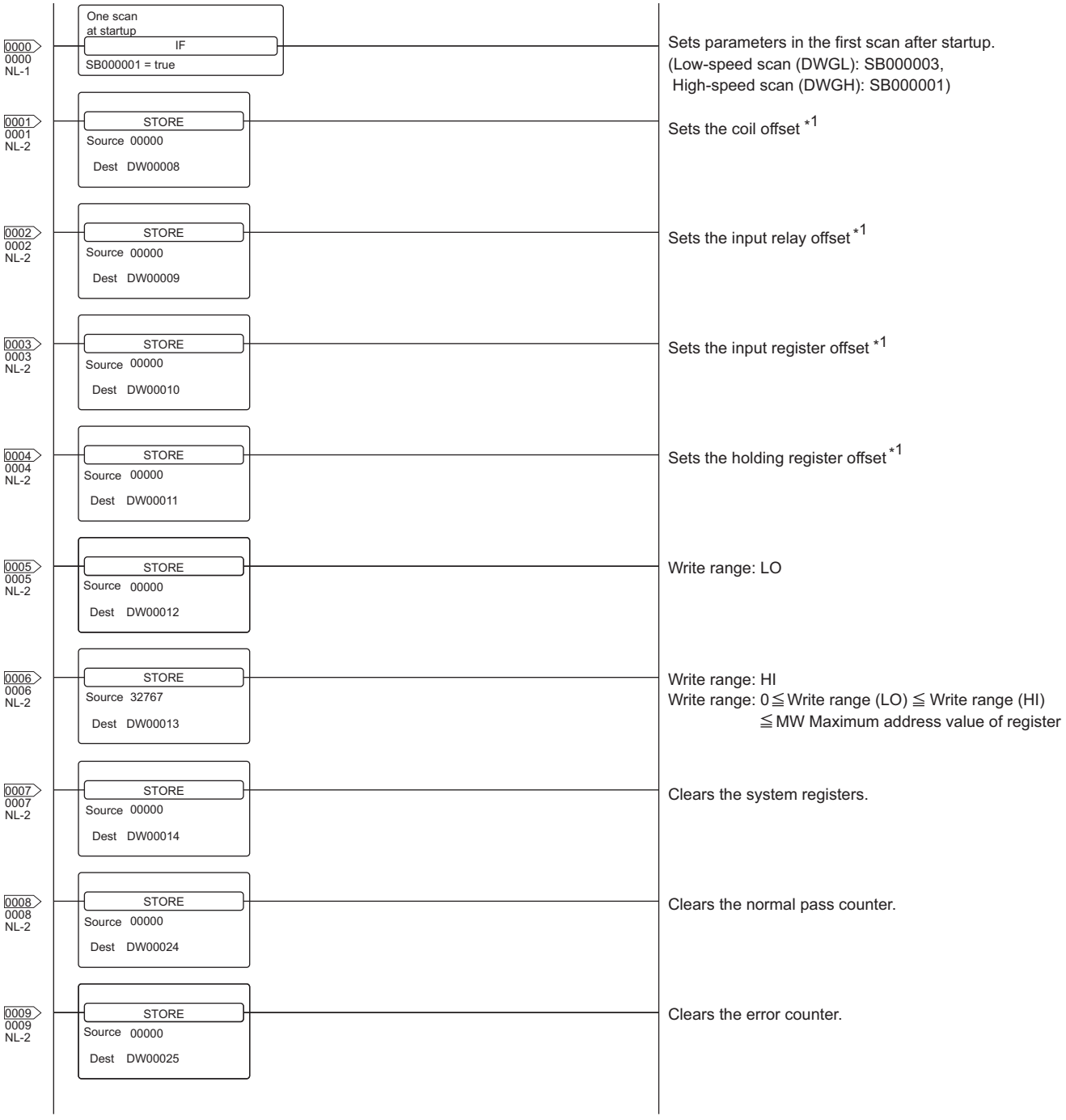
*3 The transmission speed setting must be consistent with that of the GOT side.
For the transmission speed setting on the GOT side, refer to the following.
Page 1558 Communication detail settings

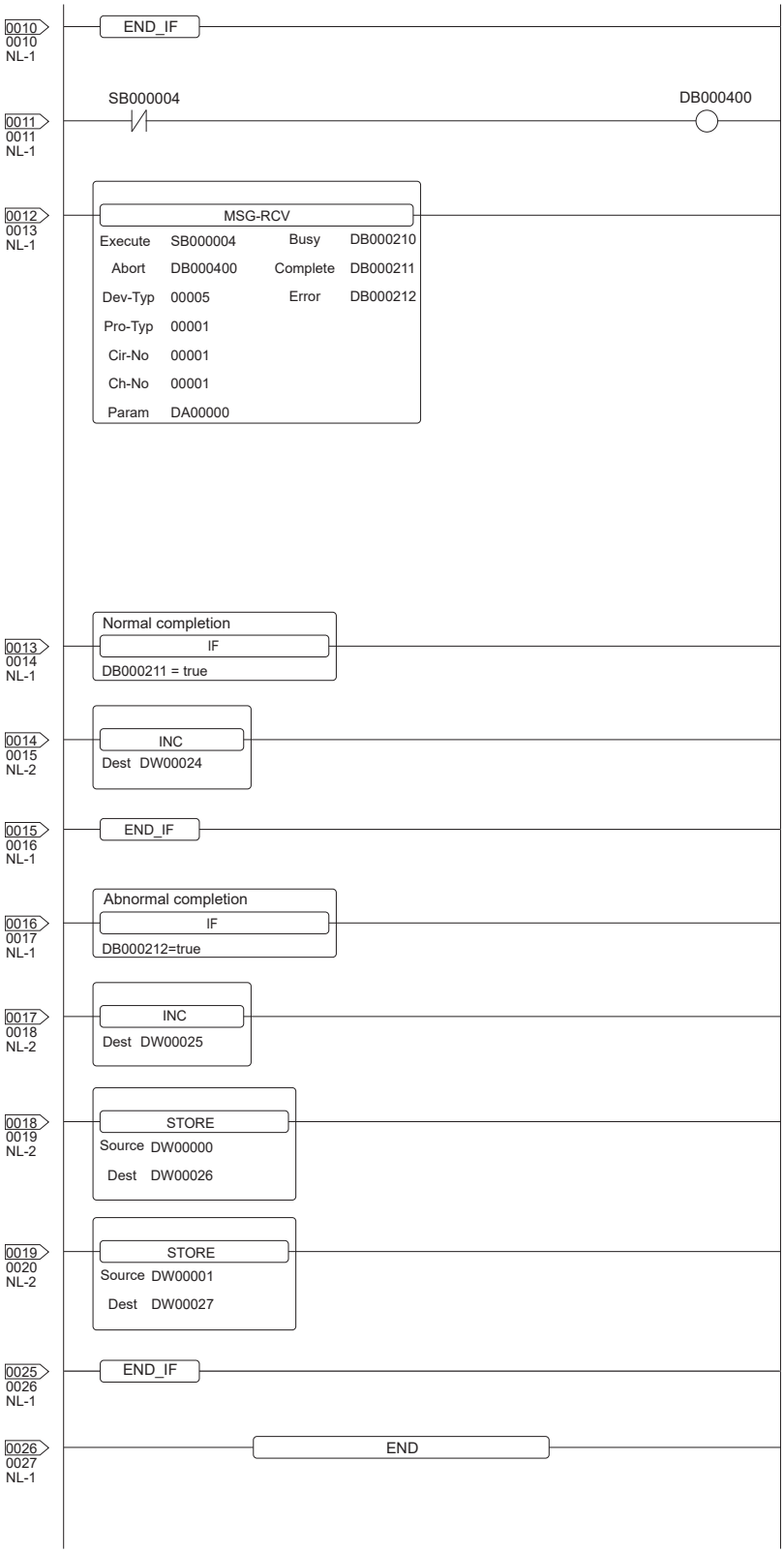
Sequence program

To communicate the MP2000 series with the GOT2000 series, the ladder program to receive messages is required.

The following shows an example ladder program for MP2000 series.

ladder program to receive messages

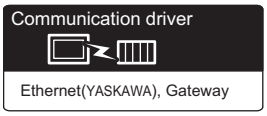


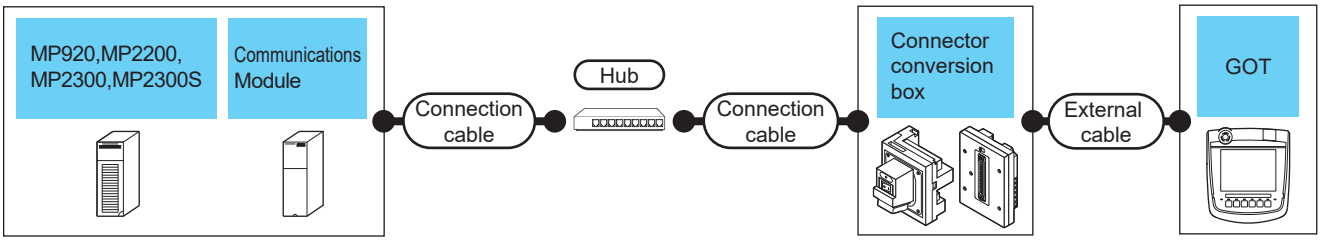


*1 Set 0 to the PARAM08 to 11 of the MSG_RCV (input relay, input register, coil, holding register offset). (Do not make the offset settings.) When the offset is needed, set [Option] → [Offset] to each object or make a setting added the offset value to the device.

32.3 Ethernet Connection

Connecting to MP920, MP2200, MP2300, or MP2300S





PLC		Connection cable		Connector conversion box	External cable *4	GOT Model	Number of connectable equipment
Model name	Communication module*3	Cable model*1	Maximum segment length*2				
MP920	218IF	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When PLC (module): GOT is N: 1 The following shows the number of PLCs for 1 GOT TCP: 128 or less UDP: 128 or less When PLC (module): GOT is 1: N The following shows the number of GOTs for 1 PLC (module) TCP/UDP: 10 or less
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
MP2200 MP2300	218IF-01 218IF-02		100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
MP2300S	218IF-01 218IF-02		100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
	-		100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

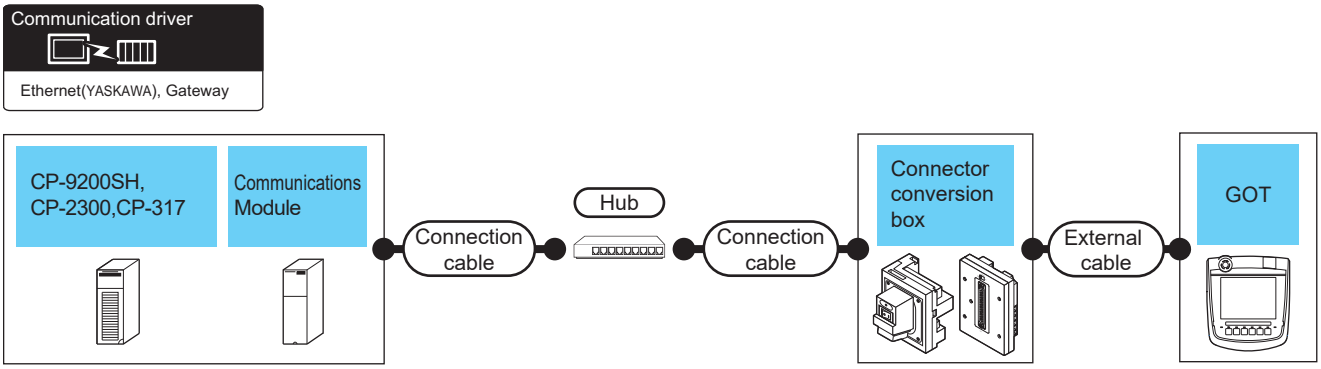
*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the target device and hub, use a cable according to the target controller configuration.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

*3 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

*4 Use C or later version of GT11H-C□□-37P.

Connecting to CP-9200SH, CP-312, or CP-317



PLC		Connection cable		Connector conversion box	External cable *4	GOT Model	Number of connectable equipment
Model name	Communication module*3	Cable model*1	Maximum segment length*2				
CP-9200SH CP-312	CP-218IF	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When PLC (module): GOT is N: 1 The following shows the number of PLCs for 1 GOT TCP: 128 or less UDP: 128 or less When PLC (module): GOT is 1: N The following shows the number of GOTs for 1 PLC (module) TCP/UDP: 10 or less
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
CP-317	218TXB		100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the target device and hub, use a cable according to the target controller configuration.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

*3 Product manufactured by YASKAWA Electric Corporation.
For details of the product, contact YASKAWA Electric Corporation.

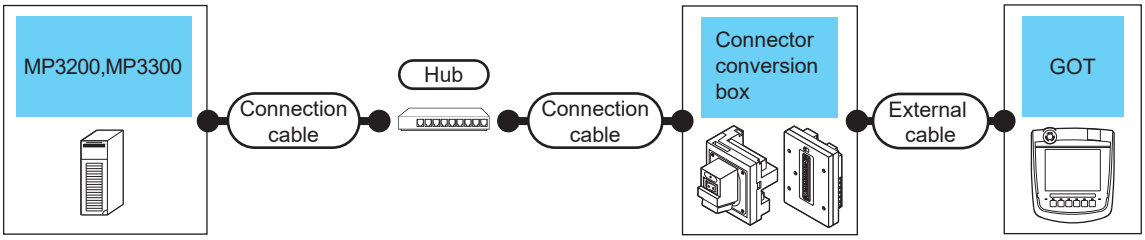
*4 Use C or later version of GT11H-C□□-37P.

Connecting to MP3200 or MP3300

Communication driver

Ethernet(YASKAWA MP3000), Gateway

When using the connector conversion box



PLC	Connection cable		Connector conversion box	External cable *3	GOT	Number of connectable equipment
Model name	Cable model*1	Maximum segment length*2			Model	
MP3200 MP3300	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When PLC (module): GOT is N: 1 The following shows the number of PLCs for 1 GOT TCP: 128 or less UDP: 128 or less When PLC (module): GOT is 1: N The following shows the number of GOTs for 1 PLC (module) TCP/UDP: 10 or less
			GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
			GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
			GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

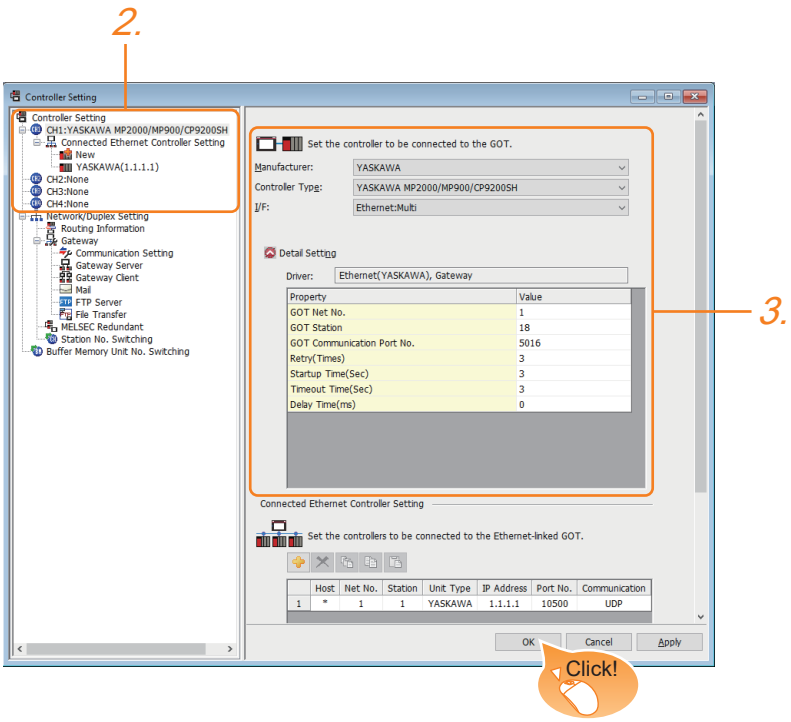
*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the target device and hub, use a cable according to the target controller configuration.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*3 Use C or later version of GT11H-C□□-37P.

Setting communication interface (Communication settings)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [YASKAWA]
- [Controller Type]: Select one of the following items according to the controller to be connected.

[YASKAWA MP2000/MP900/CP9200SH]

[YASKAWA MP3000]

- [I/F]: [Ethernet:Multi]
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1568 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
GOT Net No.	1
GOT Station	18
GOT Communication Port No.	5016
Retry(Times)	3
Startup Time(Sec)	3
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
GOT Net No.	Set the network No. of the GOT. (Default: 1)	1 to 239
GOT Station*1	Set the station No. of the GOT. (Default: 1)	1 to 64
GOT Communication Port No.	Set the GOT port No. for the connection with the Ethernet equipment. (Default: 5016 *2)	1024 to 5010, 5014 to 49152, 49171 to 65534
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 3times)	0 to 5times
Startup Time	Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU. (Default: 3sec)	3 to 255sec
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 90sec
Delay Time	Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms)	0 to 10000(10ms)

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1569 Connected Ethernet Controller Setting

*2 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

■GOT IP address setting

Set the following communication port setting.

• Standard port

■GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

• [Default Gateway]

• [Peripheral S/W Communication Port No.]

• [Transparent Port No.]

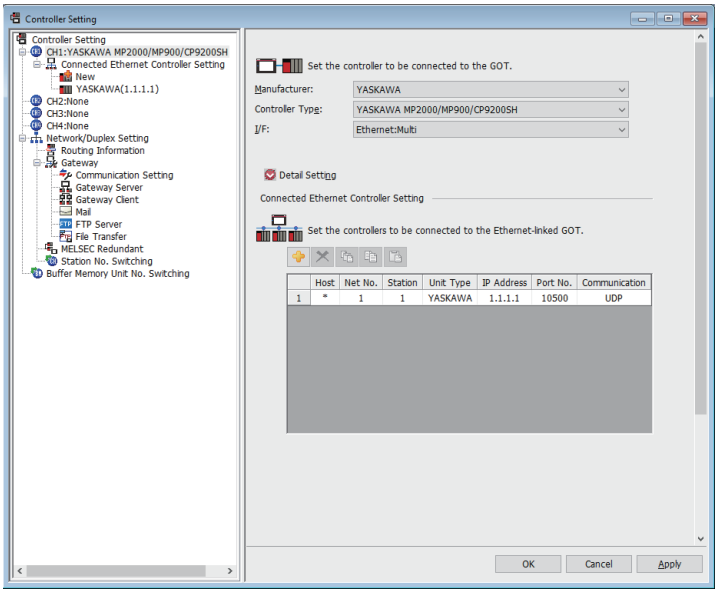
■IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 80 GOT Ethernet Setting

Connected Ethernet Controller Setting



Item	Description	Set value
Host	The host is displayed. It refers to a station that can be connected without setting a station number. (The host is indicated with an asterisk (*).)	—
Net No.	Set the network No. of the connected Ethernet equipment. (Default: 1)	1 to 239
Station *2	Set the station No. of the connected Ethernet equipment. (Default: 1)	1 to 64
Unit Type	YASKAWA (fixed)	YASKAWA (fixed)
IP address *1	Set the IP address of the connected Ethernet equipment. (Default: 1.1.1.1)	PLC side IP address
Port No.	Set the port No. of the connected Ethernet equipment. (Default: 10500)	256 to 65534
Communication format	Select a communication protocol. (Default: UDP)	UDP, TCP

*1 Connection with the PLC is unavailable if the IP address is the default value. Set the value to the IP address of the PLC to be connected.

*2 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].

☞ Page 1568 Communication detail settings

PLC side setting (MP2000 or MP920 series)

Point

YASKAWA PLC

For details of YASKAWA PLCs, refer to the following manuals.

YASKAWA PLC user's Manual

Parameter settings

Make the parameter settings with a peripheral tool.

■Settings for 218IF-01

Item		Set value	Range
Parameter setting	Local IP Address	[ ].[ ].[ ].[ ]	PLC side IP address
	Response Time	0	Not required for communication with GOT
	Count of Retry (Number of Retries)	0	Not required for communication with GOT
	CNO *1 (Connection Number)	1	1 to 20
	Local Port (Local Station's Port Number)	10500	256 to 65534
	Node IP Address (Remote Station's IP Address)*2	[ ].[ ].[ ].[ ]	IP address of GOT
	Node Port (Remote Station's Port Number)*2	[ ]	Port No. of GOT
	Connection Type	UDP (recommended)	UDP/TCP
	Protocol Type	Extended MEMOBUS	Extended MEMOBUS
	Code	BIN	BIN
	Node Name (Remote Station's Name)	GOT2000	Name of GOT
Local Port: TCP/IP Setting	Subnet Mask	[ ].[ ].[ ].[ ]	PLC side setting
	Gateway IP Address	[ ].[ ].[ ].[ ]	
	System Port No. (Diagnostic/Engineering Port No.)	10000	
	TCP (Transmission Control Protocol) Zero Window Timer Value	3 sec	
	TCP Retry Time	500ms	
	TCP Close Time	60 sec	
	IP Assemble Time	30 sec	
	MAX. Packet Length	1500 bytes	

*1 When MITSUBISHI PLC and YASKAWA PLC are used together in the same network, do not set the same value for the Station of MITSUBISHI PLC and the CNO (Connection number) of YASKAWA PLC.

*2 The settings of Node IP Address (Remote Station's IP Address) and Node Port (Remote Station's Port Number) must be the same as those of the GOT.
For how to set the IP address on the GOT, refer to the following.
☞ Page 1568 GOT IP address setting
For how to set the port number on the GOT, refer to the following.
☞ Page 1568 Communication detail settings

■Setting for the built-in MP2300S Ethernet and 218IF-02

Item		Set value	Range
Transmission parameter setting	IP Address	[ ].[ ].[ ].[ ]	PLC side IP address
	Subnet Mask	[ ].[ ].[ ].[ ]	PLC side setting
	Gateway IP Address	[ ].[ ].[ ].[ ]	
	Device name	Arbitrary	Up to 16 one-byte characters
Transmission parameter detailed setting	Engineering Port	256 to 65535	For a connection with software MPE720
	Response Time	0	Not required for communication with GOT
	Count of Retry (Number of Retries)	0	
Message communication of connection parameter setting	Connection Number	1	• Range of built-in MP2300S Ethernet: 1 to 4 • Range of 218IF-02: 1 to 20
	Local Port	10500	256 to 65534
	Node IP Address*1	[ ].[ ].[ ].[ ]	IP address of GOT
	Node Port *1	[ ]	Port No. of GOT
	Connection Type	UDP (recommended)	TCP/UDP
	Protocol Type	Extended MEMOBUS	Extended MEMOBUS
	Code	BIN	BIN
	Node Name	Arbitrary	Up to 32 one-byte characters (16 two-byte characters)

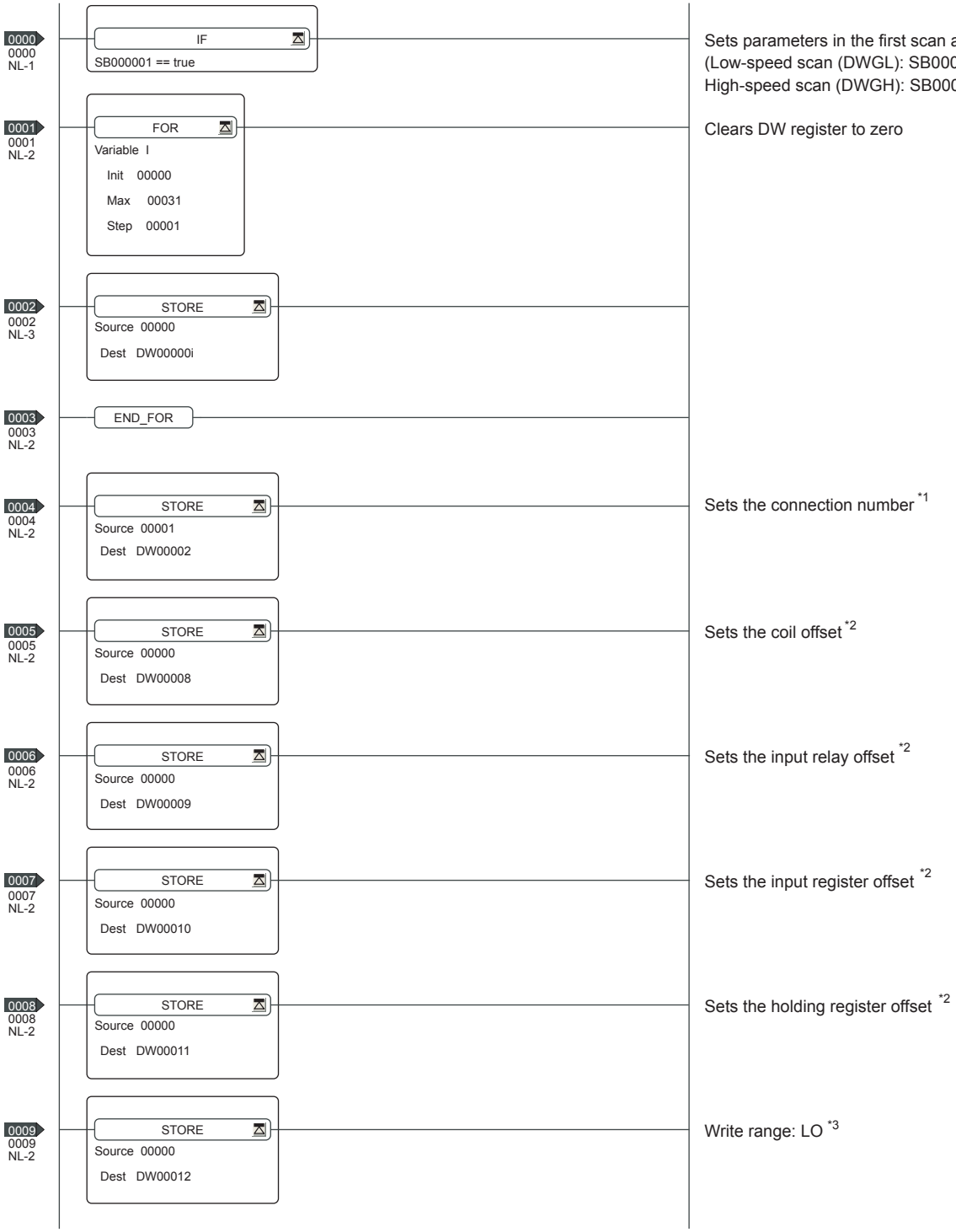
*1 The settings of Node IP Address (Remote Station's IP Address) and Node Port (Remote Station's Port Number) must be the same as those of the GOT.
For how to set the IP address on the GOT, refer to the following.
☞ Page 1568 GOT IP address setting
For how to set the port number on the GOT, refer to the following.
☞ Page 1568 Communication detail settings

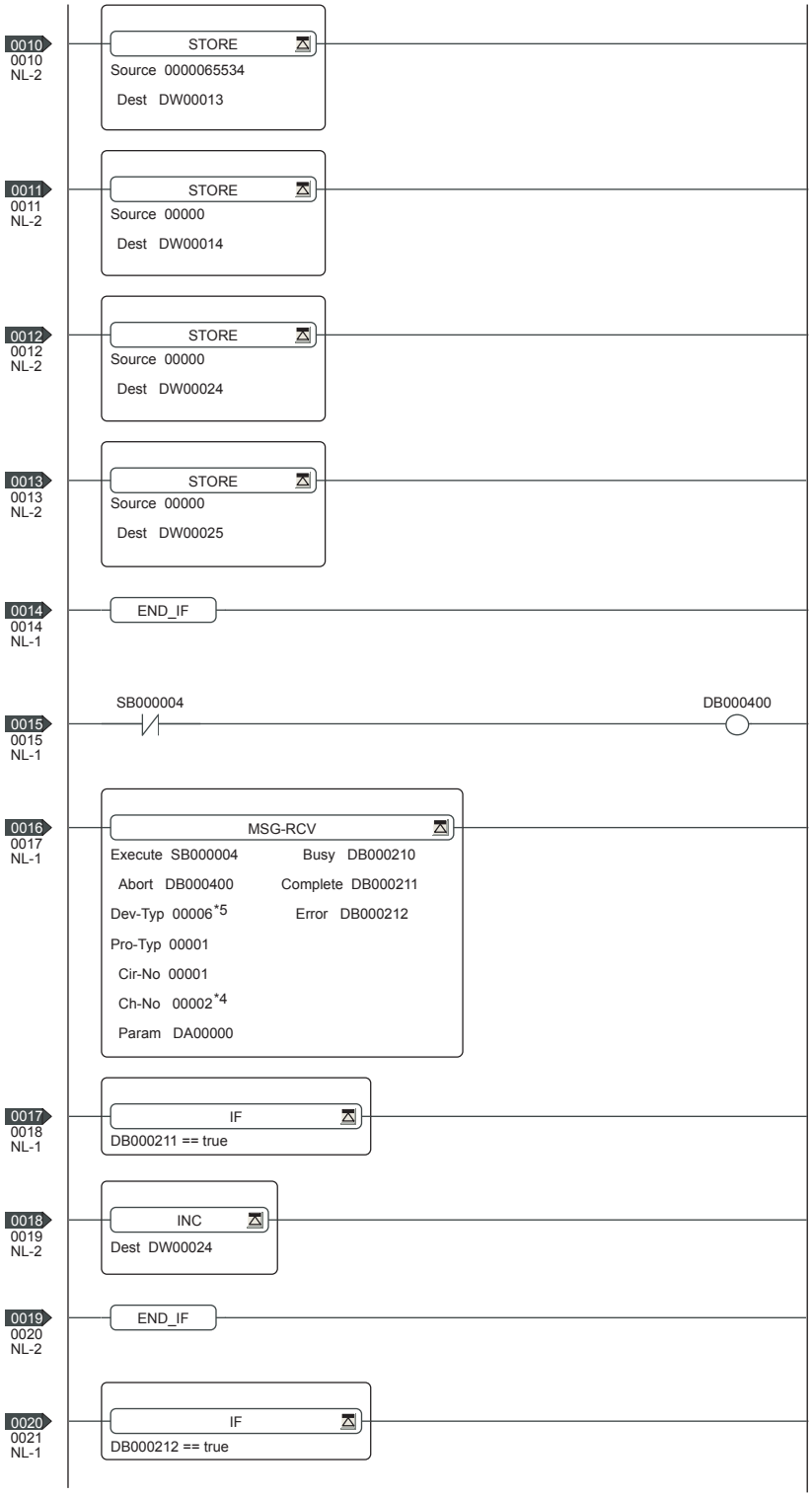
Sequence program

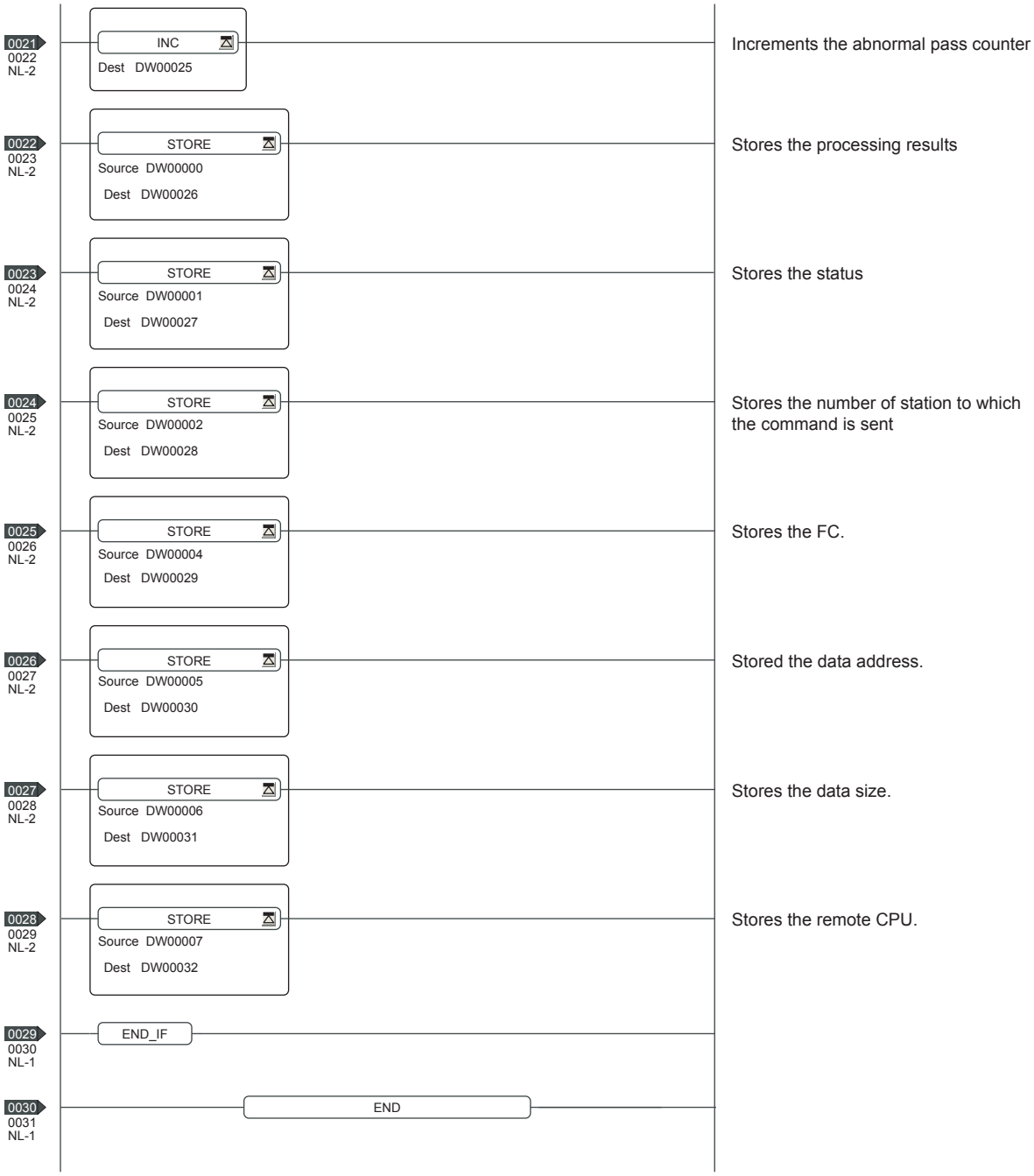
To communicate the MP2000 series or MP920 series with the GOT2000 series, the ladder program to receive messages is required.

When connecting the MP2000 series or MP920 series with multiple GOTs, ladder programs to receive messages for each GOT are required.

ladder program to receive messages




0010
0010
NL-2
STORE
Source 0000065534
Dest DW00013
Write range: HI *3
0011
0011
NL-2
STORE
Source 00000
Dest DW00014
Clears the system registers
0012
0012
NL-2
STORE
Source 00000
Dest DW00024
Clears the normal pass counter
0013
0013
NL-2
STORE
Source 00000
Dest DW00025
Clears the error counter
0014
0014
NL-1
END_IF
Parameter settings completed
SB000004
DB000400
0015
0015
NL-1
Sends a Message Receive instruction
0016
0017
NL-1
MSG-RCV
Execute SB000004
Busy DB000210
Abort DB000400
Complete DB000211
Dev-Typ 00006 *5
Error DB000212
Pro-Typ 00001
Cir-No 00001
Ch-No 00002 *4
Param DA00000
The executing coil turns ON when the CPU receives the command.
The normal or abnormal completion coil turns ON at the completion of processing.
Pro-Type: 1 for extended MEMOBUS or MELSEC.
2 for non-procedure.
0017
0018
NL-1
IF
DB000211 == true
The normal completion coil turns ON at normal completion
0018
0019
NL-2
INC
Dest DW00024
Increments the normal pass counter
0019
0020
NL-2
END_IF
0020
0021
NL-1
IF
DB000212 == true
The abnormal completion coil turns ON at abnormal completion



*1: When connecting to multiple GOTs, set connection numbers individually for each GOT.
*2: Set the offset for each device.
*3: Set the available write range for the holding registers.
*4: When connecting to multiple GOTs, set channel numbers individually for each GOT.
*5: Set the Dev-Typ of the message receive function <MSG-RCV> to [00016] for the built-in MP2300S Ethernet connection or the Ethernet port connection of 218IF-02.

PLC side setting (CP-9200SH, CP-312, or CP-317 series)

Point

YASKAWA PLC

For details of YASKAWA PLCs, refer to the following manuals.

YASKAWA PLC user's Manual

Parameter settings

Make the parameter settings with a peripheral tool.

The following shows an example of parameter settings.

■Settings for CP-218IF

Item	Set value
Module Type	CP-218
CPU Number	01
Circuit Number	01
Hot Swapping	○

To configure settings for multiple GOTs, settings are required for each GOT.

Item		Set value	Range
Transmission parameter setting	IP Address	Set the IP address of CP-218IF.	0.0.0.1 to 255.255.255.254
	Response Time	Not required	—
	Count of Retry (Number of Retries)	Not required	—
Connection parameter setting	Connection Number	1	1 to 20
	Local Port	10500	256 to 65534
	Node IP Address*1	Set the IP address of the GOT.	0.0.0.0 to 255.255.255.254
	Node Port*1	Set the port No. of the GOT.	0, 256 to 65535
	Connection Type	UDP	TCP/UDP
	Protocol Type	Extended MEMOBUS	Extended MEMOBUS
	Code	BIN	BIN
	Node Name	Any string	—

*1 The settings of Node IP Address (Remote Station's IP Address) and Node Port (Remote Station's Port Number) must be the same as those of the GOT.
For how to set the IP address on the GOT, refer to the following.
☞ Page 1568 GOT IP address setting
For how to set the port number on the GOT, refer to the following.
☞ Page 1568 Communication detail settings

■Settings for 218TXB

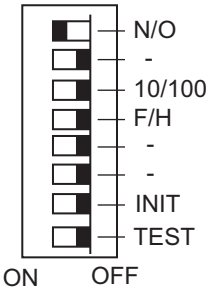
Item		Set value	Range
Transmission parameter setting	IP Address	Set the IP address of 218TXB.	0.0.0.1 to 255.255.255.254
	Response Time	Not required	—
	Count of Retry (Number of Retries)	Not required	—
Connection parameter setting	Connection Number	1	1 to 20
	Local Port	10500	256 to 65534
	Node IP Address*1	Set the IP address of the GOT.	0.0.0.0 to 255.255.255.254
	Node Port*1	Set the port No. of the GOT.	0, 256 to 65535
	Connection Type	UDP	TCP/UDP
	Protocol Type	Extended MEMOBUS	Extended MEMOBUS
	Code	BIN	BIN
	Node Name	Any string	—

*1 The settings of Node IP Address (Remote Station's IP Address) and Node Port (Remote Station's Port Number) must be the same as those of the GOT.
For how to set the IP address on the GOT, refer to the following.
☞ Page 1568 GOT IP address setting
For how to set the port number on the GOT, refer to the following.
☞ Page 1568 Communication detail settings

Settings by DIP switch

■Settings for 218TXB

Set the DIP switch (SW2) as follows.



Setting Item		Set value	Setting range
N/O	Mode Selection	ON	ON: Extended mode (13 channels, up to 1024 words) OFF: Basic mode (10 channels, up to 512 words)
-*1	Not used	OFF	-
10/100	Transmission Speed	OFF	ON: 10Mbps OFF: 100Mbps
F/H	Transmission Mode	OFF	ON: Full duplex mode OFF: Half duplex mode
INIT	Initial Startup	OFF	ON: Start up by the default IP address and the engineering port No. OFF: Start up by the IP address and the engineering port No. set for CP-717
TEST*2	Test	OFF	ON: The module starts the self-diagnosis when the PLC is started. OFF: The module does not start the self-diagnosis when the PLC is started.

*1 Turn off all the unused switches.
When even one of those switches is on, the PLC may not normally operate.

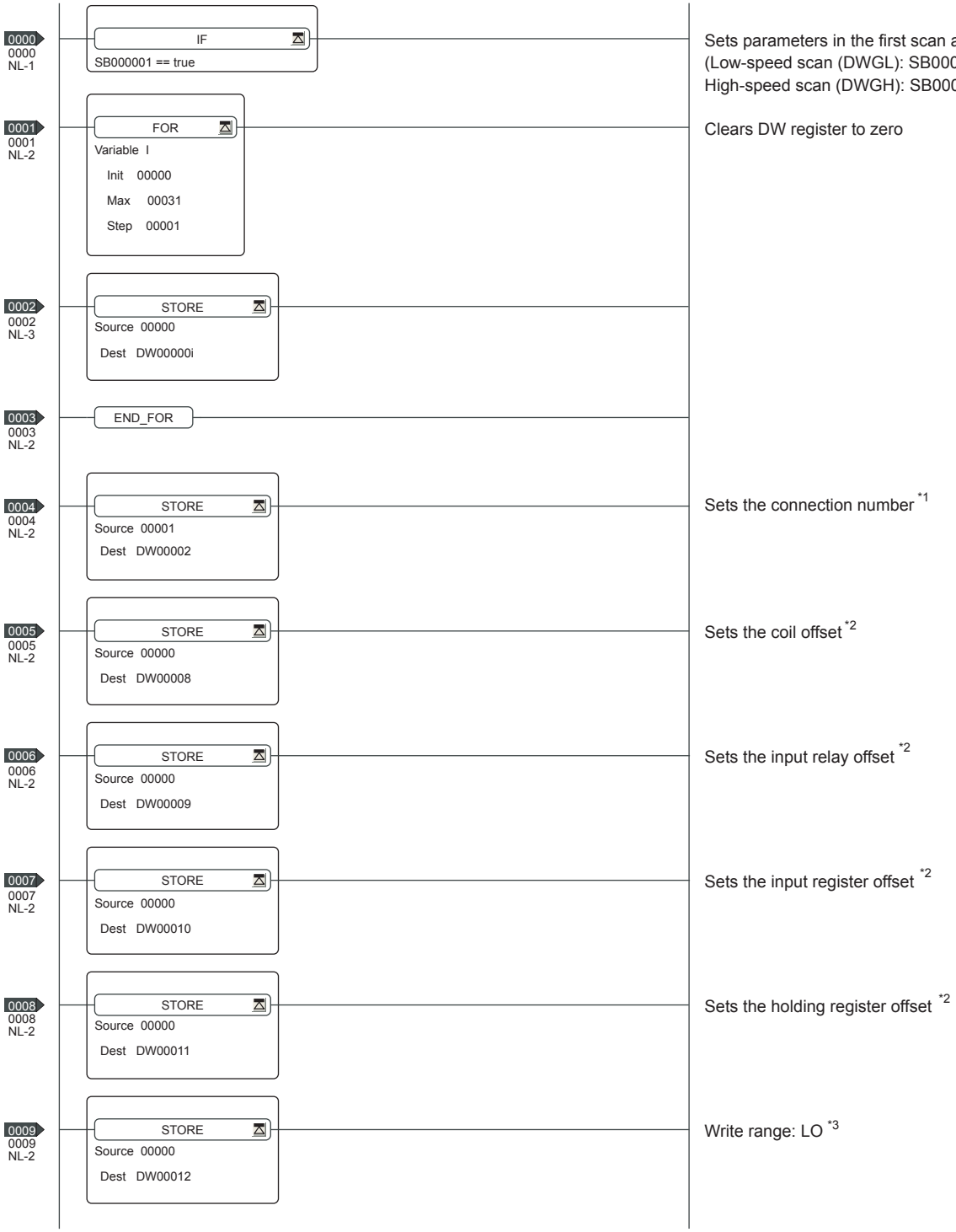
*2 When the PLC is started with the TEST switch on, the module starts the self-diagnosis and may not perform the communication.
Turn off the switch before the communication is started.

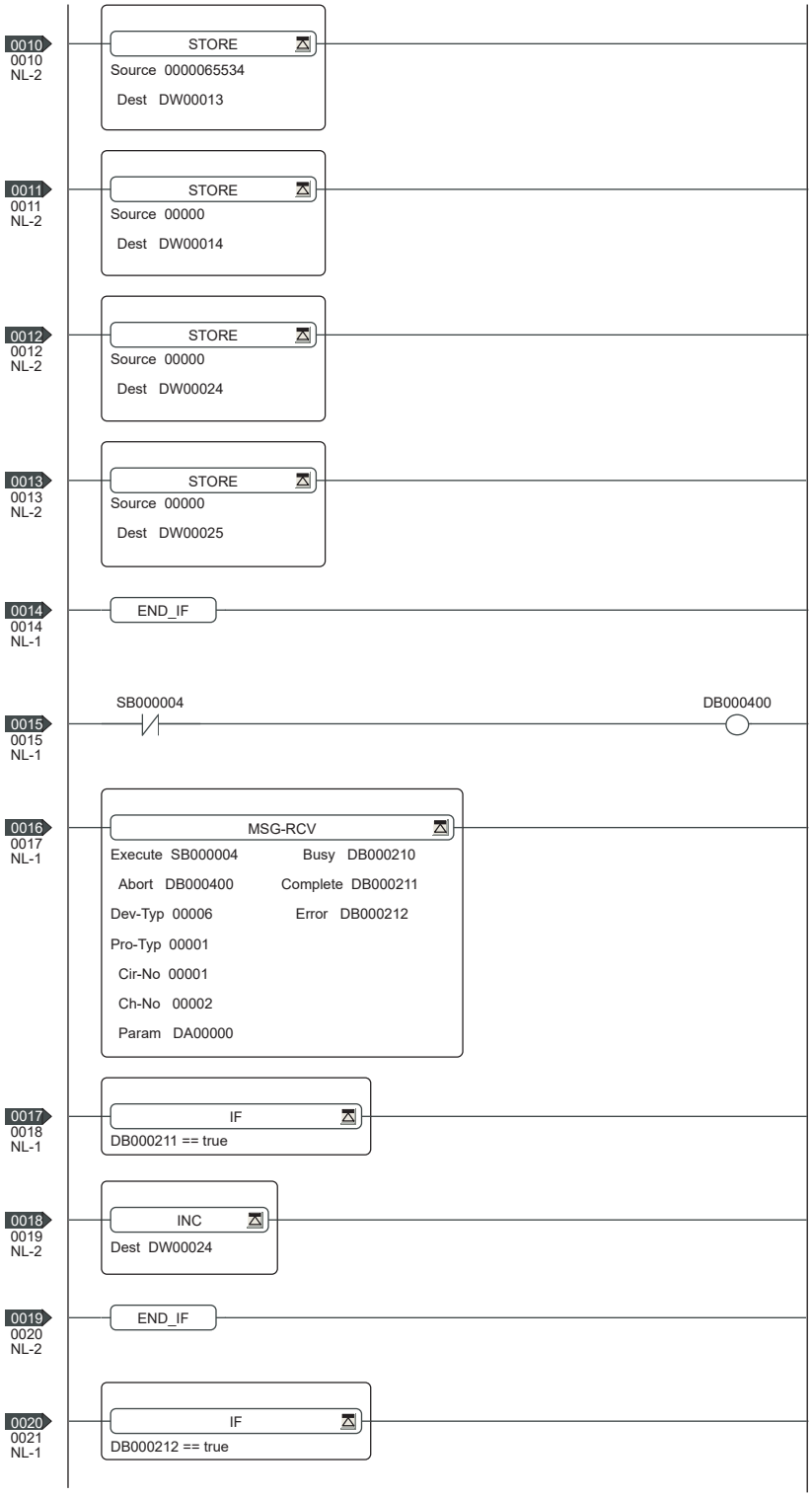
Sequence program

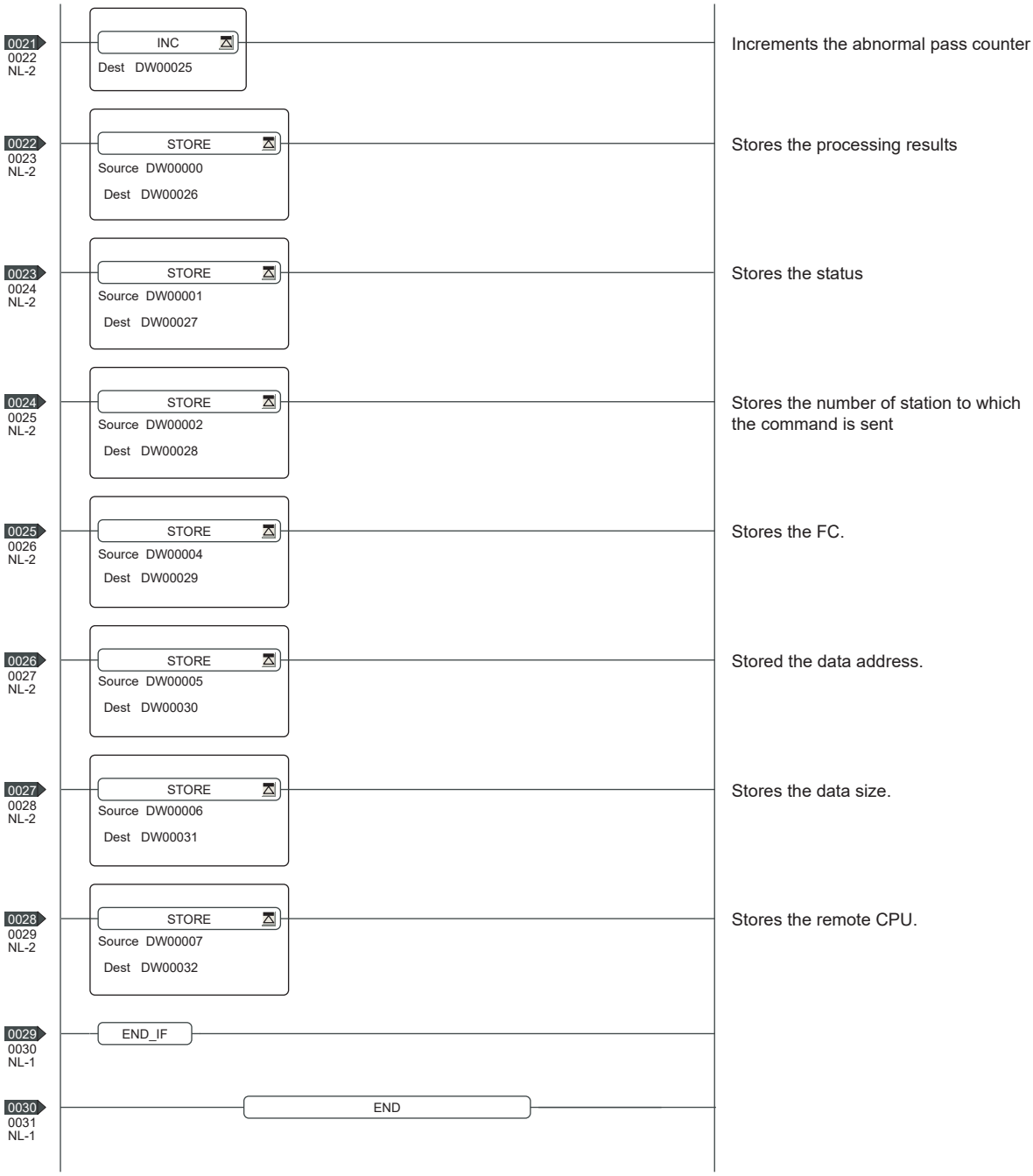
To establish connection between the CP-9200SH series, CP-312 series, or CP-317 series and the GOT2000 series, a ladder program to receive messages is required.

When multiple GOTs are connected to the CP-9200SH series, CP-312 series, or CP-317 series, ladder programs to receive messages for each GOT are required.

ladder program to receive messages




0010
0010
NL-2
STORE
Source 0000065534
Dest DW00013
Write range: HI
0011
0011
NL-2
STORE
Source 00000
Dest DW00014
Clears the system registers
0012
0012
NL-2
STORE
Source 00000
Dest DW00024
Clears the normal pass counter
0013
0013
NL-2
STORE
Source 00000
Dest DW00025
Clears the error counter
0014
0014
NL-1
END_IF
Parameter settings completed
SB000004
DB000400
0015
0015
NL-1
Sends a Message Receive instruction
0016
0017
NL-1
MSG-RCV
Execute SB000004
Busy DB000210
Abort DB000400
Complete DB000211
Dev-Typ 00006
Error DB000212
Pro-Typ 00001
Cir-No 00001
Ch-No 00002
Param DA00000
The executing coil turns ON when the CPU receives the command.
The normal or abnormal completion coil turns ON at the completion of processing.
Pro-Type: 1 for extended MEMOBUS or MELSEC.
2 for non-procedure.
0017
0018
NL-1
IF
DB000211 == true
The normal completion coil turns ON at normal completion
0018
0019
NL-2
INC
Dest DW00024
Increments the normal pass counter
0019
0020
NL-2
END_IF
0020
0021
NL-1
IF
DB000212 == true
The abnormal completion coil turns ON at abnormal completion



*1 When connecting to multiple GOTs, set connection numbers individually for each GOT.

*2 Set 0 to PARAM08 to 11 of MSG_RCV (input relay, input register, coil, holding register offset).
(Do not make the offset settings.) When the offset is needed, set [Option] → [Offset] to each object or make a setting added the offset value to the device.

*3 Set the available write range for the holding registers.

PLC side setting (MP3000 series)

Point

YASKAWA PLC

For details of YASKAWA PLCs, refer to the following manuals.

YASKAWA PLC user's Manual

Parameter settings

Make the parameter settings with a peripheral tool.

■Settings for the built-in MP3000 series Ethernet

Item		Set value	Range
Transmission parameter setting	IP Address	[ ].[ ].[ ].[ ]	PLC side IP address
	Subnet Mask	[ ].[ ].[ ].[ ]	PLC side setting
	Gateway IP Address	[ ].[ ].[ ].[ ]	
	Device name	Arbitrary	Up to 16 one-byte characters
Transmission parameter detailed setting	Engineering Port	256 to 65535	For a connection with software MPE720
	Response Time	0	Not required for communication with GOT
	Count of Retry	0	
Message communication of connection parameter setting	Connection Number	1	Range: 1 to 20
	Local Port	10500	256 to 65534
	Node IP Address*1	[ ].[ ].[ ].[ ]	IP address of GOT
	Node Port*1	[ ]	Port No. of GOT
	Connection Type	UDP (recommended)	TCP/UDP
	Protocol Type	Extended MEMOBUS	Extended MEMOBUS
	Code	BIN	BIN
	Detail	☞ • Auto receive function	
	Node Name	Arbitrary	Up to 32 one-byte characters (16 two-byte characters)

*1 The settings of Node IP Address (Remote Station's IP Address) and Node Port (Remote Station's Port Number) must be the same as those of the GOT.
For how to set the IP address on the GOT, refer to the following.
☞ Page 1568 GOT IP address setting
For how to set the port number on the GOT, refer to the following.
☞ Page 1568 Communication detail settings

- Auto receive function

Set the following items.

Item	Set value	Range
Auto receive	<When auto receive function> Valid <When using ladder program to receive messages> Invalid	Valid / Invalid
Transmission buffer channel	Set as necessary	1 to 10
Setting the slave I/F register	Default	-

Sequence program

To communicate the MP3000 series with the GOT2000 series, the ladder program to receive messages is required.

When connecting the MP3000 series with multiple GOTs, ladder programs to receive messages for each GOT are required.

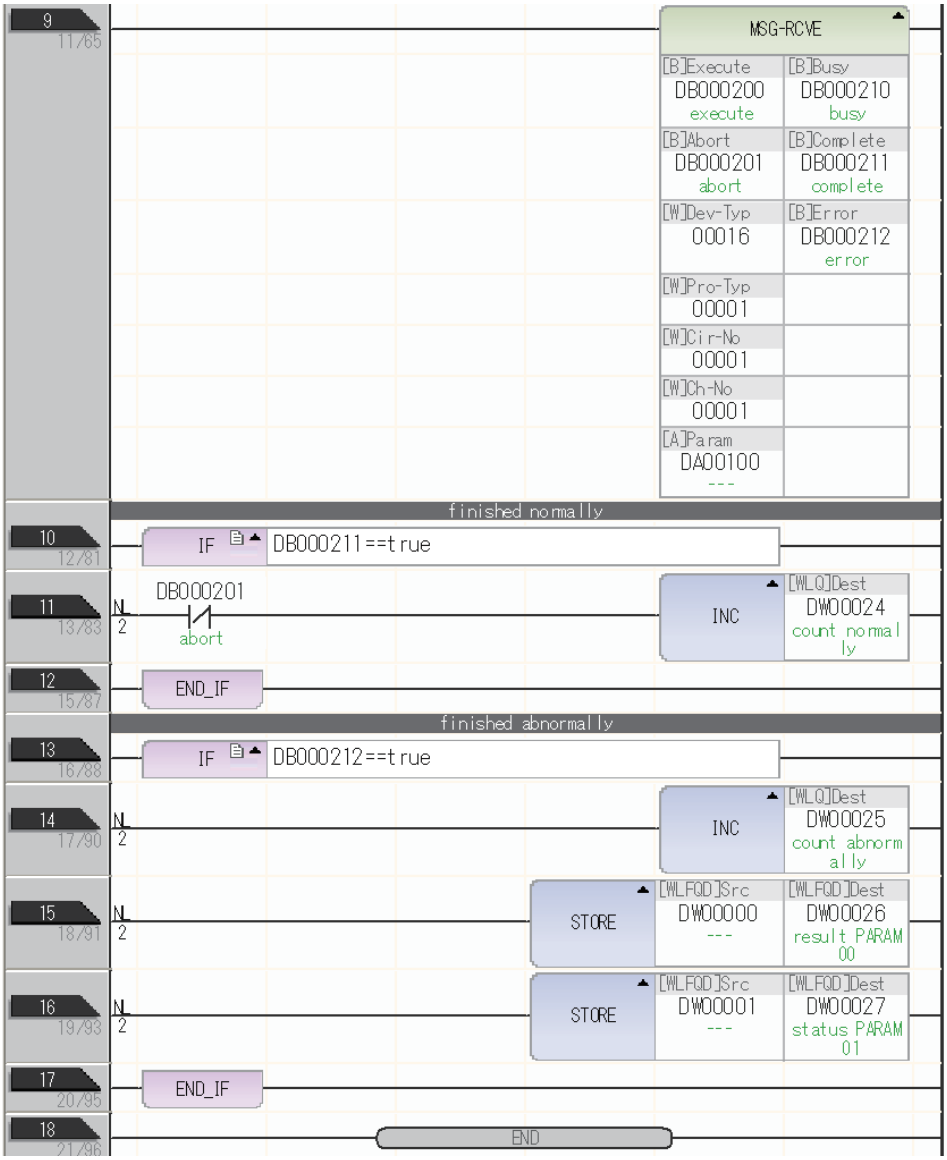
The example program using the MSG-RCVE function is shown below.

For details of ladder program, refer to the following manuals.

📖YASKAWA PLC user's Manual

ladder program to receive messages




9
11/65
MSG-RCVE
[B]Execute
DB000200
execute
[B]Busy
DB000210
busy
[B]Abort
DB000201
abort
[B]Complete
DB000211
complete
[W]Dev-Typ
00016
[B]Error
DB000212
error
[W]Pro-Typ
00001
[W]Cir-No
00001
[W]Ch-No
00001
[A]Param
DA00100
---
finished normally
10
12/81
IF
DB000211==true
11
13/83
N
2
DB000201
abort
INC
[WLQ]Dest
DW00024
count normally
12
15/87
END_IF
finished abnormally
13
16/88
IF
DB000212==true
14
17/90
N
2
INC
[WLQ]Dest
DW00025
count abnormally
15
18/91
N
2
STORE
[WLFQD]Src
DW00000

[WLFQD]Dest
DW00026
result PARAM 00
16
19/93
N
2
STORE
[WLFQD]Src
DW00001

[WLFQD]Dest
DW00027
status PARAM 01
17
20/95
END_IF
18
21/96
END

Precautions

When connecting to multiple GOTs

■Setting Station

When connecting two or more GOTs in the Ethernet network, set each [Station] to the GOT.

☞ Page 1569 Connected Ethernet Controller Setting

■Setting IP address

Do not use the IP address "192.168.0.18" when using multiple GOTs with the GOT 1000 series mixed.

A communication error may occur on the GOT with the IP address.

When setting IP address

Do not use "0" and "255" at the end of an IP address.

(Numbers of *.*.*.0 and *.*.*.255 are used by the system.)

The GOT may not monitor the controller correctly with the above numbers.

Consult with the administrator of the network before setting an IP address to the GOT and controller.

When connecting to the multiple network equipment (including GOT) in a segment

By increasing the network load, the transmission speed between the GOT and PLC may be reduced.

The following actions may improve the communication performance.

- Using a switching hub
- More high speed by 100BASE-TX (100Mbps)
- Reduction of the monitoring points on GOT

32.4 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1

YASKAWA equipment ([YASKAWA GL/PROGIC8])

YASKAWA equipment ([YASKAWA CP9200(H)])

YASKAWA equipment ([YASKAWA CP9300MS(MC compatible)])

YASKAWA equipment ([YASKAWA MP2000/MP900/CP9200SH])

YASKAWA equipment ([YASKAWA MP3000])

MEMO

33 YASKAWA ROBOT CONTROLLER

- Page 1587 Connectable Model List
- Page 1588 System Configuration
- Page 1589 GOT side settings
- Page 1593 Robot Controller Settings
- Page 1594 Settable Device Range
- Page 1595 Precautions

33.1 Connectable Model List

The following shows the connectable model.

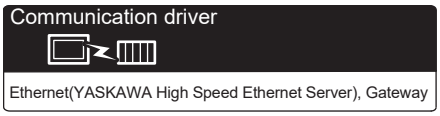
Model name	Clock	Communication type	Connectable model	Refer to
YRC1000	×*1	Ethernet*2	GT2506-HS GT2505-HS	☞ Page 1588 Connecting to a robot controller
YRC1000micro				

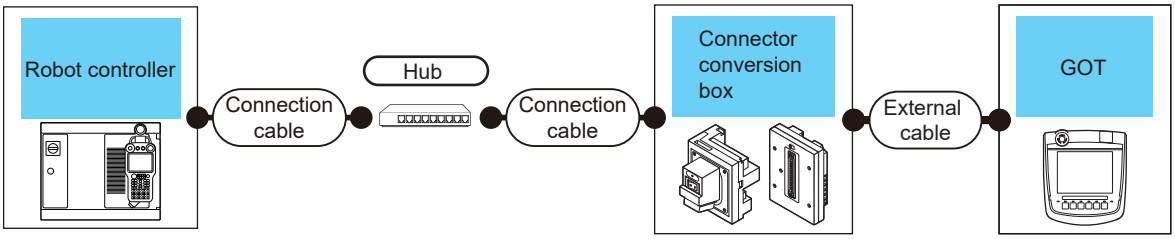
*1 The YRC1000 and YRC1000micro have the clock function but cannot acquire clock information from the GOT.

*2 The high speed Ethernet server function (option) of the YRC1000 or YRC1000micro is required.
For details, contact YASKAWA Electric Corporation.

33.2 System Configuration

Connecting to a robot controller





Robot controller		Connection cable		Connector conversion box	External cable *3	GOT Model	Number of connectable equipment
Model name	Communication type	Cable model*1	Max. distance*2				
YRC1000*4	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100 m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	Use one-to-one connection for GOT and robot controller.
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P (3m) GT11H-C60-37P (6m) GT11H-C100-37P(10m)		
YRC1000micro	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100 m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	Use one-to-one connection for GOT and robot controller.
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P (3m) GT11H-C60-37P (6m) GT11H-C100-37P(10m)		

*1 The destination device connected with the twisted pair cable varies with the configuration of the Ethernet network system used.
Connect the cable to the Ethernet module, hub, transceiver or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the controller and hub, use a cable according to the configuration of the controller.

*2 Length between a hub and a node
The maximum length depends on the Ethernet module used.
The following shows the number of the connectable pieces of equipment when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: Up to 2 nodes for a cascade connection (205 m)
For the cascade connection between the switching hubs, there is no theoretical limit to the number of cascades.
For whether there is a limit or not, contact the switching hub manufacturer.

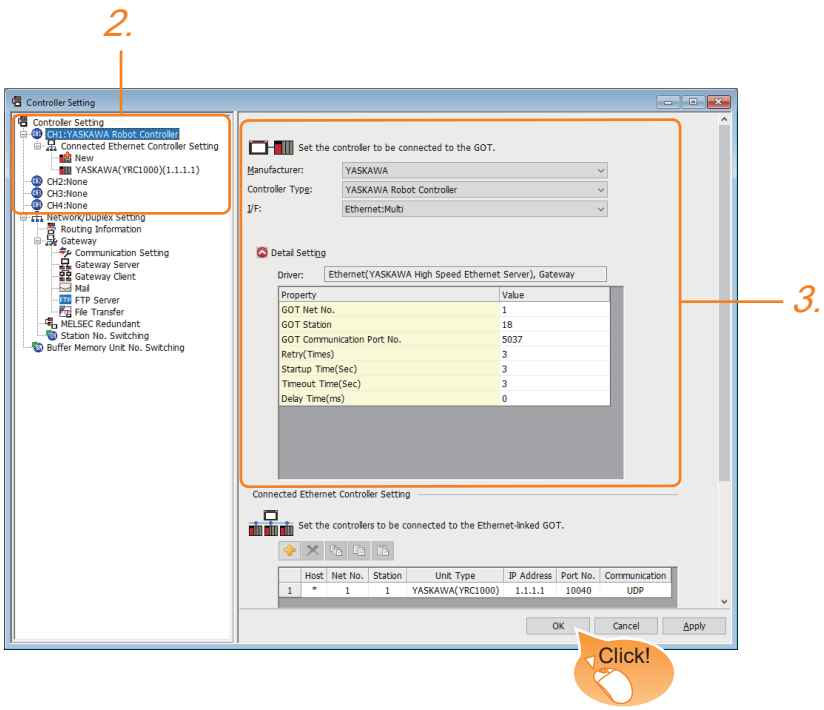
*3 Use C or later version of GT11H-C□□-37P.

*4 Connect the GOT to a LAN connector that can be used for the YRC1000's Ethernet function.
Do not connect the GOT to a LAN connector dedicated to the programming pendant.
For details, refer to the manual of the YASKAWA robot controller.

33.3 GOT side settings

Setting the communication interface (Controller setting)

Set the channel of the connected controller.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel number to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [YASKAWA]
- [GOT Type]: [YASKAWA Robot Controller]
- [I/F]: [Ethernet: Multi]
- [Detail Setting]: Configure the settings according to the use environment.

☞ Page 1590 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.
☞ Page 82 I/F communication setting

Communication detail settings

Configure the settings according to the use environment.

Property	Value
GOT Net No.	1
GOT Station	18
GOT Communication Port No.	5037
Retry(Times)	3
Startup Time(Sec)	3
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
GOT Net No.	Set the network number of the GOT. (Default: 1)	1 (fixed)
GOT Station*1	Set the station number of the GOT. (Default: 18)	1 to 120
GOT Communication Port No.	Set the port number used by the GOT for connection with the Ethernet module. (Default: 5037*2)	1024 to 5010, 5014 to 49152, 49171 to 65534
Retry	Set the number of retries to be performed when a communication timeout occurs. When no response is received after retries, the communication times out. (Default: 3 times)	0 to 5 times
Startup Time	Set the time period from when the GOT starts up until when the GOT starts communication with the robot controller. (Default: 3 sec)	3 to 255 sec
Timeout Time	Set the time period for a communication to time out. (Default: 3 sec)	1 to 90 sec
Delay Time	Set the delay time for reducing the load of the network/destination robot controller. (Default: 0 ms)	0 to 10000 (ms)

*1 Set different values for [GOT Station] in [Detail Setting] and [Station] in [Connected Ethernet Controller Setting].
☞ Page 1592 Connected Ethernet controller setting

*2 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

GOT Ethernet setting

Configuring the following settings enables the GOT to connect to different networks.

GOT IP address setting

Configure the following communication port settings.

- Standard port

GOT Ethernet common setting

Configure the following settings which are common to the standard port and the extension port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

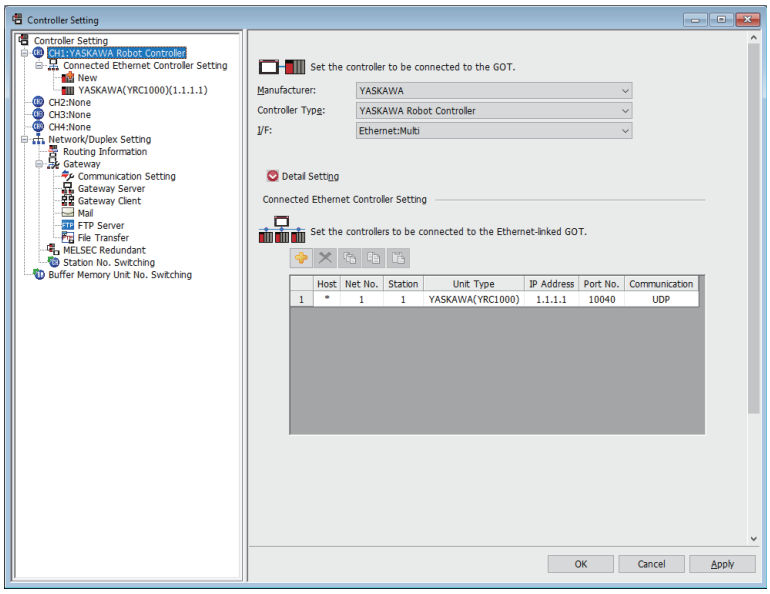
IP filter setting

Configuring the IP filter settings allows or blocks access from specific IP addresses.

For details on the settings, refer to the following.

☞ Page 80 GOT Ethernet Setting

Connected Ethernet controller setting



Item	Description	Setting value
Host	The host is displayed. It refers to a station that can be connected without setting a station number. (The host is indicated with an asterisk (*).)	-
Net No.	Set the network No. of the connected Ethernet module. (Default: 1)	1 (fixed)
Station No. *2	Set the station No. of the connected Ethernet module. (Default: 1)	1 to 120
Unit Type	YASKAWA(YRC1000) (fixed)	YASKAWA(YRC1000) (fixed)
IP address *1	Set the IP address of the connected Ethernet module. (Default: 1.1.1.1)	IP address of the robot controller
Port No.	Set the port No. of the connected Ethernet module. (Default: 10040)	10040 (fixed)
Communication	Select a communication format. (Default: UDP)	UDP (fixed)

*1 Connection with the robot controller is unavailable if the IP address is the default value.
Set the value to the IP address of the robot controller to be connected.

*2 Set different values for [GOT Station] in [Detail Setting] and [Station] in [Connected Ethernet Controller Setting].
☞ Page 1590 Communication detail settings

33.4 Robot Controller Settings

Point

For details on the YASKAWA robot controller, refer to the following.
Manual of the YASKAWA robot controller

Connecting to a robot controller

Configure the settings by using the programming pendant.

- YRC1000
- YRC1000micro

Wireless LAN interface settings

Set the following items in the LAN interface settings.

Item	Description
IP address	IP address of the robot controller*1
Subnet Mask	Subnet mask of the robot controller

*1 Ensure that it is consistent with the GOT setting.
Page 1592 Connected Ethernet controller setting

33.5 Settable Device Range

For the device setting dialog and range of devices usable in the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1
YASKAWA equipment ([YASKAWA ROBOT CONTROLLER])

33.6 Precautions

When connecting to multiple GOTs

■GOT station number setting

When connecting multiple GOTs in the Ethernet network, set a different GOT station number to each GOT.

☞ Page 1589 Setting the communication interface (Controller setting)

■IP address setting

Do not use the IP address "192.168.0.18" when using multiple GOTs with the GOT1000 series mixed.

A communication error may occur on the GOT with the IP address.

IP address setting

Do not use "0" and "255" at the end of an IP address.

(Numbers of *.*.*.0 and *.*.*.255 are used by the system.)

The GOT may not monitor the controller correctly with the above numbers.

Consult with the administrator of the network before setting an IP address to the GOT and controller.

Connecting multiple pieces of network equipment (including GOT) in a segment

Connecting multiple pieces of network equipment (including GOT) in a segment will increase the network load. This may decrease the transmission speed between the GOT and robot controller.

The following actions may improve the communication performance.

- Using a switching hub
- Using the high speed 100BASE-TX (100 Mbps) transmission
- Reducing the number of monitored devices in the GOT

MEMO

34 YOKOGAWA PLC

- Page 1597 Connectable Model List
- Page 1598 Serial Connection
- Page 1625 Ethernet Connection
- Page 1634 Settable Device Range

34.1 Connectable Model List

The following table shows the connectable models.

Series	Model name	Clock	Communication Type	Connectable model	Refer to
FA-M3	F3SP05	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 1598 Connecting to FA-M3 or FA-M3V
	F3SP08				
	F3SP10				
	F3SP20				
	F3SP30				
	F3FP36				
	F3SP21				
	F3SP22-0S				
	F3SP25				
	F3SP35				
	F3SP28				
	F3SP38				
	F3SP53				
	F3SP58				
	F3SP59				
	F3SP66				
	F3SP67				
FA-M3V	F3SP76-7S				
	F3SP71-4S				
FA500	FA500	○	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 1603 Connecting to FA500
STARDOM	NFCP100	×	RS-232	GT2506HS GT2505HS	☞ Page 1605 Connecting to STARDOM
	NFJT100				
FA-M3	F3SP05	○	Ethernet	GT2506HS GT2505HS	☞ Page 1625 Connecting to FA-M3 or FA-M3V
	F3SP08				
	F3FP36				
	F3SP21				
	F3SP25				
	F3SP35				
	F3SP28				
	F3SP38				
	F3SP53				
	F3SP58				
	F3SP59				
	F3SP66				
	F3SP67				
FA-M3V	F3SP71-4N				
	F3SP71-4S				
	F3SP76-7S				

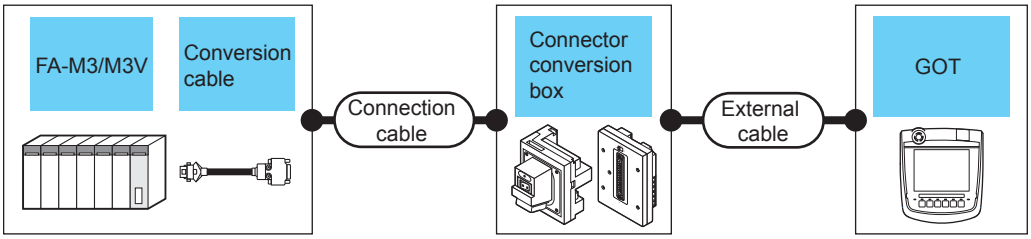
34.2 Serial Connection

Connecting to FA-M3 or FA-M3V

Communication driver
YOKOGAWA
FA500/FA-M3/STARDOM

When using the conversion cable

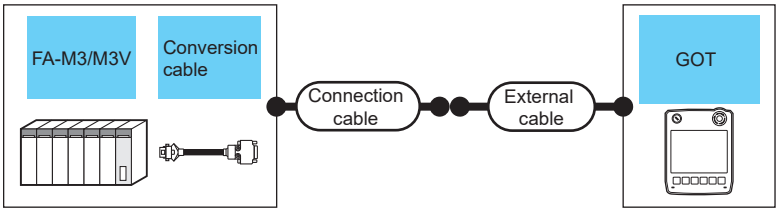
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance *4	Number of connectable equipment
Model name	Conversion cable*1	Communication Type	Cable model Connection diagram number					
F3SP05 F3SP08 F3SP21 F3SP22-0S F3SP25 F3SP28 F3SP35 F3SP38 F3SP53 F3SP58 F3SP59	KM10-0C*2	RS-232	GT09-C30R20301-9P(3m) or User preparing RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
F3SP66 F3SP67	KM10-0S*3			GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.
*2 CPU port/D-Sub 9-pin conversion cable
*3 SIO port adapter cable
*4 Including the length of the CPU port/D-Sub 9-pin conversion cable or the SIO port adapter cable.

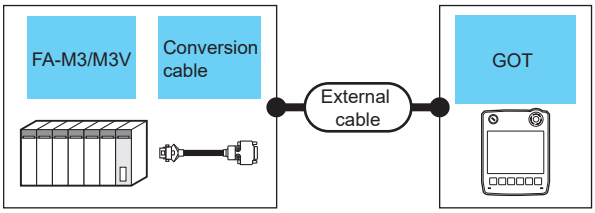
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance *4	Number of connectable equipment
Model name	Conversion cable*1	Communication Type	Cable model Connection diagram number				
F3SP05 F3SP08 F3SP21 F3SP22-0S F3SP25 F3SP28 F3SP35 F3SP38 F3SP53 F3SP58 F3SP59	KM10-0C*2	RS-232	User preparing RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
F3SP66 F3SP67	KM10-0S*3			GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.
*2 CPU port/D-Sub 9-pin conversion cable
*3 SIO port adapter cable
*4 Including the length of the CPU port/D-Sub 9-pin conversion cable or the SIO port adapter cable.

■When using the external cable (GT11H-C□□□)

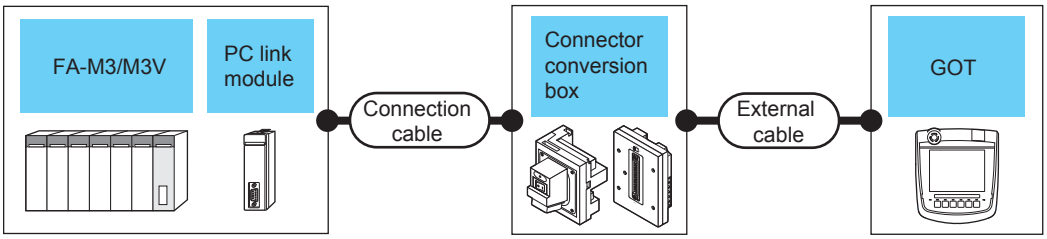


PLC			External cable	GOT Model	Total distance *4	Number of connectable equipment
Model name	Conversion cable*1	Communication Type				
F3SP05 F3SP08 F3SP21 F3SP22-0S F3SP25 F3SP28 F3SP35 F3SP38 F3SP53 F3SP58 F3SP59	KM10-0C*2	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 PLC
F3SP66 F3SP67	KM10-0S*3		GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 3)	GT 2505HS		

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.
*2 CPU port/D-Sub 9-pin conversion cable
*3 SIO port adapter cable
*4 Including the length of the CPU port/D-Sub 9-pin conversion cable or the SIO port adapter cable.

When using the PC link module

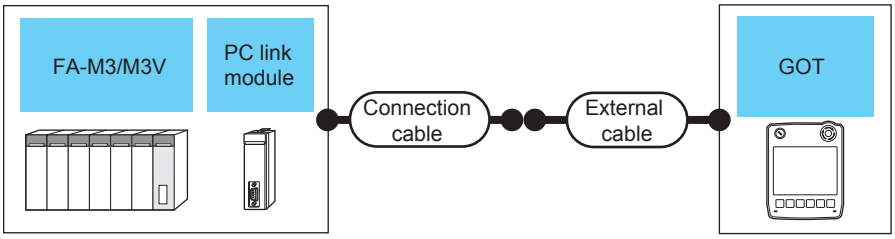
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	PC link module*1	Communication Type	Cable model Connection diagram number					
F3SP05 F3SP08 F3SP10 F3SP20 F3SP30 F3FP36 F3SP21 F3SP25 F3SP35 F3SP28 F3SP38 F3SP53 F3SP58 F3SP59 F3SP66 F3SP67	F3LC01-1N F3LC11-1N F3LC11-1F F3LC12-1F	RS-232	GT09-C30R20302-9P(3m) or User preparing RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PC link module
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
F3SP76-7S F3SP71-4S	F3LC12-1F			GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
F3SP05 F3SP08 F3SP20 F3SP30 F3FP36 F3SP21 F3SP25 F3SP35 F3SP28 F3SP38 F3SP53 F3SP58 F3SP59 F3SP66 F3SP67 F3SP71-4S	F3LC11-2N F3LC11-2F	RS-422	GT09-C30R40301-6T(3m) GT09-C100R40301-6T(10m) or User preparing RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

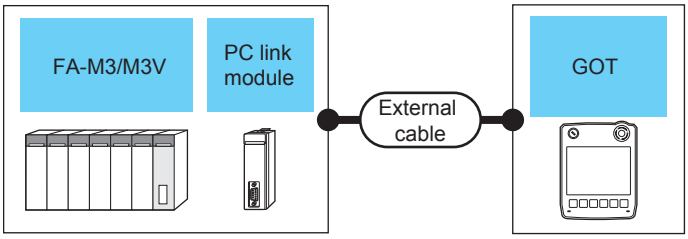
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	PC link module*1	Communication Type	Cable model Connection diagram number				
F3SP05 F3SP08 F3SP10 F3SP20 F3SP30 F3FP36 F3SP21 F3SP25 F3SP35 F3SP28 F3SP38 F3SP53 F3SP58 F3SP59 F3SP66 F3SP67	F3LC01-1N F3LC11-1N F3LC11-1F F3LC12-1F	RS-232	User preparing RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PC link module
F3SP76-7S	F3LC12-1F						
F3SP05 F3SP08 F3SP20 F3SP30 F3FP36 F3SP21 F3SP25 F3SP35 F3SP28 F3SP38 F3SP53 F3SP58 F3SP59 F3SP66 F3SP67	F3LC11-2N F3LC11-2F	RS-422	User preparing RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

■When using the external cable (GT11H-C□□□)



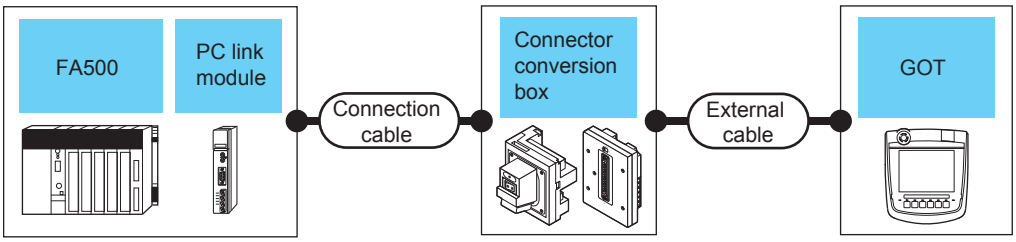
PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	PC link module*1	Communication Type				
F3SP05 F3SP08 F3SP10 F3SP20 F3SP30 F3FP36 F3SP21 F3SP25 F3SP35 F3SP28 F3SP38 F3SP53 F3SP58 F3SP59 F3SP66 F3SP67	F3LC01-1N F3LC11-1N F3LC11-1F F3LC12-1F	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 6)	GT 2505HS	6m	1 GOT for 1 PC link module
F3SP76-7S	F3LC12-1F					
F3SP05 F3SP08 F3SP20 F3SP30 F3FP36 F3SP21 F3SP25 F3SP35 F3SP28 F3SP38 F3SP53 F3SP58 F3SP59 F3SP66 F3SP67	F3LC11-2N F3LC11-2F	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 3)	GT 2505HS	13m	

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

Connecting to FA500

Communication driver
YOKOGAWA
FA500/FA-M3/STARDOM

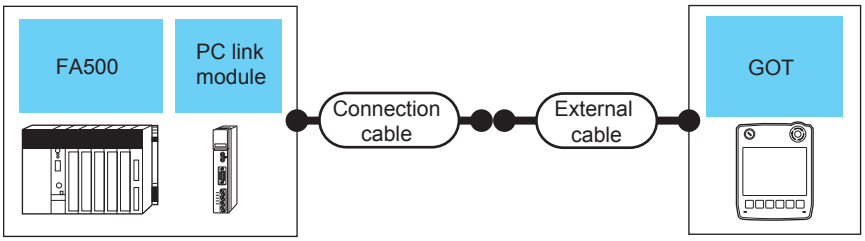
When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Series	PC link module*1	Communication Type	Cable model Connection diagram number					
FA500	LC01-0N LC02-0N	RS-232	GT09-C30R20205-25P(3m) or User preparing RS-232 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PC link module
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	LC02-0N	RS-422	GT09-C30R40302-6T(3m) GT09-C100R40302-6T(10m) or User preparing RS-422 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

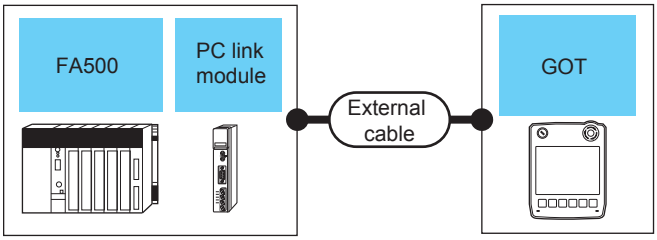
When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Series	PC link module*1	Communication Type	Cable model Connection diagram number				
FA500	LC01-0N LC02-0N	RS-232	User preparing RS-232 connection diagram 8)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PC link module
	LC02-0N	RS-422	User preparing RS-422 connection diagram 5)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

When using the external cable (GT11H-C□□□)



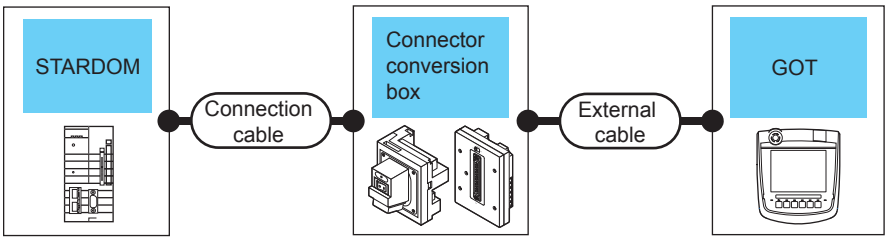
PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Series	PC link module*1	Communication Type				
FA500	LC01-0N LC02-0N	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 9)	GT 2505HS	6m	1 GOT for 1 PC link module
	LC02-0N	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ RS-422 connection diagram 6)	GT 2505HS	13m	

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

Connecting to STARDOM

Communication driver
YOKOGAWA
FA500/FA-M3/STARDOM

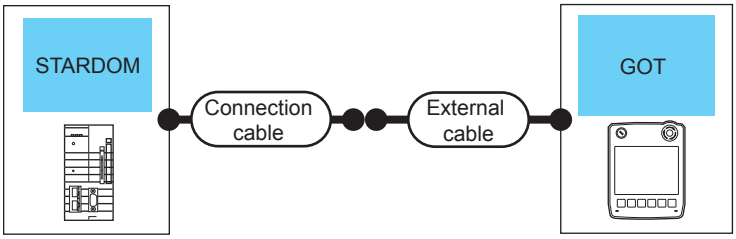
When using the connector conversion box



PLC		Connection cable*1	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Series	Communication Type	Cable model Connection diagram number					
STARDOM	RS-232	GT09-C30R20305-9S(3m) or User preparing RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Connect the connection cable to the COM port of the PLC.

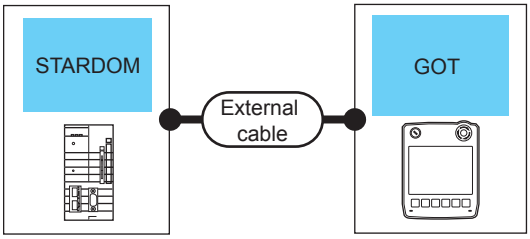
When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable*1	External cable	GOT Model	Total distance	Number of connectable equipment
Series	Communication Type	Cable model Connection diagram number				
STARDOM	RS-232	User preparing RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC

*1 Connect the connection cable to the COM port of the PLC.

When using the external cable (GT11H-C□□□)



PLC		External cable	GOT Model	Total distance	Number of connectable equipment
Series	Communication Type				
STARDOM	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS-232 connection diagram 6)	GT 2505HS	6m	1 GOT for 1 PLC

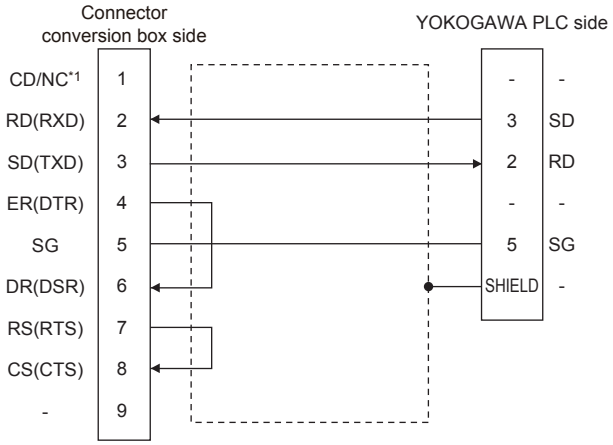
Connection diagram

The following diagram shows the connection between the GOT and the PLC.

RS-232 cable

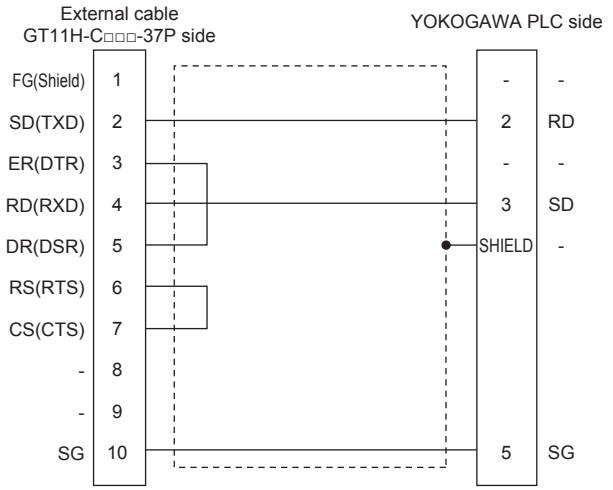
■Connection diagram

• RS-232 connection diagram 1)

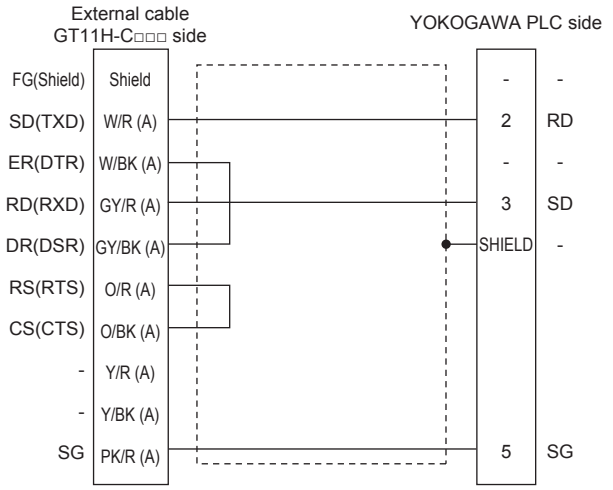


*1 GT2506HS-V: CD, GT2505HS-V: NC

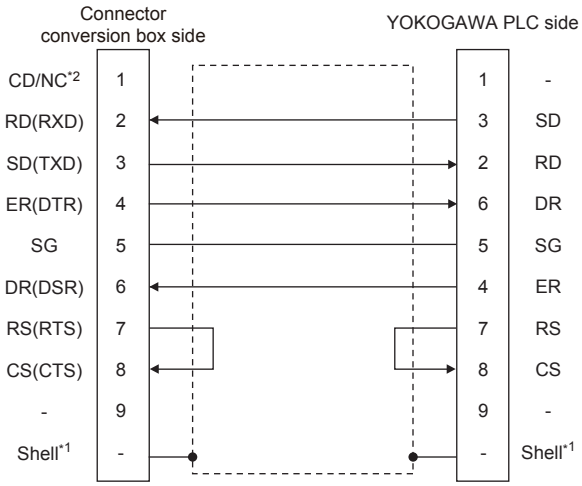
• RS-232 connection diagram 2)



• RS-232 connection diagram 3)



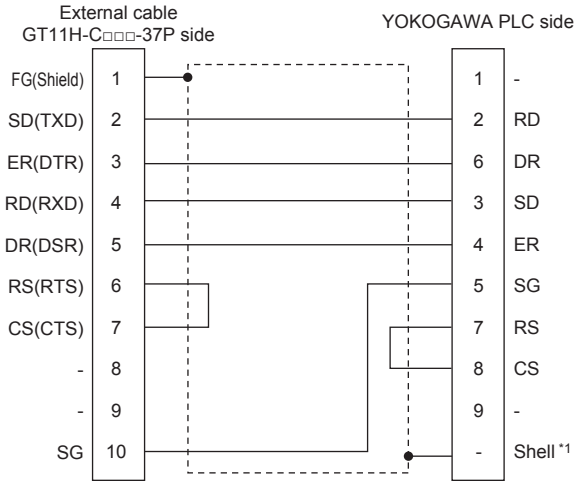
• RS-232 connection diagram 4)



*1 Connect the shield to the housing of the connectors on both the GOT and YOKOGAWA product sides.

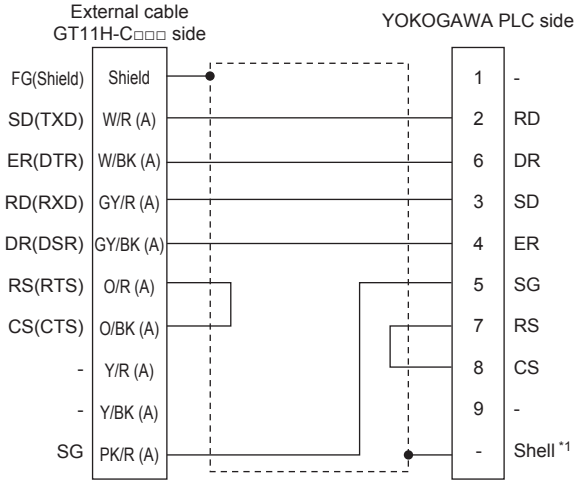
*2 GT2506HS-V: CD, GT2505HS-V: NC

• RS-232 connection diagram 5)



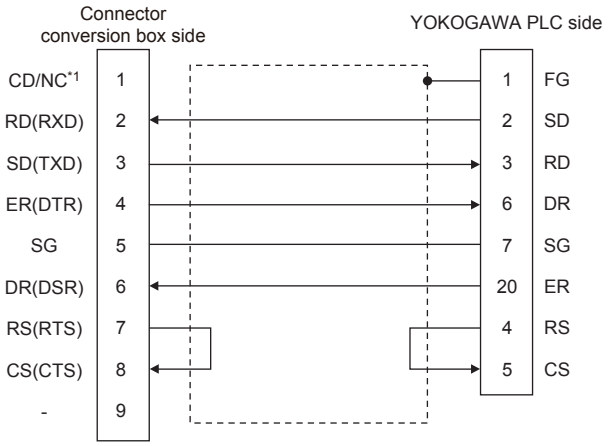
*1 Connect the shield to the housing of the connectors on both the GOT and YOKOGAWA product sides.

• RS-232 connection diagram 6)



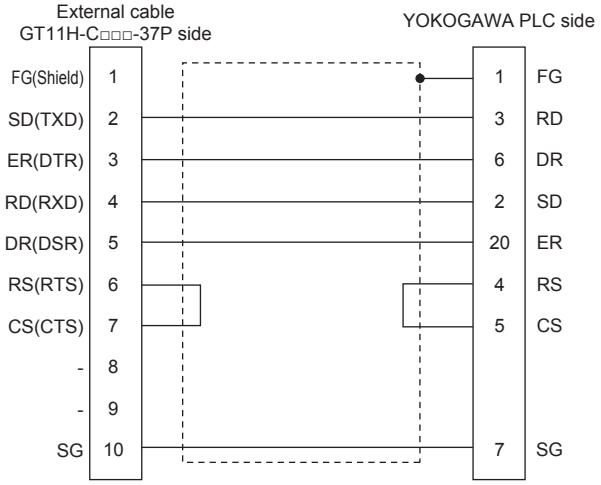
*1 Connect the shield to the housing of the connectors on both the GOT and YOKOGAWA product sides.

• RS-232 connection diagram 7)

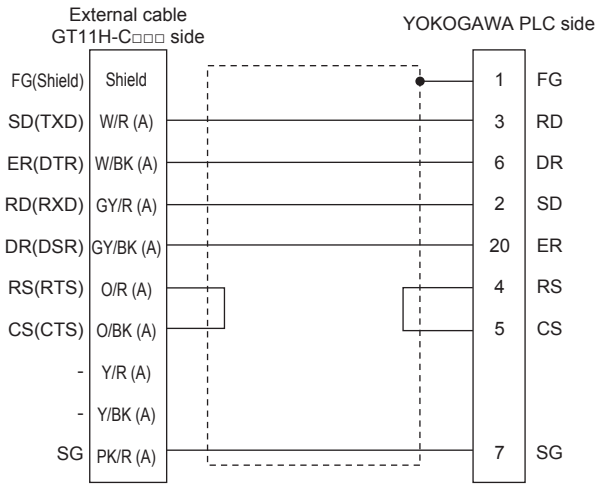


*1 GT2506HS-V: CD, GT2505HS-V: NC

• RS-232 connection diagram 8)



• RS-232 connection diagram 9)



■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

• YOKOGAWA PLC side connector

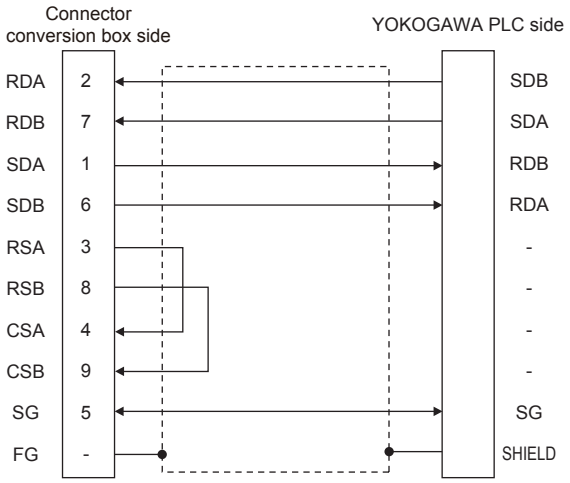
Use the connector compatible with the YOKOGAWA PLC side module.

For details, refer to the YOKOGAWA PLC user's manual.

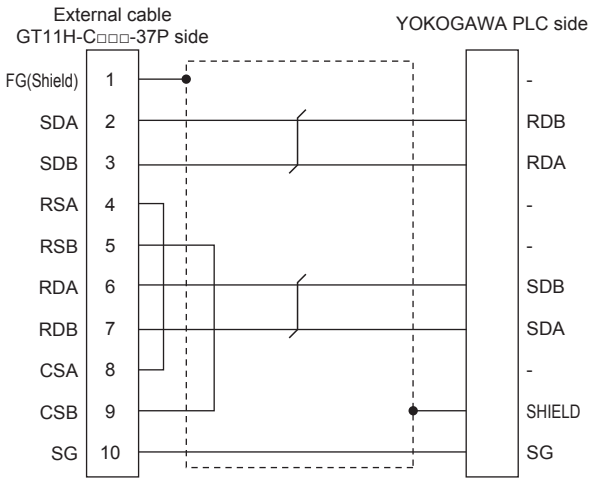
RS-422 cable

■Connection diagram

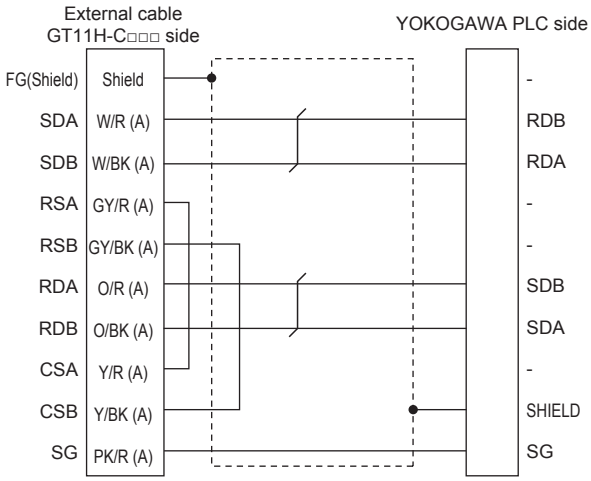
• RS-422 connection diagram 1)



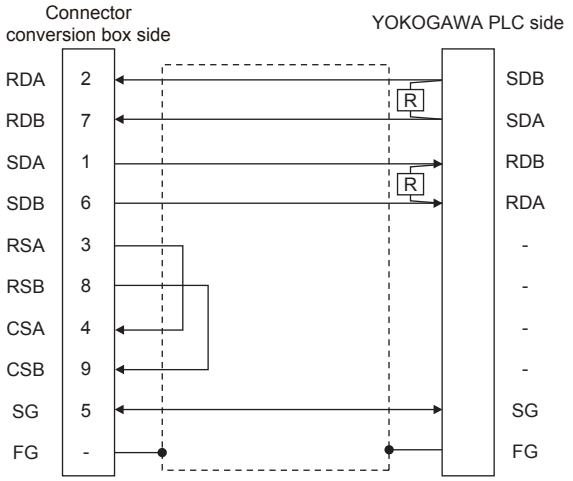
• RS-422 connection diagram 2)



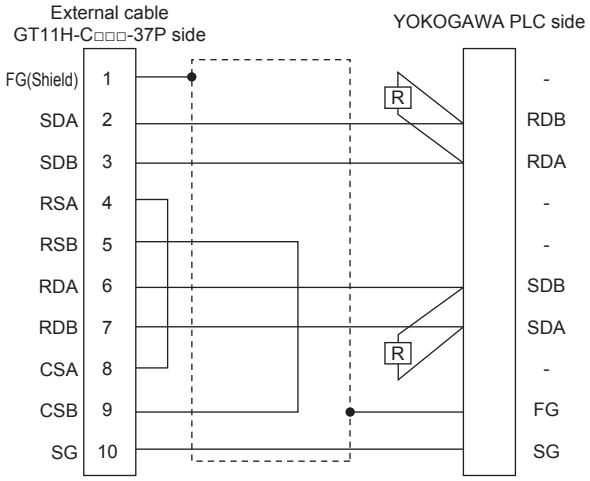
• RS-422 connection diagram 3)



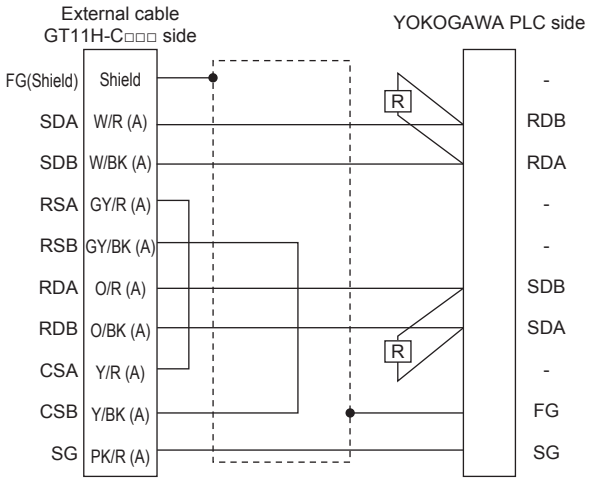
• RS-422 connection diagram 4)



• RS-422 connection diagram 5)



• RS-422 connection diagram 6)



■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

• YOKOGAWA PLC side connector

Use the connector compatible with the YOKOGAWA PLC side module.

For details, refer to the YOKOGAWA PLC user's manual.

■Connecting terminating resistors

• GOT side

For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

• YOKOGAWA PLC side

When connecting a PLC link module to a GOT, a terminating resistor must be connected to the PC link module.

The following describes how to connect it on the PC link module.

F3LC11-2N

Set the terminator switch (TERMINATOR) on the front panel of F3LC11-2N to the "4-WIRE" side to enable the terminator.

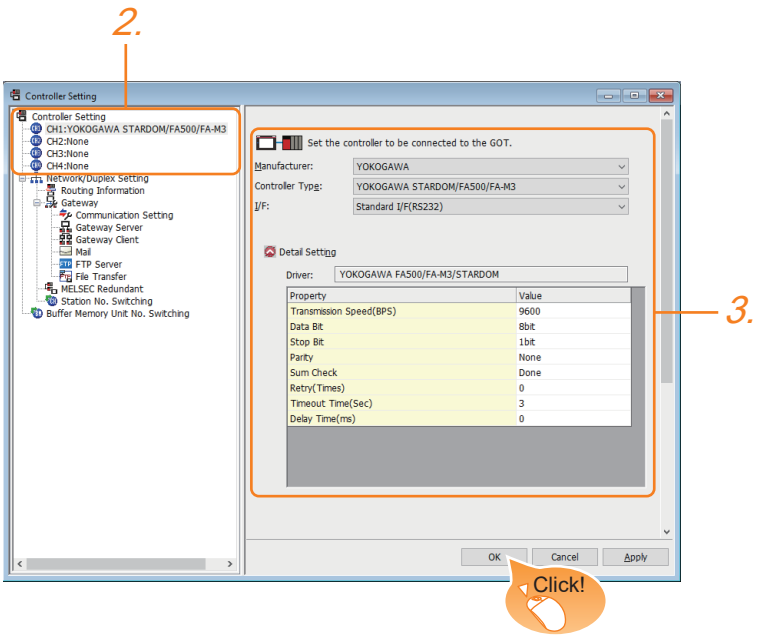
LC02-0N

Connect the terminating resistor provided with the LC02-0N across SDA and SDB, and across RDA and RDB on the terminal block.

GOT side settings

Setting communication interface (Communication settings)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [YOKOGAWA]
- [Controller Type]: [YOKOGAWA STARDOM/FA500/FA-M3]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1613 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
Transmission Speed(BPS)	9600
Data Bit	8 bit
Stop Bit	1 bit
Parity	None
Sum Check	Done
Retry(Times)	0
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 9600bps)	4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bits)	7bits/8bits
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit/2bits
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: No)	None Even Odd
Sum Check	Set whether or not to perform a sum check during communication. (Default: Yes)	Yes or No
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300(ms)

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

PLC side setting

Point

YOKOGAWA PLC

For details of YOKOGAWA PLCs, refer to the following manuals.

YOKOGAWA PLC user's Manual

Model name		Refer to
CPU port/D-Sub 9-pin conversion cable	KM10-0C	☞ Page 1615 Connecting a conversion cable
SIO port adapter cable	KM10-0S	
PC link module	F3LC01-1N	☞ Page 1616 Switch setting on the PC link module (F3LC01-1N, F3LC11-1N, F3LC11-2N, F3LC11-2F)
	F3LC11-1N	
	F3LC11-2N	
	F3LC11-2F	
	F3LC11-1F	☞ Page 1618 Switch setting on the PC link module (F3LC11-1F, F3LC12-1F)
	F3LC12-1F	
	LC01-0N	☞ Page 1620 Switch setting on the PC link module (LC01-0N, LC02-0N)
	LC02-0N	
STARDOM		☞ Page 1622 Connecting to STARDOM

Connecting a conversion cable

The following describes the settings for connecting a CPU port/D-sub 9-pin conversion cable or SIO port adapter cable.

Setting of PLC CPU

Make the PLC CPU settings, displaying [Configuration] → [Communication Settings] with the program development tool or the ladder-programming tool.

<table>
<tr><th>Item</th><th colspan="5">Set value</th></tr>
<tr><td>Communication mode*1</td><td colspan="5">Set the communication mode of the CPU (transmission speed and data format).
Set the transmission speed and data format according to settings of the transmission speed, data length, parity and stop bit on the GOT side.
For details on these GOT side settings, refer to the following.
☞ Page 1612 Setting communication interface (Communication settings)</td></tr>
<tr><td rowspan="11"></td><td rowspan="2">Item</td><td colspan="4">Transmission speed and data format</td></tr>
<tr><td>Transmission speed</td><td>Data bit</td><td>Parity</td><td>Stop bit</td></tr>
<tr><td>Communication mode 0</td><td>9600 bps</td><td>8bits</td><td>Even</td><td>1bit</td></tr>
<tr><td>Communication mode 1</td><td>9600 bps</td><td>8bits</td><td>None</td><td>1bit</td></tr>
<tr><td>Communication mode 2</td><td>19200 bps</td><td>8bits</td><td>Even</td><td>1bit</td></tr>
<tr><td>Communication mode 3</td><td>19200 bps</td><td>8bits</td><td>None</td><td>1bit</td></tr>
<tr><td>Communication mode 4</td><td>38400 bps</td><td>8bits</td><td>Even</td><td>1bit</td></tr>
<tr><td>Communication mode 5</td><td>38400 bps</td><td>8bits</td><td>None</td><td>1bit</td></tr>
<tr><td>Communication mode 6</td><td>57600 bps</td><td>8bits</td><td>Even</td><td>1bit</td></tr>
<tr><td>Communication mode 7</td><td>57600 bps</td><td>8bits</td><td>None</td><td>1bit</td></tr>
<tr><td>Communication mode 8</td><td>115200 bps</td><td>8bits</td><td>Even</td><td>1bit</td></tr>
<tr><td>Communication mode 9</td><td>115200 bps</td><td>8bits</td><td>None</td><td>1bit</td></tr>
<tr><td>CPU PC link function settings</td><td colspan="5">Set the following when using the CPU programming port as the PC link function.
Make the checksum setting according to the sum check setting on the GOT side.
For the sum check setting on the GOT side, refer to the following.
☞ Page 1612 Setting communication interface (Communication settings)</td></tr>
<tr><td rowspan="5"></td><td colspan="2">Item</td><td colspan="3">Set value</td></tr>
<tr><td colspan="2">Use of PC link function</td><td colspan="3">Mark. (Use enabled)</td></tr>
<tr><td colspan="2">Checksum</td><td colspan="3">Mark. (ON)
Do not mark. (OFF)</td></tr>
<tr><td colspan="2">End character</td><td colspan="3">Do not mark. (OFF)</td></tr>
<tr><td colspan="2">Protect function</td><td colspan="3">Do not mark. (OFF)</td></tr>
</table>

*1 The communication mode that can be selected differs according to the CPU.

Connecting to PC link module

For the settings for connecting to the PC link module, refer to the following.

☞ Page 1616 Switch setting on the PC link module (F3LC01-1N, F3LC11-1N, F3LC11-2N, F3LC11-2F)
☞ Page 1618 Switch setting on the PC link module (F3LC11-1F, F3LC12-1F)
☞ Page 1620 Switch setting on the PC link module (LC01-0N, LC02-0N)

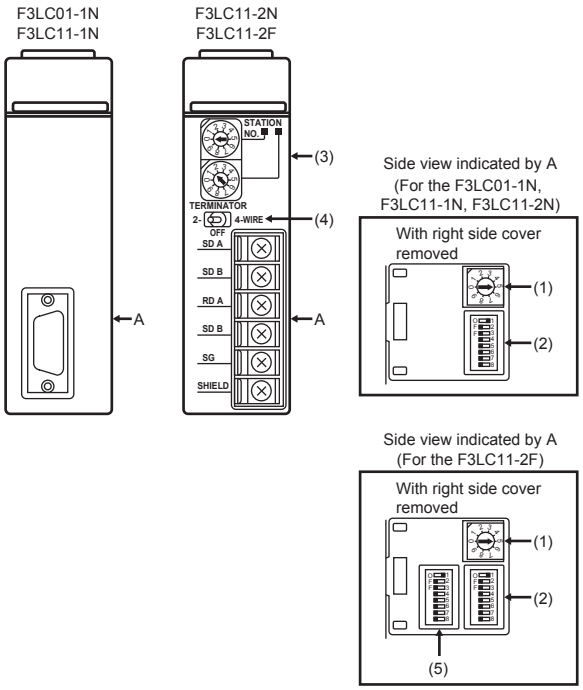
Switch setting on the PC link module (F3LC01-1N, F3LC11-1N, F3LC11-2N, F3LC11-2F)

Set the switches accordingly.

Point

Switch setting

Set the switches before mounting the Ethernet Interface Module on the base unit.

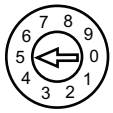


■Transmission speed setting switch

Set the same transmission speed of the GOT.

For the transmission speed setting on the GOT side, refer to the following.

☞ Page 1613 Communication detail settings



Setting*1	Transmission speed
4	4800bps
5	9600bps
6	19200bps

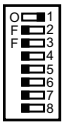
*1 Only transmission speeds available on the GOT side are shown.

■Data format setting switch

Set the data length, parity, stop bit and checksum consistent with the corresponding settings on the GOT side.

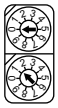
For the settings on the GOT side, refer to the following.

☞ Page 1613 Communication detail settings



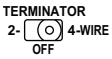
Switch No.	Description	Settings
1	Data bit	ON (8bits), OFF (7bits)
2	Parity	ON (done), OFF (none)
3		ON (even), OFF (odd)
4	Stop bit	ON (2bits), OFF (1bit)
5	Checksum	ON (done), OFF (none)
6	End character specification	OFF (none)
7	Protect function	OFF (disabled)
8	—	OFF

■Station No. switch (F3LC11-2N only)



Rotary switch	Description	Settings
1)	Station No. (10's digit)	0
2)	Station No. (1's digit)	1

■Terminator switch (F3LC11-2N only)



Settings	Description
4-WIRE	Resistor connected (4-wire type)

■SW3 switch (F3LC11-2F only)

Unused switch.Turn off all the unused switches.

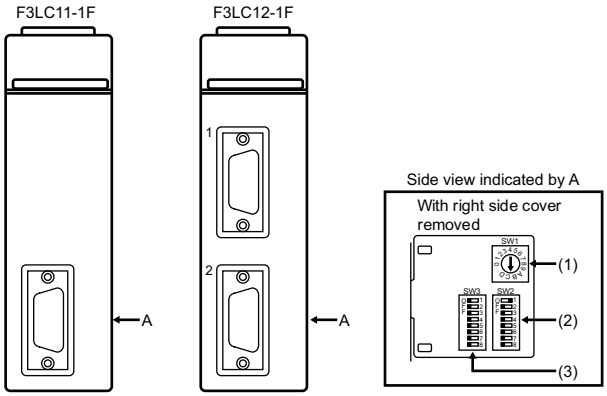
Switch setting on the PC link module (F3LC11-1F, F3LC12-1F)

Set the switches accordingly.

Point

Switch setting

Set the switches before mounting the Ethernet Interface Module on the base unit.



■Transmission speed switch (SW1)

Set the same transmission speed of the GOT.

For the transmission speed setting on the GOT side, refer to the following.

☞ Page 1613 Communication detail settings



Setting*1	Transmission speed
4	4800bps
5	9600bps
7	19200bps
9	38400bps
A	57600bps
C	115200bps

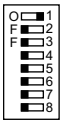
*1 Only transmission speeds available on the GOT side are shown.

■Data format switch (SW2)

Set the character length, parity, stop bit and checksum consistent with the corresponding settings on the GOT side.

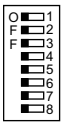
For the settings on the GOT side, refer to the following.

☞ Page 1613 Communication detail settings



Switch No.	Description	Settings
1	Character length	ON (8bits), OFF (7bits)
2	Parity	ON (done), OFF (none)
3		ON (even), OFF (odd)
4	Stop bit	ON (2bits), OFF (1bit)
5	Checksum	ON (done), OFF (none)
6	End character specification	OFF (none)
7	Protect function	OFF (disabled)
8	Security function	OFF (disabled)

■Module function switch (SW3)



Switch No.	Description	Settings
1 to 6	User setting inhibited	OFF
7	Modem compatibility	OFF (not compatible)
8	External modem	OFF (none)

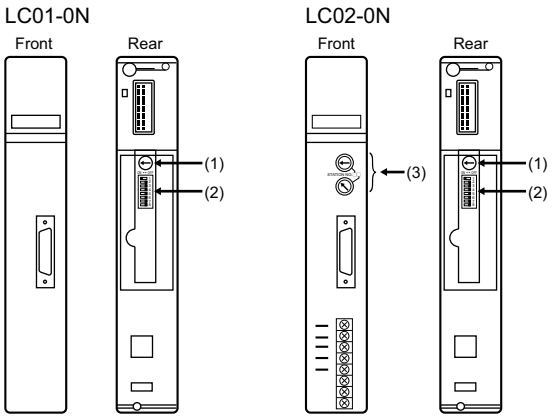
Switch setting on the PC link module (LC01-0N, LC02-0N)

Set the switches accordingly.

Point

Switch setting

Set the switches before mounting the Ethernet Interface Module on the base unit.

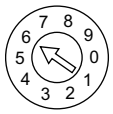


■Transmission speed setting switch

Set the same transmission speed of the GOT.

For the transmission speed setting on the GOT side, refer to the following.

☞ Page 1613 Communication detail settings



Setting*1	Transmission speed
4	4800bps
5	9600bps
6	19200bps

*1 Only transmission speeds available on the GOT side are shown.

■Data format setting switch

Set the data length, parity, stop bit and checksum consistent with the corresponding settings on the GOT side.

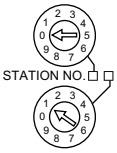
For the settings on the GOT side, refer to the following.

☞ Page 1613 Communication detail settings



Switch No.	Description	Settings
1	Data bit	ON (8bits), OFF (7bits)
2	Parity	ON (done), OFF (none)
3		ON (even), OFF (odd)
4	Stop bit	ON (2bits), OFF (1bit)
5	Checksum	ON (done), OFF (none)
6	End character specification	OFF (none)
7	Protect function	OFF (disabled)
8	—	OFF

■Station No. switch (LC02-0N only)



Rotary switch	Description	Settings	
		For RS-232 communication	For RS-422 communication
1)	Station No. (10's digit)	0	0
2)	Station No. (1's digit)	1	2

Connecting to STARDOM

Make the communication settings as shown below.
For details of the communication settings, refer to the following manual.
📖Peripheral Software Manual for YOKOGAWA PLC

Point

Connection between STARDOM and the PC for communication settings
For the communication settings of STARDOM, STARDOM and the PC for communication settings must be connected to Ethernet using the Resource Configurator (peripheral software).

COM port setting

Make the settings on the FCX Maintenance Page for STARDOM.

1. Select [Reboot (Maintenance Mode)] on the Reboot screen of the FCX Maintenance Page to set the maintenance mode.
2. Set the COM1 port driver to be used.Execute [JEROS Basic Setting File] from the [Edit System Setting File] screen on the FCX Maintenance Page.

Confirm that the line of [Com1SioDriver] is as follows.
Com1SioDriver=DUONUS_SIO

3. Set the COM1 port to be used.Execute [COM1 Port Setting File] from the [Edit System Setting Files] screen on the FCX Maintenance Page.Make the settings as follows according to the communication specifications on the setting screen.

Leave the settings as default if not listed on the communication setting items.
(Communication setting items) ( ) in the table shows the names on the FCX Maintenance Page.

Item	Set value
Transmission speed (Baudrate)*1	4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data length (DataBitLength)*1	8bits, 7bits
Stop bit (StopBitLength)*1	1bit, 2bits
Parity bit (Parity)*1	none/odd/even

Baudrate = *1
DataBitLength = *1
StopBitLength = *1
Parity = *1
FifoMode = YES
InitialDTRState = ON
SendFlowControlMode = CTS
ReceiveFlowControlMode = DTR

*1 Adjust the settings with GOT communication settings.
☞ Page 1613 Communication detail settings

4. Select "Reboot (Online Mode)" on the "Reboot" screen of the FCX Maintenance Page to set the online mode.

Defining Logic POU

Define Logic POU using Logic Designer (peripheral software), and download the project to STARDOM.

1. Start Logic Designer and create a new project using a template.

Use [STARDOM Serial Communication] template.

2. Insert FA-M3 Emulator Firmware Library to the new project.

- Right-click [Library] under the project tree in Logic Designer.
- Right-click [Insert] and select [Firmware Library].
- Double-click the [SD_FCXPLCR_LIB] folder and double-click [SD_FCXPLCR_LIB.fwl] to select it.
- The library path inserted in the procedures above is as follows.

{Install Folder}\LogicDesigner\Mwt\Plc\Fw_lib\SD_FCXPLCR_LIB\SD_FCXPLCR_LIB.fwl

3. Insert FA-M3 Emulator User Library to the new project.

- Right-click [Library] under the project tree in Logic Designer.
- Right-click [Insert] and select [User Library].
- Double-click [SD_CFAM3R_PF.mwt] to select it.
- The library path inserted in the procedures above is as follows.

{Install Folder}\LogicDesigner\Libraries\SD_CFAM3R_PF.mwt

4. Copy a sample project POU to the new project.

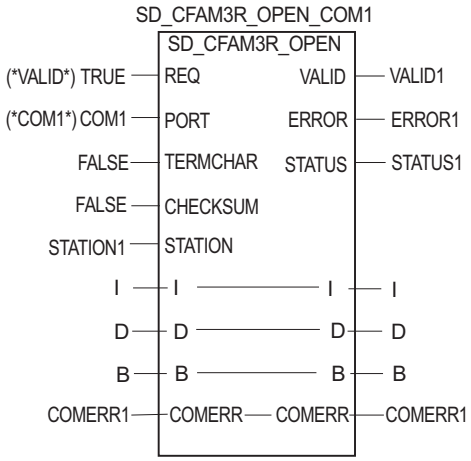
- Open C{Install Folder}\LogicDesigner\Projects\EXAMPLE_J.mwt.
- Right-click [FAM3_Emulator] in the Logic POU under the project tree in the Example_J project, and select [Copy].
- Right-click the [Logic POU] under the project tree in the created new project, and select [Paste].
- Double-click the [FAM3_Emulator*] file in the [FAM3_Emulator*] folder.
- For the following terminals, set as shown below.

REQ terminal: TRUE

TERMCHAR terminal: FALSE

PORT terminal: COM1

STATION terminal: STATION1



(Definition example of Logic POU)

5. Defining the instance

Instantiate Logic POU. Define an already defined instance to Task0.

- Right-click the [Physical hardware] [Configuration:IPC_33/FCX01:FCX/Tasks/Task0:CYCLIC] and select [Insert] - [Program instance].
- Define the program instance name and select FAM3_Emulator for the program type.

6. Defining Target Setting

Define the IP address or host name of STARDOM for which the communication settings are made.

Double-click [Physical hardware] [Configuration:IPC_33/FCX01:FCX/Target Setting] and input the IP address or the host name.

7. Downloading the project

- Execute [Build] - [Make]. (Same as when pressing the function key F9).
- Download after confirming that the compile error does not occur. Select [Download] in the project control dialog displayed when [Online] - [Project control] is selected.
- When the download is completed, select [Cold] and start STARDOM.

Precautions

Device range

When performing monitoring with the GOT connected to a YOKOGAWA PLC and setting devices for objects, use devices within the device range of the YOKOGAWA PLC.

When a device outside the range is set on an object, an indefinite value is displayed on the object.

(No error is displayed in the system alarm.)

For details on the device range of YOKOGAWA PLCs, refer to the following manual:

☞ Page 1634 Settable Device Range

Connecting to STARDOM

■Redundant system

When STARDOM is configured with a redundant system, the connection is not supported.

■System alarm

The PLC error does not appear in the system alarm.

■GOT clock control

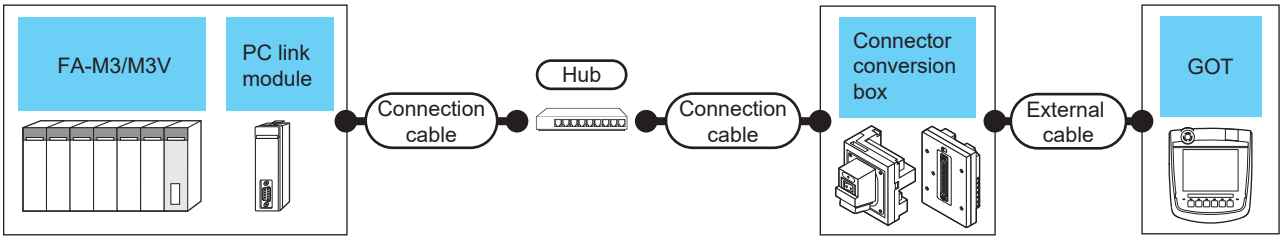
Since the STARDOM does not have a clock function, the settings of [time adjusting] or [time broad cast] by GOT clock control will be disabled.

34.3 Ethernet Connection

Connecting to FA-M3 or FA-M3V

Communication driver

Ethernet(YOKOGAWA), Gateway



PLC		Connection cable		Connector conversion box	External cable *4	GOT Model	Number of connectable equipment
Model name	Ethernet interface module*1	Cable model*2 Connection diagram number	Maximum segment length*3				
F3SP05 F3SP08 F3FP36 F3SP21 F3SP25 F3SP35 F3SP28 F3SP38 F3SP53 F3SP58 F3SP59 F3SP76-7S	F3LE01-5T F3LE11-0T F3LE12-0T	• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When PLC: GOT is N: 1 The following shows the number of PLCs for 1 GOT TCP: 128 or less UDP: 128 or less When PLC: GOT is 1: N The following shows the number of GOTs for 1 PLC TCP: 8 or less UDP: 128 or less (recommended to 16 or less)
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
F3SP71-4S	F3LE11-0T			GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
F3SP66 F3SP67 F3SP71-4N F3SP71-4S F3SP76-7S	-			GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

*2 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the target device and hub, use a cable according to the target controller configuration.

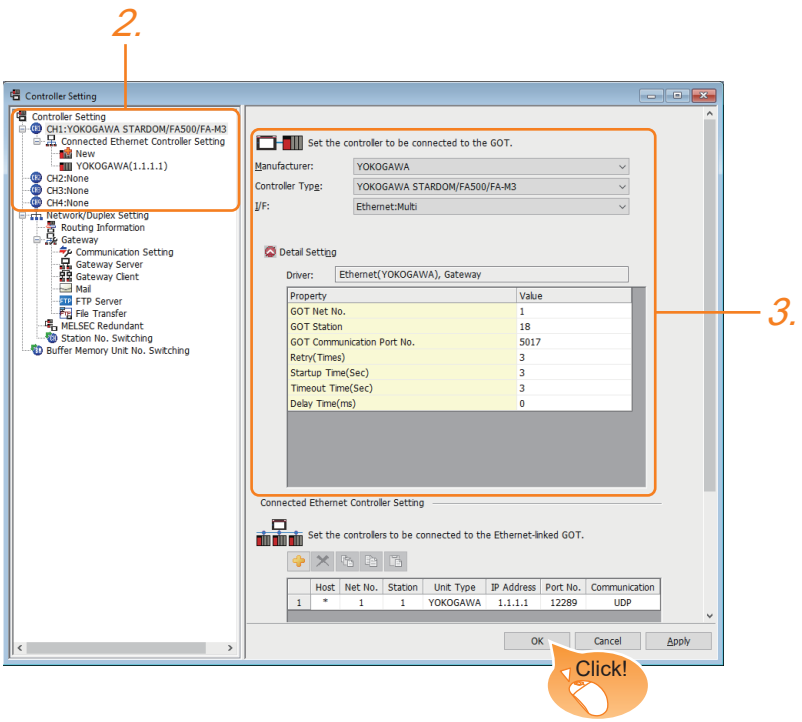
*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*4 Use C or later version of GT11H-C□□-37P.

GOT Side Settings

Setting communication interface (Communication settings)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [YOKOGAWA]
- [Controller Type]: [YOKOGAWA STARDOM/FA500/FA-M3]
- [I/F]: [Ethernet:Multi]
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1627 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
GOT Net No.	1
GOT Station	18
GOT Communication Port No.	5017
Retry(Times)	3
Startup Time(Sec)	3
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
GOT Net No.	Set the network No. of the GOT. (Default: 1)	1 to 239
GOT Station*1	Set the station No. of the GOT. (Default: 1)	1 to 64
GOT Communication Port No.	Set the GOT port No. for the connection with the Ethernet equipment. (Default: 5017 *2)	1024 to 5010, 5014 to 49152, 49171 to 65534
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 3times)	0 to 5times
Startup Time	Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU. (Default: 3sec)	3 to 255sec
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 90sec
Delay Time	Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms)	0 to 10000(ms)

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1628 Connected Ethernet Controller Setting

*2 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

■GOT IP address setting

Set the following communication port setting.

• Standard port

■GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

• [Default Gateway]

• [Peripheral S/W Communication Port No.]

• [Transparent Port No.]

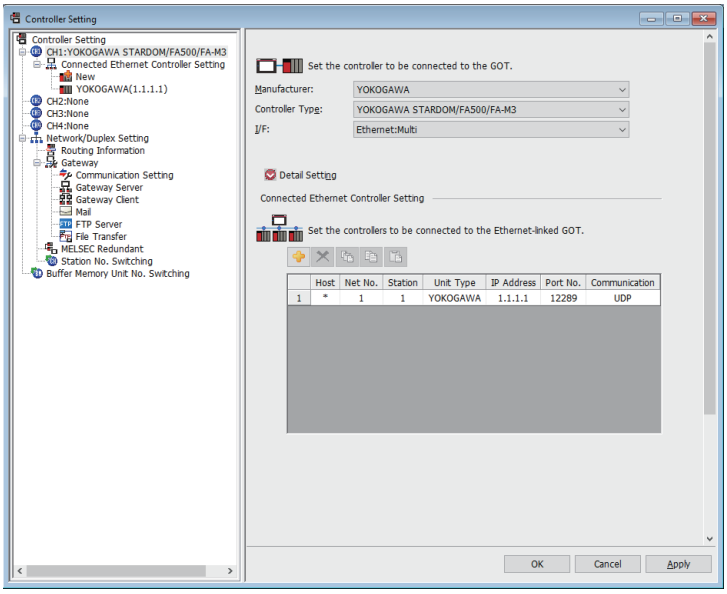
■IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 80 GOT Ethernet Setting

Connected Ethernet Controller Setting



Item	Description	Set value
Host	The host is displayed. It refers to a station that can be connected without setting a station number. (The host is indicated with an asterisk (*).)	—
Net No.	Set the network No. of the connected Ethernet equipment. (Default: 1)	1 to 239
Station *3	Set the station No. of the connected Ethernet equipment. (Default: 1)	1 to 64
Unit Type	YOKOGAWA (fixed)	YOKOGAWA (fixed)
IP address *1	Set the IP address of the connected Ethernet equipment. (Default: 1.1.1.1)	PLC side IP address
Port No. *2	Set the port No. of the connected Ethernet equipment. (Default: 12289)	12289, 12291
Communication format *1	Select a communication protocol. (Default: UDP)	UDP, TCP

*1 Set the same IP address and communication format as those of the PLC side.

*2 Set the port No. of the host link service used on the PLC side.

*3 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].

☞ Page 1627 Communication detail settings

PLC side setting

Point

YOKOGAWA PLC

For details of YOKOGAWA PLCs, refer to the following manuals.

YOKOGAWA PLC user's Manual

Model name		Refer to
Ethernet interface module	F3LE01-5T	☞ Page 1630 Switch setting on the Ethernet Interface Module (F3LE01-5T, F3LE11-0T)
	F3LE11-0T	
	F3LE12-0T	☞ Page 1631 Switch setting on the Ethernet Interface Module (F3LE12-0T)
FA-M3	F3SP66 (built-in Ethernet interface) F3SP67 (built-in Ethernet interface)	☞ Page 1632 Connecting to FA-M3, FA-M3V (built-in Ethernet interface)
FA-M3V	F3SP71-4N (built-in Ethernet interface) F3SP71-4S (built-in Ethernet interface) F3SP76-7S (built-in Ethernet interface)	

Connecting to Ethernet Interface Module

For the settings for connecting to the Ethernet Interface Module, refer to the following.

☞ Page 1630 Switch setting on the Ethernet Interface Module (F3LE01-5T, F3LE11-0T)
☞ Page 1631 Switch setting on the Ethernet Interface Module (F3LE12-0T)

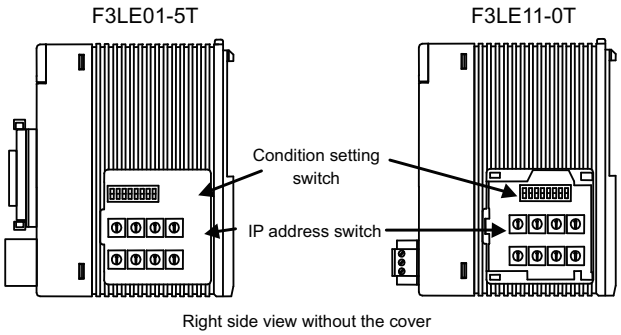
Switch setting on the Ethernet Interface Module (F3LE01-5T, F3LE11-0T)

Set the switches accordingly.

Point

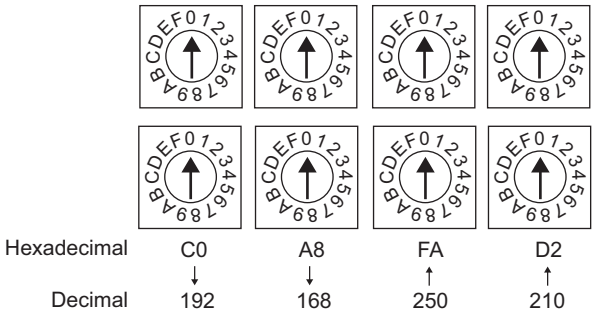
Switch setting

Set the switches before mounting the Ethernet Interface Module on the base unit.



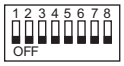
■IP address switch

Set the IP address with eight Hex rotary switches on the side of the base unit



■Condition setting switch

Set the data format, write protection, line processing at TCP timeout error or operation mode with the DIP switch on the side of the base unit.



Switch No.	Description	Set value
1	Data code	OFF (ASCII)
2	Write protect	OFF (not protect)
3	Reserved	ON (not available), OFF (always)
4		
5		
6		
7	Line processing on TCP timeout*1	OFF (close the line)
8	Operation mode	OFF (normal operation)

*1 Applicable to only F3LE01-5T.

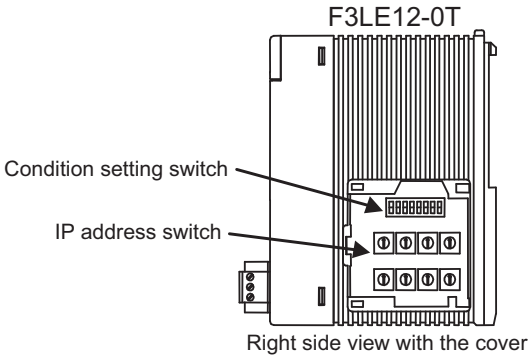
Switch setting on the Ethernet Interface Module (F3LE12-0T)

Set the switches accordingly.

Point

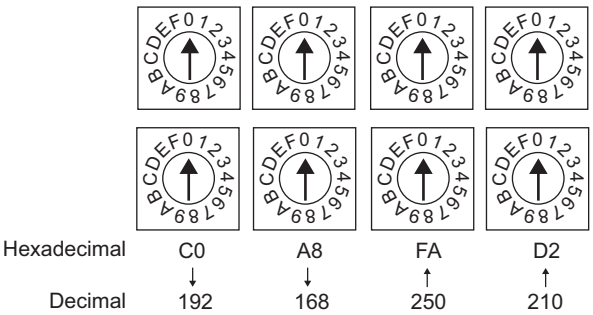
Switch setting

Set the switches before mounting the Ethernet Interface Module on the base unit.



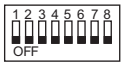
■IP address switch

Set the IP address with eight Hex rotary switches on the side of the base unit.



■Condition setting switch

Set the data format, write protection, or operation mode with the DIP switch on the side of the base unit.



Switch No.	Description	Set value
1	Data code	OFF (ASCII)
2	Write protect	OFF (not protect)
3	Reserved	ON (not available), OFF (always)
4		
5		
6		
7		
8	Operation mode	OFF (normal operation)

Connecting to FA-M3, FA-M3V (built-in Ethernet interface)

In this section, FA-M3 and FA-M3V series represent F3SP66, F3SP67, F3SP71-4N, F3SP71-4S, and F3SP76-7S.

Project setting/configuration setting

Set the setting with software for programming apparatus.

Item	Set value	Description
IP address*1	0.0.0.0 to 255.255.255.255	Set the IP address of the connected Ethernet module.
Host link service A protocol*2 Port No.: 12289	0=TCP/IP*1 1=UDP/IP*1	Select the protocol to be used in the port A of the host link service via Ethernet.
Host link service A protocol command data type*2 Port No.: 12289	0=ASCII format	Select the command data type to be used in the port A of the host link service via Ethernet.
Host link service B protocol*2 Port No.: 12291	0=TCP/IP*1 1=UDP/IP*1	Select the protocol to be used in the port B of the host link service via Ethernet.
Host link service B protocol command data type*2 Port No.: 12291	0=ASCII format	Select the command data type to be used in the port B of the host link service via Ethernet.
Write protection*3	0 = Not protected 1 = Protected	Disables the write command to this module with the host link service via Ethernet.

*1 Adjust the settings with GOT settings.
☞ Page 1628 Connected Ethernet Controller Setting

*2 For the port No. of the GOT, set the port No. of the host link service to be used.
☞ Page 1628 Connected Ethernet Controller Setting

*3 Set this as necessary.

Precautions

Device range

When performing monitoring with the GOT connected to a YOKOGAWA PLC and setting devices for objects, use devices within the device range of the YOKOGAWA PLC.

When a device outside the range is set on an object, an indefinite value is displayed on the object.

(No error is displayed in the system alarm.)

For details on the device range of YOKOGAWA PLCs, refer to the following manual:

☞ Page 1634 Settable Device Range

When setting IP address

Do not use "0" and "255" at the end of an IP address.

(Numbers of *.*.*.0 and *.*.*.255 are used by the system.)

The GOT may not monitor the controller correctly with the above numbers.

Consult with the administrator of the network before setting an IP address to the GOT and controller.

When connecting to multiple GOTs

■Setting Station

When connecting two or more GOTs in the Ethernet network, set each [Station] to the GOT.

☞ Page 1628 Connected Ethernet Controller Setting

■Setting IP address

Do not use the IP address "192.168.0.18" when using multiple GOTs with the GOT 1000 series mixed.

A communication error may occur on the GOT with the IP address.

When connecting to the multiple network equipment (including GOT) in a segment

By increasing the network load, the transmission speed between the GOT and PLC may be reduced.

The following actions may improve the communication performance.

- Using a switching hub
- More high speed by 100BASE-TX (100Mbps)
- Reduction of the monitoring points on GOT

34.4 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1
YOKOGAWA equipment ([YOKOGAWA STARDOM/FA500/FA-M3])

35 YOKOGAWA TEMPERATURE CONTROLLER

- Page 1635 Connectable Model List
- Page 1636 System Configuration
- Page 1656 Connection Diagram
- Page 1669 GOT Side Settings
- Page 1671 Temperature Controller Side Setting
- Page 1677 Settable Device Range
- Page 1677 Precautions

35.1 Connectable Model List

The following table shows the connectable models.

Series	Model name	Clock	Communication Type	Connectable model	Refer to
GREEN	UT320	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 1636 Connecting to GREEN Series
	UT321				
	UT350				
	UT351				
	UT420				
	UT450				
	UT520				
	UT550				
	UT551				
	UT750				
	UP350				
	UP351				
	UP550				
	UP750				
	UM330				
	UM331				
	UM350				
	UM351				
	US1000				
UT100	UT130	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 1642 Connecting to UT100 Series
	UT150				
	UT152				
	UT155				
	UP150				
UT2000	UT2400	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 1645 Connecting to UT2000 Series
	UT2800				
UTAdvanced	UT32A	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 1649 Connecting to UTAdvanced Series
	UT35A				
	UT52A				
	UT55A				
	UT75A				
	UP32A				
	UP35A				
	UP55A				
	UM33A				

35.2 System Configuration

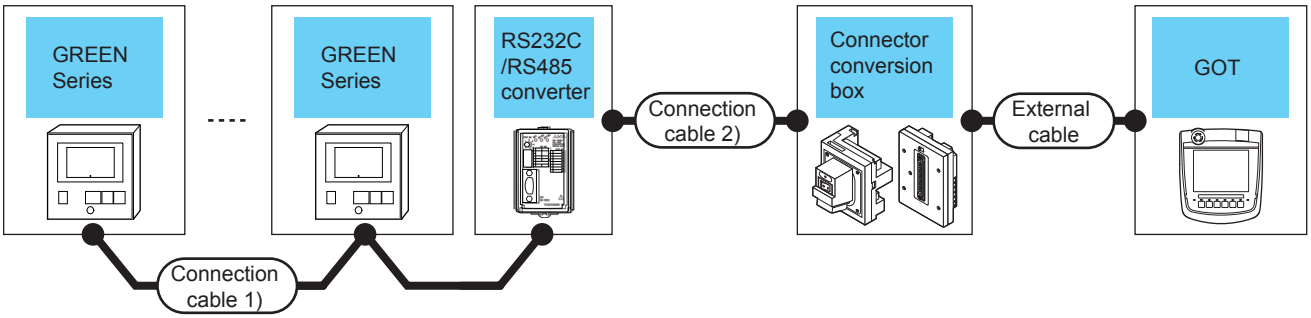
Connecting to GREEN Series

Communication driver

YOKOGAWA GREEN/UT100/UT2000/UTAdvanced

When using the RS232C/RS485 converter

■When using the connector conversion box



Temperature controller	Connection cable 1)		RS232C/RS485 converter*1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *4	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
UT320 UT321 UT350 UT351 UT420 UT450 UT520 UT550 UT551 UT750*2 UP350 UP351 UP550 UP750*2 UM330 UM331 UM350 UM351 US1000	User preparing Page 1658 RS-485 connection diagram 1) (4-wire type)	1200m	ML2-□	RS-232	GT09-C30R20304-9S (3m) or User preparing Page 1656 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 temperature controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	User preparing Page 1662 RS-485 connection diagram 5) (2-wire type)				GT09-C30R20304-9S (3m) or User preparing Page 1656 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
UP750*3 UT750*3	User preparing Page 1662 RS-485 connection diagram 6) (2-wire type)				GT09-C30R20304-9S (3m) or User preparing Page 1656 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

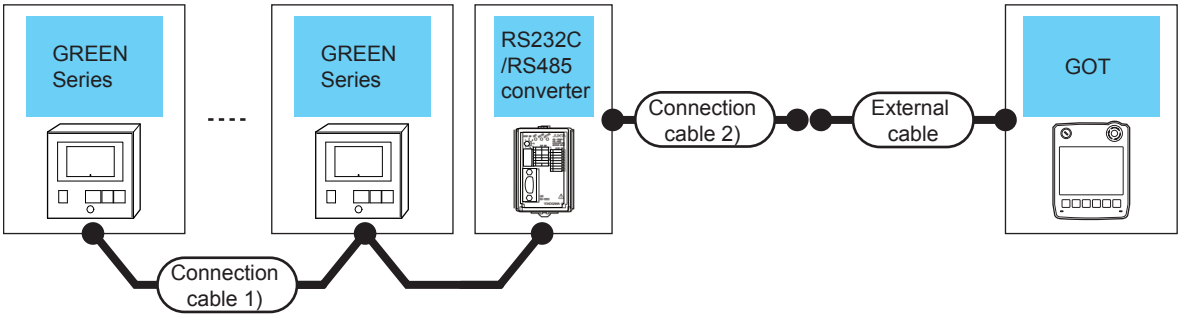
*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

*2 Connect the connection cable 1) to the standard RS-485 communication interface.

*3 Connect the connection cable 1) to the high performance RS-485 communication interface.

*4 The distance from the converter to the GOT (Connection cable 2) + External cable)

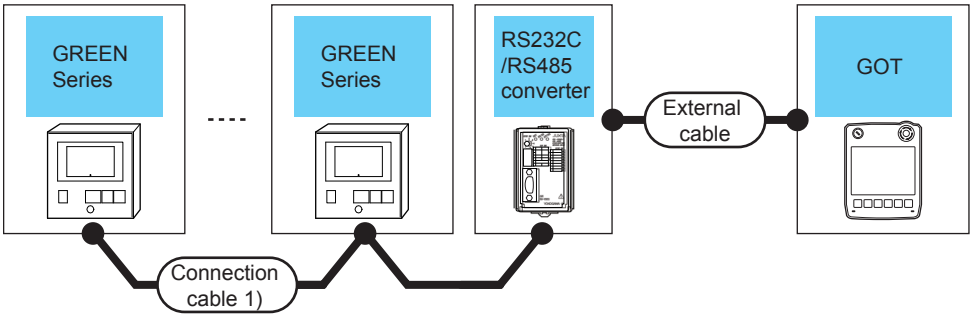
■When using the external cable (GT11H-C□□□-37P)



Temperature controller	Connection cable 1)		RS232C/RS485 converter*1		Connection cable 2)	External cable	GOT Model	Total distance *4	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
UT320 UT321 UT350 UT351 UT420	User preparing Page 1658 RS-485 connection diagram 1) (4-wire type)	1200m	ML2-□	RS-232	User preparing Page 1656 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT
UT450 UT520 UT550 UT551 UT750*2 UP350 UP351 UP550 UP750*2 UM330 UM331 UM350 UM351 US1000	User preparing Page 1662 RS-485 connection diagram 5) (2-wire type)					GT11H-C30-37P(3m)	GT 2505HS		
UP750*3 UT750*3	User preparing Page 1662 RS-485 connection diagram 6) (2-wire type)					GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.
*2 Connect the connection cable 1) to the standard RS-485 communication interface.
*3 Connect the connection cable 1) to the high performance RS-485 communication interface.
*4 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)

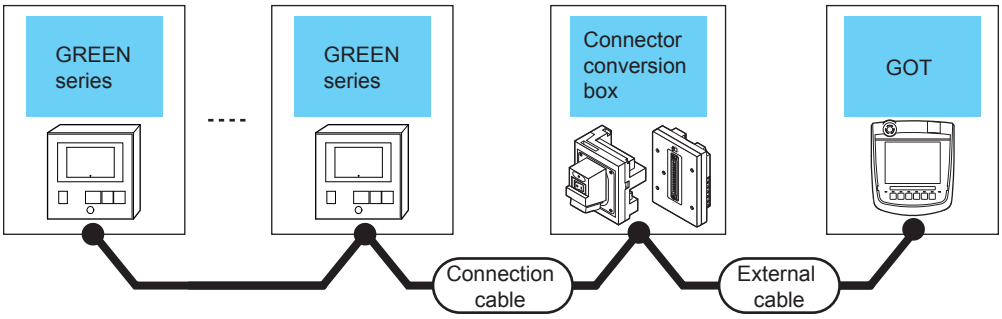


Temperature controller	Connection cable 1)		RS232C/RS485 converter*1		External cable	GOT Model	Total distance *4	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
UT320 UT321 UT350 UT351 UT420 UT450 UT520 UT550 UT551 UT750*2 UP350 UP351 UP550 UP750*2 UM330 UM331 UM350 UM351 US1000	User preparing Page 1658 RS-485 connection diagram 1) (4-wire type)	1200m	ML2-□	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1657 RS-232 connection diagram 3)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT
	User preparing Page 1662 RS-485 connection diagram 5) (2-wire type)				GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1657 RS-232 connection diagram 3)	GT 2505HS		
UP750*3 UT750*3	User preparing Page 1662 RS-485 connection diagram 6) (2-wire type)				GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1657 RS-232 connection diagram 3)	GT 2505HS		

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.
*2 Connect the connection cable 1) to the standard RS-485 communication interface.
*3 Connect the connection cable 1) to the high performance RS-485 communication interface.
*4 The distance from the converter to the GOT (External cable)

When connecting directly

■When using the connector conversion box

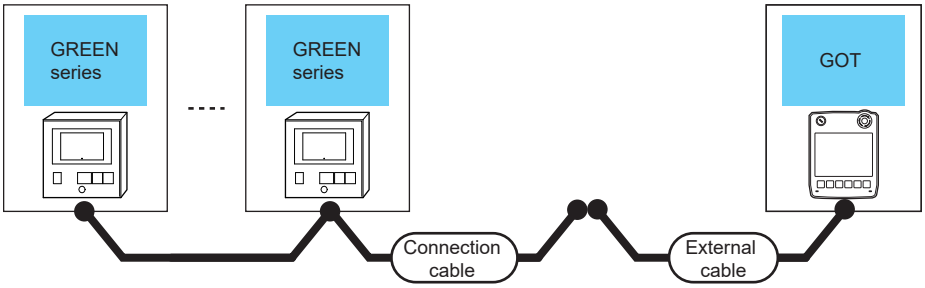


Temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
UT320 UT321 UT350 UT351 UT420 UT450 UT520 UT550 UT551 UT750*1 UP350 UP351 UP550 UP750*1 UM330 UM331 UM350 UM351 US100	RS-485	GT09-C30R40303-6T (3m) GT09-C100R40303-6T (10m) or User preparing Page 1659 RS-485 connection diagram 2) (4-wire type)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 temperature controllers for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		Up to 10 temperature controllers for 1 GOT
		User preparing Page 1666 RS-485 connection diagram 13) (2-wire type)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		Up to 31 temperature controllers for 1 GOT
UP750*2 UT750*2		User preparing Page 1667 RS-485 connection diagram 14) (2-wire type)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		Up to 31 temperature controllers for 1 GOT

*1 Connect the connection cable to the standard RS-485 communication interface.

*2 Connect the connection cable to the high performance RS-485 communication interface.

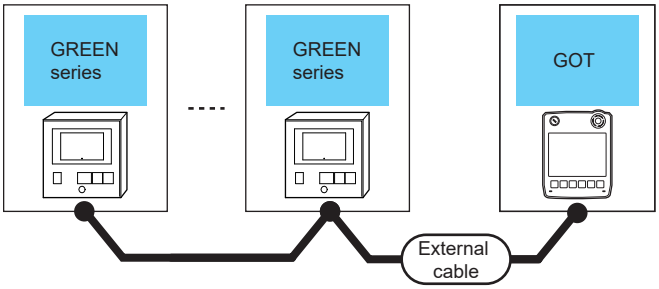
■When using the external cable (GT11H-C□□□-37P)



Temperature controller		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
UT320 UT321 UT350 UT351 UT420 UT450 UT520 UT550 UT551 UT750*1 UP350 UP351 UP550 UP750*1 UM330 UM331 UM350 UM351 US100	RS-485	User preparing Page 1660 RS-485 connection diagram 3) (4-wire type)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	Up to 10 temperature controllers for 1 GOT

*1 Connect the connection cable to the standard RS-485 communication interface.

■When using the external cable (GT11H-C□□□)



Temperature controller		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
UT320 UT321 UT350 UT351 UT420 UT450 UT520 UT550 UT551 UT750*1 UP350 UP351 UP550 UP750*1 UM330 UM331 UM350 UM351 US100	RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1661 RS-485 connection diagram 4)	GT 2505HS	13m	Up to 10 temperature controllers for 1 GOT

*1 Connect the connection cable to the standard RS-485 communication interface.

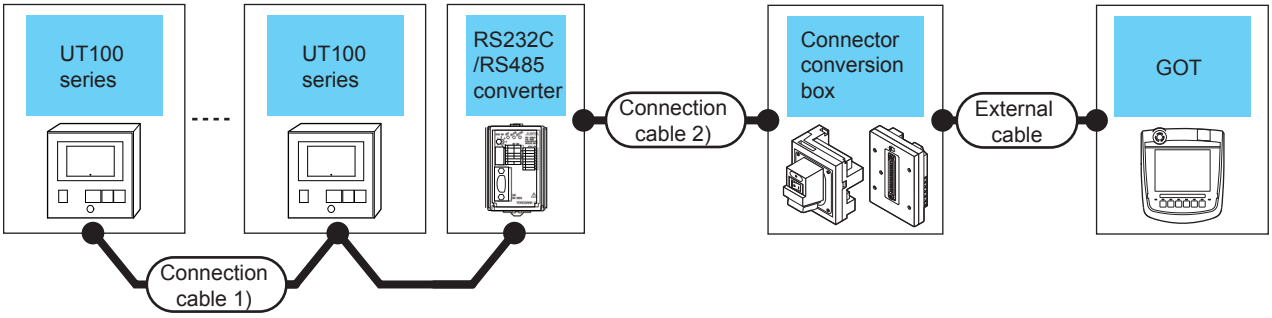
Connecting to UT100 Series

Communication driver

YOKOGAWA GREEN/UT100/ UT2000/UTAdvanced

When using the RS232C/RS485 converter

■When using the connector conversion box

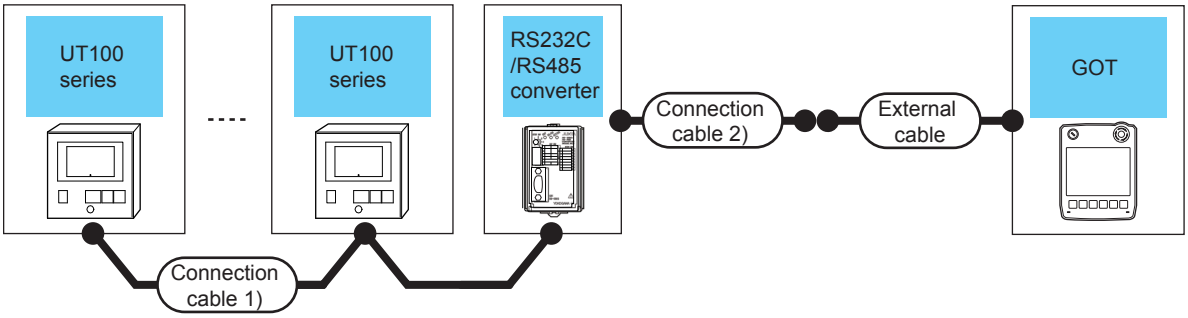


Temperature controller	Connection cable 1)		RS232C/RS485 converter*1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Series	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
UT100	User preparing Page 1662 RS-485 connection diagram 6)	1200m	ML2-□	RS-232	GT09-C30R 20304-9S (3m) or User preparing Page 1656 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	31 temperature controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

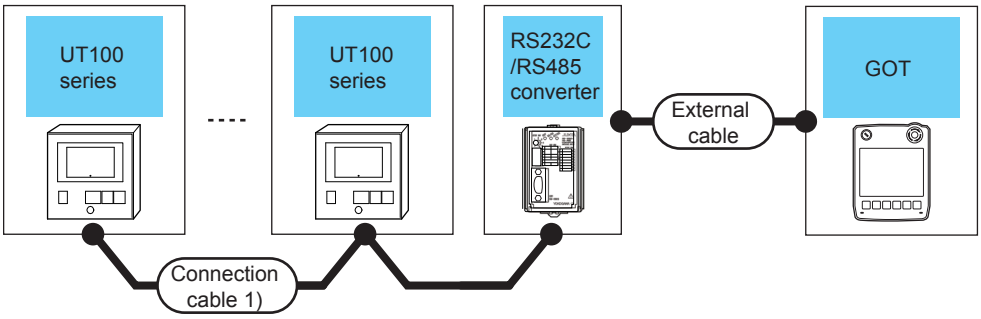


Temperature controller	Connection cable 1)		RS232C/RS485 converter*1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Series	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
UT100	User preparing Page 1662 RS-485 connection diagram 6)	1200m	ML2-□	RS-232	User preparing Page 1656 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	31 temperature controllers for 1 GOT

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



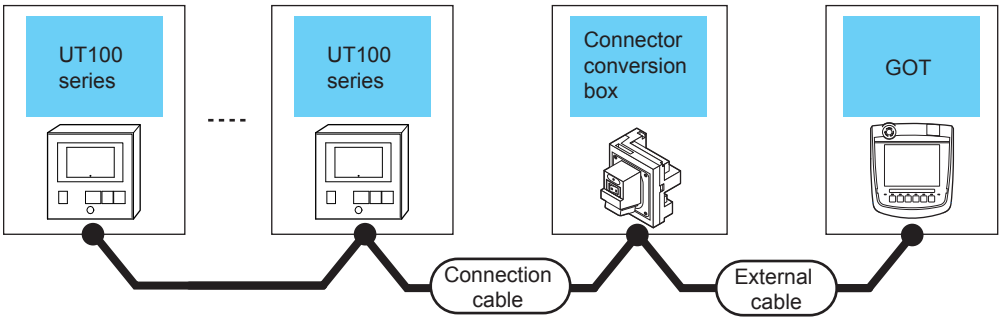
Temperature controller	Connection cable 1)		RS232C/RS485 converter*1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Series	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
UT100	User preparing Page 1662 RS-485 connection diagram 6)	1200m	ML2-□	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1657 RS-232 connection diagram 3)	GT 2505HS	6m	31 temperature controllers for 1 GOT

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

*2 The distance from the converter to the GOT (External cable)

When connecting directly

■When using the connector conversion box



Temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Series	Communication Type	Cable model Connection diagram number					
UT100	RS-485	User preparing Page 1667 RS-485 connection diagram 14) (2-wire type)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 temperature controllers for 1 GOT

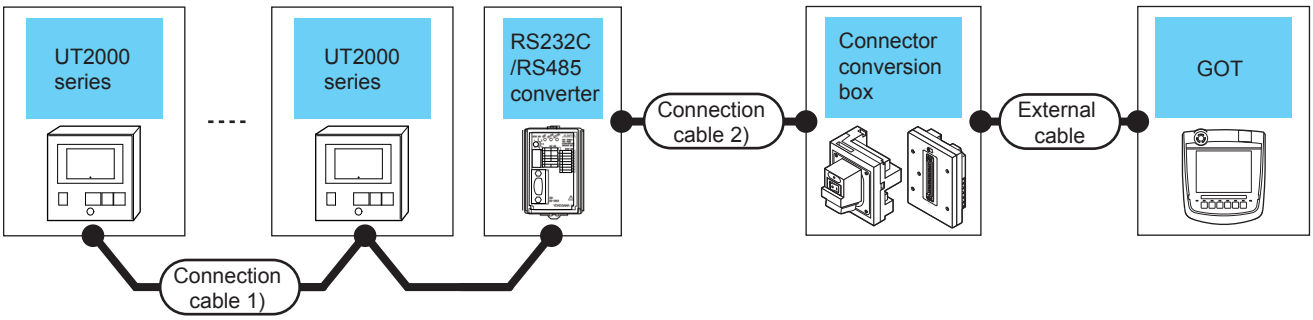
Connecting to UT2000 Series

Communication driver

YOKOGAWA GREEN/UT100/ UT2000/UTAdvanced

When using the RS232C/RS485 converter

■When using the connector conversion box

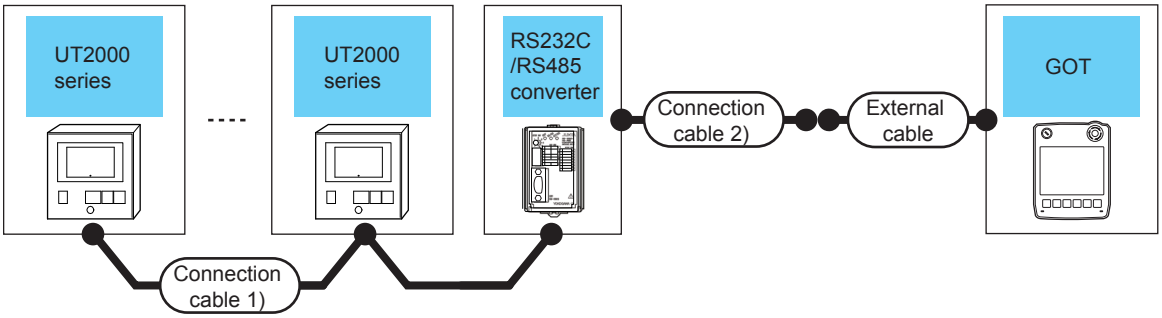


Temperature controller	Connection cable 1)		RS232C/RS485 converter*1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Series	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
UT2000	User preparing Page 1663 RS-485 connection diagram 7)	1200m	ML2-□	RS-232	GT09-C30R20304-9S (3m) or User preparing Page 1656 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 16 temperature controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

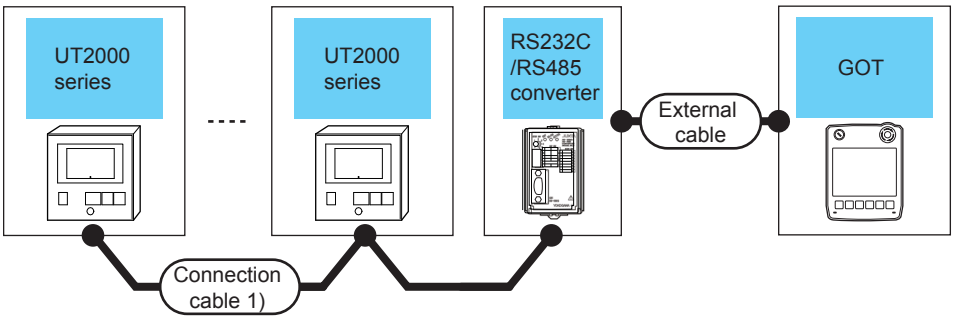


Temperature controller	Connection cable 1)		RS232C/RS485 converter*1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Series	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
UT2000	User preparing Page 1663 RS-485 connection diagram 7)	1200m	ML2-□	RS-232	User preparing Page 1656 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 16 temperature controllers for 1 GOT

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



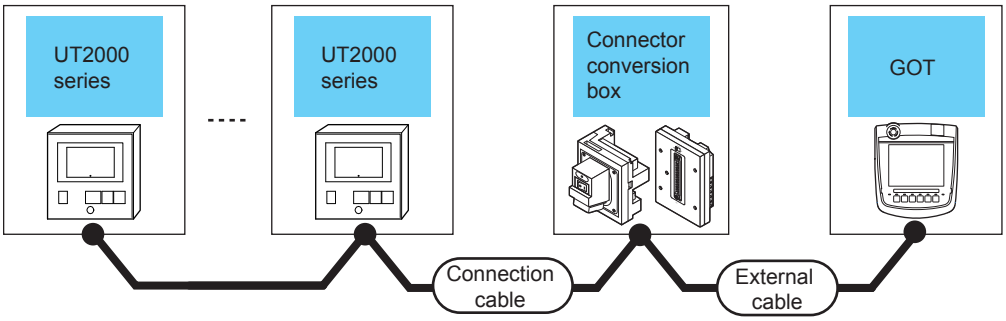
Temperature controller	Connection cable 1)		RS232C/RS485 converter*1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Series	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
UT2000	User preparing Page 1663 RS-485 connection diagram 7)	1200m	ML2-□	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1657 RS-232 connection diagram 3)	GT 2505HS	6m	Up to 16 temperature controllers for 1 GOT

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

*2 The distance from the converter to the GOT (External cable)

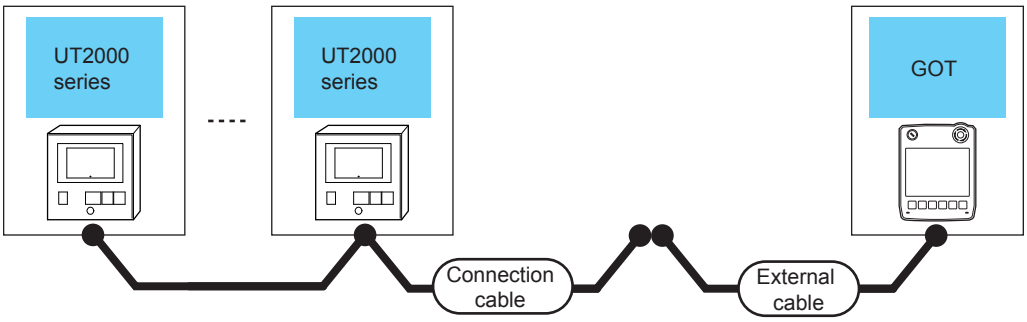
When connecting directly

■When using the connector conversion box



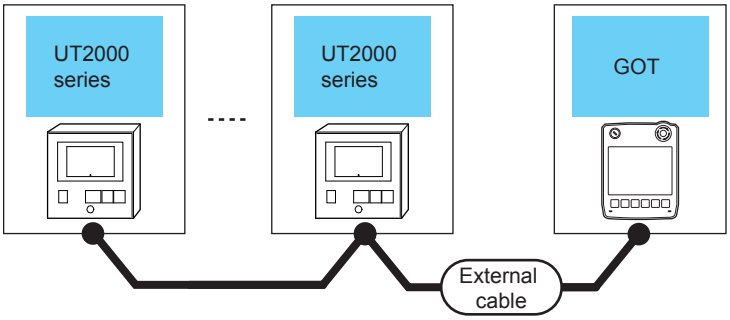
Temperature controller		Connection cable		Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Series	Communication Type	Cable model Connection diagram number	Max. distance					
UT2000	RS-485	GT09-C30R40304-6T (3m) GT09-C100R40304-6T (10m) or User preparing Page 1663 RS-485 connection diagram 8) (4-wire type)	1200m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 16 temperature controllers for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		Up to 10 temperature controllers for 1 GOT

■When using the external cable (GT11H-C□□□-37P)



Temperature controller		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Series	Communication Type	Cable model Connection diagram number				
UT2000	RS-485	User preparing Page 1663 RS-485 connection diagram 9) (4-wire type)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	Up to 10 temperature controllers for 1 GOT

■When using the external cable (GT11H-C□□□)



Temperature controller		External cable	GOT Model	Total distance	Number of connectable equipment
Series	Communication Type				
UT2000	RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1664 RS-485 connection diagram 10)	GT 2505HS	13m	Up to 10 temperature controllers for 1 GOT

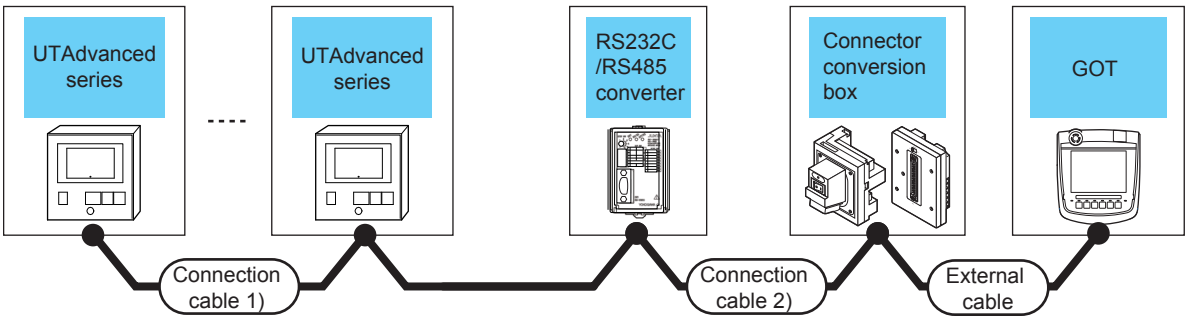
Connecting to UTAdvanced Series

Communication driver

YOKOGAWA GREEN/UT100/ UT2000/UTAdvanced

When using the RS232C/RS485 converter

■When using the connector conversion box



Temperature controller	Connection cable 1)		RS232C/RS485 converter *1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *4	Number of connectable equipment
Model	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
UT32A UT35A UT55A *2 UT75A UP32A UP35A UP55A *2 UM33A *2	User preparing Page 1664 RS-485 connection diagram 11) (4-wire type)	1200m	ML2-□	RS-232	GT09-C30R20304-9S (3m) or User preparing Page 1656 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 temperature controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	User preparing Page 1665 RS-485 connection diagram 12) (2-wire type)				GT09-C30R20304-9S (3m) or User preparing Page 1656 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
UT52A UT55A *3 UP55A *3 UM33A *3	User preparing Page 1662 RS-485 connection diagram 6) (2-wire type)				GT09-C30R20304-9S (3m) or User preparing Page 1656 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.

*2 Only the products that meet the following conditions can be connected.

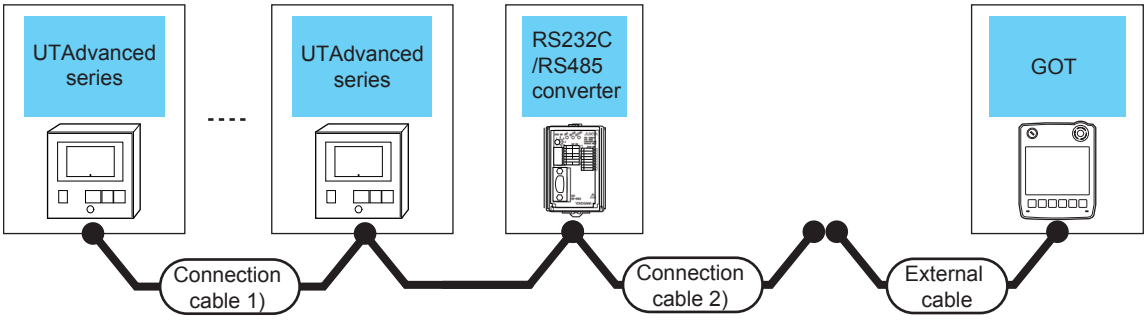
Model	Suffix code		Optional suffix code	Remark
	Function	Open network		
UT55A	1 or 2	-	Without "/LP"	Product with two RS-485 communication ports (4-wire type/2-wire type) and without the power supply for 24VDC sensor
	-	1	-	Product with the open network port of RS-485 communication (4-wire type/ 2-wire type)
UP55A	2	-	-	Product with two RS-485 communication ports (4-wire type/2-wire type) (Standard code model)
	Other than 3	-	-	Product without the additional contact output points (DO) and with the open network port of RS-485 communication (4-wire type/2-wire type) (Standard code model)
UP55A	-	-	With "/CH3"	Product with RS-485 communication port (4-wire type/2-wire type) specified in the E3 terminal area option (Detailed code model)
	-	-	With "/C4"	Product with the RS-485 communication port (4-wire type/2-wire type) specified in the E4 terminal area option (Detailed code model)
UM33A	1	-	Without "/LP"	Product with the RS-485 communication port (4- wire type/2-wire type) and without the power supply for 24 V DC sensor

*3 Only the products that meet the following conditions can be connected.

Model	Suffix code		Optional suffix code	Remark
	Function	Open network		
UT55A	1 or 2	-	With "/LP"	Product with two RS-485 communication ports (4- wire type/2-wire type) and with the power supply for 24 V DC sensor
UP55A	2	-	-	Product with two RS-485 communication ports (4- wire type/2-wire type) (Standard code model)
	-	-	With "/C4"	Product with the RS-485 communication port (4- wire type/2-wire type) specified in the E4 terminal area option (Detailed code model)
UM33A	1	-	With "/LP"	Product with the RS-485 communication port (2- wire type) and with the power supply for 24 V DC sensor

*4 The distance from the converter to the GOT (Connection cable 2) + External cable)

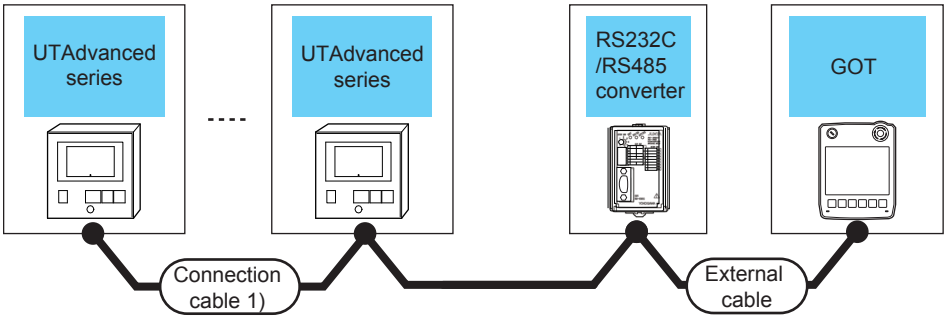
■When using the external cable (GT11H-C□□□-37P)



Temperature controller	Connection cable 1)		RS232C/RS485 converter*1		Connection cable 2)	External cable	GOT Model	Total distance *5	Number of connectable equipment
Series	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
UT32A UT35A UT55A UT75A UP32A UP35A UP55A UM33A	User preparing Page 1664 RS-485 connection diagram 11) (4-wire type)	1200m	ML2-□	RS-232	User preparing Page 1656 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT
	User preparing Page 1665 RS-485 connection diagram 12) (2-wire type)				User preparing Page 1656 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS		
UT52A UT55A*2 UP55A*3 UM33A*4	User preparing Page 1662 RS-485 connection diagram 6) (2-wire type)				User preparing Page 1656 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.
*2 When the suffix code is "1" or "2" in type 2 with the optional suffix code "/LP"
*3 (For standard) when the suffix code is "2" in type 2, (for detail) when the optional suffix code is "/C4"
*4 When the suffix code is "1" in type 2 with the optional suffix code "/LP"
*5 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)

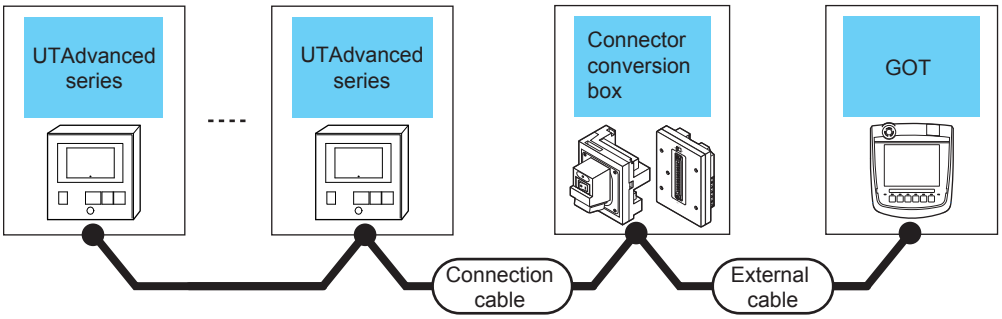


Temperature controller	Connection cable 1)		RS232C/RS485 converter*1		External cable	GOT Model	Total distance *5	Number of connectable equipment
Series	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
UT32A UT35A UT55A UT75A UP32A UP35A UP55A UM33A	User preparing Page 1664 RS-485 connection diagram 11) (4-wire type)	1200m	ML2-□	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1657 RS-232 connection diagram 3)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT
	User preparing Page 1665 RS-485 connection diagram 12) (2-wire type)				GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1657 RS-232 connection diagram 3)	GT 2505HS		
UT52A UT55A*2 UP55A*3 UM33A*4	User preparing Page 1662 RS-485 connection diagram 6) (2-wire type)				GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1657 RS-232 connection diagram 3)	GT 2505HS		

*1 Product manufactured by YOKOGAWA Electric Corporation.
For details of the product, contact Yokogawa Electric Corporation.
*2 When the suffix code is "1" or "2" in type 2 with the optional suffix code "/LP"
*3 (For standard) when the suffix code is "2" in type 2, (for detail) when the optional suffix code is "/C4"
*4 When the suffix code is "1" in type 2 with the optional suffix code "/LP"
*5 The distance from the converter to the GOT (External cable)

When connecting directly

■When using the connector conversion box



Temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model	Communication Type	Cable model Connection diagram number					
UT32A UT35A UT55A *1 UT75A UP32A UP35A UP55A *1	RS-485	GT09-C30R40303-6T(3m) GT09-C100R40303-6T(10m) or User preparing Page 1659 RS-485 connection diagram 2) (4-wire type)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 temperature controllers for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		Up to 10 temperature controllers for 1 GOT
		User preparing Page 1666 RS-485 connection diagram 13) (2-wire type)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		Up to 31 temperature controllers for 1 GOT
UM33A *1	RS-485	GT09-C30R40303-6T(3m) GT09-C100R40303-6T(10m) or User preparing Page 1659 RS-485 connection diagram 2) (4-wire type)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		Up to 31 temperature controllers for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		Up to 10 temperature controllers for 1 GOT
UT52A UT55A *2 UP55A *2 UM33A *2	RS-485	User preparing Page 1667 RS-485 connection diagram 15) (2-wire type)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		Up to 31 temperature controllers for 1 GOT

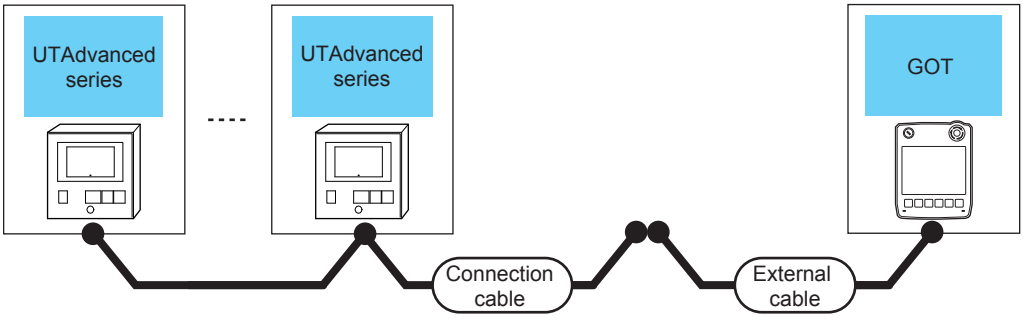
*1 Only the products that meet the following conditions can be connected.

Model	Suffix code		Optional suffix code	Remark
	Function	Open network		
UT55A	1 or 2	-	Without "/LP"	Product with two RS-485 communication ports (4-wire type/2-wire type) and without the power supply for 24VDC sensor
	-	1	-	Product with the open network port of RS-485 communication (4-wire type/2-wire type)
UP55A	2	-	-	Product with two RS-485 communication ports (4-wire type/2-wire type) (Standard code model)
	Other than 3	1	-	Product without the additional contact output points (DO) and with the open network port of RS-485 communication (4-wire type/2-wire type) (Standard code model)
	-	-	With "/CH3"	Product with RS-485 communication port (4-wire type/2-wire type) specified in the E3 terminal area option (Detailed code model)
UP55A	-	-	With "/C4"	Product with the RS-485 communication port (4-wire type/2-wire type) specified in the E4 terminal area option (Detailed code model)
UM33A	1	-	Without "/LP"	Product with the RS-485 communication port (4- wire type/2-wire type) and without the power supply for 24 V DC sensor

*2 Only the products that meet the following conditions can be connected.

Model	Suffix code		Optional suffix code	Remark
	Function	Open network		
UT55A	1 or 2	-	With "/LP"	Product with two RS-485 communication ports (4-wire type/2-wire type) and with the power supply for 24VDC sensor
UP55A	2	-	-	Product with two RS-485 communication ports (4-wire type/2-wire type) (Standard code model)
	-	-	With "/C4"	Product with the RS-485 communication port (4-wire type/2-wire type) specified in the E4 terminal area option (Detailed code model)
UM33A	1	-	With "/LP"	Product with the RS-485 communication port (2-wire type) and with the power supply for 24 V DC sensor

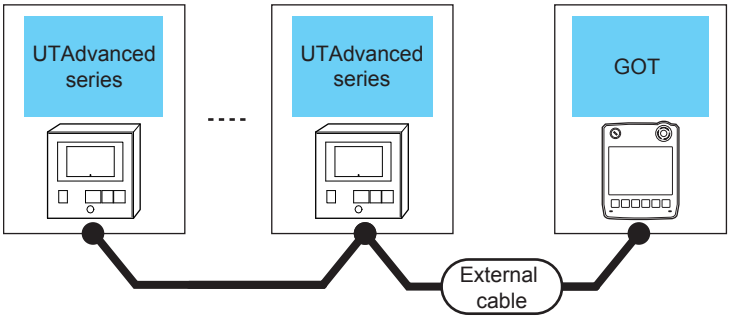
■When using the external cable (GT11H-C□□□-37P)



Temperature controller		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Series	Communication Type	Cable model Connection diagram number				
UT32A UT35A UT55A UT75A UP35A UP55A UM33A*1	RS-485	User preparing Page 1660 RS-485 connection diagram 3) (4-wire type)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	Up to 10 temperature controllers for 1 GOT

*1 When the suffix code is "1" in type 2 without the optional suffix code "/LP"

■When using the external cable (GT11H-C□□□)



Temperature controller		External cable	GOT Model	Total distance	Number of connectable equipment
Series	Communication Type				
UT32A UT35A UT55A*1 UT75A UP35A UP55A UM33A*2	RS-485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1661 RS-485 connection diagram 4)	GT 2505HS	13m	Up to 10 temperature controllers for 1 GOT

*1 When the suffix code is "1" in type 2 without the optional suffix code "/LP"

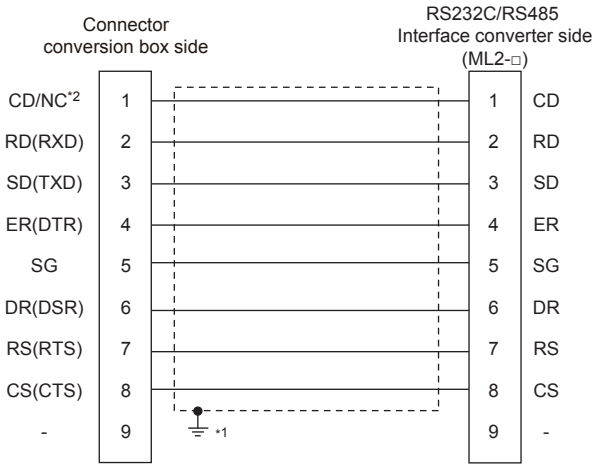
35.3 Connection Diagram

The following diagram shows the connection between the GOT and the temperature controller.

RS-232 cable

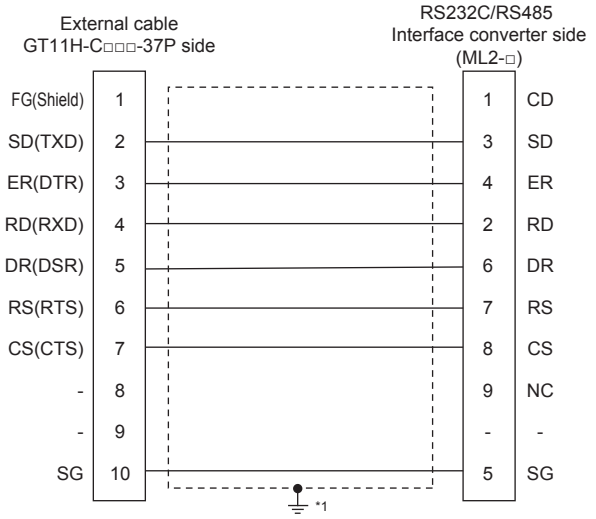
Connection diagram

■RS-232 connection diagram 1)



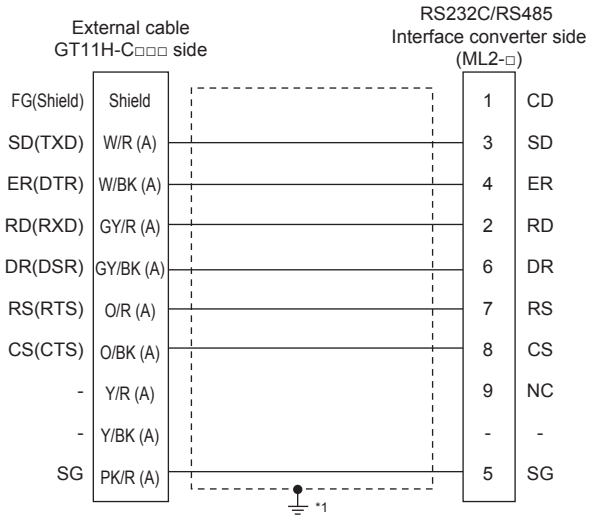
*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 GT2506HS-V: CD, GT2505HS-V: NC

■RS-232 connection diagram 2)



*1 Connect FG grounding to the appropriate part of a cable shield line.

■RS-232 connection diagram 3)



*1 Connect FG grounding to the appropriate part of a cable shield line.

Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■YOKOGAWA temperature controller side connector

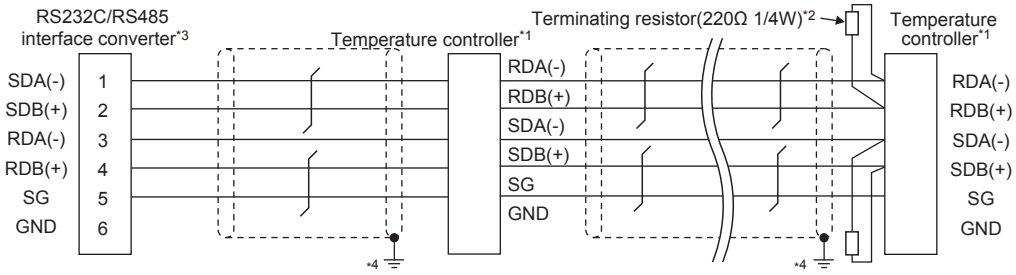
Use the connector compatible with the YOKOGAWA temperature controller side.

For details, refer to the user's manual of the YOKOGAWA temperature controller.

RS-485 cable

Connection diagram

■RS-485 connection diagram 1)

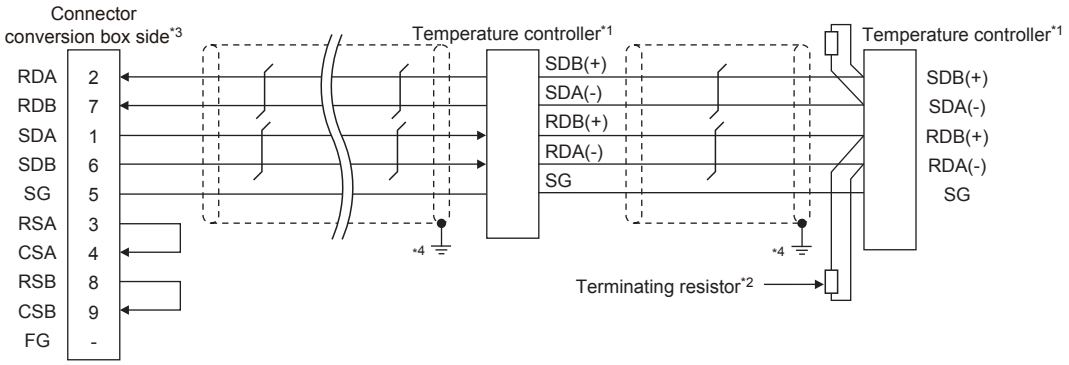


*1 Pin No. of temperature controller differs depending on the model. Refer to the following table.

Signal name	Model of temperature controller	
	GREEN Series UT/UP/UM	GREEN Series US
	Pin No.	Pin No.
RDA (-)	26	24
RDB (+)	25	23
SDB (+)	23	21
SDA (-)	24	22
SG	27	25

*2 Terminating resistor should be provided for a temperature controller which will be a terminal.
*3 Turn on the terminating switch on the RS232C/RS485 converter at the end.
*4 Connect FG grounding to the appropriate part of a cable shield line.

■RS-485 connection diagram 2)



*1 Pin No. of temperature controller differs depending on the model.Refer to the following table.

Signal name	Model of temperature controller					
	GREEN Series UT/UP/UM	GREEN Series US	UTAdvanced Series			
			UT32A/UP32A/ UM33A	UT35A/UP35A/T55A (product condition A)/UP55A (product condition A)	UT55A (product condition B)/ UP55A (product condition B)	UT75A
	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.
SDB (+)	23	21	301	407	501	1
SDA (-)	24	22	302	408	502	2
RDB (+)	25	23	304	410	504	4
RDA (-)	26	24	305	411	505	5
SG	27	25	303	409	503	3

• For the product condition of UTAdvanced series, refer to the following table.

Model	Product condition	Suffix code		Optional suffix code	Remark
		Function	Open network		
UT55A	A	-	1	-	Product with the open network port of RS-485 communication (4-wire type/2-wire type)
	B	1 or 2	-	Without "/LP"	Product with two RS-485 communication ports (4-wire type/ 2-wire type) and without the power supply for 24VDC sensor
UP55A	A	Other than 3	1	-	Product without the additional contact output points (DO) and with the open network port of RS-485 communication (4-wire type/2-wire type) (Standard code model)
		-	-	With "/CH3"	Product with the RS-485 communication port (4-wire type/2-wire type) specified in the E3 terminal area option (Detailed code model)
	B	2	-	-	Product with two RS-485 communication ports (4-wire type/ 2-wire type) (Standard code model)
		-	-	With "/C4"	Product with the RS-485 communication port (4-wire type/2-wire type) specified in the E4 terminal area option (Detailed code model)

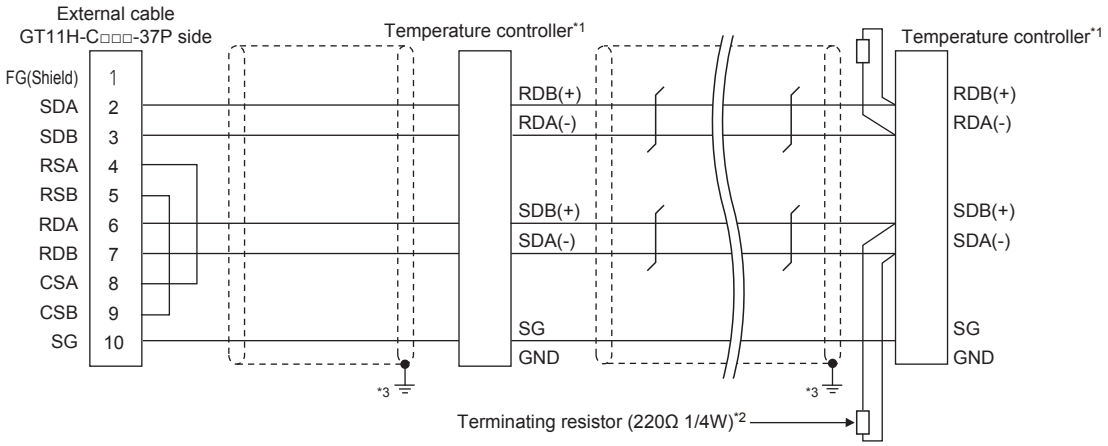
*2 Terminating resistor having 220 Ω 1/4W should be provided for a temperature controller which will be a terminal.

*3 Set the terminating resistor of GOT side which will be a terminal.

☞ Page 1668 Connecting terminating resistors

*4 Connect FG grounding to the appropriate part of a cable shield line.

■RS-485 connection diagram 3)



*1 Pin No. of temperature controller differs depending on the model.
Refer to the following table.

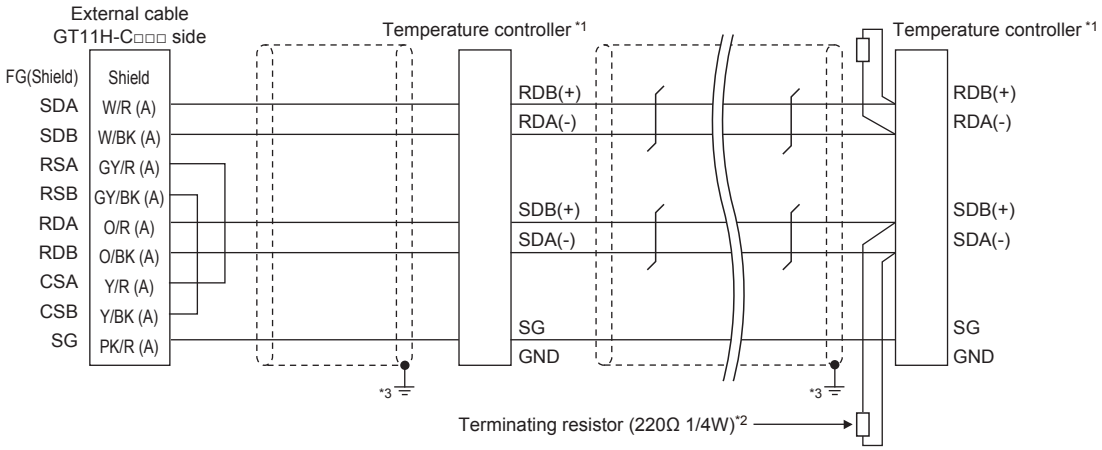
Signal name	Model of temperature controller					
	GREEN Series UT/UP/UM	GREEN Series US	UTAdvanced Series			
			UT32A/UP32A/ UM33A	UT35A/UP35A/UT55A (product condition A)/UP55A (product condition A)	UT55A (product condition B)/ UP55A (product condition B)	UT75A
	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.
SDB (+)	23	21	301	407	501	1
SDA (-)	24	22	302	408	502	2
RDB (+)	25	23	304	410	504	4
RDA (-)	26	24	305	411	505	5
SG	27	25	303	409	503	3

• For the product condition of UTAdvanced series, refer to the following table.

Model	Product condition	Suffix code		Optional suffix code	Remark
		Function	Open network		
UT55A	A	-	1	-	Product with the open network port of RS-485 communication (4-wire type/2-wire type)
	B	1 or 2	-	Without "/LP"	Product with two RS-485 communication ports (4-wire type/ 2-wire type) and without the power supply for 24VDC sensor
UP55A	A	Other than 3	1	-	Product without the additional contact output points (DO) and with the open network port of RS-485 communication (4-wire type/2-wire type) (Standard code model)
		-	-	With "/CH3"	Product with the RS-485 communication port (4-wire type/2-wire type) specified in the E3 terminal area option (Detailed code model)
	B	2	-	-	Product with two RS-485 communication ports (4-wire type/ 2-wire type) (Standard code model)
		-	-	With "/C4"	Product with the RS-485 communication port (4-wire type/2-wire type) specified in the E4 terminal area option (Detailed code model)

*2 Terminating resistor should be provided for a temperature controller which will be a terminal.
*3 Connect FG grounding to the appropriate part of a cable shield line.

■RS-485 connection diagram 4)



*1 Pin No. of temperature controller differs depending on the model.
Refer to the following table.

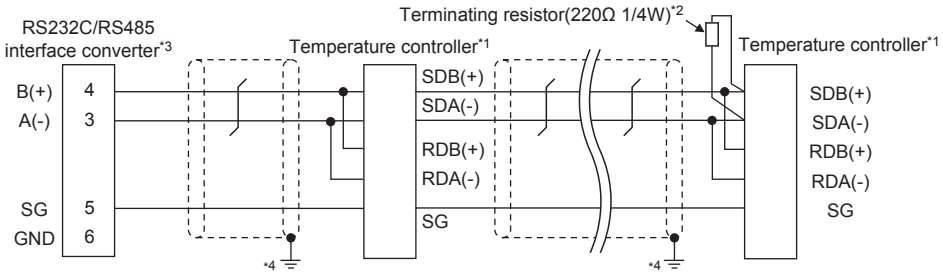
Signal name	Model of temperature controller					
	GREEN Series UT/UP/UM	GREEN Series US	UTAdvanced Series			
			UT32A/UP32A/ UM33A	UT35A/UP35A/UT55A (product condition A)/UP55A (product condition A)	UT55A (product condition B)/ UP55A (product condition B)	UT75A
	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.
SDB (+)	23	21	301	407	501	1
SDA (-)	24	22	302	408	502	2
RDB (+)	25	23	304	410	504	4
RDA (-)	26	24	305	411	505	5
SG	27	25	303	409	503	3

• For the product condition of UTAdvanced series, refer to the following table.

Model	Product condition	Suffix code		Optional suffix code	Remark
		Function	Open network		
UT55A	A	-	1	-	Product with the open network port of RS-485 communication (4-wire type/2-wire type)
	B	1 or 2	-	Without "/LP"	Product with two RS-485 communication ports (4-wire type/ 2-wire type) and without the power supply for 24VDC sensor
UP55A	A	Other than 3	1	-	Product without the additional contact output points (DO) and with the open network port of RS-485 communication (4-wire type/2-wire type) (Standard code model)
		-	-	With "/CH3"	Product with the RS-485 communication port (4-wire type/2-wire type) specified in the E3 terminal area option (Detailed code model)
	B	2	-	-	Product with two RS-485 communication ports (4-wire type/ 2-wire type) (Standard code model)
		-	-	With "/C4"	Product with the RS-485 communication port (4-wire type/2-wire type) specified in the E4 terminal area option (Detailed code model)

*2 Terminating resistor should be provided for a temperature controller which will be a terminal.
*3 Connect FG grounding to the appropriate part of a cable shield line.

■RS-485 connection diagram 5)

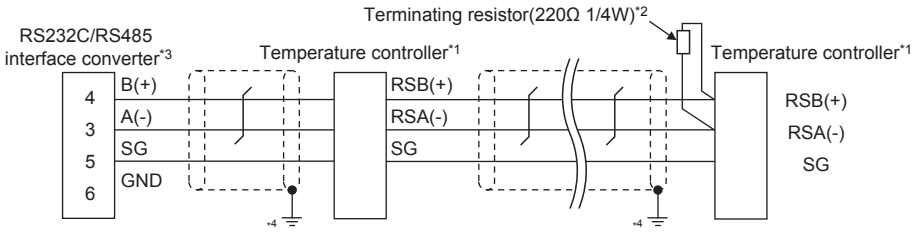


*1 Pin No. of temperature controller differs depending on the model.
Refer to the following table.

Signal name	Model of temperature controller	
	GREEN Series UT/UP/UM	GREEN Series US
	Pin No.	Pin No.
SDB (+)	23	21
SDA (-)	24	22
RDB (+)	25	23
RDA (-)	26	24
SG	27	25

*2 Terminating resistor should be provided for a temperature controller which will be a terminal.
*3 Turn on the terminating switch on the RS232C/RS485 converter at the end.
*4 Connect FG grounding to the appropriate part of a cable shield line.

■RS-485 connection diagram 6)

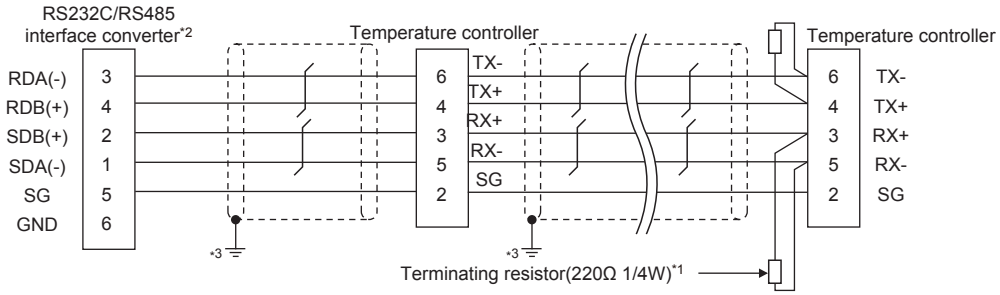


*1 Pin No. of temperature controller differs depending on the model.
Refer to the following table.

Signal name	Model of temperature controller				
	GREEN Series UT750/UP750	UT100 Series UT130/UT150/UP150	UT100 Series UT152/UT155	UTAdvanced Series UT52A/UM33A	UTAdvanced Series UT55A/UP55A
	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.
RSB (+)	28	3	26	301	501
RSA (-)	29	4	27	302	502
SG	30	5	28	303	503

*2 Terminating resistor should be provided for a temperature controller which will be a terminal.
*3 Turn on the terminating switch on the RS232C/RS485 converter at the end.
*4 Connect FG grounding to the appropriate part of a cable shield line.

■RS-485 connection diagram 7)

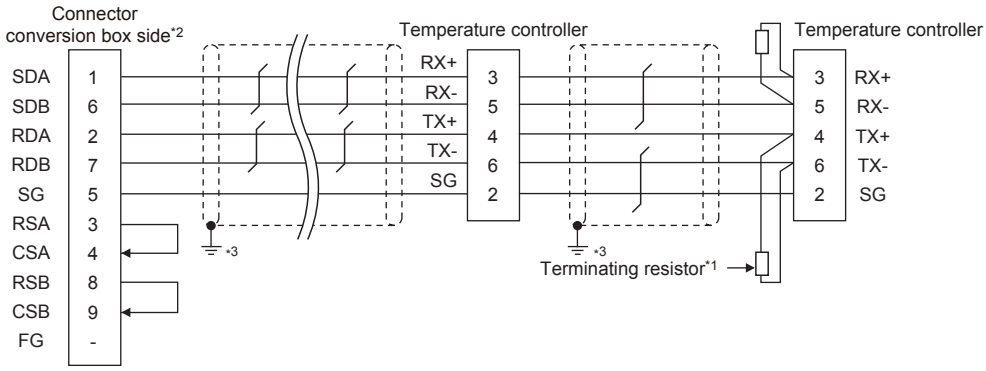


*1 Terminating resistor should be provided for a temperature controller which will be a terminal.

*2 Turn on the terminating switch on the RS232C/RS485 converter at the end.

*3 Connect FG grounding to the appropriate part of a cable shield line.

■RS-485 connection diagram 8)



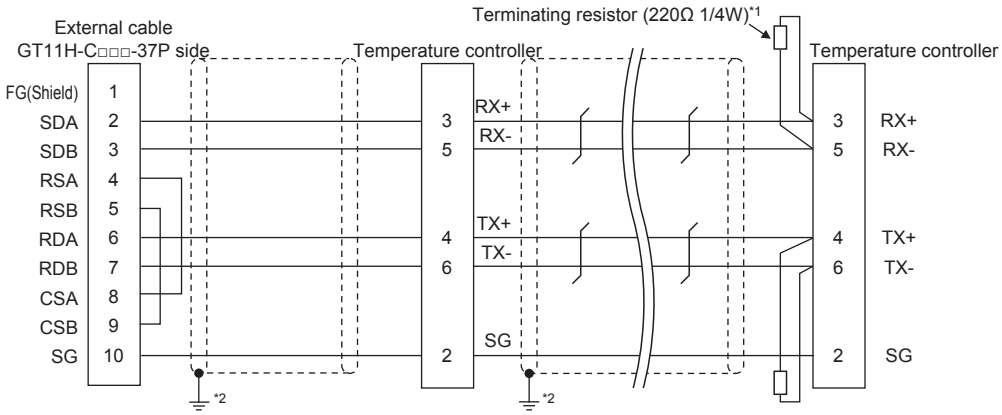
*1 Terminating resistor having 100 Ω 1/2W should be provided for a temperature controller which will be a terminal.

*2 Set the terminating resistor of GOT side which will be a terminal.

☞ Page 1668 Connecting terminating resistors

*3 Connect FG grounding to the appropriate part of a cable shield line.

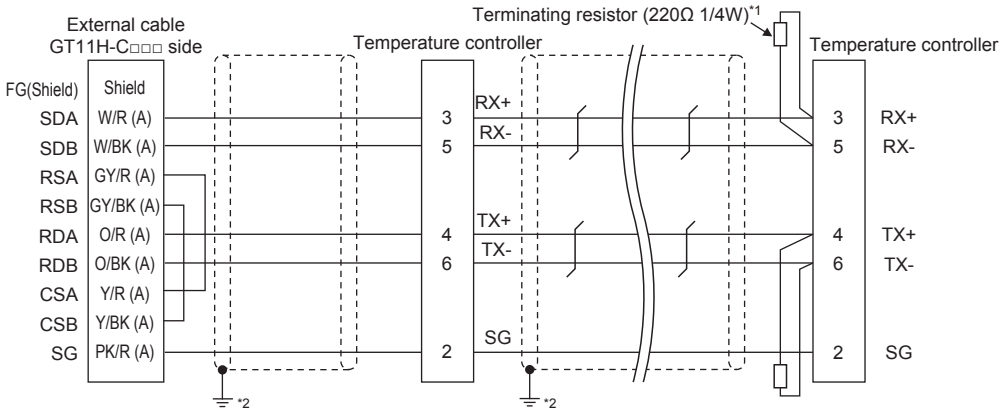
■RS-485 connection diagram 9)



*1 Terminating resistor having 100 Ω 1/2W should be provided for a temperature controller which will be a terminal.

*2 Connect FG grounding to the appropriate part of a cable shield line.

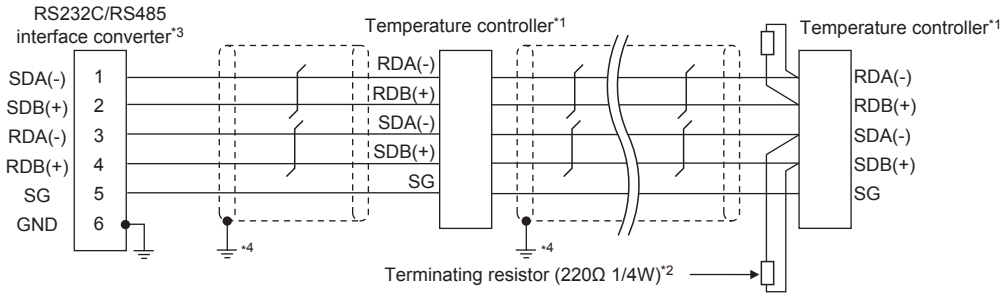
■RS-485 connection diagram 10)



*1 Terminating resistor having 100 Ω 1/2W should be provided for a temperature controller which will be a terminal.

*2 Connect FG grounding to the appropriate part of a cable shield line.

■RS-485 connection diagram 11)



*1 Pin No. of temperature controller differs depending on the model.
Refer to the following table.

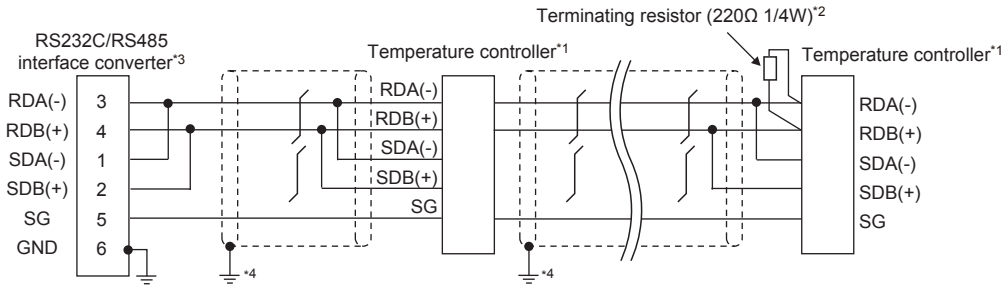
Signal name	Model of temperature controller			
	UTAdvanced Series			
	UT32A/ UP35A/ UM33A	UT35A/UT55A (product condition A)/UP55A (product condition A)	UT55A (product condition B)/UP55A (product condition B)	UT75A
	Pin No.	Pin No.	Pin No.	Pin No.
SDB (+)	301	407	501	1
SDA (-)	302	408	502	2
RDB (+)	304	410	504	4
RDA (-)	305	411	505	5
SG	303	409	503	3

• For the product condition of UTAdvanced series, refer to the following table.

Model	Product condition	Suffix code		Optional suffix code	Remark
		Function	Open network		
UT55A	A	-	1	-	Product with the open network port of RS-485 communication (4-wire type/2-wire type)
	B	1 or 2	-	Without "/LP"	Product with two RS-485 communication ports (4-wire type/ 2-wire type) and without the power supply for 24VDC sensor
UP55A	A	Other than 3	1	-	Product without the additional contact output points (DO) and with the open network port of RS-485 communication (4-wire type/2-wire type) (Standard code model)
		-	-	With "/CH3"	Product with the RS-485 communication port (4-wire type/2-wire type) specified in the E3 terminal area option (Detailed code model)
	B	2	-	-	Product with two RS-485 communication ports (4-wire type/ 2-wire type) (Standard code model)
		-	-	With "/C4"	Product with the RS-485 communication port (4-wire type/2-wire type) specified in the E4 terminal area option (Detailed code model)

*2 Terminating resistor should be provided for a temperature controller which will be a terminal.
*3 Turn on the terminating switch on the RS232C/RS485 converter at the end.
*4 Connect FG grounding to the appropriate part of a cable shield line.

■RS-485 connection diagram 12)



*1 Pin No. of temperature controller differs depending on the model.
Refer to the following table.

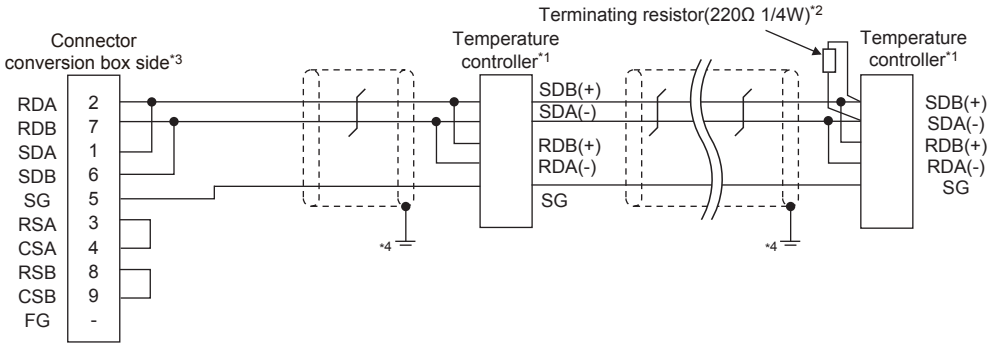
Signal name	Model of temperature controller			
	UTAdvanced Series			
	UT32A/UP32A/UM33A	UT35A/UP35A/UT55A (product condition A)/UP55A (product condition A)	UT55A (product condition B)/UP55A (product condition B)	UT75A
	Pin No.	Pin No.	Pin No.	Pin No.
SDB (+)	301	407	501	1
SDA (-)	302	408	502	2
RDB (+)	304	410	504	4
RDA (-)	305	411	505	5
SG	303	409	503	3

• For the product condition of UTAdvanced series, refer to the following table.

Model	Product condition	Suffix code		Optional suffix code	Remark
		Function	Open network		
UT55A	A	-	1	-	Product with the open network port of RS-485 communication (4-wire type/2-wire type)
	B	1 or 2	-	Without "/LP"	Product with two RS-485 communication ports (4-wire type/2-wire type) and without the power supply for 24VDC sensor
UP55A	A	Other than 3	1	-	Product without the additional contact output points (DO) and with the open network port of RS-485 communication (4-wire type/2-wire type) (Standard code model)
		-	-	With "/CH3"	Product with the RS-485 communication port (4-wire type/2-wire type) specified in the E3 terminal area option (Detailed code model)
	B	2	-	-	Product with two RS-485 communication ports (4-wire type/2-wire type) (Standard code model)
		-	-	With "/C4"	Product with the RS-485 communication port (4-wire type/2-wire type) specified in the E4 terminal area option (Detailed code model)

*2 Terminating resistor should be provided for a temperature controller which will be a terminal.
*3 Turn on the terminating switch on the RS232C/RS485 converter at the end.
*4 Connect FG grounding to the appropriate part of a cable shield line.

■RS-485 connection diagram 13)

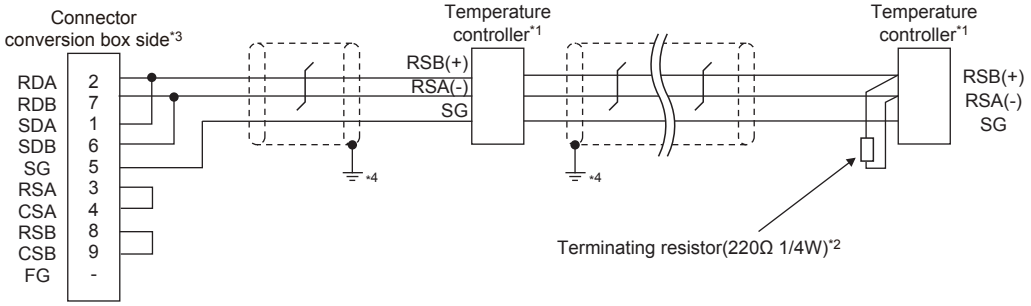


*1 Pin No. of temperature controller differs depending on the model.
Refer to the following table.

Signal name	Model of temperature controller					
	GREEN Series UT/UP/UM	GREEN Series US	UTAdvanced Series			
			UT32A/UP32A/ UM33A	UT35A/UP35A/UT55A (product condition A)/ UP55A (product condition A)	UT55A (product condition B)/UP55A (product condition B)	UT75A
	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.
SDB (+)	23	21	301	407	501	1
SDA (-)	24	22	302	408	502	2
RDB (+)	25	23	304	410	504	4
RDA (-)	26	24	305	411	505	5
SG	27	25	303	409	503	3

*2 Terminating resistor should be provided for a GOT and a temperature controller which will be a terminal.
*3 Set the terminating resistor of GOT side which will be a terminal.
☞ Page 1668 Connecting terminating resistors
*4 Connect FG grounding to the appropriate part of a cable shield line.

■RS-485 connection diagram 14)

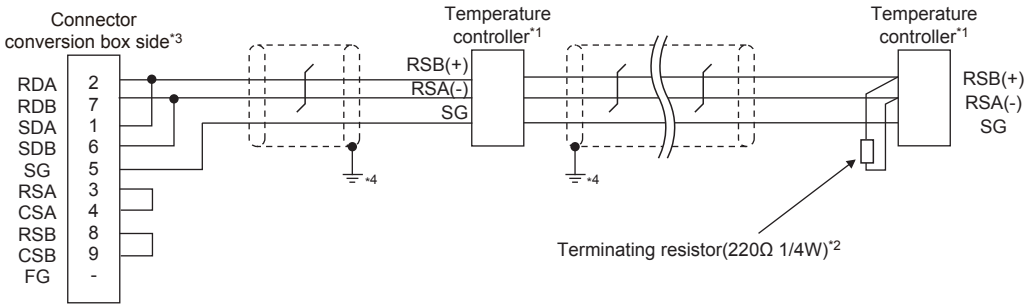


*1 Pin No. of temperature controller differs depending on the model.
Refer to the following table.

Signal name	Model of temperature controller		
	GREEN Series UT750/UP750	UT100 Series UT130/UT150/UP150	UT100 Series UT152/UT155
	Pin No.	Pin No.	Pin No.
RSB (+)	28	3	26
RSA (-)	29	4	27
SG	30	5	28

*2 Terminating resistor should be provided for a GOT and a temperature controller which will be a terminal.
*3 Set the terminating resistor of GOT side which will be a terminal.
☞ Page 1668 Connecting terminating resistors
*4 Connect FG grounding to the appropriate part of a cable shield line.

■RS-485 connection diagram 15)



*1 Pin No. of temperature controller differs depending on the model.
Refer to the following table.

Signal name	Model of temperature controller				
	GREEN Series UT750/UP750	UT100 Series UT130/UT150/UP150	UT100 Series UT152/UT155	UTAdvanced Series UT52A/UM33A	UTAdvanced Series UT55A/UP55A
	Pin No.	Pin No.	Pin No.	Pin No.	Pin No.
RSB (+)	28	3	26	301	501
RSA (-)	29	4	27	302	502
SG	30	5	28	303	503

*2 Terminating resistor should be provided for a GOT and a temperature controller which will be a terminal.
*3 Set the terminating resistor of GOT side which will be a terminal.
☞ Page 1668 Connecting terminating resistors
*4 Connect FG grounding to the appropriate part of a cable shield line.

Precautions when preparing a cable

■Cable length

The total length (between GOT and controllers) of the RS-485 cable must be 13 m or shorter.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■YOKOGAWA temperature controller side connector

Use the connector compatible with the YOKOGAWA temperature controller side.

For details, refer to the user's manual of the YOKOGAWA temperature controller.

Connecting terminating resistors

■GOT side

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Enable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

■YOKOGAWA temperature controller side

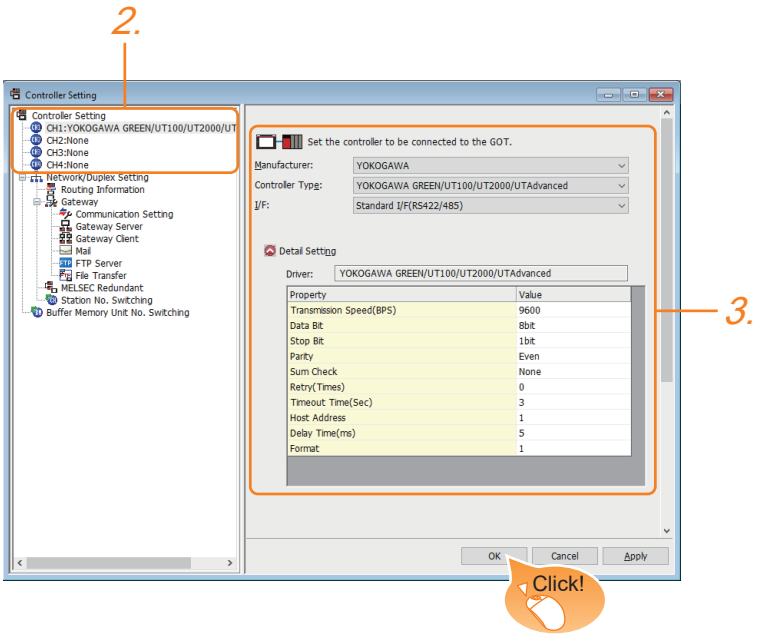
When connecting a YOKOGAWA temperature controller to the GOT, a terminating resistor must be connected.

☞ Page 1671 Temperature Controller Side Setting

35.4 GOT Side Settings

Setting communication interface (Communication settings)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [YOKOGAWA]
- [Controller Type]: [YOKOGAWA GREEN/UT100/UT2000/UTAdvanced]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1670 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Property	Value
Transmission Speed(BPS)	9600
Data Bit	8 bit
Stop Bit	1 bit
Parity	Even
Sum Check	None
Retry(Times)	0
Timeout Time(Sec)	3
Host Address	1
Delay Time(ms)	5
Format	1

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 9600bps)	4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bits)	7bits/8bits
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit/2bits
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Even)	None Even Odd
Sum Check	Set whether or not to perform a sum check during communication. (Default: No)	Done, None
Retry	Set the number of retries to be performed when a communication error occurs. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Host Address	Specify the host address (station No. of the GOT to which the temperature controller is connected) in the connected network. (Default: 1)	1 to 99
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 5ms)	0 to 300ms
Format	Select the communication format. (Default: 1) Format 1: Accessible to GREEN/UT100/UT2000/UTAdvanced Series Format 2: Accessible to GREEN/UT2000/UTAdvanced Series, Not accessible to UT100 Series.	1/2

Point

- Format
- When connecting to UT100 Series, specify the format 1.
- When connecting to only GREEN/UT2000/UTAdvanced Series, specifying the format 2 is recommended.
- Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

- Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

35.5 Temperature Controller Side Setting

Point

• YOKOGAWA temperature controller

For details of YOKOGAWA temperature controller, refer to the following manual.

User's Manual of the YOKOGAWA temperature controller

• RS232C/RS485 converter

For details on communication settings of the RS232C/RS485 converter, refer to the following manual.

User's Manual of RS232C/RS485 converter

Model name		Refer to
Temperature controller	GREEN	☞ Page 1671 Connecting to GREEN Series
	UT100	☞ Page 1672 Connecting to UT100 Series
	UT2000	☞ Page 1672 Connecting to UT2000 Series
	UTAdvanced	☞ Page 1673 Connecting to UTAdvanced Series
RS232C/RS485 converter	ML2-○	☞ Page 1674 Connecting to RS232C/RS485 converter (ML2-□)

Connecting to GREEN Series

Communication settings

Make the communication settings by operating the key of the temperature controller.

■For the UT□/UP□/UM□/US1000 (except UT750, UP750)

Item	Set value
Transmission speed	9600bps (fixed)
Data bit*1	7bits, 8bits
Parity bit*1	Even, odd, none
Stop bit*1	1bit, 2bits
Address*1*2	1 to 99
Protocol selection*1	0: PC link communication (without sum check) 1: PC link communication (with sum check)

*1 Adjust the settings with GOT settings.

*2 Avoid duplication of the address with any of the other units.

■For the UT750, UP750

Item	Set value	
Transmission speed*1	RS-485 communication	9600bps (fixed)
	High performance RS-485 communication	9600bps, 19200bps, 38400bps
Data bit*1	7bits, 8bits	
Parity bit*1	Even, odd, none	
Stop bit*1	1bit, 2bits	
Address*1*2	1 to 99	
Protocol selection*1	RS-485 communication	0: PC link communication (without sum check) 1: PC link communication (with sum check)
	High performance RS-485 communication	0: PC link communication (without sum check) 1: PC link communication (with sum check)

*1 Adjust the settings with GOT settings.

*2 Avoid duplication of the address with any of the other units.

Connecting to UT100 Series

Communication settings

Make the communication settings by operating the key of the temperature controller.

Item	Set value
Transmission speed	9600bps
Data bit*1	7bits, 8bits
Parity bit*1	Even, odd, none
Stop bit*1	1bit, 2bits
Address*1*2	1 to 99
Protocol selection*1	0: PC link communication (without sum check) 1: PC link communication (with sum check)

*1 Adjust the settings with GOT settings.
*2 Avoid duplication of the address with any of the other units.

Connecting to UT2000 Series

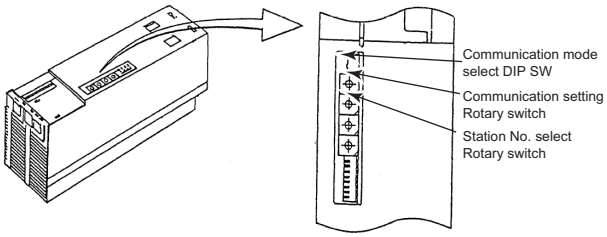
Communication settings

Make the communication settings using setting switches.

Item	Set value
Transmission speed	9600bps
Data bit*1	8bits (fixed)
Parity bit*1	Even, odd, none
Stop bit*1	1bit (fixed)
Station No.*1*2	1 to 16
Communication mode	PC link communication mode

*1 Adjust the settings with GOT settings.
*2 Avoid duplication of the station No. with any of the other units.

Settings by switch



■Settings of the transmission speed and the parity

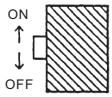
Make those settings by operating the communication setting Rotary switch.



Switch position	Transmission speed	Parity bit
0	9600bps	None
1		Odd
2		Even

■Communication mode settings

Make this setting by operating the communication mode select DIP SW.



Switch position	Communication mode
ON	PC link communication mode

■A setting of the station No.

Make this setting by operating the station No. select Rotary switch.



Switch position	Station No.
0	1
1	2
2	3
3	4
4	5
5	6
6	7
7	8
8	9
9	10
A	11
B	12
C	13
D	14
E	15
F	16

Connecting to UTAdvanced Series

Communication settings

Make the communication settings by operating the key of the temperature controller.

Item	Set value
Transmission speed*1	9600bps, 19200bps, 38400bps
Data bit*1	7bits, 8bits
Parity bit*1	Even, odd, none
Stop bit*1	1bit, 2bits
Address*1*2	1 to 99
Minimum response time	0 to 10 (x 10ms)
Protocol selection*1	0: PC link communication (without sum check) 1: PC link communication (with sum check)

*1 Adjust the settings with GOT settings.
*2 Avoid duplication of the address with any of the other units.

Connecting to RS232C/RS485 converter (ML2-□)

Communication settings

Make the communication settings using setting switches.

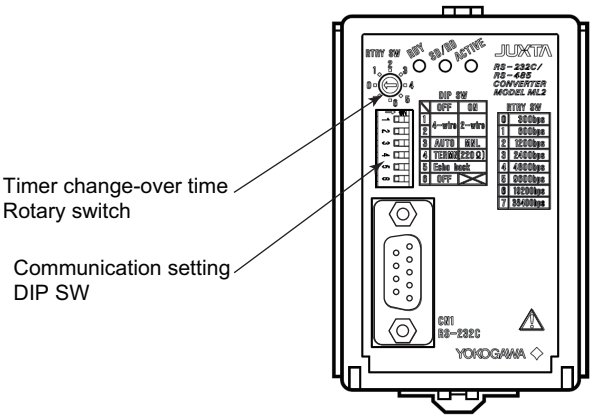
Item	Set value
Transmission speed*1	9600bps, 19200bps, 38400bps
Setting (2-wire/4-wire)*2	2-wire type or 4-wire type
Terminating resistor*2	With, Without
Echo back	OFF
RS-485 driver-active control	AUTO

*1 Adjust the settings with GOT settings.

*2 Refer to the following connection diagram for setting.

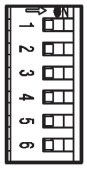
☞ Page 1658 RS-485 cable

Settings by switch



■Settings of the setting (2-wire/4-wire), the RS-485 driver-active control, the terminating resistor, the echo back

Make those settings by operating the communication setting DIP SW.



Setting item	Set value	Switch position					
		1	2	3	4	5	6
Setting(2-wire/4-wire)	4-wire type	OFF	OFF				—
	2-wire type	ON	ON				
RS-485 driver-active control	AUTO			OFF			
Terminating resistor	with				ON		
	without				OFF		
Echo back	OFF					OFF	

■A setting of the transmission speed

Make this setting by operating the timer change-over time Rotary switch.



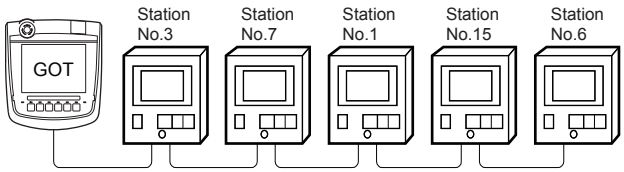
Switch position	Transmission speed
5	9600bps
6	19200bps
7	38400bps

Station number setting

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.



Examples of station number setting

Direct specification

When setting the device, specify the station number of the temperature controller of which data is to be changed.

Specification range
1 to 99

Indirect specification

When setting the device, indirectly specify the station number of the inverter of which data is to be changed using the 16-bit GOT internal data register (GD10 to GD25).

When specifying the station No. from 100 to 115 on GT Designer3, the value of GD10 to GD25 compatible to the station No. specification will be the station No. of the temperature controller.

Specification station NO.	Compatible device	Setting range
100	GD10	1 to 99 For the setting other than the above, error (dedicated device is out of range) will occur.
101	GD11	
102	GD12	
103	GD13	
104	GD14	
105	GD15	
106	GD16	
107	GD17	
108	GD18	
109	GD19	
110	GD20	
111	GD21	
112	GD22	
113	GD23	
114	GD24	
115	GD25	

All station specification

Target station differs depending on write-in operation or read-out operation.

• For write-in operation, all station will be a target.

In the WORD BIT write-in operation, only the temperature controller whose station No. is the same as host address is applicable.

☞ Page 1670 Communication detail settings

• In the read-out operation, only the temperature controller whose station No. is the same as host address is applicable.

For details of host address setting, refer to the following.

☞ Page 1670 Communication detail settings

Point

The all station specification can be set for the following temperature controllers only.
UT420, UT450, UT520, UT550, T551, UT750,
UP550, UP750,
US1000

35.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

📖GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1

YOKOGAWA equipment ([YOKOGAWA GREEN/UT100/UT2000/UTAdvanced])

35.7 Precautions

Station number settings of temperature controller

In the system configuration, the temperature controller with the station number set with the host address must be included.

For details of host address setting, refer to the following.

☞ Page 1670 Communication detail settings

GOT clock control

Since the temperature controller does not have a clock function, the settings of "time adjusting" or "time broad cast" by GOT clock control will be disabled.

Disconnecting some of multiple connected equipment

The GOT can disconnect some of multiple connected equipment by setting GOT internal device.

For example, the faulty station where a communication timeout error occurs can be disconnected from connected equipment.

For details of GOT internal device setting, refer to the following manual.

📖GT Designer3 (GOT2000) Screen Design Manual

MEMO

36 RKC TEMPERATURE CONTROLLER

- Page 1679 Connectable Model List
- Page 1681 System Configuration
- Page 1751 Connection Diagram
- Page 1764 GOT Side Settings
- Page 1766 Temperature Controller Side Setting
- Page 1788 Settable Device Range
- Page 1788 Precautions

36.1 Connectable Model List

The following table shows the connectable models.

Series	Model name*1	Clock	Communication Type	Connectable model	Refer to
SR Mini HG	H-PCP-J	×	RS-232 RS-422 RS-485	GT2506HS GT2505HS	☞ Page 1681 Connecting to SR Mini HG series (HGH-PCP-J)
	H-PCP-A	×	RS-232 RS-422	GT2506HS GT2505HS	☞ Page 1685 Connecting to SR Mini HG series (H-PCP-A, H-PCP-B)
	H-PCP-B				
SRZ	Z-TIO	×	RS-232 RS-422 RS-485	GT2506HS GT2505HS	☞ Page 1688 Connecting to SRZ series
	Z-DIO				
	Z-CT				
	Z-COM				
SRJ	J-TI-A/B	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 1694 Connecting to SRJ Series
CB	CB100	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 1697 Connecting to CB series
	CB400				
	CB500				
	CB700				
	CB900				
FB	FB100	×	RS-485	GT2506HS GT2505HS	☞ Page 1700 Connecting to FB series
	FB400	×	RS-232 RS-422 RS-485		
	FB900				
RB	RB100	×	RS-485	GT2506HS GT2505HS	☞ Page 1706 Connecting to RB series
	RB400				
	RB500				
	RB700				
	RB900				
PF	PF900 PF901	×	RS-232 RS-422 RS-485	GT2506HS GT2505HS	☞ Page 1709 Connecting to PF, HA, RMC, MA, AG, or SA series
HA	HA400/401 HA900/901	×	RS-232 RS-422 RS-485		
RMC	RMC500	×	RS-485		
MA	MA900 MA901	×	RS-232 RS-422 RS-485		
AG	AG500	×	RS-422 RS-485		
THV	THV-A1	×	RS-422 RS-485	GT2506HS GT2505HS	☞ Page 1717 Connecting to THV series
SA	SA100 SA200	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 1709 Connecting to PF, HA, RMC, MA, AG, or SA series

Series	Model name*1	Clock	Communication Type	Connectable model	Refer to
SRX	X-TIO	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 1723 Connecting to SRX series
SB1	SB1	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 1726 Connecting to SB1 series
B400	B400	×	RS-232 RS-485	GT2506HS GT2505HS	☞ Page 1728 Connecting to B400 series
FZ	FZ110	×	RS-485	GT2506HS GT2505HS	☞ Page 1730 Connecting to FZ series
	FZ400	×	RS-422 RS-485	GT2506HS GT2505HS	
	FZ900				
RZ	RZ100	×	RS-485	GT2506HS GT2505HS	☞ Page 1736 Connecting to RZ series
	RZ400				
PZ	PZ400	×	RS-422 RS-485	GT2506HS GT2505HS	☞ Page 1739 Connecting to PZ series
	PZ900				
GZ	GZ400	×	RS-422 RS-485	GT2506HS GT2505HS	☞ Page 1745 Connecting to GZ series
	GZ900				

*1 From the models of temperature controller, select the detailed model name which supports each communication type and communication protocol (MODBUS).
For details of RKC temperature controller detailed model names, refer to the following catalog.
☞ Catalog of RKC temperature controllers

36.2 System Configuration

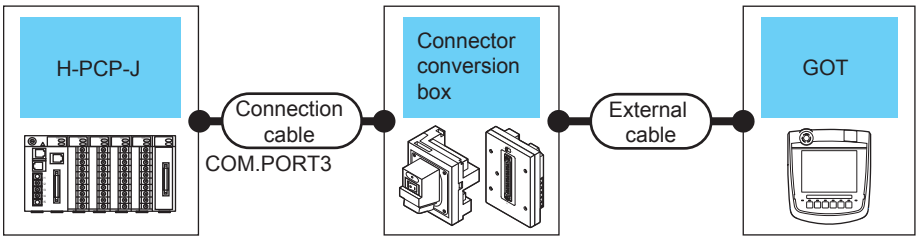
Connecting to SR Mini HG series (HGH-PCP-J)

Communication driver

RKC
SR Mini HG(MODBUS)

When connecting to one temperature controller

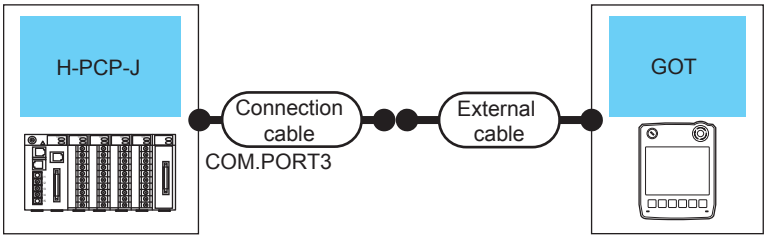
■When using the connector conversion box



Temperature controller		Connection cable	Conversion connector*1	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Model name					
H-PCP-J	RS-232	W-BF-28-0500(0.5m)*1 W-BF-28-1000(1m)*1 W-BF-28-3000(3m)*1 or User preparing Page 1751 RS-232 connection diagram 1)	-	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 1 temperature controller for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		W-BF-02-0500(0.5m)*1 W-BF-02-1000(1m)*1 W-BF-02-3000(3m)*1	FAX067*1	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	RS-422	User preparing Page 1756 RS-422 connection diagram 1)	-	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
	RS-485	User preparing Page 1760 RS-485 connection diagram 1)		GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		

*1 Product manufactured by RKC.
For details of the product, contact RKC.

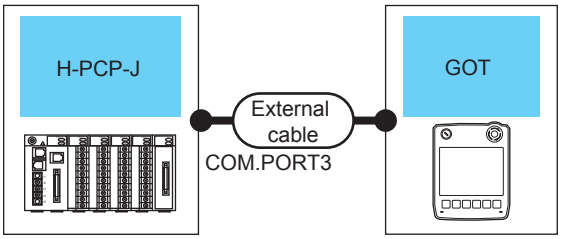
■When using the external cable (GT11H-C□□□-37P)



Temperature controller		Connection cable	Conversion connector*1	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Model name				
H-PCP-J	RS-232	User preparing Page 1751 RS-232 connection diagram 2)	-	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 1 temperature controller for 1 GOT
		W-BF-02-0500(0.5m)*1 W-BF-02-1000(1m)*1 W-BF-02-3000(3m)*1	FAX067*1	GT11H-C30-37P(3m) ☞ Page 1755 RS-232 connection diagram 11)	GT 2505HS		
	RS-422	User preparing Page 1756 RS-422 connection diagram 2)	-	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 Product manufactured by RKC.
For details of the product, contact RKC.

■When using the external cable (GT11H-C□□□)

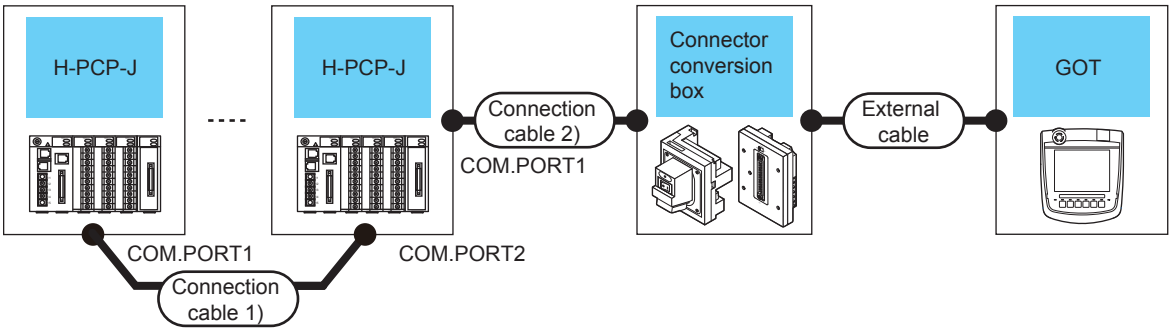


Temperature controller		Conversion connector*1	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Model name				
H-PCP-J	RS-232	FAX067*1	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1755 RS-232 connection diagram 12)	GT 2505HS	6m	Up to 1 temperature controller for 1 GOT

*1 Product manufactured by RKC.
For details of the product, contact RKC.

When connecting to multiple temperature controllers

■When using the connector conversion box

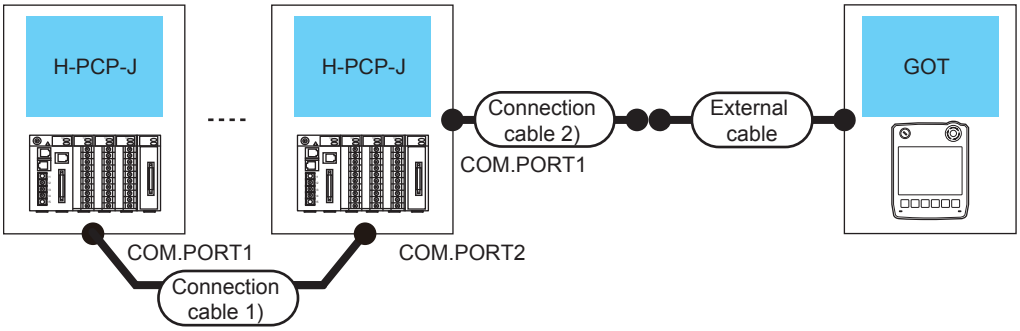


Temperature controller		Connection cable 1)	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *1	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number					
H-PCP-J	RS-422	W-BF-02-0500(0.5m)*2 W-BF-02-1000(1m)*2 W-BF-02-3000(3m)*2	User preparing Page 1756 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 16 temperature controllers for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		Up to 10 temperature controllers for 1 GOT
	RS-485	W-BF-02-0500(0.5m)*2 W-BF-02-1000(1m)*2 W-BF-02-3000(3m)*2	User preparing Page 1760 RS-485 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		Up to 16 temperature controllers for 1 GOT

*1 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

*2 Product manufactured by RKC.
For details of the product, contact RKC.

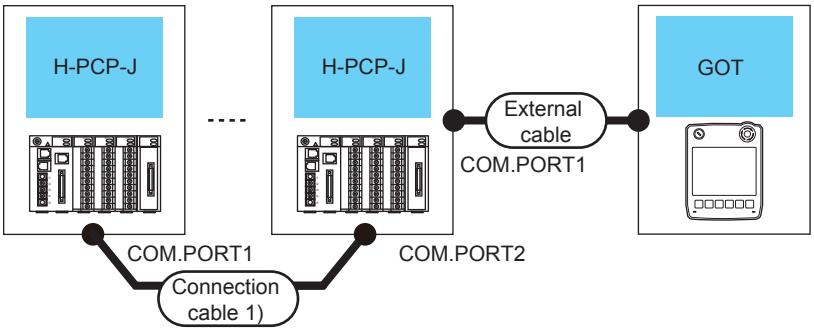
■When using the external cable (GT11H-C□□□-37P)



Temperature controller		Connection cable 1)	Connection cable 2)	External cable	GOT Model	Total distance *1	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number				
H-PCP-J	RS-422	W-BF-02-0500(0.5m)*2 W-BF-02-1000(1m)*2 W-BF-02-3000(3m)*2	User preparing Page 1756 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	Up to 10 temperature controllers for 1 GOT

*1 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)
*2 Product manufactured by RKC.
For details of the product, contact RKC.

■When using the external cable (GT11H-C□□□)



Temperature controller		Connection cable 1)	External cable	GOT Model	Total distance *1	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
H-PCP-J	RS-422	W-BF-02-0500(0.5m)*2 W-BF-02-1000(1m)*2 W-BF-02-3000(3m)*2	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1759 RS-422 connection diagram 7)	GT 2505HS	13m	Up to 10 temperature controllers for 1 GOT

*1 The distance from the GOT to the temperature controller (Connection cable 1) + External cable)
*2 Product manufactured by RKC.
For details of the product, contact RKC.

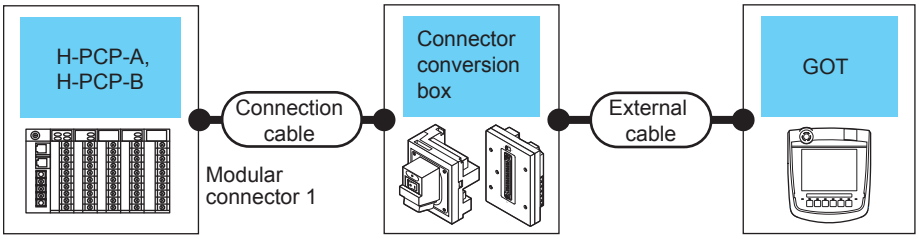
Connecting to SR Mini HG series (H-PCP-A, H-PCP-B)

Communication driver

RKC
SR Mini HG(MODBUS)

When connecting to one temperature controller

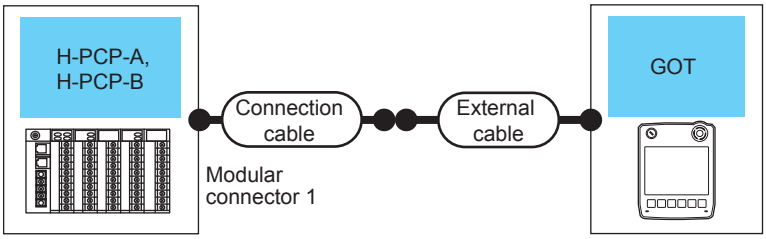
■When using the connector conversion box



Temperature controller		Connection cable	Conversion connector*1	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number						
H-PCP-A H-PCP-B	RS-232	W-BF-28-0500(0.5m)*1 W-BF-28-1000(1m)*1 W-BF-28-3000(3m)*1 or User preparing Page 1751 RS-232 connection diagram 1)	-	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 1 temperature controller for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
		W-BF-02-0500(0.5m)*1 W-BF-02-1000(1m)*1 W-BF-02-3000(3m)*1	FAX067	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	RS-422	User preparing Page 1756 RS-422 connection diagram 1)	-	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by RKC.
For details of the product, contact RKC.

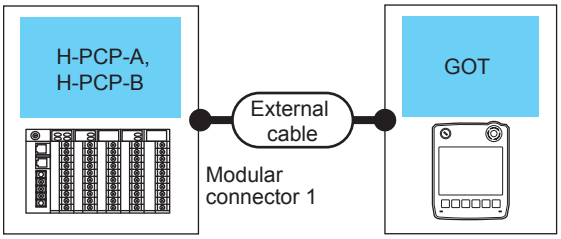
■When using the external cable (GT11H-C□□□-37P)



Temperature controller		Connection cable	Conversion connector*1	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
H-PCP-A H-PCP-B	RS-232	User preparing Page 1751 RS-232 connection diagram 2)	-	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 1 temperature controller for 1 GOT
		W-BF-02-0500(0.5m)*1 W-BF-02-1000(1m)*1 W-BF-02-3000(3m)*1	FAX067	GT11H-C30-37P(3m) ☞ Page 1755 RS-232 connection diagram 11)	GT 2505HS		
	RS-422	User preparing Page 1756 RS-422 connection diagram 2)	-	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

*1 Product manufactured by RKC.
For details of the product, contact RKC.

■When using the external cable (GT11H-C□□□)

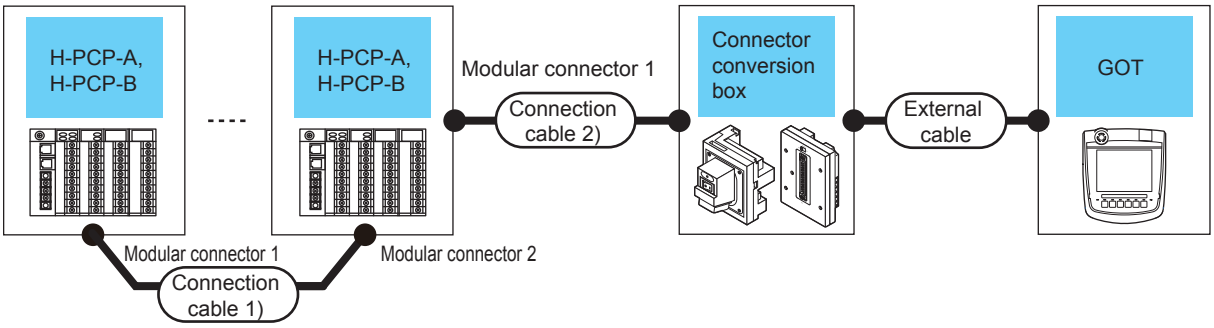


Temperature controller		Conversion connector*1	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type					
H-PCP-A H-PCP-B	RS-232	FAX067	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1755 RS-232 connection diagram 12)	GT 2505HS	6m	Up to 1 temperature controller for 1 GOT

*1 Product manufactured by RKC.
For details of the product, contact RKC.

When connecting to multiple temperature controllers

■When using the connector conversion box

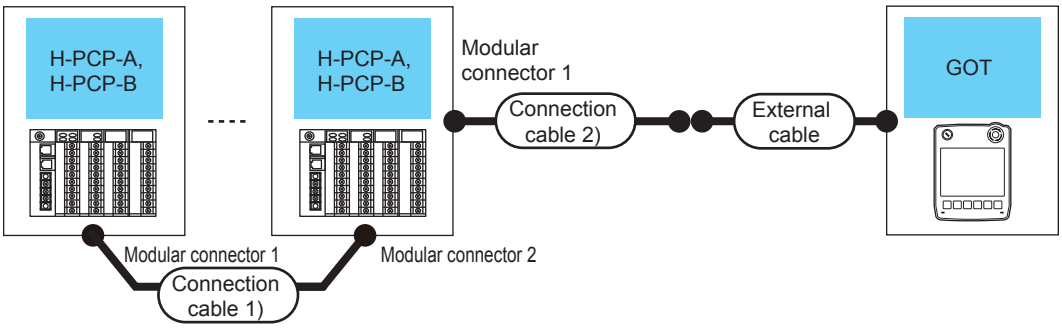


Temperature controller		Connection cable 1)	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number					
H-PCP-A H-PCP-B	RS-422	W-BF-02-0500(0.5m)*1 W-BF-02-1000(1m)*1 W-BF-02-3000(3m)*1	User preparing Page 1756 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 16 temperature controllers for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		Up to 10 temperature controllers for 1 GOT

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)



Temperature controller		Connection cable 1)	Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number				
H-PCP-A H-PCP-B	RS-422	W-BF-02-0500(0.5m)*1 W-BF-02-1000(1m)*1 W-BF-02-3000(3m)*1	User preparing Page 1756 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	Up to 10 temperature controllers for 1 GOT

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

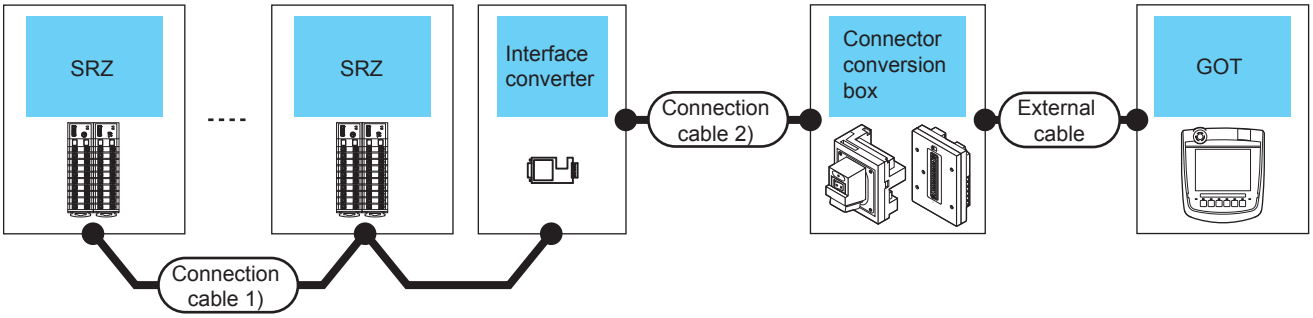
Connecting to SRZ series

Communication driver

RKC
SR Mini HG(MODBUS)

When connecting to Z-TIO and Z-CT with a converter

■When using the connector conversion box



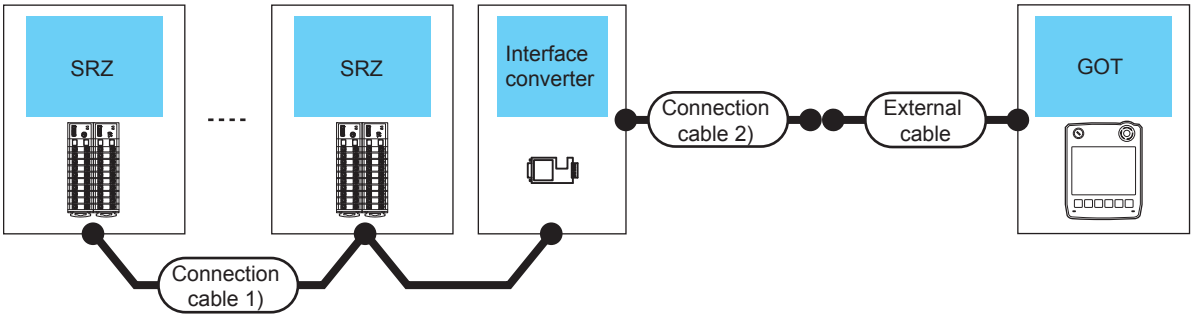
Module	Connection cable 1)		Converter		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
Z-TIO Z-CT	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V*1	RS-232	User preparing Page 1752 RS-232 connection diagram 5)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Z-TIO: Up to 16 Z-CT: Up to 16 Z-DIO: Up to 16 *3 Total of Z-TIO, Z-CT and Z-DIO: Up to 31 for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

*3 Use them with Z-TIO and Z-CT.

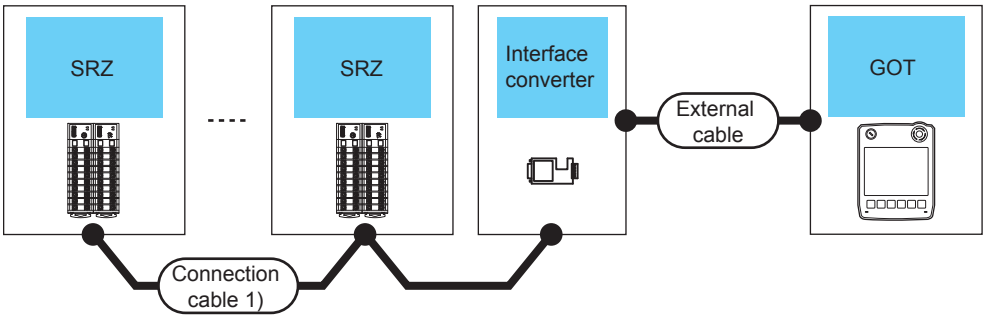
■When using the external cable (GT11H-C□□□-37P)



Module	Connection cable 1)		Converter		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
Z-TIO Z-CT	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V*1	RS-232	User preparing Page 1753 RS-232 connection diagram 6)	GT11H-C30-37P(3m)	GT 2505HS	6m	Z-TIO: Up to 16 Z-CT: Up to 16 Z-DIO: Up to 16 *3 Total of Z-TIO, Z-CT and Z-DIO: Up to 31 for 1 GOT

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.
*2 The distance from the converter to the GOT (Connection cable 2) + External cable)
*3 Use them with Z-TIO and Z-CT.

■When using the external cable (GT11H-C□□□)

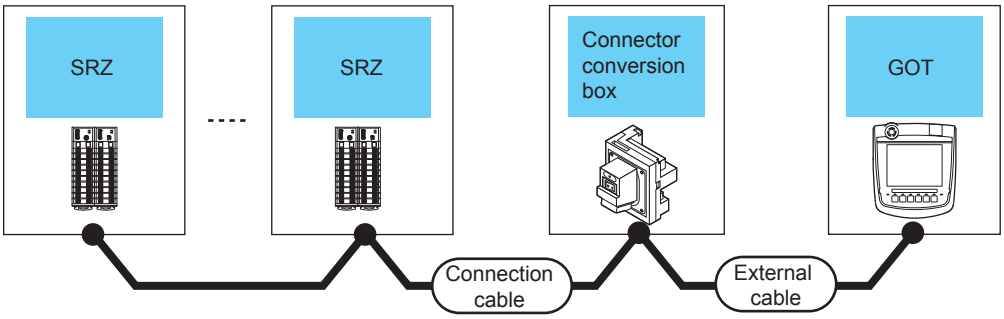


Module	Connection cable 1)		Converter		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
Z-TIO Z-CT	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V*1	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1753 RS-232 connection diagram 7)	GT 2505HS	6m	Z-TIO: Up to 16 Z-CT: Up to 16 Z-DIO: Up to 16 *3 Total of Z-TIO, Z-CT and Z-DIO: Up to 31 for 1 GOT

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.
*2 The distance from the converter to the GOT (External cable)
*3 Use them with Z-TIO and Z-CT.

When connecting directly to Z-TIO and Z-CT

■When using the connector conversion box

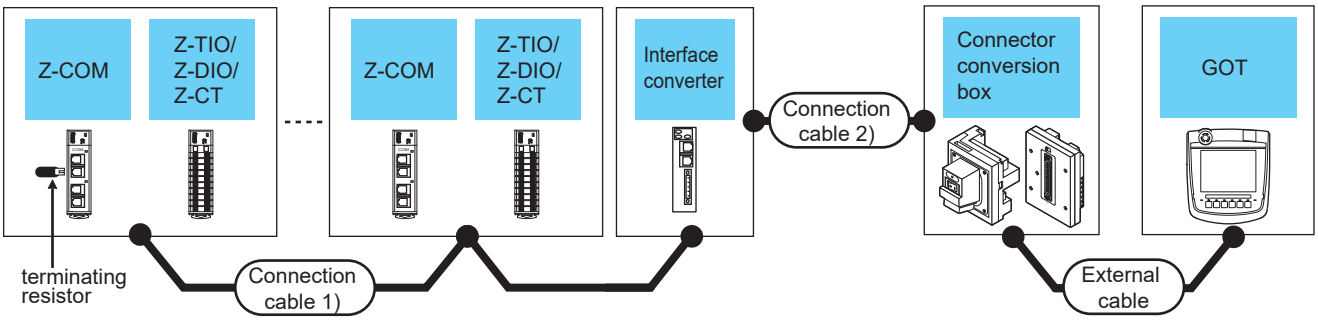


Module		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
Z-TIO Z-CT	RS-485	User preparing Page 1761 RS-485 connection diagram 2)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Z-TIO: Up to 16 Z-CT: Up to 16 Z-DIO: Up to 16 *1 Total of Z-TIO, Z-CT and Z-DIO: Up to 31 for 1 GOT

*1 Use them with Z-TIO and Z-CT.

When connecting to Z-COM with a converter

■When using the connector conversion box

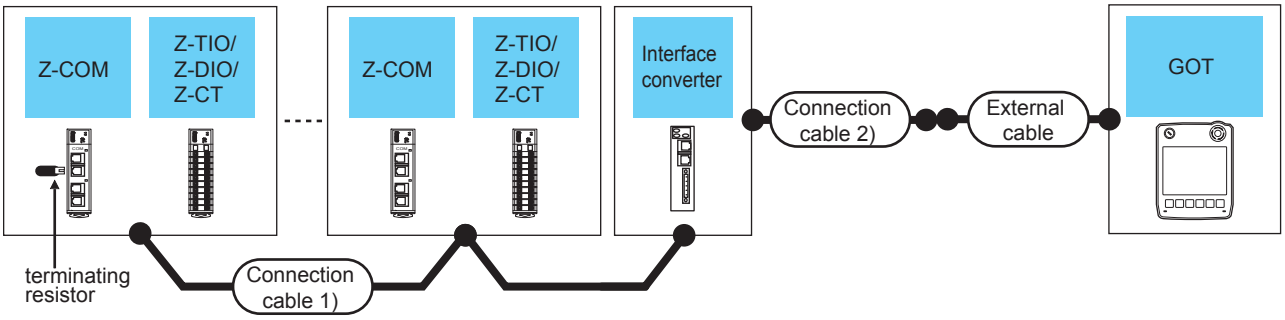


Z-COM		Connection cable 1)		Converter*1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Terminating resistor*1	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
Z-COM	W-BW-02	W-BF-02-0500(0.5m)*1 W-BF-02-1000(1m)*1 W-BF-02-3000(3m)*1 or User preparing Page 1756 RS-422 connection diagram 3)	1200m	COM-A	RS-232	W-BF-28-0500(0.5m)*1 W-BF-28-1000(1m)*1 W-BF-28-3000(3m)*1 or User preparing Page 1752 RS-232 connection diagram 3)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 16 Z-COMs for 1 GOT Z-TIO: Up to 16 Z-CT: Up to 16 Z-DIO: Up to 16 Total of Z-TIO, Z-CT and Z-DIO: Up to 31 for Z-COM
							GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)



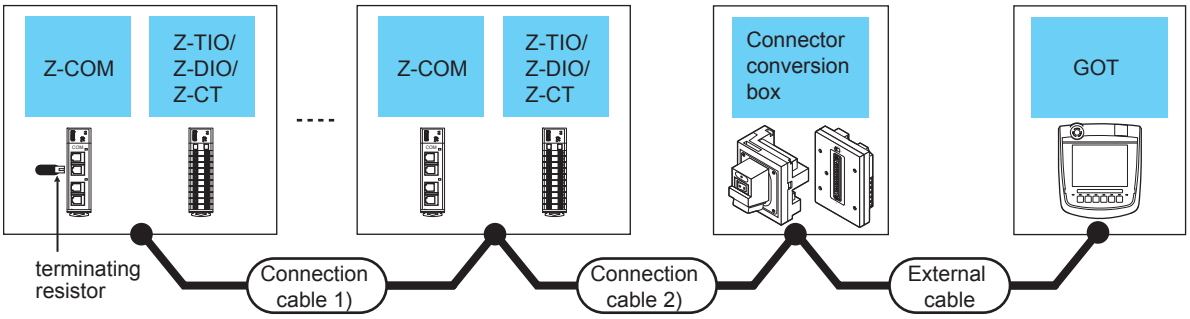
Z-COM		Connection cable 1)		Converter*1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Terminating resistor*1	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
Z-COM	W-BW-02	W-BF-02-0500(0.5m)*1 W-BF-02-1000(1m)*1 W-BF-02-3000(3m)*1 or User preparing Page 1756 RS-422 connection diagram 3)	1200m	COM-A	RS-232	User preparing Page 1752 RS-232 connection diagram 4)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 16 Z-COMs for 1 GOT Z-TIO: Up to 16 Z-CT: Up to 16 Z-DIO: Up to 16 Total of Z-TIO, Z-CT and Z-DIO: Up to 31 for Z-COM

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

When connecting directly to Z-COM

■When using the connector conversion box

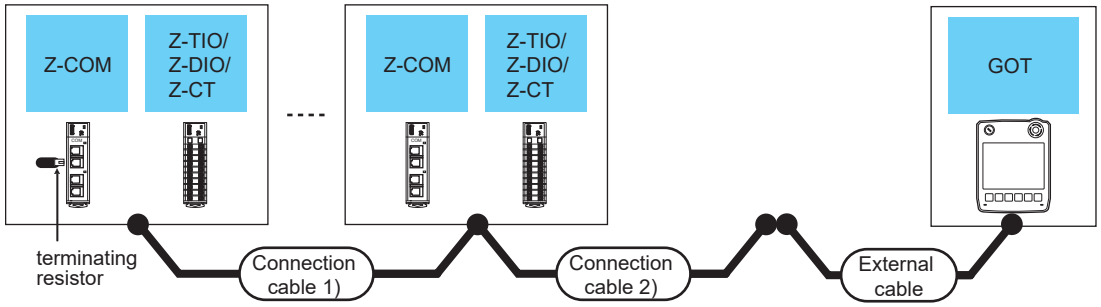


Z-COM			Connection cable 1)	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Communication Type	Terminating resistor*1	Cable model Connection diagram number	Cable model Connection diagram number					
Z-COM	RS-422	W-BW-02	W-BF-02-0500(0.5m)*1 W-BF-02-1000(1m)*1 W-BF-02-3000(3m)*1 or User preparing Page 1756 RS-422 connection diagram 3)	User preparing Page 1756 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 16 Z-COMs for 1 GOT Z-TIO: Up to 16 Z-CT: Up to 16 Z-DIO: Up to 16 Total of Z-TIO, Z-CT and Z-DIO: Up to 31 for Z-COM
					GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		Up to 10 Z-COMs for 1 GOT Z-TIO: Up to 16 Z-CT: Up to 16 Z-DIO: Up to 16 Total of Z-TIO, Z-CT and Z-DIO: Up to 31 for Z-COM
	RS-485	W-BW-01	W-BF-02-0500(0.5m)*1 W-BF-02-1000(1m)*1 W-BF-02-3000(3m)*1 or User preparing Page 1763 RS-485 connection diagram 4)	User preparing Page 1760 RS-485 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		Up to 16 Z-COMs for 1 GOT Z-TIO: Up to 16 Z-CT: Up to 16 Z-DIO: Up to 16 Total of Z-TIO, Z-CT and Z-DIO: Up to 31 for Z-COM

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)



Z-COM			Connection cable 1)	Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Communication Type	Terminating resistor*1	Cable model Connection diagram number	Cable model Connection diagram number				
Z-COM	RS-422	W-BW-02	W-BF-02-0500(0.5m)*1 W-BF-02-1000(1m)*1 W-BF-02-3000(3m)*1 or User preparing Page 1756 RS-422 connection diagram 3)	User preparing Page 1756 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	Up to 10 Z-COMs for 1 GOT Z-TIO: Up to 16 Z-CT: Up to 16 Z-DIO: Up to 16 Total of Z-TIO, Z-CT and Z-DIO: Up to 31 for Z-COM

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

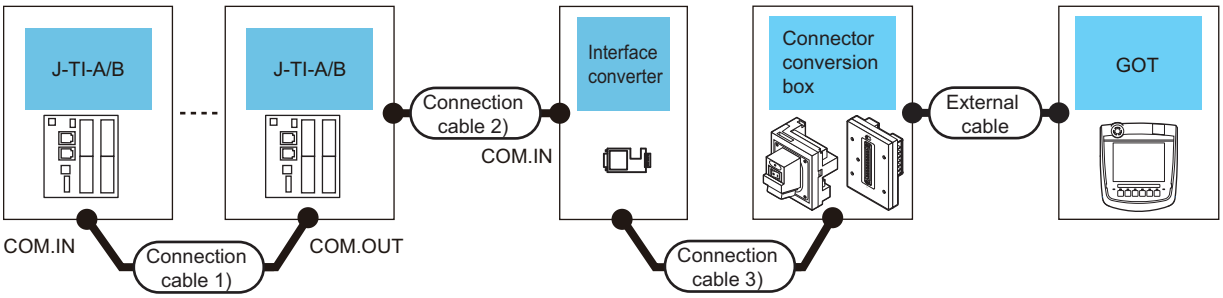
Connecting to SRJ Series

Communication driver

RKC
SR Mini HG(MODBUS)

When connecting to multiple temperature controllers with interface converter (CD485/V)

■When using the connector conversion box



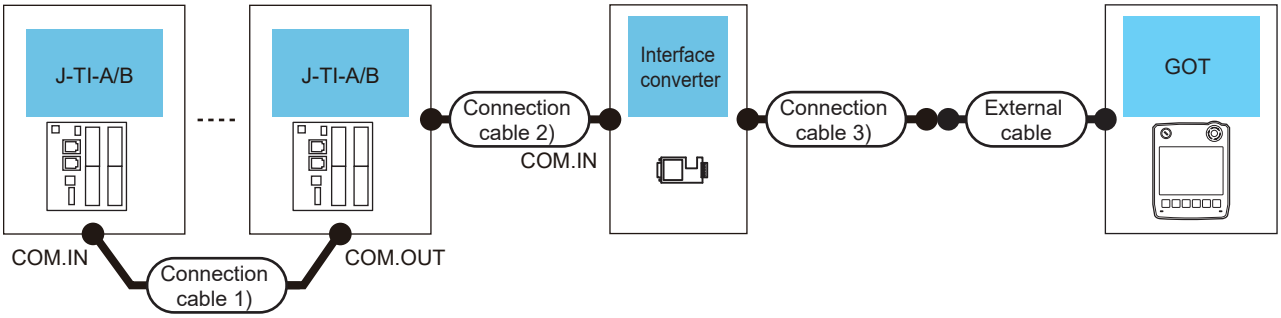
Temperature controller	Connection cable 1)	Connection cable 2)	Max. distance	Converter*1		Connection cable 3)	Connector conversion box	External cable	GOT Model	Total distance*2	Number of connectable equipment
Model name	Cable model Connection diagram number	Cable model Connection diagram number		Model name	Communication Type	Cable model Connection diagram number					
J-TI-A/B	User preparing Page 1762 RS-485 connection diagram 3)		1200m	CD485/V	RS-232	User preparing Page 1752 RS-232 connection diagram 5)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 16 temperature controllers for 1 GOT*3
							GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the converter to the GOT (Connection cable 3) + External cable)

*3 When connecting 16 temperature controllers to a GOT, take the following precautions.
• Up to 4 master stations and 12 slave stations are connectable to a GOT.
• Up to three slave stations are connectable to a master station.

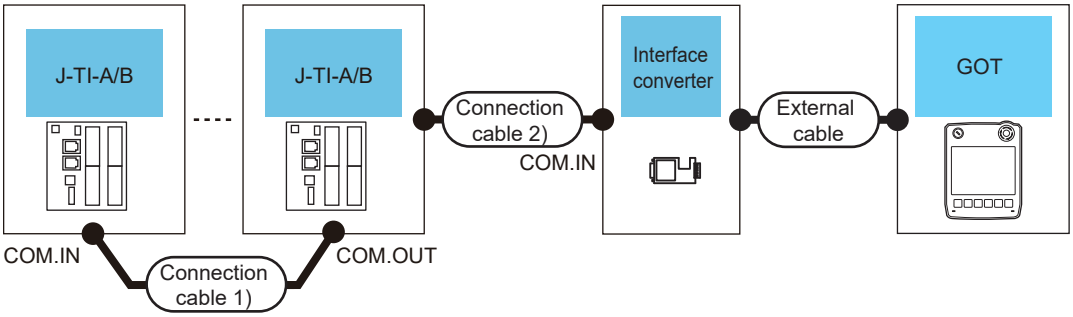
■When using the external cable (GT11H-C□□□-37P)



Temperature controller	Connection cable 1)	Connection cable 2)	Max. distance	Converter*1		Connection cable 3)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Cable model Connection diagram number		Model name	Communication Type	Cable model Connection diagram number				
J-TI-A/B	User preparing Page 1762 RS-485 connection diagram 3)	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V	RS-232	User preparing Page 1753 RS-232 connection diagram 6)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 16 temperature controllers for 1 GOT*3

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 The distance from the converter to the GOT (Connection cable 3) + External cable)
*3 When connecting 16 temperature controllers to a GOT, take the following precautions.
• Up to 4 master stations and 12 slave stations are connectable to a GOT.
• Up to three slave stations are connectable to a master station.

■When using the external cable (GT11H-C□□□)

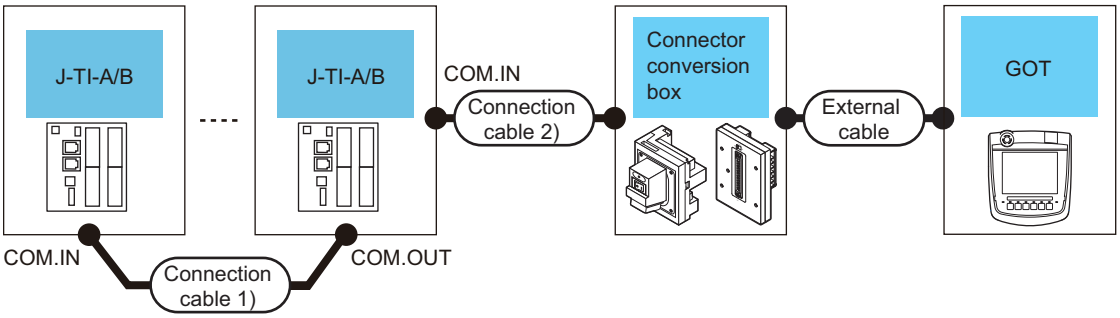


Temperature controller	Connection cable 1)	Connection cable 2)	Max. distance	Converter*1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Cable model Connection diagram number		Model name	Communication Type				
J-TI-A/B	User preparing Page 1762 RS-485 connection diagram 3)		1200m	CD485/V	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1753 RS-232 connection diagram 7)	GT 2505HS	6m	Up to 16 temperature controllers for 1 GOT*3

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 The distance from the converter to the GOT (External cable)
*3 When connecting 16 temperature controllers to a GOT, take the following precautions.
• Up to 4 master stations and 12 slave stations are connectable to a GOT.
• Up to three slave stations are connectable to a master station.

When connecting to multiple temperature controllers

■When using the connector conversion box



Temperature controller		Connection cable 1)	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance*2	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number					
J-TI-A/B	RS-485	W-BF-02-0500(0.5m)*1 W-BF-02-1000(1m)*1 W-BF-02-3000(3m)*1	W-BF-01-0500(0.5m)*1 W-BF-01-1000(1m)*1 W-BF-01-3000(3m)*1 or User preparing Page 1763 RS-485 connection diagram 5)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	6m	Up to 16 temperature controllers for 1 GOT*3

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The total length of the connection cable 1) + connection cable 2) + External cable

*3 When connecting 16 temperature controllers to a GOT, take the following precautions.
- Up to 4 master stations and 12 slave stations are connectable to a GOT.
- Up to three slave stations are connectable to a master station.

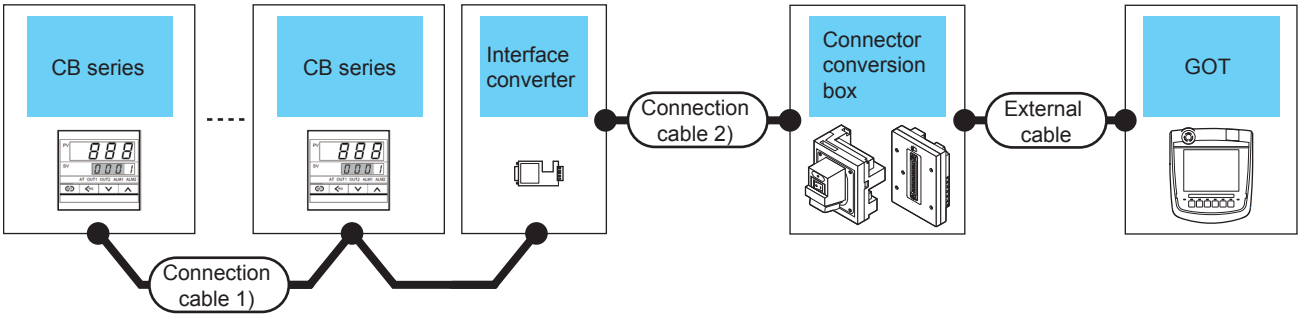
Connecting to CB series

Communication driver

RKC
SR Mini HG(MODBUS)

When using the converter

■When using the connector conversion box

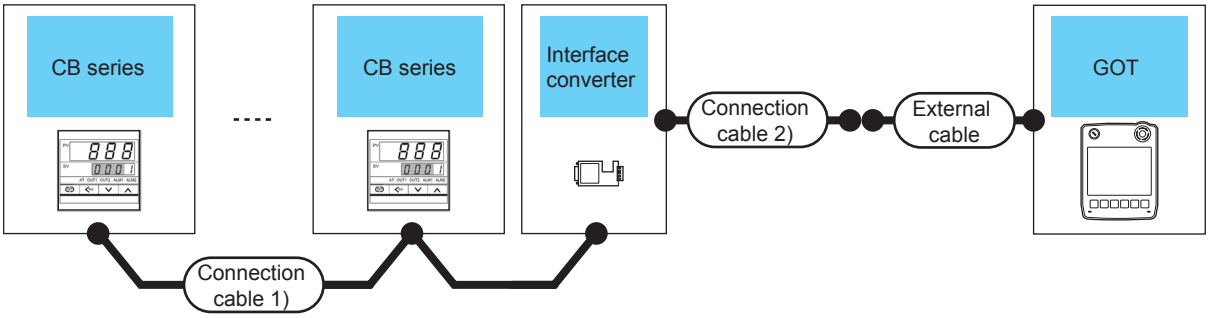


Temperature controller	Connection cable 1)		Converter		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
CB100 CB400 CB500 CB700 CB900	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V*1	RS-232	User preparing Page 1752 RS-232 connection diagram 5)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 temperature controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

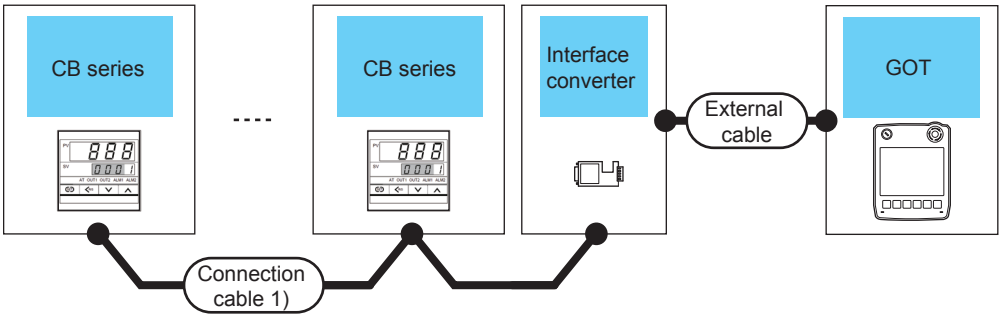
■When using the external cable (GT11H-C□□□-37P)



Temperature controller	Connection cable 1)		Converter		Connection cable 2)	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
CB100 CB400 CB500 CB700 CB900	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V*1	RS-232	User preparing Page 1753 RS-232 connection diagram 6)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.
*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)

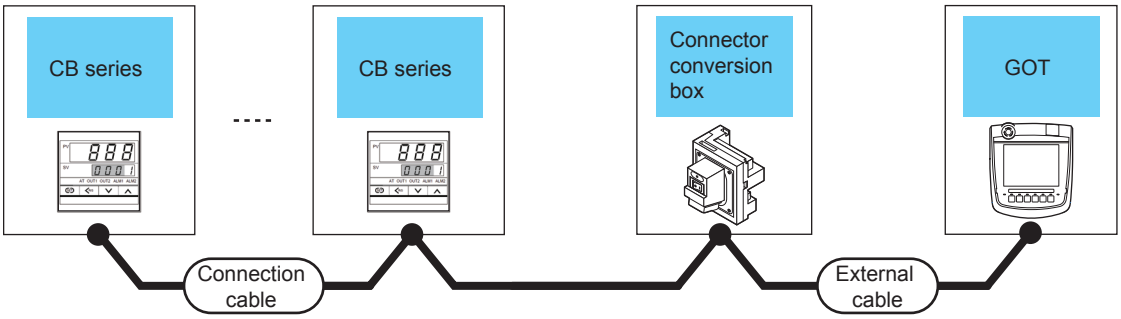


Temperature controller	Connection cable 1)		Converter		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
CB100 CB400 CB500 CB700 CB900	User preparing Page 1760 RS-485 connection diagram 1)	1200m	CD485/V*1	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1753 RS-232 connection diagram 7)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.
*2 The distance from the converter to the GOT (Connection cable 1) + External cable)

When connecting directly

■When using the connector conversion box



Temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
CB100 CB400 CB500 CB700 CB900	RS-485	User preparing Page 1761 RS-485 connection diagram 2)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 temperature controllers for 1 GOT

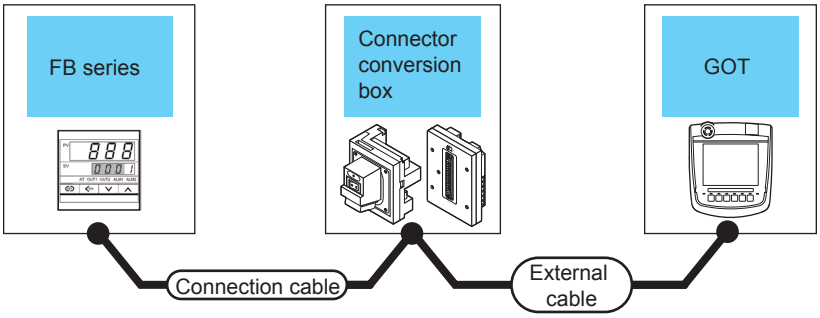
Connecting to FB series

Communication driver

RKC
SR Mini HG(MODBUS)

When connecting to one temperature controller

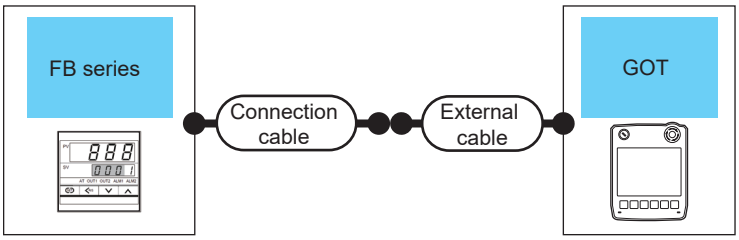
■When using the connector conversion box



Temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
FB400 FB900	RS-232*1	User preparing Page 1753 RS-232 connection diagram 8)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 1 temperature controller for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Use communication 1 for the communication format.
*2 The distance from the GOT to the interface converter (Connection cable + External cable)

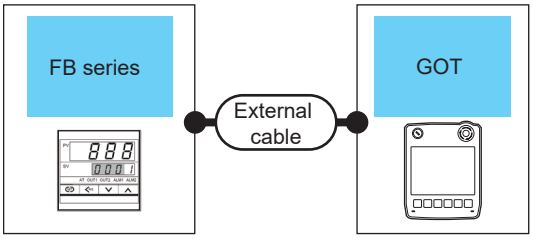
■When using the external cable (GT11H-C□□□-37P)



Temperature controller		Connection cable	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
FB400 FB900	RS-232*1	User preparing Page 1754 RS-232 connection diagram 9)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 1 temperature controller for 1 GOT

*1 Use communication 1 for the communication format.
*2 The distance from the GOT to the interface converter (Connection cable + External cable)

■When using the external cable (GT11H-C□□□)

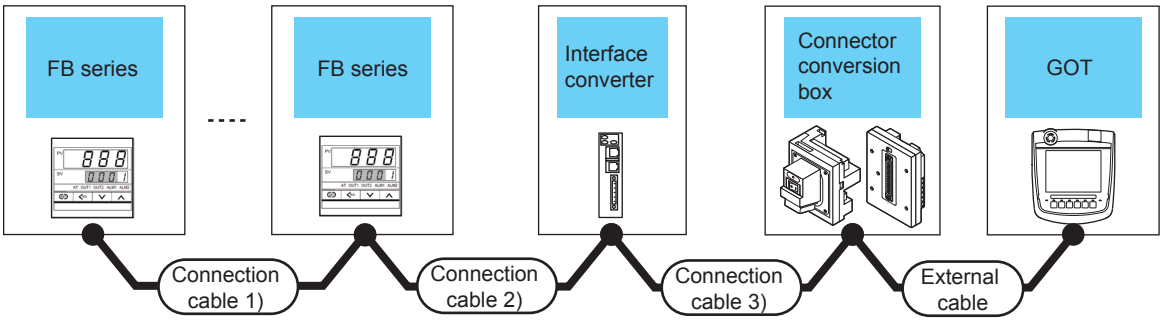


Temperature controller		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Communication Type				
FB400 FB900	RS-232*1	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1754 RS-232 connection diagram 10)	GT 2505HS	6m	Up to 1 temperature controller for 1 GOT

*1 Use communication 1 for the communication format.
*2 The distance from the GOT to the interface converter (External cable)

When connecting to multiple temperature controllers with interface converter (COM-A)

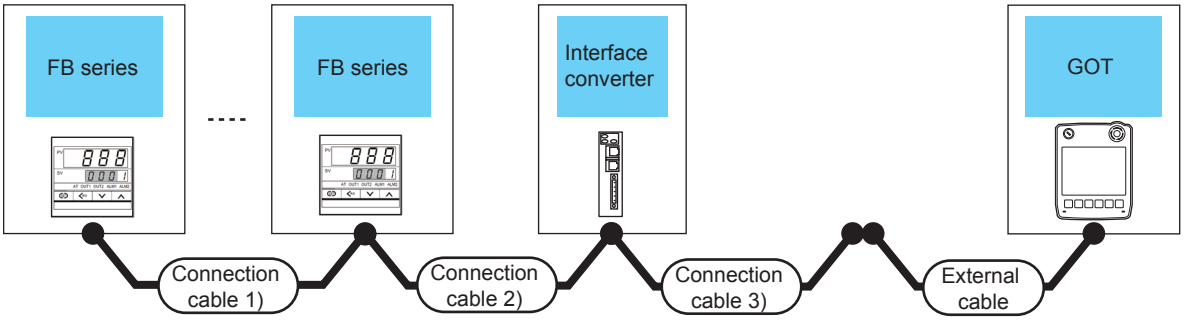
■When using the connector conversion box



Temperature controller	Connection cable 1)	Connection cable 2)	Max. distance *3	Converter *2		Connection cable 3)	Connector conversion box	External cable	GOT Model	Total distance *4	Number of connectable equipment
Model name	Cable model Connection diagram number	Cable model Connection diagram number		Model name	Communication Type	Cable model Connection diagram number					
FB400 FB900	User preparing Page 1757 RS-422 connection diagram 4)*1	W-BF-01-0500(0.5m)*2 W-BF-01-1000(1m)*2 W-BF-01-300(3m)*2	1000m	COM-A	RS-232	W-BF-28-0500(0.5m)*2 W-BF-28-1000(1m)*2 W-BF-28-3000(3m)*2 or User preparing Page 1752 RS-232 connection diagram 3)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 temperature controllers for 1 GOT
							GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Use communication 1 for the communication format.
*2 Product manufactured by RKC.
For details of the product, contact RKC.
*3 The total length of the connection cable 1) + connection cable 2)
*4 The distance from the converter to the GOT (Connection cable 3) + External cable)

■When using the external cable (GT11H-C□□□-37P)

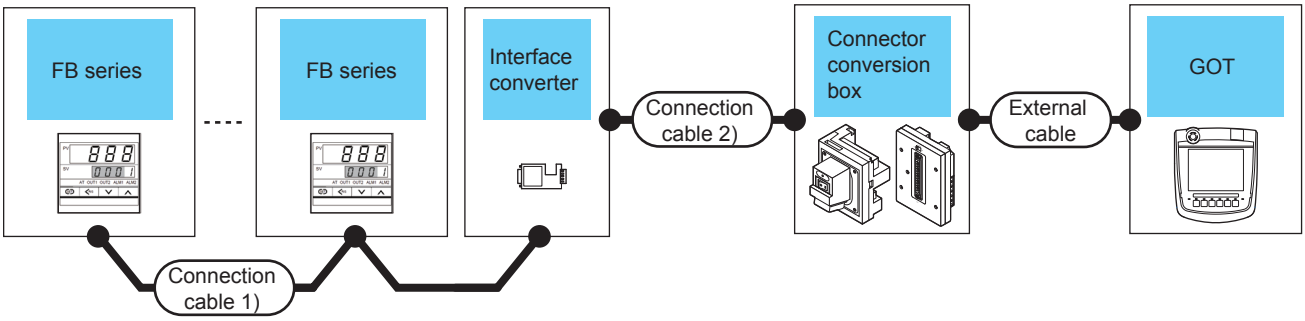


Temperature controller	Connection cable 1)	Connection cable 2)	Max. distance *3	Converter *2		Connection cable 3)	External cable	GOT Model	Total distance *4	Number of connectable equipment
Model name	Cable model Connection diagram number	Cable model Connection diagram number		Model name	Communication Type	Cable model Connection diagram number				
FB400 FB900	User preparing Page 1757 RS-422 connection diagram 4) *1	W-BF-01-0500(0.5m) *2 W-BF-01-1000(1m) *2 W-BF-01-300(3m) *2	1000m	COM-A	RS-232	User preparing Page 1752 RS-232 connection diagram 4)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Use communication 1 for the communication format.
*2 Product manufactured by RKC.
For details of the product, contact RKC.
*3 The total length of the connection cable 1) + connection cable 2)
*4 The distance from the converter to the GOT (Connection cable 3) + External cable)

When connecting to multiple temperature controllers with interface converter (CD485/V)

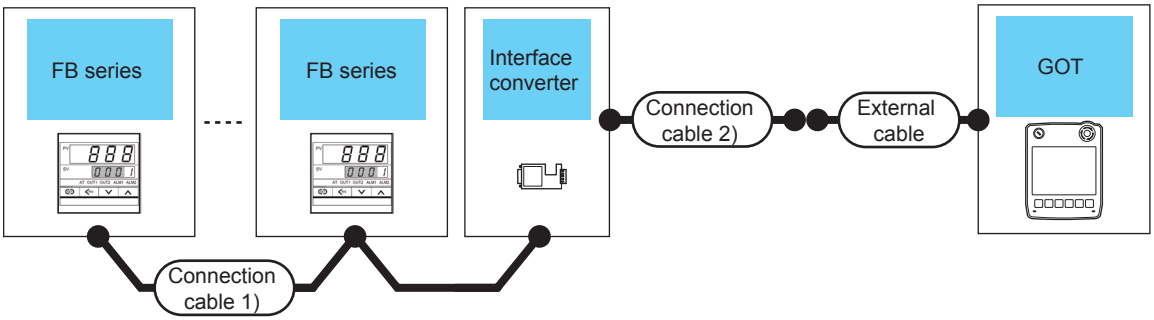
■When using the connector conversion box



Temperature controller	Connection cable 1)		Converter *1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
FB100 FB400 FB900	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V	RS-232	User preparing Page 1752 RS-232 connection diagram 5)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 temperature controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.
*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

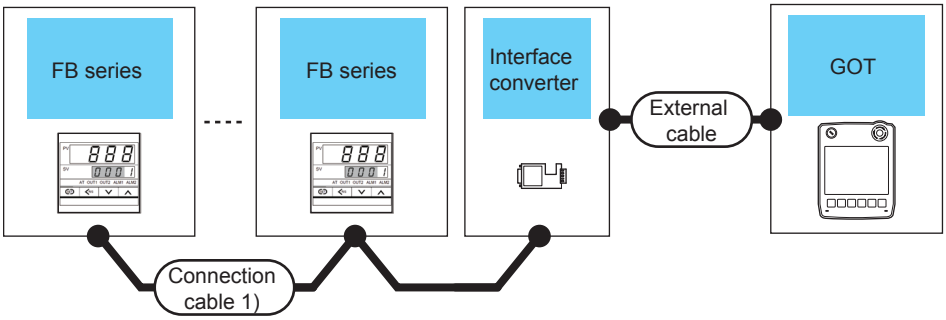


Temperature controller	Connection cable 1)		Converter*1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
FB100 FB400 FB900	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V	RS-232	User preparing Page 1753 RS-232 connection diagram 6)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



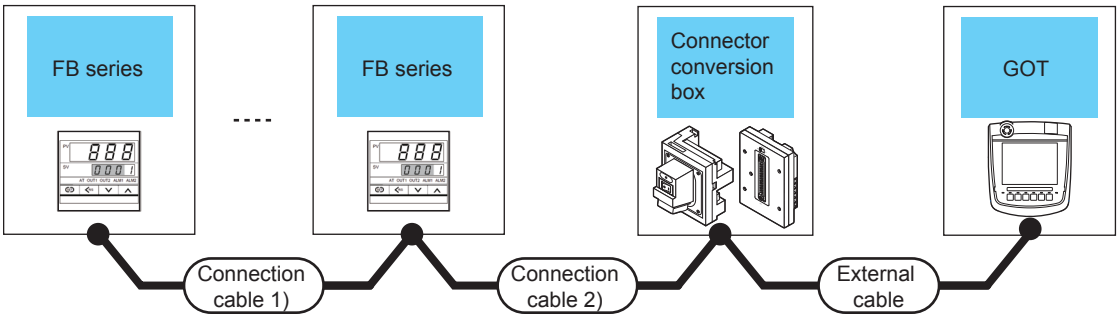
Temperature controller	Connection cable 1)		Converter*1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
FB100 FB400 FB900	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1753 RS-232 connection diagram 7)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (External cable)

When connecting directly to a temperature controller by RS-422

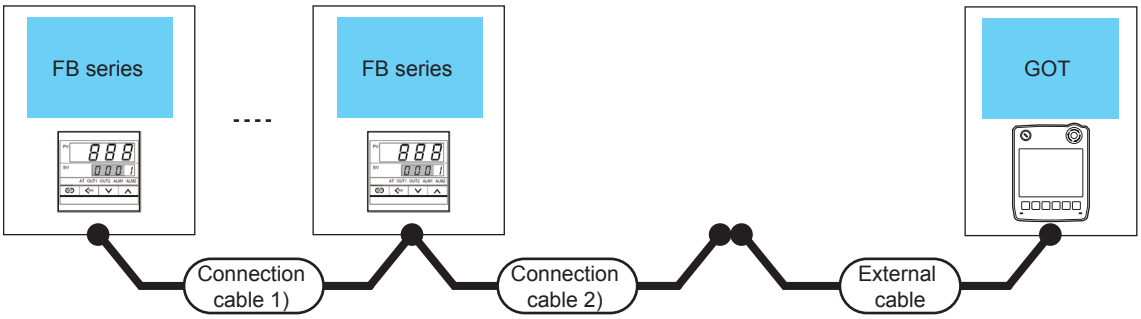
■When using the connector conversion box



Temperature controller		Connection cable 1)	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number					
FB400 FB900	RS-422*1	User preparing Page 1757 RS-422 connection diagram 4)	User preparing Page 1757 RS-422 connection diagram 5)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 temperature controllers for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		Up to 10 temperature controllers for 1 GOT

*1 Use communication 1 for the communication format.
*2 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

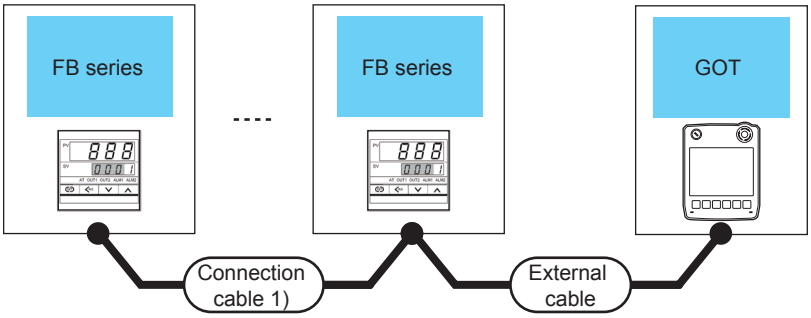
■When using the external cable (GT11H-C□□□-37P)



Temperature controller		Connection cable 1)	Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number				
FB400 FB900	RS-422*1	User preparing Page 1757 RS-422 connection diagram 4)	User preparing Page 1758 RS-422 connection diagram 6)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	Up to 10 temperature controllers for 1 GOT

*1 Use communication 1 for the communication format.
*2 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)

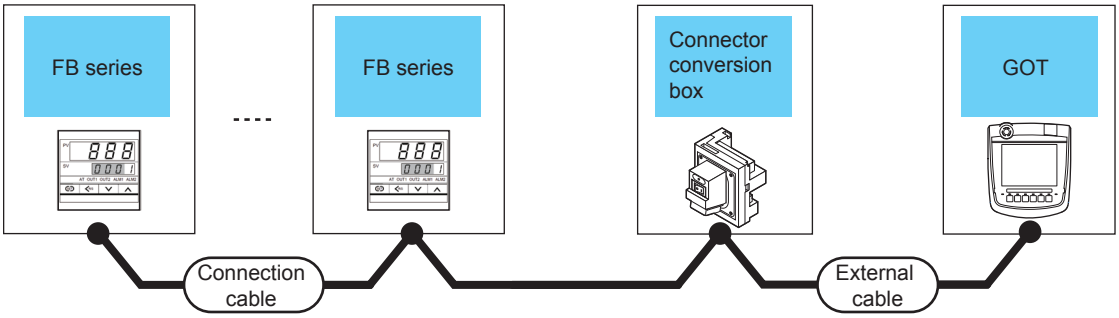


Temperature controller		Connection cable 1)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
FB400 FB900	RS-422*1	User preparing Page 1757 RS-422 connection diagram 4)	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1759 RS-422 connection diagram 7)	GT 2505HS	13m	Up to 10 temperature controllers for 1 GOT

*1 Use communication 1 for the communication format.
*2 The distance from the GOT to the temperature controller (Connection cable 1) + External cable)

When connecting directly to a temperature controller by RS-485

■When using the connector conversion box



Temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
FB100 FB400 FB900	RS-485	User preparing Page 1761 RS-485 connection diagram 2)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 temperature controllers for 1 GOT

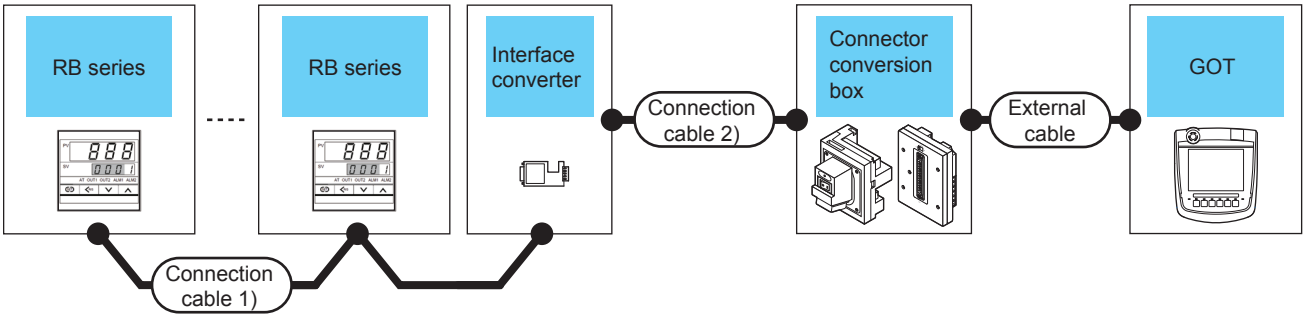
Connecting to RB series

Communication driver

RKC
SR Mini HG(MODBUS)

When using the converter

■When using the connector conversion box

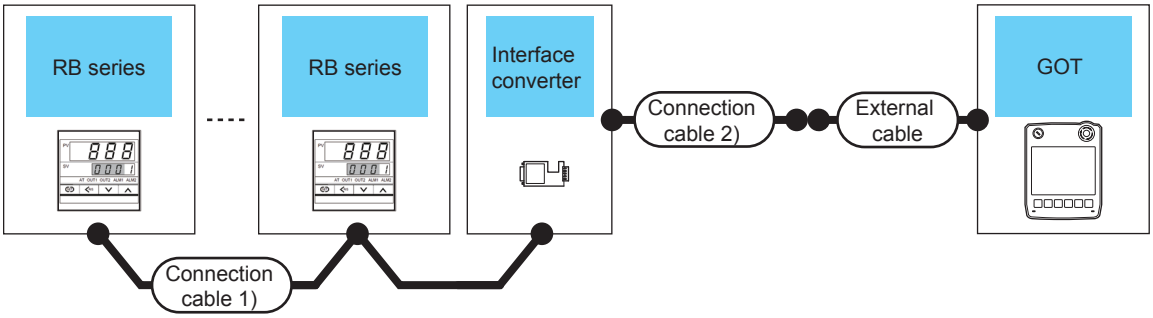


Temperature controller	Connection cable 1)		Converter*1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
RB100 RB400 RB500 RB700 RB900	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V	RS-232	User preparing Page 1752 RS-232 connection diagram 5)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 temperature controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

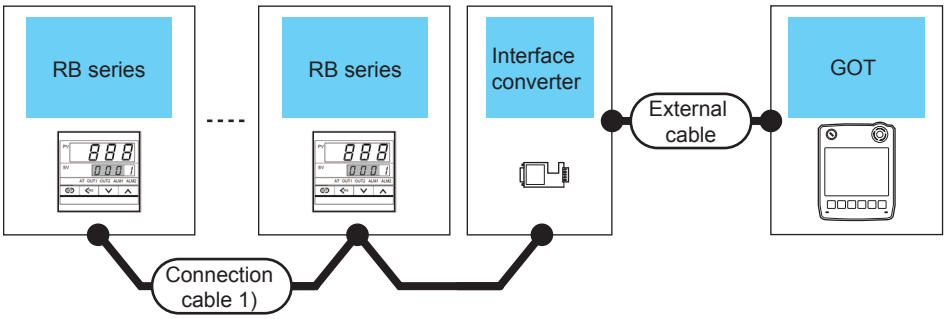


Temperature controller	Connection cable 1)		Converter*1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
RB100 RB400 RB500 RB700 RB900	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V	RS-232	User preparing Page 1753 RS-232 connection diagram 6)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



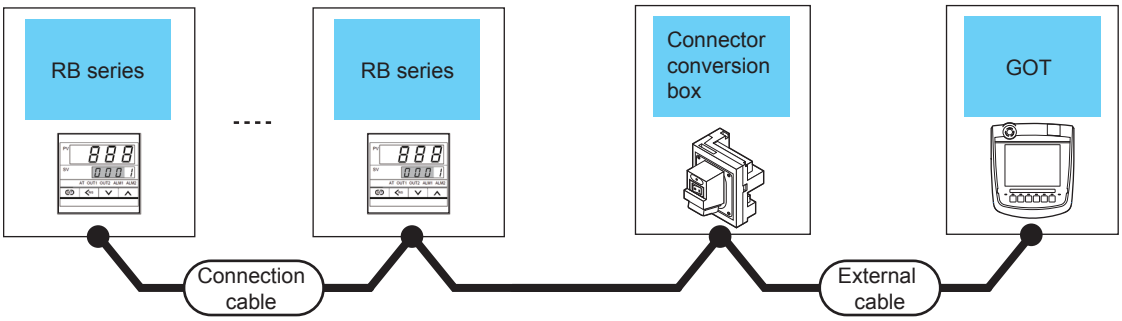
Temperature controller	Connection cable 1)		Converter*1		External cable	GOT Model	Total distance*2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
RB100 RB400 RB500 RB700 RB900	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1753 RS-232 connection diagram 7)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (External cable)

When connecting directly

■When using the connector conversion box



Temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
RB100 RB400 RB500 RB700 RB900	RS-485	User preparing Page 1761 RS-485 connection diagram 2)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 temperature controllers for 1 GOT

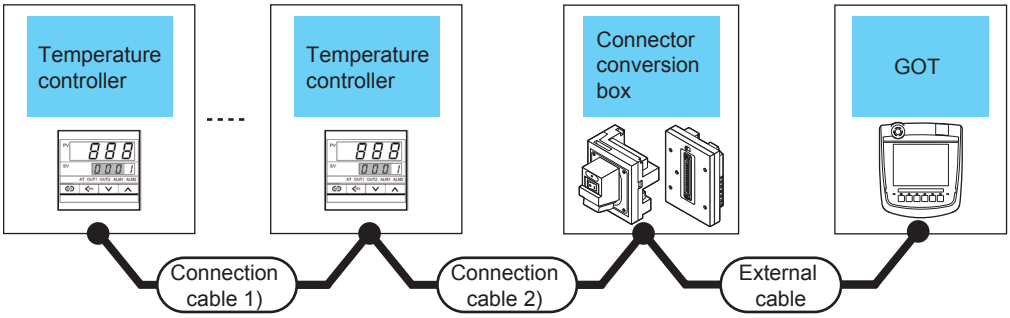
Connecting to PF, HA, RMC, MA, AG, or SA series

Communication driver

RKC
SR Mini HG(MODBUS)

When connecting to multiple temperature controllers

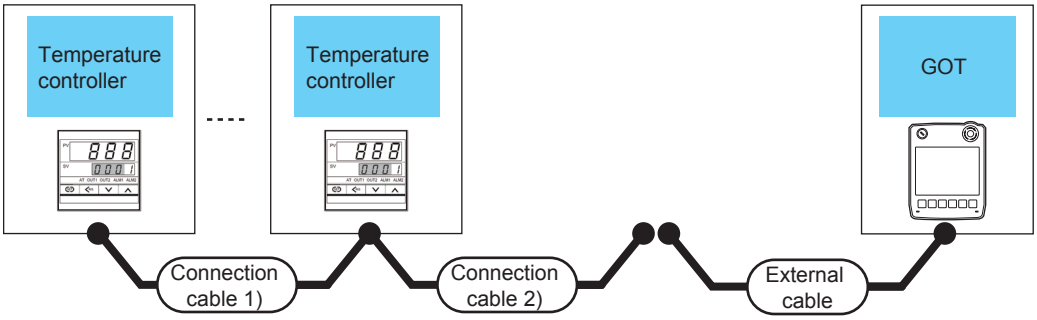
■When using the connector conversion box



Temperature controller		Connection cable 1)	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *1	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number					
PF900 PF901 HA400 HA401 HA900 HA901 MA900 MA901	RS-232	-	User preparing Page 1753 RS-232 connection diagram 8)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 1 temperature controller for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
PF900 PF901 HA400 HA401 HA900 HA901 MA900 MA901 AG500	RS-422	User preparing Page 1757 RS-422 connection diagram 4)	User preparing Page 1757 RS-422 connection diagram 5)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 temperature controllers for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		Up to 10 temperature controllers for 1 GOT
PF900 PF901 HA400 HA401 HA900 HA901 MA900 MA901 AG500 RMC500 SA100 SA200	RS-485	User preparing Page 1761 RS-485 connection diagram 2)		GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		Up to 31 temperature controllers for 1 GOT

*1 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

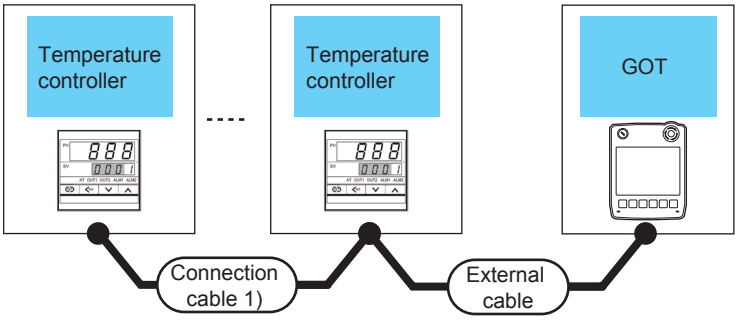
■When using the external cable (GT11H-C□□□-37P)



Temperature controller		Connection cable 1)	Connection cable 2)	External cable	GOT Model	Total distance *1	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number				
PF900 PF901 HA400 HA401 HA900 HA901 MA900 MA901	RS-232	-	User preparing Page 1754 RS-232 connection diagram 9)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 1 temperature controller for 1 GOT
PF900 PF901 HA400 HA401 HA900 HA901 MA900 MA901 AG500	RS-422	User preparing Page 1757 RS-422 connection diagram 4)	User preparing Page 1758 RS-422 connection diagram 6)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	Up to 10 temperature controllers for 1 GOT

*1 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)

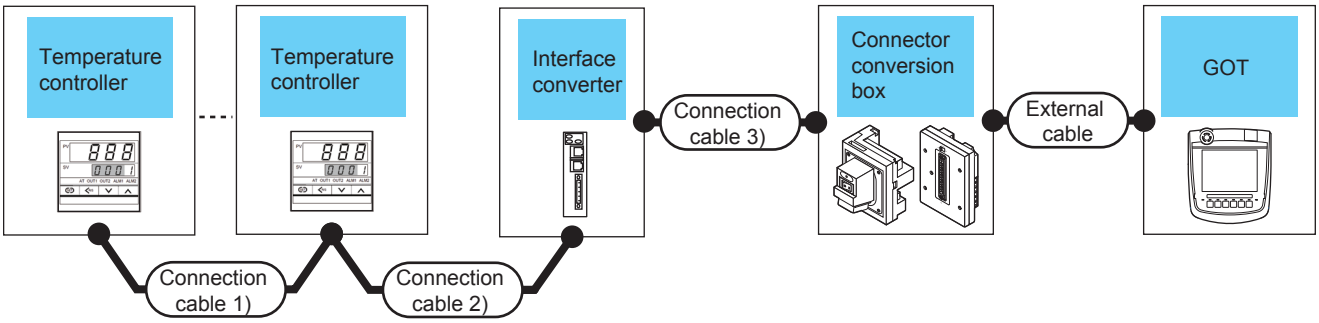


Temperature controller		Connection cable 1)	External cable	GOT Model	Total distance *1	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
PF900 PF901 HA400 HA401 HA900 HA901 MA900 MA901	RS-232	-	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1754 RS-232 connection diagram 10)	GT 2505HS	6m	Up to 1 temperature controller for 1 GOT
PF900 PF901 HA400 HA401 HA900 HA901 MA900 MA901 AG500	RS-422	User preparing Page 1757 RS-422 connection diagram 4)	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1759 RS-422 connection diagram 7)	GT 2505HS	13m	Up to 10 temperature controllers for 1 GOT

*1 The distance from the GOT to the temperature controller (Connection cable 1) + External cable)

When connecting to multiple temperature controllers with interface converter (COM-A)

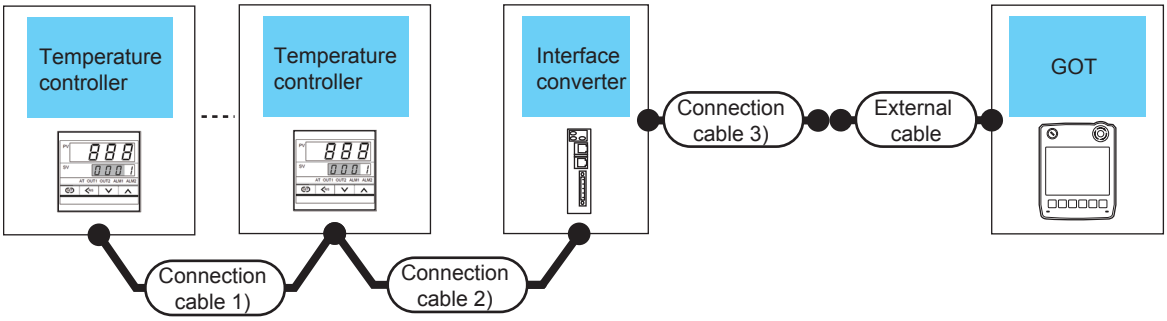
■When using the connector conversion box



Temperature controller	Connection cable 1)	Connection cable 2)	Max. distance*2	Interface converter*1		Connection cable 3)	Connector conversion box	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name	Cable model Connection diagram number	Cable model*1 Connection diagram number		Model name	Communication Type	Cable model Connection diagram number					
PF900 PF901	User preparing Page 1757 RS-422 connection diagram 4)	W-BF-01-0500(0.5m) W-BF-01-1000(1m) W-BF-01-3000(3m)	1000m	COM-A	RS-232	W-BF-28-0500(0.5m)*1 W-BF-28-1000(1m)*1 W-BF-28-3000(3m)*1 or User preparing Page 1752 RS-232 connection diagram 3)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 temperature controllers for 1 GOT
							GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 The distance from the temperature controller to the interface converter (Connection cable 1) + Connection cable 2))
*3 The distance from the converter to the GOT (Connection cable 3) + External cable)

■When using the external cable (GT11H-C□□□-37P)



Temperature controller	Connection cable 1)	Connection cable 2)	Max. distance *2	Interface converter*1		Connection cable 3)	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name	Cable model Connection diagram number	Cable model Connection diagram number		Model name	Communication Type	Cable model Connection diagram number				
PF900 PF901	User preparing Page 1757 RS-422 connection diagram 4)	W-BF-01-0500(0.5m)*1 W-BF-01-1000(1m)*1 W-BF-01-3000(3m)*1	1000m	COM-A	RS-232	User preparing Page 1752 RS-232 connection diagram 4)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

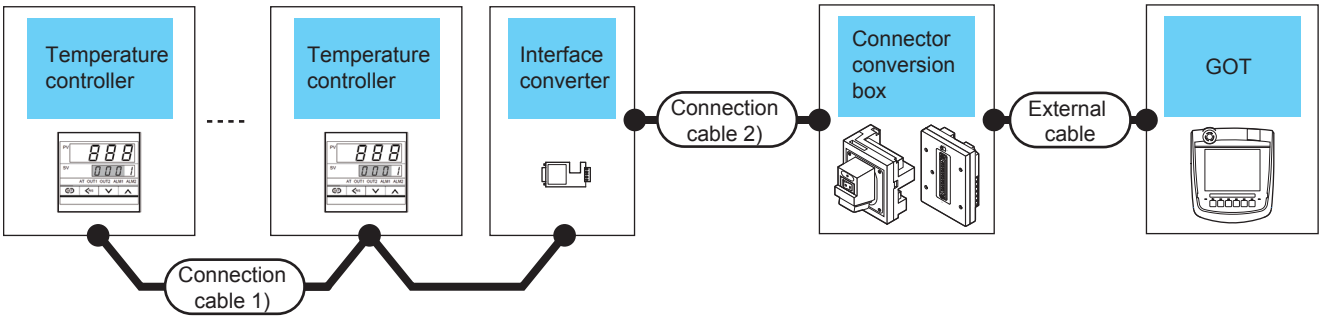
*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the temperature controller to the interface converter (Connection cable 1) + Connection cable 2))

*3 The distance from the converter to the GOT (Connection cable 3) + External cable)

When connecting to multiple temperature controllers with interface converter (CD485/V)

■When using the connector conversion box

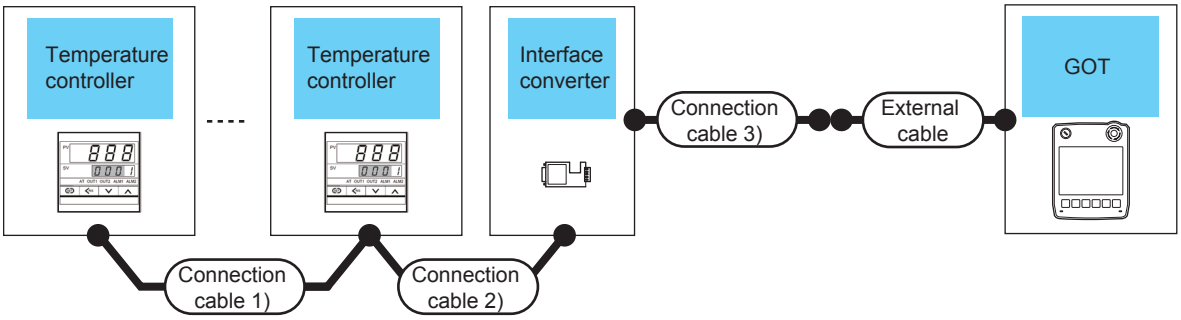


Temperature controller	Connection cable 1)	Max. distance	Interface converter*1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model*1 Connection diagram number		Model name	Communication Type	Cable model Connection diagram number					
PF900 PF901 HA400 HA401 HA900 HA901 RMC500 SA100 SA200	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V	RS-232	User preparing Page 1752 RS-232 connection diagram 5)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 temperature controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

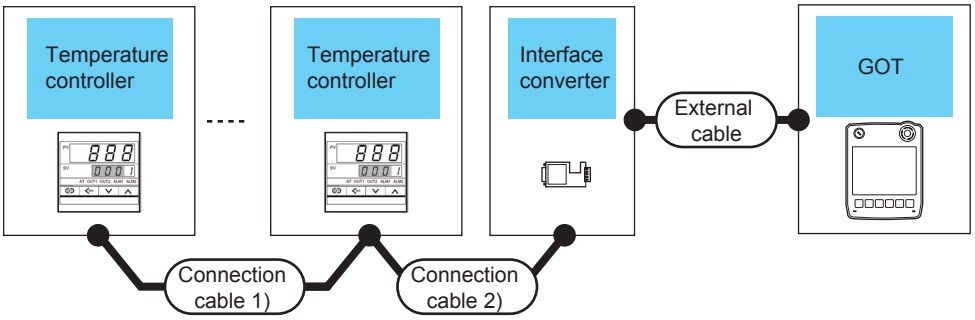


Temperature controller	Connection cable 1)	Connection cable 2)	Max. distance	Interface converter*1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model*1 Connection diagram number	Cable model*1 Connection diagram number		Model name	Communication Type	Cable model Connection diagram number				
PF900 PF901 HA400 HA401 HA900 HA901 RMC500 THV-A1 SA100 SA200	User preparing Page 1762 RS-485 connection diagram 3)		1200m	CD485/V	RS-232	User preparing Page 1753 RS-232 connection diagram 6)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the converter to the GOT (Connection cable 3) + External cable)

■When using the external cable (GT11H-C□□□)



Temperature controller	Connection cable 1)	Connection cable 2)	Max. distance	Interface converter*1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model*1 Connection diagram number	Cable model*1 Connection diagram number		Model name	Communication Type				
PF900 PF901 HA400 HA401 HA900 HA901 RMC500 THV-A1 SA100 SA200	User preparing Page 1762 RS-485 connection diagram 3)		1200m	CD485/V	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1753 RS-232 connection diagram 7)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the converter to the GOT (External cable)

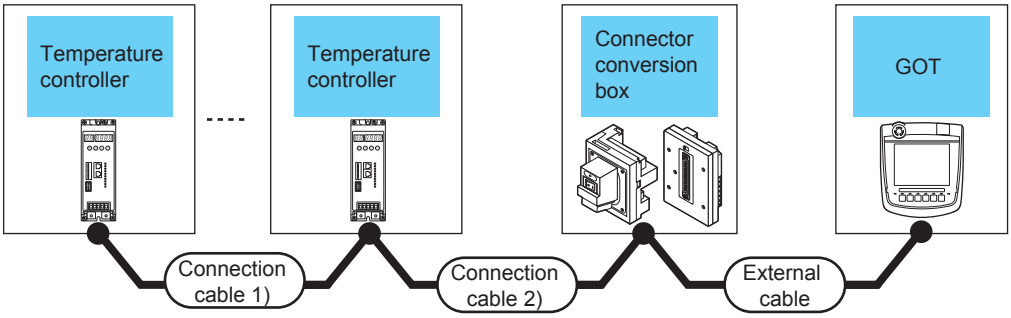
Connecting to THV series

Communication driver

RKC
SR Mini HG(MODBUS)

When connecting to multiple temperature controllers

■When using the connector conversion box

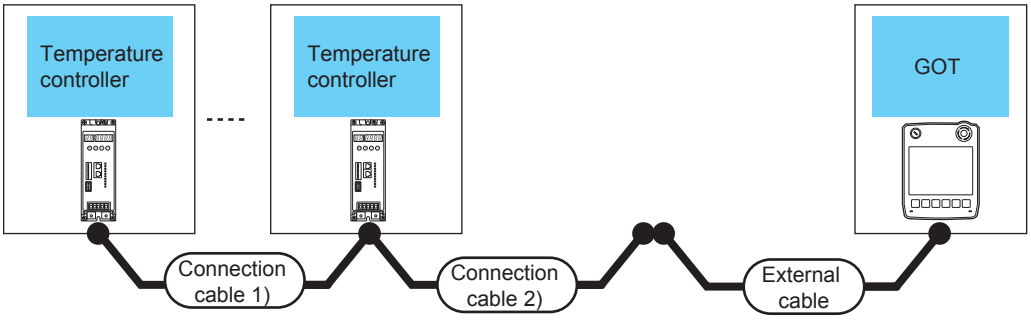


Temperature controller		Connection cable 1)	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Communication Type	Cable model*1 Connection diagram number	Cable model Connection diagram number					
THV-A1	RS-422	W-BF-02-0500 (0.5m) W-BF-02-1000 (1m) W-BF-02-3000 (3m)	User preparing Page 1756 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 temperature controllers for GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		Up to 10 temperature controllers for GOT
	RS-485	W-BF-02-0500 (0.5m) W-BF-02-1000 (1m) W-BF-02-3000 (3m)	User preparing Page 1760 RS-485 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 temperature controllers for GOT

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

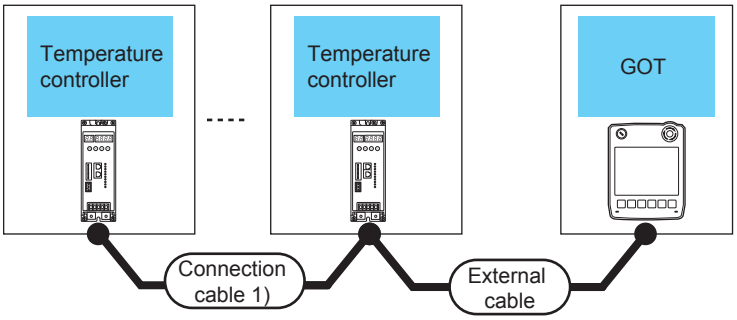


Temperature controller		Connection cable 1)	Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Communication Type	Cable model*1 Connection diagram number	Cable model Connection diagram number				
THV-A1	RS-422	W-BF-02-0500 (0.5m) W-BF-02-1000 (1m) W-BF-02-3000 (3m)	User preparing Page 1756 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	Up to 10 temperature controllers for GOT

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



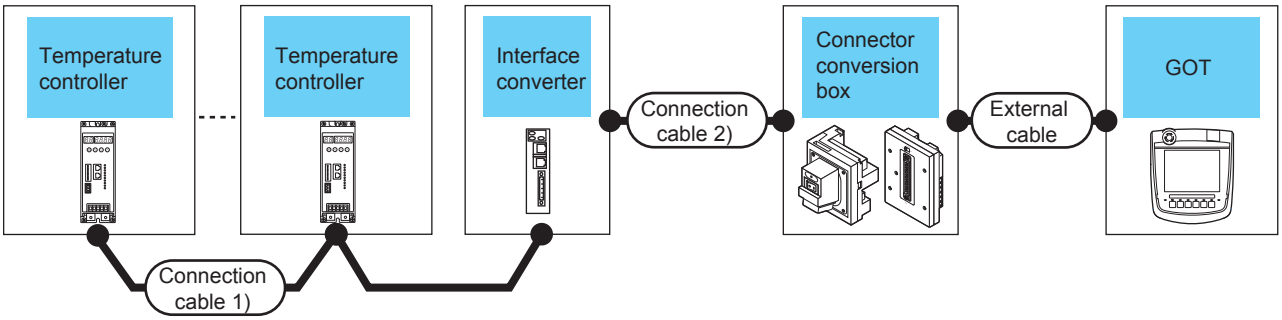
Temperature controller		Connection cable 1)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Communication Type	Cable model*1 Connection diagram number				
THV-A1	RS-422	W-BF-02-0500 (0.5m) W-BF-02-1000 (1m) W-BF-02-3000 (3m)	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1756 RS-422 connection diagram 3)	GT 2505HS	13m	Up to 10 temperature controllers for GOT

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the GOT to the temperature controller (Connection cable 1) + External cable)

When connecting to multiple temperature controllers with interface converter (COM-A)

■When using the connector conversion box

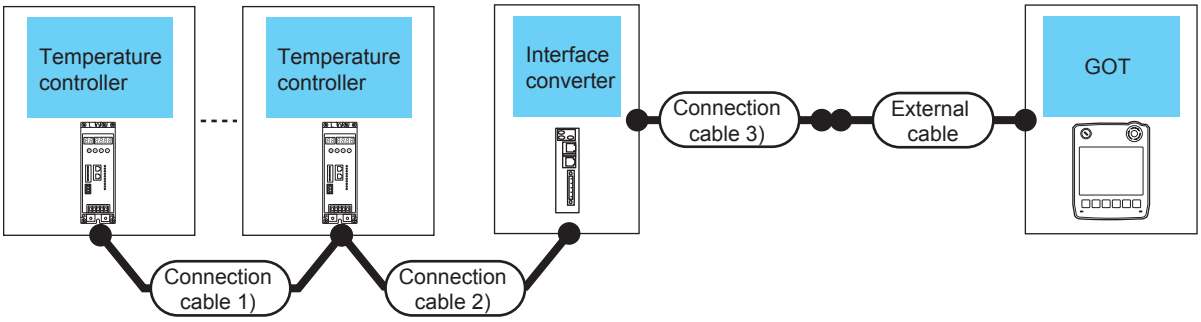


Temperature controller	Connection cable 1)	Max. distance	Interface converter*1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model*1 Connection diagram number		Model name	Communication Type	Cable model Connection diagram number					
THV-A1	W-BF-02-0500(0.5m) W-BF-02-1000(1m) W-BF-02-3000(3m)	1000m	COM-A	RS-232	W-BF-28-0500(0.5m)*1 W-BF-28-1000(1m)*1 W-BF-28-3000(3m)*1 or User preparing Page 1752 RS-232 connection diagram 3)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 temperature controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

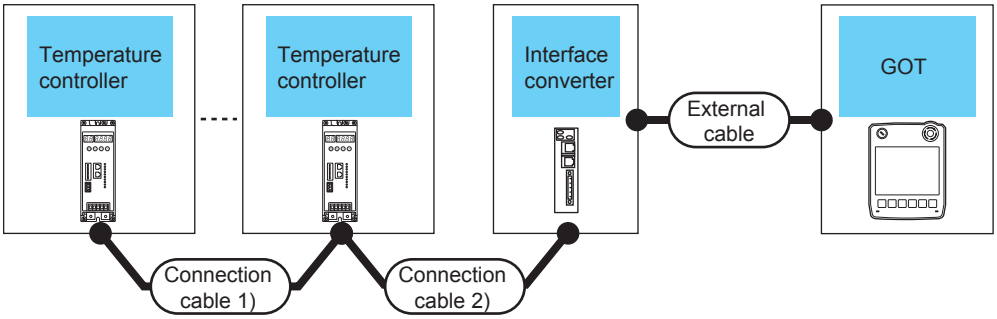
■When using the external cable (GT11H-C□□□-37P)



Temperature controller	Connection cable 1)	Connection cable 2)	Max. distance *2	Interface converter*1		Connection cable 3)	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name	Cable model*1 Connection diagram number	Cable model*1 Connection diagram number		Model name	Communication Type	Cable model Connection diagram number				
THV-A1	W-BF-02-0500(0.5m) W-BF-02-1000(1m) W-BF-02-3000(3m)		1000m	COM-A	RS-232	User preparing Page 1753 RS-232 connection diagram 6)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 The distance from the temperature controller to the interface converter (Connection cable 1) + Connection cable 2))
*3 The distance from the converter to the GOT (Connection cable 3) + External cable)

■When using the external cable (GT11H-C□□□)

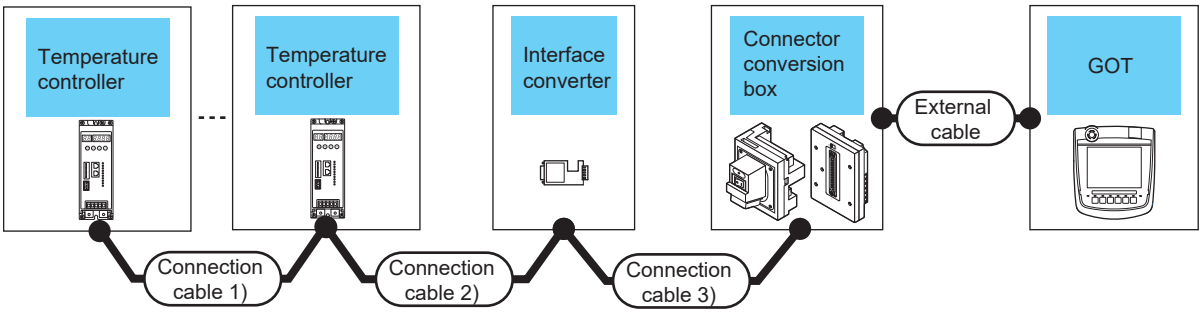


Temperature controller	Connection cable 1)	Connection cable 2)	Max. distance *2	Interface converter*1		External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name	Cable model*1 Connection diagram number	Cable model*1 Connection diagram number		Model name	Communication Type				
THV-A1	W-BF-02-0500(0.5m) W-BF-02-1000(1m) W-BF-02-3000(3m)		1000m	COM-A	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1753 RS-232 connection diagram 7)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 The distance from the temperature controller to the interface converter (Connection cable 1) + Connection cable 2))
*3 The distance from the converter to the GOT (External cable)

When connecting to multiple temperature controllers with interface converter (CD485V)

■When using the connector conversion box

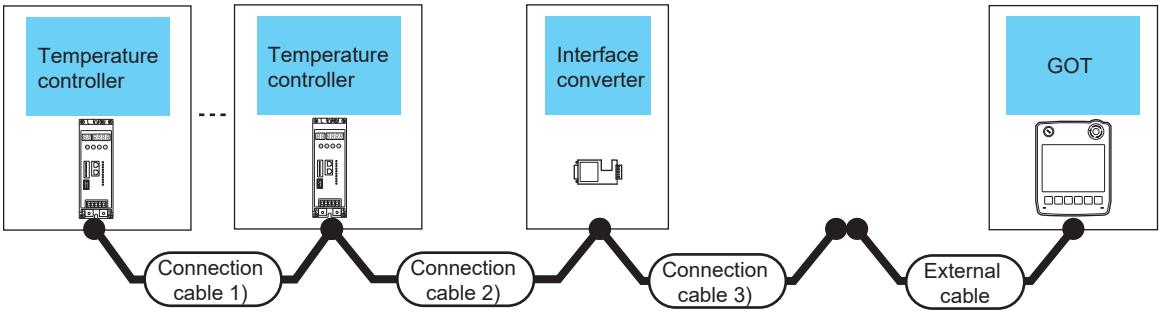


Temperature controller	Connection cable 1)	Connection cable 2)	Max. distance	Interface converter*1		Connection cable 3)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Cable model Connection diagram number		Model name	Communication Type	Cable model Connection diagram number					
THV-A1	W-BF-02-0500(0.5m)*1 W-BF-02-1000(1m)*1 W-BF-02-3000(3m)*1	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V	RS-232	User preparing Page 1752 RS-232 connection diagram 5)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 temperature controllers for 1 GOT
							GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	User preparing Page 1762 RS-485 connection diagram 3)					User preparing Page 1752 RS-232 connection diagram 5)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
							GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the converter to the GOT (Connection cable 3) + External cable)

■When using the external cable (GT11H-C□□□-37P)

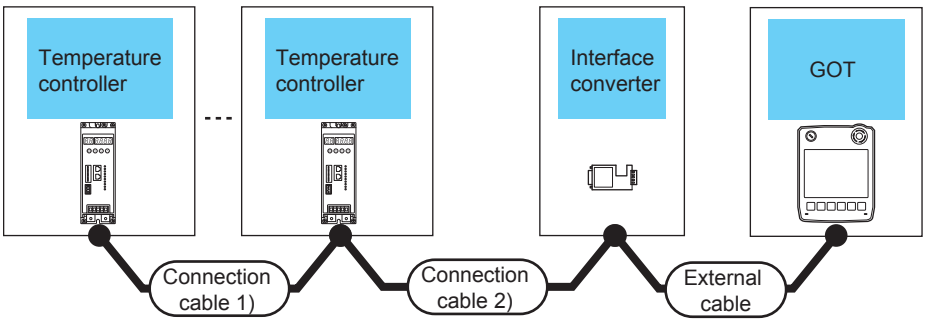


Temperature controller	Connection cable 1)	Connection cable 2)	Max. distance	Interface converter*1		Connection cable 3)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Cable model Connection diagram number		Model name	Communication Type	Cable model Connection diagram number				
THV-A1	W-BF-02-0500(0.5m)*1 W-BF-02-1000(1m)*1 W-BF-02-3000(3m)*1	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V	RS-232	User preparing Page 1753 RS-232 connection diagram 6)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the converter to the GOT (Connection cable 3) + External cable)

■When using the external cable (GT11H-C□□□)



Temperature controller	Connection cable 1)	Connection cable 2)	Max. distance	Interface converter*1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Cable model Connection diagram number		Model name	Communication Type				
THV-A1	W-BF-02-0500 (0.5m)*1 W-BF-02-1000 (1m)*1 W-BF-02-3000 (3m)*1	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1753 RS-232 connection diagram 7)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 The distance from the converter to the GOT (External cable)

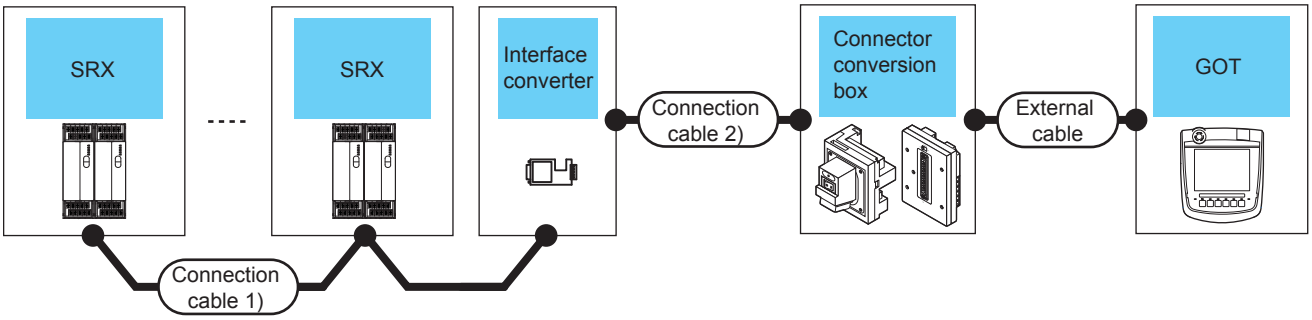
Connecting to SRX series

Communication driver

RKC
SR Mini HG(MODBUS)

When connecting to temperature control module (X-TIO) with a converter

■When using the connector conversion box

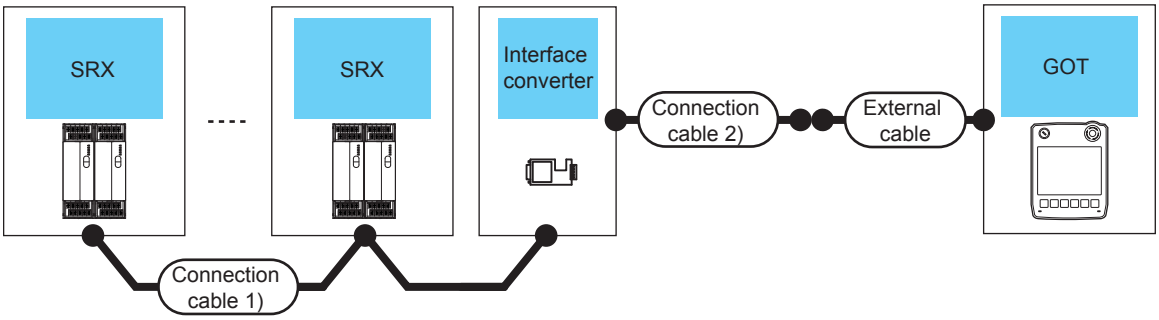


Temperature controller	Connection cable 1)		Interface Converter		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance*2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
X-TIO	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V*1	RS-232	User preparing Page 1752 RS-232 connection diagram 5)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	X-TIO: Up to 31 Total of X-TIO, X-DI and X-DO: Up to 31 for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

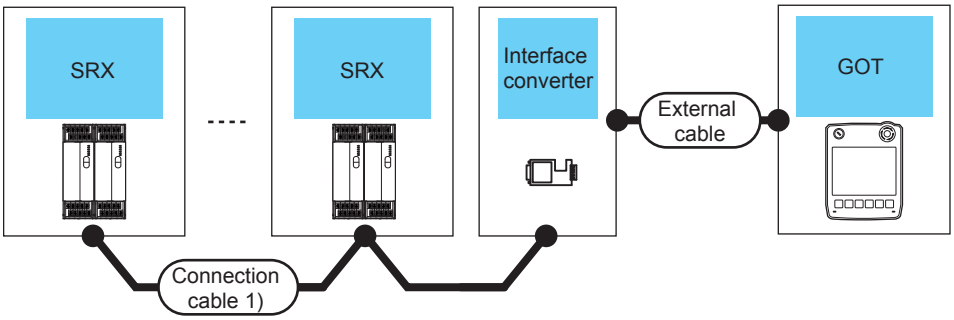
■When using the external cable (GT11H-C□□□-37P)



Temperature controller	Connection cable 1)		Interface Converter		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
X-TIO	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V*1	RS-232	User preparing Page 1753 RS-232 connection diagram 6)	GT11H-C30-37P(3m)	GT 2505HS	6m	X-TIO: Up to 31 Total of X-TIO, X-DI and X-DO: Up to 31 for 1 GOT

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.
*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)

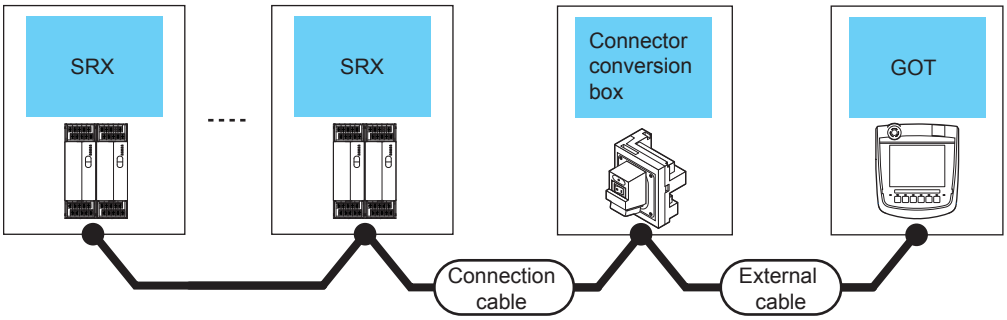


Temperature controller	Connection cable 1)		Interface Converter		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
X-TIO	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V*1	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1753 RS-232 connection diagram 7)	GT 2505HS	6m	X-TIO: Up to 31 Total of X-TIO, X-DI and X-DO: Up to 31 for 1 GOT

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.
*2 The distance from the converter to the GOT (External cable)

When connecting directly to temperature control module (X-TIO)

■When using the connector conversion box



Temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
X-TIO	RS-485	User preparing Page 1761 RS-485 connection diagram 2)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	X-TIO: Up to 31 Total of X-TIO, X-DI and X-DO: Up to 31 for 1 GOT

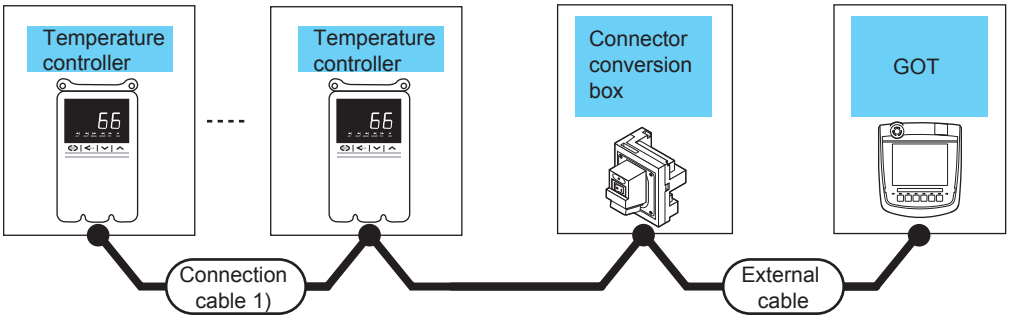
Connecting to SB1 series

Communication driver

RKC
SR Mini HG(MODBUS)

When connecting to multiple temperature controllers

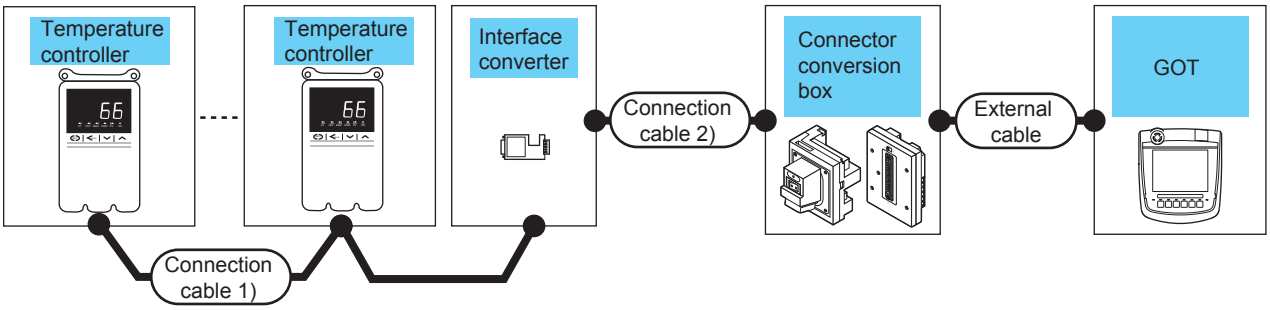
■When using the connector conversion box



Temperature controller		Connection cable 1)	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
SB1	RS-485	User preparing Page 1761 RS-485 connection diagram 2)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 temperature controllers for 1 GOT

When connecting to multiple temperature controllers with interface converter (CD485V)

■When using the connector conversion box



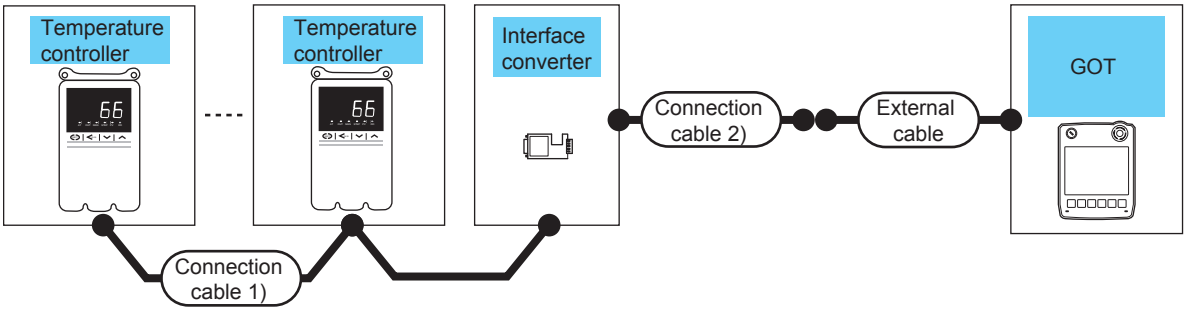
Temperature controller	Connection cable 1)		Converter*1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
SB1	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V*2	RS-232	User preparing Page 1752 RS-232 connection diagram 5)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 temperature controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by RKC.
For details of the product, contact RKC.

*2 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*3 The distance from the converter to the GOT (Connection cable 2) + External cable)

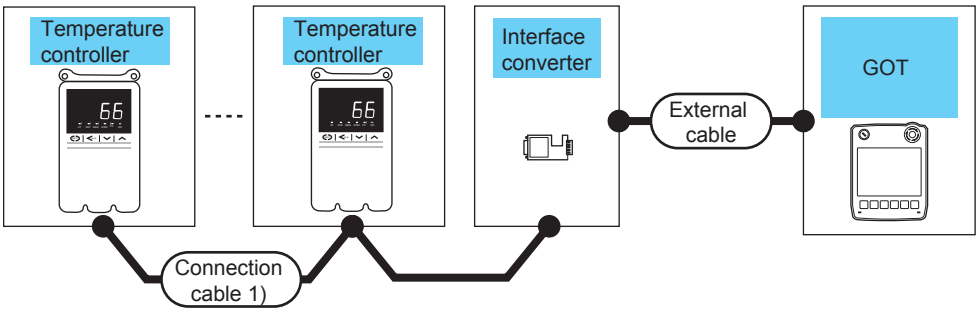
■When using the external cable (GT11H-C□□□-37P)



Temperature controller	Connection cable 1)		Converter*1		Connection cable 2)	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
SB1	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V*2	RS-232	User preparing Page 1753 RS-232 connection diagram 6)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.
*3 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



Temperature controller	Connection cable 1)		Converter*1		External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
SB1	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V*2	RS-232	GT11H-C30(3m) ☞ Page 1753 RS-232 connection diagram 7)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

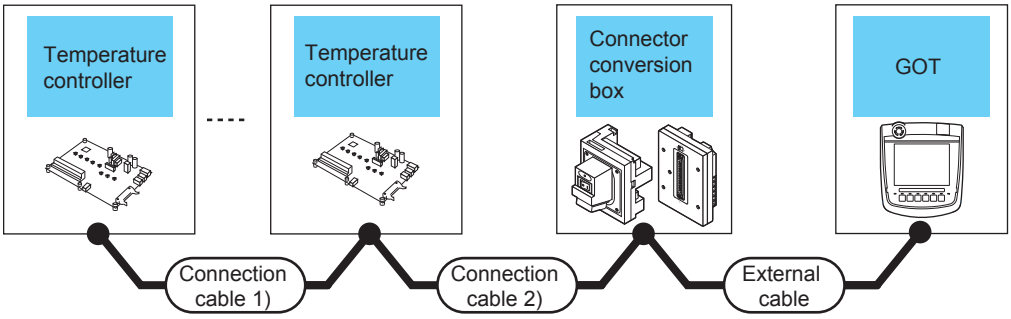
*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.
*3 The distance from the converter to the GOT (External cable)

Connecting to B400 series

Communication driver

RKC
SR Mini HG(MODBUS)

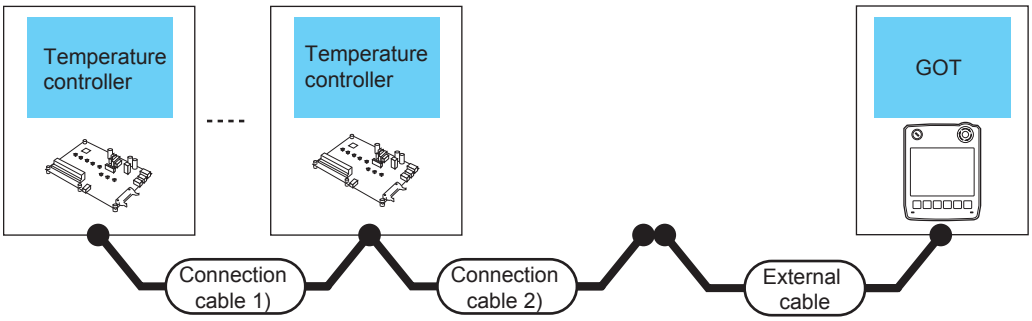
When using the connector conversion box



Temperature controller		Connection cable 1)	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *1	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number					
B400 (RS-422 specifications)	RS-422	User preparing Page 1757 RS-422 connection diagram 4)	User preparing Page 1757 RS-422 connection diagram 5)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 temperature controllers for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		Up to 10 temperature controllers for 1 GOT
B400 (RS-485 specifications)	RS-485	User preparing Page 1761 RS-485 connection diagram 2)		GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		Up to 31 temperature controllers for 1 GOT

*1 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

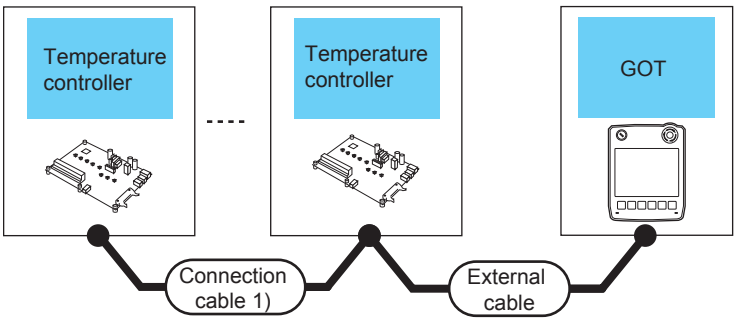
When using the external cable (GT11H-C□□□-37P)



Temperature controller		Connection cable 1)	Connection cable 2)	External cable	GOT Model	Total distance *1	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number				
B400 (RS-422 specifications)	RS-422	User preparing Page 1757 RS-422 connection diagram 4)	User preparing Page 1758 RS-422 connection diagram 6)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	Up to 10 temperature controllers for 1 GOT

*1 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

When using the external cable (GT11H-C□□□)



Temperature controller		Connection cable 1)	External cable	GOT Model	Total distance *1	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
B400 (RS-422 specifications)	RS-422	User preparing Page 1757 RS-422 connection diagram 4)	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1759 RS-422 connection diagram 7)	GT 2505HS	13m	Up to 10 temperature controllers for 1 GOT

*1 The distance from the GOT to the temperature controller (Connection cable 1) + External cable)

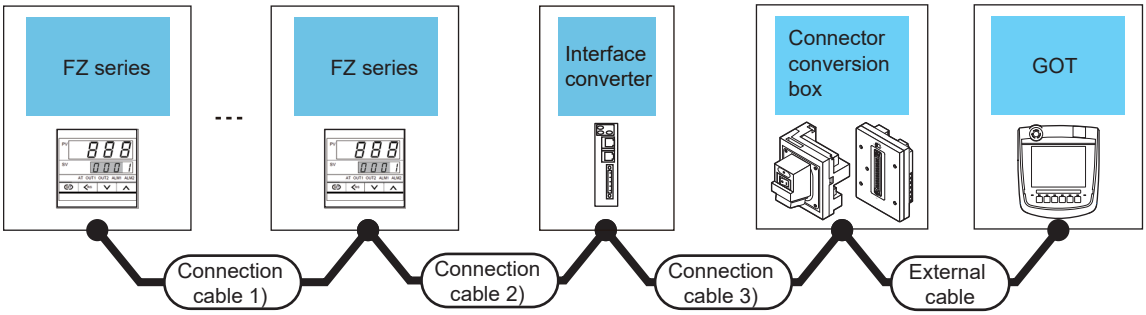
Connecting to FZ series

Communication driver

RKC
SR Mini HG(MODBUS)

When connecting to multiple temperature controllers with interface converter (COM-A)

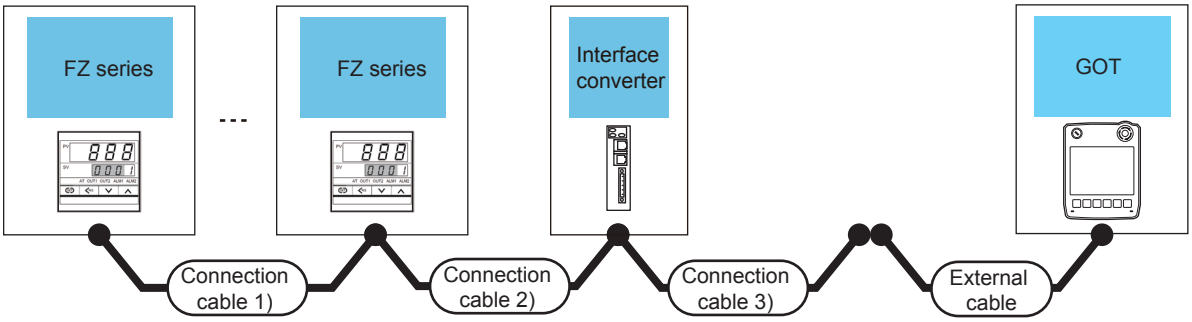
■When using the connector conversion box



Temperature controller	Connection cable 1)	Connection cable 2)	Max. distance	Converter*2		Connection cable 3)	Connector conversion box	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name	Cable model Connection diagram number	Cable model Connection diagram number		Model name	Communication Type	Cable model Connection diagram number					
FZ400 FZ900	User preparing Page 1757 RS-422 connection diagram 4)	W-BF-01-0500(0.5m)*1 W-BF-01-1000(1m)*1 W-BF-01-3000(3m)*1	1000m*2	COM-A	RS-232	W-BF-28-0500(0.5m)*1 W-BF-28-1000(1m)*1 W-BF-28-3000(3m)*1 or User preparing Page 1752 RS-232 connection diagram 3)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 temperature controllers for 1 GOT
							GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 The total length of the connection cable 1) + connection cable 2)
*3 The distance from the converter to the GOT (Connection cable 3) + External cable)

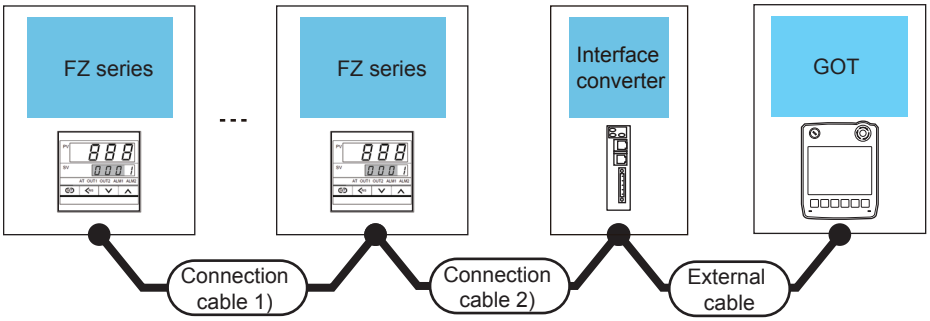
■When using the external cable (GT11H-C□□□-37P)



Temperature controller	Connection cable 1)	Connection cable 2)	Max. distance	Converter*2		Connection cable 3)	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name	Cable model Connection diagram number	Cable model Connection diagram number		Model name	Communication Type	Cable model Connection diagram number				
FZ400 FZ900	User preparing Page 1757 RS-422 connection diagram 4)	W-BF-01-0500(0.5m)*1 W-BF-01-1000(1m)*1 W-BF-01-3000(3m)*1	1000m*2	COM-A	RS-232	W-BF-28-0500(0.5m)*1 W-BF-28-1000(1m)*1 W-BF-28-3000(3m)*1 or User preparing Page 1752 RS-232 connection diagram 4)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 The total length of the connection cable 1) + connection cable 2)
*3 The distance from the converter to the GOT (Connection cable 3) + External cable)

■When using the external cable (GT11H-C□□□)

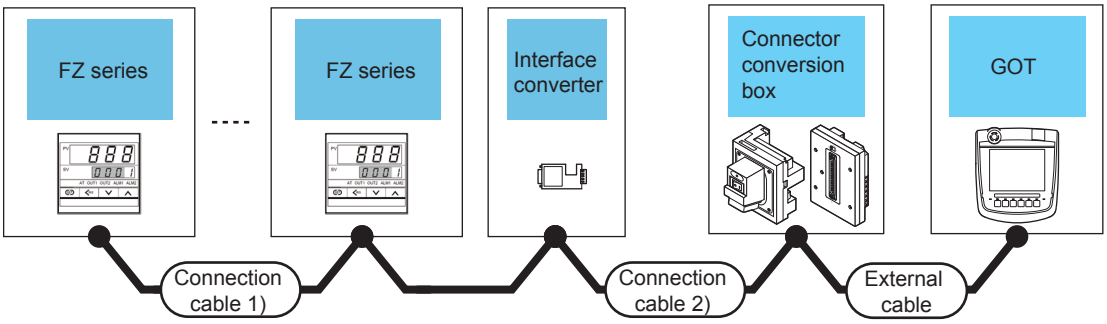


Temperature controller	Connection cable 1)	Connection cable 2)	Max. distance	Converter*2		External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name	Cable model Connection diagram number	Cable model Connection diagram number		Model name	Communication Type				
FZ400 FZ900	User preparing Page 1757 RS-422 connection diagram 4)	W-BF-01-0500(0.5m)*1 W-BF-01-1000(1m)*1 W-BF-01-3000(3m)*1	1000m*2	COM-A	RS-232	GT11H-C30(3m) ☞ Page 1752 RS-232 connection diagram 5)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 The total length of the connection cable 1) + connection cable 2)
*3 The distance from the converter to the GOT (External cable)

When connecting to multiple temperature controllers with interface converter (CD485/V)

■When using the connector conversion box

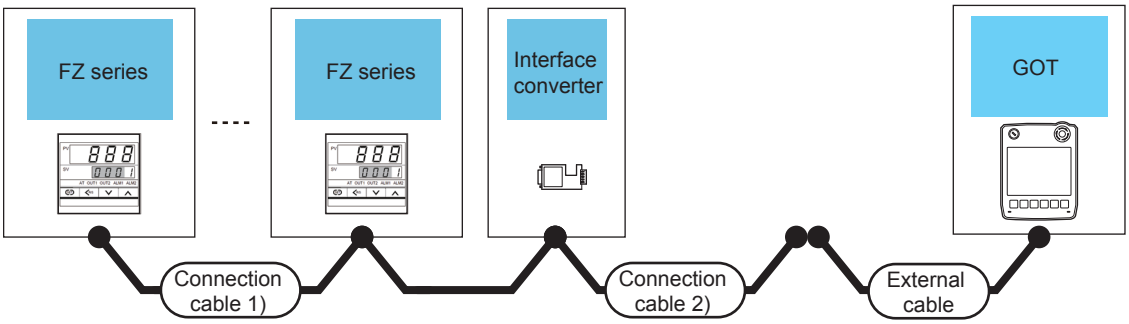


Temperature controller	Connection cable 1)		Converter *1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
FZ110 FZ400 FZ900	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V	RS-232	User preparing Page 1752 RS-232 connection diagram 5)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 temperature controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

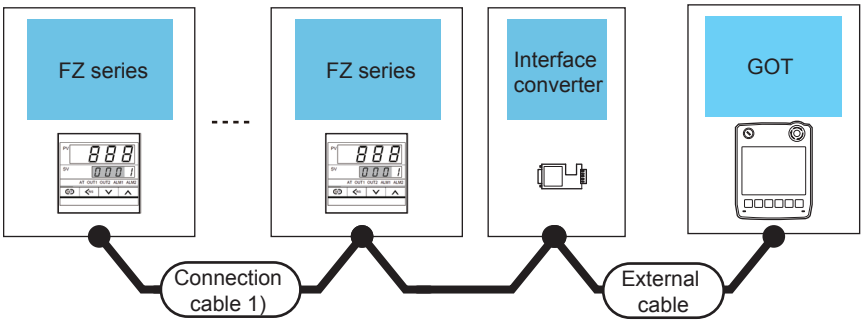


Temperature controller	Connection cable 1)		Converter *1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
FZ110 FZ400 FZ900	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V	RS-232	User preparing Page 1753 RS-232 connection diagram 6)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)

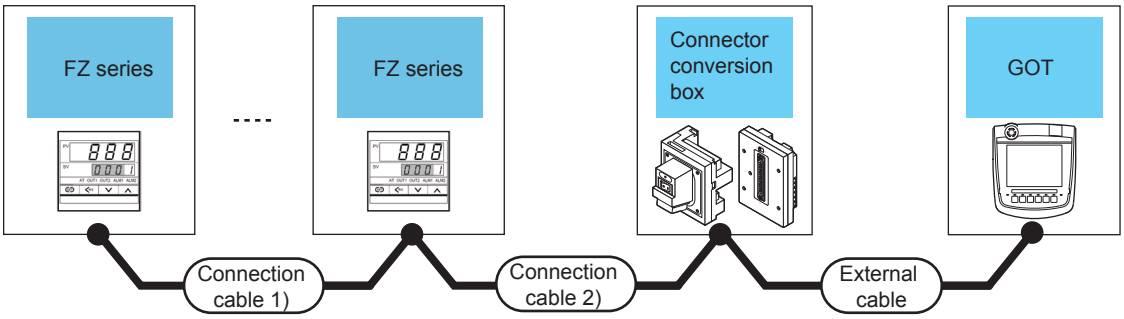


Temperature controller		Connection cable 1)		Converter *1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name		Cable model Connection diagram number	Max. distance	Model name	Communication Type				
FZ110 FZ400 FZ900		User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V	RS-232	GT11H-C30(3m) ☞ Page 1753 RS-232 connection diagram 7)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.
*2 The distance from the converter to the GOT (External cable)

When connecting directly to a temperature controller by RS-422

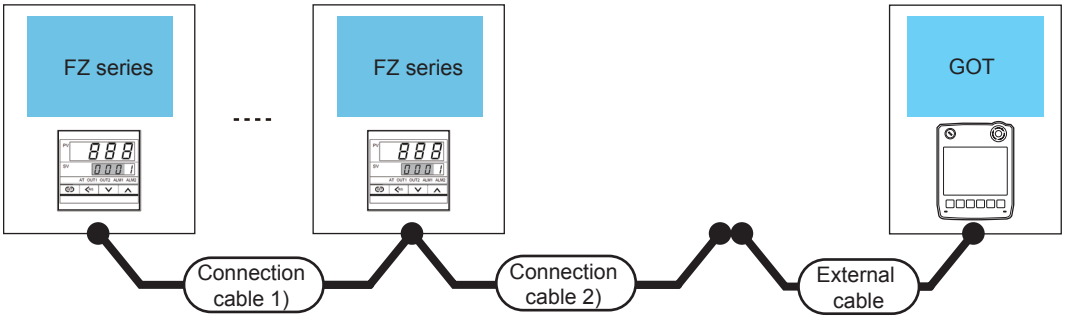
■When using the connector conversion box



Temperature controller		Connection cable 1)	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *1	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number					
FZ400 FZ900	RS-422	User preparing Page 1757 RS-422 connection diagram 4)	User preparing Page 1757 RS-422 connection diagram 5)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 temperature controllers for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		Up to 10 temperature controllers for 1 GOT

*1 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

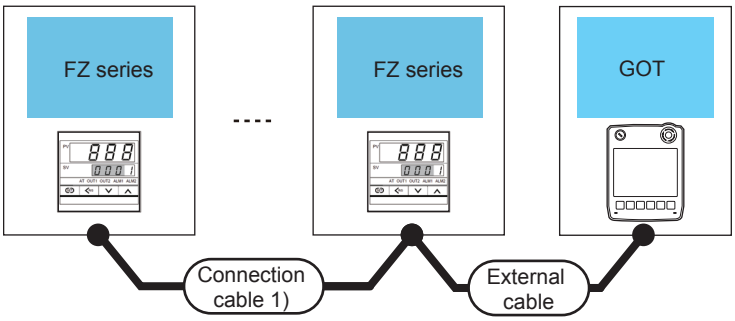
■When using the external cable (GT11H-C□□□-37P)



Temperature controller		Connection cable 1)	Connection cable 2)	External cable	GOT Model	Total distance *1	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number				
FZ400 FZ900	RS-422	User preparing Page 1757 RS-422 connection diagram 4)	User preparing Page 1758 RS-422 connection diagram 6)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	Up to 10 temperature controllers for 1 GOT

*1 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)

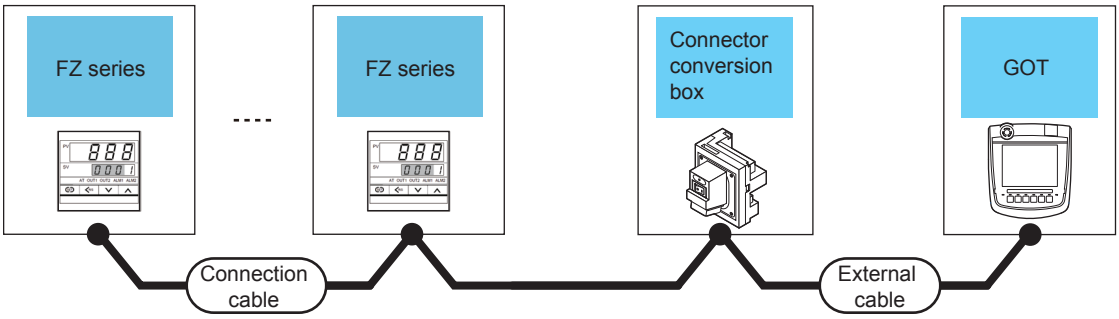


Temperature controller		Connection cable 1)	External cable	GOT Model	Total distance *1	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
FZ400 FZ900	RS-422	User preparing Page 1757 RS-422 connection diagram 4)	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1759 RS-422 connection diagram 7)	GT 2505HS	13m	Up to 10 temperature controllers for 1 GOT

*1 The distance from the GOT to the temperature controller (Connection cable 1) + External cable)

When connecting directly to a temperature controller by RS-485

■When using the connector conversion box



Temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
FZ110 FZ400 FZ900	RS-485	User preparing Page 1761 RS-485 connection diagram 2)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 temperature controllers for 1 GOT

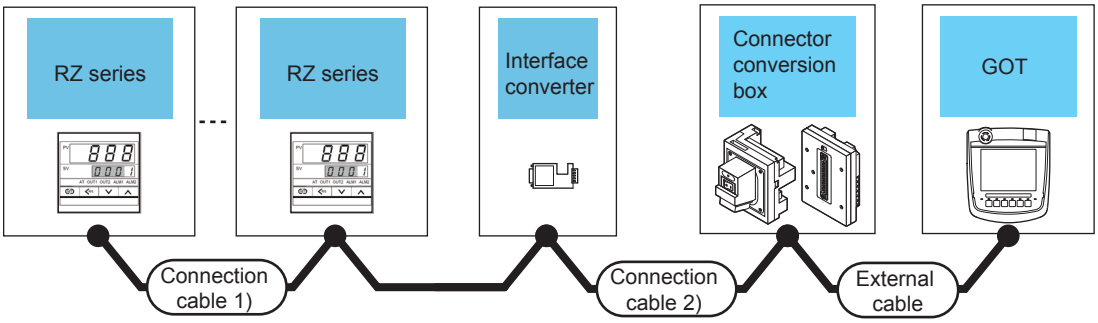
Connecting to RZ series

Communication driver

RKC
SR Mini HG(MODBUS)

When using the converter

■When using the connector conversion box

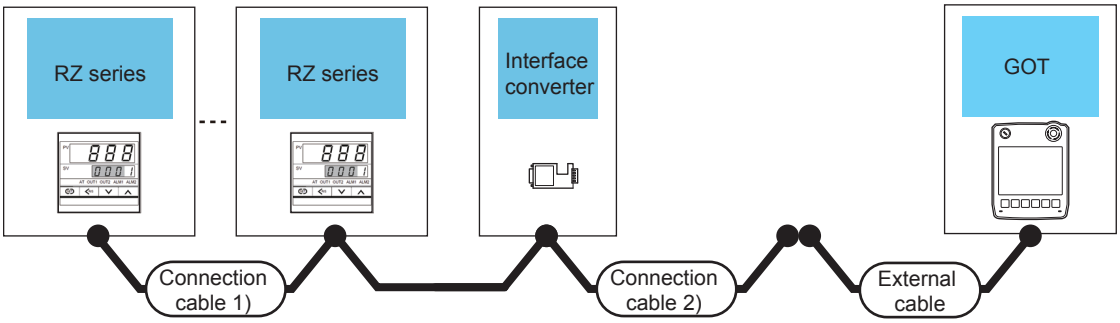


Temperature controller	Connection cable 1)		Converter *1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
RZ100 RZ400	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V	RS-232	User preparing Page 1752 RS-232 connection diagram 5)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 temperature controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

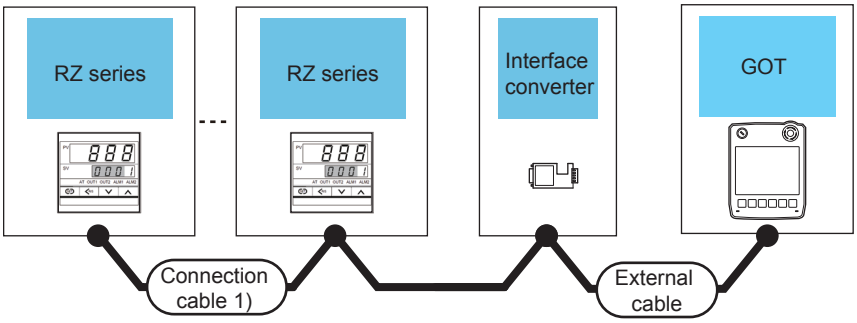
■When using the external cable (GT11H-C□□□-37P)



Temperature controller	Connection cable 1)		Converter *1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
RZ100 RZ400	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V	RS-232	User preparing Page 1753 RS-232 connection diagram 6)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.
*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)

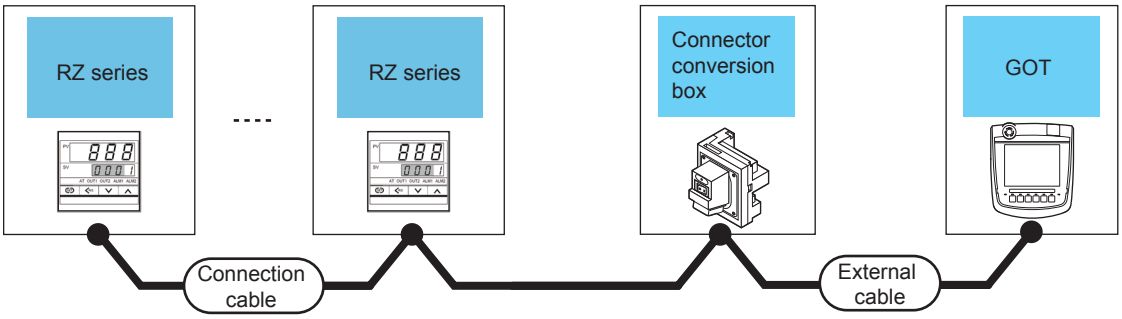


Temperature controller	Connection cable 1)		Converter *1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type				
RZ100 RZ400	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V	RS-232	GT11H-C30(3m) ☞ Page 1753 RS-232 connection diagram 7)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.
*2 The distance from the converter to the GOT (External cable)

When connecting directly

■When using the connector conversion box



Temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
RZ100 RZ400	RS-485	User preparing Page 1761 RS-485 connection diagram 2)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 temperature controllers for 1 GOT

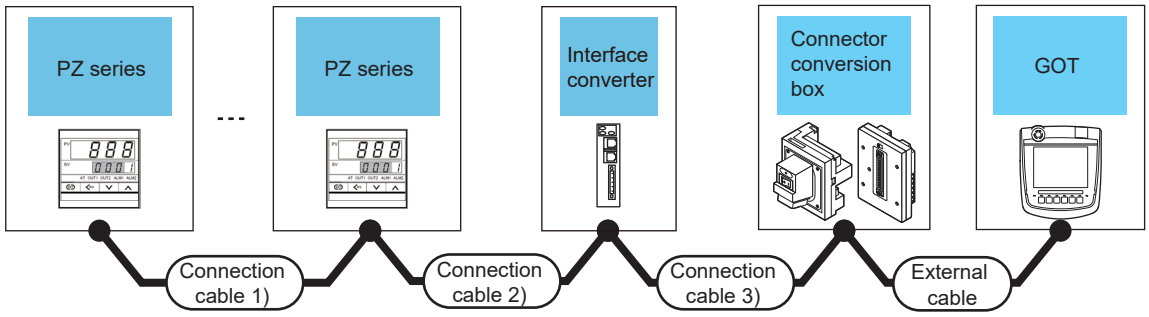
Connecting to PZ series

Communication driver

RKC
SR Mini HG(MODBUS)

When connecting to multiple temperature controllers with interface converter (COM-A)

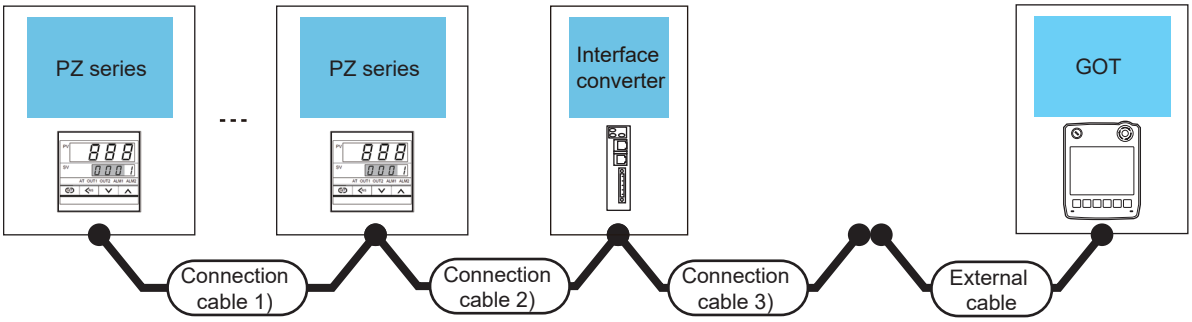
■When using the connector conversion box



Temperature controller	Connection cable 1)	Connection cable 2)*1	Max. distance	Converter*1		Connection cable 3)	Connector conversion box	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name	Cable model Connection diagram number	Cable model Connection diagram number		Model name	Communication Type	Cable model Connection diagram number					
PZ400 PZ900	User preparing Page 1757 RS-422 connection diagram 4)	W-BF-01-0500(0.5m) W-BF-01-1000(1m) W-BF-01-3000(3m)	1000m*2	COM-A	RS-232	W-BF-28-0500(0.5m)*1 W-BF-28-1000(1m)*1 W-BF-28-3000(3m)*1 or User preparing Page 1752 RS-232 connection diagram 3)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 temperature controllers for 1 GOT
							GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 The total length of the connection cable 1) + connection cable 2)
*3 The distance from the converter to the GOT (Connection cable 3) + External cable)

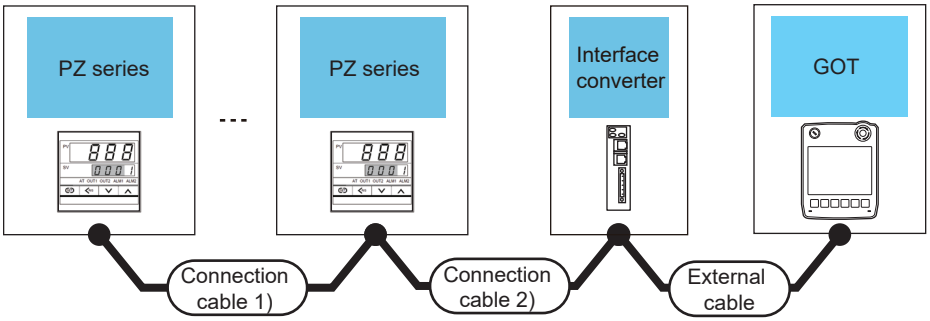
■When using the external cable (GT11H-C□□□-37P)



Temperature controller	Connection cable 1)	Connection cable 2)*1	Max. distance	Converter*1		Connection cable 3)	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name	Cable model Connection diagram number	Cable model Connection diagram number		Model name	Communication Type	Cable model Connection diagram number				
PZ400 PZ900	User preparing Page 1757 RS-422 connection diagram 4)	W-BF-01-0500(0.5m) W-BF-01-1000(1m) W-BF-01-3000(3m)	1000m*2	COM-A	RS-232	W-BF-28-0500(0.5m)*1 W-BF-28-1000(1m)*1 W-BF-28-3000(3m)*1 or User preparing Page 1752 RS-232 connection diagram 4)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 The total length of the connection cable 1) + connection cable 2)
*3 The distance from the converter to the GOT (Connection cable 3) + External cable)

■When using the external cable (GT11H-C□□□)

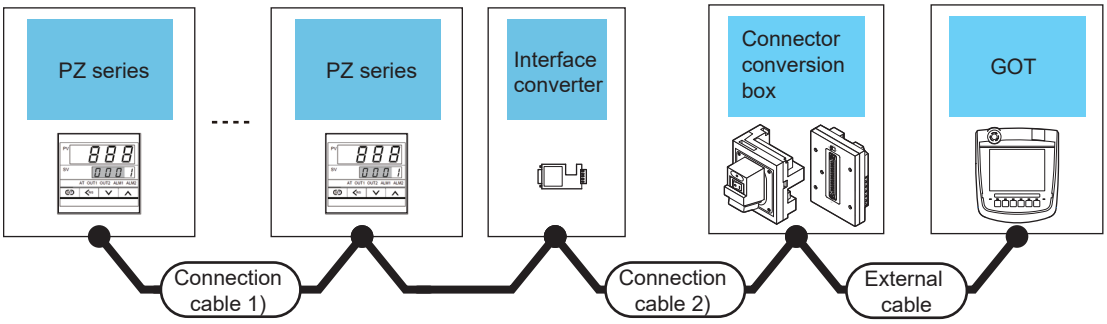


Temperature controller	Connection cable 1)	Connection cable 2)*1	Max. distance	Converter*1		External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name	Cable model Connection diagram number	Cable model Connection diagram number		Model name	Communication Type				
PZ400 PZ900	User preparing Page 1757 RS-422 connection diagram 4)	W-BF-01-0500(0.5m) W-BF-01-1000(1m) W-BF-01-3000(3m)	1000m*2	COM-A	RS-232	GT11H-C30(3m) ☞ Page 1752 RS-232 connection diagram 5)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 The total length of the connection cable 1) + connection cable 2)
*3 The distance from the converter to the GOT (External cable)

When connecting to multiple temperature controllers with interface converter (CD485/V)

■When using the connector conversion box

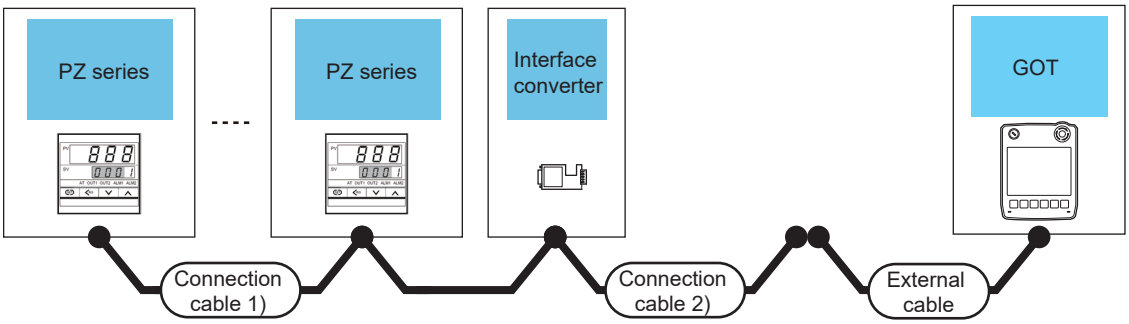


Temperature controller	Connection cable 1)		Converter *1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
PZ400 PZ900	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V	RS-232	User preparing Page 1752 RS-232 connection diagram 5)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 temperature controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

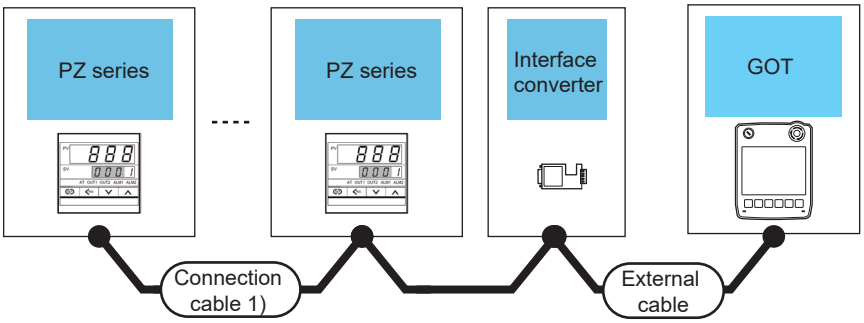


Temperature controller	Connection cable 1)		Converter *1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
PZ400 PZ900	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V	RS-232	User preparing Page 1753 RS-232 connection diagram 6)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)

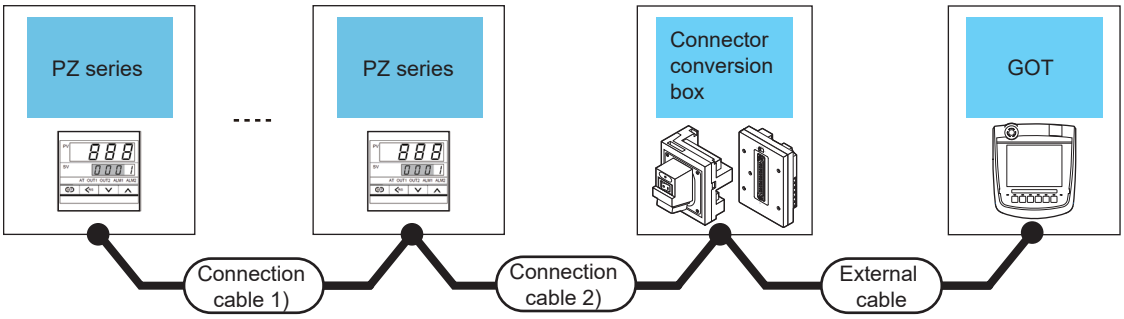


Temperature controller		Connection cable 1)		Converter *1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name		Cable model Connection diagram number	Max. distance	Model name	Communication Type				
PZ400 PZ900		User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V	RS-232	GT11H-C30(3m) ☞ Page 1753 RS-232 connection diagram 7)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.
*2 The distance from the converter to the GOT (External cable)

When connecting directly to a temperature controller by RS-422

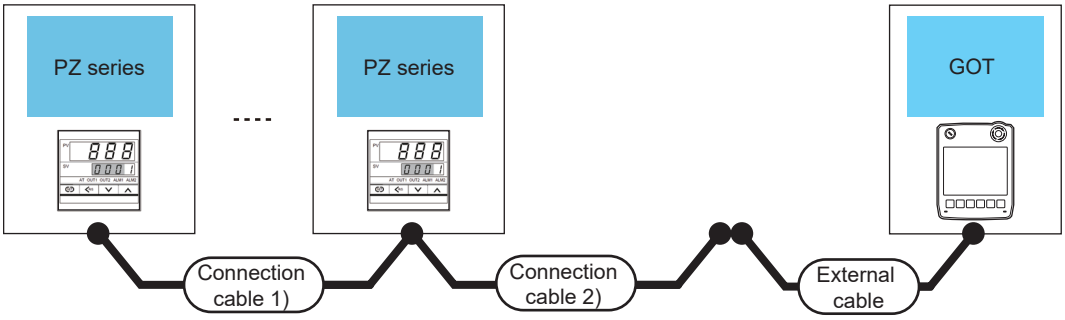
■When using the connector conversion box



Temperature controller		Connection cable 1)	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *1	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number					
PZ400 PZ900	RS-422	User preparing Page 1757 RS-422 connection diagram 4)	User preparing Page 1757 RS-422 connection diagram 5)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 temperature controllers for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		Up to 10 temperature controllers for 1 GOT

*1 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

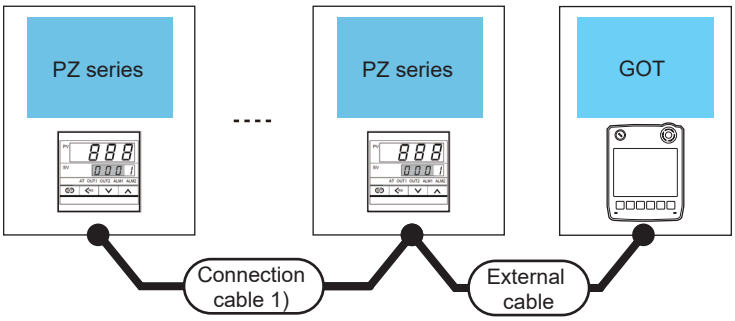
■When using the external cable (GT11H-C□□□-37P)



Temperature controller		Connection cable 1)	Connection cable 2)	External cable	GOT Model	Total distance *1	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number				
PZ400 PZ900	RS-422	User preparing Page 1757 RS-422 connection diagram 4)	User preparing Page 1758 RS-422 connection diagram 6)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	Up to 10 temperature controllers for 1 GOT

*1 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)

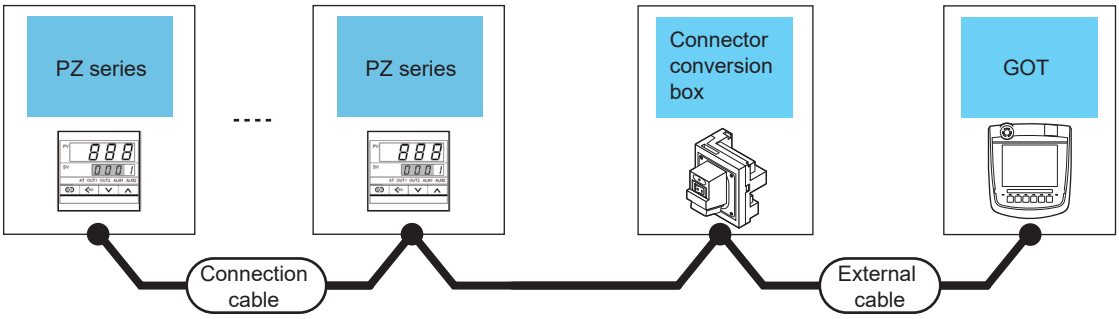


Temperature controller		Connection cable 1)	External cable	GOT Model	Total distance *1	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
PZ400 PZ900	RS-422	User preparing Page 1757 RS-422 connection diagram 4)	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1759 RS-422 connection diagram 7)	GT 2505HS	13m	Up to 10 temperature controllers for 1 GOT

*1 The distance from the GOT to the temperature controller (Connection cable 1) + External cable)

When connecting directly to a temperature controller by RS-485

■When using the connector conversion box



Temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance *1	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
PZ400 PZ900	RS-485	User preparing Page 1761 RS-485 connection diagram 2)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 temperature controllers for 1 GOT

*1 The distance from the GOT to the temperature controller (Connection cable + External cable)

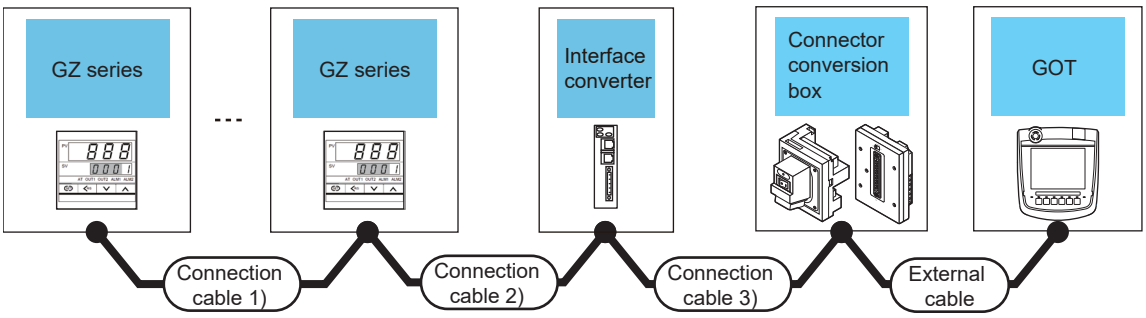
Connecting to GZ series

Communication driver

RKC
SR Mini HG(MODBUS)

When connecting to multiple temperature controllers with interface converter (COM-A)

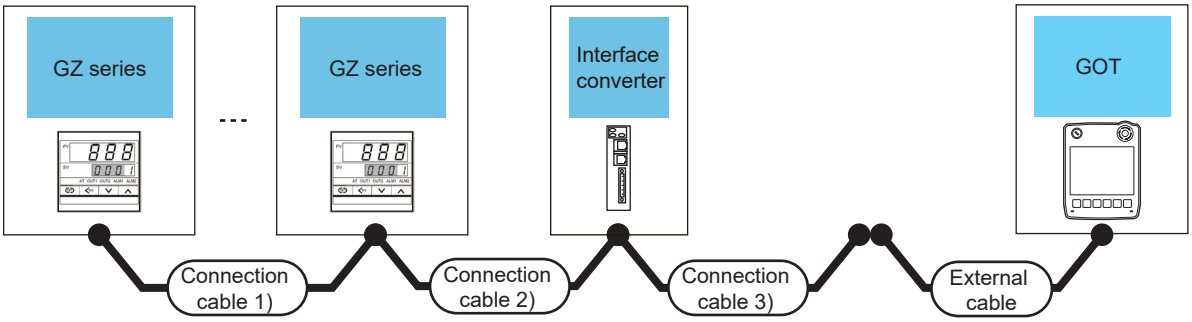
■When using the connector conversion box



Temperature controller	Connection cable 1)	Connection cable 2)*1	Max. distance	Converter*1		Connection cable 3)	Connector conversion box	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name	Cable model Connection diagram number	Cable model Connection diagram number		Model name	Communication Type	Cable model Connection diagram number					
GZ400 GZ900	User preparing Page 1757 RS-422 connection diagram 4)	W-BF-01-0500(0.5m) W-BF-01-1000(1m) W-BF-01-3000(3m)	1000m*2	COM-A	RS-232	W-BF-28-0500(0.5m)*1 W-BF-28-1000(1m)*1 W-BF-28-3000(3m)*1 or User preparing Page 1752 RS-232 connection diagram 3)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 temperature controllers for 1 GOT
							GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 The total length of the connection cable 1) + connection cable 2)
*3 The distance from the converter to the GOT (Connection cable 3) + External cable)

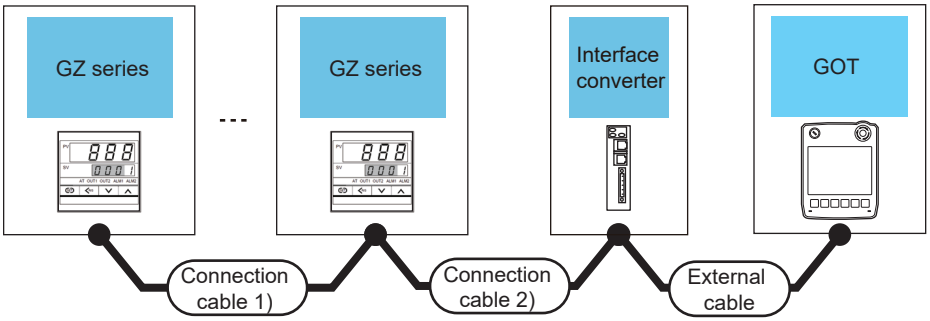
■When using the external cable (GT11H-C□□□-37P)



Temperature controller	Connection cable 1)	Connection cable 2)*1	Max. distance	Converter*1		Connection cable 3)	External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name	Cable model Connection diagram number	Cable model Connection diagram number		Model name	Communication Type	Cable model Connection diagram number				
GZ400 GZ900	User preparing Page 1757 RS-422 connection diagram 4)	W-BF-01-0500(0.5m) W-BF-01-1000(1m) W-BF-01-3000(3m)	1000m*2	COM-A	RS-232	W-BF-28-0500(0.5m)*1 W-BF-28-1000(1m)*1 W-BF-28-3000(3m)*1 or User preparing Page 1752 RS-232 connection diagram 4)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 The total length of the connection cable 1) + connection cable 2)
*3 The distance from the converter to the GOT (Connection cable 3) + External cable)

■When using the external cable (GT11H-C□□□)

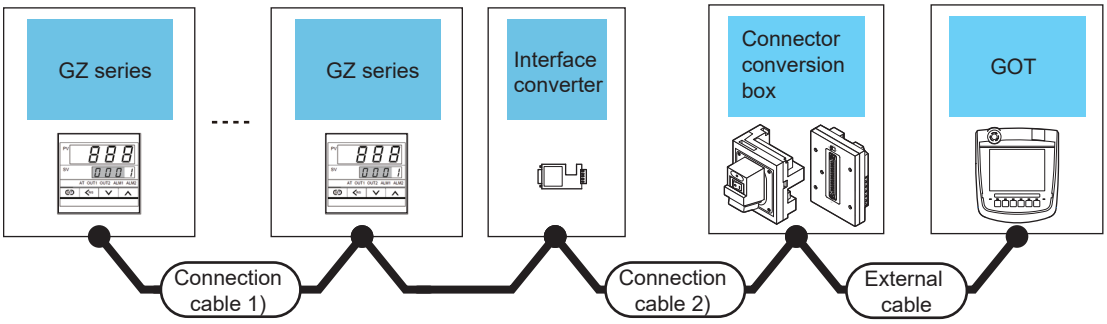


Temperature controller	Connection cable 1)	Connection cable 2)*1	Max. distance	Converter*1		External cable	GOT Model	Total distance *3	Number of connectable equipment
Model name	Cable model Connection diagram number	Cable model Connection diagram number		Model name	Communication Type				
GZ400 GZ900	User preparing Page 1757 RS-422 connection diagram 4)	W-BF-01-0500(0.5m) W-BF-01-1000(1m) W-BF-01-3000(3m)	1000m*2	COM-A	RS-232	GT11H-C30(3m) ☞ Page 1752 RS-232 connection diagram 5)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by RKC.
For details of the product, contact RKC.
*2 The total length of the connection cable 1) + connection cable 2)
*3 The distance from the converter to the GOT (External cable)

When connecting to multiple temperature controllers with interface converter (CD485/V)

■When using the connector conversion box

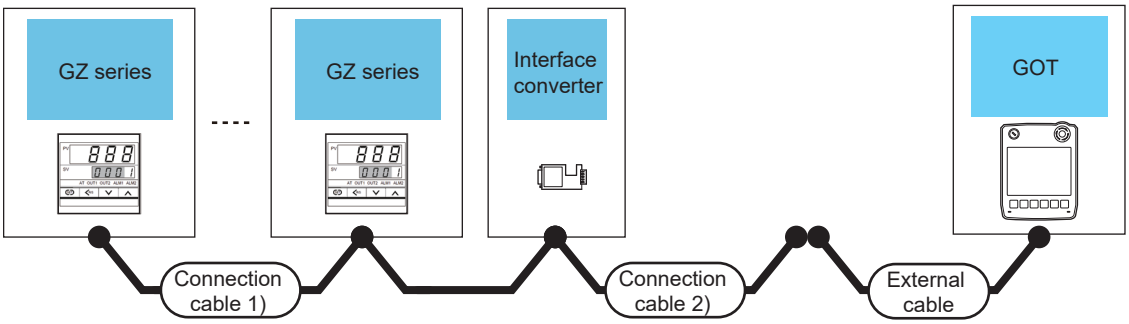


Temperature controller	Connection cable 1)		Converter *1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number					
GZ400 GZ900	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V	RS-232	User preparing Page 1752 RS-232 connection diagram 5)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	Up to 31 temperature controllers for 1 GOT
						GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

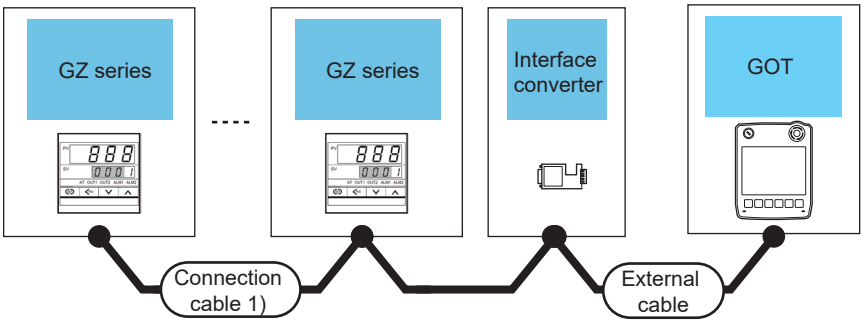


Temperature controller	Connection cable 1)		Converter *1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name	Cable model Connection diagram number	Max. distance	Model name	Communication Type	Cable model Connection diagram number				
GZ400 GZ900	User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V	RS-232	User preparing Page 1753 RS-232 connection diagram 6)	GT11H-C30-37P(3m)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.

*2 The distance from the converter to the GOT (Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)

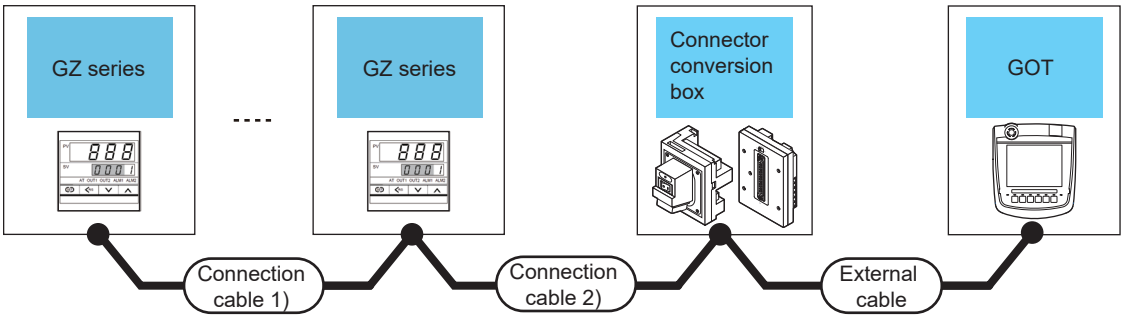


Temperature controller		Connection cable 1)		Converter *1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Model name		Cable model Connection diagram number	Max. distance	Model name	Communication Type				
GZ400 GZ900		User preparing Page 1762 RS-485 connection diagram 3)	1200m	CD485/V	RS-232	GT11H-C30(3m) ☞ Page 1753 RS-232 connection diagram 7)	GT 2505HS	6m	Up to 31 temperature controllers for 1 GOT

*1 Product manufactured by DATA LINK Co.,Ltd.
For details of the product, contact DATA LINK Co.,Ltd.
*2 The distance from the converter to the GOT (External cable)

When connecting directly to a temperature controller by RS-422

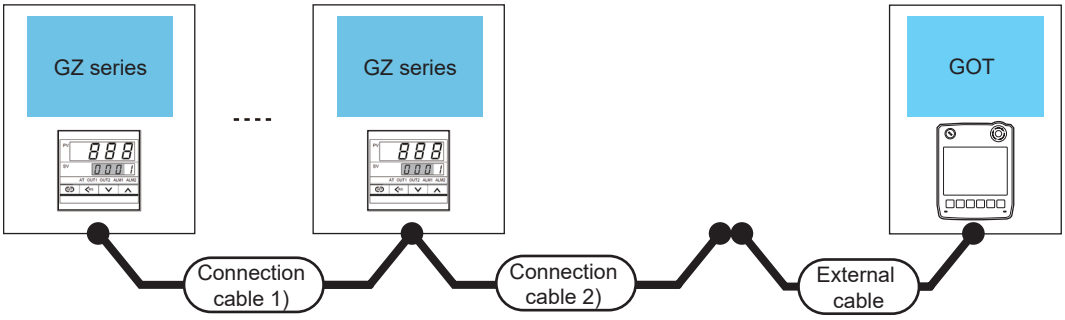
■When using the connector conversion box



Temperature controller		Connection cable 1)	Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *1	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number					
GZ400 GZ900	RS-422	User preparing Page 1757 RS-422 connection diagram 4)	User preparing Page 1757 RS-422 connection diagram 5)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 temperature controllers for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		Up to 10 temperature controllers for 1 GOT

*1 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

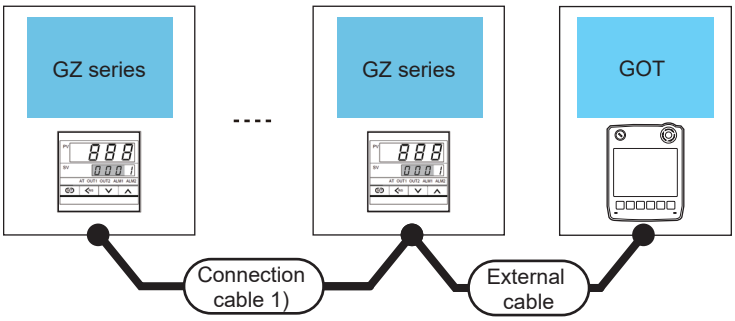
■When using the external cable (GT11H-C□□□-37P)



Temperature controller		Connection cable 1)	Connection cable 2)	External cable	GOT Model	Total distance *1	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number	Cable model Connection diagram number				
GZ400 GZ900	RS-422	User preparing Page 1757 RS-422 connection diagram 4)	User preparing Page 1758 RS-422 connection diagram 6)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	Up to 10 temperature controllers for 1 GOT

*1 The distance from the GOT to the temperature controller (Connection cable 1) + Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)

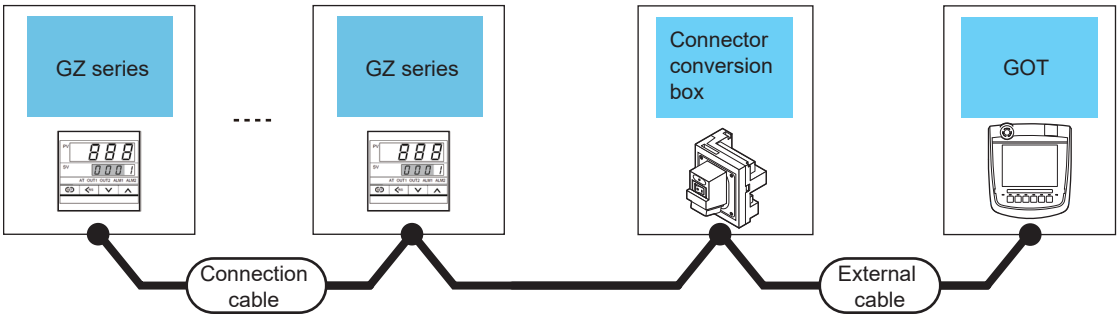


Temperature controller		Connection cable 1)	External cable	GOT Model	Total distance *1	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
GZ400 GZ900	RS-422	User preparing Page 1757 RS-422 connection diagram 4)	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1759 RS-422 connection diagram 7)	GT 2505HS	13m	Up to 10 temperature controllers for 1 GOT

*1 The distance from the GOT to the temperature controller (Connection cable 1) + External cable)

When connecting directly to a temperature controller by RS-485

■When using the connector conversion box



Temperature controller		Connection cable	Connector conversion box	External cable	GOT Model	Total distance *1	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
GZ400 GZ900	RS-485	User preparing Page 1761 RS-485 connection diagram 2)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 temperature controllers for 1 GOT

*1 The distance from the GOT to the temperature controller (Connection cable + External cable)

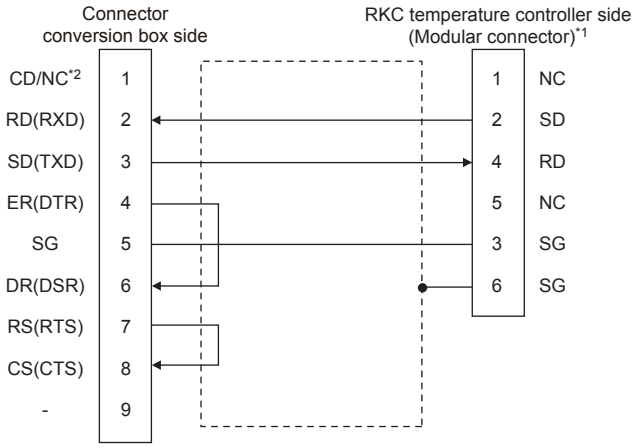
36.3 Connection Diagram

The following diagram shows the connection between the GOT and the temperature controller.

RS-232 cable

Connection diagram

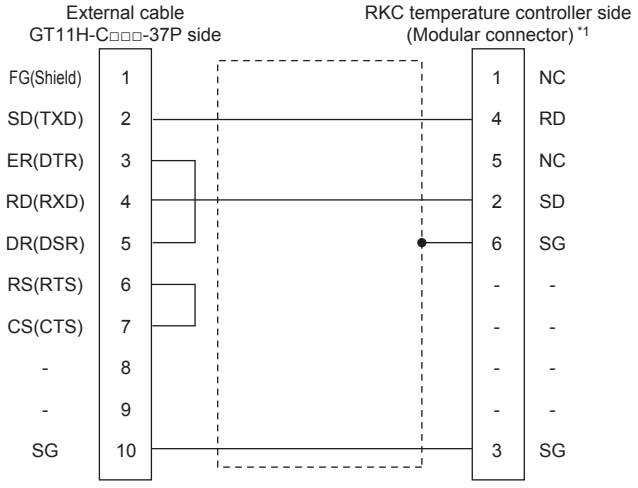
■RS-232 connection diagram 1)



*1 For details of the pin assignment, refer to the following manual.
User's Manual of the RKC temperature controller

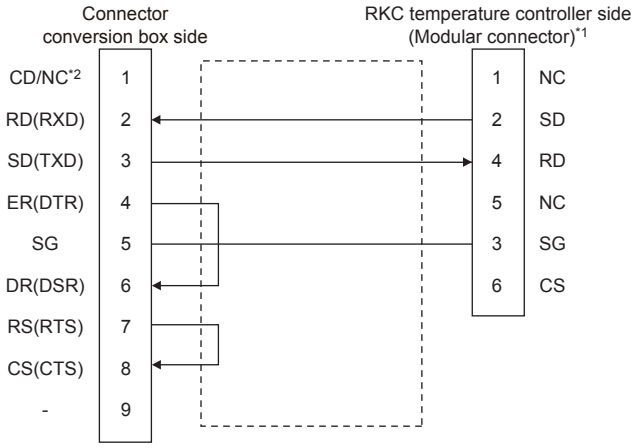
*2 GT2506HS-V: CD, GT2505HS-V: NC

■RS-232 connection diagram 2)



*1 For details of the pin assignment, refer to the following manual.
User's Manual of the RKC temperature controller

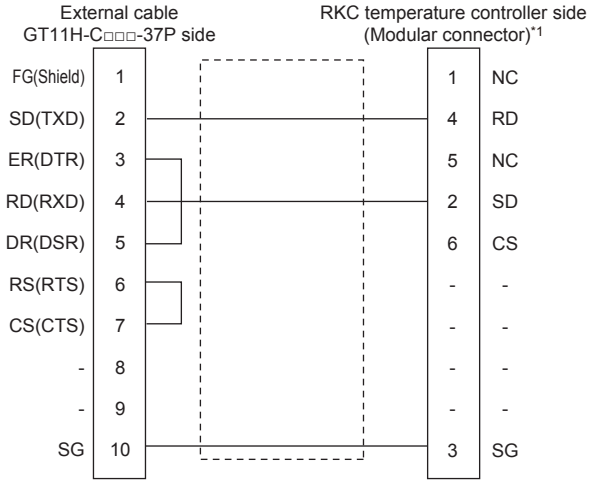
■RS-232 connection diagram 3)



*1 For details of the pin assignment, refer to the following manual.
User's Manual of the RKC temperature controller

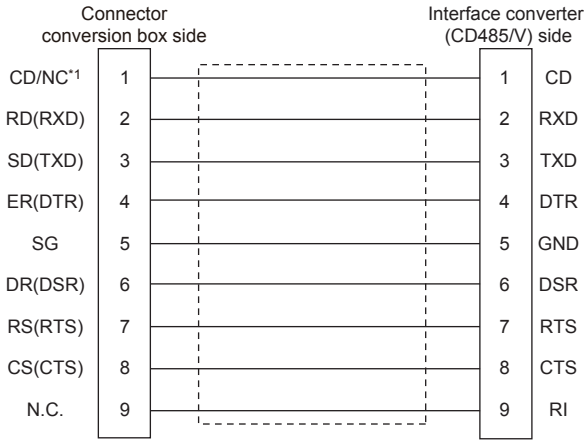
*2 GT2506HS-V: CD, GT2505HS-V: NC

■RS-232 connection diagram 4)



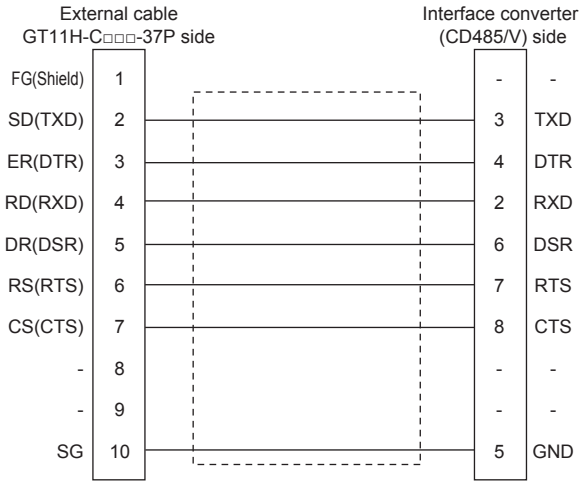
*1 For details of the pin assignment, refer to the following manual.
User's Manual of the RKC temperature controller

■RS-232 connection diagram 5)

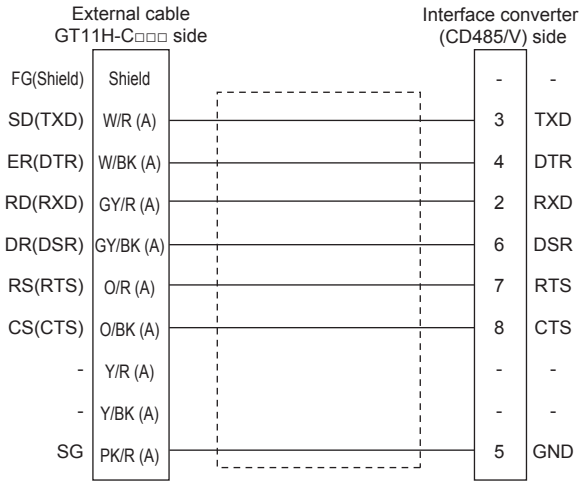


*1 GT2506HS-V: CD, GT2505HS-V: NC

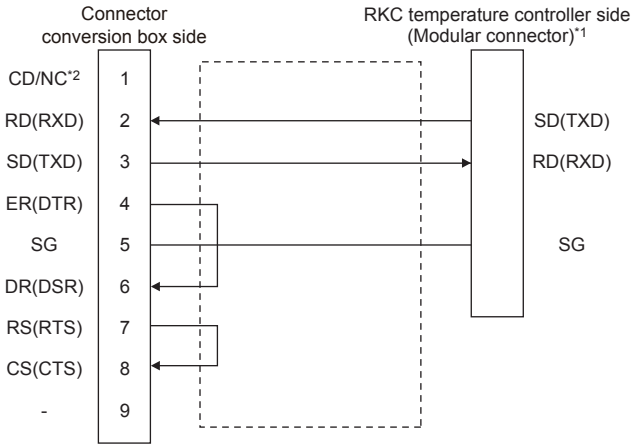
■RS-232 connection diagram 6)



■RS-232 connection diagram 7)



■RS-232 connection diagram 8)

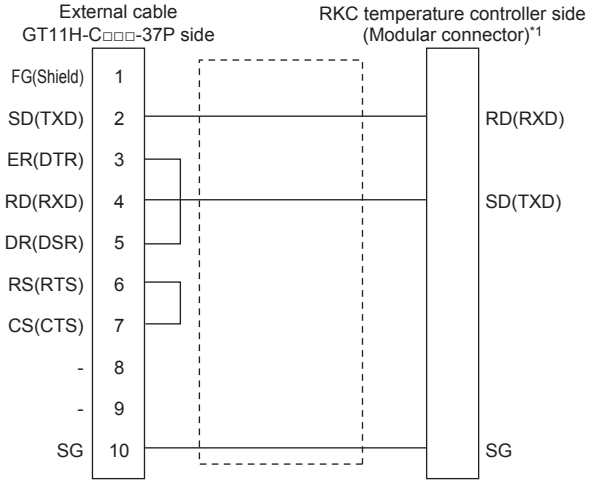


*1 For the terminal number of the temperature controller, refer to the following table.

Signal name	Terminal No.				
	FB400 FB900	PF900 PF901	HA400/401 HA900/901		MA900 MA901
			Communication 1	Communication 2	
SG	25	25	13	25	44
SD(TXD)	26	26	14	26	45
RD(RXD)	27	27	15	27	46

*2 GT2506HS-V: CD, GT2505HS-V: NC

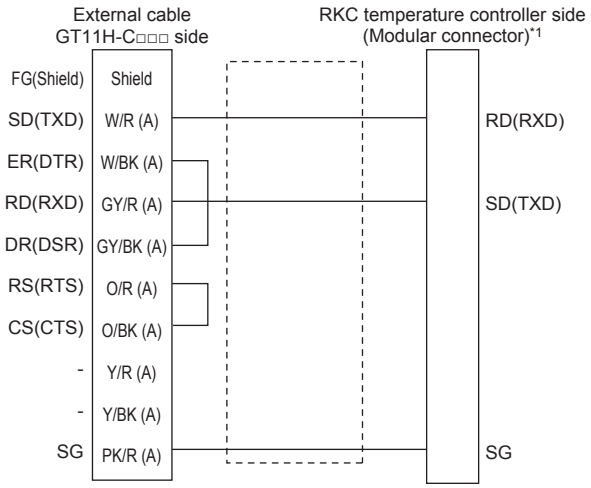
■RS-232 connection diagram 9)



*1 For the terminal number of the temperature controller, refer to the following table.

Signal name	Terminal No.				
	FB400 FB900	PF900 PF901	HA400/401 HA900/901		MA900 MA901
			Communication 1	Communication 2	
SG	25	25	13	25	44
SD(TXD)	26	26	14	26	45
RD(RXD)	27	27	15	27	46

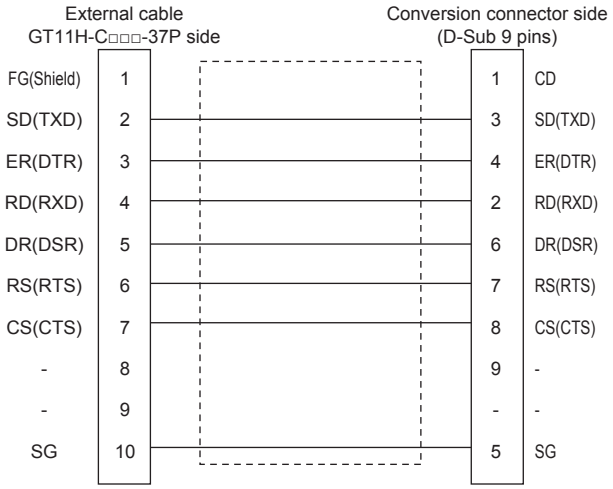
■RS-232 connection diagram 10)



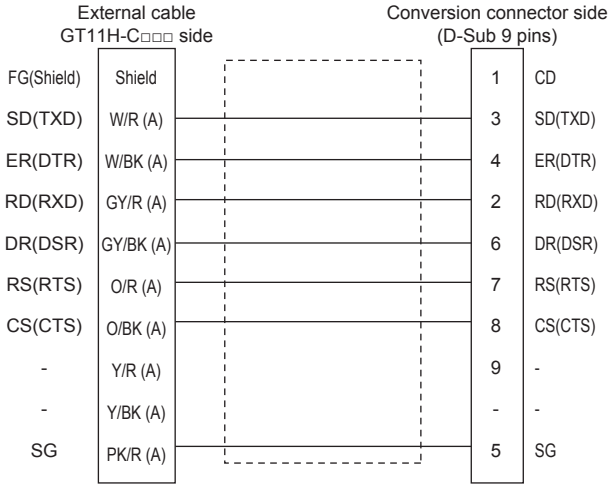
*1 For the terminal number of the temperature controller, refer to the following table.

Signal name	Terminal No.				
	FB400 FB900	PF900 PF901	HA400/401 HA900/901		MA900 MA901
			Communication 1	Communication 2	
SG	25	25	13	25	44
SD(TXD)	26	26	14	26	45
RD(RXD)	27	27	15	27	46

■RS-232 connection diagram 11)



■RS-232 connection diagram 12)



Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■RKC temperature controller side connector

Use the connector compatible with the RKC temperature controller side module.

For details, refer to user's manual of the RKC temperature controller side.

RS-422 cable

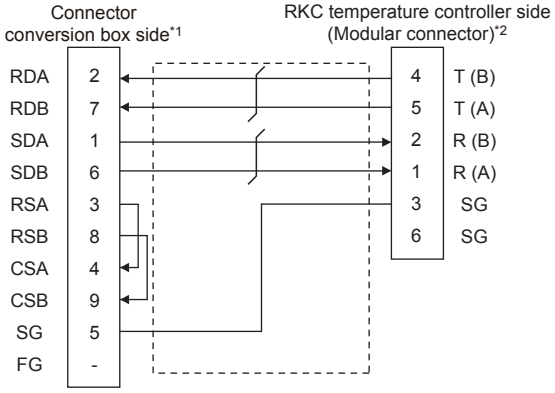
Point

Differences in polarity between GOT and RKC temperature controllers

The polarity of poles A and B in signal names is reversed between GOT and RKC temperature controllers. Connect a cable according to the following connection diagrams.

Connection diagram

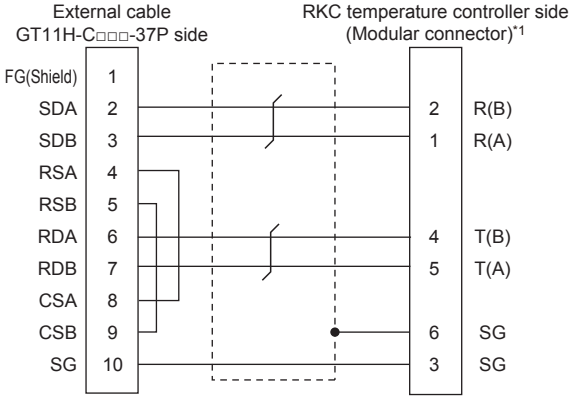
■RS-422 connection diagram 1)



*1 Set the terminating resistor setting switch of the GOT main unit to "Disable".
☞ Page 1763 Connecting terminating resistors

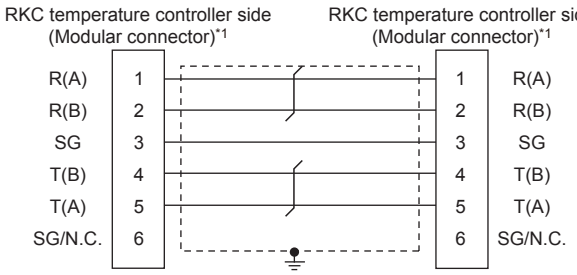
*2 For details of the pin assignment, refer to the following manual.
User's Manual of the RKC temperature controller

■RS-422 connection diagram 2)



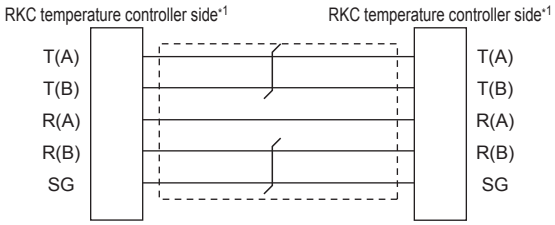
*1 For details of the pin assignment, refer to the following manual.
User's Manual of the RKC temperature controller

■RS-422 connection diagram 3)



*1 For details of the pin assignment, refer to the following manual.
User's Manual of the RKC temperature controller

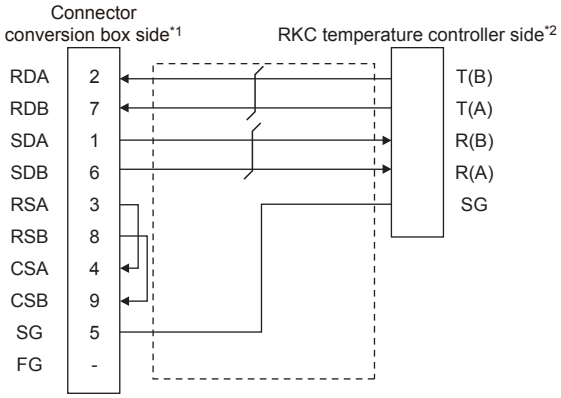
■RS-422 connection diagram 4)



*1 For the terminal number of the temperature controller, refer to the following table

Signal name	Terminal No.				
	FB400 FB900	PF900/901 AG500 HA400/401 HA900/901	MA900 MA901	B400 (RS-422 specifications)	FZ400 FZ900 PZ400 PZ900 GZ400 GZ900
SG	25	25	44	3/6	34
T(A)	26	26	45	5	35
T(B)	27	27	46	4	36
R(A)	28	28	47	1	32
R(B)	29	29	48	2	33

■RS-422 connection diagram 5)

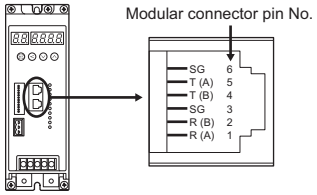


*1 Set the terminating resistor setting switch of the GOT main unit to "100 OHM".
☞ Page 1763 Connecting terminating resistors

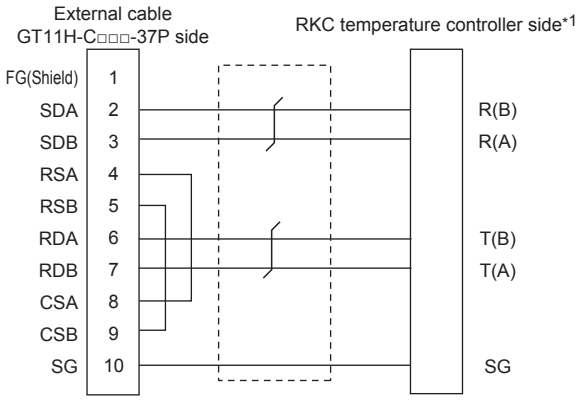
*2 For the terminal number of the temperature controller, refer to the following table

Signal name	Terminal No.					
	FB400 FB900	PF900/901 AG500 HA400/401 HA900/901	MA900 MA901	THV-A1*3	B400 (RS-422 specifications)	FZ400 FZ900 PZ400 PZ900 GZ400 GZ900
SG	25	25	44	3	3/6	34
T(A)	26	26	45	5	5	35
T(B)	27	27	46	4	4	36
R(A)	28	28	47	1	1	32
R(B)	29	29	48	2	2	33

*3 The following shows the pin assignment of the modular connector.



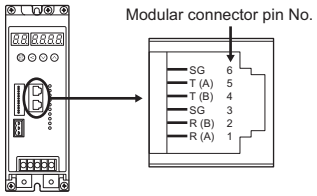
■RS-422 connection diagram 6)



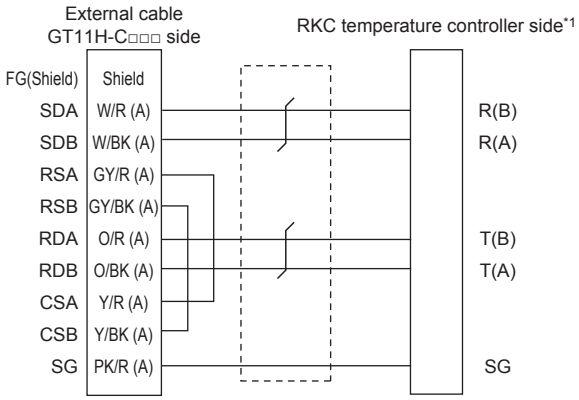
*1 For the terminal number of the temperature controller, refer to the following table

Signal name	Terminal No.					
	FB400 FB900	PF900/901 AG500 HA400/401 HA900/901	MA900 MA901	THV-A1*2	B400 (RS-422 specifications)	FZ400 FZ900 PZ400 PZ900 GZ400 GZ900
SG	25	25	44	3	3/6	34
T(A)	26	26	45	5	5	35
T(B)	27	27	46	4	4	36
R(A)	28	28	47	1	1	32
R(B)	29	29	48	2	2	33

*2 The following shows the pin assignment of the modular connector.



■RS-422 connection diagram 7)



*1 For the terminal number of the temperature controller, refer to the following table

Signal name	Terminal No.				
	FB400 FB900	PF900/901 AG500 HA400/401 HA900/901	MA900 MA901	B400 (RS-422 specifications)	FZ400 FZ900 PZ400 PZ900 GZ400 GZ900
SG	25	25	44	3/6	34
T(A)	26	26	45	5	35
T(B)	27	27	46	4	36
R(A)	28	28	47	1	32
R(B)	29	29	48	2	33

Precautions when preparing a cable

■Cable length

The length of the RS-422 cable must be within 13m (the total distance between the GOT and a controller).

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■RKC temperature controller side connector

Use the connector compatible with the RKC temperature controller side module.

For details, refer to user's manual of the RKC temperature controller.

Connecting terminating resistors

■GOT side

• For GT2506HS-V

Set the terminating resistor by operating the terminating resistor setting switch.

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

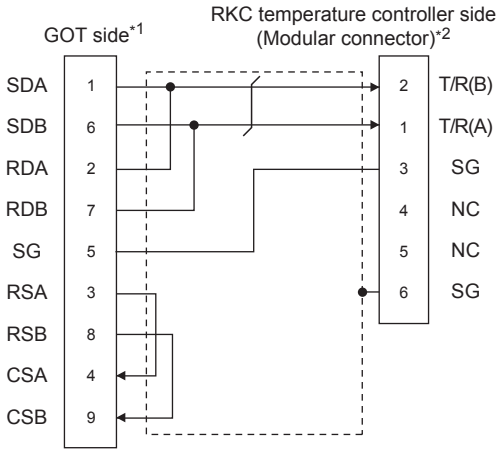
For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

RS-485 cable

Connection diagram

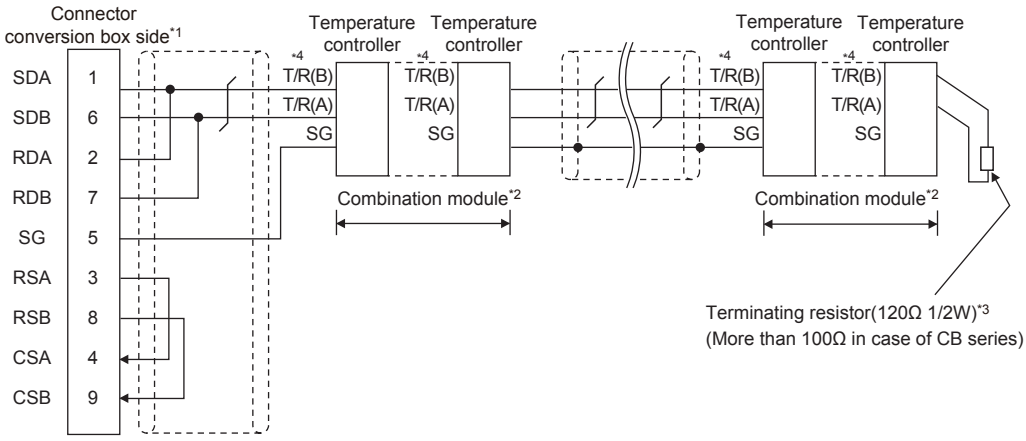
■RS-485 connection diagram 1)



*1 Set the terminating resistor setting switch of the GOT main unit to "100 OHM".
☞ Page 1763 Connecting terminating resistors

*2 For details of the pin assignment, refer to the following manual.
User's Manual of the RKC temperature controller

■RS-485 connection diagram 2)



*1 Set the terminating resistor setting switch of the GOT main unit to "100 OHM".
☞ Page 1763 Connecting terminating resistors

*2 When combining the module, because the communication line is connected between the modules with each other, wire only the communication terminal on the both end of the combination module.

*3 Terminating resistor should be provided for a temperature controller which will be a terminal.
When using X-TIO, turn ON the terminating resistor selector in the terminal base.
When combining the module, provide the terminating resistor to the end of the combination module (the one that is far from the converter).

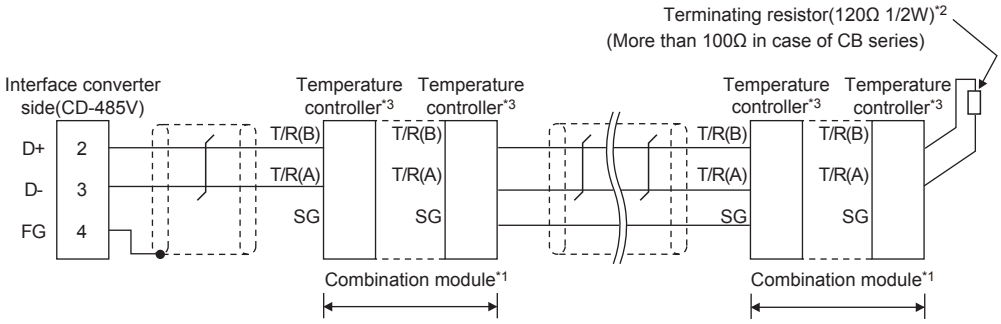
*4 For the terminal number of the temperature controller, refer to the following table.

Signal name	Terminal No.								
	Z-TIO/ Z-CT	CB100/ CB400/ CB500/ CB900	CB700	FB100		FB400/FB90		RB100/ RB400/ RB500/ RB900	RB700
				Communication 1	Communication 2	Communication 1	Communication 2		
SG	5	13	7	13	16	25	25	13	25
T/R(A)	3	14	8	14	17	26	28	14	26
T/R(B)	4	15	9	15	18	27	29	15	27

Signal name	Terminal No.									
	PF900 PF901 AG500	HA400/401 HA900/901		MA900/ MA901	RMC500	X-TIO	SA100	SA200	SB1	B400 (RS-485 specifications)
		Communication 1	Communication 2							
SG	25	13	25	44	13	17	1	10	1	3/6
T/R(A)	26	14	26	45	14	16	2	11	2	1/5
T/R(B)	27	15	27	46	15	15	3	12	3	2/4

Signal name	Terminal No.		
	FZ110	FZ400 FZ900 PZ400 PZ900 GZ400 GZ900	RZ100 RZ400
SG	16	34	13
T/R(A)	17	35	14
T/R(B)	18	36	15

■RS-485 connection diagram 3)



*1 When combining the module, because the communication line is connected between the modules with each other, wire only the communication terminal on the both end of the combination module.

*2 Terminating resistor should be provided for a temperature controller which will be a terminal.
When using X-TIO, turn ON the terminating resistor selector in the terminal base.
When combining the module, provide the terminating resistor to the end of the combination module (the one that is far from the converter).

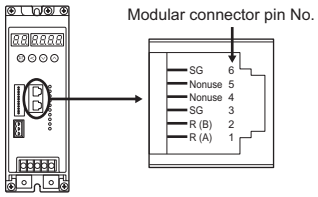
*3 For the terminal number of the temperature controller, refer to the following table.

Signal name	Terminal No.								
	Z-TIO/ Z-CT	CB100/ CB400/ CB500/ CB900	CB700	FB100		FB400/FB90		RB100/ RB400/ RB500/ RB900	RB700
				Communication 1	Communication 2	Communication 1	Communication 2		
SG	5	13	7	13	16	25	25	13	25
T/R(A)	3	14	8	14	17	26	28	14	26
T/R(B)	4	15	9	15	18	27	29	15	27

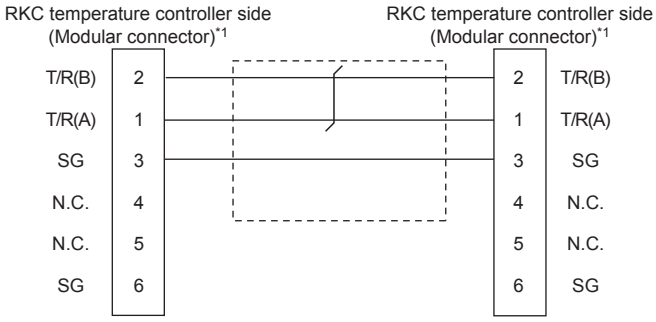
Signal name	Terminal No.								
	PF900 PF901 AG500	HA400/401 HA900/901		MA900/ MA901	RMC500	THV-A1*4	X-TIO	SA100	SA200
		Communication 1	Communication 2						
SG	25	13	25	44	13	3	17	1	10
T/R(A)	26	14	26	45	14	1	16	2	11
T/R(B)	27	15	27	46	15	2	15	3	12

Signal name	Terminal No.			
	FZ110	FZ400 FZ900 PZ400 PZ900 GZ400 GZ900	RZ100 RZ400	SRJ
SG	16	34	13	3
T/R(A)	17	35	14	5
T/R(B)	18	36	15	4

*4 The following shows the pin assignment of the modular connector.

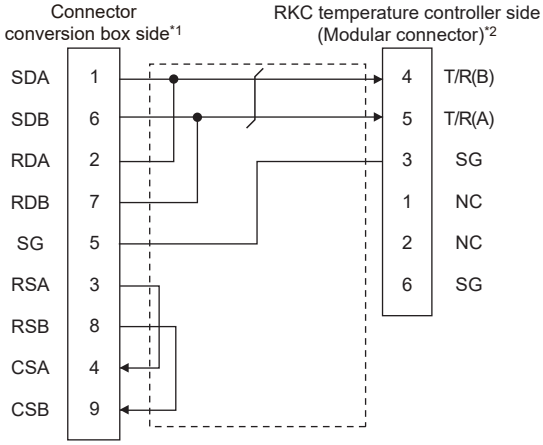


■RS-485 connection diagram 4)



*1 For details of the pin assignment, refer to the following manual.
User's Manual of the RKC temperature controller

■RS-485 connection diagram 5)



*1 Set the terminating resistor setting switch of the GOT main unit to "100 OHM".
☞ Page 1763 Connecting terminating resistors
*2 For details of the pin assignment, refer to the following manual.
User's Manual of the RKC temperature controller

Precautions when preparing a cable

■Cable length

The total length (between GOT and controllers) of the RS-485 cable must be 13m or shorter.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■RKC temperature controller side connector

Use the connector compatible with the RKC temperature controller side module.

For details, refer to user's manual of the RKC temperature controller.

Connecting terminating resistors

■GOT side

- For GT2506HS-V

Set the terminating resistor by operating the terminating resistor setting switch.

- For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

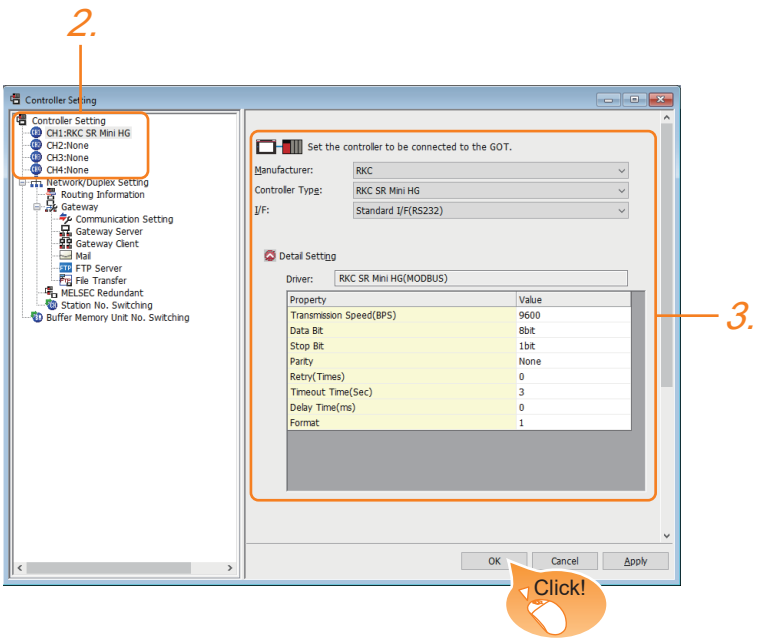
For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

36.4 GOT Side Settings

Setting communication interface (Communication settings)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [RKC]
- [Controller Type]: [RKC SR Mini HG]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1765 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Property	Value
Transmission Speed(BPS)	9600
Data Bit	8 bit
Stop Bit	1 bit
Parity	None
Retry(Times)	0
Timeout Time(Sec)	3
Delay Time(ms)	0
Format	1

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 9600bps)	9600bps 19200bps 38400bps 57600bps 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bits)	7bits 8bits
Stop Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 1bit)	1bit 2bits
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: None)	None Even Odd
Retry	Set the number of retries to be performed when a communication error occurs. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	3 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300ms
Format	Select the communication format. (Default: 1) Format 1: Accessible to H-PCP-J, H-PCP-A, H-PCP-B, SRZ, FB, PF, HA, MA, RMC, SRX, B400AG, THV, FZ, RZ, PZ, GZ series Format 2: Accessible to CB series, RB, SA, SB1 series	1 2

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

36.5 Temperature Controller Side Setting

Point

YOKOGAWA temperature controller

For details of RKC temperature controller, refer to the following manual.

User's Manual of the RKC temperature controller

Model name		Refer to
Temperature controller	H-PCP-J	☞ Page 1766 Connecting to SR Mini HG series (HGH-PCP-J)
	H-PCP-A, H-PCP-B	☞ Page 1769 Connecting to SR Mini HG series (H-PCP-A, H-PCP-B)
	Z-TIO module, Z-DIO module, Z-CT module	☞ Page 1770 Connecting to Z-TIO, Z-DIO, Z-CT
	Z-COM module	☞ Page 1771 Connecting to Z-COM module
	SRJ Series	☞ Page 1773 Connecting to SRJ Series
	CB Series	☞ Page 1774 Connecting to CB Series
	FB Series	☞ Page 1774 Connecting to FB Series
	RB Series	☞ Page 1775 Connecting to RB Series
	PF900/901	☞ Page 1775 Connecting to PF series
	HA400/401, HA900/901	☞ Page 1776 Connecting to HA series
	AG500	☞ Page 1776 Connecting to AG series
	RMC500	☞ Page 1777 Connecting to RMC series
	MA900, MA901	☞ Page 1777 Connecting to MA series
	THV-A1	☞ Page 1778 Connecting to THV series
	SA100 SA200	☞ Page 1778 Connecting to SA series
	X-TIO module	☞ Page 1779 Connecting to X-TIO Module
	SB1	☞ Page 1726 Connecting to SB1 series
	B400	☞ Page 1781 Connecting to B400 series
	FZ Series	☞ Page 1783 Connecting to FZ Series
	RZ Series	☞ Page 1784 Connecting to RZ Series
	PZ Series	☞ Page 1785 Connecting to PZ Series
	GZ Series	☞ Page 1786 Connecting to GZ Series

Connecting to SR Mini HG series (HGH-PCP-J)

Communication settings

Make the communication settings of the temperature controller.

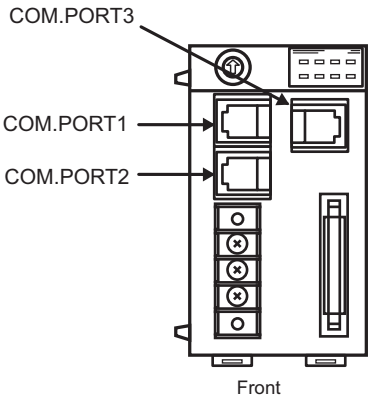
Item	Setting range
Transmission speed*1	9600bps, 19200bps, 38400bps
Communication mode	MODBUS
Data bit	8bits
Parity bit	None
Stop bit*1	1bit
Unit address*2	0 to F

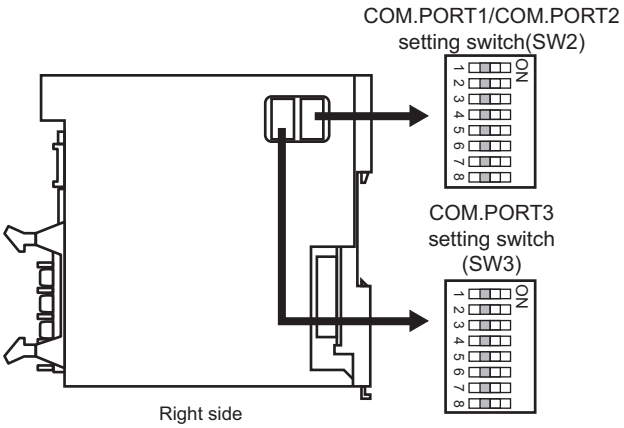
*1 Adjust the settings with GOT settings.

*2 Select the unit address without overlapping with that of other units.

Setting DIP switches

Make the settings of transmission speed, communication mode, data length, parity bit and stop bit.





■Transmission speed settings

• COM.PORT1/COM.PORT2

SW2		Communication speed
3	4	
OFF	OFF	9600bps
ON	OFF	19200bps
OFF	ON	38400bps

• COM.PORT3

SW3		Communication speed
3	4	
OFF	OFF	9600bps
ON	OFF	19200bps
OFF	ON	38400bps

■Communication mode settings

• COM.PORT1/COM.PORT2

SW2				Communication protocol
5	6	7	8	
ON	OFF	OFF	OFF	MODBUS protocol

• COM.PORT3

SW3	Communication protocol
5	
ON	MODBUS protocol

■Settings of data length, parity bit, and stop bit

• COM.PORT1/COM.PORT2

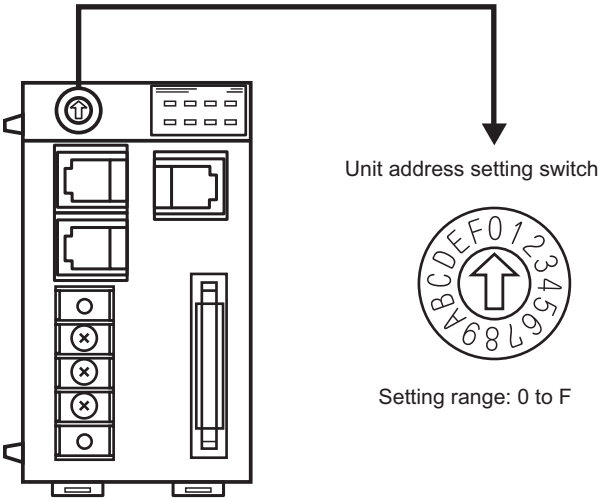
SW2		Data bit configuration
1	2	
OFF	OFF	Data 8-bit, Non parity, Stop 1bit

• COM.PORT3

SW3		Data bit configuration
1	2	
OFF	OFF	Data 8-bit, Non parity, Stop 1bit

Unit address settings

Set the unit address using the unit address setting switch.



Connecting to SR Mini HG series (H-PCP-A, H-PCP-B)

Communication settings

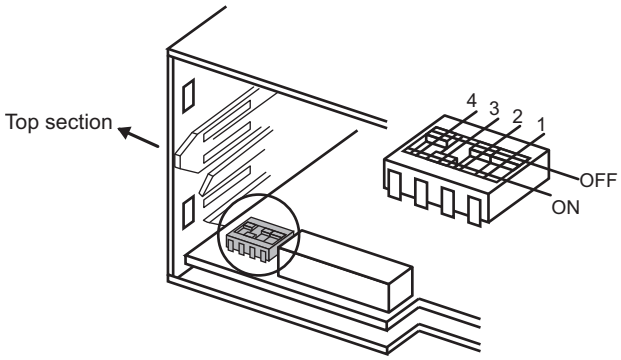
Make the communication settings of the temperature controller.

Item	Setting range
Transmission speed*1	9600bps, 19200bps
Data bit	8bits
Parity bit	None
Unit address*2	0 to F

*1 Adjust the settings with GOT settings.
*2 Select the unit address without overlapping with that of other units.

Setting DIP switches

Make the settings of transmission speed, data length, parity bit, and stop bit.



Rear view of module mainframe with mother block removed

■Transmission speed settings

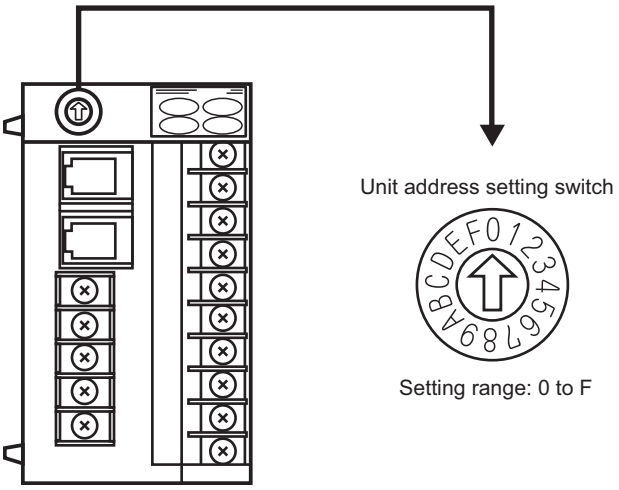
3	4	Communication speed
OFF	ON	9600bps
ON	ON	19200bps

■Settings of data length and parity bit

1	2	Data bit configuration
OFF	OFF	Data 8-bit, Non parity

Unit address settings

Set the unit address using the unit address setting switch.



Setting range: 0 to F

Connecting to Z-TIO, Z-DIO, Z-CT

Communication settings

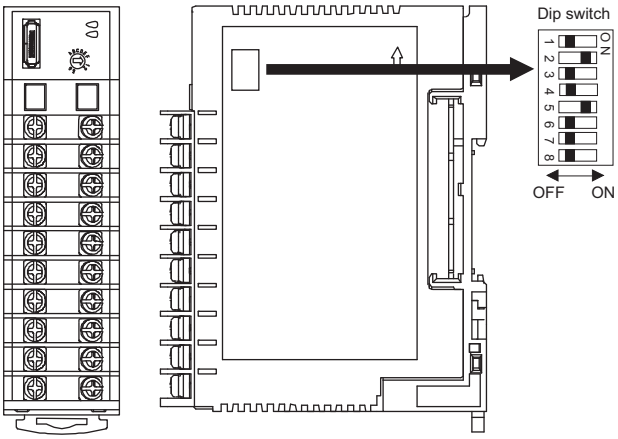
Make the communication settings of the temperature controller.

Item	Setting range
Communication speed*1	9600bps, 19200bps, 38400bps
Communication protocol	MODBUS
Data bit configuration	Data bit: 8bits, Parity: None
	Data bit: 8bits, Parity: Even
	Data bit: 8bits, Parity: Odd
	Stop bit: 1bit (fixed)
Unit address*2	0 to F
Interval time	0 to 250ms

*1 Adjust the settings with GOT settings.
*2 Select the module address without overlapping with that of other units.

Setting DIP switches

Make the settings of transmission speed, data bit configuration, communication protocol

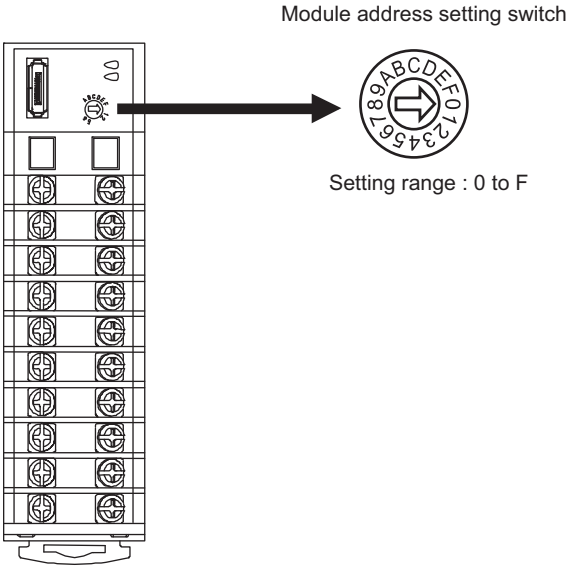


Front side Right side

Setting item	Set value	Switch position					
		1	2	3	4	5	6
Communication speed	9600bps	ON	OFF				
	19200bps	OFF	ON				
	38400bps	ON	ON				
Data bit configuration	Data bit: 8bits, Parity: None			OFF	OFF	ON	
	Data bit: 8bits, Parity: Even			OFF	ON	ON	
	Data bit: 8bits, Parity: Odd			ON	ON	ON	
Communication protocol	MODBUS						ON

Unit address settings

Set the unit address using the unit address setting switch.



Interval time settings

Configure the interval time setting using the RKC communication setting tool (WinPCI).

After the communication is started, set as follows.

Setting item	Set value
Instrument	0
CFG file	ZTIO_rkc.cfg
Interval time	0 to 250ms

For the using method of RKC communication setting tool, refer to the following.

📖RKC communication setting tool user's manual

Connecting to Z-COM module

Communication settings

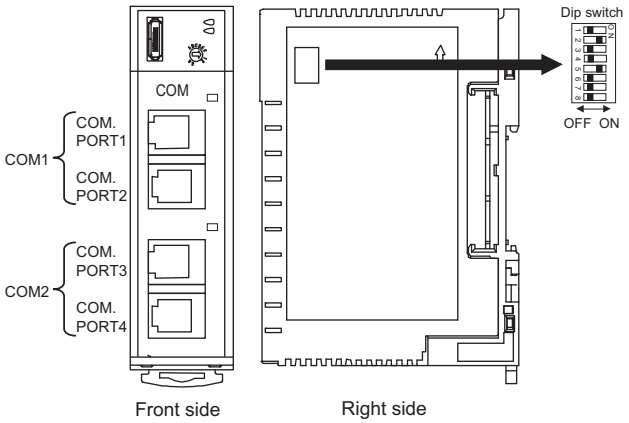
Item	Setting range
Communication speed*1	9600bps, 19200bps, 38400bps
Communication protocol	Host (MODBUS)
Data bit	8bits (fixed)
Parity	None (fixed)
Stop bit	1bit (fixed)
Unit address*2	0 to F
Interval time	0 to 250ms
Dip switch settings valid / invalid	valid

*1 Adjust the settings with GOT settings.

*2 Select the unit address without overlapping with that of other units.

Setting DIP switches

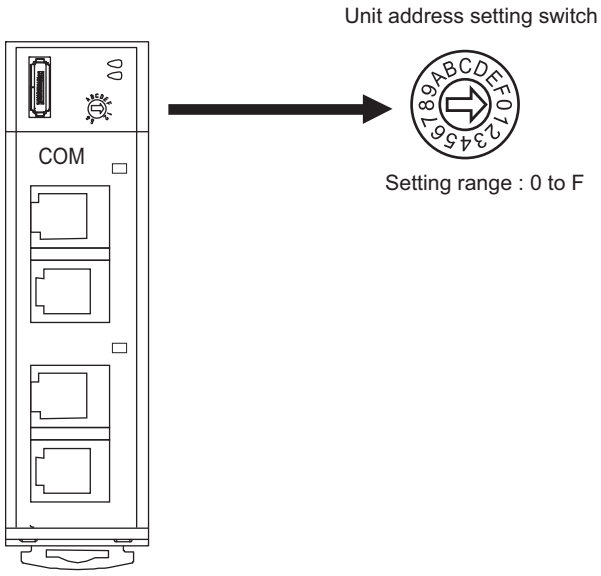
Make the settings of transmission speed, data bit configuration, communication protocol.



Setting item	Set value	Switch position							
		1	2	3	4	5	6	7	8
Communication speed (COM1)	9600bps	ON	OFF						
	19200bps	OFF	ON						
	38400bps	ON	ON						
Communication protocol (COM1)	Host (MODBUS)			ON					
Communication speed (COM2)	9600bps				OFF				
	19200bps				ON				
Communication protocol (COM2)	Host (MODBUS)					ON	OFF	OFF	
Dip switch settings valid / invalid	valid								OFF

Unit address settings

Set the unit address using the unit address setting switch.



Interval time settings

Configure the interval time setting using the RKC communication setting tool (WinPCI).

After the communication is started, set as follows.

Setting item	Set value
Instrument	0
CFG file	ZCOM_rkc.cfg
Communication 1 interval time	0 to 250ms
Communication 2 interval time	

For the using method of RKC communication setting tool, refer to the following.

RKC communication setting tool user's manual

Connecting to SRJ Series

Communication settings

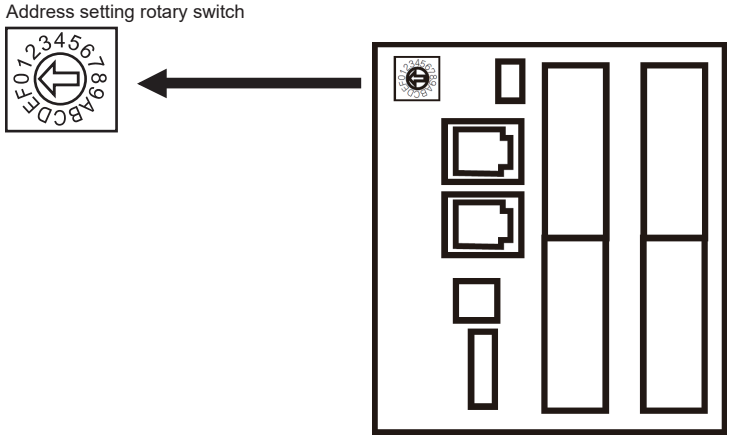
For the communication setting, use the RKC peripheral tool "PROTEM 2".

Item	Setting range	Set value
Communication protocol	0: RKC communication 1: MODBUS	1: MODBUS
Communication speed	0: 19200bps 1: 38400bps	Adjust the settings with GOT settings.
Interval time	0 to 100ms	Set this as necessary.

Rotary switch setting

Set the station address using the address setting rotary switch.

Address setting rotary switch



Set the addresses of master stations and slave stations as shown below.

Master station address	Slave station address range*1
0	1 to 3
4	5 to 7
8	9 to B
C	D to F

*1 For J-TI-A/B, up to three slave stations are connectable to a master station.

Connecting to CB Series

Communication settings

Item	Setting range
Device address*1	1 to 99
Communication speed*2	2: 9600bps 3: 19200bps
Data bit configuration	0: 8/1/None 6: 8/1/Even 7: 8/1/Odd
Interval time	0 to 150

*1 When the setting value is set to 0, a communication is not made.
*2 Adjust the settings with GOT settings.

Communication setting mode

Set the communication setting mode using the operation panel of the CB series main unit.
For details of the communication setting mode, refer to the following.
CB series "Communication Instruction Manual"

Connecting to FB Series

Communication settings

Item	Setting range
Communication protocol	1: MODBUS
Device address (Slave address)*1	1 to 99
Communication speed*2	96: 9600bps 19.2: 19200bps 38.4: 38400bps
Data bit configuration	Page 1774 Data bit configuration
Interval time	0 to 250

*1 When the setting value is set to 0, a communication is not made.
*2 Adjust the settings with GOT settings.

Data bit configuration

Set value	Data bit	Parity bit	Stop bit
8n1	8	None	1
8n2	8	None	2
8E1	8	Even	1
8E2	8	Even	2
8o1	8	Odd	1
8o2	8	Odd	2

Communication setting mode

Set the communication setting mode using the operation panel of the FB series main unit.
For details of the communication setting mode, refer to the following.
FB series "Communication Instruction Manual"

Connecting to RB Series

Communication settings

Item	Setting range
Communication protocol	1: MODBUS
Device address (Slave address)*1	1 to 99
Communication speed*2	2: 9600bps 3: 19200bps
Data bit configuration	☞ Page 1775 Data bit configuration
Interval time	0 to 250

*1 When the setting value is set to 0, a communication is not made.
*2 Adjust the settings with GOT settings.

Data bit configuration

Set value	Data bit	Parity bit	Stop bit
0	8	None	1
1	8	None	2
2	8	Even	1
3	8	Even	2
4	8	Odd	1
5	8	Odd	2

Communication setting mode

Set the communication setting mode using the operation panel of the RB series main unit.
For details of the communication setting mode, refer to the following.
📖RB series "Communication Instruction Manual"

Connecting to PF series

Communication settings

Make the communication settings by operating the key of the temperature controller.

Item	Setting range
Communication speed 1*1	9600bps, 19200bps, 38400bps, 57600bps
Communication protocol 1	MODBUS
Data bit configuration 1*1 (Data bit, Parity bit, Stop bit)	[8N1]: 8bit, None, 1bit [8N2]: 8bit, None, 2bit [8E1]: 8bit, Even, 1bit [8E2]: 8bit, Even, 2bit [8O1]: 8bit, Odd, 1bit [8O2]: 8bit, Odd, 2bit
Device address 1*2(Slave address 1)	1 to 99*4
Interval time*3	0 to 250 (ms)

*1 Adjust the settings with GOT settings.
*2 Select the device address1 without overlapping with that of other units.
*3 Set the maximum time from the sending of the last character stop bit from the GOT side until the switching of the GOT side to the receiving status (until the temperature controller becomes ready to send).
Set as necessary.
*4 When the setting value is set to 0, a communication is not made.

Connecting to HA series

Communication settings

Make the communication settings by operating the key of the temperature controller.

(Communication 1)

Item	Setting range
Communication speed 1[*1]	9600bps, 19200bps, 38400bps
Data bit configuration 1[*1] (Data bit, Parity bit, Stop bit)	[8N1]: 8bit, None, 1bit [8N2]: 8bit, None, 2bit [8E1]: 8bit, Even, 1bit [8E2]: 8bit, Even, 2bit [8O1]: 8bit, Odd, 1bit [8O2]: 8bit, Odd, 2bit
Device address 1[*2] (Slave address 1)	1 to 99[*4]
Interval time[*3]	0 to 250 (ms)

(Communication 2)

Item	Setting range
Communication speed 2[*1]	9600bps, 19200bps, 38400bps
Data bit configuration 2[*1] (Data bit, Parity bit, Stop bit)	[8N1]: 8bit, None, 1bit [8N2]: 8bit, None, 2bit [8E1]: 8bit, Even, 1bit [8E2]: 8bit, Even, 2bit [8O1]: 8bit, Odd, 1bit [8O2]: 8bit, Odd, 2bit
Device address 2[*2] (Slave address 2)	1 to 99[*4]
Interval time[*3]	0 to 250 (ms)

*1 Adjust the settings with GOT settings.
*2 Select the device address1/2 without overlapping with that of other units.
*3 Set the maximum time from the sending of the last character stop bit from the GOT side until the switching of the GOT side to the receiving status (until the temperature controller becomes ready to send).
Set as necessary.
*4 When the setting value is set to 0, a communication is not made.

Connecting to AG series

Communication settings

Make the communication settings by operating the key of the temperature controller.

Item	Setting range
Communication speed[*1]	9600bps, 19200bps, 38400bps
Communication protocol	MODBUS
Data bit configuration[*1] (Data bit, Parity bit, Stop bit)	[8N1]: 8bit, None, 1bit [8N2]: 8bit, None, 2bit [8E1]: 8bit, Even, 1bit [8E2]: 8bit, Even, 2bit [8O1]: 8bit, Odd, 1bit [8O2]: 8bit, Odd, 2bit
Device address[*2] (Slave address)	1 to 99[*4]
Interval time[*3]	0 to 250 (ms)

*1 Adjust the settings with GOT settings.
*2 Select the device address1 without overlapping with that of other units.
*3 Set the maximum time from the sending of the last character stop bit from the GOT side until the switching of the GOT side to the receiving status (until the temperature controller becomes ready to send).
Set as necessary.
*4 When the setting value is set to 0, a communication is not made.

Connecting to RMC series

Communication settings

Make the communication settings by operating the key of the temperature controller.

Item	Setting range
Communication speed*1	9600bps, 19200bps, 38400bps
Communication protocol	MODBUS
MODBUS data*2 Extension time	0 to 255 (ms)
Data bit configuration*1 (Data bit, Parity bit, Stop bit)	[8N1]: 8bit, None, 1bit [8N2]: 8bit, None, 2bit [8E1]: 8bit, Even, 1bit [8E2]: 8bit, Even, 2bit [8O1]: 8bit, Odd, 1bit [8O2]: 8bit, Odd, 2bit
Device address*3 (Slave address)	1 to 99*4
Interval time*5	0 to 250 (ms)

*1 Adjust the settings with GOT settings.
*2 Set the extension time for the data interval time in the MODBUS communication (which is lower than 24 bit time).
Set when the data time interval exceeds 24 bit time.
*3 Select the device address without overlapping with that of other units.
*4 When the setting value is set to 0, a communication is not made.
*5 Set the maximum time from the sending of the last character stop bit from the GOT side until the switching of the GOT side to the receiving status (until the temperature controller becomes ready to send).
Set as necessary.

Connecting to MA series

Communication settings

Make the communication settings by operating the key of the temperature controller.

Item	Setting range
Communication speed*1	9600bps, 19200bps
Data bit configuration*1 (Data bit, Parity bit, Stop bit)	[8N1]: 8bit, None, 1bit [8N2]: 8bit, None, 2bit [8E1]: 8bit, Even, 1bit [8E2]: 8bit, Even, 2bit [8O1]: 8bit, Odd, 1bit [8O2]: 8bit, Odd, 2bit
Device address*2 (Slave address)	1 to 99*4
Interval time*3	0 to 250 (ms)

*1 Adjust the settings with GOT settings.
*2 Select the device address1 without overlapping with that of other units.
*3 Set the maximum time from the sending of the last character stop bit from the GOT side until the switching of the GOT side to the receiving status (until the temperature controller becomes ready to send).
Set as necessary.
*4 When the setting value is set to 0, a communication is not made.

Connecting to THV series

Communication settings

Make the communication settings by operating the key of the temperature controller.

Item	Setting range
Communication speed*1	9600bps (fixed)
Data bit configuration*1	Data bit: 8bit (fixed) Parity bit: None (fixed) Stop bit: 1bit (fixed)
Device address*2 (Slave address)	1 to 99*4
Interval time*3	0 to 250 (ms)

*1 Adjust the settings of the GOT side with the temperature controller settings.
*2 Select the device address1 without overlapping with that of other units.
*3 Set the maximum time from the sending of the last character stop bit from the GOT side until the switching of the GOT side to the receiving status (until the temperature controller becomes ready to send).
Set as necessary.
*4 When the setting value is set to 0, a communication is not made.

Connecting to SA series

Communication settings

Make the communication settings by operating the key of the temperature controller.

Item	Setting range
Communication speed*1	9600bps, 19200bps
Data bit configuration*1 (Data bit, Parity bit, Stop bit)	[8N1]: 8bit, None, 1bit [8N2]: 8bit, None, 2bit [8E1]: 8bit, Even, 1bit [8E2]: 8bit, Even, 2bit [8O1]: 8bit, Odd, 1bit [8O2]: 8bit, Odd, 2bit
Device address*2 (Slave address)	1 to 99*4
Interval time*3	0 to 250 (ms)

*1 Adjust the settings with GOT settings.
*2 Select the device address1 without overlapping with that of other units.
*3 Set the maximum time from the sending of the last character stop bit from the GOT side until the switching of the GOT side to the receiving status (until the temperature controller becomes ready to send).
Set as necessary.
*4 When the setting value is set to 0, a communication is not made.

Connecting to X-TIO Module

Communication settings

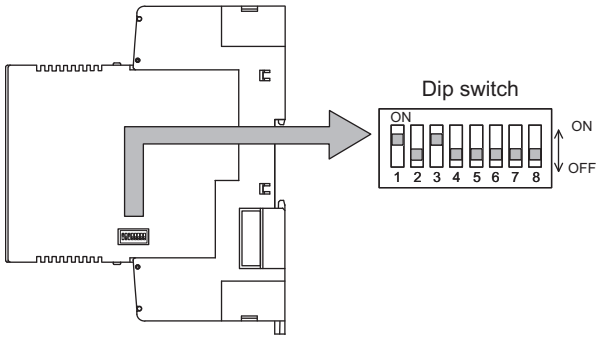
Make the communication settings of the temperature controller.

Item	Setting range
Communication speed*1	9600bps, 19200bps, 38400bps
Communication protocol	MODBUS
Data bit configuration	Data bit: 8bit, Parity: None
	Data bit: 8bit, Parity: Even
	Data bit: 8bit, Parity: Odd
	Stop bit: 1bit (fixed)
Module address*2	1 to 99
Internal data bus terminating resistor	When combining the module, turn ON the internal data bus terminating resistor at both ends of the module.
Data interval extension time	0 to 99ms

*1 Adjust the settings with GOT settings.
*2 When the setting value is set to 0, a communication is not made.

Setting DIP switches

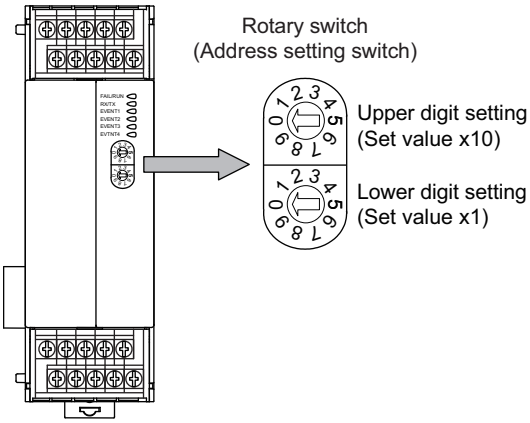
Make the settings of transmission speed, data bit configuration, communication protocol.



Setting item	Set value	Switch position							
		1	2	3	4	5	6	7	8
Communication speed	9600bps	ON	OFF						
	19200bps	OFF	ON						
	38400bps	ON	ON						
Data bit configuration	Data bit: 8bit, Parity: None			ON	OFF	OFF			
	Data bit: 8bit, Parity: Even			ON	OFF	ON			
	Data bit: 8bit, Parity: Odd			ON	ON	ON			
Communication protocol	MODBUS						ON		
Internal data bus termination resistor setting	OFF								OFF
	ON								ON
Data interval extension time	0 to 99ms				ON	OFF	ON		

Module address settings

Set the unit address using the rotary switch (address setting switch).



Point

The rotary switch (address setting switch) is also used for the data interval extension time setting.
The setting method is the same as that of the module address.
For the data interval extension time, refer to the following.
☞ Page 1780 Data interval extension time settings

Data interval extension time settings

Set the data interval extension time as the following procedure.

1. Turn the power of the module OFF.

2. Set the DIP switch 4 and 6 to ON and 5 to OFF.

3. Set the data interval extension time using the rotary switch (address setting switch).

For the setting method, refer to the following.
☞ Page 1780 Module address settings

4. Turn the power of the module ON.

The FAIL/RUN lamp lights in green and the set time becomes valid.

5. Turn the power of the module OFF again and set the DIP switches and rotary switch to the original position.

Connecting to SB1 series

Communication settings

Make the communication settings of SB1 using the switch key on the front surface.

For the operation procedure, refer to the SB1 manual.

Item	Setting range
Communication protocol*2	0: RKC communication 1: MODBUS
Device address*1*3 (Slave address)	0 to 99
Communication speed*1*4	0: 2400bps 1: 4800bps 2: 9600bps 3: 19200bps
Data bit configuration*1*5	0 to 5
Interval time*6	0 to 250ms

*1 Adjust the settings with GOT settings.

*2 Select 1: MODBUS.

*3 When the setting value is 0, communication is not performed.

*4 The communication speed cannot be set to 2400bps or 4800bps on the GOT side. Select 2 or 3.

*5 For details on the data bit configuration, refer to the following.

Set value	Data bit	Parity bit	Stop bit
0	8	None	1
1	8	None	2
2	8	Even	1
3	8	Even	2
4	8	Odd	1
5	8	Odd	2

*6 Set the maximum time from when the last character stop bit is sent from the GOT side until the transmission cable becomes ready to receive.

Connecting to B400 series

Communication settings

Make the communication settings of B400 using the rotary switch key and the DIP switch.

For the operation procedure, refer to the B400 manual.

Item	Setting range	Settings
Unit address setting (CH1 to CH8)	0 to 99*1	Page 1782 Rotary switch setting (SW1, SW2)
Communication speed	4800bps, 9600bps, 19200bps, 38400bps	Page 1782 DIP switch setting (SW3)
Data bit configuration	0 to 5	
Communication specification setting	RS-422A, RS-485	Page 1783 DIP switch settings (SW4)
Termination resistor setting	Enable, Disable	

*1 When the setting value is 98 or 99, the communication address is the same as for 97.

■Rotary switch setting (SW1, SW2)

Set the unit address using the rotary switch.

Rotary switch
(Address setting switch)



SW1: Lower digit setting
(Set value x1)



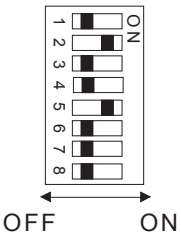
SW2: Upper digit setting
(Set value x10)

Item	Setting range
Unit address setting (CH1 to CH4)	The communication address is the rotary switch setting value + 1.
Unit address setting (CH5 to CH8)	The communication address is the rotary switch setting value + 2.

■DIP switch setting (SW3)

Set the communication speed and the data bit configuration using the DIP switch (SW3).

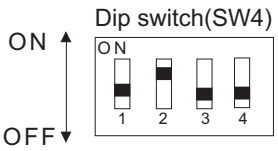
Dip switch(SW3)



Setting item	Set value	Switch position							
		1	2	3	4	5	6	7	8
Communication speed	4800bps	OFF	OFF	-					
	9600bps	ON	OFF						
	19200bps	OFF	ON						
	38400bps	ON	ON						
Data bit configuration	Data bit: 8 bits, Parity: None, Stop: 2 bits	-		OFF	OFF	-			
	Data bit: 8 bits, Parity: None, Stop: 1 bit	-		ON	OFF	-			
	Data bit: 8 bits, Parity: Even, Stop: 1 bit	-		OFF	ON	-			
	Data bit: 8 bits, Parity: Odd, Stop: 1 bit	-		ON	ON	-			

■DIP switch settings (SW4)

Set the communication specifications and the termination resistor using the DIP switch (SW4).



Setting item	Set value	Switch position			
		1	2	3	4
Communication specification setting	RS-422A	OFF	OFF	-	
	RS485	ON	ON	-	
Termination resistor setting	Enable	-			ON
	Disable	-			OFF

Connecting to FZ Series

Communication settings

Item	Setting range
Communication protocol	1: MODBUS (Data transfer order: Higher → Lower)
Device address (Slave address)*1	1 to 99
Communication speed*2	0: 2400bps 1: 4800bps 2: 9600bps 3: 19200bps 4: 38400bps 5: 57600bps
Data bit configuration	☞ Page 1783 Data bit configuration
Interval time	0 to 250

*1 When the setting value is set to 0, a communication is not made.
*2 Adjust the settings with GOT settings.

Data bit configuration

Set value	Data bit	Parity bit	Stop bit
0	8	None	1
1	8	None	2
2	8	Even	1
3	8	Even	2
4	8	Odd	1
5	8	Odd	2

Communication setting mode

Set the communication setting mode using the operation panel of the FZ series main unit.

For details of the communication setting mode, refer to the following.

📖FZ Series User's Manual

Connecting to RZ Series

Communication settings

Item	Setting range
Communication protocol	1: MODBUS
Device address (Slave address)*1	1 to 99
Communication speed*2	0: 2400bps 1: 4800bps 2: 9600bps 3: 19200bps 4: 38400bps
Data bit configuration	☞ Page 1784 Data bit configuration
Interval time	0 to 150

*1 When the setting value is set to 0, a communication is not made.
*2 Adjust the settings with GOT settings.

Data bit configuration

Set value	Data bit	Parity bit	Stop bit
0	8	None	1
1	8	None	2
6	8	Even	1
7	8	Odd	1
8	8	Even	2
9	8	Odd	2

Communication setting mode

Set the communication setting mode using the operation panel of the RZ series main unit.

For details of the communication setting mode, refer to the following.

📖RZ Series User's Manual

Connecting to PZ Series

Communication settings

Item	Setting range
Communication protocol	1: MODBUS (Data transfer order: Higher→Lower)
Device address (Slave address) *1	1 to 99
Communication speed *2	0:2400bps 1:4800bps 2:9600bps 3:19200bps 4:38400bps 5:57600bps
Data bit configuration	0 to 5 For details on the setting value, refer to the following. ☞ Page 1785 Data bit configuration
Interval time	0 to 250ms

*1 When the setting value is set to 0, a communication is not made.

*2 Adjust the settings with GOT settings.

Data bit configuration

Set value	Data bit	Parity bit	Stop bit
0	8	None	1
1	8	None	2
2	8	Even	1
3	8	Even	2
4	8	Odd	1
5	8	Odd	2

Communication setting mode

Set the communication setting mode using the operation panel of the PZ series main unit.

For details of the communication setting mode, refer to the following.

📖PZ Series User's Manual

Connecting to GZ Series

Communication settings

Item	Setting range
Communication protocol	1: MODBUS (Data transfer order: Higher→Lower)
Device address (Slave address) *1	1 to 99
Communication speed *2	0:2400bps 1:4800bps 2:9600bps 3:19200bps 4:38400bps 5:57600bps 6:115200bps
Data bit configuration	0 to 5 For details on the setting value, refer to the following. ☞ Page 1786 Data bit configuration
Interval time	0 to 250ms

*1 When the setting value is set to 0, a communication is not made.
*2 Adjust the settings with GOT settings.

Data bit configuration

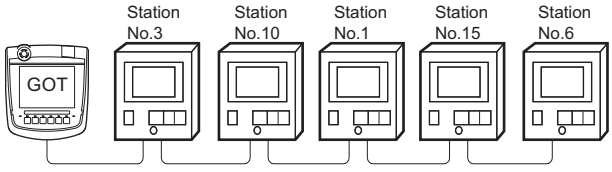
Set value	Data bit	Parity bit	Stop bit
0	8	None	1
1	8	None	2
2	8	Even	1
3	8	Even	2
4	8	Odd	1
5	8	Odd	2

Communication setting mode

Set the communication setting mode using the operation panel of the GZ series main unit.
For details of the communication setting mode, refer to the following.
📖GZ Series User's Manual

Station number setting

Set each station number so that no station number overlaps.
The station number can be set without regard to the cable connection order.
There is no problem even if station numbers are not consecutive.



Examples of station number setting

Direct specification

The station number setting range of the temperature controller side differs from that of the GOT side.

Specify the station No. of the temperature controller to be changed when setting devices referring the following table.

Temperature controller	Module address setting of temperature controller side	GOT side station number setting	Remark
H-PCP-J H-PCP-A H-PCP-B Z-TIO Z-COM	0 to F (Hexadecimal)	1 to 16 (Decimal)	The GOT side station number setting is the module address setting value +1.
Z-DIO	0 to F (Hexadecimal)	17 to 32 (Decimal)	The GOT side station number setting is the module address setting value +17.
Z-CT	0 to F (Hexadecimal)	33 to 48 (Decimal)	The GOT side station number setting is the module address setting value +33.
X-TIO	1 to 99 (Decimal)	2 to 100 (Decimal)	The GOT side station number setting is the module address setting value +1.
CB, FB, RB, PF, AG, HA, MA, RMC, THV, SA, SB1	1 to 99 (Decimal)	1 to 99 (Decimal)	The GOT side station number setting is the same as the module address setting value.
B400	1 to 99 (Decimal)	1 to 99 (Decimal)	The GOT side station number is the module address setting value +1 or +2.

Indirect specification

When setting the device, indirectly specify the station number of the temperature controller of which data is to be changed using the 16-bit GOT internal data register (GD10 to GD25).

When specifying the station No. from 100 to 115 on GT Designer3, the value of GD10 to GD25 compatible to the station No. specification will be the station No. of the temperature controller.

Specification station NO.	Compatible device	Setting range
100	GD10	1 to 99 For the setting other than the above, error (dedicated device is out of range) will occur.
101	GD11	
102	GD12	
103	GD13	
104	GD14	
105	GD15	
106	GD16	
107	GD17	
108	GD18	
109	GD19	
110	GD20	
111	GD21	
112	GD22	
113	GD23	
114	GD24	
115	GD25	

36.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

📖GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1

RKC equipment ([RKC SR Mini HG])

36.7 Precautions

Station number setting of the temperature controller system

Make sure to establish temperature controller system with No.01 station.

GOT clock control

Since the temperature controller does not have a clock function, the settings of "time adjusting" or "time broad cast" by GOT clock control will be disabled.

Disconnecting some of multiple connected equipment

By setting GOT internal device, GOT can cut the portion of multiple connection of the controller.

For example, faulty station that has communication timeout can be cut from the system.

For details of GOT internal device setting, refer to the following manual.

📖GT Designer3 (GOT2000) Screen Design Manual

Precautions for using 32-bit data

The storage order of 32-bit data of the RKC temperature controller is from lower-order bits by default.

Configure the following settings according to the temperature controller to be used.

■FZ, PZ and GZ series

Set the communication protocol from the higher-order bit to the lower-order bit on the temperature controller side.

For the details, refer to the following.

☞ Page 1783 Connecting to FZ Series

☞ Page 1785 Connecting to PZ Series

☞ Page 1786 Connecting to GZ Series

■Other than FZ, PZ and GZ series

Use [MODBUS/RTU Master] for the communication driver.

Configure the following settings in the [Controller Setting] window in GT Designer3.

- [Manufacturer]: [MODBUS]
- [Controller Type]: [MODBUS Slave(GOT:Master)]
- [Detail Setting]: [LH Order] for [32bit Order]

For details on the MODBUS/RTU master connection, refer to the following manual.

📖GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1

37 ALLEN-BRADLEY PLC

- Page 1789 Connectable Model List
- Page 1792 Serial Connection
- Page 1809 Ethernet Connection
- Page 1822 Settable Device Range

37.1 Connectable Model List

The following table shows the connectable models.

Series	Model name	Clock	Communication Type	Connectable model	Refer to
SLC500	SLC500-20	×	RS-232	GT2506HS GT2505HS	☞ Page 1792 Connecting to SLC500 series
	SLC500-30				
	SLC500-40				
	SLC5/01				
	SLC5/02				
	SLC5/03	○	RS-232	GT2506HS GT2505HS	
	SLC5/04				
	SLC5/05				
MicroLogix1000 (Digital CPU)	1761-L10BWA	×	RS-232	GT2506HS GT2505HS	☞ Page 1794 Connecting to MicroLogix series
	1761-L10BWB				
	1761-L16AWA				
	1761-L16BWA				
	1761-L16BWB				
	1761-L16BBB				
	1761-L32AWA				
	1761-L32BWA				
	1761-L32BWB				
	1761-L32BBB				
	1761-L32AAA				
MicroLogix1000 (Analog CPU)	1761-L20AWA-5A	×	RS-232	GT2506HS GT2505HS	
	1761-L20BWA-5A				
	1761-L20BWB-5A				
MicroLogix1100	1763-L16BWA	×	RS-232	GT2506HS GT2505HS	
MicroLogix1200	1762-L24BWA	×	RS-232	GT2506HS GT2505HS	
MicroLogix1400	1766-L32AWA	×	RS-232	GT2506HS GT2505HS	
MicroLogix1500	1764-LSP	×	RS-232	GT2506HS GT2505HS	
	1764-LRP				

Series	Model name	Clock	Communication Type	Connectable model	Refer to
ControlLogix	1756-L	×	RS-232	GT2506HS GT2505HS	☞ Page 1797 Connecting to ControlLogix, CompactLogix, or FlexLogix series
	1756-L1M1				
	1756-L1M2				
	1756-L1M3				
	1756-L61				
	1756-L62				
	1756-L63				
	1756-L64				
	1756-L55M12				
	1756-L55M13				
	1756-L55M14				
	1756-L55M16				
	1756-L55M22				
	1756-L55M23				
	1756-L55M24				
CompactLogix	1769-L31	×	RS-232	GT2506HS GT2505HS	☞ Page 1797 Connecting to ControlLogix, CompactLogix, or FlexLogix series
	1769-L32C				
	1769-L35CR				
FlexLogix	1794-L33	×	RS-232	GT2506HS GT2505HS	☞ Page 1797 Connecting to ControlLogix, CompactLogix, or FlexLogix series
	1794-L34				
MicroLogix1000 (Digital CPU)	1761-L10BWA	×	Ethernet	GT2506HS GT2505HS	☞ Page 1810 Ethernet connection type: Connecting to Ethernet (AB)
	1761-L10BWB				
	1761-L16AWA				
	1761-L16BWA				
	1761-L16BWB				
	1761-L16BBB				
	1761-L32AWA				
	1761-L32BWA				
	1761-L32BWB				
	1761-L32BBB				
	1761-L32AAA				
MicroLogix1000 (Analog CPU)	1761-L20AWA-5A	×	Ethernet	GT2506HS GT2505HS	
	1761-L20BWA-5A				
	1761-L20BWB-5A				
MicroLogix1100	1763-L16BWA	×	Ethernet	GT2506HS GT2505HS	
MicroLogix1200	1762-L24BWA	×	Ethernet	GT2506HS GT2505HS	
MicroLogix1400	1766-L32AWA	×	Ethernet	GT2506HS GT2505HS	
MicroLogix1500	1764-LSP	×	Ethernet	GT2506HS GT2505HS	
	1764-LRP				

Series	Model name	Clock	Communication Type	Connectable model	Refer to
ControlLogix	1756-L	×	Ethernet	GT2506HS GT2505HS	☞ Page 1810 Ethernet connection type: Connecting to Ethernet (AB) ☞ Page 1812 Ethernet connection type: Connecting to Ethernet (AB Tag)
	1756-L1M1				
	1756-L1M2				
	1756-L1M3				
	1756-L61				
	1756-L62				
	1756-L63				
	1756-L64				
	1756-L55M12				
	1756-L55M13				
	1756-L55M14				
	1756-L55M16				
	1756-L55M22				
	1756-L55M23				
	1756-L55M24				
ControlLogix	1756-L72S	×	Ethernet	GT2506HS GT2505HS	☞ Page 1810 Ethernet connection type: Connecting to Ethernet (AB) ☞ Page 1812 Ethernet connection type: Connecting to Ethernet (AB Tag)
	1756-L71				
	1756-L72				
	1756-L73				
	1756-L74				
	1756-L75				
	1756-L81E				
	1756-L82E				
	1756-L83E				
	1756-L84E				
	1756-L85E				
CompactLogix	1769-L31 *1	×	Ethernet	GT2506HS GT2505HS	☞ Page 1810 Ethernet connection type: Connecting to Ethernet (AB) ☞ Page 1812 Ethernet connection type: Connecting to Ethernet (AB Tag)
	1769-L32C *1				
	1769-L35CR *1				
	1769-L32E	×	Ethernet	GT2506HS GT2505HS	☞ Page 1810 Ethernet connection type: Connecting to Ethernet (AB) ☞ Page 1812 Ethernet connection type: Connecting to Ethernet (AB Tag)
	1769-L35E				
FlexLogix	1794-L33 *2	×	Ethernet	GT2506HS GT2505HS	☞ Page 1812 Ethernet connection type: Connecting to Ethernet (AB Tag)
	1794-L34 *2				

*1 1769-L31, 1769-L32C, and 1769-L35CR do not support Ethernet connection type: Ethernet (AB Tag).

*2 1794-L33 and 1794-L34 do not support Ethernet connection type: Ethernet (AB).

37.2 Serial Connection

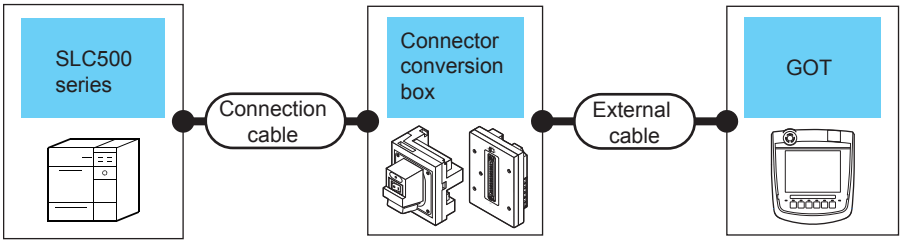
Connecting to SLC500 series

Communication driver

AB SLC500, AB 1:N

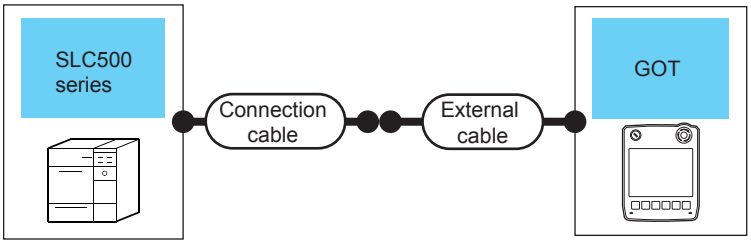
When connecting to one PLC

■When using the connector conversion box



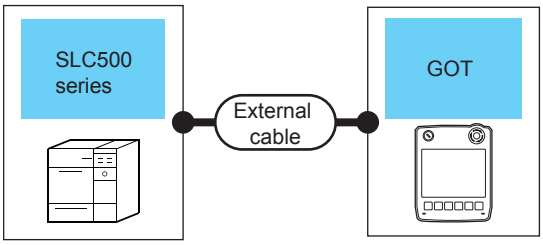
PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Series	Communication Type	Cable model Connection diagram number					
SLC500	RS-232	GT09-C30R20701-9S(3m) or User preparing RS232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

■When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Series	Communication Type	Cable model Connection diagram number				
SLC500	RS-232	User preparing RS232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC

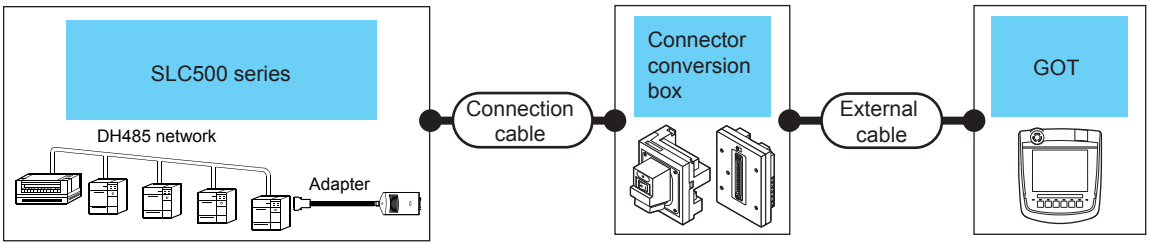
■When using the external cable (GT11H-C□□□)



PLC		External cable	GOT Model	Total distance	Number of connectable equipment
Series	Communication Type				
SLC500	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 PLC

When connecting to multiple PLCs

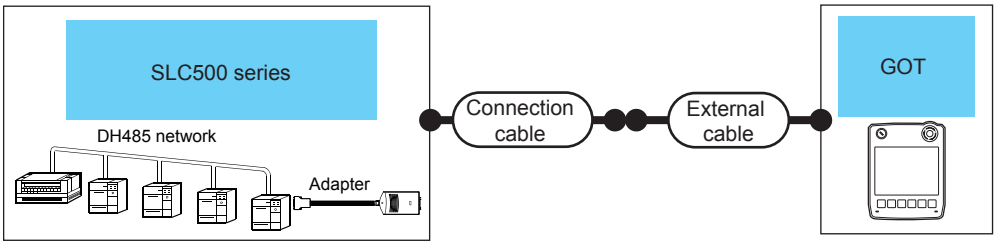
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Series	Adapter*1	Communication Type	Cable model Connection diagram number					
SLC500	1770-KF3	RS-232	User preparing RS232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 adapter
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.
*2 The distance from the GOT to the Adapter (Connection cable + External cable)

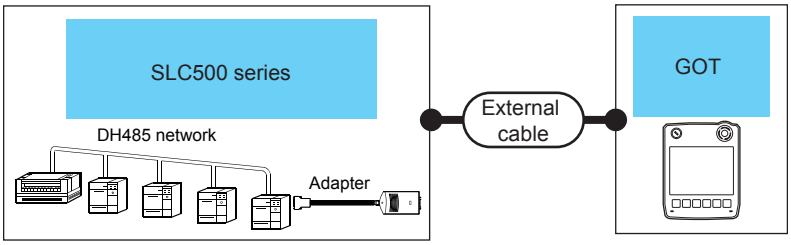
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance *2	Number of connectable equipment
Series	Adapter*1	Communication Type	Cable model Connection diagram number				
SLC500	1770-KF3	RS-232	User preparing RS232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 adapter

*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.
*2 The distance from the GOT to the Adapter (Connection cable + External cable)

■When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance *2	Number of connectable equipment
Series	Adapter*1	Communication Type				
SLC500	1770-KF3	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS232 connection diagram 6)	GT 2505HS	6m	1 GOT for 1 adapter

*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.
*2 The distance from the GOT to the Adapter (External cable)

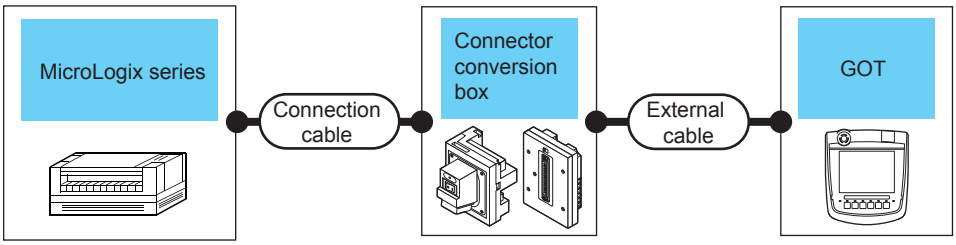
Connecting to MicroLogix series

Communication driver

AB MicroLogix

When connecting to one PLC

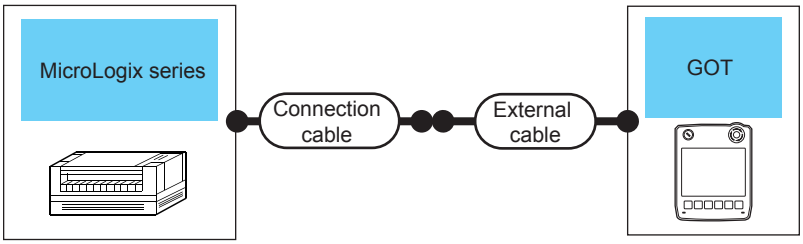
■When using the connector conversion box



PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Series*2	Communication Type	Cable model Connection diagram number					
MicroLogix1000 *3 MicroLogix1100 *3 MicroLogix1200 *3 MicroLogix1400 *3 MicroLogix1500 *3	RS-232	1761-CBL-PM02*1 (Series C or later) or User preparing RS232 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
MicroLogix1400 *4		GT09-C30R20701-9S(3m) or User preparing RS232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.
*2 For MicroLogix1000 (Digital CPU), it is supported in the series D and later.
*3 Connect the GOT to COM0.
*4 Connect the GOT to COM2.

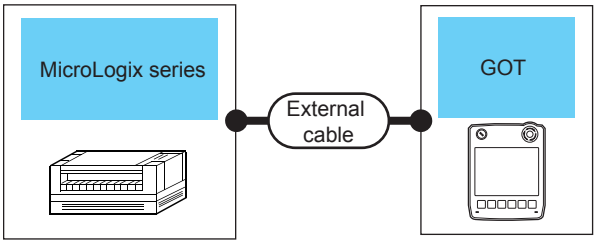
■When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Series*2	Communication Type	Cable model Connection diagram number				
MicroLogix1000 *3 MicroLogix1100 *3 MicroLogix1200 *3 MicroLogix1400 *3 MicroLogix1500 *3	RS-232	User preparing RS232 connection diagram 8)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC
MicroLogix1400 *4	RS-232	User preparing RS232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS		

*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.
*2 For MicroLogix1000 (Digital CPU), it is supported in the series D and later.
*3 Connect the GOT to COM0.
*4 Connect the GOT to COM2.

■When using the external cable (GT11H-C□□□)

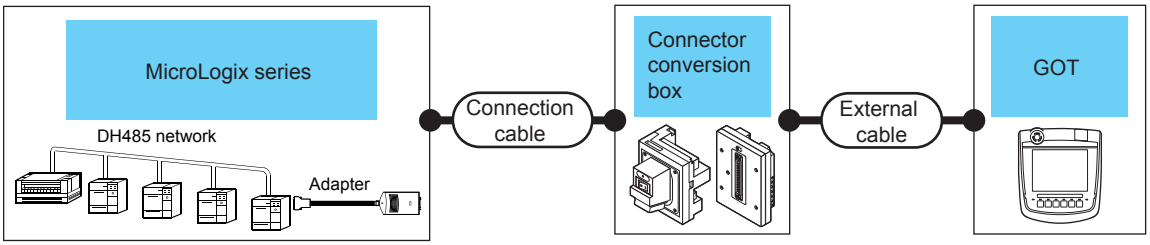


PLC		External cable	GOT Model	Total distance	Number of connectable equipment
Series*2	Communication Type				
MicroLogix1000 *3 MicroLogix1100 *3 MicroLogix1200 *3 MicroLogix1400 *3 MicroLogix1500 *3	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS232 connection diagram 9)	GT 2505HS	6m	1 GOT for 1 PLC
MicroLogix1400 *4	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS232 connection diagram 3)	GT 2505HS		

*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.
*2 For MicroLogix1000 (Digital CPU), it is supported in the series D and later.
*3 Connect the GOT to COM0.
*4 Connect the GOT to COM2.

When connecting to multiple PLCs

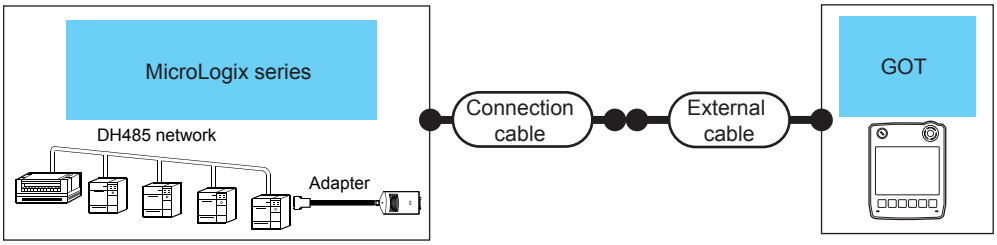
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance *3	Number of connectable equipment
Series*2	Adapter*1	Communication Type	Cable model Connection diagram number					
MicroLogix1000 MicroLogix1100 MicroLogix1200 MicroLogix1400 MicroLogix1500	1770-KF3	RS-232	User preparing RS232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 adapter
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.
*2 For MicroLogix1000 (Digital CPU), it is supported in the series C and later.
*3 The distance from the GOT to the Adapter (Connection cable + External cable)

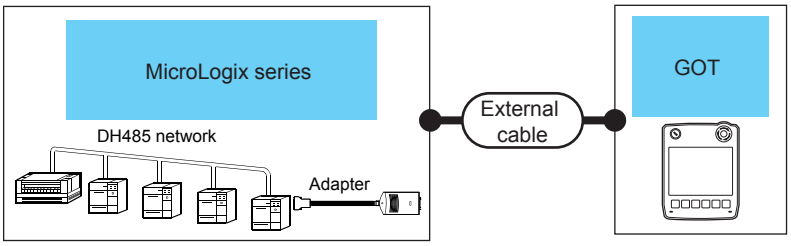
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance *3	Number of connectable equipment
Series*2	Adapter*1	Communication Type	Cable model Connection diagram number				
MicroLogix1000 MicroLogix1100 MicroLogix1200 MicroLogix1400 MicroLogix1500	1770-KF3	RS-232	User preparing RS232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 adapter

*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.
*2 For MicroLogix1000 (Digital CPU), it is supported in the series C and later.
*3 The distance from the GOT to the Adapter (Connection cable + External cable)

■When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance *3	Number of connectable equipment
Series*2	Adapter*1	Communication Type				
MicroLogix1000 MicroLogix1100 MicroLogix1200 MicroLogix1400 MicroLogix1500	1770-KF3	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS232 connection diagram 6)	GT 2505HS	6m	1 GOT for 1 adapter

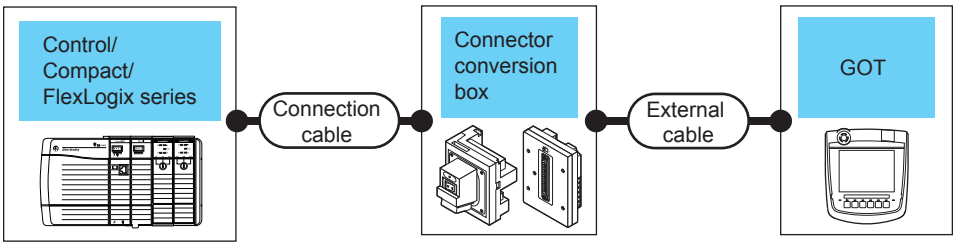
*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.
*2 For MicroLogix1000 (Digital CPU), it is supported in the series C and later.
*3 The distance from the GOT to the Adapter (External cable)

Connecting to ControlLogix, CompactLogix, or FlexLogix series

Communication driver

AB Control/CompactLogix

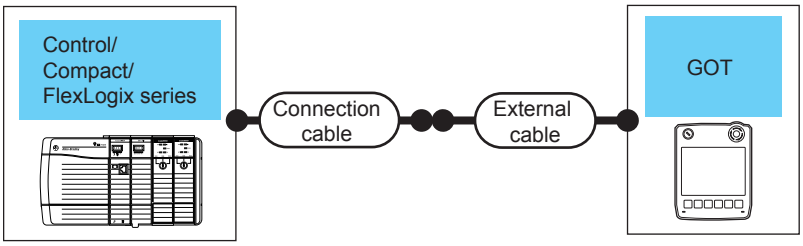
When using the connector conversion box



PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Series	Communication Type	Cable model Connection diagram number					
ControlLogix CompactLogix FlexLogix	RS-232	1747-CP3*1 1756-CP3*1 or User preparing RS232 connection diagram 10)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.

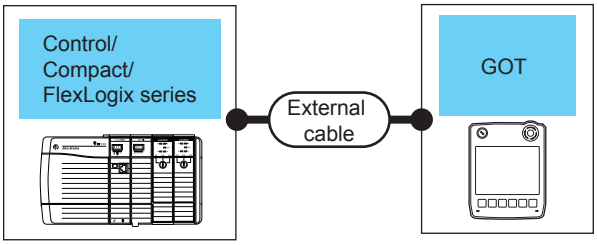
When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Series	Communication Type	Cable model Connection diagram number				
ControlLogix CompactLogix FlexLogix	RS-232	1747-CP3*1 1756-CP3*1 or User preparing RS232 connection diagram 11)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 PLC

*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.

When using the external cable (GT11H-C□□□)



PLC		External cable	GOT Model	Total distance	Number of connectable equipment
Series	Communication Type				
ControlLogix CompactLogix FlexLogix	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS232 connection diagram 12)	GT 2505HS	6m	1 GOT for 1 PLC

*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.

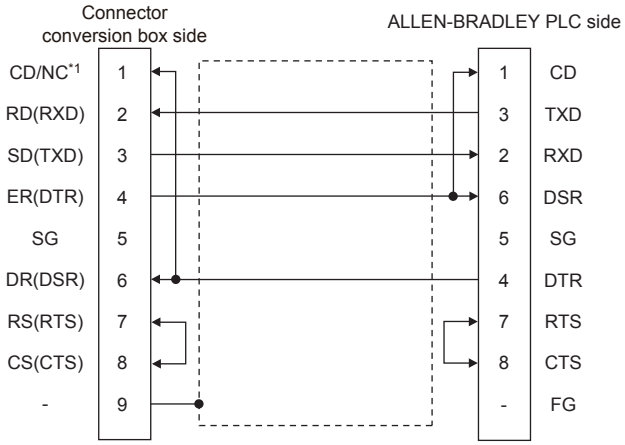
Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

RS-232 cable

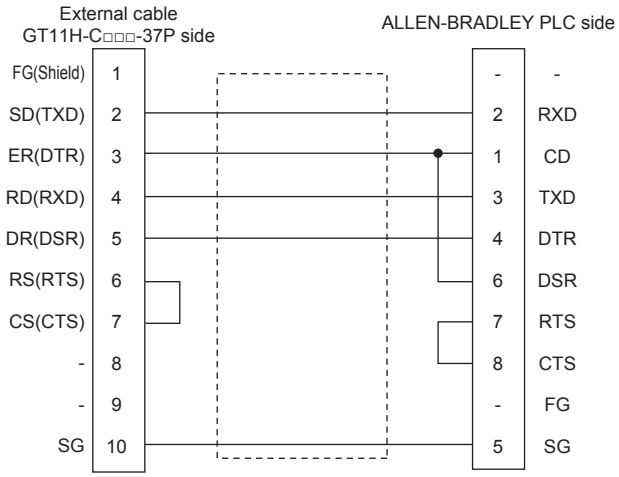
■Connection diagram

• RS232 connection diagram 1)

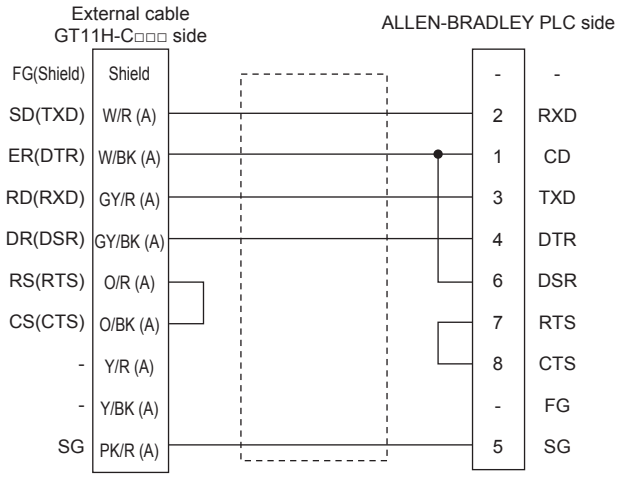


*1 GT2506HS-V: CD, GT2505HS-V: NC

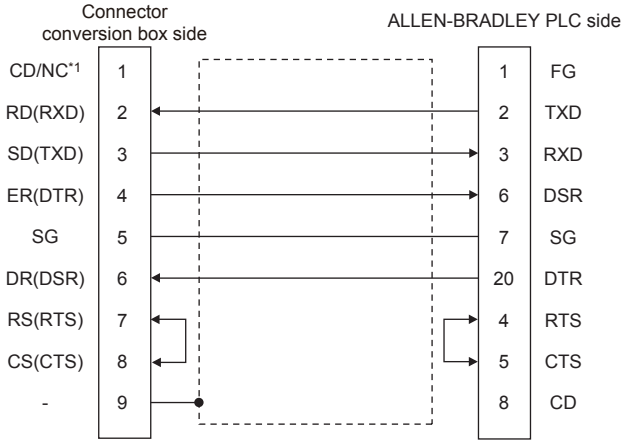
• RS232 connection diagram 2)



• RS232 connection diagram 3)

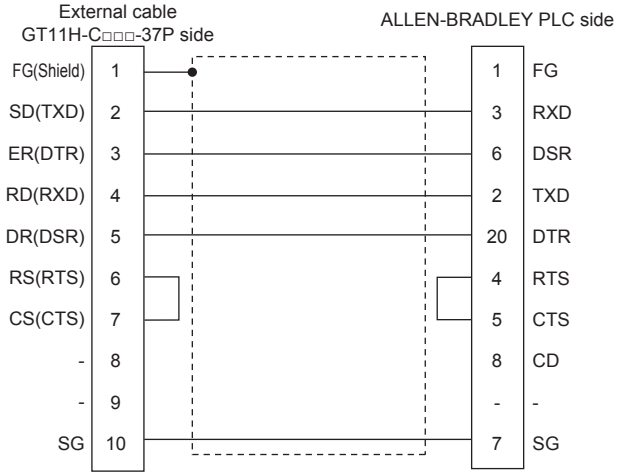


• RS232 connection diagram 4)

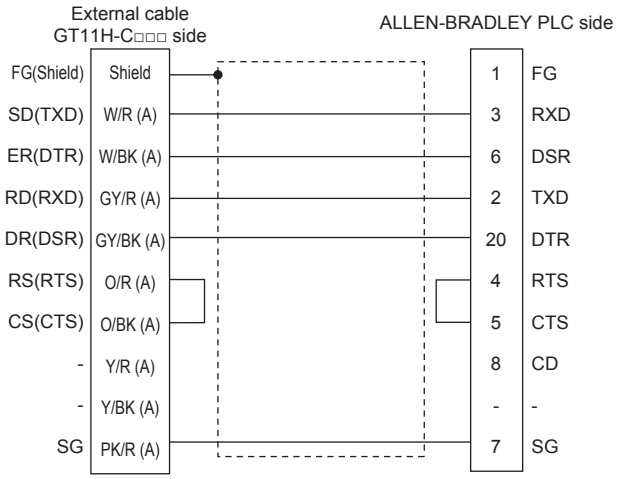


*1 GT2506HS-V: CD, GT2505HS-V: NC

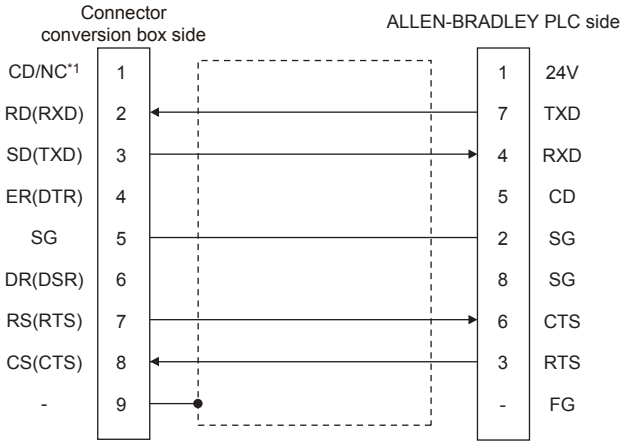
• RS232 connection diagram 5)



• RS232 connection diagram 6)

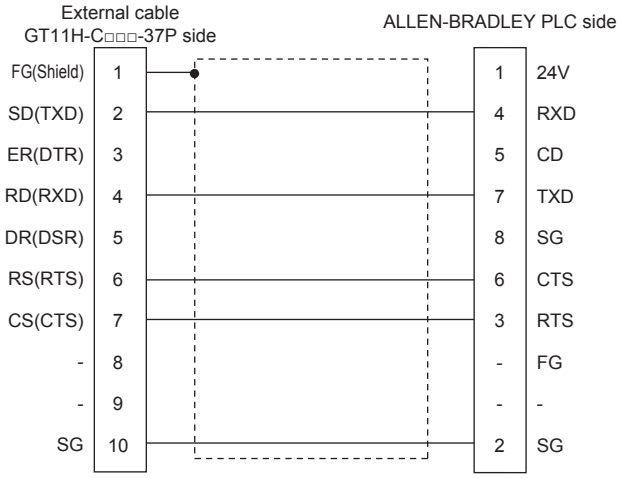


• RS232 connection diagram 7)

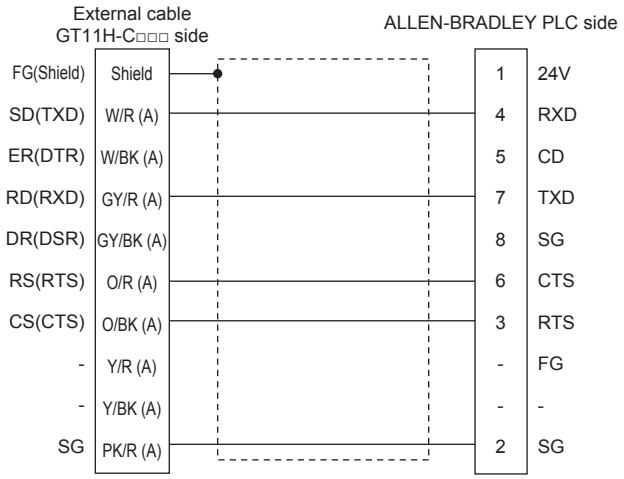


*1 GT2506HS-V: CD, GT2505HS-V: NC

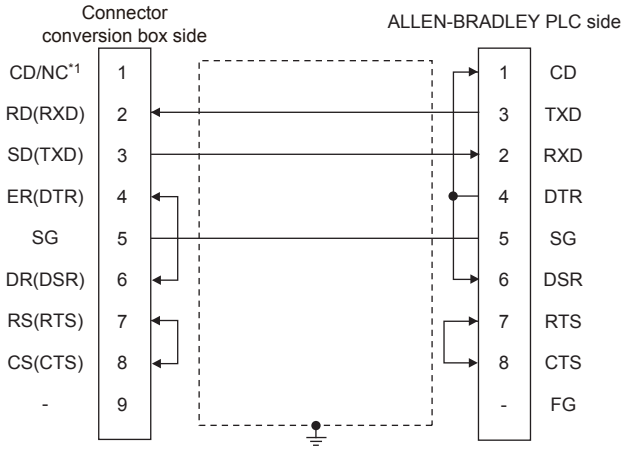
• RS232 connection diagram 8)



• RS232 connection diagram 9)

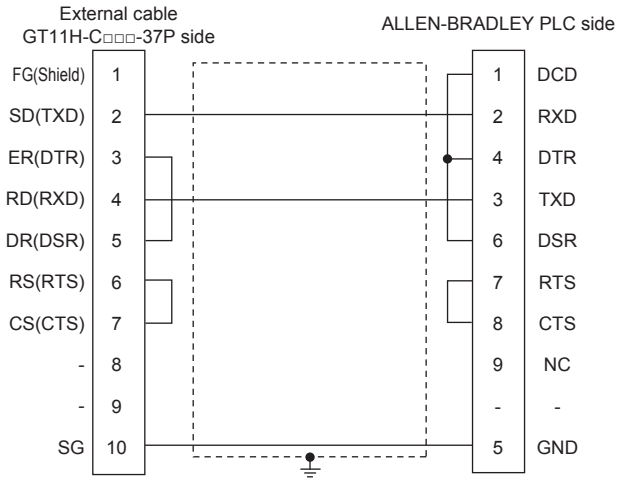


• RS232 connection diagram 10)

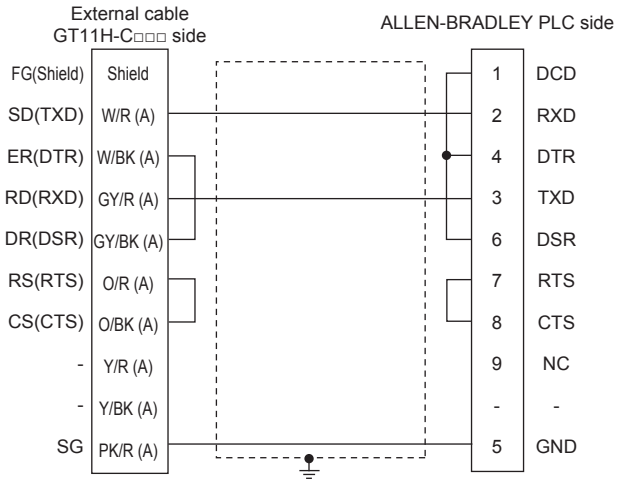


*1 GT2506HS-V: CD, GT2505HS-V: NC

• RS232 connection diagram 11)



• RS232 connection diagram 12)



■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

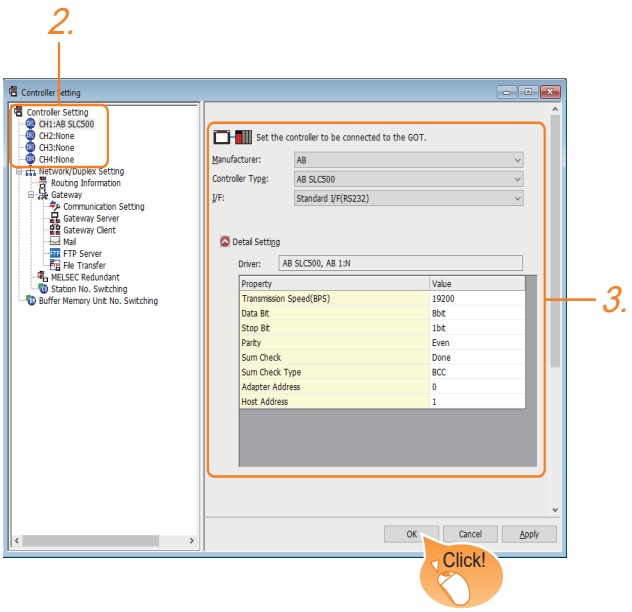
• ALLEN-BRADLEY PLC side connector

Use the connector compatible with the ALLEN-BRADLEY PLC side module.

For details, refer to the ALLEN-BRADLEY PLC user's manual.

Setting communication interface (Communication settings)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [AB]
- [Controller Type]: Select one of the following items according to the controller to be connected.

[AB SLC500]

[AB MicroLogix]

[AB Control/CompactLogix]

- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1805 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 82 I/F communication setting

Communication detail settings

■AB SLC500, AB 1: Ns

Property	Value
Transmission Speed(BPS)	19200
Data Bit	8 bit
Stop Bit	1 bit
Parity	Even
Sum Check	Done
Sum Check Type	BCC
Adapter Address	0
Host Address	1

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 19200bps)	4800bps, 9600bps, 19200bps
Adapter Address*1	The adapter address is to be specified depending on the connection type. <In direct CPU connection (serial)> The address of the connected PLC <In connection via Adapter(1770-K3)> The address of the adapter (Default: 0)	0 to 31
Host Address*1	The host address is to be specified depending on the connection type. <In direct CPU connection (serial)> Optional address <In connection via Adapter(1770-K3)> The address of the PLC of the system configuration (Default: 1)	1 to 31

*1 Do not specify the same value for the adapter address and host address.

■AB MicroLogix

Property	Value
Transmission Speed(BPS)	19200
Data Bit	8 bit
Stop Bit	1 bit
Parity	None
Sum Check	Done
Sum Check Type	BCC
Adapter Address	0
Host Address	1

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 19200bps)	4800bps, 9600bps, 19200bps, 38400bps
Sum Check Type	Specify the format in which the sum check is performed during communication when performing sum check. (Default: BCC)	BCC, CRC16
Adapter Address*1	The adapter address is to be specified depending on the connection type. <In direct CPU connection (serial)> The address of the connected PLC <In connection via Adapter(1770-K3)> The address of the adapter (Default: 0)	0 to 63
Host Address*1	The host address is to be specified depending on the connection type. <In direct CPU connection (serial)> Optional address <In connection via Adapter(1770-K3)> The address of the PLC of the system configuration (Default: 1)	0 to 63

*1 Do not specify the same value for the adapter address and host address.

■AB Control/CompactLogix

Property	Value
Transmission Speed(BPS)	19200
Data Bit	8 bit
Stop Bit	1 bit
Parity	None
Sum Check Type	BCC
Retry(Times)	3
Timeout Time(Sec)	3
Adapter Address	0
Host Address	0
Delay Time(ms)	0

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 19200bps)	9600bps, 19200bps, 38400bps, 57600bps 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bits)	7bits/8bits
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit/2bits
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: None)	None Even Odd
Sum Check Type	Specify the format in which the sum check is performed during communication when performing sum check. (Default: BCC)	BCC, CRC16
Retry	Set the number of retries to be performed when a communication error occurs. (Default: 3times)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	3 to 30sec
Adapter Address	Specify the adapter address (station No. of the PLC that the GOT will monitor) in the connected network. (Default: 0)	0 to 254
Host Address	Specify the host address (station No. of the adapter to which the GOT is connected) in the connected network. (Default: 0)	0 to 254
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300ms

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

PLC Side Setting

Point

ALLEN-BRADLEY PLC

For details of ALLEN-BRADLEY PLCs, refer to the following manuals.

ALLEN-BRADLEY PLC user's Manual

Direct CPU connection (serial)

Item	Setting details		
	SLC500 Series	MicroLogix 1000/1200/1500 Series	Control/Compact/FlexLogix Series
Baud Rate*1	4800bps, 9600bps, 19200bps	4800bps, 9600bps, 19200bps, 38400bps	4800bps, 9600bps, 19200bps, 38400bps
Parity	EVEN	NONE	NONE
Control Line	NO HANDSHAKING		
Communication Driver	DF1 HALF-DUPLEX SLAVE		
Duplicate Packet Detection	DISABLE		
Station Address	0		
Error Detection	BCC	BCC, CRC*2	BCC, CRC*2

*1 Set the Baud Rate according to the transmission speed setting on the GOT side.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1805 Communication detail settings

*2 Set the Error Detection according to the sum check format setting on the GOT side.
For the sum check format setting on the GOT side, refer to the following.
☞ Page 1805 Communication detail settings

Connecting to DH485 network via adapter (1770-KF3)

■Setting of the adapter side

Item	Setting details
RS232 Baud Rate*1	4800bps, 9600bps, 19200bps
Parity	SLC500 series: EVEN, MicroLogix series: NONE
Flow Control	Disable (No Handshaking)
DF1 Device Category	DF1 half-duplex slave, local mode
Error Detection*2	SLC500 series: BCC, MicroLogix series: BCC/CRC
DH-485 Baud Rate*5	9600bps, 19200bps
Maximum Node Address	1 to 31*3
DH-485 Node Address	0 to 31*4

*1 Set the RS232 Baud Rate according to the transmission speed setting on the GOT side.
For the transmission speed setting on the GOT side, refer to the following.
☞ Page 1805 Communication detail settings

*2 Set the Error Detection according to the sum check format setting on the GOT side.
For the sum check format setting on the GOT side, refer to the following.
☞ Page 1805 Communication detail settings

*3 For the Maximum Node Address, set the same address as the Maximum Node Address on the DH-485 network.

*4 Set the DH-485 Node Address according to the Host Address on the GOT side.
Set a unique DH-485 Node Address so that it does not conflict with the Node Address of the PLC CPU on the DH-485 network.
For the Host Address setting on the GOT side, refer to the following.
☞ Page 1805 Communication detail settings

*5 Set the DH-485 baud rate according to the baud rate on the CPU side.

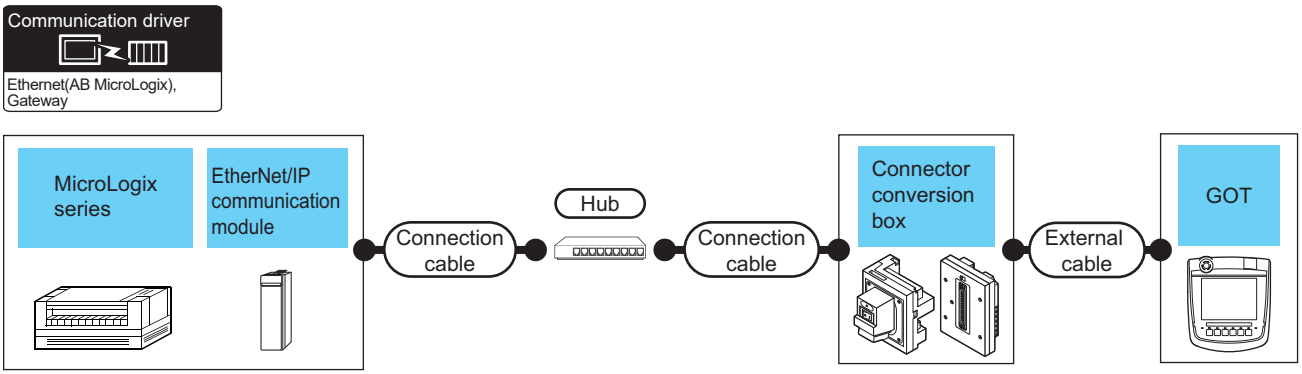
■Setting of the CPU side

Item	Setting details
Baud Rate*1	9600bps, 19200bps
Communication Driver	DH485
Node Address	1 to 31

*1 Set the baud rate according to the DH-485 baud rate on the Adapter side.

37.3 Ethernet Connection

Ethernet connection type: Connecting to Ethernet (AB MicroLogix)



PLC			Connection cable		Connector conversion box	External cable *4	GOT Model	Number of connectable equipment
Series	EtherNet/IP communication module *1	Communication Type	Cable model *2	Maximum segment length *3				
MicroLogix 1000 MicroLogix 1100 MicroLogix 1200 MicroLogix 1400 MicroLogix 1500	1761-NET-ENI	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When PLC:GOT is N:1 TCP: 16 PLCs or less for 1 GOT When PLC:GOT is 1:N TCP: 32 GOTs or less for 1 PLC
					GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
					GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
					GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
MicroLogix 1100 MicroLogix 1400	-				GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	
					GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
					GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
					GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

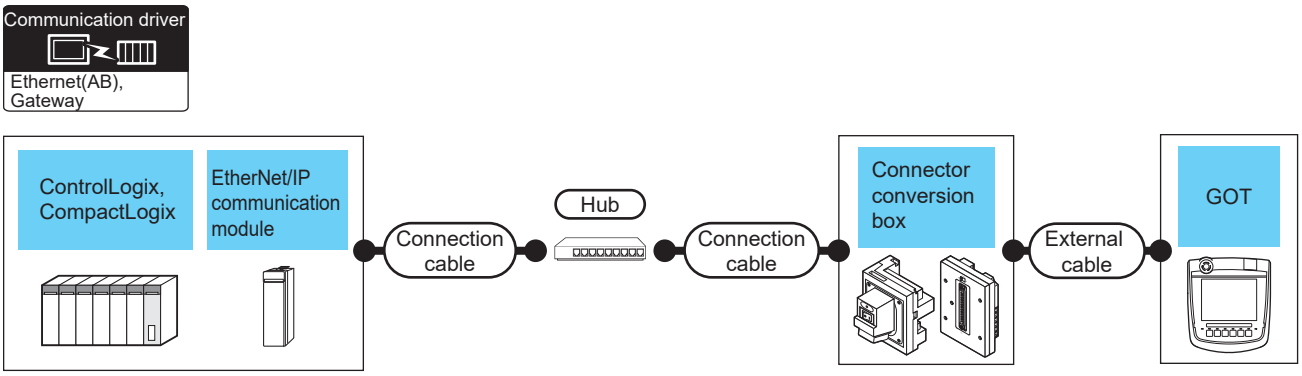
*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.

*2 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the target device and hub, use a cable according to the target controller configuration.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*4 Use C or later version of GT11H-C□□-37P.

Ethernet connection type: Connecting to Ethernet (AB)



PLC			Connection cable		Connector conversion box	External cable *6	GOT Model	Number of connectable equipment
Series	EtherNet/IP communication module*1	Communication Type	Cable model*2	Maximum segment length*3				
ControlLogix	*4	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	*5
					GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
					GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
					GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
Compact Logix	-				GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When PLC:GOT is N: 1 TCP: 128 PLCs or less for 1 GOT When PLC:GOT is 1: N TCP: 32 GOTs or less (recommended to 16 or less) for 1 PLC
					GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
					GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
					GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.

*2 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the target device and hub, use a cable according to the target controller configuration.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

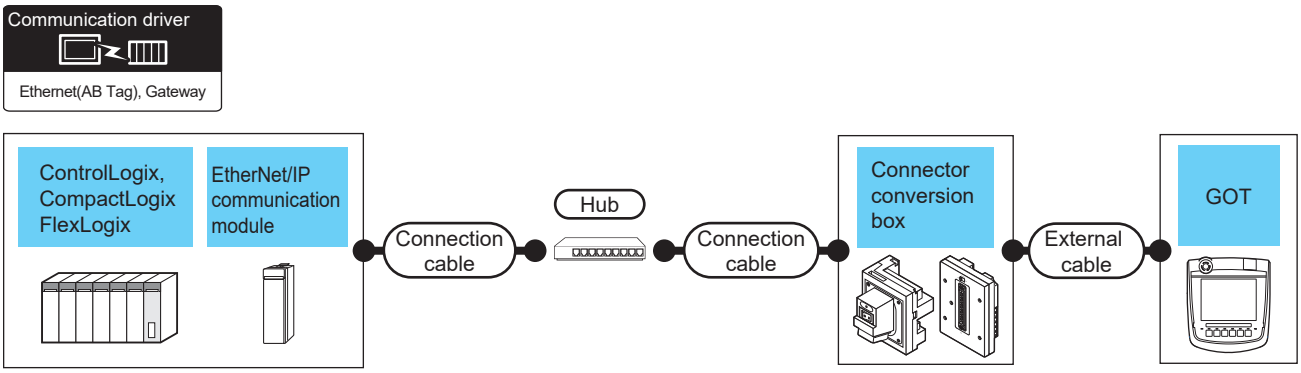
*4 The connectable EtherNet/IP communication module differs depending on the PLC model name.

PLC model name	Connectable EtherNet/IP communication module
1756-L, 1756-L1M1, 1756-L1M2, 1756-L1M3	1756-ENET(10Mbps), 1756-ENBT(10/100Mbps)
1756-L61, 1756-L62, 1756-L63	1756-ENET(10Mbps), 1756-ENBT(10/100Mbps)
1756-L64	1756-ENET(10Mbps), 1756-ENBT(10/100Mbps), 1756-EN2T(10/100Mbps)
1756-L55M12, 1756-L55M13, 1756-L55M14, 1756-L55M16, 1756-L55M22, 1756-L55M23, 1756-L55M24	1756-ENET(10Mbps), 1756-ENBT(10/100Mbps)
1756-L72S	1756-EN2T(10/100Mbps)
1756-L71, 1756-L72, 1756-L73, 1756-L74, 1756-L75	1756-EN2T(10/100Mbps), 1756-EN2TR(10/100Mbps), 1756-EN3TR(10/100Mbps), 1756-ENBT(10/100Mbps)
1756-L81E, 1756-L82E, 1756-L83E, 1756-L84E, 1756-L85E	1756-EN2T(10/100Mbps), 1756-EN2TR(10/100Mbps), 1756-EN3TR(10/100Mbps), 1756-ENBT(10/100Mbps), 1756-EN2TSC(10/100Mbps)

*5 The number of the connectable GOTs for 1 PLC differs depending on the PLC series.
(ControlLogix5550/5555/5560)
• When PLC:GOT is N:1, the following number of the PLCs can be connected to 1 GOT.
TCP: 128 or less
When PLC:GOT is 1:N, the following number of the GOTs can be connected to 1 PLC.
TCP: 64 or less (recommended to 16 or less)
(ControlLogix5570/ControlLogix5580)
• When PLC:GOT is N:1, the following number of the PLCs can be connected to 1 GOT.
TCP: 128 or less
When PLC:GOT is 1:N, the following number of the GOTs can be connected to 1 PLC.
TCP: 128 or less (recommended to 16 or less)

*6 Use C or later version of GT11H-C□□-37P.

Ethernet connection type: Connecting to Ethernet (AB Tag)



PLC			Connection cable		Connector conversion box	External cable *5	GOT Model	Number of connectable equipment
Series	EtherNet/IP communication module*1	Communication Type	Cable model*2	Maximum segment length*3				
ControlLogix	*4	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When PLC: GOT is N: 1 TCP: 16 PLCs or less for 1 GOT When PLC: GOT is 1: N TCP: 32 GOTs or less (recommended to 16 or less) for 1 PLC
					GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
					GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
					GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
CompactLogix	-	Ethernet		100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When PLC: GOT is N: 1 TCP: 16 PLCs or less for 1 GOT When PLC: GOT is 1: N TCP: 20 GOTs or less (recommended to 16 or less) for 1 PLC
					GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
					GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
					GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
FlexLogix	1788-ENBT/A	Ethernet		100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When PLC: GOT is N: 1 TCP: 16 PLCs or less for 1 GOT When PLC: GOT is 1: N TCP: 20 GOTs or less (recommended to 16 or less) for 1 PLC
					GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
					GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
					GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

*1 Allen-Bradley product manufactured by Rockwell Automation, Inc.
For details of the product, contact Rockwell Automation, Inc.

*2 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the target device and hub, use a cable according to the target controller configuration.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*4 The connectable EtherNet/IP communication module differs depending on the PLC model name.

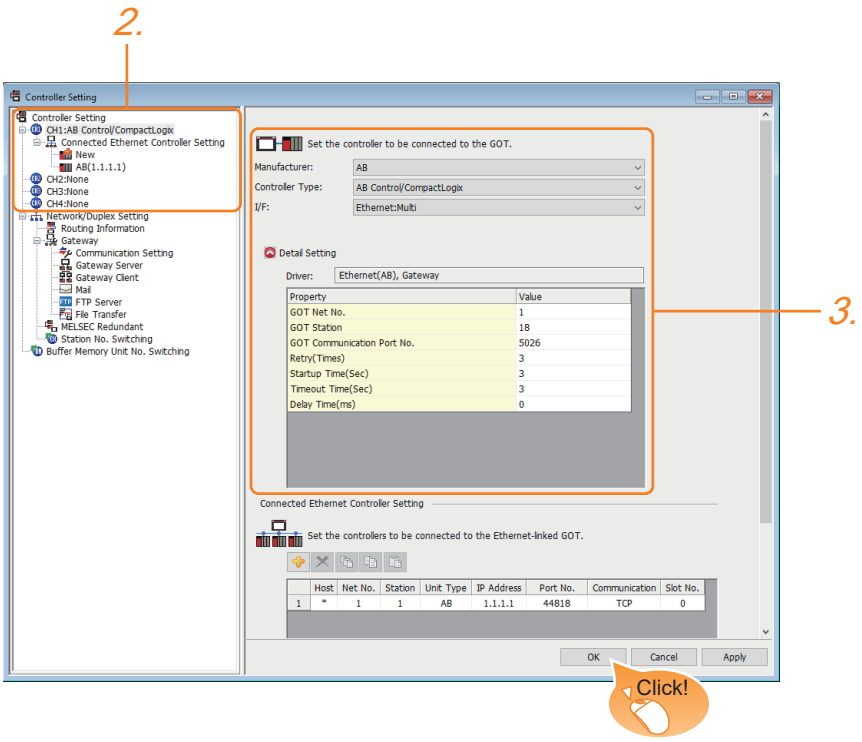
PLC model name	Connectable EtherNet/IP communication module
1756-L, 1756-L1M1, 1756-L1M2, 1756-L1M3	1756-ENET(10Mbps), 1756-ENBT(10/100Mbps)
1756-L61, 1756-L62, 1756-L63	1756-ENET(10Mbps), 1756-ENBT(10/100Mbps)
1756-L64	1756-ENET(10Mbps), 1756-ENBT(10/100Mbps), 1756-EN2T(10/100Mbps)
1756-L55M12, 1756-L55M13, 1756-L55M14, 1756-L55M16, 1756-L55M22, 1756-L55M23, 1756-L55M24	1756-ENET(10Mbps), 1756-ENBT(10/100Mbps)
1756-L72S	1756-EN2T(10/100Mbps)
1756-L71, 1756-L72, 1756-L73, 1756-L74, 1756-L75	1756-EN2T(10/100Mbps), 1756-EN2TR(10/100Mbps), 1756-EN3TR(10/100Mbps), 1756-ENBT(10/100Mbps)
1756-L81E, 1756-L82E, 1756-L83E, 1756-L84E, 1756-L85E	1756-EN2T(10/100Mbps), 1756-EN2TR(10/100Mbps), 1756-EN3TR(10/100Mbps), 1756-ENBT(10/100Mbps), 1756-EN2TSC(10/100Mbps)

*5 Use C or later version of GT11H-C□□-37P.

GOT Side Settings

Setting communication interface (Communication settings)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [AB]
- [Controller Type]: Depends on the Ethernet connection type.

Ethernet (AB MicroLogix): [AB MicroLogix]

Ethernet (AB): [AB Control/CompactLogix]

Ethernet (AB Tag): [AB Control/CompactLogix (Tag)]

- [I/F]: [Ethernet:Multi]
- [Detail Setting]: Configure the settings according to the usage environment.

☞

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
GOT Net No.	1
GOT Station	18
GOT Communication Port No.	5026
Retry(Times)	3
Startup Time(Sec)	3
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
GOT Net No.	Set the network No. of the GOT. (Default: 1)	1 to 239
GOT Station*1	Set the station No. of the GOT. (Default: 1)	1 to 64
GOT Communication Port No.	Set the GOT port No. for the connection with the Ethernet equipment. (Default: 5026*2*3)	1024 to 5010, 5014 to 44817, 44819 to 49152, 49171 to 65534
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 3times)	0 to 5times
Startup Time	Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU. (Default: 3sec)	1 to 255sec
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	3 to 90sec
Delay Time	Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms)	0 to 10000 (ms)

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1816 Connected Ethernet Controller Setting

*2 When the communication driver is set to [Ethernet(AB Tag), Gateway], the default is 5028.

*3 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

■GOT IP address setting

Set the following communication port setting.

- Standard port

■GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

■IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

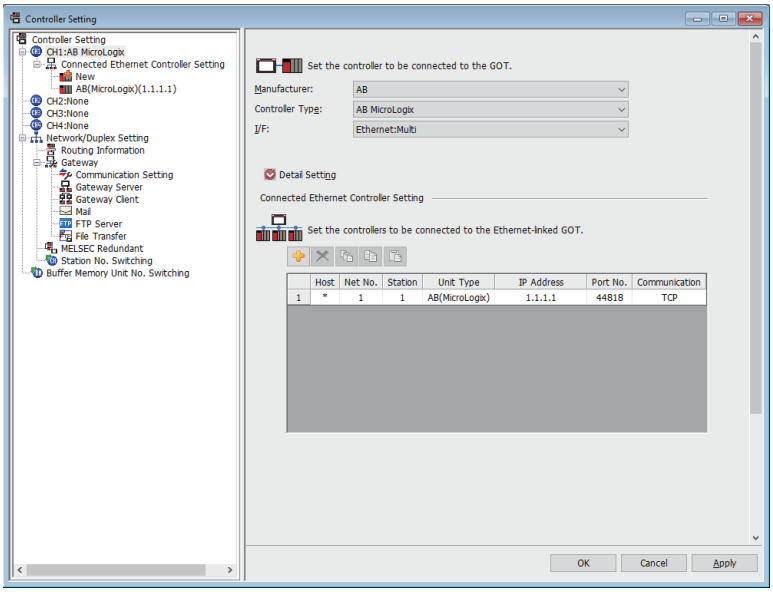
For the detailed settings, refer to the following manual.

☞ Page 80 GOT Ethernet Setting

Connected Ethernet Controller Setting

■Ethernet connection type: Ethernet (AB MicroLogix)

The following describes [Connected Ethernet Controller Setting] when [AB MicroLogix] is selected for [Controller Type].



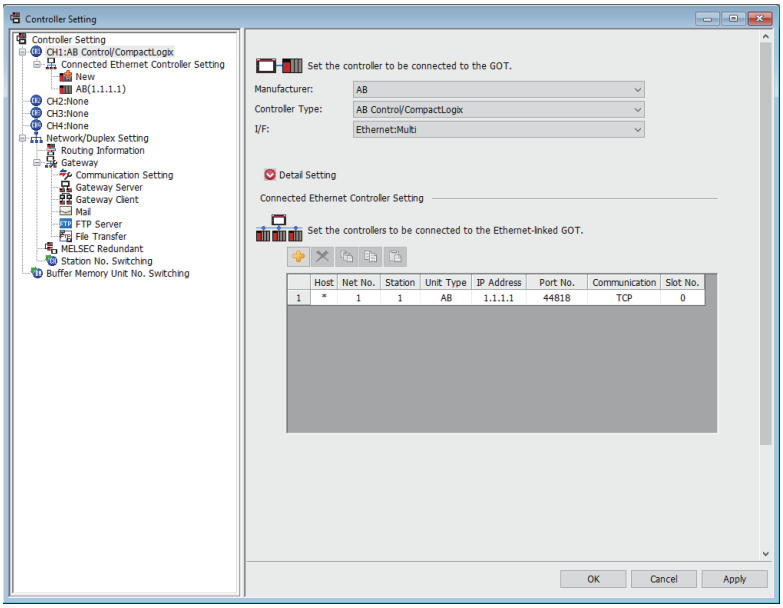
Item	Description	Set value
Host	The host is displayed. It refers to a station that can be connected without setting a station number. (The host is indicated with an asterisk (*).)	—
Net No.	Set the network No. of the connected Ethernet equipment. (Default: 1)	1 to 239
Station *1	Set the station No. of the connected Ethernet equipment. (Default: 1)	1 to 64
Unit Type	AB(MicroLogix) (fixed)	AB(MicroLogix) (fixed)
IP address	Set the IP address of the connected Ethernet equipment. (Default: 1.1.1.1)	PLC side IP address
Port No.	44818 (fixed)	44818 (fixed)
Communication format	TCP (fixed)	TCP (fixed)

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].

☞ Page 1815 Communication detail settings

■Ethernet connection type: Ethernet (AB)

The following describes [Connected Ethernet Controller Setting] when [AB Control/CompactLogix] is selected for [Controller Type].

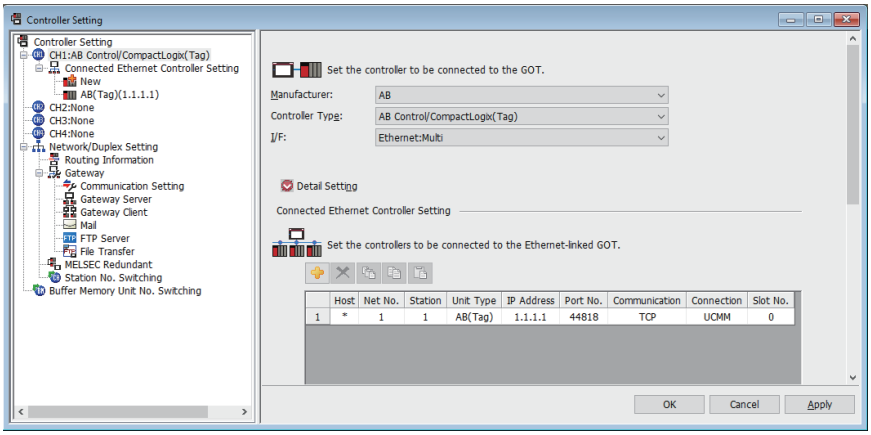


Item	Description	Set value
Host	The host is displayed. It refers to a station that can be connected without setting a station number. (The host is indicated with an asterisk (*).)	—
Net No.	Set the network No. of the connected Ethernet equipment. (Default: 1)	1 to 239
Station *1	Set the station No. of the connected Ethernet equipment. (Default: 1)	1 to 64
Unit Type	AB (fixed)	AB (fixed)
IP address	Set the IP address of the connected Ethernet equipment. (Default: 1.1.1.1)	PLC side IP address
Port No.	44818 (fixed)	44818 (fixed)
Communication format	TCP (fixed)	TCP (fixed)
Slot No.	Set the slot No. connected to the CPU module in the PLC module. (Default: 0)	0 to 16

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1815 Communication detail settings

■Ethernet connection type: Ethernet (AB Tag)

The following describes [Connected Ethernet Controller Setting] when [AB Control/CompactLogix(Tag)] is selected for [Controller Type].



Item	Description	Range
Host	The host is displayed. It refers to a station that can be connected without setting a station number. (The host is indicated with an asterisk (*).)	—
Net No.	Set the network No. of the connected Ethernet equipment. (Default: 1)	1 to 239
Station *1	Set the station No. of the connected Ethernet equipment. (Default: 1)	1 to 64
Unit Type	AB (Tag) (fixed)	AB (Tag) (fixed)
IP Address	Set the IP address of the connected Ethernet equipment. (Default: 1.1.1.1)	PLC side IP address
Port No.	44818 (fixed)	44818 (fixed)
Communication	TCP (fixed)	TCP (fixed)
Connection	Set the message communication type according to the connected Ethernet equipment. (Default: UCMM)	UCMM Class3
Slot No.	Set the slot No. connected to the CPU module in the PLC module. (Default: 0)	0 to 20

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1815 Communication detail settings

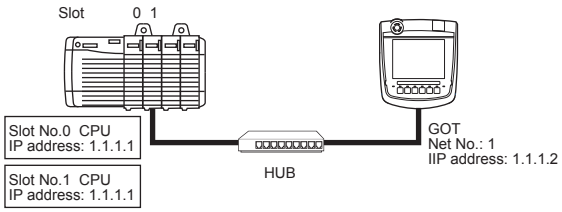
Point

[Connected Ethernet Controller Setting] for a multiple CPU system

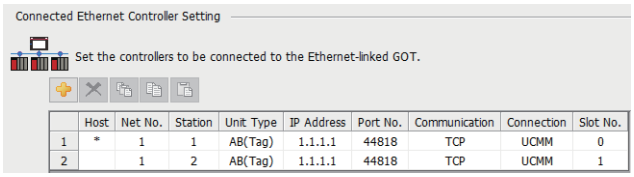
When the Ethernet connection type is Ethernet (AB Tag), monitoring in the multiple CPU system is possible by setting a different [Slot No.] for one module with the same IP address in [Connected Ethernet Controller Setting].

The following shows [Connected Ethernet Controller Setting] for configuring a system.

(Example: System configuration)



(Example: Settings in [Connected Ethernet Controller Setting])



	Host	Net No.	Station	Unit Type	IP Address	Port No.	Communication	Connection	Slot No.
1	*	1	1	AB(Tag)	1.1.1.1	44818	TCP	UCMM	0
2		1	2	AB(Tag)	1.1.1.1	44818	TCP	UCMM	1

In the above settings, the GOT monitors the CPU as follows.

- When [Net No.] is set to 1 and [Station No.] is set to 1 for an object, the GOT monitors the CPU whose slot No. is 0.
- When [Net No.] is set to 1 and [Station No.] is set to 2 for an object, the GOT monitors the CPU whose slot No. is 1.

Point

- Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

- Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

- Setting IP address and port No

The same IP address cannot be set for the same port No.The same IP address can be set for the different port No.

PLC side setting

Point

ALLEN-BRADLEY PLC

For details of ALLEN-BRADLEY PLCs, refer to the following manuals.

📖ALLEN-BRADLEY PLC user's Manual

Parameter setting

Set the following parameters with the software package manufactured by the Allen-Bradley.

Item	Setting details
Name	Sets the name.
IP Address	IP address of the connected module*1
Slot	Slots No. for installing the EtherNet/IP communication module*2

*1 For the IP address, make the same setting as that of each Ethernet module set on GT Designer3.
Do not set the same IP Address as those of GOT and controller on the Ethernet network.
For the address setting on GT Designer3, refer to the following.
☞ Page 1815 Communication detail settings

*2 The EtherNet/IP communication module cannot be connected to the slot [0].
Set the slot No. to [1] or later.

Rotary switch setting

In EtherNet/IP communication module (1756-EN2T, 1756-EN2TR, 1756-EN3TR, and 1756-EN2TSC only), IP address can be set by rotary switches.

EtherNet/IP communication module have 3 rotary switches named X, Y, and Z.

The following shows the procedure to set IP address using the rotary switches X, Y, and Z.

For details of these rotary switches, refer to the following manual.

📖Manual of EtherNet/IP communication module to be used

Rotary switch setting value	Description
1 to 254	The fourth octet of the IP address is the value set by the rotary switches. *The network address part is fixed to [192.168.1.***]. (Setting example) If the switches are set to X=0, Y=3, Z=1, IP address of EtherNet/IP communication module will be [192.168.1.31]. Adjust the settings with the GOT settings. ☞ Page 1816 Connected Ethernet Controller Setting
888	The setting value which sets EtherNet/IP communication module to initial setting. When the setting value is [888], the EtherNet/IP communication module cannot be connected with the GOT.
Other than above	To set the IP address with a peripheral tool, set the values on left for the rotary switches.

Precautions

When setting IP address

Do not use "0" and "255" at the end of an IP address.

(Numbers of *.*.*.0 and *.*.*.255 are used by the system.)

The GOT may not monitor the controller correctly with the above numbers.

Consult with the administrator of the network before setting an IP address to the GOT and controller.

When connecting to multiple GOTs

■Setting Station

When connecting two or more GOTs in the Ethernet network, set each [Station] to the GOT.

☞ Page 1816 Connected Ethernet Controller Setting

■Setting IP address

Do not use the IP address "192.168.0.18" when using multiple GOTs with the GOT 1000 series mixed.

A communication error may occur on the GOT with the IP address.

When connecting to the multiple network equipment (including GOT) in a segment

By increasing the network load, the transmission speed between the GOT and PLC may be reduced.

The following actions may improve the communication performance.

- Using a switching hub
- More high speed by 100BASE-TX (100Mbps)Reduction of the monitoring points on GOT

AB native tag name

When you use multiple AB native tags whose names are long, the monitoring process may take a longer time.

For the details, refer to the following manual.

📖GT Designer3 (GOT2000) Screen Design Manual

37.4 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1

ALLEN-BRADLEY equipment ([AB SLC500])

ALLEN-BRADLEY equipment ([AB MicroLogix])

ALLEN-BRADLEY equipment ([AB MicroLogix (Extended)])

ALLEN-BRADLEY equipment ([AB Control/CompactLogix])

ALLEN-BRADLEY equipment ([AB Control/CompactLogix(Tag)])

38 GE PLC

- Page 1823 Connectable Model List
- Page 1825 System Configuration
- Page 1840 Connection Diagram
- Page 1847 GOT Side Settings
- Page 1849 PLC Side Setting
- Page 1852 Settable Device Range
- Page 1852 Precautions

38.1 Connectable Model List

The following table shows the connectable models.

Series	Model name	Clock	Communication Type	Connectable model	Refer to
Series90-30	IC693CPU311	×	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 1825 Connecting to Series90-30
	IC693CPU313				
	IC693CPU323				
	IC693CPU350				
	IC693CPU360				
	IC693CPU363				
	IC693CPU366				
	IC693CPU367				
	IC693CPU374				
Series90-70	IC697CPU731	×	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 1831 Connecting to Series90-70
	IC697CPX772				
	IC697CPX782				
	IC697CPX928				
	IC697CPX935				
	IC697CPU780				
	IC697CGR772				
	IC697CGR935				
	IC697CPU788				
	IC697CPU789				
	IC697CPM790				

Series	Model name	Clock	Communication Type	Connectable model	Refer to
VersaMax Micro	IC200UAA003	×	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 1835 Connecting to VersaMax Micro
	IC200UAL004				
	IC200UAL005				
	IC200UAL006				
	IC200UAA007				
	IC200UAR028				
	IC200UDD110				
	IC200UDD120				
	IC200UDD212				
	IC200UDR005				
	IC200UDR006				
	IC200UDR010				
	IC200UDD064				
	IC200UDD164				
	IC200UDR164				
	IC200UDR064				
	IC200UAR014				
	IC200UDD104				
	IC200UDD112				
	IC200UDR001				
	IC200UDR002				
	IC200UDR003				

38.2 System Configuration

Connecting to Series90-30

Point

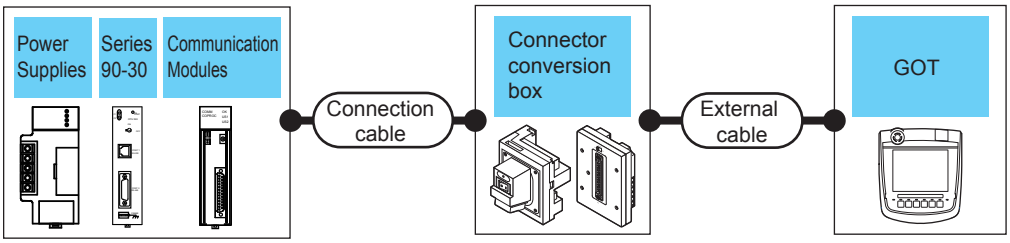
Connectable model

Only the models that are compatible with SNP-X protocol can be connected.

Communication driver

GE (SNP-X)

When using the connector conversion box



■For the RS-232 connection

PLC				Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Power Supplies*1	Model name	Communication Modules*1	Communication Type	Cable model Connection diagram number					
IC693PWR321 IC693PWR330 IC693PWR331 IC693PWR332 IC693PWR328	IC693CPU311 IC693CPU313 IC693CPU323	IC693CMM311	RS-232	User preparing Page 1840 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 PLC for 1 GOT
					GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
IC693PWR321 IC693PWR330 IC693PWR331 IC693PWR332 IC693PWR328	IC693CPU350 IC693CPU360 IC693CPU366 IC693CPU367 IC693CPU374			User preparing Page 1840 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
					GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
IC693PWR321 IC693PWR330 IC693PWR331 IC693PWR332 IC693PWR328	IC693CPU363			User preparing Page 1840 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
					GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

■For the RS-422 connection (connecting to the Communication Modules)

PLC				Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Power Supplies*1	Model name	Communication Modules*1	Communication Type	Cable model Connection diagram number					
IC693PWR321 IC693PWR330 IC693PWR331 IC693PWR332 IC693PWR328	IC693CPU311 IC693CPU313 IC693CPU323	IC693CMM311	RS-422	User preparing Page 1843 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	8 PLCs for 1 GOT
					GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
IC693PWR321 IC693PWR330 IC693PWR331 IC693PWR332 IC693PWR328	IC693CPU350 IC693CPU360 IC693CPU366 IC693CPU367 IC693CPU374			User preparing Page 1843 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		
					GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
IC693PWR321 IC693PWR330 IC693PWR331 IC693PWR332 IC693PWR328	IC693CPU363			User preparing Page 1843 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		
					GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

■For the RS-422 connection (connecting to the Power Supplies)

PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Power Supplies*1	Model name	Communication Type	Cable model Connection diagram number					
IC693PWR321 IC693PWR330 IC693PWR331 IC693PWR332 IC693PWR328	IC693CPU350 IC693CPU360 IC693CPU366 IC693CPU367 IC693CPU374	RS-422	User preparing Page 1844 RS-422 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	8 PLCs for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
IC693PWR321 IC693PWR330 IC693PWR331 IC693PWR332 IC693PWR328	IC693CPU363		User preparing Page 1844 RS-422 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

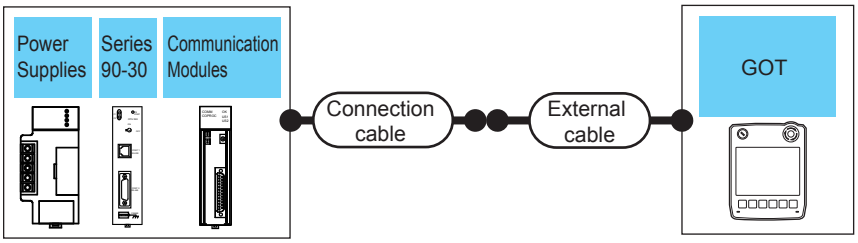
*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

■For the RS-422 connection (connecting to the PLC)

PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Power Supplies*1	Model name	Communication Type	Cable model Connection diagram number					
IC693PWR321 IC693PWR330 IC693PWR331 IC693PWR332 IC693PWR328	IC693CPU363 (CPU port 2)	RS-422	User preparing Page 1844 RS-422 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	8 PLC for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

When using the external cable (GT11H-C□□□-37P)



■For the RS-232 connection

PLC				Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Power Supplies*1	Model name	Communication Modules*1	Communication Type	Cable model Connection diagram number				
IC693PWR321 IC693PWR330 IC693PWR331 IC693PWR332 IC693PWR328	IC693CPU311 IC693CPU313 IC693CPU323	IC693CMM311	RS-232	User preparing Page 1840 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 PLC for 1 GOT
IC693PWR321 IC693PWR330 IC693PWR331 IC693PWR332 IC693PWR328	IC693CPU350 IC693CPU360 IC693CPU366 IC693CPU367 IC693CPU374			User preparing Page 1840 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS		
IC693PWR321 IC693PWR330 IC693PWR331 IC693PWR332 IC693PWR328	IC693CPU363			User preparing Page 1840 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

■For the RS-422 connection (connecting to the Communication Modules)

PLC				Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Power Supplies*1	Model name	Communication Modules*1	Communication Type	Cable model Connection diagram number				
IC693PWR321 IC693PWR330 IC693PWR331 IC693PWR332 IC693PWR328	IC693CPU311 IC693CPU313 IC693CPU323	IC693CMM311	RS-422	User preparing Page 1843 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	8 PLCs for 1 GOT
IC693PWR321 IC693PWR330 IC693PWR331 IC693PWR332 IC693PWR328	IC693CPU350 IC693CPU360 IC693CPU366 IC693CPU367 IC693CPU374			User preparing Page 1843 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
IC693PWR321 IC693PWR330 IC693PWR331 IC693PWR332 IC693PWR328	IC693CPU363			User preparing Page 1843 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

■For the RS-422 connection (connecting to the Power Supplies)

PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Power Supplies*1	Model name	Communication Type	Cable model Connection diagram number				
IC693PWR321 IC693PWR330 IC693PWR331 IC693PWR332 IC693PWR328	IC693CPU350 IC693CPU360 IC693CPU366 IC693CPU367 IC693CPU374	RS-422	User preparing Page 1844 RS-422 connection diagram 5)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	8 PLCs for 1 GOT
IC693PWR321 IC693PWR330 IC693PWR331 IC693PWR332 IC693PWR328	IC693CPU363		User preparing Page 1844 RS-422 connection diagram 5)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

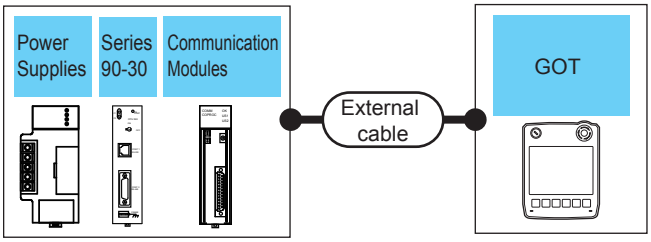
*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

■For the RS-422 connection (connecting to the PLC)

PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Power Supplies*1	Model name	Communication Type	Cable model Connection diagram number				
IC693PWR321 IC693PWR330 IC693PWR331 IC693PWR332 IC693PWR328	IC693CPU363 (CPU port 2)	RS-422	User preparing Page 1844 RS-422 connection diagram 5)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	8 PLC for 1 GOT

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

When using the external cable (GT11H-C□□□)



■For the RS-232 connection

PLC				External cable	GOT Model	Total distance	Number of connectable equipment
Power Supplies*1	Model name	Communication Modules*1	Communication Type				
IC693PWR321 IC693PWR330 IC693PWR331 IC693PWR332 IC693PWR328	IC693CPU311 IC693CPU313 IC693CPU323	IC693CMM311	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1841 RS-232 connection diagram 3)	GT 2505HS	6m	1 PLC for 1 GOT
IC693PWR321 IC693PWR330 IC693PWR331 IC693PWR332 IC693PWR328	IC693CPU350 IC693CPU360 IC693CPU366 IC693CPU367 IC693CPU374			GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1841 RS-232 connection diagram 3)	GT 2505HS		
IC693PWR321 IC693PWR330 IC693PWR331 IC693PWR332 IC693PWR328	IC693CPU363			GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1841 RS-232 connection diagram 3)	GT 2505HS		

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

■For the RS-422 connection (connecting to the Communication Modules)

PLC				External cable	GOT Model	Total distance	Number of connectable equipment
Power Supplies*1	Model name	Communication Modules*1	Communication Type				
IC693PWR321 IC693PWR330 IC693PWR331 IC693PWR332 IC693PWR328	IC693CPU311 IC693CPU313 IC693CPU323	IC693CMM311	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1844 RS-422 connection diagram 3)	GT 2505HS	13m	8 PLCs for 1 GOT
IC693PWR321 IC693PWR330 IC693PWR331 IC693PWR332 IC693PWR328	IC693CPU350 IC693CPU360 IC693CPU366 IC693CPU367 IC693CPU374			GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1844 RS-422 connection diagram 3)	GT 2505HS		
IC693PWR321 IC693PWR330 IC693PWR331 IC693PWR332 IC693PWR328	IC693CPU363			GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1844 RS-422 connection diagram 3)	GT 2505HS		

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

■For the RS-422 connection (connecting to the Power Supplies)

PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Power Supplies*1	Model name	Communication Type				
IC693PWR321 IC693PWR330 IC693PWR331 IC693PWR332 IC693PWR328	IC693CPU350 IC693CPU360 IC693CPU366 IC693CPU367 IC693CPU374	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1845 RS-422 connection diagram 6)	GT 2505HS	13m	8 PLCs for 1 GOT
IC693PWR321 IC693PWR330 IC693PWR331 IC693PWR332 IC693PWR328	IC693CPU363		GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1845 RS-422 connection diagram 6)	GT 2505HS		

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

■For the RS-422 connection (connecting to the PLC)

PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Power Supplies*1	Model name	Communication Type				
IC693PWR321 IC693PWR330 IC693PWR331 IC693PWR332 IC693PWR328	IC693CPU363 (CPU port 2)	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1845 RS-422 connection diagram 6)	GT 2505HS	13m	8 PLC for 1 GOT

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

Connecting to Series90-70

Point

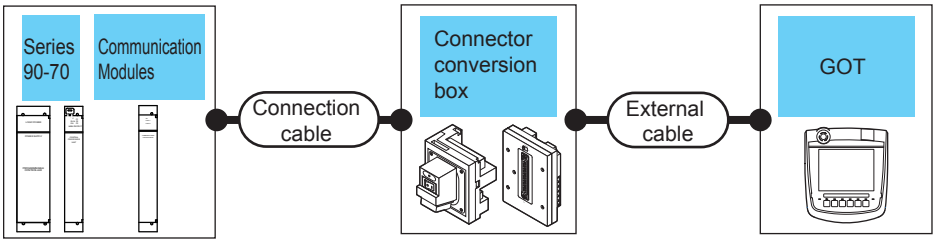
Only the models that are compatible with SNP-X protocol can be connected.

Communication driver

GE (SNP-X)

For the RS-232 connection

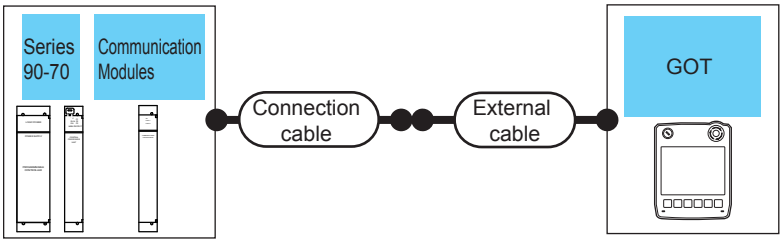
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Modules*1	Communication Type	Cable model Connection diagram number					
IC697CPX772 IC697CPX782 IC697CPX928 IC697CPX935 IC697CPU780 IC697CPU788 IC697CPU789 IC697CPU731 IC697CGR772 IC697CGR935 IC697CPM790	IC697CMM711	RS-232	User preparing Page 1840 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 PLC for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

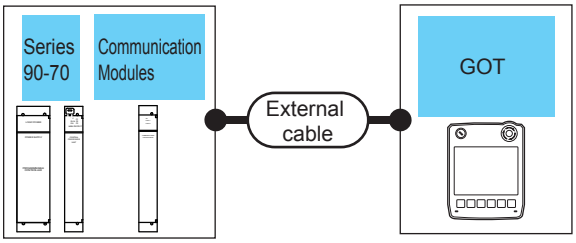
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Modules*1	Communication Type	Cable model Connection diagram number				
IC697CPX772 IC697CPX782 IC697CPX928 IC697CPX935 IC697CPU780 IC697CPU788 IC697CPU789 IC697CPU731 IC697CGR772 IC697CGR935 IC697CPM790	IC697CMM711	RS-232	User preparing Page 1840 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 PLC for 1 GOT

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

■When using the external cable (GT11H-C□□□)

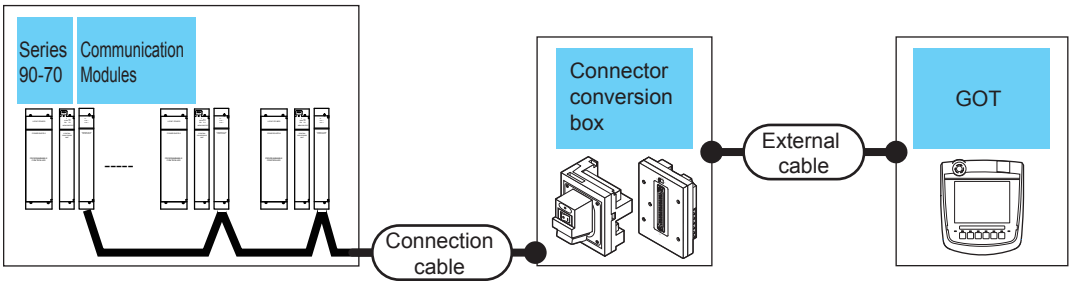


PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Modules*1	Communication Type				
IC697CPX772 IC697CPX782 IC697CPX928 IC697CPX935 IC697CPU780 IC697CPU788 IC697CPU789 IC697CPU731 IC697CGR772 IC697CGR935 IC697CPM790	IC697CMM711	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1841 RS-232 connection diagram 3)	GT 2505HS	6m	1 PLC for 1 GOT

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

For the RS-422 connection

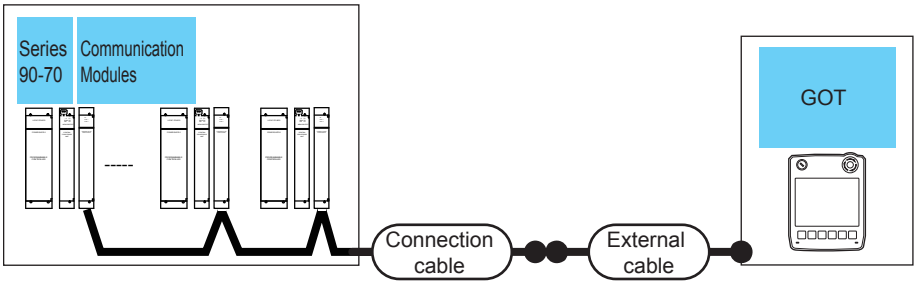
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
PLC	Communication Modules*1	Communication Type	Cable model Connection diagram number					
IC697CPX772 IC697CPX782 IC697CPX928 IC697CPX935 IC697CPU780 IC697CPU788 IC697CPU789 IC697CPU731 IC697CGR772 IC697CGR935 IC697CPM790	IC697CMM711	RS-422	User preparing Page 1843 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 8 PLCs for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

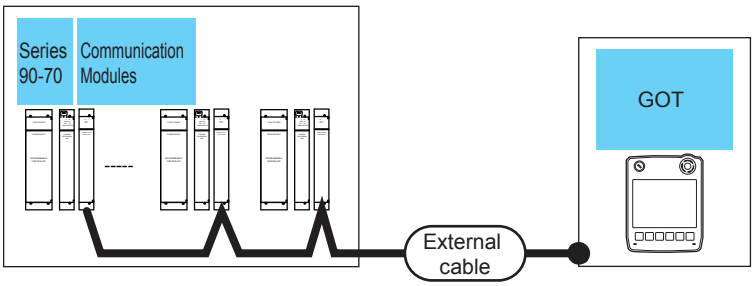
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
PLC	Communication Modules*1	Communication Type	Cable model Connection diagram number				
IC697CPX772 IC697CPX782 IC697CPX928 IC697CPX935 IC697CPU780 IC697CPU788 IC697CPU789 IC697CPU731 IC697CGR772 IC697CGR935 IC697CPM790	IC697CMM711	RS-422	User preparing Page 1843 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	Up to 8 PLCs for 1 GOT

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

■When using the external cable (GT11H-C□□□)



PLC			External cable	GOT Model	Total distance	Number of connectable equipment
PLC	Communication Modules*1	Communication Type				
IC697CPX772 IC697CPX782 IC697CPX928 IC697CPX935 IC697CPU780 IC697CPU788 IC697CPU789 IC697CPU731 IC697CGR772 IC697CGR935 IC697CPM790	IC697CMM711	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1844 RS-422 connection diagram 3)	GT 2505HS	13m	Up to 8 PLCs for 1 GOT

*1 Product manufactured by GE Corporation.
For details of the product, contact GE Corporation.

Connecting to VersaMax Micro

Point

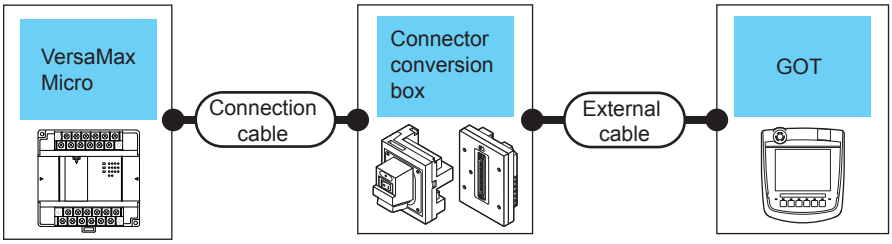
Only the models that are compatible with SNP-X protocol can be connected.

Communication driver

GE (SNP-X)

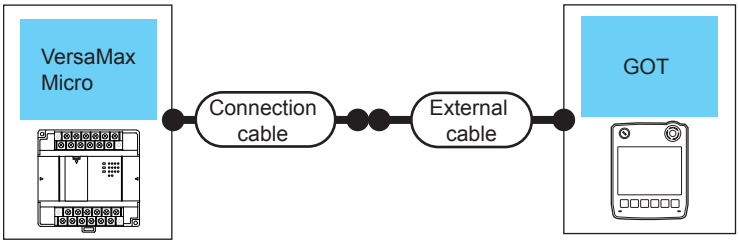
For the RS-232 connection

■When using the connector conversion box



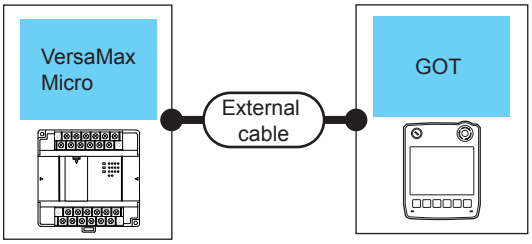
PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number					
IC200UAA003 IC200UAR014 IC200UDD104 IC200UDD112 IC200UDR001 IC200UDR002 IC200UDR003	RS-232	User preparing Page 1841 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 PLC for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
IC200UAL004 IC200UAL005 IC200UAL006 IC200UAA007 IC200UAR028 IC200UDD110 IC200UDD120 IC200UDD212 IC200UDR005 IC200UDR006 IC200UDR010 IC200UDD064 IC200UDD164 IC200UDR164 IC200UDR064		User preparing Page 1841 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

■When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type	Cable model Connection diagram number				
IC200UAA003 IC200UAR014 IC200UDD104 IC200UDD112 IC200UDR001 IC200UDR002 IC200UDR003	RS-232	User programming Page 1841 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 PLC for 1 GOT
IC200UAL004 IC200UAL005 IC200UAL006 IC200UAA007 IC200UAR028 IC200UDD110 IC200UDD120 IC200UDD212 IC200UDR005 IC200UDR006 IC200UDR010 IC200UDD064 IC200UDD164 IC200UDR164 IC200UDR064		User programming Page 1841 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS		

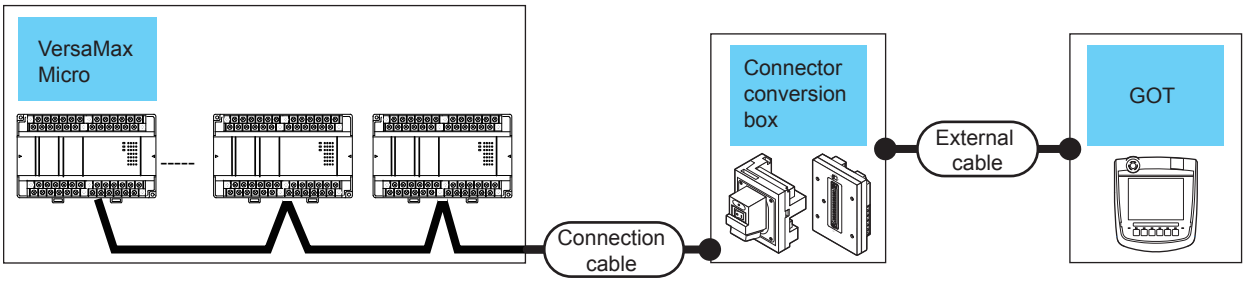
■When using the external cable (GT11H-C□□□)



PLC		External cable	GOT Model	Total distance	Number of connectable equipment
Model name	Communication Type				
IC200UAA003 IC200UAR014 IC200UDD104 IC200UDD112 IC200UDR001 IC200UDR002 IC200UDR003	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1842 RS-232 connection diagram 6)	GT 2505HS	6m	1 PLC for 1 GOT
IC200UAL004 IC200UAL005 IC200UAL006 IC200UAA007 IC200UAR028 IC200UDD110 IC200UDD120 IC200UDD212 IC200UDR005 IC200UDR006 IC200UDR010 IC200UDD064 IC200UDD164 IC200UDR164 IC200UDR064		GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1842 RS-232 connection diagram 6)	GT 2505HS		

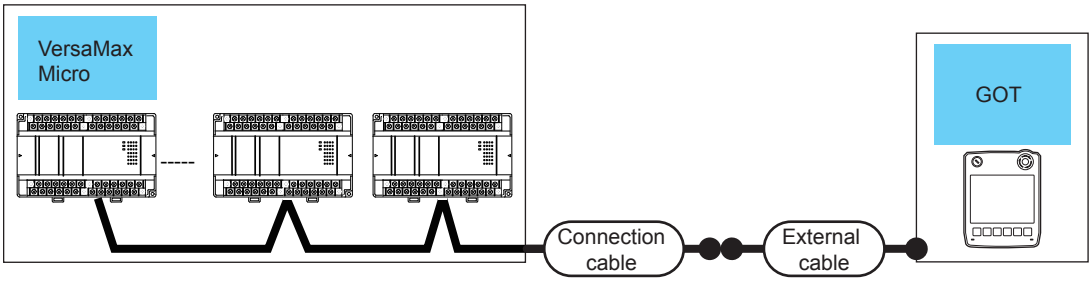
For the RS-422 connection

■When using the connector conversion box



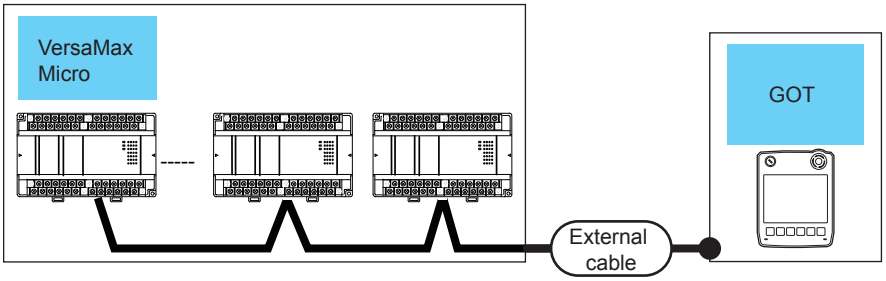
PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
PLC	Communication Type	Cable model Connection diagram number					
IC200UAL004 IC200UAL005 IC200UAL006 IC200UAA007 IC200UAR028 IC200UDD110 IC200UDD120 IC200UDD212 IC200UDR005 IC200UDR006 IC200UDR010 IC200UDD064 IC200UDD164 IC200UDR164 IC200UDR064	RS-422	User preparing Page 1845 RS-422 connection diagram 7)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 8 PLCs for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

■When using the external cable (GT11H-C□□□-37P)



PLC		Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
PLC	Communication Type	Cable model Connection diagram number				
IC200UAL004 IC200UAL005 IC200UAL006 IC200UAA007 IC200UAR028 IC200UDD110 IC200UDD120 IC200UDD212 IC200UDR005 IC200UDR006 IC200UDR010 IC200UDD064 IC200UDD164 IC200UDR164 IC200UDR064	RS-422	User preparing Page 1845 RS-422 connection diagram 8)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	Up to 8 PLCs for 1 GOT

■When using the external cable (GT11H-C□□□)



PLC		External cable	GOT Model	Total distance	Number of connectable equipment
PLC	Communication Type				
IC200UAL004 IC200UAL005 IC200UAL006 IC200UAA007 IC200UAR028 IC200UDD110 IC200UDD120 IC200UDD212 IC200UDR005 IC200UDR006 IC200UDR010 IC200UDD064 IC200UDD164 IC200UDR164 IC200UDR064	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1846 RS-422 connection diagram 9)	GT 2505HS	13m	Up to 8 PLCs for 1 GOT

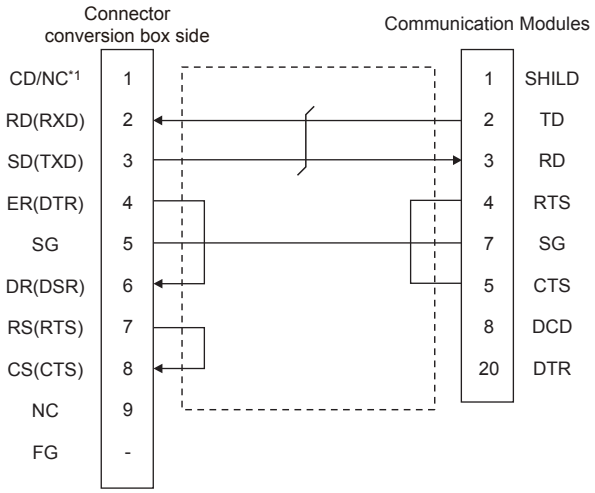
38.3 Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

RS-232 cable

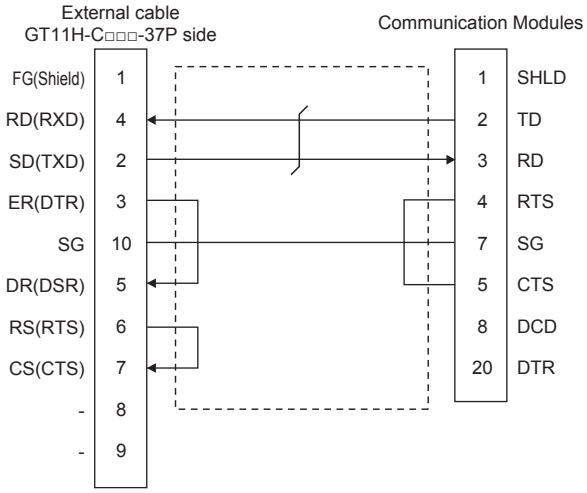
Connection diagram

■RS-232 connection diagram 1)

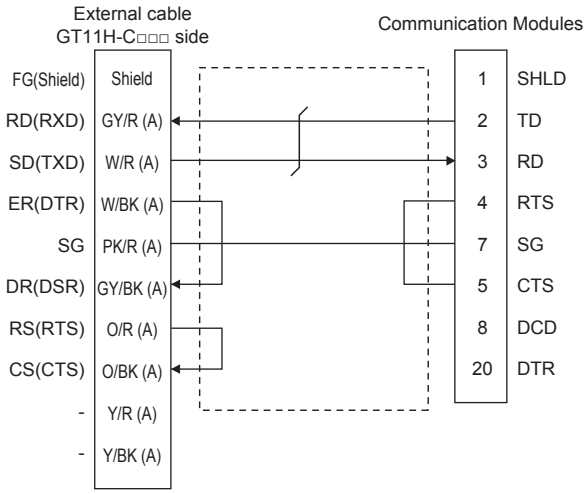


*1 GT2506HS-V: CD, GT2505HS-V: NC

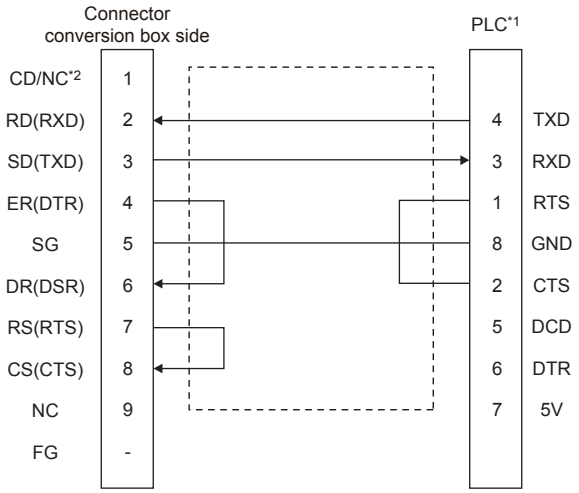
■RS-232 connection diagram 2)



■RS-232 connection diagram 3)



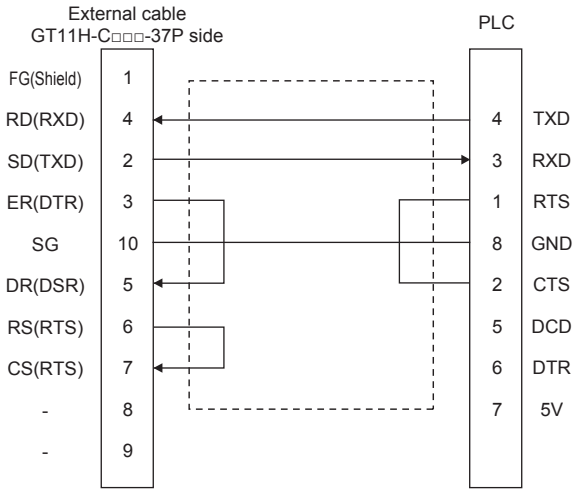
■RS-232 connection diagram 4)



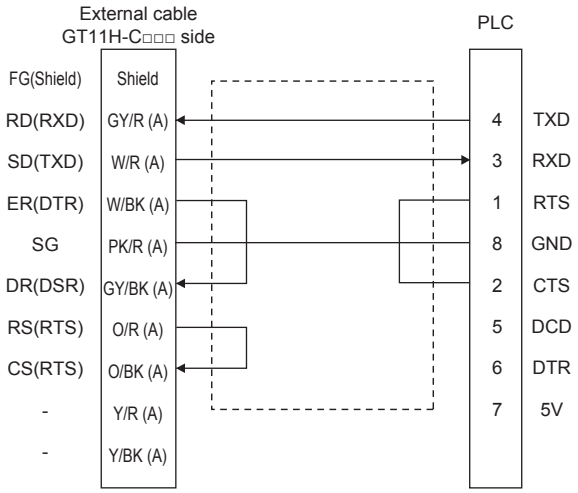
*1 For details of the pin assignment, refer to the following manual.
GE PLC user's Manual

*2 GT2506HS-V: CD, GT2505HS-V: NC

■RS-232 connection diagram 5)



■RS-232 connection diagram 6)



Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■GE PLC side connector

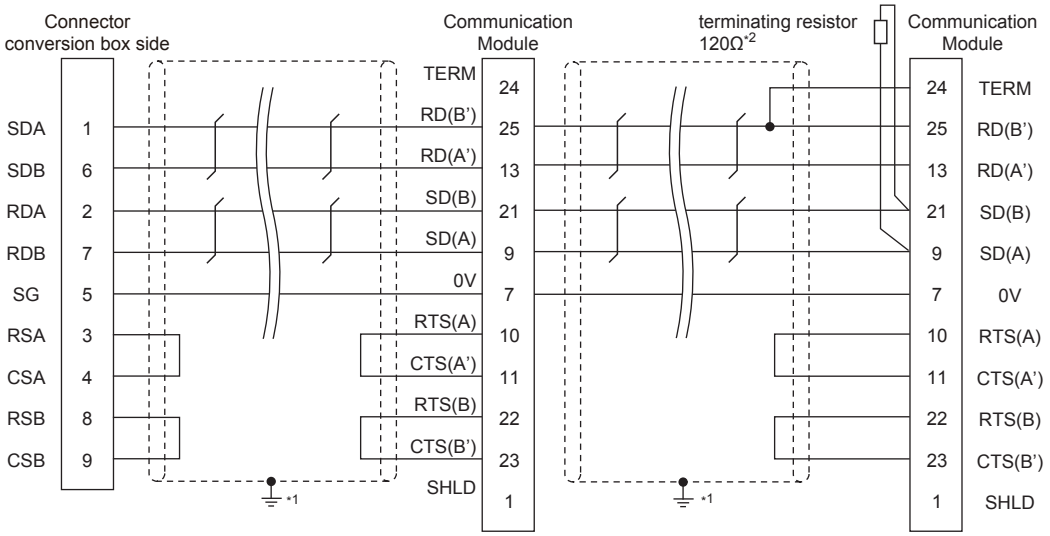
Use the connector compatible with the GE PLC side module.

For details, refer to the GE PLC user's manual.

RS-422 cable

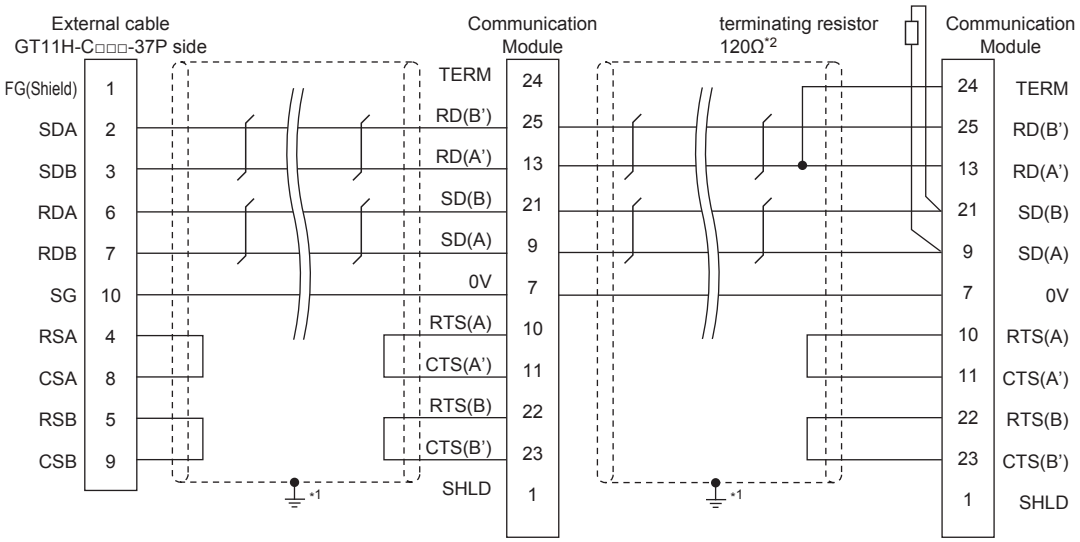
Connection diagram

■RS-422 connection diagram 1)



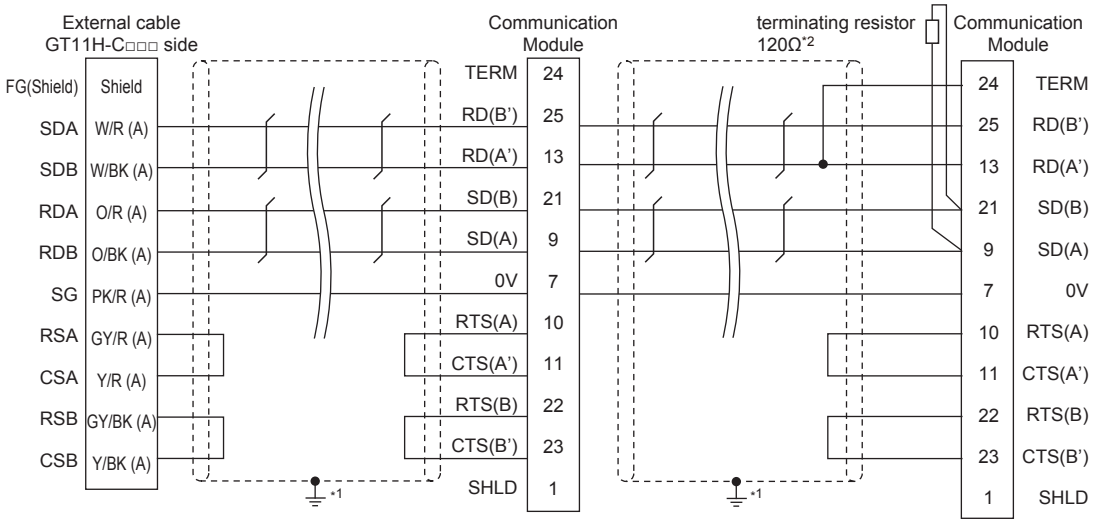
*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 A terminating resistor should be connected to communication module at a terminal station.

■RS-422 connection diagram 2)



*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 Terminating resistor should be provided for a PLC which will be a terminal.

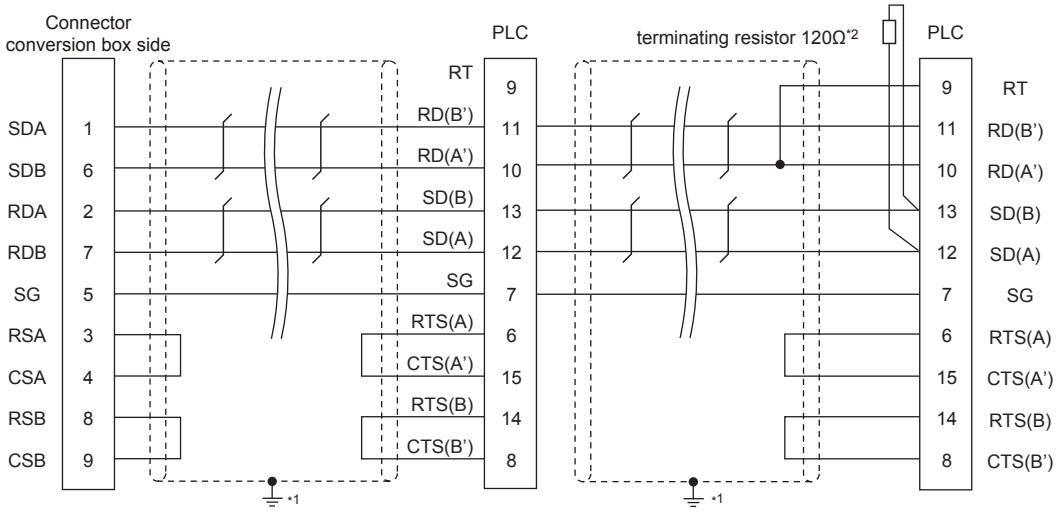
■RS-422 connection diagram 3)



*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Terminating resistor should be provided for a PLC which will be a terminal.

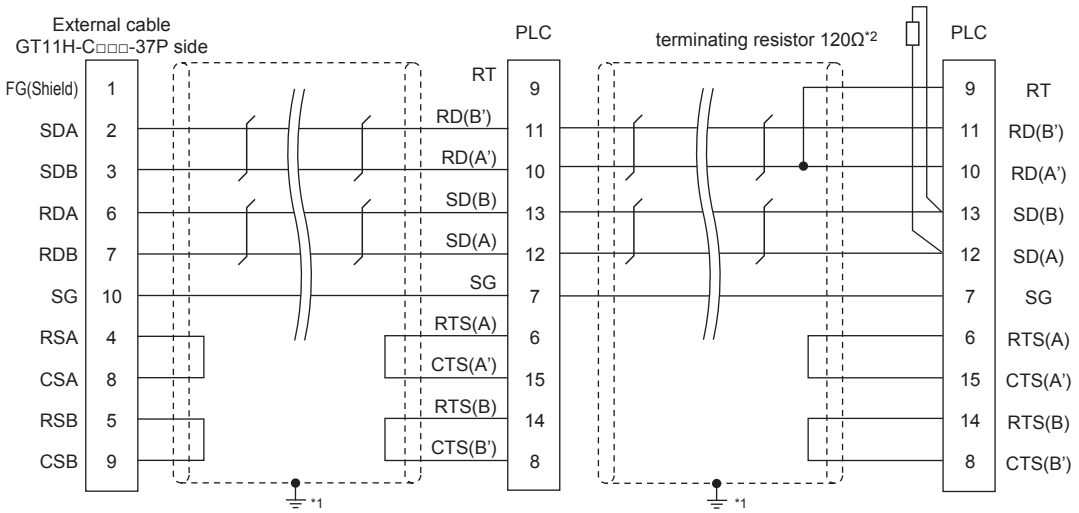
■RS-422 connection diagram 4)



*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Terminating resistor should be provided for a PLC which will be a terminal.

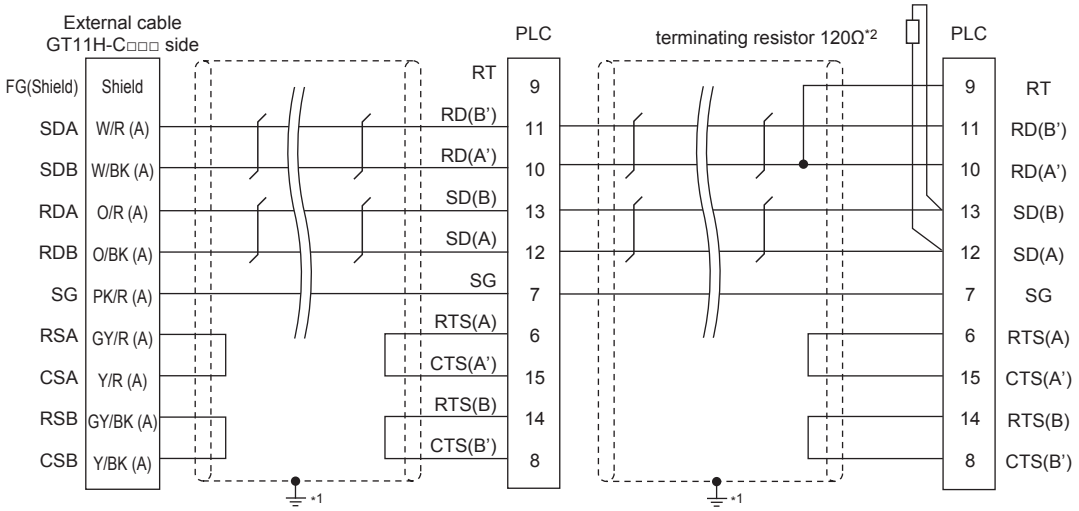
■RS-422 connection diagram 5)



*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Terminating resistor should be provided for a PLC which will be a terminal.

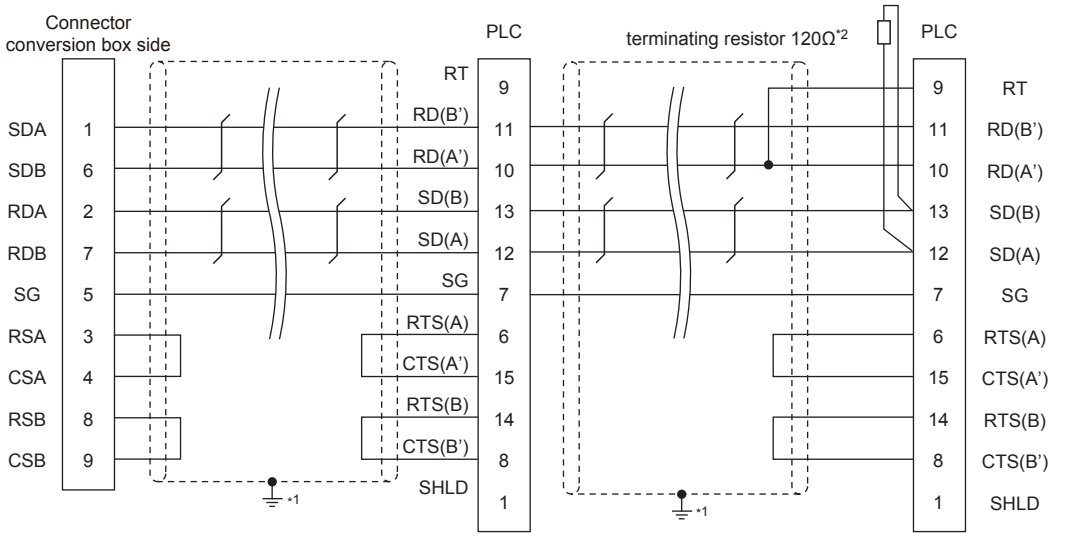
■RS-422 connection diagram 6)



*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Terminating resistor should be provided for a PLC which will be a terminal.

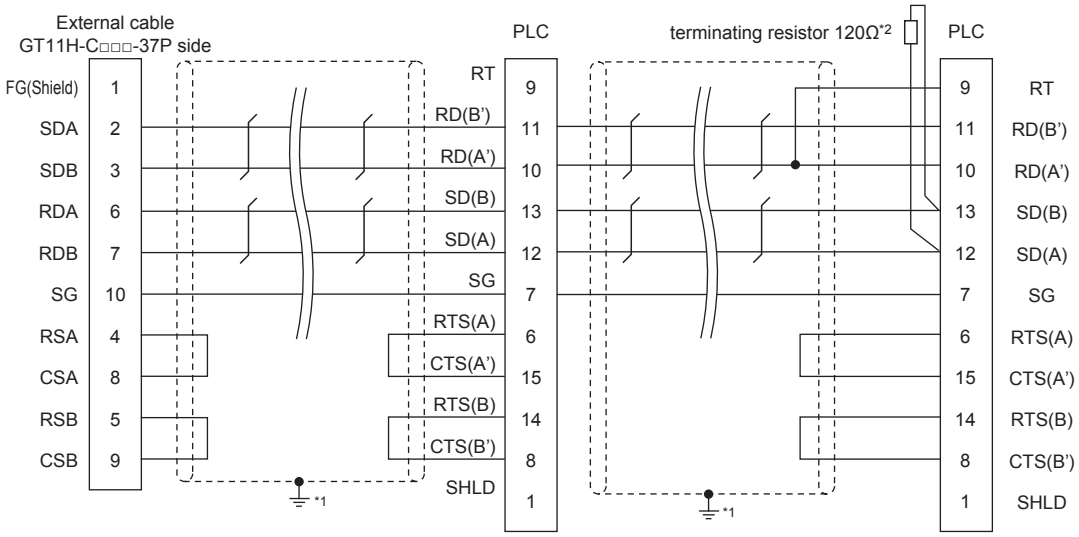
■RS-422 connection diagram 7)



*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Terminating resistor should be provided for a PLC which will be a terminal.

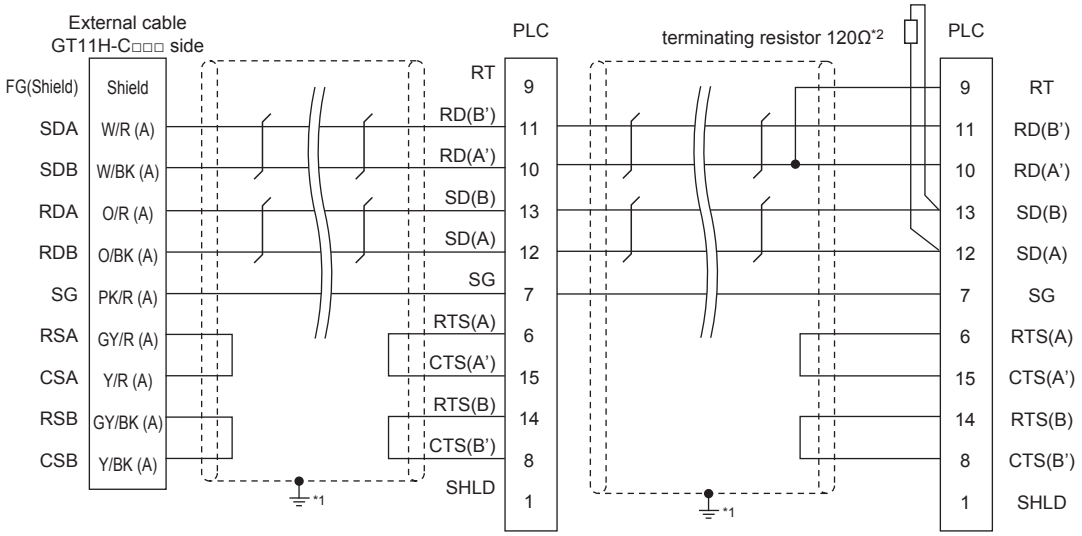
■RS-422 connection diagram 8)



*1 Connect FG grounding to the appropriate part of a cable shield line.

*2 Terminating resistor should be provided for a PLC which will be a terminal.

■RS-422 connection diagram 9)



*1 Connect FG grounding to the appropriate part of a cable shield line.
*2 Terminating resistor should be provided for a PLC which will be a terminal.

Precautions when preparing a cable

■Cable length

The total length (between GOT and controllers) of the RS-422 cable must be 13 m or shorter.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■GE PLC side connector

Use the connector compatible with the GE PLC side module.

For details, refer to the GE PLC user's manual.

Connecting terminating resistors

■GOT side

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

■GE PLC side

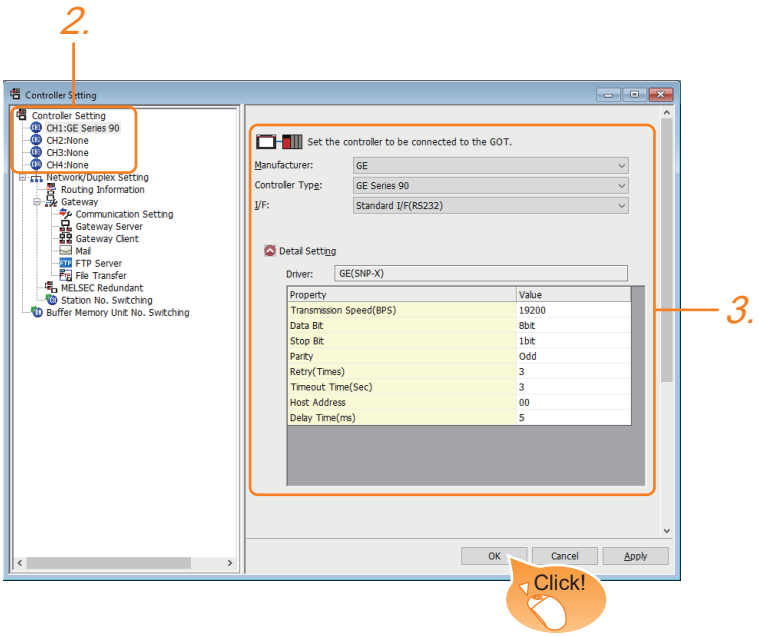
When connecting a GE PLC to the GOT, a terminating resistor must be connected.

📖GE PLC user's Manual

38.4 GOT Side Settings

Setting communication interface (Communication settings)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [GE]
- [Controller Type]: [GE Series 90]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1848 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

GE (SNP-X)

Property	Value
Transmission Speed(BPS)	19200
Data Bit	8 bit
Stop Bit	1 bit
Parity	Odd
Retry(Times)	3
Timeout Time(Sec)	3
Host Address	00
Delay Time(ms)	5

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 19200bps)	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit*1	Set this item when change the data length used for communication with the connected equipment. (Default: 8bits)	7bits/8bits
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit/2bits
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Odd)	None Even Odd
Retry	Set the number of retries to be performed when a communication error occurs. (Default: 3times)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Host Address	Specify the host address (station No. of the GOT to which the PLC is connected) in the connected network. (Default: 00)	00 to 31
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 5ms)	0 to 300ms

*1 If no setting is provided for the data length for the controller, set "8 bits".
If the setting is provided for the data length for the controller, set the same set value for the data length for the GOT as that for the PLC.

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

38.5 PLC Side Setting

Point

GE PLC

For details of GE PLCs, refer to the following manuals.

GE PLC user's Manual

Model name		Refer to
PLC CPU	Series 90-30	Page 1849 Connecting to Series 90-30
	VersaMaxMicro	Page 1850 Connecting to VersaMaxMicro
Communication Modules	IC693CMM311	Page 1850 Connecting to IC693CMM311
	IC697CMM711	Page 1851 Connecting to IC697CMM711

Connecting to Series 90-30

Communication settings

Make the communication settings using the engineering tool.

When making the settings, set [Configuration Mode] on the [Setting] tab of the engineering tool to "SNP only".

Setting item	PLC side setting
Port Mode*1	SNP
Port Type*2	Slave
Data Rate	9600bps, 19200bps
Flow Control	NONE
Parity	EVEN, ODD, NONE
Stop Bits	1bit, 2bits
Timeout*3	Long
Turn Around Delay*4	0
SNP ID*5	00 to 31
Converter Power Consumption*6	0

*1 Set to SNP.

*2 Set to Slave.

*3 Set to Long.

*4 Set to 0.

*5 Set within the range of 00 to 31.
When specifying the station No. from 0 to 9, add "0" before the number and set it as 00 to 09.

*6 Set to 0.(only when connecting to Port2)

Connecting to VersaMaxMicro

Communication settings

Make the communication settings using the engineering tool.

Setting item	PLC side setting
Data Rate	9600bps, 19200bps, 38400bps
Bits / Character*6	7bits, 8bits
Parity	EVEN, ODD, NONE
Stop Bits	1bit, 2bits
Port Mode*1	SNP
Port Type*2	Slave
Flow Control	NONE
Timeout*3	Long
Turn Around Delay*4	0
SNP ID*5	00 to 31

*1 Set to the SNP protocol.
*2 Set to Slave.
*3 Set to Long.
*4 Set to 0.
*5 Set within the range of 00 to 31.
When specifying the station No. from 0 to 9, add "0" before the number and set it as 00 to 09.
*6 Set the same set value for the data length for the GOT and PLC.

Connecting to IC693CMM311

Communication settings

Make the communication settings using the engineering tool.

When making the settings, set [Configuration Mode] on the [Setting] tab of the engineering tool to "SNP only".

Setting item	PLC side setting
SNP Enable*1	YES
SNP Mode*2	Slave
Interface*3	RS232, RS485
Data Rate	9600bps, 19200bps
Parity	ODD, NONE, EVEN
Stop Bits	1bit, 2bits
Flow Control*4	NONE
Turn Around Delay*5	NONE
Timeout*6	Long

*1 Set to YES.
*2 Set to SLAVE.
*3 Set the communication format to be used.
(only when connecting to Port2)
*4 Set to NONE.
*5 Set to NONE.
*6 Set to LONG.

Connecting to IC697CMM711

Communication settings

Make the communication settings using the engineering tool.

When making the settings, set [Configuration Mode] on the [Setting] tab of the engineering tool to "SNP only".

Setting item	PLC side setting
SNP Enable*1	YES
SNP Mode*2	Slave
Interface*3	RS232, RS485
Data Rate	9600bps, 19200bps
Parity	ODD, NONE, EVEN
Stop Bits	1bit, 2bits
Flow Control*4	NONE
Turn Around Delay*5	NONE
Timeout*6	Long

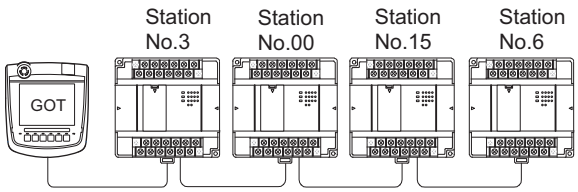
*1 Set to YES.
*2 Set to SLAVE.
*3 Set the communication format to be used.
(only when connecting to Port2)
*4 Set to NONE.
*5 Set to NONE.
*6 Set to LONG.

Station number setting

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.



Examples of station number setting

Direct specification

Specify the station No. of the PLC to be changed when setting device.

Specification range
00 to 31

Point

PLC Station No. settings

Make sure to set a 2-digit number for the station No. of the PLC to be monitored by the GOT.

38.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1
GE equipment ([GE Series 90])

38.7 Precautions

GOT clock control

The PLC clock data cannot be written to or read from the GOT.

The settings of "time adjusting" or "time broadcast" made on the GOT will be disabled on the PLC.

39 LS INDUSTRIAL SYSTEMS PLC

- Page 1853 Connectable Model List
- Page 1854 Serial Connection
- Page 1871 Ethernet Connection
- Page 1879 Settable Device Range

39.1 Connectable Model List

The following table shows the connectable models.

Series		Model name	Clock	Communication Type	Connectable model	Refer to
MASTER-K	K80S	K7M-D□□□S(/DC)	○	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 1854 Connecting to K80S or K120S
	K120S	K7M-D□□□U				
	K200S	K3P-07□S	○	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 1857 Connecting to K200S
	K300S	K4P-15AS	○	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 1860 Connecting to K300S
XGT	XGK	XGK-CPUU XGK-CPUH XGK-CPUA XGK-CPUS XGK-CPUE XGK-CPUUN XGK-CPUHN XGK-CPUSN	○	Ethernet	GT 2506 HS GT 2505 HS	☞ Page 1871 Connecting to XGK

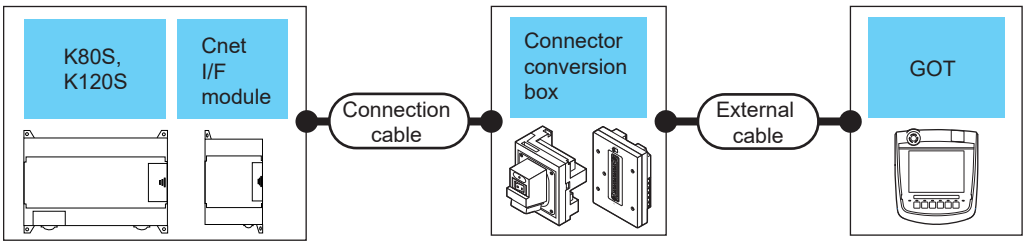
39.2 Serial Connection

Connecting to K80S or K120S

Communication driver
LS Industrial Systems
MASTER-K

When connecting to one PLC

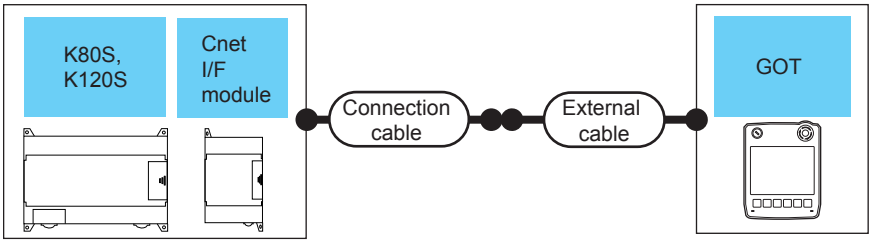
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Series	Cnet I/F module*1	Communication Type	Cable model Connection diagram number					
K80S K120S	-	RS-232	User preparing Page 1864 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 PLC for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	G7L-CUEB		User preparing Page 1865 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS		
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

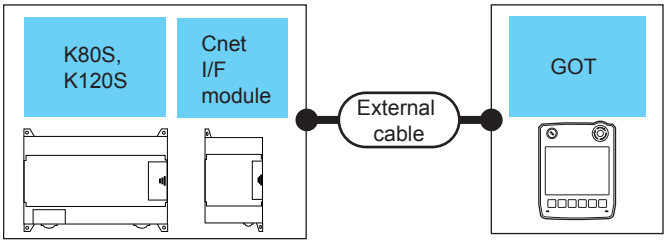
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Series	Cnet I/F module*1	Communication Type	Cable model Connection diagram number				
K80S K120S	-	RS-232	User preparing Page 1864 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 PLC for 1 GOT
	G7L-CUEB		User preparing Page 1865 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

■When using the external cable (GT11H-C□□□)

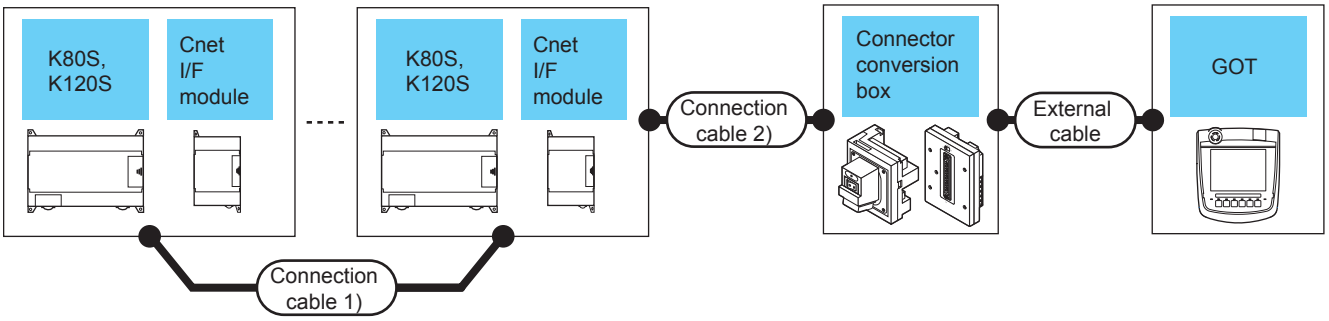


PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Series	Cnet I/F module*1	Communication Type				
K80S K120S	-	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1864 RS-232 connection diagram 3)	GT 2505HS	6m	1 PLC for 1 GOT
	G7L-CUEB		GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1865 RS-232 connection diagram 6)	GT 2505HS	6m	

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

When connecting to multiple PLCs

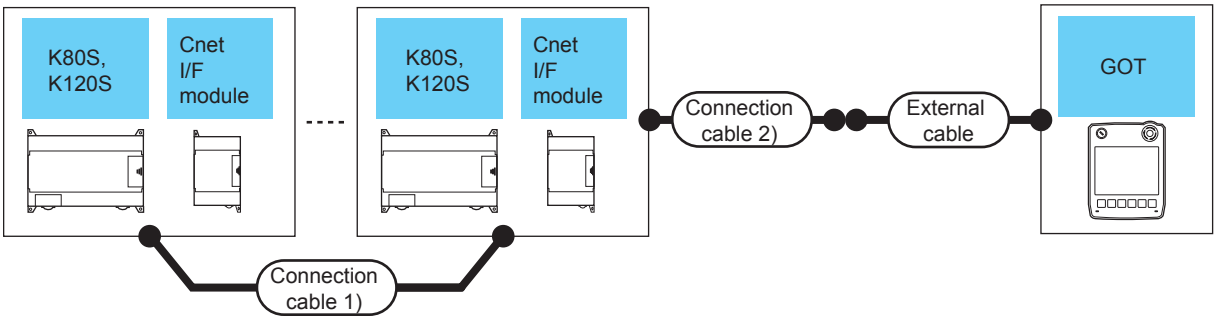
■When using the connector conversion box



PLC	Connection cable 1)	Cnet I/F module*1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Series	Cable model Connection diagram number	Model name	Communication Type	Cable model Connection diagram number					
K80S K120S	User preparing Page 1867 RS-422 connection diagram 4)	G7L-CUEC	RS-422	User preparing Page 1866 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	31 PLCs for 1 GOT
					GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		10 PLCs for 1 GOT

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.
*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

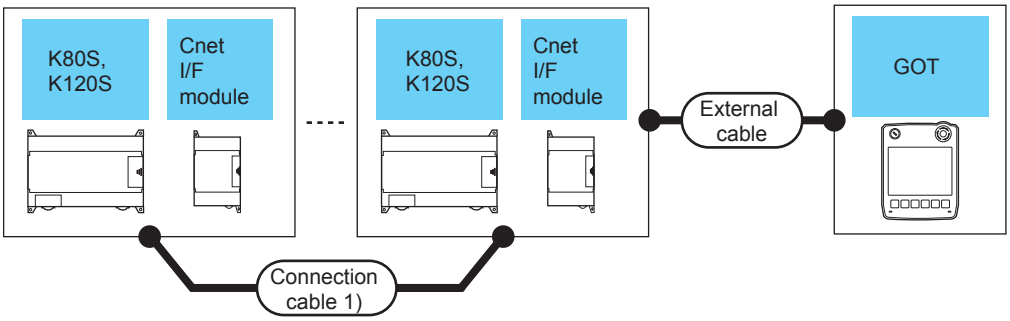


PLC	Connection cable 1)	Cnet I/F module*1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Series	Cable model Connection diagram number	Model name	Communication Type	Cable model Connection diagram number				
K80S K120S	User preparing Page 1867 RS-422 connection diagram 4)	G7L-CUEC	RS-422	User preparing Page 1866 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	10 PLCs for 1 GOT

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



PLC	Connection cable 1)	Cnet I/F module*1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Series	Cable model Connection diagram number	Model name	Communication Type				
K80S K120S	User preparing Page 1867 RS-422 connection diagram 4)	G7L-CUEC	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1867 RS-422 connection diagram 3)	GT 2505HS	13m	10 PLCs for 1 GOT

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

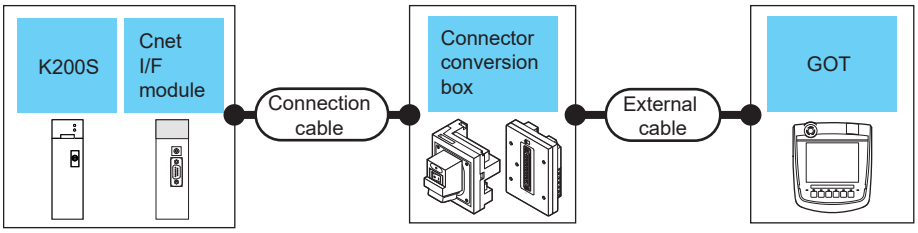
*2 The distance from the GOT to the PLC (Connection cable 1) + External cable)

Connecting to K200S

Communication driver
LS Industrial Systems MASTER-K

When connecting to one PLC

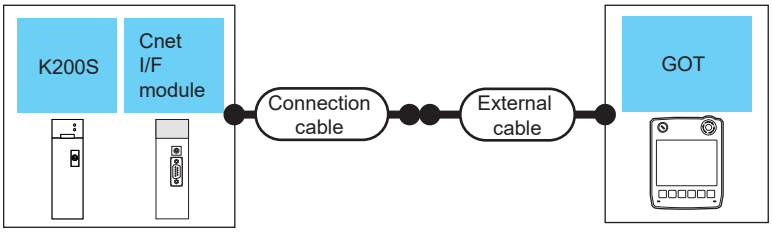
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Series	Cnet I/F module*1	Communication Type	Cable model Connection diagram number					
K200S	G6L-CUEB	RS-232	User preparing Page 1865 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 PLC for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

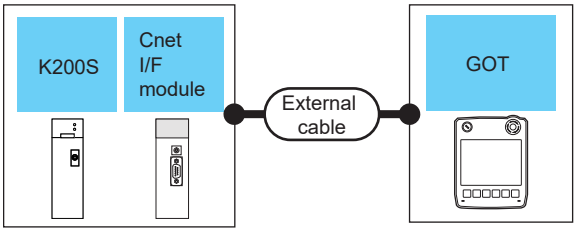
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Series	Cnet I/F module*1	Communication Type	Cable model Connection diagram number				
K200S	G6L-CUEB	RS-232	User preparing Page 1865 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 PLC for 1 GOT

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

■When using the external cable (GT11H-C□□□)

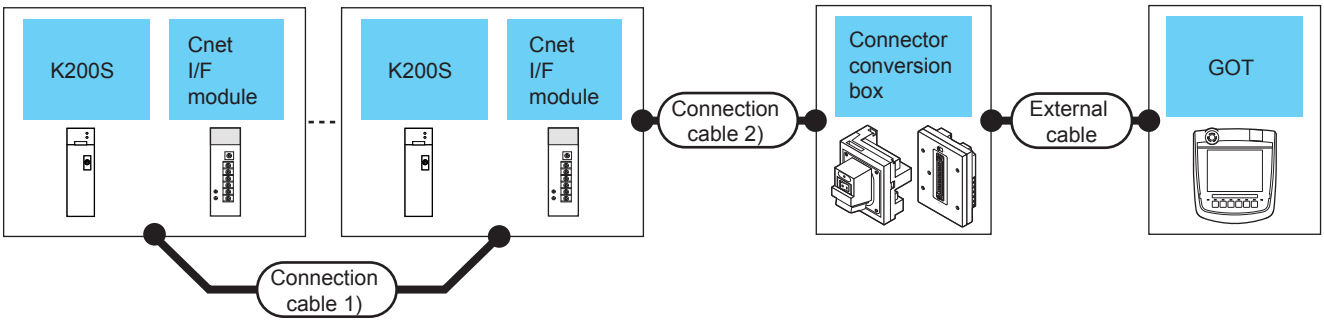


PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Series	Cnet I/F module*1	Communication Type				
K200S	G6L-CUEB	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1865 RS-232 connection diagram 6)	GT 2505HS	6m	1 PLC for 1 GOT

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

When connecting to multiple PLCs

■When using the connector conversion box

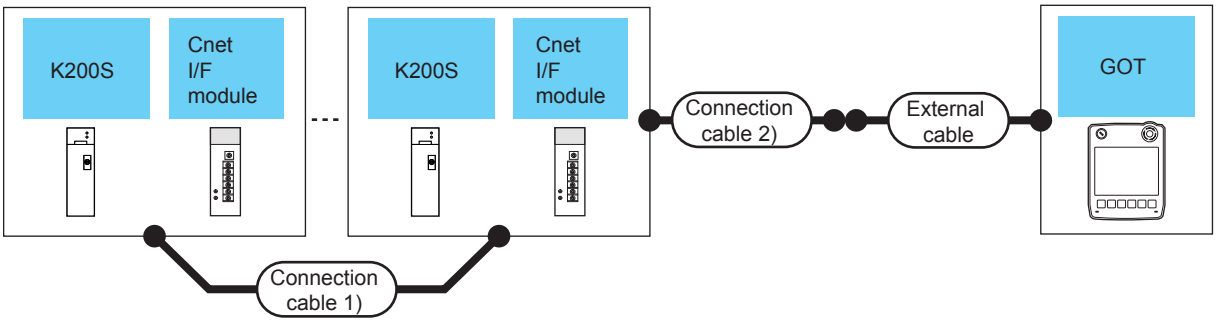


PLC	Connection cable 1)	Cnet I/F module*1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Series	Cable model Connection diagram number	Model name	Communication Type	Cable model Connection diagram number					
K200S	User preparing Page 1867 RS-422 connection diagram 4)	G6L-CUEC	RS-422	User preparing Page 1866 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	31 PLCs for 1 GOT
					GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		10 PLCs for 1 GOT

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

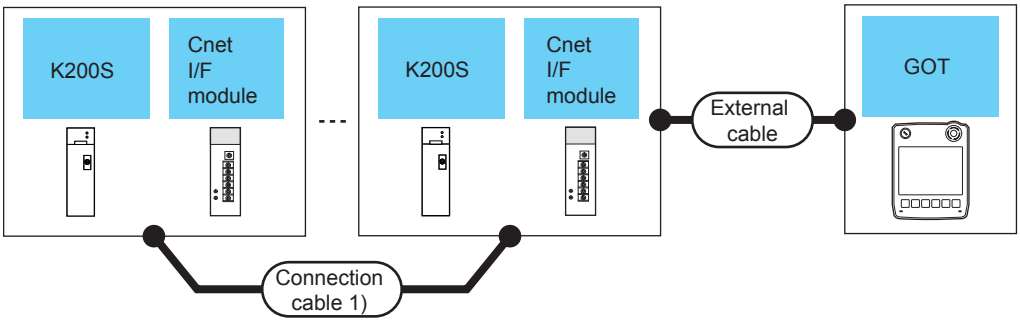


PLC	Connection cable 1)	Cnet I/F module*1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Series	Cable model Connection diagram number	Model name	Communication Type	Cable model Connection diagram number				
K200S	User preparing Page 1867 RS-422 connection diagram 4)	G6L-CUEC	RS-422	User preparing Page 1866 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	10 PLCs for 1 GOT

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



PLC	Connection cable 1)	Cnet I/F module*1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Series	Cable model Connection diagram number	Model name	Communication Type				
K200S	(User preparing) Page 1867 RS-422 connection diagram 4)	G6L-CUEC	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1867 RS-422 connection diagram 3)	GT 2505HS	13m	10 PLCs for 1 GOT

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

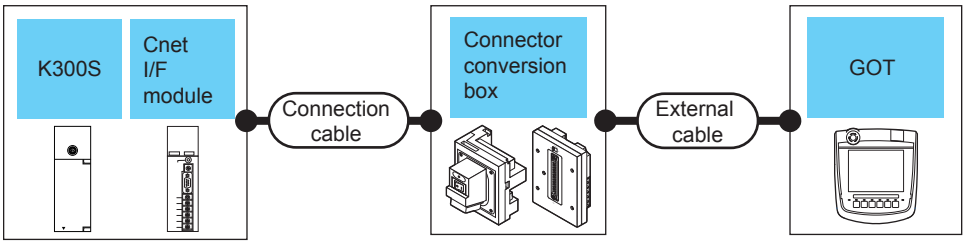
*2 The distance from the GOT to the PLC (Connection cable 1) +External cable)

Connecting to K300S

Communication driver
LS Industrial Systems MASTER-K

When connecting to one PLC

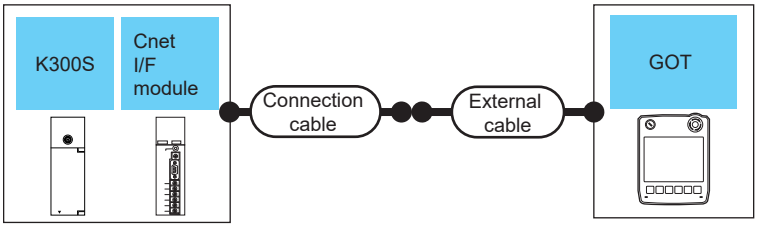
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Series	Cnet I/F module*1	Communication Type	Cable model Connection diagram number					
K300S	G4L-CUEA	RS-232	(User preparing) Page 1865 RS-232 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 PLC for 1 GOT
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

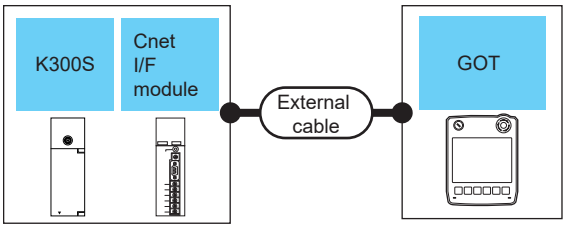
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Series	Cnet I/F module*1	Communication Type	Cable model Connection diagram number				
K300S	G4L-CUEA	RS-232	User preparing Page 1865 RS-232 connection diagram 5)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 PLC for 1 GOT

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

■When using the external cable (GT11H-C□□□)

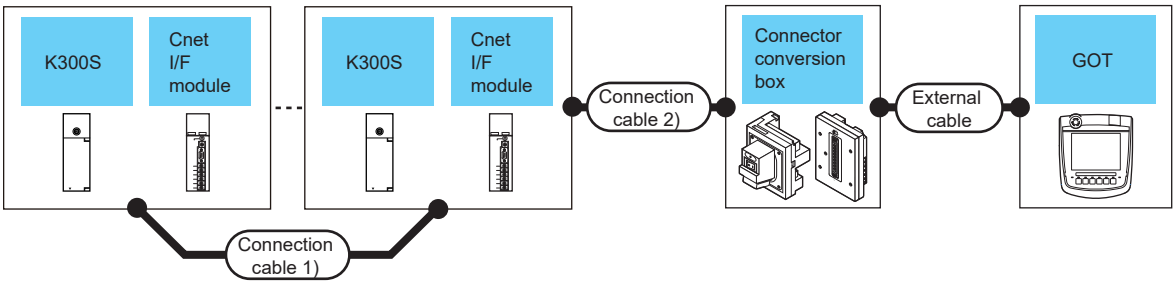


PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Series	Cnet I/F module*1	Communication Type				
K300S	G4L-CUEA	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1865 RS-232 connection diagram 6)	GT 2505HS	6m	1 PLC for 1 GOT

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

When connecting to multiple PLCs

■When using the connector conversion box

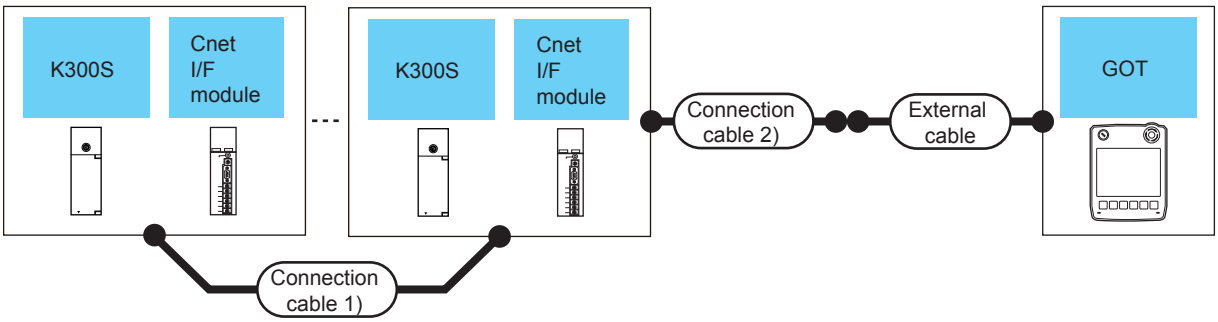


PLC	Connection cable 1)	Cnet I/F module*1		Connection cable 2)	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Series	Cable model Connection diagram number	Cnet I/F module*1	Communication Type	Cable model Connection diagram number					
K300S	User preparing Page 1867 RS-422 connection diagram 4)	G4L-CUEA	RS-422	User preparing Page 1866 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	31 PLCs for 1 GOT
					GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		10 PLCs for 1 GOT

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□-37P)

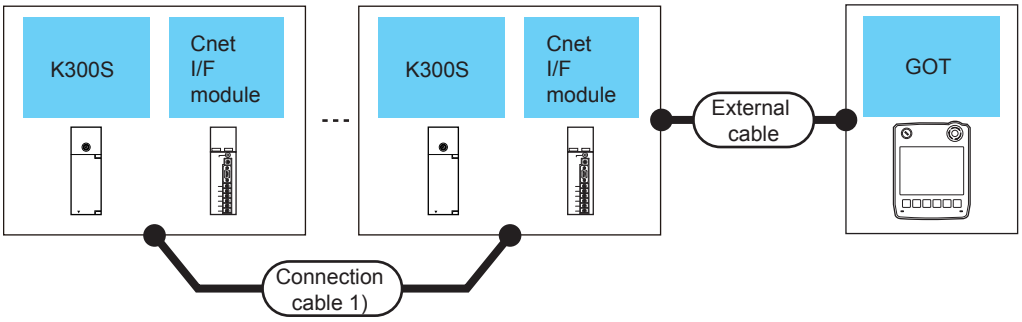


PLC	Connection cable 1)	Cnet I/F module*1		Connection cable 2)	External cable	GOT Model	Total distance *2	Number of connectable equipment
Series	Cable model Connection diagram number	Cnet I/F module*1	Communication Type	Cable model Connection diagram number				
K300S	User preparing Page 1867 RS-422 connection diagram 4)	G4L-CUEA	RS-422	User preparing Page 1866 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	10 PLCs for 1 GOT

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

*2 The distance from the GOT to the PLC (Connection cable 1) + Connection cable 2) + External cable)

■When using the external cable (GT11H-C□□□)



PLC	Connection cable 1)	Cnet I/F module*1		External cable	GOT Model	Total distance *2	Number of connectable equipment
Series	Cable model Connection diagram number	Cnet I/F module*1	Communication Type				
K300S	User preparing Page 1867 RS-422 connection diagram 4)	G4L-CUEA	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1867 RS-422 connection diagram 3)	GT 2505HS	13m	10 PLCs for 1 GOT

*1 Product manufactured by LS Industrial Systems Co., Ltd.
For details of the product, contact LS Industrial Systems Co.,Ltd.

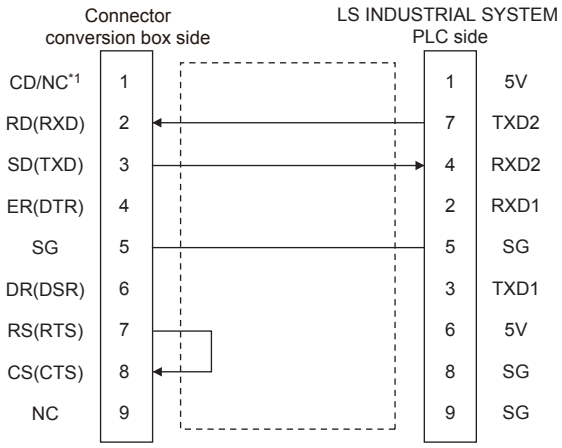
*2 The distance from the GOT to the PLC (Connection cable 1) +External cable)

Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

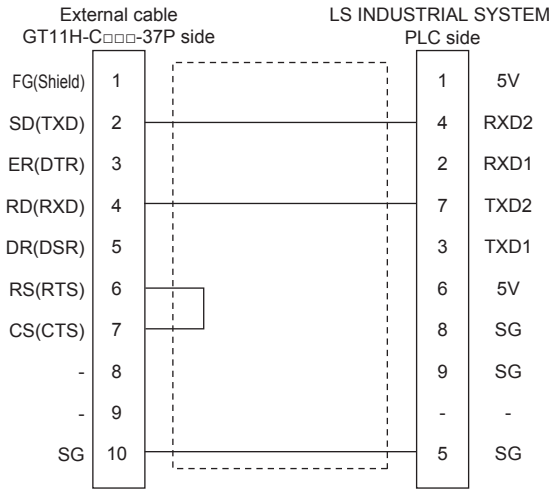
RS-232 cable

■RS-232 connection diagram 1)

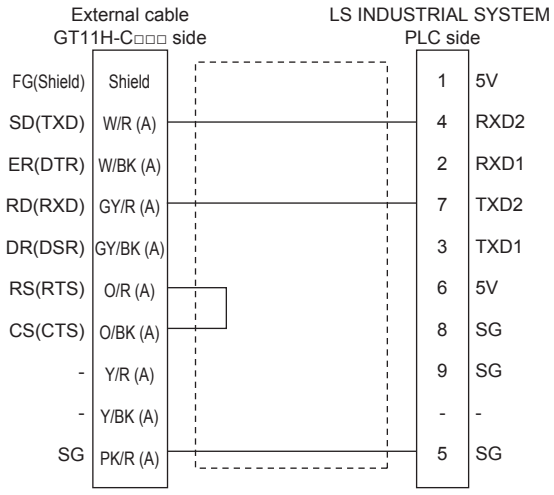


*1 GT2506HS-V: CD, GT2505HS-V: NC

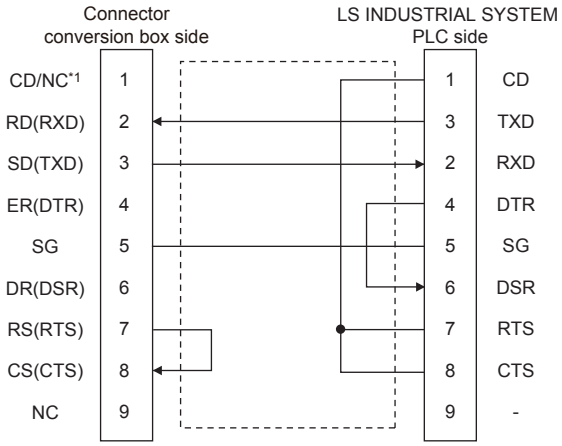
■RS-232 connection diagram 2)



■RS-232 connection diagram 3)

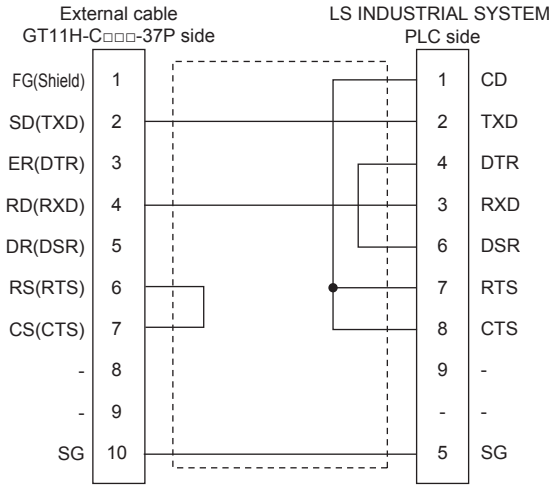


■RS-232 connection diagram 4)

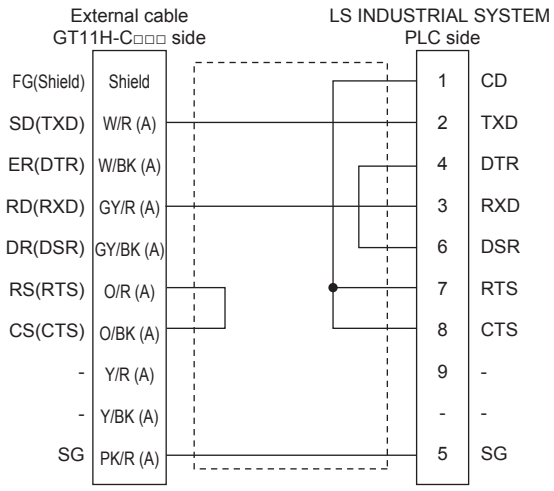


*1 GT2506HS-V: CD, GT2505HS-V: NC

■RS-232 connection diagram 5)



■RS-232 connection diagram 6)



■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

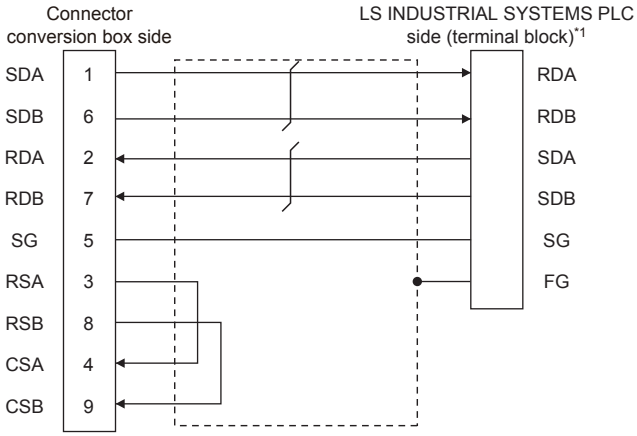
• LS INDUSTRIAL SYSTEMS PLC side connector

Use the connector compatible with the LS INDUSTRIAL SYSTEMS PLC side module.

For details, refer to the user's manual of the LS INDUSTRIAL SYSTEMS PLC.

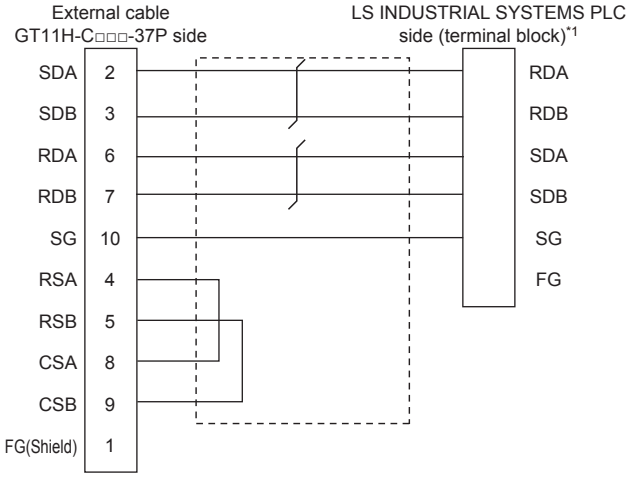
RS-422 cable

■RS-422 connection diagram 1)



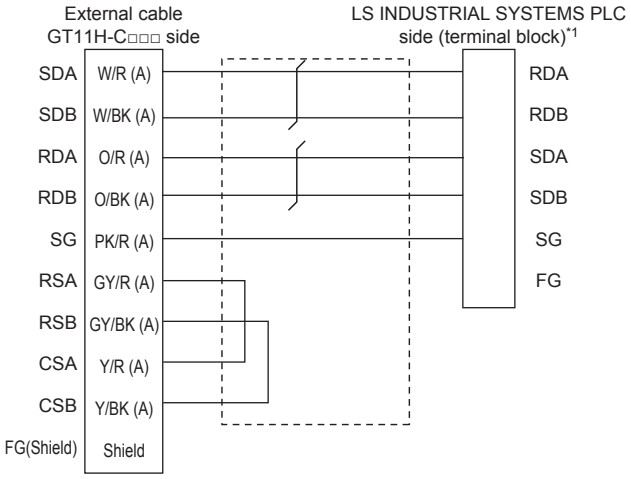
*1 For the system terminal, connect a 120Ω (1/2W) terminating resistor across RDA and RDB, and across SDA and SDB respectively.

■RS-422 connection diagram 2)



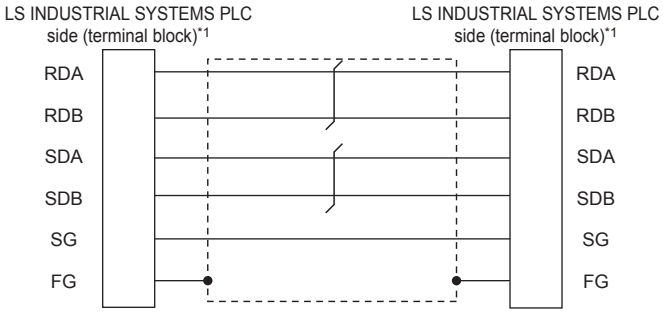
*1 For the system terminal, connect a 120Ω (1/2W) terminating resistor across RDA and RDB, and across SDA and SDB respectively.

■RS-422 connection diagram 3)



*1 For the system terminal, connect a 120Ω (1/2W) terminating resistor across RDA and RDB, and across SDA and SDB respectively.

■RS-422 connection diagram 4)



*1 For the system terminal, connect a 120Ω (1/2W) terminating resistor across RDA and RDB, and across SDA and SDB respectively.

■Precautions when preparing a cable

• Cable length

The total length (between GOT and controllers) of the RS-422 cable must be 13 m or shorter.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

• LS INDUSTRIAL SYSTEMS PLC side connector

Use the connector compatible with the LS INDUSTRIAL SYSTEMS PLC side module.

For details, refer to the user's manual of the LS INDUSTRIAL SYSTEMS PLC.

■Connecting terminating resistors

• GOT side

When connecting a PLC to the GOT, a terminating resistor must be connected to the GOT.

◇For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

◇For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

• LS INDUSTRIAL SYSTEMS PLC side

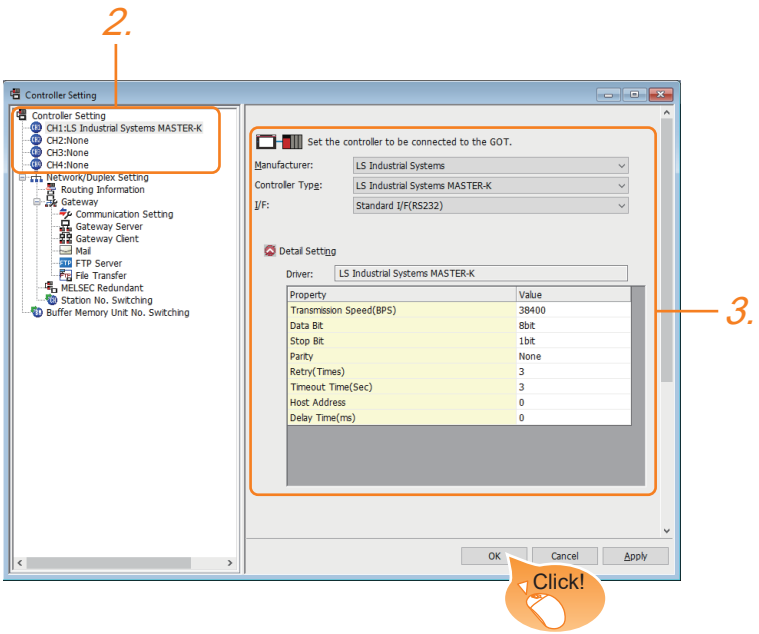
When connecting an LS INDUSTRIAL SYSTEMS PLC to the GOT, a terminating resistor must be connected.

☞ Page 1866 RS-422 cable

GOT Side Settings

Setting communication interface (Communication settings)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [LS Industrial Systems]
- [Controller Type]: [LS Industrial Systems MASTER-K]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1869 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
Transmission Speed(BPS)	38400
Data Bit	8 bit
Stop Bit	1 bit
Parity	None
Retry(Times)	3
Timeout Time(Sec)	3
Host Address	0
Delay Time(ms)	0

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 38400bps)	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bits)	7bits/8bits
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit/2bits
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: None)	None Even Odd
Retry	Set the number of retries to be performed when a communication error occurs. (Default: 3times)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	3 to 30sec
Host Address	Specify the host address (station No. of the PLC to which the GOT is connected) in the network of the GOT. (Default: 0)	0 to 31
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300 (ms)

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

PLC Side Setting

Point

LS INDUSTRIAL SYSTEMS PLC

For details of LS INDUSTRIAL SYSTEMS PLCs, refer to the following manual.

User's Manual of the LS INDUSTRIAL SYSTEMS PLC

Model name		Refer to
PLC CPU	K80S K120S	☞ Page 1870 Connecting to PLC CPU
	K200S	
	K300S	
Cnet I/F module	G7L-CUEB	☞ Page 1870 Connecting to Cnet I/F module
	G7L-CUEC	
	G6L-CUEB	
	G6L-CUEC	
	G4L-CUEA	

Connecting to PLC CPU

■Settings of the communication specifications

There is no item to be set using the hardware.

Set the items using the engineering software for MASTER-K.

Item	Setting details
Station No.	0 to 31
Communication speed	1200, 2400, 4800, 9600, 19200, 38400, 57600bps
Data bit	7 or 8
Parity bit	None, Even, Odd
Stop bit	1 or 2

*1 For the setting method of the engineering software, refer to the following.
User's Manual of the LS INDUSTRIAL SYSTEMS PLC

Connecting to Cnet I/F module

■Settings of the communication specifications

There is no item to be set using the hardware.

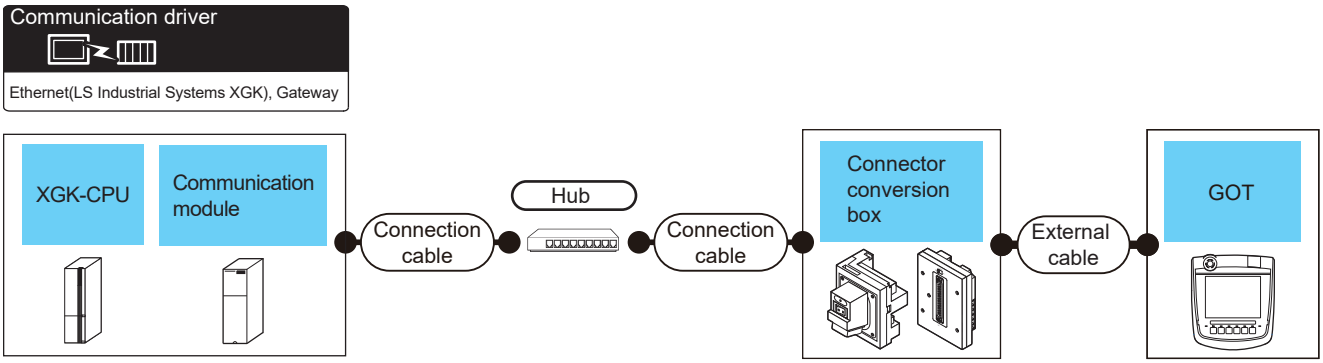
Set the items using the engineering software for MASTER-K.

Item		Setting details
Communication protocol		Dedicated protocol
Communication format	Data bit	7 or 8
	Stop bit	1 or 2
	Start bit	1
	Parity bit	Even/Odd/None
Channel selection		Stand-alone mode/Interlocking mode
Synchronization		Asynchronous
Transmission speed (bps)	RS-232C	300/600/1200/2400/4800/9600/19200/38400
	RS-422/485	300/600/1200/2400/4800/9600/19200/38400/76800

*1 For the setting method of the engineering software, refer to the following.
User's Manual of the LS INDUSTRIAL SYSTEMS PLC

39.3 Ethernet Connection

Connecting to XGK



PLC		Connection cable		Connector conversion box	External cable*5	GOT Model	Number of connectable equipment
Model name	Communication module *1*2	Cable model *3	Maximum segment length *4				
XGK-CPUU XGK-CPUH XGK-CPUA XGK-CPUS XGK-CPUE	XGL-EFMT(B)	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	• 63 PLCs or less for 1 GOT • 16 GOTs or less for 1 XGL-EFMT(B) when connecting to the communication module*6 • 4 GOTs or less for 1 XGK-CPU when connecting to the Ethernet port built in the CPU*6
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)		GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P (3m) GT11H-C60-37P (6m) GT11H-C100-37P(10m)		
XGK-CPUUN XGK-CPUHN XGK-CPUSN	XGL-EFMT(B)			GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P (3m) GT11H-C60-37P (6m) GT11H-C100-37P(10m)		
	-(Ethernet port built in the CPU)			GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P (3m) GT11H-C60-37P (6m) GT11H-C100-37P(10m)		

*1 Product manufactured by LS Industrial Systems Co., Ltd. For details of the product, contact LS Industrial Systems Co.,Ltd.

*2 Select one of the following for [Unit Type] in [Connected Ethernet Controller Setting] of GT Designer3.
• When connecting to the communication module: [XGL-EFMT(B)]
• When connecting to the Ethernet port built in the CPU: [XGK-CPU]
For [Connected Ethernet Controller Setting] of GT Designer3, refer to the following.
☞ Page 1876 Connected Ethernet controller setting

*3 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system.
Connect to the Ethernet module, hub, transceiver or other system equipment corresponding to the applicable Ethernet network system.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the target device and hub, use a cable according to the target device configuration

*4 A length between a hub and a node.
The maximum distance differs depending on the Ethernet device to be used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Max. 4 nodes for a cascade connection (500m)
• 100BASE-TX: Max. 2 nodes for a cascade connection (205m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

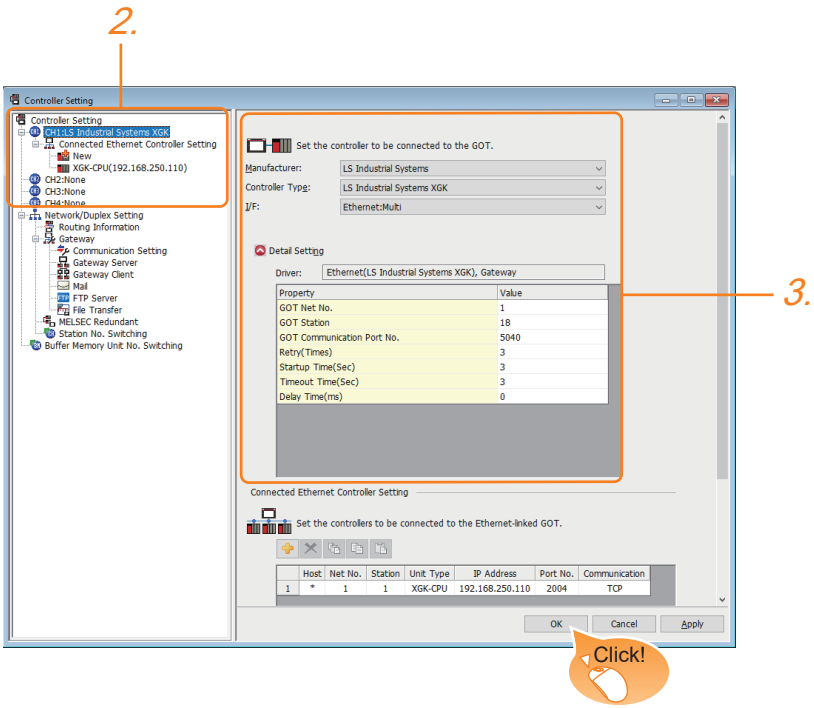
*5 Use C or later version of GT11H-C□□-37P.

*6 Set the number of connected GOTs in the engineering software for the PLC.
☞ Page 1877 PLC Side Setting

GOT side settings

Setting communication interface (Communication settings)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [LS Industrial Systems]
- [Controller Type]: [LS Industrial Systems XGK]
- [I/F]: [Ethernet: Multi]
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1874 Communication detail settings

4. When you have completed the setting, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.
☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
GOT Net No.	1
GOT Station	18
GOT Communication Port No.	5040
Retry(Times)	3
Startup Time(Sec)	3
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
GOT Net No.	Set the network No. of the GOT. (Default: 1)	1 to 239
GOT Station *1	Set the station No. of the GOT. (Default: 18)	1 to 64
GOT Communication Port No.	Set the GOT port No. for the connection with the Ethernet equipment. (Default: 5040 *2)	1024 to 5010, 5014 to 49152, 49171 to 65534
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 3times)	0 to 5times
Startup Time	Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU. (Default: 3sec)	3 to 255sec
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 90sec
Delay Time	Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms)	0 to 10000(ms)

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1876 Connected Ethernet controller setting

*2 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

■GOT IP address setting

Set the following communication port setting.

- Standard port

■GOT Ethernet common setting

Set the following setting which is common to the standard port and the extension port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

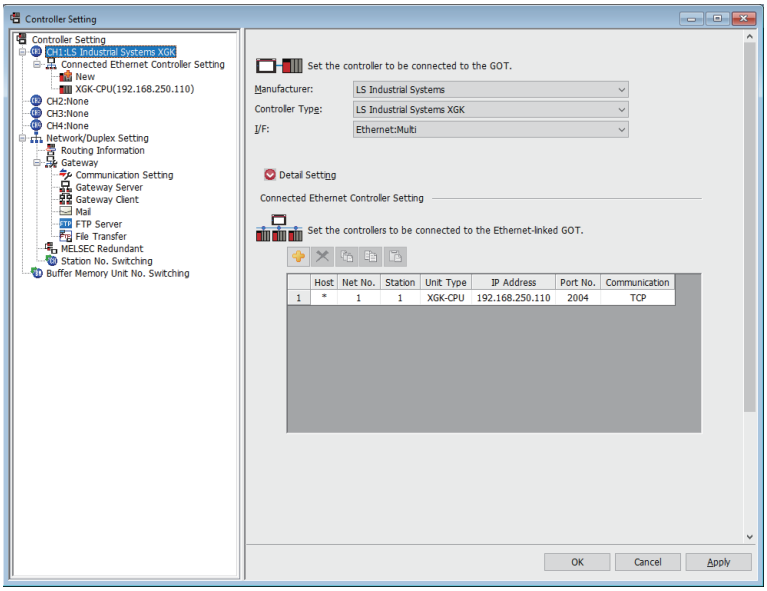
■IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 80 GOT Ethernet Setting

Connected Ethernet controller setting



Item	Description	Set value	
		XGK-CPU	XGL-EFMT(B)
Host	The host is displayed. It refers to a station that can be connected without setting a station number. (The host is indicated with an asterisk (*).)	-	
Net No.	Set the network No. of the connected Ethernet equipment. (Default: 1)	1 to 239	
Station *1	Set the station No. of the connected Ethernet equipment. (Default: 1)	1 to 64	
Unit Type	Select one according to the connected unit. When connecting to the Ethernet port built in the CPU: [XGK-CPU] When connecting to the communication module: [XGL-EFMT(B)] (Default: XGK-CPU)	XGK-CPU, XGL-EFMT(B)	
IP address	Set the IP address of the connected Ethernet equipment. (Default: 192.168.250.110)	PLC side IP address	
Port No. *2	Set the port No. of the connected Ethernet equipment. (Default: 2004)	2004	2004 (TPC), 2005 (UDP)
Communication format *2	Select a communication protocol. (Default: TCP)	TCP	TCP, UDP

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1874 Communication detail settings

*2 The setting range depends on the selection for [Unit Type].

PLC Side Setting

Point

LS INDUSTRIAL SYSTEMS PLC

For details of LS INDUSTRIAL SYSTEMS PLCs, refer to the following manual.

User's Manual of the LS INDUSTRIAL SYSTEMS PLC

Standard settings

Configure the settings in the XGT series engineering software.

Item	Setting details
IP Adress	PLC side IP Adress*1
Reception waiting time	Time period from when communication with the controller stops until when communication is disconnected (Five seconds or longer is recommended.)
Number of Dedicated Connections	Set the number of TCP devices connected to the PLC.
Driver	Select XGT Server.

*1 Adjust the settings with GOT settings.

Page 1876 Connected Ethernet controller setting

Precautions

When connecting to multiple GOTs

■Setting Station

When connecting two or more GOTs in the Ethernet network, set each [Station] to the GOT.

☞ Page 1873 Setting communication interface (Communication settings)

■Setting IP address

Do not use the IP address "192.168.0.18" when using multiple GOTs with the GOT 1000 series mixed.

A communication error may occur on the GOT with the IP address.

When setting IP address

Do not use "0" and "255" at the end of an IP address.

(Numbers of *.*.*.0 and *.*.*.255 are used by the system.)

The GOT may not monitor the controller correctly with the above numbers.

Consult with the administrator of the network before setting an IP address to the GOT and controller.

When connecting to the multiple network equipment (including GOT) in a segment

By increasing the network load, the transmission speed between the GOT and PLC may be reduced.

The following actions may improve the communication performance.

- Using a switching hub
- More high speed by 100BASE-TX (100Mbps)
- Reduction of the monitoring points on GOT

39.4 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1
LS IS equipment ([LS Industrial Systems XGK])
LS IS equipment ([LS Industrial Systems MASTER-K])

MEMO

40 MITSUBISHI ELECTRIC INDIA PLC

- Page 1881 Connectable Model List
- Page 1882 System Configuration
- Page 1884 Connection Diagram
- Page 1888 GOT Side Settings
- Page 1890 PLC Side Settings
- Page 1890 Settable Device Range

40.1 Connectable Model List

The following table shows the connectable models.

Series	Model name*1	Clock	Communication Type	Connectable model	Refer to
Nexgenie 1000 PLC	NG16DL	○	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 1882 Connecting to Nexgenie 1000 PLC, Nexgenie 2000 PLUS PLC
	NG16ADL				
	NG14RL				
	NG16DN				
	NG16ADN				
	NG14RN				
	NG16DL	○	RS-485	GT 2506 HS	
	NG16ADL				
	NG14RL				
	NG16DN				
	NG16ADN				
	NG14RN				
Nexgenie 2000 PLUS PLC	P2210	○	RS-232 RS-422	GT 2506 HS GT 2505 HS	☞ Page 1882 Connecting to Nexgenie 1000 PLC, Nexgenie 2000 PLUS PLC
	P2211				
	P2213A				
	P2214				
	P2210	○	RS-485	GT 2506 HS	
	P2211				
	P2213A				
	P2214				

*1 Use the PLC versions listed below.

Model	Applicable Library		Applicable Target	
	Library name	Version	Target name	Version
NG16DL	GOT2000_NG_1000.lib	Ver. 1.0 or later	Installable_Target_Nexgenie_T2.7	Ver. 2.7 or later
NG16ADL				
NG14RL				
NG16DN				
NG16ADN				
NG14RN				
P2210	GOT2000_NG_P2210.lib	Ver. 1.0 or later	Installable_Target_Nexgenie2210_T1.8	Ver. 1.8 or later
P2211				
P2213A	GOT2000_NG_P2213A.lib	Ver. 1.0 or later	Installable_Target_Nexgenie2213A_T1.5	Ver. 1.5 or later
P2214	GOT2000_NG_P2214.lib	Ver. 1.0 or later	Installable_Target_Nexgenie2214_T1.5	Ver. 1.5 or later

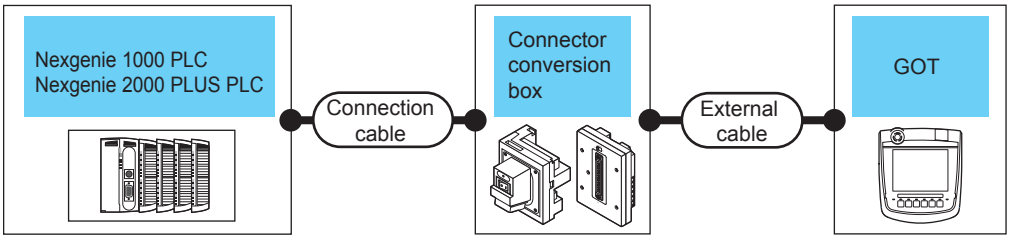
40.2 System Configuration

Connecting to Nexgenie 1000 PLC, Nexgenie 2000 PLUS PLC

Communication driver

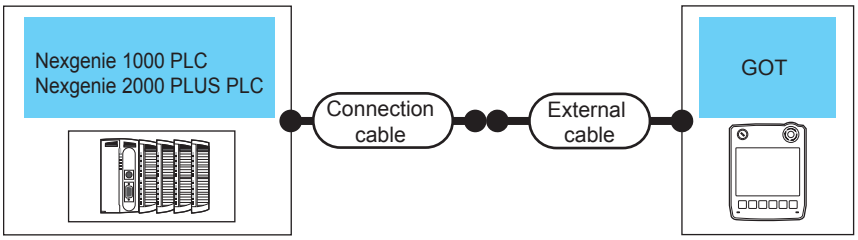
MEI Nexgenie

When using the connector conversion box



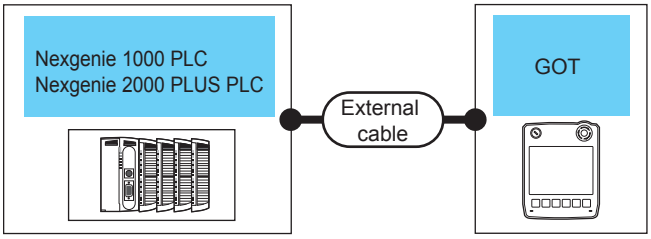
Communication unit	Communication Type	Connection cable Cable model Connection diagram number	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Nexgenie 1000 PLC Nexgenie 2000 PLUS PLC	RS-232	User preparing Page 1884 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 PLC for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	RS-422	User preparing Page 1885 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 PLC for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		
Nexgenie 1000 PLC Nexgenie 2000 PLUS PLC	RS-485	User preparing Page 1887 RS-485 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS		

When using the external cable (GT11H-C□□□-37P)



Communication unit	Communication Type	Connection cable Cable model Connection diagram number	External cable	GOT Model	Total distance	Number of connectable equipment
Nexgenie 1000 PLC Nexgenie 2000 PLUS PLC	RS-232	User preparing Page 1884 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 PLC for 1 GOT
	RS-422	User preparing Page 1885 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	Up to 31 PLC for 1 GOT

When using the external cable (GT11H-C□□□)



Communication unit	Communication Type	External cable	GOT Model	Total distance	Number of connectable equipment
Nexgenie 1000 PLC Nexgenie 2000 PLUS PLC	RS-232	GT11H-C30(3m) ☞ Page 1884 RS-232 connection diagram 3)	GT 2505HS	6m	1 PLC for 1 GOT
	RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1886 RS-422 connection diagram 3)	GT 2505HS	13m	Up to 31 PLC for 1 GOT

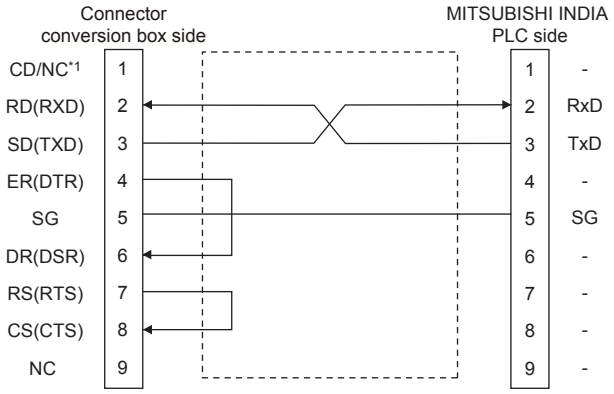
40.3 Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

RS-232 cable

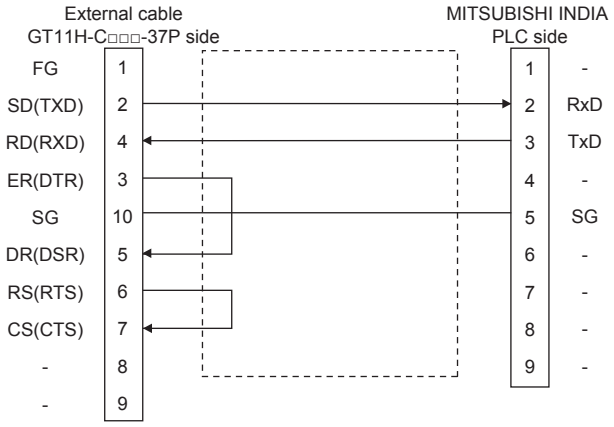
Connection diagram

■RS-232 connection diagram 1)

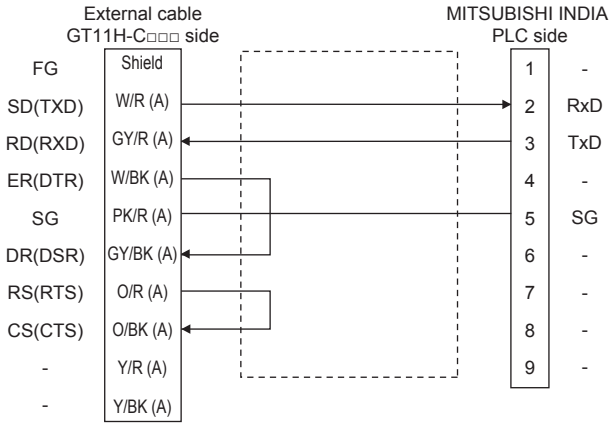


*1 GT2506HS-V: CD, GT2505HS-V: NC

■RS-232 connection diagram 2)



■RS-232 connection diagram 3)



Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■MITSUBISHI INDIA PLC side connector

Use the connector compatible with the MITSUBISHI INDIA PLC side module.

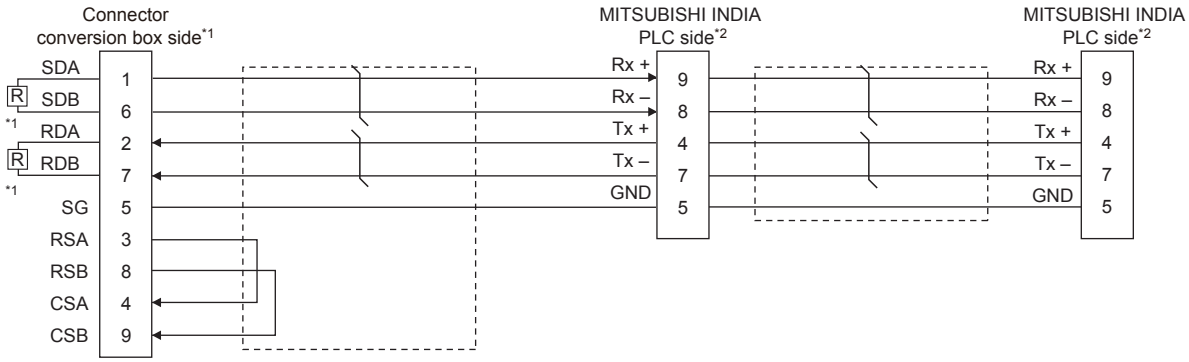
For details, refer to the user's manual of the MITSUBISHI INDIA PLC.

RS-422 cable

The following diagram shows the connection between the GOT and the PLC.

Connection diagram

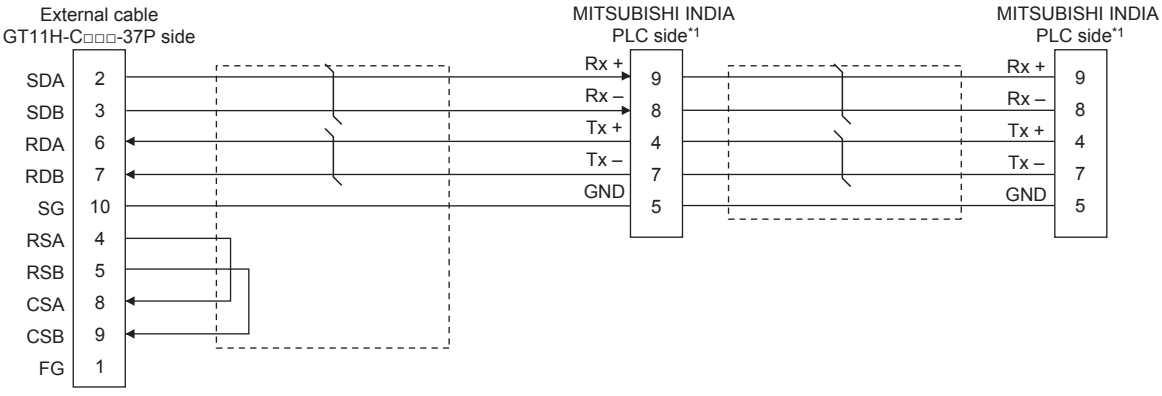
■RS-422 connection diagram 1)



*1 For GT2506HS-V, set the terminating resistor setting switch of the GOT to "Disable" and connect a 330 Ω terminating resistor.
For GT2505HS-V, the terminating resistor of the GOT is fixed to 330Ω.
Do not connect a 330Ω terminating resistor.
☞ Page 91 Terminating resistors of GOT

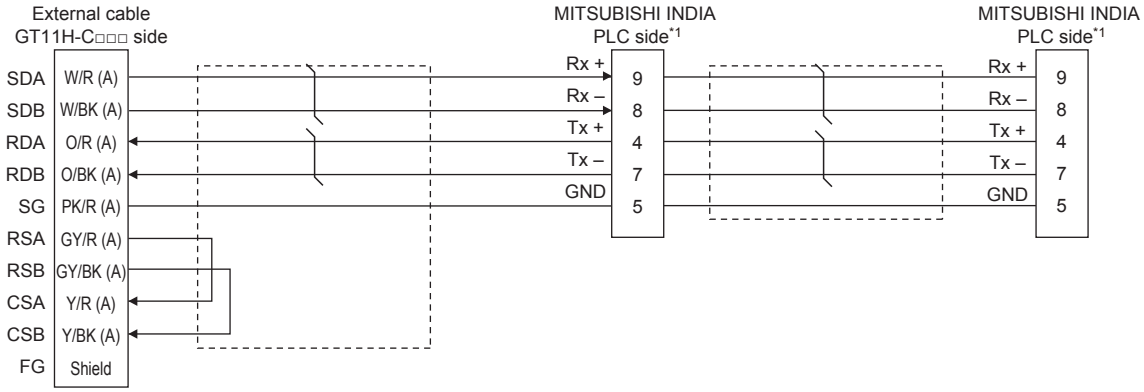
*2 For terminating resistors in PLCs manufactured by MITSUBISHI INDIA, refer to the manual of PLCs manufactured by MITSUBISHI INDIA.

■RS-422 connection diagram 2)



*1 For terminating resistors in PLCs manufactured by MITSUBISHI INDIA, refer to the manual of PLCs manufactured by MITSUBISHI INDIA.

■RS-422 connection diagram 3)



*1 For terminating resistors in PLCs manufactured by MITSUBISHI INDIA, refer to the manual of PLCs manufactured by MITSUBISHI INDIA.

Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■Connectors on the MITSUBISHI INDIA PLC side

Use proper connectors on the MITSUBISHI INDIA PLC side.

For the details, refer to the User's Manual of the used PLC manufactured by MITSUBISHI INDIA.

Connecting terminating resistors

■GOT side

• For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

• For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

■MITSUBISHI INDIA PLC side

It is necessary to set terminating resistors in the PLC manufactured by MITSUBISHI INDIA when connecting the GOT to the PLC manufactured by MITSUBISHI INDIA.

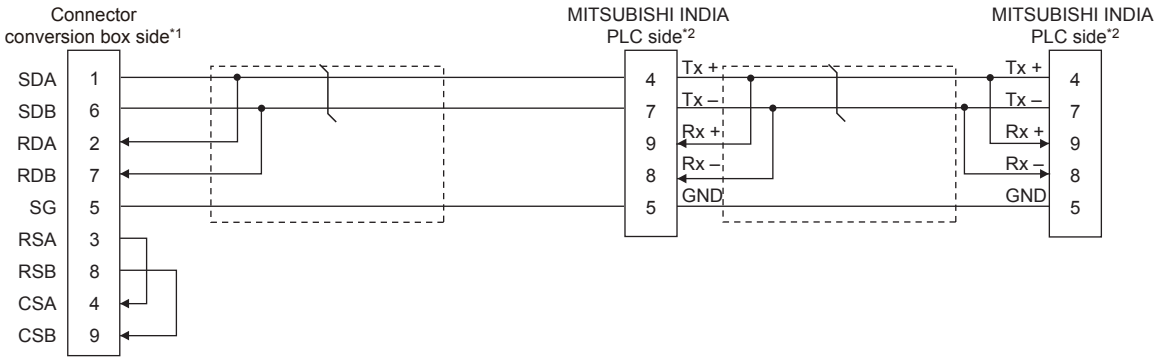
For the details, refer to the User's Manual of the used PLC manufactured by MITSUBISHI INDIA.

RS-485 cable

The following diagram shows the connection between the GOT and the PLC.

Connection diagram

■RS-485 connection diagram 1)



*1 Set the terminating resistor to "Enable" when arranging the GOT in the end position of the system configuration.
Set the terminating resistor to "Disable" when arranging the GOT in any position other than the end position of the system configuration.
☞ Page 91 Terminating resistors of GOT

*2 For terminating resistors in PLCs manufactured by MITSUBISHI INDIA, refer to the manual of PLCs manufactured by MITSUBISHI INDIA.

Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-485 cable must be 13 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■Connectors on the MITSUBISHI INDIA PLC side

Use proper connectors on the MITSUBISHI INDIA PLC side.

For the details, refer to the User's Manual of the used MITSUBISHI INDIA PLC.

Connecting terminating resistors

■GOT side

Set the terminating resistor using the terminating resistor setting switch.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

■Connectors on the MITSUBISHI INDIA PLC side

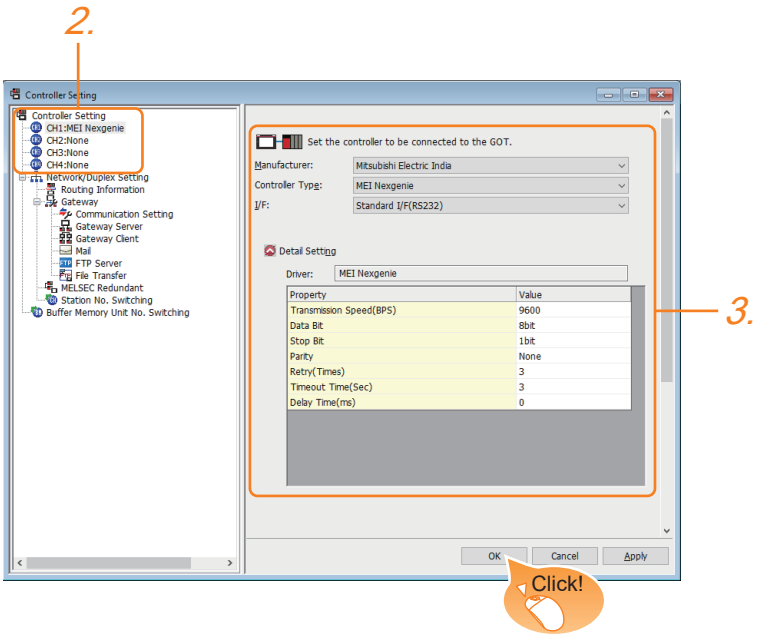
Use proper connectors on the MITSUBISHI INDIA PLC side.

For the details, refer to the User's Manual of the used PLC manufactured by MITSUBISHI INDIA.

40.4 GOT Side Settings

Setting communication interface (Communication settings)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [Mitsubishi Electric India]
- [Controller Type]: [MEI Nexgenie]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1889 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
Transmission Speed(BPS)	9600
Data Bit	8bit
Stop Bit	1bit
Parity	None
Retry(Times)	3
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 9600bps)	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit*1	Set this item when change the data length used for communication with the connected equipment. (Default: 8bits)	7bit/8bit
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit/2bit
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Odd)	None Even Odd
Retry	Set the number of retries to be performed when a communication timeout occurs. (Default: 3times)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300(ms)

*1 Set "8 bits".

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manuals.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

40.5 PLC Side Settings

Point

PLCs manufactured by MITSUBISHI INDIA

For the details of PLCs manufactured by MITSUBISHI INDIA, refer to the following manual.

PLCs manufactured by MITSUBISHI INDIA

Communication settings

Make the communication settings using peripheral S/W of MITSUBISHI INDIA PLC.

■Nexgenie 1000 PLC

Item	Setting details
Communication speed*1	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data bit	8bits
Stop bit*1	1bit, 2bits
Parity bit*1	None, Even, Odd
Full duplex/Half duplex	Half duplex

*1 Adjust the settings with GOT settings.

■Nexgenie 2000 PLUS PLC

Item	Setting details
Communication speed*1	9600bps, 19200bps, 38400bps
Data bit	8bits
Stop bit*1	1bit, 2bits
Parity bit*1	None, Even, Odd
Full duplex/Half duplex	Half duplex

*1 Adjust the settings with GOT settings.

40.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1 MITSUBISHI INDIA equipment ([MEI Nexgenie])

41 SICK SAFETY CONTROLLER

- Page 1891 Connectable Model List
- Page 1891 System Configuration
- Page 1892 GOT Side Settings
- Page 1894 PLC Side Setting
- Page 1894 Settable Device Range

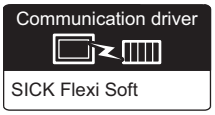
41.1 Connectable Model List

The following table shows the connectable models.

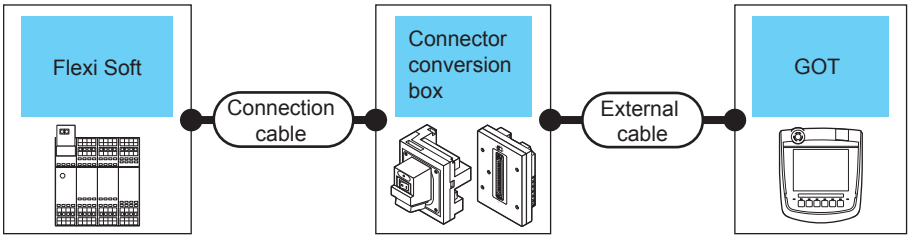
Series	Model name	Clock	Communication Type	Connectable model	Refer to
Flexi Soft	FX3-CPU000000	×	RS-232	GT 2506 HS GT 2505 HS	☞ Page 1891 Connecting to Flexi Soft
	FX3-CPU130002				
	FX3-CPU320002				

41.2 System Configuration

Connecting to Flexi Soft



When using the connector conversion box



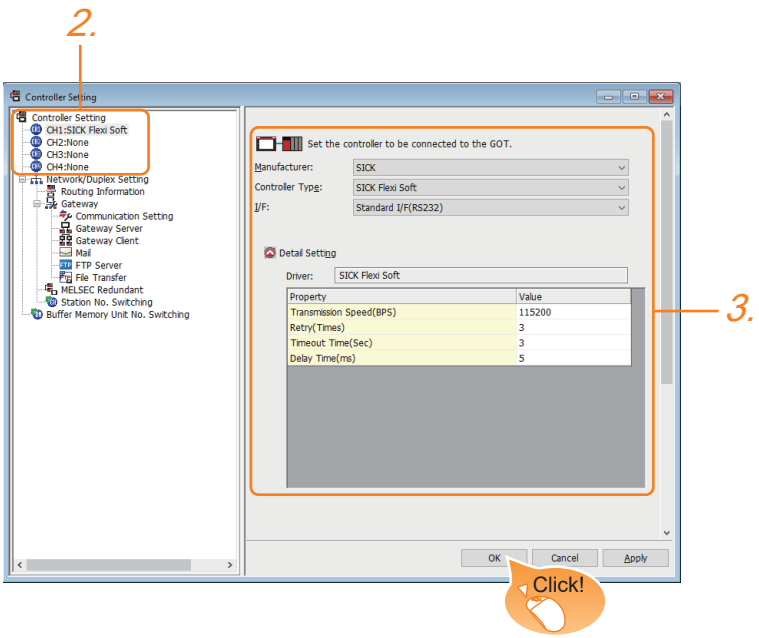
PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Series	Communication Type	Cable model Connection diagram number					
Flexi Soft	RS-232	Part Number:6021195(2m)*1 Part Number:6036342(3m)*1	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 PLC for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by SICK Inc.
For details of the product, contact SICK Inc.

41.3 GOT Side Settings

Setting communication interface (Communication settings)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [SICK]
- [Controller Type]: [SICK Flexi Soft]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1893 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].
For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

SICK Flexi Soft

Property	Value
Transmission Speed(BPS)	115200
Retry(Times)	3
Timeout Time(Sec)	3
Delay Time(ms)	5

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 115200bps)	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Retry	Set the number of retries to be performed when a communication error occurs. (Default: 3times)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 5ms)	0 to 300 (ms)

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

41.4 PLC Side Setting

Point

SICK PLC

For details of SICK PLCs, refer to the following manual.

User's Manual of the SICK PLC

Connecting to Flexi Soft

Communication settings

Communication settings are not required, since the following contents are fixed.

Setting item	Controller Side Settings
Communication speed	115200bps (fixed)
Data bit	8bits (fixed)
Parity bit	Without (fixed)
Stop bit	1bit (fixed)

41.5 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1
SICK equipment ([SICK Flexi Soft])

42 SIEMENS PLC

- Page 1895 Connectable Model List
- Page 1896 Serial Connection
- Page 1906 Ethernet Connection
- Page 1917 Settable Device Range

42.1 Connectable Model List

The following table shows the connectable models.

Series	Clock	Communication Type	Ethernet Connection Type	Connectable model	Refer to
SIMATIC S7-200	×	RS-232	-	GT2506HS GT2505HS	☞ Page 1899 Connecting to SIMATIC S7-200 series
		Ethernet	OP communication	GT2506HS GT2505HS	☞ Page 1907 Ethernet connection type: Connecting to OP communication
SIMATIC S7-200 SMART	○	Ethernet	OP communication	GT2506HS GT2505HS	☞ Page 1907 Ethernet connection type: Connecting to OP communication
SIMATIC S7-300	○*1	RS-232	-	GT2506HS GT2505HS	☞ Page 1896 Connecting to SIMATIC S7-300 or SIMATIC S7-400 series
		Ethernet	FETCH/WRITE	GT2506HS GT2505HS	☞ Page 1906 Ethernet connection type: Connecting to FETCH/WRITE
			OP communication	GT2506HS GT2505HS	☞ Page 1907 Ethernet connection type: Connecting to OP communication
SIMATIC S7-400	○*1	RS-232	-	GT2506HS GT2505HS	☞ Page 1896 Connecting to SIMATIC S7-300 or SIMATIC S7-400 series
		Ethernet	FETCH/WRITE	GT2506HS GT2505HS	☞ Page 1906 Ethernet connection type: Connecting to FETCH/WRITE
			OP communication	GT2506HS GT2505HS	☞ Page 1907 Ethernet connection type: Connecting to OP communication
SIMATIC S7-1200	×	Ethernet	OP communication	GT2506HS GT2505HS	☞ Page 1907 Ethernet connection type: Connecting to OP communication
SIMATIC S7-1500	×	Ethernet	OP communication	GT2506HS GT2505HS	☞ Page 1907 Ethernet connection type: Connecting to OP communication

*1 Only OP communication type can be used in an Ethernet connection.

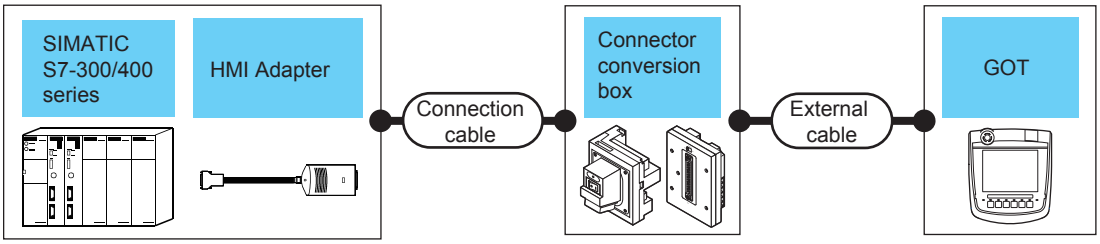
42.2 Serial Connection

Connecting to SIMATIC S7-300 or SIMATIC S7-400 series

Communication driver
SIEMENS S7-300/400

When connecting to one PLC

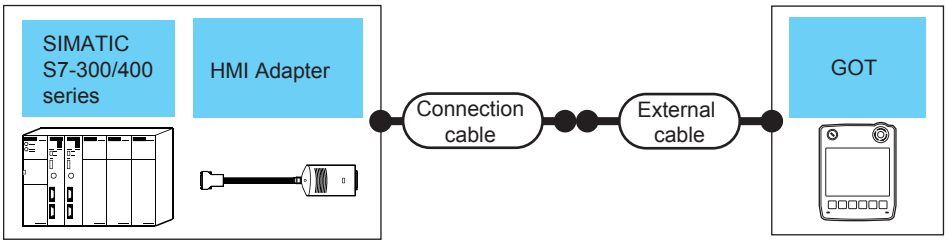
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Series	HMI Adapter*1	Communication Type	Cable model Connection diagram number					
SIMATIC S7-300 SIMATIC S7-400	MLFB: 6ES7 972-0CA11-0XA0	RS-232	GT09-C30R20801-9S (3m) or User preparing RS232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 HMI Adapter
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Siemens AG.
For details of this product, contact Siemens AG.

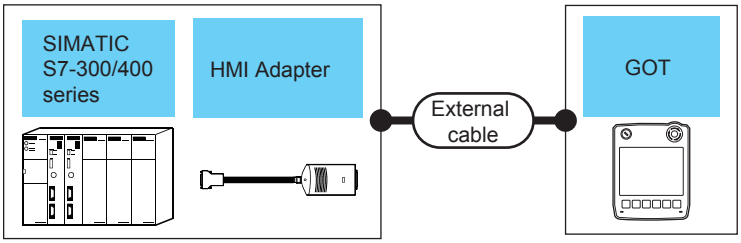
■When using the external cable (GT11H-C□□□-37P)



PLC			Connection cable	External cable	GOT Model	Total distance	Number of connectable equipment
Series	HMI Adapter*1	Communication Type	Cable model Connection diagram number				
SIMATIC S7-300 SIMATIC S7-400	MLFB: 6ES7 972-0CA11-0XA0	RS-232	User preparing RS232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 HMI Adapter

*1 Product manufactured by Siemens AG.
For details of this product, contact Siemens AG.

■When using the external cable (GT11H-C□□□)

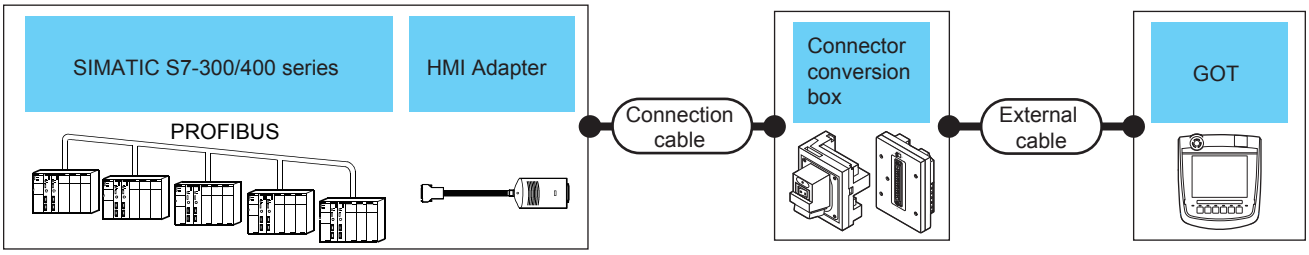


PLC			External cable	GOT Model	Total distance	Number of connectable equipment
Series	HMI Adapter*1	Communication Type				
SIMATIC S7-300 SIMATIC S7-400	MLFB: 6ES7 972-0CA11-0XA0	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 HMI Adapter

*1 Product manufactured by Siemens AG.
For details of this product, contact Siemens AG.

When connecting to multiple PLCs

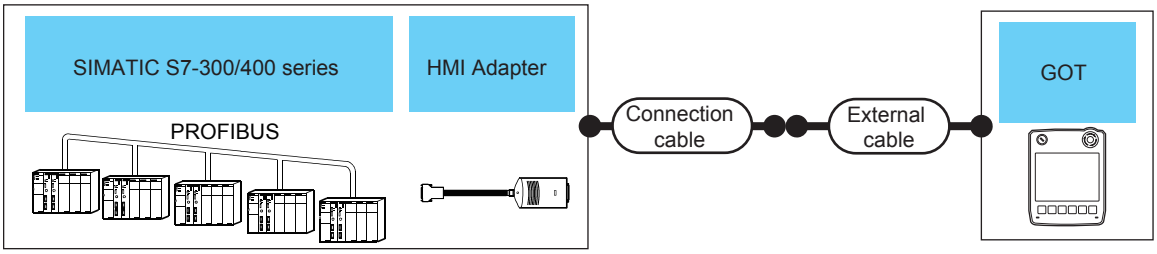
■When using the connector conversion box



PLC			Connection cable	Connector conversion box	External cable	GOT Model	Total distance *2	Number of connectable equipment
Series	HMI Adapter*1	Communication Type	Cable model Connection diagram number					
SIMATIC S7-300 SIMATIC S7-400	MLFB: 6ES7 972-0CA11-0XA0	RS-232	GT09-C30R20801-9S (3m) or User preparing RS232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 HMI Adapter
				GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Siemens AG.
For details of this product, contact Siemens AG.
*2 The distance from the GOT to the HMI Adapter (Connection cable + External cable)

■When using the external cable (GT11H-C□□□-37P)

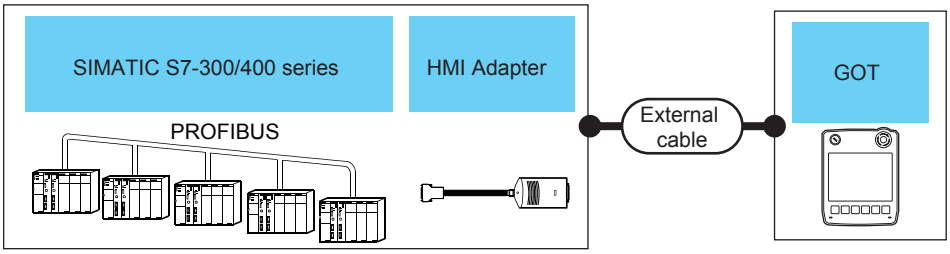


PLC			Connection cable	External cable	GOT Model	Total distance *2	Number of connectable equipment
Series	HMI Adapter*1	Communication Type	Cable model Connection diagram number				
SIMATIC S7-300 SIMATIC S7-400	MLFB: 6ES7 972-0CA11-0XA0	RS-232	User preparing RS232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 HMI Adapter

*1 Product manufactured by Siemens AG.
For details of this product, contact Siemens AG.

*2 The distance from the GOT to the HMI Adapter (Connection cable + External cable)

■When using the external cable (GT11H-C□□□)



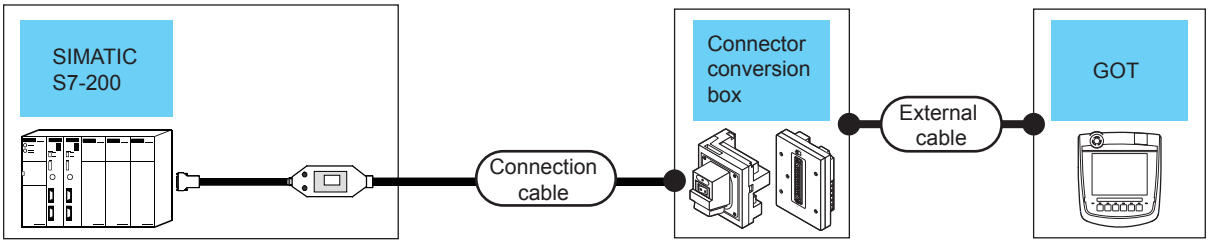
PLC			External cable	GOT Model	Total distance *2	Number of connectable equipment
Series	HMI Adapter*1	Communication Type				
SIMATIC S7-300 SIMATIC S7-400	MLFB: 6ES7 972-0CA11-0XA0	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ RS232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 HMI Adapter

*1 Product manufactured by Siemens AG.
For details of this product, contact Siemens AG.
*2 The distance from the GOT to the HMI Adapter (External cable)

Connecting to SIMATIC S7-200 series

Communication driver
SIEMENS S7-200

When using the connector conversion box



PLC		Connection cable	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
Series	Communication Type	Cable model Connection diagram number					
SIMATIC S7-200	RS-232	6ES7 901-3BF20-0XA0*1 6ES7 901-3CB30-0XA0*1	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 PLC
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		

*1 Product manufactured by Siemens AG.
For details of this product, contact Siemens AG.

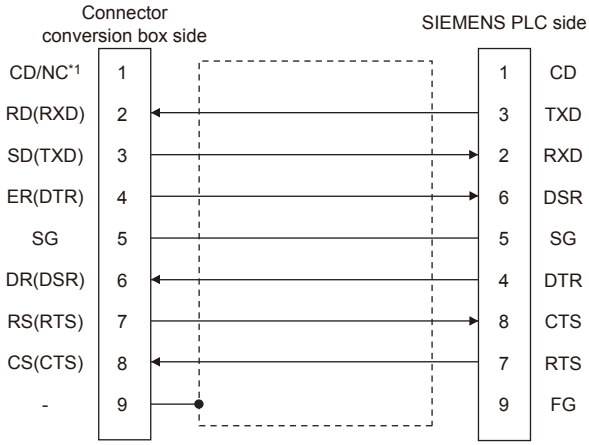
Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

RS-232 cable

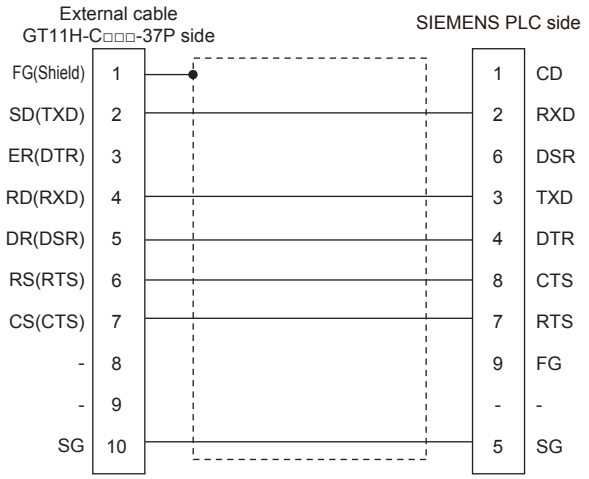
■Connection diagram

• RS232 connection diagram 1)

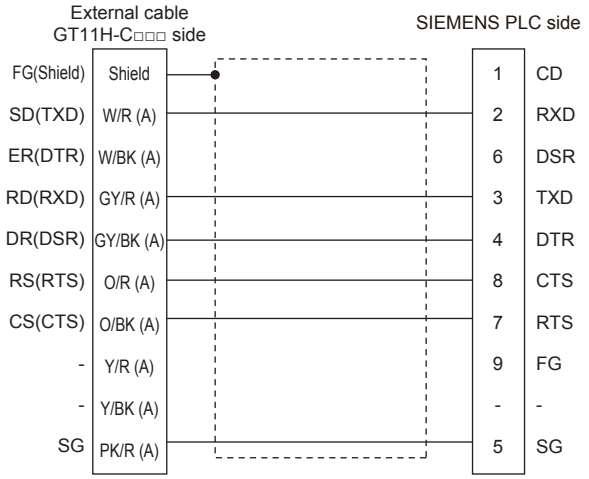


*1 GT2506HS-V: CD, GT2505HS-V: NC

• RS232 connection diagram 2)



• RS232 connection diagram 3)



■Precautions when preparing a cable

• Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

• GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

• SIEMENS PLC side connector

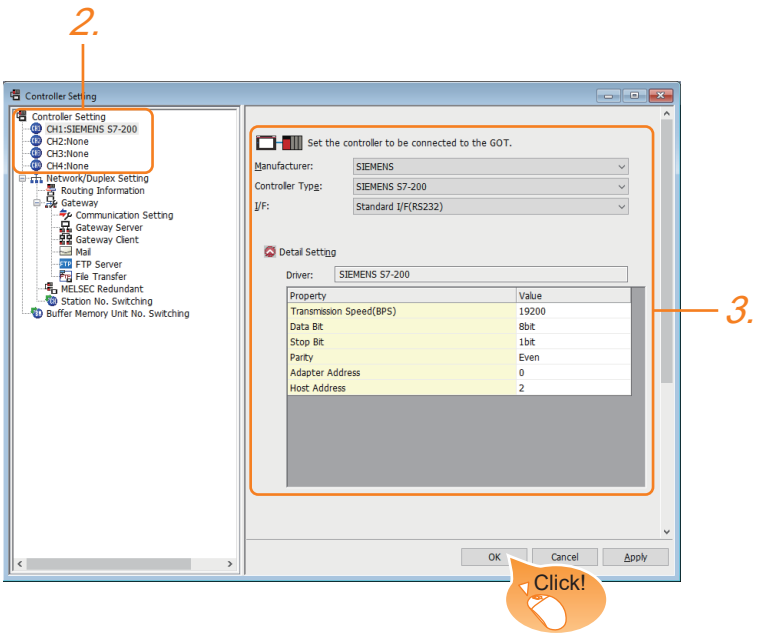
Use the connector compatible with the SIEMENS PLC side.

For details, refer to the SIEMENS PLC user's manual.

GOT Side Settings

Setting communication interface (Communication settings)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [SIEMENS]
- [Controller Type]: Select one of the following items.

[SIEMENS S7-300/400]

[SIEMENS S7-200]

- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1903 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

■SIEMENS S7-300/400

Property	Value
Transmission Speed(BPS)	38400
Data Bit	8 bit
Stop Bit	1 bit
Parity	Odd
Adapter Address	1
Host Address	2

Item	Description	Range
Transmission Speed*2	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 38400bps)	9600bps, 19200bps, 38400bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bit)	8bit (fixed)
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit (fixed)
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Odd)	Odd (fixed)
Adapter Address*1*2	Specify the adapter address (station No. of the adapter to which the GOT is connected) in the connected network. (Default: 1)	1 to 31
Host Address*1*2	Specify the host address (station No. of the PLC that the GOT will monitor) in the connected network. (Default: 2)	1 to 31

*1 Set the address without overlapping the address of other units.

*2 The GOT automatically sets the values of Transmission Speed, Adapter Address, and Host Address to the HMI Adapter.

■SIEMENS S7-200

Property	Value
Transmission Speed(BPS)	19200
Data Bit	8 bit
Stop Bit	1 bit
Parity	Even
Adapter Address	0
Host Address	2

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 19200bps)	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bits)	7bits/8bits
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit/2bits
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Even)	None Even Odd
Adapter Address	Specify the adapter address (station No. of the adapter to which the GOT is connected) in the connected network. (Default: 0)	0 to 31
Host Address	Specify the host address (station No. of the PLC that the GOT will monitor) in the connected network. (Default: 2)	1 to 31

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

PLC Side Setting

Point

SIEMENS PLC

For details of SIEMENS PLCs, refer to the following manuals.

SIEMENS PLC user's Manual

Model name		Refer to
PLC CPU	S7-200	☞ Page 1904 Connecting to SIMATIC S7-200
HMI Adapter	6ES7 972-0CA11-0XA0	☞ Page 1904 Connecting to HMI Adapter
PC/PPI cable	6ES7 901-3BF20-0XA0 6ES7 901-3CB30-0XA0	☞ Page 1904 Connecting to SIMATIC S7-200

Connecting to HMI Adapter

Communication settings

The following communication settings are made at the communication detail settings of the GOT side.

For details, refer to the following.

☞ Page 1903 Communication detail settings

Setting item	PLC side setting
Transmission speed	9600bps, 19200bps, 38400bps
Data bit	8bits (fixed)
Parity bit	Odd (fixed)
Stop bit	1bit (fixed)
Adapter address	1 to 31
Host address	1 to 31

Connecting to SIMATIC S7-200

Communication settings

Set the communication settings of PLC and PC/PPI cable.

■PLC settings

Set the communication settings of PLC by operating the SIEMENS programming tool(STEP7-WIN32).

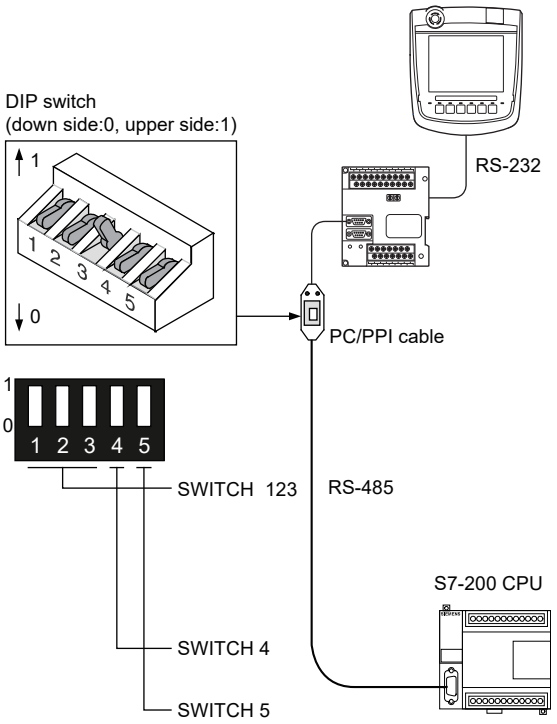
Setting item	PLC Side Setting
Transmission speed*1	9600bps, 19200bps
Data bit	8bits (fixed)
Parity bit	Even (fixed)
Stop bit	1bit (fixed)
Host address*2	1 to 31

*1 Adjust the settings with GOT settings.

*2 Set the address without overlapping the address of other units.

■PC/PPI cable settings

Set the transmission speed by operating the DIP switch on the PC/PPI cable.



SWITCH1	SWITCH2	SWITCH3	SWITCH4	SWITCH5	Transmission speed
0	0	1	0	0	19200bps*1
0	1	0	0	0	9600bps*1

*1 Adjust with GOT settings.

Precautions

GOT alarm list (system alarm) function

Error information cannot be monitored when the GOT is connected to a SIEMENS PLC.

(The error information on the PLC CPU side can be monitored.)

For details on the alarm list (system alarm), refer to the following manual:

GT Designer3 (GOT2000) Screen Design Manual

When powering ON the system

■When powering ON the system

Turn ON all PLC CPUs before turning ON the GOT.

If the GOT is turned ON before power-up of the PLC CPUs, restart the GOT.

■When powering OFF a PLC CPU at another station

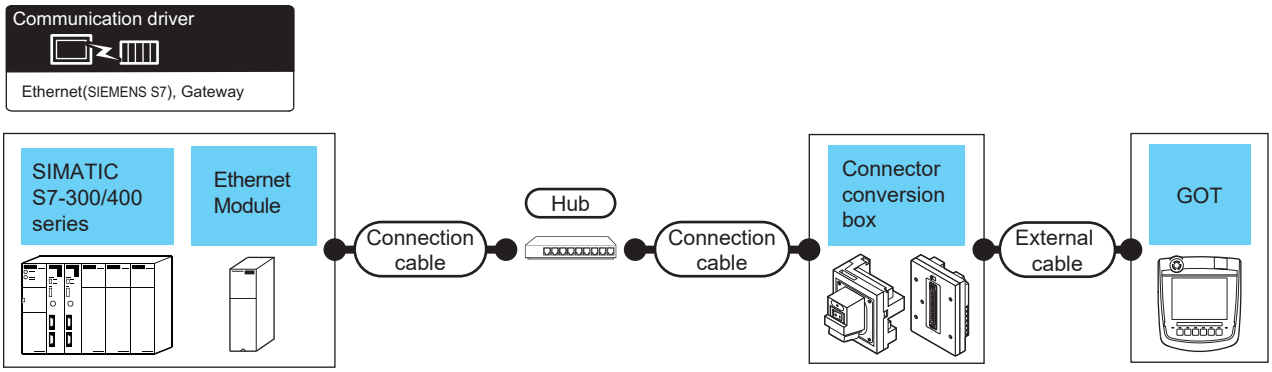
When a PLC CPU at another station (the PLC CPU to which the HMI Adapter is not connected) is turned OFF, monitoring by the GOT is stopped.

To resume the monitoring, restart the GOT.

(Monitoring will not be resumed on GOT even if the PLC CPU is turned ON again.)

42.3 Ethernet Connection

Ethernet connection type: Connecting to FETCH/WRITE



PLC		Connection cable		Connector conversion box	External cable *5	GOT Model	Number of connectable equipment
Series	Ethernet model*3	Cable model*1	Maximum segment length*2				
SIMATIC S7-300	CP343-1 IT CP343-1 CP343-1 Lean CP343-1 Advanced	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When PLC: GOT is N: 1 16 PLCs or less for 1 GOT When PLC: GOT is 1: N The following shows the number of GOTs for 1 PLC 32 or less*4 (recommended to 16 or less)
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
SIMATIC S7-400	CP443-1 IT CP443-1			GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the target device and hub, use a cable according to the target controller configuration.

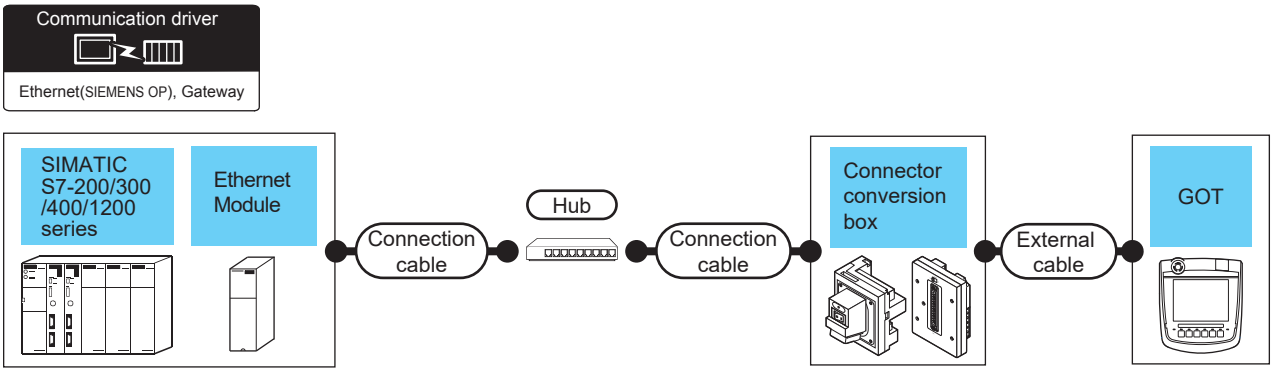
*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

*3 Product manufactured by Siemens AG. For details of the product, contact Siemens AG.

*4 If the number of GOTs increases, the communication becomes highloaded, and it may affect the communication performance.

*5 Use C or later version of GT11H-C□□-37P.

Ethernet connection type: Connecting to OP communication



PLC		Connection cable		Connector conversion box	External cable *5	GOT Model	Number of connectable equipment
Series	Ethernet model*3	Cable model*1	Maximum segment length*2				
SIMATIC S7-200	CP 243-1 CP 243-1 IT	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When PLC: GOT is N: 1 The following shows the number of PLCs for 1 GOT 128 or less When PLC: GOT is 1: N The following shows the number of GOTs for 1 PLC 32 or less*4 (recommended to 16 or less)
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
SIMATIC S7-200 SMART	- (Built into PLC)		100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P (3m) GT11H-C60-37P (6m) GT11H-C100-37P(10m)		

PLC		Connection cable		Connector conversion box	External cable [*5]	GOT Model	Number of connectable equipment
Series	Ethernet model[*3]	Cable model[*1]	Maximum segment length[*2]				
SIMATIC S7-300	CP 343-1 CP 343-1 Lean CP 343-1 Advanced-IT	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When PLC: GOT is N: 1 The following shows the number of PLCs for 1 GOT 128 or less When PLC: GOT is 1: N The following shows the number of GOTs for 1 PLC 32 or less[*4] (recommended to 16 or less)
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
	- (Built into PLC)		100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
SIMATIC S7-400	CP 443-1 CP 443-1 Advanced-IT		100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
	- (Built into PLC)		100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

PLC		Connection cable		Connector conversion box	External cable *5	GOT Model	Number of connectable equipment
Series	Ethernet model*3	Cable model*1	Maximum segment length*2				
SIMATIC S7-1200	- (Built into PLC)	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When PLC: GOT is N: 1 The following shows the number of PLCs for 1 GOT 128 or less When PLC: GOT is 1: N The following shows the number of GOTs for 1 PLC 32 or less*4 (recommended to 16 or less)
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		
SIMATIC S7-1500	- (Built into PLC)		100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.
To connect the target device and hub, use a cable according to the target controller configuration.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

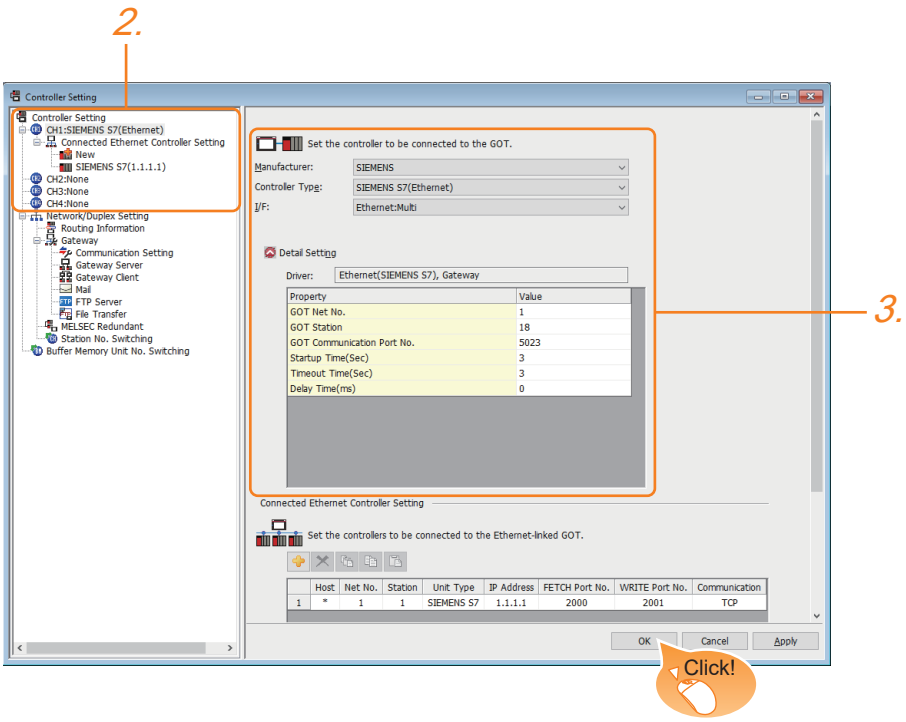
*3 Product manufactured by Siemens AG. For details of the product, contact Siemens AG.

*4 If the number of GOTs increases, the communication becomes highloaded, and it may affect the communication performance.

*5 Use C or later version of GT11H-C□□-37P.

Setting communication interface (Communication settings)

Set the channel of the connected equipment.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [SIEMENS]
- [Controller Type]: Depends on the Ethernet connection type.

FETCH/WRITE: [SIEMENS S7(Ethernet)]

OP communication: [SIEMENS OP(Ethernet)]

- [I/F]: [Ethernet:Multi]
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1911 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be confirmed in [I/F Communication Setting].

For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
GOT Net No.	1
GOT Station	18
GOT Communication Port No.	5023
Startup Time(Sec)	3
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
GOT Net No.	Set the network No. of the GOT. (Default: 1)	1 to 239
GOT Station*1	Set the station No. of the GOT. (Default: 18)	1 to 254
GOT Communication Port No.	Set the GOT port No. for the connection with the Ethernet equipment. (Default) Ethernet (SIEMENS S7), Gateway: 5023 *2 Ethernet (SIEMENS OP), Gateway: 5024 *2	1024 to 5010, 5014 to 49152, 49171 to 65534
Startup Time	Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU. (Default: 3sec)	3 to 255 sec
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	3 to 90 sec
Delay Time	Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms)	0 to 10000 (ms)

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1912 Connected Ethernet Controller Setting

*2 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

■GOT IP address setting

Set the following communication port setting.

• Standard port

■GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

• [Default Gateway]

• [Peripheral S/W Communication Port No.]

• [Transparent Port No.]

■IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

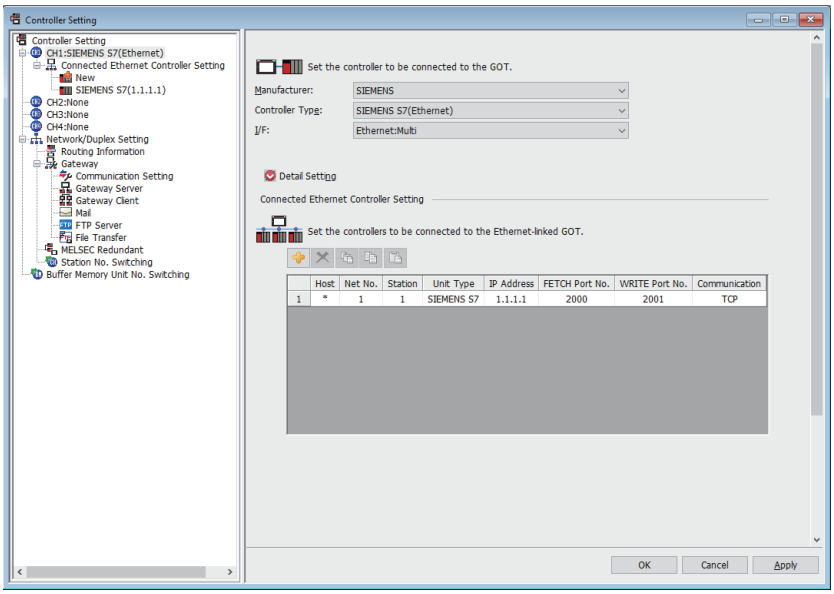
For the detailed settings, refer to the following manual.

☞ Page 80 GOT Ethernet Setting

Connected Ethernet Controller Setting

■Ethernet connection type: FETCH/WRITE

The following describes [Connected Ethernet Controller Setting] when [SIEMENS S7(Ethernet)] is selected for [Controller Type].

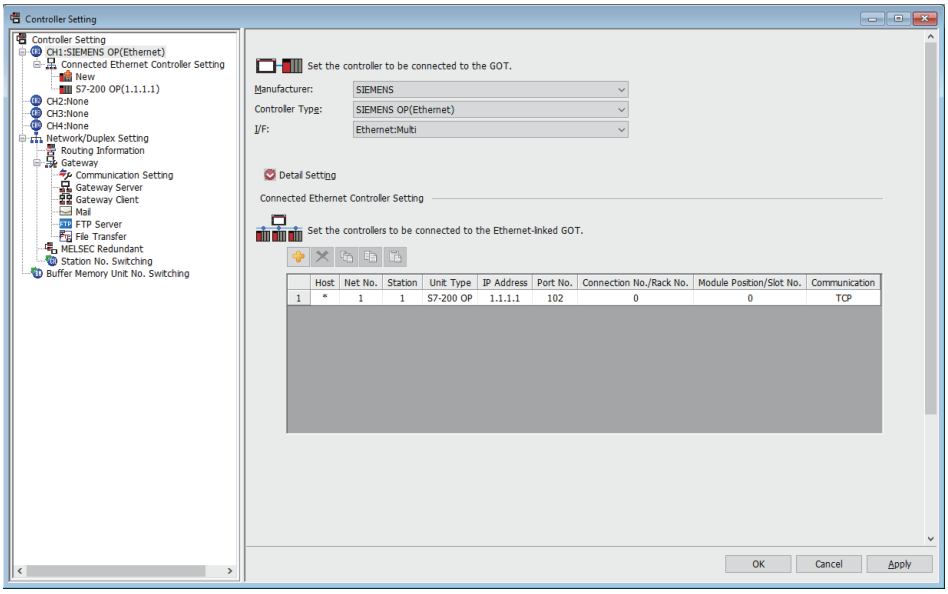


Item	Description	Set value
Host	The host is displayed. It refers to a station that can be connected without setting a station number. (The host is indicated with an asterisk (*).)	—
Net No.	Set the network No. of the connected Ethernet equipment. (Default: 1)	1 to 239
Station *1	Set the station No. of the connected Ethernet equipment. (Default: 1)	1 to 64
Unit Type	SIEMENS S7 (fixed)	SIEMENS S7 (fixed)
IP Address	Set the IP address of the connected Ethernet equipment. (Default: 1.1.1.1)	PLC side IP address
FETCH Port No.	Set the FETCH port No. of the connected Ethernet equipment. (Default: 2000)	1024 to 65534
WRITE Port No.	For the WRITE port No. of the connected Ethernet equipment, the value that the FETCH port No. is incremented by one is set automatically. (Default: 2001)	1025 to 65535
Communication	TCP (fixed)	TCP (fixed)

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1911 Communication detail settings

■Ethernet connection type: OP communication

The following describes [Connected Ethernet Controller Setting] when [SIEMENS OP(Ethernet)] is selected for [Controller Type].



Item	Description	Set value
Host	The host is displayed. It refers to a station that can be connected without setting a station number. (The host is indicated with an asterisk (*).)	—
Net No.	Set the network No. of the connected Ethernet equipment. (Default: 1)	1 to 239
Station *1	Set the station No. of the connected Ethernet equipment. (Default: 1)	1 to 254
Unit Type	Set the PLC type to be connected.	S7-1500 OP S7-200 OP S7-200 SMART OP S7-300/400 OP S7-1200 OP
IP Address	Set the IP address of the connected Ethernet equipment. (Default: 0)	PLC side IP address
Port No.	102 (fixed)	102 (fixed)
Connection No./Rack No.	Set the Connection No./Rack No. set on the PLC side. (Default: 0)	S7-1500 OP: 0 (fixed) S7-200 OP: 0 to 7 S7-200 SMART OP:0 (fixed) S7-300/400 OP: 0 to 7 S7-1200 OP: 0 (fixed)
Module Position/Slot No.	Set the module position/slot No. set on the PLC side. (Default: 0 unless the setting value is fixed)	S7-1500 OP: 0 to 31 S7-200 OP: 0 to 6 S7-200 SMART OP:1 (fixed) S7-300/400 OP: 0 to 6 S7-1200 OP: 1 (fixed)
Communication	TCP (fixed)	TCP (fixed)

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 1911 Communication detail settings

PLC side setting

Point

SIEMENS PLC

For details of SIEMENS PLCs, refer to the following manuals.

SIEMENS PLC user's Manual

Parameter settings

Set the following parameters with the SIEMENS software package.

■Ethernet connection type: FETCH/WRITE

• Settings of IP address and subnet mask

Item		Setting details	
Parameters		IP Address	PLC side IP address
		Subnet mask	PLC side subnet mask

• Fetch port setting

Item		Setting details	
Options	Mode	Select [Fetch passive].	
Addresses	IP (dec)	Local	PLC side IP address
		Remote	- (Default)
	PORT (dec)	Local	PLC side port No.
		Remote	- (Default)

• Write port setting

Item		Setting details	
Options	Mode	Select [Write passive].	
Addresses	IP (dec)	Local	PLC side IP address
		Remote	- (Default)
	PORT (dec)	Local	PLC side port No.
		Remote	- (Default)

• Precautions for setting

The Keep Alive function of the Siemens CP Module is not supported.

Specify 0 for [Keep Alive].

■Ethernet connection type: OP communication

• S7-200

Set the following parameters.

Item	Setting details	
Module Position	Value in [Position] of the Ethernet module	
Module Address	IP Address	PLC side IP address
	Subnet mask	PLC side subnet mask
Number of connections to configure for this module	Set "1" as the number of connected GOT.	
This is a Server connection: Servers respond to connection request from remote clients.	Mark the check box.	
Local Properties (Server)	Select [Accept all connection requests]	
Remote Properties (Client)	Set "10.00" in [TSAP].	
Enable the Keep Alive function for this connection.	Unmark the check box.	

• S7-200 SMART

Set the following parameters.

Item	Setting details	
Ethernet addresses	IP Address	PLC side IP address
	Subnet mask	PLC side subnet mask

• S7-300/400

Set the following parameters.

• When using the Ethernet module

Item	Setting details	
Properties	IP Address	PLC side IP address
	Subnet mask	PLC side subnet mask

• When using the built-in Ethernet port

Item	Setting details	
Device name	Set [PN-IO]	
Properties	IP Address	PLC side IP address
	Subnet mask	PLC side subnet mask

• S7-1200

Set the following parameters.

Item	Setting details	
Ethernet addresses	IP Address	PLC side IP address
	Subnet mask	PLC side subnet mask

• S7-1500

Set the following parameters.

Item	Setting details	
Ethernet addresses	IP Address	PLC side IP address
	Subnet mask	PLC side subnet mask

Precautions

When connecting to multiple GOTs

■Setting Station

When connecting two or more GOTs in the Ethernet network, set each [Station] to the GOT.

☞ Page 1912 Connected Ethernet Controller Setting

■Setting IP address

Do not use the IP address "192.168.0.18" when using multiple GOTs with the GOT 1000 series mixed.

A communication error may occur on the GOT with the IP address.

When setting IP address

Do not use "0" and "255" at the end of an IP address.

(Numbers of *.*.*.0 and *.*.*.255 are used by the system.)

The GOT may not monitor the controller correctly with the above numbers.

Consult with the administrator of the network before setting an IP address to the GOT and controller.

When connecting to the multiple network equipment (including GOT) in a segment

By increasing the network load, the transmission speed between the GOT and PLC may be reduced.

The following actions may improve the communication performance.

- Using a switching hub
- More high speed by 100BASE-TX (100Mbps)
- Reduction of the monitoring points on GOT

When monitoring a nonexistent or turned-off station

If a time-out occurs with the initial communication by monitoring a nonexistent or turned-off station, the time-out can delay the communication with the normally operating station.

Timing to start GOT communication

After the PLC starts up, start the GOT communication.

When the GOT starts communication before the PLC starts up, a communication timeout occurs.

Operations during communication

During normal communication, any operation which makes the GOT restart (including writing a project and changing utility data)may display the system alarm, "402 Communication timeout.

Confirm communication pathway or modules.", when the GOT restarts.

When Ethernet connection type is OP communication

To monitor a device, permit the access to the device in the PLC side setting.

For details of SIEMENS PLCs, refer to the following manuals.

📖SIEMENS PLC user's Manual

42.4 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1

SIEMENS equipment ([SIEMENS S7-200] or [SIEMENS S7-200(CN/SMART)])

SIEMENS equipment ([SIEMENS S7-300/400])

SIEMENS equipment ([SIEMENS S7(Ethernet)])

SIEMENS equipment ([SIEMENS OP(Ethernet)])

MEMO

43 HIRATA CORPORATION HNC CONTROLLER

For the connection to the HNC controller manufactured by Hirata Corporation, please contact our company.

MEMO

44 MURATEC CONTROLLER

For the connection to the MURATEC controller, please contact our company.

MEMO

PART 8 MICROCOMPUTER

45 MICROCOMPUTER CONNECTION (SERIAL)

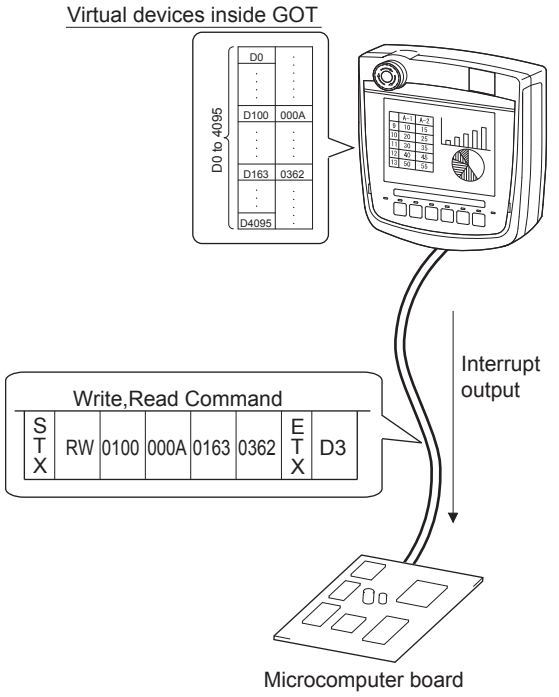
46 MICROCOMPUTER CONNECTION (ETHERNET)

45 MICROCOMPUTER CONNECTION (SERIAL)

- Page 1924 Microcomputer Connection (Serial)
- Page 1927 System Configuration
- Page 1929 Connection Diagram
- Page 1934 Device Data Area
- Page 1946 Message Formats
- Page 1995 GOT Side Settings
- Page 1999 Settable Device Range
- Page 2000 Precautions

45.1 Microcomputer Connection (Serial)

The microcomputer connection (Ethernet) is a function by which data can be written or read from a personal computer, microcomputer board, PLC, and others (hereinafter, host) to the virtual devices of the GOT by connecting the host and the GOT by Ethernet.
Interrupt output is also available from the GOT to the host.

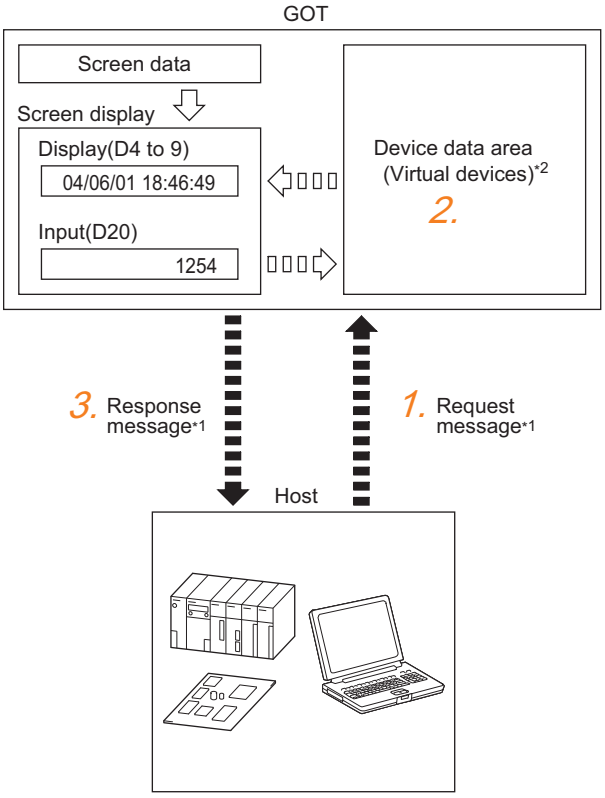


Point

Virtual devices inside the GOT
The devices inside the GOT are used in the microcomputer connection.
(PLC devices are not used)
☞ Page 1934 Device Data Area

Flow of data processing

■When reading or writing data



1. The host sends a request message (the read or write command) to the GOT.

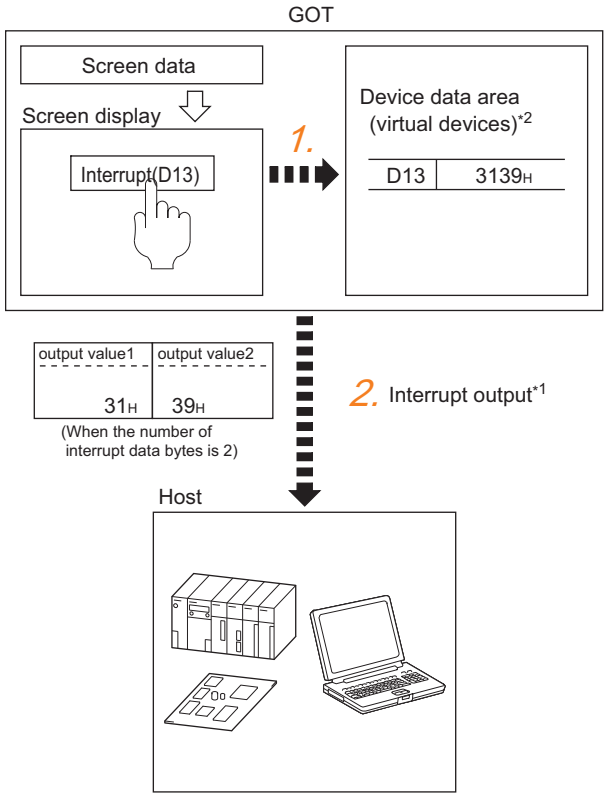
2. The GOT reads or writes data from or to its virtual devices according to the request from the host.

3. Upon completion of the processing, the GOT sends a response message (processing result) to the host.

Creating the following objects on the screen allows you to use the data read or written from or to the virtual devices.

- Numerical display object to display the data written by the write command
- Numerical input object to input data to be uploaded to the host

■When outputting interrupts



1. Data are written to the virtual devices for interrupt output from the touch switches on the GOT.

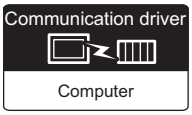
2. The GOT sends the written data (interrupt output) to the host.

*1 ☞ Page 1946 Message Formats

*2 ☞ Page 1934 Device Data Area

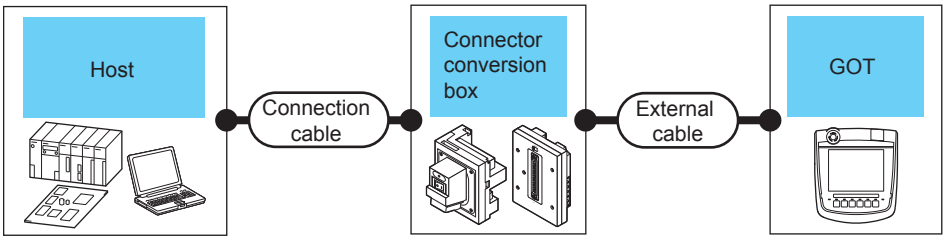
45.2 System Configuration

For the microcomputer connection (serial)



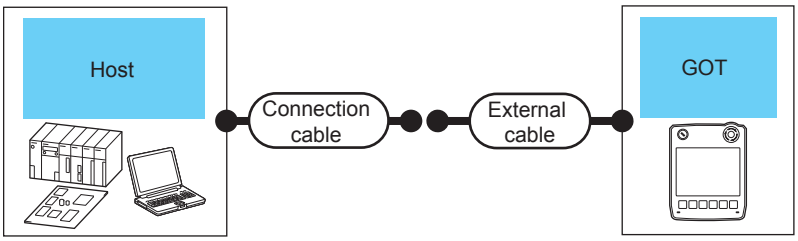
When connecting one GOT

■When using the connector conversion box



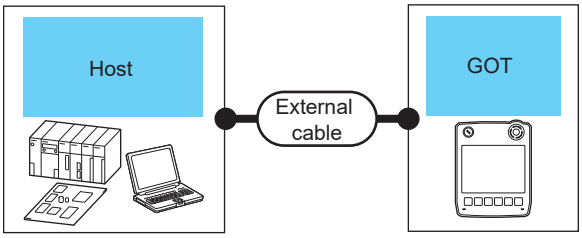
Host Communication Type	Connection cable Connection diagram number	Connector conversion box	External cable	GOT Model	Total distance	Number of connectable equipment
RS-232	User preparing Page 1929 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 GOT for 1 host
		GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
RS-422	User preparing Page 1932 RS-422 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	
		GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		

■When using the external cable (GT11H-C□□□-37P)



Host Communication Type	Connection cable Connection diagram number	External cable	GOT Model	Total distance	Number of connectable equipment
RS-232	User preparing Page 1930 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 GOT for 1 host
RS-422	User preparing Page 1932 RS-422 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS	13m	

■When using the external cable (GT11H-C□□□)



Host Communication Type	External cable	GOT Model	Total distance	Number of connectable equipment
RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 1930 RS-232 connection diagram 3)	GT 2505HS	6m	1 GOT for 1 host
RS-422	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 1932 RS-422 connection diagram 3)	GT 2505HS	13m	

45.3 Connection Diagram

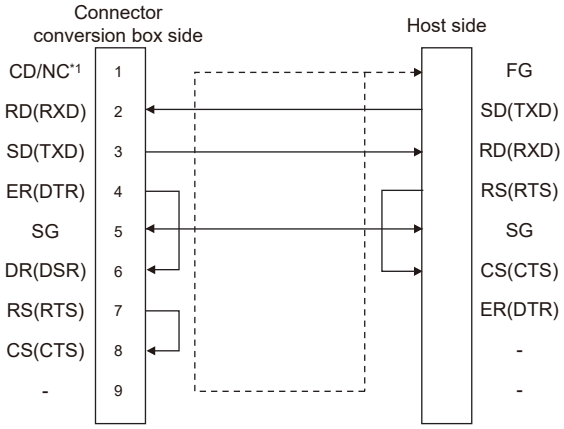
The following diagram shows the connection between the GOT and the microcomputer.

RS-232 cable

Connection diagram

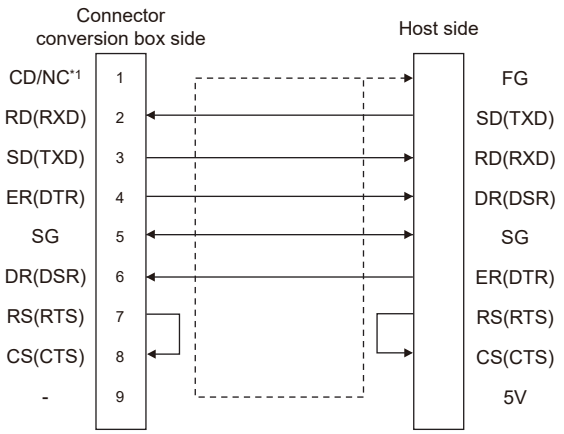
■RS-232 connection diagram 1)

Example of the case where the DTR/DSR signal is not used



*1 GT2506HS-V: CD, GT2505HS-V: NC

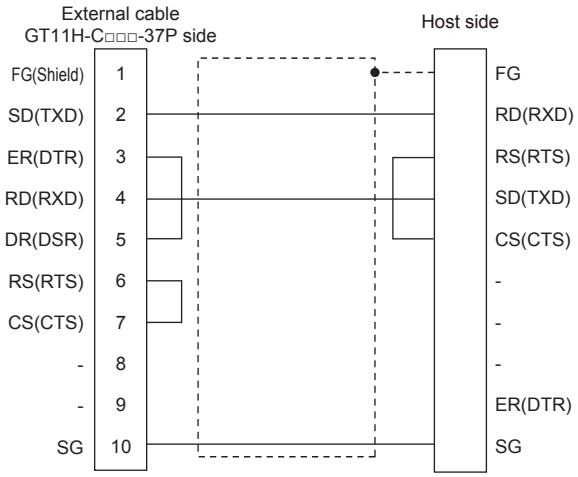
Example of the case where the DTR/DSR signal is used



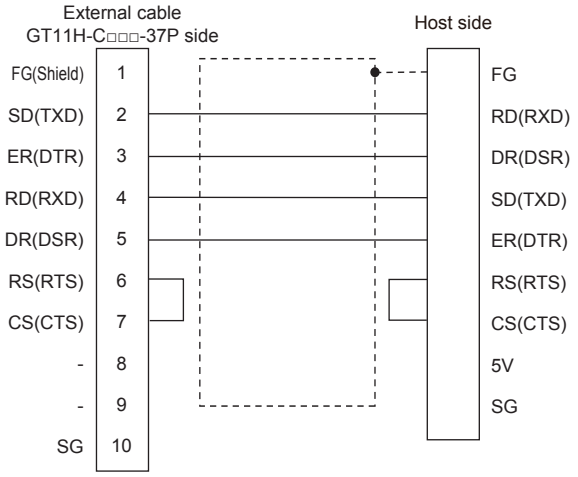
*1 GT2506HS-V: CD, GT2505HS-V: NC

■RS-232 connection diagram 2)

Example of the case where the DTR/DSR signal is not used

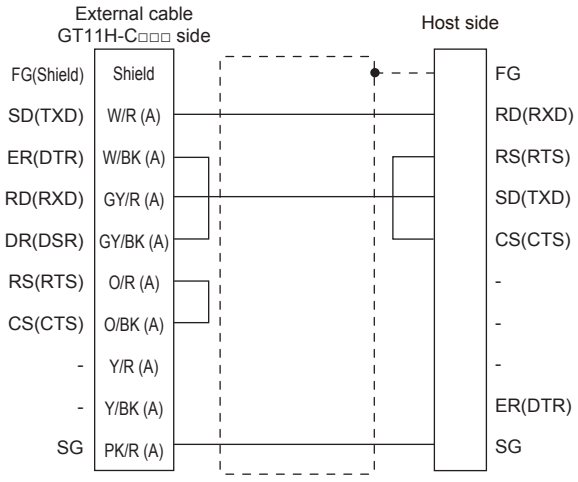


Example of the case where the DTR/DSR signal is used

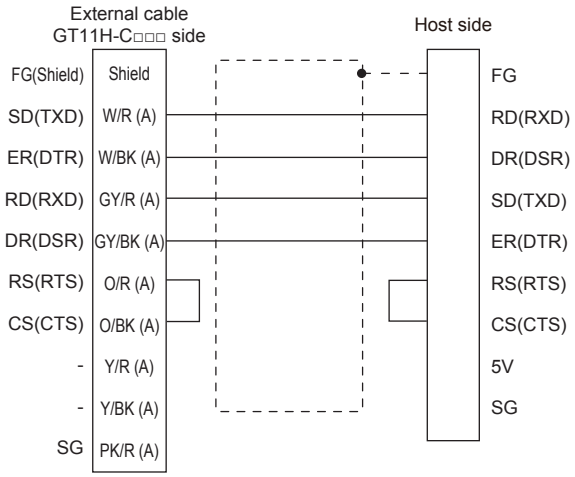


■RS-232 connection diagram 3)

Example of the case where the DTR/DSR signal is not used



Example of the case where the DTR/DSR signal is used



Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

■GOT side connector

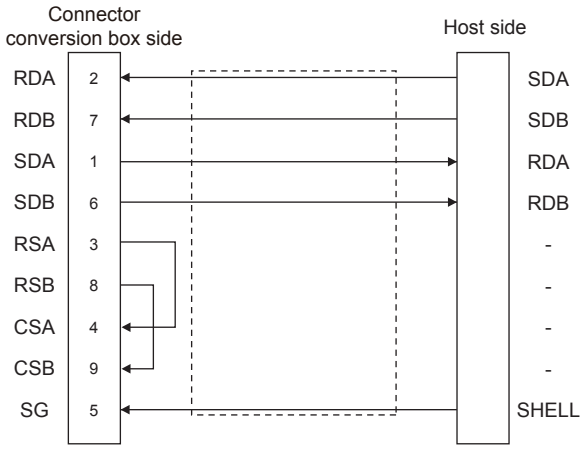
For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

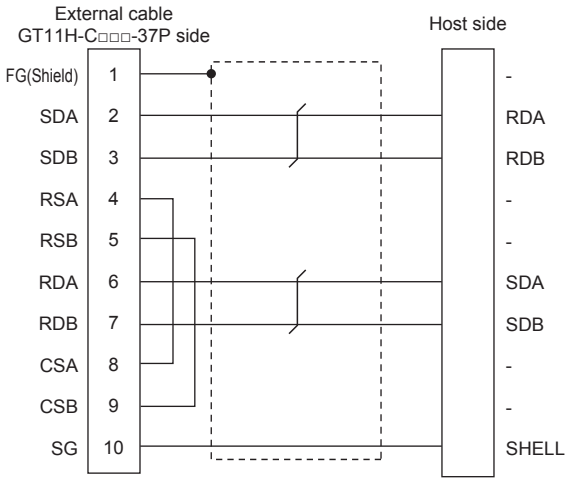
RS-422 cable

Connection diagram

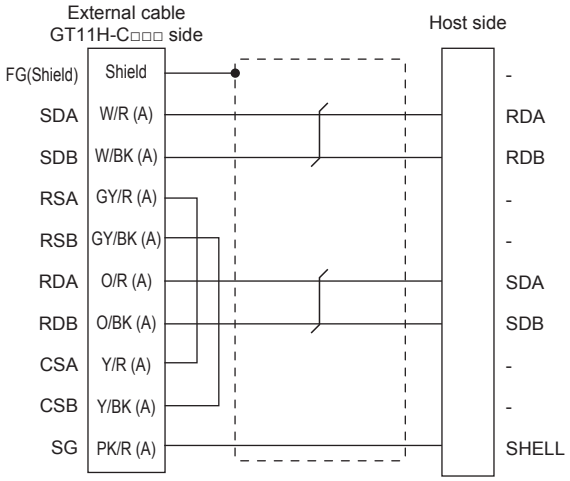
■RS-422 connection diagram 1)



■RS-422 connection diagram 2)



■RS-422 connection diagram 3)



Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-422 cable must be 13 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

Connecting terminating resistors

■GOT side

When connecting a microcomputer to the GOT, a terminating resistor must be connected to the GOT.

- For GT2506HS-V

Set the terminating resistor setting switch of the GOT main unit to "Disable".

- For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

45.4 Device Data Area

The following shows a list of virtual devices inside the GOT available in the microcomputer connection (serial), and the address specification values for each data format.

The address specification of the virtual devices differs depending on the data format.*1

Model	Virtual device*2			Address specification value					Refer to
	Name	Device range (decimal)	Device type	Format 1, 2	Format 3 to 6	Format 7 to 10	Format 11 to 13	Format 14, 15	
GT2506-HS GT2505-HS	D	0 to 4095	Word	0 to 4095	D0 to 4095	D0 to 4095	0000 to 0FFFH	8000 to 9FFFH	☞ Page 1935 D devices
	R	0 to 4095	Word	4096 to 8191	R0 to 4095	R0 to 4095	1000 to 1FFFH	0000 to 1FFFH	☞ Page 1939 R devices
	L	0 to 2047	Bit	8192 to 8319	L0 to 2047	L0 to 2047	2000 to 207FH	A000 to A0FFH	☞ Page 1940 L devices
	M	0 to 2047	Bit	8320 to 8447	M0 to 2047	M0 to 2047	2080 to 20FFH	2000 to 20FFH	☞ Page 1940 M devices
	SD	0 to 15	Word	8448 to 8463	D9000 to 9015	SD0 to 15	2100 to 210FH	2100 to 211FH (3000 to 300DH)*3	☞ Page 1941 SD devices
	SM	0 to 63	Bit	8464 to 8467	M9000 to 9063	SM0 to 63	2110 to 2113H	2200 to 2207H	☞ Page 1944 SM devices

*1 For the address specification method for each data format, refer to the following.
☞ Page 1946 Message Formats

- Formats 1, 2 : GOT-A900 Series microcomputer connection
- Formats 3 to 6 : A compatible 1C frame
- Formats 7 to 10 : QnA compatible 3C/4C frame
- Formats 11 to 13 : SCHNEIDER EJH's memory link method
- Formats 14, 15 : GOT-F900 Series microcomputer connection

*2 When reusing GOT900 Series project data
• GOT-A900 Series virtual devices (D0 to 2047)
Can be used as they are without changing the assignments.
• GOT-F900 Series virtual devices
Since some of the assigned virtual device values differ as indicated below, change the assignment using device batch edit of GT Designer3.
Refer to the following manual for device batch edit of GT Designer3.
GT Designer3 (GOT2000) Screen Design Manual

GOT2000 Series virtual devices	GOT-F900 Series virtual devices
D0 to 2047	—
D2048 to 4095	—
R0 to 4095	D0 to 4095
L0 to 2047	—
M0 to 2047	M0 to 2047
SD0 to 15	D8000 to 8015 GD0 to 6
SM0 to 63	M8000 to 8063

*3 Access to SD3 to 9 can also be made by the specification of the addresses (3000 to 300DH) of GD0 to 6 on the GOT-F900 Series.

Point

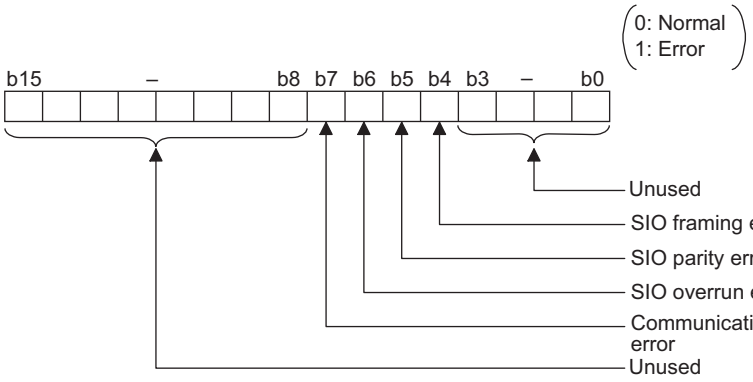
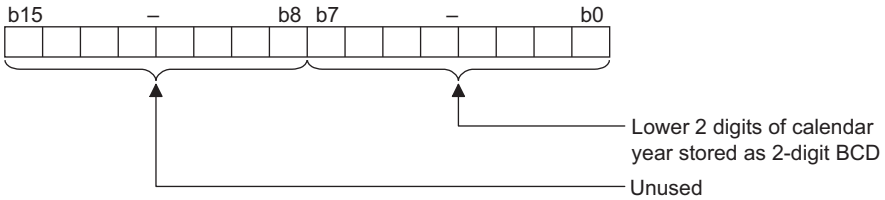
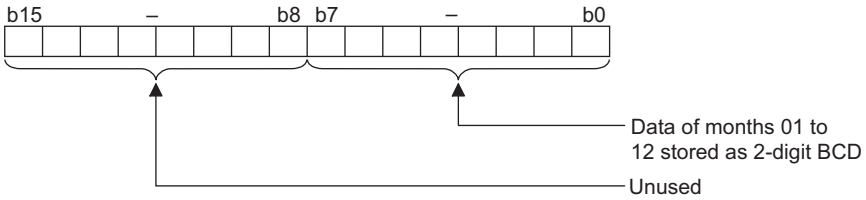
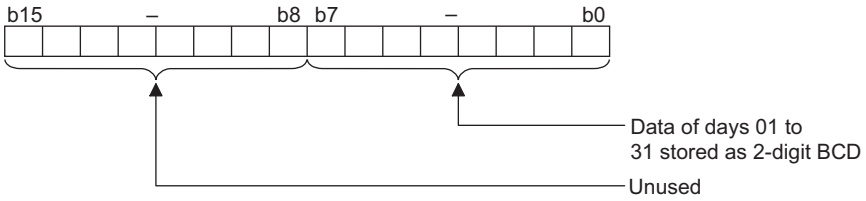
Values of virtual devices inside the GOT
When the GOT is turned OFF or reset, values are cleared to their defaults (bit devices: OFF, word devices: 0).
Values are held in the memory when project data are written to the GOT.

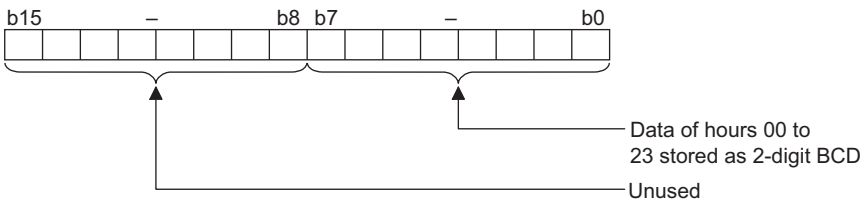
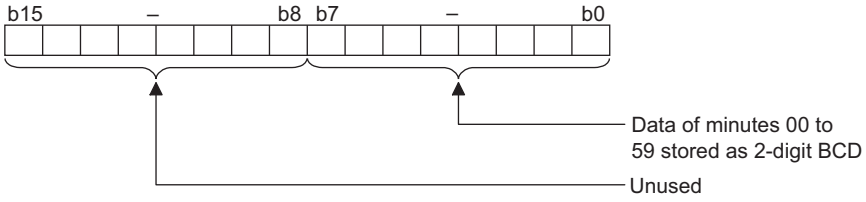
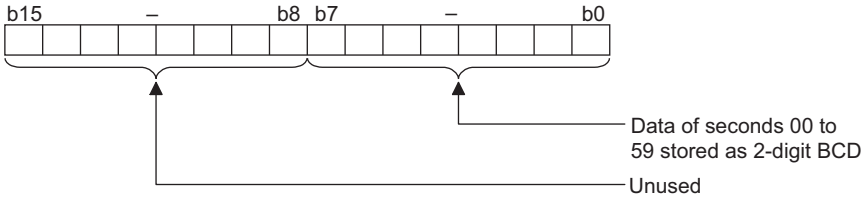
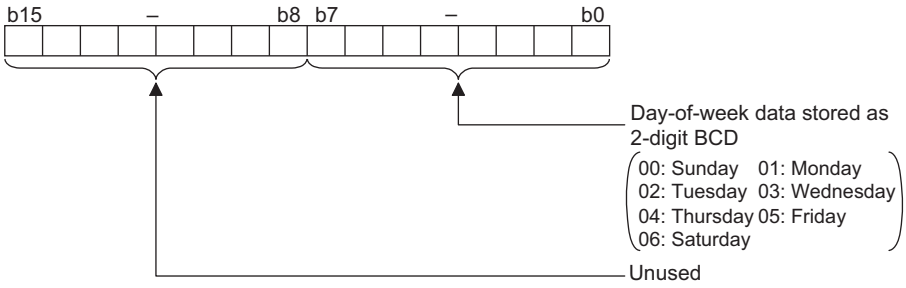
D devices

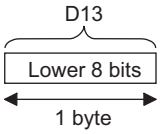
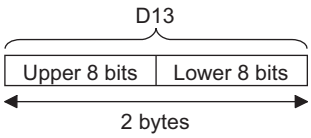
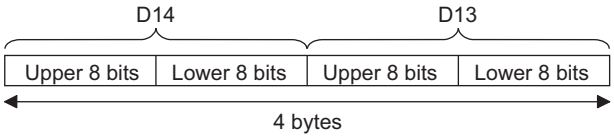
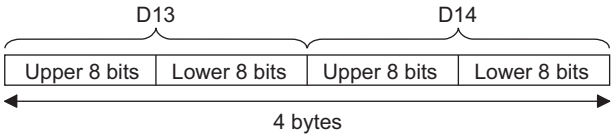
The D devices are word devices into which GOT communication errors, clock data or other information are stored.
The user can also store data using the user area.

List of D devices

The following lists the D devices (virtual devices inside the GOT).

Address	Description	Set side
D0 to 2	Unused	—
D3	Communication error status Stores the communication error details of GOT.  • b4 to 6 turn ON when an SIO error occurs, and turn OFF when an request message from the host is received successfully after the error occurrence. • b7 turns ON about 3 seconds after the host side DTR becomes OFF, and turns OFF when transmission is performed successfully to the host after the error occurrence.	System
D4	Clock data (year) 	
D5	Clock data (month) 	
D6	Clock data (day) 	

Address	Description	Set side
D7	Clock data (hour) 	System
D8	Clock data (minute) 	
D9	Clock data (second) 	
D10	Clock data (day of the week) 	
D11, D12	Unused	—

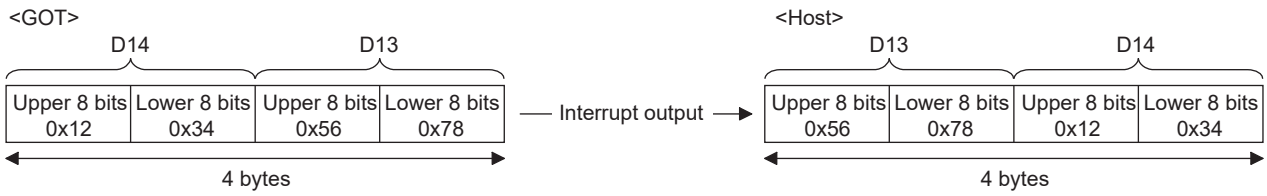
Address	Description	Set side
D13 D14	Interrupt output When data are written to D13 and D14 from a GOT touch switch, for example, the data of D13 and D14 are transmitted (interrupt output) to the host side. *1*2 Set the data amount (bytes) for an interrupt output to [Interrupt Data Byte(Byte)] in the communication detail settings. ☞ Page 1995 Setting communication interface (Controller Setting) • Output value when [1] is set to [Interrupt Data Byte(Byte)] in the communication detail settings  • Output value when [2] is set to [Interrupt Data Byte(Byte)] in the communication detail settings  • Output value when [4] is set to [Interrupt Data Byte(Byte)] in the communication detail settings*3 (1) When [32bit Storage] in the communication detail settings is set to [LH Order]  (2) When [32bit Storage] in the communication detail settings is set to [HL Order] 	User
D15 to 19	Unused	—
D20 to 2031	User area	User
D2032 to 2034	Unused	—
D2035	1-second binary counter The counter is incremented at 1-second intervals after the GOT is turned ON. (The time elapsed after GOT is turned ON is stored in 1-second units.) Data are stored in binary format.	System
D2036 to 4095	User area	User

*1 After the interrupt data is written, the data is output within 1 to 10 ms.

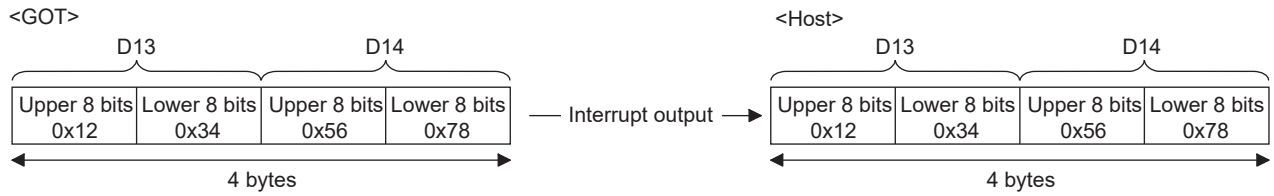
*2 When data are written to D13 and D14 from the host side, interrupt output is not performed.

*3 When 32-bit data are written to D13 and D14, the values are output to the host side regardless of the setting for [32bit Storage] in the communication detail settings.
Example) When outputting 0x12345678 with unsigned 32-bit binary data

· LH Order



· HL Order



Point

• The side where virtual devices are set

System: Set on the system side.

User: Set on the user side (by sending request messages from host or using the touch switches, etc. on the GOT).

• Interrupt output (D13, D14)

To disable the interrupt output, turn on SM52 (interrupt code output disable flag).

☞ Page 1944 SM devices

To execute the interrupt output in format 1, 2, 11, 14, or 15, set the data length to 8 bits in the communication detail settings.

When "7 bits" is set, the MSB (8th bit) is ignored. (Example: FFH→7FH)

☞ Page 1995 Setting communication interface (Controller Setting)

Differences in address specifications by data format

The address specification of devices varies depending on the data format.*1

The following shows the address specification values for each data format.

Model	Address	Address specification value					
		Format 1, 2	Format 3 to 6	Format 7 to 10	Format 11 to 13	Format 14, 15	
GT2506HS GT2505HS	D0	0	D0	D0	0000H	8000H 8001H	8000H 8001H Upper 8 bits Lower 8 bits
	D1	1	D1	D1	0001H	8002H 8003H	8002H 8003H Upper 8 bits Lower 8 bits
	:	:	:	:	:	:	
	D4095	4095	D4095	D4095	0FFFH	9FFEH 9FFFH	9FFEH 9FFFH Upper 8 bits Lower 8 bits

*1 For the address specification method for each data format, refer to the following.

☞ Page 1946 Message Formats

- Formats 1, 2 : GOT-A900 Series microcomputer connection
- Formats 3 to 6 : A compatible 1C frame
- Formats 7 to 10 : QnA compatible 3C/4C frame
- Formats 11 to 13 : SCHNEIDER EJH's memory link method
- Formats 14, 15 : GOT-F900 Series microcomputer connection

R devices

The R devices are word devices into which user data are stored.

All of these devices can be used as a user area.

List of R devices and differences in address specification by data format

The following shows the R devices (virtual devices inside the GOT).

The address specification values different depending on the data format are also given below.*1

Model	Address	Address specification value					
		Format 1, 2	Format 3 to 6	Format 7 to 10	Format 11 to 13	Format 14, 15	
GT2506HS GT2505HS	R0	4096	R0	R0	1000H	0000H 0001H	0000H 0001H Upper 8 bits Lower 8 bits
	R1	4097	R1	R1	1001H	0002H 0003H	0002H 0003H Upper 8 bits Lower 8 bits
	:	:	:	:	:	:	
	R4095	8191	R4095	R4095	1FFFH	1FFEH 1FFFH	1FFEH 1FFFH Upper 8 bits Lower 8 bits

*1 For the address specification method for each data format, refer to the following.

☞ Page 1946 Message Formats

- Formats 1, 2 : GOT-A900 Series microcomputer connection
- Formats 3 to 6 : A compatible 1C frame
- Formats 7 to 10 : QnA compatible 3C/4C frame
- Formats 11 to 13 : SCHNEIDER EJH's memory link method
- Formats 14, 15 : GOT-F900 Series microcomputer connection

L devices

The L devices are bit devices into which user data are stored.

All of these devices can be used as a user area.

List of L devices and differences in address specification by data format

The following shows the L devices (virtual devices inside the GOT).

The address specification values different depending on the data format are also given below.*1

Model	Address								Address specification value				
	b7	b6	b5	b4	b3	b2	b1	b0	Format 1, 2	Format 3 to 6	Format 7 to 10	Format 11 to 13	Format 14, 15
GT2506HS GT2505HS	L7	L6	L5	L4	L3	L2	L1	L0	8192	Same as address column on left*2		2000H	A000H
	L15	L14	L13	L12	L11	L10	L9	L8					A001H
	L23	L22	L21	L20	L19	L18	L17	L16	8193			2001H	A002H
	L31	L30	L29	L28	L27	L26	L25	L24					A003H
	:								:			:	:
	L2039	L2038	L2037	L2036	L2035	L2034	L2033	L2032	8319			207FH	A0FEH
	L2047	L2046	L2045	L2044	L2043	L2042	L2041	L2040					A0FFH

*1 For the address specification method for each data format, refer to the following.

☞ Page 1946 Message Formats

- Formats 1, 2 : GOT-A900 Series microcomputer connection
- Formats 3 to 6 : A compatible 1C frame
- Formats 7 to 10 : QnA compatible 3C/4C frame
- Formats 11 to 13 : SCHNEIDER EJH's memory link method
- Formats 14, 15 : GOT-F900 Series microcomputer connection

*2 For reading or writing data in word units, specify the addresses in a unit of 16 points. (Example: L0, L16, L32, etc.)

M devices

The M devices are bit devices into which user data are stored.

All of these devices can be used as a user area.

List of M devices and differences in address specification by data format

The following shows the M devices (virtual devices inside the GOT).

The address specification values different depending on the data format are also given below.*1

Model	Address								Address specification value				
	b7	b6	b5	b4	b3	b2	b1	b0	Format 1, 2	Format 3 to 6	Format 7 to 10	Format 11 to 13	Format 14, 15
GT2506HS GT2505HS	M7	M6	M5	M4	M3	M2	M1	M0	8320	Same as address column on left*2		2080H	2000H
	M15	M14	M13	M12	M11	M10	M9	M8					2H001H
	M23	M22	M21	M20	M19	M18	M17	M16	8321			2081H	2002H
	M31	M30	M29	M28	M27	M26	M25	M24					2003H
	:								:			:	:
	M2039	M2038	M2037	M2036	M2035	M2034	M2033	M2032	8447			20FFH	20FEH
	M2047	M2046	M2045	M2044	M2043	M2042	M2041	M2040					20FFH

*1 For the address specification method for each data format, refer to the following.

☞ Page 1946 Message Formats

- Formats 1, 2 : GOT-A900 Series microcomputer connection
- Formats 3 to 6 : A compatible 1C frame
- Formats 7 to 10 : QnA compatible 3C/4C frame
- Formats 11 to 13 : SCHNEIDER EJH's memory link method
- Formats 14, 15 : GOT-F900 Series microcomputer connection

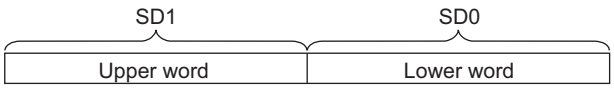
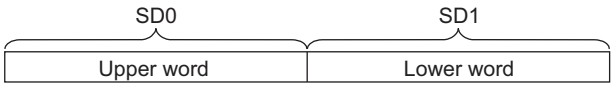
*2 For reading or writing data in word units, specify the addresses in a unit of 16 points. (Example: M0, M16, M32, etc.)

SD devices

The SD devices are word devices into which GOT communication errors (error codes), clock data and other information are stored.

List of SD devices

The following lists the SD devices (virtual devices inside the GOT).

Address	Description	Set side
SD0 SD1	100ms counter (32bits) The counter is incremented at 100ms intervals after GOT is turned ON. (The time elapsed after GOT is turned ON is stored in 100ms units.) (1) When [32bit Storage] in the communication detail settings is set to [LH Order] The lower and upper bits are stored in SD0 and SD1 respectively.  (2) When [32bit Storage] in the communication detail settings is set to [HL Order] The upper and lower bits are stored in SD0 and SD1 respectively. 	System
SD2*1	Communication error status An error data (error code) occurred during communication is stored. • Host Address (Communication error that occurred on the request destination GOT) 0: No error 1: Parity error 2: Framing error 3: Overrun error 4: Communication message error 5: Command error 6: Clock data setting error	
SD3	Clock data (second) Second data of 00 to 59 is stored.	
SD4	Clock data (minute) Minute data of 00 to 59 is stored.	
SD5	Clock data (hour) Hour data of 00 to 23 is stored.	
SD6	Clock data (day) Day data of 00 to 31 is stored.	
SD7	Clock data (month) Month data of 01 to 12 is stored.	
SD8	Clock data (year) The last two digits of four-digit year data are stored.	
SD9	Clock data (day of the week) Day-of-the-week data is stored. 0: Sunday 1: Monday 2: Tuesday 3: Wednesday 4: Thursday 5: Friday 6: Saturday	
SD10 to 15	Unused	—

*1 For details and corrective actions for the errors (error codes) that are stored into SD2, refer to the following:
☞ Page 1942 Details and actions for errors (error codes) stored into SD2

Point

The side where virtual devices are set
System: Set on the system side.
User: Set on the user side (by sending request messages from host or using the touch switches, etc. on the GOT).

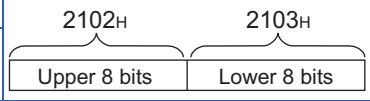
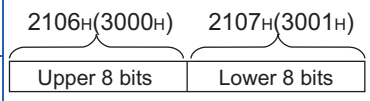
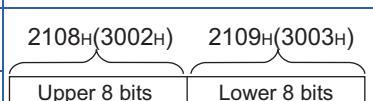
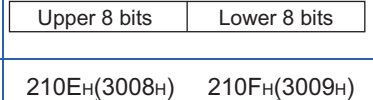
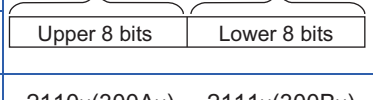
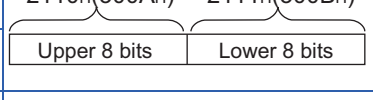
Details and actions for errors (error codes) stored into SD2

Error code	Description	Action
0	No error	—
1, 101	Parity error The parity bit does not match.	• Check the communication cable and communication module attachment. • Check the settings of "Communication Detail Settings". • Match the GOT and host transmission settings.
2, 102	Framing error The data bit and/or stop bit are not correct.	
3, 103	Overrun error The next data was transmitted from the host before GOT completes the processing of the data received.	• Check the settings of "Communication Detail Settings". • Decrease the transmission speed.
4, 104	Communication message error EXT/CR could not be found before the upper limit of the receive buffer was exceeded.	• Check the communication cable and communication module attachment. • Check the settings of "Communication Detail Settings". • Review the contents of the message to transmit.
5	Command error An unsupported command was used.	• Review the contents of the message to transmit. • Check the commands in the message. ☞ Page 1947 List of commands
105	Timeout error There is no response from the GOT, or the station of the specified address does not exist.	• Check the communication cable and communication module attachment. • Check the settings of "Communication Detail Settings". • Review the contents of the message to transmit.
106	Multiple units not connectable The RS-232 port is occupied.	• Check the communication cable and communication module attachment. • Check the settings of "Communication Detail Settings". • Check to see if the RS-232 port is occupied.
6, 107	Clock data setting error The setting value of the clock data has error.	• Review the contents of the message to transmit. • Check whether the non-existent data is set (e.g. setting "07" at the day of the week) as clock data.

Differences in address specifications by data format

The address specification of devices varies depending on the data format.*1

The following shows the address specification values for each data format.

Model	Address	Address specification value					
		Formats 1, 2	Formats 3 to 6	Formats 7 to 10	Formats 11 to 13	Formats 14, 15*2	
GT2506HS GT2505HS	SD0	8448	D9000	SD0	2100H	2100H	
						2101H	
	SD1	8449	D9001	SD1	2101H	2102H	
						2103H	
	SD2	8450	D9002	SD2	2102H	2104H	
						2105H	
	SD3	8451	D9003	SD3	2103H	2106H (3000H)	
						2107H (3001H)	
	SD4	8452	D9004	SD4	2104H	2108H (3002H)	
						2109H (3003H)	
	SD5	8453	D9005	SD5	2105H	210AH (3004H)	
						210BH (3005H)	
	SD6	8454	D9006	SD6	2106H	210CH (3006H)	
						210DH (3007H)	
	SD7	8455	D9007	SD7	2107H	210EH (3008H)	
						210FH (3009H)	
	SD8	8456	D9008	SD8	2108H	2110H (300AH)	
						2111H (300BH)	
	SD9	8457	D9009	SD9	2109H	2112H (300CH)	
						2113H (300DH)	

*1 For the address specification method for each data format, refer to the following.

☞ Page 1946 Message Formats

- Formats 1, 2 : GOT-A900 Series microcomputer connection
- Formats 3 to 6 : A compatible 1C frame
- Formats 7 to 10 : QnA compatible 3C/4C frame
- Formats 11 to 13 : SCHNEIDER EJH's memory link method
- Formats 14, 15 : GOT-F900 Series microcomputer connection

*2 SD3 to 9 correspond to GD0 to 6 on the GOT-F900 Series.
Access to SD3 to 9 can be also made by the specification of the addresses (3000 to 300DH) of GD0 to 6 on the GOT-F900 Series.

SM devices

The SM devices are bit devices into which interrupt outputs and clock data that turn ON or OFF at 1-second cycles.

List of SM devices

The following shows the SM devices (virtual devices inside the GOT).

<table>
<tr><th>Address</th><th>Description</th><th>Set side</th></tr>
<tr><td>SM0 to 49</td><td>Interrupt output
When the ON or OFF state of SM0 to 49 is changed by a touch switch on the GOT, for example, the interrupt codes shown below are transmitted (interrupt output) to the host side. *1*2
Set the data amount (bytes) for an interrupt output to [Interrupt Data Byte(Byte)] in the communication detail settings.
☞ Page 1995 Setting communication interface (Controller Setting)
<table>
<tr><th>Address</th><th>Event type</th><th>Interrupt code</th></tr>
<tr><td rowspan="2">SM0</td><td>Changed from OFF to ON</td><td>50H</td></tr>
<tr><td>Changed from ON to OFF</td><td>51H</td></tr>
<tr><td rowspan="2">SM1</td><td>Changed from OFF to ON</td><td>52H</td></tr>
<tr><td>Changed from ON to OFF</td><td>53H</td></tr>
<tr><td rowspan="2">SM2</td><td>Changed from OFF to ON</td><td>54H</td></tr>
<tr><td>Changed from ON to OFF</td><td>55H</td></tr>
<tr><td>≀</td><td>≀</td><td>≀</td></tr>
<tr><td rowspan="2">SM48</td><td>Changed from OFF to ON</td><td>B0H</td></tr>
<tr><td>Changed from ON to OFF</td><td>B1H</td></tr>
<tr><td rowspan="2">SM49</td><td>Changed from OFF to ON</td><td>B2H</td></tr>
<tr><td>Changed from ON to OFF</td><td>B3H</td></tr>
</table></td><td>User</td></tr>
<tr><td>SM50</td><td>1-second cycle clock
Turns ON and OFF in 1-second cycles.
 
</td><td rowspan="2">System</td></tr>
<tr><td>SM51</td><td>2-second cycle clock
Turns ON and OFF in 2-second cycles.
 
</td></tr>
<tr><td>SM52</td><td>Interrupt code output disable flag
Enables or disables the output of the interrupt code and special interrupt code.
OFF: Output enabled, ON: Output disabled
When the output is set to be disabled, no interrupt data are output to the host.
(Relevant devices: D13, D14, SM0 to 49)</td><td>User</td></tr>
<tr><td>SM53 to 63</td><td>Unused</td><td>—</td></tr>
</table>

*1 After the ON or OFF state is changed, the interrupt data is output within 1 to 10 ms.

*2 When the ON or OFF state of SM0 to 49 is changed from the host side, interrupt output is not performed.

Point

The side where virtual devices are set

System: Set on the system side.

User: Set on the user side (by sending request messages from host or using the touch switches, etc. on the GOT).

Interrupt outputs (SM0 to 49)

To disable the interrupt output, turn on SM52 (interrupt code output disable flag).

☞ Page 1944 SM devices

To execute the interrupt output in format 1, 2, 11, 14, or 15, set the data length to 8 bits in the communication detail settings.

When "7 bits" is set, the MSB (8th bit) is ignored. (Example: FFH→7FH)

☞ Page 1995 Setting communication interface (Controller Setting)

Differences in address specifications by data format

The address specification of devices varies depending on the data format.*1

The following shows the address specification values for each data format.

Model	Address								Address specification value				
	b7	b6	b5	b4	b3	b2	b1	b0	Format 1, 2	Format 3 to 6	Format 7 to 10	Format 11 to 13	Format 14, 15
GT2506-HS GT2505-HS	SM7	SM6	SM5	SM4	SM3	SM2	SM1	SM0	8464	*2*4	*3*4	2110H	2200H
	SM15	SM14	SM13	SM12	SM11	SM10	SM9	SM8					2201H
	SM23	SM22	SM21	SM20	SM19	SM18	SM17	SM16	8465			2111H	2202H
	SM31	SM30	SM29	SM28	SM27	SM26	SM25	SM24					2203H
	SM39	SM38	SM37	SM36	SM35	SM34	SM33	SM32	8466			2112H	2204H
	SM47	SM46	SM45	SM44	SM43	SM42	SM41	SM40					2205H
	Unused			SM52	SM51	SM50	SM49	SM48	8467			2113H	2206H
	Unused								—				—

*1 For the address specification method for each data format, refer to the following.

☞ Page 1946 Message Formats

- Formats 1, 2 : GOT-A900 Series microcomputer connection
- Formats 3 to 6 : A compatible 1C frame
- Formats 7 to 10 : QnA compatible 3C/4C frame
- Formats 11 to 13 : SCHNEIDER EJH's memory link method
- Formats 14, 15 : GOT-F900 Series microcomputer connection

*2 In formats 3 to 6, values are specified within a range of M9000 to 9052.

*3 In formats 7 to 10, values are specified within a range of SM0 to 52.

*4 For reading or writing data in word units, specify the addresses in a unit of 16 points. (Example: SM0, SM16, SM32, etc.)

45.5 Message Formats

This section describes the format of messages that can be used in the microcomputer connection (serial).

Data format type

Set the data format in the communication detail settings in GT Designer3.

For details of the data format setting method, refer to the following.

☞ Page 1995 Setting communication interface (Controller Setting)

Formats 1, 2 (GOT-A900 Series microcomputer connection)

This is the same message format as when a microcomputer connection is established with the GOT-A900 series.

Type	Name	Description	Refer to
Format 1	GOT-A900 Series microcomputer connection (format 1)	This format is used when the GOT is connected to the host in a 1:1 connection.	☞ Page 1950 Formats 1, 2
Format 2	GOT-A900 Series microcomputer connection (format 2)	This is the appended format with error code at the error response of the GOT-A900 Series microcomputer connection (format 1).	

Formats 3 to 6 (A compatible 1C frame)

This is the same message format as when communication is performed using the dedicated protocol of the A series computer link module.

Type	Name	Description	Refer to
Format 3	A compatible 1C frame (format 1)	This is the basic format of the dedicated protocols.	☞ Page 1963 Formats 3 to 6
Format 4	A compatible 1C frame (format 2)	This is the appended format of the A compatible 1C frame (format 1) with a block No.	
Format 5	A compatible 1C frame (format 3)	This is the enclosed format of the A compatible 1C frame (format 1) with STX and ETX.	
Format 6	A compatible 1C frame (format 4)	This is the appended format of the A compatible 1C frame (format 1) with CR and LF.	

Formats 7 to 10 (QnA compatible 3C/4C frame)

This is the same message format as when a communication is performed using the MC protocol of Q/QnA Series serial communication module.

Type	Name	Description	Refer to
Format 7	QnA compatible 3C/4C frame (format 1)	This is the basic format of the MC protocols.	☞ Page 1968 Formats 7 to 10
Format 8	QnA compatible 3C/4C frame (format 2)	This is the appended format of the QnA compatible 3C/4C frame (format 1) with block No.	
Format 9	QnA compatible 3C/4C frame (format 3)	This is the enclosed format of the QnA compatible 3C/4C frame (format 1) with STX and ETX.	
Format 10	QnA compatible 3C/4C frame (format 4)	This is the appended format of the QnA compatible 3C/4C frame (format 1) with CR and LF.	

Formats 11 to 13 (SCHNEIDER EJH's memory link method)

This is the same message format as the protocol of the SCHNEIDER EJH's memory link method.

Type	Name	Description	Refer to
Format 11	SCHNEIDER EJH's memory link method (compatible mode)	This is the basic format of the SCHNEIDER EJH's memory link method.	☞ Page 1973 Formats 11 to 13
Format 12	SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:1)	This is the format with sum check, CR, and LF appended to the SCHNEIDER EJH's memory link method (compatible mode).	
Format 13	SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n)	This is the format with a station No. appended to the SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:1).	

Formats 14, 15 (GOT-F900 Series microcomputer connection)

This is the same message format as when a microcomputer connection is established with the GOT-F900 Series.

Type	Name	Description	Refer to
Format 14	GOT-F900 Series microcomputer connection (format 1)	Use this format when establishing a 1:1 or m:n connection between the GOT and the host. The end code is CR.	☞ Page 1981 Formats 14, 15
Format 15	GOT-F900 Series microcomputer connection (format 2)	Use this format when establishing a 1:1 or m:n connection between the GOT and the host. The end code is ETX or sum check.	

List of commands

The following shows the list of commands available in each data format.

List of commands for formats 1, 2 (GOT-A900 Series microcomputer connection)

Command		Command name	Description	Max. number of points processed
Symbol	ASCII code			
RD	52H 44H	Batch read in word units	Reads bit devices in 16-point units.	99 words (1584 points)
			Reads word devices in 1-point units.	99 points
WD	57H 44H	Batch write in word units	Writes to bit devices in 16-point units.	99 words (1584 points)
			Writes to word devices in 1-point units.	99 points
RR	52H 52H	Random read in word units *1	Reads multiple different bit devices in 16-point units.	256 words (4096 points)
			Reads multiple different word devices in 1-point units.	256 points
RW	52H 57H	Random write in word units *1	Writes to multiple different word devices in 16-point units.	128 words (2048 points)
			Writes to multiple different word devices in 1-point units.	128 points
TR	54H 52H	Read clock data	Reads the clock data of the GOT.	—
TS	54H 53H	Set clock data	Sets the clock data of the GOT.	—

*1 Mixed specification of bit devices and word devices is also possible.

List of commands for formats 3 to 6 (A compatible 1C frame)

Command		Command name	Description	Max. number of points processed
Symbol	ASCII code			
BR JR	42H 52H 4AH 52H	Batch read in bit units	Reads bit devices in 1-point units.	64 points
WR QR	57H 52H 51H 52H	Batch read in word units	Reads bit devices in 16-point units.*2	64 words (1024 points)
			Reads word devices in 1-point units.	64 points
BW JW	42H 57H 4AH 57H	Batch write in bit units	Writes to bit devices in 1-point units.	64 points
WW QW	57H 57H 51H 57H	Batch write in word units	Writes to bit devices in 16-point units.*2	64 words (1024 points)
			Writes to word devices in 1-point units.	64 points
BT JT	42H 54H 4AH 54H	Test in bit units (Random write)	Writes to multiple different bit devices in 1-point units.	64 points
WT QT	57H 54H 51H 54H	Test in word units (Random write)	Writes to multiple different bit devices in 16-point units.*2	64 words (1024 points)
			Writes to multiple different word devices in 1-point units.	64 points
TR*1	54H 52H	Read clock data	Reads the clock data of the GOT.	—
TS*1	54H 53H	Set clock data	Sets the clock data of the GOT.	—

*1 This is a dedicated command of GOT for the microcomputer connection.

*2 Specifies the address of bit devices in 16-point units. (Example: M0, M16, M32, and others)

Command lists for formats 7 to 10 (QnA compatible 3C/4C frame)

Command	Sub-command	Command name	Description	Max. number of points processed
0401	0001	Batch read in bit units	Reads bit devices in 1-point units.	64 points
0401	0000	Batch read in word units	Reads bit devices in 16-point units.*3	64 words (1024 points)
			Reads word devices in 1-point units.	64 points
1401	0001	Batch write in bit units	Writes to bit devices in 1-point units.	64 points
1401	0000	Batch write in word units	Writes to bit devices in 16-point units.*3	64 words (1024 points)
			Writes to word devices in 1-point units.	64 points
0403	0000	Random read in word units *1	Reads multiple different bit devices in 16-point and 32-point units.*3	64 words (1024 points)
			Reads multiple different word devices in 1-point and 2-point units.	64 points
1402	0001	Random write in bit units	Writes to multiple different bit devices in 1-point units.	64 points
1402	0000	Random write in word units *1	Writes to multiple different bit devices in 16-point and 32-point units.*3	64 words (1024 points)
			Writes to multiple different word devices in 1-point and 2-point units.	64 points
0406	0000	Multiple block batch read	Reads multiple blocks. A bit device (16 bits for 1 point) or a word device (1 word for 1 point) is regarded as one block.*3	64 points
1406	0000	Multiple block batch write	Writes multiple blocks. A bit device (16 bits for 1 point) or a word device (1 word for 1 point) is regarded as one block.*3	64 points
1901*2	0000	Read clock data	Reads the clock data of the GOT.	—
0901*2	0000	Set clock data	Sets the clock data of the GOT.	—

*1 Mixed specification of bit devices and word devices is also possible.
*2 This is a dedicated command of GOT for the microcomputer connection.
*3 Specifies the address of bit devices in 16-point units. (Example: M0, M16, M32, and others)

List of commands for formats 11 to 13 (SCHNEIDER EJH's memory link method)

Command		Command name	Description	Max. number of points processed
Symbol	ASCII code			
R	52H	Batch read in word units	Reads bit devices in 16-point units.	256 words (4096 points)
			Reads word devices in 1-point units.	256 points
W	57H	Batch write in word units	Writes to bit devices in 16-point units.	Format 11: 496 words (7936 points) Format 12: 256 words (4096 points) Format 13: 256 words (4096 points)
			Writes to word devices in 1-point units.	Format 11: 496 points Format 12: 256 points Format 13: 256 points
I	49H	Interrupt inquiry	Issues an interrupt inquiry. (format 13 only)	—
N*1	4DH	Read clock data	Reads the clock data of the GOT.	—
M*1	4EH	Set clock data	Sets the clock data of the GOT.	—

*1 This is a dedicated command of GOT for the microcomputer connection.

List of commands for formats 14, 15 (GOT-F900 series microcomputer connection)

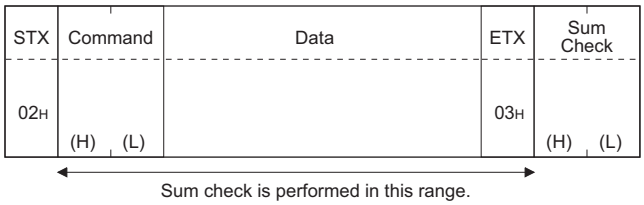
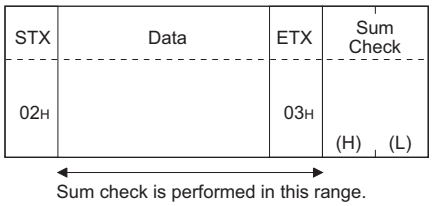
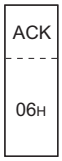
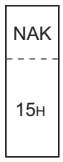
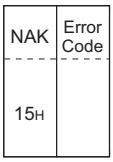
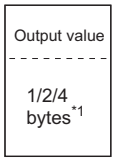
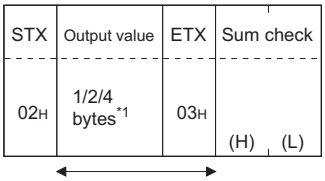
Command		Command name	Description	Max. number of points processed
Symbol	ASCII code			
0	30H	Batch read (without the station No.)	Reads bit devices in byte units.	255 bytes (2040 points)
			Reads word devices in byte units.	255 bytes (127 points)
A	41H	Batch read (with the station No.)	Reads bit devices in byte units.	255 bytes (2040 points)
			Reads word devices in byte units.	255 bytes (127 points)
1	31H	Batch write (without the station No.)	Writes to bit devices in byte units.	255 bytes (2040 points)
			Writes to word devices in byte units.	255 bytes (127 points)
B	42H	Batch write (with the station No.)	Writes to bit devices in byte units.	255 bytes (2040 points)
			Writes to word devices in byte units.	255 bytes (127 points)
3	33H	Multi-point write in bit units (without the station No.)	Writes bit patterns (bit ON or OFF, inversion, direct specification) in 1-point units (8 bits for 1 point) to a specified device.	70 bytes (560 points)
D	44H	Multi-point write in bit units (with the station No.)		
4	34H	Fill command (without the station No.)	Writes the same value to a range of specified devices.	—
E	45H	Fill command (with the station No.)		
5	35H	Set clock data (without the station No.)	Sets the clock data of the GOT.	—
F	46H	Set clock data (with the station No.)		
6	36H	Read clock data (without the station No.)	Reads the clock data of the GOT.	—
G	47H	Read clock data (with the station No.)		

Formats 1, 2

The following describes the message formats 1 and 2 (GOT-A900 Series microcomputer connection).

GT 2506 HS GT 2505 HS

Basic format of data communication

Item	Message format
Request message (host → GOT)	
Response message during normal communication (GOT → host)	(1) During processing of read commands  (2) During processing of write commands 
Response message during faulty communication (GOT → host)	(format 1: GOT-A900 Series microcomputer connection (format 1))  (format 2: GOT-A900 Series microcomputer connection (format 2)) 
During interrupt output *2	(format 1: GOT-A900 Series microcomputer connection (format 1))  (format 2: GOT-A900 Series microcomputer connection (format 2)) 

*1 Set the number of interrupt data bytes in the communication detail settings in GT Designer3.
For setting the number of interrupt data bytes, refer to the following.
☞ Page 1995 Setting communication interface (Controller Setting)

*2 Interrupt output can be executed by writing the data to the interrupt output devices (D13 and D14).
☞ Page 1935 D devices

Details of data items in message format

Point

Data code during communication

Communication is performed in ASCII code. (excluding interrupt output)

■Control codes

Symbol	ASCII code	Description
STX	02H	Start of Text (start marker of message frame)
ETX	03H	End of Text (end marker of message frame)
EOT	04H	End of Transmission
ENQ	05H	Enquiry (start of enquiry)
NAK	15H	Negative ACK (error response)
ACK	06H	Acknowledge (write completion response)
LF	0AH	Line Feed
CL	0CH	Clear
CR	0DH	Carriage Return

■Command

Specifies the contents to access from the host to GOT.

The command is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

For details of the commands that can be used, refer to the following.

☞ Page 1947 List of commands

■Address

Specifies the head No. of the device data to be read or written.

The address notated in decimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.

For details of the device range that can be accessed, refer to the following.

☞ Page 1934 Device Data Area

■Number of points

Specify the number of device data points to be read and written. (Setting range: 1 to 99)

The address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

■Year, month, day, hour, minute, second and day of the week data

Specifies year, month, day, hour, minute, second, and day of the week to be read or set to the GOT clock data.

The address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

☞ Page 1958 Read clock data (TR) command

☞ Page 1959 Set clock data (TS) command

■Data

Specifies the data to read from or write to the specified device data. (word unit)

The address notated in hexadecimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.

■Error code

This is the response message at faulty communication appended with error contents.

Error code is transmitted in 1 byte.

For details of the error codes generated in format 2 (GOT-A900 Series microcomputer connection (format 2)), refer to the following:

☞ Page 1962 Error code list

■Sum check code

The sum check code is obtained by converting the lower 1 byte (8 bits) of the result (sum), after having added the sum check target data as binary data, to 2-digit ASCII code (Hex).

STX	Command		Address				Number of points		ETX	Sum Check	
	R	D	0	1	0	0	0	2		B	C
02H	52H	44H	30H	31H	30H	30H	30H	32H	03H	42H	43H
	(H)	(L)	(H)	—	—	(L)	(H)	(L)		(H)	(L)

Sum check is performed in this range.

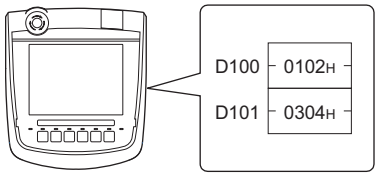
$52_H + 44_H + 30_H + 31_H + 30_H + 30_H + 30_H + 32_H + 03_H = 1BC_H$

Message Formats

■Batch read in word units (RD) command

- When reading a word device

The following shows an example of reading the two points of the virtual devices D100 and D101.
(Assuming D100=0102H, D101=0304H are stored.)

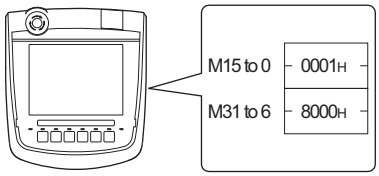


Item	Message format
Request message (host → GOT)	STX: 02H; Command: R 52H (H), D 44H (L); Address: 0 30H (H), 1 31H, 0 30H, 0 30H (L); Number of points: 0 30H (H), 2 32H (L); ETX: 03H; Sum Check: B 42H (H), C 43H (L). Sum check is performed in this range.
Response message during normal communication (GOT → host)	STX: 02H; Data 1 (D100): 0 30H (H), 1 31H, 0 30H, 2 32H (L); Data 2 (D101): 0 30H (H), 3 33H, 0 30H, 4 34H (L); ETX: 03H; Sum Check: 8 38H (H), D 44H (L). Sum check is performed in this range.
Response message during faulty communication (GOT → host)	(format 1: GOT-A900 Series microcomputer connection (format 1)) NAK: 15H (format 2: GOT-A900 Series microcomputer connection (format 2)) NAK: 15H; Error code: 06H The above is a case where the sum check error (06H) has occurred.

• When reading a bit device

The following shows an example of reading the two points of the virtual devices M0 to M31.

(Assuming M0="1" and M31="1" are stored.)

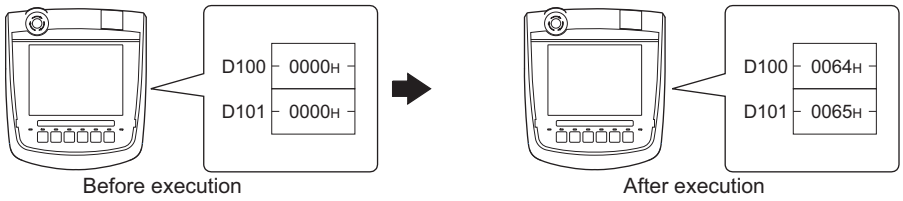


Item	Message format
Request message (host → GOT)	STX: 02H Command: R (52H) D (44H) Address: 8 (38H) 3 (33H) 2 (32H) 0 (30H) Number of points: 0 (30H) 2 (32H) ETX: 03H Sum Check: C (43H) 8 (38H) Sum check is performed in this range.
Response message during normal communication (GOT → host)	Sum check is performed in this range. STX: 02H Data 1 (M15 to 0): 0 (30H) 0 (30H) 0 (30H) 1 (31H) Data 2 (M31 to 16): 8 (38H) 0 (30H) 0 (30H) 0 (30H) ETX: 03H Sum Check: 8 (38H) C (43H) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 MM MM MM MM MM MM MM MM MM MM MM MM MM MM MM MM MM MM MM MM MM MM MM MM MM MM 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16
Response message during faulty communication (GOT → host)	(format 1: GOT-A900 Series microcomputer connection (format 1)) NAK: 15H (format 2: GOT-A900 Series microcomputer connection (format 2)) NAK: 15H Error code: 06H The above is a case where the sum check error (06H) has occurred.

■Batch write in word units (WD) command

• When writing to a word device

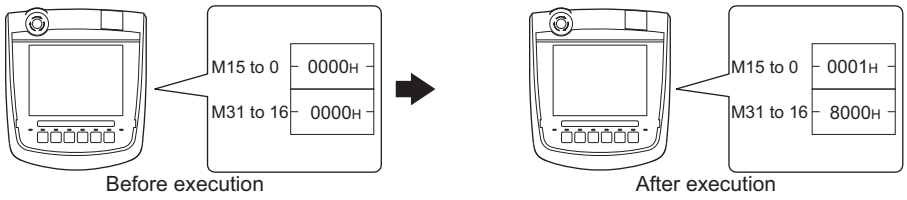
The following shows as example of writing "0064H"and "0065H"to virtual devices D100 and D101.



Item	Message format
Request message (host → GOT)	STX: 02H Command: W (57H) D (44H) Address: 0 (30H) 1 (31H) 0 (30H) 0 (30H) (H) — — (L) Number of points: 0 (30H) 2 (32H) (H) (L) Data 1(D100): 0 (30H) 0 (30H) 6 (36H) 4 (34H) (H) — — (L) Data 2 (D101): 0 (30H) 0 (30H) 6 (36H) 5 (35H) (H) — — (L) ETX: 03H Sum Check: 5 (35H) 6 (36H) (H) (L) Sum check is performed in this range.
Response message during normal communication (GOT → host)	ACK: 06H
Response message during faulty communication (GOT → host)	(format 1: GOT-A900 Series microcomputer connection (format 1)) NAK: 15H (format 2: GOT-A900 Series microcomputer connection (format 2)) NAK: 15H, Error code: 06H The above is a case where the sum check error (06H) has occurred.

• When writing to a bit device

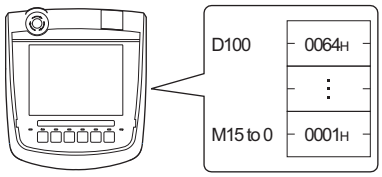
The following shows an example of writing "1"s to virtual devices M0 and M31.



Item	Message format
Request message (host → GOT)	Sum check is performed in this range. STX: 02H Command: W 57H (H), D 44H (L) Address: 8 3 2 0 → 38H 33H 32H 30H (H – – L) Number of points: 0 2 → 30H 32H (H L) Data 1 (M15 to 0): 0 0 0 1 → 30H 30H 30H 31H (H – – L) Data 2 (M31 to 16): 8 0 0 0 → 38H 30H 30H 30H (H – – L) ETX: 03H Sum Check: 5 6 → 35H 36H (H L) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 M M M M M M M M M M M M M M M M M M M M M M M M M M M M 1 1 1 1 1 1 9 8 7 6 5 4 3 2 1 0 3 3 2 2 2 2 2 2 2 2 2 2 1 1 1 1 5 4 3 2 1 0 1 0 9 8 7 6 5 4 3 2 1 0 9 8 7 6
Response message during normal communication (GOT → host)	ACK: 06H
Response message during faulty communication (GOT → host)	(format 1: GOT-A900 Series microcomputer connection (format 1)) NAK: 15H (format 2: GOT-A900 Series microcomputer connection (format 2)) NAK: 15H; Error code: 06H The above is a case where the sum check error (06H) has occurred.

■Random read in word units (RR) command

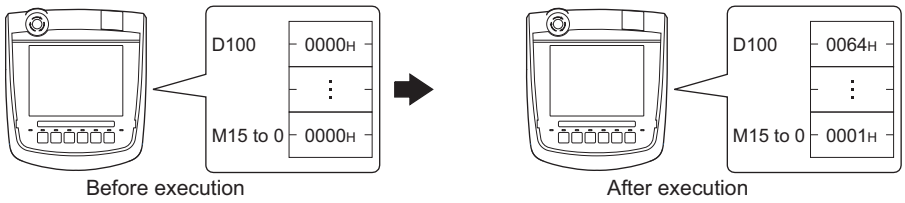
The following shows an example of reading the two points of the virtual devices D100 and M0 to M15.
(Assuming D100=0064H, M0=1are stored.)



Item	Message format
Request message (host → GOT)	STX: 02H Command: R (52H) R (52H) Address 1: 0 (30H) 1 (31H) 0 (30H) 0 (30H) Address 2: 8 (38H) 3 (33H) 2 (32H) 0 (30H) ETX: 03H Sum Check: 3 (33H) 5 (35H) Sum check is performed in this range.
Response message during normal communication (GOT → host)	Sum check is performed in this range. STX: 02H Data 1 (D100): 0 (30H) 0 (30H) 6 (36H) 4 (34H) Data 2 (M15 to 0): 0 (30H) 0 (30H) 0 (30H) 1 (31H) ETX: 03H Sum Check: 8 (38H) E (45H) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 M M M M M M M M M M M M M M M M 1 1 1 1 1 1 9 8 7 6 5 4 3 2 1 0 5 4 3 2 1 0
Response message during faulty communication (GOT → host)	(format 1: GOT-A900 Series microcomputer connection (format 1)) NAK: 15H (format 2: GOT-A900 Series microcomputer connection (format 2)) NAK: 15H Error code: 06H The above is a case where the sum check error (06H) has occurred.

■Random write in word units (RW) command

The following shows an example of writing "0064H" and "1" to virtual devices D100 and M0, respectively.

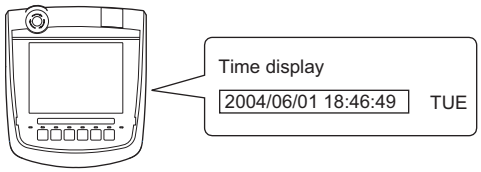


Item	Message format
Request message (host → GOT)	STX: 02H Command: R 52H (H), W 57H (L) Following*1 ETX: 03H Sum Check: C 43H (H), 5 35H (L) Sum check is performed in this range. *1 Address 1: 0 30H (H), 1 31H, 0 30H, 0 30H (L) Data 1 (D100): 0 30H (H), 0 30H, 6 36H, 4 34H (L) Address 2: 8 38H (H), 3 33H, 2 32H, 0 30H (L) Data 2 (M15 to 0): 0 30H (H), 0 30H, 0 30H, 1 31H (L) 0000000000000001 MMMMMMMMMMMMMMMM 1111119876543210 5432 10
Response message during normal communication (GOT → host)	ACK: 06H
Response message during faulty communication (GOT → host)	(format 1: GOT-A900 Series microcomputer connection (format 1)) NAK: 15H (format 2: GOT-A900 Series microcomputer connection (format 2)) NAK: 15H, Error code: 06H The above is a case where the sum check error (06H) has occurred.

■Read clock data (TR) command

The following shows an example of reading the clock data of GOT.

(Assuming that the clock data of GOT has been set to "2004, June 1, 18:46:49, Tuesday".)

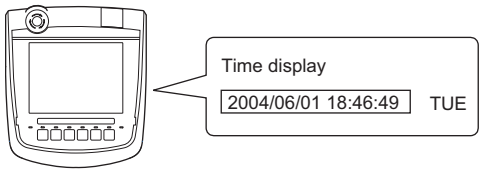


Item	Message format
Request message (host → GOT)	STX: 02H Command: T (54H) R (52H) ETX: 03H Sum Check: A (41H) 9 (39H) Sum check is performed in this range.
Response message during normal communication (GOT → host)	STX: 02H Year data: 0 (30H) 4 (34H) Month data: 0 (30H) 6 (36H) Day data: 0 (30H) 1 (31H) Hour data: 1 (31H) 8 (38H) Minute data: 4 (34H) 6 (36H) Second data: 4 (34H) 9 (39H) Day-of-week data: 0 (30H) 2 (32H) ETX: 03H Sum Check: D (44H) 0 (30H) Sum check is performed in this range.
Response message during faulty communication (GOT → host)	(format 1: GOT-A900 Series microcomputer connection (format 1)) NAK: 15H (format 2: GOT-A900 Series microcomputer connection (format 2)) NAK: 15H Error code: 06H The above is a case where the sum check error (06H) has occurred.

■Set clock data (TS) command

The following shows an example of setting the clock data of GOT.

(Assuming the clock data of GOT is to be set to "2004, June 1, 18:46:49 Tuesday".)



After execution

Item	Message format
Request message (host → GOT)	STX | Command (T 54H (H), S 53H (L)) | Year data (0 30H (H), 4 34H (L)) | Month data (0 30H (H), 6 36H (L)) | Day data (0 30H (H), 1 31H (L)) | Hour data (1 31H (H), 8 38H (L)) | Minute data (4 34H (H), 6 36H (L)) | Second data (4 34H (H), 9 39H (L)) | Day-of-week data (0 30H (H), 2 32H (L)) | ETX 03H | Sum Check (7 37H (H), 7 37H (L)) Sum check is performed in this range.
Response message during normal communication (GOT → host)	ACK 06H
Response message during faulty communication (GOT → host)	(format 1: GOT-A900 Series microcomputer connection (format 1)) NAK 15H (format 2: GOT-A900 Series microcomputer connection (format 2)) NAK 15H | Error code 06H The above is a case where the sum check error (06H) has occurred.

Point

When a wrong day of the week has been set by the clock data setting command

If a wrong day of the week is set by the clock data setting commands, it will be corrected and a correct day of the week will be set.

Example: When June 1, 2004 (Thursday) is set by the clock data setting command (The actual day of week is Tuesday.)

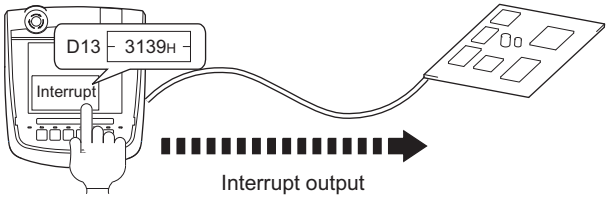
Tuesday (TUE) will be set.

■In the case of interrupt outputs

Write the data to the interrupt output devices (D13 and D14) to output to the host.

(Assuming that "3139H" is written to D13 and "AA55H" to D14.)

Example) When [Interrupt Data Byte(Byte)] in the communication detail settings is set to [2] as shown in (2) of the table below



Interrupt output

Output value 1	Output value 2
31H	39H

Item	Message format
Interrupt output (GOT → host)	(1) When [Interrupt Data Byte(Byte)] in "Communication Detail Settings" is set to [1]

(format 1: in the case of GOT-A900 Series microcomputer connection (format 1))

Output value 1
39H

(format 2: in the case of GOT-A900 Series microcomputer connection (format 2))

STX	Output value 1	ETX	Sum check	
			3	C
02H	39H	03H	33H	43H
			(H)	(L)

Sum check is performed in this range.

(2) When [Interrupt Data Byte(Byte)] in "Communication Detail Settings" is set to [2]

(format 1: in the case of GOT-A900 Series microcomputer connection (format 1))

Output value 1	Output value 2
31H	39H

(format 2: in the case of GOT-A900 Series microcomputer connection (format 2))

STX	Output value 1	Output value 2	ETX	Sum check	
				6	D
02H	31H	39H	03H	36H	44H
				(H)	(L)

Sum check is performed in this range.

(3) When [Interrupt Data Byte(Byte)] in "Communication Detail Settings" is set to [4]

• When [32bit Storage] in the communication detail settings is set to [LH Order]

(format 1: in the case of GOT-A900 Series microcomputer connection (format 1))

Output value1	Output value2	Output value3	Output value4
AAH	55H	31H	39H

(format 2: in the case of GOT-A900 Series microcomputer connection (format 2))

STX	Output value1	Output value2	Output value3	Output value4	ETX	Sum Check	
						6	C
02H	AAH	55H	31H	39H	03H	36H	43H
						(H)	(L)

Sum check is performed in this range.

• When [32bit Storage] in the communication detail settings is set to [HL Order]

(format 1: in the case of GOT-A900 Series microcomputer connection (format 1))

Output value1	Output value2	Output value3	Output value4
31H	39H	AAH	55H

(format 2: in the case of GOT-A900 Series microcomputer connection (format 2))

STX	Output value1	Output value2	Output value3	Output value4	ETX	Sum Check	
						6	C
02H	31H	39H	AAH	55H	03H	36H	43H
						(H)	(L)

Sum check is performed in this range.

Point

Interrupt output

To set not to perform the interrupt output, turn ON SM52 (interrupt code output disable flag).

☞ Page 1944 SM devices

To execute the interrupt output in format 1, 2, 11, 14, or 15, set the data length to 8 bits in the communication detail settings.

When "7 bits" is set, the MSB (8th bit) is ignored. (Example: FFH→7FH)

☞ Page 1995 Setting communication interface (Controller Setting)

Error code list

In the case of format 2 (GOT-A900 series microcomputer connection (format 2)), the error contents (error code) are appended to the response message during faulty communication.

The following shows error code, error contents, cause, and measures.

Error code	Description	Action
06H	Sum check error The sum check code created from received data differs from the sum check code in the receive data.	• Review the contents of the message to transmit.
10H	Command error An unsupported command was used.	• Review the contents of the message to transmit. • Check the commands in the message. ☞ Page 1947 List of commands
11H	Message length error The upper limit of the data length that can be received by the GOT has been exceeded.	• Review the contents of the message to transmit. • Check the data length of the message.(data length of the data section, etc.)
12H	Communication message error EXT was not found within the upper limit of the receive buffer.	• Check the communication cable and communication module attachment. • Check the settings of "Communication Detail Settings". • Review the contents of the message to transmit.
15H	Clock data setting error The setting value of the clock data has error.	• Review the contents of the message to transmit. • Check whether the non-existent data is set (e.g. setting "07" at the day of the week) as clock data.
7AH	Address error The start address of the read or write device is out of range.	• Review the contents of the message to transmit. • Check the devices that can be used and the device ranges. ☞ Page 1934 Device Data Area
7BH	Exceeded number of points error The read or write range exceeded the device range.	

Precautions

■Storage order for 32-bit data

When the program of the GOT-A900 series is used and 32-bit data is set, set [HL Order] for [32bit Order] in the communication detail settings.

With setting [LH Order], the order of upper bits and lower bits are reversed when the GOT displays and writes 32-bit data.

Formats 3 to 6

The following describes the message formats 3 to 6 (A compatible 1C frame).

GT 2506 HS GT 2505 HS

Basic format of data communication

This is the same message format as when communication is performed using the dedicated protocol (A compatible 1C frame) of the A Series computer link module.

For details of the basic format of data communication, refer to the following manual:

MELSEC Communication Protocol Reference Manual

This section describes items whose settings differ from the dedicated protocol of the A Series computer link modules, and the dedicated commands for a GOT microcomputer connection.

Example: Request message for the batch read in word units (QR) command in format 4 (A compatible 1C frame (format 2))

Character A section

ENQ	Block No.		Station No.		PLC No.		Command		Wait	Address							Number of points		Sum Check	
	0	0	0	0	0	0	Q	R	0	D	0	0	0	1	0	0	0	2	B	A
05H	30H	30H	30H	30H	30H	30H	51H	52H	30H	44H	30H	30H	30H	31H	30H	30H	30H	32H	42H	41H
	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)		(H)	–	–	–	–	–	(L)	(H)	(L)	(H)	(L)

Sum check is performed in this range.

Details of data items in message format

Point

Data code during communication

Communication is performed in ASCII code.

■Block No, PLC No.

Ignored in a microcomputer connection of the GOT.

Specify "00".

"00" is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

■Station No.

Station No. is used to identify the GOT with which the host communicates. (Setting range: 0 to 31)

The address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

The GOT processes only commands whose station No. matches the "Host Address (0 to 31)" set at "Communication Detail Settings". (The message of command whose station No. does not match is ignored.)

For setting method of "Communication Detail Settings", refer to the following.

☞ Page 1995 Setting communication interface (Controller Setting)

■Command

Specifies the contents to access from the host to GOT.

The command is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

For details of the commands that can be used, refer to the following.

☞ Page 1947 List of commands

■Message wait

Ignored in a microcomputer connection of the GOT.

Specify "0".

"0" is converted to a 1-digit ASCII code (hexadecimal) and transmitted.

■Address

Specifies the head No. of the device data to be read or written.

The data annotated in decimal is converted to a 5- or 7-digit ASCII code (Hex) and transmitted from the upper digit.

For details of the device range that can be accessed, refer to the following.

☞ Page 1934 Device Data Area

■Number of points

Specifies the device data points to be read or written. (Setting range: 1 to 40H)

The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

■Year, month, day, hour, minute, second and day of the week data

Specifies the year, month, day, hour, minute, second, and the day of the week data to be read or set to the GOT clock data.

The address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

☞ Page 1965 Read clock data (TR) command

☞ Page 1966 Set clock data (TS) command

■Error code

This is the response message at faulty communication appended with error contents.

The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

For details on error codes generated in formats 3 to 6 (A compatible 1C frame), refer to the following.

☞ Page 1967 Error code list

Point

When connecting a microcomputer, etc. that uses the dedicated protocol of the A series computer link module with the GOT

When connecting a microcomputer, etc. that uses the dedicated protocol of the A series computer link module with the GOT, correct the commands to use and the device range according to the specifications of GOT.

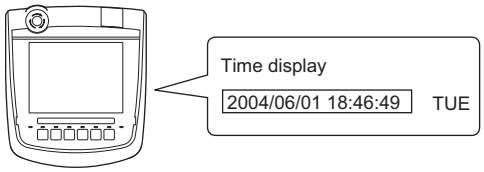
Message format

The following shows the message format of the dedicated commands for a microcomputer connection of GOT.

■Read clock data (TR) command

The following shows an example of reading the clock data of GOT.

(Assuming that the clock data of GOT has been set to "2004, June 1, 18:46:49, Tuesday".)



Item	Message format
Request message (host → GOT)	Example: Format 3 (A compatible 1C frame (format 1))
Response message during normal communication (GOT → host)	Example: Format 3 (A compatible 1C frame (format 1))
Response message during faulty communication (GOT → host)	Example: Format 3 (A compatible 1C frame (format 1))

Request message (host → GOT)

ENQ	Station No.		PLC No.		Command		Wait	Sum Check	
	0	0	0	0	T	R	0	9	6
05H	30H	30H	30H	30H	54H	52H	30H	39H	36H
	(H)	(L)	(H)	(L)	(H)	(L)		(H)	(L)

Sum check is performed in this range.

Response message during normal communication (GOT → host)

Character B section

STX	Station No.		PLC No.			ETX	Sum Check	
	0	0	0	0			9	0
02H	30H	30H	30H	30H	Following*1	03H	39H	30H
	(H)	(L)	(H)	(L)			(H)	(L)

Sum check is performed in this range.

*1

	Year data		Month data		Day data		Hour data		Minute data		Second data		Day-of-week data		
	0	4	0	6	0	1	1	8	4	6	4	9	0	2	
	30H	34H	30H	36H	30H	31H	31H	38H	34H	36H	34H	39H	30H	32H	
	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	

Response message during faulty communication (GOT → host)

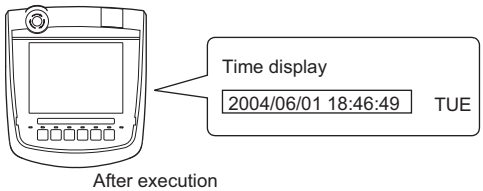
NAK	Station No.		PLC No.		Error code	
	0	0	0	0	0	5
15H	30H	30H	30H	30H	30H	35H
	(H)	(L)	(H)	(L)	(H)	(L)

The above is the case where an overrun error (05H) has occurred.

■Set clock data (TS) command

The following shows an example of setting the clock data of GOT.

(Assuming the clock data of GOT is to be set to "2004, June 1, 18:46:49 Tuesday".)



After execution

Item	Message format
Request message (host → GOT)	Example: Format 3 (A compatible 1C frame (format 1))
Response message during normal communication (GOT → host)	Example: Format 3 (A compatible 1C frame (format 1))
Response message during faulty communication (GOT → host)	Example: Format 3 (A compatible 1C frame (format 1))

Character C section

ENQ	Station No.		PLC No.		Command		Wait		Sum Check	
	0	0	0	0	T	S	0	Following*1	6	4
05H	30H	30H	30H	30H	54H	53H	30H		36H	34H
	(H)	(L)	(H)	(L)	(H)	(L)			(H)	(L)

Sum check is performed in this range.

*1

Year data		Month data		Day data		Hour data		Minute data		Second data		Day-of-week data	
0	4	0	6	0	1	1	8	4	6	4	9	0	2
30H	34H	30H	36H	30H	31H	31H	38H	34H	36H	34H	39H	30H	32H
(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)

ACK	Station No.		PLC No.	
	0	0	0	0
06H	30H	30H	30H	30H
	(H)	(L)	(H)	(L)

NAK	Station No.		PLC No.		Error code	
	0	0	0	0	0	5
15H	30H	30H	30H	30H	30H	35H
	(H)	(L)	(H)	(L)	(H)	(L)

The above is the case where an overrun error (05H) has occurred.

Point

When a wrong day of the week has been set by the clock data setting command

If a wrong day of the week is set by the clock data setting commands, the corrected day of the week will be set.

Example: When June 1, 2004 (Thursday) is set by the clock data setting command (The actual day of week is Tuesday.)

Tuesday (TUE) will be set.

Error code list

The following shows error code, error contents, cause, and measures.

Error code	Description	Action
01H	Parity error The parity bit does not match.	• Check the communication cable and communication module attachment. • Check the settings of "Communication Detail Settings". • Match the GOT and host transmission settings.
02H	Sum check error The sum check code created from received data differs from the sum check code in the receive data.	• Review the contents of the message to transmit.
03H	Protocol error Received a message that does not follow the control procedure of the format set at "Communication Detail Settings".	• Check the settings of "Communication Detail Settings". • Review the contents of the message to transmit.
05H	Overrun error The next data was transmitted from the host before GOT completes the processing of the data received.	• Check the settings of "Communication Detail Settings". • Decrease the transmission speed.
06H	Character section error The character section specification error. • The method of specifying the character section is wrong. • The specified command has error. • The number of points of the processing requests exceeds the allowable range. • A non-existent device has been specified. • The setting value of the clock data has error.	• Review the contents of the message to transmit. • Check the commands in the message. ☞ Page 1947 List of commands • Check the devices that can be used and the device ranges. ☞ Page 1934 Device Data Area • Check whether the non-existent data is set (e.g. setting "07" at the day of the week) as clock data.
07H	Character error A character other than "A to Z", "0 to 9", space, and control codes has been received.	• Review the contents of the message to transmit.

Formats 7 to 10

The following describes the message formats 7 to 10 (QnA compatible 3C/4C frame).

GT 2506 HS GT 2505 HS

Basic format of data communication

This is the same message format as when communication is performed using the MC protocol (QnA compatible 3C/4C frame) of the Q/QnA Series serial communication module.

For details of the basic format of data communication, refer to the following manual:

📖MELSEC Communication Protocol Reference Manual

This section describes items whose settings differ from the MC protocol of the Q/QnA Series serial communication module, and the dedicated commands for a GOT microcomputer connection.

Example: Request message for the batch read in word units (0401) command in format 8 (QnA compatible 4C frame (format 2))

ENQ	Block No.		Frame ID No.		Station No.		Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Host Address No.		Following *1	Sum check	
	0	0	F	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0		5	4
05H	30H	30H	46H	38H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H		35H	34H
	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	(H)	(L)		(H)	(L)

Sum check is performed in this range.

Character A section

*1

Command				Sub-command				Device code		Head Device						Device points			
0	4	0	1	0	0	0	0	D	*	0	0	0	1	0	0	0	0	0	2
30H	34H	30H	31H	30H	30H	30H	30H	44H	2AH	30H	30H	30H	31H	30H	30H	30H	30H	30H	32H
(H)	–	–	(L)	(H)	–	–	(L)	(H)	(L)	(H)	–	–	–	–	(L)	(H)	–	–	(L)

Point

QnA compatible 4C frame (format 5)

GOT cannot use the QnA compatible 4C frame (format 5).

Details of data items in message format

Point

Data code during communication

Communication is performed in ASCII code.

■Block No., network No., PLC No., request destination module I/O No. and station No.

Ignored in a microcomputer connection of the GOT.

Specify "00". (The request destination module I/O No. is "0000".)

"00" is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

(The request destination module I/O No. is 4-digit.)

■Station No.

Station No. is used to identify the GOT with which the host communicates.(Setting range: 0 to 1FH)

The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

The GOT processes only commands whose station No. matches the "Host Address (0 to 31)" set at "Communication Detail Settings". (The message of command whose station No. does not match is ignored.)

For setting method of "Communication Detail Settings", refer to the following.

☞ Page 1995 Setting communication interface (Controller Setting)

■Command, sub-command

Specifies the contents to access from the host to GOT.

The command is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.

For details of the commands that can be used, refer to the following.

☞ Page 1947 List of commands

■Device code

Specifies the code by which the device data to be read or written is recognized.

The command is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

For details of the device range that can be accessed, refer to the following.

☞ Page 1934 Device Data Area

■Head device

Specifies the head No. of the device data to be read or written.

The address notated in decimal is converted to a 6-digit ASCII code (Hex) and transmitted from the upper digit.

For details of the device range that can be accessed, refer to the following.

☞ Page 1934 Device Data Area

■Device points

Specifies the device data points to be read or written. (Setting range: 1 to 40H)

The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

When specifying multiple devices as follows, limit the total device points to within 64 points.

• When using random read or write command

When setting multiple bit accesses, word accesses or double word accesses, limit the total number of access points to within 64 points

• When using multiple block batch read or write commands

When setting multiple blocks, limit the total number of points of all blocks to within 64 points.

■Year, month, day, hour, minute, second and day of the week data

Specifies the year, month, day, hour, minute, second, and day of the week data to be read or set to the GOT clock data.

The address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

☞ Page 1970 Read clock data (1901) command

☞ Page 1971 Set clock data (0901) command

■Error code

This is the response message at faulty communication appended with error contents.

The address notated in hexadecimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.

For details on error codes that are generated in formats 7 to 10 (QnA compatible 3C/4C frame), refer to the following.

☞ Page 1972 Error code list

Point

When connecting a microcomputer, etc. that uses the MC protocol of the Q/QnA series serial communication module with the GOT

When connecting a microcomputer, etc. that uses the MC protocol of the Q/QnA series serial communication module with the GOT, correct the commands to be used and the device ranges to match the GOT specifications.

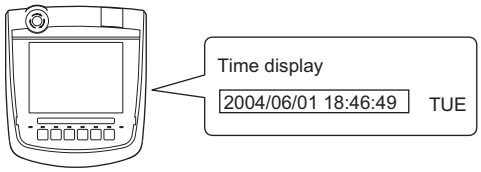
Message format

The following shows the message format of the dedicated commands for a microcomputer connection of GOT.

■Read clock data (1901) command

The following shows an example of reading the clock data of GOT.

(Assuming that the clock data of GOT has been set to "2004, June 1, 18:46:49, Tuesday".)



Item	Message format
Request message (host → GOT)	Example: Format 7 (QnA compatible 4C frame (format 1))

ENQ	Frame ID No.		Station No.		Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Following *1	Sum check	
	F	8	0	0	0	0	0	0	0	0	0	0	0	0		A	9
05H	46H	38H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H		41H	39H
	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)		(H)	(L)

Sum check is performed in this range.

*1

Character A section

Host Address No.		Command				Sub-command			
0	0	1	9	0	1	0	0	0	0
30H	30H	31H	39H	30H	31H	30H	30H	30H	30H
(H)	(L)	(H)	–	–	(L)	(H)	–	–	(L)

Response message during normal communication (GOT → host)	Example: Format 7 (QnA compatible 4C frame (format 1))

STX	Frame ID No.		Station No.		Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Following *1	ETX	Sum check	
	F	8	0	0	0	0	0	0	0	0	0	0	0	0			E	E
02H	46H	38H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H		03H	43H	43H
	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)			(H)	(L)

Sum check is performed in this range.

*1

Character B section

Host Address No.		Year data		Month data		Day data		Hour data		Minute data		Second data		Day-of-week data	
0	0	0	4	0	6	0	1	1	8	4	6	4	9	0	2
30H	30H	30H	34H	30H	36H	30H	31H	31H	38H	34H	36H	34H	39H	30H	32H
(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)

Response message during faulty communication (GOT → host)	Example: Format 7 (QnA compatible 4C frame (format 1))

NAK	Frame ID No.		Station No.		Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Host Address No.		Following *1
	F	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
15H	46H	38H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	
	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	(H)	(L)	

*1

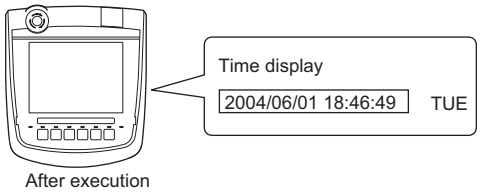
Error code			
7	F	6	9
37H	46H	36H	39H
(H)	–	–	(L)

The above is the case where a parity error (7F69H) has occurred.

■Set clock data (0901) command

The following shows an example of setting the clock data of GOT.

(Assuming the clock data of GOT is to be set to "2004, June 1, 18:46:49 Tuesday".)



After execution

Item	Message format
Request message (host → GOT)	Example: Format 7 (QnA compatible 4C frame (format 1))

ENQ	Frame ID No.		Station No.		Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Host Address No.		Following *1	Sum check	
	F	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0		7	5
05H	46H	38H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H		37H	35H
	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	(H)	(L)		(H)	(L)

Sum check is performed in this range.

*1

Character C section

Command				Sub-command				
0	9	0	1	0	0	0	0	→ 1)
30H	39H	30H	31H	30H	30H	30H	30H	
(H)	–	–	(L)	(H)	–	–	(L)	

Character C section

1) →	Year data		Month data		Day data		Hour data		Minute data		Second data		Day-of-week data	
	0	4	0	6	0	1	1	8	4	6	4	9	0	2
	30H	34H	30H	36H	30H	31H	31H	38H	34H	36H	34H	39H	30H	32H
	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)

Response message during normal communication (GOT → host)	Example: Format 7 (QnA compatible 4C frame (format 1))

ACK	Frame ID No.		Station No.		Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Host Address No.	
	F	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06H	46H	38H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H
	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	(H)	(L)

Response message during faulty communication (GOT → host)	Example: Format 7 (QnA compatible 4C frame (format 1))

NAK	Frame ID No.		Station No.		Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Host Address No.		Following *1
	F	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
15H	46H	38H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	
	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	(H)	(L)	

*1

Error code			
7	F	6	9
37H	46H	36H	39H
(H)	–	–	(L)

The above is the case where a parity error (7F69H) has occurred.

Point

When a wrong day of the week has been set by the clock data setting command

If a wrong day of the week is set by the clock data setting commands, the corrected day of the week will be set.

Example: When June 1, 2004 (Thursday) is set by the clock data setting command (The actual day of week is Tuesday.)

Tuesday (TUE) will be set.

Error code list

The following shows error code, error contents, cause, and measures.

Error code	Description	Action
7E40H	Command error An unsupported command or sub-command was used.	• Review the contents of the message to transmit. • Check the commands in the message. ☞ Page 1947 List of commands
7E41H	Data length error Specified the data points exceeding those that can be communicated during random read or write.	• Review the contents of the message to transmit. • Check the devices that can be used and the device ranges. ☞ Page 1934 Device Data Area
7E42H	Number of data error The number of requests exceeds the command range.	
7E43H	Device error A non-existent device has been specified.	• Review the contents of the message to transmit. • Check the devices that can be used and the device ranges. ☞ Page 1934 Device Data Area
7E46H	Clock data setting error The setting value of the clock data has error.	• Review the contents of the message to transmit. • Check whether the non-existent data is set (e.g. setting "07" at the day of the week) as clock data.
7E4FH	Exceeded number of points error The read or write range has exceeded the device range.	• Review the contents of the message to transmit. • Check the devices that can be used and the device ranges. ☞ Page 1934 Device Data Area
7F20H	Character error A character other than "A to Z", "0 to 9", space, and control codes has been received.	• Review the contents of the message to transmit.
7F23H	Communication message error EXT or CR+LF was not found within the upper limit of the receive buffer.	• Check the communication cable and communication module attachment. • Check the settings in the communication detail settings. • Review the contents of the message to transmit.
7F24H	Sum check error The sum check code created from received data differs from the sum check code in the receive data.	• Review the contents of the message to transmit.
7F67H	Overrun error The next data was transmitted from the host before GOT completes the processing of the data received.	• Check the settings in the communication detail settings. • Decrease the transmission speed.
7F68H	Framing error The data bit and/or stop bit are not correct.	• Check the communication cable and communication module attachment. • Check the settings in the communication detail settings. • Match the GOT and host transmission settings.
7F69H	Parity error The parity bit does not match.	
7F6AH	Buffer full error The receive buffer overflowed.	• Check the communication cable and communication module attachment. • Check the settings in the communication detail settings. • Review the contents of the message to transmit.

Formats 11 to 13

The following describes the message formats 11 to 13 (SCHNEIDER EJH's (former Digital Electronics Corporation) memory link method).

GT 2506 HS GT 2505 HS

Basic format of data communication

This is the same format as the protocol of the SCHNEIDER EJH's memory link method.

For details of the basic format of data communication, refer to the following manual:

The connection manual of the device manufactured by SCHNEIDER EJH

This section describes items whose settings differ from the protocols of the SCHNEIDER EJH's memory link method and dedicated commands for a microcomputer connection of the GOT.

Example: Request message for the batch read in word units (R) command in format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n))

ENQ	Station No.		ESC	Com-mand	Address				Number of points				Sum Check		CR	LF
	0	0		R	0	0	6	4	0	0	0	2	5	E		
05H	30H	30H	1BH	52H	30H	30H	36H	34H	30H	30H	30H	32H	35H	45H	0DH	0AH
	(H)	(L)			(H)	–	–	(L)	(H)	–	–	(L)	(H)	(L)		

Sum check is performed in this range.

Point

Compatibility with the SCHNEIDER EJH's memory link method

In the case of formats 12 and 13 (SCHNEIDER EJH's memory link method (extended mode)), a communication error may occur since some communication packets are not compatible with the SCHNEIDER EJH's memory link method in the communication.

To give the compatibility, turn on the digital compatible signals (GS580 to GS583) of the GOT internal device and communicate in the fully compatible message format.

Device	Function	Bit	Bit position	Settings
GS580	Microcomputer connection extended setting (CH1)	Digital compatible signal	b0	0: Partly compatible (Default) 1: Fully compatible
GS581	Microcomputer connection extended setting (CH2)	Digital compatible signal	b0	0: Partly compatible (Default) 1: Fully compatible
GS582	Microcomputer connection extended setting (CH3)	Digital compatible signal	b0	0: Partly compatible (Default) 1: Fully compatible
GS583	Microcomputer connection extended setting (CH4)	Digital compatible signal	b0	0: Partly compatible (Default) 1: Fully compatible

When the digital compatible signal turns on, interrupt outputs (D13 to D14, SM0 to SM49) are invalid.

To use interrupt outputs, turn off the digital compatible signal.

For the GOT internal device, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

Details of data items in message format

Point

Data code during communication

Communication is performed in ASCII code.

■Command

Specifies the contents to access from the host to GOT.

The command is converted to a 1-digit ASCII code (Hex) and transmitted.

For details of the commands that can be used, refer to the following.

☞ Page 1947 List of commands

■Station No.

Station No. is used to identify the GOT with which the host communicates. (Setting range: 0 to 1FH)

The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

The GOT processes only commands whose station No. matches the "Host Address (0 to 31)" set at "Communication Detail Settings". (The message of command whose station No. does not match is ignored.)

For setting method of "Communication Detail Settings", refer to the following.

☞ Page 1997 Communication detail settings

■Address

Specifies the head No. of the device data to be read or written.

The address notated in hexadecimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.

For details of the device range that can be accessed, refer to the following.

☞ Page 1934 Device Data Area

■Number of points

Specify the number of device data points to be read and written.

The address notated in hexadecimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.

The setting range depends on the format and command.

Format	Command	Command name	Setting range
11	R	Batch read in word units	1 to 100H
	W	Batch write in word units	1 to 1F0H
12	R	Batch read in word units	1 to 100H
	W	Batch write in word units	
13	R	Batch read in word units	1 to 100H
	W	Batch write in word units	

■Year, month, day, hour, minute, second and day of the week data

Specifies the year, month, day, hour, minute, second, and day of the week data to be read or set to the GOT clock data.

The address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

☞ Page 1975 Read clock data (N) command

☞ Page 1976 Set clock data (M) command

■Error code

This is the response message at faulty communication appended with error contents.

The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

For details on the error codes generated in formats 12 and 13 (SCHNEIDER EJH's memory link method (extended mode)), refer to the following.

☞ Page 1980 Error code list

Point

When connecting a microcomputer or others that uses the protocol of the SCHNEIDER EJH's memory link method with the GOT

To do so, correct the commands to be used and the device ranges to match the specifications of the GOT.

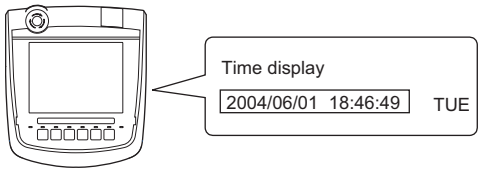
Message format

The following shows the message format of the dedicated commands for a microcomputer connection of GOT.

■Read clock data (N) command

The following shows an example of reading the clock data of GOT.

(Assuming that the clock data of GOT has been set to "2004, June 1, 18:46:49, Tuesday".)



Item	Message format
Request message (host → GOT)	Example: Format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n)) • Digital compatible signal (GS580 to GS583): OFF (Partly compatible) ENQ: 05H Station No.: 0 0 (30H 30H) (H) (L) ESC: 1BH Command: N 4EH Sum Check: C E (43H 45H) (H) (L) CR: 0DH LF: 0AH This range Sum check • Digital compatible signal (GS580 to GS583): ON (Fully compatible) ENQ: 05H Station No.: 0 0 (30H 30H) (H) (L) ESC: 1BH Command: N 4EH Sum Check: C 9 (43H 39H) (H) (L) CR: 0DH LF: 0AH This range Sum check
Response message during normal communication (GOT → host)	Example: Format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n)) • Digital compatible signal (GS580 to GS583): OFF (Partly compatible) STX: 02H Station No.: 0 0 (30H 30H) (H) (L) ESC: 1BH Command: A 41H Following*1 ETX: 03H Sum Check: 8 E (38H 45H) (H) (L) CR: 0DH LF: 0AH This range Sum check *1 Year data: 0 4 (30H 34H) (H) (L) Month data: 0 6 (30H 36H) (H) (L) Day data: 0 1 (30H 31H) (H) (L) Hour data: 1 8 (31H 38H) (H) (L) Minute data: 4 6 (34H 36H) (H) (L) Second data: 4 9 (34H 39H) (H) (L) Day-of-week data: 0 2 (30H 32H) (H) (L) • Digital compatible signal (GS580 to GS583): ON (Fully compatible) STX: 02H Station No.: 0 0 (30H 30H) (H) (L) ESC: 1BH Command: A 41H Following*1 ETX: 03H Sum Check: 8 C (38H 43H) (H) (L) CR: 0DH LF: 0AH This range Sum check *1 Year data: 0 4 (30H 34H) (H) (L) Month data: 0 6 (30H 36H) (H) (L) Day data: 0 1 (30H 31H) (H) (L) Hour data: 1 8 (31H 38H) (H) (L) Minute data: 4 6 (34H 36H) (H) (L) Second data: 4 9 (34H 39H) (H) (L) Day-of-week data: 0 2 (30H 32H) (H) (L)

Item	Message format
Response message during faulty communication (GOT → host)	Example: Format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n))

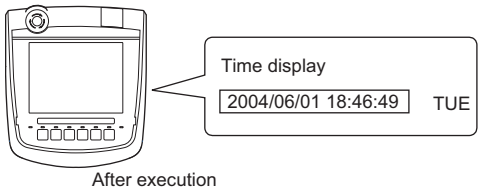
NAK	Station No.		Error code		CR	LF
	0	0	0	6		
15H	30H (H)	30H (L)	30H (H)	36H (L)	0DH	0AH

The above is a case where the sum check error (06H) has occurred.

■Set clock data (M) command

The following shows an example of setting the clock data of GOT.

(Assuming the clock data of GOT is to be set to "2004, June 1, 18:46:49 Tuesday".)



After execution

Item	Message format
Request message (host → GOT)	Example: Format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n))

• Digital compatible signal (GS580 to GS583): OFF (Partly compatible)

ENQ	Station No.		ESC	Com-mand		Sum Check		CR	LF
	0	0		M	Following*1	9	A		
05H	30H (H)	30H (L)	1BH	4DH		39H (H)	41H (L)	0DH	0AH

Sum check is performed in this range.

*1

Year data		Month data		Day data		Hour data		Minute data		Second data		Day-of-week data	
0	4	0	6	0	1	1	8	4	6	4	9	0	2
30H (H)	34H (L)	30H (H)	36H (L)	30H (H)	31H (L)	31H (H)	38H (L)	34H (H)	36H (L)	34H (H)	39H (L)	30H (H)	32H (L)

• Digital compatible signal (GS580 to GS583): ON (Fully compatible)

ENQ	Station No.		ESC	Com-mand		Sum Check		CR	LF
	0	0		M	Following*1	9	5		
05H	30H (H)	30H (L)	1BH	4DH		39H (H)	35H (L)	0DH	0AH

Sum check is performed in this range.

*1

Year data		Month data		Day data		Hour data		Minute data		Second data		Day-of-week data	
0	4	0	6	0	1	1	8	4	6	4	9	0	2
30H (H)	34H (L)	30H (H)	36H (L)	30H (H)	31H (L)	31H (H)	38H (L)	34H (H)	36H (L)	34H (H)	39H (L)	30H (H)	32H (L)

Item	Message format
Response message during normal communication (GOT → host)	Example: Format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n))

ACK	Station No.		CR	LF
	0	0		
06H	30H (H)	30H (L)	0DH	0AH

Item	Message format
Response message during faulty communication (GOT → host)	Example: Format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n))

NAK	Station No.		Error code		CR	LF
	0	0	0	6		
15H	30H (H)	30H (L)	30H (H)	36H (L)	0DH	0AH

The above is a case where the sum check error (06H) has occurred.

Point

When a wrong day of the week has been set by the clock data setting command

If a wrong day of the week is set by the clock data setting commands, the corrected day of the week will be set.

Example: When June 1, 2004 (Thursday) is set by the clock data setting command (The actual day of week is Tuesday.)

Tuesday (TUE) will be set.

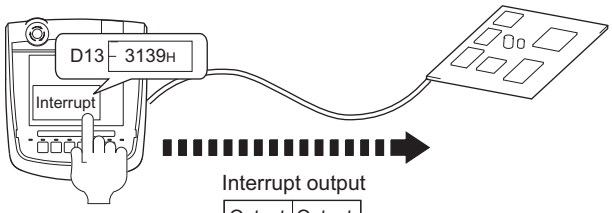
45

■In the case of interrupt inquiry

The following shows the example of an interrupt inquiry when data are written to the interrupt output devices (D13 and D14).

(Assuming that "3139H" is written to D13 and "AA55H" to D14.)

Example: When [Interrupt Data Byte(Byte)] is set to [2] in format 11



Interrupt output

Output value 1	Output value 2
31H	39H

Item	Message format
Request message (host → GOT)	Example: Format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n))

• Digital compatible signal (GS580 to GS583): OFF (Partly compatible)

ENQ	Station No.		ESC	Com-mand	Sum Check		CR	LF
	0	0		I	C	9		
05H	30H (H)	30H (L)	1BH	49H	43H (H)	39H (L)	0DH	0AH

This range Sum check

• Digital compatible signal (GS580 to GS583): ON (Fully compatible)

ENQ	Station No.		ESC	Com-mand	Sum Check		CR	LF
	0	0		I	C	4		
05H	30H (H)	30H (L)	1BH	49H	43H (H)	34H (L)	0DH	0AH

This range Sum check

Item	Message format
Interrupt inquiry (GOT → host)	Example: Format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n)) (1) When [Interrupt Data Byte(Byte)] in the communication detail settings is set to [1]

STX	Station No.		ESC	Com-mand	Data quantity		Output value 1		ETX	Sum Check		CR	LF
	0	0		I	0	1	3	9		9	4		
02H	30H	30H	1BH	49H	30H	31H	33H	39H	03H	39H	44H	0DH	0AH
	(H)	(L)			(H)	(L)	(H)	(L)		(H)	(L)		

This range Sum check is performed.

(2) When [Interrupt Data Byte(Byte)] in the communication detail settings is set to [2]

STX	Station No.		ESC	Com-mand	Data quantity		Output value 1		Output value 2		ETX	Sum Check		CR	LF
	0	0		I	0	1	3	1	3	9		F	9		
02H	30H	30H	1BH	49H	30H	31H	33H	31H	33H	39H	03H	46H	39H	0DH	0AH
	(H)	(L)			(H)	(L)	(H)	(L)	(H)	(L)		(H)	(L)		

Sum check is performed in this range.

(3) When [Interrupt Data Byte(Byte)] in the communication detail settings is set to [4]

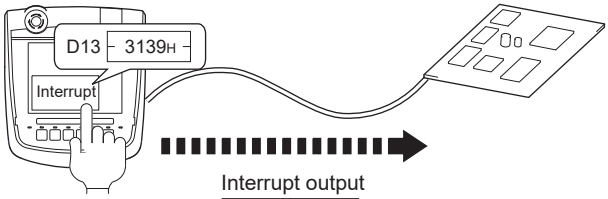
STX	Station No.		ESC	Com-mand	Data quantity		Output value 1		Output value 2		Output value 3		Output value 4		ETX	Sum Check		CR	LF
	0	0		I	0	1	A	A	5	5	3	1	3	9		E	7		
02H	30H	30H	1BH	49H	30H	31H	41H	41H	35H	35H	33H	31H	33H	39H	03H	45H	37H	0DH	0AH
	(H)	(L)			(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)		(H)	(L)		

Sum check is performed in this range.

■In the case of interrupt outputs

Write the data to the interrupt output devices (D13 and D14) to output to the host.
(Assuming that "3139H" is written to D13 and "AA55H" to D14.)

Example) When [Interrupt Data Byte(Byte)] in the communication detail settings is set to [2] as shown in (2) of the table below



Interrupt output

Output value 1	Output value 2
31H	39H

Item	Message format
Interrupt output (GOT → host)	Example: Format 13 (SCHNEIDER EJH's memory link method (extended mode, ASCII code 1:n))

(1) When [Interrupt Data Byte(Byte)] in "Communication Detail Settings" is set to [1]

STX	Station No.		ESC	Com-mand	Data quantity		Output value 1		ETX	Sum Check		CR	LF
	0	0		I	0	1	3	9		9	4		
02H	30H	30H	1BH	49H	30H	31H	33H	39H	03H	39H	44H	0DH	0AH
	(H)	(L)			(H)	(L)	(H)	(L)		(H)	(L)		

This range Sum check is performed.

(2) When [Interrupt Data Byte(Byte)] in "Communication Detail Settings" is set to [2]

STX	Station No.		ESC	Com-mand	Data quantity		Output value 1		Output value 2		ETX	Sum Check		CR	LF
	0	0		I	0	2	3	1	3	9		F	9		
02H	30H	30H	1BH	49H	30H	32H	33H	31H	33H	39H	03H	46H	39H	0DH	0AH
	(H)	(L)			(H)	(L)	(H)	(L)	(H)	(L)		(H)	(L)		

Sum check is performed in this range.

(3) When [Interrupt Data Byte(Byte)] in "Communication Detail Settings" is set to [4]

• When [32bit Storage] in the communication detail settings is set to [LH Order]

STX	Station No.		ESC	Com-mand	Data quantity		Output value 1		Output value 2		Output value 3		Output value 4		ETX	Sum Check		CR	LF
	0	0		I	0	4	A	A	5	5	3	1	3	9		E	7		
02H	30H	30H	1BH	49H	30H	34H	41H	41H	35H	35H	33H	31H	33H	39H	03H	45H	37H	0DH	0AH
	(H)	(L)			(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)		(H)	(L)		

Sum check is performed in this range.

• When [32bit Storage] in the communication detail settings is set to [HL Order]

STX	Station No.		ESC	Com-mand	Data quantity		Output value 1		Output value 2		Output value 3		Output value 4		ETX	Sum Check		CR	LF
	0	0		I	0	4	3	1	3	9	A	A	5	5		E	7		
02H	30H	30H	1BH	49H	30H	34H	33H	31H	33H	39H	41H	41H	35H	35H	03H	45H	37H	0DH	0AH
	(H)	(L)			(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)		(H)	(L)		

Sum check is performed in this range.

Point

Interrupt output

To set not to perform the interrupt output, turn ON SM52 (interrupt code output disable flag).

☞ Page 1944 SM devices

To execute the interrupt output in format 1, 2, 11, 14, or 15, set the data length to 8 bits in the communication detail settings.

When "7 bits" is set, the MSB (8th bit) is ignored. (Example: FFH→7FH)

☞ Page 1995 Setting communication interface (Controller Setting)

Error code list

In the case of formats 12 and 13 (SCHNEIDER EJH's memory link method (extended mode)), the details (error code) of the error are appended to the response message during faulty communication.

The following shows error code, error contents, cause, and measures.

Error code	Description	Action
06H	Sum check error The sum check code created from received data differs from the sum check code in the receive data.	• Review the contents of the message to transmit.
10H	Command error An unsupported command was used.	• Review the contents of the message to transmit. • Check the commands in the message. ☞ Page 1947 List of commands
12H	Message length error The upper limit of the data length that can be received by the GOT has been exceeded.	
16H	Clock data setting error The setting value of the clock data has error.	• Review the contents of the message to transmit. • Check whether the non-existent data is set (e.g. setting "07" at the day of the week) as clock data.
FAH	Address error The start address of the read or write device is out of range.	• Review the contents of the message to transmit. • Check the data length of the message.(data length of the data section, etc.)
FBH	Exceeded number of points error The read or write range has exceeded the device range.	• Review the contents of the message to transmit. • Check the devices that can be used and the device ranges. ☞ Page 1934 Device Data Area
FCH	Message format error The format of the received message has error.	• Check the settings in the communication detail settings. • Review the contents of the message to transmit.
FFH	Timeout error There is no response from the GOT, or the station of the specified address does not exist.	• Check the communication cable and communication module attachment. • Check the settings in the communication detail settings. • Review the contents of the message to transmit.

Precautions

■Storage order for 32-bit data

To use the program of the SCHNEIDER EJH's memory link method by setting 32-bit data to the GOT1000 series, set [HL Order] for [32bit Storage] in the communication detail settings.

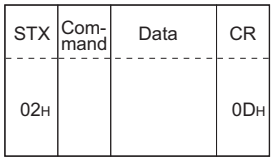
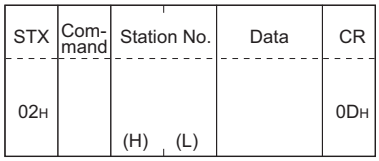
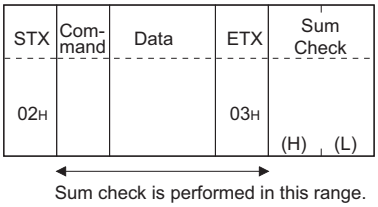
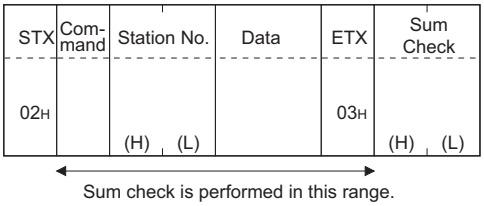
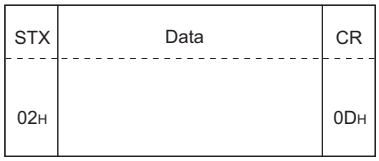
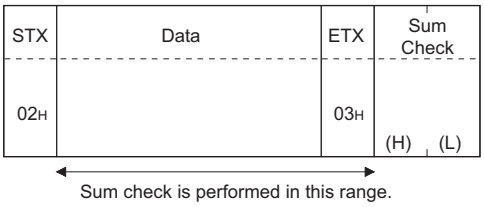
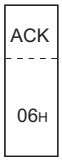
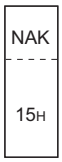
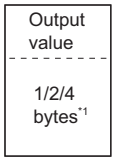
If [LH Order] is set, higher-order bits and lower-order bits are reversed when 32-bit data is displayed on or written to the GOT.

Formats 14, 15

The following describes the message formats 14 and 15 (GOT-F900 Series microcomputer connection).

GT 2506 HS GT 2505 HS

Basic format of data communication

Item	Message format
Request message (host → GOT)	(format 14: GOT-F900 Series microcomputer connection (format 1)) (1) w/out station No.  (2) w/station No.  (format 15: GOT-F900 Series microcomputer connection (format 2)) (1) w/out station No.  (2) w/station No. 
Response message during normal communication (GOT → host)	(1) During processing of read commands (format 14: GOT-F900 Series microcomputer connection (format 1))  (format 15: GOT-F900 Series microcomputer connection (format 2))  (2) During processing of write commands 
Response message during faulty communication (GOT → host)	
During interrupt output *2	

*1 Set the number of interrupt data bytes in the communication detail settings in GT Designer3.
For setting the number of interrupt data bytes, refer to the following.
☞ Page 1995 Setting communication interface (Controller Setting)

*2 Write data to the interrupt devices (D13 and D14) to enable an interrupt output.
☞ Page 1935 D devices

Details of data items in message format

Point

Data code during communication

Communication is performed in ASCII code. (excluding interrupt output)

■Control codes

Symbol	ASCII code	Description
STX	02H	Start of Text (start marker of message frame)
ETX	03H	End of Text (end marker of message frame)
EOT	04H	End of Transmission
ENQ	05H	Enquiry (start of enquiry)
NAK	15H	Negative ACK (error response)
ACK	06H	Acknowledge (write completion response)
LF	0AH	Line Feed
CL	0CH	Clear
CR	0DH	Carriage Return

■Command

Specifies the contents to access from the host to GOT.

The command is converted to a 1-digit ASCII code (Hex) and transmitted.

For details of the commands that can be used, refer to the following.

☞ Page 1947 List of commands

■Station No.

Station No. is used to identify the GOT with which the host communicates. (Setting range: 0 to 31)

The address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

The GOT processes only commands whose station No. matches the "Host Address (0 to 31)" set at "Communication Detail Settings". (The message of command whose station No. does not match is ignored.)

For setting method of "Communication Detail Settings", refer to the following.

☞ Page 1995 Setting communication interface (Controller Setting)

■Address

Specifies the head No. of the device data to be read or written.

The address notated in hexadecimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.

For details of the device range that can be accessed, refer to the following.

☞ Page 1934 Device Data Area

■Bit pattern

Specifies the pattern of the bits to change.

The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

☞ Page 1988 Multi-point write in bit units (3) command (without station No.), multi-point write in bit units (D) command (with station No.)

■Write specification

Specifies how to change the data of the specified address by bit pattern.

(Setting range: 0 to 3)

Data notated in decimal is converted to a 1-digit ASCII code (Hex) and transmitted.

☞ Page 1988 Multi-point write in bit units (3) command (without station No.), multi-point write in bit units (D) command (with station No.)

■Number of bytes

Specifies the number of bytes of the device data to be batch read or written. (Setting range: 0 to FFH)

The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

■Number of points

Specifies the number of device data to be written to multiple points in bit units. (Setting range: 0 to 70)

The address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

■Year, month, day, hour, minute, second and day of the week data

Specifies the year, month, day, hour, minute, second, and day of the week data to be read or set to the GOT clock data.

The address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

☞ Page 1991 Read clock data (6) command (without station No.), read clock data (G) command (with station No.)

☞ Page 1992 Set clock data (5) command (w/out station No.), set clock data (F) command (w/station No.)

■Data

Specifies the data to be read or written from or to the specified device data. (word unit)

The address notated in hexadecimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.

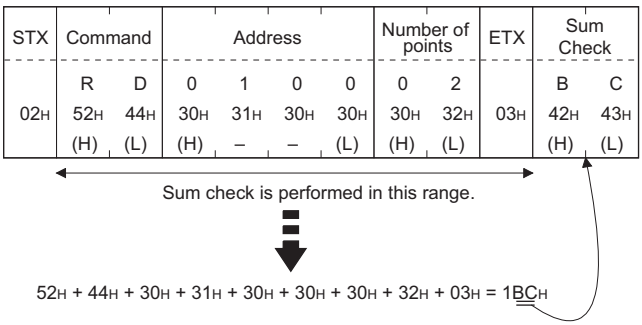
■Write data

Specifies the data to be written to the specified device data.

The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

■Sum check code (for format 15: GOT-F900 series microcomputer connection (format 2) only)

The sum check code is obtained by converting the lower 1 byte (8 bits) of the result (sum), after having added the sum check target data as binary data, to 2-digit ASCII code (Hex).

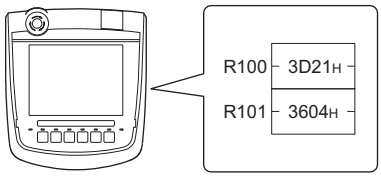


Message format

■Batch read (0) command (without station No.), batch read (A) command (with station No.)

• When reading a word device

The following shows an example of reading four bytes of virtual devices R100 to R101 from the GOT at station No.15.
(Assuming R100=3D21H, R101=3604H are stored.)



Item	Message format
Request message (host → GOT)	(format 14: GOT-F900 Series microcomputer connection (format 1))

STX	Com-mand	Station No.		Address				Number of bytes		CR
	A	1	5	0	0	C	8	0	4	
02H	41H	31H	35H	30H	30H	43H	38H	30H	34H	0DH
		(H)	(L)	(H)	–	–	(L)	(H)	(L)	

(format 15: GOT-F900 Series microcomputer connection (format 2))

STX	Com-mand	Station No.		Address				Number of bytes		ETX	Sum Check	
	A	1	5	0	0	C	8	0	4		E	9
02H	41H	31H	35H	30H	30H	43H	38H	30H	34H	03H	45H	39H
		(H)	(L)	(H)	–	–	(L)	(H)	(L)		(H)	(L)

Sum check is performed in this range.

Response message during normal communication (GOT → host)	(format 14: GOT-F900 Series microcomputer connection (format 1))

STX	Data 1 (R100 upper)		Data 2 (R100 lower)		Data 3 (R101 upper)		Data 4 (R101 lower)		CR
	3	D	2	1	3	6	0	4	
02H	33H	44H	32H	31H	33H	36H	30H	34H	0DH
	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	

(format 15: GOT-F900 Series microcomputer connection (format 2))

STX	Data 1 (R100 upper)		Data 2 (R100 lower)		Data 3 (R101 upper)		Data 4 (R101 lower)		ETX	Sum Check	
	3	D	2	1	3	6	0	4		A	A
02H	33H	44H	32H	31H	33H	36H	30H	34H	03H	41H	41H
	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)		(H)	(L)

Sum check is performed in this range.

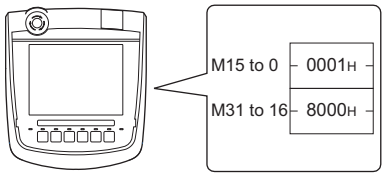
Response message during faulty communication (GOT → host)	

NAK
15H

• When reading a bit device

The following shows an example of reading four bytes of the virtual devices M0 to M31.

(Assuming M0="1" and M31="1" are stored.)



Item	Message format
Request message (host → GOT)	(format 14: GOT-F900 Series microcomputer connection (format 1))

STX	Com-mand	Station No.		Address				Number of bytes		CR
	A	1	5	2	0	0	0	0	4	
02H	41H	31H (H)	35H (L)	32H (H)	30H –	30H –	30H (L)	30H (H)	34H (L)	0DH

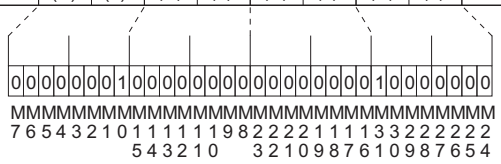
(format 15: GOT-F900 Series microcomputer connection (format 2))

STX	Com-mand	Station No.		Address				Number of bytes		ETX	Sum Check	
	A	1	5	2	0	0	0	0	4		D	0
02H	41H	31H (H)	35H (L)	32H (H)	30H –	30H –	30H (L)	30H (H)	34H (L)	03H	44H (H)	30H (L)

Sum check is performed in this range.

Response message during normal communication (GOT → host)	(format 14: GOT-F900 Series microcomputer connection (format 1))

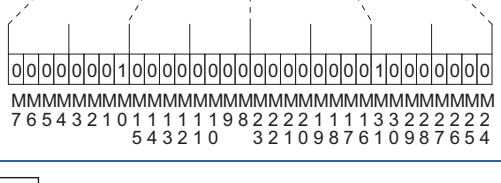
STX	Data 1 (M7 to 0)		Data 2 (M15 to 8)		Data 3 (M23 to 16)		Data 4 (M31 to 24)		CR
	0	1	0	0	0	0	8	0	
02H	30H (H)	31H (L)	30H (H)	30H (L)	30H (H)	30H (L)	38H (H)	30H (L)	0DH



(format 15: GOT-F900 Series microcomputer connection (format 2))

Sum check is performed in this range.

STX	Data 1 (M7 to 0)		Data 2 (M15 to 8)		Data 3 (M23 to 16)		Data 4 (M31 to 24)		ETX	Sum Check	
	0	1	0	0	0	0	8	0		8	C
02H	30H (H)	31H (L)	30H (H)	30H (L)	30H (H)	30H (L)	38H (H)	30H (L)	03H	38H (H)	43H (L)



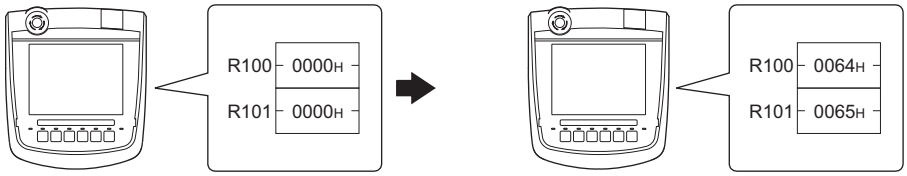
Response message during faulty communication (GOT → host)	

NAK
15H

■Batch write (1) command (without station No.), batch write (B) command (with station No.)

• When writing to a word device

The following shows an example of writing "0064H" and "0065H" to virtual devices R100 and R101 on the GOT at station No.15.



Before execution　　After execution

Item	Message format
Request message (host → GOT)	(format 14: GOT-F900 Series microcomputer connection (format 1))

STX	Com-mand	Station No.		Address				Number of bytes		Following*1	CR
	B	1	5	0	0	C	8	0	4		
02H	42H	31H	35H	30H	30H	43H	38H	30H	34H		0DH
		(H)	(L)	(H)	–	–	(L)	(H)	(L)		

(format 15: GOT-F900 Series microcomputer connection (format 2))

STX	Com-mand	Station No.		Address				Number of bytes		Following*1	ETX	Sum Check	
	B	1	5	0	0	C	8	0	4			9	1
02H	42H	31H	35H	30H	30H	43H	38H	30H	34H		03H	39H	31H
		(H)	(L)	(H)	–	–	(L)	(H)	(L)			(H)	(L)

Sum check is performed in this range.

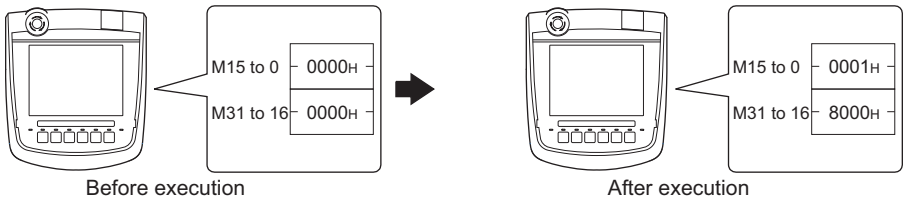
*1

Data 1 (R100 upper)		Data 2 (R100 lower)		Data 3 (R101 upper)		Data 4 (R101 lower)	
0	0	6	4	0	0	6	5
30H	30H	36H	34H	30H	30H	36H	35H
(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)

Item	Message format
Response message during normal communication (GOT → host)	ACK: 06H
Response message during faulty communication (GOT → host)	NAK: 15H

• When writing to a bit device

The following shows an example of writing "1"s to virtual devices M0 and M31 on the GOT at station No.15.



Item	Message format
Request message (host → GOT)	(format 14: GOT-F900 Series microcomputer connection (format 1))

STX	Com-mand	Station No.		Address				Number of bytes		Following*1	CR
	B	1	5	2	0	0	0	0	4		
02H	42H	31H (H)	35H (L)	32H (H)	30H –	30H –	30H (L)	30H (H)	34H (L)		0DH

(format 15: GOT-F900 Series microcomputer connection (format 2))

STX	Com-mand	Station No.		Address				Byte Number		Following*1	ETX	Sum Check	
	B	1	5	2	0	0	0	0	4			5	A
02H	42H	31H (H)	35H (L)	32H (H)	30H –	30H –	30H (L)	30H (H)	34H (L)		03H	35H (H)	41H (L)

Sum check is performed in this range.

*1

Data 1 (M7 to 0)		Data 2 (M15 to 8)		Data 3 (M23 to 16)		Data 4 (M31 to 24)	
0	1	0	0	0	0	8	0
30H (H)	31H (L)	30H (H)	30H (L)	30H (H)	30H (L)	38H (H)	30H (L)

0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
M7	M6	M5	M4	M3	M2	M1	M0	M15	M14	M13	M12	M11	M10	M9	M8	M23	M22	M21	M20	M19	M18	M17	M16	M31	M30	M29	M28	M27	M26	M25	M24

Response message during normal communication (GOT → host)	ACK 06H
Response message during faulty communication (GOT → host)	NAK 15H

■Multi-point write in bit units (3) command (without station No.), multi-point write in bit units (D) command (with station No.)

The following shows an example of turning OFF the virtual device M31 and turning ON the virtual device M2038 on the GOT at station No.31.

Item	Message format
Request message (host → GOT)	(format 14: GOT-F900 Series microcomputer connection (format 1))

STX	Com-mand	Station No.		Number of points		Following*1	CR
	D	3	1	0	2		
02H	44H	33H (H)	31H (L)	30H (H)	32H (L)		0DH

(format 15: GOT-F900 Series microcomputer connection (format 2))

STX	Com-mand	Station No.		Number of points		Following*1	ETX	Sum check	
	D	3	1	0	2			E	C
02H	44H	33H (H)	31H (L)	30H (H)	32H (L)		03H	45H (H)	43H (L)

Sum check is performed in this range.

*1

Write specification 1	Address1				Bit pattern1		Write specification 2	Address2				Bit pattern2	
1	2	0	0	3	8	0	0	2	0	F	E	4	0
31H	32H (H)	30H –	30H –	33H (L)	38H (H)	30H (L)	30H	32H (H)	30H –	46 –	45H (L)	34H (H)	30H (L)

*2 (write specification1=1)

	MM33	MM32	MM31	MM30	MM29	MM28	MM27	MM26
Source data bit pattern	1	0	1	0	1	0	1	0
	1	0	0	0	0	0	0	0
Result	0	0	1	0	1	0	1	0

*2 (write specification2=0)

	MM22	MM21	MM20	MM19	MM18	MM17	MM16	MM15
Source data bit pattern	1	0	1	0	1	0	1	0
	0	1	0	0	0	0	0	0
Result	1	1	1	0	1	0	1	0

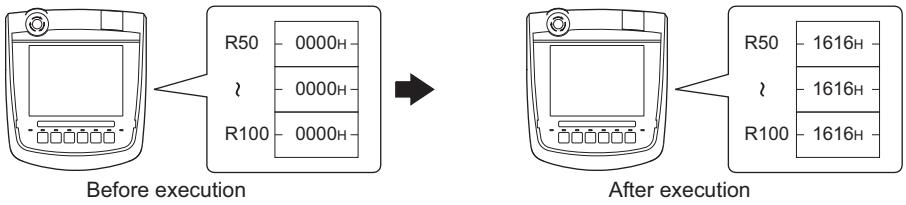
Item	Message format
Response message during normal communication (GOT → host)	ACK 06H
Response message during faulty communication (GOT → host)	NAK 15H

*1 The write specification specifies how the data of the specified address is changed in the bit pattern.

Write specification	Function	Description	Action example
0	ON specification	Bits set to "1" by the bit pattern are turned ON.	Original data 1010 Bit pattern 1100
			Result 1110
1	OFF specification	Bits set to "1" by the bit pattern are turned OFF.	Original data 1010 Bit pattern 1100
			Result 0010
2	Invert specification	Bits set to "1" by the bit pattern are inverted.	Original data 1010 Bit pattern 1100
			Result 0110
3	Write specification	The numerical values to write by the bit pattern are specified directly.	Original data 1010 Bit pattern 1100
			Result 1100

■Fill command (4) (w/out station No.), fill command (E) (w/station No.)

The following shows an example of writing "16"s to virtual devices R50 to R100 on the GOT at station No.27.



Item	Message format
Request message (host → GOT)	(format 14: GOT-F900 Series microcomputer connection (format 1))

STX	Com-mand	Station No.		Start address				End address				Write Data		CR
	E	2	7	0	0	6	4	0	0	C	9	1	6	
02H	45H	32H (H)	37H (L)	30H (H)	30H –	36H –	34H (L)	30H (H)	30H –	43H –	39H (L)	31H (H)	36H (L)	0DH

(format 15: GOT-F900 Series microcomputer connection (format 2))

STX	Com-mand	Station No.		Start address				End address				Write Data		ETX	Sum Check	
	E	2	7	0	0	6	4	0	0	C	9	1	6		B	E
02H	45H	32H (H)	37H (L)	30H (H)	30H –	36H –	34H (L)	30H (H)	30H –	43H –	39H (L)	31H (H)	36H (L)	03H	42H (H)	45H (L)

Sum check is performed in this range.

Response message during normal communication (GOT → host)	ACK 06H
Response message during faulty communication (GOT → host)	NAK 15H

Point

• Start address/end address specification conditions

Specify addresses so that the start address is the same or less than the end address.

Error response occurs in the following cases:

The address to specify has the start address greater than the end address.

Either of the start address or end address exceeds the device range that can be specified.

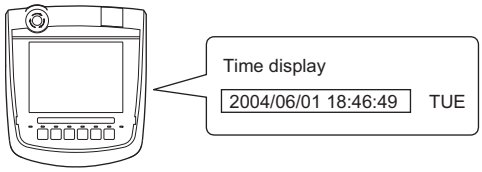
• Address specifying crossing over different devices

The start address and end address can be specified crossing over different devices.

■Read clock data (6) command (without station No.), read clock data (G) command (with station No.)

The following shows an example of reading the clock data of GOT at station No.27.

(Assuming that the clock data of GOT has been set to "2004, June 1, 18:46:49, Tuesday".)

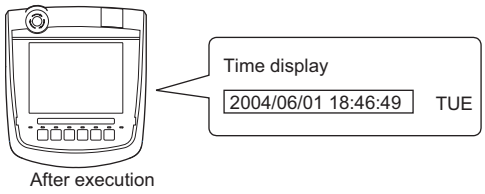


Item	Message format
Request message (host → GOT)	(format 14: GOT-F900 Series microcomputer connection (format 1)) STX: 02H Command: G (47H) Station No.: 27 (32H (H), 37H (L)) CR: 0DH (format 15: GOT-F900 Series microcomputer connection (format 2)) STX: 02H Command: G (47H) Station No.: 27 (32H (H), 37H (L)) ETX: 03H Sum Check: B3 (42H (H), 33H (L)) Sum check is performed in this range.
Response message during normal communication (GOT → host)	(format 14: GOT-F900 Series microcomputer connection (format 1)) STX: 02H Year data: 04 (30H (H), 34H (L)) Month data: 06 (30H (H), 36H (L)) Day data: 01 (30H (H), 31H (L)) Hour data: 18 (31H (H), 38H (L)) Minute data: 46 (34H (H), 36H (L)) Second data: 49 (34H (H), 39H (L)) Day-of-week data: 02 (30H (H), 32H (L)) CR: 0DH (format 15: GOT-F900 Series microcomputer connection (format 2)) STX: 02H Year data: 04 (30H (H), 34H (L)) Month data: 06 (30H (H), 36H (L)) Day data: 01 (30H (H), 31H (L)) Hour data: 18 (31H (H), 38H (L)) Minute data: 46 (34H (H), 36H (L)) Second data: 49 (34H (H), 39H (L)) Day-of-week data: 02 (30H (H), 32H (L)) ETX: 03H Sum Check: D0 (44H (H), 30H (L)) Sum check is performed in this range.
Response message during faulty communication (GOT → host)	NAK: 15H

■Set clock data (5) command (w/out station No.), set clock data (F) command (w/station No.)

The following shows an example of setting clock data of GOT at station No.27.

(Assuming the clock data of GOT is to be set to "2004, June 1, 18:46:49 Tuesday".)



After execution

Item	Message format
Request message (host → GOT)	(format 14: GOT-F900 Series microcomputer connection (format 1))

STX	Com-mand	Station No.		Year data		Month data		Day Data		Hour data		Minute data		Second data		Day-of-week data		CR
	F	2	7	0	4	0	6	0	1	1	8	4	6	4	9	0	2	
02H	46H	32H (H)	37H (L)	30H (H)	34H (L)	30H (H)	36H (L)	30H (H)	31H (L)	31H (H)	38H (L)	34H (H)	36H (L)	34H (H)	39H (L)	30H (H)	32H (L)	0DH

(format 15: GOT-F900 Series microcomputer connection (format 2))

STX	Com-mand	Station No.		Following*1	ETX	Sum Check	
	F	2	7			7	F
02H	46H	32H (H)	37H (L)		03H	37H (H)	46H (L)

Sum check is performed in this range.

*1

Year data		Month data		Day data		Hour data		Minute data		Second data		Day-of-week data	
0	4	0	6	0	1	1	8	4	6	4	9	0	2
30H (H)	34H (L)	30H (H)	36H (L)	30H (H)	31H (L)	31H (H)	38H (L)	34H (H)	36H (L)	34H (H)	39H (L)	30H (H)	32H (L)

Response message during normal communication (GOT → host)	ACK 06H
Response message during faulty communication (GOT → host)	NAK 15H

Point

When a wrong day of the week has been set by the clock data setting command

If a wrong day of the week is set by the clock data setting commands, the corrected day of the week will be set.

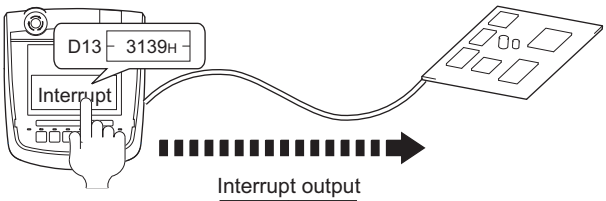
Example: When June 1, 2004 (Thursday) is set by the clock data setting command (The actual day of week is Tuesday.)

Tuesday (TUE) will be set.

■In the case of interrupt outputs

Write data to the interrupt output devices (D13 and D14) to output the data to the host.
(Assuming that "3139H" is written to D13 and "AA55H" to D14.)

Example) When [Interrupt Data Byte(Byte)] in the communication detail settings is set to [2] as shown in (2) of the table below



Interrupt output

Output value 1	Output value 2
31H	39H

Item	Message format
Interrupt output (GOT → host)	(1) When [Interrupt Data Byte(Byte)] in the communication detail settings is set to [1] Output value 1: 39H (2) When [Interrupt Data Byte(Byte)] in the communication detail settings is set to [2] Output value 1: 31H, Output value 2: 39H (3) When [Interrupt Data Byte(Byte)] in the communication detail settings is set to [4] • When [32bit Storage] in the communication detail settings is set to [LH Order] Output value 1: AAH, Output value 2: 55H, Output value 3: 31H, Output value 4: 39H • When [32bit Storage] in the communication detail settings is set to [HL Order] Output value 1: 31H, Output value 2: 39H, Output value 3: AAH, Output value 4: 55H

Point

Interrupt output

To disable the interrupt output, turn on SM52 (interrupt code output disable flag).

☞ Page 1944 SM devices

To execute the interrupt output in format 1, 2, 11, 14, or 15, set the data length to 8 bits in the communication detail settings.

When "7 bits" is set, the MSB (8th bit) is ignored. (Example: FFH→7FH)

☞ Page 1995 Setting communication interface (Controller Setting)

Error code list

When faulty, the error code is stored in SD2.

For details on error code stored in SD2, the error contents, cause and measures, refer to the following.

☞ Page 1942 Details and actions for errors (error codes) stored into SD2

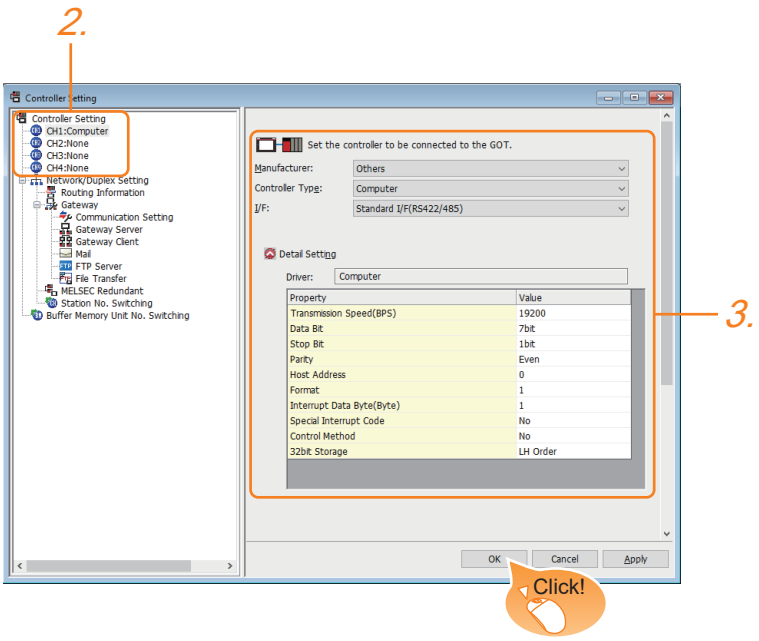
When an error other than those to be stored in SD2 occurs, at faulty, only the NAK response is executed.

45.6 GOT Side Settings

Setting communication interface (Controller Setting)

Controller setting

Set the channel of the equipment to be connected to the GOT.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [Others]
- [Controller Type]: [Computer]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 1997 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be set and confirmed in [I/F Communication Setting]. For details, refer to the following.

☞ Page 82 I/F communication setting

Extension setting for microcomputer

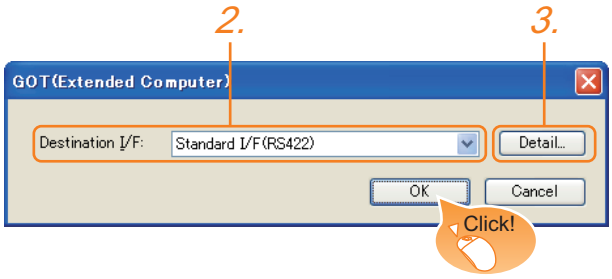
Set the GOT interface connecting to the n+1th GOT.

No setting is required for a terminal GOT.

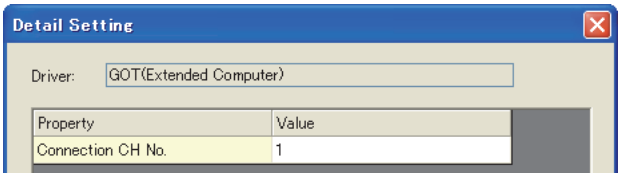
Point

Microcomputer connection extension

The setting is required when connecting multiple GOTs for one microcomputer.



1. Select [Common] → [Peripheral Setting] → [GOT (Extended Computer)] from the menu.
2. Set the interface to which the n+1th GOT is connected.
3. Clicking the detail setting button displays the Communication Detail Settings dialog box for the communication driver.



Item	Description	Range
Connection CH No.	This CH No. is used for the connection with a microcomputer or n-1th GOT. (Default: 1)	1 fixed

4. When you have completed the settings, click the [OK] button.

Communication detail settings

Make the settings according to the usage environment.

Property	Value
Transmission Speed(BPS)	19200
Data Bit	7 bit
Stop Bit	1 bit
Parity	Even
Host Address	0
Format	1
Interrupt Data Byte(Byte)	1
Special Interrupt Code	No
Control Method	No
32bit Storage	LH Order

Item	Description	Range
Transmission Speed(BPS)	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 19200bps)	4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 7bits)	7bits, 8bits
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit, 2bits
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Even)	None Even Odd
Host Address	Specify the host address (station No. of the PLC to which the GOT is connected) in the network of the GOT. (Default: 0)	0 to 31
Format	Select the communication format. (Default: 1)	1 to 15
Interrupt Data Byte(Byte)	Specify the number of bytes of interrupt data. (Default: 1)	1, 2, 4
Special Interrupt Code	Set whether or not to output the special interrupt code. (Default: No)	Yes, No
Control Method	Set this item when selecting the XON/XOFF control for the control method. (Default: No)	XON/XOFF, No
32bit Storage	Select the steps to store two words (32-bit data). (Default: LH Order)	LH Order, HL Order

Point

• Special Interrupt Code

The special interrupt codes are output at event occurrences.

If multiple events occur simultaneously, the special interrupt codes may not be output.

The following shows the special interrupt codes and the event types.

Special Interrupt Code (Hex)	Event type
20H	Base Screen, Overlap Window 1 to 5 Special interrupt codes are output at the timing when the screen is switched by the screen switching device. Base Screen or each Overlap Window switches independently without being interlocked. (Example of output) When all the values of screen switching devices of the Base Screen and Overlap Window 1 to 2 are changed, 3 special interrupt codes are output.
21H	This code is output when a numerical or ASCII input is completed.
22H	This code is output when reading or writing of the recipe data is completed.
23H	This code is output when a barcode or RFID data is read.

• Communication detail setting when connecting multiple GOTs

For the following items, set the same settings to the n+1th GOT interface as the CH No.1 of n-th GOT.

Transmission Speed

Data Bit

Stop Bit

Parity

Set each [Host Address] for the GOT.

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

User's Manual of GOT used.

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

45.7 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1
Microcomputer ([Computer])

45.8 Precautions

GOT clock control

Even though the time setting function and time notification function are set in the GOT time setting, the settings are disabled.
When reading from or writing to the clock data between the GOT and microcomputer, use the dedicated command.

Operation in which the GOT shifts to the offline mode

Before performing operation in which the GOT shifts to the offline mode such as writing the package data, stop the communication between the GOT and the host.
After shifting to the offline mode, the GOT cannot respond to the requests from the host.
Even after the GOT returns from the offline mode, the communication may not be performed until the timeout time of the host side elapses.

46 MICROCOMPUTER CONNECTION (ETHERNET)

- Page 2001 Microcomputer connection (Ethernet)
- Page 2002 System Configuration
- Page 2003 Device Data Area
- Page 2016 Message Formats
- Page 2068 GOT Side Settings
- Page 2071 Settable Device Range
- Page 2071 Precautions

46.1 Microcomputer connection (Ethernet)

The microcomputer connection (Ethernet) is a function by which data can be written or read from a personal computer, microcomputer board, PLC, and others (hereinafter, host) to the virtual devices of the GOT by connecting the host and the GOT by Ethernet.

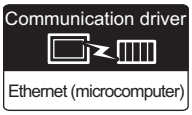
Interrupt output is also available from the GOT to the host.

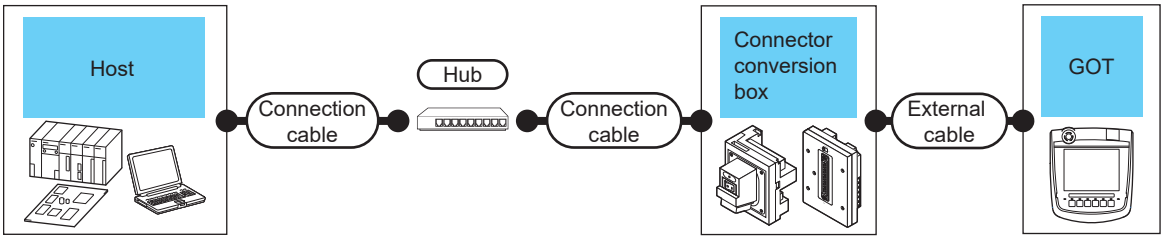
For the flow of the data processing, such as reading or writing data and interrupt output, refer to the following.

☞ Page 1924 Microcomputer Connection (Serial)

46.2 System Configuration

For the microcomputer connection (Ethernet)





Host	Connection cable		Connector conversion box	External cable*3	GOT Model	Number of connectable equipment			
Communication Type	Cable model	Maximum segment length*2				Per GOT channel*4		Per host*5	
						UDP	TCP	UDP	TCP
Ethernet	Twisted pair cable*1 • 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	Unlimited	1	Unlimited	Unlimited
			GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)					
			GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS				
			GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)					

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect the cable to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system used.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

*3 Use C or later version of GT11H-C□□-37P.

*4 The number of connectable controllers per GOT channel is indicated.

*5 The number of GOTs connectable to one host is indicated.

46.3 Device Data Area

The following shows a list of virtual devices inside the GOT available in the microcomputer connection (Ethernet), and the address specification values for each data format.

The address specification of the virtual devices differs depending on the data format.*1

Model	Virtual device*2			Address specification value				Refer to
	Name	Device range (decimal)	Device type	Format 1, 2	Format 3, 4	Format 5	Format 6 to 9	
GT2506-HS GT2505-HS	D	0 to 4095	Word	0 to 4095	8000 to 9FFFH	0000 to 0FFFH	D0 to D4095	☞ Page 2004 D devices
	R	0 to 4095	Word	4096 to 8191	0000 to 1FFFH	1000 to 1FFFH	R0 to R4095	☞ Page 2008 R devices
	L	0 to 2047	Bit	8192 to 8319	A000 to A0FFH	2000 to 207FH	L0 to L2047	☞ Page 2009 L devices
	M	0 to 2047	Bit	8320 to 8447	2000 to 20FFH	2080 to 20FFH	M0 to M2047	☞ Page 2010 M devices
	SD	0 to 15	Word	8448 to 8463	2100 to 211FH (3000 to 300DH)*3	2100 to 210FH	SD0 to SD15	☞ Page 2011 SD devices
	SM	0 to 63	Bit	8464 to 8467	2200 to 2207H	2110 to 2113H	SM0 to SM63	☞ Page 2014 SM devices

*1 For the address specification method for each data format, refer to the following.
☞ Page 2016 Message Formats

- Formats 1, 2 : GOT-A900 Series microcomputer connection
- Formats 3, 4 : GOT-F900 series microcomputer connection
- Formats 5 : SCHNEIDER EJH's memory link method
- Formats 6, 7 : 4E frame
- Formats 8, 9 : QnA compatible 3E frame

*2 When reusing GOT900 Series project data

• GOT-A900 Series virtual devices (D0 to 2047)
Can be used as they are without changing the assignments.

• GOT-F900 Series virtual devices
Since some of the assigned virtual device values differ as indicated below, change the assignment using device batch edit of GT Designer3.
Refer to the following manual for device batch edit of GT Designer3.
GT Designer3 (GOT2000) Screen Design Manual

GOT2000 Series virtual devices	GOT-F900 Series virtual devices
D0 to 2047	—
D2048 to 4095	—
R0 to 4095	D0 to 4095
L0 to 2047	—
M0 to 2047	M0 to 2047
SD0 to 15	D8000 to 8015 GD0 to 6
SM0 to 63	M8000 to 8063

*3 Access to SD3 to 9 can also be made by the specification of the addresses (3000 to 300DH) of GD0 to 6 on the GOT-F900 Series.

Point

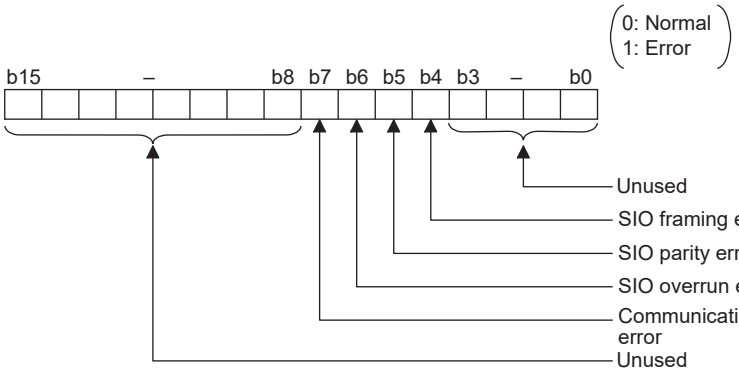
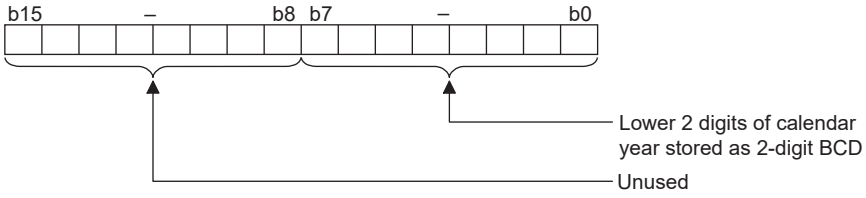
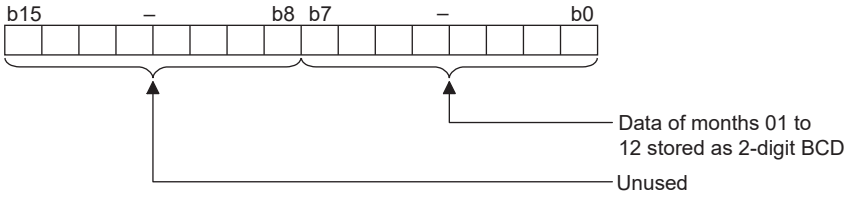
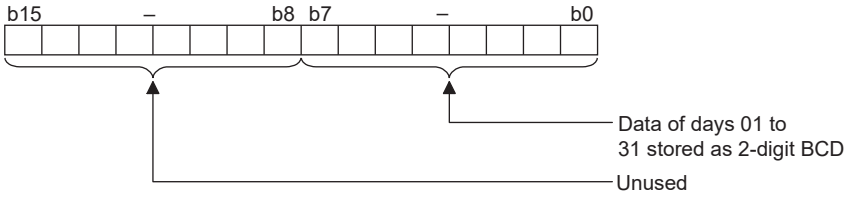
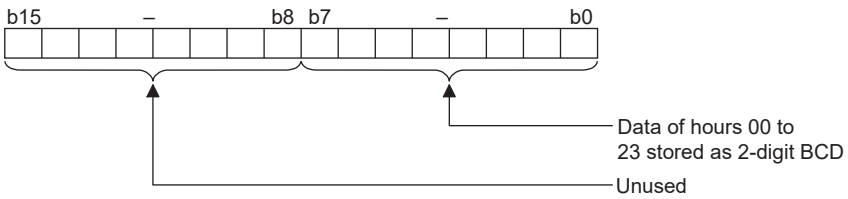
Values of virtual devices inside the GOT
When the GOT is turned OFF or reset, values are cleared to their defaults (bit devices: OFF, word devices: 0).
Values are held in the memory when project data are written to the GOT.

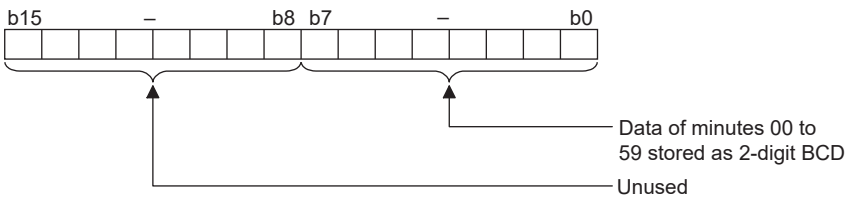
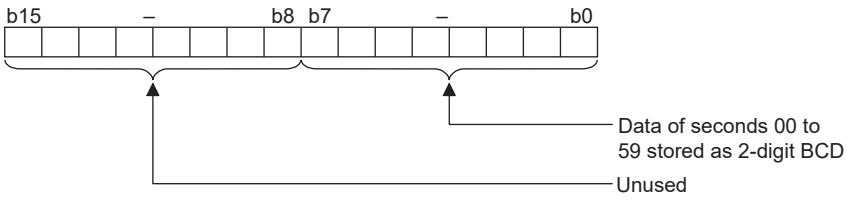
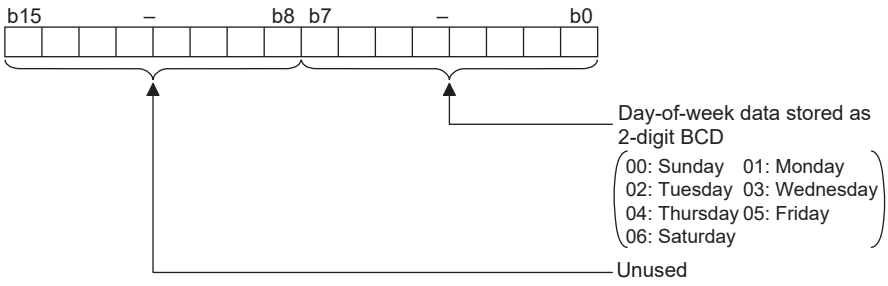
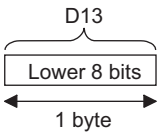
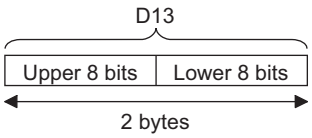
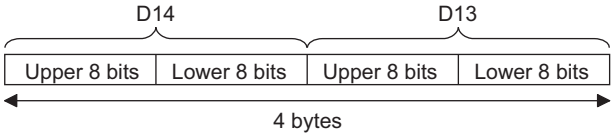
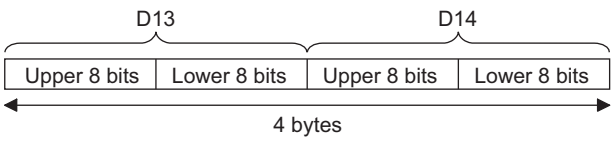
D devices

The D devices are word devices into which GOT communication errors, clock data or other information are stored.
The user can also store data using the user area.

List of D devices

The following lists the D devices (virtual devices inside the GOT).

Address	Description	Set side
D0 to 2	Unused	—
D3	Communication error status Stores the communication error details of GOT.  • b4 to 6 turn ON when an SIO error occurs, and turn OFF when an request message from the host is received successfully after the error occurrence. • b7 turns ON about 3 seconds after the host side DTR becomes OFF, and turns OFF when transmission is performed successfully to the host after the error occurrence.	System
D4	Clock data (year) 	
D5	Clock data (month) 	
D6	Clock data (day) 	
D7	Clock data (hour) 	

Address	Description	Set side
D8	Clock data (minute) 	System
D9	Clock data (second) 	
D10	Clock data (day of the week) 	
D11, D12	Unused	—
D13 D14	Interrupt output When data are written to D13 and D14 from a GOT touch switch, for example, the data of D13 and D14 are transmitted (interrupt output) to the host side. *1*2 Set the data amount (number of bytes) to execute an interrupt output for [Interrupt Data Byte] in the communication detail settings. ☞ Page 2068 Setting communication interface (Controller Setting) • Output value when [1] is set to [Interrupt Data Byte] in the communication detail settings.  • Output value when [2] is set to [Interrupt Data Byte] in the communication detail settings.  • Output value when [4] is set to [Interrupt Data Byte] in the communication detail settings.*3 (1) When [32bit Storage] in the communication detail settings is set to [LH Order]  (2) When [32bit Storage] in the communication detail settings is set to [HL Order] 	User
D15 to 19	Unused	—
D20 to 2031	User area	User
D2032 to 2034	Unused	—

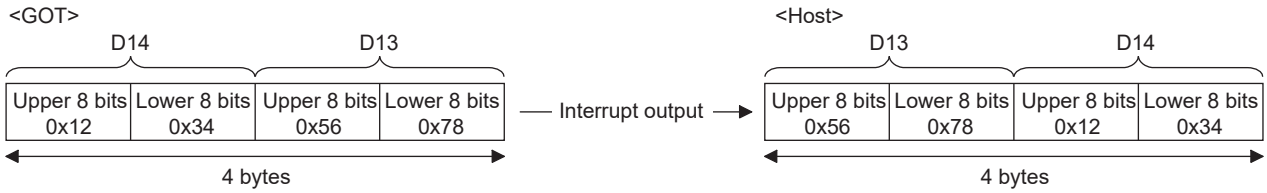
Address	Description	Set side
D2035	1-second binary counter The counter is incremented at 1-second intervals after the GOT is turned ON. (The time elapsed after GOT is turned ON is stored in 1-second units.) Data are stored in binary format.	System
D2036 to 4095	User area	User

*1 After writing data, the interrupt data is output within a period of 1 to 10 ms.

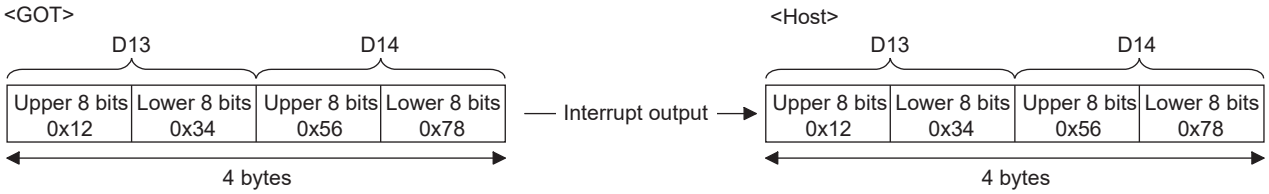
*2 When data are written to D13 and D14 from the host side, interrupt output is not performed.

*3 When 32-bit data are written to D13 and D14, the values are output to the host side regardless of the setting for [32bit Storage] in the communication detail settings.
Example) When outputting 0x12345678 with unsigned 32-bit binary data

· LH Order



· HL Order



Point

• The side where virtual devices are set

System: Set on the system side.

User: Set on the user side (by sending request messages from host or using the touch switches, etc. on the GOT).

• Interrupt output (D13, D14)

To disable the interrupt output, turn on SM52 (interrupt code output disable flag).

☞ Page 2014 SM devices

Differences in address specifications by data format

The address specification of devices varies depending on the data format.*1

The following shows the address specification values for each data format.

Model	Address	Address specification value				
		Format 1, 2	Format 3, 4		Format 5	Format 6 to 9
GT2506HS GT2505HS	D0	0	8000H 8001H	8000H 8001H Upper 8 bits Lower 8 bits	0000H	D0
	D1	1	8002H 8003H	8002H 8003H Upper 8 bits Lower 8 bits	0001H	D1
	:	:		:	:	:
	D4095	4095	9FFEH 9FFFH	9FFEH 9FFFH Upper 8 bits Lower 8 bits	0FFFH	D4095

*1 For the address specification method for each data format, refer to the following.

☞ Page 2016 Message Formats

- Formats 1, 2 : GOT-A900 Series microcomputer connection
- Formats 3, 4 : GOT-F900 series microcomputer connection
- Formats 5 : SCHNEIDER EJH's memory link method
- Formats 6, 7 : 4E frame
- Formats 8, 9 : QnA compatible 3E frame

R devices

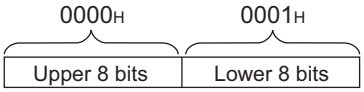
The R devices are word devices into which user data are stored.

All of these devices can be used as a user area.

List of R devices and differences in address specification by data format

The following shows the R devices (virtual devices inside the GOT).

The address specification values different depending on the data format are also given below.*1

Model	Address	Address specification value				
		Format 1, 2	Format 3, 4		Format 5	Format 6 to 9
GT2506HS GT2505HS	R0	4096	0000H 0001H		1000H	R0
	R1	4097	0002H 0003H		1001H	R1
	:	:		:	:	:
	R4095	8191	1FFEH 1FFFH		1FFFH	R4095

*1 For the address specification method for each data format, refer to the following.

☞ Page 2016 Message Formats

- Formats 1, 2 : GOT-A900 Series microcomputer connection
- Formats 3, 4 : GOT-F900 series microcomputer connection
- Formats 5 : SCHNEIDER EJH's memory link method
- Formats 6, 7 : 4E frame
- Formats 8, 9 : QnA compatible 3E frame

L devices

The L devices are bit devices into which user data are stored.

All of these devices can be used as a user area.

List of L devices and differences in address specification by data format

The following shows the L devices (virtual devices inside the GOT).

The address specification values different depending on the data format are also given below.*1

Model	Address								Address specification value				
	b7	b6	b5	b4	b3	b2	b1	b0	Form at 1, 2	Format 3, 4		Format 5	Format 6 to 9
										When GS580.b8, GS581.b8, GS582.b8, or GS583.b8 is ON	When GS580.b8, GS581.b8, GS582.b8, or GS583.b8 is OFF		
GT2506-HS GT2505-HS	L7	L6	L5	L4	L3	L2	L1	L0	8192	A000H	A001H	2000H	Same as address column on left*2
	L15	L14	L13	L12	L11	L10	L9	L8		A001H	A000H		
	L23	L22	L21	L20	L19	L18	L17	L16	8193	A002H	A003H	2001H	
	L31	L30	L29	L28	L27	L26	L25	L24		A003H	A002H		
	:								:	:	:	:	
	L2039	L2038	L2037	L2036	L2035	L2034	L2033	L2032	8319	A0FEH	A0FFH	207FH	
	L2047	L2046	L2045	L2044	L2043	L2042	L2041	L2040		A0FFH	A0FEH		

*1 For the address specification method for each data format, refer to the following.

☞ Page 2016 Message Formats

- Formats 1, 2 : GOT-A900 Series microcomputer connection
- Formats 3, 4 : GOT-F900 series microcomputer connection
- Formats 5 : SCHNEIDER EJH's memory link method
- Formats 6, 7 : 4E frame
- Formats 8, 9 : QnA compatible 3E frame

*2 For reading or writing data in word units, specify the addresses in 16-point units. (Example: L0, L16, L32, and others)

M devices

The M devices are bit devices into which user data are stored.

All of these devices can be used as a user area.

List of M devices and differences in address specification by data format

The following shows the M devices (virtual devices inside the GOT).

The address specification values different depending on the data format are also given below.*1

Model	Address								Address specification value				
	b7	b6	b5	b4	b3	b2	b1	b0	Form at 1, 2	Format 3, 4		Format 5	Format 6 to 9
										When GS580.b8, GS581.b8, GS582.b8, or GS583.b8 is ON	When GS580.b8, GS581.b8, GS582.b8, or GS583.b8 is OFF		
GT2506HS GT2505HS	M7	M6	M5	M4	M3	M2	M1	M0	8320	2000H	2001H	2080H	Same as address column on left*2
	M15	M14	M13	M12	M11	M10	M9	M8		2001H	2000H		
	M23	M22	M21	M20	M19	M18	M17	M16	8321	2002H	2003H	2081H	
	M31	M30	M29	M28	M27	M26	M25	M24		2003H	2002H		
	:								:	:	:	:	
	M2039	M2038	M2037	M2036	M2035	M2034	M2033	M2032	8447	20FEH	20FFH	20FFH	
	M2047	M2046	M2045	M2044	M2043	M2042	M2041	M2040		20FFH	20FEH		

*1 For the address specification method for each data format, refer to the following.

☞ Page 2016 Message Formats

- Formats 1, 2 : GOT-A900 Series microcomputer connection
- Formats 3, 4 : GOT-F900 series microcomputer connection
- Formats 5 : SCHNEIDER EJH's memory link method
- Formats 6, 7 : 4E frame
- Formats 8, 9 : QnA compatible 3E frame

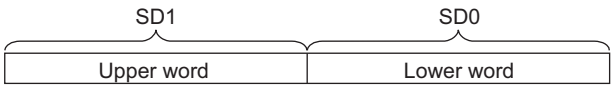
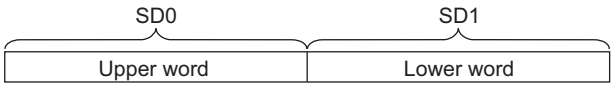
*2 For reading or writing data in word units, specify the addresses in 16-point units. (Example: M0, M16, M32, and others)

SD devices

The SD devices are word devices into which GOT communication errors (error codes), clock data and other information are stored.

List of SD devices

The following lists the SD devices (virtual devices inside the GOT).

Address	Description	Set side
SD0 SD1	100ms counter (32bits) The counter is incremented at 100ms intervals after GOT is turned ON. (The time elapsed after GOT is turned ON is stored in 100ms units.) (1) When [32bit Storage] in the communication detail settings is set to [LH Order] The lower and upper bits are stored in SD0 and SD1 respectively.  (2) When [32bit Storage] in the communication detail settings is set to [HL Order] The upper and lower bits are stored in SD0 and SD1 respectively. 	System
SD2*1	Communication error status An error data (error code) occurred during communication is stored. • Host Address (Communication error that occurred on the request destination GOT) 0: No error 1: Parity error 2: Framing error 3: Overrun error 4: Communication message error 5: Command error 6: Clock data setting error	
SD3	Clock data (second) Second data of 00 to 59 is stored.	
SD4	Clock data (minute) Minute data of 00 to 59 is stored.	
SD5	Clock data (hour) Hour data of 00 to 23 is stored.	
SD6	Clock data (day) Day data of 00 to 31 is stored.	
SD7	Clock data (month) Month data of 01 to 12 is stored.	
SD8	Clock data (year) The last two digits of four-digit year data are stored.	
SD9	Clock data (day of the week) Day-of-the-week data is stored. 0: Sunday 1: Monday 2: Tuesday 3: Wednesday 4: Thursday 5: Friday 6: Saturday	
SD10 to 15	Unused	—

*1 For details and corrective actions for the errors (error codes) that are stored into SD2, refer to the following:
☞ Page 2012 Details and actions for errors (error codes) stored into SD2

Point

The side where virtual devices are set

System: Set on the system side.

User: Set on the user side (by sending request messages from host or using the touch switches, etc. on the GOT).

Details and actions for errors (error codes) stored into SD2

Error code	Description	Action
0	No error	—
1, 101	Parity error The parity bit does not match.	• Check the communication cable and communication module attachment. • Check the settings of "Communication Detail Settings". • Match the GOT and host transmission settings.
2, 102	Framing error The data bit and/or stop bit are not correct.	
3, 103	Overrun error The next data was transmitted from the host before GOT completes the processing of the data received.	• Check the settings of "Communication Detail Settings". • Decrease the transmission speed.
4, 104	Communication message error EXT/CR could not be found before the upper limit of the receive buffer was exceeded.	• Check the communication cable and communication module attachment. • Check the settings of "Communication Detail Settings". • Review the contents of the message to transmit.
5	Command error An unsupported command was used.	• Review the contents of the message to transmit. • Check the commands in the message. ☞ Page 2017 List of commands
105	Timeout error There is no response from the GOT, or the station of the specified address does not exist.	• Check the communication cable and communication module attachment. • Check the settings of "Communication Detail Settings". • Review the contents of the message to transmit.
106	Multiple units not connectable The RS-232 port is occupied.	• Check the communication cable and communication module attachment. • Check the settings of "Communication Detail Settings". • Check to see if the RS-232 port is occupied.
6, 107	Clock data setting error The setting value of the clock data has error.	• Review the contents of the message to transmit. • Check whether the non-existent data is set (e.g. setting "07" at the day of the week) as clock data.

Differences in address specifications by data format

The address specification of devices varies depending on the data format.*1

The following shows the address specification values for each data format.

Model	Address	Address specification value				
		Format 1, 2	Format 3, 4*2		Format 5	Format 6 to 9
GT2506HS GT2505HS	SD0	8448	2100H 2101H	2100H: Upper 8 bits; 2101H: Lower 8 bits	2100H	SD0
	SD1	8449	2102H 2103H	2102H: Upper 8 bits; 2103H: Lower 8 bits	2101H	SD1
	SD2	8450	2104H 2105H	2104H: Upper 8 bits; 2105H: Lower 8 bits	2102H	SD2
	SD3	8451	2106H (3000H) 2107H (3001H)	2106H(3000H): Upper 8 bits; 2107H(3001H): Lower 8 bits	2103H	SD3
	SD4	8452	2108H (3002H) 2109H (3003H)	2108H(3002H): Upper 8 bits; 2109H(3003H): Lower 8 bits	2104H	SD4
	SD5	8453	210AH (3004H) 210BH (3005H)	210AH(3004H): Upper 8 bits; 210BH(3005H): Lower 8 bits	2105H	SD5
	SD6	8454	210CH (3006H) 210DH (3007H)	210CH(3006H): Upper 8 bits; 210DH(3007H): Lower 8 bits	2106H	SD6
	SD7	8455	210EH (3008H) 210FH (3009H)	210EH(3008H): Upper 8 bits; 210FH(3009H): Lower 8 bits	2107H	SD7
	SD8	8456	2110H (300AH) 2111H (300BH)	2110H(300AH): Upper 8 bits; 2111H(300BH): Lower 8 bits	2108H	SD8
	SD9	8457	2112H (300CH) 2113H (300DH)	2112H(300CH): Upper 8 bits; 2113H(300DH): Lower 8 bits	2109H	SD9

*1 For the address specification method for each data format, refer to the following.

☞ Page 2016 Message Formats

- Formats 1, 2 : GOT-A900 Series microcomputer connection
- Formats 3, 4 : GOT-F900 series microcomputer connection
- Formats 5 : SCHNEIDER EJH's memory link method
- Formats 6, 7 : 4E frame
- Formats 8, 9 : QnA compatible 3E frame

*2 SD3 to 9 correspond to GD0 to 6 on the GOT-F900 Series.
Access to SD3 to 9 can be also made by the specification of the addresses (3000 to 300DH) of GD0 to 6 on the GOT-F900 Series.

SM devices

The SM devices are bit devices into which interrupt outputs and clock data that turn ON or OFF in 1-second cycles are stored.

List of SM devices

The following shows the SM devices (virtual devices inside the GOT).

<table>
<tr><th>Address</th><th>Description</th><th>Set side</th></tr>
<tr><td>SM0 to 49</td><td>Interrupt output
When the ON or OFF state of SM0 to 49 is changed by a touch switch on the GOT, for example, the interrupt codes shown below are transmitted (interrupt output) to the host side. *1*2
Set the data amount (number of bytes) to execute an interrupt output for [Interrupt Data Byte] in the communication detail settings.
☞ Page 2068 Setting communication interface (Controller Setting)
<table>
<tr><th>Address</th><th>Event type</th><th>Interrupt code</th></tr>
<tr><td rowspan="2">SM0</td><td>Changed from OFF to ON</td><td>50H</td></tr>
<tr><td>Changed from ON to OFF</td><td>51H</td></tr>
<tr><td rowspan="2">SM1</td><td>Changed from OFF to ON</td><td>52H</td></tr>
<tr><td>Changed from ON to OFF</td><td>53H</td></tr>
<tr><td rowspan="2">SM2</td><td>Changed from OFF to ON</td><td>54H</td></tr>
<tr><td>Changed from ON to OFF</td><td>55H</td></tr>
<tr><td>≀</td><td>≀</td><td>≀</td></tr>
<tr><td rowspan="2">SM48</td><td>Changed from OFF to ON</td><td>B0H</td></tr>
<tr><td>Changed from ON to OFF</td><td>B1H</td></tr>
<tr><td rowspan="2">SM49</td><td>Changed from OFF to ON</td><td>B2H</td></tr>
<tr><td>Changed from ON to OFF</td><td>B3H</td></tr>
</table></td><td>User</td></tr>
<tr><td>SM50</td><td>1-second cycle clock
Turns ON and OFF in 1-second cycles.
 
</td><td rowspan="2">System</td></tr>
<tr><td>SM51</td><td>2-second cycle clock
Turns ON and OFF in 2-second cycles.
 
</td></tr>
<tr><td>SM52</td><td>Interrupt code output disable flag
Enables or disables the output of the interrupt code and special interrupt code.
OFF: Output enabled, ON: Output disabled
When the output is set to be disabled, no interrupt data are output to the host.
(Relevant devices: D13, D14, SM0 to 49)</td><td>User</td></tr>
<tr><td>SM53 to 63</td><td>Unused</td><td>—</td></tr>
</table>

*1 After the ON or OFF state is changed, the interrupt data is output within a period of 1 to 10 ms.

*2 When the ON or OFF state of SM0 to 49 is changed from the host side, interrupt output is not performed.

Point

The side where virtual devices are set

System: Set on the system side.

User: Set on the user side (by sending request messages from host or using the touch switches, etc. on the GOT).

Differences in address specifications by data format

The address specification of devices varies depending on the data format.*1

The following shows the address specification values for each data format.

Model	Address								Address specification value				
	b7	b6	b5	b4	b3	b2	b1	b0	Format 1, 2	Format 3, 4		Format 5	Format 6 to 9
										When GS580.b8, GS581.b8, GS582.b8, or GS583.b8 is ON	When GS580.b8, GS581.b8, GS582.b8, or GS583.b8 is OFF		
GT2506-HS GT2505-HS	SM7	SM6	SM5	SM4	SM3	SM2	SM1	SM0	8464	2200H	2201H	2110H	*2*3
	SM15	SM14	SM13	SM12	SM11	SM10	SM9	SM8		2201H	2200H		
	SM23	SM22	SM21	SM20	SM19	SM18	SM17	SM16	8465	2202H	2203H	2111H	
	SM31	SM30	SM29	SM28	SM27	SM26	SM25	SM24		2203H	2202H		
	SM39	SM38	SM37	SM36	SM35	SM34	SM33	SM32	8466	2204H	2205H	2112H	
	SM47	SM46	SM45	SM44	SM43	SM42	SM41	SM40		2205H	2204H		
	Unused			SM52	SM51	SM50	SM49	SM48	8467	2206H	2207H	2113H	
	Unused								—	—	—		

*1 For the address specification method for each data format, refer to the following.

☞ Page 2016 Message Formats

- Formats 1, 2 : GOT-A900 Series microcomputer connection
- Formats 3, 4 : GOT-F900 series microcomputer connection
- Formats 5 : SCHNEIDER EJH's memory link method
- Formats 6, 7 : 4E frame
- Formats 8, 9 : QnA compatible 3E frame

*2 In formats 6, 7, values are specified within a range of SM0 to 52.

*3 For reading or writing data in word units, specify the addresses in 16-point units. (Example: SM0, SM16, SM32, and others)

46.4 Message Formats

This section describes the format of messages that can be used in the microcomputer connection (Ethernet).

Data format type

Set the data format in the communication detail settings in GT Designer3.

For details of the data format setting method, refer to the following.

☞ Page 2068 Setting communication interface (Controller Setting)

Formats 1, 2 (GOT-A900 Series microcomputer connection)

This is the same message format as when a microcomputer connection is established with the GOT-A900 series.

Type	Name	Description	Refer to
Format 1	GOT-A900 series microcomputer connection (ASCII)	This format is used when the GOT is connected to the host in a 1:1 connection. The data format is ASCII.	☞ Page 2021 Formats 1, 2
Format 2	GOT-A900 series microcomputer connection (Binary)	This format is used when the GOT is connected to the host in a 1:1 connection. The data format is Binary.	

Formats 3, 4 (GOT-F900 series microcomputer connection)

This is the compatible message format with when a microcomputer connection is established with the GOT-F900 Series.

Type	Name	Description	Refer to
Format 3	GOT-F900 series microcomputer connection (ASCII)	This format is used when the GOT is connected to the host in a 1:1 connection. The data format is ASCII.	☞ Page 2033 Formats 3, 4
Format 4	GOT-F900 series microcomputer connection (Binary)	This format is used when the GOT is connected to the host in a 1:1 connection. The data format is Binary.	

Format 5 (SCHNEIDER EJH's memory link method)

This is the message format compatible with the protocol of the SCHNEIDER EJH's memory link method.

Type	Name	Description	Refer to
Format 5	SCHNEIDER EJH's memory link method	This is the basic format of the SCHNEIDER EJH's memory link method.	☞ Page 2046 Format 5

Formats 6, 7 (4E frame)

This is the compatible message format with when a communication is performed using the MC protocol of Q/QnA Series serial communication module.

Type	Name	Description	Refer to
Format 6	4E frame (ASCII)	This is the basic format of the MC protocols. The data format is ASCII.	☞ Page 2049 Formats 6, 7
Format 7	4E frame (Binary)	This is the basic format of the MC protocols. The data format is Binary.	

Formats 8, 9 (QnA compatible 3E frame)

This is the compatible message format with when a communication is performed using the MC protocol of Q/QnA Series serial communication module.

Type	Name	Description	Refer to
Format 8	QnA compatible 3E frame (ASCII)	This is the basic format of the MC protocols. The data format is ASCII.	☞ Page 2059 Formats 8, 9
Format 9	QnA compatible 3E frame (Binary)	This is the basic format of the MC protocols. The data format is Binary.	

List of commands

The following shows the list of commands available in each data format.

Specify the number of devices within each device range in a request message.

If the specified number of devices exceeds the device range, the device value cannot be written or read by a command.

For the device range, refer to the following.

☞ Page 2003 Device Data Area

Interrupt output is available in all formats only when [Protocol] is set to [TCP/IP] in the communication detail settings.

List of commands for format 1 (GOT-A900 series microcomputer connection (ASCII))

Command		Command name	Description	Max. number of points processed
Symbol	ASCII code			
RD	52H 44H	Batch read in word units	Reads bit devices in 16-point units.	99 words (1584 points)
			Reads word devices in 1-point units.	99 points
WD	57H 44H	Batch write in word units	Writes to bit devices in 16-point units.	99 words (1584 points)
			Writes to word devices in 1-point units.	99 points
RR	52H 52H	Random read in word units *1	Reads multiple different bit devices in 16-point units.	256 words (4096 points)
			Reads multiple different word devices in 1-point units.	256 points
RW	52H 57H	Random write in word units *1	Writes to multiple different word devices in 16-point units.	128 words (2048 points)
			Writes to multiple different word devices in 1-point units.	128 points
TR	54H 52H	Read clock data	Reads the clock data of the GOT.	—
TS	54H 53H	Set clock data	Sets the clock data of the GOT.	—

*1 Mixed specification of bit devices and word devices is also possible.

List of commands for format 2 (GOT-A900 series microcomputer connection (Binary))

Command	Command name	Description	Max. number of points processed
RD	Batch read in word units	Reads bit devices in 16-point units.	255 words (4080 points)
		Reads word devices in 1-point units.	255 points
WD	Batch write in word units	Writes to bit devices in 16-point units.	255 words (4080 points)
		Writes to word devices in 1-point units.	255 points
RR	Random read in word units *1	Reads multiple different bit devices in 16-point units.	512 words (8192 points)
		Reads multiple different word devices in 1-point units.	512 points
RW	Random write in word units *1	Writes to multiple different word devices in 16-point units.	256 words (4096 points)
		Writes to multiple different word devices in 1-point units.	256 points
TR	Read clock data	Reads the clock data of the GOT.	—
TS	Set clock data	Sets the clock data of the GOT.	—

*1 Mixed specification of bit devices and word devices is also possible.

List of commands for formats 3, 4 (GOT-F900 series microcomputer connection)

Command		Command name	Description	Max. number of points processed
Symbol	ASCII code			
0	30H	Batch read (without station No.)	Reads bit devices in byte units.	255 bytes (2040 points)
			Reads word devices in byte units.	255 bytes (127 points)
A	41H	Batch read (with station No.)	Reads bit devices in byte units.	255 bytes (2040 points)
			Reads word devices in byte units.	255 bytes (127 points)
1	31H	Batch write (without station No.)	Writes to bit devices in byte units.	255 bytes (2040 points)
			Writes to word devices in byte units.	255 bytes (127 points)
B	42H	Batch write (with station No.)	Writes to bit devices in byte units.	255 bytes (2040 points)
			Writes to word devices in byte units.	255 bytes (127 points)
3	33H	Multi-point write in bit units (without station No.)	Writes bit patterns (bit ON or OFF, inversion, direct specification) in 1-point units (8 bits for 1 point) to a specified device.	99 points
D	44H	Multi-point write in bit units (with station No.)		
4	34H	Fill command (without station No.)	Writes the same value to a range of specified devices.	—
E	45H	Fill command (with station No.)		
5	35H	Set clock data (without station No.)	Sets the clock data of the GOT.	—
F	46H	Set clock data (with station No.)		
6	36H	Read clock data (without station No.)	Reads the clock data of the GOT.	—
G	47H	Read clock data (with station No.)		

List of commands for format 5 (SCHNEIDER EJH's memory link method)

Command		Command name	Description	Max. number of points processed
Symbol	ASCII code			
R	52H	Batch read in word units	Reads bit devices in 16-point units.	512 words (8192 points)
			Reads word devices in 1-point units.	512 points
W	57H	Batch write in word units	Writes to bit devices in 16-point units.	512 words (8192 points)
			Writes to word devices in 1-point units.	512 points
I	49H	Interrupt inquiry	Issues an interrupt inquiry.	—

List of commands for format 6 (4E frame (ASCII)), format 8 (QnA compatible 3E frame (ASCII))

Command	Sub-command	Command name	Description	Max. number of points processed
0401	0001	Batch read in bit units	Reads bit devices in 1-point units.	896 points
0401	0000	Batch read in word units	Reads bit devices in 16-point units.*3	256 words (4096 points)
			Reads word devices in 1-point units.	256 points
1401	0001	Batch write in bit units	Writes to bit devices in 1-point units.	896 points
1401	0000	Batch write in word units	Writes to bit devices in 16-point units.*3	244 words (3904 points)
			Writes to word devices in 1-point units.	244 points
0403	0000	Random read in word units *1	Reads multiple different bit devices in 16-point and 32-point units.*3	128 words (2048 points)
			Reads multiple different word devices in 1-point and 2-point units.	128 points
1402	0001	Random write in bit units	Writes to multiple different bit devices in 1-point units.	96 points
1402	0000	Random write in word units *1	Writes to multiple different bit devices in 16-point and 32-point units.*3	64 words (1024 points)
			Writes to multiple different word devices in 1-point and 2-point units.	64 points
0406	0000	Multiple block batch read	Reads multiple blocks. A bit device (16 bits for 1 point) or a word device (1 word for 1 point) is regarded as one block.*3	80 points
1406	0000	Multiple block batch write	Writes multiple blocks. A bit device (16 bits for 1 point) or a word device (1 word for 1 point) is regarded as one block.*3	64 points
1901*2	0000	Read clock data	Reads the clock data of the GOT.	—
0901*2	0000	Set clock data	Sets the clock data of the GOT.	—

*1 Mixed specification of bit devices and word devices is also possible.
*2 This is a dedicated command of GOT for the microcomputer connection.
*3 Specifies the address of bit devices in 16-point units. (Example: M0, M16, M32, and others)

List of commands for format 7 (4E frame (Binary)), format 9 (QnA compatible 3E frame (Binary))

Command	Sub-command	Command name	Description	Max. number of points processed
0401	0001	Batch read in bit units	Reads bit devices in 1-point units.	896 points
0401	0000	Batch read in word units	Reads bit devices in 16-point units. *3	512 words (8192 points)
			Reads word devices in 1-point units.	512 points
1401	0001	Batch write in bit units	Writes to bit devices in 1-point units.	896 points
1401	0000	Batch write in word units	Writes to bit devices in 16-point units. *3	496 words (7936 points)
			Writes to word devices in 1-point units.	496 points
0403	0000	Random read in word units *1	Reads multiple different bit devices in 16-point and 32-point units. *3	255 words (4080 points)
			Reads multiple different word devices in 1-point and 2-point units.	255 points
1402	0001	Random write in bit units	Writes to multiple different bit devices in 1-point units.	188 points
1402	0000	Random write in word units *1	Writes to multiple different bit devices in 16-point and 32-point units. *3	128 words (2048 points)
			Writes to multiple different word devices in 1-point and 2-point units.	128 points
0406	0000	Multiple block batch read	Reads multiple blocks. A bit device (16 bits for 1 point) or a word device (1 word for 1 point) is regarded as one block. *3	160 points
1406	0000	Multiple block batch write	Writes multiple blocks. A bit device (16 bits for 1 point) or a word device (1 word for 1 point) is regarded as one block. *3	128 points
1901 *2	0000	Read clock data	Reads the clock data of the GOT.	—
0901 *2	0000	Set clock data	Sets the clock data of the GOT.	—

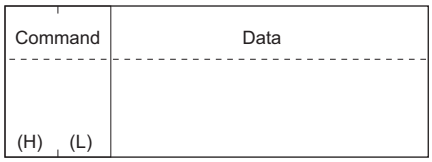
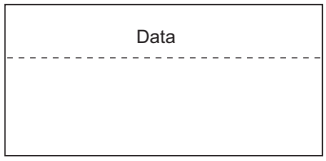
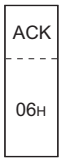
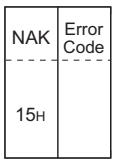
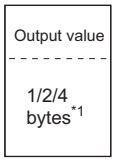
*1 Mixed specification of bit devices and word devices is also possible.
*2 This is a dedicated command of GOT for the microcomputer connection.
*3 Specifies the address of bit devices in 16-point units. (Example: M0, M16, M32, and others)

Formats 1, 2

The following describes the message formats 1 and 2 (GOT-A900 Series microcomputer connection).

GT 2506 HS GT 2505 HS

Basic format of data communication

Item	Message format
Request message (host → GOT)	
Response message during normal communication (GOT → host)	(1) During processing of read commands  (2) During processing of write commands 
Response message during faulty communication (GOT → host)	
During interrupt output *2	

*1 Set the number of interrupt data bytes in the communication detail settings in GT Designer3.
For setting the number of interrupt data bytes, refer to the following.
☞ Page 2068 Setting communication interface (Controller Setting)

*2 Interrupt output can be executed by writing the data to the interrupt output devices (D13 and D14).
☞ Page 2004 D devices

Details of data items in message format

Point

Data code during communication
Communication of the format 1 is performed in ASCII code. (excluding interrupt output)
Communication of the format 2 is performed in Binary code.

■Control codes

Symbol	ASCII code	Description
EOT	04H	End of Transmission
ENQ	05H	Enquiry (start of enquiry)
NAK	15H	Negative ACK (error response)
ACK	06H	Acknowledge (write completion response)
LF	0AH	Line Feed
CL	0CH	Clear
CR	0DH	Carriage Return

■Command

Specifies the contents to access from the host to GOT.
The command is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.
For details of the commands that can be used, refer to the following.
☞ Page 2017 List of commands

■Address

Specifies the head No. of the device data to be read or written.
In the format 1, the address notated in decimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.
In the format 2, the address notated in decimal is converted to a 2-digit Binary code (binary) and transmitted from the upper digit.
For details of the device range that can be accessed, refer to the following.
☞ Page 2003 Device Data Area

■Number of points

Specifies the device data points to be read or written. (Setting range: Range of the maximum number of points processed for each command)
In the format 1, the address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.
In the format 2, the address notated in decimal is converted to a 1-digit Binary code (binary) and transmitted.

■Year, month, day, hour, minute, second and day of the week data

Specifies the year, month, day, hour, minute, second, and day of the week data to be read or set to the GOT clock data.
In the format 1, the address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.
In the format 2, the address notated in decimal is converted to a 1-digit Binary code (binary) and transmitted.
☞ Page 2029 Read clock data (TR) command
☞ Page 2030 Set clock data (TS) command

■Data

Specifies the data to read from or write to the specified device data. (word unit)
In the format 1, the address notated in hexadecimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.
In the format 2, the address notated in hexadecimal is converted to a 2-digit Binary code (binary) and transmitted from the upper digit.

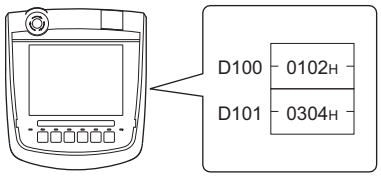
■Error code

This is the response message at faulty communication appended with error contents.
Error code is transmitted in 1 byte.
For the error codes, refer to the following.
☞ Page 2032 Error code list

■Batch read in word units (RD) command

• When reading a word device

The following shows an example of reading the two points of the virtual devices D100 and D101.
(Assuming D100=0102H, D101=0304H are stored.)

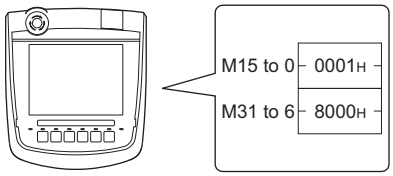


Item	Message format
Request message (host → GOT)	(format 1: GOT-A900 Series microcomputer connection (ASCII)) Command: R (52H) D (44H) Address: 0 (30H) 1 (31H) 0 (30H) 0 (30H) (H) — — (L) Number of points: 0 (30H) 2 (32H) (H) (L) (format 2: GOT-A900 Series microcomputer connection (Binary)) Command: R D Address: 00H 64H Number of points: 02H
Response message during normal communication (GOT → host)	(format 1: GOT-A900 Series microcomputer connection (ASCII)) Data 1 (D100): 0 (30H) 1 (31H) 0 (30H) 2 (32H) (H) — — (L) Data 2 (D101): 0 (30H) 3 (33H) 0 (30H) 4 (34H) (H) — — (L) (format 2: GOT-A900 Series microcomputer connection (Binary)) Data 1 (D100): 01H 02H Data 2 (D101): 03H 04H
Response message during faulty communication (GOT → host)	NAK: 15H Error code: 06H The above is a case where the sum check error (06H) has occurred.

• When reading a bit device

The following shows an example of reading the two points of the virtual devices M0 to M31.

(Assuming M0="1" and M31="1" are stored.)

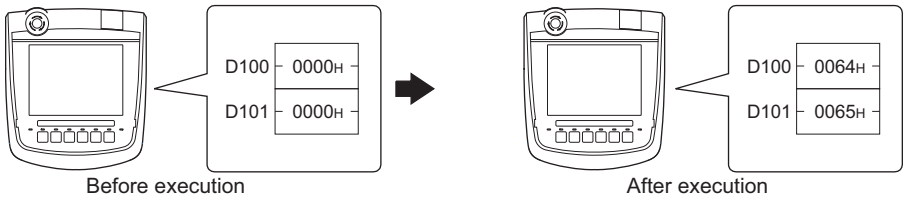


Item	Message format
Request message (host → GOT)	(format 1: GOT-A900 Series microcomputer connection (ASCII)) Command: R D (52H 44H (H) (L)); Address: 8 3 2 0 (38H 33H 32H 30H (H) – – (L)); Number of points: 0 2 (30H 32H (H) (L)) (format 2: GOT-A900 Series microcomputer connection (Binary)) Command: R D; Address: 83H 20H; Number of points: 02H
Response message during normal communication (GOT → host)	(format 1: GOT-A900 Series microcomputer connection (ASCII)) Data 1 (M15 to 0): 0 0 0 1 (30H 30H 30H 31H (H) – – (L)); Data 2 (M31 to 16): 8 0 0 0 (38H 30H 30H 30H (H) – – (L)) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 MMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM 111111198765432103322222222222211111 543210 1098765432109876 (format 2: GOT-A900 Series microcomputer connection (Binary)) Data 1 (M15 to 0): 00H 01H; Data 2 (M31 to 16): 80H 00H 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 MMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM 111111198765432103322222222222211111 543210 1098765432109876
Response message during faulty communication (GOT → host)	NAK: 15H; Error code: 06H The above is a case where the sum check error (06H) has occurred.

■Batch write in word units (WD) command

• When writing to a word device

The following shows as example of writing "0064H"and "0065H"to virtual devices D100 and D101.



Item	Message format
Request message (host → GOT)	(format 1: GOT-A900 Series microcomputer connection (ASCII))

Command		Address				Number of points		Data 1(D100)				Data 2 (D101)			
W	D	0	1	0	0	0	2	0	0	6	4	0	0	6	5
57H	44H	30H	31H	30H	30H	30H	32H	30H	30H	36H	34H	30H	30H	36H	35H
(H)	(L)	(H)	—	—	(L)	(H)	(L)	(H)	—	—	(L)	(H)	—	—	(L)

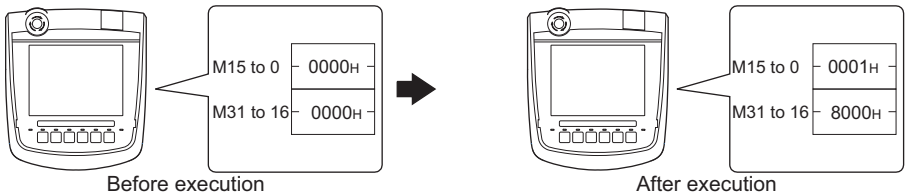
(format 2: GOT-A900 Series microcomputer connection (Binary))

Command		Address		Number of points	Data1 (D100)		Data 2 (D101)	
W	D	00H	64H	02H	00H	64H	00H	65H

Response message during normal communication (GOT → host)	ACK: 06H
Response message during faulty communication (GOT → host)	NAK: 15H, Error code: 06H The above is a case where the sum check error (06H) has occurred.

• When writing to a bit device

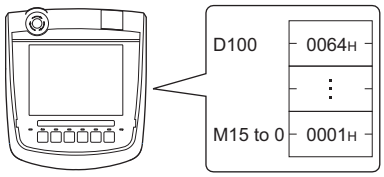
The following shows an example of writing "1"s to virtual devices M0 and M31.



Item	Message format
Request message (host → GOT)	(format 1: GOT-A900 Series microcomputer connection (ASCII)) Command: W D (57H 44H) (H) (L) Address: 8 3 2 0 (38H 33H 32H 30H) (H) – – (L) Number of points: 0 2 (30H 32H) (H) (L) Data 1 (M15 to 0): 0 0 0 1 (30H 30H 30H 31H) (H) – – (L) Data 2 (M31 to 16): 8 0 0 0 (38H 30H 30H 30H) (H) – – (L) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 MMMMMMMMMMMMMMMM MMMMMMMMMMMMMMMM 1111111198765432103322222222222211111 5432100 1098765432109876 (format 2: GOT-A900 Series microcomputer connection (Binary)) Command: W D Address: 20H 80H Number of points: 02H Data 1 (M15 to 0): 00H 01H Data 2 (M31 to 16): 80H 00H 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 MMMMMMMMMMMMMMMM MMMMMMMMMMMMMMMM 1111111198765432103322222222222211111 5432100 1098765432109876
Response message during normal communication (GOT → host)	ACK: 06H
Response message during faulty communication (GOT → host)	NAK: 15H; Error code: 06H The above is a case where the sum check error (06H) has occurred.

■Random read in word units (RR) command

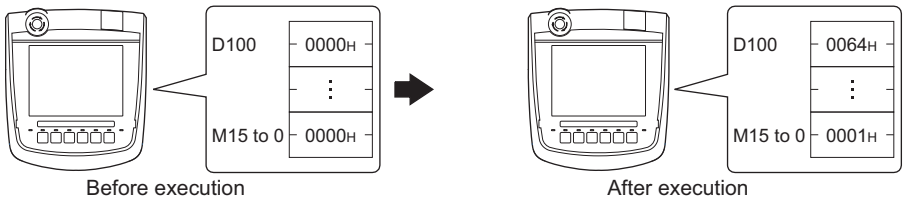
The following shows an example of reading the two points of the virtual devices D100 and M0 to M15.
(Assuming D100=0064H, M0=1are stored.)



Item	Message format
Request message (host → GOT)	(format 1: GOT-A900 Series microcomputer connection (ASCII)) Command: R R (52H 52H) (H) (L) Address 1: 0 1 0 0 (30H 31H 30H 30H) (H) – – (L) Address 2: 8 3 2 0 (38H 33H 32H 30H) (H) – – (L) (format 2: GOT-A900 Series microcomputer connection (Binary)) Command: R R Address 1: 00H 64H Address 2: 20H 80H
Response message during normal communication (GOT → host)	(format 1: GOT-A900 Series microcomputer connection (ASCII)) Data 1 (D100): 0 0 6 4 (30H 30H 36H 34H) (H) – – (L) Data 2 (M15 to 0): 0 0 0 1 (30H 30H 30H 31H) (H) – – (L) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 MMMMMMMMMMMMMMMM 1111111987654321 0 5432 10 (format 2: GOT-A900 Series microcomputer connection (Binary)) Data 1 (D100): 00H 64H Data 2 (M15 to 0): 00H 01H 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 MMMMMMMMMMMMMMMM 1111111987654321 0 5432 10
Response message during faulty communication (GOT → host)	NAK: 15H Error code: 06H The above is a case where the sum check error (06H) has occurred.

■Random write in word units (RW) command

The following shows an example of writing "0064H" and "1" to virtual devices D100 and M0, respectively.



Item	Message format
Request message (host → GOT)	(format 1: GOT-A900 Series microcomputer connection (ASCII))

Command		Address 1				Data 1 (D100)				Address 2				Data 2 (M15 to 0)			
R	W	0	1	0	0	0	0	6	4	8	3	2	0	0	0	0	1
52H	57H	30H	31H	30H	30H	30H	30H	36H	34H	38H	33H	32H	30H	30H	30H	30H	31H
(H)	(L)	(H)	–	–	(L)	(H)	–	–	(L)	(H)	–	–	(L)	(H)	–	–	(L)

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
1	1	1	1	1	1	9	8	7	6	5	4	3	2	1	0
5	4	3	2	1	0										

(format 2: GOT-A900 Series microcomputer connection (Binary))

Command		Address 1		Data 1 (D100)		Address 2		Data 2 (M15 to 0)	
R	W	00H	64H	00H	00H	20H	80H	00H	01H

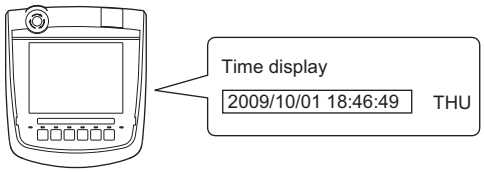
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
1	1	1	1	1	1	9	8	7	6	5	4	3	2	1	0
5	4	3	2	1	0										

Item	Message format
Response message during normal communication (GOT → host)	ACK: 06H
Response message during faulty communication (GOT → host)	NAK: 15H; Error code: 06H The above is a case where the sum check error (06H) has occurred.

■Read clock data (TR) command

The following shows an example of reading the clock data of GOT.

(Assuming that the clock data of GOT has been set to "2009, October 1, 18:46:49, Thursday".)

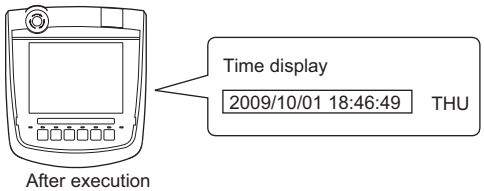


Item	Message format
Request message (host → GOT)	Command: T (54H) R (52H)
Response message during normal communication (GOT → host)	(format 1: GOT-A900 Series microcomputer connection (ASCII)) Year data: 0 (30H) 9 (39H); Month data: 1 (31H) 0 (30H); Day data: 0 (31H) 1 (31H); Hour data: 1 (31H) 8 (38H); Minute data: 4 (34H) 6 (36H); Second data: 4 (34H) 9 (39H); Day-of-week data: 0 (30H) 4 (34H) (format 2: GOT-A900 Series microcomputer connection (Binary)) Year data: 09H; Month data: 0AH; Day data: 01H; Hour data: 12H; Minute data: 2EH; Second data: 31H; Day-of-week data: 04H
Response message during faulty communication (GOT → host)	NAK: 15H; Error code: 06H The above is a case where the sum check error (06H) has occurred.

■Set clock data (TS) command

The following shows an example of setting the clock data of GOT.

(Assuming the clock data of GOT is to be set to "2009, October 1, 18:46:49 Thursday".)



After execution

Item	Message format
Request message (host → GOT)	(format 1: GOT-A900 Series microcomputer connection (ASCII)) Command: T S (54H 53H (H) (L)) / Year data: 0 9 (30H 39H (H) (L)) / Month data: 1 0 (31H 30H (H) (L)) / Day data: 0 1 (30H 31H (H) (L)) / Hour data: 1 8 (31H 38H (H) (L)) / Minute data: 4 6 (34H 36H (H) (L)) / Second data: 4 9 (34H 39H (H) (L)) / Day-of-week data: 0 4 (30H 34H (H) (L)) (format 2: GOT-A900 Series microcomputer connection (Binary)) Command: T S / Year data: 09H / Month data: 0AH / Day data: 01H / Hour data: 12H / Minute data: 2EH / Second data: 31H / Day-of-week data: 04H
Response message during normal communication (GOT → host)	ACK: 06H
Response message during faulty communication (GOT → host)	NAK: 15H / Error code: 06H The above is a case where the sum check error (06H) has occurred.

Point

When a wrong day of the week has been set by the clock data setting command

If a wrong day of the week is set by the clock data setting commands, the corrected day of the week will be set.

Example: When June 1, 2004 (Thursday) is set by the clock data setting command (The actual day of week is Tuesday.)

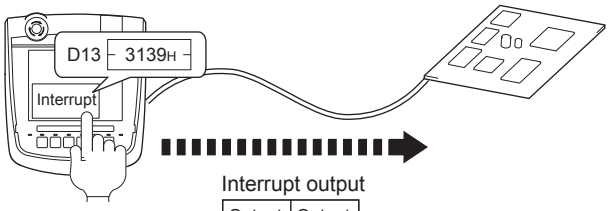
Tuesday (TUE) will be set.

■In the case of interrupt outputs

Write data to the interrupt output devices (D13 and D14) to output the data to the host.

(Assuming that "3139H" is written to D13 and "AA55H" to D14.)

Example) When [Interrupt Data Byte] in the communication detail settings is set to [2] as shown in (2) of the table below



Interrupt output

Output value 1	Output value 2
31H	39H

Item	Message format
Interrupt output (GOT → host)	(1) When [Interrupt Data Byte] in the communication detail settings is set to [1] Output value 1: 39H (2) When [Interrupt Data Byte] in the communication detail settings is set to [2] Output value 1: 31H; Output value 2: 39H (3) When [Interrupt Data Byte] in the communication detail settings is set to [4] • When [32bit Storage] in the communication detail settings is set to [LH Order] Output value1: AAH; Output value2: 55H; Output value3: 31H; Output value4: 39H • When [32bit Storage] in the communication detail settings is set to [HL Order] Output value1: 31H; Output value2: 39H; Output value3: AAH; Output value4: 55H

Point

Interrupt output

To disable the interrupt output, turn on SM52 (interrupt code output disable flag).

☞ Page 2014 SM devices

Error code list

The error contents (error code) are appended to the response message during faulty communication.

The following shows error code, error contents, cause, and measures.

Error code	Description	Action
10H	Command error An unsupported command was used.	• Review the contents of the message to transmit. • Check the commands in the message. ☞ Page 2017 List of commands
11H	Message length error The upper limit of the data length that can be received by the GOT has been exceeded.	• Review the contents of the message to transmit. • Check the data length of the message. (data length of the data section, etc.)
15H	Clock data setting error The setting value of the clock data has error.	• Review the contents of the message to transmit. • Check whether the non-existent data is set (e.g. setting "07" at the day of the week) as clock data.
7AH	Address error The start address of the read or write device is out of range.	• Review the contents of the message to transmit. • Check the devices that can be used and the device ranges. ☞ Page 2003 Device Data Area
7EH	Exceeded number of points error The read or write range has exceeded the device range.	

Precautions

■Storage order for 32-bit data

To use the program of the GOT-A900 series by setting 32-bit data to the GOT1000 series, set [HL Order] for [32bit Storage] in the communication detail settings.

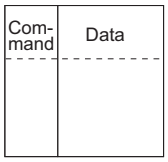
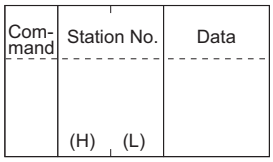
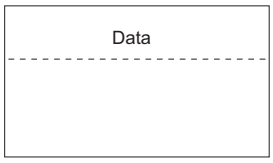
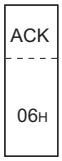
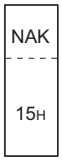
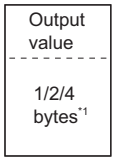
If [LH Order] is set, higher-order bits and lower-order bits are reversed when 32-bit data is displayed on or written to the GOT.

Formats 3, 4

The following describes the message formats 3 and 4 (GOT-F900 Series microcomputer connection).

GT 2506 HS GT 2505 HS

Basic format of data communication

Item	Message format
Request message (host → GOT)	(1) w/out station No.  (2) w/station No. 
Response message during normal communication (GOT → host)	(1) During processing of read commands 
	(2) During processing of write commands 
Response message during faulty communication (GOT → host)	
During interrupt output *2	

*1 Set the number of interrupt data bytes in the communication detail settings in GT Designer3.
For setting the number of interrupt data bytes, refer to the following.
☞ Page 2068 Setting communication interface (Controller Setting)

*2 Interrupt output can be executed by writing the data to the interrupt output devices (D13 and D14).
☞ Page 2004 D devices

Details of data items in message format

Point

Data code during communication
Communication of the format 3 is performed in ASCII code. (excluding interrupt output)
Communication of the format 4 is performed in Binary code.

■Control codes

Symbol	ASCII code	Description
EOT	04H	End of Transmission
ENQ	05H	Enquiry (start of enquiry)
NAK	15H	Negative ACK (error response)
ACK	06H	Acknowledge (write completion response)
LF	0AH	Line Feed
CL	0CH	Clear
CR	0DH	Carriage Return

■Command

Specifies the contents to access from the host to GOT.
The command is converted to a 1-digit ASCII code (Hex) and transmitted.
For details of the commands that can be used, refer to the following.
☞ Page 2017 List of commands

■Station No.

Station No. is used to identify the GOT with which the host communicates. (Setting range: 0 to 31)
In the format 3, the address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.
In the format 4, the address notated in decimal is converted to a 1-digit Binary code (binary) and transmitted.
The GOT processes only commands whose station No. matches the "Host Address (0 to 31)" set at "Communication Detail Settings". (The message of command whose station No. does not match is ignored.)
For setting method of "Communication Detail Settings", refer to the following.
☞ Page 2068 Setting communication interface (Controller Setting)

■Address

Specifies the head No. of the device data to be read or written.
In the format 3, the address notated in hexadecimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.
In the format 4, the address notated in hexadecimal is converted to a 2-digit Binary code (binary) and transmitted from the upper digit.
For details of the device range that can be accessed, refer to the following.
☞ Page 2003 Device Data Area

■Bit pattern

Specifies the pattern of the bits to change.
In the format 3, the address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.
In the format 4, the address notated in hexadecimal is converted to a 1-digit Binary code (binary) and transmitted.
☞ Page 2040 Multi-point write in bit units (3) command (without station No.), multi-point write in bit units (D) command (with station No.)

■Write specification

Specifies how to change the data of the specified address by bit pattern.
(Setting range: 0 to 3)
Data notated in decimal is converted to a 1-digit ASCII code (Hex) and transmitted.
☞ Page 2040 Multi-point write in bit units (3) command (without station No.), multi-point write in bit units (D) command (with station No.)

■Number of bytes

Specifies the number of bytes of the device data to be batch read or written. (Setting range: 0 to FFH)
In the format 3, the address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.
In the format 4, the address notated in hexadecimal is converted to a 1-digit Binary code (binary) and transmitted.

■Number of points

Specifies the device data points to be written to multi-point in bit units. (Setting range: Range of the maximum number of points processed for each command)
In the format 3, the address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.
In the format 4, the address notated in decimal is converted to a 1-digit Binary code (binary) and transmitted.

■Year, month, day, hour, minute, second and day of the week data

Specifies year, month, day, hour, minute, second, and day of the week data to be read or set to the GOT clock data.
In the format 3, the address notated in decimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.
In the format 4, the address notated in decimal is converted to a 1-digit Binary code (binary) and transmitted.
☞ Page 2043 Read clock data (6) command (w/out station No.), read clock data (G) command (w/station No.)
☞ Page 2044 Set clock data (5) command (without station No.), set clock data (F) command (with station No.)

■Data

Specifies the data to read from or write to the specified device data. (word unit)
In the format 3, the address notated in hexadecimal is converted to a 4-digit ASCII code (Hex) and transmitted from the upper digit.
In the format 4, the address notated in hexadecimal is converted to a 2-digit Binary code (binary) and transmitted from the upper digit.

■Write data

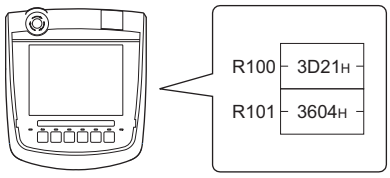
Specifies the data to write to the specified device data.
The address notated in hexadecimal is converted to a 2-digit ASCII code (Hex) and transmitted from the upper digit.

Message format

■Batch read (0) command (without station No.), batch read (A) command (with station No.)

• When reading a word device

The following shows an example of reading four bytes of virtual devices R100 to R101 from the GOT at station No.15.
(Assuming R100=3D21H, R101=3604H are stored.)

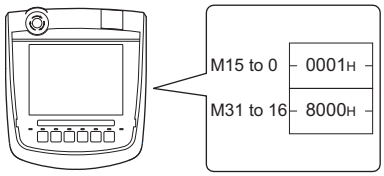


Item	Message format
Request message (host → GOT)	(format 3: GOT-F900 Series microcomputer connection (ASCII)) Command: A (41H) Station No.: 1 (31H) 5 (35H) Address: 0 (30H) 0 (30H) C (43H) 8 (38H) Number of bytes: 0 (30H) 4 (34H) (format 4: GOT-F900 Series microcomputer connection (Binary)) Command: A Station No.: 0FH Address: 00H C8H Number of bytes: 04H
Response message during normal communication (GOT → host)	(format 3: GOT-F900 Series microcomputer connection (ASCII)) Data 1 (R100 upper): 3 (33H) D (44H) Data 2 (R100 lower): 2 (32H) 1 (31H) Data 3 (R101 upper): 3 (33H) 6 (36H) Data 4 (R101 lower): 0 (30H) 4 (34H) (format 4: GOT-F900 Series microcomputer connection (Binary)) Data 1 (R100 upper): 3DH Data 2 (R100 lower): 21H Data 3 (R101 upper): 36H Data 4 (R101 lower): 04H
Response message during faulty communication (GOT → host)	NAK 15H

• When reading a bit device

The following shows an example of reading four bytes of the virtual devices M0 to M31.

(Assuming M0="1" and M31="1" are stored.)

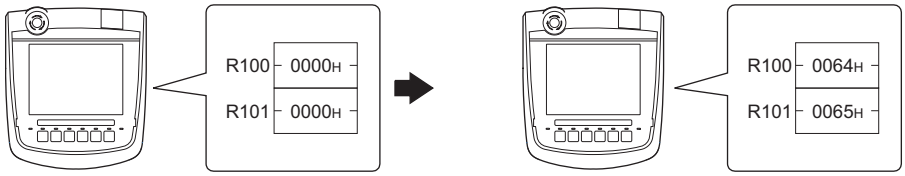


Item	Message format
Request message (host → GOT)	(format 3: GOT-F900 Series microcomputer connection (ASCII)) Com-mand: A (41H) Station No.: 15 (31H (H), 35H (L)) Address: 2000 (32H (H), 30H, 30H, 30H (L)) Number of bytes: 04 (30H (H), 34H (L)) (format 4: GOT-F900 Series microcomputer connection (Binary)) Com-mand: A Station No.: 0FH Address: 20H 00H Number of bytes: 04H
Response message during normal communication (GOT → host)	(format 3: GOT-F900 Series microcomputer connection (ASCII)) Data 1 (M7 to 0): 01 (30H (H), 31H (L)) Data 2 (M15 to 8): 00 (30H (H), 30H (L)) Data 3 (M23 to 16): 00 (30H (H), 30H (L)) Data 4 (M31 to 24): 80 (38H (H), 30H (L)) 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 M M M M M M M M M M M M M M M M M M M M M M M M M M M M M M M M 7 6 5 4 3 2 1 0 1 1 1 1 1 1 1 9 8 2 2 2 2 2 1 1 1 1 1 3 3 2 2 2 2 2 2 5 4 3 2 1 0 3 2 1 0 9 8 7 6 1 0 9 8 7 6 5 4 (format 4: GOT-F900 Series microcomputer connection (Binary)) Data 1 (M7 to 0): 01H Data 2 (M15 to 8): 00H Data 3 (M23 to 16): 00H Data 4 (M31 to 24): 80H 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 M M M M M M M M M M M M M M M M M M M M M M M M M M M M M M M M 7 6 5 4 3 2 1 0 1 1 1 1 1 1 1 9 8 2 2 2 2 2 1 1 1 1 1 3 3 2 2 2 2 2 2 5 4 3 2 1 0 3 2 1 0 9 8 7 6 1 0 9 8 7 6 5 4
Response message during faulty communication (GOT → host)	NAK 15H

■Batch write (1) command (without station No.), batch write (B) command (with station No.)

• When writing to a word device

The following shows an example of writing "3D21H" and "3604H" to virtual devices R100 and R101 on the GOT at station No.15.



Before execution　　After execution

Item	Message format
Request message (host → GOT)	(format 3: GOT-F900 Series microcomputer connection (ASCII))

Com-mand	Station No.		Address				Number of bytes		Following*1
B	1	5	0	0	C	8	0	4	
42H	31H	35H	30H	30H	43H	38H	30H	34H	
	(H)	(L)	(H)	–	–	(L)	(H)	(L)	

*1

Data 1 (R100 upper)		Data 2 (R100 lower)		Data 3 (R101 upper)		Data 4 (R101 lower)	
3	D	2	1	3	6	0	4
33H	44H	32H	31H	33H	36H	30H	34H
(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)

(format 4: GOT-F900 Series microcomputer connection (Binary))

Com-mand	Station No.	Address		Number of bytes	Following*2
B	0FH	00H	C8H	04H	

*2

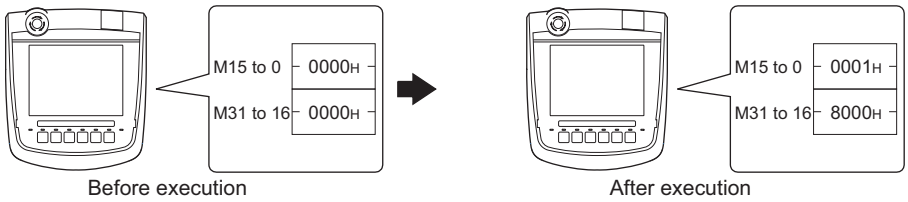
Data 1 (R100 upper)	Data 2 (R100 lower)	Data 3 (R101 upper)	Data 4 (R101 lower)
3DH	21H	36H	04H

Response message during normal communication (GOT → host)	ACK 06H

Response message during faulty communication (GOT → host)	NAK 15H

• When writing to a bit device

The following shows an example of writing "1"s to virtual devices M0 and M31 on the GOT at station No.15.



Item	Message format
Request message (host → GOT)	(format 3: GOT-F900 Series microcomputer connection (ASCII))

Com-mand	Station No.		Address				Number of bytes		Following*1
B	1	5	2	0	0	0	0	4	
42H	31H (H)	35H (L)	32H (H)	30H –	30H –	30H (L)	30H (H)	34H (L)	

*1

Data 1 (M7 to 0)		Data 2 (M15 to 8)		Data 3 (M23 to 16)		Data 4 (M31 to 24)	
0	1	0	0	0	0	8	0
30H (H)	31H (L)	30H (H)	30H (L)	30H (H)	30H (L)	38H (H)	30H (L)

0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
M7	M6	M5	M4	M3	M2	M1	M0	M15	M14	M13	M12	M11	M10	M9	M8	M23	M22	M21	M20	M19	M18	M17	M16	M31	M30	M29	M28	M27	M26	M25	M24			
7	6	5	4	3	2	1	0	15	14	13	12	11	10	9	8	23	22	21	20	19	18	17	16	31	30	29	28	27	26	25	24			

(format 4: GOT-F900 Series microcomputer connection (Binary))

Com-mand	Station No.	Address		Number of bytes	Following*2
B	0FH	20H	00H	04H	

*2

Data 1 (M7 to 0)	Data 2 (M15 to 8)	Data 3 (M23 to 16)	Data 4 (M31 to 24)
01H	00H	00H	80H

0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
M7	M6	M5	M4	M3	M2	M1	M0	M15	M14	M13	M12	M11	M10	M9	M8	M23	M22	M21	M20	M19	M18	M17	M16	M31	M30	M29	M28	M27	M26	M25	M24			
7	6	5	4	3	2	1	0	15	14	13	12	11	10	9	8	23	22	21	20	19	18	17	16	31	30	29	28	27	26	25	24			

Response message during normal communication (GOT → host)	ACK 06H
Response message during faulty communication (GOT → host)	NAK 15H

■Multi-point write in bit units (3) command (without station No.), multi-point write in bit units (D) command (with station No.)

The following shows an example of turning OFF the virtual device M31 and turning ON the virtual device M2038 on the GOT at station No.31.

Item	Message format
Request message (host → GOT)	(format 3: GOT-F900 Series microcomputer connection (ASCII))

Com-mand	Station No.		Number of points		Following *2
D	3	1	0	2	
44H	33H (H)	31H (L)	30H (H)	32H (L)	

*2

Write specification 1	Address1				Bit pattern1		Write specification 2	Address2				Bit pattern2	
1	2	0	0	3	8	0	0	2	0	F	E	4	0
31H	32H (H)	30H –	30H –	33H (L)	38H (H)	30H (L)	30H	32H (H)	30H –	46 –	45H (L)	34H (H)	30H (L)

*1 (write specification1=1)

Source data bit pattern	1	0	1	0	1	0	1	0
	1	0	0	0	0	0	0	0
Result	0	0	1	0	1	0	1	0

MMMMMMMM
33222222
10987654

*1 (write specification2=0)

Source data bit pattern	1	0	1	0	1	0	1	0
	0	1	0	0	0	0	0	0
Result	1	1	1	0	1	0	1	0

MMMMMMMM
22222222
00000000
33333333
98765432

(format 4: GOT-F900 Series microcomputer connection (Binary))

Com-mand	Station No.	Number of points	Following *3
D	1FH	02H	

*3

Write specification 1	Address1		Bit pattern1	Write specification 2	Address2		Bit pattern2
1	20H	03H	80H	0	20H	FEH	40H

*1 (write specification1=1)

Source data bit pattern	1	0	1	0	1	0	1	0
	1	0	0	0	0	0	0	0
Result	0	0	1	0	1	0	1	0

MMMMMMMM
33222222
10987654

*1 (write specification2=0)

Source data bit pattern	1	0	1	0	1	0	1	0
	0	1	0	0	0	0	0	0
Result	1	1	1	0	1	0	1	0

MMMMMMMM
22222222
00000000
33333333
98765432

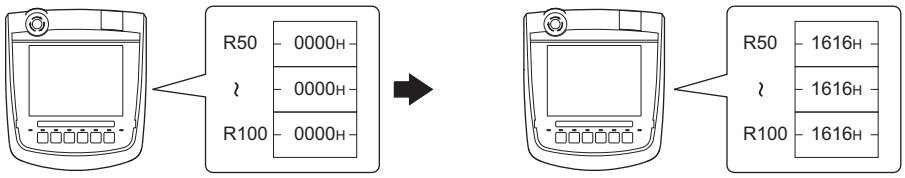
Response message during normal communication (GOT → host)	ACK 06H
Response message during faulty communication (GOT → host)	NAK 15H

*1 The write specification specifies how the data of the specified address is changed in the bit pattern.

Write specification	Function	Description	Action example
0	ON specification	Bits set to "1" by the bit pattern are turned ON.	Original data1010 Bit pattern1100
			Result1110
1	OFF specification	Bits set to "1" by the bit pattern are turned OFF.	Original data1010 Bit pattern1100
			Result0010
2	Invert specification	Bits set to "1" by the bit pattern are inverted.	Original data1010 Bit pattern1100
			Result0110
3	Write specification	The numerical values to write by the bit pattern are specified directly.	Original data1010 Bit pattern1100
			Result1100

■Fill command (4) (without station No.), fill command (E) (with station No.)

The following shows an example of writing "16"s to virtual devices R50 to R100 on the GOT at station No.27.



Item	Message format
Request message (host → GOT)	(format 3: GOT-F900 Series microcomputer connection (ASCII))

Com-mand	Station No.		Start address				End address				Write Data	
E	2	7	0	0	6	4	0	0	C	9	1	6
45H	32H	37H	30H	30H	36H	34H	30H	30H	43H	39H	31H	36H
	(H)	(L)	(H)	–	–	(L)	(H)	–	–	(L)	(H)	(L)

(format 4: GOT-F900 Series microcomputer connection (Binary))

Com-mand	Station No.	Start address		End address		Write Data
E	1BH	00H	64H	00H	C9H	16H

Response message during normal communication (GOT → host)	ACK 06H
Response message during faulty communication (GOT → host)	NAK 15H

Point

• Start address/end address specification conditions

Specify addresses so that the start address is the same or less than the end address.

Error response occurs in the following cases:

The address to specify has the start address greater than the end address.

Either of the start address or end address exceeds the device range that can be specified.

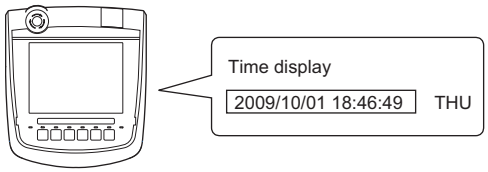
• Address specifying crossing over different devices

The start address and end address can be specified crossing over different devices.

■Read clock data (6) command (w/out station No.), read clock data (G) command (w/station No.)

The following shows an example of reading the clock data of GOT at station No.27.

(Assuming that the clock data of GOT has been set to "2009, October 1, 18:46:49, Thursday".)

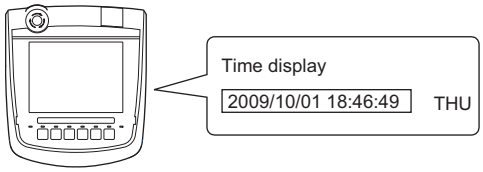


Item	Message format
Request message (host → GOT)	(format 3: GOT-F900 Series microcomputer connection (ASCII)) Com-mand: G (47H) / Station No.: 2 (32H) 7 (37H) (H) (L) (format 4: GOT-F900 Series microcomputer connection (Binary)) Com-mand: G / Station No.: 1BH
Response message during normal communication (GOT → host)	(format 3: GOT-F900 Series microcomputer connection (ASCII)) Year data: 0 (30H) 9 (39H) (H) (L) / Month data: 1 (31H) 0 (30H) (H) (L) / Day data: 0 (30H) 1 (31H) (H) (L) / Hour data: 1 (31H) 8 (38H) (H) (L) / Minute data: 4 (34H) 6 (36H) (H) (L) / Second data: 4 (34H) 9 (39H) (H) (L) / Day-of-week data: 0 (30H) 4 (34H) (H) (L) (format 4: GOT-F900 Series microcomputer connection (Binary)) Year data: 09H / Month data: 0AH / Day data: 01H / Hour data: 12H / Minute data: 2EH / Second data: 31H / Day-of-week data: 04H
Response message during faulty communication (GOT → host)	NAK (15H)

■Set clock data (5) command (without station No.), set clock data (F) command (with station No.)

The following shows an example of setting clock data of GOT at station No.27.

(Assuming the clock data of GOT is to be set to "2009, October 1, 18:46:49 Thursday".)



After execution

Item	Message format
Request message (host → GOT)	(format 3: GOT-F900 Series microcomputer connection (ASCII))

Com-mand	Station No.		Year data		Month data		Day Data		Hour data		Minute data		Second data		Day-of-week data	
F	2	7	0	9	1	0	0	1	1	8	4	6	4	9	0	4
46H	32H (H)	37H (L)	30H (H)	39H (L)	31H (H)	30H (L)	30H (H)	31H (L)	31H (H)	38H (L)	34H (H)	36H (L)	34H (H)	39H (L)	30H (H)	34H (L)

(format 4: GOT-F900 Series microcomputer connection (Binary))

Com-mand	Station No.	Year data	Month data	Day data	Hour data	Minute data	Second data	Day-of-week data
F	1BH	09H	0AH	01H	12H	2EH	31H	04H

Response message during normal communication (GOT → host)

ACK
06H

Response message during faulty communication (GOT → host)

NAK
15H

Point

When a wrong day of the week has been set by the clock data setting command

If a wrong day of the week is set by the clock data setting commands, the corrected day of the week will be set.

Example: When June 1, 2004 (Thursday) is set by the clock data setting command (The actual day of week is Tuesday.)

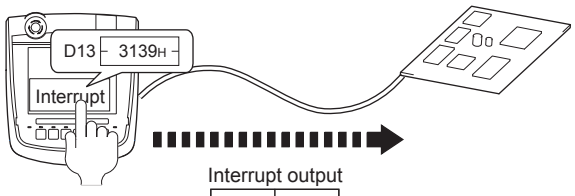
Tuesday (TUE) will be set.

■In the case of interrupt outputs

Write data to the interrupt output devices (D13 and D14) to output the data to the host.

(Assuming that "3139H" is written to D13 and "AA55H" to D14.)

Example) When [Interrupt Data Byte] in the communication detail settings is set to [2] as shown in (2) of the table below



Interrupt output

Output value 1	Output value 2
31H	39H

Item	Message format
Interrupt output (GOT → host)	(1) When [Interrupt Data Byte] in the communication detail settings is set to [1] Output value 1: 39H (2) When [Interrupt Data Byte] in the communication detail settings is set to [2] Output value 1: 31H; Output value 2: 39H (3) When [Interrupt Data Byte] in the communication detail settings is set to [4] • When [32bit Storage] in the communication detail settings is set to [LH Order] Output value 1: AAH; Output value 2: 55H; Output value 3: 31H; Output value 4: 39H • When [32bit Storage] in the communication detail settings is set to [HL Order] Output value 1: 31H; Output value 2: 39H; Output value 3: AAH; Output value 4: 55H

Point

Interrupt output

To disable the interrupt output, turn on SM52 (interrupt code output disable flag).

☞ Page 2014 SM devices

Error code list

When faulty, the error code is stored in SD2.

For details on error code stored in SD2, the error contents, cause and measures, refer to the following.

☞ Page 2012 Details and actions for errors (error codes) stored into SD2

When an error other than those to be stored in SD2 occurs, at faulty, only the NAK response is executed.

Format 5

The following describes the message format 5 (SCHNEIDER EJH's (former Digital Electronics Corporation) memory link method).

GT 2506 HS GT 2505 HS

Basic format of data communication

This is the same format as the protocol of the SCHNEIDER EJH's memory link method.

For details of the basic format of data communication, refer to the following manual:

📖The connection manual of the device manufactured by SCHNEIDER EJH

This section describes items whose settings differ from the protocols of the SCHNEIDER EJH's memory link method and dedicated commands for a microcomputer connection of the GOT.

Example: Request message for the batch read in word units (R) command in format 5 (SCHNEIDER EJH's memory link method)

	Data length			ESC	Com-mand	Address		Number of points	
B					R				
42H	00H	00H	00H	00H	00H	00H	06H	1BH	52H	00H	64H	00H	02H

Details of data items in message format

Point

Data code during communication

Communication is performed in Binary code.

■Command

Specifies the contents to access from the host to GOT.

The command is converted to a 1-digit ASCII code (Hex) and transmitted.

For details of the commands that can be used, refer to the following.

☞ Page 2017 List of commands

■Address

Specifies the head No. of the device data to be read or written.

The address notated in hexadecimal is converted to a 4-digit Binary code (Hex) and transmitted from the upper digit.

For details of the device range that can be accessed, refer to the following.

☞ Page 2003 Device Data Area

■Number of points

Specifies the device data points to be read or written. (Setting range: Range of the maximum number of points processed for each command)

The address notated in hexadecimal is converted to a 4-digit Binary code (Hex) and transmitted from the upper digit.

■Error code

This is the response message at faulty communication appended with error contents.

The address notated in hexadecimal is converted to a 2-digit Binary code (Hex) and transmitted from the upper digit.

For details on error code generated in format 5 (SCHNEIDER EJH's memory link method), refer to the following.

☞ Page 2048 Error code list

Point

When connecting a microcomputer or others that uses the protocol of the SCHNEIDER EJH's memory link method with the GOT

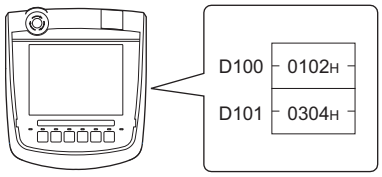
To do so, correct the commands to be used and the device ranges to match the specifications of the GOT.

Message Formats

The following shows the message format of the dedicated commands for a microcomputer connection of GOT.

■Batch read in word units (R) command

The following shows an example of reading the two points of the virtual devices D100 and D101.
(Assuming D100=0102H, D101=0304H are stored.)

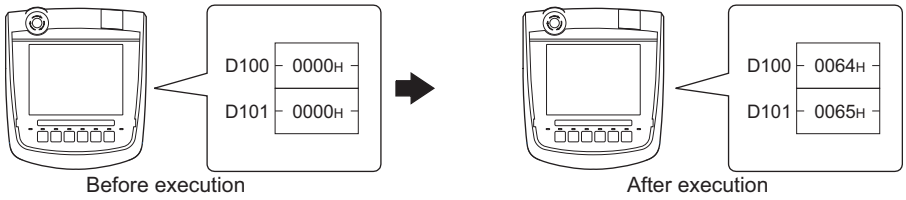


Item	Message format
Request message (host → GOT)	B 42H 00H 00H 00H | Data length 00H 00H 00H 06H | ESC 1BH | Command R 52H | Address 00H 64H | Number of points 00H 02H
Response message during normal communication (GOT → host)	b 42H 00H 00H 00H | Data length 00H 00H 00H 06H | ESC 1BH | Command A 41H | Address 01H 02H | Number of points 03H 04H

■Batch write in word units (WD) command

- When writing to a word device

The following shows as example of writing "0064H"and "0065H"to virtual devices D100 and D101.

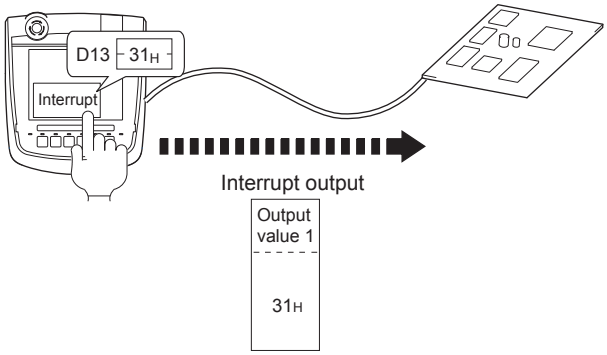


Item	Message format
Request message (host → GOT)	B 42H 00H 00H 00H | Data length 00H 00H 00H 0AH | ESC 1BH | Command W 57H | Address 00H 64H | Number of points 00H 02H | Data 1 00H 64H | Data 2 00H 65H
Response message during normal communication (GOT → host)	b 42H 00H 00H 00H | Data length 00H 00H 00H 06H | ACK 06H

■In the case of interrupt outputs

Write data to the interrupt output devices (D13 and D14) to output the data to the host.
(Assuming that "31H" is written to D13.)

Example: When [Interrupt Data Byte] is set to [1]



Item	Message format
Interrupt output (GOT → host)	When [Interrupt Data Byte] in the communication detail settings is set to [1] Output value 1 31H

Point

Interrupt output

To disable the interrupt output, turn on SM52 (interrupt code output disable flag).

☞ Page 2014 SM devices

Error code list

In the case of format 5 (SCHNEIDER EJH's memory link method), the details (error code) of the error are appended to the response message during faulty communication.

The following shows error code, error contents, cause, and measures.

Error code	Description	Action
10H	Command error An unsupported command was used.	• Review the contents of the message to transmit. • Check the commands in the message. ☞ Page 2017 List of commands
12H	Message length error The upper limit of the data length that can be received by the GOT has been exceeded.	
FAH	Address error The start address of the read or write device is out of range.	• Review the contents of the message to transmit. • Check the data length of the message. (data length of the data section, etc.)
FBH	Exceeded number of points error The read or write range has exceeded the device range.	• Review the contents of the message to transmit. • Check the devices that can be used and the device ranges. ☞ Page 2003 Device Data Area
FCH	Message format error The format of the received message has error.	• Check the settings in the communication detail settings. • Review the contents of the message to transmit.
FFH	Timeout error There is no response from the GOT, or the station of the specified address does not exist.	• Check the communication cable and communication module attachment. • Check the settings in the communication detail settings. • Review the contents of the message to transmit.

Precautions

■Storage order for 32-bit data

To use the program of the SCHNEIDER EJH's memory link method by setting 32-bit data to the GOT1000 series, set [HL Order] for [32bit Storage] in the communication detail settings.

If [LH Order] is set, higher-order bits and lower-order bits are reversed when 32-bit data is displayed on or written to the GOT.

Formats 6, 7

The following describes the message formats 6 and 7 (4E frame).

GT 2506 HS GT 2505 HS

Basic format of data communication

This is the same message format as when communication is performed using the MC protocol (4E frame) of the Q/QnA Series serial communication module.

For details of the basic format of data communication, refer to the following manual:

MELSEC Communication Protocol Reference Manual

This section describes items whose settings differ from the MC protocol of the Q/QnA Series serial communication module, and the dedicated commands for a GOT microcomputer connection.

Example: Request message for the batch read (0401) command in word units

Device name: D

Head device: 100

Device points: 2

Communication setting of GOT side: Network No.=1, PLC No.=1

(Format 6 (4E frame (ASCII))

Request type				Serial No.				Fixed value				Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Following *1
5	4	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	
35H	34H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	31H	30H	31H	30H	30H	30H	30H	30H	30H	
(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	–	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	

*1

Request data length				CPU monitoring timer				Command				
0	0	1	8	0	0	0	0	0	4	0	1	→ 1)
30H	30H	31H	38H	30H	30H	30H	30H	30H	34H	30H	31H	
(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	

Data length target range

Character A section

1) →	Sub-command				Device code		Head Device						Device points			
	0	0	0	0	D	*	0	0	0	1	0	0	0	0	0	2
	30H	30H	30H	30H	44H	2AH	30H	30H	30H	31H	30H	30H	30H	30H	30H	32H
	(H)	–	–	(L)	(H)	(L)	(H)	–	–	–	–	(L)	(H)	–	–	(L)

Data length target range

(format 7:4E frame (Binary))

Request type		Serial No.		Fixed value		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Request data length		CPU monitoring timer		Command		Sub-command		Head Device			Device code	Device points	
54H	00H	00H	00H	00H	00H	01H	01H	00H	00H	00H	0CH	00H	00H	00H	01H	04H	00H	00H	64H	00H	00H	A8H	02H	00H

Data length target range

Details of data items in message format

Point

Data code during communication

Communication of format 6 is performed in ASCII code.

Communication of the format 7 is performed in Binary code.

The following table shows the contents of the data items.

<table>
<tr><th rowspan="2">Data item name</th><th colspan="2">Contents</th></tr>
<tr><th>Format 6</th><th>Format 7</th></tr>
<tr><td rowspan="2">Request type (Microcomputer side)</td><td colspan="2">Indicates it is a command message.</td></tr>
<tr><td>Command message: ASCII "5400" (Fixed value)</td><td>Command message: 54H (Upper digit) (Fixed value)</td></tr>
<tr><td rowspan="2">Response type (GOT side)</td><td colspan="2">Indicates it is a response message.</td></tr>
<tr><td>Response message: ASCII "D400" (Fixed value)</td><td>Response message: D4H (Upper digit) (Fixed value)</td></tr>
<tr><td>Serial No.</td><td colspan="2">Arbitrary number for recognition of the message appended at the microcomputer side. GOT sends the response message appending this Serial No.</td></tr>
<tr><td>Fixed value</td><td>Should be ASCII "0000".</td><td>Should be "0000H".</td></tr>
<tr><td rowspan="2">Network No.</td><td colspan="2">Set the same number as the network No. set in the GOT.
For setting method of "Communication Detail Settings", refer to the following.
☞ Page 2068 Setting communication interface (Controller Setting)</td></tr>
<tr><td>Transmit the data converted to a 2-digit ASCII code from the upper digit.</td><td>Transmit the data converted to a 2-digit binary code.</td></tr>
<tr><td rowspan="2">PLC No.</td><td colspan="2">Set the same number as the PLC No. set in the GOT.
For setting method of "Communication Detail Settings", refer to the following.
☞ Page 2068 Setting communication interface (Controller Setting)</td></tr>
<tr><td>Transmit the data converted to a 2-digit ASCII code from the upper digit.</td><td>Transmit the data converted to a 2-digit binary code.</td></tr>
<tr><td>Request destination module I/O No.</td><td colspan="2">Ignore GOT.</td></tr>
<tr><td>Request destination module station No.</td><td colspan="2">Ignore GOT.</td></tr>
<tr><td rowspan="2">Request data length</td><td colspan="2">Number of bytes from the start of CPU monitoring timer to the last request data.</td></tr>
<tr><td>Transmit the data converted to a 4-digit ASCII code from the upper digit.</td><td>Transmit the data converted to a 4-digit binary code from the lower two digits.</td></tr>
<tr><td rowspan="2">Response data length</td><td colspan="2">Appended to the response message from the microcomputer side.
Number of bytes from the start of end code to the last response data or last error response data.</td></tr>
<tr><td>Transmit the data converted to a 4-digit ASCII code from the upper digit.</td><td>Transmit the data converted to a 4-digit binary code from the lower two digits.</td></tr>
<tr><td>CPU monitoring timer</td><td colspan="2">Ignore GOT.</td></tr>
<tr><td rowspan="2">Command, Sub-command</td><td colspan="2">Specifies the access contents from the microcomputer side to GOT. For details of the commands that can be used, refer to the following.
☞ Page 2017 List of commands</td></tr>
<tr><td>Transmit the command and sub-command converted to a 4-digit ASCII code, from the upper digit.</td><td>Transmit the data converted to a 4-digit binary code from the lower two digits.</td></tr>
<tr><td>Device code</td><td colspan="2">Specifies the code by which the device data to be read or written is recognized. For the accessible device range, refer to the following.
☞ Page 2003 Device Data Area</td></tr>
<tr><td>Transmit the 2-digit ASCII code corresponding to the following device codes.
<table><tr><th>Device name</th><th>Device code</th></tr><tr><td>M</td><td>M*</td></tr><tr><td>SM</td><td>SM</td></tr><tr><td>L</td><td>L*</td></tr><tr><td>D</td><td>D*</td></tr><tr><td>SD</td><td>SD</td></tr><tr><td>R</td><td>R*</td></tr></table></td><td>Transmit the 2-digit binary code corresponding to the following device codes.
<table><tr><th>Device name</th><th>Device code</th></tr><tr><td>M</td><td>90H</td></tr><tr><td>SM</td><td>91H</td></tr><tr><td>L</td><td>92H</td></tr><tr><td>D</td><td>A8H</td></tr><tr><td>SD</td><td>A9H</td></tr><tr><td>R</td><td>AFH</td></tr></table></td></tr>
</table>

Data item name	Contents	
	Format 6	Format 7
Head device	Specifies the head No. of the device data to be read or written. For details of the device range that can be accessed, refer to the following. ☞ Page 2003 Device Data Area	
	Transmit the data notated in decimal converted to a 6-digit ASCII code, from the upper digit.	Transmit the data converted to a 6-digit binary code from the lower two digits.
Device points	Specifies the device data points to be read or written. (Setting range: Range of the maximum number of points processed for each command) <When using random read or write command> When setting multiple bit accesses, word accesses or double word accesses, limit the total number of access points to within 64 points. <When using multiple block batch read or write commands> When setting multiple blocks, limit the total number of points of all blocks to within the maximum number of points processed for each command.	
	Transmit the data notated in decimal converted to a 4-digit ASCII code, from the upper digit.	Transmit the data converted to a 4-digit binary code from the lower two digits.
Year, month, day, hour, minute, second and day of the week data	Specifies the year, month, day, hour, minute, second, and day of the week data to be read or set to the GOT clock data. ☞ Page 2052 Read clock data (1901) command ☞ Page 2055 Set clock data (0901) command	
	Transmit the data notated in decimal converted to a 2-digit ASCII code, from the upper digit.	Transmit the data converted to a 2-digit binary code.
End code (Microcomputer side)	Appended to the response message from the microcomputer side. If an error occurs at the microcomputer side, the error code is displayed. ☞ Page 2058 Error code list	
	Transmit the data notated in hexadecimal converted to a 4-digit ASCII code, from the upper digit.	Transmit the data converted to a 4-digit binary code from the lower two digits.

Point

When connecting a microcomputer, etc. that uses the MC protocol of the Q/QnA series serial communication module with the GOT

When connecting a microcomputer, etc. that uses the MC protocol of the Q/QnA series serial communication module with the GOT, correct the commands to be used and the device ranges to match the GOT specifications.

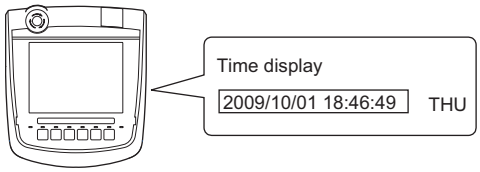
Message format

The following shows the message format of the dedicated commands for a microcomputer connection of GOT.

■Read clock data (1901) command

The following shows an example of reading the clock data of GOT.

(Assuming that the clock data of GOT has been set to "2009, October 1, 18:46:49, Thursday".)



Item	Message format
Request message (host → GOT)	(format 6:4E frame (ASCII))

Request type				Serial No.				Fixed value				Network No.		PLC No.		Following *1
5	4	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
35H	34H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	31H	30H	31H	
(H)	–	–	(L)	(H)	–	–	(L)	(H)	–	–	(L)	(H)	(L)	(H)	(L)	

*1

Request destination module I/O No.				Request destination module station No.		Request data length				CPU monitoring timer				
0	0	0	0	0	0	0	0	0	C	0	0	0	0	→ 1)
30H	30H	30H	30H	30H	30H	30H	30H	30H	43H	30H	30H	30H	30H	
(H)	–	–	(L)	(H)	(L)	(H)	–	–	(L)	(H)	–	–	(L)	

Character A section

1) →	Command				Sub-command			
	1	9	0	1	0	0	0	0
	31H	39H	30H	31H	30H	30H	30H	30H
	(H)	–	–	(L)	(H)	–	–	(L)

(format 7:4E frame (Binary))

Request type		Serial No.		Fixed value		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Request data length		Following *1
54H	00H	00H	00H	00H	00H	01H	01H	00H	00H	00H	06H	00H	

Data length target range

*1

CPU monitoring timer		Command		Sub-command	
00H	00H	01H	19H	00H	00H

Item	Message format
Response message during normal communication (GOT → host)	(format 6:4E frame (ASCII))

Response type				Serial No.				Fixed value				Network No.		PLC No.		Following *1
D	4	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
44H	34H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	31H	30H	31H	
(H)	–	–	(L)	(H)	–	–	(L)	(H)	–	–	(L)	(H)	(L)	(H)	(L)	

*1

Request destination module I/O No.				Request destination module station No.		Response data length				End code				
0	0	0	0	0	0	0	0	1	2	0	0	0	0	→ 1)
30H	30H	30H	30H	30H	30H	30H	30H	31H	32H	30H	30H	30H	30H	
(H)	–	–	(L)	(H)	(L)	(H)	–	–	(L)	(H)	–	–	(L)	

Character B section

1) →

Year data		Month data		Day data		Hour data		Minute data		Second data		Day-of-week data	
0	9	1	0	0	1	1	8	4	6	4	9	0	4
30H	39H	31H	30H	30H	31H	31H	38H	34H	36H	34H	39H	30H	34H
(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)

(format 7:4E frame (Binary))

Request type		Serial No.		Fixed value		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Response data length		Following *1
D4H	00H	00H	00H	00H	00H	01H	01H	00H	00H	00H	09H	00H	

Data length target range

*1

End code		Year data	Month data	Day data	Hour data	Minute data	Second data	Day-of-week data
00H	00H	09H	0AH	01H	12H	2EH	31H	04H

Item	Message format
Response message during faulty communication (GOT → host)	(format 6:4E frame (ASCII))

Response type				Serial No.				Fixed value				Network No.		PLC No.		
D	4	0	0	0	0	0	0	0	0	0	0	0	1	0	1	Following *1
44H	34H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	31H	30H	31H	
(H)	–	–	(L)	(H)	–	–	(L)	(H)	–	–	(L)	(H)	(L)	(H)	(L)	

*1

Request destination module I/O No.				Request destination module station No.		Response data length				End code				
0	0	0	0	0	0	0	0	1	6	0	0	5	6	→ 1)
30H	30H	30H	30H	30H	30H	30H	30H	31H	36H	30H	30H	35H	36H	
(H)	–	–	(L)	(H)	(L)	(H)	–	–	(L)	(H)	–	–	(L)	

1) →

Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Command				Sub-command			
0	0	0	0	0	0	0	0	0	0	1	9	0	1	0	0	0	0
30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	31H	39H	30H	31H	30H	30H	30H	30H
(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	(H)	–	–	(L)	(H)	–	–	(L)

(format 7:4E frame (Binary))

Request type		Serial No.		Fixed value		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Response data length		Following *1
D4H	00H	00H	00H	00H	00H	01H	01H	00H	00H	00H	0BH	00H	

Data length target range

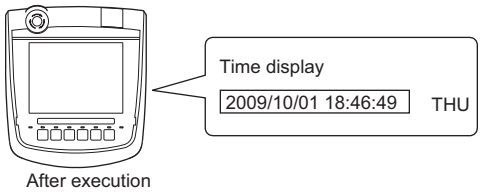
*1 ←→

End code		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Command		Sub-command	
56H	00H	00H	00H	00H	00H	00H	01H	19H	00H	00H

■Set clock data (0901) command

The following shows an example of setting the clock data of GOT.

(Assuming the clock data of GOT is to be set to "2009, October 1, 18:46:49 Thursday".)



Item	Message format
Request message (host → GOT)	(format 6:4E frame (ASCII))

Response type				Serial No.				Fixed value				Network No.		PLC No.		Following *1
5	4	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
35H	34H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	31H	30H	31H	
(H)	–	–	(L)	(H)	–	–	(L)	(H)	–	–	(L)	(H)	(L)	(H)	(L)	

*1

Request destination module I/O No.				Request destination module station No.		Request data length				CPU monitoring timer				Command				
0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	9	0	1	→ 1)
30H	30H	30H	30H	30H	30H	30H	30H	31H	41H	30H	30H	30H	30H	31H	39H	30H	31H	
(H)	–	–	(L)	(H)	(L)	(H)	–	–	(L)	(H)	–	–	(L)	(H)	–	–	(L)	

Character C section

1) →	Sub-command				Year data		Month data		Day data		Hour data		Minute data		Second data		Day-of-week data	
	0	0	0	0	0	9	1	0	0	1	1	8	4	6	4	9	0	4
	30H	30H	30H	30H	30H	39H	31H	30H	30H	31H	31H	38H	34H	36H	34H	39H	30H	34H
	(H)	–	–	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)

(format 7:4E frame (Binary))

Request type		Serial No.		Fixed value		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Request data length		Following *1
54H	00H	00H	00H	00H	00H	01H	01H	00H	00H	00H	0DH	00H	

Data length target range

*1 →

CPU monitoring timer		Command		Sub-command		Year data	Month data	Day data	Hour data	Minute data	Second data	Day-of-week data
00H	00H	01H	09H	00H	00H	09H	0AH	01H	12H	2EH	31H	04H

Item	Message format
Response message during normal communication (GOT → host)	(format 6:4E frame (ASCII))

Response type				Serial No.				Fixed value				Network No.		PLC No.		
D	4	0	0	0	0	0	0	0	0	0	0	0	1	0	1	Following *1
44H	34H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	31H	30H	31H	
(H)	–	–	(L)	(H)	–	–	(L)	(H)	–	–	(L)	(H)	(L)	(H)	(L)	

*1

Request destination module I/O No.				Request destination module station No.		Response data length				End code			
0	0	0	0	0	0	0	0	0	4	0	0	0	0
30H	**30H**	30H	30H	30H	30H	30H	30H	30H	34H	30H	30H	30H	30H
(H)	–	–	(L)	(H)	(L)	(H)	–	–	(L)	(H)	–	–	(L)

(format 7:4E frame (Binary))

Data length target range

Request type		Serial No.		Fixed value		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Response data length		End code	
D4H	00H	00H	00H	00H	00H	01H	01H	00H	00H	00H	02H	00H	00H	00H

Response message during faulty communication (GOT → host)	(format 6:4E frame (ASCII))

Response type				Serial No.				Fixed value				Network No.		PLC No.		
D	4	0	0	0	0	0	0	0	0	0	0	0	1	0	1	Following *1
44H	34H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	31H	30H	31H	
(H)	–	–	(L)	(H)	–	–	(L)	(H)	–	–	(L)	(H)	(L)	(H)	(L)	

*1

Request destination module I/O No.				Request destination module station No.		Response data length				End code				
0	0	0	0	0	0	0	0	1	6	0	0	5	6	→ 1)
30H	**30H**	30H	30H	30H	30H	30H	30H	31H	36H	30H	30H	35H	36H	
(H)	–	–	(L)	(H)	(L)	(H)	–	–	(L)	(H)	–	–	(L)	

	Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Command				Sub-command			
1) →	0	0	0	0	0	0	0	0	0	0	0	9	0	1	0	0	0	0
	30H	30H	30H	30H	30H	**30H**	30H	30H	30H	30H	30H	39H	30H	31H	30H	30H	30H	30H
	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	(H)	–	–	(L)	(H)	–	–	(L)

(format 7:4E frame (Binary))

Request type		Serial No.		Fixed value		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Response data length		Following *1
D4H	00H	00H	00H	00H	00H	01H	01H	00H	00H	00H	0BH	0H	

Data length target range

*1

End code		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Command		Sub-command
56H	00H	00H	00H	00H	00H	00H	01H	09H	00H	00H

Point

When a wrong day of the week has been set by the clock data setting command

If a wrong day of the week is set by the clock data setting commands, the corrected day of the week will be set.

Example: When June 1, 2004 (Thursday) is set by the clock data setting command (The actual day of week is Tuesday.)

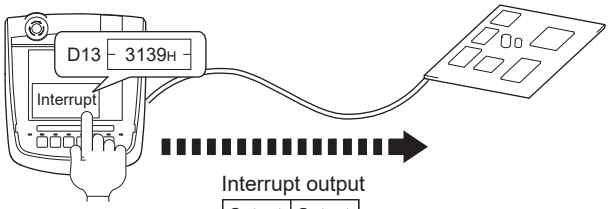
Tuesday (TUE) will be set.

■In the case of interrupt outputs

Write data to the interrupt output devices (D13 and D14) to output the data to the host.

(Assuming that "3139H" is written to D13 and "AA55H" to D14.)

Example) When [Interrupt Data Byte] in the communication detail settings is set to [2] as shown in (2) of the table below



Interrupt output

Output value 1	Output value 2
31H	39H

Item	Message format
Interrupt output (GOT → host)	(1) When [Interrupt Data Byte] in the communication detail settings is set to [1]

Output value 1
39H

(2) When [Interrupt Data Byte] in the communication detail settings is set to [2]

Output value 1	Output value 2
31H	39H

(3) When [Interrupt Data Byte] in the communication detail settings is set to [4]

• When [32bit Storage] in the communication detail settings is set to [LH Order]

Output value1	Output value2	Output value3	Output value4
AAH	55H	31H	39H

• When [32bit Storage] in the communication detail settings is set to [HL Order]

Output value1	Output value2	Output value3	Output value4
31H	39H	AAH	55H

Point

Interrupt output

To disable the interrupt output, turn on SM52 (interrupt code output disable flag).

☞ Page 2014 SM devices

Error code list

The following shows error code, error contents, cause, and measures.

Error code	Description	Action
0002H	Device point error The specified device range to be read or written is incorrect	• Check the specified head device and number of points, and correct it. ☞ Page 2003 Device Data Area
0050H	Request (command) type or response (response) type code error A code other than the specified value is set for the command type or response type.	• Check and correct the command type or response type set in the microcomputer.
0056H	Device error A non-existent device has been specified.	• Check the devices that can be used and the device ranges. ☞ Page 2003 Device Data Area
0057H	Device point error • The command number of points specification from the microcomputer exceeds the maximum number of points processed at each process (number of points processed in one communication). • The start address (head device number) to specified number of points exceeds the maximum address (device number, step number) for each process.	• Correct the specified number of points, or the start address (device number). ☞ Page 2003 Device Data Area
	When writing data which the command bit length is longer or shorter than the specification, the set number of write data points differs from the specified number of points value.	• Check the command data length and set the data again.
0058H	• The command start address (head device number, start step number) specification from the microcomputer exceeds the range that can be specified. • A value outside the GOT parameter setting range is specified for reading or writing the microcomputer program or file register (R).	• Correct the values to values that can be specified in each process.
	• Word device is specified in the command for bit device. • In the command for word device, a bit device start number is specified in other than hexadecimal.	• Correct the command or the specified device.
00A1H	Request content cannot be analyzed because the text length or request data length is too short.	• Review the text length or the head request data length.
00A2H	Request cannot be processed.	• Correct the request content and command.
C0D6H	The specification of network No. and station No. have error.	• Review the network No., station No. specification method.

Formats 8, 9

The following describes the message formats 8 and 9 (QnA compatible 3E frame).

GT 2506 HS GT 2505 HS

Basic format of data communication

This is the same message format as when communication is performed using the MC protocol (QnA compatible 3E frame) of the Q/QnA Series serial communication module.

For details of the basic format of data communication, refer to the following manual:

MELSEC Communication Protocol Reference Manual

This section describes items whose settings differ from the MC protocol of the Q/QnA Series serial communication module, and the dedicated commands for a GOT microcomputer connection.

Example: Request message for the batch read (0401) command in word units

Device name: D

Head device: 100

Device points: 2

Communication setting of GOT side: Network No.=1, PLC No.=1

(Format 8: QnA compatible 3E frame (ASCII))

Subheader				Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Request data length				Following *1
5	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	8	
35H	30H	30H	30H	30H	31H	30H	31H	30H	30H	30H	30H	30H	30H	30H	30H	31H	38H	
(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	(H)	(L)	(H)	(L)	

*1

Character A section

CPU monitoring timer				Command				Sub-command				Device code		Start Device						Device points			
0	0	0	0	0	4	0	1	0	0	0	0	D	*	0	0	0	1	0	0	0	0	0	2
30H	30H	30H	30H	30H	34H	30H	31H	30H	30H	30H	30H	44H	2AH	30H	30H	30H	31H	30H	30H	30H	30H	30H	32H
(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	–	–	(L)	(H)	(L)	(H)	–	–	–	–	(L)	(H)	–	–	(L)

Data length target data

(Format 9: QnA compatible 3E frame (Binary))

Subheader		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Request data length		CPU monitoring timer		Command		Sub-command		Start Device			Device code	Device points	
50H	00H	01H	01H	00H	00H	00H	0CH	00H	00H	00H	01H	04H	00H	00H	64H	00H	00H	A8H	02H	00H

Data length target data

Details of data items in message format

Point

Data code during communication

Communication of format 8 is performed in ASCII code.

Communication of the format 9 is performed in Binary code.

The following table shows the contents of the data items.

<table>
<tr><th rowspan="2">Data item name</th><th colspan="2">Contents</th></tr>
<tr><th>Format 8</th><th>Format 9</th></tr>
<tr><td rowspan="2">Subheader (Microcomputer side)</td><td colspan="2">Indicates it is a command message.</td></tr>
<tr><td>Command message: ASCII "5000" (Fixed value)</td><td>Command message: 50H (Upper digit) (Fixed value)</td></tr>
<tr><td rowspan="2">Subheader (GOT side)</td><td colspan="2">Indicates it is a response message.</td></tr>
<tr><td>Response message: ASCII "D000" (Fixed value)</td><td>Response message: D0H (Upper digit) (Fixed value)</td></tr>
<tr><td rowspan="2">Network No.</td><td colspan="2">Set the same number as the network No. set in the GOT.
For setting method of "Communication Detail Settings", refer to the following.
☞ Page 2068 Setting communication interface (Controller Setting)</td></tr>
<tr><td>Transmit the data converted to a 2-digit ASCII code from the upper digit.</td><td>Transmit the data converted to a 2-digit binary code.</td></tr>
<tr><td rowspan="2">PLC No.</td><td colspan="2">Set the same number as the PLC No. set in the GOT.
For setting method of "Communication Detail Settings", refer to the following.
☞ Page 2068 Setting communication interface (Controller Setting)</td></tr>
<tr><td>Transmit the data converted to a 2-digit ASCII code from the upper digit.</td><td>Transmit the data converted to a 2-digit binary code.</td></tr>
<tr><td>Request destination module I/O No.</td><td colspan="2">Ignore GOT.</td></tr>
<tr><td>Request destination module station No.</td><td colspan="2">Ignore GOT.</td></tr>
<tr><td rowspan="2">Request data length</td><td colspan="2">Number of bytes from the start of CPU monitoring timer to the last request data.</td></tr>
<tr><td>Transmit the data converted to a 4-digit ASCII code from the upper digit.</td><td>Transmit the data converted to a 4-digit binary code from the lower two digits.</td></tr>
<tr><td rowspan="2">Response data length</td><td colspan="2">Appended to the response message from the microcomputer side.
Number of bytes from the start of end code to the last response data or last error response data.</td></tr>
<tr><td>Transmit the data converted to a 4-digit ASCII code from the upper digit.</td><td>Transmit the data converted to a 4-digit binary code from the lower two digits.</td></tr>
<tr><td>CPU monitoring timer</td><td colspan="2">Ignore GOT.</td></tr>
<tr><td rowspan="2">Command, Sub-command</td><td colspan="2">Specifies the access contents from the microcomputer side to GOT. For details of the commands that can be used, refer to the following.
☞ Page 2017 List of commands</td></tr>
<tr><td>Transmit the command and sub-command converted to a 4-digit ASCII code, from the upper digit.</td><td>Transmit the data converted to a 4-digit binary code from the lower two digits.</td></tr>
<tr><td rowspan="2">Device code</td><td colspan="2">Specifies the code by which the device data to be read or written is recognized.
For details of the device range that can be accessed, refer to the following.
☞ Page 2003 Device Data Area</td></tr>
<tr><td>Transmit the 2-digit ASCII code corresponding to the following device codes.
<table><tr><th>Device name</th><th>Device code</th></tr><tr><td>M</td><td>M*</td></tr><tr><td>SM</td><td>SM</td></tr><tr><td>L</td><td>L*</td></tr><tr><td>D</td><td>D*</td></tr><tr><td>SD</td><td>SD</td></tr><tr><td>R</td><td>R*</td></tr></table></td><td>Transmit the 2-digit binary code corresponding to the following device codes.
<table><tr><th>Device name</th><th>Device code</th></tr><tr><td>M</td><td>90H</td></tr><tr><td>SM</td><td>91H</td></tr><tr><td>L</td><td>92H</td></tr><tr><td>D</td><td>A8H</td></tr><tr><td>SD</td><td>A9H</td></tr><tr><td>R</td><td>AFH</td></tr></table></td></tr>
<tr><td rowspan="2">Head device</td><td colspan="2">Specifies the head No. of the device data to be read or written.
For details of the device range that can be accessed, refer to the following.
☞ Page 2003 Device Data Area</td></tr>
<tr><td>Transmit the data notated in decimal converted to a 6-digit ASCII code, from the upper digit.</td><td>Transmit the data converted to a 6-digit binary code from the lower two digits.</td></tr>
</table>

Data item name	Contents	
	Format 8	Format 9
Device points	Specifies the number of device data to be read or written. (Setting range: Range of the maximum number of points processed for each command) <When using random read or write command> When setting multiple bit accesses, word accesses or double word accesses, limit the total number of access points to within 64 points. <When using multiple block batch read or write commands> When setting multiple blocks, limit the total number of points of all blocks to within the maximum number of points processed for each command.	
	Transmit the data notated in decimal converted to a 4-digit ASCII code, from the upper digit.	Transmit the data converted to a 4-digit binary code from the lower two digits.
Year, month, day, hour, minute, second and day of the week data	Specifies the year, month, day, hour, minute, second, and day of the week data to be read or set to the GOT clock data. ☞ Page 2062 Read clock data (1901) command ☞ Page 2064 Set clock data (0901) command	
	Transmit the data notated in decimal converted to a 2-digit ASCII code, from the upper digit.	Transmit the data converted to a 2-digit binary code.
End code (Microcomputer side)	Appended to the response message from the microcomputer side. If an error occurs at the microcomputer side, the error code is displayed. ☞ Page 2067 Error code list	
	Transmit the data notated in hexadecimal converted to a 4-digit ASCII code, from the upper digit.	Transmit the data converted to a 4-digit binary code from the lower two digits.

Point

When connecting a microcomputer, etc. that uses the MC protocol of the Q/QnA series serial communication module with the GOT

When connecting a microcomputer, etc. that uses the MC protocol of the Q/QnA series serial communication module with the GOT, correct the commands to be used and the device ranges to match the GOT specifications.

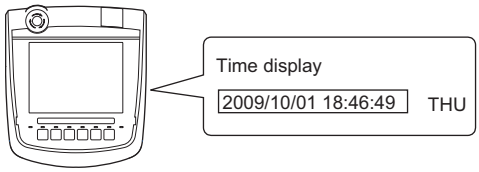
Message format

The following shows the message format of the dedicated commands for a microcomputer connection of GOT.

■Read clock data (1901) command

The following shows an example of reading the clock data of GOT.

(Assuming that the clock data of GOT has been set to "2009, October 1, 18:46:49, Thursday".)



Item	Message format
Request message (host → GOT)	(format 8:QnA compatible 3E frame (ASCII))

Subheader				Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Following *1
5	0	0	0	0	1	0	1	0	0	0	0	0	0	
35H	30H	30H	30H	30H	31H	30H	31H	30H	30H	30H	30H	30H	30H	
(H)	–	–	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	

*1

Character A section

Request data length				CPU monitoring timer				Command				Sub-command			
0	0	0	C	0	0	0	0	1	9	0	1	0	0	0	0
30H	30H	30H	43H	30H	30H	30H	30H	31H	39H	30H	31H	30H	30H	30H	30H
(H)	–	–	(L)	(H)	–	–	(L)	(H)	–	–	(L)	(H)	–	–	(L)

Data length target data

(format 9:QnA compatible 3E frame (Binary))

Subheader		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Request data length		CPU monitoring timer		Command		Sub-command	
50H	00H	01H	01H	00H	00H	00H	06H	00H	00H	00H	01H	19H	00H	00H

Data length target data

Response message during normal communication (GOT → host)	(format 8:QnA compatible 3E frame (ASCII))

Subheader				Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Response data length				Following *1
D	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	2	
44H	30H	30H	30H	30H	31H	30H	31H	30H	30H	30H	30H	30H	30H	30H	30H	31H	32H	
(H)	–	–	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	(H)	–	–	(L)	

*1

Character B section

End code				Year data		Month data		Day data		Hour data		Minute data		Second data		Day-of-week data	
0	0	0	0	0	9	1	0	0	1	1	8	4	6	4	9	0	4
30H	30H	30H	30H	30H	39H	31H	30H	30H	31H	31H	38H	34H	36H	34H	39H	30H	34H
(H)	–	–	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)

Data length target data

(format 9:QnA compatible 3E frame (Binary))

Subheader		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Response data length		End code		Year data	Month data	Day data	Hour data	Minute data	Second data	Day-of-week data
D0H	00H	01H	01H	00H	00H	00H	09H	00H	00H	00H	09H	0AH	01H	12H	2EH	31H	04H

Data length target data

Item	Message format
Response message during faulty communication (GOT → host)	(format 8:QnA compatible 3E frame (ASCII))

Subheader				Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Response data length				Following *1
D	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	6	
44H	30H	30H	30H	30H	31H	30H	31H	30H	30H	30H	30H	30H	30H	30H	30H	31H	36H	
(H)	–	–	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	(H)	–	–	(L)	

*1

	End code				Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		
	0	0	5	6	0	0	0	0	0	0	0	0	0	0	→ 1)
	30H	30H	35H	36H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	
	(H)	–	–	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	

Data length target data

1) →	Command				Sub-command			
	1	9	0	1	0	0	0	0
	31H	39H	30H	31H	30H	30H	30H	30H
	(H)	–	–	(L)	(H)	–	–	(L)

Data length target data

(format 9:QnA compatible 3E frame (Binary))

Subheader		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Response data length		Following *1
D0H	00H	01H	01H	00H	00H	00H	0BH	00H	

*1

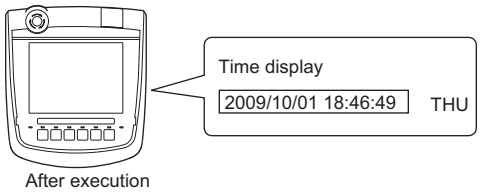
	End code		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Command		Sub-command	
	56H	00H	00H	00H	00H	00H	00H	01H	19H	00H	00H

Data length target data

■Set clock data (0901) command

The following shows an example of setting the clock data of GOT.

(Assuming the clock data of GOT is to be set to "2009, October 1, 18:46:49 Thursday".)



Item	Message format
Request message (host → GOT)	(format 8:QnA compatible 3E frame (ASCII))

Subheader				Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Following *1
5	0	0	0	0	1	0	1	0	0	0	0	0	0	
35H	30H	30H	30H	30H	31H	30H	31H	30H	30H	30H	30H	30H	30H	
(H)	–	–	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	

*1

Response data length				CPU monitoring timer				Command				
0	0	1	A	0	0	0	0	0	9	0	1	→ 1)
30H	30H	31H	41H	30H	30H	30H	30H	31H	39H	30H	31H	
(H)	–	–	(L)	(H)	–	–	(L)	(H)	–	–	(L)	

Data length target data

Character C section

1) →

Sub-command				Year data		Month data		Day data		Hour data		Minute data		Second data		Day-of-week data	
0	0	0	0	0	9	1	0	0	1	1	8	4	6	4	9	0	4
30H	30H	30H	30H	30H	39H	31H	30H	30H	31H	31H	38H	34H	36H	34H	39H	30H	34H
(H)	–	–	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)	(H)	(L)

Data length target data

(format 9:QnA compatible 3E frame (Binary))

Subheader		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Request data length		Following *1
50H	00H	01H	01H	00H	00H	00H	0DH	00H	

*1

CPU monitoring timer		Command		Sub-command		Year data	Month data	Day data	Hour data	Minute data	Second data	Day-of-week data
00H	00H	01H	09H	00H	00H	09H	0AH	01H	12H	2EH	31H	04H

Data length target data

Item	Message format
Response message during normal communication (GOT → host)	(format 8:QnA compatible 3E frame (ASCII))

Subheader				Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Following *1
D	0	0	0	0	1	0	1	0	0	0	0	0	0	
44H	30H	30H	30H	30H	31H	30H	31H	30H	30H	30H	30H	30H	30H	
(H)	–	–	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	

*1

	Response data length				End code			
	0	0	0	4	0	0	0	0
	30H	30H	30H	34H	30H	30H	30H	30H
	(H)	–	–	(L)	(H)	–	–	(L)

Data length target data

(format 9:QnA compatible 3E frame (Binary))

Subheader		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Response data length		End code	
D0H	00H	01H	01H	00H	00H	00H	02H	00H	00H	00H

Data length target data

Response message during faulty communication (GOT → host)	(format 8:QnA compatible 3E frame (ASCII))

Subheader				Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		Response data length				Following *1
D	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	6	
44H	30H	30H	30H	30H	31H	30H	31H	30H	30H	30H	30H	30H	30H	30H	30H	31H	36H	
(H)	–	–	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	(H)	–	–	(L)	

*1

	End code				Network No.		PLC No.		Request destination module I/O No.				Request destination module station No.		
	0	0	5	6	0	0	0	0	0	0	0	0	0	0	→ 1)
	30H	30H	35H	36H	30H	30H	30H	30H	30H	30H	30H	30H	30H	30H	
	(H)	–	–	(L)	(H)	(L)	(H)	(L)	(H)	–	–	(L)	(H)	(L)	

Data length target data

1) →

	Command				Sub-command			
	0	9	0	1	0	0	0	0
	30H	39H	30H	31H	30H	30H	30H	30H
	(H)	–	–	(L)	(H)	–	–	(L)

Data length target data

(format 9:QnA compatible 3E frame (Binary))

Subheader		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Response data length		Following *1
D0H	00H	01H	01H	00H	00H	00H	0BH	00H	

*1

	End code		Network No.	PLC No.	Request destination module I/O No.		Request destination module station No.	Command		Sub-command	
	56H	00H	00H	00H	00H	00H	00H	01H	09H	00H	00H

Data length target data

Point

When a wrong day of the week has been set by the clock data setting command

If a wrong day of the week is set by the clock data setting commands, the corrected day of the week will be set.

Example: When June 1, 2004 (Thursday) is set by the clock data setting command (The actual day of week is Tuesday.)

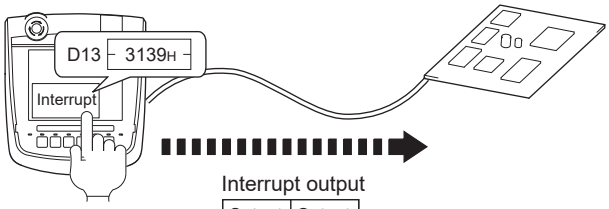
Tuesday (TUE) will be set.

■In the case of interrupt outputs

Write data to the interrupt output devices (D13 and D14) to output the data to the host.

(Assuming that "3139H" is written to D13 and "AA55H" to D14.)

Example) When [Interrupt Data Byte] in the communication detail settings is set to [2] as shown in (2) of the table below



Interrupt output

Output value 1	Output value 2
31H	39H

Item	Message format
Interrupt output (GOT → host)	(1) When [Interrupt Data Byte] in the communication detail settings is set to [1] Output value 1: 39H (2) When [Interrupt Data Byte] in the communication detail settings is set to [2] Output value 1: 31H; Output value 2: 39H (3) When [Interrupt Data Byte] in the communication detail settings is set to [4] • When [32bit Storage] in the communication detail settings is set to [LH Order] Output value1: AAH; Output value2: 55H; Output value3: 31H; Output value4: 39H • When [32bit Storage] in the communication detail settings is set to [HL Order] Output value1: 31H; Output value2: 39H; Output value3: AAH; Output value4: 55H

Point

Interrupt output

To disable the interrupt output, turn on SM52 (interrupt code output disable flag).

☞ Page 2014 SM devices

Error code list

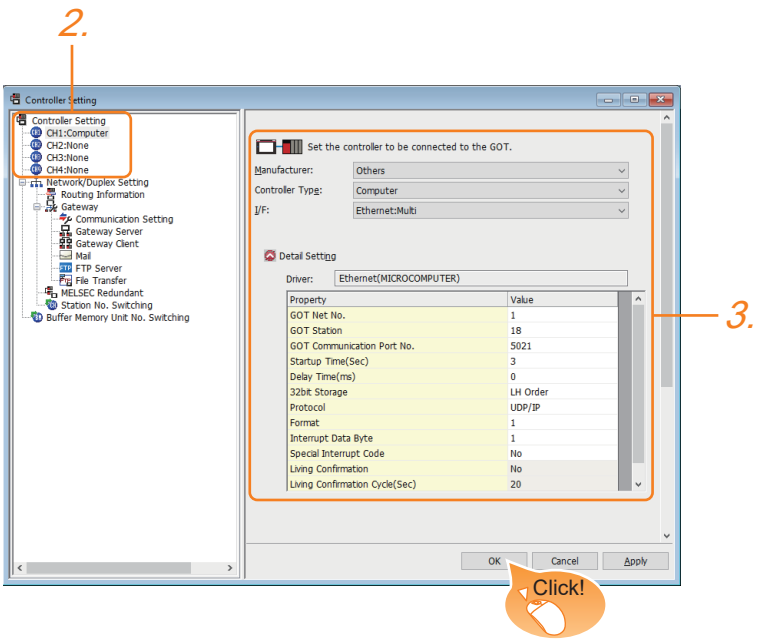
For the error codes, refer to the following.

☞ Page 2058 Error code list

46.5 GOT Side Settings

Setting communication interface (Controller Setting)

Set the channel of the equipment to be connected to the GOT.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [Others]
- [Controller Type]: [Computer]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 2069 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be set and confirmed in [I/F Communication Setting]. For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
GOT Net No.	1
GOT Station	18
GOT Communication Port No.	5021
Startup Time(Sec)	3
Delay Time(ms)	0
32bit Storage	LH Order
Protocol	UDP/IP
Format	1
Interrupt Data Byte	1
Special Interrupt Code	No
Living Confirmation	No
Living Confirmation Cycle(Sec)	20
Destination module I/O number	0

Item	Description	Range
GOT Net No.	Set the network No. of the GOT. (Default: 1)	1 to 239
GOT Station	Set the station No. of the GOT. (Default: 18)	1 to 64
GOT Communication Port No.	Set the GOT port No. for the connection with the Ethernet module. (Default: 5021 *4)	1024 to 5010. 5014 to 65534 (Except for 5011, 5012, 5013 and 49153 to 49170)
Startup Time(sec)	Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU. (Default: 3sec)	3 to 255sec
Delay Time(ms)	Set the send delay time to lower the load of the network and the connected PLCs. (Default: 0ms)	0 to 10000 (ms)
32bit Storage	Select the steps to store two words (32-bit data). (Default: LH Order)	LH Order or HL Order
Protocol *1	Select the communication protocol (Default: UDP/IP)	TCP/IP UDP/IP
Format	Select the communication format. (Default: 1)*2	1 to 9
Interrupt Data Length	Specify the number of bytes of interrupt data. (Default: 1)	1, 2 or 4
Special Interrupt Code	Set whether or not to output the special interrupt code. (Default: No)	Yes or No
Living Confirmation *2	Set whether or not to perform a living confirmation. (Default: No)	Yes or No
Living Confirmation Cycle *3	Set the sampling to perform a living confirmation. (Default: 20s)	10 to 100s
Destination module I/O number	Set the values for the I/O number and the station number of the connection destination module that responds to the request from the controller. Not available to GT21. (It operates with [Same as requested value].) (Default: 0)	0 or Same as requested value

*1 For the interrupt output, select [TCP/IP].

*2 Select [Yes] only when [Protocol] is [TCP/IP].

*3 The setting value can be changed when the [Living Confirmation] is [Yes].

*4 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

Point

Special Interrupt Code

The special interrupt codes are output at event occurrences.

If multiple events occur simultaneously, the special interrupt codes may not be output.

The following shows the special interrupt codes and the event types.

Special Interrupt Code (Hex)	Event type
20H	Base screen, overlap window 1 to 5 When the screen is switched by the screen switching device, the special interrupt code will be output. The base screen and each overlap window are switched independently. (Example of output) When the values of the screen switching devices for the base screen and overlap window 1 and 2 are all changed, three special interrupt codes will be output.
21H	This code is output when a numerical or ASCII input is completed.
22H	This code is output when reading or writing of the recipe data is completed.
23H	This code is output when a barcode or RFID data is read.

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

GOT IP address setting

Set the following communication port setting.

• Standard port

GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

• [Default Gateway]

• [Peripheral S/W Communication Port No.]

• [Transparent Port No.]

IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 80 GOT Ethernet Setting

46.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1
Microcomputer ([Computer])

46.7 Precautions

GOT clock control

Even though the time setting function and time notification function are set in the GOT time setting, the settings are disabled.
When reading from or writing to the clock data between the GOT and microcomputer, use the dedicated command.

UDP/IP connection

When the commands are sent from multiple controllers simultaneously, the GOT may not receive all the commands.
Retry sending the commands on the controller, to receive them on the GOT again.

Station monitoring function

The microcomputer connection (Ethernet) does not support the station monitoring function.

Interrupt output

The interrupt output is available only for the TCP/IP connection.
The interrupt output cannot be executed in the UDP/IP connection.

MEMO

PART 9 MODBUS

47 MODBUS/RTU MASTER CONNECTION

48 MODBUS/TCP MASTER CONNECTION

49 MODBUS/RTU SLAVE CONNECTION

50 MODBUS/TCP SLAVE CONNECTION

47 MODBUS/RTU MASTER CONNECTION

- Page 2074 Connectable Model List
- Page 2075 System Configuration
- Page 2077 Connection Diagram
- Page 2082 GOT Side Settings
- Page 2085 MODBUS/RTU Slave Equipment Side Setting
- Page 2086 Function code
- Page 2086 MODBUS Communication Control Function
- Page 2086 Settable Device Range
- Page 2087 Precautions

47.1 Connectable Model List

GOT2000 Series products support the master function of MODBUS communication, the open FA network.
Thus, the GOT can be connected with each MODBUS slave.
For the MODBUS/RTU equipment validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin.
📖List of Valid Devices Applicable for GOT2000 Series MODBUS Connection for Overseas (GOT-A-0170)
For Technical Bulletins, go to the Mitsubishi Electric Factory Automation Global Website.
www.MitsubishiElectric.com/fa

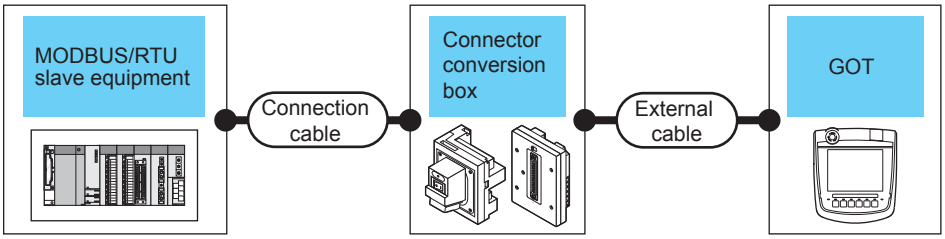
47.2 System Configuration

Connecting to MODBUS/RTU slave equipment

Communication driver

MODBUS/RTU Master

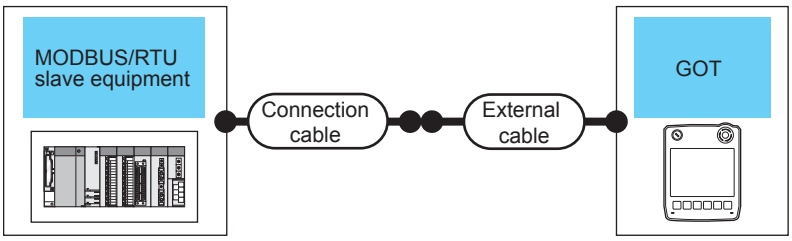
When using the connector conversion box



Controller	Communication Type	Connection cable Cable model Connection diagram number	Connector conversion box	External cable	GOT Model	Total distance *1	Number of connectable equipment
MODBUS/RTU equipment	RS-232	User preparing Page 2077 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 MODBUS equipment for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	RS-422/485	User preparing Page 2079 RS-422/485 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 MODBUS equipment for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		Up to 10 MODBUS equipment for 1 GOT
	RS-422/485	User preparing Page 2080 RS-422/485 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 MODBUS equipment for 1 GOT

*1 The shortest specification on the MODBUS/RTU equipment side is prioritized.

When using the external cable (GT11H-C□□□-37P)

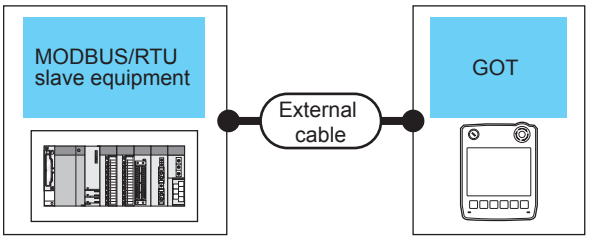


Controller		Connection cable	External cable	GOT Model	Total distance *1	Number of connectable equipment
Model	Communication Type	Cable model Connection diagram number				
MODBUS/RTU equipment	RS-232	User preparing Page 2077 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 MODBUS equipment for 1 GOT
	RS-422/485	User preparing Page 2079 RS-422/485 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		13m	Up to 10 MODBUS equipment for 1 GOT*2

*1 The shortest specification on the MODBUS/RTU equipment side is prioritized.

*2 When it is less than 10 units, the number of the maximum connectable units on the MODBUS/RTU equipment side will apply.

When using the external cable (GT11H-C□□□)



Controller		External cable	GOT Model	Total distance *1	Number of connectable equipment
Model	Communication Type				
MODBUS/RTU equipment	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 2077 RS-232 connection diagram 3)	GT 2505HS	6m	1 MODBUS equipment for 1 GOT
	RS-422/485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 2080 RS-422/485 connection diagram 3)		13m	Up to 10 MODBUS equipment for 1 GOT*2

*1 The shortest specification on the MODBUS/RTU equipment side is prioritized.

*2 When it is less than 10 units, the number of the maximum connectable units on the MODBUS/RTU equipment side will apply.

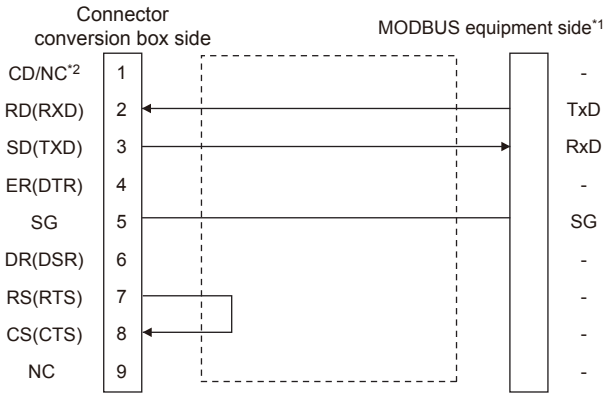
47.3 Connection Diagram

The following diagram shows the connection between the GOT and the controller.

RS-232 cable

Connection diagram

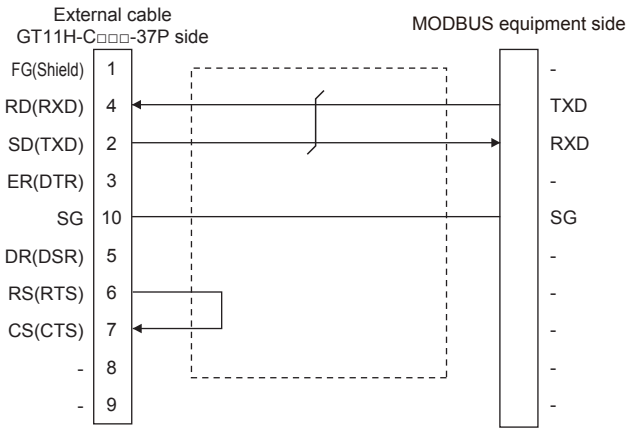
■RS-232 connection diagram 1)



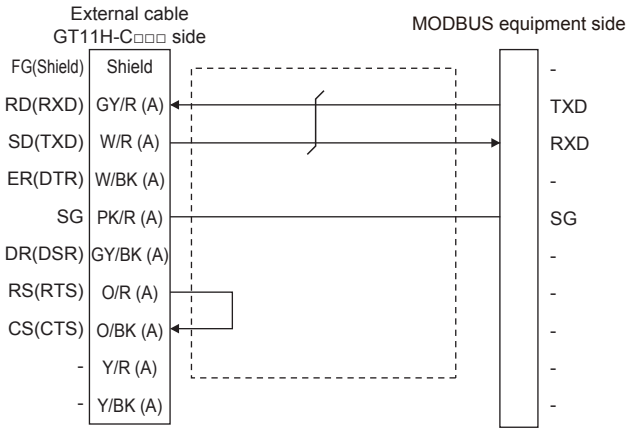
*1 Some MODBUS/RTU equipment require the control line (CS, RS, etc.) to be controlled.
Make sure to connect the cables and wires as described in the MODBUS/RTU equipment manual.

*2 GT2506HS-V: CD, GT2505HS-V: NC

■RS-232 connection diagram 2)



■RS-232 connection diagram 3)



Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■MODBUS equipment side connector

Use the connector compatible with the MODBUS/RTU equipment side module.

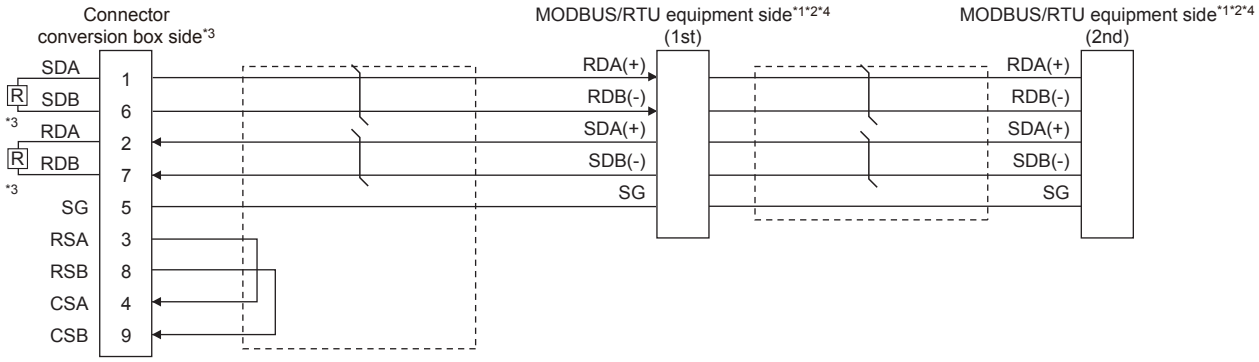
For details, refer to the MODBUS/RTU equipment user's manual.

RS-422/485 cable

The following shows the connection diagrams and connector specifications of the RS-422/485 cable used for connecting the GOT to a PLC.

Connection diagram

■RS-422/485 connection diagram 1)



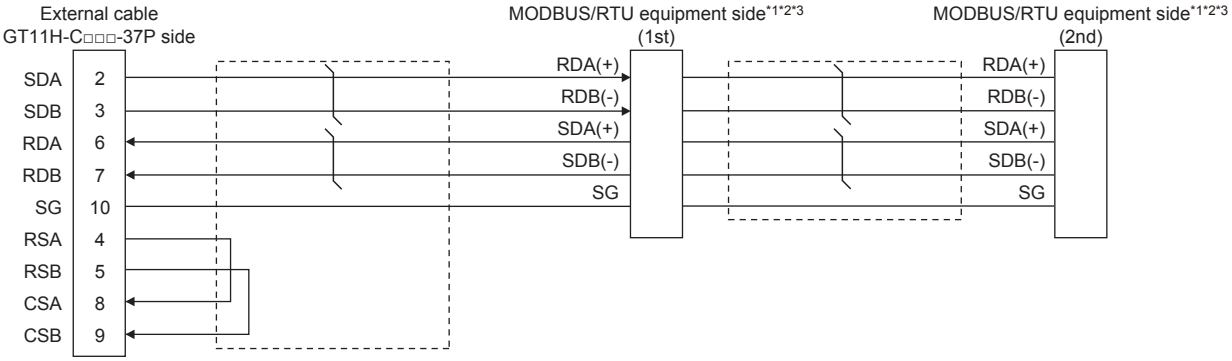
*1 Some MODBUS/RTU equipment doesn't have SG. In this case, the wiring between GOT and SG is unnecessary.

*2 Some MODBUS/RTU equipment require the control line (CS, RS, etc.) to be controlled.
Make sure to connect the cables and wires as described in the MODBUS/RTU equipment manual.

*3 For GT2506HS-V, set the terminating resistor setting switch of the GOT to "Disable" and connect a 330 Ω terminating resistor.
For GT2505HS-V, the terminating resistor of the GOT is fixed to 330Ω.
Do not connect a 330Ω terminating resistor.
☞ Page 91 Terminating resistors of GOT

*4 For the terminating resistor of MODBUS/RTU equipment, refer to the manual of MODBUS/RTU equipment to be used.

■RS-422/485 connection diagram 2)

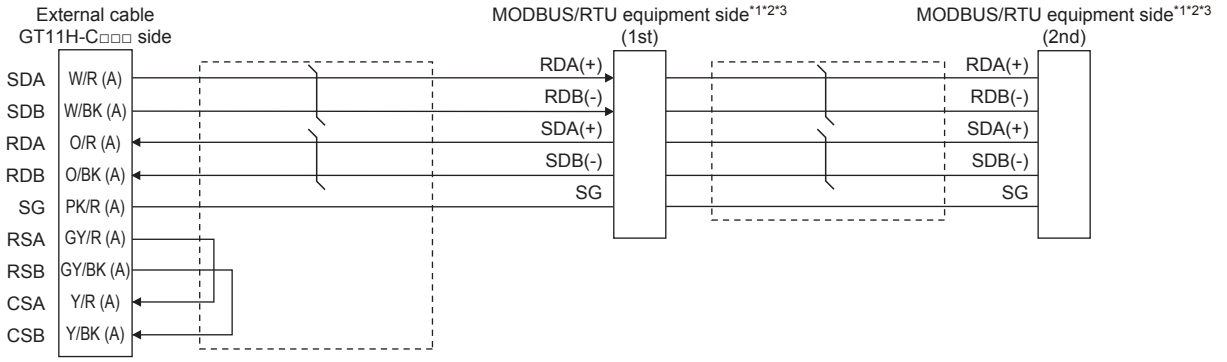


*1 Some MODBUS/RTU equipment doesn't have SG. In this case, the wiring between GOT and SG is unnecessary.

*2 Some MODBUS/RTU equipment require the control line (CS, RS, etc.) to be controlled.
Make sure to connect the cables and wires as described in the MODBUS/RTU equipment manual.

*3 For the terminating resistor of MODBUS/RTU equipment, refer to the manual of MODBUS/RTU equipment to be used.

■RS-422/485 connection diagram 3)

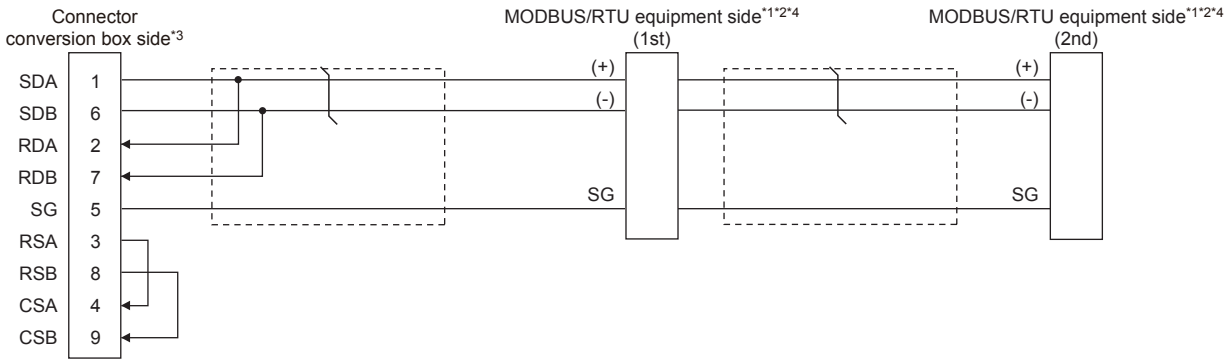


*1 Some MODBUS/RTU equipment doesn't have SG. In this case, the wiring between GOT and SG is unnecessary.

*2 Some MODBUS/RTU equipment require the control line (CS, RS, etc.) to be controlled.
Make sure to connect the cables and wires as described in the MODBUS/RTU equipment manual.

*3 For the terminating resistor of MODBUS/RTU equipment, refer to the manual of MODBUS/RTU equipment to be used.

■RS-422/485 connection diagram 4)



*1 The actual terminal layout on the MODBUS/RTU equipment may differ from the example shown above. SDA/B(+/-) and RDA/B(+/-) terminals can be separated from each other. Make sure to connect the cables and wires as described in the MODBUS/RTU equipment manual.

*2 Some MODBUS/RTU equipment doesn't have SG. In this case, the wiring between GOT and SG is unnecessary.

*3 Set the terminating resistor to "Enable" when arranging the GOT in the end position of the system configuration.
Set the terminating resistor to "Disable" when arranging the GOT in any position other than the end position of the system configuration.
☞ Page 91 Terminating resistors of GOT

*4 For the terminating resistor of MODBUS/RTU equipment, refer to the manual of MODBUS/RTU equipment to be used.

Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-422/485 cable must be 13 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■MODBUS/RTU equipment side connector

Use the connector compatible with the MODBUS/RTU equipment side module.

For details, refer to the MODBUS equipment user's manual.

Connecting terminating resistors

■GOT side

When connecting a MODBUS/RTU equipment to the GOT, a terminating resistor must be connected to the GOT.

- For GT2506HS-V

Set the terminating resistor using the terminating resistor setting switch.

- For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

■MODBUS/RTU equipment side

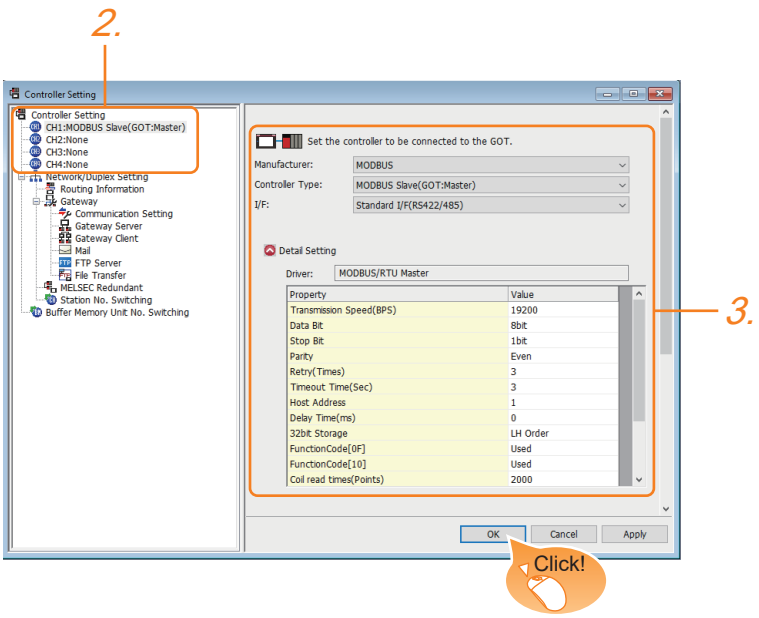
When connecting a MODBUS/RTU equipment to the GOT, a terminating resistor must be connected to the MODBUS/RTU equipment.

For details, refer to the MODBUS/RTU equipment user's manual.

47.4 GOT Side Settings

Setting communication interface (Controller Setting)

Set the channel of the equipment to be connected to the GOT.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [MODBUS]
- [Controller Type]: [MODBUS Slave(GOT:Master)]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 2083 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be set and confirmed in [I/F Communication Setting]. For details, refer to the following.

☞ Page 82 I/F communication setting

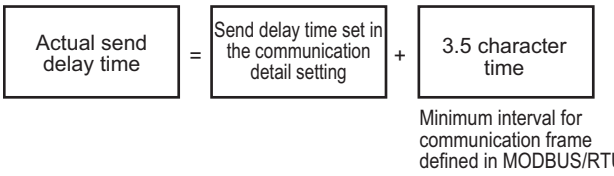
Communication detail settings

Make the settings according to the usage environment.

Property	Value
Transmission Speed(BPS)	19200
Data Bit	8bit
Stop Bit	1bit
Parity	Even
Retry(Times)	3
Timeout Time(Sec)	3
Host Address	1
Delay Time(ms)	0
32bit Storage	LH Order
FunctionCode[0F]	Used
FunctionCode[10]	Used
Coil read times(Points)	2000
Input relay read times(Points)	2000
Holding register read times(Points)	125
Input register read times(Points)	125
Coil write times(Points)	800
Holding register write times(Points)	100

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 19200bps)	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bits)	7bits/8bits
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit/2bits
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Even)	None Even Odd
Retry	Set the number of retries to be performed when a communication error occurs. (Default: 3times)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Host Address	Specify the host address in the network of the GOT. (Default: 1)	1 to 247
Delay Time*1	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300ms
32bit Storage	Select the steps to store two words (32-bit data). (Default: LH Order)	LH Order/HL Order
FunctionCode[0F]	Select the FunctionCode[0F]. (Default: Used)	Used/Unused
FunctionCode[10]	Select the FunctionCode[10]. (Default: Used)	Used/Unused
Coil read times	Set the Coil read time. (Default: 2000)	1 to 2000 points
Input relay read time	Set the Input relay read time. (Default: 2000)	1 to 2000 points
Holding register read times	Set the Holding register read times. (Default: 125)	1 to 125 points
Input register read times	Set the Input register read times. (Default: 125)	1 to 125 points
Coil write times	Set the Coil write times. (Default: 800)	1 to 1968 points
Holding register write times	Set the Holding register write times. (Default: 100)	1 to 123 points

*1 The GOT ensures in advance the minimum interval (3.5 characters time) for communication frame defined in the MODBUS/RTU. Therefore, the actual send delay time is as follows.



When connecting to MODBUS/RTU equipment which requires a delay longer than 3.5 character time, adjust the send delay time.

Point

If the communication with MODBUS/RTU equipment is not established, some equipment which requires a delay longer than 3.5 character time may be connected.
Adjust the send delay time in the communication detail setting.

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Controller Setting] of project data.
For details on the Utility, refer to the following manual.
GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

47.5 MODBUS/RTU Slave Equipment Side Setting

Point

MODBUS/RTU Slave equipment

For details of the MODBUS/RTU Slave equipment, refer to the manual of MODBUS/RTU Slave equipment to be used.

Station number setting

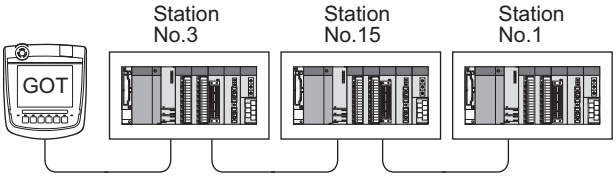
In the MODBUS network, a maximum of 31 MODBUS/RTU slave equipment can be connected to one GOT.

Assign a non-overlapped station number ranging from 1 to 247 arbitrarily to each MODBUS/RTU slave equipment.

In the system configuration, the MODBUS/RTU slave equipment with the station number set with the host address must be included.

The station number can be set without regard to the cable connection order.

There is no problem even if station numbers are not consecutive.



Examples of station number setting

Direct specification

When setting the device, specify the station number of the MODBUS/RTU slave equipment of which data is to be changed.

Specification range
1 to 247

Indirect specification

When setting the device, indirectly specify the station number of the MODBUS/RTU slave equipment of which data is to be changed using the 16-bit GOT internal data register (GD10 to GD16).

When specifying the station No. from 248 to 254 on GT Designer3, the value of GD10 to GD16 compatible to the station No. specification will be the station No. of the MODBUS/RTU slave equipment.

Specification station NO.	Compatible device	Setting range
248	GD10	0 to 255: 0 : All station specification (broadcast) 255 : Host station access For the setting other than the above, an error (dedicated device is out of range) will occur.
249	GD11	
250	GD12	
251	GD13	
252	GD14	
253	GD15	
254	GD16	

All station specification (broadcast)

Target station differs depending on write-in operation or read-out operation.

- For write-in operation, all station will be a target.
- For read-out operation, only the host station will be a target.

47.6 Function code

The following shows the message format for the MODBUS communication.

Address	Function code	Data	CRC

The GOT supports the following function codes.

Function code	Function	Number of devices that are accessible with one message [Unit: point(s)]
0x01	Read Coils	1 to 2000
0x02	Read Discrete Inputs	1 to 2000
0x03	Read Holding Registers	1 to 125
0x04	Read Input Registers	1 to 125
0x05	Write Single Coil	1
0x06	Write Single Register	1
0x0F	Write Multiple Coils	1 to 1968
0x10	Write Multiple Register	1 to 123
0x14	Read File Record	1 to 124
0x15	Write File Record	1 to 122

47.7 MODBUS Communication Control Function

This function is to prevent a communication response delay by the equipment with different specifications in the MODBUS network.

The GOT special register (GS) controls available function codes.

Set this function when equipment applicable to the following conditions is used on the MODBUS network.

- Equipment that supports only some function codes
- Equipment whose maximum transfer size is small for function codes

The following lists the GOT special registers (GS) used for the MODBUS communication control function.

GOT special register (GS)	Description
GS579	Specification of the communication setting (common or individual) for each CH
GS570 to GS576	Common communication settings
GS590 to GS596	Individual communication settings for CH1
GS597 to GS603	Individual communication settings for CH2
GS604 to GS610	Individual communication settings for CH3
GS611 to GS617	Individual communication settings for CH4

For the details of the GOT special registers (GS), refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

47.8 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1
MODBUS ([MODBUS Slave(GOT:Master)])

47.9 Precautions

Communication confirmation to connected equipment

The GOT reads the following devices for checking whether the GOT can communicate with the controller.

GOT	Device
GT25	The holding register (400001) is read.

When the controller is a MODBUS/RTU equipment that does not have the holding register (400001), check whether the MODBUS/RTU equipment sends back a response to the request from the GOT.
Communication is available when the MODBUS/RTU equipment sends back a response, regardless of the message type (normal or abnormal).

Station No. settings of the MODBUS/RTU slave equipment side

In the system configuration, the MODBUS/RTU slave equipment with the station number set with the host address must be included.For details of host address setting, refer to the following.
☞ Page 2082 Setting communication interface (Controller Setting)

GOT clock control

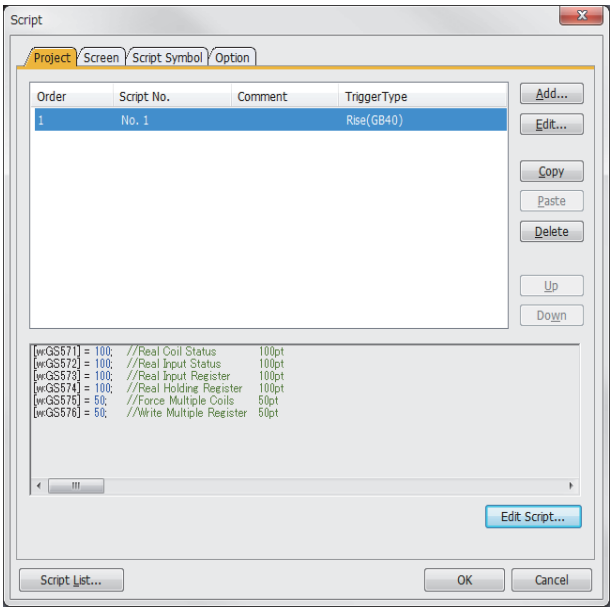
The settings of "time adjusting" or "time broadcast" made on the GOT will be disabled on the PLC.

Disconnecting some of multiple connected equipment

The GOT can disconnect some of multiple connected equipment by setting GOT internal device.
For example, the faulty station where a communication timeout error occurs can be disconnected from connected equipment.
For details of GOT internal device setting, refer to the following manual.
📖GT Designer3 (GOT2000) Screen Design Manual

MODBUS communication control function on the GS device

At GOT startup, set MODBUS communication control function with project scripts, etc.
If settings are changed after communication start, a communication error may occur.



Setting example for project script

MEMO

48 MODBUS/TCP MASTER CONNECTION

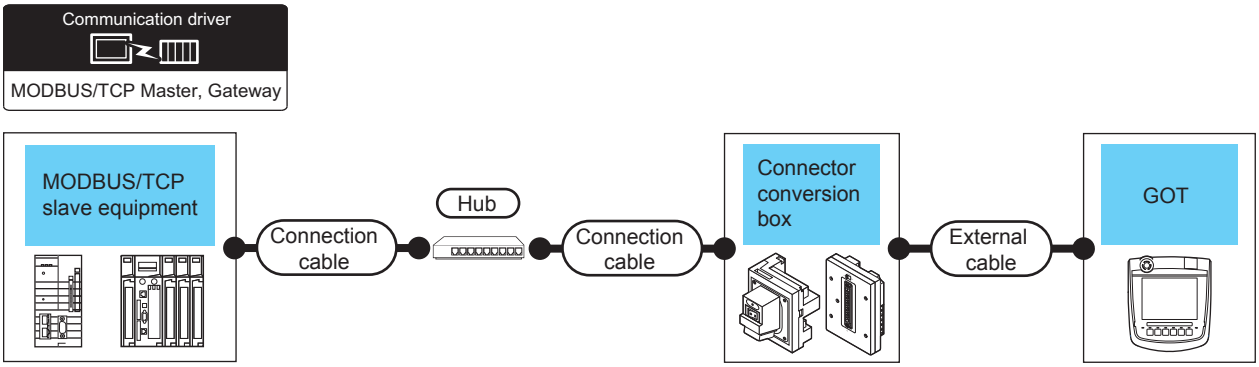
- Page 2089 Connectable Model List
- Page 2090 System Configuration
- Page 2091 GOT Side Settings
- Page 2095 MODBUS/TCP Slave Side Settings
- Page 2095 Function Code
- Page 2095 MODBUS Communication Control Function
- Page 2095 Settable Device Range
- Page 2096 Example of Connection
- Page 2102 Precautions

48.1 Connectable Model List

GOT2000 Series products support the master function of MODBUS/TCP communication, the open FA network.
Thus, the GOT can be connected with each MODBUS/TCP slave.
For the MODBUS/TCP equipment validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin.
📖List of Valid Devices Applicable for GOT2000 Series MODBUS Connection for Overseas (GOT-A-0170)
For Technical Bulletins, go to the Mitsubishi Electric Factory Automation Global Website.
www.MitsubishiElectric.com/fa

48.2 System Configuration

Connecting to MODBUS/TCP slave equipment



Controller	Communication Type	Connection cable		External device	Connection cable		Connector conversion box	External cable *6	GOT model *2	Number of connectable equipment
		Cable model*4	Maximum segment length*3		Cable model	Maximum segment length*3				
MODBUS/TCP equipment	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	Hub*1	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When controller: GOT is N: 1 The number of controllers for 1 GOT is TCP: 128 or less. When controller: GOT is 1: N The following shows the number of GOTs for 1 controller Depends on the MODBUS/TCP equipment used.*5
							GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
							GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
							GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

*1 Connect the GOT to the MODBUS/TCP equipment via a hub.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.

*2 When connecting GOT2000 to equipment that meets the 10BASE (-T/2/5) standard, use the switching hub and operate in an environment where 10Mbps and 100Mbps can be mixed.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

*4 Use the straight cable.

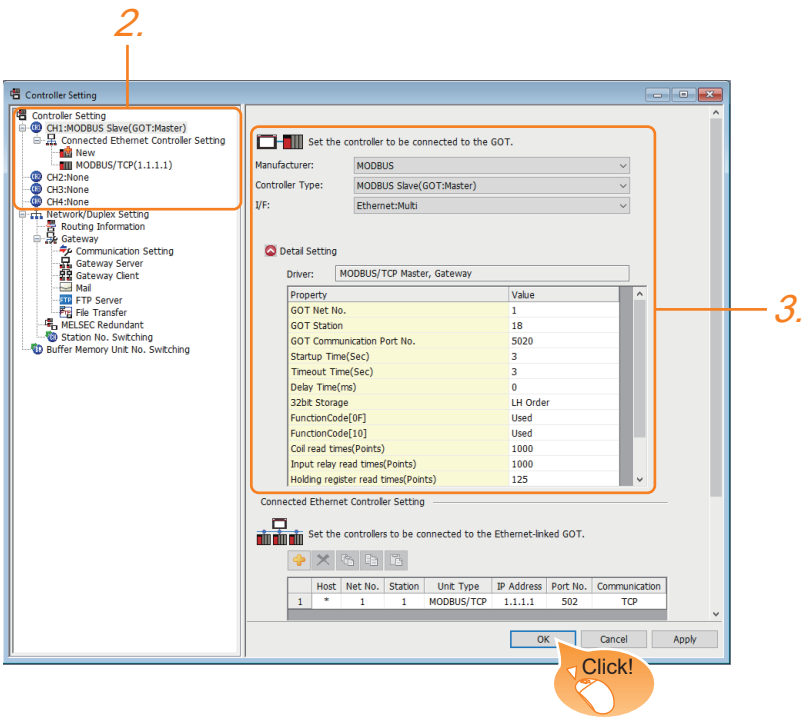
*5 For details, refer to the MODBUS/TCP equipment manual.

*6 Use C or later version of GT11H-C□□-37P.

48.3 GOT Side Settings

Setting communication interface (Controller Setting)

Set the channel of the equipment to be connected to the GOT.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Set the following items.

- [Manufacturer]: [MODBUS]
- [Controller Type]: [MODBUS Slave(GOT:Master)]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 2092 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be set and confirmed in [I/F Communication Setting]. For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
GOT Net No.	1
GOT Station	18
GOT Communication Port No.	5020
Startup Time(Sec)	3
Timeout Time(Sec)	3
Delay Time(ms)	0
32bit Storage	LH Order
FunctionCode[0F]	Used
FunctionCode[10]	Used
Coil read times(Points)	1000
Input relay read times(Points)	1000
Holding register read times(Points)	125
Input register read times(Points)	125
Coil write times(Points)	800
Holding register write times(Points)	100

Item	Description	Range
GOT Net No.	Set the network No. of the GOT. (Default: 1)	1 to 239
GOT Station*1	Set the station No. of the GOT. (Default: 18)	1 to 247
GOT Communication Port No.	Set the GOT port No. for the connection with the Ethernet module. (Default: 5020 *2)	1024 to 5010, 5014 to 65534 (Except for 5011, 5012, 5013 and 49153 to 49170)
Startup Time	Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU. (Default: 3sec)	3 to 255sec
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	3 to 90sec
Delay Time	Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms)	0 to 10000 (ms)
32bit Storage	Select the steps to store two words (32-bit data). (Default: LH Order)	LH Order/HL Order
FunctionCode[0F]	Set whether to use the function code [0F]. (Default: Used)	Used/Unused
FunctionCode[10]	Set whether to use the function code [10]. (Default: Used)	Used/Unused
Coil read times	Set the read points of the coil. (Default: 1000 points)	1 to 2000 (points)
Input relay read times	Set the read points of the input relay. (Default: 1000 points)	1 to 2000 (points)
Holding register read times	Set the read points of the holding register. (Default: 125 points)	1 to 125 (points)
Input register read times	Set the read points of the input register. (Default: 125 points)	1 to 125 (points)
Coil write times	Set the write points of the coil. (Default: 800 points)	1 to 800(points)
Holding register write times	Set the write points of the holding register. (Default: 100 points)	1 to 100(points)

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 2094 Connected Ethernet Controller Setting

*2 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

GOT IP address setting

Set the following communication port setting.

• Standard port

GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

• [Default Gateway]

• [Peripheral S/W Communication Port No.]

• [Transparent Port No.]

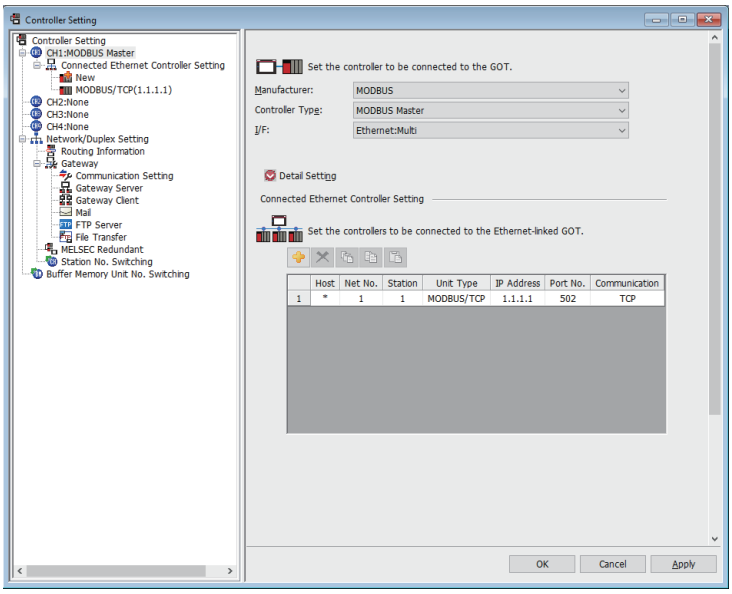
IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 80 GOT Ethernet Setting

Connected Ethernet Controller Setting



Item	Description	Range
Host	The host is displayed. It refers to a station that can be connected without setting a station number. (The host is indicated with an asterisk (*).)	—
Net No.	Set the network No. of the connected Ethernet module. (Default: 1)	1 to 239
Station*2	Set the station No. of the connected Ethernet module. (Default: 1)	1 to 247
Unit Type *1	Select the destination Ethernet module. (Default: MODBUS/TCP)	MODBUS/TCP, MODBUS/TCP(unit ID fixed)
IP Address	Set the IP address of the connected Ethernet module. (Default: 1.1.1.1)	PLC side IP address
Port No.	Set the port No. of the connected Ethernet module. (Default: 502)	1 to 65535
Communication format	TCP (fixed)	TCP (fixed)

*1 When the module ID is required to be fixed to 255, select [MODBUS/TCP(unit ID fixed)].

*2 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].

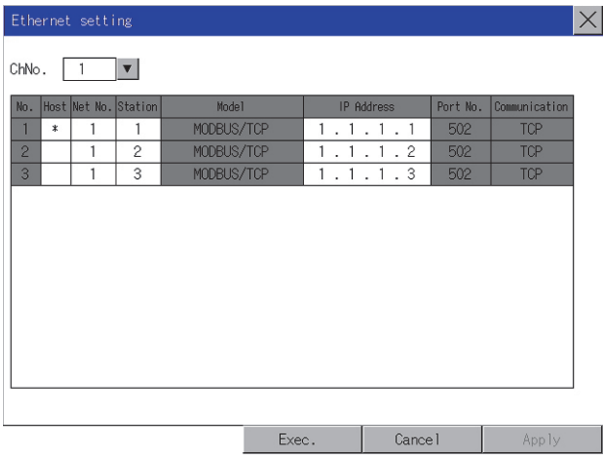
☞ Page 2092 Communication detail settings

Point

• Changing the host with GOT module

The host can be changed by the GOT module Utility. For details of settings, refer to the following.

GOT2000 Series User's Manual (Utility)



48.4 MODBUS/TCP Slave Side Settings

For details of the MODBUS/TCP equipment, refer to the manual of MODBUS/RTU equipment to be used.

48.5 Function Code

The following shows the message format for the MODBUS communication.

Address	Function code	Data	CRC

The GOT supports the following function codes.

Function code	Function	Number of devices that are accessible with one message [Unit: point(s)]
0x01	Read Coils	1 to 1000
0x02	Read Discrete Inputs	1 to 1000
0x03	Read Holding Registers	1 to 125
0x04	Read Input Registers	1 to 125
0x05	Write Single Coil	1
0x06	Write Single Register	1
0x0F	Write Multiple Coils	1 to 800
0x10	Write Multiple Register	1 to 123
0x14	Read File Record	1 to 124
0x15	Write File Record	1 to 122

48.6 MODBUS Communication Control Function

This function is to prevent a communication response delay by the equipment with different specifications in the MODBUS network.

The GOT special register (GS) controls available function codes.

Set this function when equipment applicable to the following conditions is used on the MODBUS network.

- Equipment that supports only some function codes
- Equipment whose maximum transfer size is small for function codes

The following lists the GOT special registers (GS) used for the MODBUS communication control function.

GOT special register (GS)	Description
GS579	Specification of the communication setting (common or individual) for each CH
GS570 to GS576	Common communication settings
GS590 to GS596	Individual communication settings for CH1
GS597 to GS603	Individual communication settings for CH2
GS604 to GS610	Individual communication settings for CH3
GS611 to GS617	Individual communication settings for CH4

For the details of the GOT special registers (GS), refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

48.7 Settable Device Range

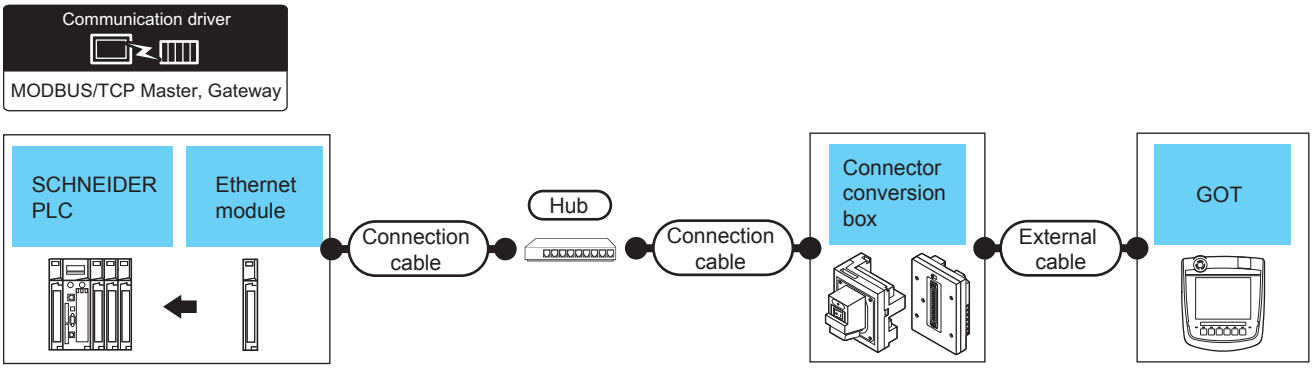
For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1
MODBUS ([MODBUS Slave(GOT:Master)])

48.8 Example of Connection

Connecting to SCHNEIDER PLC

System Configuration



controller	Ethernet module*4	Communication Type	Connection cable		External device	Connection cable		Connector conversion box	External cable *6	GOT model *2	Number of connectable equipment
			Cable model*5	Max. distance*3		Cable model	Max. distance*3				
Modicon Premium Series	TSX ETY 4102 TSX ETY 5102	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	Hub*1	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	64 GOTs for 1 PLC
								GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
								GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
								GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

controller	Ethernet module*4	Communication Type	Connection cable		External device	Connection cable		Connector conversion box	External cable *6	GOT model *2	Number of connectable equipment
			Cable model*5	Max. distance*3		Cable model	Max. distance*3				
Modicon Premium Series	140 NOE 771 00 140 NOE 771 10 140 NWM 100 00	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	Hub*1	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	64 GOTs for 1 PLC
								GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
								GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
								GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

*1 Connect the GOT to the Ethernet module via a hub.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.

*2 When connecting GOT2000 to equipment that meets the 10BASE (-T/2/5) standard, use the switching hub and operate in an environment where 10Mbps and 100Mbps can be mixed.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

*4 Product manufactured by SCHNEIDER ELECTRIC SA.For details of the product, contact SCHNEIDER ELECTRIC SA.

*5 Use the straight cable.

*6 Use C or later version of GT11H-C□□-37P.

PLC Side Setting

Point

SCHNEIDER ELECTRIC PLC

For details of SCHNEIDER PLC, refer to the following manual.

SCHNEIDER PLC user's Manual

■Parameter settings

Set the parameter settings with programming software for SCHNEIDER PLC.

- For Modicon Premium series

Set for PL7 Pro programming software.

Item	Set value
Processors	Connected CPU module
Memory cards	Memory card to be used
Module	Connected Ethernet module
IP Address	IP address for Ethernet module
Size of global address fields	Setting for device points Bits: Coil, Input Words: Input register, Maintenance register

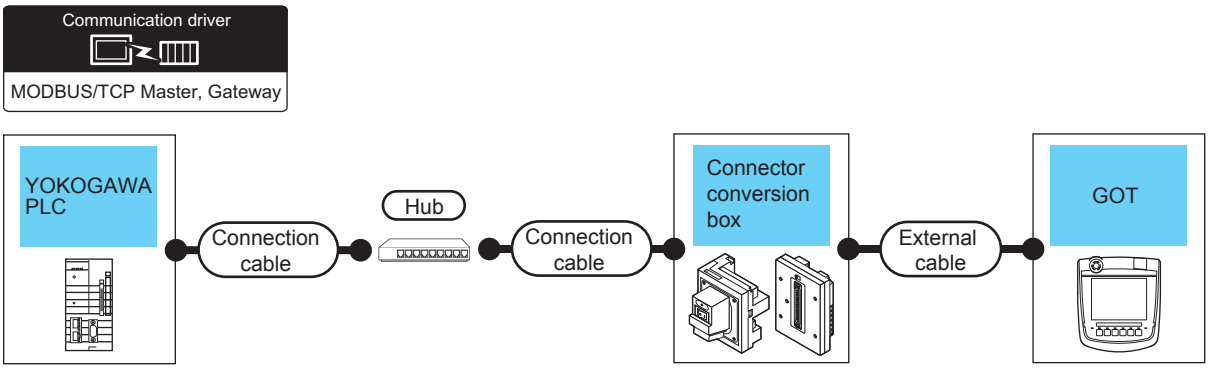
- For Modicon Quantum series

Set for Concept programming software.

Item	Set value
PLC Selection	Connected CPU module
TCP/IP Ethernet	Numbers of unit
I/O Module Selection	Connected Ethernet module
Internet Address	IP address for Ethernet module

Connecting to YOKOGAWA PLC

System Configuration



controller	Communication Type	Connection cable		External device	Connection cable		Connector conversion box	External cable *6	GOT model *2	Number of connectable equipment
		Cable model *5	Max. distance *4		Cable model	Max. distance *4				
STARDOM *1 (NFCP100, NFJT100)	Ethernet	Twisted pair cable • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e	100m	Hub *2	Twisted pair cable • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	126 GOTs for 1 PLC
							GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
							GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
							GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

*1 When connecting STARDOM to MODBUS/TCP, Modbus Communication Portfolio License is required.
For details, refer to the following manual.
YOKOGAWA PLC user's Manual

*2 When connect a GOT to a PLC, connect to the PCL Ethernet port via a hub.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.

*3 When connecting GOT2000 to equipment that meets the 10BASE (-T/2/5) standard, use the switching hub and operate in an environment where 10Mbps and 100Mbps can be mixed.

*4 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*5 Use the straight cable.

*6 Use C or later version of GT11H-C□□-37P.

PLC Side Setting

Make the communication settings as shown below. For details of the communication settings, refer to the following manual.
📖Peripheral Software Manual for YOKOGAWA PLC

Point

Connection between STARDOM and the PC for communication settings
For the communication settings of STARDOM, STARDOM and the PC for communication settings must be connected to Ethernet using the Resource Configurator (peripheral software).

■Modbus Communication Portfolio License

To set the communication settings for STARDOM, an installation of Modbus Communication Portfolio License is required.
For details of the communication settings, refer to the following manual.
📖STARDOM FCN/FCJ Guide

■Defining Logic POU

Define Logic POU using Logic Designer (peripheral software), and download the project to STARDOM.

• Start Logic Designer and create a new project using a template.

Use [STARDOM Serial Communication] template.

• Insert Firmware Library to the new project.

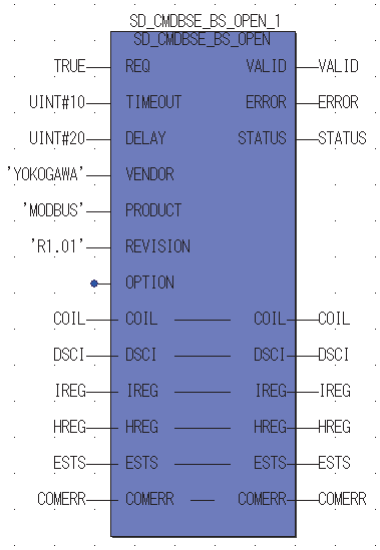
Right-click [Library] under the project tree in Logic Designer.
Right-click [Insert] and select [Firmware Library].
Double-click the [SD_FCXPLCE_LIB] folder and double-click [SD_FCXPLCE_LIB.fwl] to select it.
The library path inserted in the procedures above is as follows.
{Install Folder}\LogicDesigner\Mwt\Plc\Fw_lib\SD_FCXPLCE_LIB\SD_FCXPLCE_LIB.fwl

• Insert User Library to the new project.

Right-click [Library] under the project tree in Logic Designer.
Right-click [Insert] and select [User Library].
Double-click [SD_CMODBUSE_PF.mwt], [SD_CUTIL_PF.mwt] and [SD_CMODBUSS_PF.mwt] to select it.
(When [STARDOM Serial Communication] is used for the template, [SD_CUTIL_PF.mwt] is inserted as default.)
The library path inserted in the procedures above is as follows.
{Install Folder}\LogicDesigner\Libraries\SD_CMODBUSE_PF.mwt
{Install Folder}\LogicDesigner\Libraries\SD_CUTIL_PF.mwt
{Install Folder}\LogicDesigner\Libraries\SD_CMODBUSS_PF.mwt

• Copy a sample project POU to the new project.

Open "SD_CMODBUSE_Sample1.mwt".
Right-click [ComEServerModbus*] in the Logic POU under the project tree in the SD_CMODBUSE_Sample1 project, and select [Copy].
Right-click the [Logic POU] under the project tree in the previously created project, and select [Paste].
Double-click the [ComEServerModbus*] file in the [ComEServerModbus*] folder.
For the following terminals, set as shown below.



• Set devices to be monitored by a GOT.

Right-click the [ComEServerModbus*] file in the [ComEServerModbus*] folder in the logic POU under the project tree and select [Insert] - [Cord worksheet].

Set the variable devices to be monitored.

Instantiate Logic POU.

Define an already defined instance to Task0.

Right-click [Physical hardware] - [Configuration:IPC_33/FCX01:FCX/Tasks/Task0:CYCLIC] and select [Insert] - [Program instance].

Define the program instance name and select ComEServerModbus for the program type.

• Defining Target Setting

Define the IP address of STARDOM to set the communication settings.

Double-click [Physical hardware] - [Configuration:IPC_33/FCX01:FCX/Target Setting] and input the IP address or the host name.

• Downloading the project

Execute [Build] - [Make].

(Same as when pressing the function key F9).

Download after confirming that the compile error does not occur. Select [Download] in the project control dialog displayed when [Online] - [Project control] is selected.

When the download is completed, select [Cold] and start STARDOM.

Device range

When performing monitoring with the GOT connected to a YOKOGAWA PLC and setting devices for objects, use devices within the device range of the YOKOGAWA PLC.

When a device outside the range is set on an object, an indefinite value is displayed on the object.

(No error is displayed in the system alarm.)

For details on the device range of YOKOGAWA PLCs, refer to the following manual:

YOKOGAWA PLC user's Manual

Precautions

■For dual-redundant configuration

When STARDOM is configured with a redundant system, the connection is not supported.

■Not communicating with GOT and STARDOM in a specified period

When the GOT does not communicate with STARDOM in a specified period during the GOT is turned on, STARDOM disconnects the line for the GOT. As the line is disconnected, the GOT displays an error when the GOT monitors STARDAM after the disconnection.

After the error displayed as the system alarm (No.402: timeout error) on the GOT, the normal communication is recovered and the GOT can monitor STARDOM.

48.9 Precautions

When connecting to multiple GOTs

■Setting PLC No.

When connecting two or more GOTs in the MODBUS/TCP network, set each [PLC No.] to the GOT.

☞ Page 2091 Setting communication interface (Controller Setting)

■Setting IP address

Do not use the IP address "192.168.0.18" when using multiple GOTs with the GOT 1000 series mixed.

A communication error may occur on the GOT with the IP address.

When setting IP address

Do not use "0" and "255" at the end of an IP address.

(Numbers of *.*.*.0 and *.*.*.255 are used by the system)

The GOT may not monitor the controller correctly with the above numbers.

Consult with the administrator of the network before setting an IP address to the GOT and controller.

When connecting to the multiple network equipment (including GOT) in a segment

By increasing the network load, the transmission speed between the GOT and PLC may be reduced.

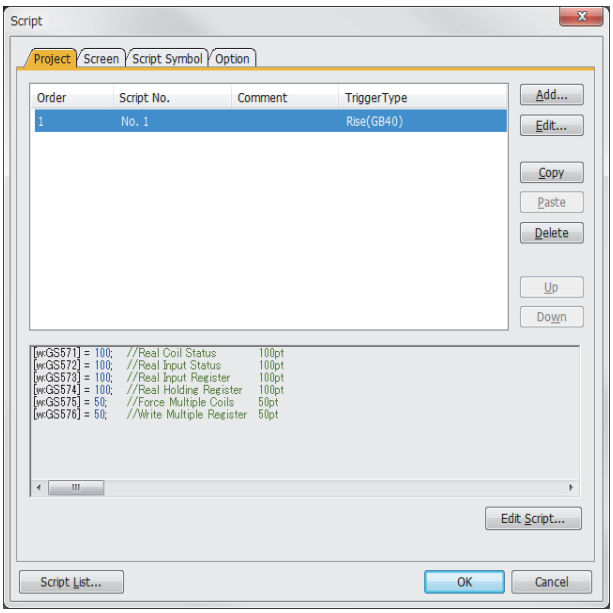
The following actions may improve the communication performance.

- Using a switching hub
- More high speed by 100BASE-TX (100Mbps)
- Reduction of the monitoring points on GOT

MODBUS communication control function on the GS device

At GOT startup, set MODBUS communication control function with project scripts, etc.

If settings are changed after communication start, a communication error may occur.



Setting example for project script

49 MODBUS/RTU SLAVE CONNECTION

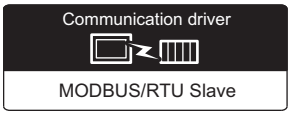
- Page 2103 Connectable Model List
- Page 2104 System Configuration
- Page 2106 Connection Diagram
- Page 2111 GOT Side Settings
- Page 2113 MODBUS/RTU master equipment Side Settings
- Page 2113 Function Code
- Page 2113 GOT (Slave) Operations for All Station Specification (Broadcast)
- Page 2113 Settable Device Range
- Page 2114 Precautions

49.1 Connectable Model List

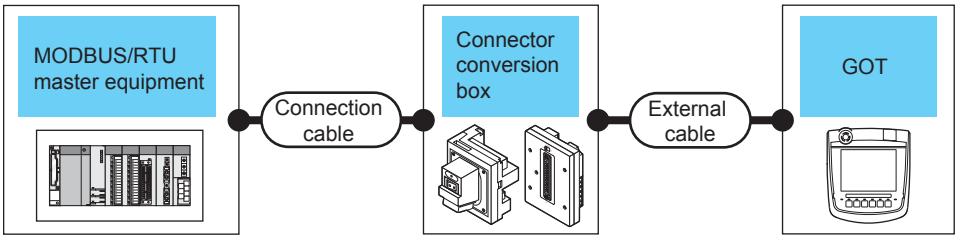
The GOT2000 series supports the slave function of the MODBUS communication that is the open FA network.
Thus, the GOT can be connected with each MODBUS master equipment.
For the MODBUS/RTU equipment validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin.
📖List of Valid Devices Applicable for GOT2000 Series MODBUS Connection for Overseas (GOT-A-0170)
For Technical Bulletins, go to the Mitsubishi Electric Factory Automation Global Website.
www.MitsubishiElectric.com/fa

49.2 System Configuration

Connecting to MODBUS/RTU master equipment



When using the connector conversion box

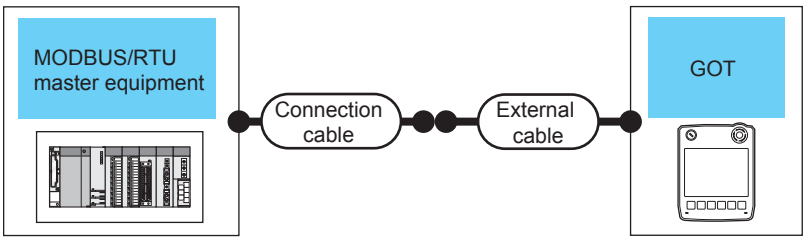


Controller	Communication Type	Connection cable Cable model Connection diagram number	Connector conversion box	External cable	GOT Model	Total distance *1	Number of connectable equipment
MODBUS/RTU master equipment	RS-232	User preparing Page 2106 RS-232 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m)	GT 2506HS	6m	1 MODBUS/RTU master equipment for 1 GOT
			GT11H-CNB-37S	GT11H-C30-37P(3m)	GT 2505HS		
	RS-422/485	User preparing Page 2108 RS-422/485 connection diagram 1)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 GOTs for 1 MODBUS/RTU master equipment *2
			GT11H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)	GT 2505HS		Up to 1 GOT for 1 MODBUS/RTU master equipment
	RS-422/485	User preparing Page 2109 RS-422/485 connection diagram 4)	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	13m	Up to 31 GOTs for 1 MODBUS/RTU master equipment *2

*1 The shortest specification on the MODBUS/RTU equipment side is prioritized.

*2 When it is less than 31 units, the number of the maximum connectable units on the MODBUS/RTU equipment side will apply.

When using the external cable (GT11H-C□□□-37P)

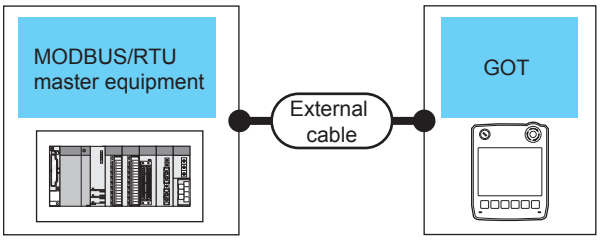


Controller		Connection cable	External cable	GOT Model	Total distance *1	Number of connectable equipment
Model	Communication Type	Cable model Connection diagram number				
MODBUS/RTU master equipment	RS-232	User preparing Page 2106 RS-232 connection diagram 2)	GT11H-C30-37P(3m)	GT 2505HS	6m	1 MODBUS equipment for 1 GOT
	RS-422/485	User preparing Page 2108 RS-422/485 connection diagram 2)	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		13m	Up to 10 MODBUS equipment for 1 GOT*2

*1 The shortest specification on the MODBUS/RTU equipment side is prioritized.

*2 When it is less than 10 units, the number of the maximum connectable units on the MODBUS/RTU equipment side will apply.

When using the external cable (GT11H-C□□□)



Controller		External cable	GOT Model	Total distance *1	Number of connectable equipment
Model	Communication Type				
MODBUS/RTU master equipment	RS-232	GT11H-C30(3m) GT11H-C60(6m) ☞ Page 2107 RS-232 connection diagram 3)	GT 2505HS	6m	1 MODBUS equipment for 1 GOT
	RS-422/485	GT11H-C30(3m) GT11H-C60(6m) GT11H-C100(10m) ☞ Page 2109 RS-422/485 connection diagram 3)		13m	Up to 10 MODBUS equipment for 1 GOT*2

*1 The shortest specification on the MODBUS/RTU equipment side is prioritized.

*2 When it is less than 10 units, the number of the maximum connectable units on the MODBUS/RTU equipment side will apply.

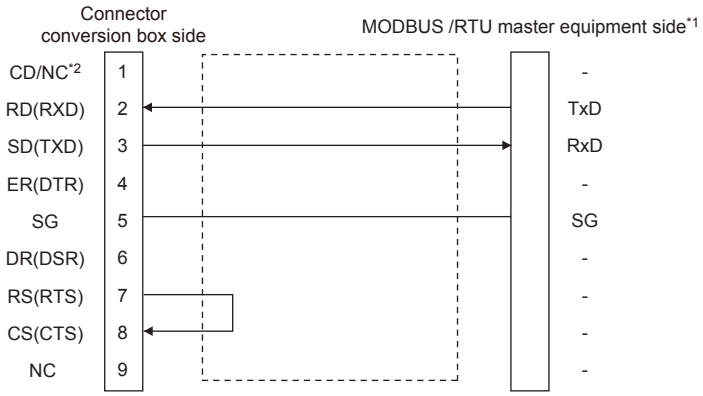
49.3 Connection Diagram

The following diagram shows the connection between the GOT and the controller.

RS-232 cable

Connection diagram

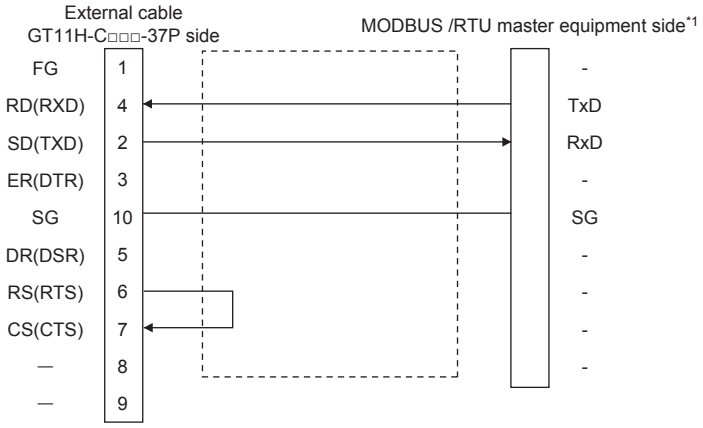
■RS-232 connection diagram 1)



*1 Some MODBUS/RTU master equipment require the control line (CS, RS, etc.) to be controlled.
Make sure to connect the cables and wires as described in the MODBUS/RTU master equipment manual.

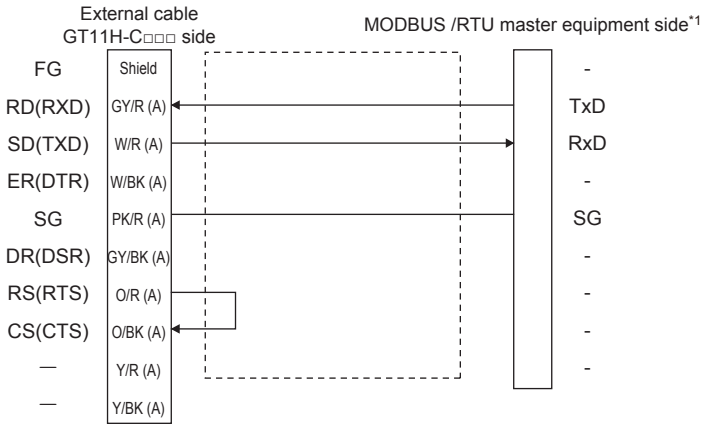
*2 GT2506HS-V: CD, GT2505HS-V: NC

■RS-232 connection diagram 2)



*1 Some MODBUS/RTU master equipment require the control line (CS, RS, etc.) to be controlled.
Make sure to connect the cables and wires as described in the MODBUS/RTU master equipment manual.

■RS-232 connection diagram 3)



*1 Some MODBUS/RTU master equipment require the control line (CS, RS, etc.) to be controlled.
Make sure to connect the cables and wires as described in the MODBUS/RTU master equipment manual.

Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-232 cable must be 6 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■MODBUS equipment side connector

Use the connector compatible with the MODBUS/RTU master equipment side module.

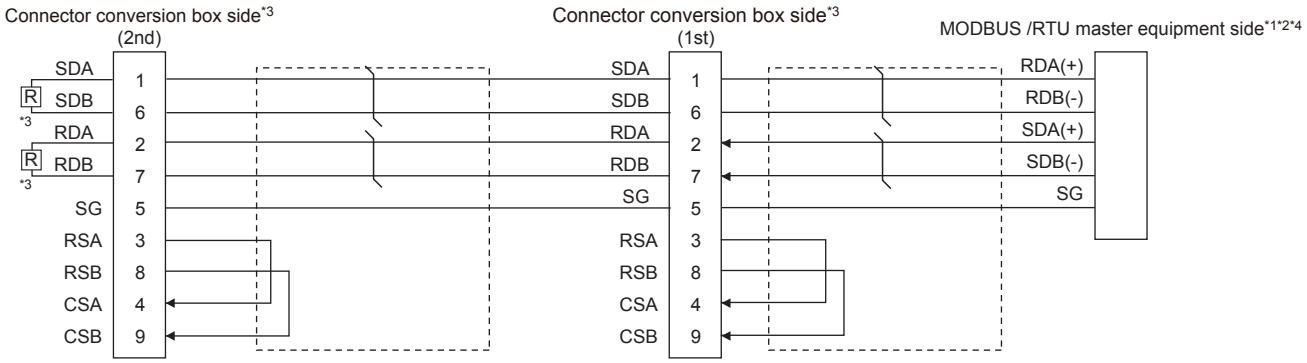
For details, refer to the MODBUS/RTU master equipment user's manual.

RS-422/485 cable

The following shows the connection diagrams and connector specifications of the RS-422/485 cable used for connecting the GOT to a PLC.

Connection diagram

■RS-422/485 connection diagram 1)



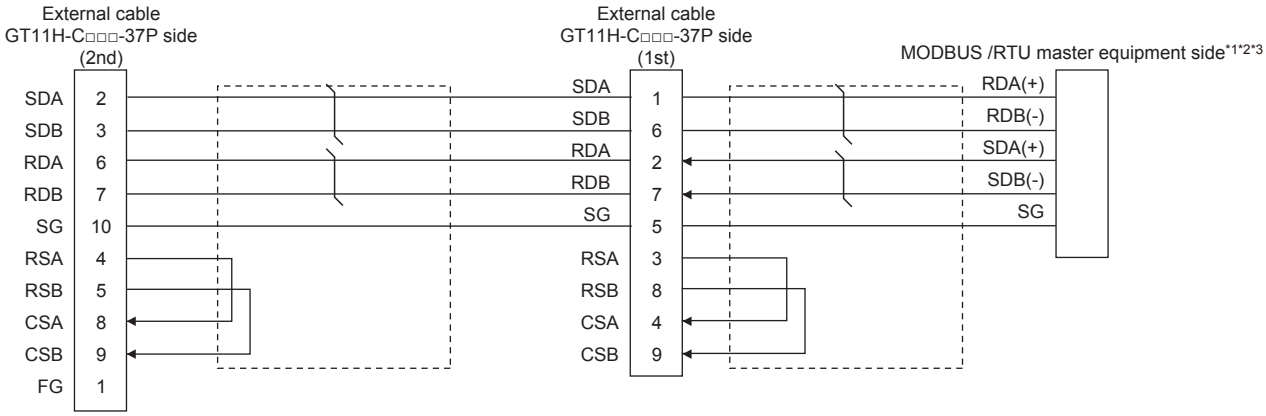
*1 Some MODBUS/RTU master equipment don't have SG.
In this case, the wiring between GOT and SG is unnecessary.

*2 Some MODBUS/RTU master equipment require the control line (CS, RS, etc.) to be controlled.
Make sure to connect the cables and wires as described in the MODBUS/RTU master equipment manual.

*3 For GT2506HS-V, set the terminating resistor setting switch of the GOT to "Disable" and connect a 330 Ω terminating resistor.
For GT2505HS-V, the terminating resistor of the GOT is fixed to 330Ω.
Do not connect a 330Ω terminating resistor.
☞ Page 91 Terminating resistors of GOT

*4 For the terminating resistor of MODBUS/RTU master equipment, refer to the manual of MODBUS/RTU master equipment to be used.

■RS-422/485 connection diagram 2)

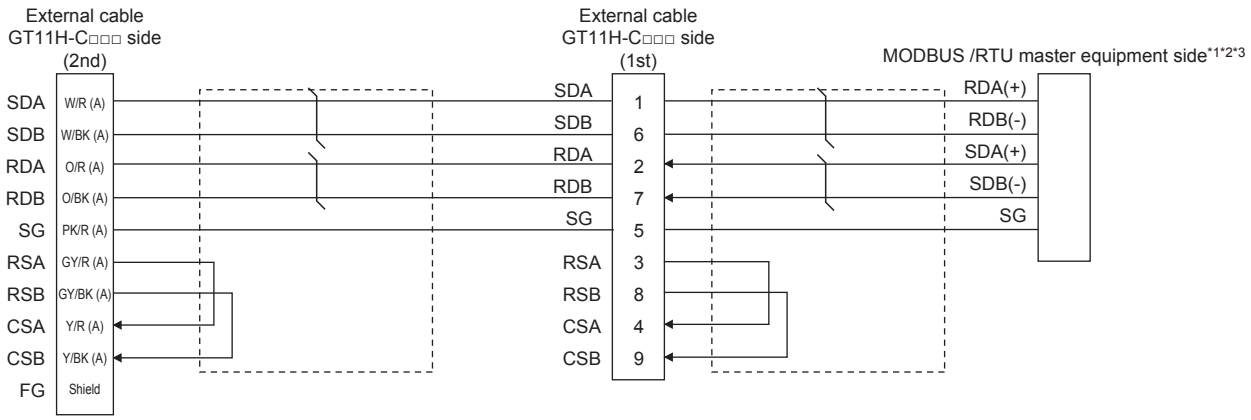


*1 Some MODBUS/RTU master equipment don't have SG.
In this case, the wiring between GOT and SG is unnecessary.

*2 Some MODBUS/RTU master equipment require the control line (CS, RS, etc.) to be controlled.
Make sure to connect the cables and wires as described in the MODBUS/RTU master equipment manual.

*3 For the terminating resistor of MODBUS/RTU master equipment, refer to the manual of MODBUS/RTU master equipment to be used.

■RS-422/485 connection diagram 3)

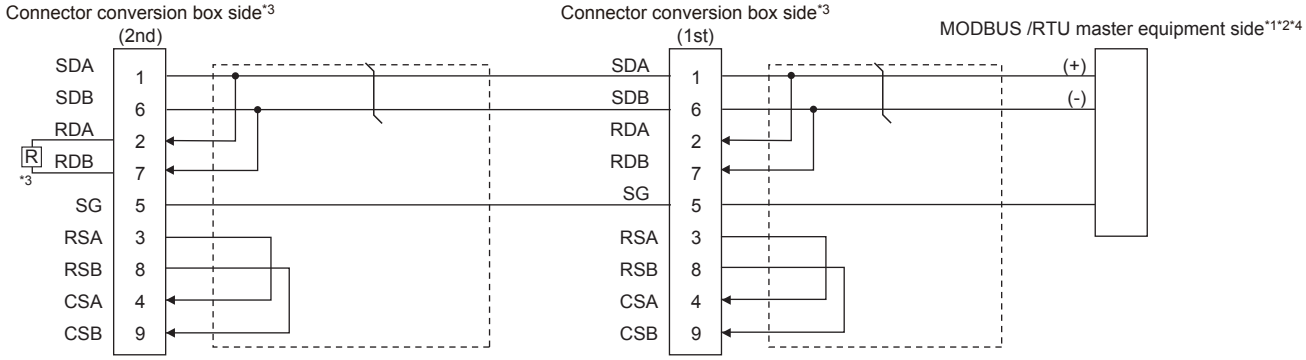


*1 Some MODBUS/RTU master equipment don't have SG.
In this case, the wiring between GOT and SG is unnecessary.

*2 Some MODBUS/RTU master equipment require the control line (CS, RS, etc.) to be controlled.
Make sure to connect the cables and wires as described in the MODBUS/RTU master equipment manual.

*3 For the terminating resistor of MODBUS/RTU master equipment, refer to the manual of MODBUS/RTU master equipment to be used.

■RS-422/485 connection diagram 4)



*1 The actual terminal layout on the MODBUS/RTU master equipment may differ from the example shown above.
SDA/B(+/-) and RDA/B(+/-) terminals can be separated from each other.
In such cases, make sure to connect the cables and wires as described in the MODBUS/RTU master equipment manual.

*2 Some MODBUS/RTU master equipment don't have SG.
In this case, the wiring between GOT and SG is unnecessary.

*3 Set the terminating resistor to "Enable" when arranging the GOT in the end position of the system configuration.
Set the terminating resistor to "Disable" when arranging the GOT in any position other than the end position of the system configuration.
☞ Page 91 Terminating resistors of GOT

*4 For the terminating resistor of MODBUS/RTU master equipment, refer to the manual of MODBUS/RTU master equipment.

Precautions when preparing a cable

■Cable length

The total distance (between GOT and controllers) of the RS-422/485 cable must be 13 m or less.

■GOT side connector

For the GOT side connector, refer to the following.

☞ Page 89 GOT connector specifications

■MODBUS/RTU master equipment side connector

Use the connector compatible with the MODBUS/RTU master equipment side module.

For details, refer to the MODBUS/RTU master equipment user's manual.

Connecting terminating resistors

■GOT side

When connecting a MODBUS/RTU master equipment to the GOT, a terminating resistor must be connected to the GOT.

- For GT2506HS-V

Set the terminating resistor using the terminating resistor setting switch.

- For GT2505HS-V

The terminating resistor setting is fixed to 330Ω.

For the procedure to set the terminating resistor, refer to the following.

☞ Page 91 Terminating resistors of GOT

■MODBUS/RTU equipment side

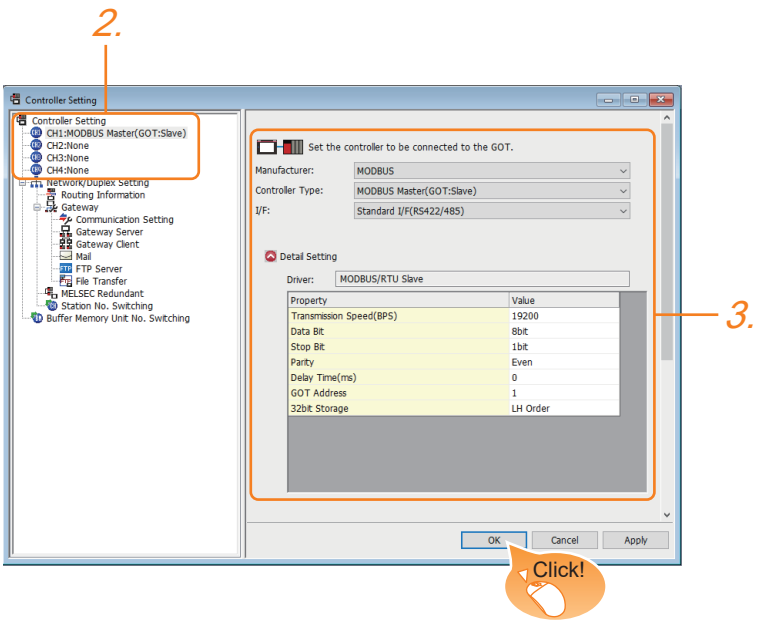
When connecting a MODBUS/RTU master equipment to the GOT, a terminating resistor must be connected to the MODBUS/RTU master equipment.

For details, refer to the MODBUS/RTU master equipment user's manual.

49.4 GOT Side Settings

Setting communication interface (Controller Setting)

Set the channel of the equipment to be connected to the GOT.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Select the following items and the detail setting is displayed.

- [Manufacturer]: [MODBUS]
- [Controller Type]: [MODBUS Master(GOT:Slave)]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 2112 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be set and confirmed in [I/F Communication Setting]. For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
Transmission Speed(BPS)	19200
Data Bit	8bit
Stop Bit	1bit
Parity	Even
Delay Time(ms)	0
GOT Address	1
32bit Storage	LH Order

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 19200bps)	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bits)	7bit/8bit
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit/2bit
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Even)	None Even Odd
Delay Time*1	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300ms
GOT Station	Set the station No. of the GOT. (Default: 1)	1 to 247
32bit Storage	Select the steps to store two words (32-bit data). (Default: LH Order)	LH Order/HL Order

*1 The GOT ensures in advance the minimum interval (3.5 characters time) for communication frame defined in the MODBUS/RTU. Therefore, the actual send delay time is as follows.

Actual send delay time = Send delay time set in the communication detail setting + 3.5 character time

Minimum interval for communication frame defined in MODBUS/RTU

When connecting to MODBUS/RTU master equipment which requires a delay longer than 3.5 character time, adjust the send delay time.

Point

If the communication with MODBUS/RTU master equipment is not established, some equipment which requires a delay longer than 3.5 character time may be connected.
Adjust the send delay time in the communication detail setting.

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting]after writing [Controller Setting] of project data.
For details on the Utility, refer to the following manual.
GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

49.5 MODBUS/RTU master equipment Side Settings

Point

MODBUS/RTU master equipment

For details of the MODBUS/RTU master equipment, refer to the manual of MODBUS/RTU master equipment to be used.

49.6 Function Code

The following shows the message format for the MODBUS communication.

Address	Function code	Data	CRC

The GOT (slave) supports the following function codes.

Function code	Function	Number of devices that are accessible with one message [Unit: point(s)]
0x01	Read Coils	1 to 2000
0x02	Read Discrete Inputs	1 to 2000
0x03	Read Holding Registers	1 to 125
0x04	Read Input Registers	1 to 125
0x05	Write Single Coil	1
0x06	Write Single Register	1
0x08 *1	Diagnostics	-
0x0F	Write Multiple Coils	1 to 1968
0x10	Write Multiple Register	1 to 123

*1 Only available to the loopback (sub function code 0x0000).

49.7 GOT (Slave) Operations for All Station Specification (Broadcast)

The all station specification (broadcast) operates when [0] is specified as the slave address in the request packet.

The following describes the GOT (Slave) Operations for All Station Specification (Broadcast) from the MODBUS/RTU master equipment.

- The GOT (slave) will not respond to the read-out requests specifying all stations from the MODBUS/RTU master equipment (read-out disabled).
- The GOT (slave) will perform the write-in requests specifying all stations from the MODBUS/RTU master equipment but will not respond.
- The GOT (slave) will not respond to the diagnosis requests specifying all stations from the MODBUS/RTU master equipment (loopback disabled).

49.8 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1
MODBUS ([MODBUS Master(GOT:Slave)])

49.9 Precautions

Errors that occur in the GOT at MODBUS/RTU slave connection

In MODBUS/RTU slave connection, contents of the message display, causes, and countermeasures when an error occurs in the GOT are described below.

When the following errors occur, the GOT will generate a system alarm.

Error code	Contents of the message display	Causes	Countermeasures
309*1	Device reading error. Correct device.	• An error occurred when reading consecutive devices. • A device that is out of the monitor range is specified at a place where consecutive device is specified, such as graph function or system information.	Correct so that a device No. in the monitor range is specified.
315*1	Device writing error. Correct device.	• Writing was executed to a device No. that is out of the monitor range. • Writing was executed to a write-prohibit device.	Review the write target device and the device No.
322*1	The specified device No. is out of range. Confirm the available device range.	• A device read error occurs. • The GOT accesses the device that is out of range specified by the master station.	To take corrective actions, check the range that is allocated to the master station and range of the monitoring target device.

*1 This may occur even when the MODBUS/RTU slave is not connected.

Error codes (MODBUS Exception Codes) returned from GOT (slave) to MODBUS master equipment

The GOT (slave) supports the following error codes (MODBUS Exception Codes) in respect to the request from the MODBUS master equipment.

When the following errors occur, the GOT will not generate a system alarm.

The description, causes and countermeasures for each error code are explained below.

■Error codes issued in common in respect to request from master equipment

Error code (HEX)	Category	Description	Causes	Countermeasures
0x01	-	ILLEGAL FUNCTION	A function code not supported by the GOT was received.	Use only function codes supported by GOT. Refer to the following for details on function codes supported by the GOT. ☞ Page 2113 Function Code

■Error code issued in response to read request from master equipment

Error code (HEX)	Category	Description	Causes	Countermeasures
0x02	Read/Write	ILLEGAL DATA ADDRESS	An out-of-range device was accessed.	Check that the device being accessed is correct.

■Error code issued in response to write request from master equipment

Error code (HEX)	Category	Description	Causes	Countermeasures
0x02	Read/Write	ILLEGAL DATA ADDRESS	An out-of-range device was accessed.	Check that the device being accessed is correct.
0x03	Write	ILLEGAL DATA VALUE	The request packet (number of write points, number of write data bytes, and number of write data items) is inconsistent.	Check that a correct packet is sent from the master equipment.

■Error code issued when diagnosis occurs (function code 0x08)

Error code (HEX)	Category	Description	Causes	Countermeasures
0x01	-	ILLEGAL FUNCTION	The GOT received an unsupported sub-function code.	Use only 0x0000 (loopback) for the sub-function codes.

Operation in which the GOT shifts to the offline mode

Before performing operation in which the GOT shifts to the offline mode such as writing the package data, stop the communication between the GOT and the MODBUS/RTU master equipment.
After shifting to the offline mode, the GOT cannot respond to the requests from the MODBUS/RTU master equipment.
Even after the GOT returns from the offline mode, the communication may not be performed until the timeout time of the MODBUS/RTU master equipment side elapses.

MEMO

50 MODBUS/TCP SLAVE CONNECTION

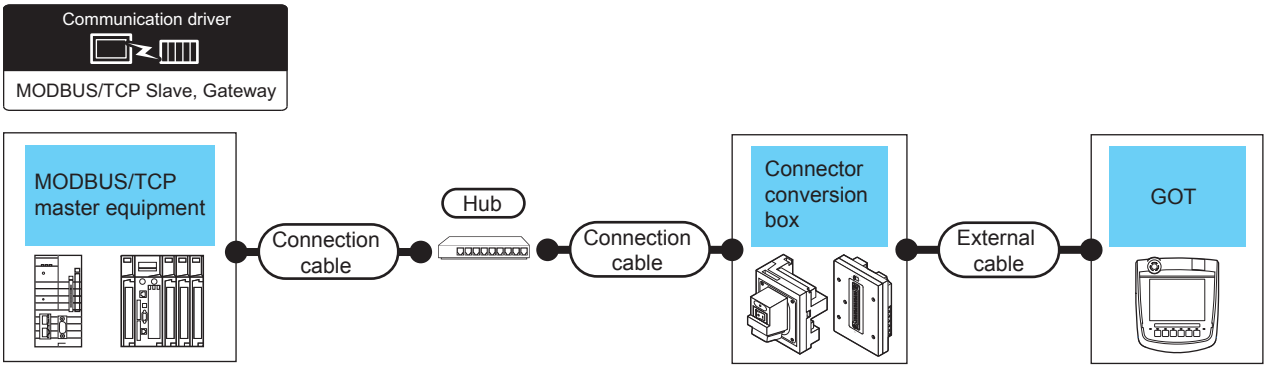
- Page 2117 Connectable Model List
- Page 2118 System Configuration
- Page 2119 GOT Side Settings
- Page 2121 MODBUS/TCP Master Equipment Side Settings
- Page 2121 Function Code
- Page 2121 Settable Device Range
- Page 2122 Precautions

50.1 Connectable Model List

The GOT2000 series supports the slave function of the MODBUS/TCP communication that is the open FA network.
Thus, the GOT can be connected with each MODBUS master equipment.
For the MODBUS/TCP equipment validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin.
📖List of Valid Devices Applicable for GOT2000 Series MODBUS Connection for Overseas (GOT-A-0170)
For Technical Bulletins, go to the Mitsubishi Electric Factory Automation Global Website.
www.MitsubishiElectric.com/fa

50.2 System Configuration

Connecting to MODBUS/TCP master equipment



Controller	Communication Type	Connection cable		External device	Connection cable		Connector conversion box	External cable *6	GOT model *2	Number of connectable equipment
		Cable model*4	Maximum segment length*3		Cable model	Maximum segment length*3				
MODBUS/TCP master equipment	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	Hub*1	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When the ratio of master equipment to the GOT is N:1 The number of master equipment for 1 GOT is 16 or less When the ratio of master equipment to the GOT is N:1 The following shows the number of GOTs for 1 master equipment Depends on the MODBUS/TCP master equipment used*5.
							GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
							GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
							GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

*1 Connect the GOT to the MODBUS/TCP master equipment via a hub.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.

*2 When connecting GOT2000 to equipment that meets the 10BASE (-T/2/5) standard, use the switching hub and operate in an environment where 10Mbps and 100Mbps can be mixed.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hub s has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

*4 Use the straight cable.

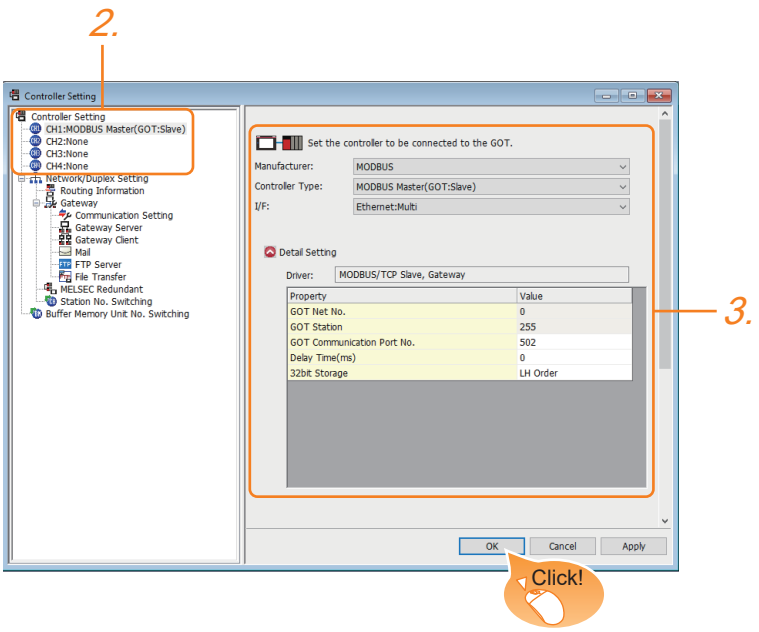
*5 For details, refer to the MODBUS/TCP master equipment manual.

*6 Use C or later version of GT11H-C□□-37P.

50.3 GOT Side Settings

Setting communication interface (Controller Setting)

Set the channel of the equipment to be connected to the GOT.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Select the following items and the detail setting is displayed.

- [Manufacturer]: [MODBUS]
- [Controller Type]: [MODBUS Master(GOT:Slave)]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 2120 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be set and confirmed in [I/F Communication Setting]. For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
GOT Net No.	0
GOT Station	255
GOT Communication Port No.	502
Delay Time(ms)	0
32bit Storage	LH Order

Item	Description	Range
GOT Net No.	Not used	-
GOT Station	Not used	-
GOT Communication Port No.	Set the GOT port No. for the connection with the Ethernet module. (Default: 502 *1)	502 to 65534 (Except for 503 to 1023, 5011 to 5013 and 49153 to 49170)
Delay Time	Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms)	0 to 10000(ms)
32bit Storage	Select the steps to store two words (32-bit data). (Default: LH Order)	LH Order/HL Order

*1 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

GOT IP address setting

Set the following communication port setting.

• Standard port

GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

• [Default Gateway]

• [Peripheral S/W Communication Port No.]

• [Transparent Port No.]

IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 80 GOT Ethernet Setting

50.4 MODBUS/TCP Master Equipment Side Settings

For details of the MODBUS/TCP master equipment, refer to the manual of MODBUS/TCP master equipment to be used.

50.5 Function Code

The following shows the message format for the MODBUS communication.

Address	Function code	Data	CRC

The GOT (slave) supports the following function codes (sub function codes).

Function code	Function	Number of devices that are accessible with one message [Unit: point(s)]
0x01	Read Coils	1 to 2000
0x02	Read Discrete Inputs	1 to 2000
0x03	Read Holding Registers	1 to 125
0x04	Read Input Registers	1 to 125
0x05	Write Single Coil	1
0x06	Write Single Register	1
0x0F	Write Multiple Coils	1 to 1968
0x10	Write Multiple Register	1 to 123

50.6 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1
MODBUS ([MODBUS Master(GOT:Slave)])

50.7 Precautions

Send delay

"Send delay" is a setting used for low-speed devices that cannot respond when the send response is too fast.
When "Send delay" is set with the GOT's communication devices detail settings, the "Send delay" is enabled for all master devices that are connected.

Errors that occur in the GOT at MODBUS/TCP slave connection

In MODBUS/TCP slave connection, contents of the message display, causes, and countermeasures when an error occurs in the GOT are described below.
When the following errors occur, the GOT will generate a system alarm.

Error code	Contents of the message display	Causes	Countermeasures
309*1	Device reading error. Correct device.	• An error occurred when reading consecutive devices. • A device that is out of the monitor range is specified at a place where consecutive device is specified, such as graph function or system information.	Correct so that a device No. in the monitor range is specified.
315*1	Device writing error. Correct device.	• Writing was executed to a device No. that is out of the monitor range. • Writing was executed to a write-prohibit device.	Review the write target device and the device No.
322*1	The specified device No. is out of range. Confirm the available device range.	• A device read error occurs. • The GOT accesses the device that is out of range specified by the master station.	To take corrective actions, check the range that is allocated to the master station and range of the monitoring target device.

*1 This may occur even when the MODBUS/TCP slave is not connected.

Error codes (MODBUS Exception Codes) returned from GOT (slave) to MODBUS master equipment

The GOT (slave) supports the following error codes (MODBUS Exception Codes) in respect to the request from the MODBUS master equipment. When the following errors occur, the GOT will not generate a system alarm.
The description, causes and countermeasures for each error code are explained below.

■Error codes issued in common in respect to request from master equipment

Error code (HEX)	Category	Description	Causes	Countermeasures
0x01	-	ILLEGAL FUNCTION	A function code not supported by the GOT was received.	Use only function codes supported by GOT. Refer to the following for details on function codes supported by the GOT. ☞ Page 2121 Function Code

■Error code issued in response to read request from master equipment

Error code (HEX)	Category	Description	Causes	Countermeasures
0x02	Read/Write	ILLEGAL DATA ADDRESS	An out-of-range device was accessed.	Check that the device being accessed is correct.

■Error code issued in response to write request from master equipment

Error code (HEX)	Category	Description	Causes	Countermeasures
0x02	Read/Write	ILLEGAL DATA ADDRESS	An out-of-range device was accessed.	Check that the device being accessed is correct.
0x03	Write	ILLEGAL DATA VALUE	The request packet (number of write points, number of write data bytes, and number of write data items) is inconsistent.	Check that a correct packet is sent from the master equipment.

PART 10 CLPA

51 SLMP CONNECTION

52 CC-LINK IE FIELD NETWORK BASIC CONNECTION

51 SLMP CONNECTION

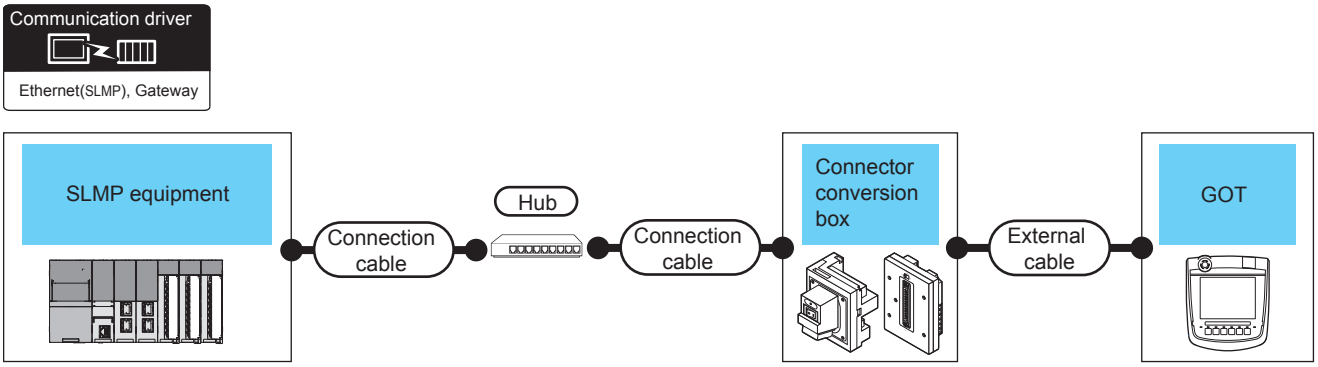
- Page 2124 Connectable Model List
- Page 2125 System Configuration
- Page 2126 GOT Side Settings
- Page 2131 SLMP Equipment Side Setting
- Page 2131 Settable Device Range
- Page 2132 Precautions

51.1 Connectable Model List

GOT2000 Series products support the master function of SLMP communication, the open FA network.
Thus, the GOT can be connected with each SLMP server.
For the SLMP-compatible equipment validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin.
📖List of SLMP-compatible Equipment Validated to Operate with the GOT2000 Series (GOT-A-0153)
For Technical Bulletins, go to the Mitsubishi Electric Factory Automation Global Website.
www.MitsubishiElectric.com/fa

51.2 System Configuration

Connecting to SLMP equipment



Controller	Communication Type	Connection cable		External device	Connection cable		Connector conversion box	External cable *6	GOT model *2	Number of connectable equipment
		Cable model*4	Maximum segment length*3		Cable model	Maximum segment length*3				
SLMP equipment	Ethernet	• 1000BASE-T 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	Hub*1	• 1000BASE-T 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	When SLMP equipment: GOT is N: 1 The number of SLMP equipment for 1 GOT is TCP: 128 or less. When SLMP equipment: GOT is 1: N The following shows the number of GOTs for 1 SLMP equipment Depends on the SLMP equipment used.*5
							GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
							GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
							GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

*1 Connect the GOT to the SLMP equipment via a hub.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX/1000BASE-T standards.

*2 When connecting GOT2000 to equipment that meets the 10BASE (-T/2/5) standard, use the switching hub and operate in an environment where 10Mbps and 100Mbps can be mixed.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades. For the limit, contact the switching hub manufacturer.

*4 Use the straight cable.

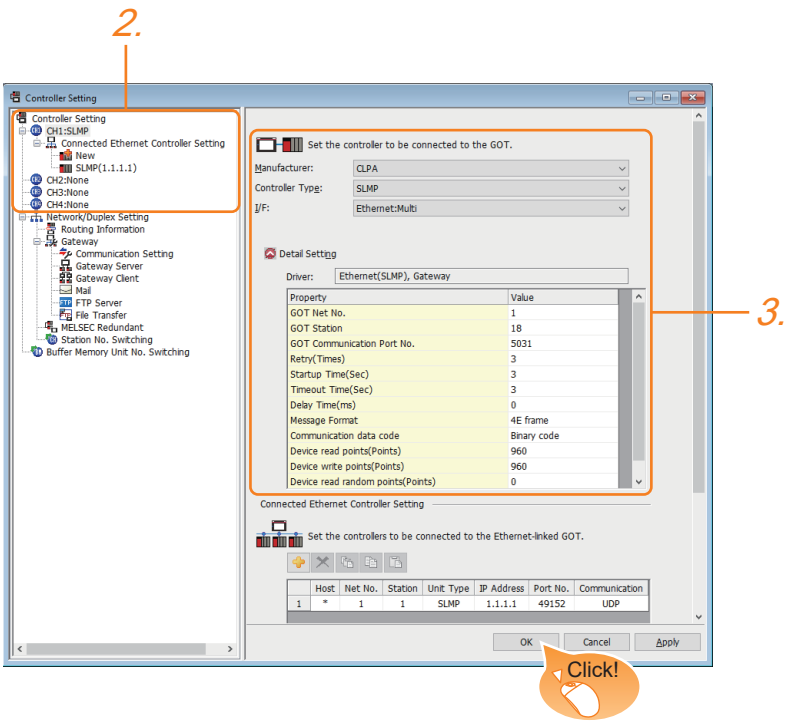
*5 For details, refer to the SLMP equipment manual.

*6 Use C or later version of GT11H-C□□-37P.

51.3 GOT Side Settings

Setting communication interface (Controller Setting)

Set the channel of the equipment to be connected to the GOT.



1. Select [Common] → [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Select the following items and the detail setting is displayed.

- [Manufacturer]: [CLPA]
- [Controller Type]: [SLMP]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 2127 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be set and confirmed in [I/F Communication Setting].For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
GOT Net No.	1
GOT Station	18
GOT Communication Port No.	5031
Retry(Times)	3
Startup Time(Sec)	3
Timeout Time(Sec)	3
Delay Time(ms)	0
Message Format	4E frame
Communication data code	Binary code
Device read points(Points)	960
Device write points(Points)	960
Device read random points(Points)	0
Device write random points(Points)	0

Item	Description	Range
GOT Net No.	Set the network No. of the GOT. (Default: 1)	1 to 239
GOT Station*1	Set the station No. of the GOT. (Default: 18)	1 to 120
GOT Communication Port No.	Set the GOT port No. for the connection with the Ethernet module. (Default: 5031 *3)	1024 to 5010, 5014 to 49152, 49171 to 65534 (Except for 49153 to 49170)
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 3times)	0 to 5times
Startup Time	Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU. (Default: 3sec)	3 to 255sec
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 90sec
Delay Time	Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms)	0 to 10000 (ms)
Message Format	Set the message format. (Default: 4E frame)	QnA compatible 3E frame, 4E frame
Communication data code	Set the communication data code. (Default: Binary code)	ASCII code, Binary code
Device read points*2	Set the device read points. (Default: 960 points)	1 to 960 points
Device write points*2	Set the device write points. (Default: 960 points)	1 to 960 points
Device read random points *2	Device read random points (Default: 0 point)	0 to 192 points
Device write random points *2	Device write random points (Default: 0 point)	0 to 160 points

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 2129 Connected Ethernet Controller Setting

*2 Pay attention to the following items for read/write points.
- Set the points to be processed at one-time communication.
- The point is in word device units. The point is to be 16 times of the set value for the bit device.
- The points could be less than the set value when UDP protocol or ASCII code are used.
- Refer to the following Technical News for details.

List of SLMP-compatible Equipment Validated to Operate with the GOT2000 Series (GOT-A-0153)

*3 When assigning the same driver to the multiple channels, in the communication drivers set as the second and following, the default value of [GOT Communication Port No.] becomes the earliest number in the vacant numbers of No. 6000 and later.

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

GOT IP address setting

Set the following communication port setting.

• Standard port

GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

• [Default Gateway]

• [Peripheral S/W Communication Port No.]

• [Transparent Port No.]

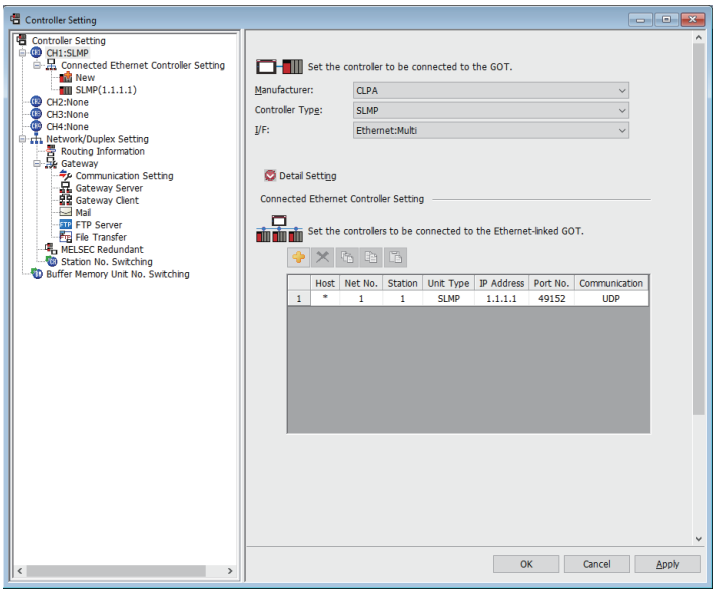
IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 80 GOT Ethernet Setting

Connected Ethernet Controller Setting



Item	Description	Range
Host	The host is displayed. It refers to a station that can be connected without setting a station number. (The host is indicated with an asterisk (*).)	—
Net No.	Set the network No. of the connected Ethernet module. (Default: 1)	1 to 239
Station*1	Set the station No. of the connected Ethernet module. (Default: 1)	1 to 120, 125 *2
Unit Type	SLMP (fixed)	—
IP Address	Set the IP address of the connected Ethernet module. (Default: 1.1.1.1)	SLMP equipment side IP address
Port No.	Set the port number of the SLMP compatible device. (Default: 49152)	1 to 65535
Communication format	UDP, TCP (Default: UDP)	Adjust the setting with the communication format of the SLMP compatible device.

*1 Set different values for [GOT Station] of [Detail Setting] and [Station] of [Connected Ethernet Controller Setting].
☞ Page 2127 Communication detail settings

*2 Set 125 to [Station] to access the master station of the CC-Link IE TSN network.

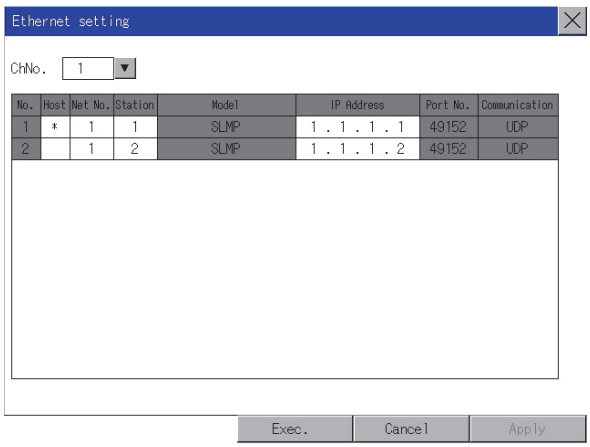
Point

Changing the host with GOT module

The host can be changed by the GOT module Utility.

For details of settings, refer to the following.

GOT2000 Series User's Manual (Utility)

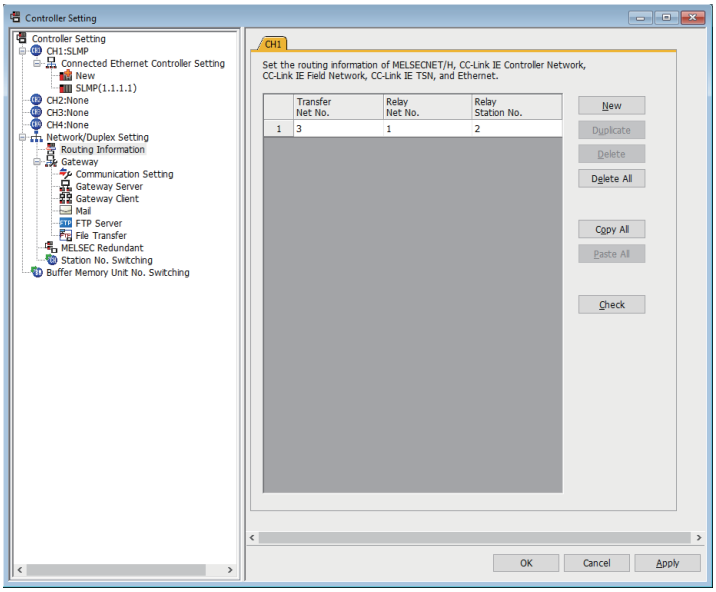


Routing parameter setting

Up to 64 [Transfer Network No.]s can be set.
However, the same transfer network number cannot be set twice or more (multiple times).
Therefore, the one that can access to other station from there quest source host GOT is 64 kinds of [Transfer NetworkNo.]s.

Point

Routing parameter setting
When communicating within the host network, routing parameter setting is unnecessary.
For details of routing parameters, refer to the following manual.
Manuals of SLMP equipment



Item	Range
Transfer Network No.	1 to 239
Relay Network No.	1 to 239
Relay Station No.	0 to 120, 125 *1

*1 When 125 is set to [Relay Station No.], the master station of CC-Link IE TSN can be accessed.

Point

• Routing parameter setting of relay station
Routing parameter setting may also be necessary for the relay station.
For the setting, refer to the following.
Manuals of SLMP equipment
• Parameter reflection function of MELSOFT Navigator
The color of the cells for the items which are reflected to GT Designer3 from MELSOFT Navigator changes to green.
Set items, which are displayed in green cells, from the MELSOFT Navigator.
When the settings of Transfer network No., Relay network No. or Relay station No. are reflected to the parameter from the MELSOFT Navigator, those settings are added.
Items set in advance are not deleted.
However, if the target network No. overlaps, the item set in advance is overwritten.
The routing information is used manually by the user when the data is created.
Therefore, after changing the network configuration by MELSOFT Navigator, create a routing information again.
For details of the creation of the routing information, refer to the MELSOFT Navigator help.

51.4 SLMP Equipment Side Setting

Refer to the following manual for the setting of the SLMP compatible devices.

Manuals of SLMP equipment

51.5 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1
CLPA ([SLMP])

51.6 Precautions

Replacing SLMP compatible device

After replacing an external device or a SLMP compatible device due to failure and so on, the devices may not communicate by changing the MAC address. (When replaced with a device that has the same IP address)
When a device in the Ethernet network is replaced, restart all devices in the network.

The deviation between MC protocol and SLMP protocol

When using our products used in MC protocol for SLMP protocol, there is a difference between the corresponding commands. Refer to the following manual and check if they are convertible.
📖SLMP Reference Manual

Setting the message format

When the message format setting is not consistent with the communication frame type, monitoring may not be performed properly.
Set the message format according to the communication frame type of the SLMP-compatible equipment.

- ST type: QnA compatible 3E frame
- MT type: 4E frame

For details of the communication frame of the SLMP-compatible equipment, refer to the following.
📖Manuals of SLMP equipment
For setting the message format, refer to the following.
☞ Page 2127 Communication detail settings

52 CC-LINK IE FIELD NETWORK BASIC CONNECTION

- Page 2133 Connectable Model List
- Page 2134 System Configuration
- Page 2137 GOT Side Settings
- Page 2140 Master Station Side Settings
- Page 2140 Settable Device Range
- Page 2141 Precautions

52.1 Connectable Model List

The GOT2000 series supports the remote station function of the CC-Link IE Field Network Basic communication, which is an open FA network.

Therefore, the GOT2000 series can communicate with various CC-Link IE Field Network Basic master stations.

For the CC-Link IE Field Network Basic master stations validated by Mitsubishi Electric Corporation, refer to the following.

📖List of CC-Link IE Field Network Basic-compatible Equipment Validated to Operate with the GOT2000 Series (GOT-A-0149)

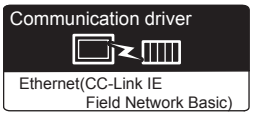
For Technical Bulletins, go to the Mitsubishi Electric Factory Automation Global Website.

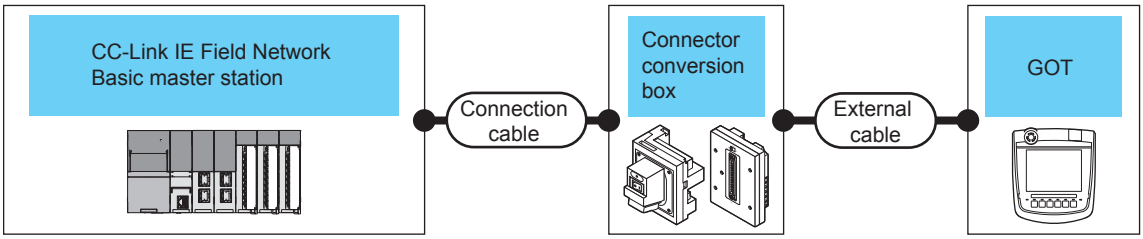
www.MitsubishiElectric.com/fa

52.2 System Configuration

When connecting to the CC-Link IE Field Network Basic master station

When connecting to one master station

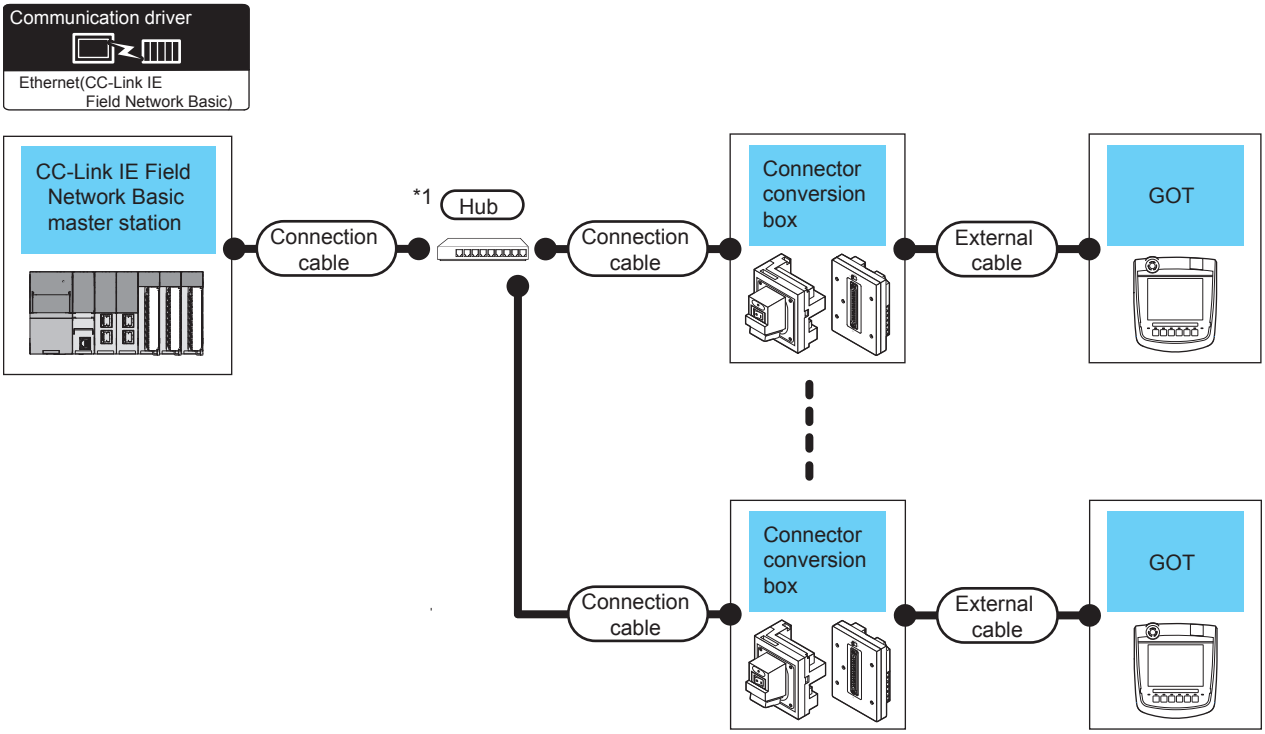




Controller	Communication Type	Connection cable		Connector conversion box	External cable *1	GOT model (remote station)	Number of connectable equipment
		Cable model	Maximum segment length				
CC-Link IE Field Network Basic master station	Ethernet	100BASE-TX Shielded twisted pair cable (STP) of category 5 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	1 GOT for 1 master station
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
				GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

*1 Use C or later version of GT11H-C□□-37P.

When multiple GOTs (remote stations) are connected to one master station



*1 Use hubs that satisfy the following conditions.
- Conform to the IEEE802.3 (100BASE-TX) standard.
- Include Auto MDI/MDI-X.
- Include an automatic negotiation function.
- Switching hub (layer 2 switch) (Do not use repeater hubs)

Controller	Communication Type	Connection cable		External device	Connection cable		Connector conversion box	External cable*5	GOT model (remote station)	Number of connectable equipment
		Cable model*3	Maximum segment length*2		Cable model	Maximum segment length*2				
CC-Link IE Field Network Basic master station	Ethernet*4	100BASE-TX Shielded twisted pair cable (STP) of category 5 or higher	100m	Hub*1	100BASE-TX Shielded twisted pair cable (STP) of category 5 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	Up to 64 GOTs (remote stations) for 1 master station
							GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)		
							GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	
							GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)		

*1 Connect the GOT to the CC-Link IE Field Network Basic master station via a hub.
Use cables, connectors, and hubs that meet the IEEE802.3 100BASE-TX standards.

*2 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*3 Use the straight cable.

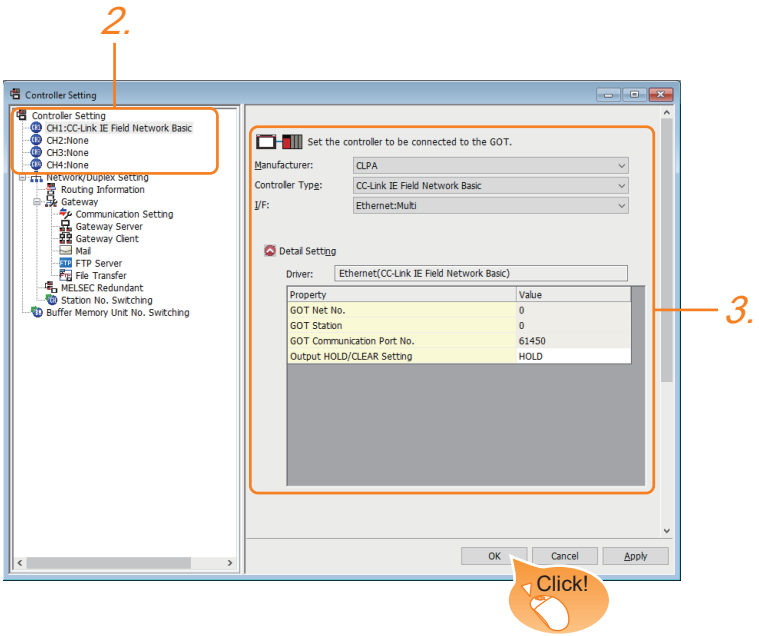
*4 CC-Link IE Field Network Basic communication does not support connection beyond routers.

*5 Use C or later version of GT11H-C□□-37P.

52.3 GOT Side Settings

Setting communication interface (Controller Setting)

Set the channel of the equipment to be connected to the GOT.



1. Select [Common] [Controller Setting] from the menu.

2. In the [Controller Setting] window, select the channel No. to be used from the list menu.

3. Select the following items and the detail setting is displayed.

- [Manufacturer]: [CLPA]
- [Controller Type]: [CC-Link IE Field Network Basic]
- [I/F]: Interface to be used
- [Detail Setting]: Configure the settings according to the usage environment.

☞ Page 2138 Communication detail settings

4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be set and confirmed in [I/F Communication Setting].For details, refer to the following.

☞ Page 82 I/F communication setting

Communication detail settings

Make the settings according to the usage environment.

Property	Value
GOT Net No.	0
GOT Station	0
GOT Communication Port No.	61450
Output HOLD/CLEAR Setting	HOLD

Item	Description	Range
GOT Net No.	Not used	-
GOT Station	Not used	-
GOT Communication Port No.	Displays the port No. that is used by cyclic transmission of CC-Link IE Field Network Basic for the GOT.	61450 (fixed)
Output HOLD/CLEAR Setting	Select whether the GOT holds or clears its device value (output data of the master and remote stations(GOT)) when the master station stops running. (Default: HOLD)	HOLD, CLEAR

Point

• Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Controller Setting] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

• Precedence in communication settings

When settings are made by GT Designer3 or the Utility, the latest setting is effective.

• Port No. [61451]

For CC-Link IE Field Network Basic, the port No. [61451] is used as a port for device detection.

When the port No. [61451] is used for other communication functions, CC-Link IE Field Network Basic connection cannot be used.

GOT Ethernet Setting

The GOT can be connected to a different network by configuring the following setting.

GOT IP address setting

Set the following communication port setting.

- Standard port

GOT Ethernet common setting

Set the following setting which is common to the standard port and the extended port, or port 1 and port 2.

- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]

IP filter setting

By configuring the IP filter setting, the access from the specific IP address can be permitted or shut off.

For the detailed settings, refer to the following manual.

☞ Page 80 GOT Ethernet Setting

52.4 Master Station Side Settings

For the settings of the CC-Link IE Field Network Basic master station, refer to the following manual.

Manual for CC-Link IE Field Network Basic master station

52.5 Settable Device Range

For details of the device range that can be used on the GOT, refer to the following.

GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1

CLPA ([CC-Link IE Field Network Basic])

52.6 Precautions

Port No. [61451]

For CC-Link IE Field Network Basic, the port No. [61451] is used as a port for device detection.
When the port No. [61451] is used for other communication functions, CC-Link IE Field Network Basic connection cannot be used.

Errors that occurs in the GOT at CC-Link IE Field Network Basic connection

In CC-Link IE Field Network Basic connection, contents of the message display, causes, and countermeasures when an error occurs in the GOT are described below.

Error code	Contents of the message display	Causes	Countermeasures
322*1	The specified device No. is out of range. Confirm the available device range.	• A device read error occurs. • The GOT accesses the device that is out of range specified by the master station.	To take corrective actions, check the range that is allocated to the master station and range of the monitoring target device.
402*1	The specified device No. is out of range. Confirm the available device range.	When the GOT is turned on, the master station is powered off.	Start the master station, and then turn on the GOT.
496*2	Settings for the GOT is not satisfied operation conditions of the communication driver.	• Unusable IP address in CC-Link IE Field Network Basic is set. • The port No. 61451 that is used in CC-Link IE Field Network Basic is used by other functions.	• Set the IP address within the range of 0.0.0.1 to 223.255.255.254. • When setting the IP address and subnet mask to each Ethernet I/F, set the network differently from each other. • Change the port No. of the function that uses the port No. 61451.

*1 May occurs even if CC-Link IE Field Network connection is not used.
*2 Occurs only when CC-Link IE Field Network connection is used.

Network errors that occurs in CC-Link IE Field Network Basic connection

In CC-Link IE Field Network Basic connection, contents of the message display, causes, and countermeasures for the following network errors are described below.

Error code	Contents of the message display	Causes	Countermeasures
854*1	The master station is duplicated in the same network.	The master station is duplicated in the same network.	Correct it so that one master station is in the same network.
855*1	Parallel-off status.	Waiting for the request from the master station.	Confirm the status of the master station.

*1 Occurs only when CC-Link IE Field Network connection is used.

Response performance of the GOT

The GOT carries out many object functions as well as CC-Link IE Field Network Basic connection so that the response performance for the master station may deteriorate.
If this occurs, adjust the link scan time or timeout time at the master station side The following setting values are recommended.

Model	Recommendation value of link scan time/timeout time
GT2506HS-V	50 ms and more

MEMO

PART 11 CONNECTIONS TO PERIPHERAL EQUIPMENT

53 GOT Mobile CONNECTION

54 VNC SERVER CONNECTION

55 PRINTER CONNECTION

53 GOT Mobile CONNECTION

- Page 2144 Connectable Model List
- Page 2145 System Configuration
- Page 2147 GOT Side Settings
- Page 2148 Precautions

53.1 Connectable Model List

The following table lists the GOT models that support the GOT Mobile connection.

- GT2506HS-V
- GT2505HS-V

For connectable devices and usable browsers as clients, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

Point

CoreOS version of the GOT

To use GOT Mobile connection, install CoreOS version L or later on the GOT.

For the procedure to check the CoreOS version and upgrade the version, refer to the following.

GT Designer3 (GOT2000) Screen Design Manual

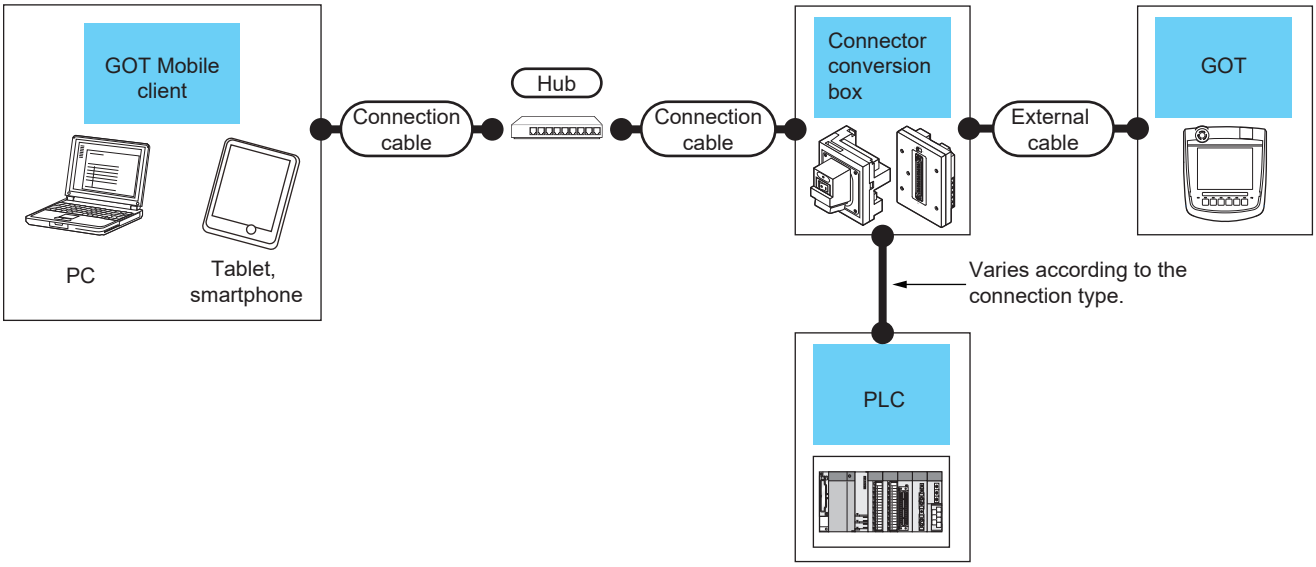
GOT2000 Series User's Manual (Utility)

53.2 System Configuration

Extended function OS | Communication driver

GOT Mobile | Connection type dependant

For GT2506HS-V



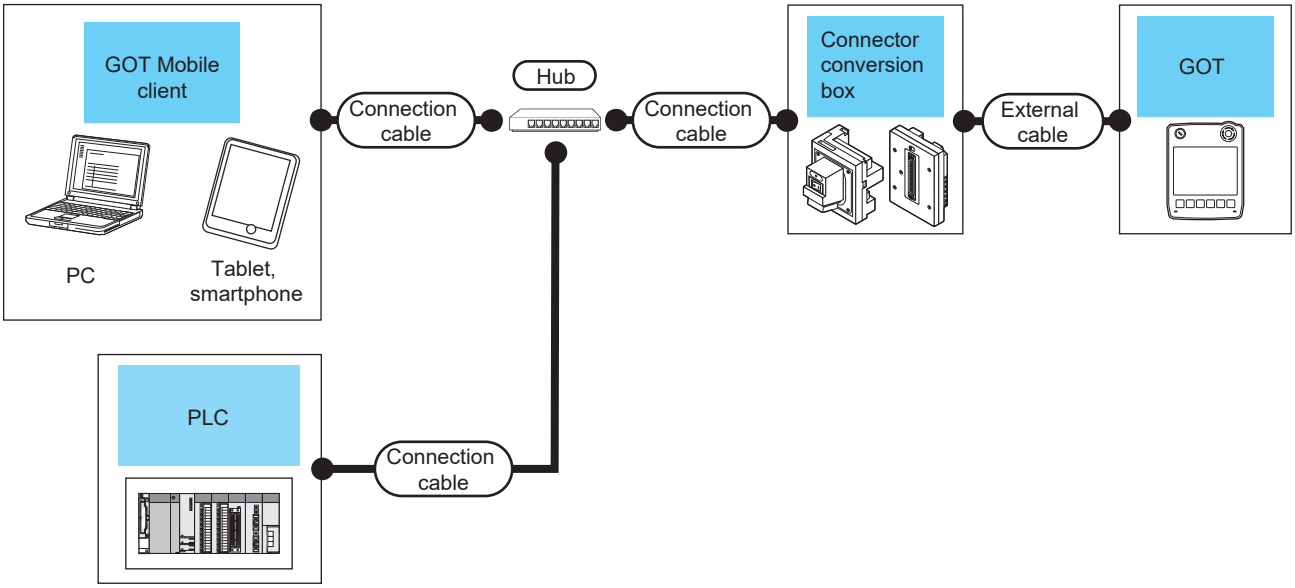
PC, Tablet, smartphone (GOT Mobile client)	Connection cable*1*2	Maximum segment length*3	Connector conversion box	External cable	GOT Model (GOT Mobile server)	PLC	Number of connectable equipment
To be selected by the user.	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	For the system configuration between the GOT and PLC, refer to each chapter.	5 clients for 1 GOT
			GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)			

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment corresponding to the applicable Ethernet network system.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
For the controllers that can be connected to the wireless LAN adapters and how to set the wireless LAN adapter, refer to the manual of the wireless LAN adapter used.

*2 When connecting the GOT and personal computer via a hub, use a cable according to the client configuration.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

For GT2505HS-V



PC, Tablet, smartphone (GOT Mobile client)	Connection cable*1*2	Maximum segment length*3	Connector conversion box	External cable*4	GOT Model (GOT Mobile server)	PLC	Number of connectable equipment
To be selected by the user.	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	For the system configuration between the GOT and PLC, refer to each chapter.	5 clients for 1 GOT
			GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)			

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment corresponding to the applicable Ethernet network system.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
For the controllers that can be connected to the wireless LAN adapters and how to set the wireless LAN adapter, refer to the manual of the wireless LAN adapter used.

*2 A straight cable is available.
When connecting the GOT and PC directly with Ethernet cable, remember that the by cross cable is available.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*4 Use C or later version of GT11H-C□□-37P.

Point

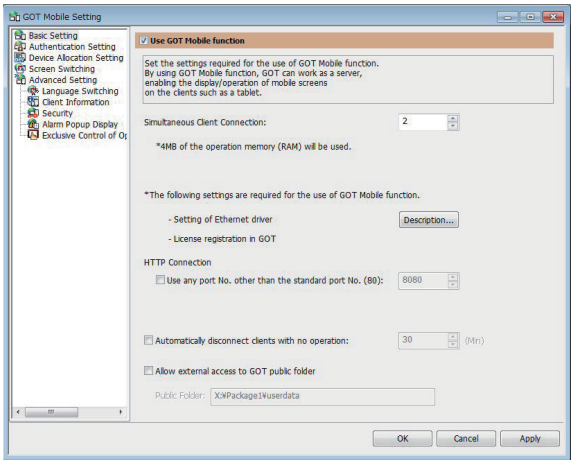
System configuration between the GOT and PLC

For the system configuration between the GOT and PLC, refer to each chapter.

☞ Mitsubishi Electric Products
☞ Non-Mitsubishi Electric Products 1, Non-Mitsubishi Electric Products 2
☞ Microcomputer, MODBUS/Fieldbus Products, Peripherals

53.3 GOT Side Settings

GOT Mobile setting



1. Select [Common] → [GOT Mobile Setting] from the menu.
2. Check the [Use GOT Mobile function] of [GOT Mobile Setting] to set.

For details on the settings, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

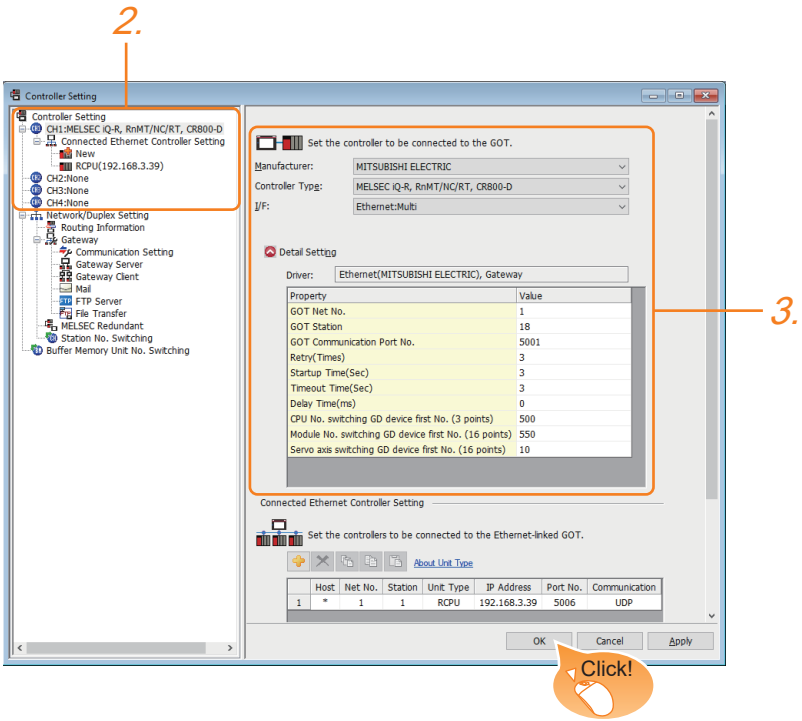
3. When you have completed the settings, click the [OK] button.

Setting communication interface (Controller Setting)

When using the Ethernet connection cable

Ethernet communication drivers must be set on the GOT, and set the Communication settings.

■Ethernet communication driver setting



1. Select [Common] → [Controller Setting] from the menu.
2. In the [Controller Setting] window, select the channel No. to be used from the list menu.
3. Set [Manufacturer], [Controller Type], [I/F], and [Detail Setting] according to the controller used.
4. When you have completed the settings, click the [OK] button.

53.4 Precautions

For cautions or troubleshooting of the GOT Mobile function, refer to the following manual.

GT Designer3 (GOT2000) Screen Design Manual

54 VNC SERVER CONNECTION

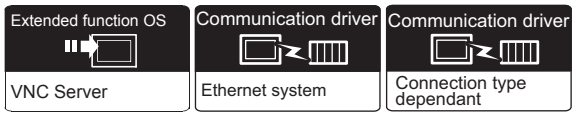
- Page 2149 Connectable Model List
- Page 2150 System Configuration
- Page 2152 GOT Side Settings
- Page 2154 Setting in Personal Computer

54.1 Connectable Model List

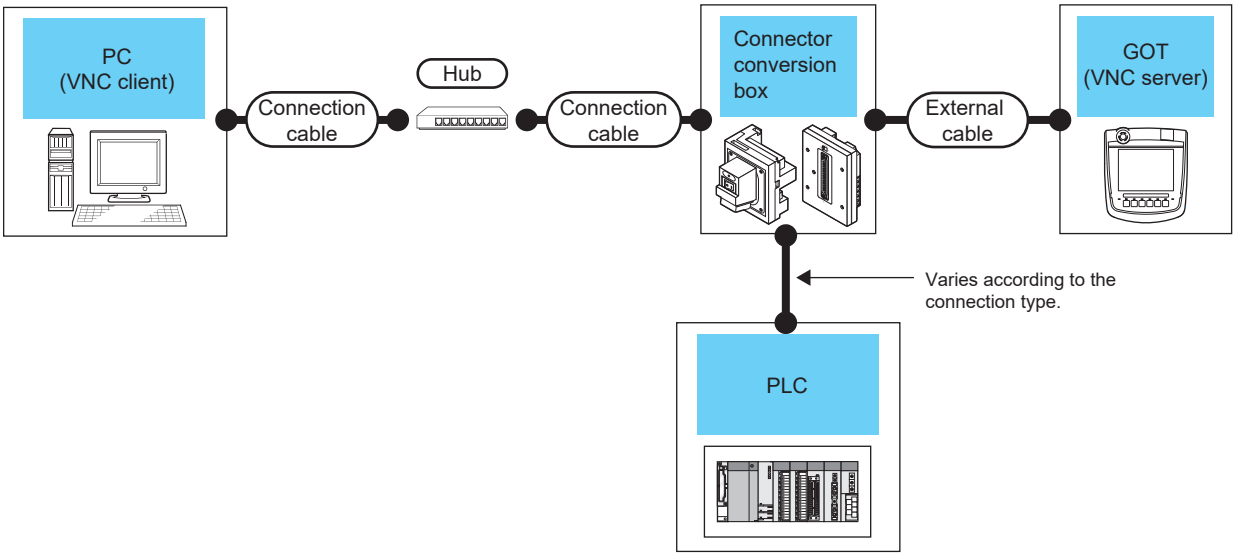
The VNC server can be connected to the following VNC client.

CPU	Software
PC	Ultra VNC

54.2 System Configuration



For GT2506HS-V



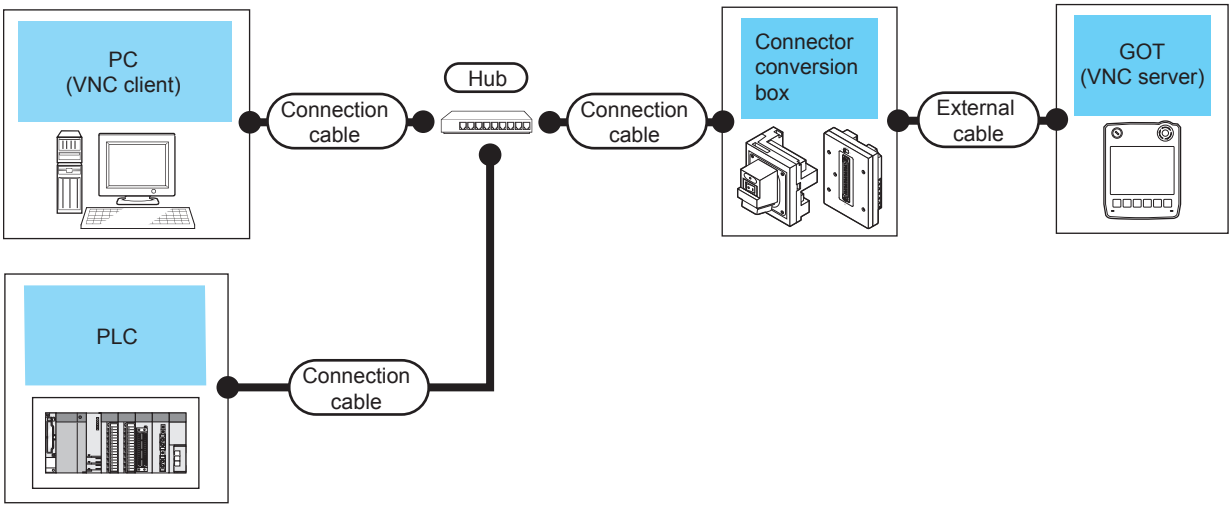
Personal computer (VNC client)	Connection cable*1*2	Maximum segment length*3	Connector conversion box	External cable	GOT Model (VNC server)	PLC	Number of connectable equipment
To be selected by the user.	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	For the system configuration between the GOT and PLC, refer to each chapter.	1 personal computer for 1 GOT
			GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)			

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment corresponding to the applicable Ethernet network system.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
For the controllers that can be connected to the wireless LAN adapters and how to set the wireless LAN adapter, refer to the manual of the wireless LAN adapter used.

*2 When connecting the GOT and personal computer (VNC client) via a hub, use a cable according to the client configuration.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

For GT2505HS-V



Personal computer (VNC client)	Connection cable*1*2	Maximum segment length*3	Connector conversion box	External cable*4	GOT Model (VNC server)	PLC	Number of connectable equipment
To be selected by the user.	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2505HS	For the system configuration between the GOT and PLC, refer to each chapter.	1 personal computer for 1 GOT
			GT16H-CNB-37S	GT11H-C30-37P(3m) GT11H-C60-37P(6m) GT11H-C100-37P(10m)			

*1 Only available for MELSEC-Q (A mode), MELSEC-A (AnSCPU), and Motion CPU (A series) small type.
Connect to the Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment corresponding to the applicable Ethernet network system.
Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.
For the controllers that can be connected to the wireless LAN adapters and how to set the wireless LAN adapter, refer to the manual of the wireless LAN adapter used.

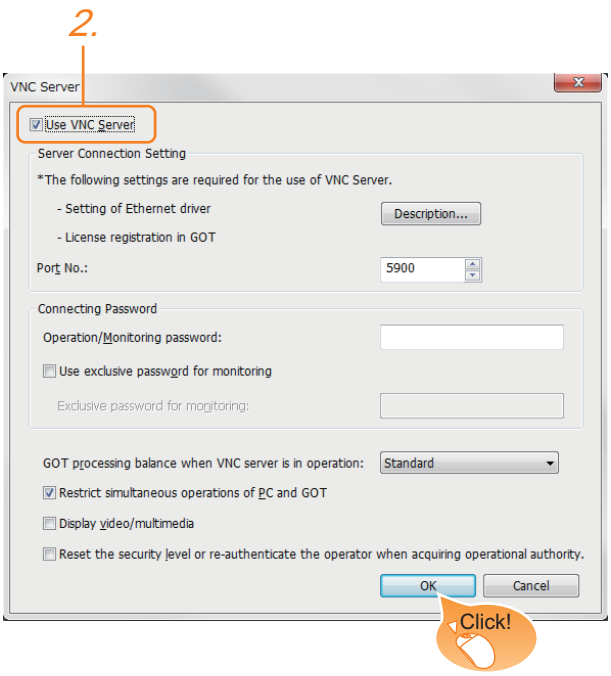
*2 When connecting the GOT and personal computer (VNC client) via a hub, use a cable according to the client configuration.

*3 Length between a hub and a node
The maximum length depends on the Ethernet equipment used.
The following shows the number of the connectable nodes when a repeater hub is used.
• 10BASE-T: Up to 4 nodes for a cascade connection (500 m)
• 100BASE-TX: UP to 2 nodes for a cascade connection (205 m)
When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.
For the limit, contact the switching hub manufacturer.

*4 Use C or later version of GT11H-C□□-37P.

54.3 GOT Side Settings

VNC server function setting



1. Select [Common] → [Peripheral Setting] → [VNC Server] from the menu.

2. Check the [VNC Server] of [Use VNC Server] to set.

For details on the settings, refer to the following manual.

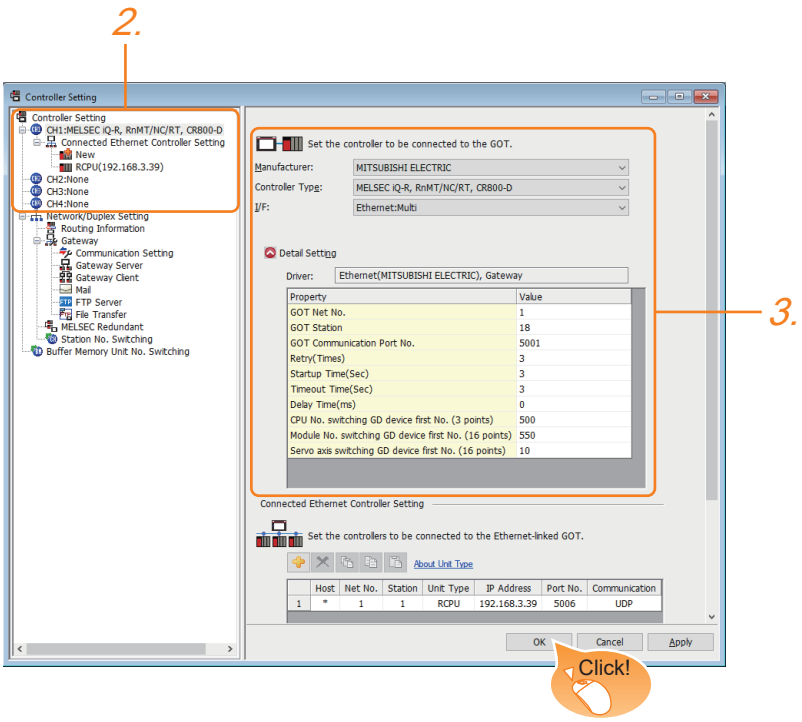
GT Designer3 (GOT2000) Screen Design Manual

3. Click the [OK] button when settings are completed.

Setting communication interface (Controller Setting)

When using the Ethernet connection cable

For using the VNC server, Ethernet communication drivers must be set on the GOT, and set the Communication settings



1. Select [Common] → [Controller Setting] from the menu.
2. In the [Controller Setting] window, select the channel No. to be used from the list menu.
3. Set [Manufacturer], [Controller Type], [I/F], and [Detail Setting] according to the controller used.
4. When you have completed the settings, click the [OK] button.

54.4 Setting in Personal Computer

For connecting the VNC server to the personal computer (VNC client), it is necessary to install the VNC client software to the personal computer to be connected and set it.
Refer to the following for details of the VNC client software installation method and setting method.
GT Designer3 (GOT2000) Screen Design Manual

55 PRINTER CONNECTION

- Page 2155 Connectable Model List
- Page 2156 System Configuration
- Page 2159 GOT Side Settings
- Page 2161 Precautions

55.1 Connectable Model List

For connectable printers and system equipment, refer to the following Technical Bulletin.

List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)

For Technical Bulletins, go to the Mitsubishi Electric Factory Automation Global Website.

www.MitsubishiElectric.com/fa

Point

BootOS version of the GOT

To use an Ethernet printer, install version AJ or later of BootOS on the GOT.

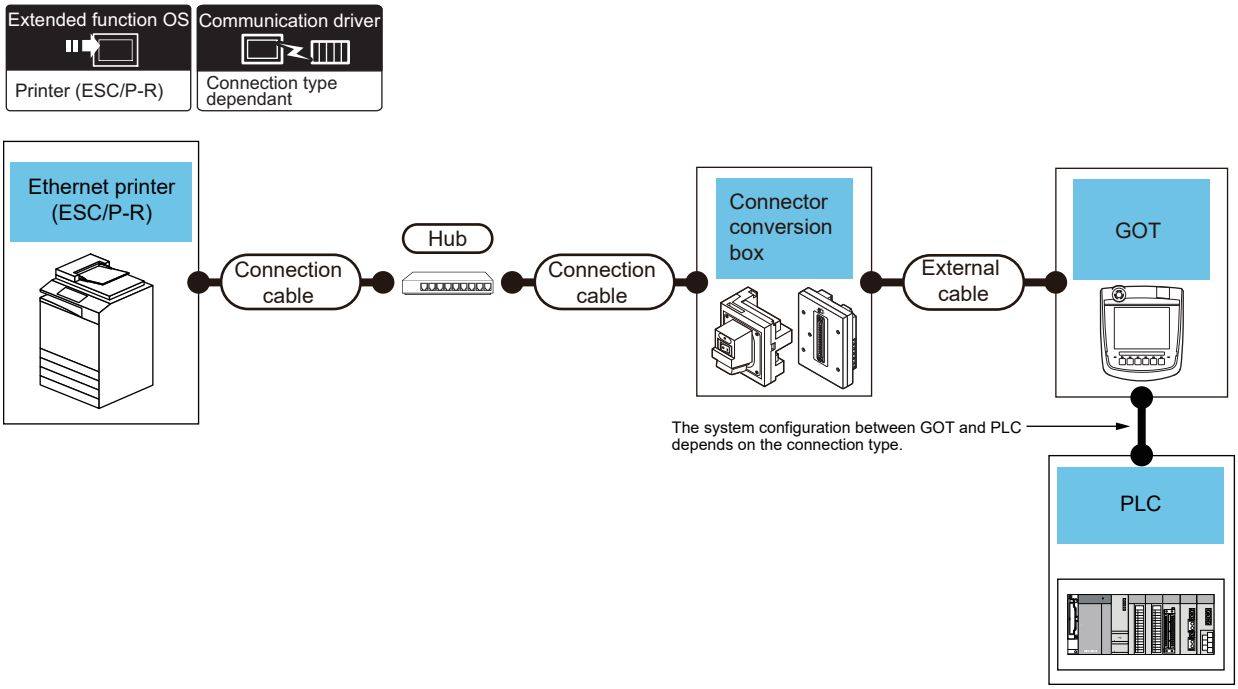
For the procedure to check the BootOS version and upgrade the version, refer to the following.

GT Designer3 (GOT2000) Screen Design Manual

GOT2000 Series User's Manual (Utility)

55.2 System Configuration

Connecting an Ethernet printer (ESC/P-R)



Printer		Connection cable *1*2	Maximum segment length *3	Connector conversion box	External cable *4	GOT model	PLC	Number of connectable equipment
Model name	Communication Type							
For connectable printers and system equipment, refer to the following Technical News. List of valid devices applicable for GOT2000 series (GOT-A-0064)	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	For the system configuration between the GOT and PLC, refer to each chapter.	1 printer for 1 GOT
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)			
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2506HS		
				GT16H-CNB-37S	GT11H-C30-37P (3m) GT11H-C60-37P (6m) GT11H-C100-37P(10m)			

*1 The applicable destination to connect the twisted pair cable depends on the configuration of the Ethernet network system.
Connect to the applicable Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system.
Use the cable, connector, or hub that meets the IEEE802.3 10BASE-T/100BASE-TX standard.
For the controller to which the wireless LAN adapter can be connected and how to configure the settings for the wireless LAN adapter, refer to the manual of the wireless LAN adapter you use.

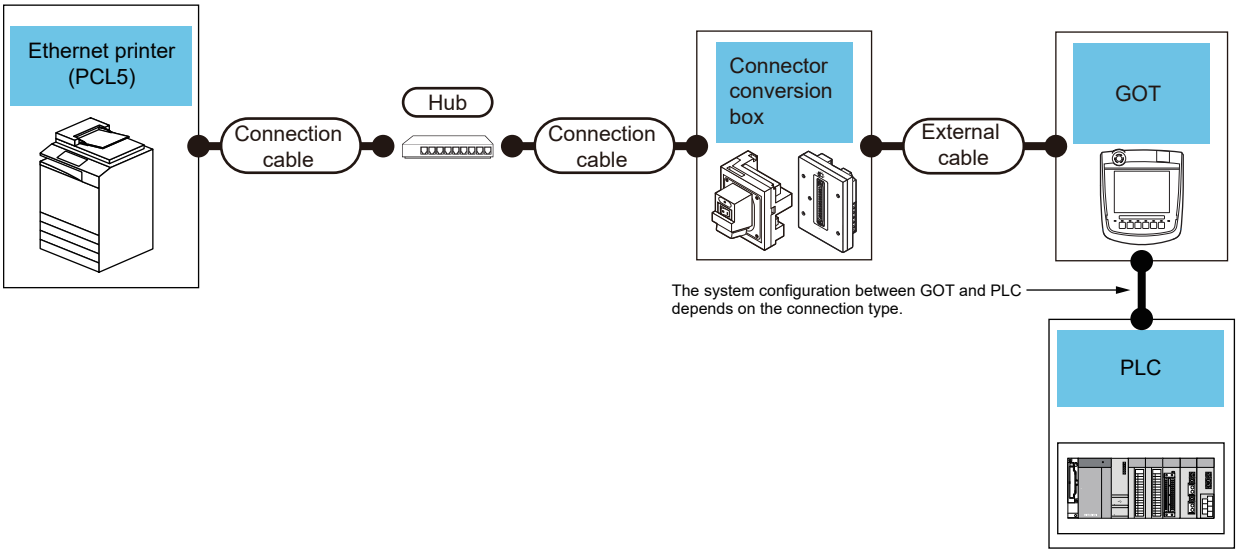
*2 When connecting the GOT and printer via a hub, use a cable according to the printer configuration.

*3 The length between the hub and node.
The maximum length depends on the Ethernet equipment you use. When a repeater hub is used, the number of connectable personal computers is as follows.
• 10BASE-T: Up to 4 personal computers for a cascade connection (500m)
• 100BASE-TX: Up to 2 personal computers for a cascade connection (205m)
For the cascade connection between the switching hubs, there is no theoretical limit to the number of cascades.
For the limit, contact the switching hub manufacturer.

*4 Use C or later version of GT11H-C□□-37P.

Connecting an Ethernet printer (PCL5)

Extended function OS	Communication driver
Printer (PCL5)	Connection type dependant



Printer		Connection cable *1*2	Maximum segment length *3	Connector conversion box	External cable *4	GOT model	PLC	Number of connectable equipment
Model name	Communication Type							
For connectable printers and system equipment, refer to the following Technical News. 📖List of valid devices applicable for GOT2000 series (GOT-A-0064)	Ethernet	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	GT16H-CNB-42S	GT16H-C30-42P(3m) GT16H-C60-42P(6m) GT16H-C100-42P(10m)	GT 2506HS	For the system configuration between the GOT and PLC, refer to each chapter.	1 printer for 1 GOT
				GT16H-CNB-37S	GT16H-C30-37PE(3m) GT16H-C60-37PE(6m) GT16H-C100-37PE(10m)			
				GT16H-CNB-42S	GT14H-C30-42P(3m) GT14H-C60-42P(6m) GT14H-C100-42P(10m)	GT 2506HS		
				GT16H-CNB-37S	GT11H-C30-37P (3m) GT11H-C60-37P (6m) GT11H-C100-37P(10m)			

*1 The applicable destination to connect the twisted pair cable depends on the configuration of the Ethernet network system.
Connect to the applicable Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system.
Use the cable, connector, or hub that meets the IEEE802.3 10BASE-T/100BASE-TX standard.
For the controller to which the wireless LAN adapter can be connected and how to configure the settings for the wireless LAN adapter, refer to the manual of the wireless LAN adapter you use.

*2 When connecting the GOT and printer via a hub, use a cable according to the printer configuration.

*3 The length between the hub and node.
The maximum length depends on the Ethernet equipment you use. When a repeater hub is used, the number of connectable personal computers is as follows.
• 10BASE-T: Up to 4 personal computers for a cascade connection (500m)
• 100BASE-TX: Up to 2 personal computers for a cascade connection (205m)
For the cascade connection between the switching hubs, there is no theoretical limit to the number of cascades.
For the limit, contact the switching hub manufacturer.

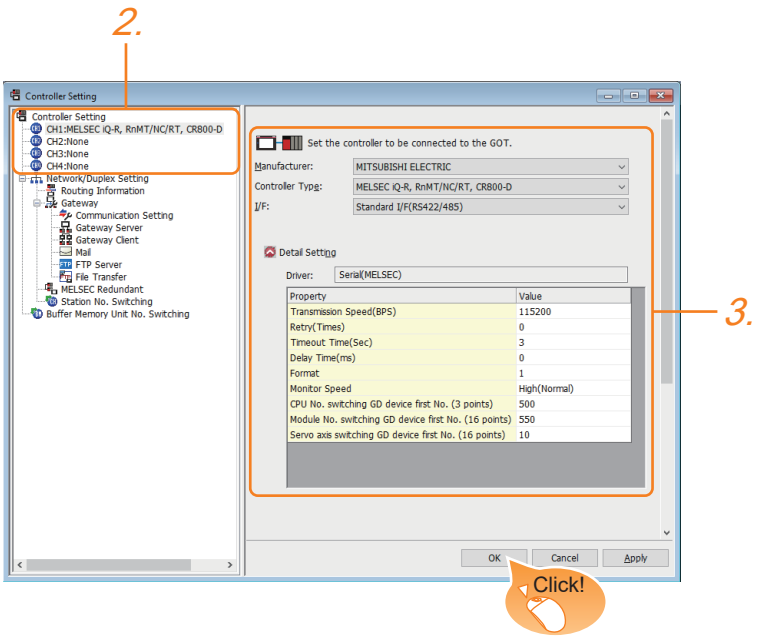
*4 Use C or later version of GT11H-C□□-37P.

55.3 GOT Side Settings

Setting communication interface

Controller setting

Set the channel of the equipment to be connected to the GOT.



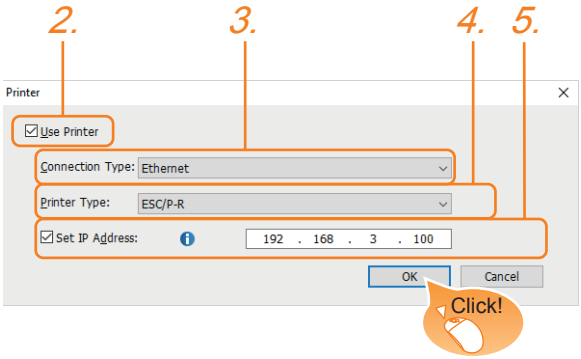
1. Select [Common] → [Controller Setting] from the menu.
2. In the [Controller Setting] window, select the channel No. to be used from the list menu.
3. Set [Manufacturer], [Controller Type], [I/F], and [Detail Setting] according to the controller used.
4. When you have completed the settings, click the [OK] button.

Point

The settings of connecting equipment can be set and confirmed in [I/F Communication Setting]. For details, refer to the following.

☞ Page 82 I/F communication setting

Printer setting



1. Select [Common] → [Peripheral Setting] → [Printer] from the menu.
2. Select [Use Printer].
3. Select [Connection Type].
4. Select [Printer Type].
5. Select [Set IP Address] to set the IP address of the printer used.
6. When you have completed the settings, click the [OK] button.

Point

• Setting for the driver

Regardless of the printer type, multiple printers are cannot be set.

• Port number of the Ethernet printer

Use 515 for the port number of the Ethernet printer.

55.4 Precautions

IP address setting

When the IP addresses of the Ethernet printer and the GOT are the same, a system alarm may occur.
Set different IP addresses for the Ethernet printer and the GOT.

REVISIONS

* The manual number is given on the bottom left of the back cover.

Revision date	* Manual Number	Revision
Jun. 2017	SH(NA)-081867ENG-A	Compatible with GT Works3 Version1.180N
Oct. 2017	SH(NA)-081867ENG-B	Compatible with GT Works3 Version1.185T • MR-JE-C is supported. • The use of the virtual device for manufacturer setting for MELSERVO-J4-A(-RJ), MELSERVO-JE-A by some users is supported. • FUJI Temperature controller (PXF4, PXF5, PXF9, PUMA, PUMB) is supported. • YOKOGAWA Temperature controller (UP32A) is supported. • MURATEC controller connection is supported. • Hirata Corporation HNC controller connection is supported. • OMRON PLC NJ series is supported.
Dec. 2017	SH(NA)-081867ENG-C	Compatible with GT Works3 Version 1.190Y • Compatible with R00CPU, R01CPU, R02CPU • Compatible with avoiding overlapping of [GOT Communication Port No.]
Apr. 2018	SH(NA)-081867ENG-D	Compatible with GT Works3 Version 1.195D • GT2505HS-V is supported. • FR-A800 series (FR-A8□0-GF and FR-A8□2-GF) is supported. • The MELIPC connection is supported. • The FA transparent function is usable with MI Configurator. • OMRON PLCs (NX series) are supported. • The following devices of the ALLEN-BRADLEY PLC (MicroLogix series) are supported: I, O, and F devices. • RKC temperature controllers (SR-J series) are supported. • The following setting is available when the CC-Link IE Field Network Basic connection is used: [Output HOLD/CLEAR Setting].
Jul. 2018	SH(NA)-081867ENG-E	Compatible with GT Works3 Version1.200J • R08PSFCPU, R16PSFCPU, R32PSFCPU, and R120PSFCPU are supported. • FR-E700 series (FR-E7□0-NE) is supported. • FA transparent function Between the personal computer and the GOT: USB, between the GOT and the PLC: Ethernet FR Configurator2 is supported. • Compatible OMRON temperature controllers are added (E5□D series). • ALLEN-BRADLEY PLC Ethernet connection (Ethernet (AB MicroLogix)) is supported. • The connection to Ethernet printer is supported. • In the communication detail settings of the microcomputer connection (Ethernet), setting the request destination module I/O number is supported. • For the MODBUS/TCP master connection, the connection with the device where the module ID is fixed to 255.
Oct. 2018	SH(NA)-081867ENG-F	Compatible with GT Works3 Version1.205P • CR800-Q (Q172DSRCPU) is supported. • Serial connection to FR-A800 series (FR-A8□0-GF and FR-A8□2-GF) is supported. • FA transparent function For R08PSFCPU, R16PSFCPU, R32PSFCPU, R120PSFCPU, GX Works3 supports the following communication path. Between personal computer and GOT: USB, between GOT and PLC: Ethernet For CR800-Q (Q172DSRCPU), RT ToolBox3 supports the following communication path. Between personal computer and GOT: USB, between GOT and PLC: Direct CPU Between personal computer and GOT: USB, between GOT and PLC: Ethernet • Compatible OMRON PLCs are added (NX701). • Compatible KEYENCE PLCs are added (KV-N14□□, KV-N24□□, KV-N40□□, KV-N60□□, KV-NC32T). • Compatible TOSHIBA Unified Controller nv are added. <Controller type1 light> PUM11, PUM12, PUM14
Jan. 2019	SH(NA)-081867ENG-G	Compatible with GT Works3 Version1.210U • Some corrections
Apr. 2019	SH(NA)-081867ENG-H	Compatible with GT Works3 Version1.215Z • Specifying CPU numbers with devices is supported. • Specifying module numbers with devices is supported. • Compatible OMRON PLCs are added (NX102). • The connection to Ethernet printer (PCL5) is supported.

Revision date	* Manual Number	Revision
Jul. 2019	SH(NA)-081867ENG-I	Compatible with GT Works3 Version1.220E • Connection with CC-Link IE TSN master/local module (RJ71GN11-T2) by the Ethernet connection is supported. • FR-A800 Plus series (FR-A8□0-E-CRN, FR-A8□2-E-CRN, FR-A8□0-E-R2R, and FR-A8□2-E-R2R) is supported. • The manufacturer name has been changed. (Digital Electronics Corporation → Schneider Electric Japan Holdings Ltd.) • For the SLMP connection, the connection with the CC-Link IE TSN master/local module (RJ71GN11-T2) is supported.
Oct. 2019	SH(NA)-081867ENG-J	Compatible with GT Works3 Version1.225K • FX5UJ is supported.
Jan. 2020	SH(NA)-081867ENG-K	Compatible with GT Works3 Version1.230Q • FR-A800 series (FR-A8□0-GN and FR-A8□2-GN) is supported. • FR-E800 series is supported. • FA transparent function FR-E800 series is supported. • IAI robot controller models (PCON-CB, PCON-CFB, ACON-CB, SCON-CB, EC) have been added. • Devices used for connecting IAI robot controller have been added.
Apr. 2020	SH(NA)-081867ENG-L	Compatible with GT Works3 Version1.235V • Motion module is supported. • Reading/writing data from/to 8-bit and 64-bit devices are supported. • The time setting function of the GOT is supported for OMRON PLC NJ/NX Series by obtaining the clock data. • SLMP-compatible devices have been added.
Jun. 2020	SH(NA)-081867ENG-M	Compatible with GT Works3 Version1.240A • The company name of TOSHIBA MACHINE CO., LTD. has been changed to SHIBAURA MACHINE CO., LTD. • Motion module (RD78GHV, RD78GHW) is supported. • FR-A800 Plus series (FR-A8□0-AWH, FR-A8□0-E-AWH, FR-A8□0-LC, FR-A8□0-E-LC) is supported. • MR-J5 series (MR-J5-□G, MR-J5-□G-RJ, MR-J5W2-□G, and MR-J5W3-□G) is supported. • Supported KEYENCE PLC (KV8000 series) has been added. • Supported OMRON PLC (CP2E) has been added. • Supported Panasonic IDS PLC (FP0H) has been added. • RKC temperature controller (PZ/GZ series) are additionally supported.
Oct. 2020	SH(NA)-081867ENG-N	Compatible with GT Works3 Version1.245F • Connection with the CC-Link IE TSN master/local module (FX5-CCLGN-MS) using the Ethernet connection is supported. • The MR-JET series (MR-JET-□G) is supported. • HITACHI PLC S10VE is supported.
Jan. 2021	SH(NA)-081867ENG-O	• Some corrections
Apr. 2021	SH(NA)-081867ENG-P	Compatible with GT Works3 Version1.255R • Connection with MELSEC iQ-R Series extension base unit for the redundant system is supported. • Connection with MELSEC iQ-F Ethernet module (FX5-ENET, FX5-ENET/IP) is supported. • The model names and communication driver name for connection to CHINO controllers have been changed. • Connection to Panasonic IDS PLC (FP2, FP2SH) using the multi-communication unit and communication block is supported. • HITACHI IES PLC and HITACHI IES EHV series are supported. • The 8-bit and 64-bit tag communication for ALLEN-BRADLEY PLC AB Control/CompactLogix(Tag) connection is supported. • The model name and communication driver name for connection to HITACHI IES PLC have been changed.
Jul. 2021	SH(NA)-081867ENG-Q	Compatible with GT Works3 Version1.260W • Connection with the C Controller module (MELSEC iQ-R series) using the CC-Link IE TSN connection is supported. • Connection with the MR-J5 series or MR-JET series using the Ethernet connection is supported. • IAI robot controller models (RCON) have been added. • Panasonic IDS PLC (FP-XH) has been added. • Extending the following device range in HITACHI IES HIDIC H series is supported. TD, CU, SS, WDT, MS, TMR, RCU, CT, TC, WR • Changed the name of the direct CPU connection to the direct CPU connection (serial).
Oct. 2021	SH(NA)-081867ENG-R	Compatible with GT Works3 Version1.265B • MELSEC iQ-F series Motion module (FX5-40SSC-G, FX5-80SSC-G) is supported. • SHINKO indicating controller models (ACD-13A, ACR-13A, and BC□2) have been added. • Connection to YASKAWA robot controller YRC1000 is supported. • Connection to LS IS PLC XGT series is supported.

Revision date	* Manual Number	Revision
Jan. 2022	SH(NA)-081867ENG-S	Compatible with GT Works3 Version1.270G • FX3U-ENET is supported. • MELSEC iQ-R series MELSECWinCPU module is supported. • MR-J5(W)-□B(-RJ) and MR-J5D-□G4 are supported. • FA transparent function Connection with CW Configurator using the serial communication connection is supported. FX Configurator-EN is supported. • Connectable IAI robot controller models (EC series) have been added. • Connectable JTEKT PLC model (PC10G) has been added.
Apr. 2022	SH(NA)-081867ENG-T	Compatible with GT Works3 Version1.275M • Connection with a PLC or MELIPC through a servo amplifier using Ethernet connection is supported. • Connection with a servo amplifier (MR-J5-□G(-RJ), MR-J5W2-□G, MR-J5W3-□G, or MR-JET-G) through a CC-Link IE TSN master/local module (RJ71GN11-T2) is supported. • FX5S is supported.
Jul. 2022	SH(NA)-081867ENG-U	Compatible with GT Works3 Version1.280S • Connection with the CC-Link IE TSN Plus master/local module (RJ71GN11-EIP) via Ethernet is supported. • Connection to YASKAWA robot controller YRC1000micro is supported.
Oct. 2022	SH(NA)-081867ENG-V	Compatible with GT Works3 Version1.285X • Connection with a servo amplifier (MR-J5-□B(-RJ), MR-J5W2-□B, or MR-J5W3-□B) through a Motion controller (R16MTCPU, R32MTCPU, or R64MTCPU) or Simple Motion module (RD77MS2, RD77MS4, RD77MS8, or RD77MS16) is supported.
Jan. 2023	SH(NA)-081867ENG-W	Compatible with GT Works3 Version1.290C • The name of the communication driver for Ethernet connection to ALLEN-BRADLEY PLC has been changed. • The name of the communication driver for Ethernet connection to OMRON PLC has been changed.
Apr. 2023	SH(NA)-081867ENG-X	Compatible with GT Works3 Version1.295H • Connection with a servo amplifier (MR-J5-□G(-RJ), MR-J5W2-□G, MR-J5W3-□G, MR-J5D2-□G4, MR-J5D3-□G4, or MR-JET-□G) through a CC-Link IE TSN Plus master/local module (RJ71GN11-EIP) is supported. • FA transparent function For the RCPU, CPU Module Logging Configuration Tool supports the following communication paths. Between a personal computer and the GOT: USB, between the GOT and PLC: Serial communication Between a personal computer and the GOT: USB, between the GOT and PLC: Ethernet Between a personal computer and the GOT: Ethernet, between the GOT and PLC: Serial communication For FR-A800 series, FR-F800 series, and FR-E800, FR Configurator2 supports the following communication paths. Between a personal computer and GOT: Ethernet, between the GOT and PLC: CPU direct communication (serial)
Jul. 2023	SH(NA)-081867ENG-Y	Compatible with GT Works3 Version1.300N • Ethernet connection with FX5UJ via the CC-Link IE TSN master/local module (FX5-CCLGN-MS) is supported.
Oct. 2023	SH(NA)-081867ENG-Z	• Some corrections
Jan. 2024	SH(NA)-081867ENG-AA	Compatible with GT Works3 Version1.310Y • Connection with a servo amplifier (MR-J5-□B(-RJ), MR-J5W2-□B, or MR-J5W3-□B) through a Motion controller (Q170MSCPU) is supported. • Connection with a KEYENCE PLC (KV-8000 series or KV-7000 series) using the multi-communication unit (KV-XL402) is supported.
Oct. 2024	SH(NA)-081867ENG-AB	Compatible with GT Works3 Version1.325P • A supported OMRON PLC model (NX502) has been added. • A supported IAI robot controller model (RSEL) has been added.
Apr. 2025	SH(NA)-081867ENG-AC	Compatible with GT Works3 Version1.335Z • Connection with MELSEC MX Controller is supported. • Connection with FR-D800 series is supported.
Jul. 2025	SH(NA)-081867ENG-AD	• Some corrections
Dec. 2025	SH(NA)-081867ENG-AE	Compatible with GT Works3 Version1.410C • Device definitions for FR-E800 series have been expanded. • Connection with OMRON PLC NJ series (NJ101-□□□□, NJ301-□□□□, NJ501-□□□□) via the CJ1W-EIP21S is supported.
Apr. 2026	SH(NA)-081867ENG-AF	Compatible with GT Works3 Version1.410C • The connection to the MELSEC iQ-F Ethernet module (FX5-EIP) is supported. • Connectable IAI robot controller models (EC series) have been added. • KEYENCE PLC (KV-X series) is supported. • Writing errors have been corrected.

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WARRANTY

Please check the following product warranty details before using this product.

■1. Gratis Warranty Term and Gratis Warranty Range

If any faults or defects (hereinafter "Failure") found to be the responsibility of Mitsubishi occurs during use of the product within the gratis warranty term, the product shall be repaired at no cost via the sales representative or Mitsubishi Service Company.
However, if repairs are required onsite at domestic or overseas location, expenses to send an engineer will be solely at the customer's discretion.
Mitsubishi shall not be held responsible for any re-commissioning, maintenance, or testing on-site that involves replacement of the failed module.

(1) Gratis Warranty Term

The gratis warranty term of the product shall be for thirty-six (36) months after the date of purchase or delivery to a designated place.
Note that after manufacture and shipment from Mitsubishi, the maximum distribution period shall be six (6) months, and the longest gratis warranty term after manufacturing shall be forty-two (42) months.
The gratis warranty term of repair parts shall not exceed the gratis warranty term before repairs.

(2) Gratis Warranty Range

(a) The customer shall be responsible for the primary failure diagnosis unless otherwise specified.
If requested by the customer, Mitsubishi Electric Corporation or its representative firm may carry out the primary failure diagnosis at the customer's expense.
The primary failure diagnosis will, however, be free of charge should the cause of failure be attributable to Mitsubishi Electric Corporation.

(b) The range shall be limited to normal use within the usage state, usage methods, and usage environment, etc., which follow the conditions and precautions, etc., given in the instruction manual, user's manual and caution labels on the product.

(c) Even within the gratis warranty term, repairs shall be charged in the following cases.
- Failure occurring from inappropriate storage or handling, carelessness or negligence by the user. Failure caused by the user's hardware or software design.
- Failure caused by unapproved modifications, etc., to the product by the user.
- When the Mitsubishi product is assembled into a user's device, Failure that could have been avoided if functions or structures, judged as necessary in the legal safety measures the user's device is subject to or as necessary by industry standards, had been provided.
- Failure that could have been avoided if consumable parts designated in the instruction manual had been correctly serviced or replaced.
- Replacing consumable parts such as a battery, backlight, and fuse.
- Failure caused by external irresistible forces such as fires or abnormal voltages, and Failure caused by force majeure such as earthquakes, lightning, wind and water damage.
- Failure caused by reasons that could not be predicted by scientific technology standards at the time of shipment from Mitsubishi.
- Any other failure found not to be the responsibility of Mitsubishi or that admitted not to be so by the user.

■2. Onerous repair term after discontinuation of production

(1) Mitsubishi shall accept onerous product repairs for seven (7) years after production of the product is discontinued.
Discontinuation of production shall be notified with Mitsubishi Technical Bulletins, etc.

(2) Mitsubishi shall not accept a request for product supply (including spare parts) after production is discontinued.

■3. Overseas service

Overseas, repairs shall be accepted by Mitsubishi's local overseas FA Center.
Note that the repair conditions at each FA Center may differ.

■4. Exclusion of loss in opportunity and secondary loss from warranty liability

Regardless of the gratis warranty term, Mitsubishi shall not be liable for compensation to:

(1) Damages caused by any cause found not to be the responsibility of Mitsubishi.

(2) Loss in opportunity, lost profits incurred to the user by Failures of Mitsubishi products.

(3) Special damages and secondary damages whether foreseeable or not, compensation for accidents, and compensation for damages to products other than Mitsubishi products.

(4) Replacement by the user, maintenance of on-site equipment, start-up test run and other tasks.

■5. Changes in product specifications

The specifications given in the catalogs, manuals, or technical documents are subject to change without prior notice.

■6. Product application

(1) In using the Mitsubishi graphic operation terminal, the usage conditions shall be that the application will not lead to a major accident even if any problem or fault should occur in the graphic operation terminal device, and that backup and fail-safe functions are systematically provided outside of the device for any problem or fault.

(2) The Mitsubishi graphic operation terminal has been designed and manufactured for applications in general industries, etc.
Thus, applications in which the public could be affected such as in nuclear power plants and other power plants operated by respective power companies, and applications in which a special quality assurance system is required, such as for Railway companies or Public service shall be excluded from the graphic operation terminal applications.
In addition, applications in which human life or property could be greatly affected, such as in aircraft, medical, railway applications, incineration and fuel devices, manned transportation equipment, recreation and amusement devices, safety devices, shall also be excluded from the graphic operation terminal.
Even for the above applications, however, Mitsubishi Electric Corporation may consider the possibility of an application, provided that the customer notifies Mitsubishi Electric Corporation of the intention, the application is clearly defined and any special quality is not required, after the user consults the local Mitsubishi representative.

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SH(NA)-081867ENG-AF(2604)MEE
MODEL: GOT2000-HSCON-SW1-E

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