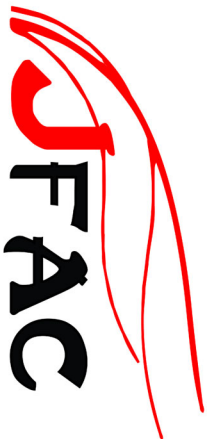




SCHEMATIC DIAGRAM



TRAINING CENTER



Changes for the Better
FACTORY AUTOMATION

DRAWING NAME : COVER PAGE			REVISION		
PAGE NO :	1	PROJECT NO : AWP-EDU-01-PT-PLC-VOC	REV _1 :	16 OCTOBER 2023	CONCEPT BY : SOMPOCH V.
PAGE SIZE :	A3	DRAWING NO : VEC SKILLS COMPETITION 2023	REV _2 :		DESIGN BY : SOMPOCH V.
SCALE :	1:1	DRAWING STD : JFAC PATTERN	REV _3 :		DRAWING BY : WASANSAK C.
QUALITY :	1	WIRING STD : JFAC PATTERN	REV _4 :		APPROVE BY : SOMPOCH V.
			CS CHECK BY : SOMPOCH V.		
			S&M MAKER NAME : JFAC TRAINING CENTER		
			PROJECT NAME : VEC SKILLS COMPETITION 2023		
			PLAN NAME : --		
			USER NAME : MECHATRONIC AND ROBOTICS (VEC)		
			OWNER NAME : JFAC TRAINING CENTER		

PROJECT NAME : VEC SKILLS COMPETITION 2023

PROJECT NO : AWP-EDU-01-PT-PLC-VOC

USER : MECHATRONIC AND ROBOTICS (VEC)

USER : JFAC TRAINING CENTER


REVISED DATE : 16 OCTOBER 2023

ฉบับอนุมัติใช้ในการแข่งขัน ประจำปี 2566 (ระดัปรถาค)

Sheet No.	Designation	Revision/Modification							As Built
		Approval	Revision 1	Revision 2	Revision 3	Revision 4	Revision 5	Revision 6	
01	COVER PAGE								0
02	CONTENT								0
03	THE COMPOSITION OF PANEL								0
04	THE COMPOSITION OF MECHANIC								0
05	LAYOUT MAIN PANEL								0
06	LAYOUT TERMINAL PANEL								0
07	LAYOUT TERMINAL PANEL MECHANIC								0
08	SYSTEM INTERFACE LAYOUT								0
09	(3000) AC 220V 1PH POWER CIRCUIT								0
10	(6000) CONTROL CIRCUIT DC HARD WIRING								0
11	(8000) PLC INPUT CONTROL CIRCUIT								0
12	(9000) PLC OUTPUT CONTROL CIRCUIT								0
13									0
14									0
15									0
16									0
17									0
18									0
19									0
20									0
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22									0
23									0
24									0
25									0
26									0
27									0
28									0
29									0
30									0

	Designation	Revision/Modification							As Built
		Approval	Revision 1	Revision 2	Revision 3	Revision 4	Revision 5	Revision 6	
31									0
32									0
33									0
34									0
35									0
36									0
37									0
38									
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DRAWING NAME : CONTENT				REVISION			CONCEPT BY : SOMPOCH V.			PROJECT NAME : VEC SKILLS COMPETITION 2023		
PAGE NO :	2	PROJECT NO :	AWP-EDU-01-PT-PLC-VOC	REV _1 :	16 OCTOBER 2023			DESIGN BY :	SOMPOCH V.	PLAN NAME :	--	
PAGE SIZE :	A3	DRAWING NO :	VEC SKILLS COMPETITION 2023	REV _2 :				DRAWING BY :	WASANSAK C.	USER NAME :	MECHATRONIC AND ROBOTICS (VEC)	
SCALE :	1:1	DRAWING STD :	JFAC PATTERN	REV _3 :				APPROVE BY :	SOMPOCH V.	OWNER NAME :	JFAC TRAINING CENTER	
QUALITY :	1	WIRING STD :	JFAC PATTERN	REV _4 :				CS CHECK BY :	SOMPOCH V.	SIG&MAKER NAME :	JFAC TRAINING CENTER	



THE COMPOSITION OF PANEL

NO	SYMBOL	DESCRIPTION	BRAND	MODEL	QTY	REMARK
1	CB1	MOLDED CASE CIRCUIT BREAKER 10AT/30AF	HITACHI	S-30S 2P-10A	1.00	
2	CV1	SWITCHING POWER SUPPLY 220VAC/24VDC	DELTA	DRP024V060W1AA	1.00	
3	PLC1	PLC COMPACT TYPE 16IN/16OUT	MTSUBISHI	FX5U-32MR/ES	1.00	
4	CR1	CIRCUIT RELAY @ 24VDC + SOCKET RELAY	OMRON	MY2N D2 + 2-M4X10	1.00	
5	CR2	CIRCUIT RELAY @ 24VDC + SOCKET RELAY	IDEC	RU2S-C-D24 + SM2S-05DF	1.00	
6	CR3	CIRCUIT RELAY @ 24VDC + SOCKET RELAY	IDEC	RU2S-C-D24 + SM2S-05DF	1.00	
7	SS01	SELECTOR SWITCH "MODE MAN AUTO"	IDEC	YW1S-2E11	1.00	
8	PB01	PUSH BUTTON SWITCH MOMENTARY(BLUE)"CYCLE START"	IDEC	YW1B-M1E10S	1.00	
9	PB02	PUSH BUTTON SWITCH MOMENTARY(BLUE)"AUTO START"	IDEC	YW1B-M1E10S	1.00	
10	EMG01	EMERGENCY STOP SWITCH "EMERGENCY STOP"	IDEC	YW1B-V4E01R	1.00	
11	PL01	PILOT LAMP @24VAC (RED) "CYLINDER 1 STATUS"	IDEC	YW1P-2EQ4R	1.00	
12	PL02	PILOT LAMP @24VAC (RED) "CYLINDER 2 STATUS"	IDEC	YW1P-2EQ4R	1.00	
13	PL03	PILOT LAMP @24VAC (RED) "VACUUM STATUS"	IDEC	YW1P-2EQ4R	1.00	
14	TB1	TERMINAL BLOCK	IDEC	BNH1SLW	3.00	
15	TB2	TERMINAL BLOCK	IDEC	BNH1SMW	4.00	
16	TB3	TERMINAL BLOCK	IDEC	BNH1SMW	20.00	
17	F1	FUSE TERMINAL BLOCK	SHINOHAWA	RT18-32-1P	1.00	
18		STOPPER TERMINAL	IDEC	BNL6	14.00	
19		END PLATE	IDEC	BNE15W	4.00	
19		DUST COVER TERMINAL	IDEC	BNC230	3.00	
20		JUMPPER	IDEC	BNJ26FWB	2.00	

DRAWING NAME : THE COMPOSITION OF PANEL					REVISION		CONCEPT BY : SOMPOCH V.		PROJECT NAME : VEC SKILLS COMPETITION 2023	
PAGE NO : 3		PROJECT NO : AWP-EDU-01-PT-PLC-VOC		REV_1 : 16 OCTOBER 2023			DESIGN BY : SOMPOCH V.		PLAN NAME : --	
PAGE SIZE : A3		DRAWING NO : VEC SKILLS COMPETITION 2023		REV_2 :			DRAWING BY : WASANSAK C.		USER NAME : MECHATRONIC AND ROBOTICS (VEC)	
SCALE : 1:1		DRAWING STD : JFAC PATTERN		REV_3 :			APPROVE BY : SOMPOCH V.		OWNER NAME : JFAC TRAINING CENTER	
QUALITY : 1		WIRING STD : JFAC PATTERN		REV_4 :			CS CHECK BY : SOMPOCH V		SIGN&MAKER NAME : JFAC TRAINING CENTER	




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TRAINING CENTER

THE COMPOSITION OF MECHANIC

NO	SYMBOL	DESCRIPTION	BRAND	MODEL	QTY	REMARK
1	SV01	DIRECTIONAL CONTROL VALVE	SMC	SY3120-SLU-C4	1.00	
2	SV02	DIRECTIONAL CONTROL VALVE	SMC	SY3120-SLU-C4	1.00	
3	SV03	DIRECTIONAL CONTROL VALVE	SMC	SY3120-SLU-C4	1.00	
4		TWIN-ROD CYLINDER	SMC	CXSM15-100	2.00	
5		REGULATOR AND FILTER	SMC	AW20-02BE-B	1.00	
6		SPACER	SMC	--	2.00	
7		LUBRICATOR	SMC	AL20-02-A	1.00	
8		3/2 MANUAL VALVE	SMC	VHS-02A	1.00	
9		FLOW CONTROL VALVE	SMC	AS1201F	4.00	
10		SUCTION PAD	--	--	1.00	
11		VACUUM GENERATOR	SMC	ZH070	1.00	
12	VS01	VACUUM SWITCH	SMC	ZSE10-M5-A	1.00	
13	LSS01	REED AUTO SWITCH	SMC	D-Z73	1.00	
14	LSS02	REED AUTO SWITCH	SMC	D-Z73	1.00	
15	LSS03	REED AUTO SWITCH	SMC	D-Z73	1.00	
16	LSS04	REED AUTO SWITCH	SMC	D-Z73	1.00	
17	TB4	TERMINAL BLOCK	TOYOGIKEN	PTW-SS10	6.00	
18	TB5	TERMINAL BLOCK	TOYOGIKEN	PTW-SS10	5.00	
19		STOPPER TERMINAL	TOYOGIKEN	GTY18	4.00	
20		END PLATE	TOYOGIKEN	PSWL-1(A)	2.00	
21		END PLATE	TOYOGIKEN	PSWL-1(B)	2.00	
22		JUMPPER	TOYOGIKEN	BB10-10	2.00	

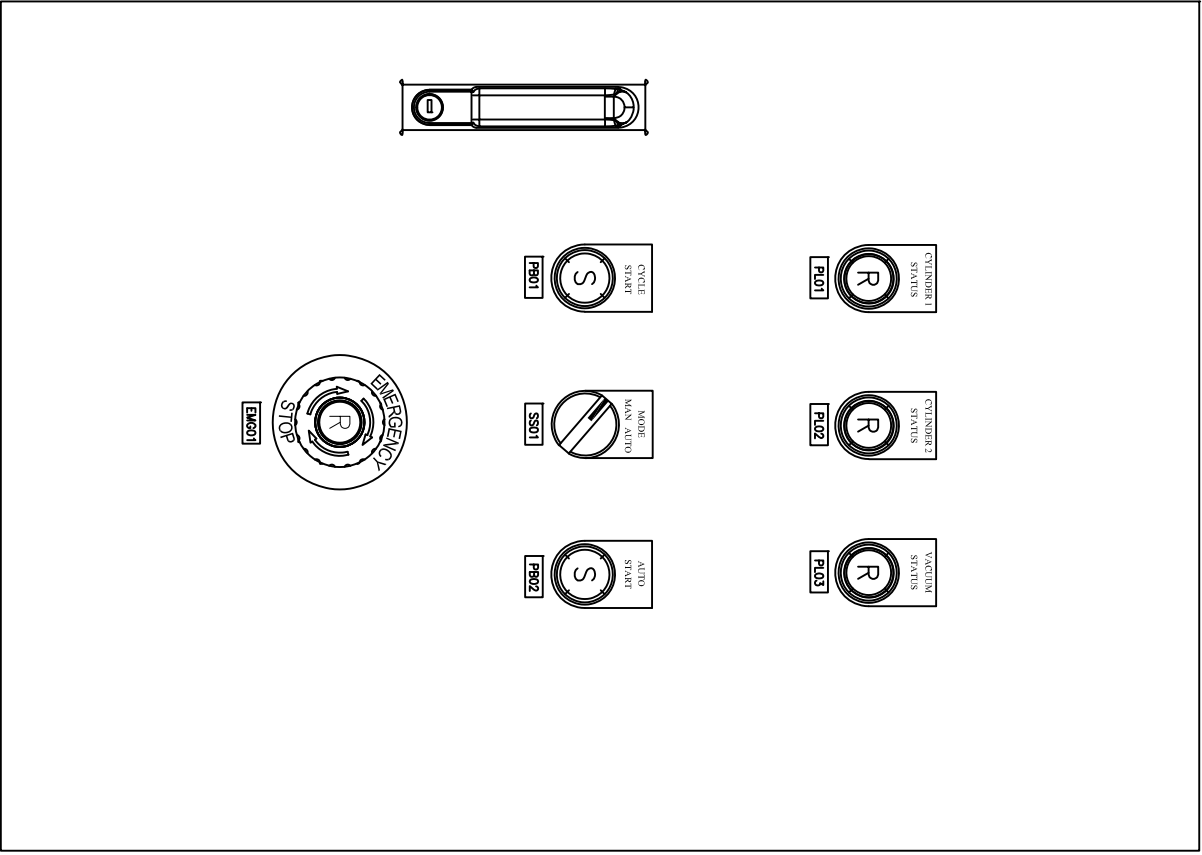
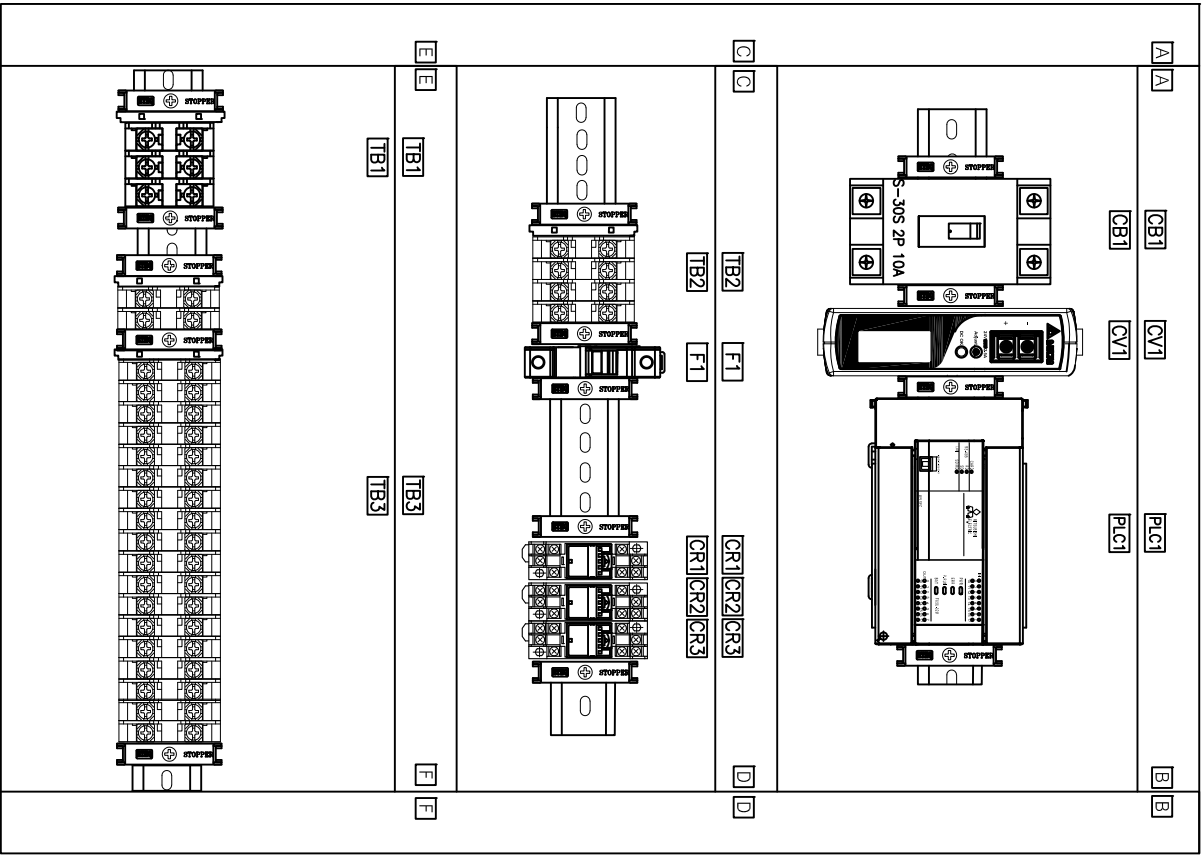
DRAWING NAME : THE COMPOSITION OF MECHANIC					REVISION		CONCEPT BY : SOMPOCH V.		PROJECT NAME : VEC SKILLS COMPETITION 2023	
PAGE NO :	4	PROJECT NO :	AWP-EDU-01-PT-PLC-VOC	REV _1 :	16 OCTOBER 2023	DESIGN BY :	SOMPOCH V.	PLAN NAME :	--	
PAGE SIZE :	A3	DRAWING NO :	VEC SKILLS COMPETITION 2023	REV _2 :		DRAWING BY :	WASANSAK C.	USER NAME :	MECHATRONIC AND ROBOTICS (VEC)	
SCALE :	1:1	DRAWING STD :	JFAC PATTERN	REV _3 :		APPROVE BY :	SOMPOCH V.	OWNER NAME :	JFAC TRAINING CENTER	
QUALITY :	1	WIRING STD :	JFAC PATTERN	REV _4 :		CS CHECK BY :	SOMPOCH V.	SI&MAKER NAME :	JFAC TRAINING CENTER	



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LAYOUT MAIN PANEL



TB4

TERMINAL IDEC (MECHANIC)
MODEL :BNDH15W 6 PCS.


1	2	3	4	5	6
N24	N24	N24	N24	N24	N24
P24	P24	P24	P24	P24	P24

TB5

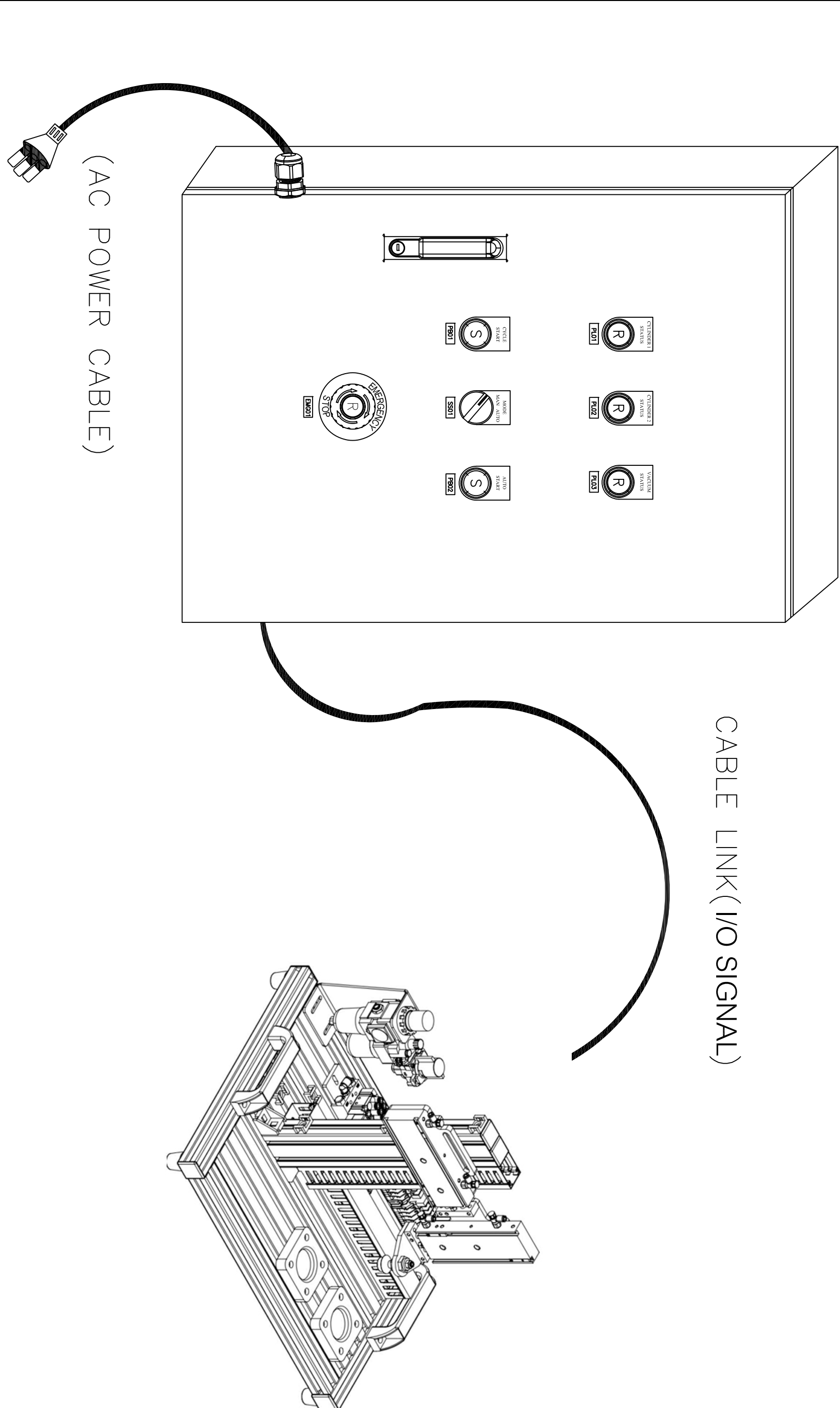
TERMINAL IDEC (MECHANIC)
MODEL :BNDH15W 5 PCS.


1	2	3	4	5
D01	D02	D03	N/A	N/A
X005	X006	X007	X010	X011

DRAWING NAME : LAYOUT TERMINAL PANEL MECHANIC		REVISION		CONCEPT BY : SOMPOCH V.		PROJECT NAME : VEC SKILLS COMPETITION 2023			
PAGE NO :	7	PROJECT NO :	AWP-EDU-01-PT-PLC-VOC	REV _1 :	16 OCTOBER 2023	DESIGN BY :	SOMPOCH V.	PLAN NAME :	--
PAGE SIZE :	A3	DRAWING NO :	VEC SKILLS COMPETITION 2023	REV _2 :		DRAWING BY :	WASANSAK C.	USER NAME :	MECHATRONIC AND ROBOTICS (VEC)
SCALE :	1:1	DRAWING STD :	JFAC PATTERN	REV _3 :		APPROVE BY :	SOMPOCH V.	OWNER NAME :	JFAC TRAINING CENTER
QUALITY :	1	WIRING STD :	JFAC PATTERN	REV _4 :		CS CHECK BY :	SOMPOCH V	SIG&MAKER NAME :	JFAC TRAINING CENTER



SYSTEM INTERFACE LAYOUT



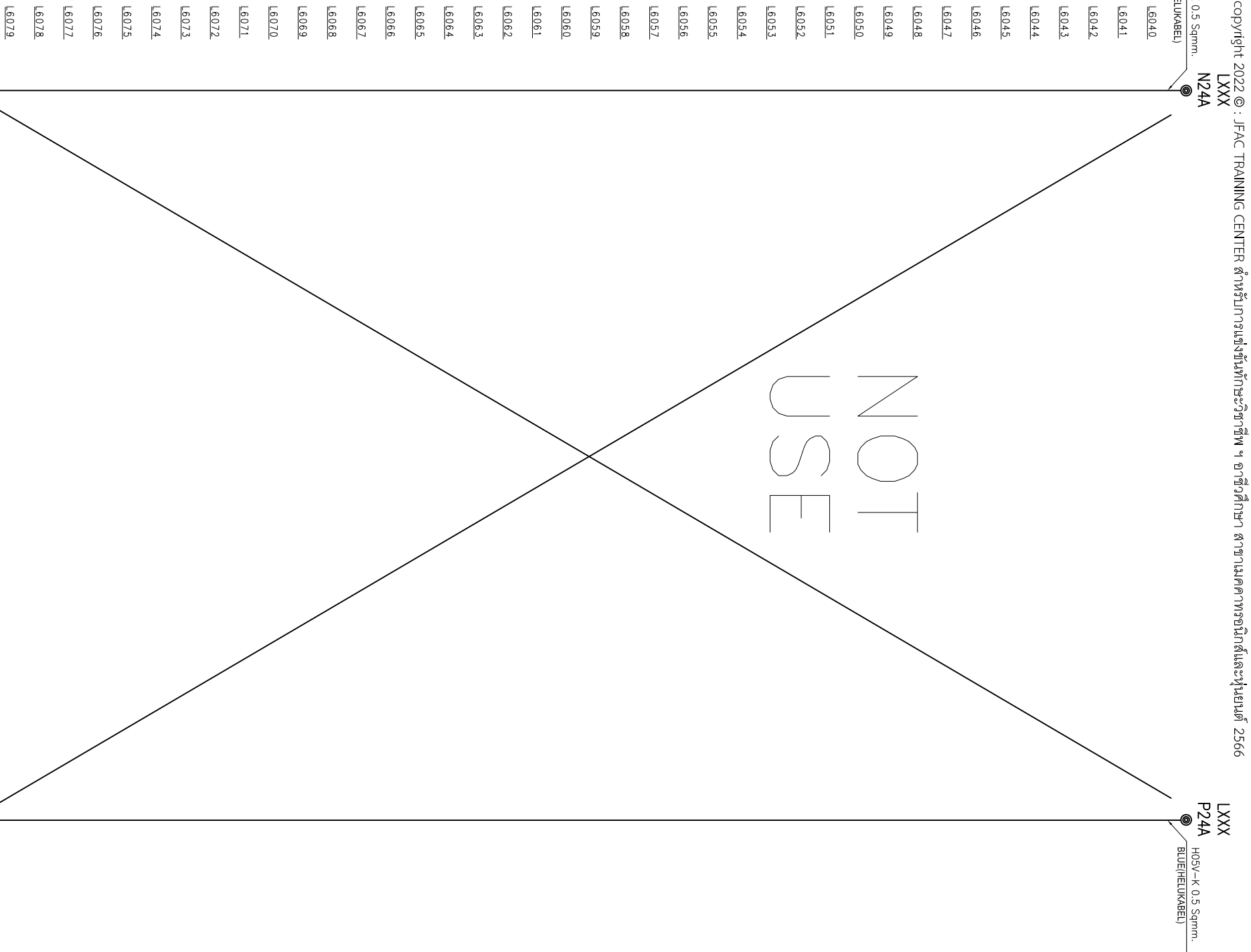
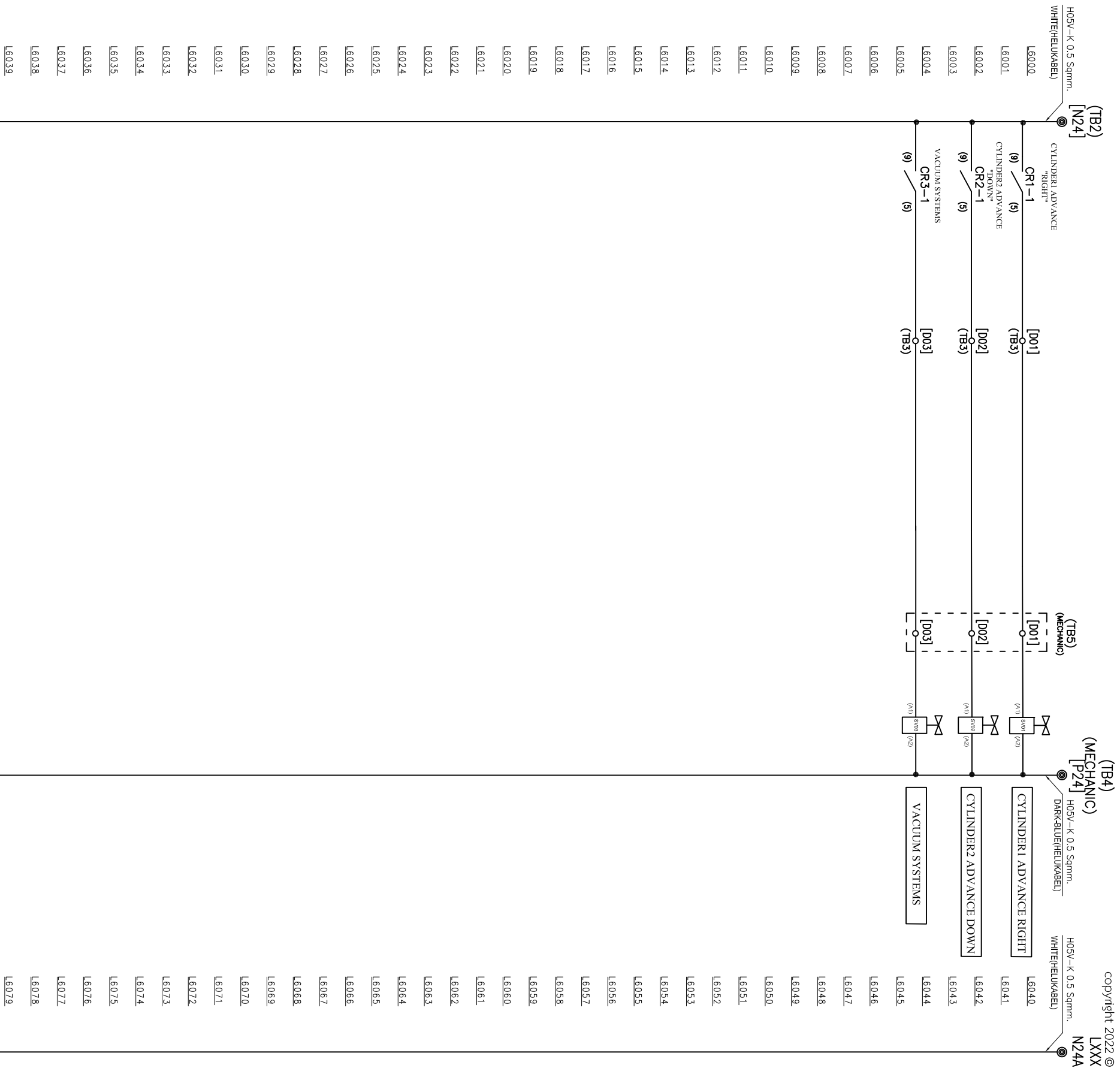



JFAC

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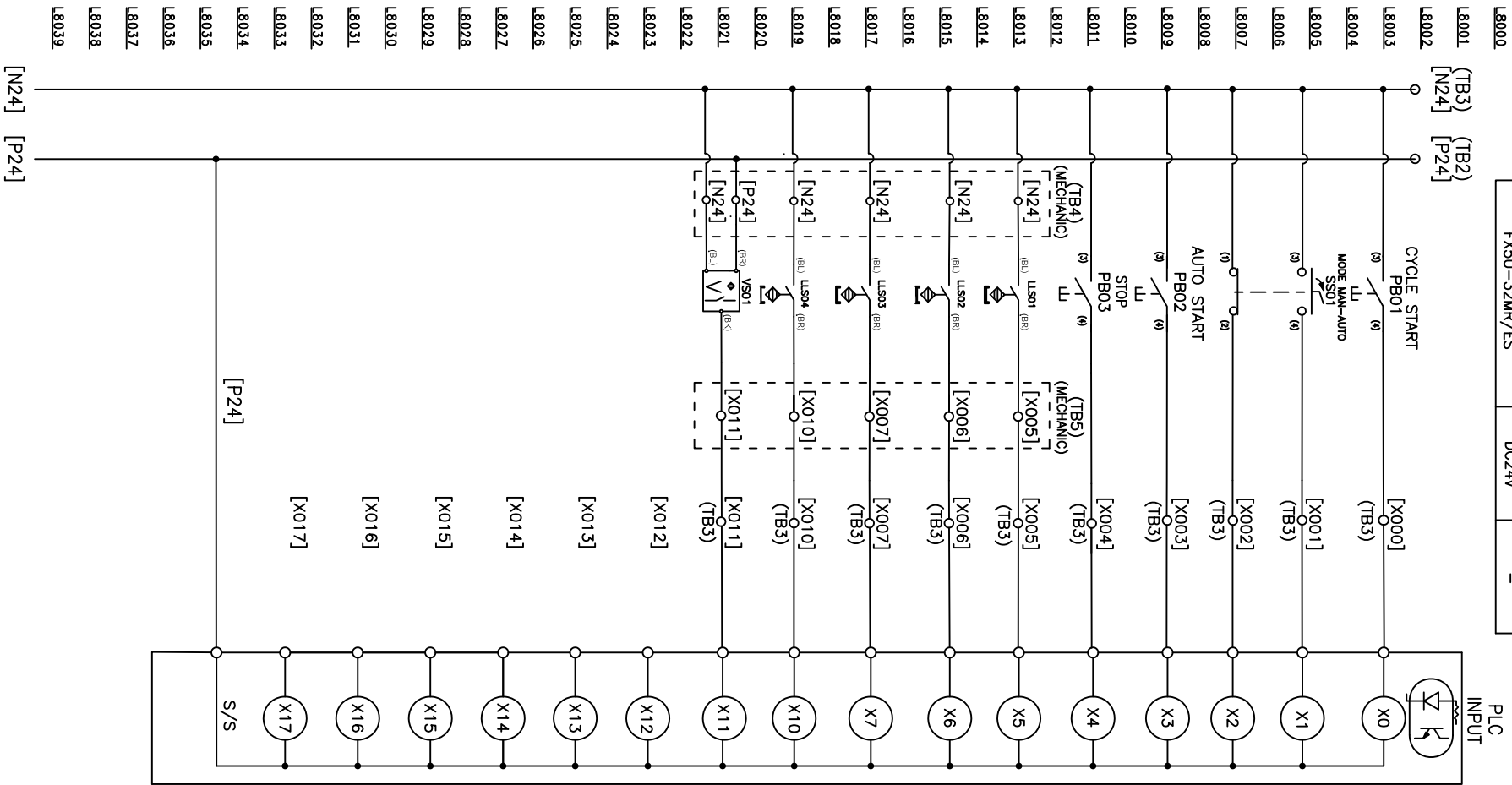
DRAWING NAME : SYSTEM INTERFACE LAYOUT		REVISION		PROJECT NAME : VEC SKILLS COMPETITION 2023	
PAGE NO : 8	PROJECT NO : AWP-EDU-01-PT-PLC-VOC	REV_1 : 16 OCTOBER 2023	CONCEPT BY : SOMPOCH V.	PLAN NAME : --	
PAGE SIZE : A3	DRAWING NO : VEC SKILLS COMPETITION 2023	REV_2 :	DRAWING BY : WASANSACK C.	USER NAME : MECHATRONIC AND ROBOTICS (VEC)	
SCALE : 1:1	DRAWING STD : JFAC PATTERN	REV_3 :	APPROVE BY : SOMPOCH V.	OWNER NAME : JFAC TRAINING CENTER	
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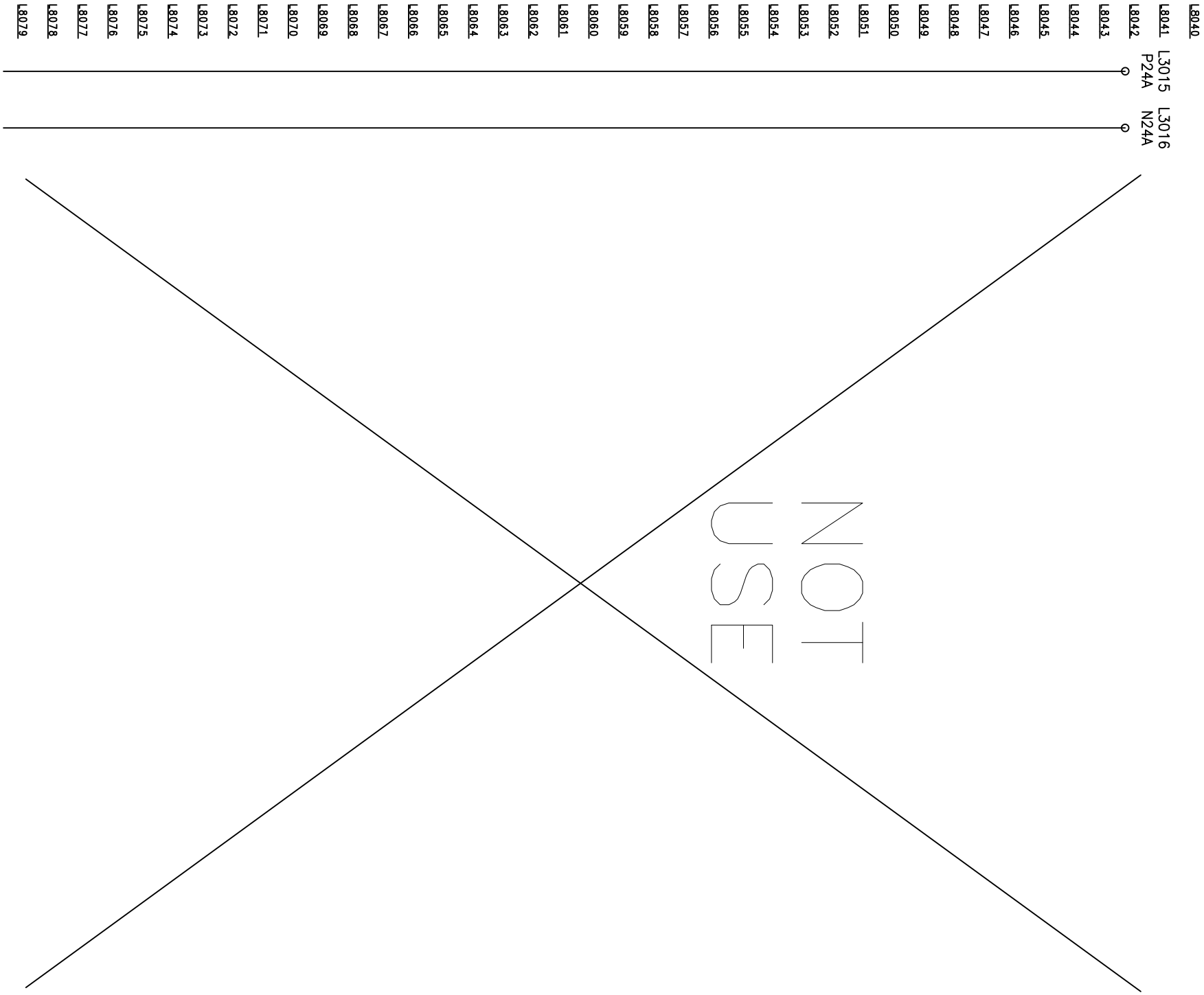


 JFAC TRAINING CENTER				
DRAWING NAME :	(6000) CONTROL CIRCUIT DC HARD WIRING		REVISION	PROJECT NAME : VEC SKILLS COMPETITION 2023
PAGE NO : 10	PROJECT NO : AWP-EDU-01-PT-PLC-VOC	REV_1 : 16 OCTOBER 2023	CONCEPT BY : SOMPOCH V.	PLAN NAME : --
PAGE SIZE : A3	DRAWING NO : VEC SKILLS COMPETITION 2023	REV_2 :	DRAWING BY : WASANSAK C.	USER NAME : MECHATRONIC AND ROBOTICS (VEC)
SCALE : 1:1	DRAWING STD : JFAC PATTERN	REV_3 :	APPROVE BY : SOMPOCH V.	OWNER NAME : JFAC TRAINING CENTER
QUALITY : 1	WIRING STD : JFAC PATTERN	REV_4 :	CS CHECK BY : SOMPOCH V.	S&E/MAKER NAME : JFAC TRAINING CENTER

UNIT	MITSUBISHI	OUTPUT	SLOT NO.
FX5U-32MR/ES		DC24V	-



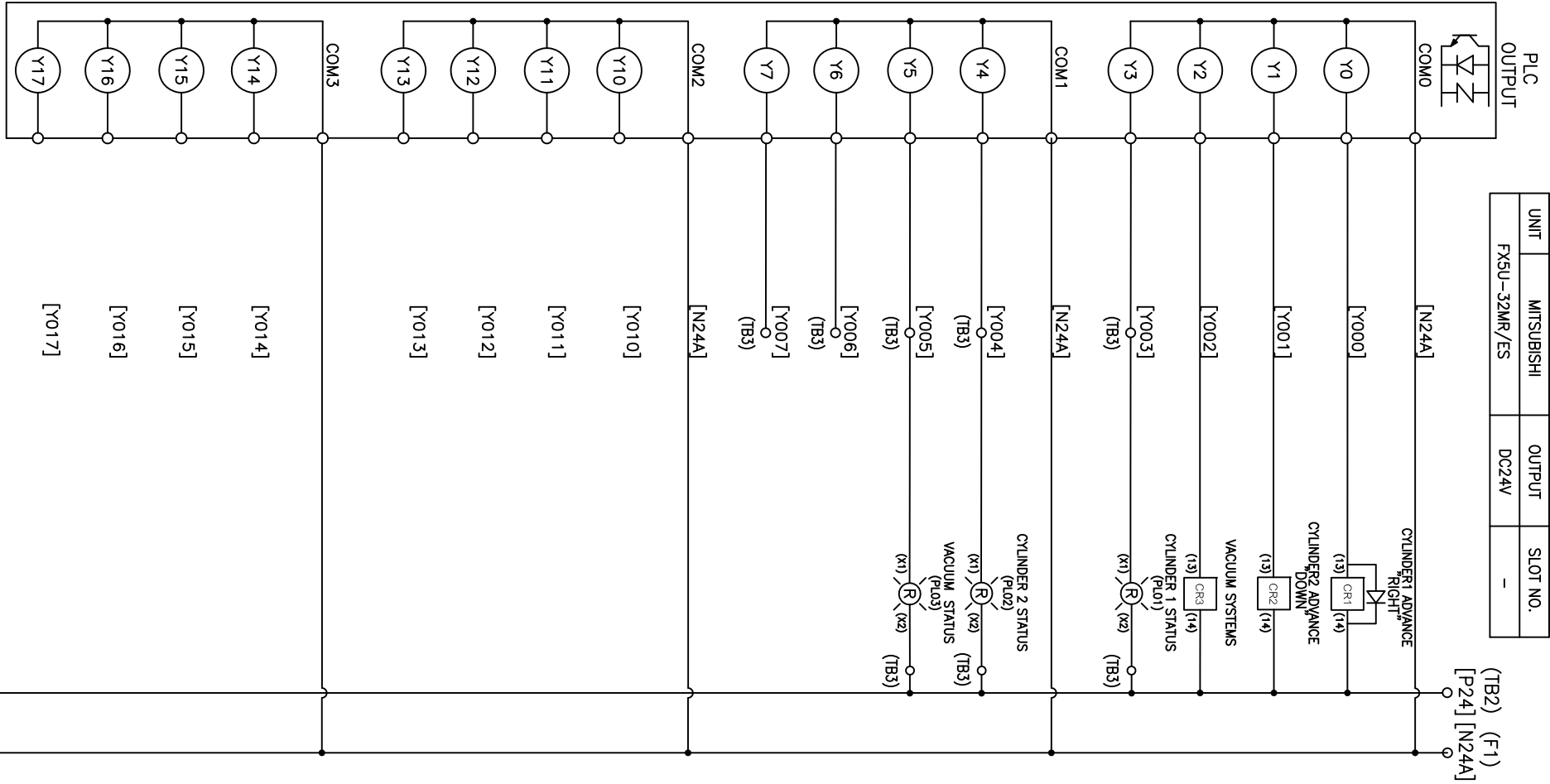
DECRPTION	TYPE	RELATE
CYCLE START	YW1B-M1E10S	--
MANUAL	YW1S-2E11	--
AUTO		--
AUTO START	YW1B-M1E10S	--
STOP	YW1B-VE01R	--
REED AUTO SWITCH (CYLINDER1 ADVANCE RIGHT)	D-Z73	--
REED AUTO SWITCH (CYLINDER1 RETURN)	D-Z73	--
REED AUTO SWITCH (CYLINDER2 ADVANCE DOWN)	D-Z73	--
REED AUTO SWITCH (CYLINDER2 RETURN)	D-Z73	--
VACUUM SWITCH	ZSE10-M5-A	--
--	--	--
--	--	--
--	--	--
--	--	--
--	--	--
--	--	--
COMMON	PLC	--




DRAWING NAME : (8000) PLC INPUT CONTROL CIRCUIT			
PAGE NO : 11	PROJECT NO : AWP-EDU-01-PT-PLC-VOC	REVISION	CONCEPT BY : SOMPOCH V.
PAGE SIZE : A3	DRAWING NO : VEC SKILLS COMPETITION 2023	REV_1 : 16 OCTOBER 2023	DESIGN BY : SOMPOCH V.
SCALE : 1:1	DRAWING STD : JFAC PATTERN	REV_3 :	DRAWING BY : WASANSAK C.
QUALITY : 1	WIRING STD : JFAC PATTERN	REV_4 :	APPROVE BY : SOMPOCH V.
		CS CHECK BY : SOMPOCH V.	OWNER NAME : JFAC TRAINING CENTER
		SIG&MAKER NAME : JFAC TRAINING CENTER	



DETAIL OUTPUT TABLE		
DESCRIPTION	TYPE	RELATE
COMMON	PLC	--
CYLINDER1 "RIGHT"	MY2N-D2	--
CYLINDER2 "DOWN"	RU2S-C-D24	--
VACUUM SYSTEMS	RU2S-C-D24	--
CYLINDER1 "RIGHT STATUS"	YM1P-2EQ4R	--
COMMON	PLC	--
CYLINDER2 ADVANCE "DOWN STATUS"	YM1P-2EQ4R	--
"VACUUM STATUS"	YM1P-2EQ4R	--
--	--	--
--	--	--
COMMON	PLC	--
COMMON	PLC	--
--	--	--
--	--	--
--	--	--
--	--	--
--	--	--
COMMON	PLC	--
--	--	--
--	--	--
--	--	--
--	--	--
COMMON	PLC	--
--	--	--
--	--	--
--	--	--
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--	--	--



 JFAC TRAINING CENTER							
DRAWING NAME : (9000) PLC OUTPUT CONTROL CIRCUIT				REVISION		PROJECT NAME : VEC SKILLS COMPETITION 2023	
PAGE NO : 12	PROJECT NO : AWP-EDU-01-PT-PLC-VOC		REV_1 : 16 OCTOBER 2023		CONCEPT BY : SOMPOCH V.		
PAGE SIZE : A3	DRAWING NO : VEC SKILLS COMPETITION 2023		REV_2 :		DESIGN BY : SOMPOCH V.		PLAN NAME : --
SCALE : 1:1	DRAWING STD : JFAC PATTERN		REV_3 :		DRAWING BY : WASANSACK C.		USER NAME : MECHATRONIC AND ROBOTICS (VEC)
					APPROVE BY : SOMPOCH V.		OWNER NAME : JFAC TRAINING CENTER
QUALITY : 1	WIRING STD : JFAC PATTERN		REV_4 :		CS CHECK BY : SOMPOCH V.		SIG&MAKER NAME : JFAC TRAINING CENTER

