



SCHEMATIC DIAGRAM



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 (Rev. L8011)



ฉบับอนุมัติใช้ในการแข่งขัน ประจำปี 2566 (ระดับภาค)

	DRAWING NAME : COVER PAGE		REVISION		CONCEPT BY : SOMPOCH V.	PROJECT NAME : VEC SKILLS COMPETITION 2023
	PAGE NO: 1	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	

Sheet No.	Designation	Revision/Modification								As Built
		Approval	Revision 1	Revision 2	Revision 3	Revision 4	Revision 5	Revision 6		
01	COVER PAGE									0
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	Designation	Revision/Modification								As Built
		Approval	Revision 1	Revision 2	Revision 3	Revision 4	Revision 5	Revision 6		
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DRAWING NAME : CONTENT	REVISION	CONCEPT BY : SOMPOCH V.	PROJECT NAME : VEC SKILLS COMPETITION 2023
PAGE NO: 2	REV_1 : 16 OCTOBER 2023	DESIGN BY : SOMPOCH V.	PLAN NAME : --
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SCALE: 1:1	REV_3 :	APPROVE BY : SOMPOCH V.	OWNER NAME : JFAC TRAINING CENTER
QUALITY: 1	REV_4 :	CS CHECK BY : SOMPOCH V.	SI&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	MITSUBISHI	FX5U-32MR/ES	1.00	
4	CR1	CIRCUIT RELAY @ 24VDC + SOCKET RELAY	OMRON	MY2N D2 + PYF08A-E	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	BNH15LW	3.00	
15	TB2	TERMINAL BLOCK	IDEC	BNH15MW	4.00	
16	TB3	TERMINAL BLOCK	IDEC	BNH15MW	20.00	
17	F1	FUSE TERMINAL BLOCK (2A)	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	

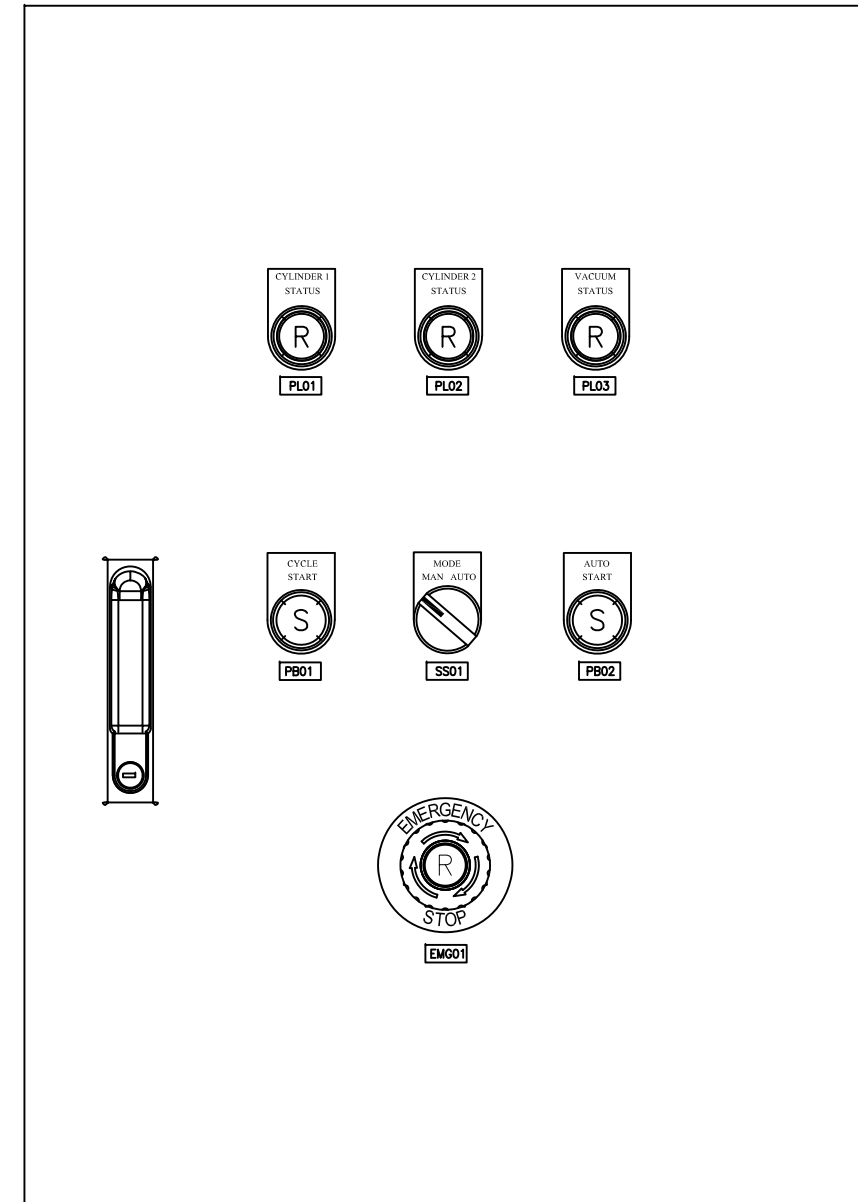
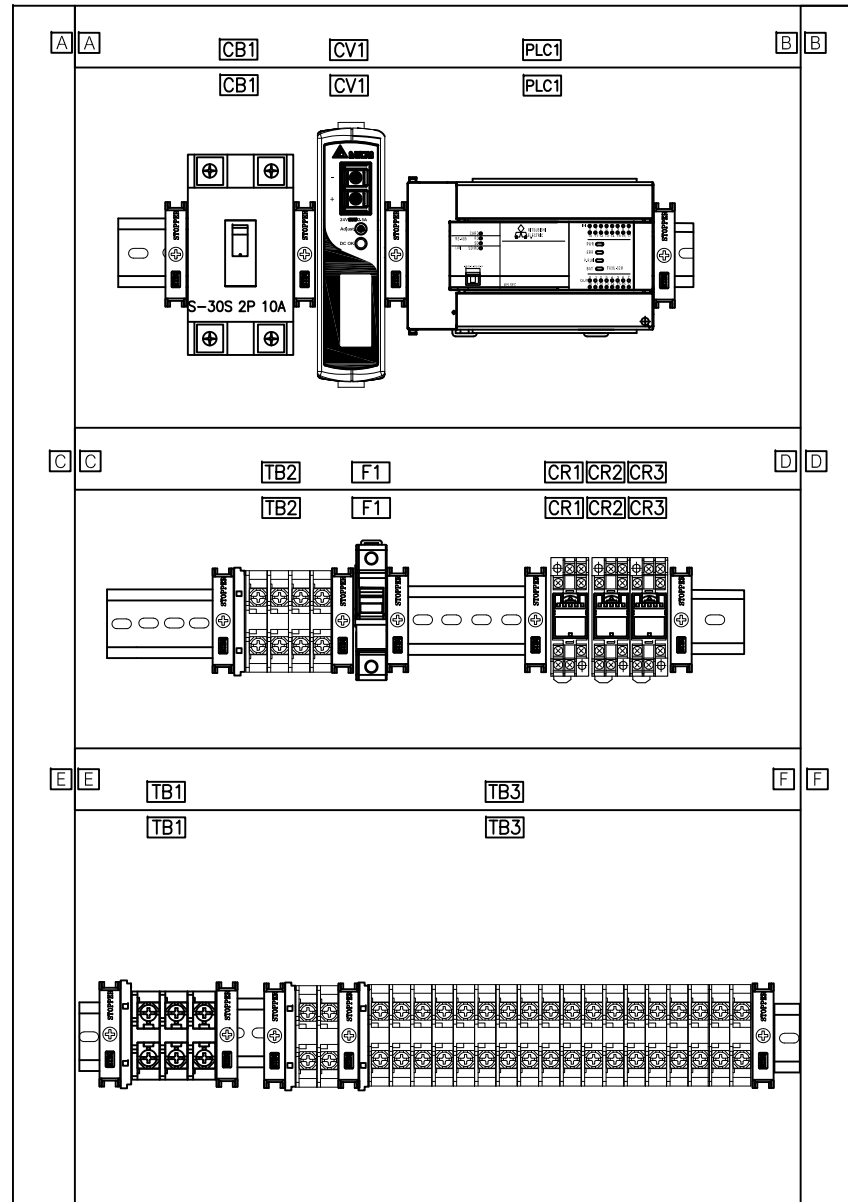
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	PAGE NO: 3	PROJECT NO: AWP-EDU-01-PT-PLC-VOC	REV_1: 16 OCTOBER 2023	DESIGN BY : SOMPOCH V.	PLAN NAME : --	
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	QUALITY: 1	WIRING STD: JFAC PATTERN	REV_4:	CS CHECK BY : SOMPOCH V	SI&MAKER NAME : JFAC 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 : --	
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	QUALITY: 1	WIRING STD: JFAC PATTERN	REV_4:	CS CHECK BY : SOMPOCH V.	SI&MAKER NAME : JFAC TRAINING CENTER	

LAYOUT MAIN PANEL



	DRAWING NAME : LAYOUT MAIN PANEL		REVISION		CONCEPT BY : SOMPOCH V.	PROJECT NAME : VEC SKILLS COMPETITION 2023
	PAGE NO: 5	PROJECT NO : AWP-EDU-01-PT-PLC-VOC	REV_1 :	16 OCTOBER 2023	DESIGN BY : SOMPOCH V.	PLAN NAME : --
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	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

TB1 TERMINAL IDEC
MODEL :BNH15LW 3 PCS.

1	2	3
L	N	E

TB2 TERMINAL IDEC
MODEL :BNH15MW 4 PCS.

1	2	3	4
P24	P24	N24	N24

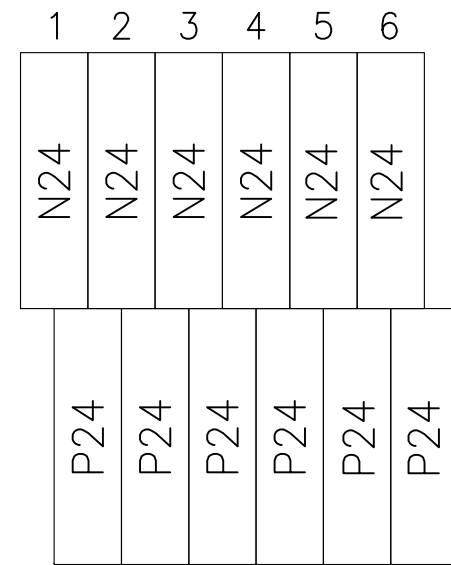
TB3 TERMINAL IDEC
MODEL :BNH15MW 20 PCS.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
P24	N24	X000	X001	X002	X003	X004	X005	X006	X007	X010	X011	D01	D02	D03	Y003	Y004	Y005	Y006	Y007

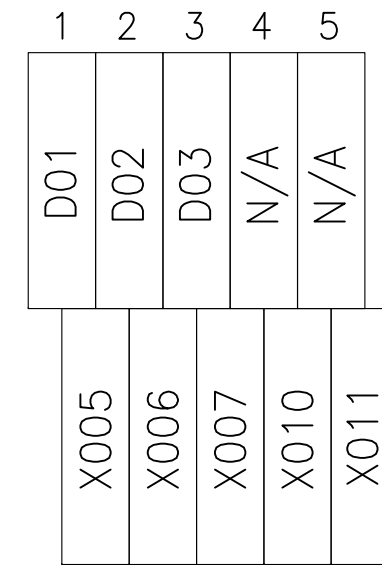


DRAWING NAME : LAYOUT TERMINAL PANEL		REVISION		CONCEPT BY : SOMPOCH V.	PROJECT NAME : VEC SKILLS COMPETITION 2023
PAGE NO: 6	PROJECT NO: AWP-EDU-01-PT-PLC-VOC	REV_1: 16 OCTOBER 2023	DESIGN BY : SOMPOCH V.	PLAN NAME : --	
PAGE SIZE: A3	DRAWING NO: VEC SKILLS COMPETITION 2023	REV_2:	DRAWING BY : WASANSAK 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	

TB4 TERMINAL IDEC (MECHANIC)
MODEL :BNDH15W 6 PCS.

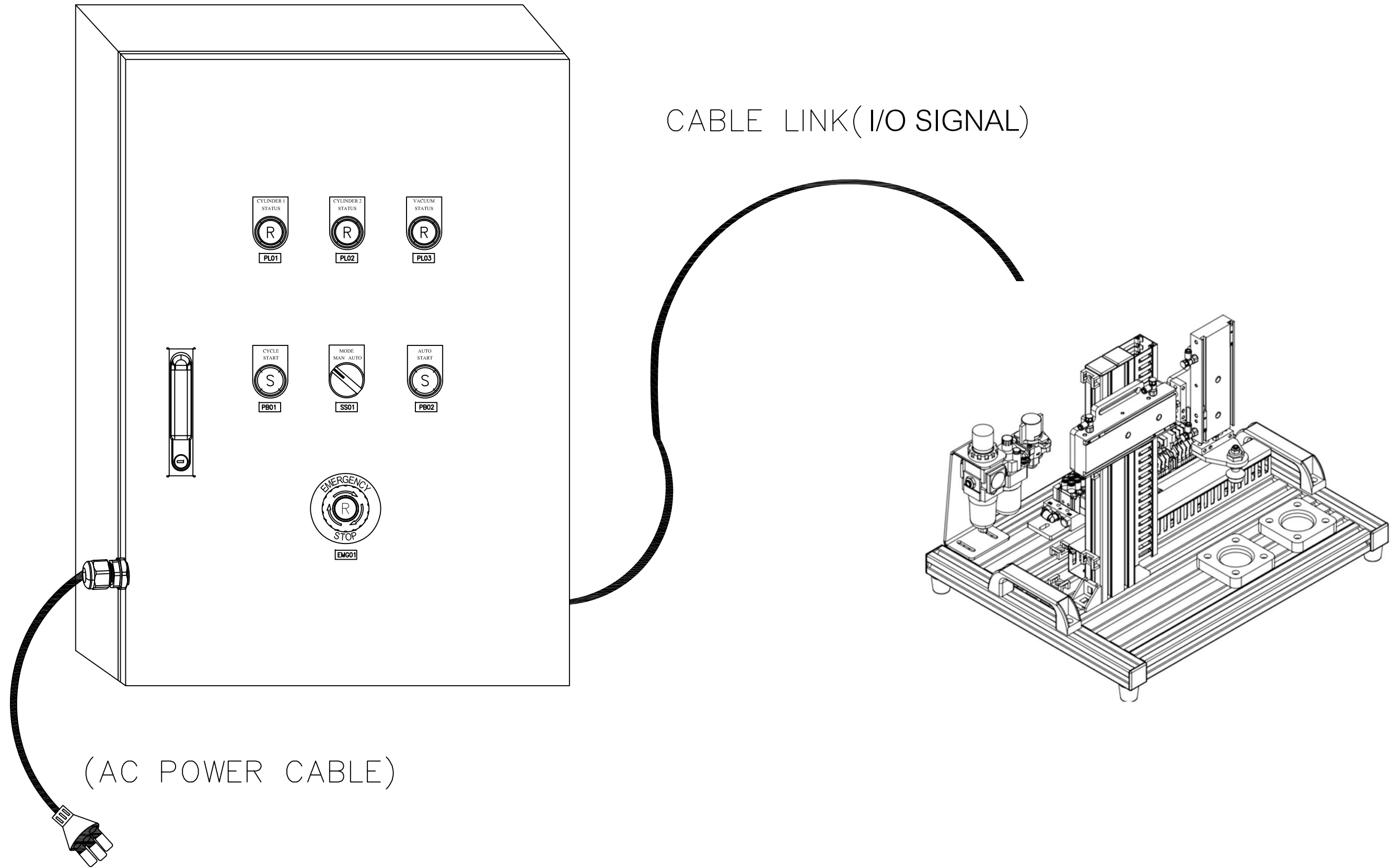


TB5 TERMINAL IDEC (MECHANIC)
MODEL :BNDH15W 5 PCS.



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	SI&MAKER NAME : JFAC TRAINING CENTER	

SYSTEM INTERFACE LAYOUT



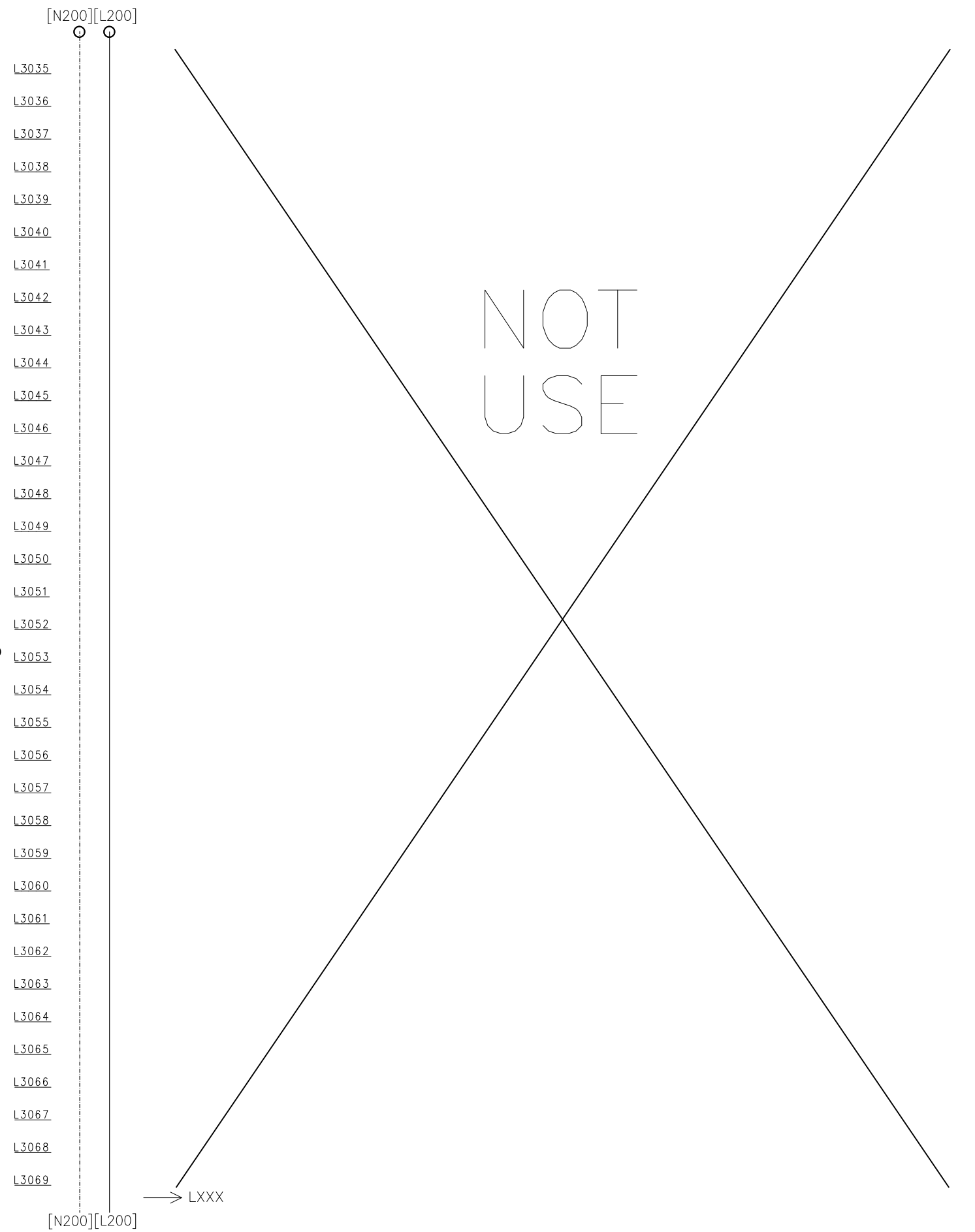
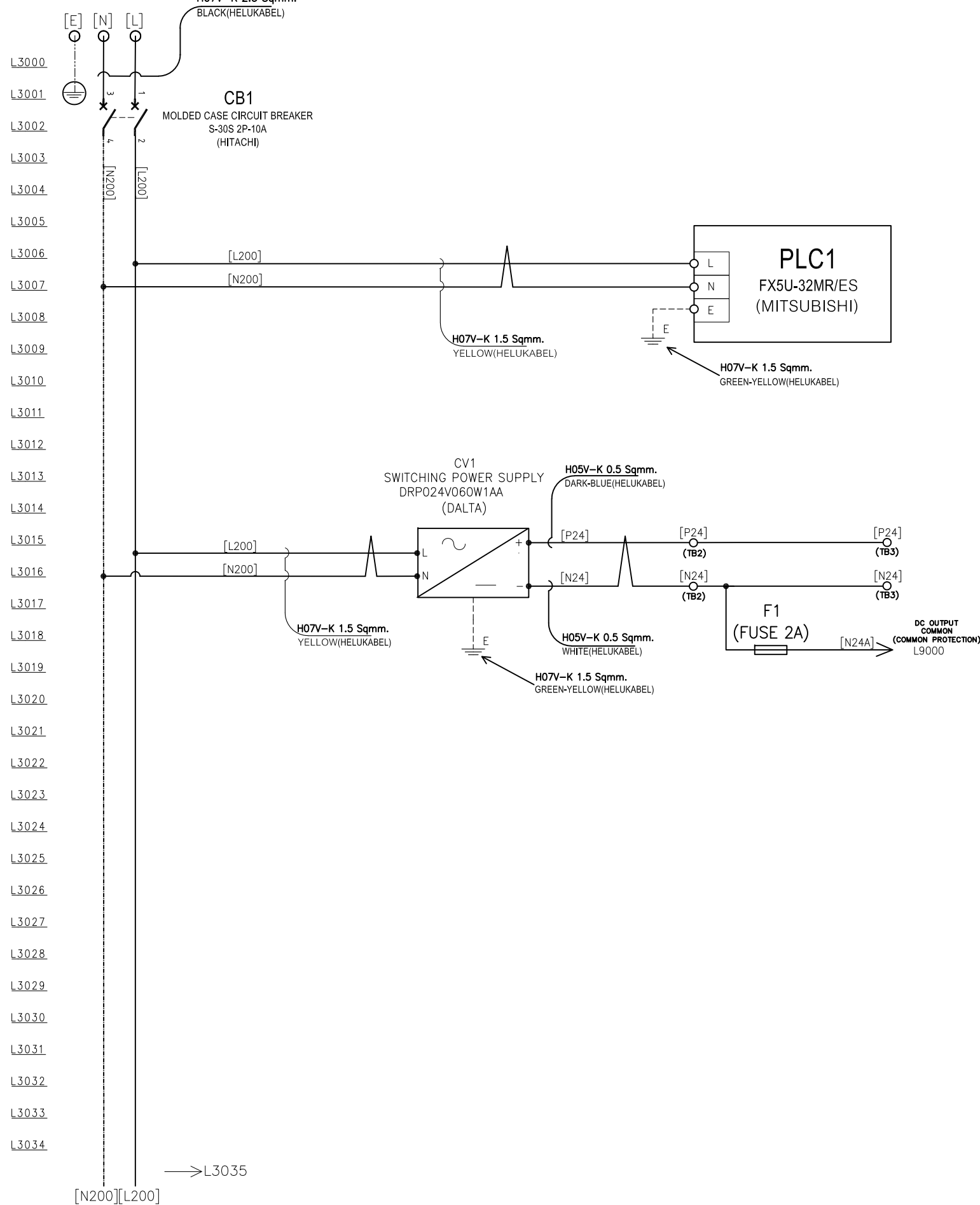
(AC POWER CABLE)

CABLE LINK (I/O SIGNAL)

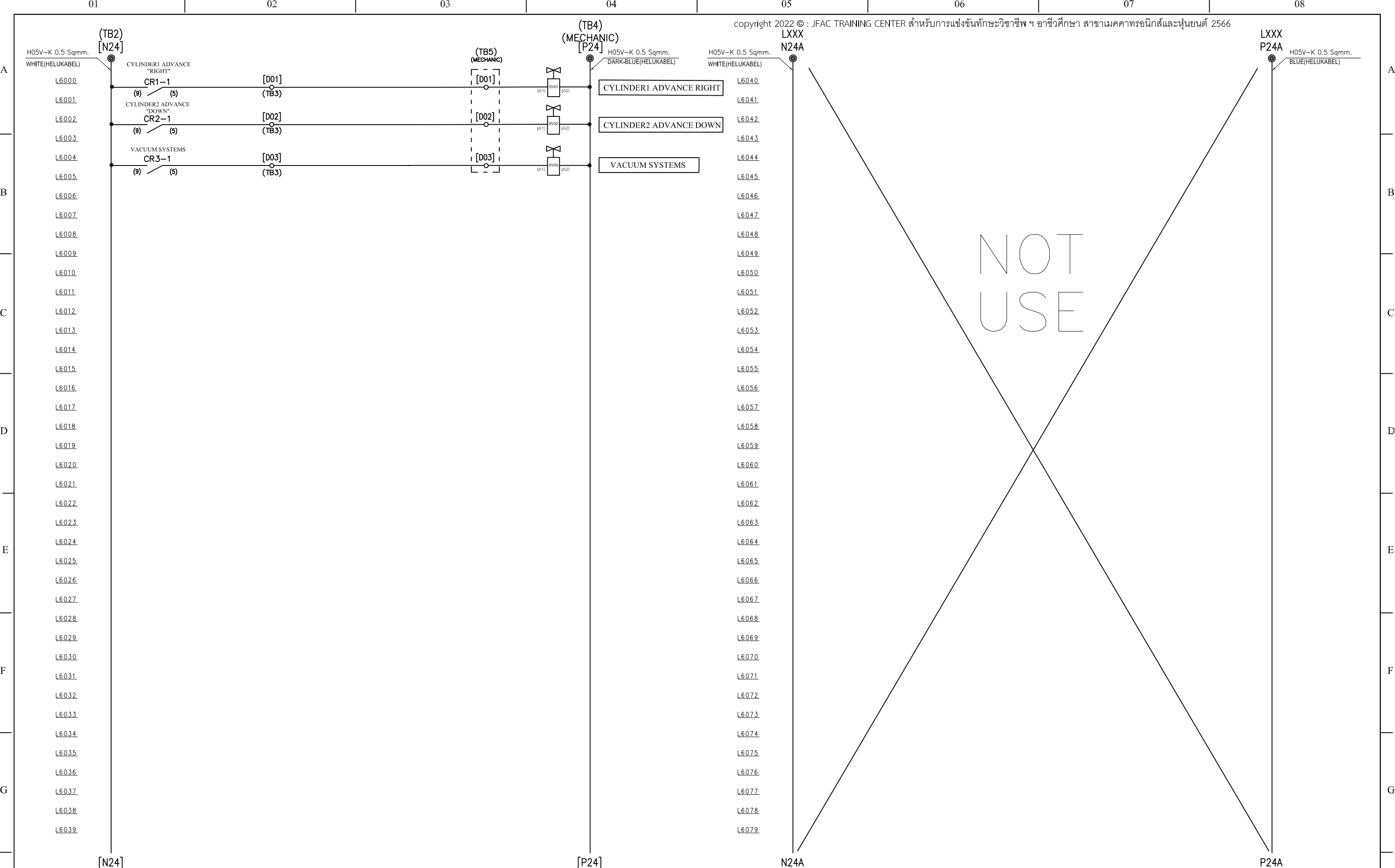


DRAWING NAME : SYSTEM INTERFACE LAYOUT		REVISION		CONCEPT BY : SOMPOCH V.	PROJECT NAME : VEC SKILLS COMPETITION 2023
PAGE NO: 8	PROJECT NO: AWP-EDU-01-PT-PLC-VOC	REV_1: 16 OCTOBER 2023	DESIGN BY : SOMPOCH V.	PLAN NAME : --	
PAGE SIZE: A3	DRAWING NO: VEC SKILLS COMPETITION 2023	REV_2:	DRAWING BY : WASANSAK 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	

220VAC 1Ph, 50Hz

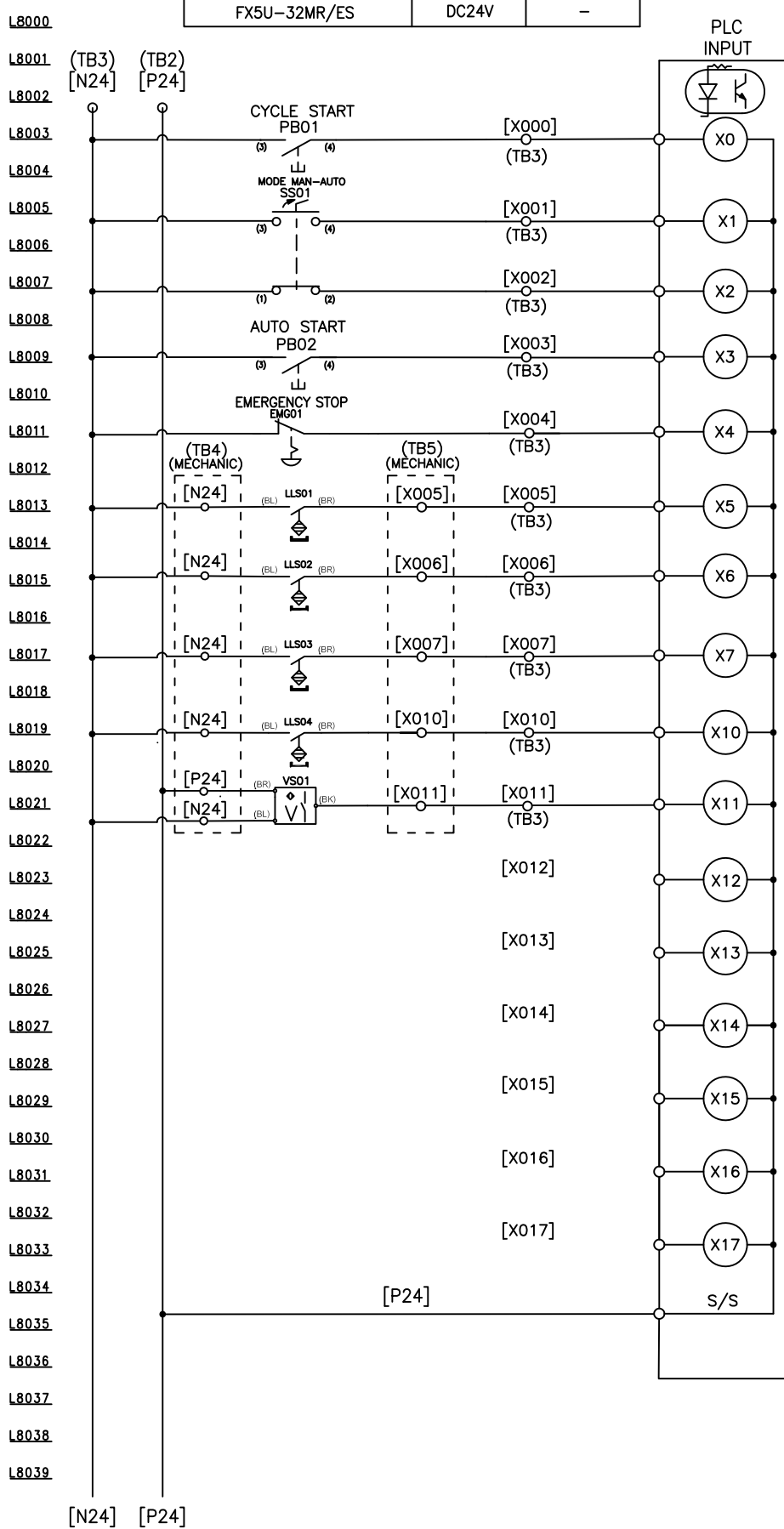


DRAWING NAME : (3000) AC 220V 1PH POWER CIRCUIT		REVISION		CONCEPT BY : SOMPOCH V.	PROJECT NAME : VEC SKILLS COMPETITION 2023
PAGE NO: 9	PROJECT NO: AWP-EDU-01-PT-PLC-VOC	REV_1: 16 OCTOBER 2023		DESIGN BY : SOMPOCH V.	PLAN NAME : --
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SCALE: 1:1	DRAWING STD: JFAC PATTERN	REV_3:		APPROVE BY : SOMPOCH V.	OWNER NAME : JFAC TRAINING CENTER
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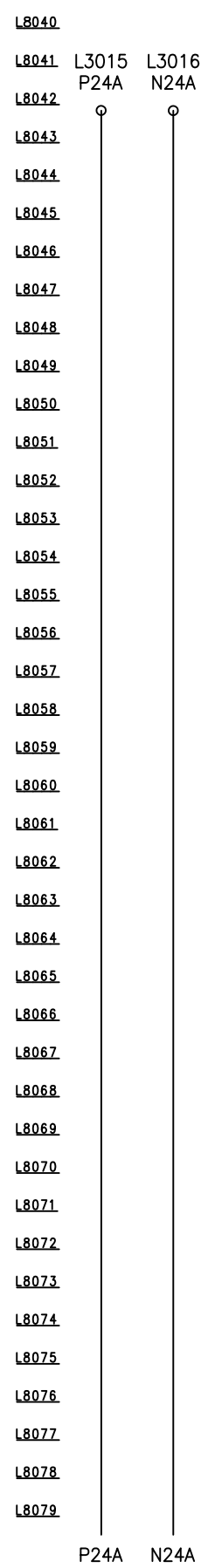
DRAWING NAME : (6000) CONTROL CIRCUIT DC HARD WIRING		REVISION		CONCEPT BY : SOMPOCH V.	PROJECT NAME : VEC SKILLS COMPETITION 2023
PAGE NO: 10	PROJECT NO: AWP-EDU-01-PT-PLC-VOC	REV_1: 16 OCTOBER 2023	DESIGN BY : SOMPOCH V.	PLAN NAME : --	
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QUALITY: 1	WIRING STD: JFAC PATTERN	REV_4:	CS CHECK BY : SOMPOCH V.	SI&MAKER NAME : JFAC TRAINING CENTER	

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



DETAIL INPUT TABLE

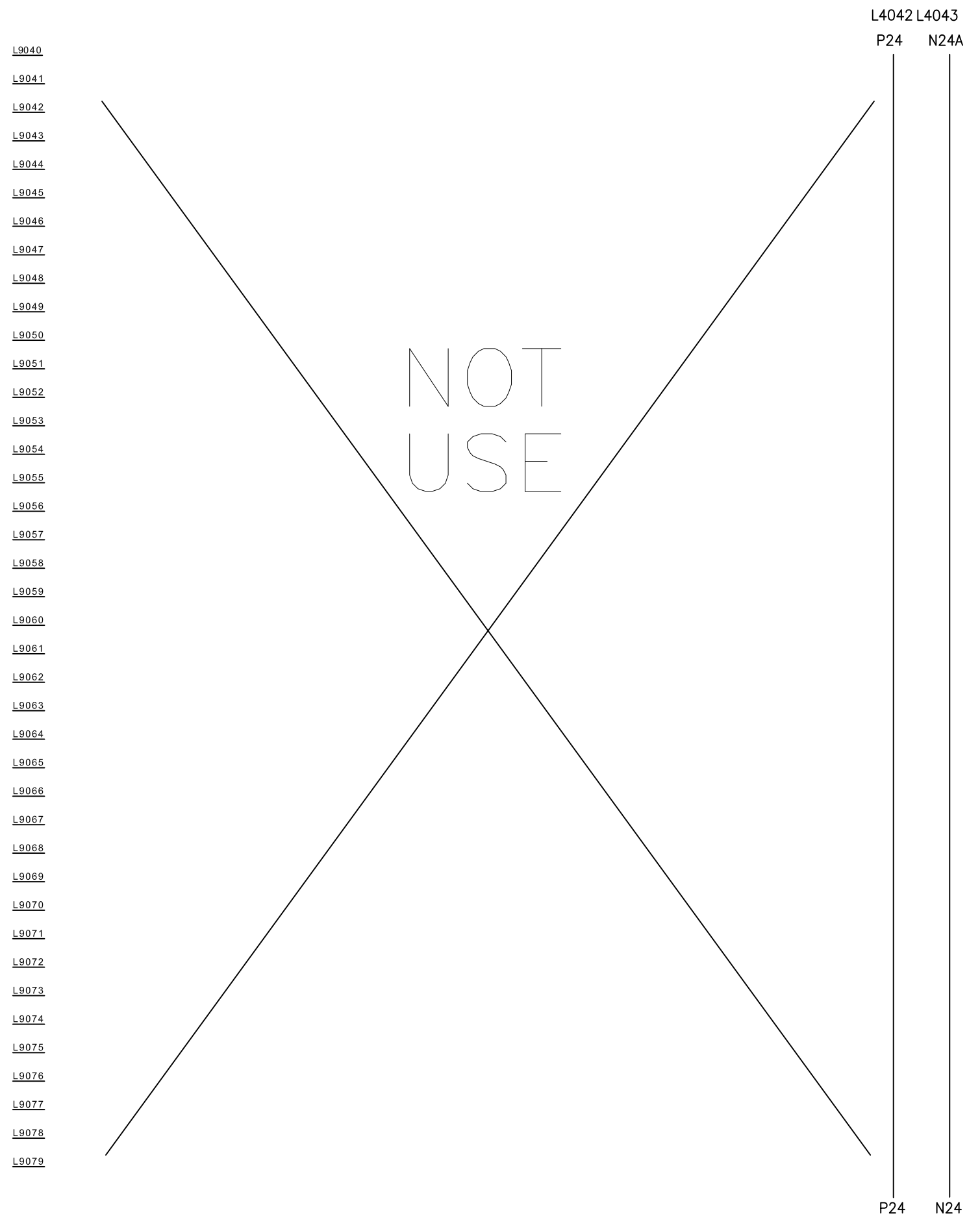
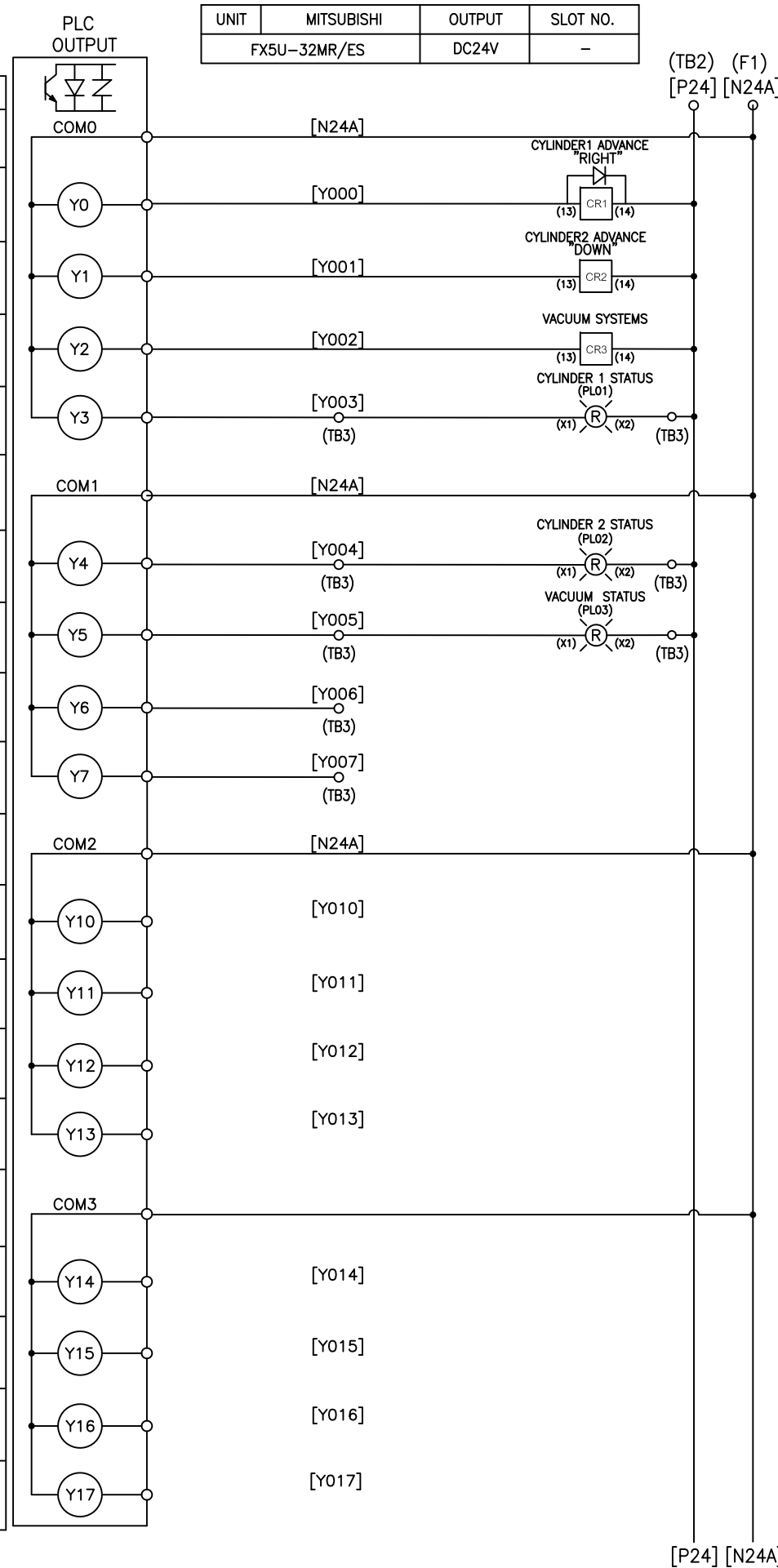
DESCRIPTION	TYPE	RELATE
CYCLE START	YW1B-M1E10S	--
MANUAL	YW1S-2E11	--
AUTO		--
AUTO START	YW1B-M1E10S	--
EMERGENCY STOP	YW1B-V4E01R	--
REED AUTO SWITCH (CYLINDER1 ADVANCE RIGHT)	D-Z73	--
REED AUTO SWITCH (CYLINDER1 RETURN)	D-Z73	--
REED AUTO SWITCH (CYLINDER2 ADVANCE DOWN)	D-Z73	--
REED AUTO SWITCH (CYLINDER2 RETURN)	D-Z73	--
VACUUM SWITCH	ZSE10-M5-A	--
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COMMON	PLC	--



DRAWING NAME : (8000) PLC INPUT CONTROL CIRCUIT		REVISION		CONCEPT BY : SOMPOCH V.	PROJECT NAME : VEC SKILLS COMPETITION 2023
PAGE NO : 11	PROJECT NO : AWP-EDU-01-PT-PLC-VOC	REV_1 : 16 OCTOBER 2023		DESIGN BY : SOMPOCH V.	PLAN NAME : --
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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

DETAIL OUTPUT TABLE

L9000	DESCRIPTION	TYPE	RELATE
L9001	COMMON	PLC	--
L9002	CYLINDER1 "RIGHT"	MY2N-D2	--
L9003	CYLINDER2 "DOWN"	RU2S-C-D24	--
L9004	VACUUM SYSTEMS	RU2S-C-D24	--
L9005	CYLINDER1 "RIGHT STATUS"	YW1P-2EQ4R	--
L9006	COMMON	PLC	--
L9007	CYLINDER2 ADVANCE "DOWN STATUS"	YW1P-2EQ4R	--
L9008	"VACUUM STATUS"	YW1P-2EQ4R	--
L9009	--	--	--
L9010	--	--	--
L9011	COMMON	PLC	--
L9012	--	--	--
L9013	--	--	--
L9014	--	--	--
L9015	--	--	--
L9016	--	--	--
L9017	--	--	--
L9018	--	--	--
L9019	--	--	--
L9020	COMMON	PLC	--
L9021	--	--	--
L9022	--	--	--
L9023	--	--	--
L9024	--	--	--
L9025	--	--	--
L9026	--	--	--
L9027	--	--	--
L9028	--	--	--
L9029	--	--	--
L9030	COMMON	PLC	--
L9031	--	--	--
L9032	--	--	--
L9033	--	--	--
L9034	--	--	--
L9035	--	--	--
L9036	--	--	--
L9037	--	--	--
L9038	--	--	--
L9039	--	--	--



DRAWING NAME : (9000) PLC OUTPUT CONTROL CIRCUIT		REVISION		CONCEPT BY : SOMPOCH V.	PROJECT NAME : VEC SKILLS COMPETITION 2023
PAGE NO: 12	PROJECT NO: AWP-EDU-01-PT-PLC-VOC	REV_1: 16 OCTOBER 2023	DESIGN BY : SOMPOCH V.	PLAN NAME : --	
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