

APMM 150B FR SUS 5st

I N D E X

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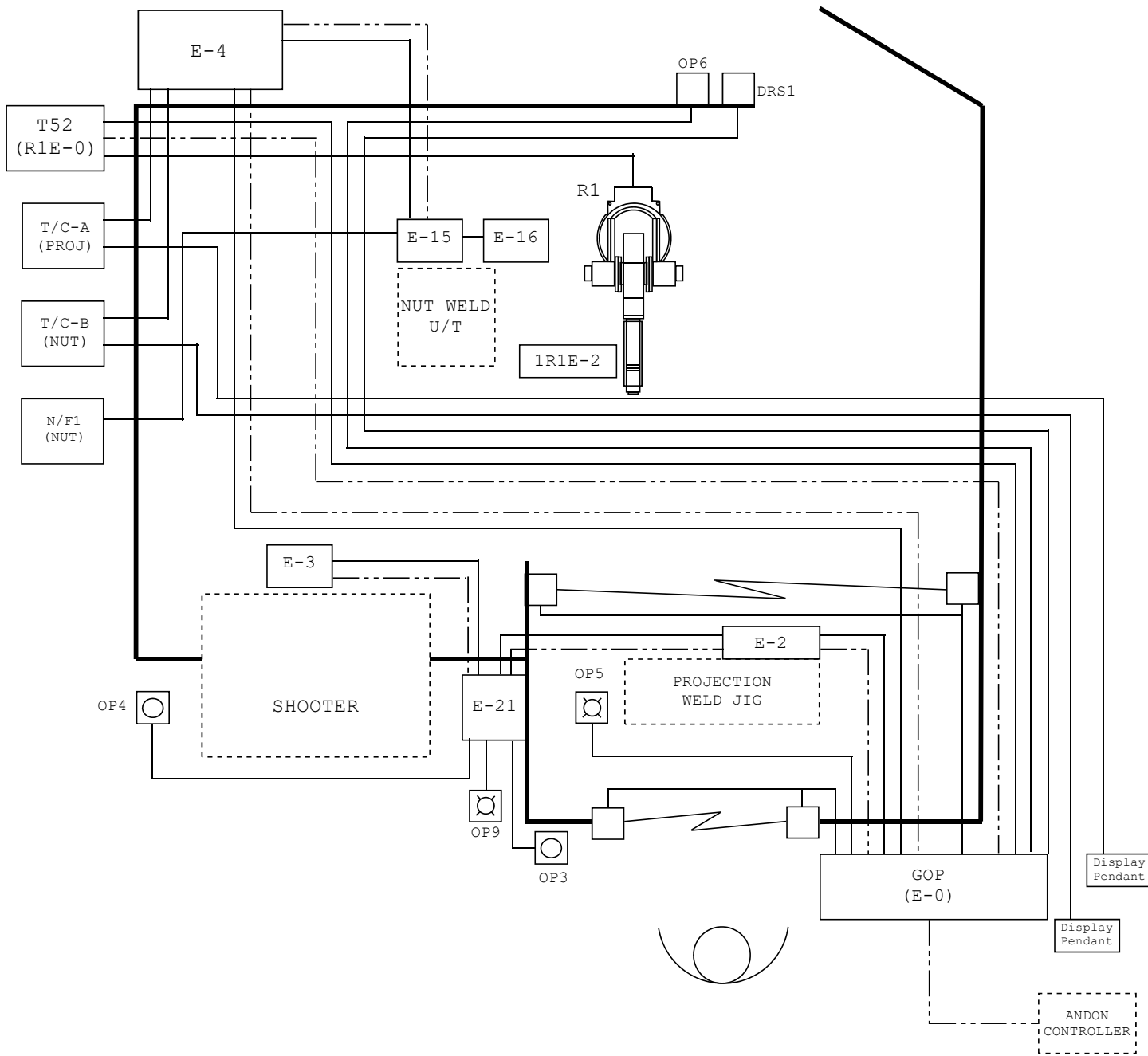
	PC PARAMETER LIST (PCWin)	*** - ***
	PROGRAM 1 LOGIC CIRCUIT (PCWin)	-
	PROGRAM LOGIC CIRCUIT (NE1A)	-

17GS780430

CONTROLLER TYPE		GOP-R4M-UL20-EN-B3-00		USER'S NO.		DWEH0050	
PLC TYPE		PC10P-DP-IO		MACHINE NO.		MESSRS.	
POLARITY / Cat.		PNP / Cat.4				DRAWING FOR	
				MACHINE NAME		ELECTRIC CIRCUIT DIAGRAM	
				150B FR SUS		1 PAGE	
				5st_LWR PRJ/W/N		TOTAL 121 PAGE	
				APPROVED		CHECKED BY	
				DESIGNED BY		DRAWN BY	
				REMARKS			
SYM		REVISION / DATE / NAME		FUSO MACHINE WORKS LTD.		DRAWING NO. HC20474-FR_SUS_5st	

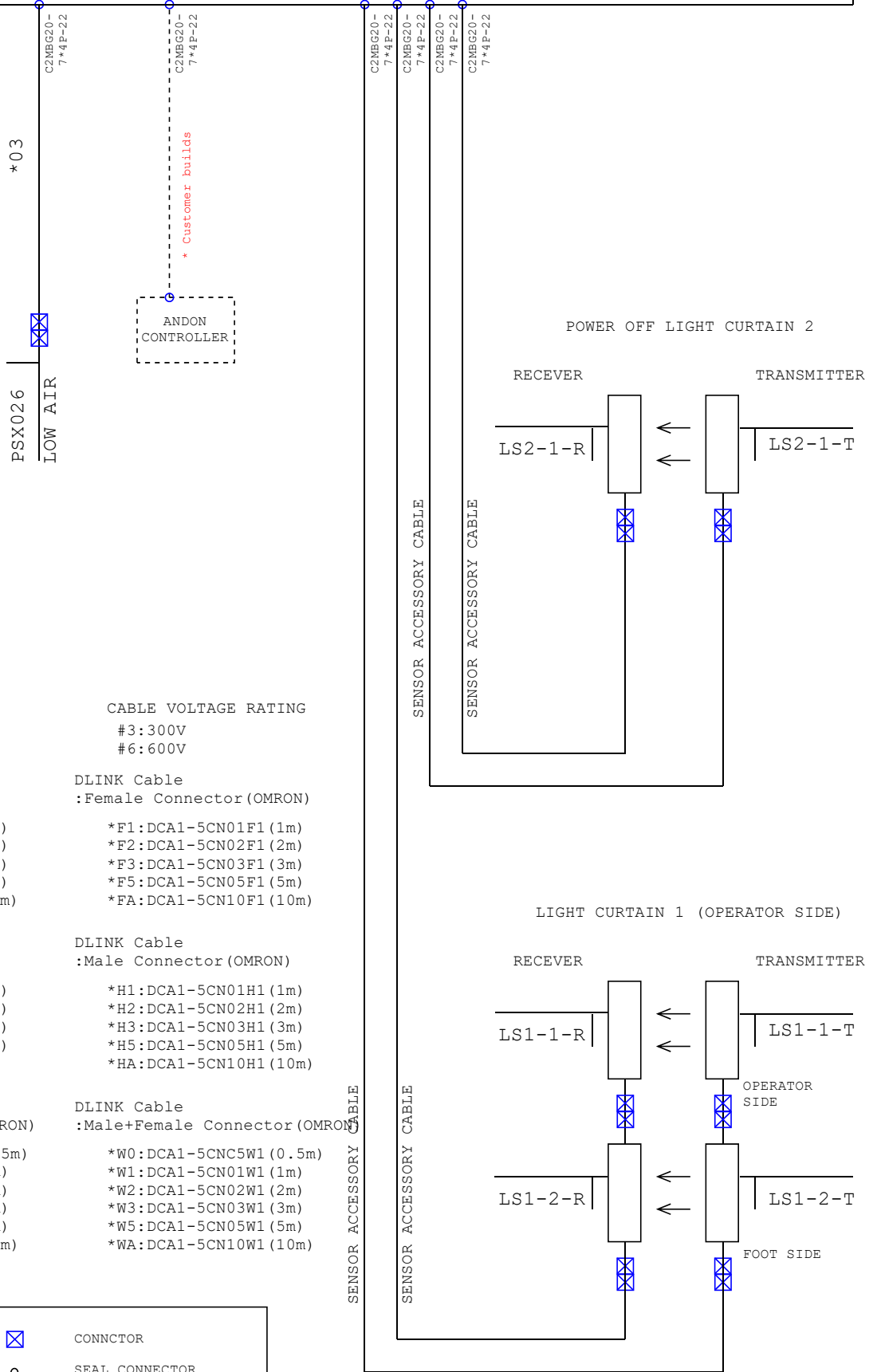
APMM 150B FR SUS 5st

INCLUDE COMMUNICAT.	-----
ONLY HARD WIRE	_____



PARTS NEME	DEVICE CODE (MAKER)	H*W*D	REMARKS	PARTS NAME	DEVICE CODE (MAKER)	H*W*D	REMARKS
GOP	E-0 (JTEKT)	H1000*W300*D250	GOP-R4M	NUT FEEDER	N/F1 (Techno Aoyama)	H*W*D	
TERMINAL BOX2	E-2 (EQUIPMENT MAKER)	H130*W385*D110		TIMER CONTACTOR	T/C-A (NADEX)	H*W*D	
TERMINAL BOX2	E-3 (EQUIPMENT MAKER)	H130*W385*D110		TIMER CONTACTOR	T/C-B (NADEX)	H*W*D	
TERMINAL BOX2	E-4 (EQUIPMENT MAKER)	H420*W360*D160		DOOR SWITCH	DRS1 (SCHMERSAL)	H104*W130*D97.5	
TERMINAL BOX2	E-21 (JTEKT)	H288*W388*D155		NUT WELD TERMINAL BOX15/16	E-15/E-16 (USER PROVISION)	H*W*D	
PARTS SET COMPLETED BOX	OP3 (EQUIPMENT MAKER)	H140*W170*D95		ROBOT CONTROLLER :T52	R1E-0 (KAWASAKI)	H*W*D	
TAKE OUT COMPLETED BOX	OP4 (EQUIPMENT MAKER)	H140*W170*D95		TERMINAL BOX2 ON ROBOT	1R1E-2 (EQUIPMENT MAKER)	H130*W240*D110	
PARTS SET OK LAMP BOX	OP5 (EQUIPMENT MAKER)	H110*W80*D70		USER'S NO. DWEH0050			PAGE
TEACH ROBOT SELECT BOX	OP6 (EQUIPMENT MAKER)	H110*W80*D70					2
QUALITY CHECK BOX	OP9 (EQUIPMENT MAKER)	H190*W110*D110					
				DRAWING NO. HC20474-FR_SUS_5st			

GOP (E-0)



Connector Cable
:Female Connector(OMRON)

*01:XS5F-D421-C80-F(1m)
*02:XS5F-D421-D80-F(2m)
*03:XS5F-D421-E80-F(3m)
*05:XS5F-D421-G80-F(5m)
*0A:XS5F-D421-J80-F(10m)

Connector Cable
:Male Connector(OMRON)

*61:XS5H-D421-C80-F(1m)
*62:XS5H-D421-D80-F(2m)
*63:XS5H-D421-E80-F(3m)
*65:XS5H-D421-G80-F(5m)

Connector Cable
:Male+Female Connector(OMRON)

*30:XS5W-D421-B81-F(0.5m)
*31:XS5W-D421-C81-F(1m)
*32:XS5W-D421-D81-F(2m)
*33:XS5W-D421-E81-F(3m)
*35:XS5W-D421-G81-F(5m)
*3A:XS5W-D421-J81-F(10m)

DLINK Cable
:Female Connector(OMRON)

*F1:DCA1-5CN01F1(1m)
*F2:DCA1-5CN02F1(2m)
*F3:DCA1-5CN03F1(3m)
*F5:DCA1-5CN05F1(5m)
*FA:DCA1-5CN10F1(10m)

DLINK Cable
:Male Connector(OMRON)

*H1:DCA1-5CN01H1(1m)
*H2:DCA1-5CN02H1(2m)
*H3:DCA1-5CN03H1(3m)
*H5:DCA1-5CN05H1(5m)
*HA:DCA1-5CN10H1(10m)

DLINK Cable
:Male+Female Connector(OMRON)

*W0:DCA1-5CNC5W1(0.5m)
*W1:DCA1-5CN01W1(1m)
*W2:DCA1-5CN02W1(2m)
*W3:DCA1-5CN03W1(3m)
*W5:DCA1-5CN05W1(5m)
*WA:DCA1-5CN10W1(10m)

USER'S NO.

DWEH0050

DEVICE CODE

CONTENTS

SYSTEM DIAGRAM

DRAWING NO.

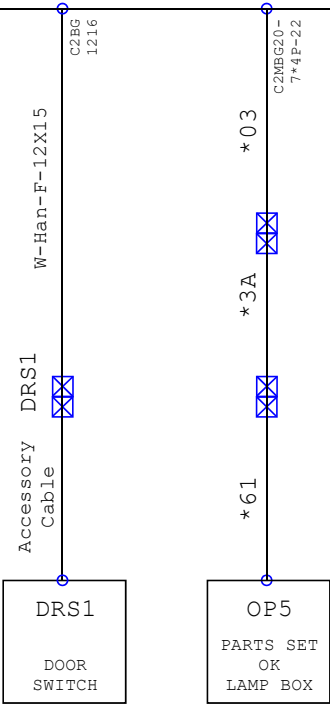
HC20474-FR_SUS_5st

PAGE

3

APMM) 150B FR SUS 5st

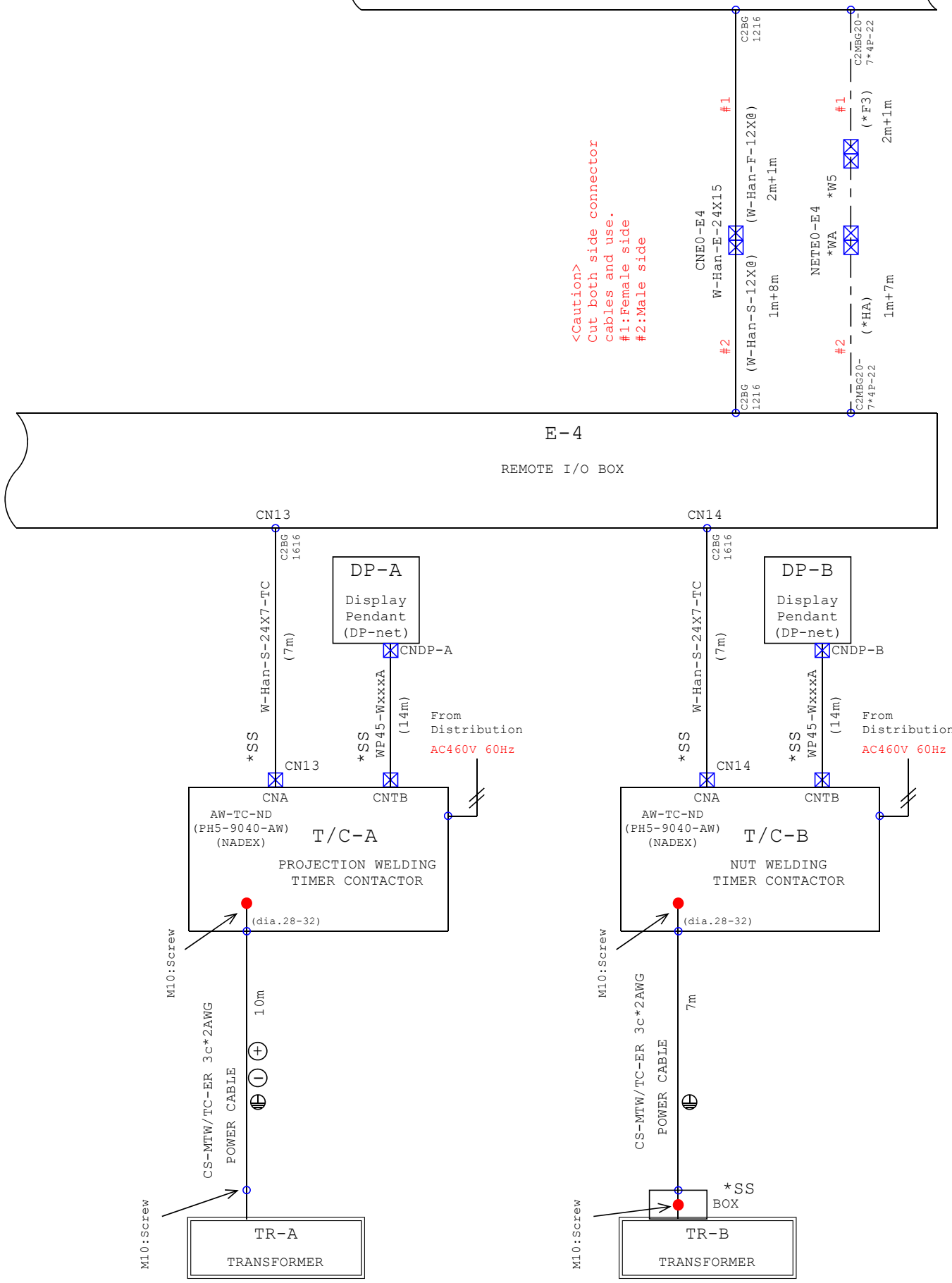
GOP (E-0)



	SHORT CONNECTOR		CONNECTOR
	HARD WIRE		SEAL CONNECTOR
	SAFETY LINK CABLE		
	PC/CMP LINK CABLE		
	FL/ET-net CABLE		
	DLNK CABLE		

USER'S NO. DWEH0050	DEVICE CODE	PAGE 4
	CONTENTS SYSTEM DIAGRAM	
	DRAWING NO. HC20474-FR_SUS_5st	

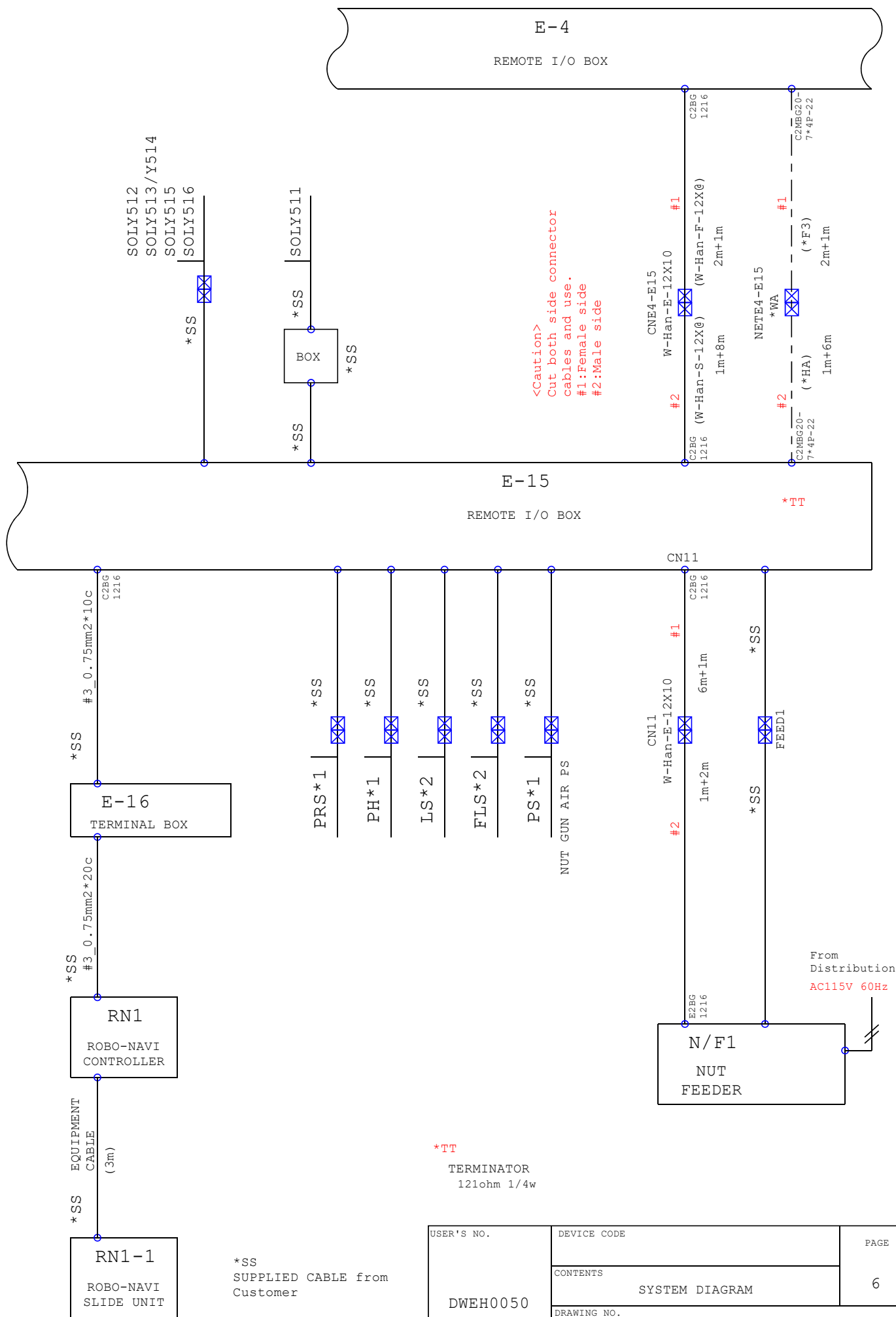
GOP (E-0)



*TT
TERMINATOR
121ohm 1/4w

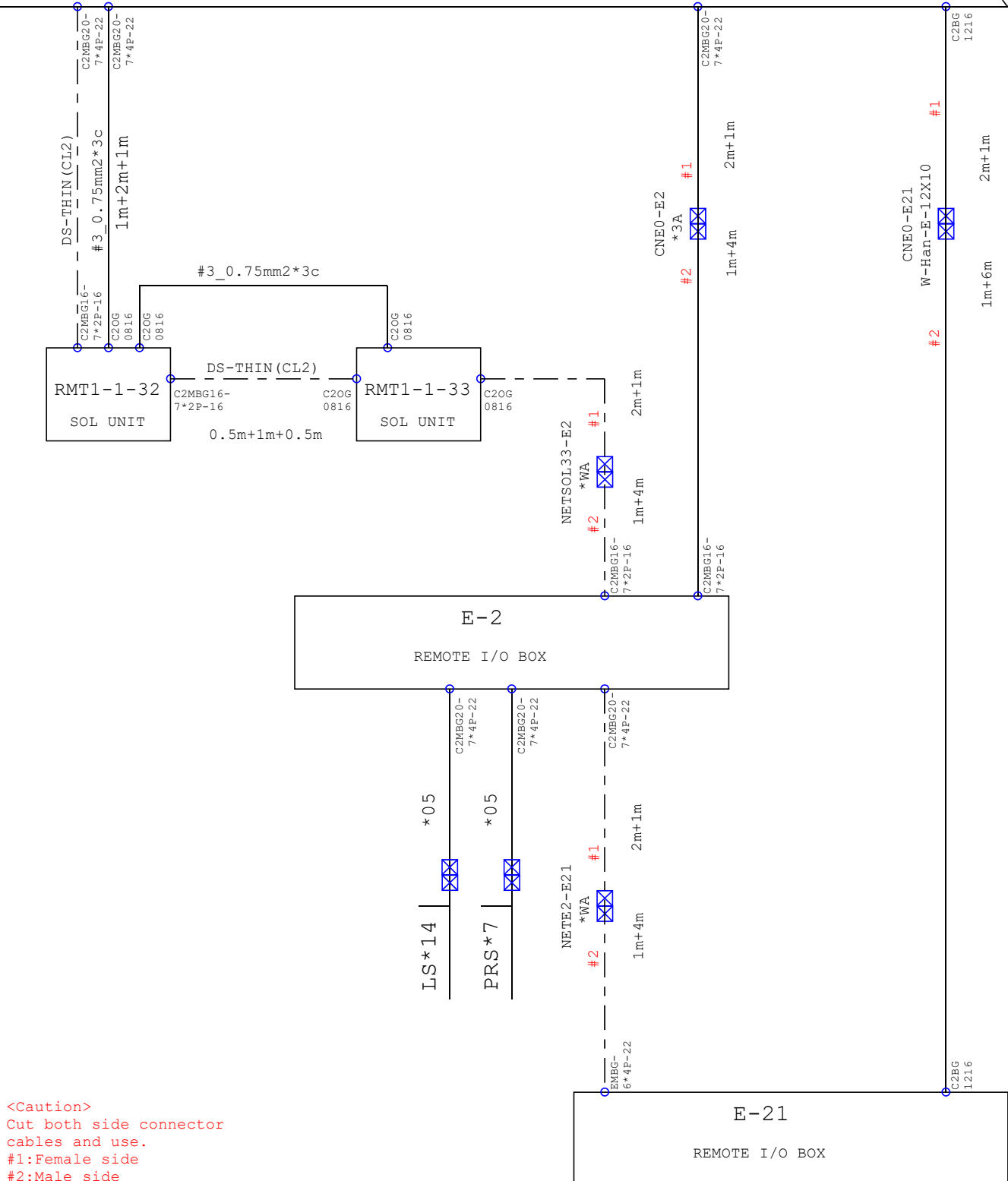
*SS
SUPPLIED CABLE from
Customer

USER'S NO. DWEH0050	DEVICE CODE	PAGE 5
	CONTENTS SYSTEM DIAGRAM	
	DRAWING NO. HC20474-FR_SUS_5st	



USER'S NO. DWEH0050	DEVICE CODE	PAGE 6
	CONTENTS SYSTEM DIAGRAM	
	DRAWING NO. HC20474-FR_SUS_5st	

GOP (E-0)



<Caution>
 Cut both side connector
 cables and use.
 #1:Female side
 #2:Male side

	SHORT CONNECTOR		CONNECTOR
	HARD WIRE		SEAL CONNECTOR
	SAFETY LINK CABLE		
	PC/CMP LINK CABLE		
	FL/ET-net CABLE		
	DLNK CABLE		

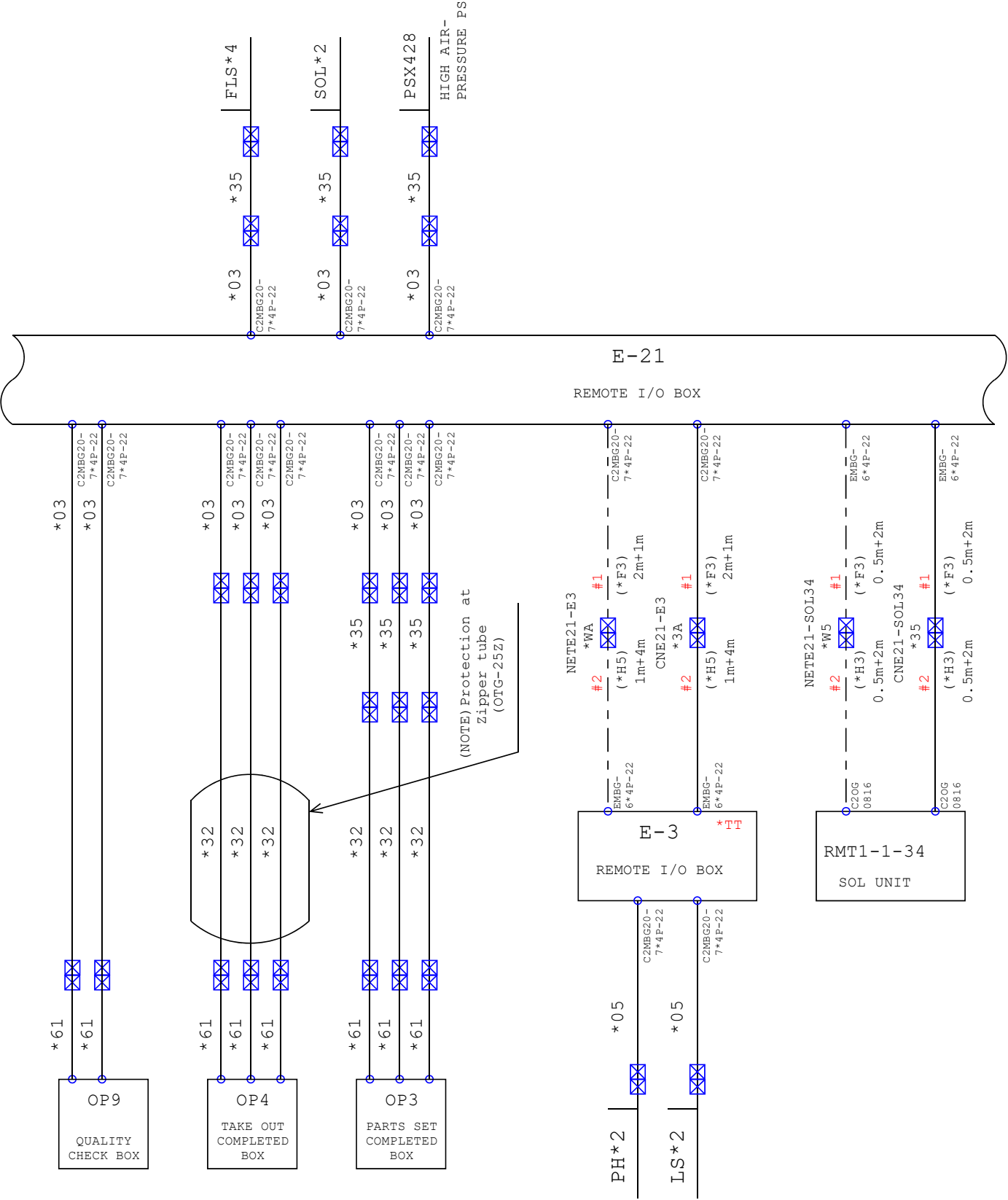
USER'S NO. DWEH0050	DEVICE CODE	PAGE 7
	CONTENTS SYSTEM DIAGRAM	
	DRAWING NO. HC20474-FR_SUS_5st	

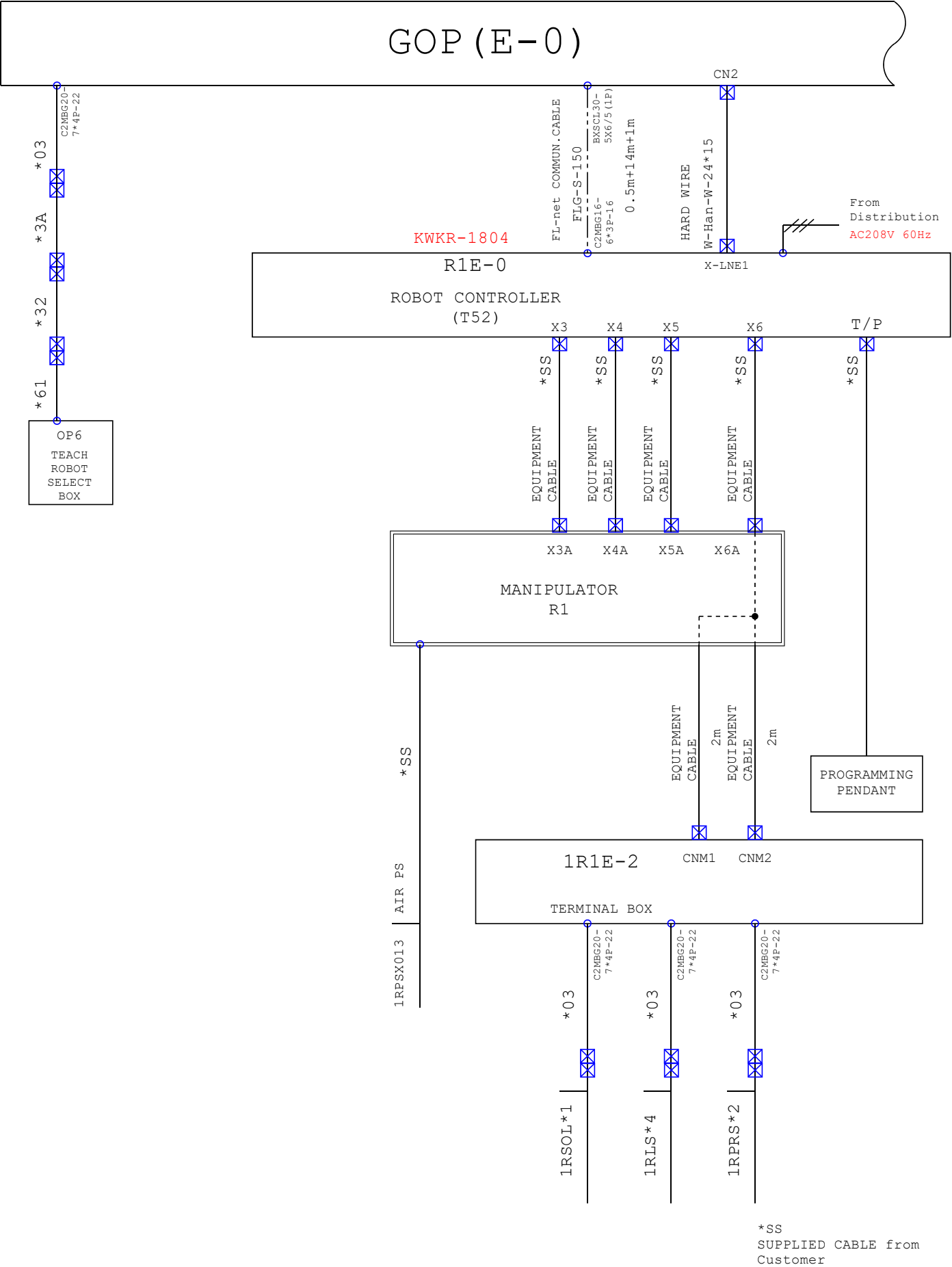
<Caution>
Cut both side connector
cables and use.
#1:Female side
#2:Male side

	SHORT CONNECTOR		CONNECTOR
	HARD WIRE		SEAL CONNECTOR
	SAFETY LINK CABLE		
	-PC/CMP LINK CABLE		
FL/ET-net CABLE			

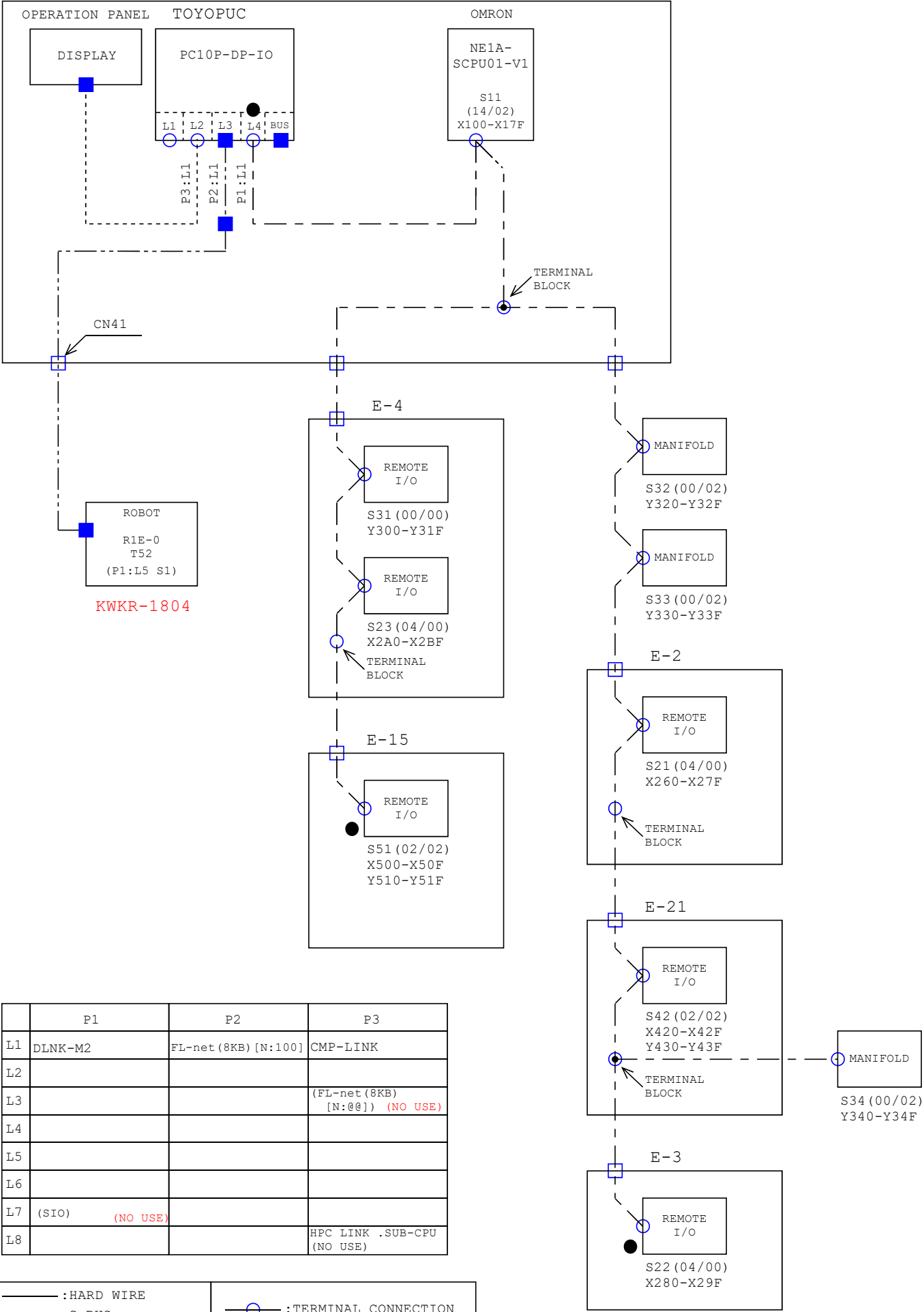
*TT
TERMINATOR
121ohm 1/4w

USER'S NO. DWEH0050	DEVICE CODE	PAGE 8
	CONTENTS SYSTEM DIAGRAM	
	DRAWING NO. HC20474-FR_SUS_5st	





USER'S NO. DWEH0050	DEVICE CODE	PAGE 9
	CONTENTS SYSTEM DIAGRAM	
	DRAWING NO. HC20474-FR_SUS_5st	



	P1	P2	P3
L1	DLNK-M2	FL-net(8KB) [N:100]	CMP-LINK
L2			
L3			(FL-net(8KB) [N:00]) (NO USE)
L4			
L5			
L6			
L7	(SIO) (NO USE)		
L8			HPC LINK .SUB-CPU (NO USE)

— :HARD WIRE	○ :TERMINAL CONNECTION
- - - :S-BUS (OPTICAL CABLE)	■ :CONNECTOR CONNECTION
- · - · :PC/CMP-LINK	□ :SEAL CONNECTOR
- · - · :SN-I/F	● :TERMINATOR 121ohm 1/4w
- - - :FL-net/Ethernet	
- - - :FL-REMOTE	
- - - :DLNK	

USER'S NO. DWEH0050	DEVICE CODE	PAGE 10
	CONTENTS COMMUNICATION CHART	
	DRAWING NO. HC20474-FR_SUS_5st	

ANDON INTERLOCK SIGNAL (1/1)

GOP (E-0)

ANDON CONTROLLER

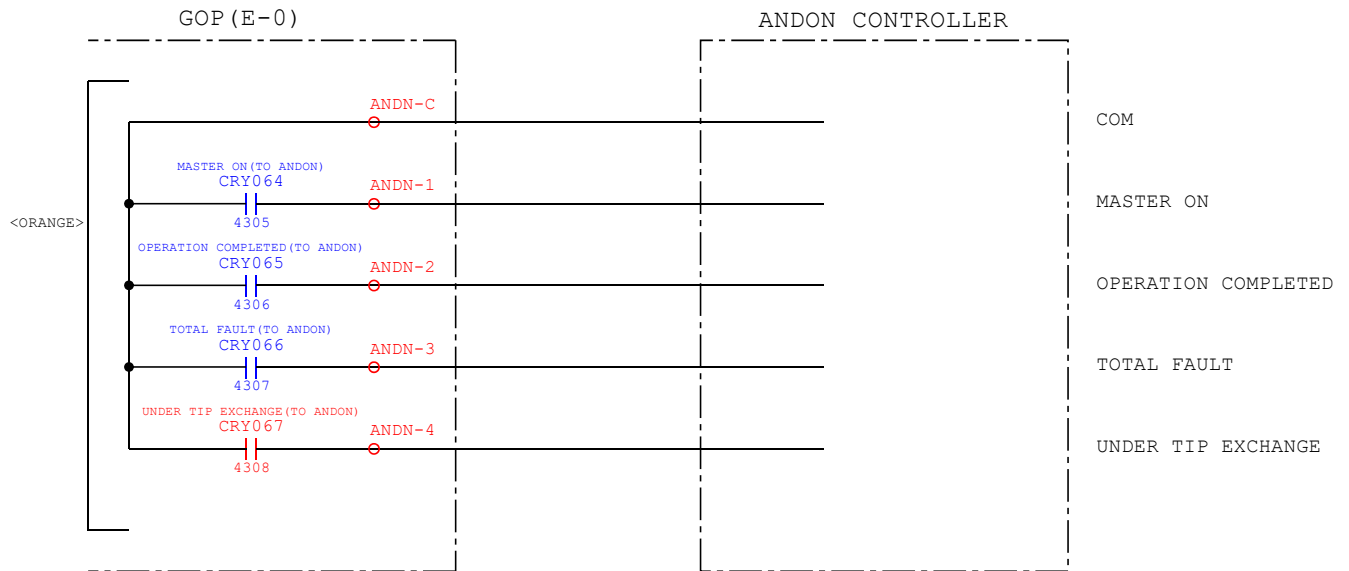
COM

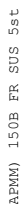
MASTER ON

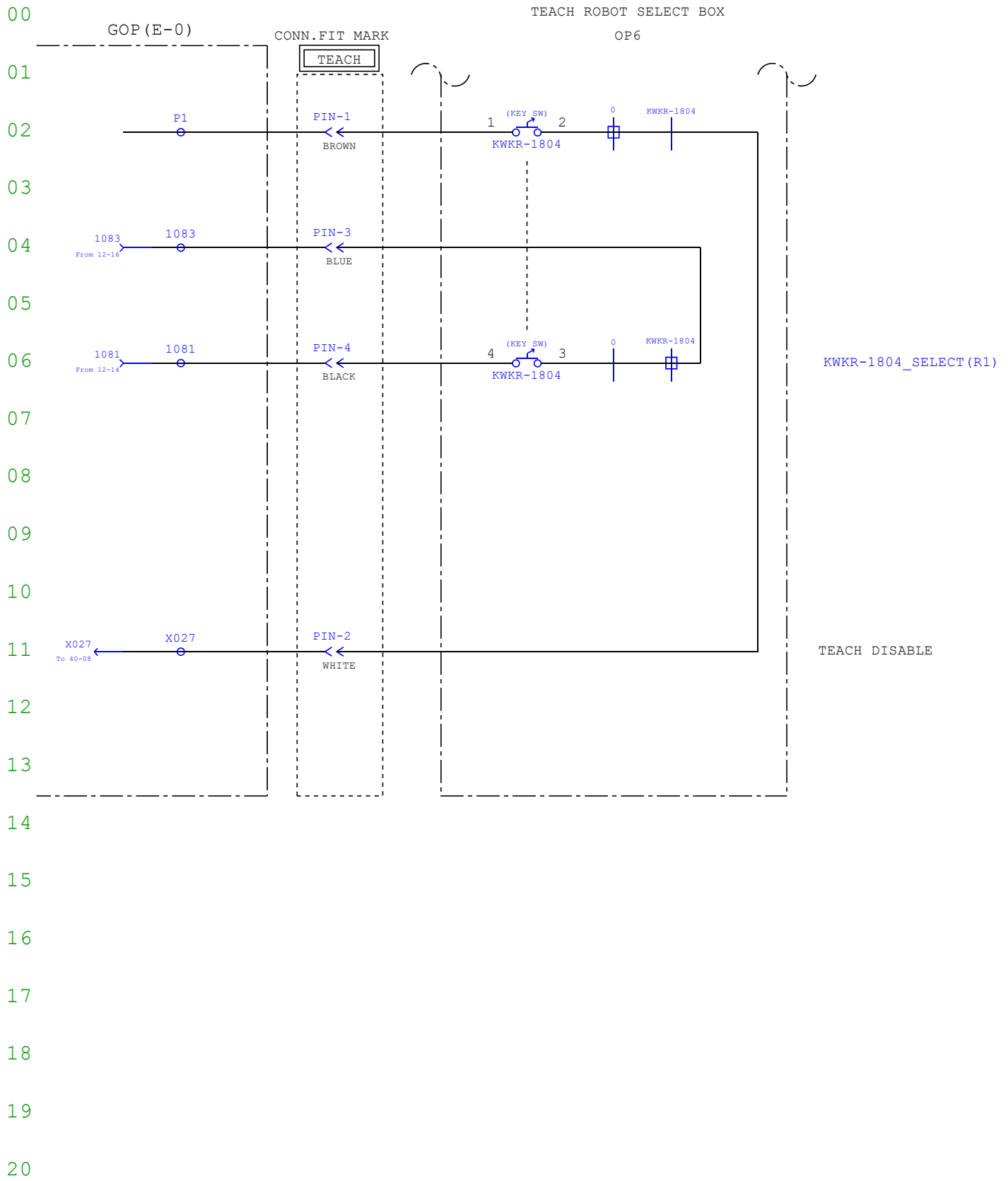
OPERATION COMPLETED

TOTAL FAULT

UNDER TIP EXCHANGE

[illegible]



[illegible]

AC460V 60Hz



FUSO MACHINE WORKS LTD.

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CNA

T/C-A

STEPPER RESET

20

APMM) 150B FR SUS 5st

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CNA

T/C-B

(OUTPUT COMMON)

WELD COMP.

FAULT (N.C)

(STEPPER COMP.)

(INPUT COMMON)

PILOT 1/1

PILOT 2/2

PILOT 3/4

PILOT 4/8

EXTERNAL POWER DC0V-

WELD/NO WELD

FAULT RESET

(RETRACT POWER)

(VALVE COMMON)

(VALVE 1)

(VALVE 2)

STEPPER RESET

AW-TC-ND
(NADEX)

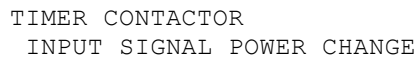
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10

TIMER CONTACTOR INTERLOCK SIGNAL (2/2)

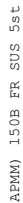
TIMER CONTACTOR

T/C-B



WITHOUT

[illegible]

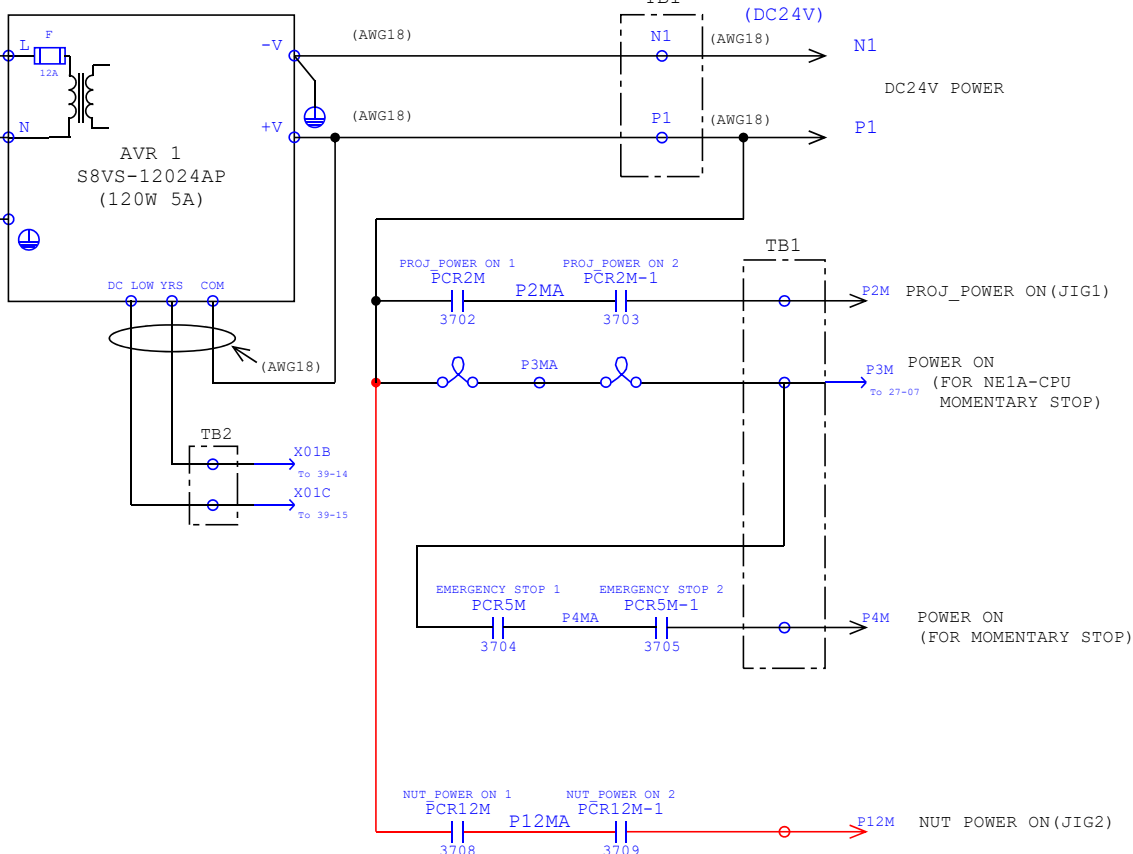


DRAWING NO. OF STANDARD: DRAWING NO.: HC20474 OUTPUT: 2024/03/04 UPDATE: 2018/05/30 FUSO MACHINE WORKS LTD.



WIRE NO.	WIRE SIZE	COLOR
1L1 1L2 1L3	2.5mm ² (AWG14)	BLACK
P1 P2MA P2M P3MA P3M P4MA P4M	0.75mm ² (AWG18)	BLUE
N1	0.75mm ² (AWG18)	BLUE/WHITE
DC WIRING	0.75mm ² (AWG18)	BLUE
SAFETY CONTROLLER I/O	0.5mm ² (AWG20)	BLUE
PLC I/O	0.2mm ² (AWG24)	BLUE
INTERLOCK	0.75mm ² (AWG18)	ORANGE
	2.5mm ² (AWG14)	GREEN/YELLOW

[illegible]

[illegible][illegible]

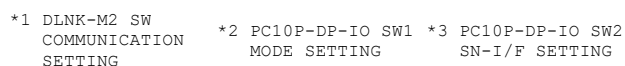


Figure 1 consists of three panels, each showing a sequence of four states of a two-button system. The buttons are labeled 'OFF' and 'ON'.

- Panel 1:**
 - State 1: OFF button is black, ON button is red.
 - State 2: OFF button is black, ON button is red.
 - State 3: OFF button is black, ON button is black.
 - State 4: OFF button is black, ON button is black.
- Panel 2:**
 - State 1: OFF button is black, ON button is red.
 - State 2: OFF button is black, ON button is black.
 - State 3: OFF button is black, ON button is black.
 - State 4: OFF button is black, ON button is black.
- Panel 3:**
 - State 1: OFF button is black, ON button is black.
 - State 2: OFF button is black, ON button is black.
 - State 3: OFF button is black, ON button is black.
 - State 4: OFF button is black, ON button is black.

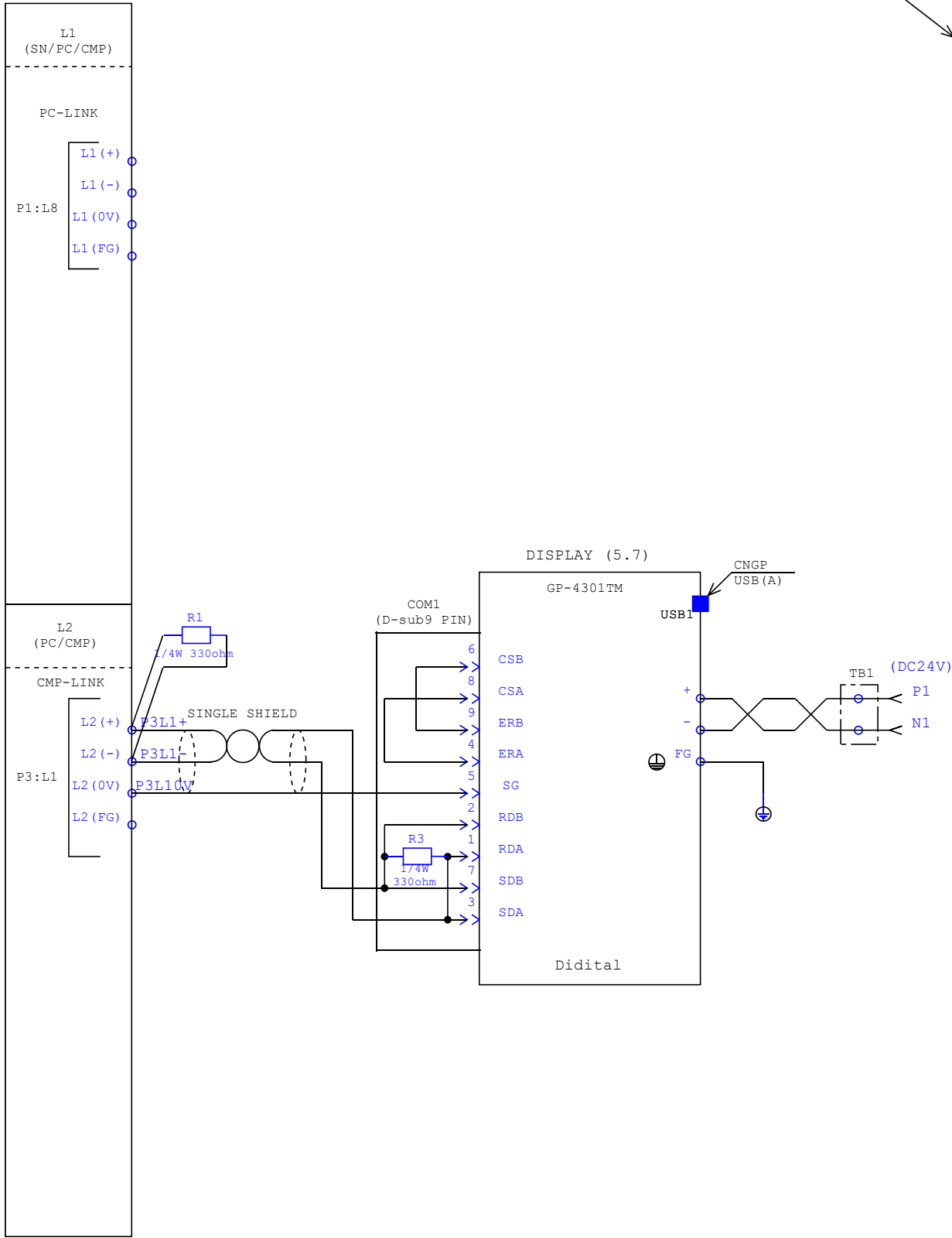
[illegible]



OFF -> ON

[illegible][illegible]

BOTTOM SIDE
CONNECTOR BOX

[illegible]

L5
(PCI BUS)

 $(\mathbb{I}/\mathbb{F})$

USB (B)

EXT-BUS

USB (miniB)

CNPC10P-DP-IO
USB (B)

CNEXTBUS
USB (miniB)

PC10P-DP-IO
USB (B)

TOYOPUC PC10P-DP-IO

USB HARNESS

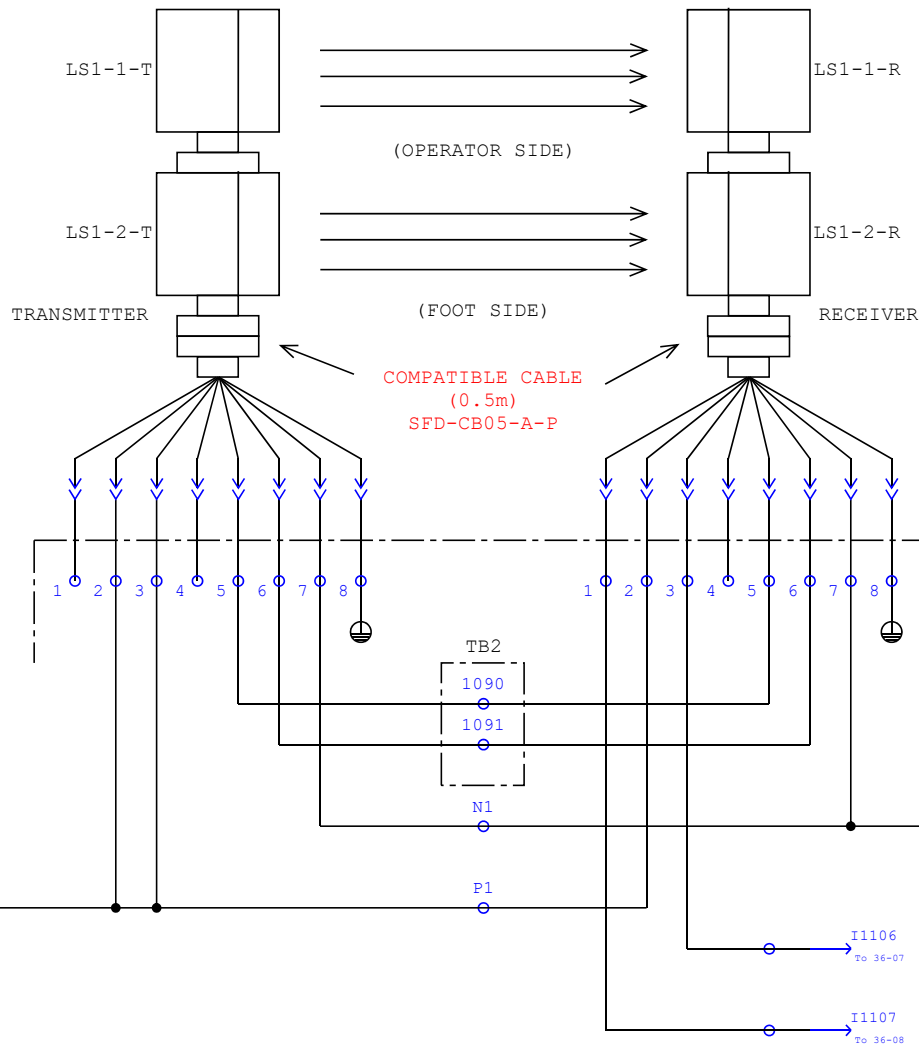
USB CABLE

[illegible][illegible]

N1

SUNX
SF4D-H** -T

COMPATIBLE CABLE
BOTTOM CAP (0.5m)
INSTALLS.
"SFD-CB05-A-P"



TRANSMITTER WIRE COLOR	RECEIVER WIRE COLOR
1:THIN PURPLE (UNUSED)	1:WHITE
2:BROWN	2:BROWN
3:PINK	3:BLACK
4:RED (UNUSED)	4:THIN PURPLE (UNUSED)
5:ORANGE	5:ORANGE
6:ORANGE /BLACK	6:ORANGE /BLACK
7:BLUE	7:BLUE
8:SPARE	8:SPARE

LIGHT CURTAIN 1-1
(OPERATOR SIDE)

LIGHT CURTAIN 1-2
(OPERATOR SIDE)

GOP
(E-0)

TRANSMITTER SWITCH

ON ←

4

3

2

1

*SW1.2 SYNCHRONIZATION SETTING

1:OFF 2:OFF

- LINE SYNCHRONIZATION

1:ON 2:OFF

- OPTICAL SYNCHRONIZATION1

1:OFF 2:ON

- OPTICAL SYNCHRONIZATION2

1:ON 2:ON

- LINE SYNCHRONIZATION

*SW3 LIGHT EMISSION INTENSITY SETTING

3:OFF - SHORT MODE

3:ON - LONG MODE

The diagram shows a vertical receiver switch with four positions, numbered 1 to 4 from bottom to top. Each position has a corresponding label to its right. Position 1 is labeled '1:ON 2:ON' and '- LINE SYNCHRONIZATION'. Position 2 is labeled '1:OFF 2:ON' and '- OPTICAL SYNCHRONIZATION2'. Position 3 is labeled '1:ON 2:OFF' and '- OPTICAL SYNCHRONIZATION1'. Position 4 is labeled '1:OFF 2:OFF' and '- LINE SYNCHRONIZATION'. The switch is currently set to position 1, indicated by a black square in the window.

RECEIVER SWITCH

ON ←

4

3

2

1

***SW1.2 SYNCHRONIZATION SETTING**

1:OFF 2:OFF

- LINE SYNCHRONIZATION

1:ON 2:OFF

- OPTICAL SYNCHRONIZATION1

1:OFF 2:ON

- OPTICAL SYNCHRONIZATION2

1:ON 2:ON

- LINE SYNCHRONIZATION

***SW3 INDICATOR SETTING**

3:OFF - BEAM AXIS ALIGNMENT MODE

3:ON - APPLICATION MODE

```
*SW4  POWER SAVE SETTING
4:OFF - NORMAL MODE
4:ON  - POWER SAVE MODE
```

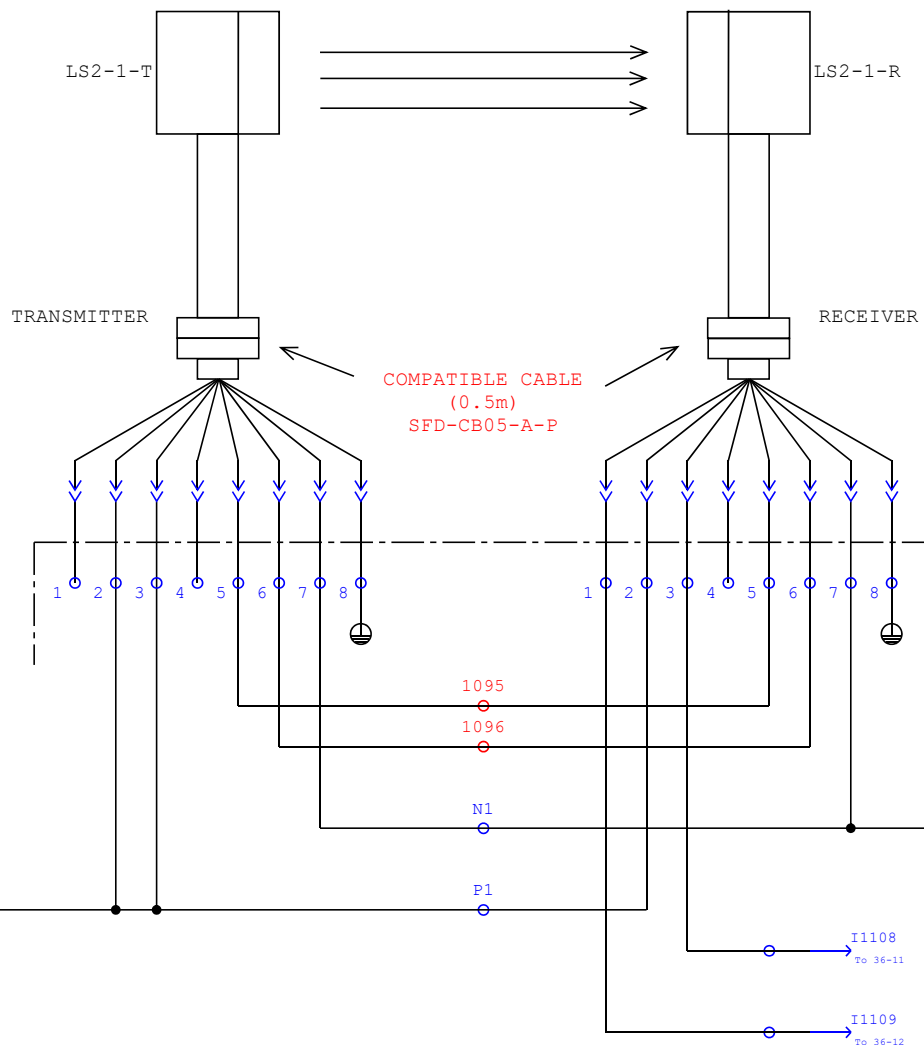
```
*SW4  POWER SAVE SETTING
4:OFF - NORMAL MODE
4:ON  - POWER SAVE MODE
```

[illegible]

N1

SUNX
SF4D-H** -T

COMPATIBLE CABLE
BOTTOM CAP (0.5m)
INSTALLS.
"SFD-CB05-A-P"



TRANSMITTER WIRE COLOR	RECEIVER WIRE COLOR
1:THIN PURPLE (UNUSED)	1:WHITE
2:BROWN	2:BROWN
3:PINK	3:BLACK
4:RED (UNUSED)	4:THIN PURPLE (UNUSED)
5:ORANGE	5:ORANGE
6:ORANGE /BLACK	6:ORANGE /BLACK
7:BLUE	7:BLUE
8:SPARE	8:SPARE

POWER OFF LIGHT CURTAIN 2-1

POWER OFF LIGHT CURTAIN 2-2

GOP
(E-0)

TRANSMITTER SWITCH

ON ←



4

3

2

1

*SW1.2 SYNCHRONIZATION SETTING

1:OFF 2:OFF

- LINE SYNCHRONIZATION

1:ON 2:OFF

- OPTICAL SYNCHRONIZATION1

1:OFF 2:ON

- OPTICAL SYNCHRONIZATION2

1:ON 2:ON

- LINE SYNCHRONIZATION

*SW3 LIGHT EMISSION INTENSITY SETTING

3:OFF - SHORT MODE

3:ON - LONG MODE

The diagram shows a vertical receiver switch with four positions, numbered 1 to 4 from bottom to top. Each position has a corresponding label to its right. Position 1 is labeled '1:ON 2:ON' and '- LINE SYNCHRONIZATION'. Position 2 is labeled '1:OFF 2:ON' and '- OPTICAL SYNCHRONIZATION2'. Position 3 is labeled '1:ON 2:OFF' and '- OPTICAL SYNCHRONIZATION1'. Position 4 is labeled '1:OFF 2:OFF' and '*SW1.2 SYNCHRONIZATION SETTING'. A horizontal arrow points to the left from the top of the switch, labeled 'ON'.

RECEIVER SWITCH

ON ←

4

3

2

1

*SW1.2 SYNCHRONIZATION SETTING

1:OFF 2:OFF

- LINE SYNCHRONIZATION

1:ON 2:OFF

- OPTICAL SYNCHRONIZATION1

1:OFF 2:ON

- OPTICAL SYNCHRONIZATION2

1:ON 2:ON

- LINE SYNCHRONIZATION

*SW3 INDICATOR SETTING

3:OFF - BEAM AXIS ALIGNMENT MODE

3:ON - APPLICATION MODE

```
*SW4  POWER SAVE SETTING
4:OFF - NORMAL MODE
4:ON  - POWER SAVE MODE
```

```
*SW4  POWER SAVE SETTING
4:OFF - NORMAL MODE
4:ON  - POWER SAVE MODE
```

[illegible]

[illegible]

[illegible]

[illegible]

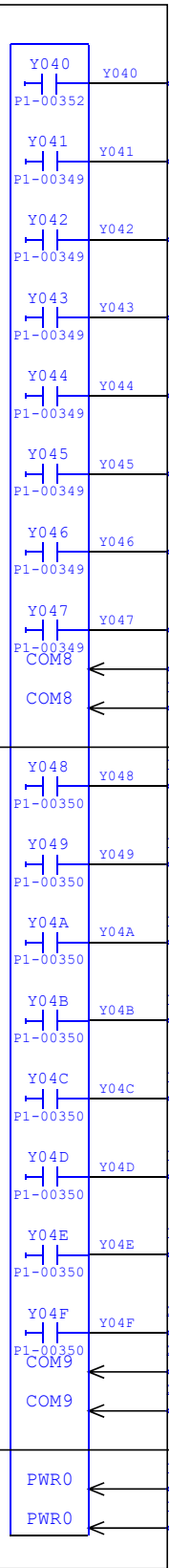
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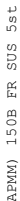
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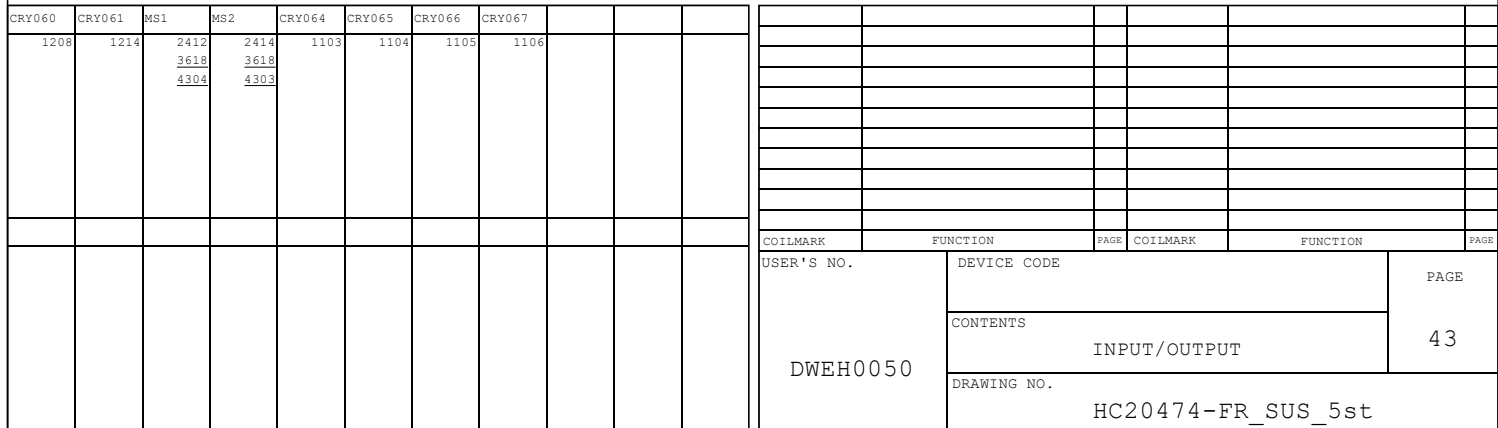
[illegible]

X020	X021	X022	X023	X024	X025	X026	X027	X028	X029	X02A
P1-00341	P1-00340					P1-00332 P1-00590	P1-00334 P1-00379 P1-00504 P1-00505	P1-00598	P1-00598	P1-00598
X02B	X02C	X02D								
P1-00598	P1-00598									

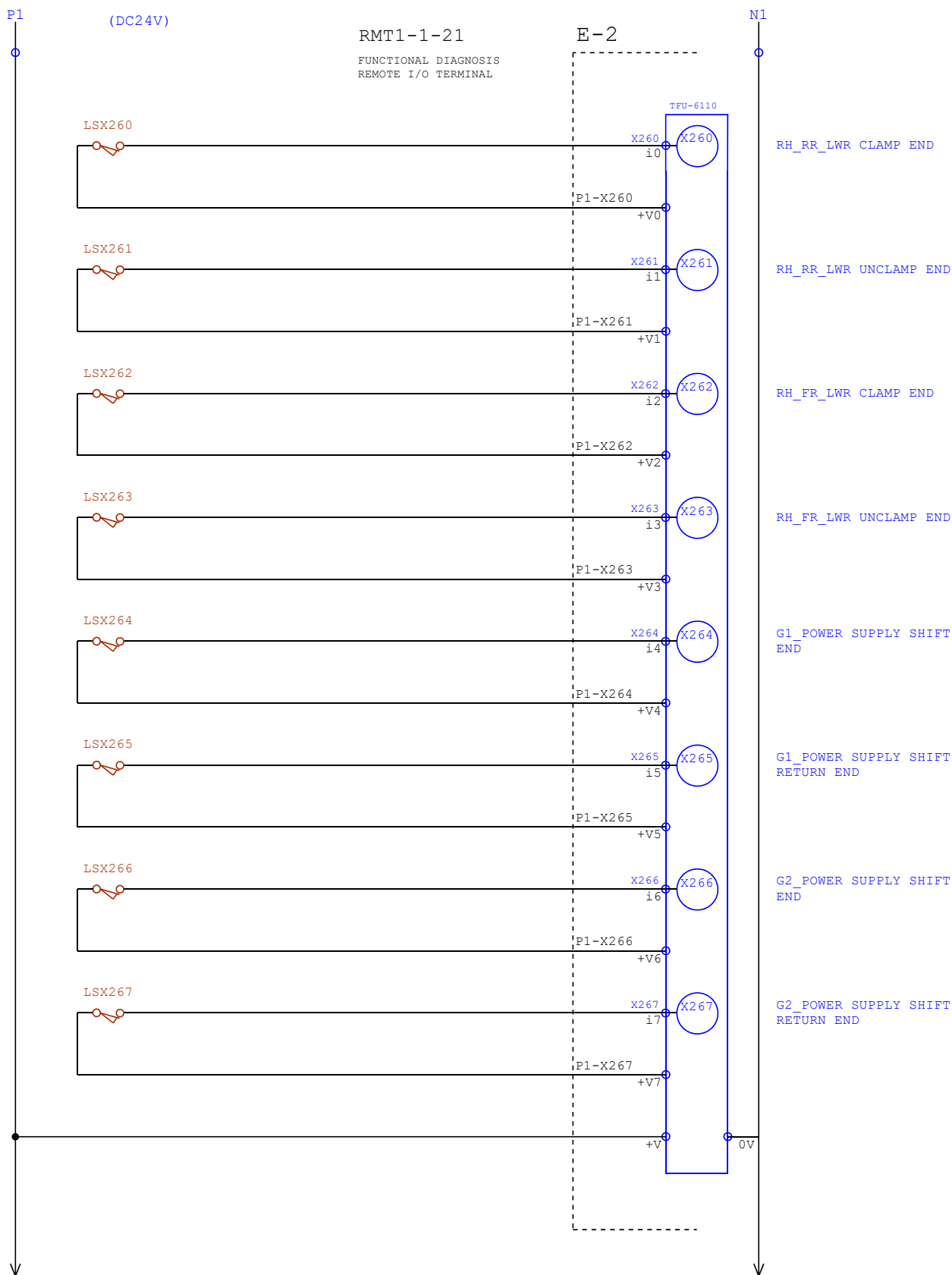
COILMARK	FUNCTION	PAGE	COILMARK	FUNCTION	PAGE
USER'S NO.	DEVICE CODE				PAGE
DWEH0050	CONTENTS				40
	INPUT/OUTPUT				
	DRAWING NO.				
	HC20474-FR_SUS_5st				

[illegible]

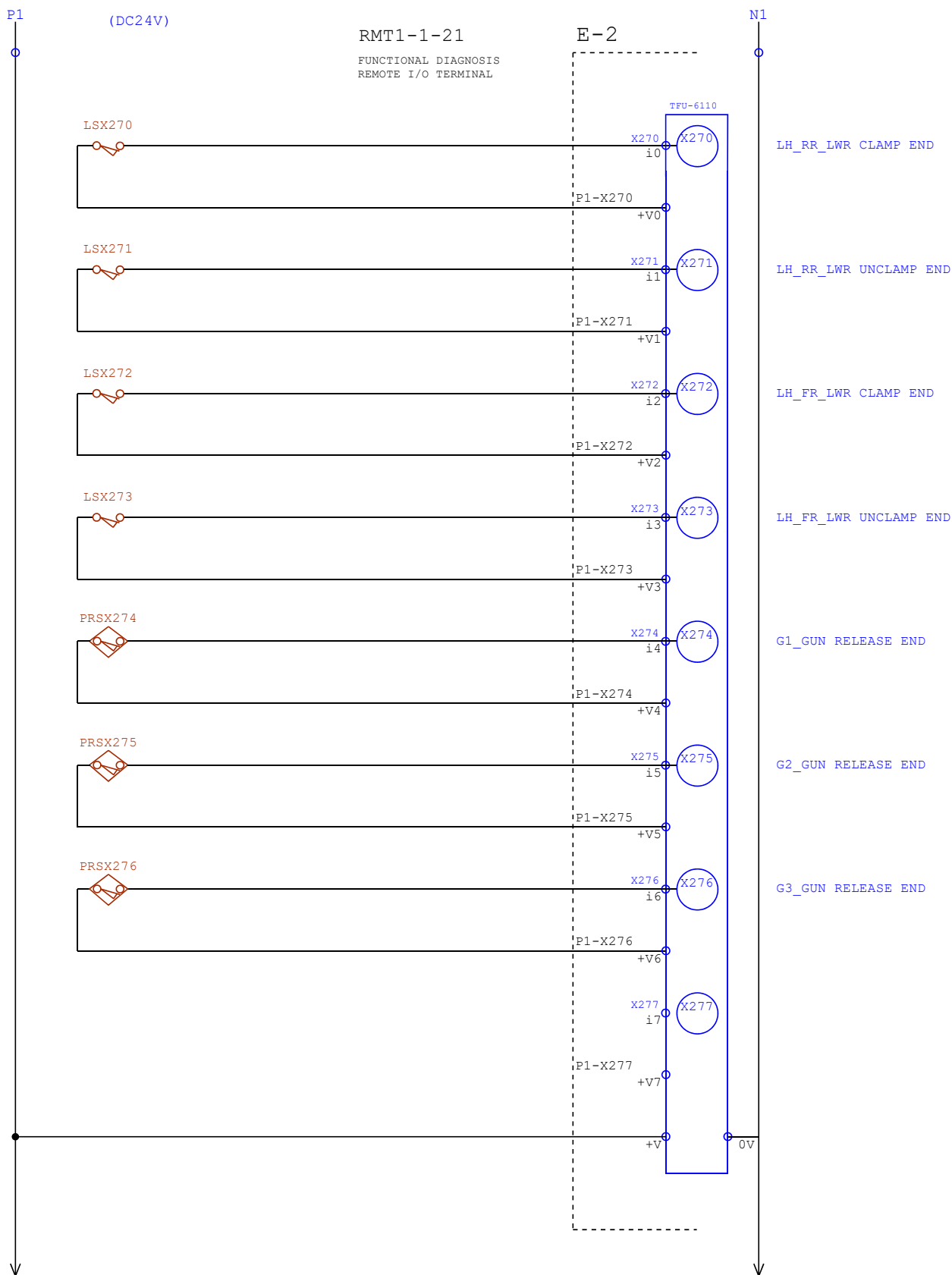
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[illegible]

[illegible]

[illegible]

00 P1

(DC24V)

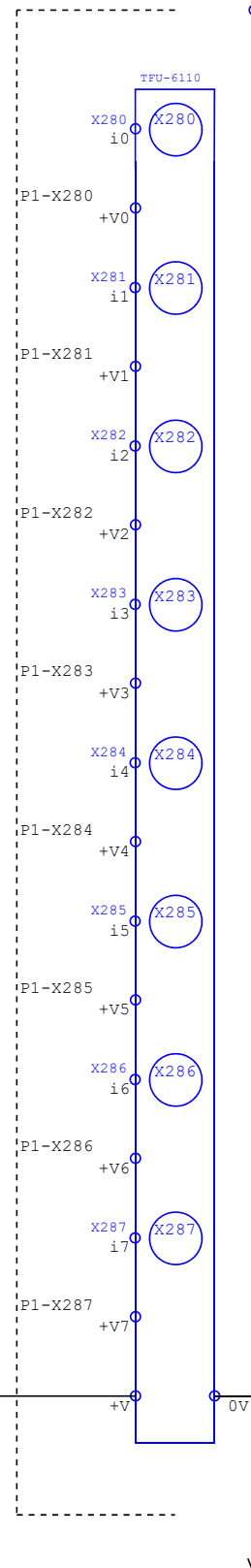
RMT1-1-22

FUNCTIONAL DIAGNOSIS
REMOTE I/O TERMINAL

E-3

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[illegible]

00 P1

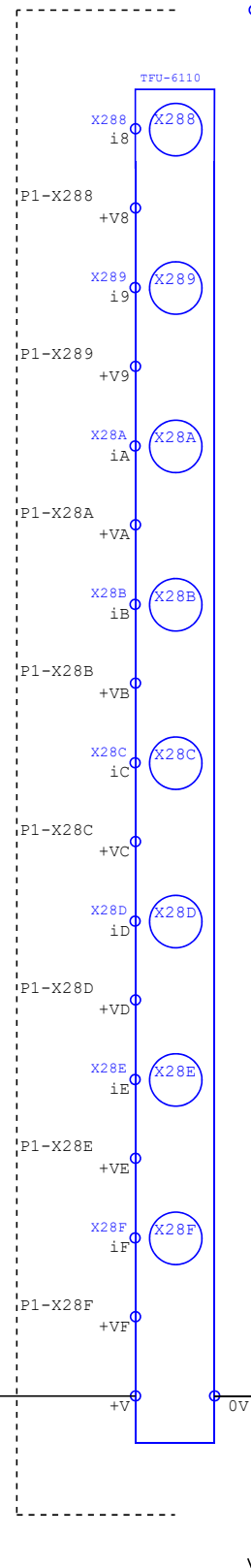
RMT1-1-22

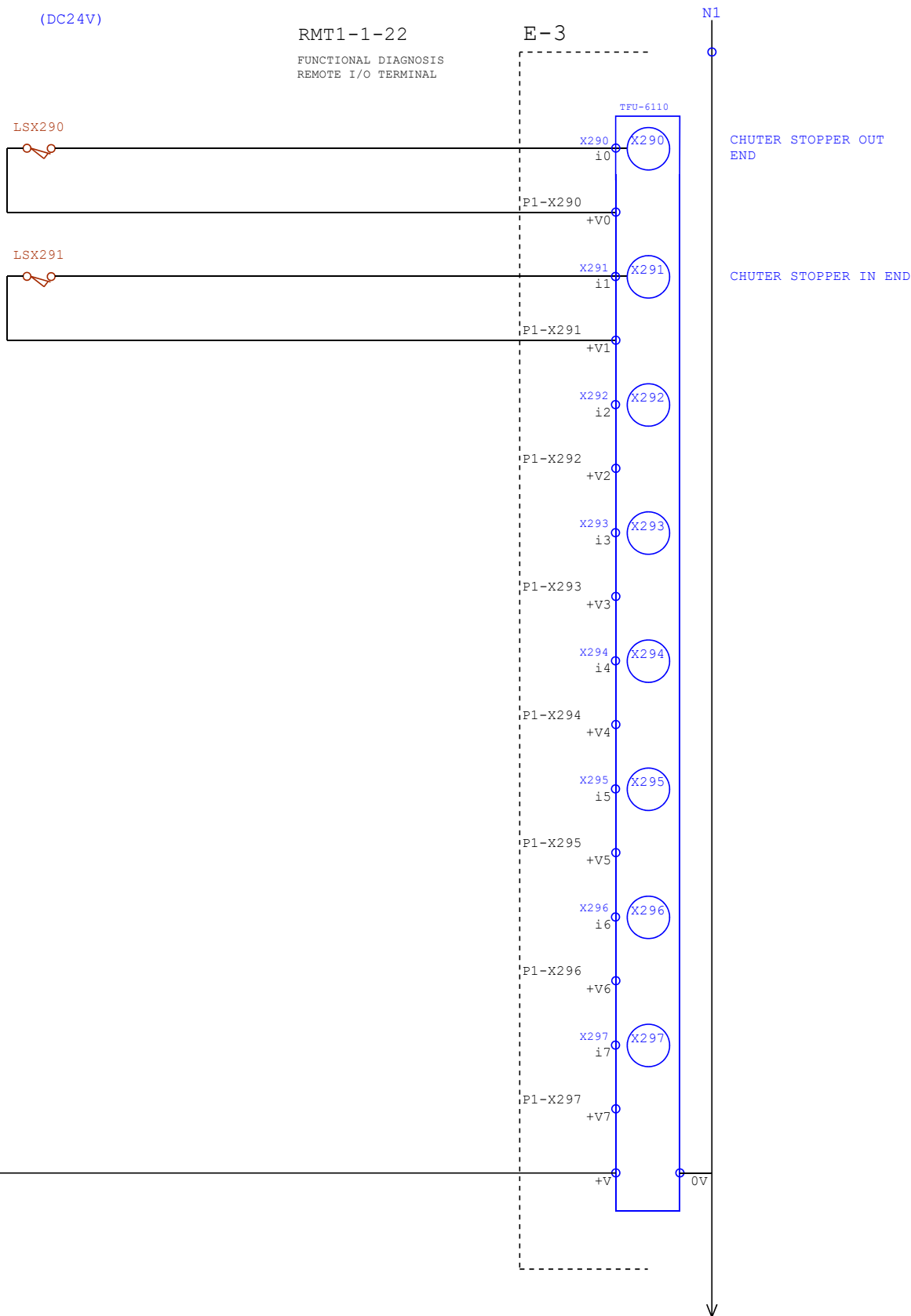
FUNCTIONAL DIAGNOSIS
REMOTE I/O TERMINAL

E-3

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[illegible]

[illegible]

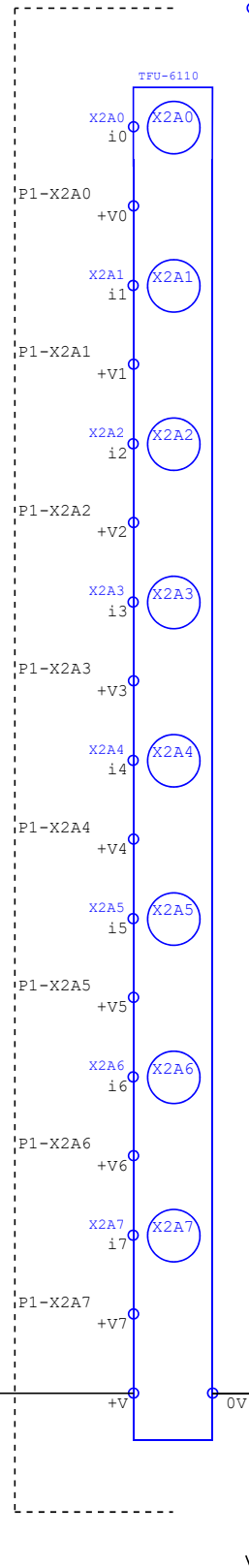
[illegible]

(DC24V)

FUNCTIONAL DIAGNOSIS
REMOTE I/O TERMINAL

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[illegible]

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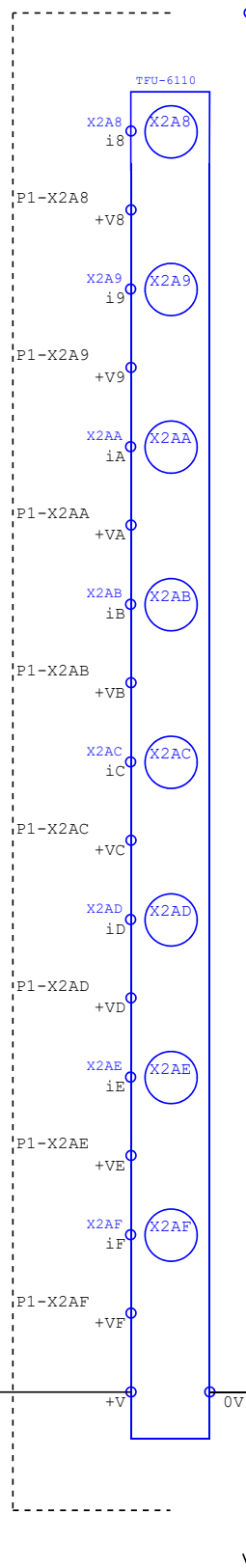
RMT1-1-23

FUNCTIONAL DIAGNOSIS
REMOTE I/O TERMINAL

E-4

N1

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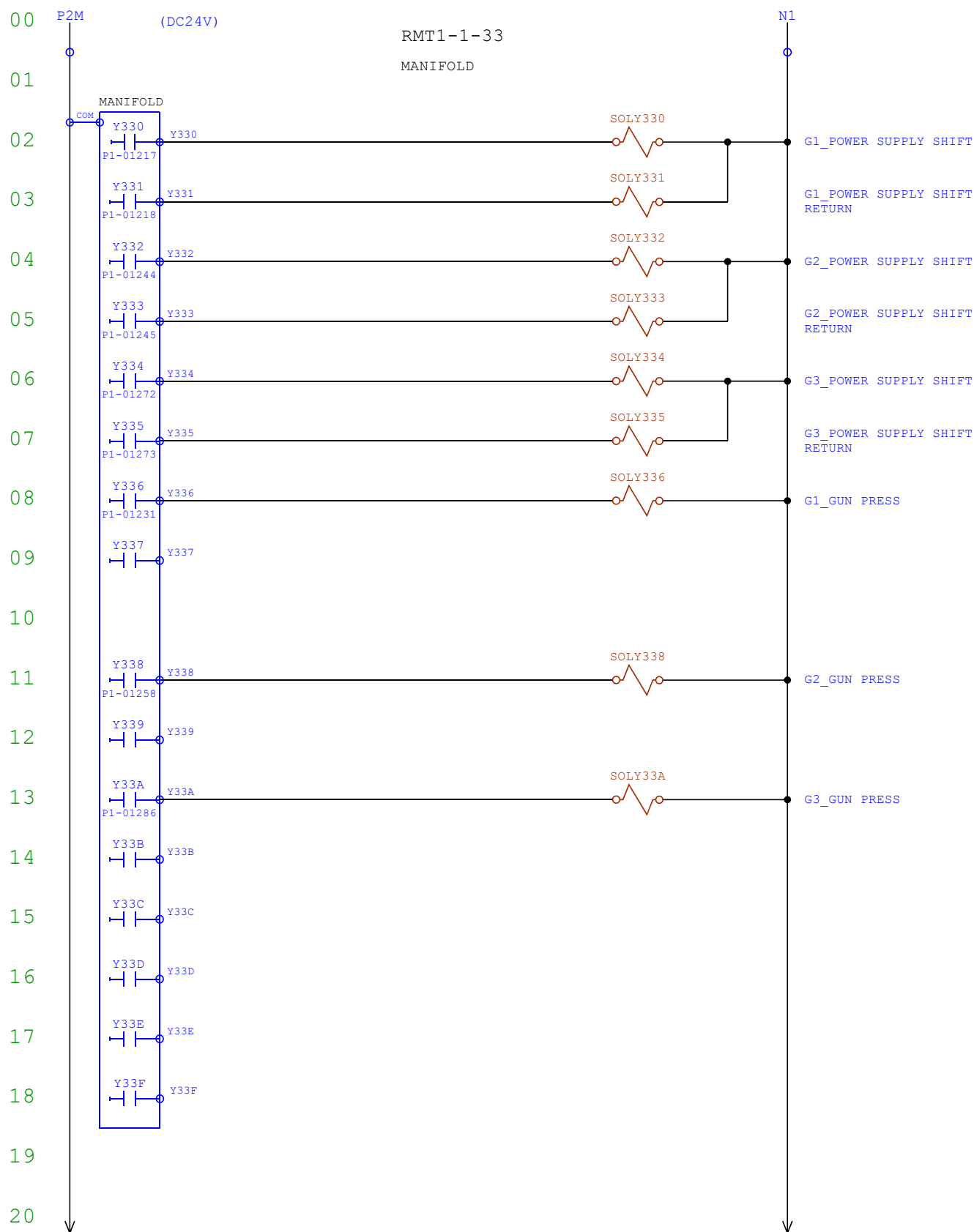
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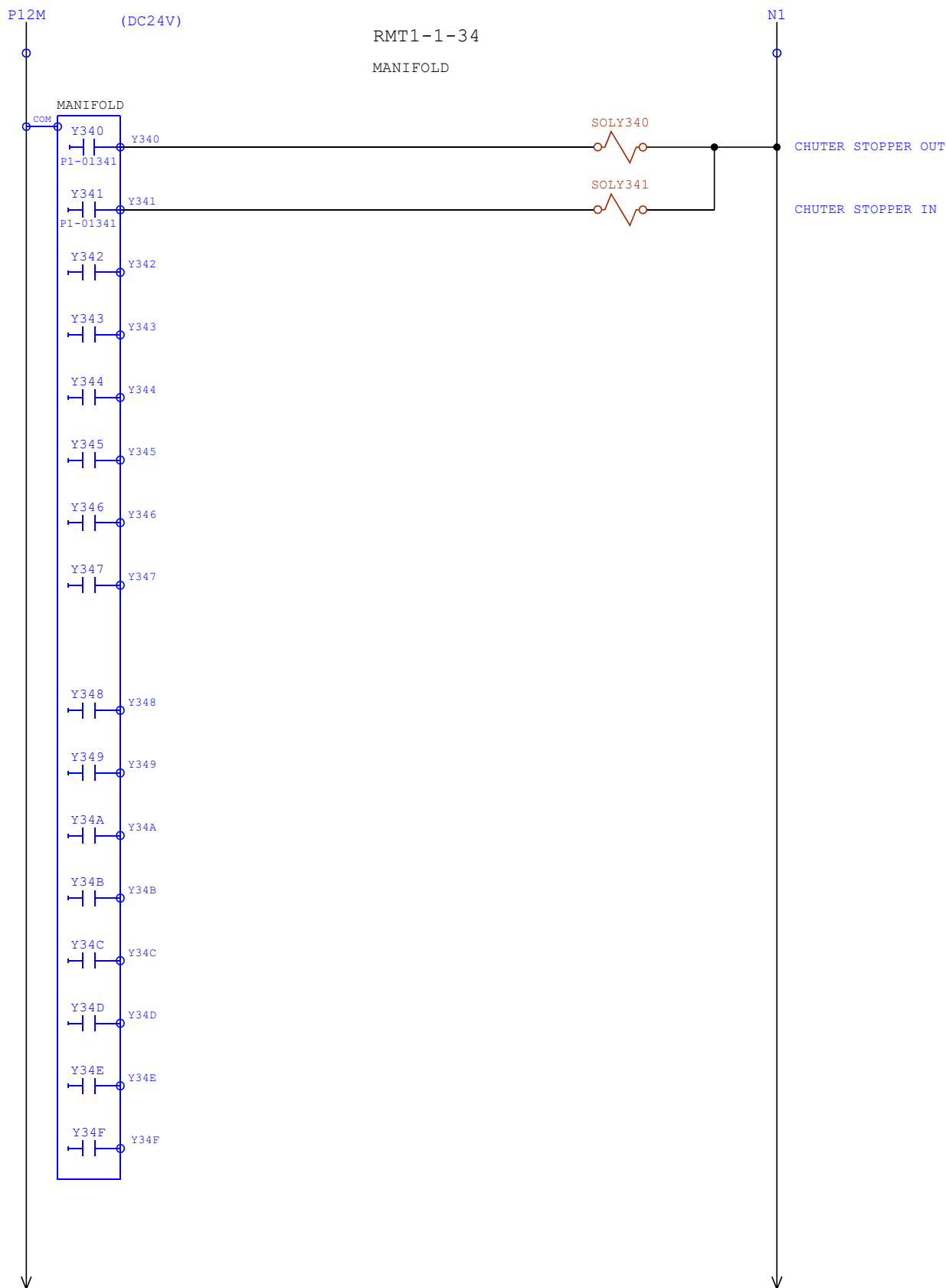
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[illegible]

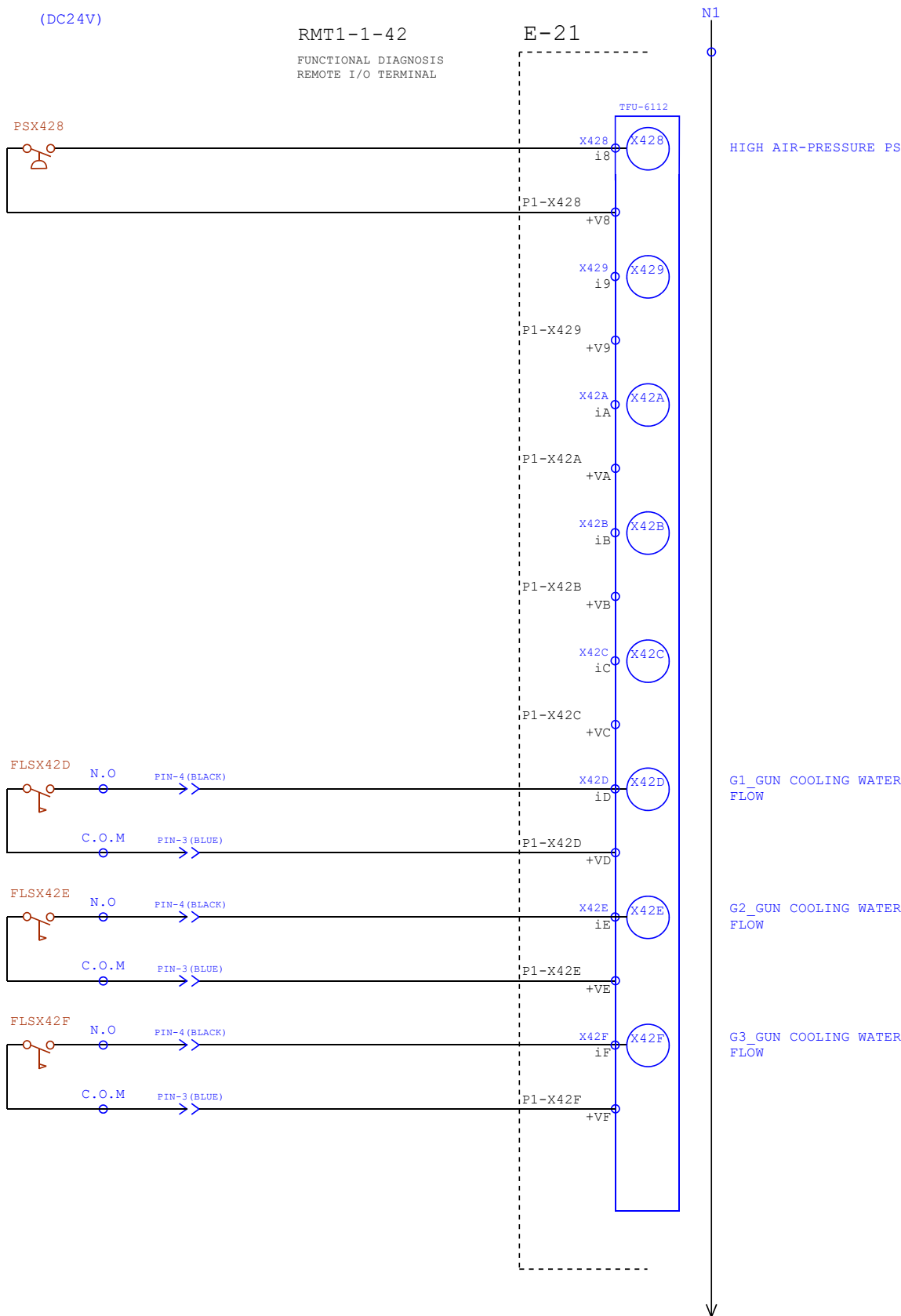
[illegible]

[illegible][illegible]

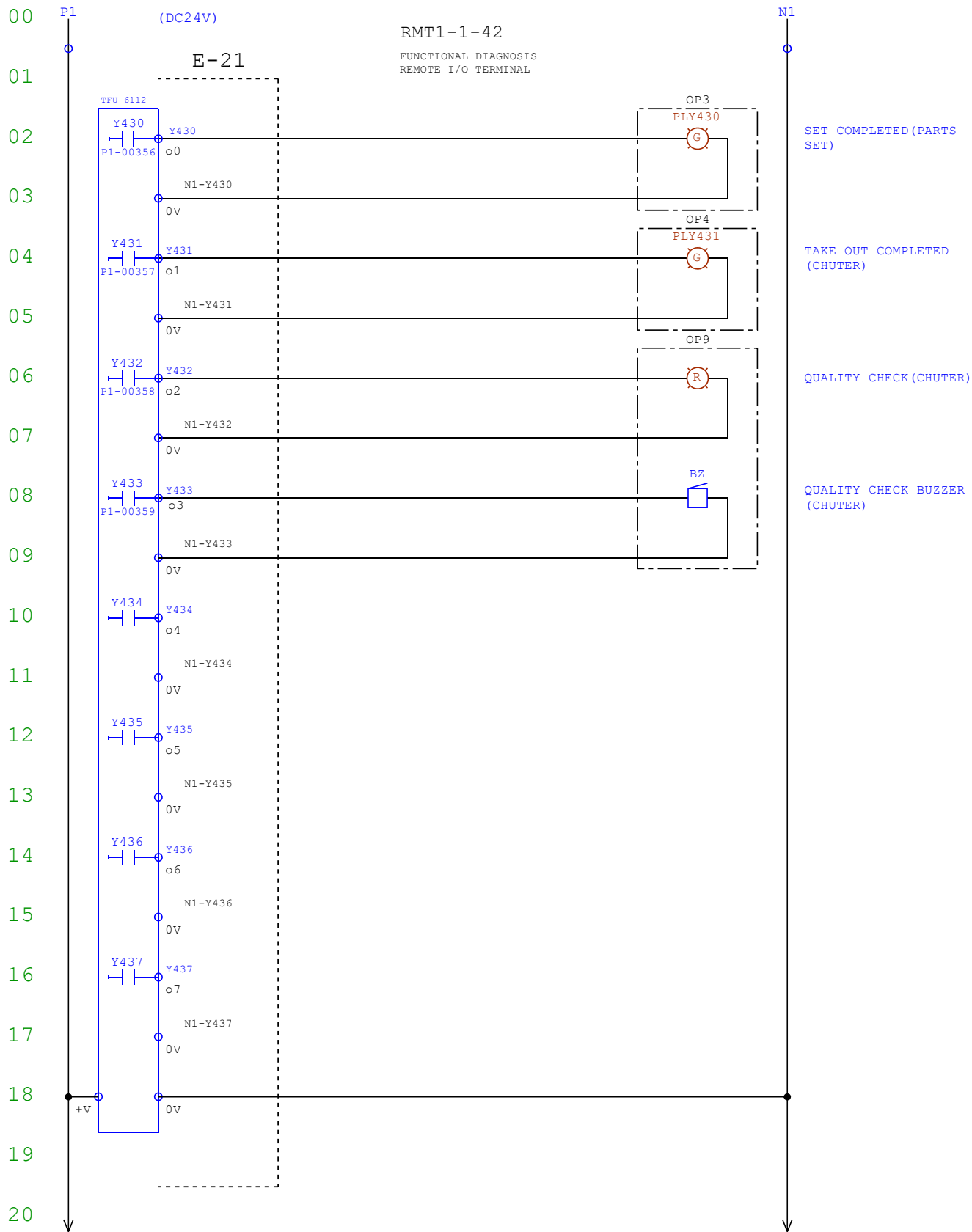
[illegible]

[illegible]

[illegible]

[illegible]

APMM) 150B FR SUS 5st



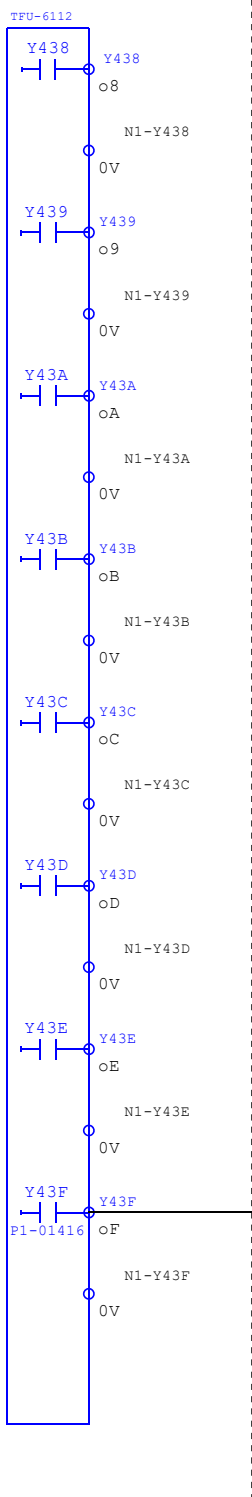
COILMARK	FUNCTION	PAGE	COILMARK	FUNCTION	PAGE				
USER'S NO.	DEVICE CODE				PAGE				
DWEH0050	CONTENTS			INPUT/OUTPUT (JIG)	65				
	DRAWING NO.			HC20474-FR_SUS_5st					

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P1

E-21

FUNCTIONAL DIAGNOSIS
REMOTE I/O TERMINAL

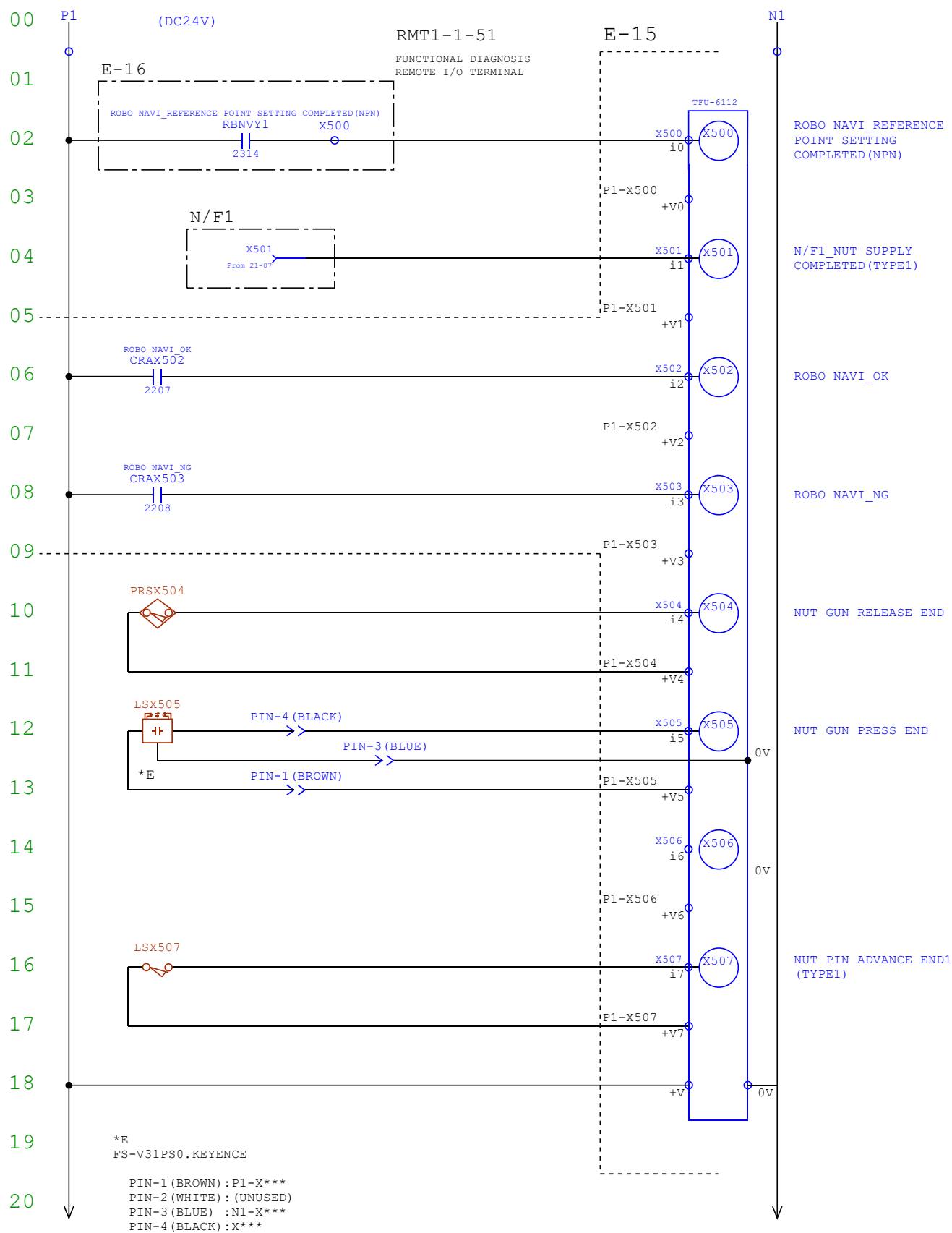


SOLY43F

No. 2 PTN-3 (BLUE)

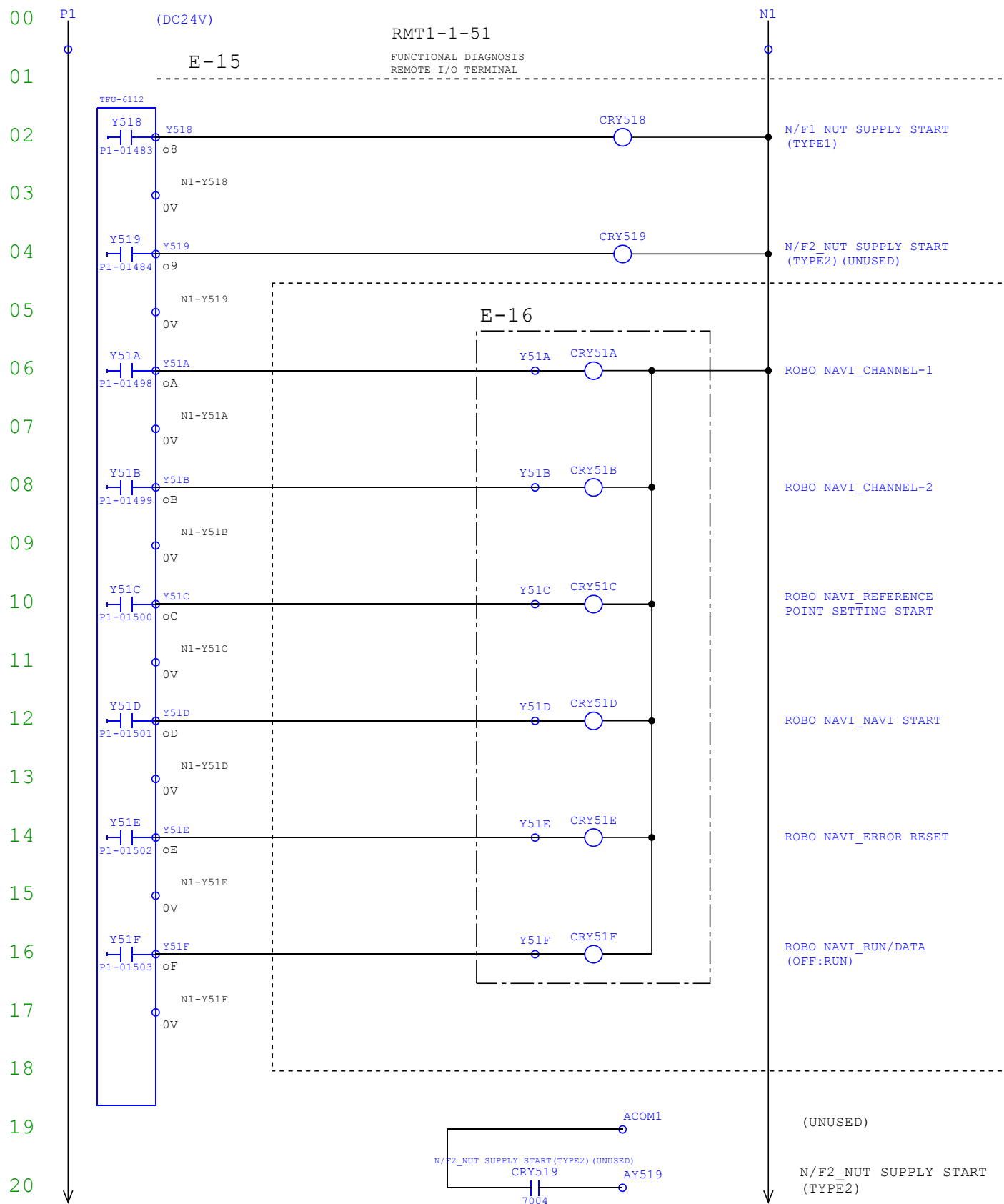
PROJ COOLING WATER
SUPPLY

[illegible][illegible]

[illegible]

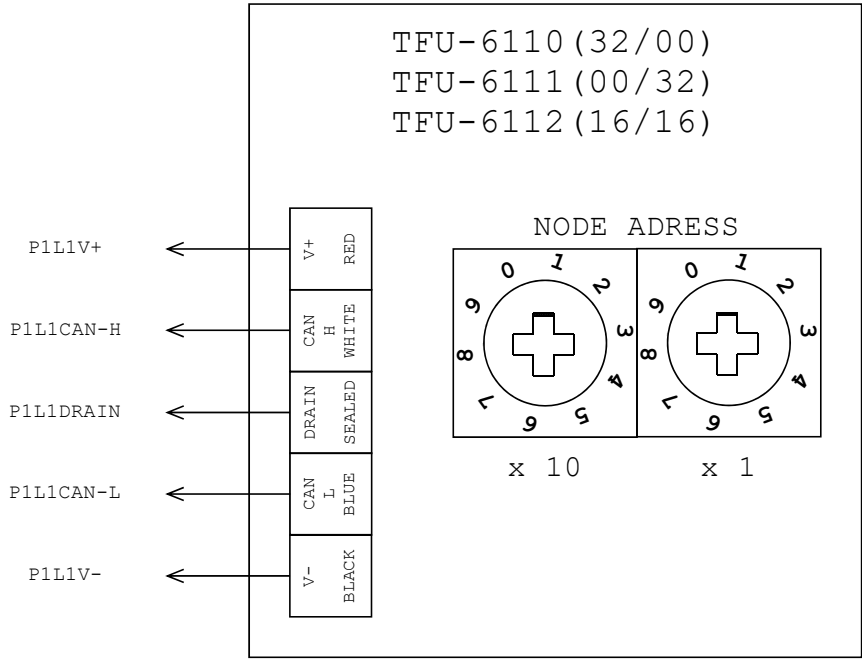
[illegible]

[illegible]

[illegible]

FUNCTIONAL DIAGNOSIS REMOTE I/O TERMINAL

SWITCH SETTING

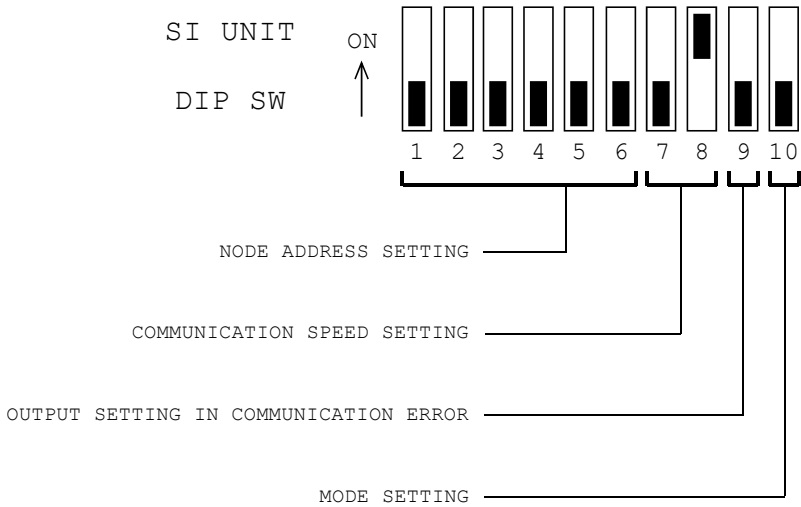


DeviceNet CORRESPONDENCE SOLENOID MANIFOLD (SMC)

SWITCH SETTING

VV5Q41-**-*****-W-X109 (SMC)

VV5Q21-**-*****-W-X413 (SMC)



SLAVE NAME			RMT1-1-32	RMT1-1-33	RMT1-1-34			
NODE ADDRESS SETTING	SLAVE No.		32	33	33			
	DIP SW No.	1	2 ⁰ (1)	OFF	ON	OFF		
		2	2 ¹ (2)	OFF	OFF	ON		
		3	2 ² (4)	OFF	OFF	OFF		
		4	2 ³ (8)	OFF	OFF	OFF		
		5	2 ⁴ (16)	OFF	OFF	OFF		
		6	2 ⁵ (32)	ON	ON	ON		
COMMUNICATION SPEED SETTING	COMMUNICATION SPEED		500	500	500			
	DIP SW No.	7	OFF	OFF	OFF			
		8	ON	ON	ON			
OUTPUT SETTING IN COMMUNICATION ERROR	OUTPUT STATE		CLEAR	CLEAR	CLEAR			
	DIP SW No.	9	OFF	OFF	OFF			
MODE SETTING	MODE		HARDWARE	HARDWARE	HARDWARE			
	DIP SW No.	10	OFF	OFF	OFF			
DC24V POWER SUPPLY	VALVE POWER (+)	24V	P2M	P2M	P12M			
	VALVE POWER (-)	0V	N1	N1	N1			

USER'S NO. DWEH0050	DEVICE CODE	PAGE 72
	CONTENTS SWITCH SETTING (SMC SOL)	
	DRAWING NO. HC20474-FR_SUS_5st	

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			COMMUNICATION PARAMETER									
			NODO NO.	LINK RELAY				LINK REGISTER				
				HEAD ADDRESS			WORD NO.	HEAD ADDRESS			WORD NO.	
				LINK TERRITORY								
				EX00W	—	EX6FW	112	R0000		R003F	64	
ROBOT				SEND TERRITORY								
NO.	USE	SERIES										
R1	MATEHAN	1	1	EX30W	—	EX31W	2	R0000	—	R0001	2	
R2	MATEHAN	2	2	EX32W	—	EX33W	2	R0002	—	R0003	2	
R3	MATEHAN	3	3	EX34W	—	EX35W	2	R0004	—	R0005	2	

[illegible]

STANDARD CIRCUIT DIAGRAM

Ver. P1_V530-V500

SET UP CONTENTS	ADDRESS	P1	
		ON	OFF
Andon-FL-net exist [ON] : nothing [OFF]	M0F0		O
The main controller [ON] / process. and independent controller [OFF]	M0F1		O
Process controller (ON) / independent controller under main controller [OFF]	M0F2		O
Interlock exist [ON] : nothing [OFF]s. such as transfer device	M0F3	O	
evacuation controller exist [ON] / nothing [OFF] (factory concentrated control controller -- except)	M0F4		O
[ON]/ [which detects quality check] Don't carry out [OFF].	M0F5	O	
"fault . warning occurring" automatic-screen-change available [ON] / disable [OFF]	M0F6	O	
At the time of tip exchange and the nozzle-cleaning count UP The auto circuit available [ON] / disable [OFF]	M0F7		O
Production-instruction exist [ON] / nothing [OFF]	M0F8		O
The production-instruction-body [ON] / chassis [OFF]	M0F9		O
Production-instruction display (many dot displays) exist [ON] / nothing [OFF]	M0FA		O
Production-instruction 2st exist [ON] / nothing [OFF]	M0FB		O
Translation table is effective	M0FC		O
S11@P2-L2:NE1A	M0FD		O
I/F BOX nothing [ON] / exist [OFF]	M0FE	O	
VSF check-mode exist [ON] / nothing [OFF]	M0FF		O

Connect station number (BCD)	P1-D000A	15h
Operation specification (0:GOP-M. 1:GOP-E controller. 2:GOP-S controller. 4:WG-M controller. 5:WG-J controller.) [HEX]	P1-D000B	0h

USER'S NO. DWEH0050	DEVICE CODE	PAGE 74
	CONTENTS STANDARD CIRCUIT SETTING	
	DRAWING NO. HC20474-FR_SUS_5st	

STANDARD CIRCUIT DIAGRAM

M1

(ROBOT CONNECTION)

SET UP CONTENTS	ADDRESS	ON	OFF
M1_R1 exist	P1-D00A0-0	☐	
M1_R2 exist	P1-D00A0-1		☐
M1_R3 exist	P1-D00A0-2		☐
M1_R4 exist	P1-D00A0-3		☐
M1_R5 exist	P1-D00A0-4		☐
M1_R6 exist	P1-D00A0-5		☐
M1_R7 exist	P1-D00A0-6		☐
M1_R8 exist	P1-D00A0-7		☐
M1_R9 exist	P1-D00A0-8		☐
M1_R10 exist	P1-D00A0-9		☐
M1_R11 exist	P1-D00A0-A		☐
M1_R12 exist	P1-D00A0-B		☐
M1_R13 exist	P1-D00A0-C		☐
M1_R14 exist	P1-D00A0-D		☐
M1_R15 exist	P1-D00A0-E		☐
M1_R16 exist	P1-D00A0-F		☐

SET UP CONTENTS	ADDRESS	ON	OFF
M1_R17 exist	P1-D00A1-0		☐
M1_R18 exist	P1-D00A1-1		☐
M1_R19 exist	P1-D00A1-2		☐
M1_R20 exist	P1-D00A1-3		☐
M1_R21 exist	P1-D00A1-4		☐
M1_R22 exist	P1-D00A1-5		☐
M1_R23 exist	P1-D00A1-6		☐
M1_R24 exist	P1-D00A1-7		☐
M1_R25 exist	P1-D00A1-8		☐
M1_R26 exist	P1-D00A1-9		☐
M1_R27 exist	P1-D00A1-A		☐
M1_R28 exist	P1-D00A1-B		☐
M1_R29 exist	P1-D00A1-C		☐
M1_R30 exist	P1-D00A1-D		☐
M1_R31 exist	P1-D00A1-E		☐
M1_R32 exist	P1-D00A1-F		☐

USER'S NO. DWEH0050	DEVICE CODE	PAGE
	CONTENTS STANDARD CIRCUIT SETTING	75
	DRAWING NO. HC20474-FR_SUS_5st	

APMM) 150B FR SUS 5st

STANDARD CIRCUIT DIAGRAM

Series 0

(Robot connect situation)

SET UP CONTENTS	ADDRESS	ON	OFF
Series 0 R1 exist	P1-D0040-0		☐
Series 0 R2 exist	P1-D0040-1		☐
Series 0 R3 exist	P1-D0040-2		☐
Series 0 R4 exist	P1-D0040-3		☐
Series 0 R5 exist	P1-D0040-4		☐
Series 0 R6 exist	P1-D0040-5		☐
Series 0 R7 exist	P1-D0040-6		☐
Series 0 R8 exist	P1-D0040-7		☐
Series 0 R9 exist	P1-D0040-8		☐
Series 0 R10 exist	P1-D0040-9		☐
Series 0 R11 exist	P1-D0040-A		☐
Series 0 R12 exist	P1-D0040-B		☐
Series 0 R13 exist	P1-D0040-C		☐
Series 0 R14 exist	P1-D0040-D		☐
Series 0 R15 exist	P1-D0040-E		☐
Series 0 R16 exist	P1-D0040-F		☐

SET UP CONTENTS	ADDRESS	ON	OFF
Series 0 R17 exist	P1-D0041-0		☐
Series 0 R18 exist	P1-D0041-1		☐
Series 0 R19 exist	P1-D0041-2		☐
Series 0 R20 exist	P1-D0041-3		☐
Series 0 R21 exist	P1-D0041-4		☐
Series 0 R22 exist	P1-D0041-5		☐
Series 0 R23 exist	P1-D0041-6		☐
Series 0 R24 exist	P1-D0041-7		☐
Series 0 R25 exist	P1-D0041-8		☐
Series 0 R26 exist	P1-D0041-9		☐
Series 0 R27 exist	P1-D0041-A		☐
Series 0 R28 exist	P1-D0041-B		☐
Series 0 R29 exist	P1-D0041-C		☐
Series 0 R30 exist	P1-D0041-D		☐
Series 0 R31 exist	P1-D0041-E		☐
Series 0 R32 exist	P1-D0041-F		☐

USER'S NO. DWEH0050	DEVICE CODE	PAGE
	CONTENTS STANDARD CIRCUIT SETTING	76
	DRAWING NO. HC20474-FR_SUS_5st	

APMM) 150B FR SUS 5st

STANDARD CIRCUIT DIAGRAM

Series 1

(Robot connect situation)

SET UP CONTENTS	ADDRESS	ON	OFF
Series 1_ R1 exist	P1-D0042-0	O	
Series 1_ R2 exist	P1-D0042-1		O
Series 1_ R3 exist	P1-D0042-2		O
Series 1_ R4 exist	P1-D0042-3		O
Series 1_ R5 exist	P1-D0042-4		O
Series 1_ R6 exist	P1-D0042-5		O
Series 1_ R7 exist	P1-D0042-6		O
Series 1_ R8 exist	P1-D0042-7		O
Series 1_ R9 exist	P1-D0042-8		O
Series 1_ R10 exist	P1-D0042-9		O
Series 1_ R11 exist	P1-D0042-A		O
Series 1_ R12 exist	P1-D0042-B		O
Series 1_ R13 exist	P1-D0042-C		O
Series 1_ R14 exist	P1-D0042-D		O
Series 1_ R15 exist	P1-D0042-E		O
Series 1_ R16 exist	P1-D0042-F		O

SET UP CONTENTS	ADDRESS	ON	OFF
Series 1_ R17 exist	P1-D0043-0		O
Series 1_ R18 exist	P1-D0043-1		O
Series 1_ R19 exist	P1-D0043-2		O
Series 1_ R20 exist	P1-D0043-3		O
Series 1_ R21 exist	P1-D0043-4		O
Series 1_ R22 exist	P1-D0043-5		O
Series 1_ R23 exist	P1-D0043-6		O
Series 1_ R24 exist	P1-D0043-7		O
Series 1_ R25 exist	P1-D0043-8		O
Series 1_ R26 exist	P1-D0043-9		O
Series 1_ R27 exist	P1-D0043-A		O
Series 1_ R28 exist	P1-D0043-B		O
Series 1_ R29 exist	P1-D0043-C		O
Series 1_ R30 exist	P1-D0043-D		O
Series 1_ R31 exist	P1-D0043-E		O
Series 1_ R32 exist	P1-D0043-F		O

USER'S NO. DWEH0050	DEVICE CODE	PAGE
	CONTENTS STANDARD CIRCUIT SETTING	77
	DRAWING NO. HC20474-FR_SUS_5st	

APMM) 150B FR SUS 5st

CONTROLLER TYPE

TYPE

GOP-R4	M	-	UL	20	-	EN	-	B	3	-	00
1	2		3	4		5		6	7		8

	CONTENTS	CODE
1	ARC WELDING ROBOT CELL EQUIPMENT	GOP-R4
2	MINIMUM TYPE CONTROLLER	M
3	CONFORMITY STANDARD	IE
	THAILAND / INDONASIA	
	INDIA	
	ARGENTINA	
	VENEZUELA	
	SOUTH AFRICA	
	JAPAN	
	TAIWAN	
	UK	
	TURKEY / AUSTRALIA	
	FRANCE	
	CZECH REPUBLIC	
	RUSSIA	
	BRAZIL	NR
	U.S.A. / CANADA	UL
	MEXICO	
4	SPECIAL1 (POWER)	
	380V	
	200V	
5	NAME PLATE OR DESTINATION	
	JAPANESE	
	ENGLISH	
	SOUTH AFRICA	
	PORTUGUESE	
	FRENCH	
	CZECH	
	RUSSIAN	
6	Ver.	A.B.---
7	MINOR CHANGE	0. 1. 2
8	OPTION (NEXT PAGE)	

USER'S NO. DWEH0050	DEVICE CODE	PAGE
	CONTENTS CONTROLLER TYPE	78
	DRAWING NO. HC20474-FR_SUS_5st	

APMM) 150B FR SUS 5st

CONTROLLER TYPE

TYPE
OPTION

	CONTENTS							CODE
8	OPTION	NE1A-EDR01 USE/NO USE	TOYOPUC-Plus BUS-EX USE/NO USE	SLOT				
				0	1	2	3	
		NO USE	NO USE	NO USE	NO USE	NO USE	NO USE	0 0
		NO USE	USE	BUS-EX	NO USE	NO USE	NO USE	A 1
		NO USE	USE	BUS-EX	NO USE	EFR2	NO USE	A 5
		NO USE	USE	BUS-EX	NO USE	EX2	NO USE	A B
		NO USE	USE	BUS-EX	NO USE	EFR2	EX2	A D
		NO USE	USE	BUS-EX	DLNK-M	NO USE	NO USE	A E
		NO USE	USE	BUS-EX	DLNK-M	EFR2	NO USE	A I
		NO USE	USE	BUS-EX	DLNK-M	EX2	NO USE	A O
		NO USE	USE	BUS-EX	DLNK-M	EFR2	EX2	A Q
		USE	NO USE	NO USE	NO USE	NO USE	NO USE	B 0
		USE	USE	BUS-EX	NO USE	NO USE	NO USE	B 1
		USE	USE	BUS-EX	NO USE	EFR2	NO USE	B 5
		USE	USE	BUS-EX	NO USE	EX2	NO USE	B B
		USE	USE	BUS-EX	NO USE	EFR2	EX2	B D
		USE	USE	BUS-EX	DLNK-M	NO USE	NO USE	B E
		USE	USE	BUS-EX	DLNK-M	EFR2	NO USE	B I
		USE	USE	BUS-EX	DLNK-M	EX2	NO USE	B O
		USE	USE	BUS-EX	DLNK-M	EFR2	EX2	B Q

USER'S NO. DWEH0050	DEVICE CODE	PAGE 79
	CONTENTS CONTROLLER TYPE	
	DRAWING NO. HC20474-FR_SUS_5st	

CONNECTOR LIST(CONNECTOR PANEL)

CONNECTOR NO.	
DESTINATION	
CONNECT FORM	PANEL SIDE DESTINATION
CONNECTOR FORM	
CABLE TYPE	
SPAN	

CNIO1			
PC10P-DP-IO			
CONNECTOR			
CONNECTOR			
MIL. CONNECTOR 50P			
UL1007 AWG24 BLUE			
PIN NO.	WIRE NO.	PIN NO.	WIRE NO.
50	N1 (COM0)	49	N1 (COM0)
48	X000	47	X001
46	X002	45	X003
44	X004	43	X005
42	X006	41	X007
40	N1 (COM1)	39	N1 (COM1)
38	X008	37	X009
36	X00A	35	X00B
34	X00C	33	X00D
32	X00E	31	X00F
30	N1 (COM2)	29	N1 (COM2)
28	X010	27	X011
26	X012	25	X013
24	X014	23	X015
22	X016	21	X017
20	N1 (COM3)	19	N1 (COM3)
18	X018	17	X019
16	X01A	15	X01B
14	X01C	13	X01D
12	X01E	11	X01F
10	N1 (COM4)	9	N1 (COM4)
8	X020	7	X021
6	X022	5	X023
4	X024	3	X025
2	X026	1	X027

CNIO2			
PC10P-DP-IO			
CONNECTOR			
CONNECTOR			
MIL. CONNECTOR 60P			
UL1007 AWG24 BLUE			
PIN NO.	WIRE NO.	PIN NO.	WIRE NO.
60	CNIO2-60	59	CNIO2-59
58	CNIO2-58	57	CNIO2-57
56	N1 (PWR2)	55	N1 (PWR2)
54	P1 (COMC)	53	P1 (COMC)
52	Y067	51	Y066
50	Y065	49	Y064
48	Y063	47	Y062
46	Y061	45	Y060
44	P1 (COMB)	43	P1 (COMB)
42	Y05F	41	Y05E
40	Y05D	39	Y05C
38	Y05B	37	Y05A
36	Y059	35	Y058
34	N1 (PWR1)	33	N1 (PWR1)
32	P1 (COMA)	31	P1 (COMA)
30	Y057	29	Y056
28	Y055	27	Y054
26	Y053	25	Y052
24	Y051	23	Y050
22	P1 (COM9)	21	P1 (COM9)
20	Y04F	19	Y04E
18	Y04D	17	Y04C
16	Y04B	15	Y04A
14	Y049	13	Y048
12	N1 (PWR0)	11	N1 (PWR0)
10	P1 (COM8)	9	P1 (COM8)
8	Y047	7	Y046
6	Y045	5	Y044
4	Y043	3	Y042
2	Y041	1	Y040

USER'S NO. DWEH0050	DEVICE CODE	PAGE
	CONTENTS CONNECTOR LIST	80
	DRAWING NO. HC20474-FR_SUS_5st	

WIRE CONNECTOR LIST

CONNECTOR NO.	
DESTINATION	
CONNECT FORM	PANEL SIDE PARTNER SIDE
CONNECTOR FORM	
CABLE TYPE	
SPAN	

CN2	
ROBOT CONTROLLER	
CONNECTOR	
CONNECTOR	
Han24DD	
W-Han-W-24x**	
m	
PIN NO.	WIRE NO.
1	I1101A
2	X020
3	X021
4	T0
5	I1101B
6	I1100A
7	I1100B
8	1070
9	1071
10	1080
11	T1
12	I1105
13	1060
14	1061
15	1062
16	1063
17	1081
18	1082
19	1083
20	1072
21	1073
22	I1104
23	N1
24	P1
⊕	⊕

USER'S NO. DWEH0050	DEVICE CODE	PAGE
	CONTENTS CONNECTOR LIST	81
	DRAWING NO. HC20474-FR_SUS_5st	

CONNECTOR PIN LIST

CONNECTOR
DESTINATION
CONNECTOR FORM

CN11	
E-15 <--> N/F1	
Han Q12/0	
PIN NO.	WIRE NO.
1	X2B1
2	P1
3	X2B2
4	P1
5	.
6	.
7	.
8	.
9	.
10	.
11	.
12	.
⊕	⊕

CN13	
E-4 <--> T/C-A	
Han24DD	
PIN NO.	WIRE NO.
1	P1
2	X2B8
3	X2B9
4	.
5	.
6	Y300
7	Y301
8	Y302
9	Y303
10	N1
11	Y304
12	Y05A
13	.
14	.
15	.
16	.
17	Y05B
18	P1
19	.
20	.
21	.
22	.
23	.
24	.
⊕	⊕

CN14	
E-4 <--> T/C-B	
Han24DD	
PIN NO.	WIRE NO.
1	P1
2	X2BA
3	X2BB
4	.
5	.
6	Y310
7	Y311
8	Y312
9	Y313
10	N1
11	Y314
12	Y05C
13	.
14	.
15	.
16	.
17	Y05D
18	P1
19	.
20	.
21	.
22	.
23	.
24	.
⊕	⊕

CNE0-E21	
E-0 <--> E-21	
Han Q12/0	
PIN NO.	WIRE NO.
1	N1
2	P1
3	P2M
4	P12M
5	I1100C
6	I1100
7	I1101C
8	I1101
9	.
10	.
11	.
12	.
⊕	⊕

CNE0-E4	
E-0 <--> E-4	
Han24DD	
PIN NO.	WIRE NO.
1	N1
2	P1
3	P2M
4	P12M
5	Y058
6	Y059
7	Y05A
8	Y05B
9	.
10	.
11	.
12	.
13	.
14	.
15	.
16	.
17	.
18	.
19	.
20	.
21	.
22	.
23	.
24	.
⊕	⊕

CNE4-E15	
E-4 <--> E-15	
Han Q12/0	
PIN NO.	WIRE NO.
1	N1
2	P1
3	X2B1
4	X2B2
5	.
6	.
7	.
8	.
9	.
10	.
11	.
12	.
⊕	⊕

USER'S NO.
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CONNECTOR PIN LIST

CONNECTOR NO.
DESTINATION
CONNECTOR FORM

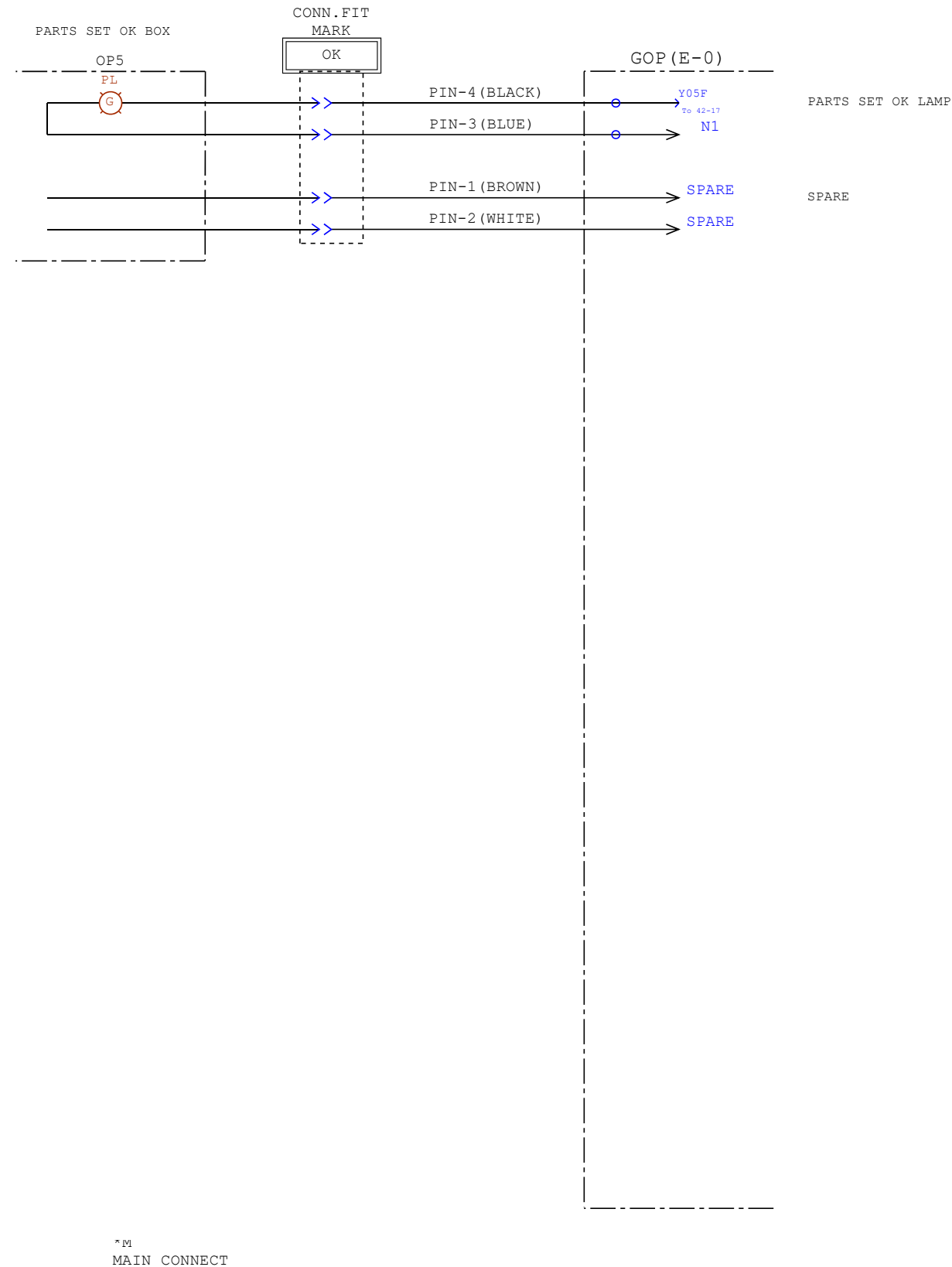
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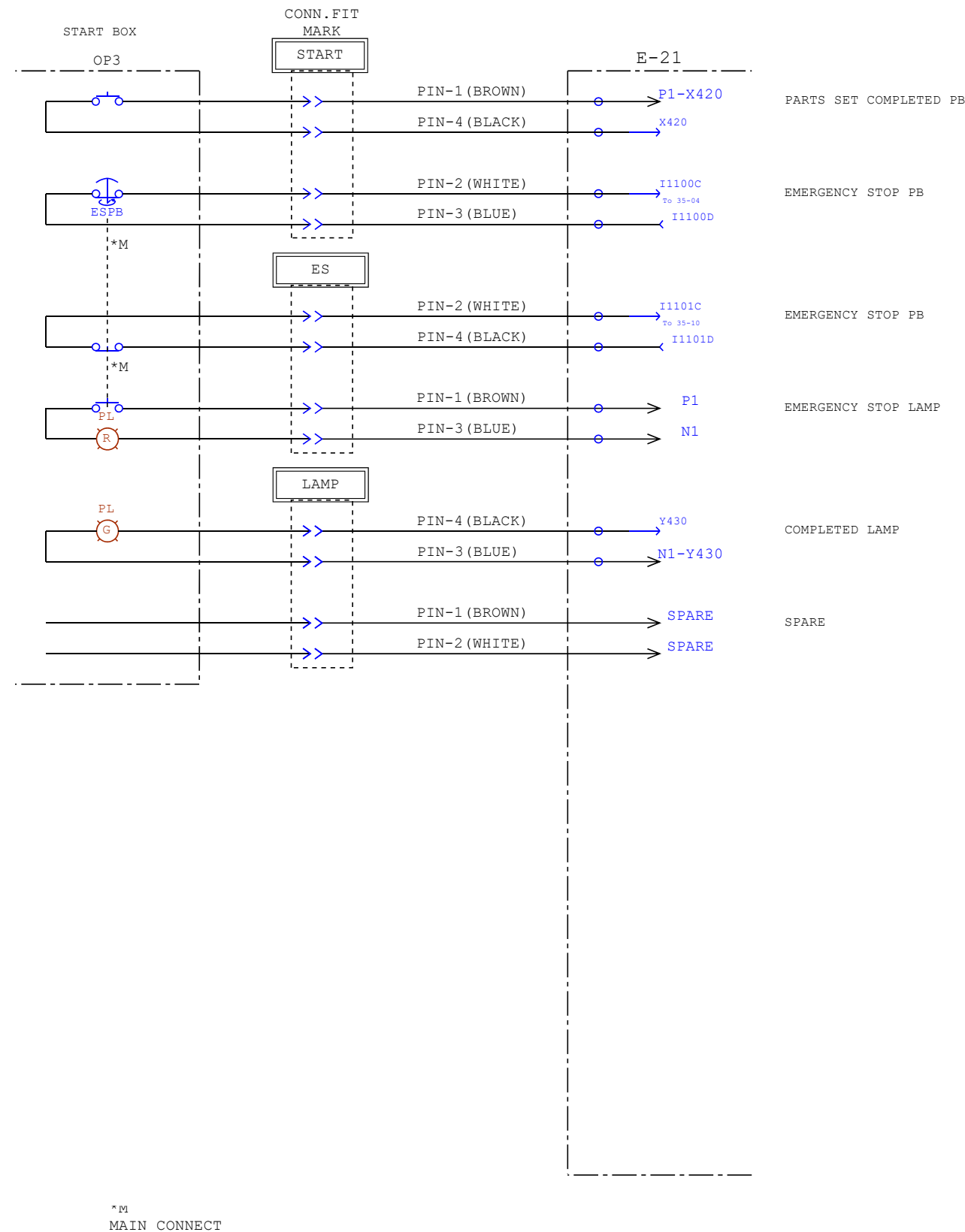
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R1E-0 <--> 1R1E-2	
RMT21WTR-20P (BOX SIDE)	
PIN NO.	WIRE NO.
1	U0V
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3	UM
4	X014
5	X015
6	X016
7	X017
8	X018
9	X019
10	X01A
11	X01B
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13	Y054
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16	Y057
17	Y058
18	Y059
19	G 
20	G 

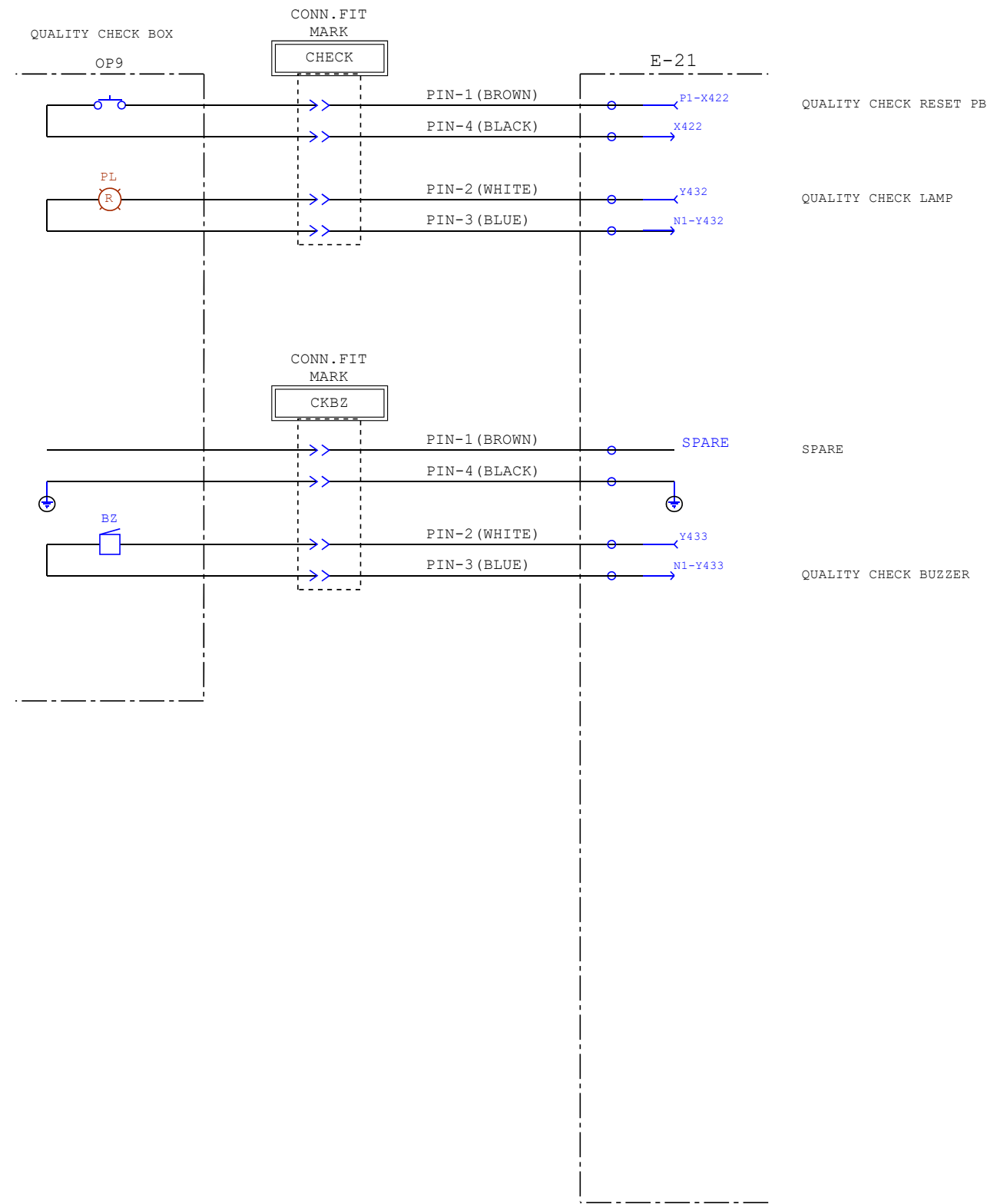
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CNM2	
R1E-0 <--> 1R1E-2	
RMT21WTR-20P (BOX SIDE)	
PIN NO.	WIRE NO.
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2	U24V
3	UM
4	X010
5	X011
6	X012
7	X01D
8	X01E
9	X01F
10	Y050
11	Y051
12	Y052
13	Y053
14	Y05A
15	Y05B
16	Y05D
17	Y05E
18	Y05F
19	G 
20	G 

USER'S NO. DWEH0050	DEVICE CODE	PAGE 83
	CONTENTS CONNECTOR LIST	
	DRAWING NO. HC20474-FR_SUS_5st	







APMM) 150B FR SUS 5st

CODE	PARTS NAME	MAKER	TYPE	RATING	STANDARD	REMARKS	Q'TY
	< GOP-R4M-UL20 -EN-B3-00 >						
	<GOP-UL20>						
CB1	CIRCUIT BREAKER	MITSUBISHI	NF100-SRU 3P 15A	15A 3P	UL CE CCC		1
	F TYPE HANDLE	MITSUBISHI	F-05SRUL				1
	COVER FOR BREAKER	MITSUBISHI	TCL-05SRU3				1
	PROTECTIVE COVER	SANKEI	SPPA-512				3
	<GOP-**20> <GOP-UL20>						
MS1 2 OL1	MAGNET SWITCH	MITSUBISHI	MSOD-QR11BCKP 2.1A 200V DC24V		UL-C/US CE CCC	THRMAL RANGE 1.7~2.5A	1
	OPTION UNIT FOR MAGNET SWITCH	MITSUBISHI	UQ-AX2	1a1b	UL-C/US CE CCC		1
	OPTION UNIT FOR MAGNET SWITCH	MITSUBISHI	UQ-AX2KR	1a1b	UL-C/US CE CCC		1
	VARISTOR	NIPPON CHEMI-CON	TNR15G821K		UL CSA		
REC1 *1	DC POWER SUPPLY	OMRON	S8VS-12024AP	DC24V 5.0A	UL-C/US CE		1
	END STOPPER	(TOYO GIKEN)	(GTY-13)				2
BZ1	BUZZER	Panasonic Electric	EB1124	DC24V			1

*1:TYPE[JA]/[TW]:AVR1

USER'S NO. DWEH0050	DEVICE CODE	PAGE
	CONTENTS PARTS LIST	89
	DRAWING NO. HC20474-FR_SUS_5st	

APMM) 150B FR SUS 5st

CODE	PARTS NAME	MAKER	TYPE	RATING	STANDARD	REMARKS	Q'TY
CR1P CR2P CRY060 CRY061	MINI RELAY	OMRON	MY2N-D2 DC24	DC24V	UL. CSA CE		4
	SOCKET	OMRON	PYF08A-E				4
	END STOPPER	OMRON	PYC-A1				4
PCR2M PCR2M-1 PCR5M PCR5M-1 PCR6M PCR6M-1	SAFETY RELAY	OMRON	G7SA-3A1B DC24	DC24V	UL CSA CE		6
	SOCKET	OMRON	P7SA-10F-ND DC24	DC24V	UL CSA CE		6
	END STOPPER	(TOYO GIKEN)	(GTY-13)				4
CRY064 CRY065 CRY066 CRY067	TERMINAL RELAY	OMRON	G6B-47BND DC24	DC24V	UL CSA		1
	TERMINAL COVER	OMRON	G6B-4-C				1
	SHORT BAR	OMRON	G6B-4-SB				2
	SEAL CONNECTOR	SEIWA	SCT-20			PRIMARY POWER SUPPLY	1
CN41	SEAL CONNECTOR	SEIWA	BXSCL30-5X6/5			5 HOLE	1
	STOPPER	SEIWA	BXSCL30TM				3
	MOUNTING HOLE PLUG	IDEC	RP2BGZ 22			DIA27 METAL	1
CN2	HOUSING(Han24DD)	HARTING	09 30 006 0301		UL CSA		
	FEMALE INSERT	HARTING	09 16 024 3101		UL CSA		
	FEMALE CONTACT SILVER	HARTING	09 15 000 6202		UL CSA		
	CODING SYSTEM WITH BUSH	HARTING	09 33 000 9909		UL CSA		
	CODING SYSTEM WITH GUIDE PIN	HARTING	09 33 000 9908		UL CSA		
CN2	CONECTOR CABLE	KOM PURODUCT	W-Han-R24-020			2m	1
CNFL21	FL-NET CABLE	NICHIGOH	FLG-X-002			L=0.2m CROSS	1

USER'S NO. DWEH0050	DEVICE CODE	PAGE
	CONTENTS PARTS LIST	90
	DRAWING NO. HC20474-FR_SUS_5st	

APMM) 150B FR SUS 5st

CODE	PARTS NAME	MAKER	TYPE	RATING	STANDARD	REMARKS	Q'TY
TB1	TERMINAL BLOCK	PHOENIX CONTACT	PT 1.5/S-QUATTRO	500V 17.5A	UL-C/US CE		35
	END PLATE	PHOENIX CONTACT	D-PT 1.5/S-QUATTRO				1
TB2	TERMINAL BLOCK	PHOENIX CONTACT	PT 1.5/S-TWIN	500V 17.5A	UL-C/US CE		35
	END PLATE	PHOENIX CONTACT	D-PT 1.5/S-TWIN				1
	END STOPPER	(TOYO GIKEN)	(GTY-13)				4
	SHORT BAR	PHOENIX CONTACT	FBS 2-3.5			2 POLES	23
TB3	TERMINAL BLOCK	PHOENIX CONTACT	PT 2.5-TWIN	600V 20A	UL EN		5
	END PLATE	PHOENIX CONTACT	D-ST 2.5-TWIN				1
	END STOPPER	(TOYO GIKEN)	(GTY-13)				2
	SHORT BAR	PHOENIX CONTACT	FBS 2-5			2 POLES	2
TB4	TERMINAL BLOCK	PHOENIX CONTACT	PT 2.5-TWIN	600V 20A	UL EN		2
	END PLATE	PHOENIX CONTACT	D-ST 2.5-TWIN				1
	END STOPPER	(TOYO GIKEN)	(GTY-13)				2
	SHORT BAR	PHOENIX CONTACT	FBS 2-5			2 POLES	
TB5	TERMINAL BLOCK	PHOENIX CONTACT	PT 1.5/S-TWIN	500V 17.5A	UL-C/US CE		7
	END PLATE	PHOENIX CONTACT	D-PT 1.5/S-TWIN				1
	END STOPPER	(TOYO GIKEN)	(GTY-13)				2
	SHORT BAR	PHOENIX CONTACT	FBS 2-3.5			2 POLES	

USER'S NO. DWEH0050	DEVICE CODE	PAGE
	CONTENTS PARTS LIST	91
	DRAWING NO. HC20474-FR_SUS_5st	

APMM) 150B FR SUS 5st

CODE	PARTS NAME	MAKER	TYPE	RATING	STANDARD	REMARKS	Q'TY
PL1~3 PL8	PILOT LAMP	IDEC	AL6H-P4P-TK868-6W	DC24V	UL CSA CE CCC	LED (LATD-2W)	4
PL6 PL9~13	PILOT LAMP	IDEC	AL6H-P4P-TK868-6A	DC24V	UL CSA CE CCC	LED (LATD-2A)	6
PL4 PL5	PILOT LAMP	IDEC	AL6H-P4P-TK868-6G	DC24V	UL CSA CE CCC	LED (LATD-2G)	2
PL14 PL15 PL16	PILOT LAMP	IDEC	AL6H-P4P-TK868-6R	DC24V	UL CSA CE CCC	LED (LATD-2R)	3
PL7	PILOT LAMP	IDEC	AL6H-P4P-TK868-6Y	DC24V	UL CSA CE CCC	LED (LATD-2JW)	1
PBL1 PBL2 PBL15	ILUMINATED PUSH BUTTON SWITCH	IDEC	HA2L-M1C14GF-TK1977	DC24V	UL CSA CE CCC	FLAT SHAPE GREEN	3
PBL4 PBL9	ILUMINATED PUSH BUTTON SWITCH	IDEC	HA2L-M1C14AF-TK1977	DC24V	UL CSA CE CCC	FLAT SHAPE ORANGE	2
PBL3.5 PBL6 PBL17	ILUMINATED PUSH BUTTON SWITCH	IDEC	HA2L-M1C14WF-TK1977	DC24V	UL CSA CE CCC	FLAT SHAPE WHITE	4
PB7 PB8 PB10 PB12~14 PB16.18	PUSH BUTTON SWITCH	IDEC	HA2B-M1C1LWF-TK1977		UL CSA CE CCC	FLAT SHAPE WHITE	8
PB11	PUSH BUTTON SWITCH	IDEC	HA2B-M1C1LYF-TK1977		UL CSA CE CCC	FLAT SHAPE YELLOW	1
	PUSH BUTTON SWITCH	IDEC	HA2B-M1C1LAF-TK1977		UL CSA CE CCC	FLAT SHAPE ORANGE	
	PUSH BUTTON SWITCH	IDEC	HA2B-M1C1LSF-TK1977		UL CSA CE CCC	FLAT SHAPE BLUE	
SS1	SELECT SWITCH	IDEC	HA3S-3C2		UL CSA CE CCC	3 NOTCH BLACK MANUAL	1
SS2 SS3	SELECT SWITCH	IDEC	HA3S-2C1F-TK1977		UL CSA CE CCC	2 NOTCH BLACK	2
SS4	KEY SWITCH	IDEC	HA3K-2C2B		UL CSA CE CCC	2 NOTCH	1
	MOUNTING HOLE PLUG	IDEC	AL-BM6			DIA16 METAL	
PBL19	PUSH LOCK BUTTON SWITCH WITH LAMP	IDEC	XN4E-TL403Q4MR		UL-C/US CE	3B RED	1
PBL19	NAME PLATE	IDEC	HNAV-0				1
PB10	SWITCH GUARD	IDEC	HA9Z-KW1				1

NAME PLATE OR DESTINATION
GOP-*****

USER'S NO. DWEH0050	DEVICE CODE	PAGE 92
	CONTENTS PARTS LIST	
	DRAWING NO. HC20474-FR_SUS_5st	

APMM) 150B FR SUS 5st

CODE	PARTS NAME	MAKER	TYPE	RATING	STANDARD	REMARKS	Q'TY
PLC1	PC10P-DP-IO	JTEKT	TCC-6752		CSA-C/US CE		1
	PC10P-RACK	JTEKT	TCR-6753			1 SLOT	1
CNPC1 0P-DP -IO	USB HARNESS	MISUMI	U09A-BF-BM-1	1m		USB (B)	1
CNIO1	MIL SOCKET CONNECTOR 50c HARNESS	MISUMI	BDHIFS-S-B-50-3	3m		UL1007 AWG24 BLUE	1
CNIO2	MIL SOCKET CONNECTOR 60c HARNESS	MISUMI	BDHIFS-S-B-60-3	3m		UL1007 AWG24 BLUE	1
PLC2	SAFETY CONTROLLER	OMRON	NE1A-SCPU01-V1		UL CSA CE		1
	COMBICON SPRING CAGE PLUG T-BRANCH TAP	PHENIX CONTACT	TFKC 2.5/5-STF- 5.08 AU M				2
	DISPLAY (5.7 INCH) GP-4301TM	DIGITAL	PFXGM4301TAD		UL-C/US CE		1
	3D USB ADAPTOR	SANWA SUPPLY	AD-3DUSB8			USB (A)	
R1 R3	RESISTANCE			1/4W 330 ohm			2
R2	RESISTANCE			1/4W 121 ohm			1

USER'S NO. DWEH0050	DEVICE CODE	PAGE 93
	CONTENTS PARTS LIST	
	DRAWING NO. HC20474-FR_SUS_5st	

<OPTION>

CODE	PARTS NAME	MAKER	TYPE	RATING	STANDARD	REMARKS	Q'TY
	<OPTION:BUS-EX>						
CNEXT BUS	USB CABLE	(ELECOM)	(U2C-M10BK)	1.0m		USB (mini-B - A)	1
EX	TOYOPUC-Plus BUS-EX	JTEKT	TCU-6900		CSA-C/US CE		1
	TOYOPUC-Plus COVER	JTEKT	TCU-6779				1
	BRACKET	JTEKT	BRA_DIN				1
	STUD	JTEKT	STD16X4				1
	STUD	JTEKT	STD22X4				1
	SCREW	JTEKT	SCR6X4				4
CN5	CABLE WITH CONNECTOR	JTEKT	CPU_PR_CN5-010				1
	<OPTION:EX2>						
	TOYOPUC-Plus EX2	JTEKT	TCU-6858		CSA-C/US CE		1
	<OPTION:EFR2>						
	TOYOPUC-Plus EFR2	JTEKT	TCU-6859		CSA-C/US CE		1
	<OPTION:DLNK-M>						
	TOYOPUC-Plus DLNK-M	JTEKT	TCU-6744		CSA-C/US CE		1
	<OPTION:NE1A-EDR01>						
EDR	EtherNet/IP - DeviceNet ROUTER	OMRON	NE1A-EDR01		UL CSA CE		1
	COMBICON SPRING CAGE PLUG T-BRANCH TAP	PHENIX CONTACT	TFKC 2.5/5-STF- 5.08 AU M				1

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*2

1:OPTION A/B*
2:OPTION B

USER'S NO.

DEVICE CODE

PAGE

CONTENTS

PARTS LIST

94

DWEH0050

DRAWING NO.

HC20474-FR_SUS_5st

APMM) 150B FR SUS 5st

APMM) 150B FR SUS 5st

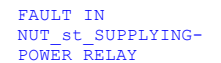
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	GOP	JTEKT	GOP-R4M-UL20-EN-B3-00			USER PROVISION	1
	REMOTE I/O BOX	JTEKT	DTB-P1616C			USER PROVISION	1
	BUTTON BOX	SANRITSU	TA-EMBIZX-P1-G				2
	LAMP BOX	SANRITSU	TA-LBIZ-1-G				1
	TEACH KEY SWITCH BOX	SAKAE	TYRSS-1R-M4-N-N				2
	DLINK TERMINAL (32/00 PNP)	JTEKT	TFU-6110				3
		JTEKT	TFU-6111				1
	IO CABLE (7m)	SHINWA	W-HAN-S-24x7-TC				2
	RESET CABLE (14m)	NADEX	WP45-W140A (14m)				2
	SAFETY RELAY	OMRON	G7SA-3A1B DC24V				2
	SOCKET	OMRON	P7SA-10F-ND				2
	TERMINAL	PHOENIX CONTACT	PT 2.5-TWIN				59
	END PLATE	PHOENIX CONTACT	D-ST 2.5-TWIN				5
	BRIDGE BAR	PHOENIX CONTACT	FBS 2-5				10
	TERMINAL BLOCK	PHOENIX CONTACT	PT 2.5-TWIN-PE				2
	TERMINAL	PHOENIX CONTACT	PT 1.5/S-QUATTRO				43
	END PLATE	PHOENIX CONTACT	D-PT 1.5/S-QUATTRO				2
	TERMINAL	PHOENIX CONTACT	PT 1.5/S-TWIN				56
	END PLATE	PHOENIX CONTACT	D-PT 1.5/S-TWIN				1
	BRIDGE BAR	PHOENIX CONTACT	FBS 2-3.5				14
	HOLDER	IDEC	BNL6				21
	LAMP	IDEC	HW1P-5Q4R				1

USER'S NO. DWEH0050	DEVICE CODE	PAGE
	CONTENTS PARTS LIST	95
	DRAWING NO. HC20474-FR_SUS_5st	

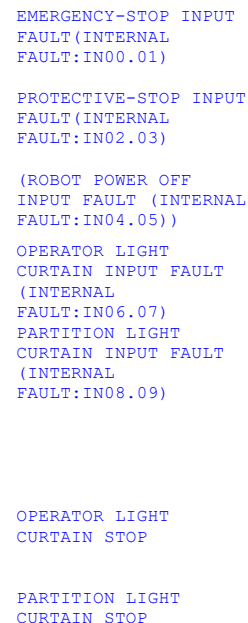
APMM) 150B FR SUS 5st

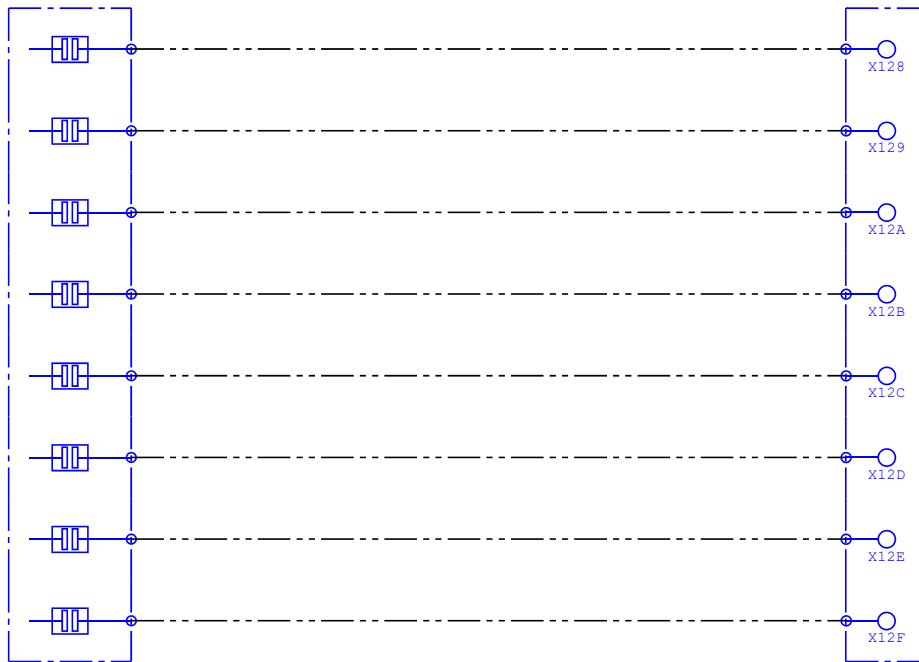
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	LED	IDEC	LATD-2W				1
	LED	IDEC	LATD-2G				1
	LED	IDEC	LATD-2A				1
	COLOR FILM	IDEC	AL-FH6W				1
	COLOR FILM	IDEC	AL-FH6G				1
	COLOR FILM	IDEC	AL-FH6A				1
	PUSH BUTTON	IDEC	HW1B-M110B				1
	BUZZER	PANASONIC	EB1124 (DC24V)				1

USER'S NO. DWEH0050	DEVICE CODE	PAGE
	CONTENTS PARTS LIST	96
	DRAWING NO. HC20474-FR_SUS_5st	

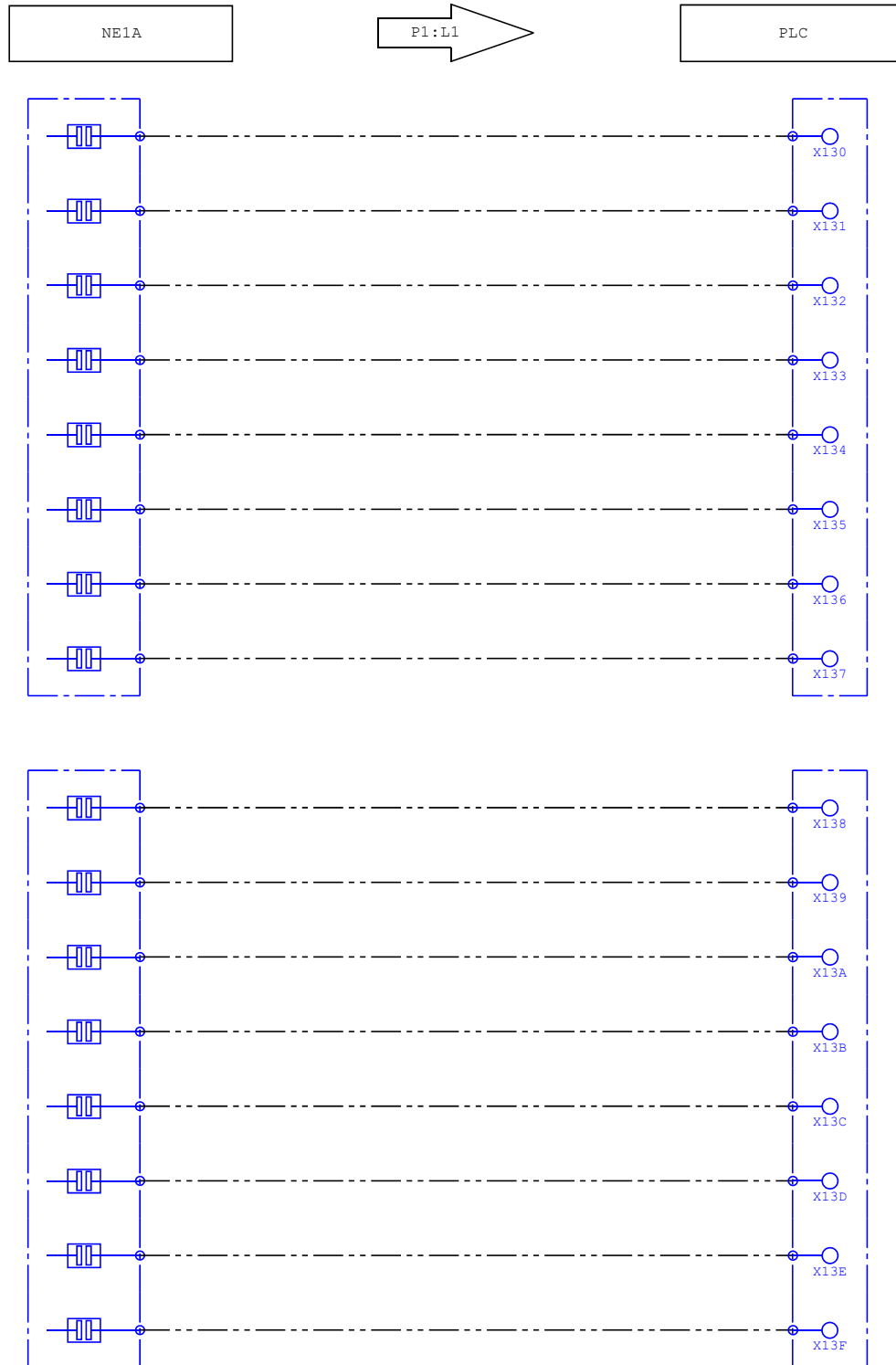


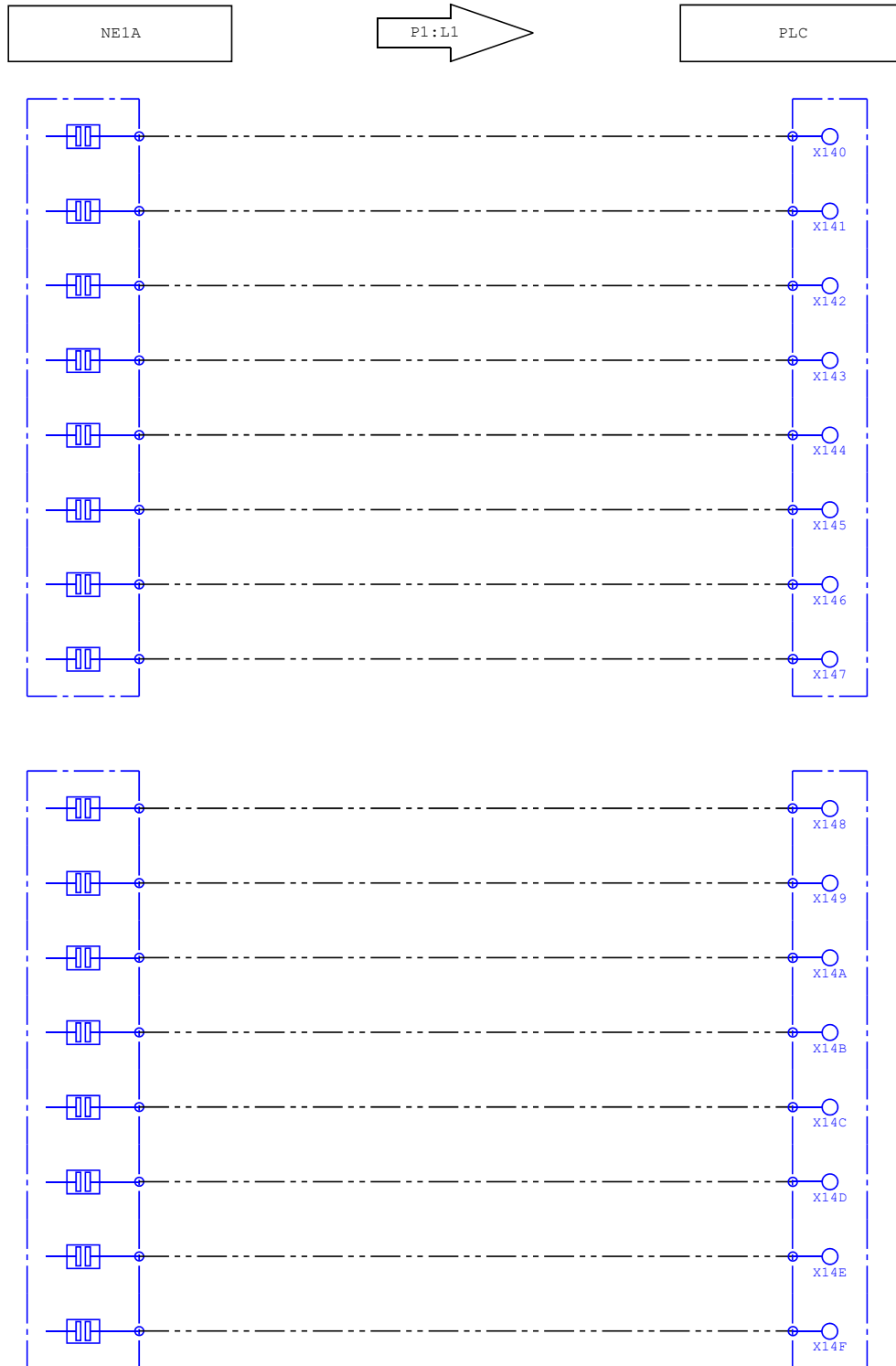
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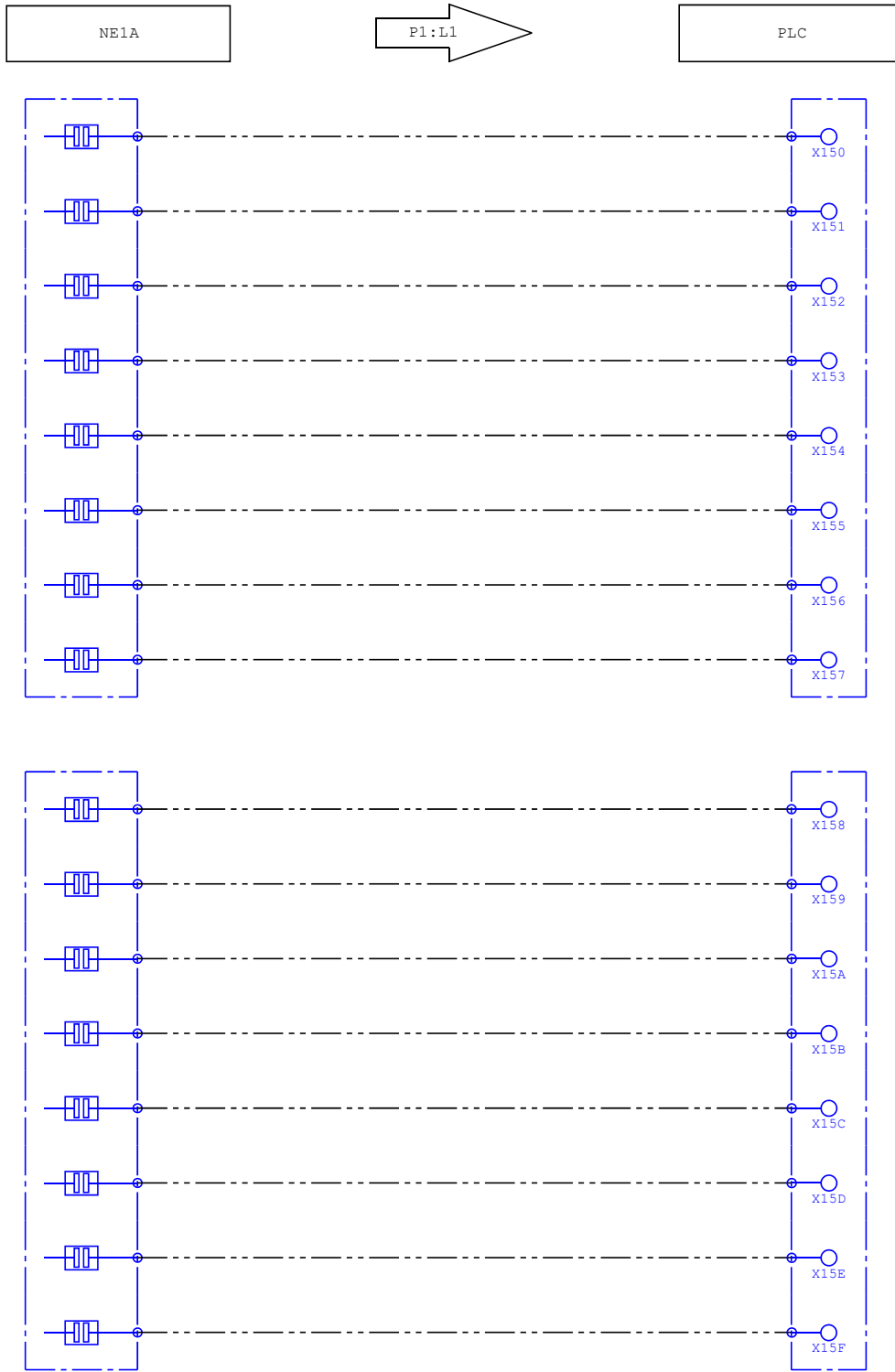


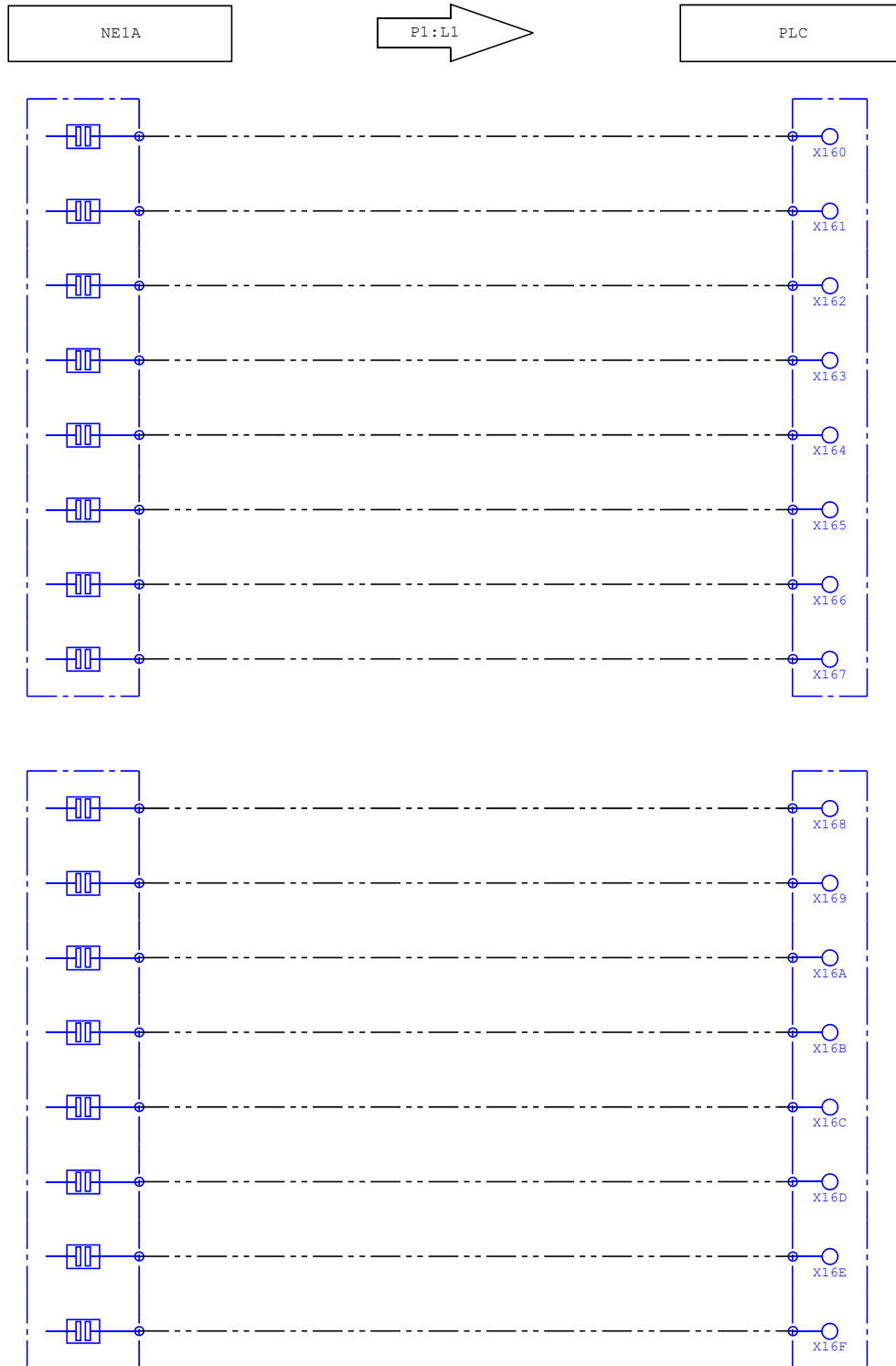
APMM) 150B FR SUS 5st

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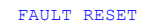


X140	X141	X142	X143	X144	X145	X146	X147	X148	X149	X14A
X14B	X14C	X14D	X14E	X14F						

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X160	X161	X162	X163	X164	X165	X166	X167	X168	X169	X16A
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COILMARK	FUNCTION	PAGE	COILMARK	FUNCTION	PAGE
USER'S NO.		DEVICE CODE			PAGE
DWEH0050		CONTENTS			104
		COMMUNICATION I/O CIRCUIT(P1:L1)			
		DRAWING NO.			
		HC20474-FR SUS 5st			

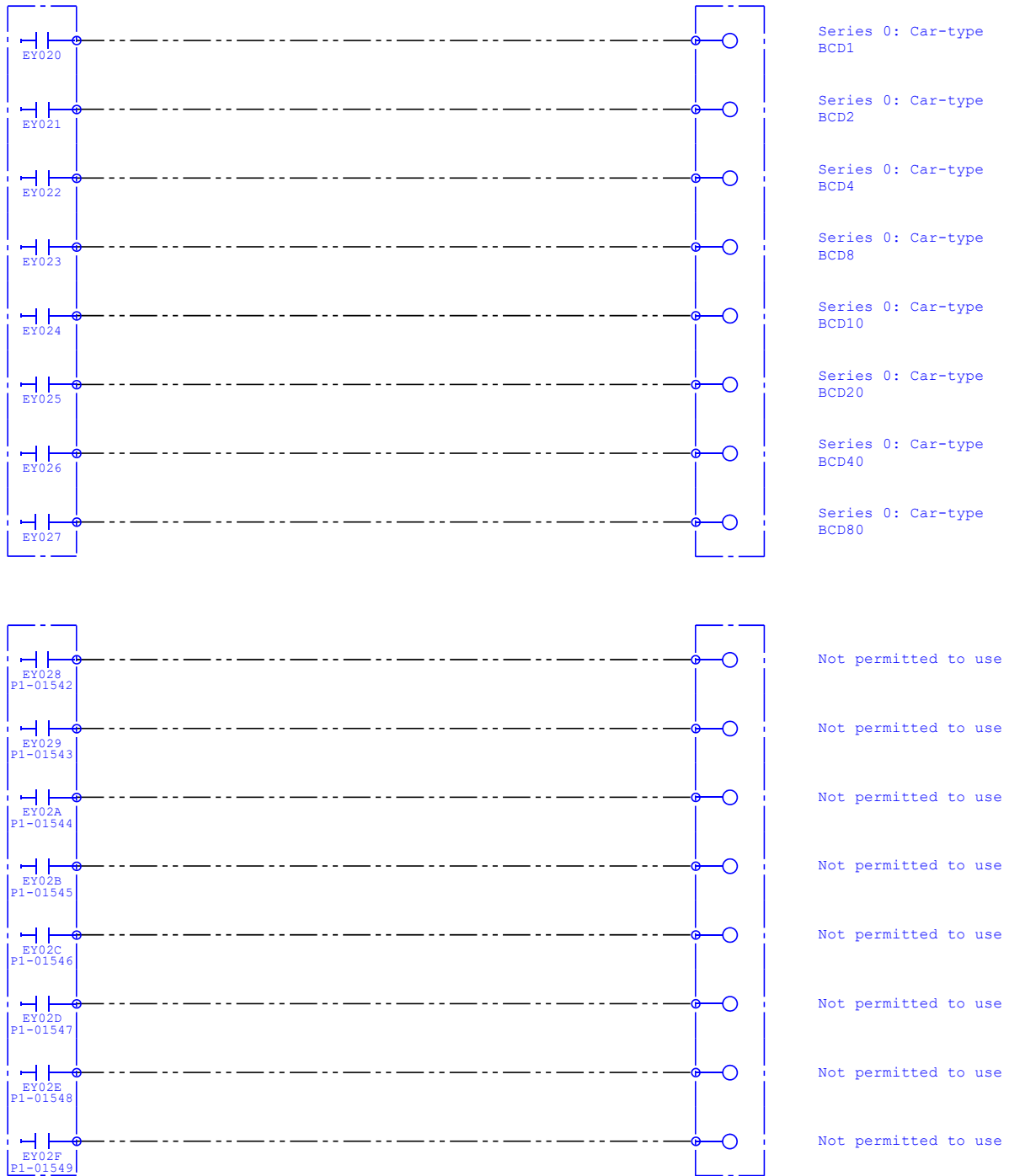


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(Robot 16 home
position )
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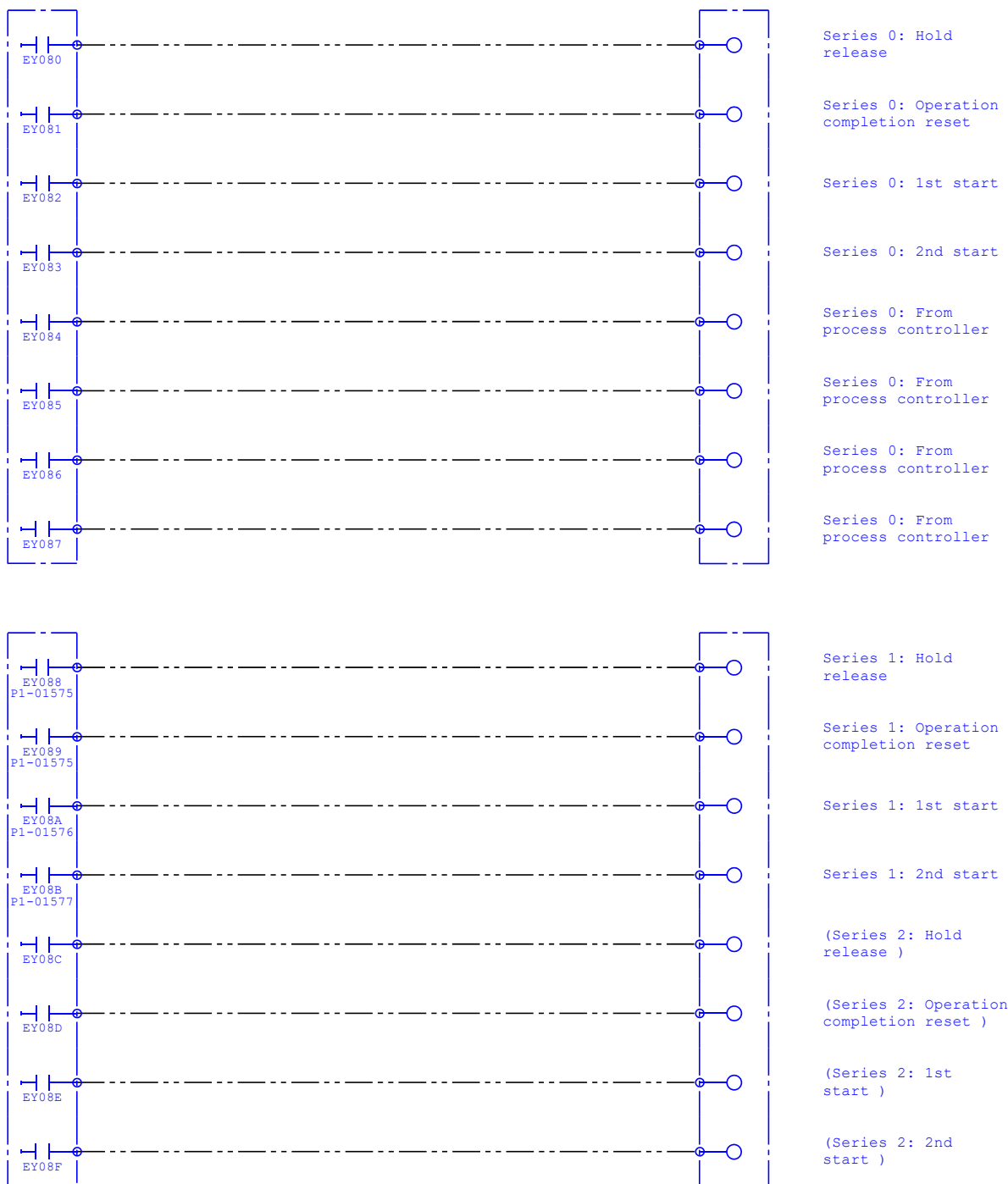


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position )
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ROBOT CONTROLLER

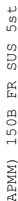
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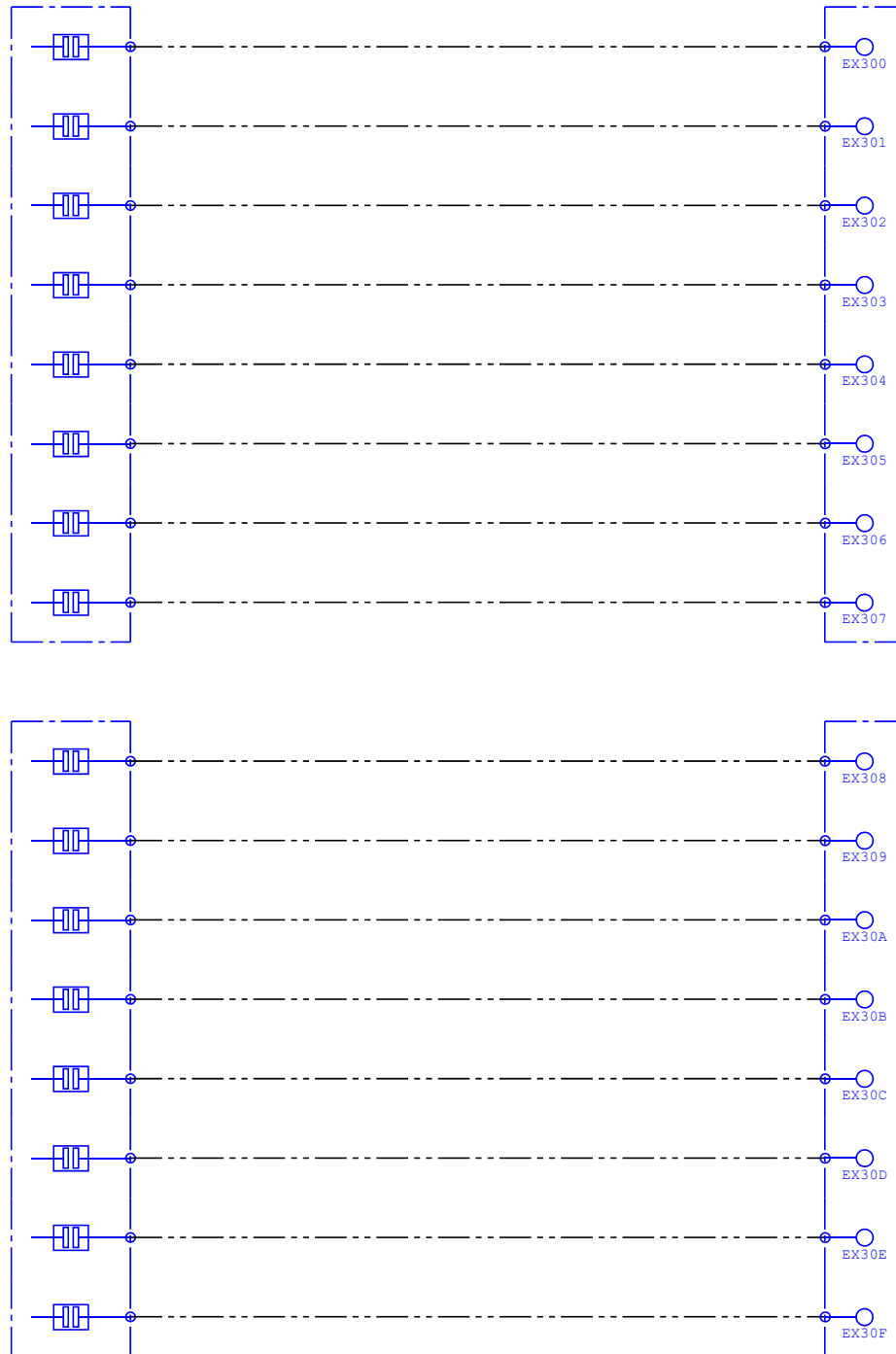
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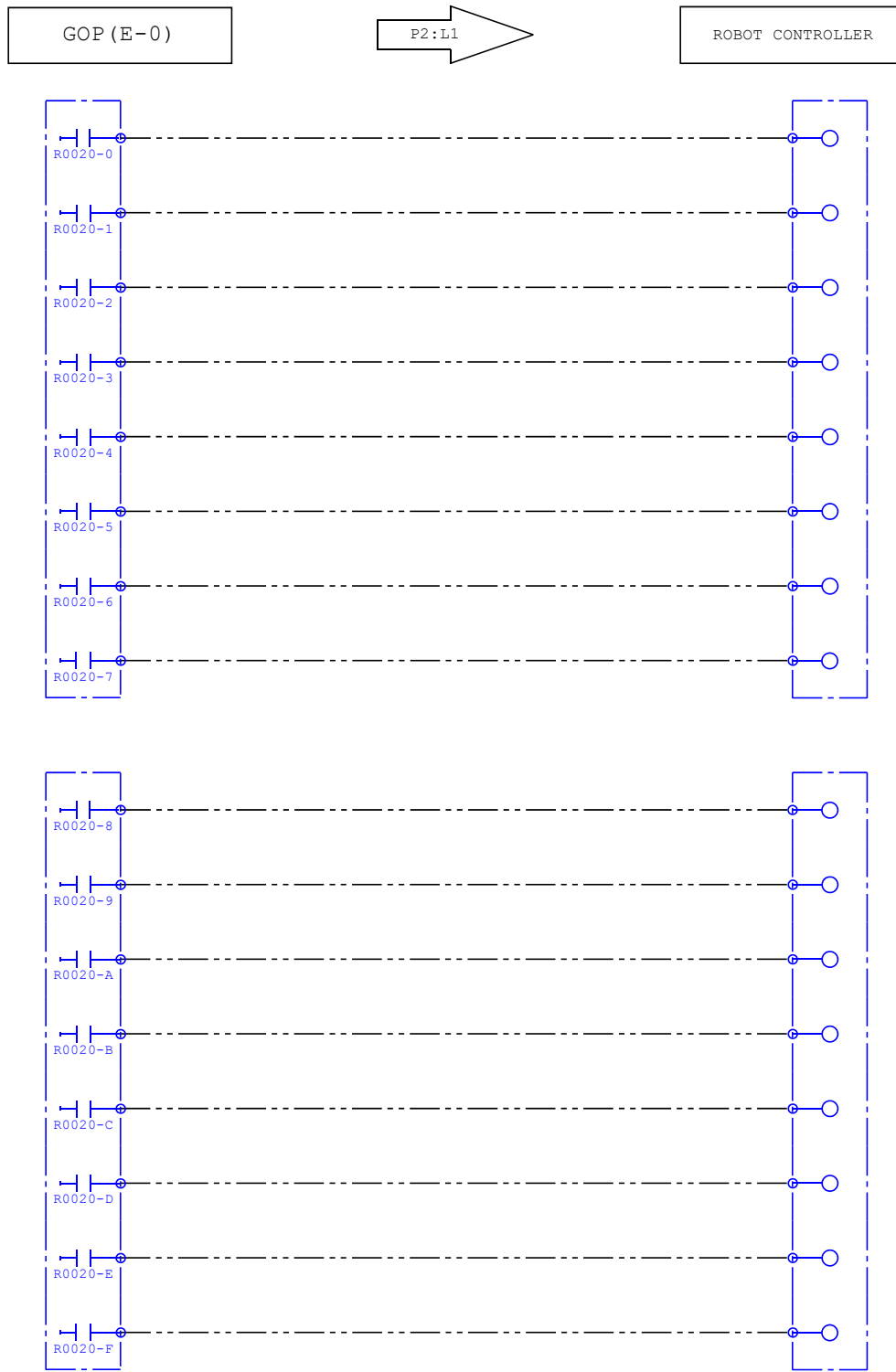
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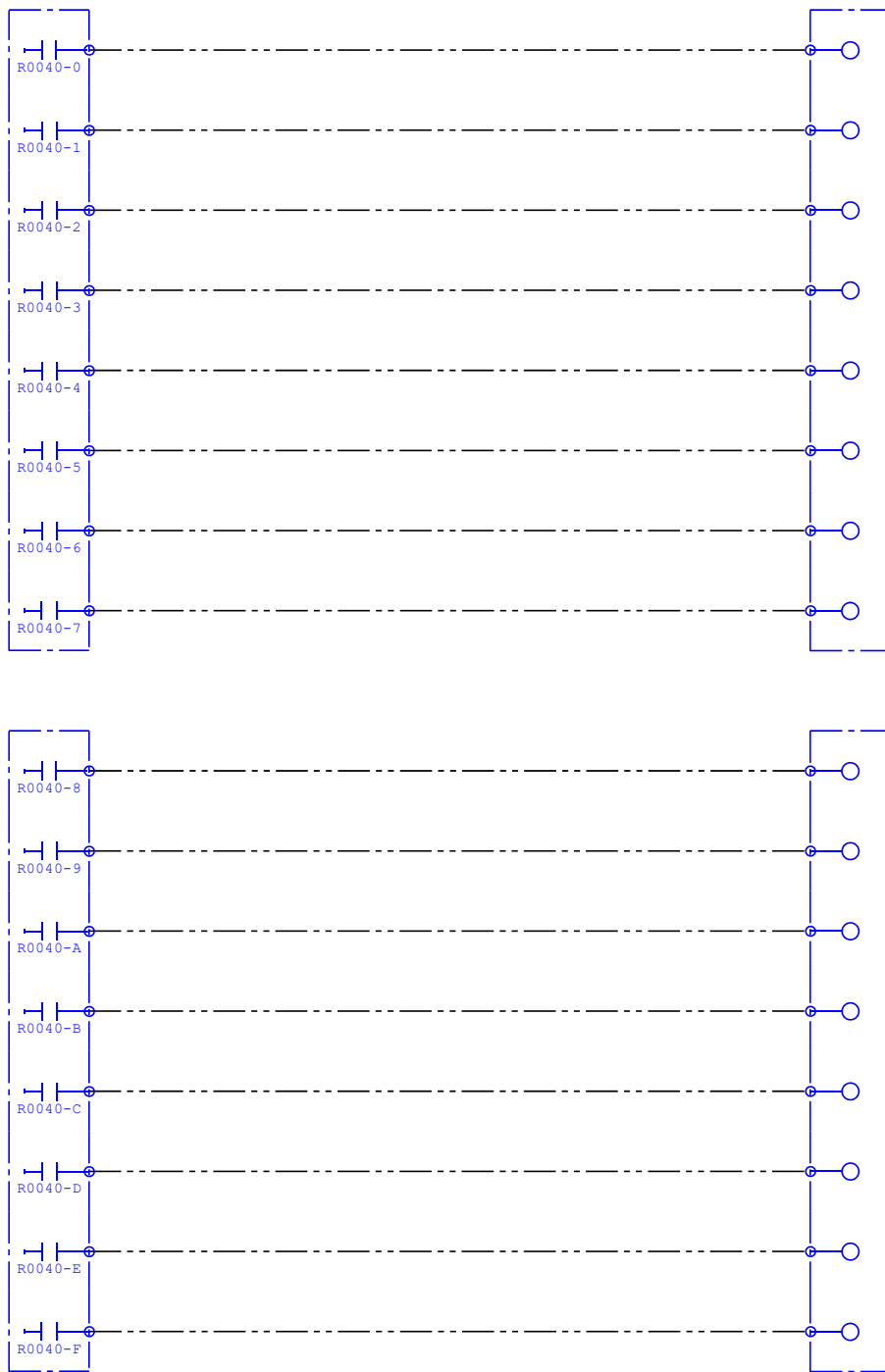
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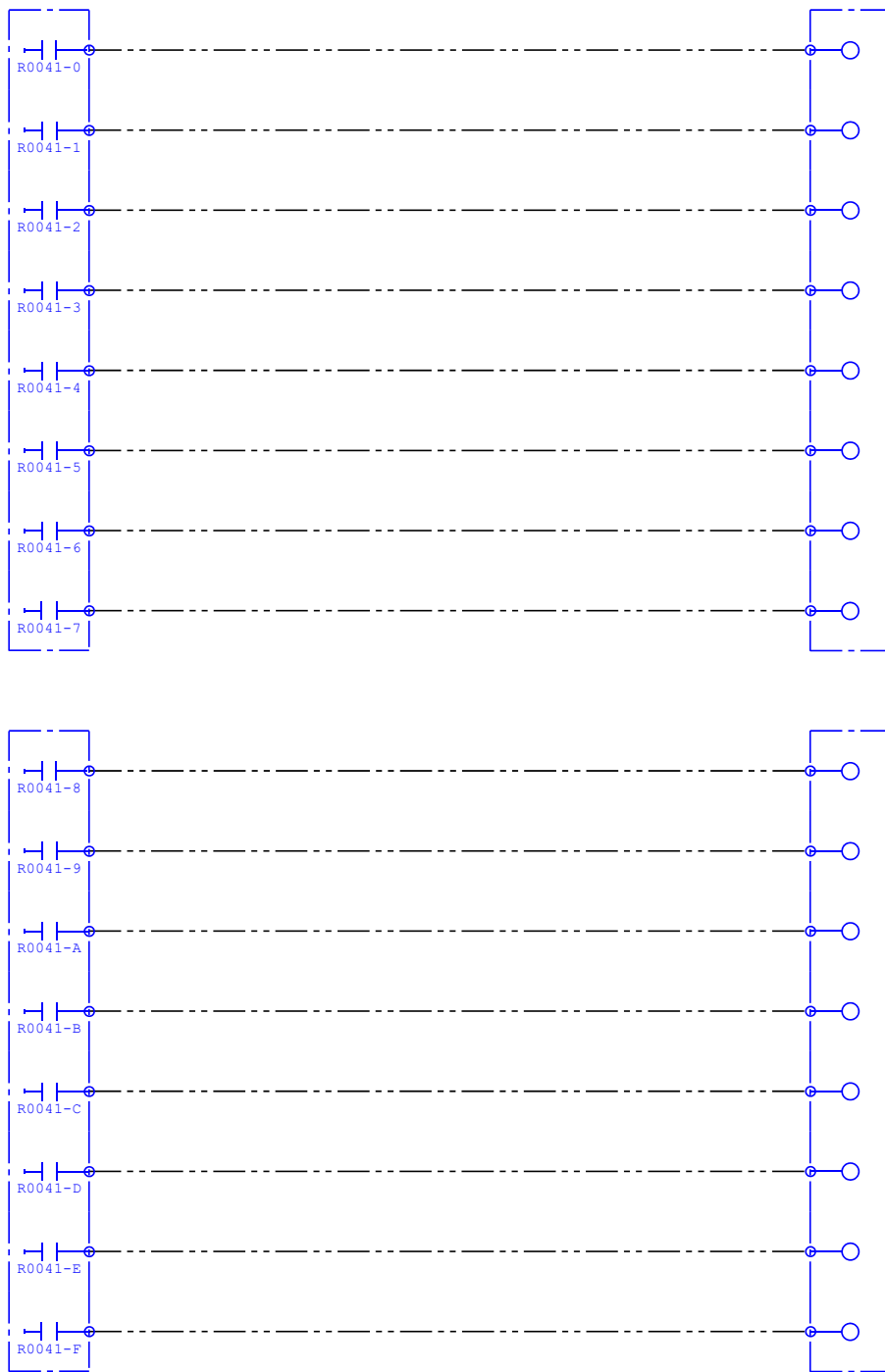
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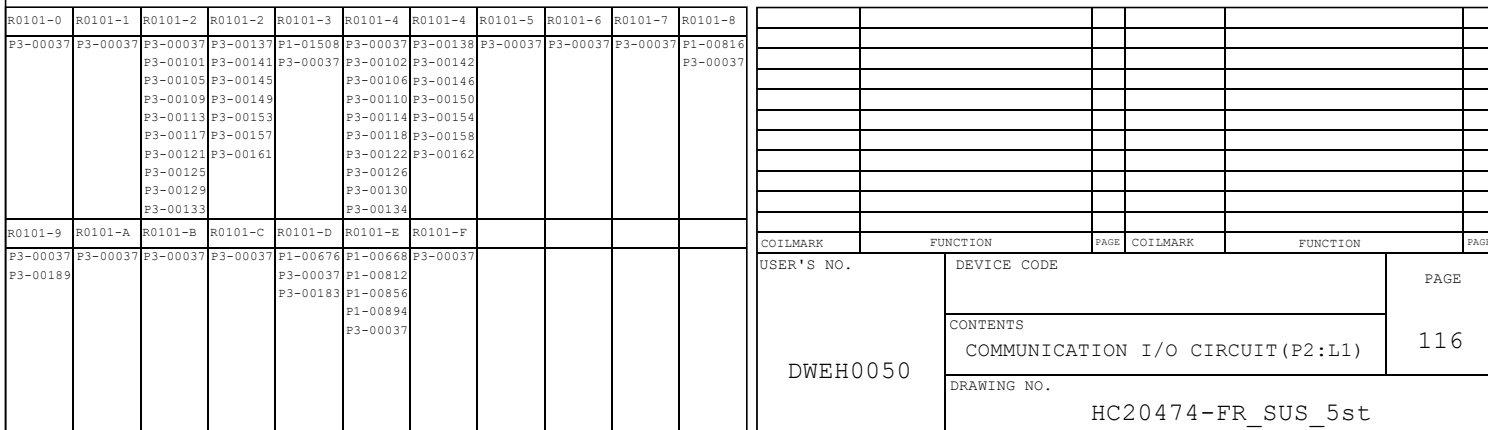
ROBOT CONTROLLER

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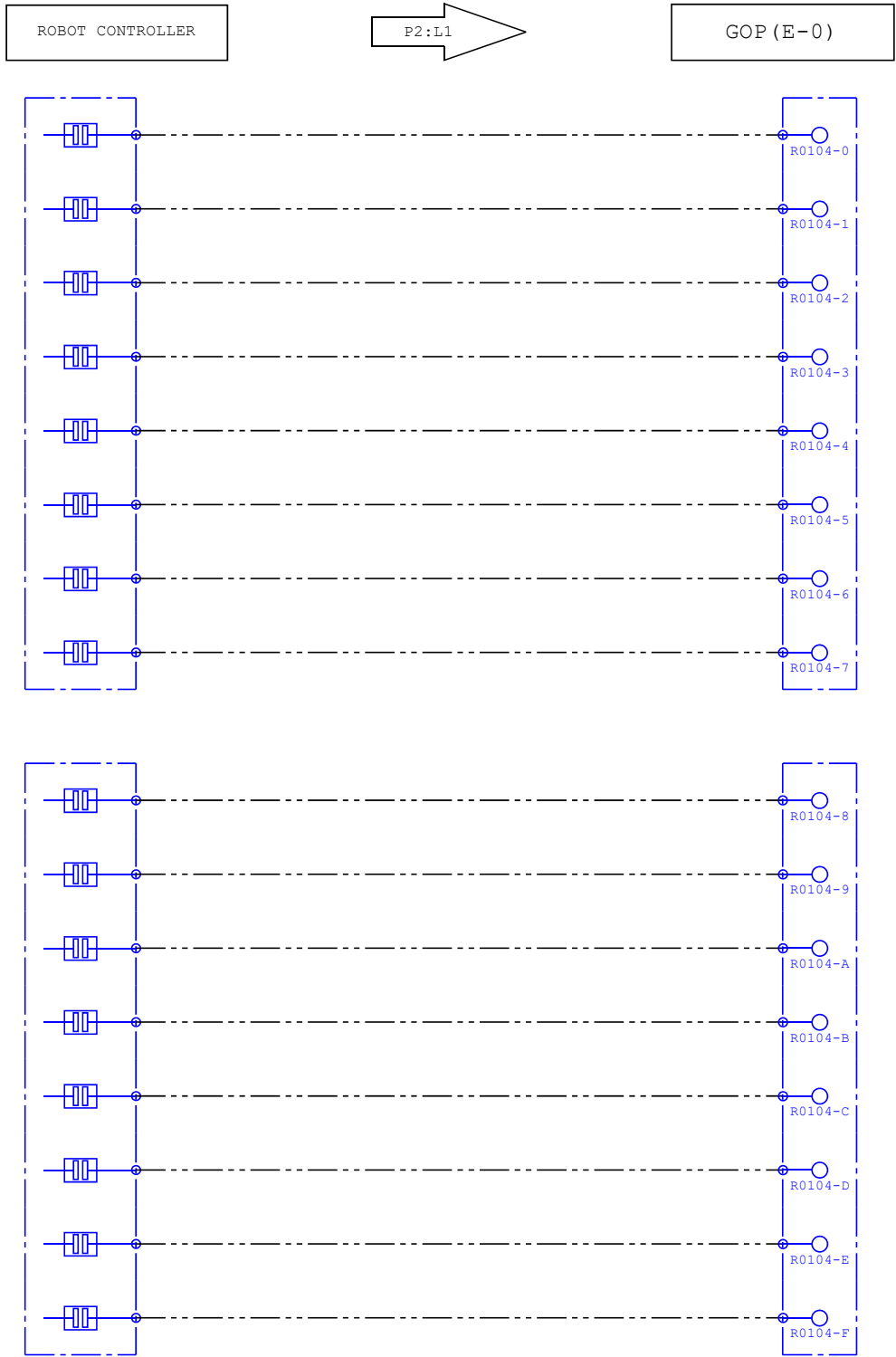
ROBOT CONTROLLER

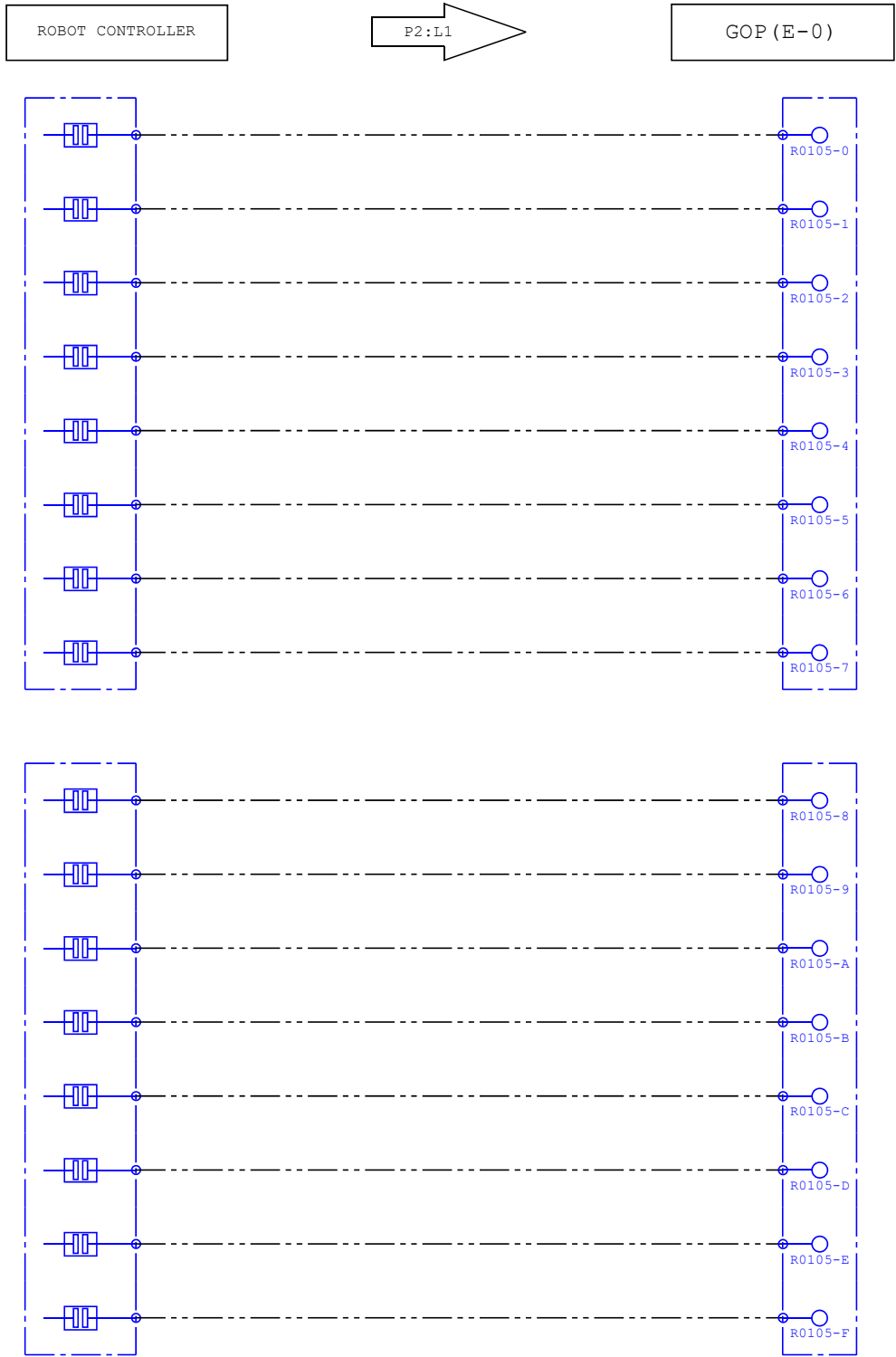
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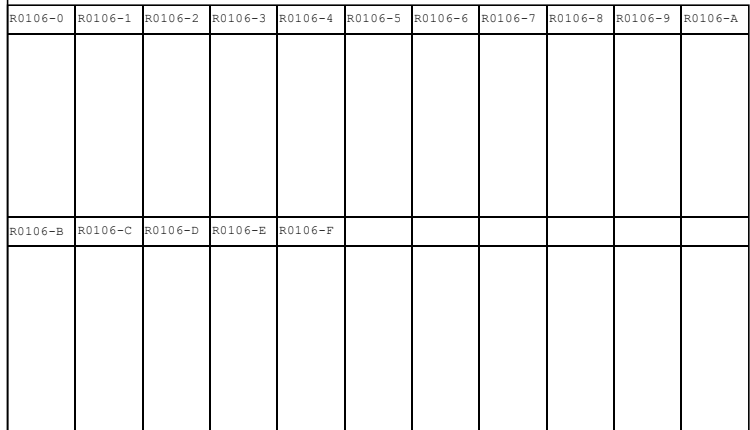


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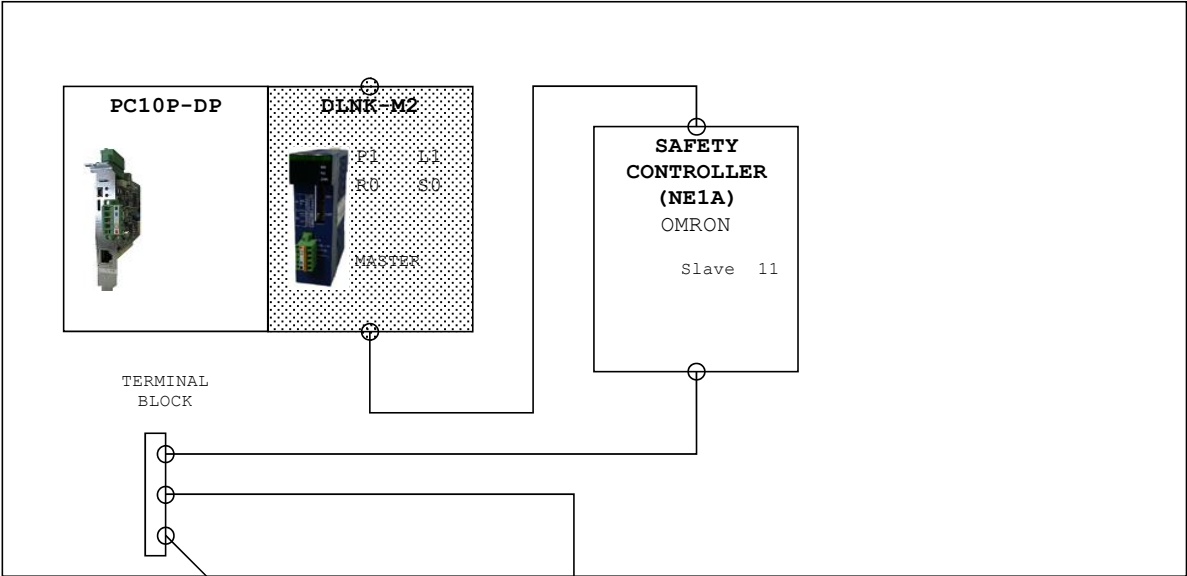
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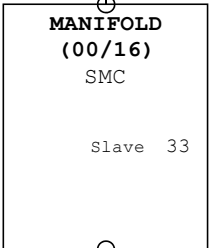
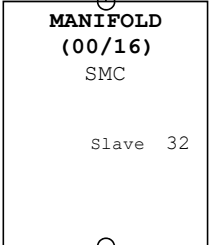
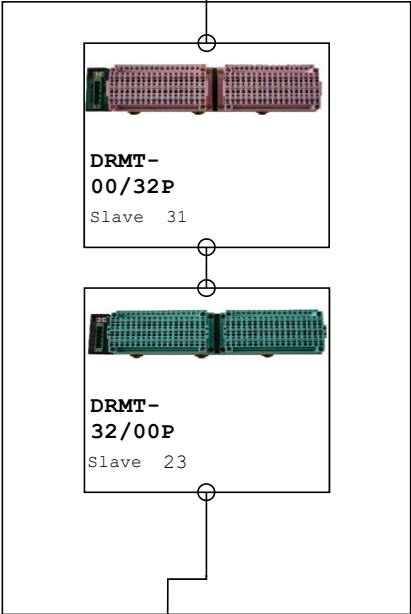
20



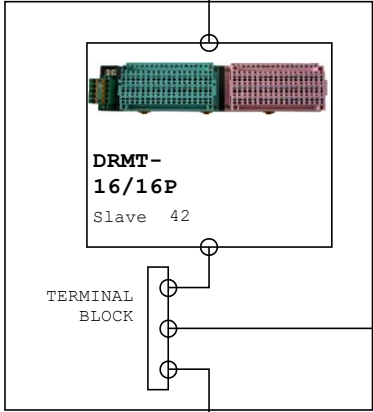
COILMARK	FUNCTION	PAGE	COILMARK	FUNCTION	PAGE
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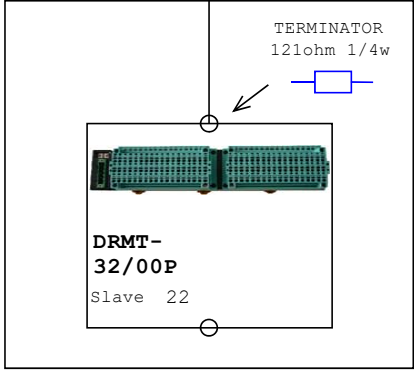
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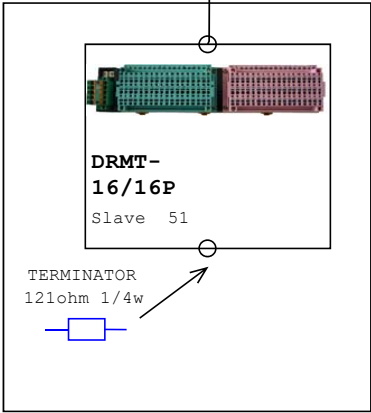
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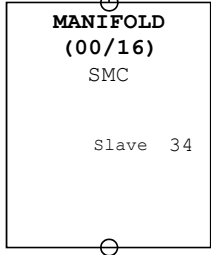
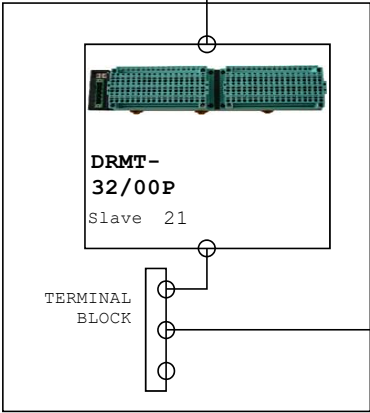
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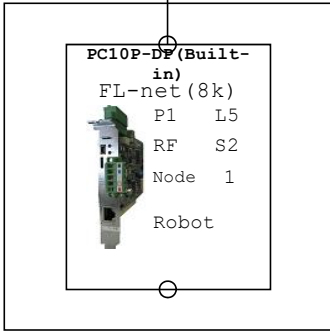
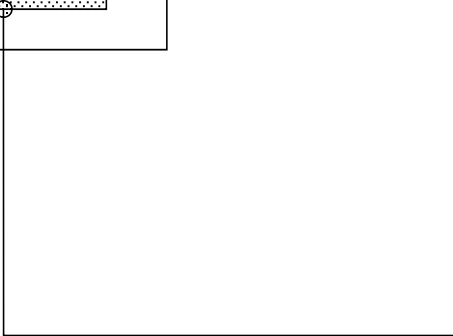
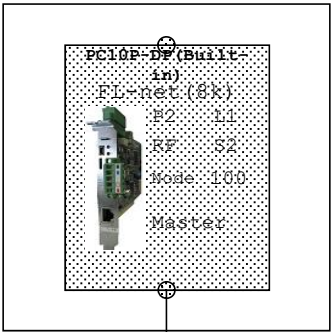


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