

The following table shows the relationship between the indicators on the RUN and STOP Keys and the Inverter conditions. The indicators are lit, unlit or blinking reflecting the order of priority.

Relation of Inverter to RUN and STOP Indicators

Priority	RUN Indicator	STOP Indicator	Inverter Status	Conditions
1	●	●	Stopped	Power supply is shut down.
2	●	☉	Stopped *	Emergency stop • Stop Command is sent from the Digital Operator when the control circuit terminals were used to operate the Inverter. • Emergency Stop Command is sent from the control circuit terminal. Switched from LOCAL (operation using the Digital Operator) to REMOTE (operation using the control circuit terminals) when the Run Command is sent from the external terminal. Switched from the Quick or Advanced Quick programming mode to the Drive mode when the Run Command is sent from the external terminal.
3	☉	☉	Stopped	The Inverter is run at a frequency below the minimum output frequency. The Run Command is carried out when the External Baseblock Command using the multi-function contact input terminal is issued.
4	●	☉	Stopped	Stopped
5	☉	☉	Running	During deceleration to a stop During DC injection braking when using the multi-function contact input terminal. During initial excitation of DC injection braking while the Inverter is stopped.
6	☉	☉	Running	During emergency deceleration • Stop Command is sent from the Digital Operator when operating the Inverter using the control circuit terminals. • Emergency Stop Command is sent from the control circuit terminal.
7	☉	●	Running	Run Command is issued. During initial excitation of DC injection braking when starting the Inverter.

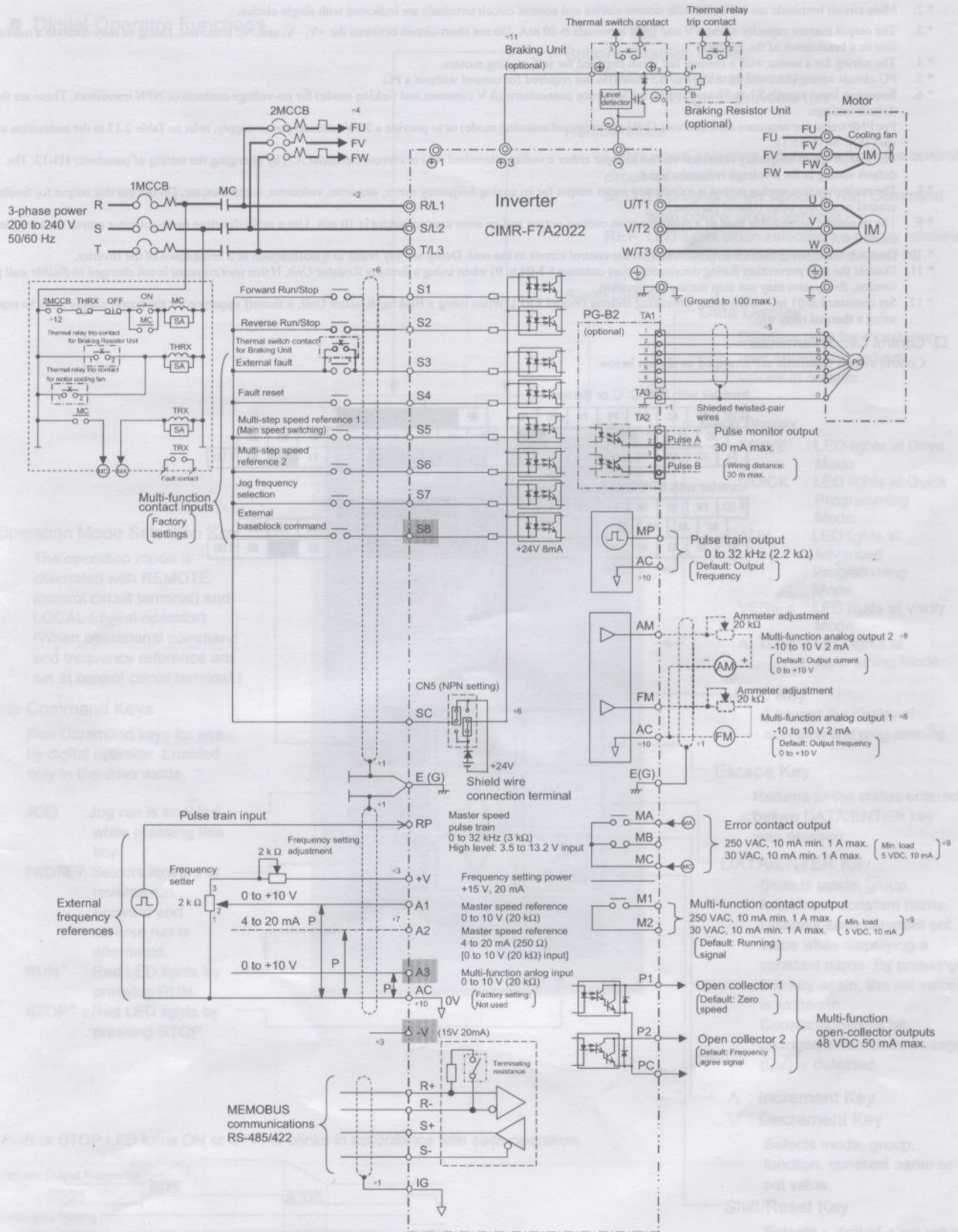
Note: ☉: Lit ☉: Blinking ●: Not lit

* If planning to run the Inverter again, first turn OFF the Run Command and Emergency Stop Command from the control circuit terminal and send the Run Command.

■ Easy Operation with Digital Operator

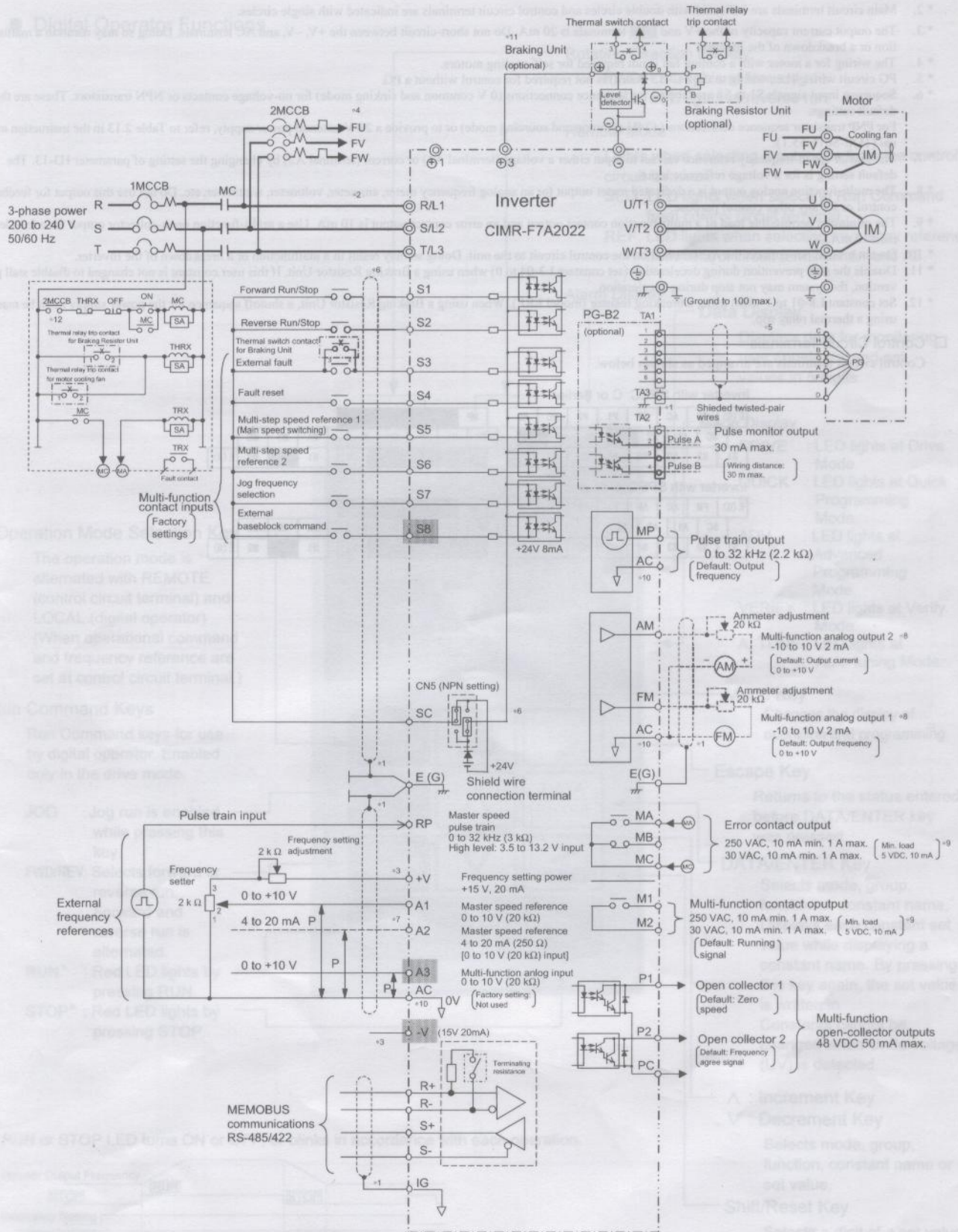
Description	Key Operation	Operator Display	Description	Key Operation	Operator Display
① Power ON • Displays frequency reference value.		DRIVE LED ON F 0.00	⑥ Frequency Changing (15 Hz → 60 Hz) • Select frequency display. • Change reference value.	↓ DATA ENTER Change the value by pressing: RECALL ↓ ↑	F15.00 F15.00 Digit to be changed blinks F60.00
② Operation Condition Setting • Select LOCAL mode.	LOCAL REMOTE	REMOTE LED (SEQ.REF) OFF FWD LED ON	• Write-in set value. • Select output frequency monitor display.	DATA ENTER SEC ↑	After "End" display F60.00 F60.00 60.00
③ Forward Jog Run (6 Hz) JOG run procedure (RUNs while pressing JOG key.)	JOG	F 6.00 Displays only while pressing JOG key.	⑦ Reverse Run • Switch to reverse run.	FWD REV	-60.00 REV LED ON
④ Frequency Setting • Change reference value.	Change the value by pressing: DATA ENTER RECALL ↓ ↑	F00.00 Digit to be changed blinks. F15.00	⑧ Stop • Decelerates to a stop.	STOP	0.00 STOP LED ON (RUN LED blinks during deceleration.)
• Write-in set value. • Select output frequency monitor display.	DATA ENTER SEC ↑	After "End" display F15.00 F15.00 0.00			
⑤ Forward Run • Forward Run (15 Hz)	RUN	15.00 RUN LED ON RUN			

3 ■ Connection Diagram



- Note: 1. If turning off the power only for the main circuit but leaving the power ON for the control circuit, use a separate power supply for the control circuit and a specially designed Inverter, which are sold as options.
2. DC reactors to improve the input power factor are built into 200 V Class Inverters for 22 to 110 kW and 400 V Class Inverters for 22 to 300 kW. A DC reactor is thus an option only for Inverters for 18.5 kW or less.

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4. Sep. 2007 16:31

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TO: 25204123

P.1

B1-01 →

頻率指令輸入方法

B1-02 →

運轉指令輸入方法

B1-03 →

停止指令下達停止方法

C1-01 →

加速時間

C1-02 →

減速時間

d1-17 →

才動頻率指令

E1-03 →

V/F 模式選擇

E1-04 →

最高輸出頻率

E1-05 →

最大電壓

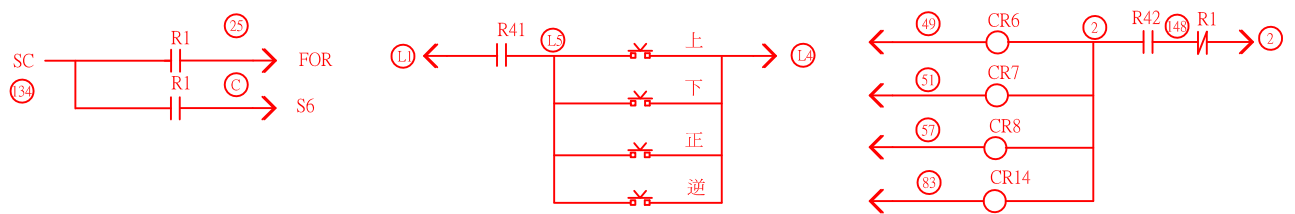
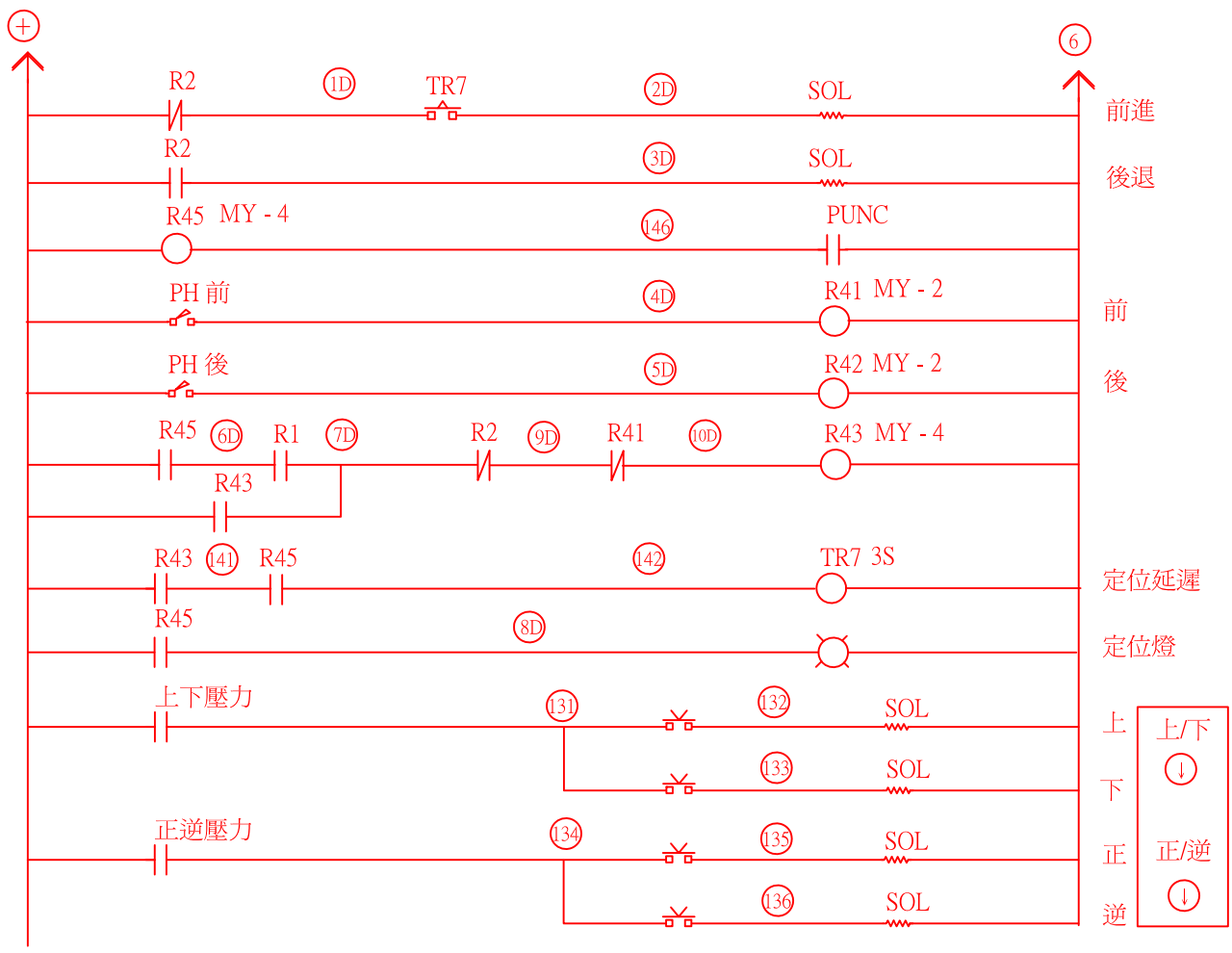
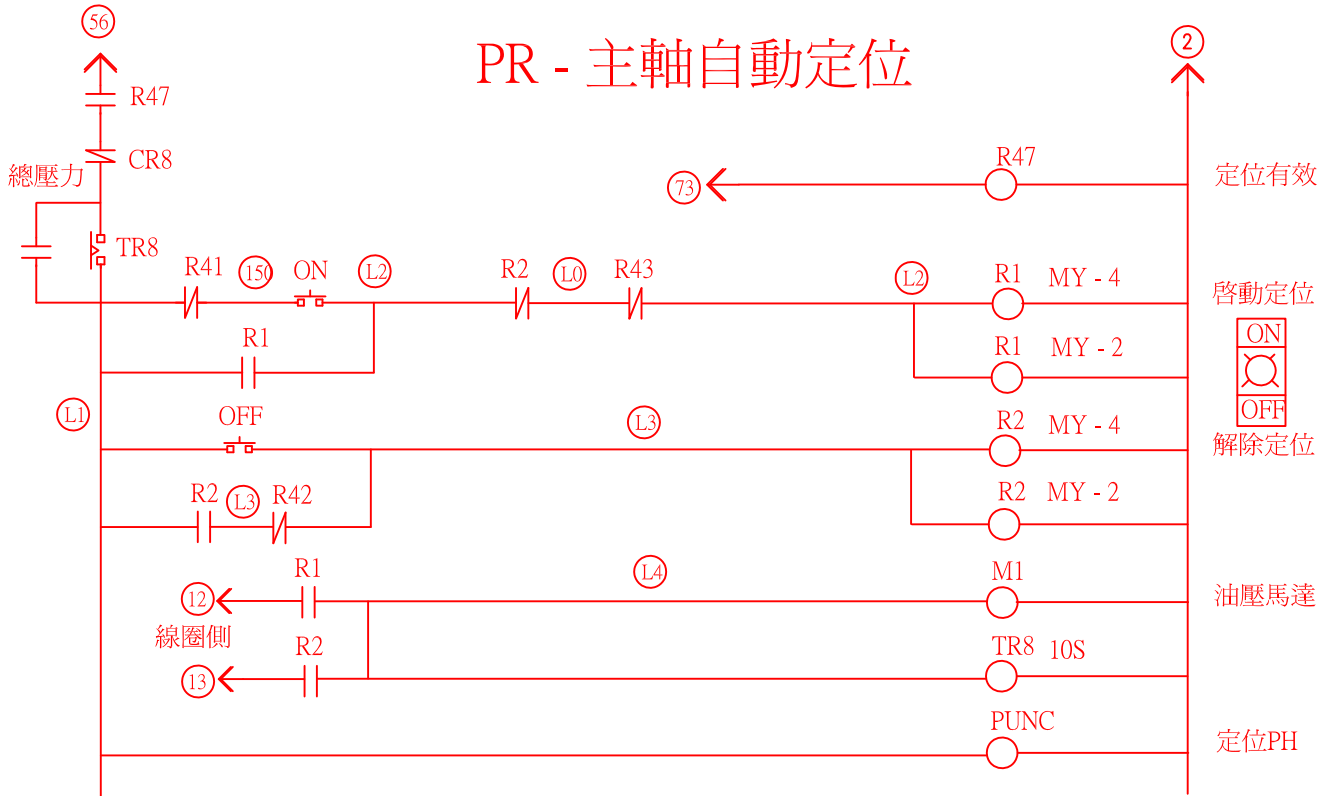
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最低輸出頻率

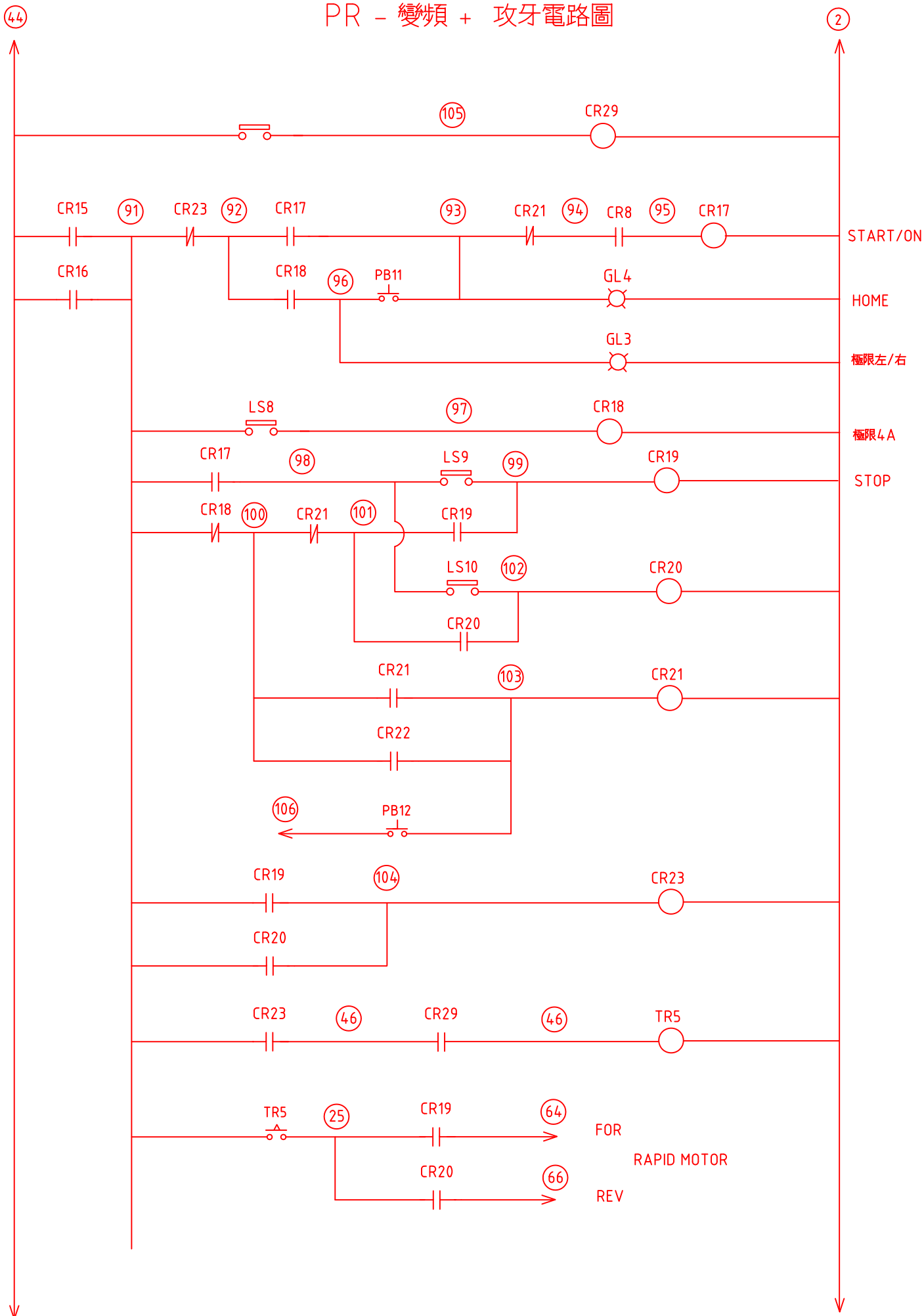
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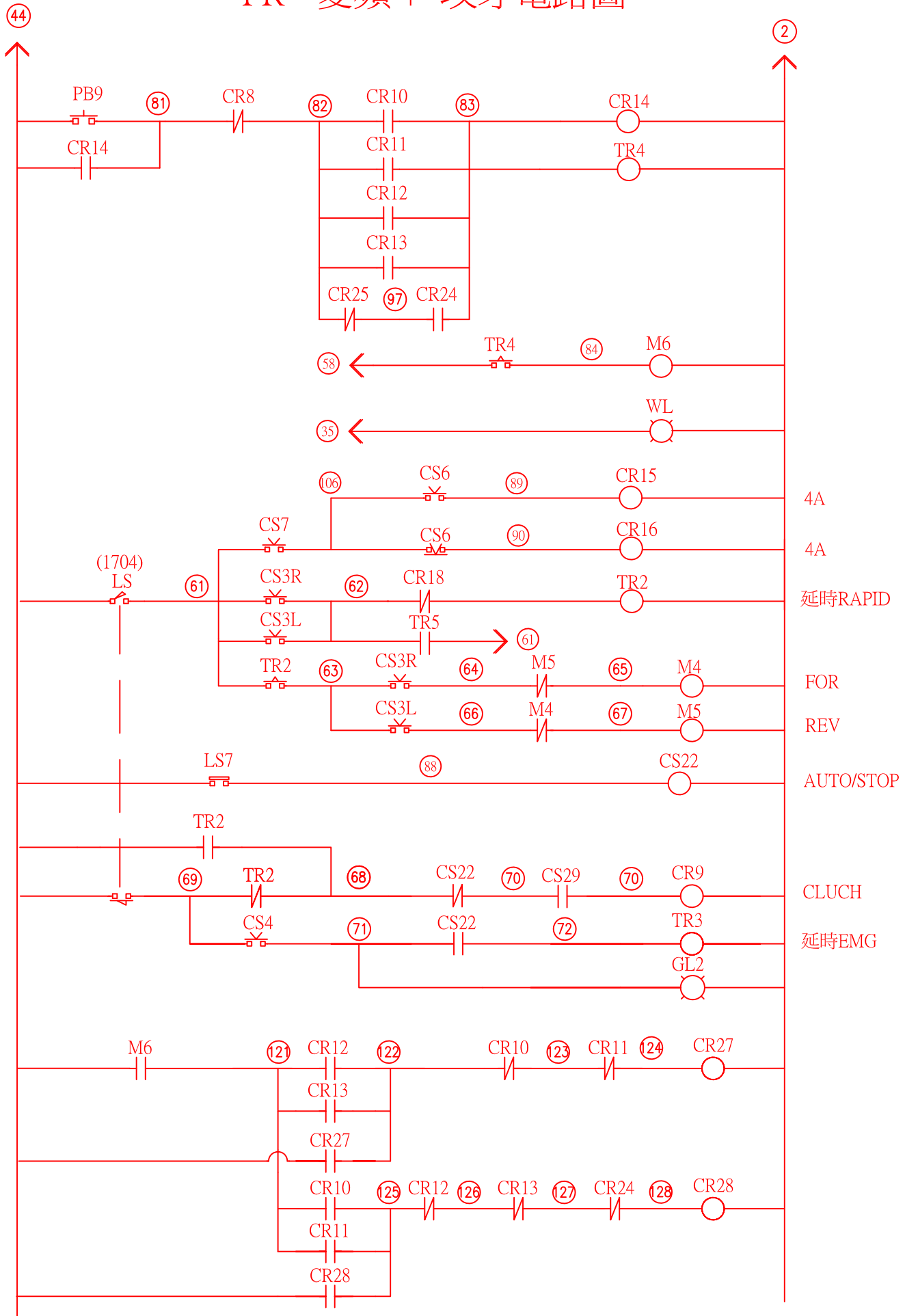
PR - 主軸自動定位



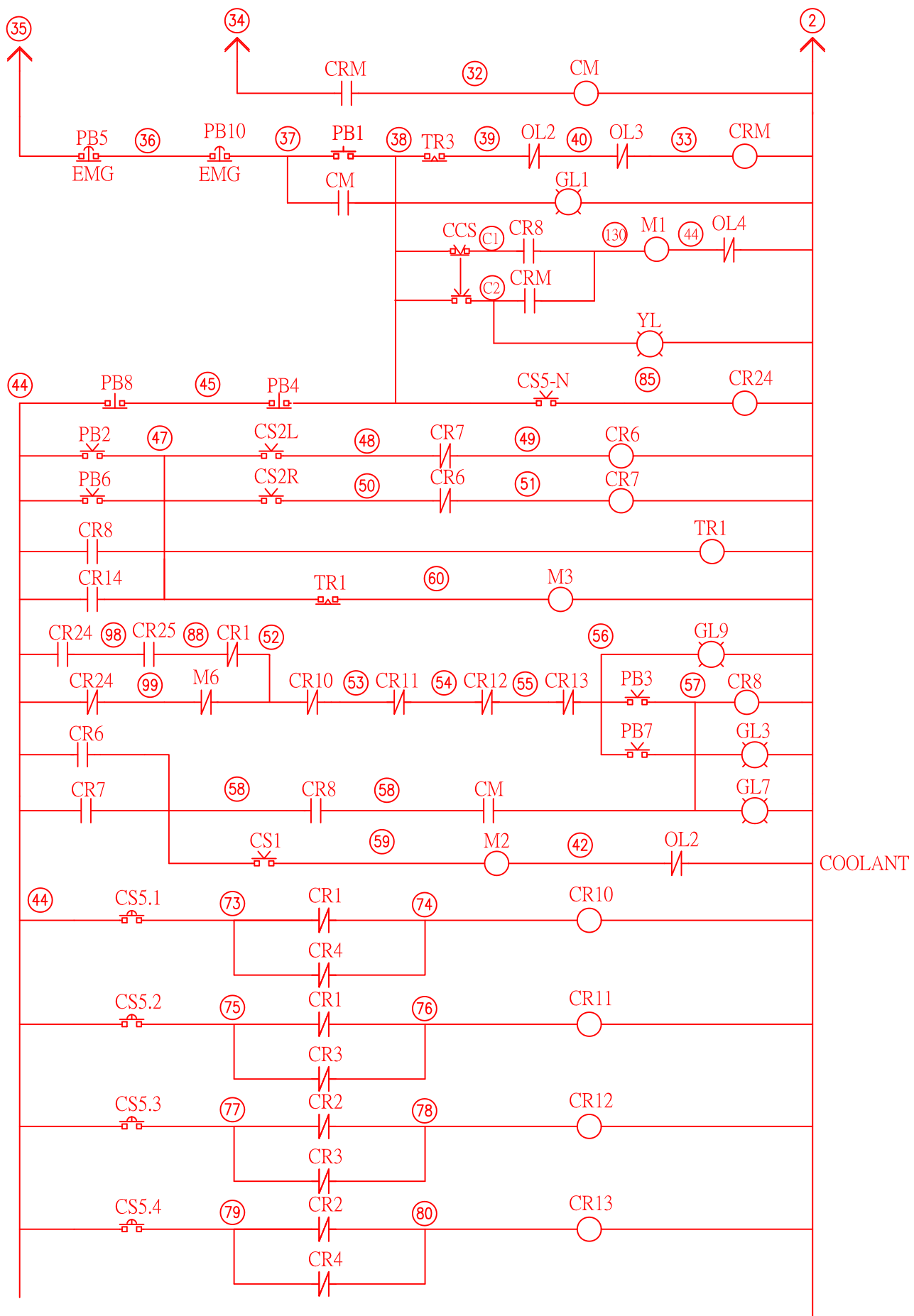
PR - 變頻 + 攻牙電路圖



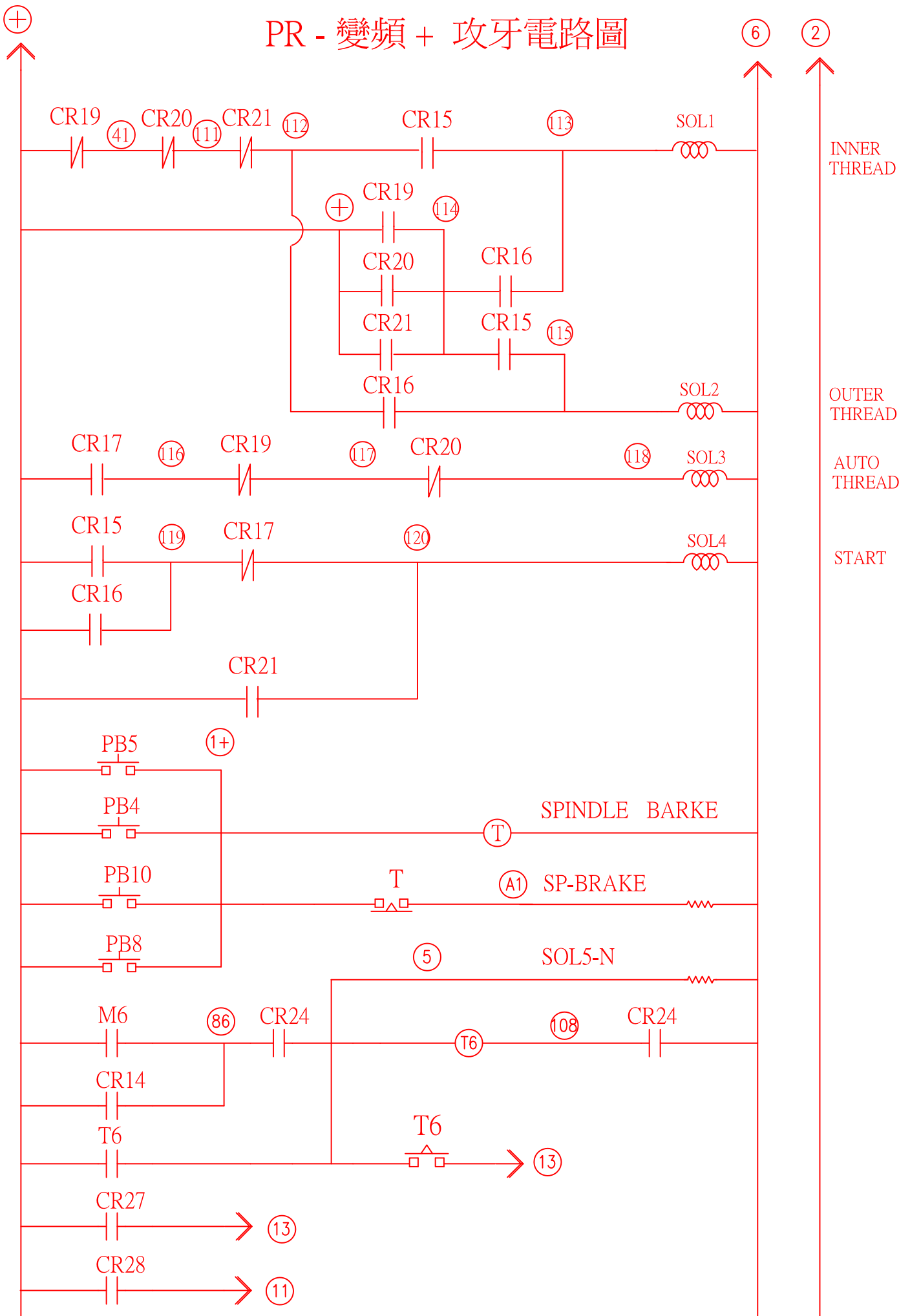
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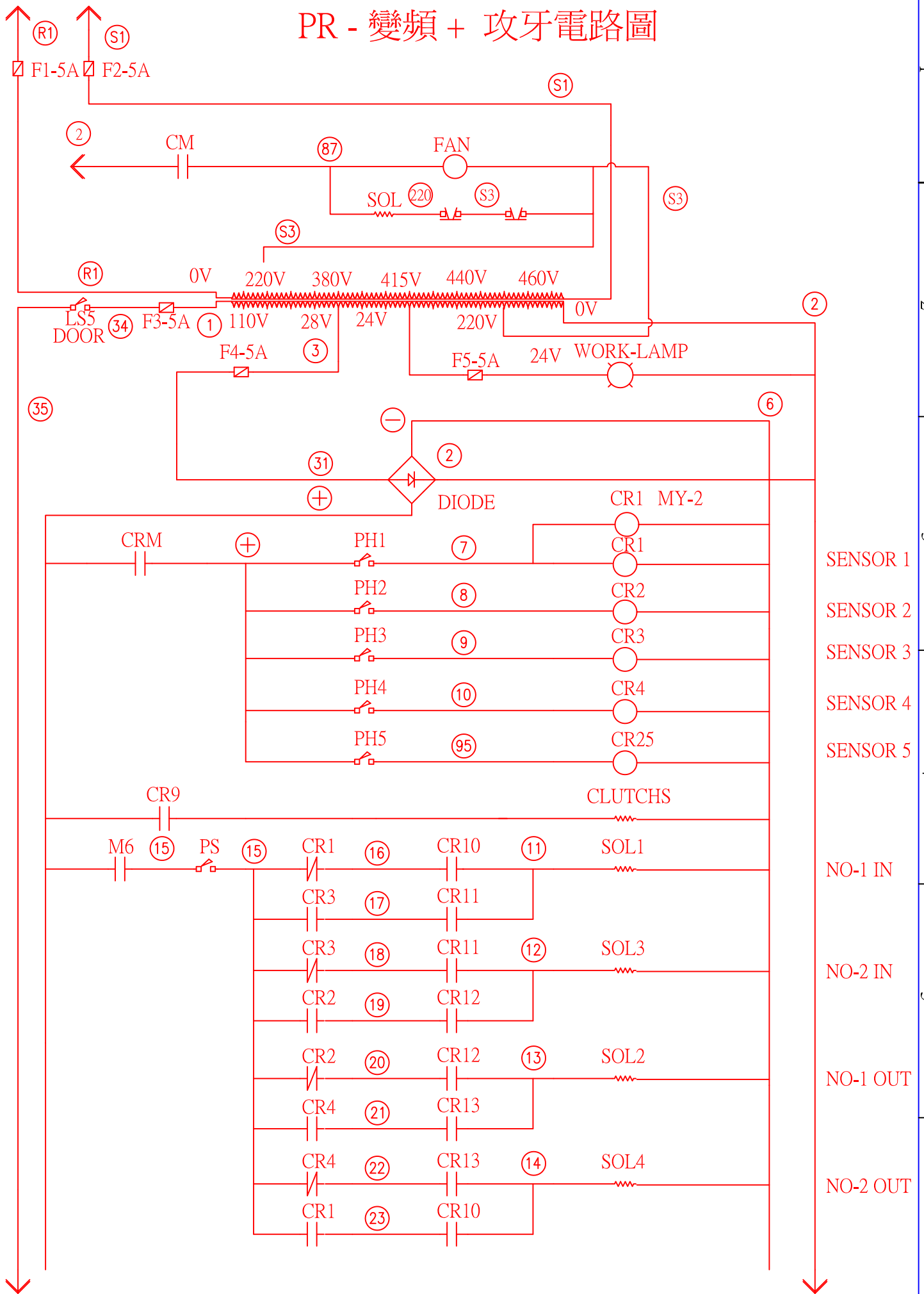
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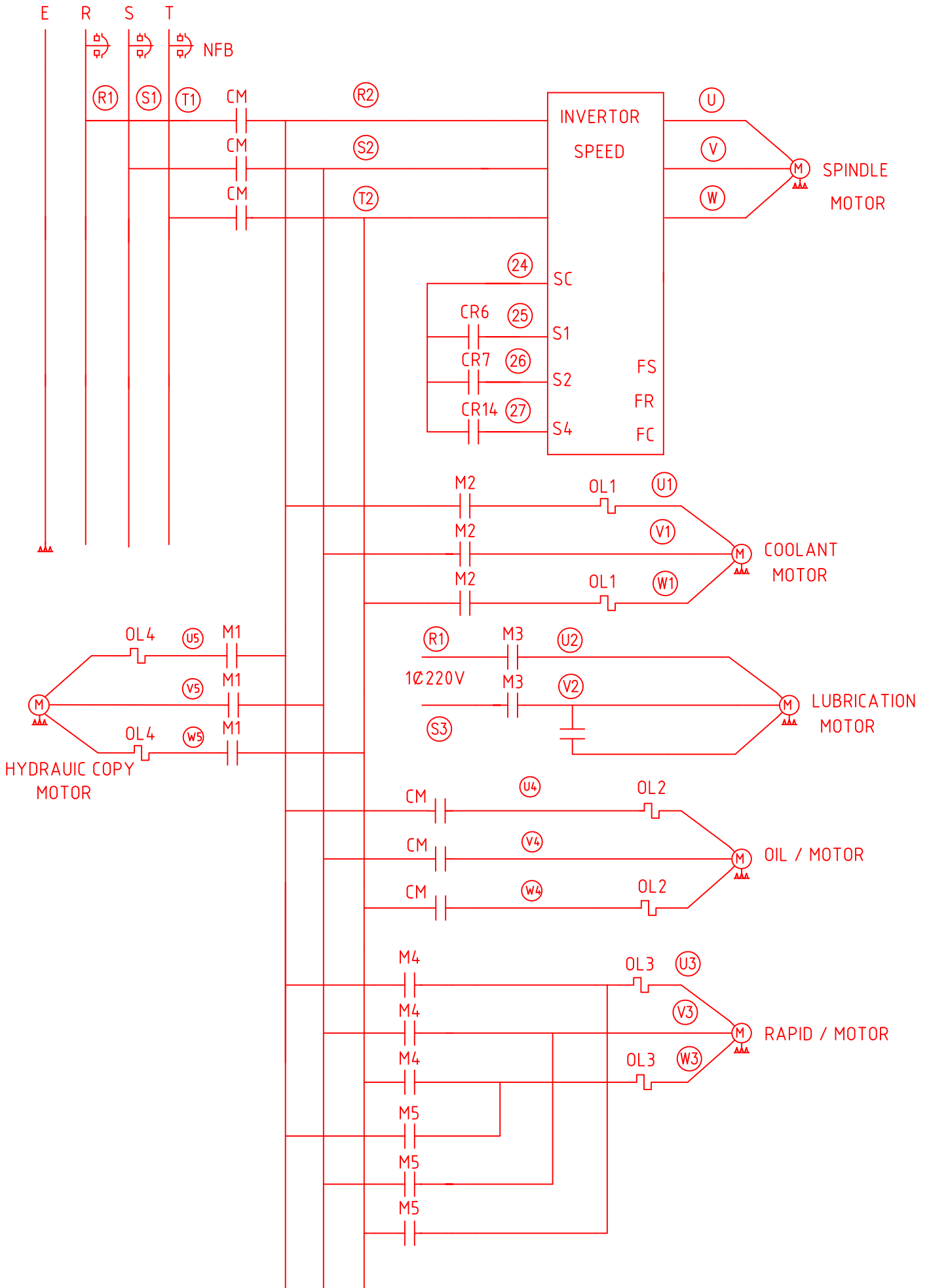
PR - 變頻 + 攻牙電路圖



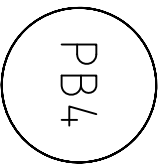
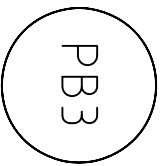
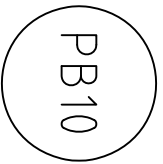
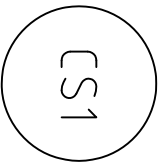
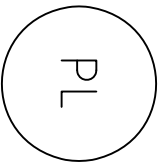
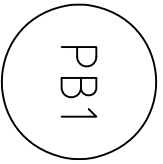
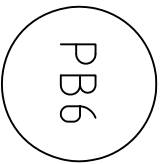
PR - 變頻 + 攻牙電路圖



PR - 變頻 + 攻牙電路圖



HEADSTOCK SIDE OPERATION BUTTON/WIRE NUMBER



JOG

POWER

POWER
LAMP

OFF ON

EMG2



STOP

JOG

6

37 2

2

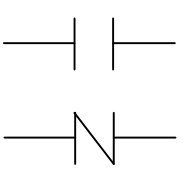
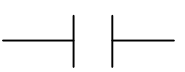
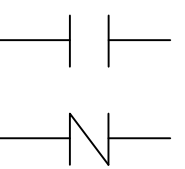
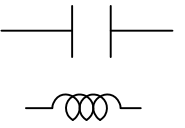
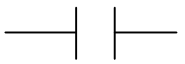
11

+ 35

56

+ 38

6



7

38 38

35

12

1+ 36

57

1+ 45

7

D

D

C

C

B

B

A

A

1

2

3

4

5

6

1

2

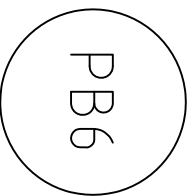
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4

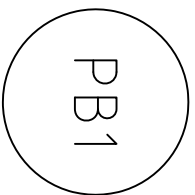
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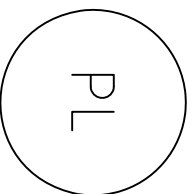
HEADSTOCK SIDE OPERATION BUTTON



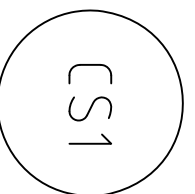
PB6



PB1



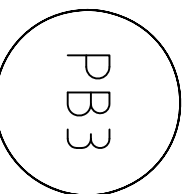
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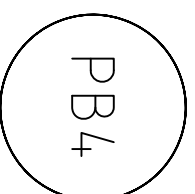
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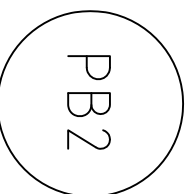
EMG2



PB3



PB4



PB2

JOG POWER

POWER
LAMP

OFF ON

PB10



STOP

JOG

1

2

3

4

5

6

A

B

C

D

1

2

3

4

5

6

A

B

C

D

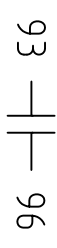
PR - 變頻 + 攻牙電路圖

SYMBOL 符號名稱	CIRCUIT STANDARD 電器規格
NFB	TECO TO-100EC 690V
CM	TECO CU-80
T.R.	LCE 1PH 750VA (0.220.380.415.440/0.24.28.110.220)
TR1	ANV TRD-N 110V
TR2	ANV CTDV-N 110V
TR3	ANV AH3-3 110V
TR4	ANV H3M-B 110V
TR5	ANV AH3-3 110V
TR6	ANV AH3-3 24V
T	ANV AH3-3 24V
CRM	ANV MR2P 110V
CR1	ANV MK3P 110V
CR25	ANV MR2P 110V
M3	ANV MR2P 110V
CR23	ANV MR2P 110V
CR27	ANV MR2P 110V
CR28	ANV MR2P 110V
CR29	ANV MR2P 110V
CR30	ANV MR2P 110V
CR6	TECO CN-11 110V
CR7	TECO CN-11 110V
CR8	TECO CN-11 110V
CR9	TECO CN-11 110V
CR10	TECO CN-11 110V
CR11	TECO CN-11 110V
CR12	TECO CN-11 110V
CR13	TECO CN-11 110V
CR14	TECO CN-11 110V
CR15	TECO CN-11 110V
CR16	TECO CN-11 110V
CR17	TECO CN-11 110V
CR18	TECO CN-11 110V
CR19	TECO CN-11 110V
CR20	TECO CN-11 110V
CR21	TECO CN-11 110V
CR22	TECO CN-11 110V
CR24	TECO CN-11 110V
CR1	TECO CN-11 110V
CR2	TECO CN-11 110V
CR30	TECO CN-11 110V
CR4	TECO CN-11 110V
CR31	TECO CN-11 110V
M2	TECO CN-11 110V
CM	TECO CN-11 110V
M1	TECO CN-11 110V
M4	TECO CN-11 110V
M5	TECO CN-11 110V
M6	TECO CN-11 110V
O.L.1	
O.L.2	
O.L.3	
O.L.4	

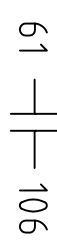
CARRIAGE SIDE OPERATION BUTTON/WIRE NUMBER



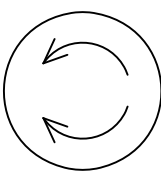
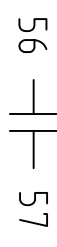
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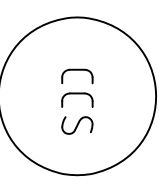
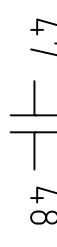
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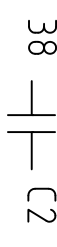
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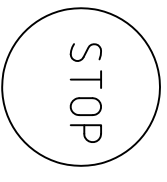
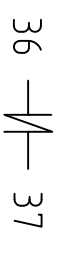
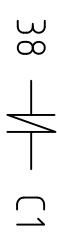
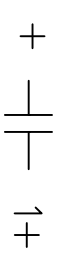
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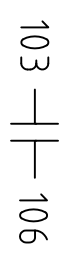
CCS



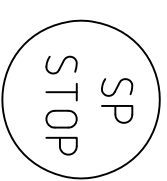
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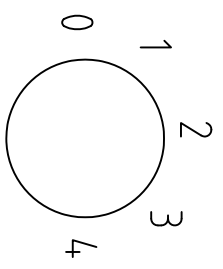
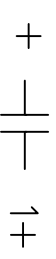
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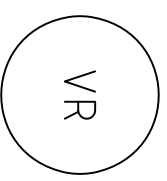
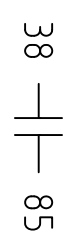
CS6



PB8



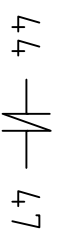
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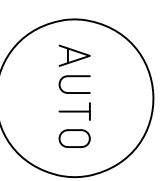
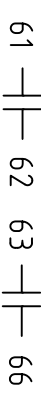
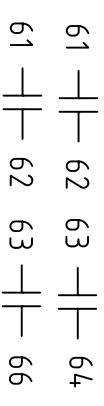
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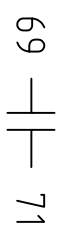
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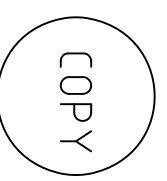
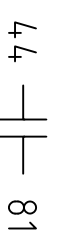
CS3



CS4



PB9



CS

1

2

3

4

5

6

1

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3

4

5

6

D

C

B

A

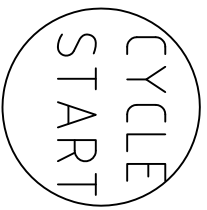
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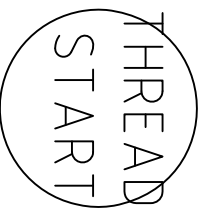
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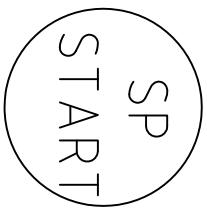
CARRIAGE SIDE OPERATION BUTTON



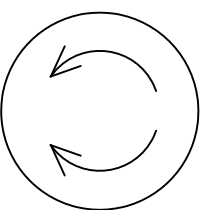
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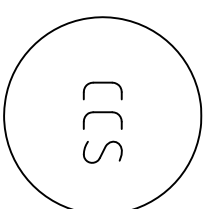
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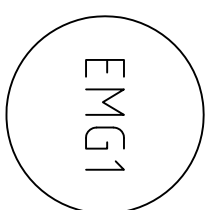
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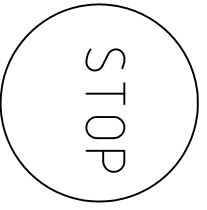
SPINDLE
CS2



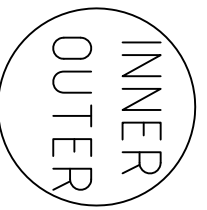
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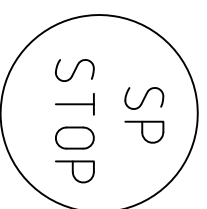
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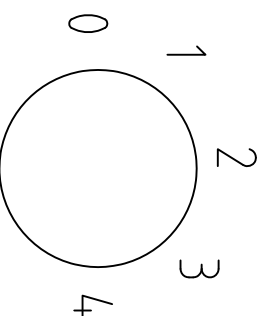
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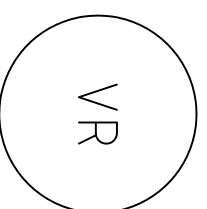
CS6



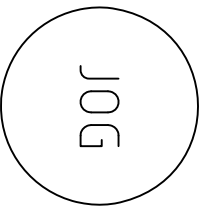
PB8



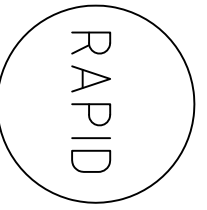
CS5



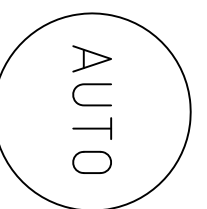
VR1



PB6



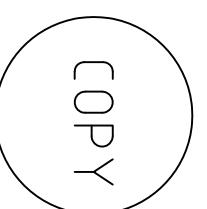
CS3



CS4



PB9



CS

CABINET SEATDY

<p>NFB</p> <p>100AF 100A</p>	<p>CU - 80</p> <p>CM</p>
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TR1	TR2	TR3	TR4	TR5	TR6	T	CRM	CR1	CR25	M3	CR23	CR27	CR28	CR29	CR30
-----	-----	-----	-----	-----	-----	---	-----	-----	------	----	------	------	------	------	------

CR6	CR7	CR8	CR9	CR10	CR11	CR12	CR13	CR14	CR15	CR16
-----	-----	-----	-----	------	------	------	------	------	------	------

CR17	CR18	CR19	CR20	CR21	CR22	CR24	CR1	CR2	CR3	CR4	CR31
------	------	------	------	------	------	------	-----	-----	-----	-----	------



DIODE

M2	CM	M1	M4	M5	M6
O.L1	O.L2	O.L4	O.L3		

FS	FS	FS	FS
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34 31 24V R2 S2

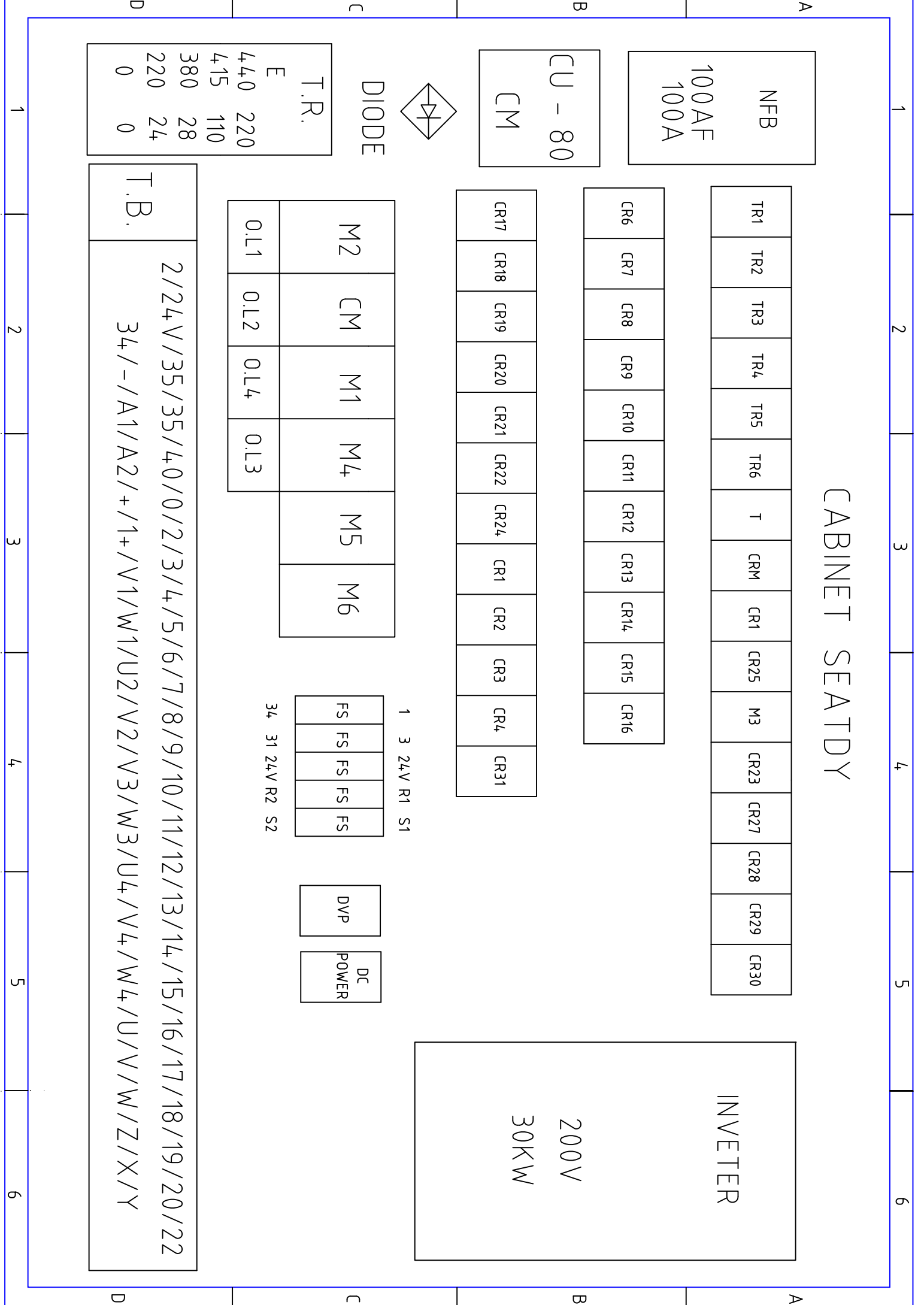
DVP

DC POWER

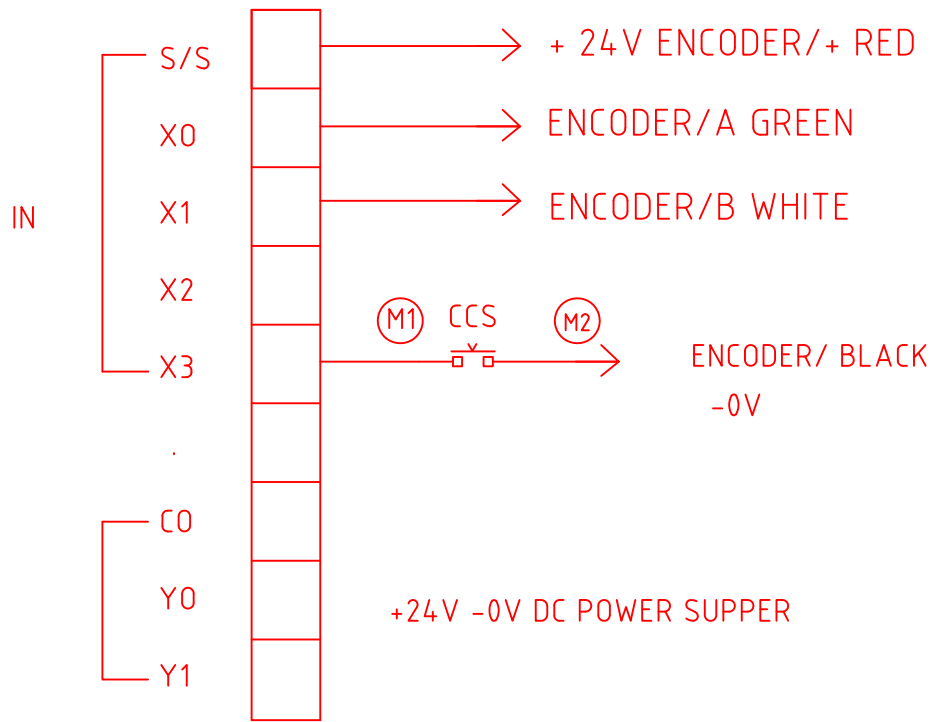
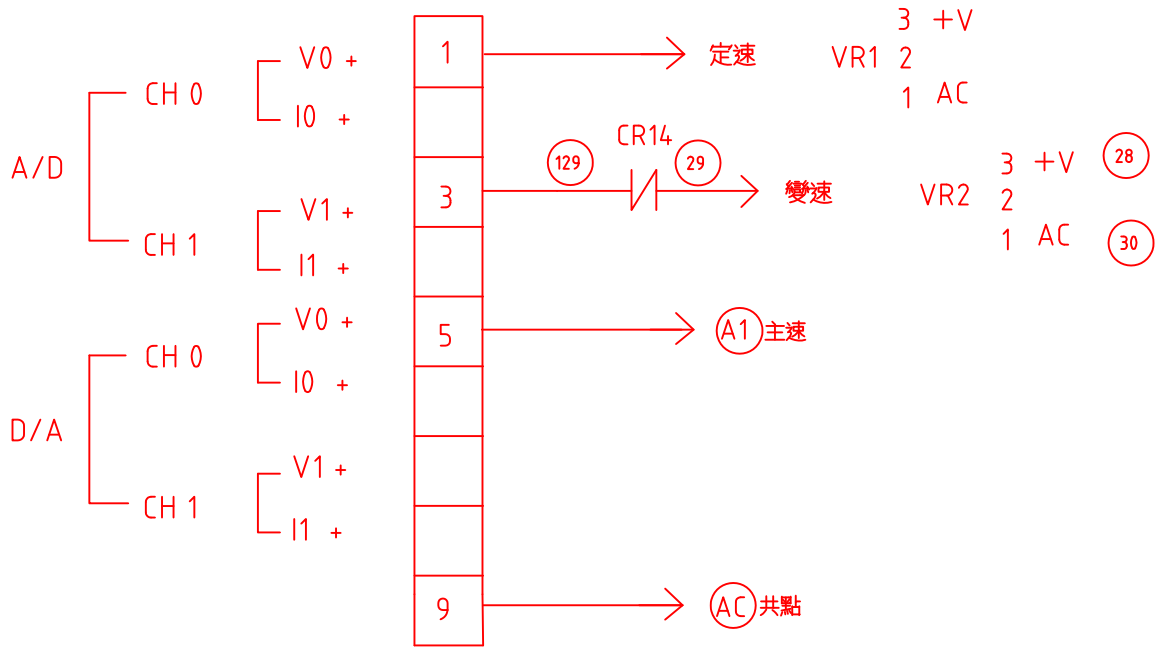
<p>INVETER</p> <p>200V</p> <p>30KW</p>
--

<p>T.R.</p> <p>E</p> <p>440 220</p> <p>415 110</p> <p>380 28</p> <p>220 24</p> <p>0 0</p>

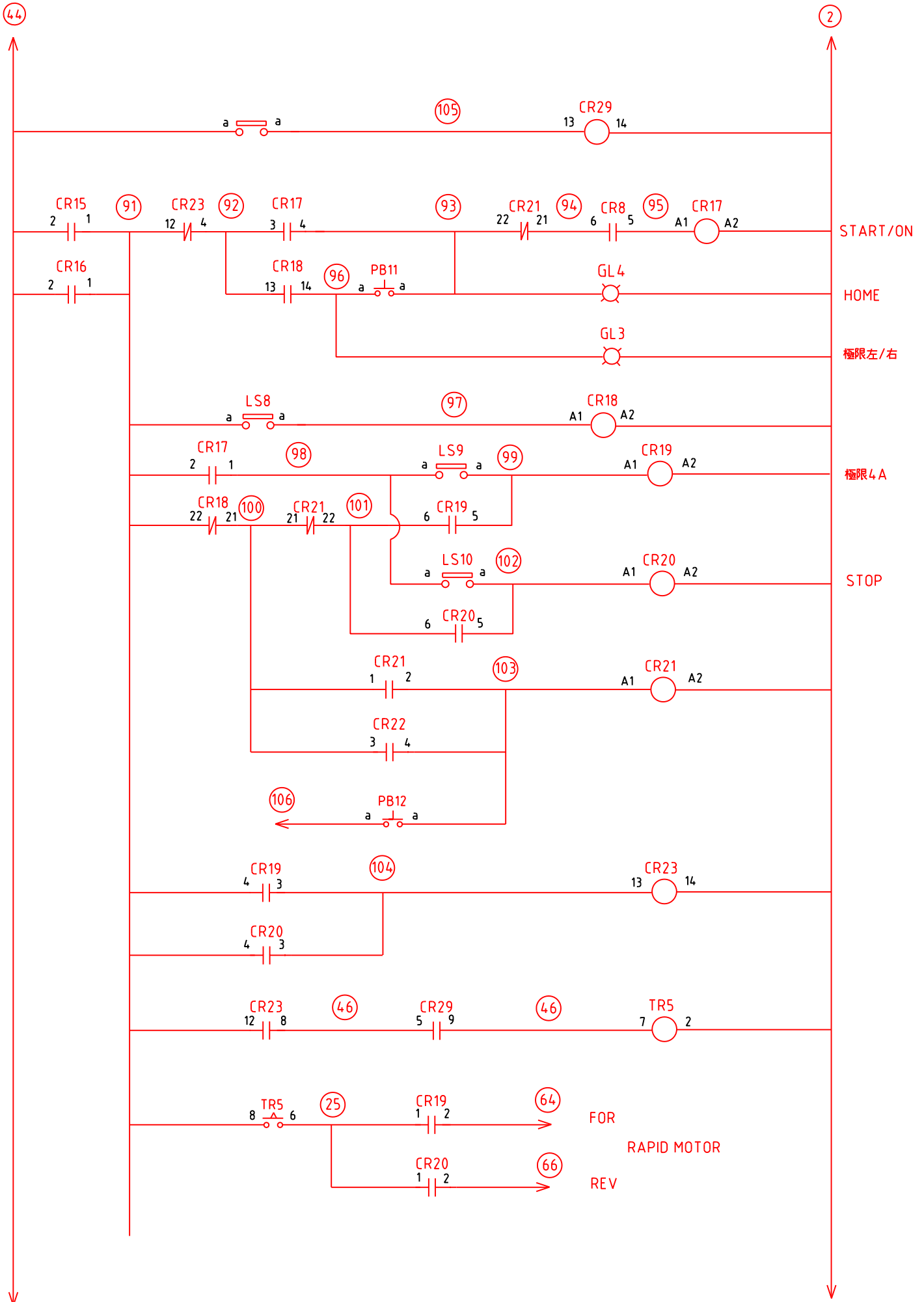
<p>T.B.</p>	<p>2/24V/35/35/40/0/2/3/4/5/6/7/8/9/10/11/12/13/14/15/16/17/18/19/20/22</p> <p>34/-/A1/A2/+ /1+ /V1/W1/U2/V2/V3/W3/U4/V4/W4/U/V/W/Z/X/Y</p>
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PR - 變頻 + 攻牙電路圖



變頻攻牙電路圖



1
2
3
4
5
6

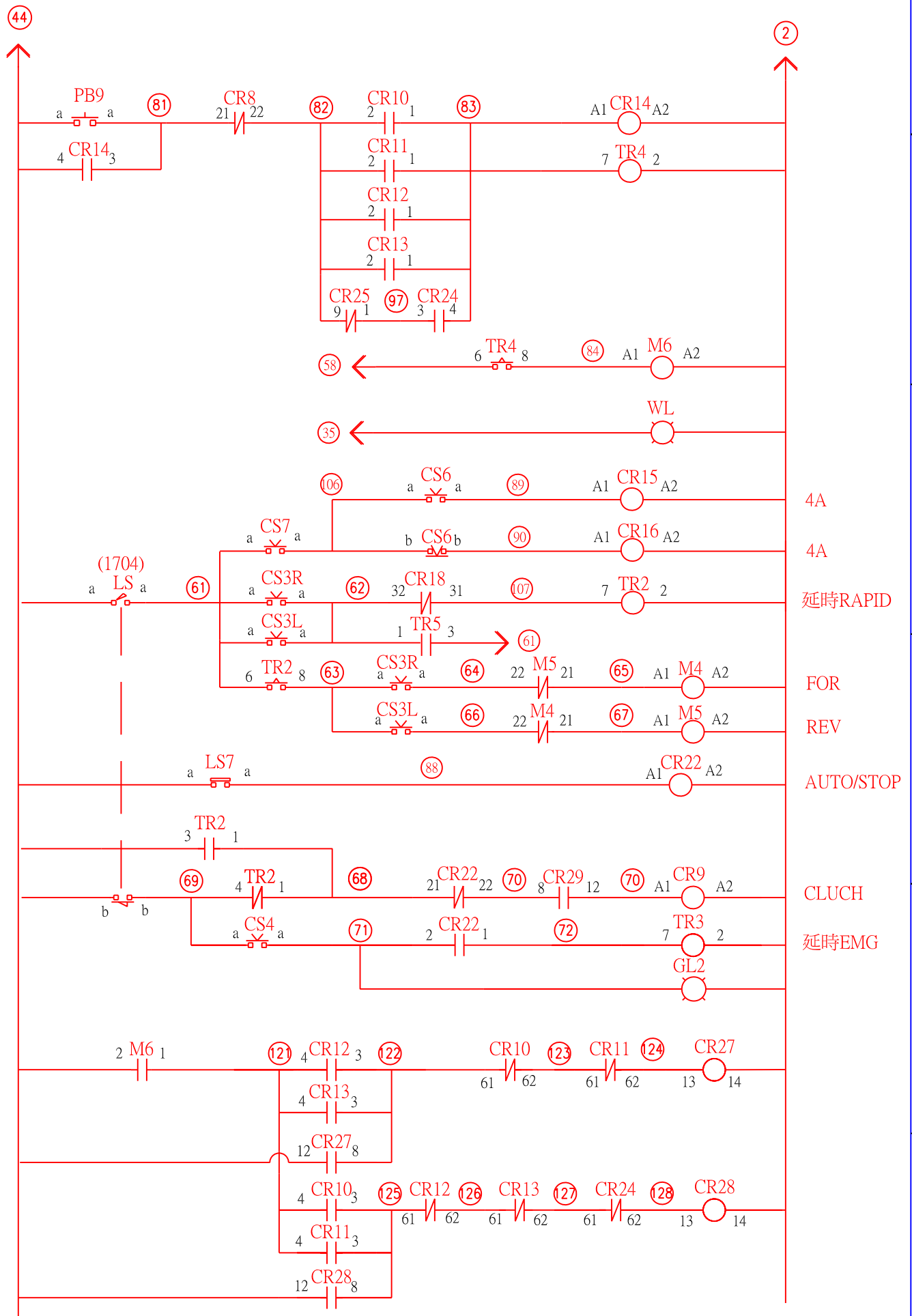
1
2
3
4
5
6

START/ON
HOME
極限左/右
極限4A
STOP

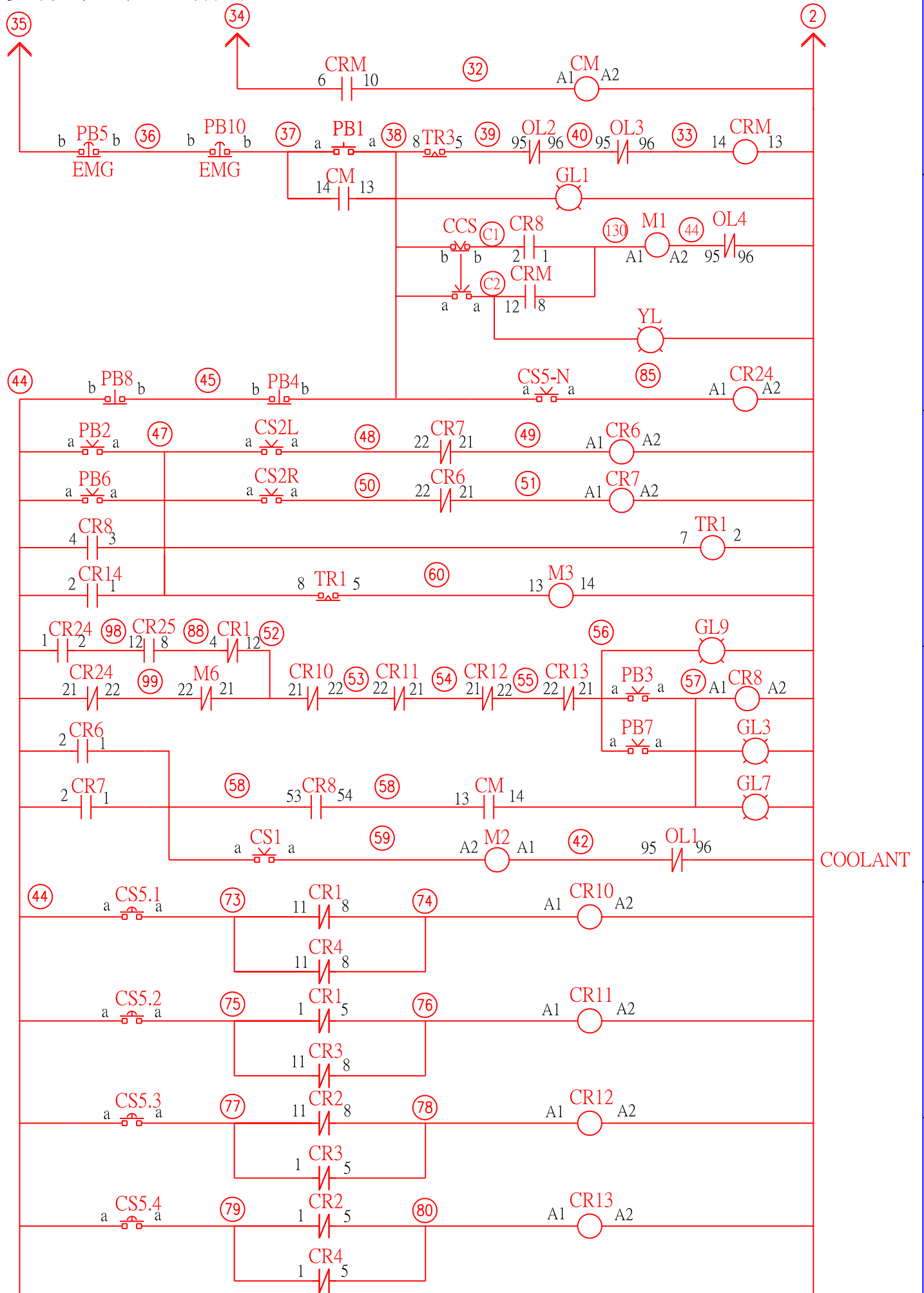
FOR
RAPID MOTOR
REV

D C B A

變頻攻牙電路圖

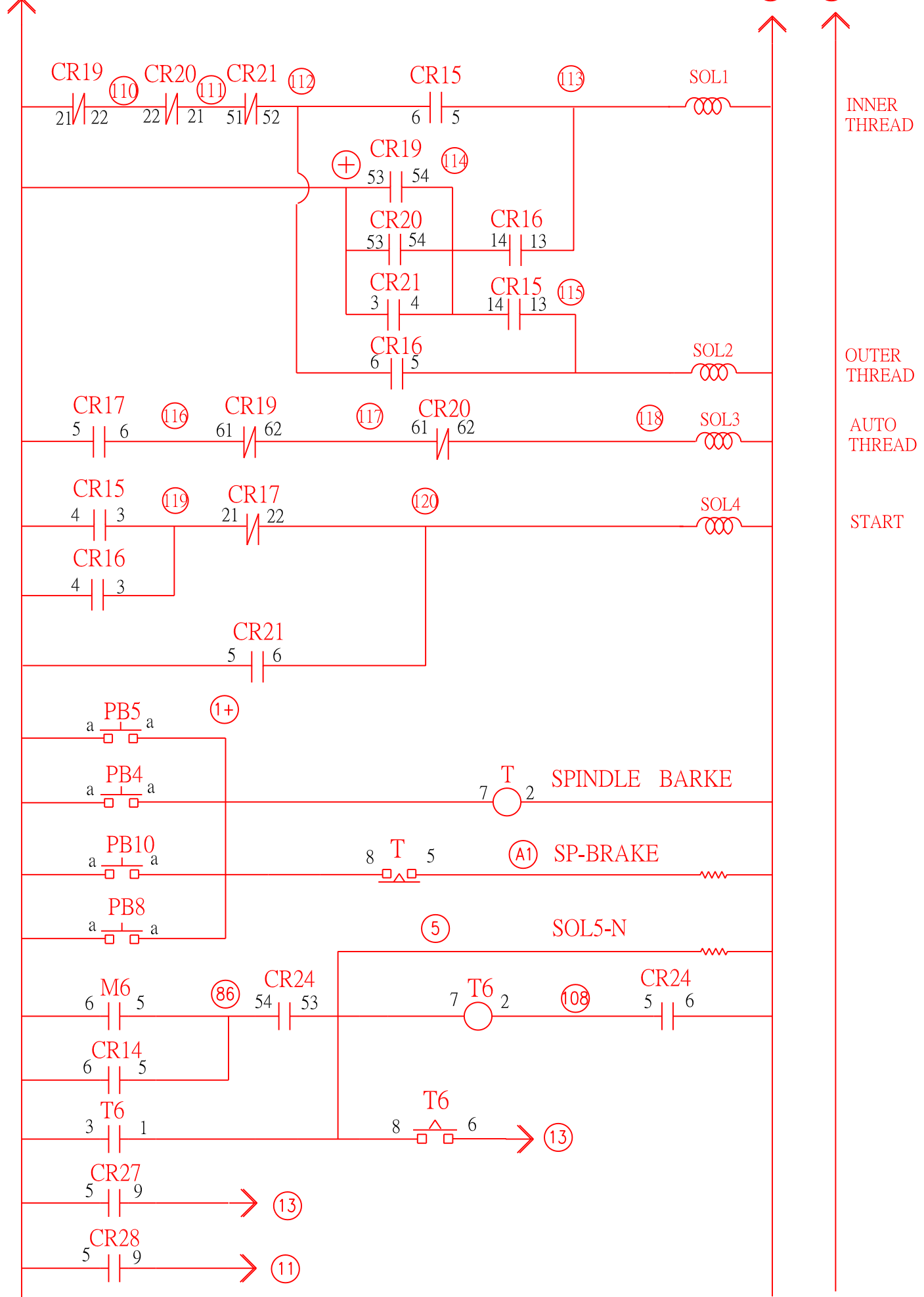


變頻攻牙電路圖

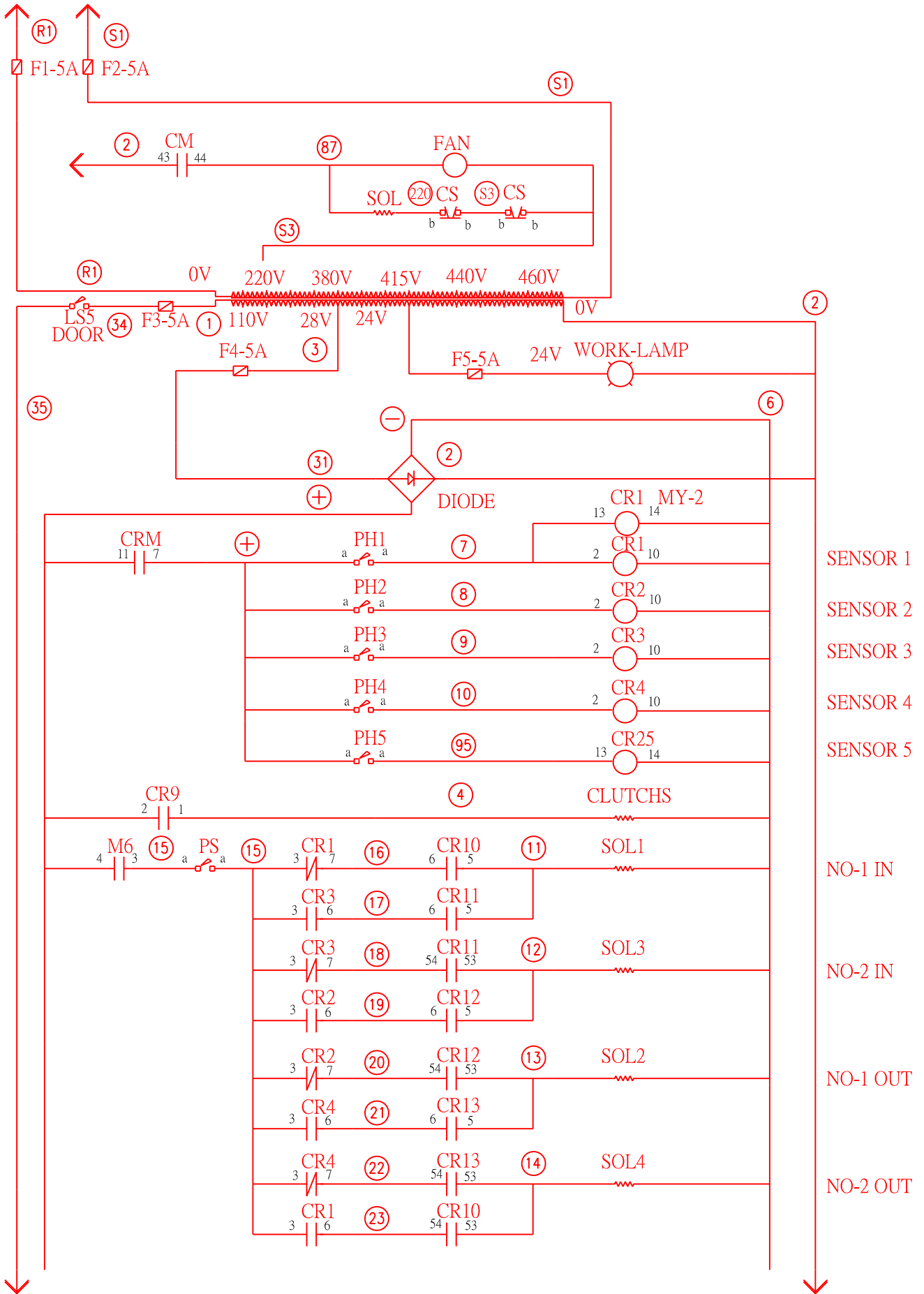


COOLANT

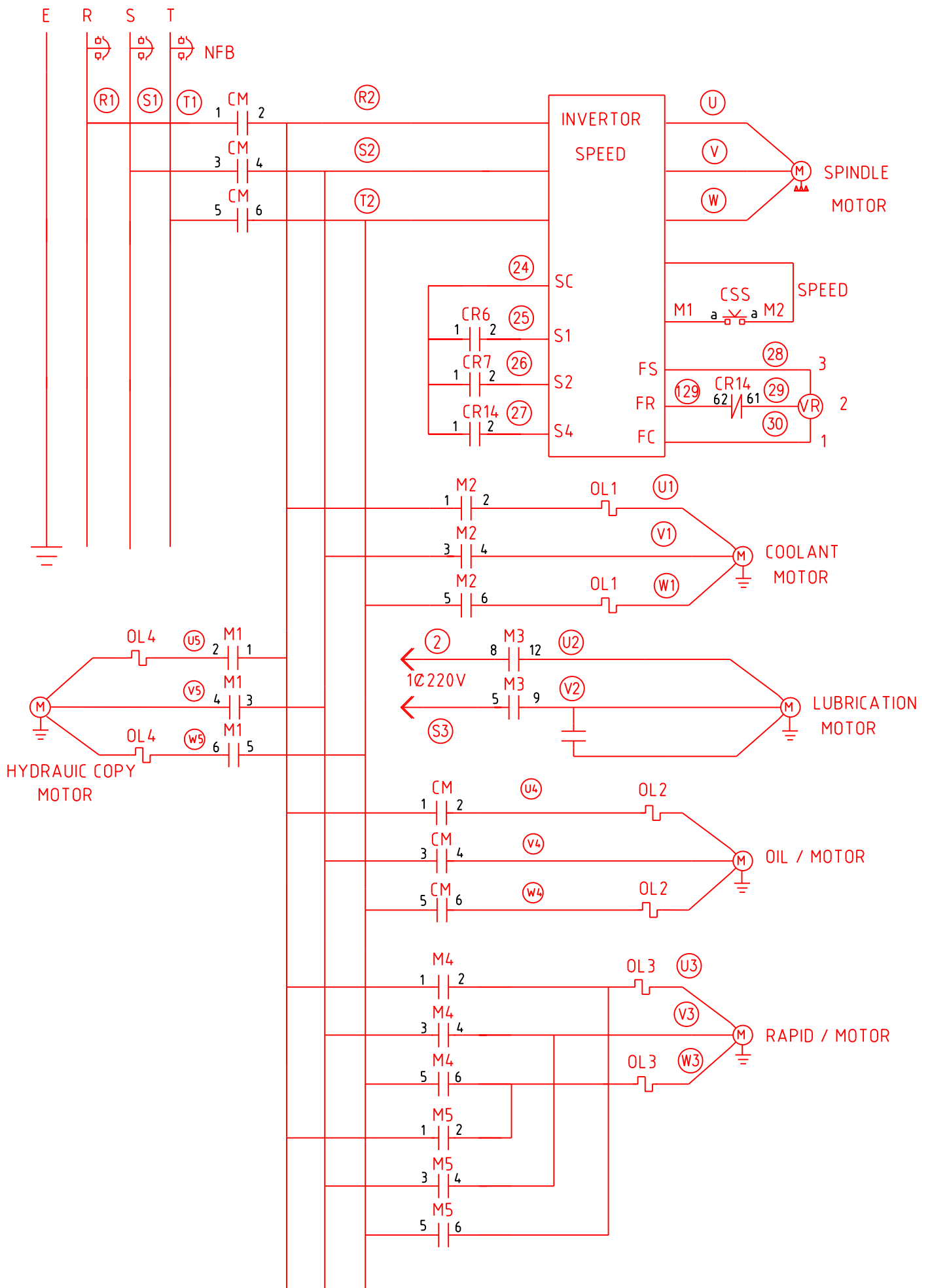
變頻攻牙電路圖



變頻攻牙電路圖

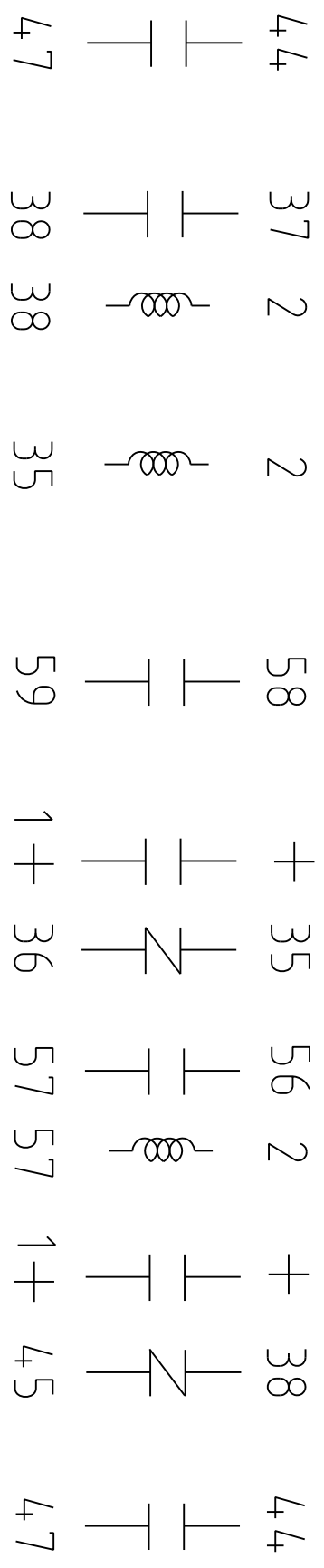
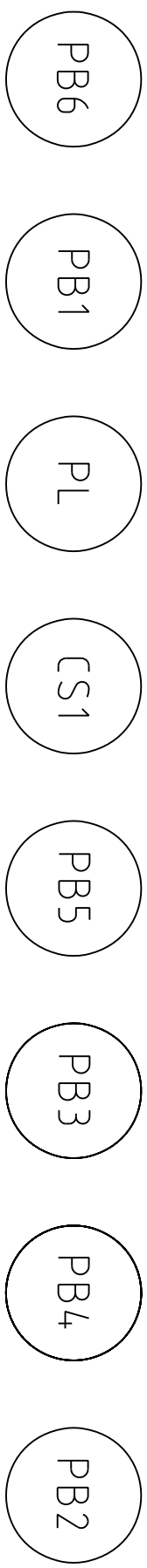


變頻攻牙電路圖



變頻攻牙電路圖

HEADSTOCK SIDE OPERATION BUTTON/WIRE NUMBER

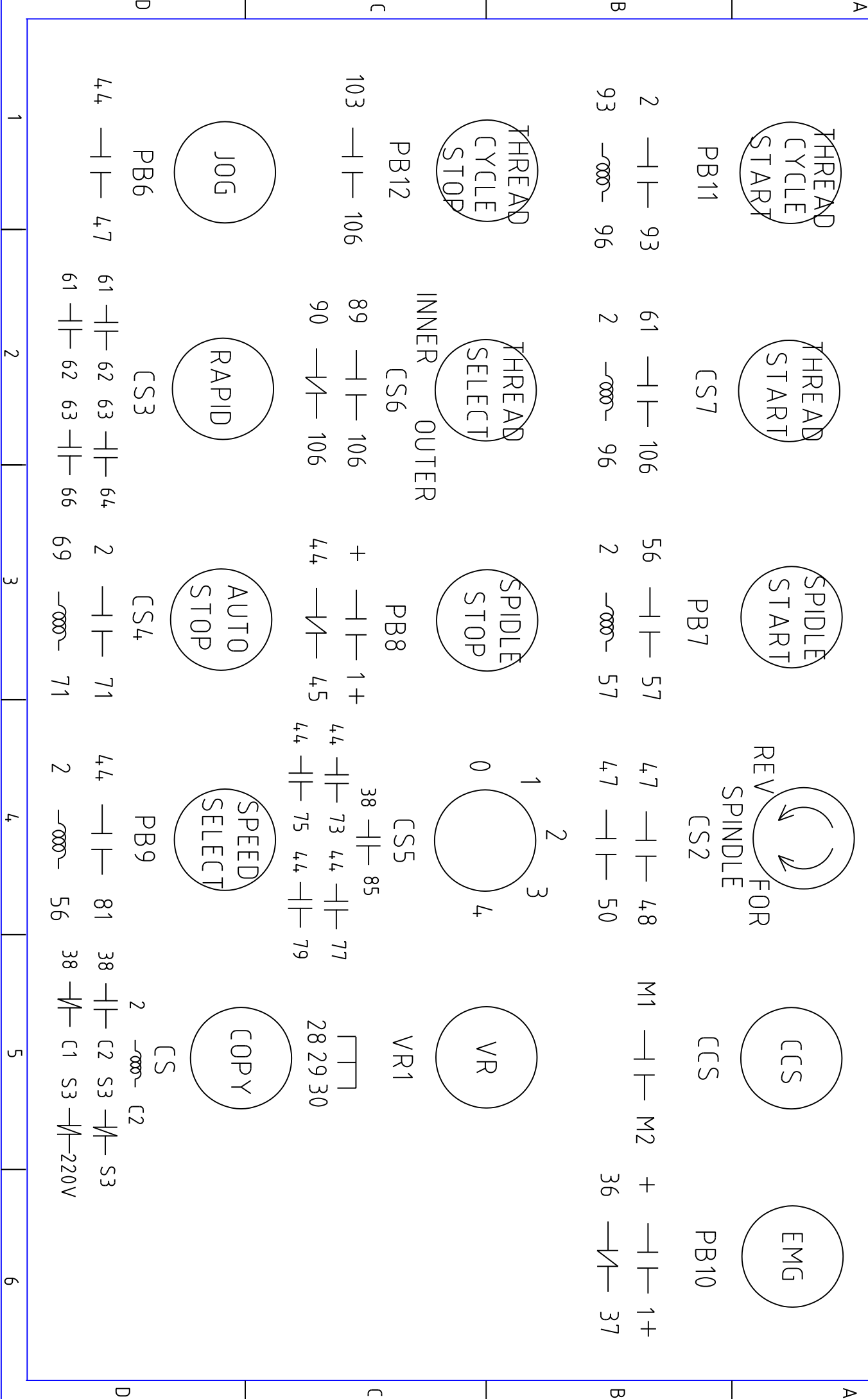


變頻攻牙電路圖

SYMBOL 符號名稱	CIRCUIT STANDARD 電器規格
NFB	TECO TO-100EC 690V
CM	TECO CU-50 110V (5a2b)
DIODE	HY KBPC2506
T.R.	LCE 1PH 750VA (0,220,380,415,440,E/0,24,28,110,220)
TR1	ANV CTDV-N 110V (2a2b)
TR2	ANV AH3-3 110V (2a2b)
TR3	ANV H3M-B 110V (2a2b)
TR4	ANV AH3-3 110V (2a2b)
TR5	ANV AH3-3 110V (2a2b)
T6	ANV AH3-3 24V (2a2b)
T	ANV AH3-3 24V (2a2b)
CRM	ANV AM 4L 110V (4a4b)
CR1 M Y-2	ANV AM 2L 110V (2a2b)
CR25	ANV AM 2L 110V (2a2b)
M3	ANV AM 2L 110V (2a2b)
CR23	ANV AM 2L 110V (2a2b)
CR27	ANV AM 2L 110V (2a2b)
CR28	ANV AM 2L 110V (2a2b)
CR29	ANV AM 2L 110V (2a2b)
CR6	TECO CU-11 110V (3a1b)
CR7	TECO CU-11 110V (3a1b)
CR8	TECO CU-11 110V (3a1b) + CUA-2 (1a1b)
CR9	TECO CU-11 110V (4a)
CR10	TECO CU-11 110V (3a1b) + CUA-2 (1a1b)
CR11	TECO CU-11 110V (3a1b) + CUA-2 (1a1b)
CR12	TECO CU-11 110V (3a1b) + CUA-2 (1a1b)
CR13	TECO CU-11 110V (3a1b) + CUA-2 (1a1b)
CR14	TECO CU-11 110V (3a1b) + CUA-2 (1a1b)
CR15	TECO CU-11 110V (4a)
CR16	TECO CU-11 110V (4a)
CR17	TECO CU-11 110V (3a1b)
CR18	TECO RAU-4 110V (2a2b)
CR19	TECO CU-11 110V (3a1b) + CUA-2 (1a1b)
CR20	TECO CU-11 110V (3a1b) + CUA-2 (1a1b)
CR21	TECO CU-11 110V (3a1b) + CUA-2 (2b)
CR22	TECO CU-11 110V (3a1b)
CR24	TECO CU-11 110V (3a1b) + CUA-2 (1a1b)
CR1	PUAA M3KPI 250V (3a3b)
CR2	PUAA M3KPI 250V (3a3b)
CR3	PUAA M3KPI 250V (3a3b)
CR4	PUAA M3KPI 250V (3a3b)
M2	TECO CU-11 110V (4a)
CM	TECO CU-11 110V (4a)
M1	TECO CU-11 110V (4a)
M4	TECO CU-11 110V (3a1b)
M5	TECO CU-11 110V (3a1b)
M6	TECO CU-11 110V (3a1b)
O.L.1	TECO RHK-10K 0.45A
O.L.2	TECO RHK-10K 1.4A
O.L.3	TECO RHK-10K 2.5A
O.L.4	TECO RHK-10K 5.5A

變頻攻牙電路圖

CARRIAGE SIDE OPERATION BUTTON/WIRE NUMBER



變頻攻牙電路圖

