

# MOTION CONTROLLER

Qseries

SV22가

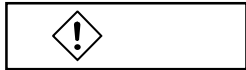
Q173CPU

Q172CPU

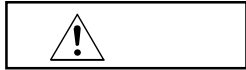
( )

, Q172CPU / Q172CPU

「 」, 「 」



가

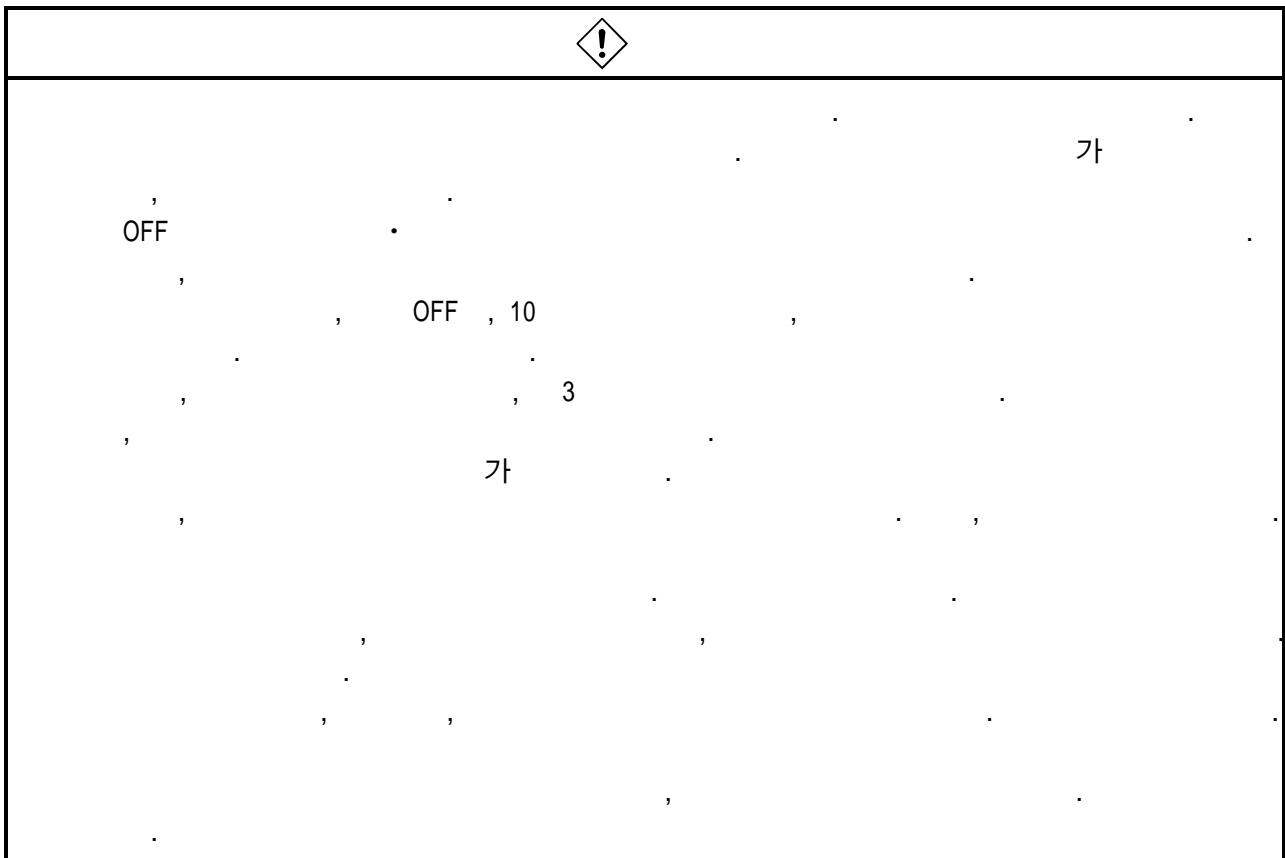


가

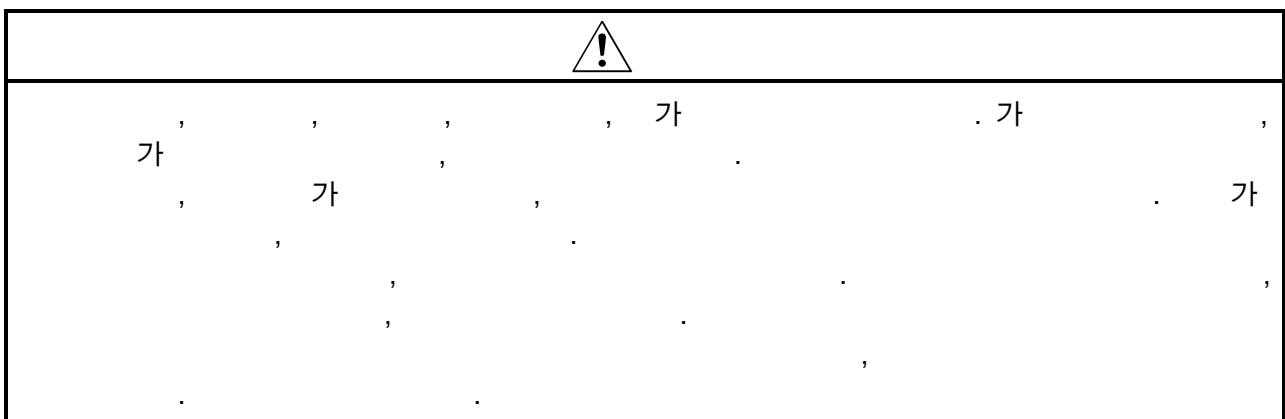


가

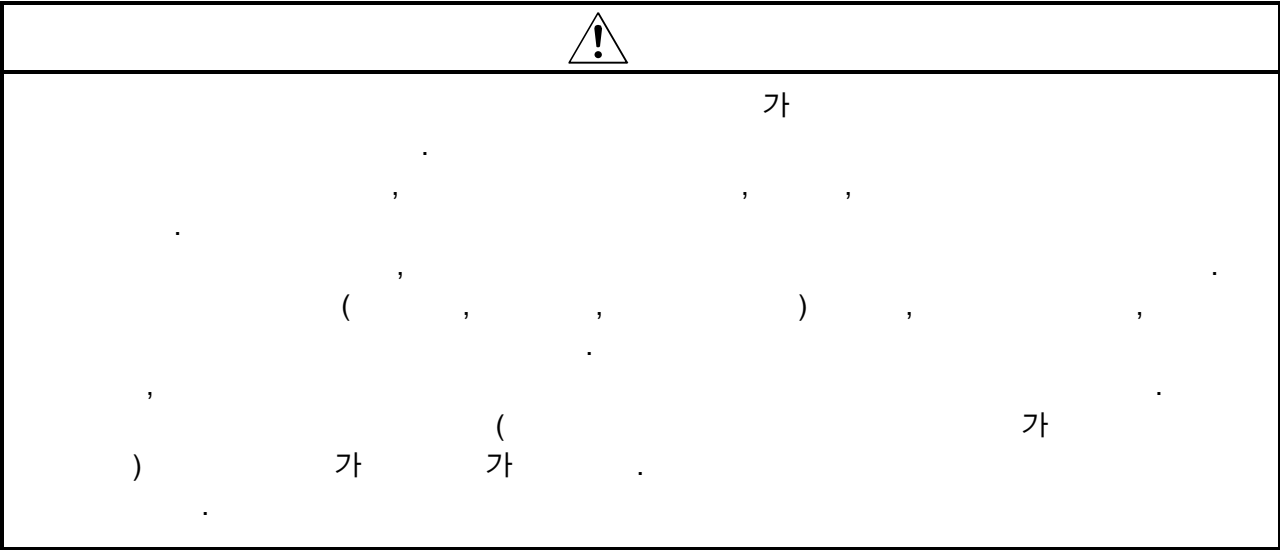
1 .

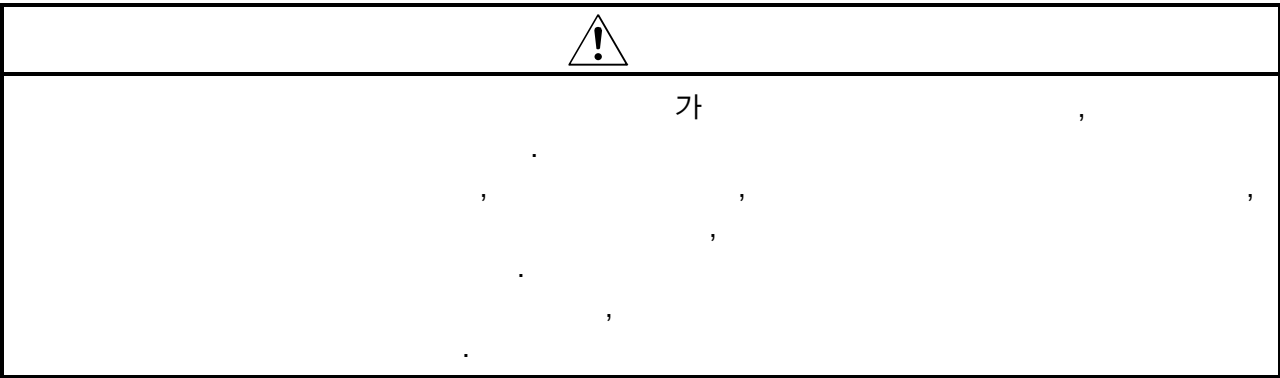


2 .

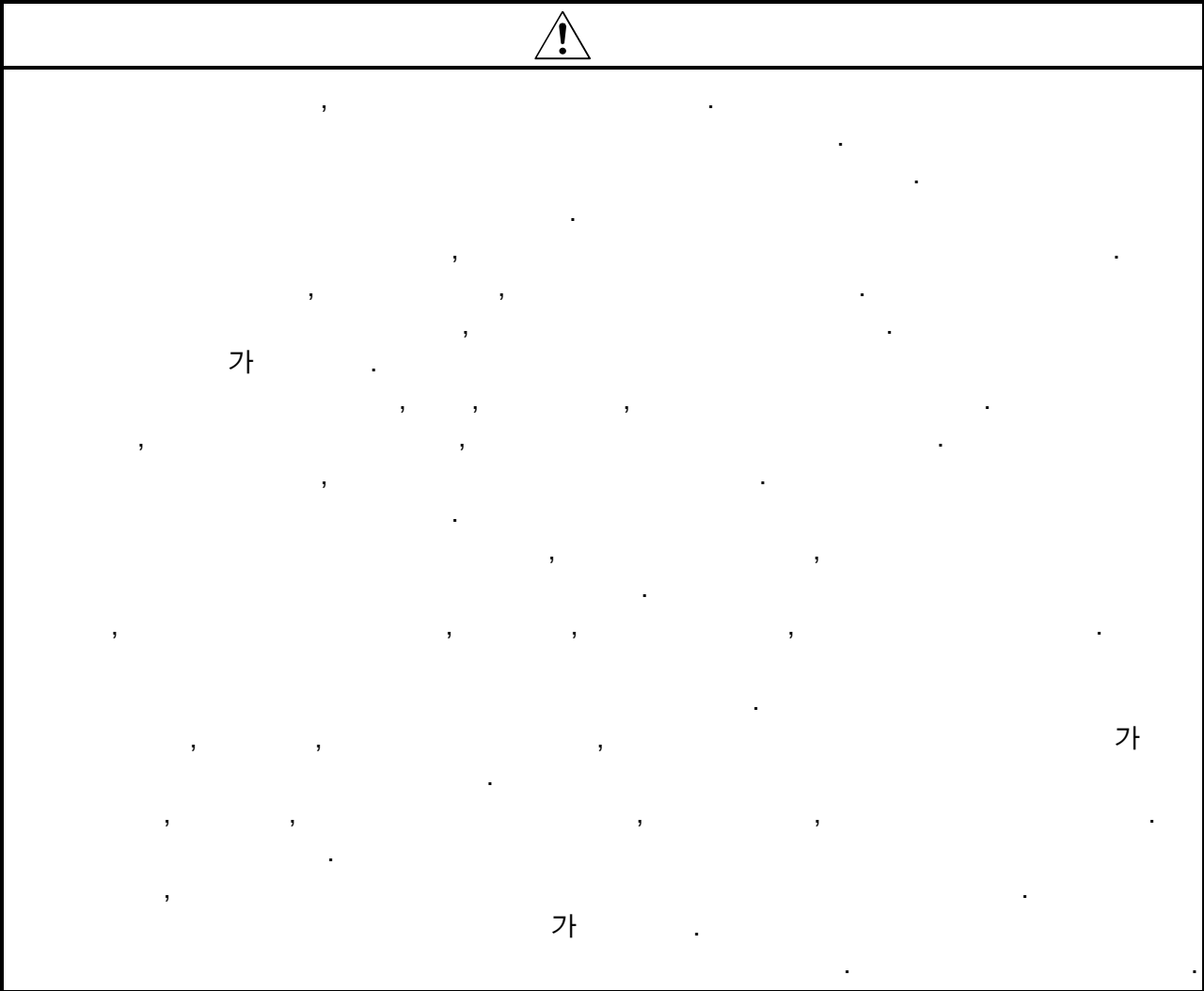


A large, empty rectangular frame with a warning symbol (a triangle with an exclamation mark) at the top center. The frame is defined by a thin black border. The warning symbol is a black triangle with a black exclamation mark inside, positioned at the top center of the frame. The rest of the frame is empty white space.

[illegible]



•



		0 ~ +40 (                    )
		80%RH (        가        )
		- 20 ~ + 65
	(                    )	
	가        .        가        .        가	
	1000m	

가


(4)

(        FR-BIF)


(        U, V, W)                    가

DC

가                    ,                    가                    가                    가


	
가	PLC

(5)

	
가	



(6)




가

CE , 「EMC Installtion Guide lines」 ( IB( )  
-67320) , EMC가

	Q61P-A1	Q61P-A2
	AC100 ~ 120V <sup>+10%</sup> <sub>-15%</sub> (AC85 ~ 132V)	AC200 ~ 240V <sup>+10%</sup> <sub>-15%</sub> (AC170 ~ 264V)
	50 / 60Hz ± 5%	
	20m	

(7)

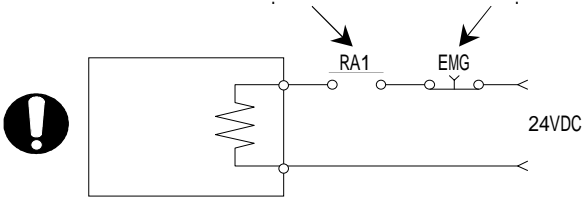


가

가

2

OFF (EMC)



가


가

가


(

.)

(8) . .

	
, . , .	
가 가 .	
IC	.
가	가 ,
가 ( )	.
,	.
(	)
(1) S/W	PC , ON .
(2) S/W	,
.	가 .
,	.
가	가
.	2
가	,

(9)


, .
, .
.

(10)

가 ,
,

2001 6	IB(AUD)-0300025-A	

가

© 2001 MITSUBISHI ELECTRIC CORPORATION

## Q173CPU / Q172CPU

.....	A - 1
.....	A - 10
.....	A - 11
.....	A - 14

1	1- 1~1- 4
---	-----------

1.1 .....	1 - 1
1.2 SV13/SV22 .....	1 - 3
1.3 SV22가 .....	1 - 4

2 CPU	2- 1~2- 8
-------	-----------

2.1 .....	2 - 1
2.2 .....	2- 3
2.2.1 .....	2 - 3
2.2.2 ( ) .....	2- 4
2.3 가 .....	2- 5
2.3.1 .....	2 - 5
2.3.2 .....	2 - 5
2.3.3 .....	2 - 6
2.3.4 ( , ) .....	2- 7

3	3- 1~3- 2
---	-----------

4	4- 1~4-74
---	-----------

4.1 .....	4 - 2
4.1.1 .....	4 - 13
4.1.2 .....	4 - 18
4.1.3 가 .....	4 - 21
4.1.4 가 .....	4 - 25
4.1.5 .....	4 - 30
4.1.6 .....	4 - 31
4.1.7 .....	4 - 32
4.2 .....	4 - 45
4.2.1 .....	4 - 53

4.2.2	.....	4 - 54
4.2.3 가	.....	4 - 55
4.2.4 가	.....	4 - 57
4.2.5	.....	4 - 59
4.2.6	.....	4 - 60
4.2.7	.....	4 - 62
4.2.8	.....	4 - 63
4.3	.....	4 - 67
4.4 (SP.M)	.....	4 - 68
4.5 (SP.D)	.....	4 - 70

5	5- 1 ~ 5- 6
---	-------------

5.1	.....	5 - 2
5.2	.....	5 - 4

6	6- 1 ~ 6-22
---	-------------

6.1 가	.....	6 - 1
6.1.1	.....	6 - 1
6.1.2	.....	6 - 10
6.1.3 가 ( , )	.....	6 - 13
6.2	.....	6 - 14
6.2.1	.....	6 - 14
6.2.2	.....	6 - 18
6.2.3 ( , )	.....	6 - 19
6.3 가 /	.....	6 - 20
6.3.1 가	.....	6 - 20
6.3.2	.....	6 - 22

7	7- 1 ~ 7-34
---	-------------

7.1	.....	7 - 3
7.1.1	.....	7 - 3
7.1.2	.....	7 - 3
7.2	.....	7 - 5
7.2.1	.....	7 - 9
7.2.2	.....	7 - 26
7.3	.....	7 - 30
7.3.1	.....	7 - 30
7.3.2	.....	7 - 31
7.4	.....	7 - 33
7.4.1	.....	7 - 33
7.4.2 ( )	.....	7 - 33

8	8- 1 ~ 8-36
---	-------------

8.1	.....	8 - 4
8.1.1	.....	8 - 4
8.1.2	.....	8 - 5

8.2	.....	8 - 8
8.2.1	.....	8 - 8
8.2.2	.....	8 - 9
8.3	.....	8 - 12
8.3.1	.....	8 - 12
8.3.2	.....	8 - 13
8.4	.....	8 - 19
8.4.1	.....	8 - 20
8.4.2	.....	8 - 25
8.4.3	.....	8 - 28
8.4.4	.....	8 - 35

9	가 /	9- 1 ~ 9-12
---	-----	-------------

9.1	가	.....	9 - 1
9.2	가	.....	9 - 5
9.2.1	가	.....	9 - 5
9.2.2	OS 가	.....	9 - 5
9.3	↔ 가	.....	9 - 6
9.4		.....	9 - 9
9.4.1	/	.....	9- 10

		-1 ~ -61
--	--	----------

1	.....	- 1
2	CPU가	- 5
2.1	.....	- 8
2.2	.....	- 9
2.3	(D9190 ).....	- 10
2.4	.....	- 10
2.5	.....	- 17
2.6	PC	- 27
2.7	.....	- 28
2.8	•가	- 34
3	,	- 36
3.1	.....	- 36
3.2	.....	- 39
4	.....	- 44
5	.....	- 46

		( )	가
C P U  H / W . S / W	Q173CPU / Q172CPU CPU , Q172LX , Q172EX Q173PX , , , SSCNET  ( OS )	IB-0300021 (1CT760)	¥3000
	Q173CPU / Q172CPU (SV13/SV22) (SFC ) CPU , , , , ,  ( OS )	IB-0300023 (1CT761)	¥3000
	Q173CPU / Q172CPU (SV13/SV22) ( ) , , .  ( OS )	IB-0300024 (1CT762)	¥4000
P L C  S / W	QCPU(Q ) ( . ) QCPU(Q ) ,  ( )	SH-080020 (13JQ44)	¥3000
	QCPU(Q ) / QnACPU ( ) PLC , , .  ( )	SH-080021 (13JC00)	¥4000
	QCPU(Q ) / QnACPU (PID ) PID .  ( )	SH-080022 (13JC01)	¥1000
	QCPU(Q ) / QnACPU (SFC ) MELSAP3 , , , , ,  ( )	SH-080023 (13JC02)	¥3000

		( )	가
P L C  H / W	QCPU(Q ) ( . ) CPU , , . ( )	SH-080019 (13JQ43)	¥3000
	QPLC CPU , / ( )	SH-080024 (13JQ45)	¥1500



# MEMO

[illegible]

## 1.1

가 , (SV22가 )

가 ,

(SV22가 ) 가 가 .


CPU	
Q173CPU (32 )	32
Q172CPU (8 )	8

· ·	· ·
Q173CPU/Q172CPU, CPU( )	Q173CPU / Q172 CPU
MR-H-BN/MR-J2-B/MR-J2S-B/MR-J2-03B5	MR-H-BN/MR-J2-B/MR-J2S-B/MR-J2-03B5
Q172LX/Q172EX/Q173PX	Q172LX / Q172EX ABS /Q173PX
QCPU PLC CPU	Qn (H) CPU
CPU	Q PLC CPU
CPU <sub>n</sub>	CPU n CPU (n=1~4)
S/W	「SW5RN-GSV P」 「Gx Developer S/W」
GVS GSV P	S/W 「SW6RN-GSVPR0」
SV13P	: SW6RN-GSV13P
SV22P	: SW6RN-GSV22P
GX Developer	GX Developer s/w 「SW6D5C-GPPW( )」
PLC MR-HDP01	PLC (MR-HDP01)
ABS MR-HENC	ABS (MR-HENC)
SSCNET*	
	(Q170FAN)
	(Q173DV)
	(Q170BAT)

\* : SSCNET : Servo System Controller NETwork



, CPU ,  
 「Q173CPU / Q172CPU (SV13 / SV22)  
 , (SFC )」  
 SV13 / SV22  
 「Q173CPU / Q172CPU (SV13/SV22) ( )」



가

## 1.2 SV13 / SV22

(a) SV13/SV22 ,

(b)

(c)

S(P). SFCS

SFC

( SFC

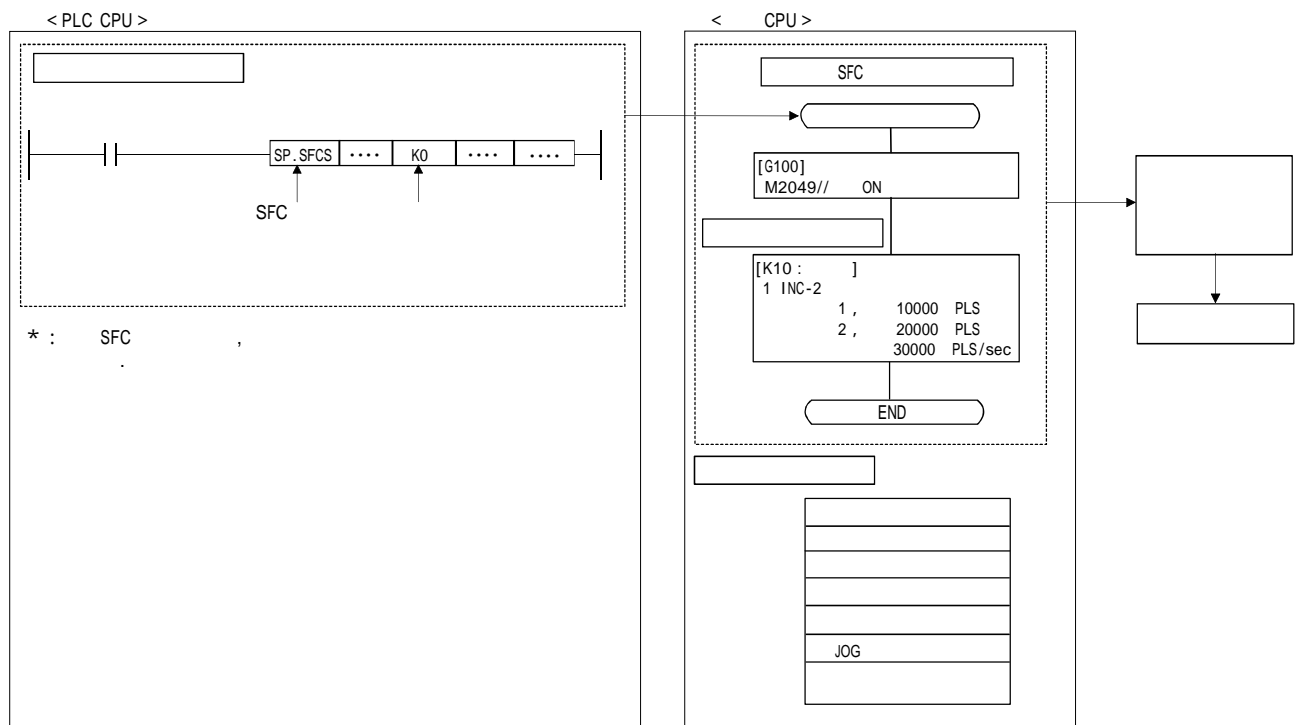
.)

SFC

( )

가

SV13 / SV22



### 1.3 SV22 가

(a) 가 가 , , .

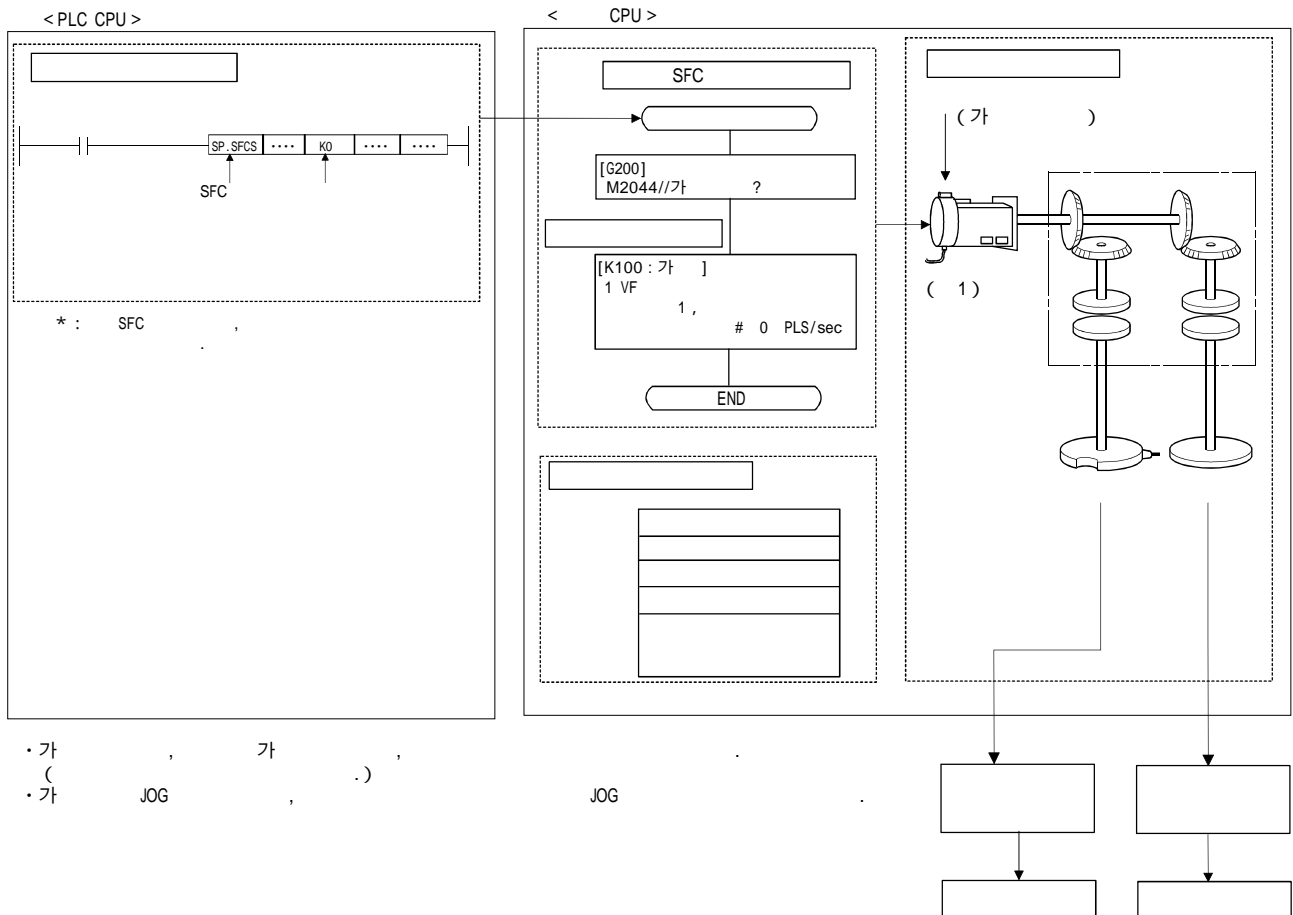
(b) 가 , .  
 • SFC .

(c) 가 S(P). SFCs 가 SFC .  
 ( SFC .)

가 가 .

가 .

SV22 가

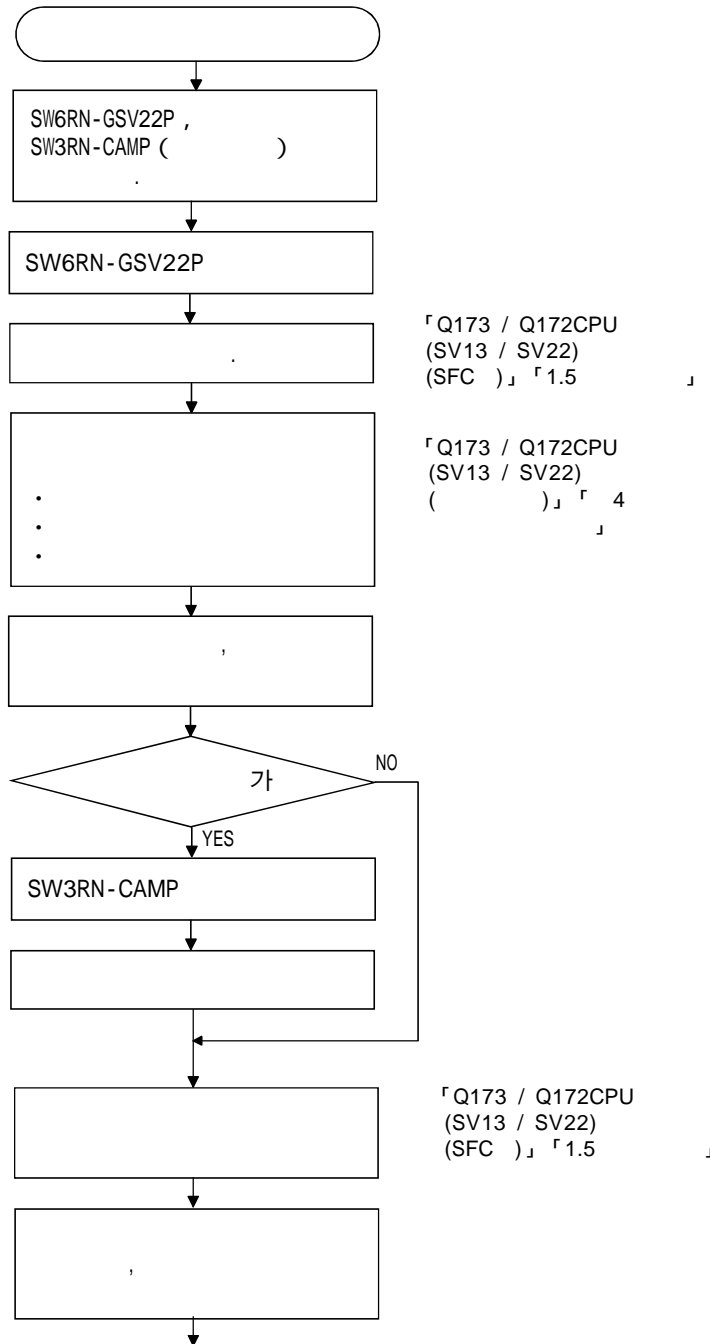


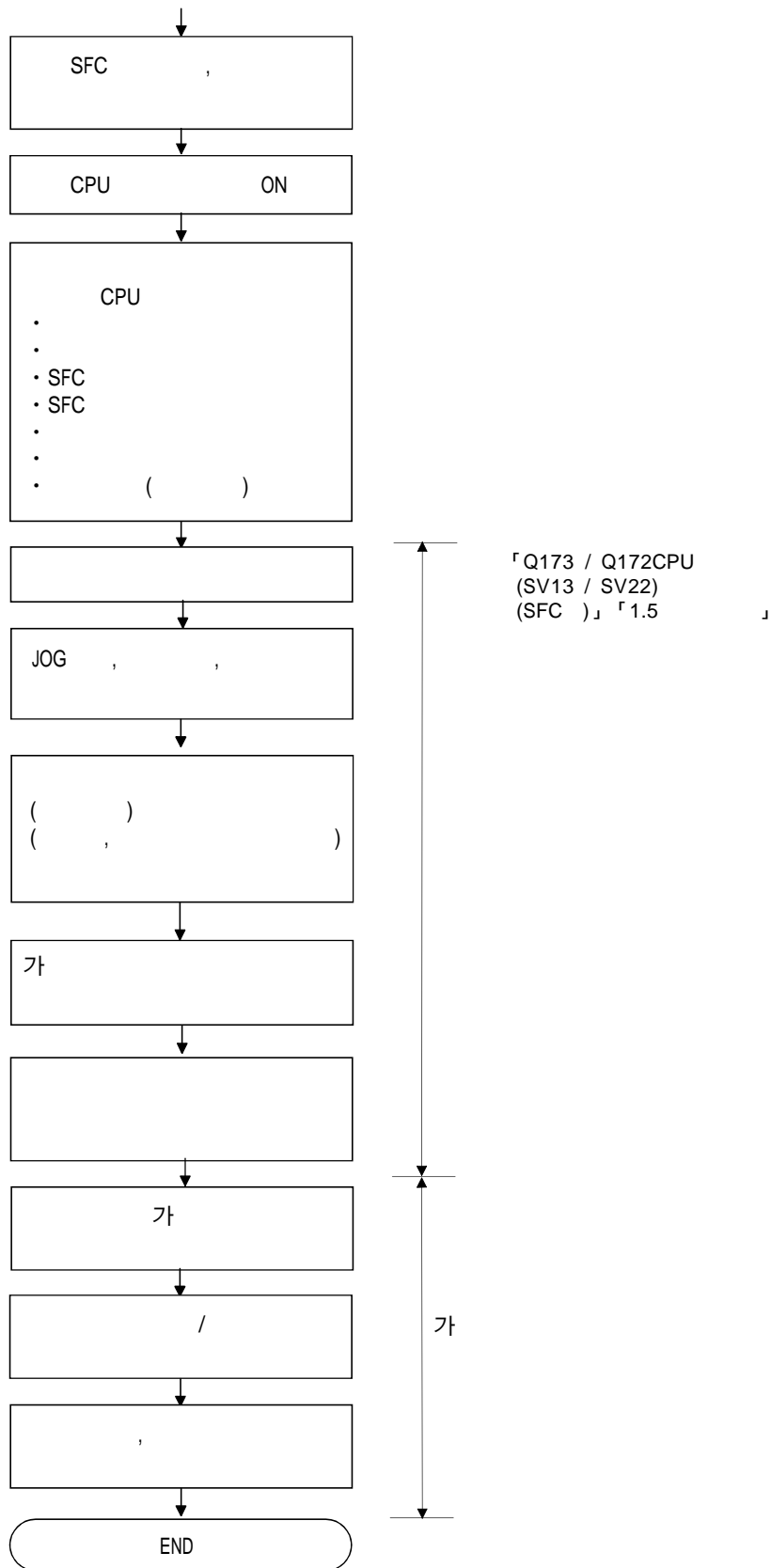
## 2 CPU

가

### 2.1

가

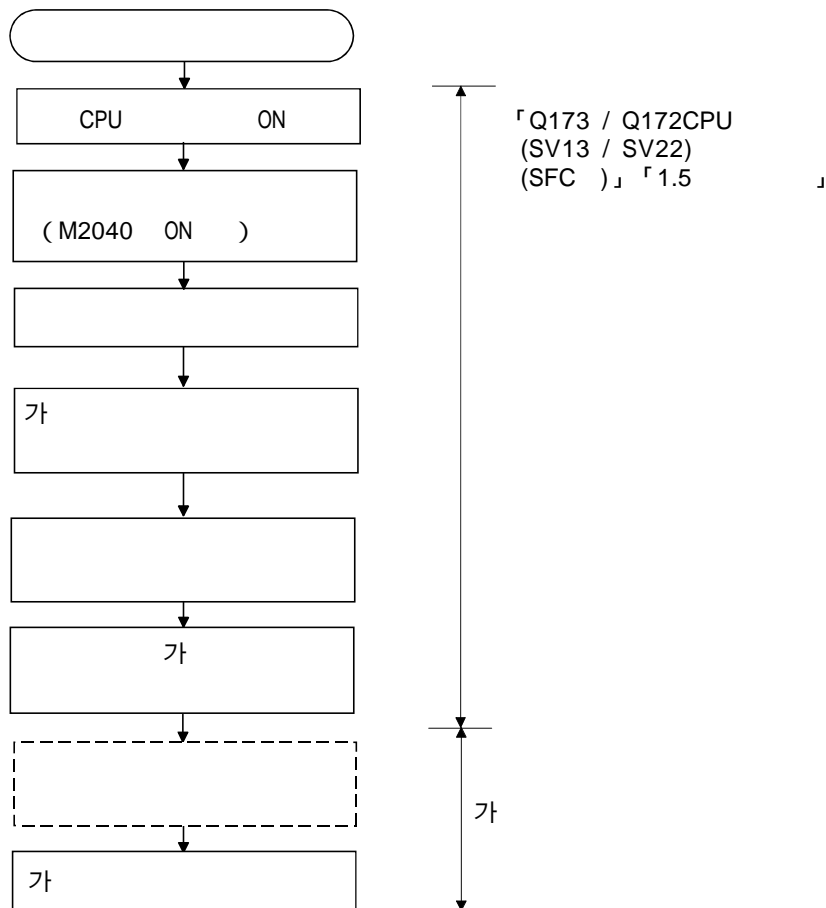




2.2

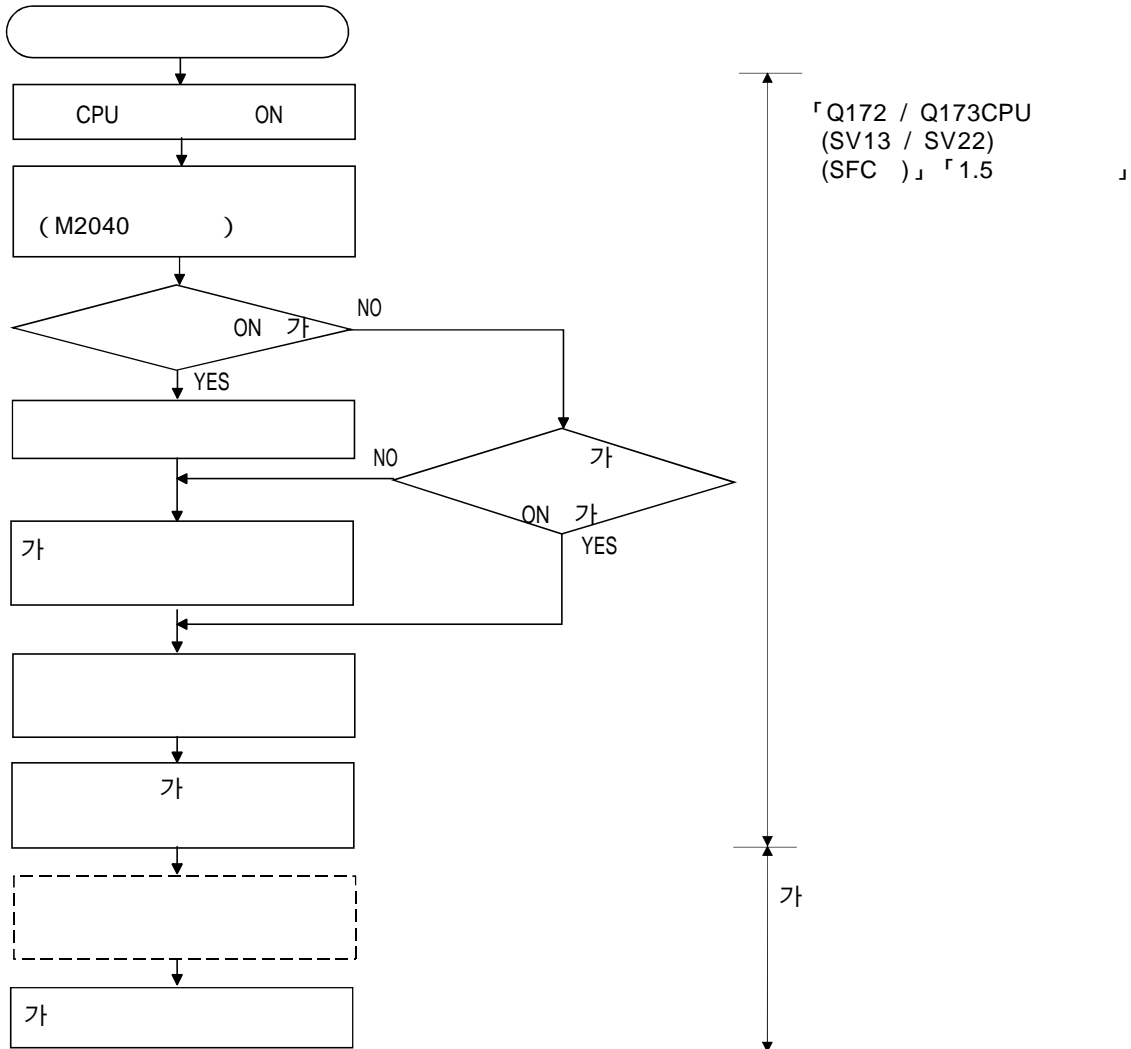
가

2.2.1





2.2.2 ( )



## 2 . CPU

### 2.3 가

, 가  
가 , 「Q172 / Q173CPU  
(SV13 / SV22) ( )」.

#### 2.3.1

가 2.1 .

##### 2.1

		가	
			가 가 .
			[ PLS] 가
JOG			

∴  
∴ ( )  
∴

#### 2.3.2

가 2.2 .

##### 2.2

		가
	M2000 ~ M3839 M4640 ~ M4687 M5440 ~ M5487	M2000 ~ M5487
	M9073 ~ M9079	
	D0 ~ D799 D1120 ~ D1239	D0 ~ D1559
	D9180 ~ D9199	

2.3.3

- (1)  
 (a) , 가 NO. .  
 가 ( SW6RN-GVS22P 가 . )
- (2)  
 (a) 가 , , ( ) .  
 , , 가 .
- (b) 가 .
- (3) 가 가 2.3 .

2.3

				가	
	.	VPF		x	
		VPF			
		VPSTART			
	( )	VVF		x	
		VVR			
		ZERO		x	, 가
		OSC		x	
					[PLS]

:  
 x : 가  
 :

\* : , , 가 .

## 2 . CPU

### 2.3.4 ( , )

가 , / 가 .

( ) , .  
가 2.4 .

#### 2.4

		가					
		가					
				×	×	×	
			×	× *1			

: / 가

× : / 가

\*1 : ,

\*2 : , CPU ON OFF ON ,



1) , .

- : 5 , 6
- : 5 , 8

[illegible]

CPU , 3.1 .

3.1 CPU (가 )

		Q173CPU		Q172CPU		
		32 ( 2~4 , 32 )		8 ( 2~4 , 8 )		
		, PTP(PointToPoint), , , , ,				
		가	PLS			
			mm , inch			
			degree			
			mm , inch , PLS			
			( + )			
		4 (14334 ) *				
		3200 / ( , 가 )				
가			1CPU 가			
		가	32	8		
			32	8		
			32	8		
			32	8		
			64	16		
			64	16		
			64	16		
			32	8		
			32	8		
			32	8		
			32	8		
			32	8		
			32	32	8	8
			32		8	
			32		8	
		32	8			
		SW6RN-GSV22P WindowsNT® 4.0 / Windows98® PC				
1			256 *3			
			256 • 512 • 1024 • 2048 *3			
			132k			
	• 1			CPU RAM		
				32767		
			•			
		SW3RN-CAMP WindowsNT® 4.0 / Windows98® PC				
가			(2 , 3 , 4 ) , (2 )			
			PTP (Point To Point), , , , ,			
		PTP	:	/ 가		
			:			
			:	/ 가		
			:			
	- 2147483648 ~ 2147483647[PLS]					
	1 ~ 10000000[PLS/s]					

3.1 CPU (가 ) ( )

			Q173CPU	Q172CPU						
가	가	가	<table><tr><td>가</td><td>가</td></tr><tr><td>가 : 1 ~ 65535[ms]</td><td>가 : 1 ~ 5000[ms]</td></tr><tr><td>: 1 ~ 65535[ms]</td><td>( 가 )</td></tr></table>	가	가	가 : 1 ~ 65535[ms]	가 : 1 ~ 5000[ms]	: 1 ~ 65535[ms]	( 가 )	
			가	가						
		가 : 1 ~ 65535[ms]	가 : 1 ~ 5000[ms]							
	: 1 ~ 65535[ms]	( 가 )								
	S 가	S	0 ~ 100[ % ]							
JOG										
M (with )	M	, M								
( )	3 가 , 3 가 , : 1 ~ 10000*2 ,									

\* 1 : TREN 「 」 ,

\* 2 : SW6RN-22Q (Ver.00B) , (1~100) .

\* 3 : 1 , .

1	256	512	1024	2048
	256	128	64	32

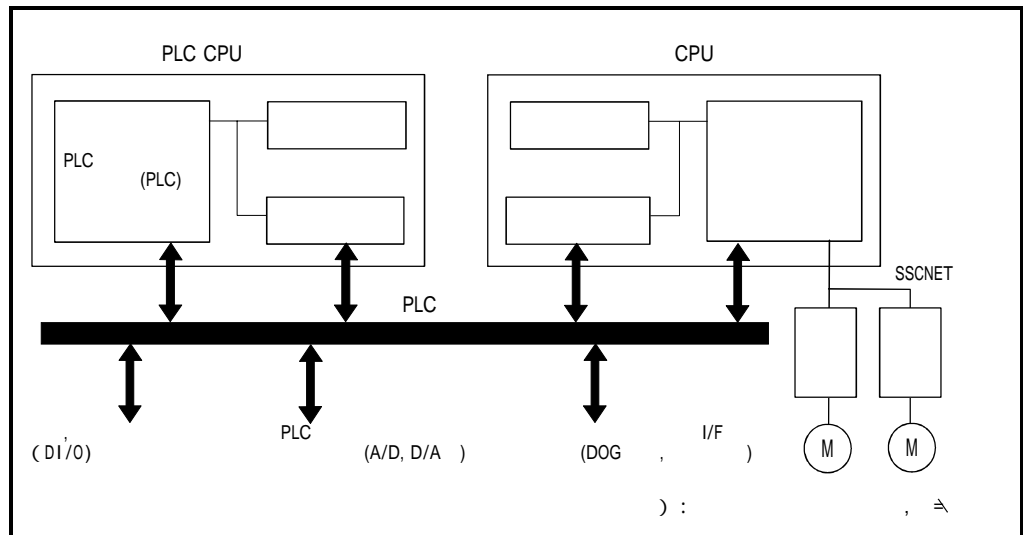
, CPU CPU

(1) CPU CPU가 4

- (M) M2000 ~ M5599 ( 3600 )
- (SP.M) M9073 ~ M9079 ( 7 )
- (D) D0 ~ D1599 ( 1600 )
- (#) #8000 ~ #8191 ( 192 )
- (SP.D) D9180 ~ D9199 ( 20 )

(2) CPU , / , ,

- / , /
- 
- 
- ON/OFF
- →



4.1 /



CPU  
CPU

CPU

(1)

		Q173CPU	Q172CPU
		32	8
( )	SV22	0.88[ms] / 1 ~ 4 1.77[ms] / 5 ~ 12 3.55[ms] / 13 ~ 24 7.11[ms] / 25 ~ 32	0.88[ms] / 1 ~ 4 1.77[ms] / 5 ~ 8

(2) , 가 [ms] ~ [ms] 가

## 4. 1

(1)

Q173CPU				Q172CPU			
			가				가
MO {	( 2000 )			MO {	( 2000 )		
M2000 {	( 320 )			M2000 {	( 320 )		
M2320 {	가 ( 80 )	-	-	M2320 {	가 ( 80 )	-	-
M2400 {	( 20 × 32 ) ... 가 ...			M2400 {	( 20 × 8 ) ... 가 ...		
M3040 {	가 ( 160 )	-	-	M2560 {	가 ( 640 )	-	-
M3200 {	( 20 × 32 ) ... 가 ...			M3200 {	( 20 × 8 ) ... 가 ...		
M3840 {	가 ( 160 )	-	-	M3360 {	가 ( 640 )	-	-
M4000*1 {	가 ( 20 × 32 ) *2			M4000*1 {	가 ( 20 × 8 ) *2		
				M4160*1 {	가 ( 480 )	-	-
M4640*1 {	( 4 × 12 )			M4640*1 {	( 4 × 8 )		
M4688*1 {	가 ( 112 )	-	-	M4656*1 {	가 ( 128 )		-

( )

Q173CPU				Q172CPU			
			가				가
M4800 <sup>*1</sup>	가 ( 20 × 32 ) *2	×		M4800 <sup>*1</sup>	가 ( 20 × 8 ) *2	×	
{				M4960 <sup>*1</sup>	( 480 )		
				{			
M5440 <sup>*1</sup>	( 4 × 12 )	×		M5440 <sup>*1</sup>	( 4 × 8 )	×	
{				{			
M5488 <sup>*1</sup>	가 ( 113 )	-	-	M5472 <sup>*1</sup>	가 ( 128 )	-	-
{				{			
M560M5600	( 2592 )				( 2592 )		
{				{			
M8191				M8191			



, ×

가

<p>•</p> <p>4592 (Q173CPU), 5552 (Q172CPU)</p> <p>*1 : 가 , M4000~M5559</p> <p>*2 : 「가 / 」 ,</p> <p>*3 : , 「 가 (M2400~), (M3200~)」</p> <p>가 「Q173CPU / Q172CPU (SV13 / SV22)</p> <p>( )」</p>

(2)

No.		
1	M2400 ~ M2419	
2	M2420 ~ M2439	
3	M2440 ~ M2459	
4	M2460 ~ M2479	
5	M2480 ~ M2499	0
6	M2500 ~ M2519	1
7	M2520 ~ M2539	2
8	M2540 ~ M2559	3
9	M2560 ~ M2579	4
10	M2580 ~ M2599	5
11	M2600 ~ M2619	6
12	M2620 ~ M2639	7
13	M2640 ~ M2659	8
14	M2660 ~ M2679	9
15	M2680 ~ M2699	10
16	M2700 ~ M2719	11
17	M2720 ~ M2739	12
18	M2740 ~ M2759	13
19	M2760 ~ M2779	14
20	M2780 ~ M2799	15
21	M2800 ~ M2819	16
22	M2820 ~ M2839	17
23	M2840 ~ M2859	18
24	M2860 ~ M2879	19
25	M2880 ~ M2899	
26	M2900 ~ M2919	
27	M2920 ~ M2939	
28	M2940 ~ M2959	
29	M2960 ~ M2979	
30	M2980 ~ M2999	
31	M3000 ~ M3019	
32	M3020 ~ M3039	

\*1 : SV22

\*2 : Q172CPU , NO.1~ NO.8

\*3 : Q172CPU , 9



\*1 :

가

「Q173CPU/Q172CPU

(SV13/SV22)

( ) 「3.1.1

(3)

No.											
1	M3200 ~ M3219										
2	M3220 ~ M3239	<div><div></div><div></div><div></div><div></div></div>	가								
3	M3240 ~ M3259										
4	M3260 ~ M3279										
5	M3280 ~ M3299		0		x						
6	M3300 ~ M3319	1									
7	M3320 ~ M3339	2	JOG								
8	M3340 ~ M3359	3	JOG								
9	M3360 ~ M3379	4	OFF								
10	M3380 ~ M3399	5	• 가								
11	M3400 ~ M3419	6	가								
12	M3420 ~ M3439	7		x							
13	M3440 ~ M3459	8									
14	M3460 ~ M3479										
15	M3480 ~ M3499	9	STOP								
16	M3500 ~ M3519										
17	M3520 ~ M3539	10	가								
18	M3540 ~ M3559	11									
19	M3560 ~ M3579	12		x				가			
20	M3580 ~ M3599	13	*1	x							
21	M3600 ~ M3619	14	*1	x							
22	M3620 ~ M3639	15	OFF								
23	M3640 ~ M3659	16	가								
24	M3660 ~ M3679	17									
25	M3680 ~ M3699	18									
26	M3700 ~ M3719	19		FIN	x						
27	M3720 ~ M3739										
28	M3740 ~ M3759										
29	M3760 ~ M3779										
30	M3780 ~ M3799										
31	M3800 ~ M3819										
32	M3820 ~ M3839										

* 1 : SV22			가	.
* 2 : Q172CPU		NO.1~	NO.8	가 .
* 3 : Q172CPU	9			가 .

11/11/2019

\*1 : 가  
『Q173CPU / Q172CPU』 (SV13/SV22)  
( )」 「3.1.2」

## (4) 가

No.																																																																																																																																																
1	M4000 ~ M4019	<table><tr><td></td><td></td><td></td><td>가</td><td></td><td></td><td></td></tr><tr><td>0</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td>가</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td>가</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>8</td><td rowspan="11">가</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>9</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>10</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>11</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>12</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>13</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>14</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>15</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>16</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>17</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>18</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>19</td><td>M</td><td></td><td></td><td></td><td></td><td></td></tr></table>									가				0							1							2	가						3							4							5	가						6							7							8	가						9						10						11						12						13						14						15						16						17						18						19	M					
									가																																																																																																																																							
0																																																																																																																																																
1																																																																																																																																																
2	가																																																																																																																																															
3																																																																																																																																																
4																																																																																																																																																
5	가																																																																																																																																															
6																																																																																																																																																
7																																																																																																																																																
8	가																																																																																																																																															
9																																																																																																																																																
10																																																																																																																																																
11																																																																																																																																																
12																																																																																																																																																
13																																																																																																																																																
14																																																																																																																																																
15																																																																																																																																																
16																																																																																																																																																
17																																																																																																																																																
18																																																																																																																																																
19	M																																																																																																																																															
2	M4020 ~ M4039																																																																																																																																															
3	M4040 ~ M4059																																																																																																																																															
4	M4060 ~ M4079																																																																																																																																															
5	M4080 ~ M4099																																																																																																																																															
6	M4100 ~ M4119																																																																																																																																															
7	M4120 ~ M4139																																																																																																																																															
8	M4140 ~ M4159																																																																																																																																															
9	M4160 ~ M4179																																																																																																																																															
10	M4180 ~ M4199																																																																																																																																															
11	M4200 ~ M4219																																																																																																																																															
12	M4220 ~ M4239																																																																																																																																															
13	M4240 ~ M4259																																																																																																																																															
14	M4260 ~ M4279																																																																																																																																															
15	M4280 ~ M4299																																																																																																																																															
16	M4300 ~ M4319																																																																																																																																															
17	M4320 ~ M4339																																																																																																																																															
18	M4340 ~ M4359																																																																																																																																															
19	M4360 ~ M4379																																																																																																																																															
20	M4380 ~ M4399																																																																																																																																															
21	M4400 ~ M4419																																																																																																																																															
22	M4420 ~ M4439																																																																																																																																															
23	M4440 ~ M4459																																																																																																																																															
24	M4460 ~ M4479																																																																																																																																															
25	M4480 ~ M4499																																																																																																																																															
26	M4500 ~ M4519																																																																																																																																															
27	M4520 ~ M4539																																																																																																																																															
28	M4540 ~ M4559																																																																																																																																															
29	M4560 ~ M4579																																																																																																																																															
30	M4580 ~ M4599																																																																																																																																															
31	M4600 ~ M4619																																																																																																																																															
32	M4620 ~ M4639																																																																																																																																															

\*1 : Q172CPU , NO.1~ NO.8 가 .

\*2 : Q172CPU , 9 가 .

## (5) 가

No.						
1	M4800 ~ M4819					
2	M4820 ~ M4839					
3	M4840 ~ M4859					
4	M4860 ~ M4879	0				
5	M4880 ~ M4899	1				
6	M4900 ~ M4919	2	JOG			
7	M4920 ~ M4939	3	JOG			
8	M4940 ~ M4959	4	OFF			
9	M4960 ~ M4979	5	가			
10	M4980 ~ M4999	6				
11	M5000 ~ M5019	7				
12	M5020 ~ M5039	8	가			
13	M5040 ~ M5059	9	STOP			
14	M5060 ~ M5079	10				
15	M5080 ~ M5099	11				
16	M5100 ~ M5119	12				
17	M5120 ~ M5139	13				
18	M5140 ~ M5159	14				
19	M5160 ~ M5179	15				
20	M5180 ~ M5199	16				
21	M5200 ~ M5219	17				
22	M5220 ~ M5239	18				
23	M5240 ~ M5259	19	FIN			
24	M5260 ~ M5279					
25	M5280 ~ M5299					
26	M5300 ~ M5319					
27	M5320 ~ M5339					
28	M5340 ~ M5359					
29	M5360 ~ M5379					
30	M5380 ~ M5399					
31	M5400 ~ M5419					
32	M5420 ~ M5439					

\*1 : Q172CPU , NO.1~ NO.8 가

\*2 : Q172CPU , 9 가

(6)

No.																																
1	M4640 ~ M4643	<table><tr><td></td><td></td><td></td><td>가</td><td></td><td></td><td></td></tr><tr><td>0</td><td></td><td rowspan="3"></td><td rowspan="3"></td><td rowspan="3"></td><td rowspan="3"></td><td rowspan="3"></td></tr><tr><td>1</td><td>TREN</td></tr><tr><td>2</td><td>가 가</td></tr><tr><td>3</td><td>가</td><td></td><td></td><td></td><td></td><td></td></tr></table>									가				0							1	TREN	2	가 가	3	가					
									가																							
0																																
1	TREN																															
2	가 가																															
3	가																															
2	M4644 ~ M4647																															
3	M4648 ~ M4651																															
4	M4652 ~ M4655																															
5	M4656 ~ M4659																															
6	M4660 ~ M4663																															
7	M4664 ~ M4667																															
8	M4668 ~ M4671																															
9	M4672 ~ M4675																															
10	M4676 ~ M4679																															
11	M4680 ~ M4683																															
12	M4684 ~ M4687																															

\* 1 : Q172CPU NO.1~ NO.8 가 .

\* 2 : Q172CPU , 9 가 .

(7)

No.							
1	M5440 ~ M5443						
2	M5444 ~ M5447						
3	M5448 ~ M5451						
4	M5452 ~ M5455						
5	M5456 ~ M5459						
6	M5460 ~ M5463						
7	M5464 ~ M5467						
8	M5468 ~ M5471						
9	M5472 ~ M5475						
10	M5476 ~ M5479						
11	M5480 ~ M5483						
12	M5484 ~ M5487						

\* 1 : Q172CPU , NO.1~ NO.8 가 .

\* 2 : Q172CPU , 9 가 .

(8)

M2000	PLC			*1
M2001	1			
M2002	2			
M2003	3			
M2004	4			
M2005	5			
M2006	6			
M2007	7			
M2008	8			
M2009	9			
M2010	10			
M2011	11			
M2012	12			
M2013	13			
M2014	14			
M2015	15			
M2016	16			
M2017	17			
M2018	18			
M2019	19			
M2020	20			
M2021	21			
M2022	22			
M2023	23			
M2024	24			
M2025	25			
M2026	26			
M2027	27			
M2028	28			
M2029	29			
M2030	30			
M2031	31			
M2032	32			
M2033	가			
M2034	PC			
M2035				
M2036	가			
M2037	( 4 )			
M2038				
M2039	SFC			
M2040				*1
M2041				
M2042	ON			
M2043	/ 가 ( 가 )		가	*1
M2044	/ 가 ( 가 )			
M2045	/ 가 ( 가 )	가		
M2046	( 가 )			

M2047				
M2048	JOG			*1
M2049	ON			
M2050				
M2051	1 가			
M2052	2 가			*1
M2053	3 가			
M2054				
M2055				
M2056				
M2057	가			
M2058	( 6 )			
M2059				
M2060				
M2061	1			
M2062	2			
M2063	3			
M2064	4			
M2065	5			
M2066	6			
M2067	7			
M2068	8			
M2069	9			
M2070	10			
M2071	11			
M2072	12			
M2073	13			
M2074	14			
M2075	15			
M2076	16			
M2077	17			
M2078	18			
M2079	19			
M2080	20			
M2081	21			
M2082	22			
M2083	23			
M2084	24			
M2085	25			
M2086	26			
M2087	27			
M2088	28			
M2089	29			
M2090	30			
M2091	31			
M2092	32			
M2093				
M2094				
M2095	가			
M2096	( 6 )			
M2097				
M2098				



( )

M2099	가			
M2100	( 2 )			
M2101	1	*3 ( 12 )		*2
M2102	2			
M2103	3			
M2104	4			
M2105	5			
M2106	6			
M2107	7			
M2108	8			
M2109	9			
M2110	10			
M2111	11			
M2112	12			
M2113	가 ( 15 )			
M2114				
M2115				
M2116				
M2117				
M2118				
M2119				
M2120				
M2121				
M2122				
M2123				
M2124				
M2125				
M2126				
M2127				
M2128	1			*2
M2129	2			
M2130	3			
M2131	4			
M2132	5			
M2133	6			
M2134	7			
M2135	8			
M2136	9			
M2137	10			
M2138	11			
M2139	12			
M2140	13			
M2141	14			
M2142	15			
M2143	16			
M2144	17			
M2145	18			
M2146	19			
M2147	20			
M2148	21			
M2149	22			
M2150	23			
M2151	24			
M2152	25			
M2153	26			
M2154	27			
M2155	28			
M2156	29			
M2157	30軸			

M2158	31	*3		*2
M2159	32			
M2160				
M2161	1			
M2162				
M2163	2			
M2164				
M2165	3			
M2166				
M2167	4			
M2168				
M2169	5			
M2170				
M2171	6			
M2172				
M2173	7			
M2174				
M2175	8			
M2176				
M2177	9			
M2178				
M2179	10			
M2180				
M2181	11			
M2182				
M2183	12			
M2184				
M2185	13			
M2186				
M2187	14			
M2188				
M2189	15			
M2190				
M2191	16			
M2192				
M2193	17			
M2194				
M2195	18			
M2196				
M2197	19			
M2198				
M2199	20			
M2200				
M2201	21			
M2202				
M2203	22			
M2204				
M2205	23			
M2206				
M2207	24			
M2208				
M2209	25			
M2210				
M2211	26			
M2212				
M2213	27			
M2214				
M2215	28			

( )


[illegible]

NO.			
1	PLC	M2000	D704
2		M2040	D705
3	ON	M2042	D706
4	/ 가	M2043	D707
5	JOG	M2048	D708
6	1 가	M2051	D755
7	2 가	M2052	D756
8	3 가	M2053	D757

\*1 : D704 ~ D708 , D755 ~ D757

, QCPU ON/OFF , D  
 , 가0 1 가 ON,  
 가1 0 OFF가 .  
 S(P). DDRD, S(P). DDWR , QPLC CPU  
 . S(P). DDRD, S(P). DDWR  
 『Q173CPU / Q172CPU』 (SV13 / SV22) (SFC )

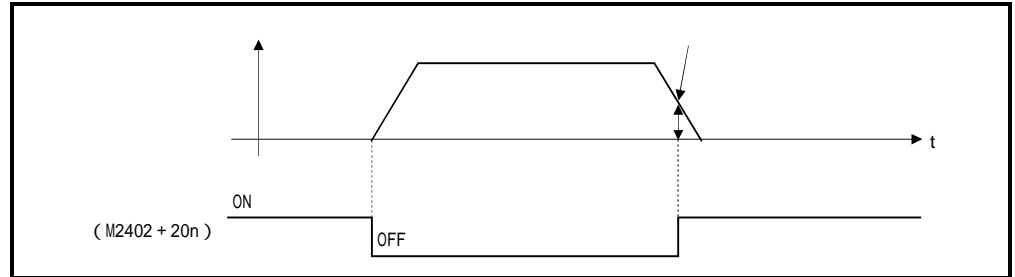
SFC , ON / OFF가 가 .  
 \*2 : Q172CPU 9 가 .  
 \*3 : SV22 가 .

	
SFC	가 .

4.1.1

(1) (M2402+20n) .....

(a) "가 , ON " OFF . ON .



(b) , ON .  
 .  
 . JOG OFF  
 .  
 . DOG ON  
 .  
 . 0  
 . ..... 가

(2) (M2406+20n) .....

ON  
 CPU ON  
 OFF , ON

(3) (M2407+20n) .....

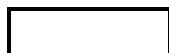
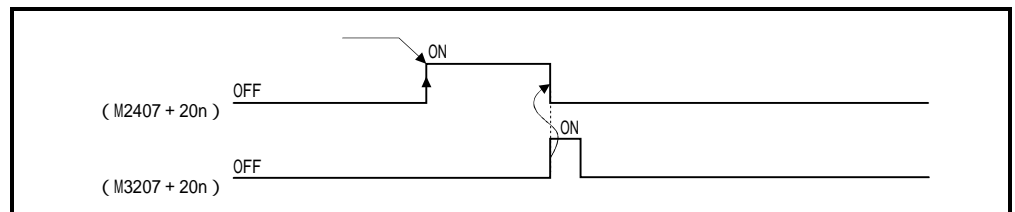
(a) , ON ,  
 / ,  
 \*1가

(4.2.1 (4) ) .

\*1가

(4.2.1 (5) ) .

(b) (M3207+20n) ON OFF .



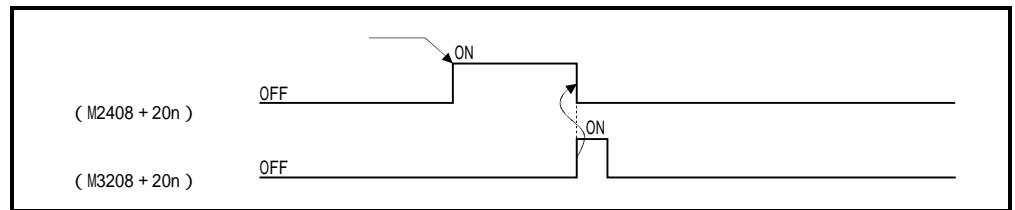
\*1 : / , 2 .

(4) (M2408+20n).....

(a) ) \*1 , ON , (

\*1가

(b) (M3208+20n) ON ,  
OFF . ( , .)



\*1 : , 2.5 .

(5) (M2409+20n).....

,ON

(a) , ON .  
CPU  
OFF .

(b) , ON .  
( ) ( )  
OFF .

(6) (M2410+20n).....

(a) ,  
ON .

(b) , JOG , OFF .

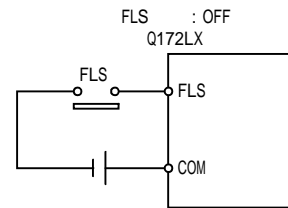
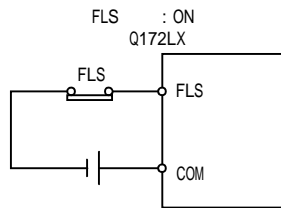
(c) 가 ON , " " 가 .

(7) FLS (M2411+20n).....

(a) FLS , Q172LX (FLS)  
ON / OFF

· OFF ..... FLS : ON  
· ON ..... FLS : OFF

(b) FLS 가, ON / OFF (FLS) ,

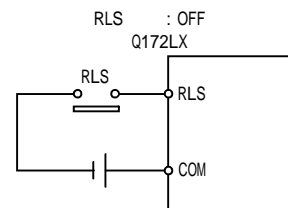
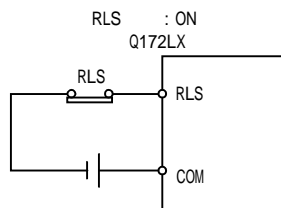


(8) RLS (M2412+20n).....

(a) RLS , Q172LX (RLS)  
ON / OFF

· OFF.....RLS : ON  
· ON.....RLS : OFF

(b) RLS 가 ON / OFF (RLS) ,

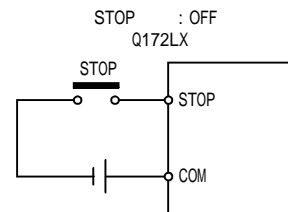
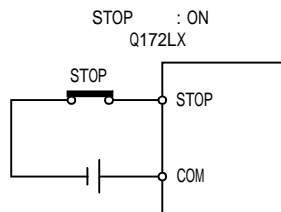


(9) STOP (M2413+20n).....

(a) STOP , Q172LX (STOP) ON/OFF

· 가 OFF ..... STOP : OFF  
· 가 ON ..... STOP : ON

(b) STOP 가, ON / OFF (STOP) ,



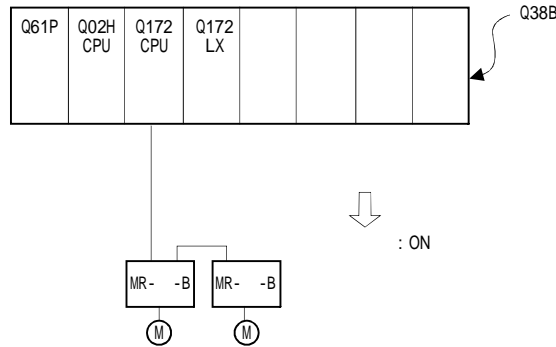
(10) DOG / CHANGE (M2414+20n).....  
 (a) , Q172LX (DOG) ON/OFF .

(b) 「A」, 「B」 가  
 CHANGE 가 ON / OFF (CHANGE)



(11) (M2415+21n).....  
 (a) , 가 READY  
 ON .

(b) OFF .  
 • M2042가 OFF  
 • 가  
 • 가  
 •  
 • OFF (M3215+20n) ON OFF  
 • 가  
 , 「 2.5 」 .



• SSCNET	, 1 가
	OFF가 .

(12) (M2416+20n).....  
ON .

가 ON .

(13) 가 (M2418+20n).....  
ABS , 가 , 가  
가 「 」 「Power O  
FF (X )」 , 가  
가 , 「가 가 」 ON  
.

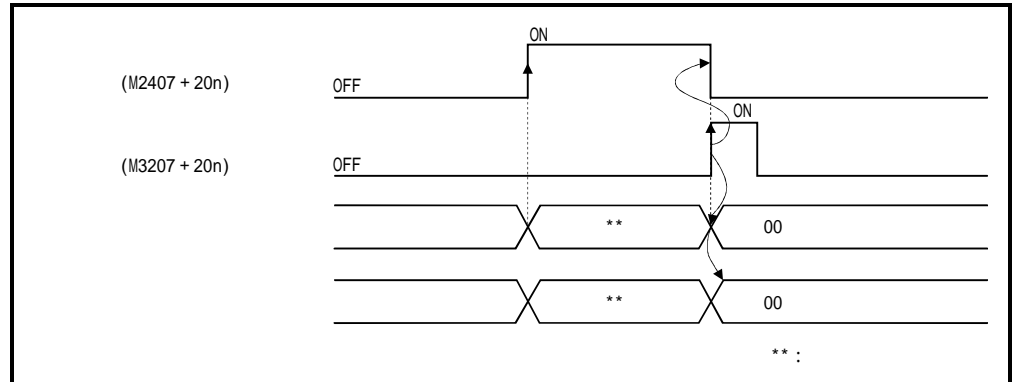
NO.		
1	ABS	• [901] ( ) / [9010] (가 )
2		• , ON . . . .

"가 가 " , SFC



4.1.2

- (1) (M3207+20n).....  
 , (M2407 + 20n : ON) ,  
 (M2407 + 20n)



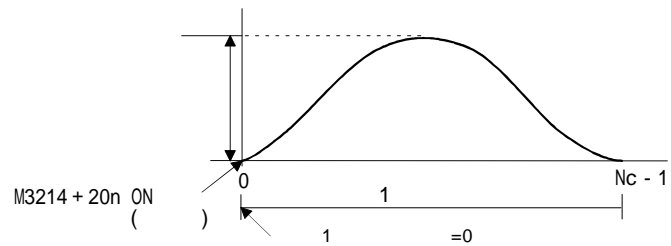
- (2) (M3213+20n).....  
 , 가 1 , "0"  
 가 , ON / OFF  
 (a) M3213 + 20n : ON  
 , 가 1 0 가  
 (b) M3213 + 20n : OFF  
 가 , 가 1 가  
 가 1

(3) (M3214+20n).....

가 , ON / OFF

(a) M3214 + 20n : ON

· ( )  
1 , (0) 1



· M3214 + 20n ,  
가 , ON  
M3214 + 20n OFF  
가 . 가  
( , .)

(b) M3214 + 20n : OFF

( 가 ) - ( ) ( )  
.....

· , 1 가  
1

( 가 ) - ( ) > ( )  
.....

· , 가  
1

$$[ \quad 1 \quad ]$$

$$( \quad ) = ( \quad ) \times ( \quad ) \times ( \quad )$$

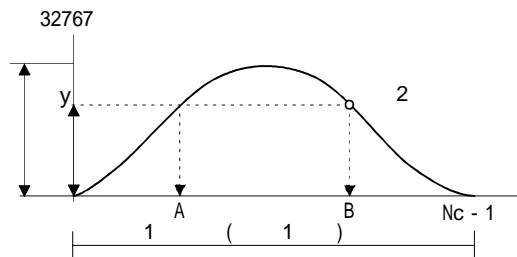
(y) , NO. 1

1

1 , 1

가

( 가 .)



가 1, 「A」 A B 「y」 .

- (4) OFF (M3215+20n).....
- OFF , OFF( RUN )
- M3215+20n : OFF... ON
  - M3215+20n : ON... OFF ( RUN )

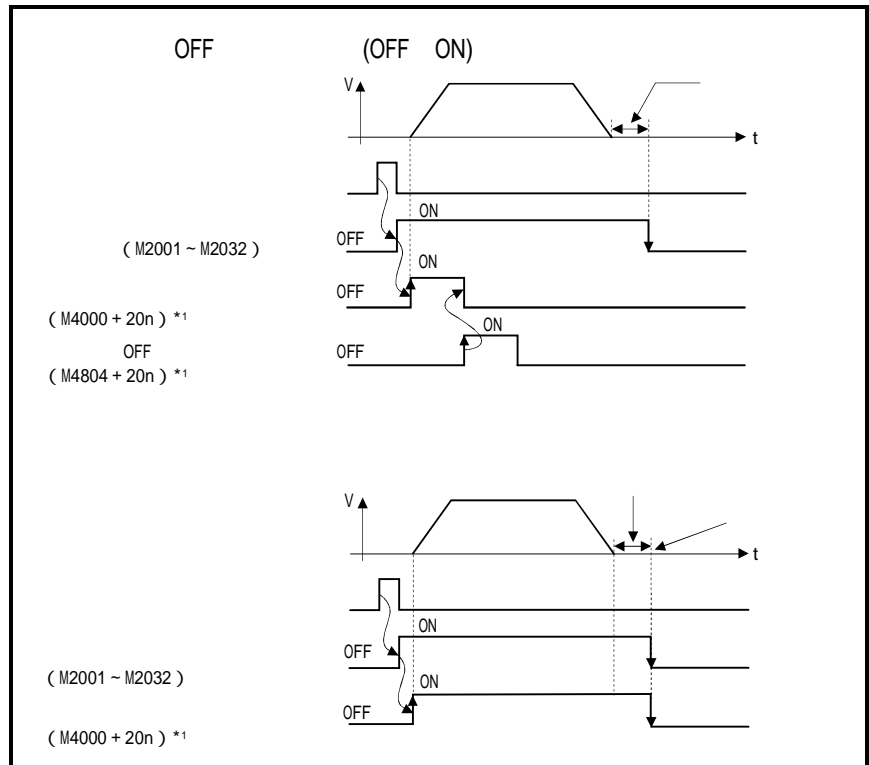
가 OFF , 가 OFF

ON , 가

가 .

## 4.1.3 가

- (1) (M4000+20n)<sup>\*1</sup>.....
- (a) SFC ( )
- ON
- JOG , , ON
- M <sup>\*2</sup>
- (b) , OFF (M4804+20n)<sup>\*1</sup>
- (OFF ON) OFF



\*1 :

M4000+20n, M4804+20n

n ,

NO.

NO.	n	No.	n	No.	n	No.	n
1	0	9	8	17	16	25	24
2	1	10	9	18	17	26	25
3	2	11	10	19	18	27	26
4	3	12	11	20	19	28	27
5	4	13	12	21	20	29	28
6	5	14	13	22	21	30	29
7	6	15	14	23	22	31	30
8	7	16	15	24	23	32	31

\* :

NO. ,

(例) 32

M4000 + 20n ( ) = M4000 + 20 × 31 = M4620

M4804 + 20n ( OFF ) = M4804 + 20 × 31 = M5424

( ) TEL : 02-3660-9531

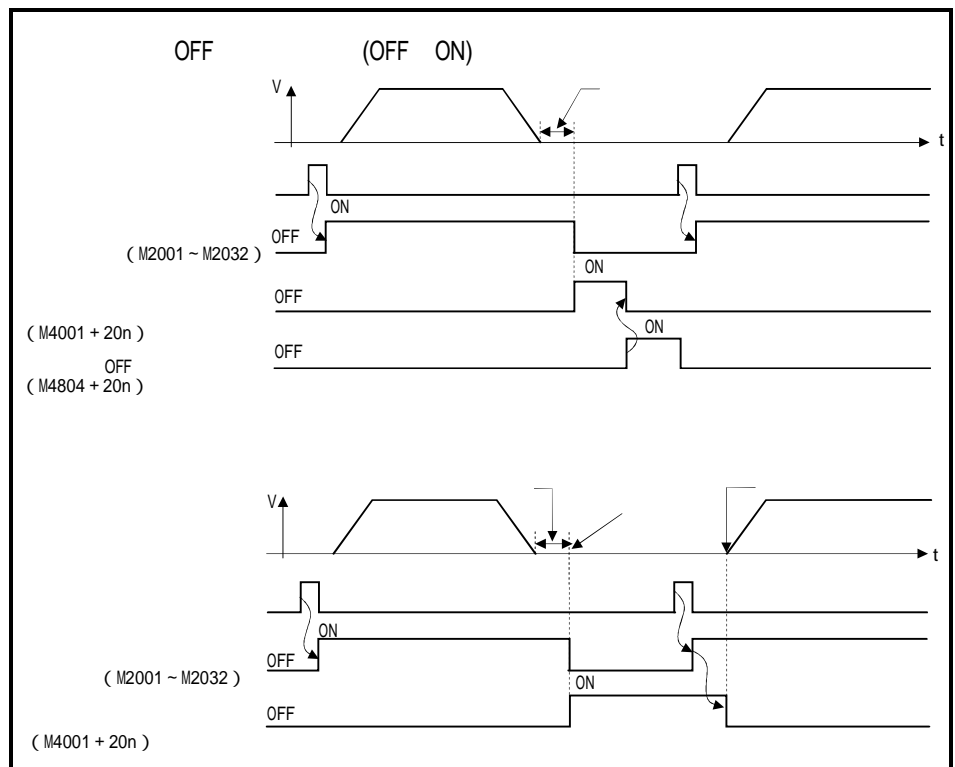
\*2 : Q172CPU NO.1~ NO.8 (n=0~7)가  
 \*3 : M , 「Q173CPU / Q172CPU (SV13 / SV22)  
 ( )」 「7.1M」

(2) (M4001+20n).....

(a) SFC ( )

ON  
 , ON  
 • JOG ,  
 • M

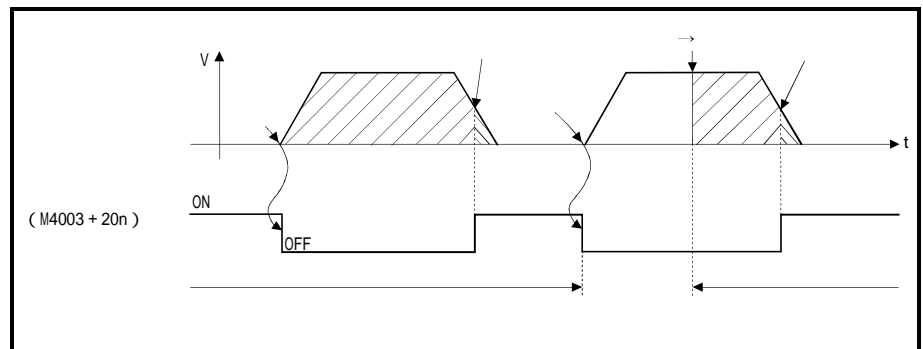
(b) , OFF (M4804+20n) (OFF  
 ON) OFF



(3) (M4003+20n).....

- (a) , 가 , 가  
(6.1.2 ) " " 가  
ON . 가 OFF .  
.  
.  
• JOG

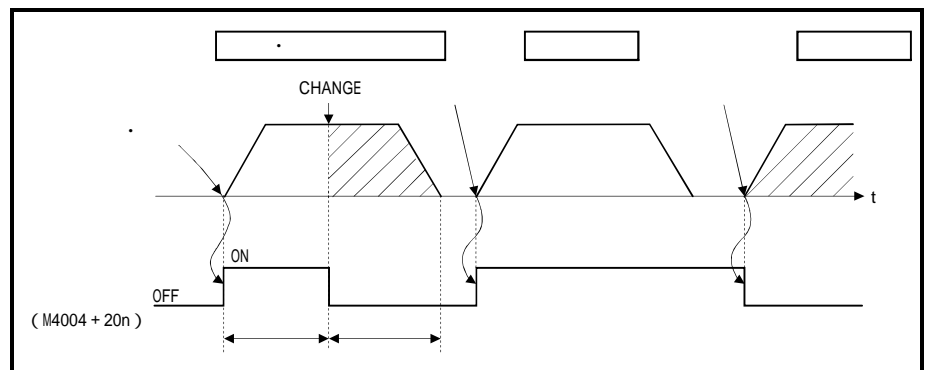
(b)



(4) (M4004+20n).....

- (a) , ON , ,  
ON , OFF .  
, OFF .

(b)



(5) (M4007+20n).....

(a) , 가 가  
ON  
ON / OFF , /

(b) 가 ON , 가

• \*1..... \*2  
• \*1..... \*2

가, 가 / 가 ,  
ON / OFF

(c) 가 가  
(M4807+20n) ON , OFF



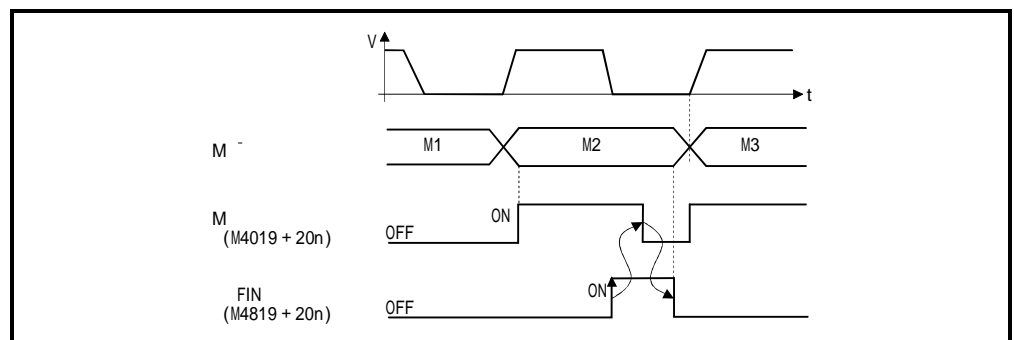
\*1 : 가 / 2.4  
/ 2.7

\*2 : , 4.2.3

(6) M (M4019+20n).....

(a) M

(b) , , , FIN 가 , OFF

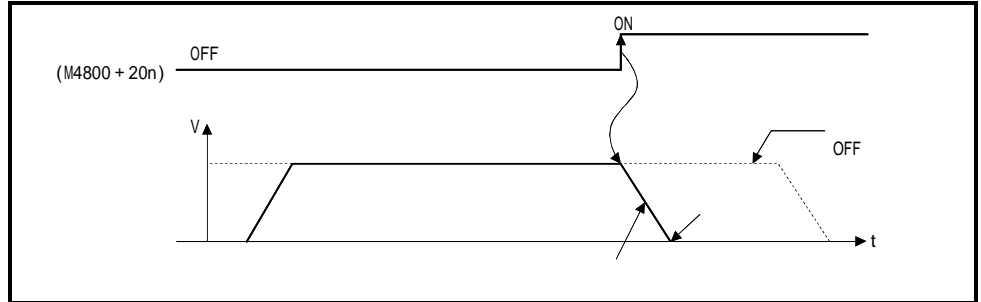


(1) M , FIN  
(2) M , FIN가  
ON , M

4.1.4 가

(1) (M4800+20n)<sup>\*1</sup>.....

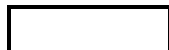
(a) ,  
(OFF ON) . ON



(b) ( , 「Q173CPU / Q172CPU (SV13 / SV22) ( )」 「6.13 (1)」 .)

(c) ON , 4.1 .  
4.1 ON

	ON	
JOG		



\*1 : M4800+20n , NO.

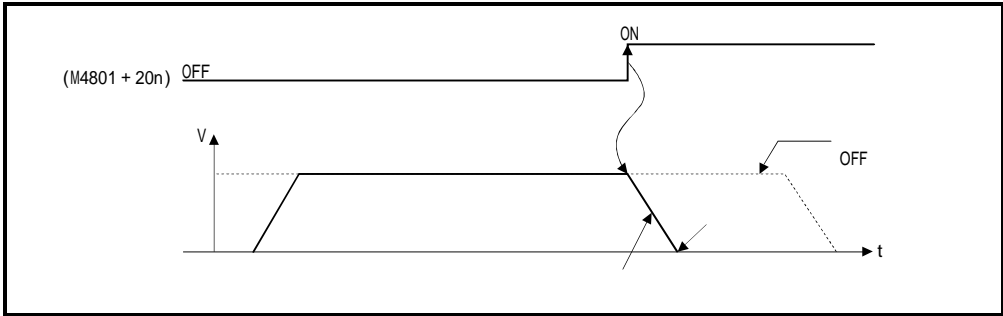
No.	n	No.	n	No.	n	No.	n
1	0	9	8	17	16	25	24
2	1	10	9	18	17	26	25
3	2	11	10	19	18	27	26
4	3	12	11	20	19	28	27
5	4	13	12	21	20	29	28
6	5	14	13	22	21	30	29
7	6	15	14	23	22	31	30
8	7	16	15	24	23	32	31

\* : NO.  
( ) 32  
M4800 + 20n ( ) = M4800 + 20 × 31 = M5420  
\* : Q172CPU NO.1~ NO.8 (n=0~7)가



(2) (M4801+20n).....

(a) ,  
(OFF ON) . ( ON ,  
.)



(b) ON , 4.2 .  
4.2 ON

	ON	
JOG	<p>This diagram shows a voltage ramping down from a high level to zero. A horizontal dashed line indicates the initial voltage level. A vertical dashed line marks the start of the ramp. The ramp reaches zero, and then there is a horizontal segment at zero voltage. Arrows indicate the direction of the ramp and the horizontal segment.</p>	<p>This diagram is similar to the previous one, showing a voltage ramp down to zero. A horizontal dashed line indicates the initial voltage level. A vertical dashed line marks the start of the ramp. The ramp reaches zero, and then there is a horizontal segment at zero voltage. A rectangular box is placed on the horizontal segment. Arrows indicate the direction of the ramp and the horizontal segment.</p>

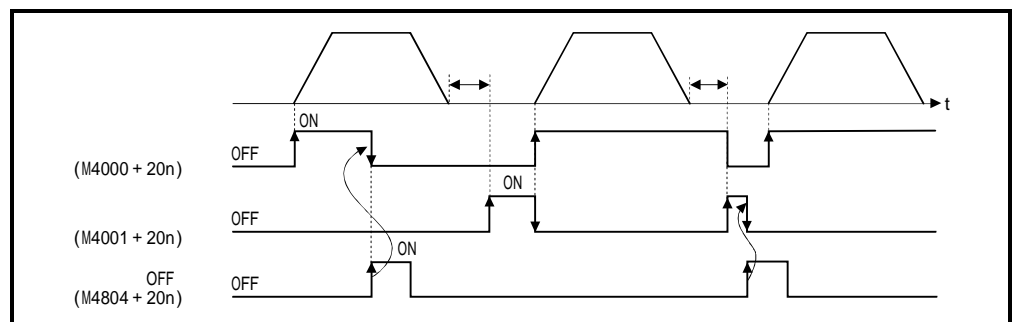


\* 1 : ,

- (3) JOG (M4802+20n) / JOG (M4803+20n)  
 .....  
 (a) SFC JOG (M4802+20n) ON ,  
 가 JOG  
 JOG (M4802+20n) OFF  
 .  
 (b) SFC JOG (M4803+20n) ON ,  
 JOG  
 JOG (M4803+20n) OFF ,  
 .

ON	JOG	(M4802+20n)	JOG (M4803+29n)
	SFC		

- (4) OFF (M4804+20n).....  
 (a) OFF , (M4000+20n),  
 (M4001+20n) SFC OFF  
 .



(5) (M4807+20n)·.....

(a) , 가

(b) ON

· 가

· 가

가

가

/

(M4007+20n) , ON

(6) STOP (M4809+20n)·.....

/

/

· ON ...

STOP

,

/

ON

가

· OFF...

STOP

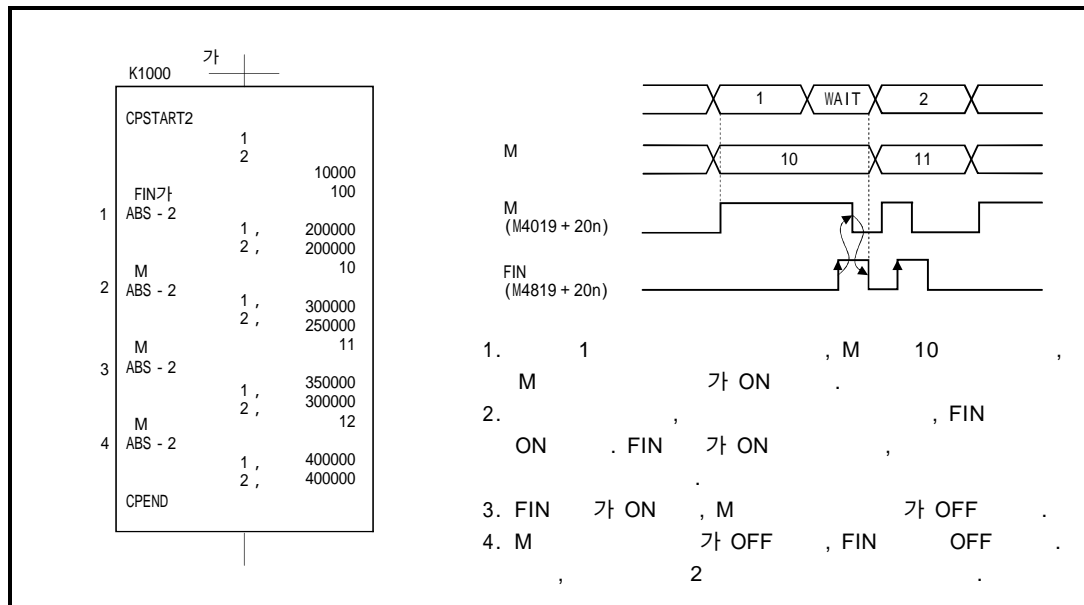
,

/

ON

STOP	(M4809+20n) ON , /
/	ON , (ON OFF ON)

(7) FIN (4819+20n).....  
M , FIN 가  
OFF ON OFF ,  
FIN OFF ON OFF .



(1) FIN , M , FIN .
(2) FIN , M , FIN 가
M , FIN
M ON .

## 4.1.5

- (1) (M4640+4n).....
- (a) , ON / ON/OFF .
- (b) 가 ON , 가  
 \*1 ..... \*2  
 \*1 ..... \*2  
 가 / 가 ,  
 ON/OFF .
- (c) (M5440+4n) ON OFF .
- (2) TREN (M4641+4n).....
- (a) TREN ,  
 Q173PX TREN ON , ON  
 TREN ON / OFF .
- (3) 가 (M4642+4n).....
- (a) CPU OFF CPU ON CPU  
 , CPU OFF (가 )  
 OFF ON  
 CPU ON / 가 가



\*1 : M4640 + 4n , M4641 + 4n , M4642 + 4n n , No.

No.	n	No.	n
P1/E1	0	P7/E7	6
P2/E2	1	P8/E8	7
P3/E3	2	P9/E9	8
P4/E4	3	P10/E10	9
P5/E5	4	P11/E11	10
P6/E6	5	P12/E12	11

\*2 : Q172CPU , NO. P1/E1~P8/E8 .

\*3 : / , 2.4 .  
 / , 2.7 .

\*4 : , 4.2.5

4.1.6

(1) (M5440+4n).....

(a) ,

.

(b) ON .

,

.

가 / ,

(M4640+4n) , ON 가 .

4.1.7

(1)	가 , 가 .
	M2000~M2319
(2)	가

(1) PLC (M2000)

(a) PLC CPU가 CPU

M2000 ON , SFC , JOG ,

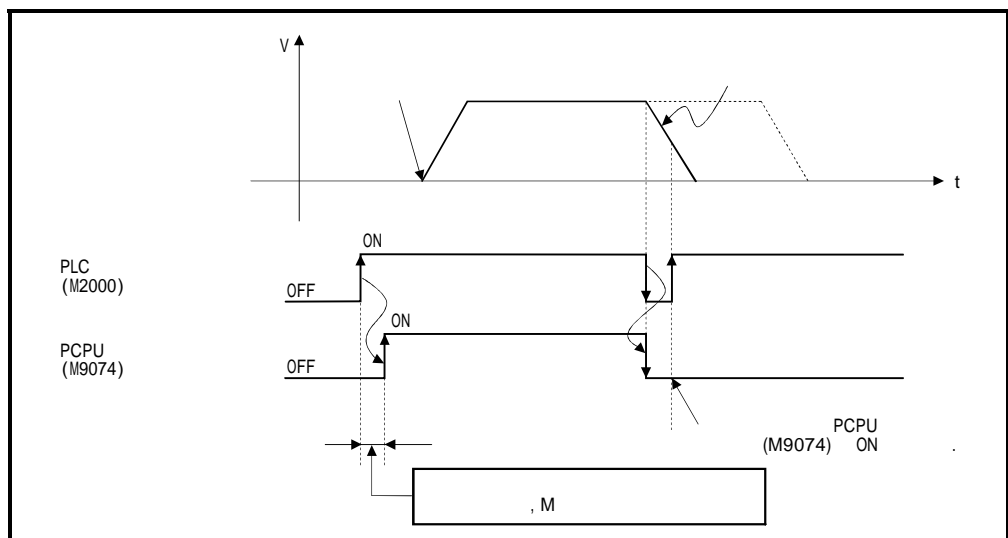
(M9057ON ) M2000 ON ,

(b) , , M2000 OFF

M2000 ON

(c) M2000 OFF→ON ,

- 
- M
- 300[%]
- ( 4.2.1 (7) )
- PUPC (M9740) ON . ( SFC
- 가 .)
- SFC
- 가 (c)
- (c)
- , M2000 ON , (c)



(d) M2000 ON→OFF , .

- PUPC (M9074) OFF .
- .
- SFC .
- PY가 OFF .

(e) STOP RUN  
 , PLC (M2000)가 ON

(STOP RUN) M2000 ON .( )  
M2000 OFF ON  
• RUN/STOP STOP RUN .  
• RUN/STOP RUN ,

M2000 ON OFF가  
• RUN/STOP RUN STOP .

(STOP RUN) + 1 M2000 ON .  
( RUN 1 M2000 ON .)  
M2000 OFF ON  
• RUN/STOP RUN PLC  
D704 1 . ( CPU D704 0  
1 .)

M2000 ON OFF가  
• RUN/STOP RUN PLC  
D704 0 . ( CPU D704 1  
0 .)  
• RUN/STOP RUN STOP .



(2) 가 (M2001~M2032)

(a) , SFC /

ON  
가 ON

(b) ON / OFF ,

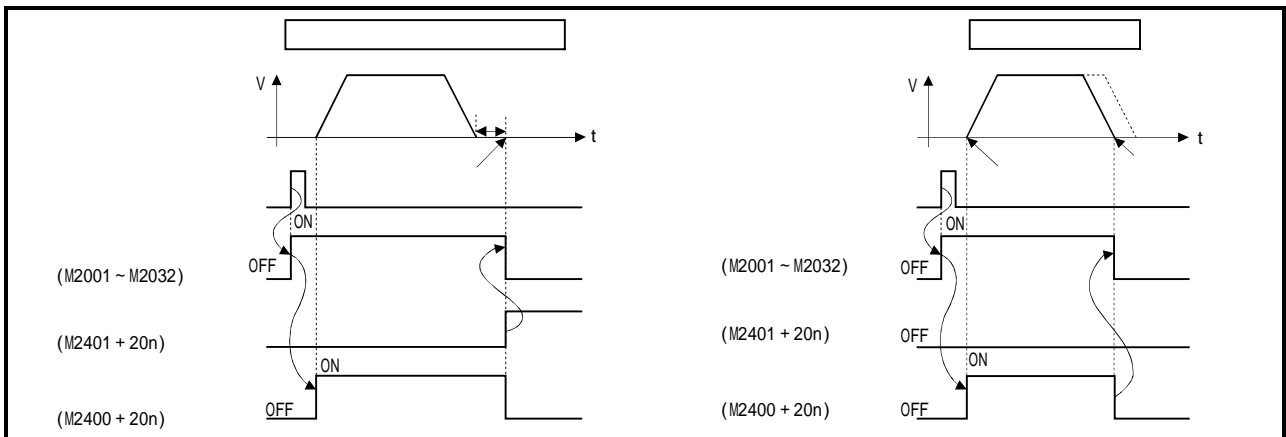
SFC ,

가 ON ,

OFF . OFF

( 0 , ,

ON .)



JOG (M4802+20n M4803+20n) ON

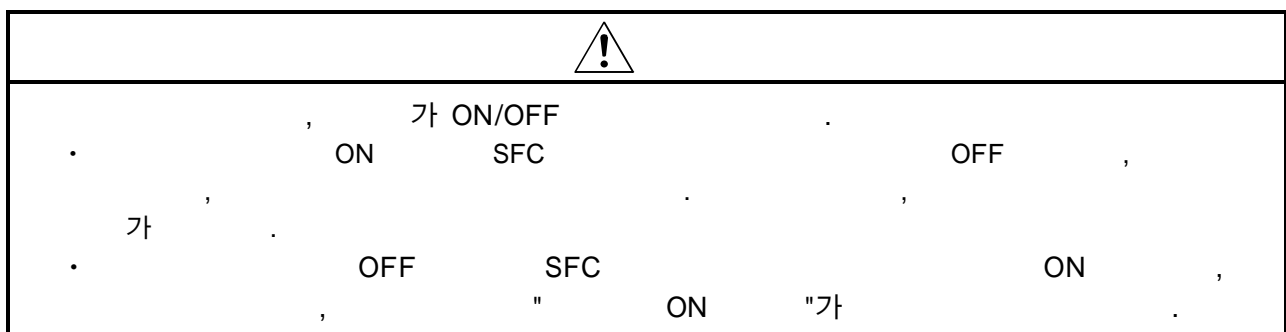
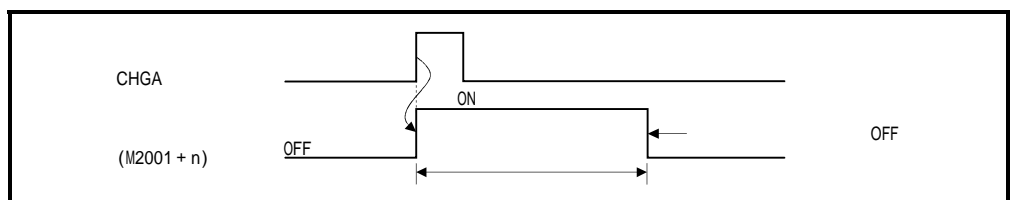
ON , JOG OFF OFF

가(M2051~M2053:ON) ON

가(M2051~M2053:OFF) OFF

CHGA , ON

OFF



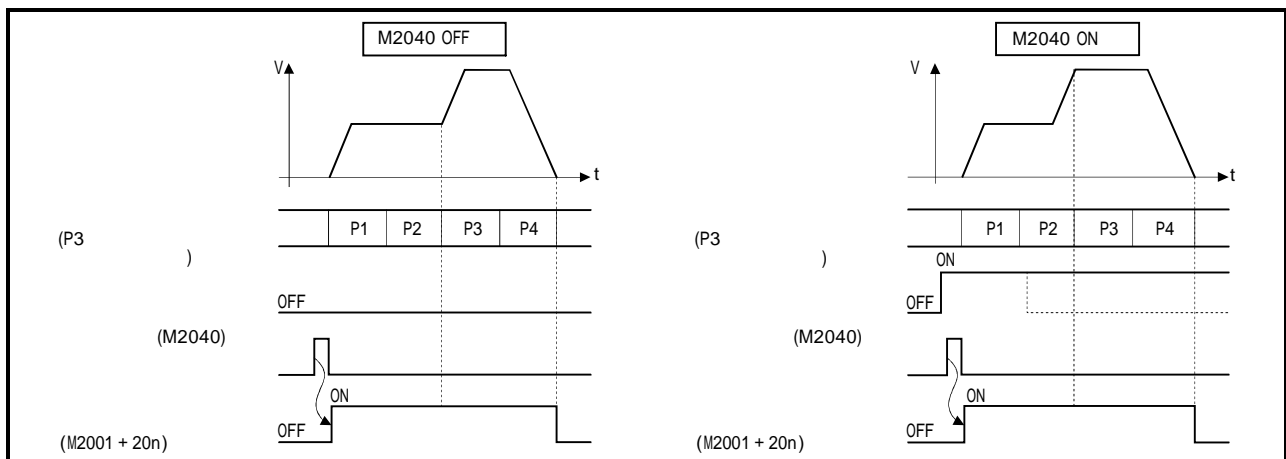
(3) PC (M2034)  
 PC 가 ON .  
 • ON : PC  
 • OFF : PC  
 ( , OFF . )  
 PC 2.6 .

(4) SFC (M2039)  
 SFC , ON .  
 OFF , OFF .

(5) (M2040)

(a) M2040 ( ) ON

- OFF
- ON



(6) (M2041)  
CPU , " "  
( , )

- ON
- OFF

(a) 가 CPU ERR.LED가 , (GSV  
22P )

(b) M2041 ON , 가 ,  
CPU

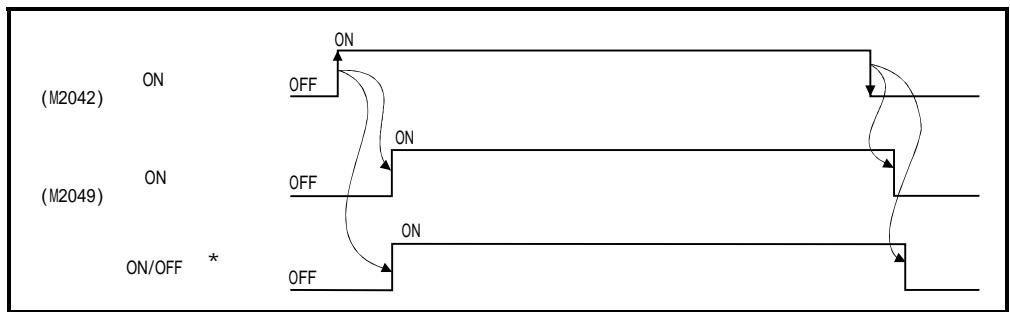


, CPU

(7) ON (M2043)

(a) ON , 가  
가 OFF (M3215+20n)가 OFF, 가  
M2042 ON .

(b) 가 • M2042가 OFF  
• OFF (M3215+20n)가 ON  
•



\*: , 「Q173CPU/Q172CPU (SV13 / SV22) ( )」 「3.1.1」

M2042 ON	, CPU STOP M2042 OFF .

- (8) /가 (M2043)  
가 / 가 .
- (a) 가 , PCPU  
(M9074)가 ON , M2043 ON .  
• M2043 OFF ON , 가  
가 , /가 (M2044)가  
ON .  
• 가 .  
/가 (M2045)가 ON ,  
(D9193) 가 .
- (b) 가 , M2043 OFF  
• .  
• 가 , M2044가 OFF .  
• 가 가 1 ,  
M2045가 ON , D9193 가 .
- (c) • 가 , 9 .
- (9) /가 (M2044)  
가 / 가 .  
• / 가 OFF .  
• 가 ON .  
( , )  
.
- (10) /가 (M2045)  
( 가 가 ) /  
• 가 , OFF .  
• ON .  
D9193 가 .

- (11) (M2046)
- (a) 가 가 ON
- .
- 가
- 가
- 가
- M2046 : ON
  - M2046 : OFF
- (b) 가 ON .
- .
- .
- (c) 가 ON ,
- .
- (M2046) OFF
- 가

(12) (M2047)..... /

- ON
- OFF

(a) ( , OFF ) , SFC

(13) JOG (M2048)

(a) M2048 ON , JOG (D710~D713)  
JOG JOG

(b) M2048 OFF , JOG

(14) ON (2049)

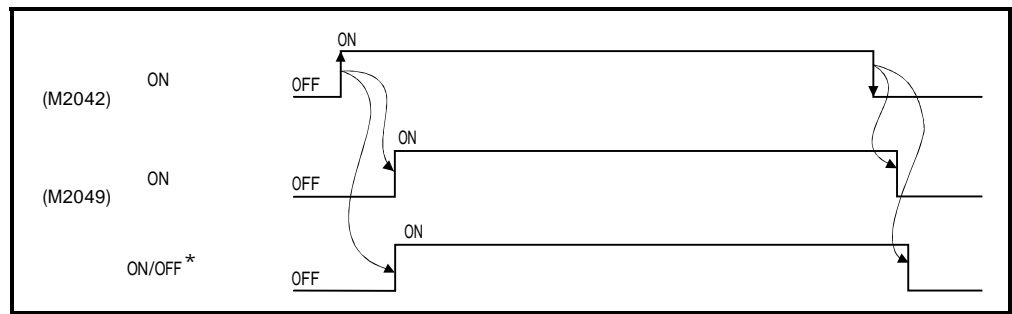
ON , CPU가 ON (M2042)

ON

ON/OFF

ON/OFF

(M2415+20n)



\* : , 「Q173CPU/Q172CPU (SV13/SV22) ( )」 「3.1.1」

(15) 가 (M2051~M2053)

가 , Q173PX P1~P3\*

가/ 가

- ON
- OFF

가

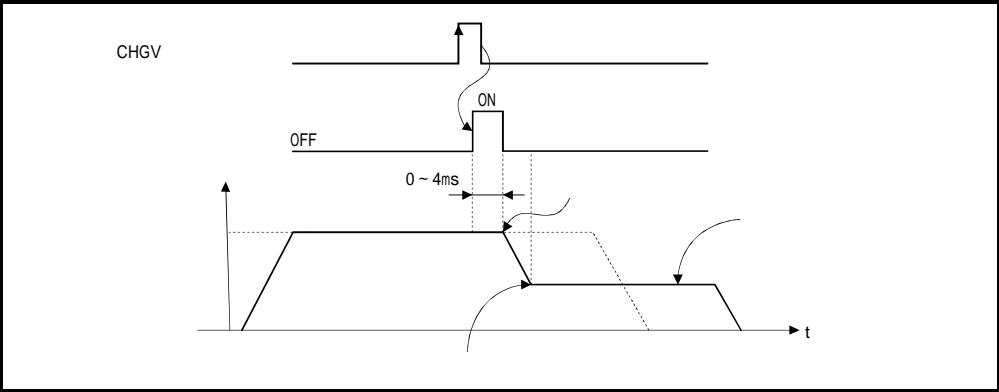
가



\* : Q173PX P1~P3( ) , 「 (Q173CPU/Q172CPUS

(16) (M2054) (D9197) ON  
OFF  
• CPU ON OFF  
• CPU  
•  
【     】  
SFC , NMI

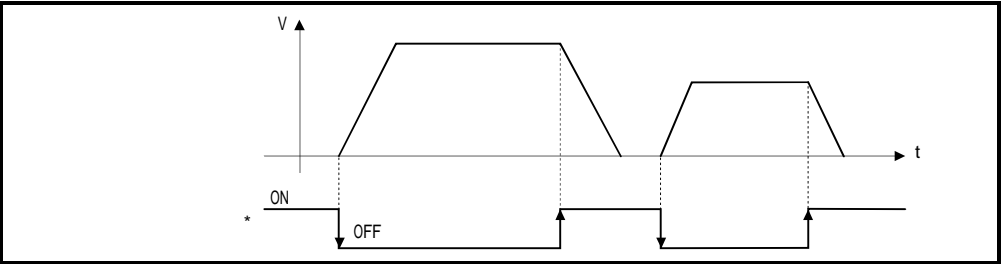
(17) (M2061~M2092) SFC (CHGV)  
ON



NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.
1	M2061	9	M2069	17	M2077	25	M2085
2	M2062	10	M2070	18	M2078	26	M2086
3	M2063	11	M2071	19	M2079	27	M2087
4	M2064	12	M2072	20	M2080	28	M2088
5	M2065	13	M2073	21	M2081	29	M2089
6	M2066	14	M2074	22	M2082	30	M2090
7	M2067	15	M2075	23	M2083	31	M2091
8	M2068	16	M2076	24	M2084	32	M2092

\* : Q173CPU/Q172CPU

- (18) (M2128~M2159)가 ,
- ON .
- (a) , , ON ,
- , 가 , OFF가 .
- (b) , OFF .
- (c) ON .
- JOG OFF .
- .
- .
- = 0

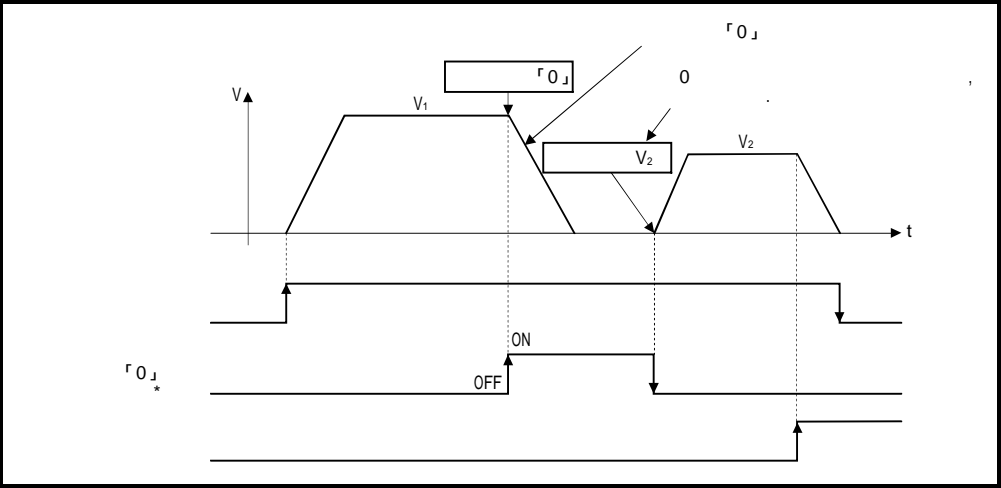


NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.
1	M2128	9	M2136	17	M2144	25	M2152
2	M2129	10	M2137	18	M2145	26	M2153
3	M2130	11	M2138	19	M2146	27	M2154
4	M2131	12	M2139	20	M2147	28	M2155
5	M2132	13	M2140	21	M2148	29	M2156
6	M2133	14	M2141	22	M2149	30	M2157
7	M2134	15	M2142	23	M2150	31	M2158
8	M2135	16	M2143	24	M2151	32	M2159

\* : Q172CPU , NO.1~ NO.8 가 .



(19) 「0」 (M2240~M2271)  
「0」 , 「0」 , (-)  
ON , ON .  
「0」 (-)  
ON , ,  
OFF가 .



「0」

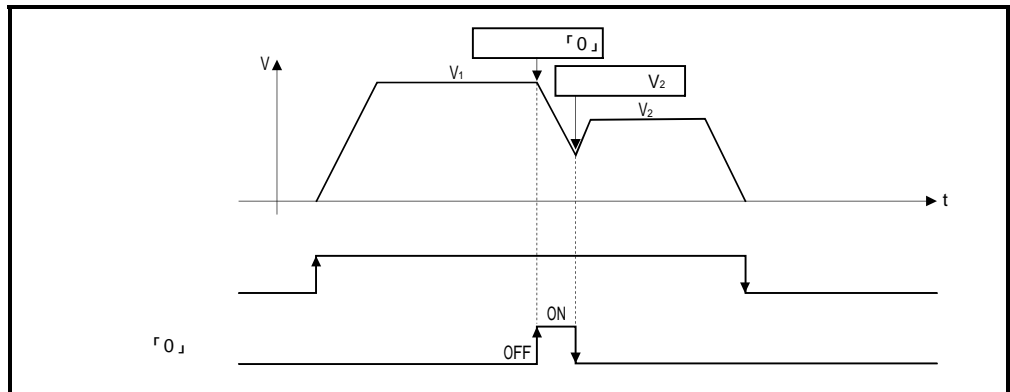
NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.
1	M2240	9	M2248	17	M2256	25	M2264
2	M2241	10	M2249	18	M2257	26	M2265
3	M2242	11	M2250	19	M2258	27	M2266
4	M2243	12	M2251	20	M2259	28	M2267
5	M2244	13	M2252	21	M2260	29	M2268
6	M2245	14	M2253	22	M2261	30	M2269
7	M2246	15	M2254	23	M2262	31	M2270
8	M2247	16	M2255	24	M2263	32	M2271

\* : Q172CPU NO.1~ NO.8 가 .

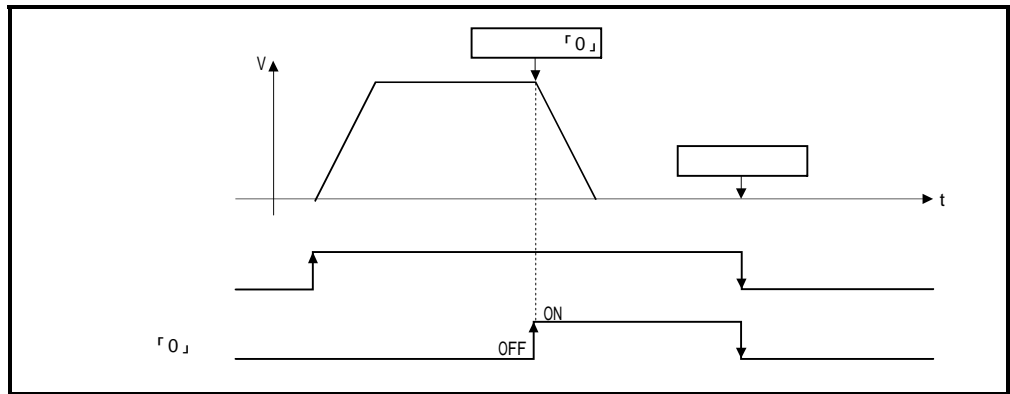


- (1) , (M2001~M2032)가 ON , 「0」 .
- (2) , , 가 .
- (3) , 「0」 가 .
  - JOG OFF
  - 
  - 
  -

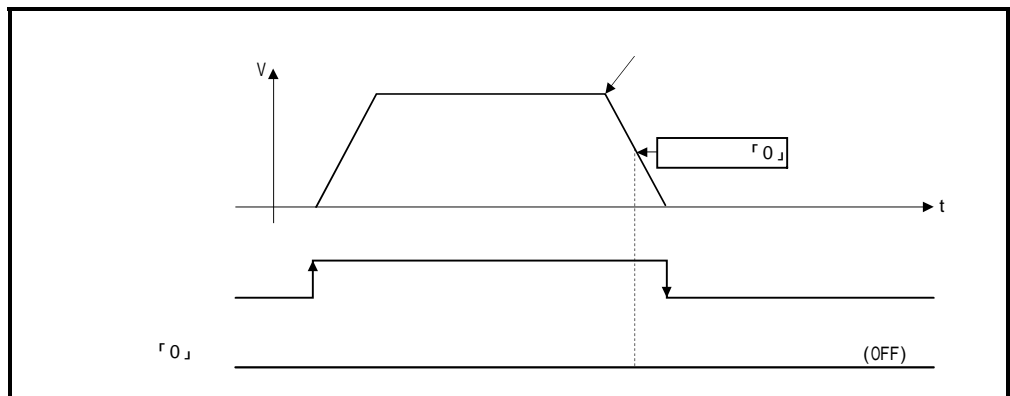
(a) 「0」 , 가 ,  
OFF가 .

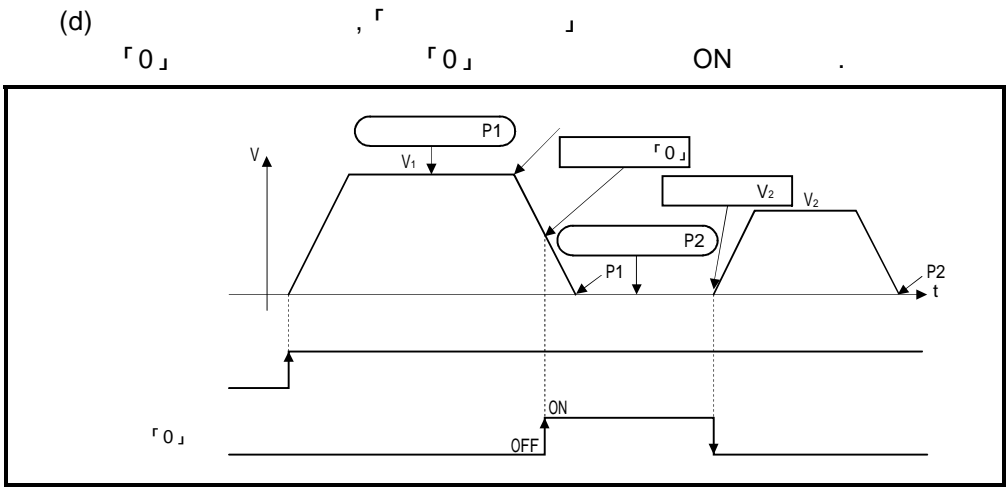


(b) 「0」 , , OFF가 .



(c) ON 「0」 , 「0」  
ON .





「 0 」 「 0 」

## 4.2

(1)

Q173CPU				Q172CPU			
			가				가
D0 }	( 20 × 32 ) ... 가 .....			D0 }	( 20 × 8 ) ... 가 .....		
				D160 }	( 480 )		
D640 }	( 2 × 32 )			D640 }	( 2 × 8 )		
				D655 }	( 48 )		
D704 }	( 96 )			D704 }	( 96 )		
D800 }	가 ( 6 × 32 ) *1			D800 }	가 ( 6 × 8 ) *1		
	가 ( 4 × 32 ) *1				가 ( 4 × 8 ) *1		
D1120 }	*1 ( 6 × 12 )			D1120 }	*1 ( 6 × 8 )		
	( 4 × 12 )				( 4 × 8 )		
D1240 }	( 10 × 32 ) *1			D1168 }	( 40 )		
D1320 }	( 6632 )			D1240 }	( 10 × 8 ) *1		
				D1320 }	( 6872 )		
D8191				D8191			



가

.	6632 (Q173CPU), 7680(Q172CPU)
*1 :	가 / / 」 ,
	, 가 가 .
*2 :	, 가
	. 「Q173CPU/Q172CPU (SV13/SV22)
	( )」 .

4.

(2)

NO.		
1	D0 ~ D19	
2	D20 ~ D39	
3	D40 ~ D59	
4	D60 ~ D79	
5	D80 ~ D99	
6	D100 ~ D119	
7	D120 ~ D139	
8	D140 ~ D159	
9	D160 ~ D179	
10	D180 ~ D199	
11	D200 ~ D219	
12	D220 ~ D239	
13	D240 ~ D259	
14	D260 ~ D279	
15	D280 ~ D299	
16	D300 ~ D319	
17	D320 ~ D339	
18	D340 ~ D359	
19	D360 ~ D379	
20	D380 ~ D399	
21	D400 ~ D419	
22	D420 ~ D439	
23	D440 ~ D459	
24	D460 ~ D479	
25	D480 ~ D499	
26	D500 ~ D519	
27	D520 ~ D539	
28	D540 ~ D559	
29	D560 ~ D579	
30	D580 ~ D599	
31	D600 ~ D619	
32	D620 ~ D639	

\*1 : Q172CPU , NO.1~ NO.8 가 .  
 \*2 : Q172CPU , 9 가 .

4.

(3)

NO.		
1	D640, D641	
2	D642, D643	
3	D644, D645	
4	D646, D647	
5	D648, D649	
6	D650, D651	
7	D652, D653	
8	D654, D655	
9	D656, D657	
10	D658, D659	
11	D660, D661	
12	D662, D663	
13	D664, D665	
14	D666, D667	
15	D668, D669	
16	D670, D671	
17	D672, D673	
18	D674, D675	
19	D676, D677	
20	D678, D679	
21	D680, D681	
22	D682, D683	
23	D684, D685	
24	D686, D687	
25	D688, D689	
26	D690, D691	
27	D692, D693	
28	D694, D695	
29	D696, D697	
30	D698, D699	
31	D700, D701	
32	D702, D703	

			가			
0	JOG					
1						

\* 1 : Q172CPU , NO.1~ NO.8 가 .  
 \* 2 : Q172CPU , 9 가 .

(4) 가

NO.							
1	D800 ~ D809						
2	D810 ~ D819						
3	D820 ~ D829						
4	D830 ~ D839						
5	D840 ~ D849						
6	D850 ~ D859						
7	D860 ~ D869						
8	D870 ~ D879						
9	D880 ~ D889						
10	D890 ~ D899						
11	D900 ~ D909						
12	D910 ~ D919						
13	D920 ~ D929						
14	D930 ~ D939						
15	D940 ~ D949						
16	D950 ~ D959						
17	D960 ~ D969						
18	D970 ~ D979						
19	D980 ~ D989						
20	D990 ~ D999						
21	D1000 ~ D1009						
22	D1010 ~ D1019						
23	D1020 ~ D1029						
24	D1030 ~ D1039						
25	D1040 ~ D1049						
26	D1050 ~ D1059						
27	D1060 ~ D1069						
28	D1070 ~ D1079						
29	D1080 ~ D1089						
30	D1090 ~ D1099						
31	D1100 ~ D1109						
32	D1110 ~ D1119						

\* 1 : SV22 가 .  
\* 2 : Q172CPU , NO.1~ NO.8 가 .  
\* 3 : Q172CPU , 9 가 .



(5)

は有効

\* 1 : Q172CPU , NO.1~ NO.8 가 .  
\* 2 : Q172CPU , 9 가 .

4.

(6)

NO.		
1	D1240 ~ D1249	
2	D1250 ~ D1259	
3	D1260 ~ D1269	
4	D1270 ~ D1279	
5	D1280 ~ D1289	
6	D1290 ~ D1299	
7	D1300 ~ D1309	
8	D1310 ~ D1319	
9	D1320 ~ D1329	
10	D1330 ~ D1339	
11	D1340 ~ D1349	
12	D1350 ~ D1359	
13	D1360 ~ D1369	
14	D1370 ~ D1379	
15	D1380 ~ D1389	
16	D1390 ~ D1399	
17	D1400 ~ D1409	
18	D1410 ~ D1419	
19	D1420 ~ D1429	
20	D1430 ~ D1439	
21	D1440 ~ D1449	
22	D1450 ~ D1459	
23	D1460 ~ D1469	
24	D1470 ~ D1479	
25	D1480 ~ D1489	
26	D1490 ~ D1499	
27	D1500 ~ D1509	
28	D1510 ~ D1519	
29	D1520 ~ D1529	
30	D1530 ~ D1539	
31	D1540 ~ D1549	
32	D1550 ~ D1559	

			가			
0	가					
1	No.					
2						
3						
4	1					
5						
6	가					
7						
8						
9						

\*1 : Q172CPU , No.1~ No.8 가 .  
 \*2 : Q172CPU , 9 가 .

(7)

D704	PLC			
D705				
D706	ON			
D707	/가			
D708	JOG			
D709	가			
D710	JOG			
D711				
D712				
D713				
D714	1 No.			
D715				
D716	2 No.			
D717				
D718	3 No.			
D719				
D720	1			
D721	2			
D722	3			
D723	4			
D724	5			
D725	6			
D726	7			
D727	8			
D728	9			
D729	10			
D730	11			
D731	12			
D732	13			
D733	14			
D734	15			
D735	16			
D736	17			
D737	18			
D738	19			
D739	20			
D740	21			
D741	22			
D742	23			
D743	24			
D744	25			
D745	26			
D746	27			
D747	28			
D748	29			
D749	30			
D750	31			
D751	32			
D752	1			

D753	2		가	
D754	3			
D755	1 가			
D756	2 가			
D757	3 가			
D758	가			
D759	PCPU			
D760	가 (32 )			
D761				
D762				
D763				
D764				
D765				
D766				
D767				
D768				
D769				
D770				
D771				
D772				
D773				
D774				
D775				
D776				
D777				
D778				
D779				
D780				
D781				
D782				
D783				
D784				
D785				
D786				
D787				
D788				
D789				
D790				
D791				
D792				
D793				
D794				
D795		ON		
D796				
D797				
D798				
D799				

\* 1 : SV22

\* 2 : Q172CPU

\* 3 : Q172CPU

가

NO.1~ NO.8

가

가

## 4. 2. 1

(1) / (D0+20n,D1+20n)••••

(a) ,  
 ,  
 .

(b) , .

(c) .

mm	1 ~ 600000000	0.01 ~ 6000000.00[mm/min]
inch		0.001 ~ 600000.000[ inch/min]

(2) (D2+20n, D3+20n)••••••••••

(a) ,  
 .

(b) , "( ) = ( )" .

(3) (D4+20n,D5+20n)••••••••••

, 가  
 .

(4) (D6+20n)••••••••••

(a) , 가  
 , 가 ,  
 가 .

(b) , (M3207+20n) .

(5) (D7+20n) ••••••••••

(a) , 가  
 , 가 ,  
 가 .

(b) , (M3207+20n) .

(6) (D8+20n)••••••••••

(a) , 가  
 가 , 가 ,  
 가 .

(b) ,

(7) (D14+20n)••••••••••

PLC (M2000) 300[%]가 .

#### 4.

##### 4. 2. 2

, 가 JOG

##### 3.1

	1	2	3	4	5	6	7	8
JOG	D641 , D640	D643 , D642	D645 , D644	D647 , D646	D649 , D648	D651 , D650	D653 , D652	D655 , D654
	9	10	11	12	13	14	15	16
	D657 , D656	D659 , D658	D661 , D660	D663 , D662	D665 , D664	D667 , D666	D669 , D668	D671 , D670
	17	18	19	20	21	22	23	24
	D673 , D672	D675 , D674	D677 , D676	D679 , D678	D681 , D680	D683 , D682	D685 , D684	D687 , D686
	25	26	27	28	29	30	31	32
	D689 , D688	D691 , D690	D693 , D692	D695 , D694	D697 , D696	D699 , D698	D701 , D700	D703 , D702

\* : Q172CPU 1 ~ 8 가

(1) JOG (D640+2n)

(a) JOG JOG

(b) JOG

	PLS	
JOG	1 ~ 10000000	[PLS/s]

(c) JOG (OFF → ON) , JOG

JOG , JOG 가

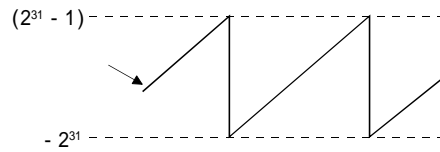
(d) JOG , 「Q173CPU/Q172CPU (SV13/SV22)  
( )」 6.20

## 4. 2. 3 가

(1) (D800+10n)<sup>\*1</sup>.....

(a) , 가 , /

(b) , .

(c) - 2<sup>31</sup> PLS ~ ( 2<sup>31</sup> - 1 ) PLS 가 .

(d) , CPU OFF /

(2) (D802+10n).....

(a) 가 , , ( 2.4  
2.7 )가 .  
가 , 가 ,  
가 .

(b) 가 ,  
\*2 .  
\*3 .



\*1 : D800+10n n , NO.

NO.	n	NO.	n	NO.	n	NO.	n
1	0	9	8	17	16	25	24
2	1	10	9	18	17	26	25
3	2	11	10	19	18	27	26
4	3	12	11	20	19	28	27
5	4	13	12	21	20	29	28
6	5	14	13	22	21	30	29
7	6	15	14	23	22	31	30
8	7	16	15	24	23	32	31

\* : NO.

( ) 32

D800+10n ( ) = D800+10×31 = D1110

\* : Q172CPU NO.1~ NO.8 (n=0~7)가 .

\*2 : 가 , 4.1.4 .

\*3 : , 4.1.2 .

(3) (D803+10n)..... ( 2.4

(a)가 ,

2.7 )가 .

가 , 가 ,

가 .

(b)가 ,

\*1 .

\*2 .



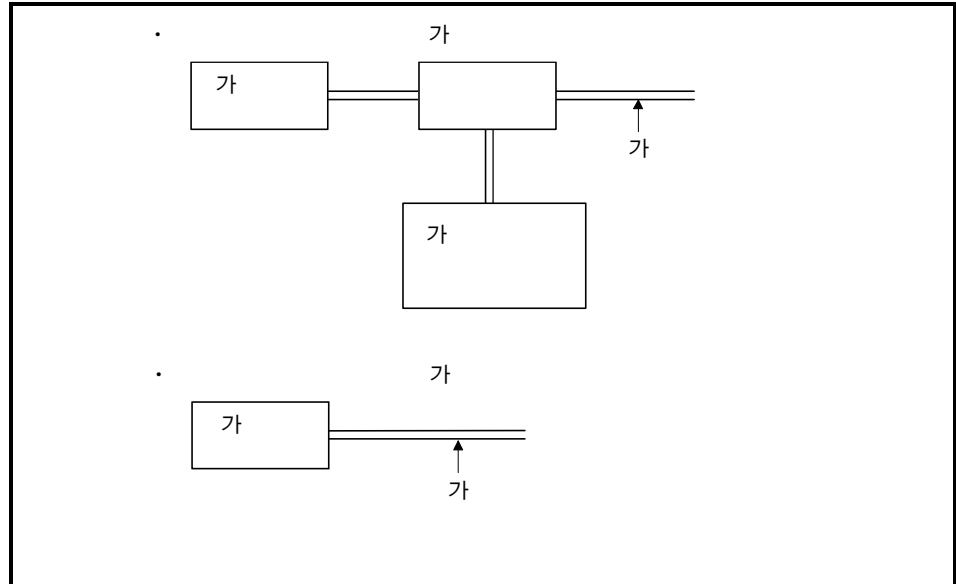
\* 1 : 가 , 4.1.4 .

\* 2 : , 4.1.2 .

4. 2. 4 가

(1) 가

(D806+10n, D807+10n)\*1.....



(a) 가

(b)

(c)



\*1 : D806+10n, D807+10n n NO.

NO.	n	NO.	n	NO.	n	NO.	n
1	0	9	8	17	16	25	24
2	1	10	9	18	17	26	25
3	2	11	10	19	18	27	26
4	3	12	11	20	19	28	27
5	4	13	12	21	20	29	28
6	5	14	13	22	21	30	29
7	6	15	14	23	22	31	30
8	7	16	15	24	23	32	31

\* : NO.

( ) 32

$$D806 + 10n = D806 + 10 \times 31 = D1116$$

\* : Q172CPU , NO.1~ NO.8 (n=0~7)가

( ) TEL : 02-3660-9531



(2) NO. (D808+10n).....

(a) 가 , 가 NO.

(b) 가 가 , NO. , NO. NO. .

(c) , NO. NO. 가 , NO.가 .

가 , NO. NO. (가 ) NO. , NO. .

(d) 가 / 가 , "0"( )

## 4. 2. 5

(1) (D1120+10n, D1121+10n).....

(a) .

(b) - 2147483648 ( -  $2^{31}$  ) ~ 2147483647 (  $2^{31} - 1$  ) [PLS] 가 .

(c) , CPU OFF /

.

(2) (D1122+10n).....

(a) , ( 2.4

2.7 )가 .

, 가 ,  
가 .

(b) ,

\*1

.

\*2

.



\*1 : , 4.1.6

\*2 : , 4,1,2

(3) (D1123+10n).....

(a) , ( 2.4

2.7 )가 .

, 가 ,  
가 .

(b) ,

.

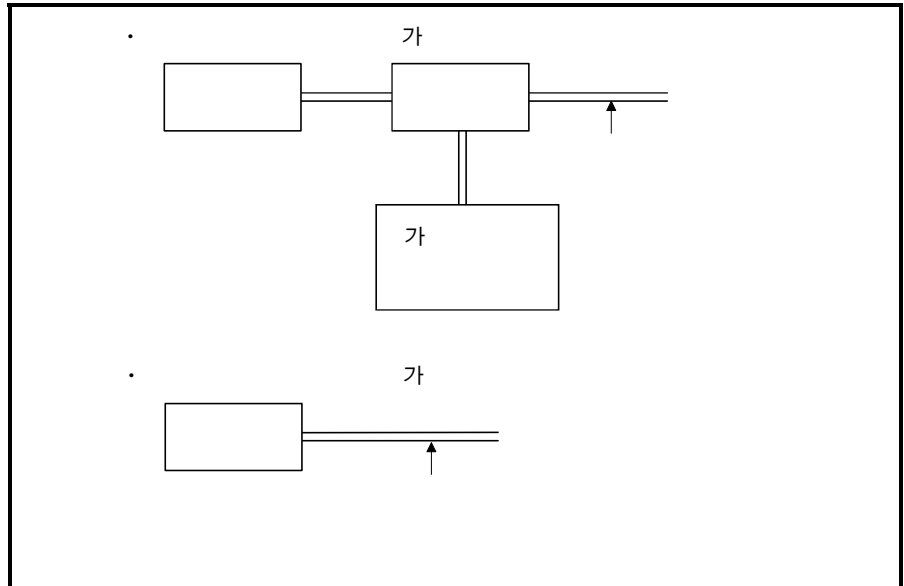
,

.

4. 2. 6

(1)

(D1126+10n, D1127+10n).....



(a) 가

(b)

(c)

- (2) NO. (D1128+10n).....
- (a) 가 , 가 NO.
- (b) 가 , No.
- No. No. .
- (c) , 가 ,
- No. No. .
- No.가 .
- 가 , No. No.
- 가 ,
- (가 ) ,
- No. ,
- No. .
- (d) 가 / 가 "0"( , )
- 가 , No. .

4. 2. 7

(1) No. (D1241+10n) .....  
 (a) No. , No.가

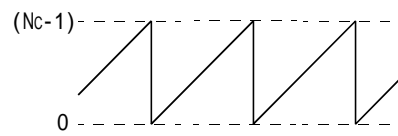
(b) No. No. ,  
 ( , No. .)

(2) (D1242+10n, D1243+10n)  
 .....

(a) .

(3) 1 (D1244+10n, D1245+10n)  
 .....

(a) , 0~[ 1 1 (Nc) - 1] .



## 4. 2. 8

(1) SET/RST (D704~D708, D755~D757)

Q-PLC CPU ON/OFF D

가 0 1 가 ON . OFF

1 0

M2000~M2053 , 「 4.1.7

」 . ( )

No.			
1	PLC	M200	D704
2		M204	D705
3	ON	M2042	D706
4	/가	M2043	D707
5	JOG	M2048	D708
6	1 가	M205	D755
7	2 가	M205	D756
8	3 가	M2053	D757

(2) JOG (D710~713)

(a) JOG 가 No.

	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0	
D710	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	JOG
D711	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	
D712	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	JJOG
D713	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	
* 1 : JOG 1/0 1 : 0 : * 2 : Q172CPU 1~ 8 가 * 3 : , 2.1																	

(b) JOG , 「 Q173CPU / Q172CPU

(SV13/SV22) ( )」 6.20.3

(3) No. (D714~D719)  
(a) 가 No.

		b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
P1	D714	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
	D715	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
P2	D716	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
	D717	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
P3	D718	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
	D719	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17

\*1 : 1/0  
1 :  
0 :  
\*2 : Q172CPU 1~ 8 가  
\*3 : , 2.1

(b) , 「Q173CPU / Q172CPU (SV13/SV22)  
( )」 6.21

(4) 1 (D720~D751)  
(a) , 1 (1~1000)

1	No.		1	No.	
D720	1	1 ~ 10000 *2	D736	17	1 ~ 10000 *2
D721	2		D737	18	
D722	3		D738	19	
D723	4		D739	20	
D724	5		D740	21	
D725	6		D741	22	
D726	7		D742	23	
D727	8		D743	24	
D728	9		D744	25	
D729	10		D745	26	
D730	11		D746	27	
D731	12		D747	28	
D732	13		D748	29	
D733	14		D749	30	
D734	15		D750	31	
D735	16		D751	32	

\*1 : Q172CPU 1~ 8 가

\*2 : SW6RN-SV13Q /22Q (Ver.OOB) , (1~100)가

(b) , 「Q173CPU / Q172CPU (SV13/SV22)  
( )」 6.21

(5) (D752~D754)

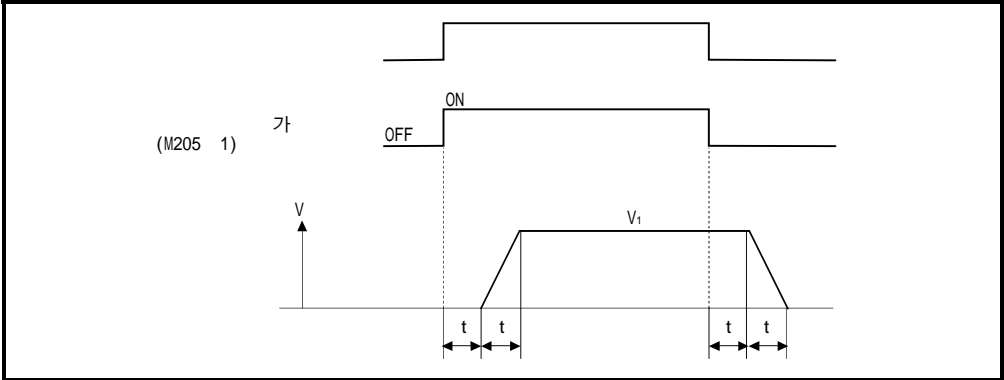
(a)

1(P1) : D752	0~59
2(P2) : D753	
3(P3) : D754	

(b)

(t) = (                    + 1) × 56.8[ms]

(c)



(V1)[PLS/s] = (                    /s) × (                    1                    )

(L)[PLS] =                    ×  $\left[ \begin{array}{c} 1 \\ \end{array} \right]$

(d) 가

(1)                    , 56.8[ms]~3408[ms]가                    .



(6) (D792~D799)  
CPU ON / ,  
.

	b15 ~ b12	b11 ~ b8	b7 ~ b4	b3 ~ b1
D792	4	3	2	1
D793	8	7	6	5
D794	12	11	10	9
D795	16	15	14	13
D796	20	19	18	17
D797	24	23	22	21
D798	28	27	26	25
D799	32	31	30	29

• 0.....  
• 2.....MR - - B



## 4. 4 (SP.M)

CPU , M9000~M9255 256 가 .  
 , M9073~M9079 7 , 3.2 가  
 . (M9073~M9079 , 「 3.1 」  
 .)

## 3. 2

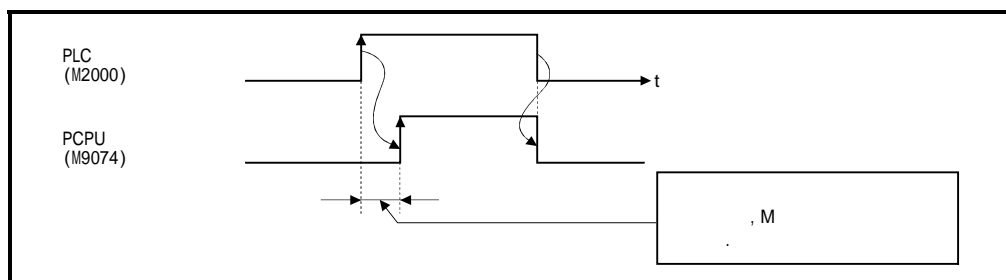
M9073	PCPU WDT		
M9074	PCPU		
M9075			
M9076			
M9077			
M9078			
M9079			

- (1) PCPU MDT (M9073)  
 CPU , "WDT " ON  
 CPU , WDT  
 CPU WDT 가 ON , CPU

M9073 ON , CPU  
 , 「 CPU WDT (D9184) 」  
 (4.5 (2) )

- (2) PCPU (M9074)  
 CPU /  
 (a) PLC (M2000) OFF → ON , ON ,  
 M

(b) PLC (M2000)가 OFF OFF .



- (3) (M9075) , 가 가 .
- (a) SFC .
- OFF
  - ON
- (b) 가 ,
- (M9078)가 ON .
- (4) (M9076)
- ON / OFF .
- OFF ON
  - ON OFF
- (5) (M9077)
- (a) (D714~D719) /
- OFF D714~D719가
  - ON D714~D719가
- (b) M9077 ON (D9185~  
D9187) .
- (6) (M9087)
- (a) , 가 ON
- (b) M9078 ON , (D9182,  
D9183) .

(1)	가 , (M
2042) OFF , OFF .	
(2)	가

- (7) (M9079) / .
- OFF
  - ON

#### 4.

##### 4. 5 (SP.D)

CPU , D9000~D9255 256  
 , D9180~D9199 20

가 .

(D9180~D9201 , 3.2 .)

##### 3. 3

D9180	가			
D9181				
D9182				
D9183				
D9184	CPU WDT	CPU WDT		
D9185				
D9186		가		
D9187				
D9188				
D9189	No.			
D9190				
D9191		ON		
D9192				
D9193	/가			
D9194		가		
D9195				
D9196	PC			
D9197		ON		
D9198	가			
D9199				
D9200				
D9201	LED			

##### (1) (D9182~D9183)

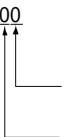

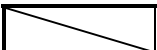
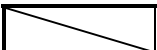
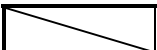
가 , (M9078)가 ON , / 가

	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
D9182	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
D9183	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17

\* 1 : Q172CPU 1~ 8 가 .  
 \* 2 : , 2.1 .

4.

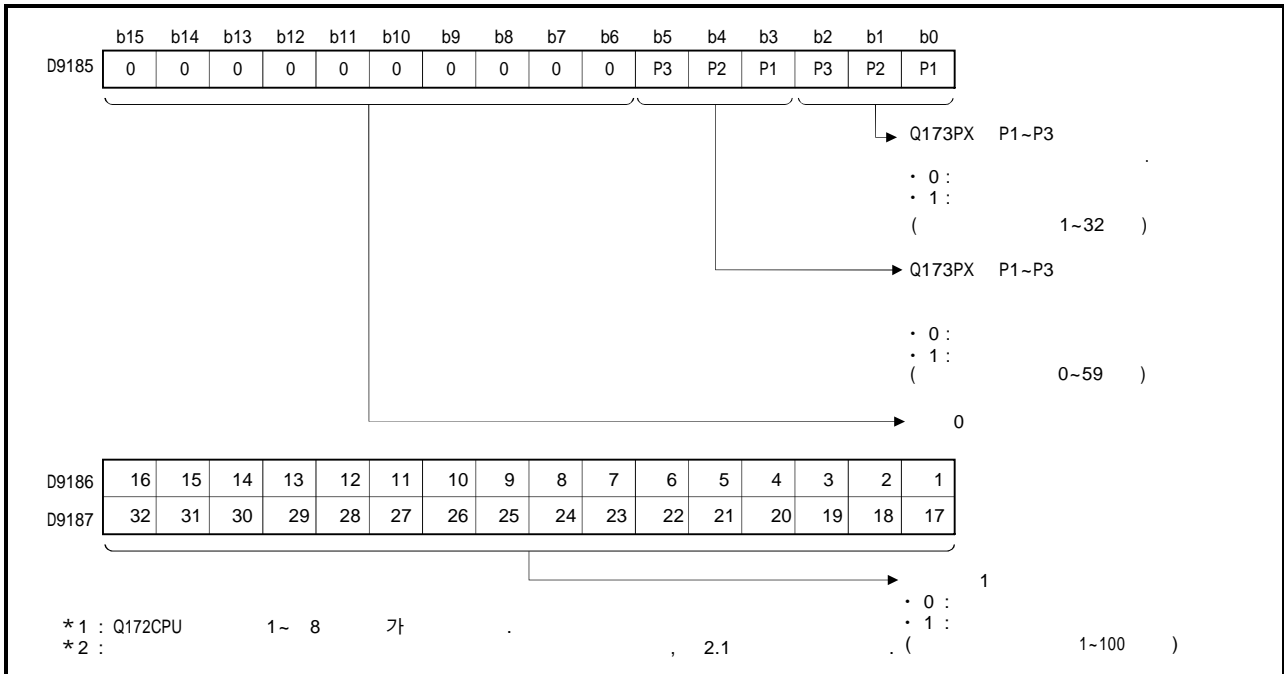
(2) CPU WDT SFC (D9184) CPU

1*1	S/W 1	가					
2*1							
3	WDT						
30	H/W						
201 ~ 215	Q H/W 200  No. (0~7) 0 : 1 : 1 2 : 2 3 : 3 4 : 4	가 가 ( )					
250 ~ 253	(MR - -B) I/F H/W 250  SSCNET No. 0 : SSCNET 1 1 : SSCNET 2 2 : SSCNET 3 3 : SSCNET 4						
300	S/W 3						
301	8 CPS START 가 <table border="1" data-bbox="320 1176 777 1272"><tr><td></td><td>가</td></tr><tr><td>가</td><td>14</td></tr></table>		가	가	14	8 CPS START 가	
	가						
가	14						

\* 1 : CPU WDT "1" "2" ,  
SFC , , NMI

4.

(3) (D9185~D9187) 가 , 가 ,  
D9185~D9187 , (M9077)  
가 ON .



(4) (D9188) [μm] .

(5) No. (D9189) 가 ,  
(a) (M9079)가 ON , 가 No. (0~4095)

(b) No.가 , No.가 .

(6) (D9190) 가 ,  
(M9079)가 ON , 가  
가 . , 2.3 .

(7) CPU (D9191~D9192) ON / 가

→ , 가 . , →

	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
D9191	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
D9192	32	31	30	29	28	27	26	25	24	23	21	20	19	18	17	

\* 1 : Q172CPU 1 ~ 8 가 . : .....1

\* 2 : : .....0

2.1 .

(a)

/

- MR- -B가 ( )
- 가 OFF .

	MR - - B	
( No. )	1	0
	0	0

(8) PC (D9196) PC 가 , 가 .

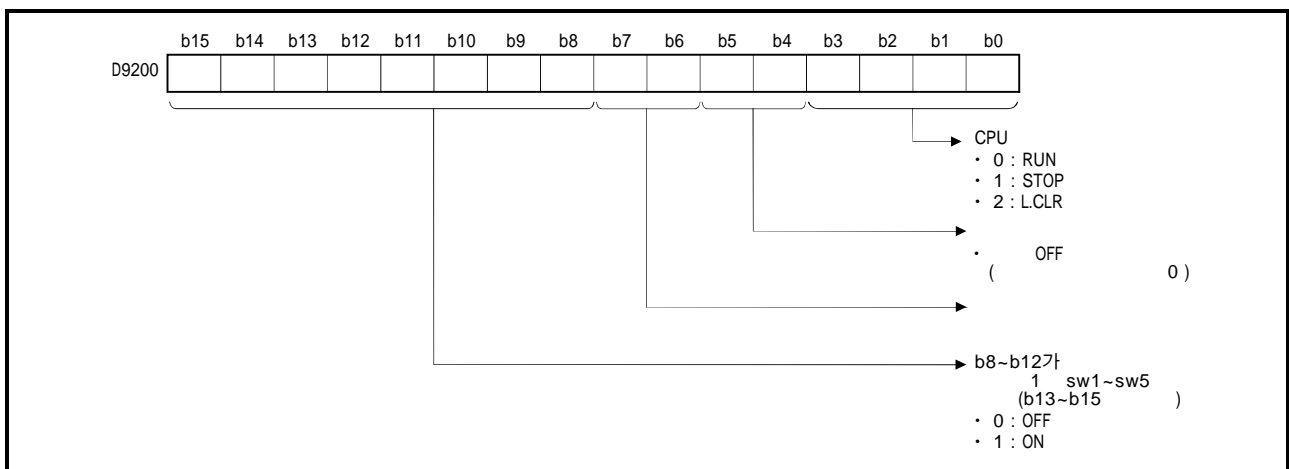
PC	
D9196	00 : 01 : 02 : CRC 03 : 04 : 05 : ( 00 . )

PC , 2.6 .

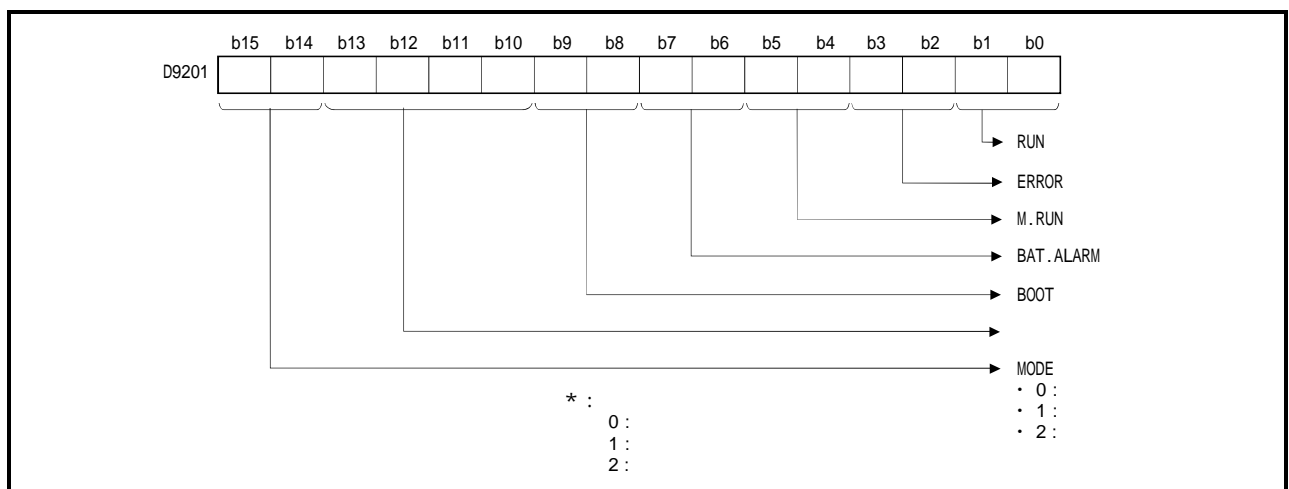


(9) (D9197)  $[\mu m]$  , 가  
 0.8[ms]/1.7[ms]/3.5[ms]/7.1[ms]  
 가  
 ) : MR-H-BN 0.8[ms]  
 MR-H-BN 0.8[ms]  
 7.1[ms]

(10) (D9200)  
 CPU 가



(11) LED (D9201)  
 CPU LED가  
 0 , 1 , 2







(1) , 가 가 ( )

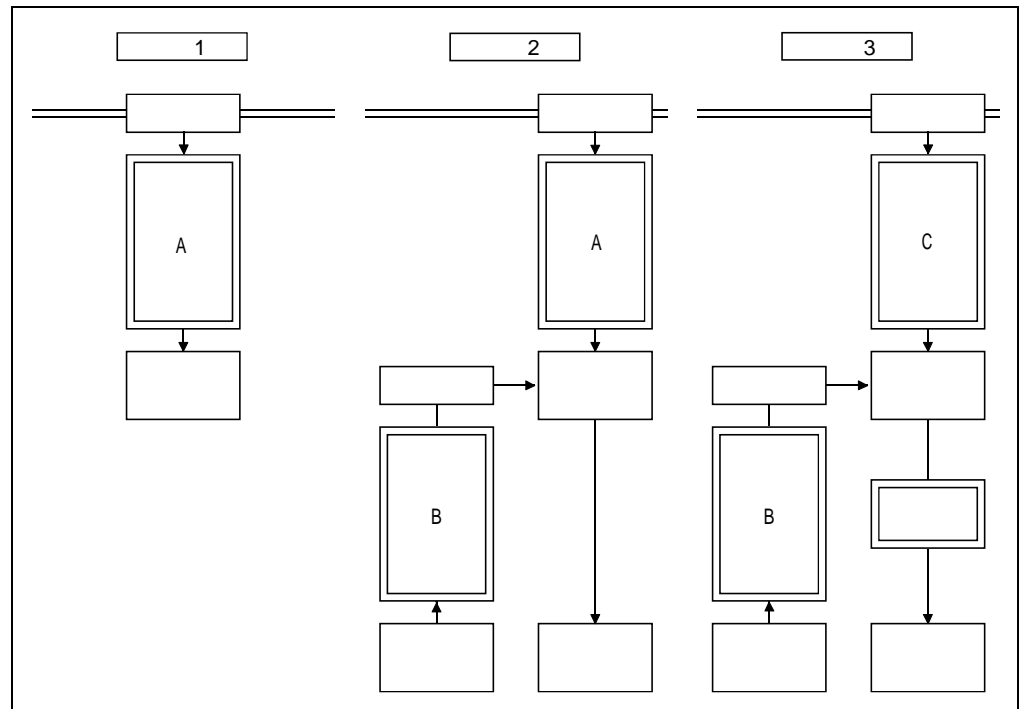
1 5.2 .

(2) , 가 .

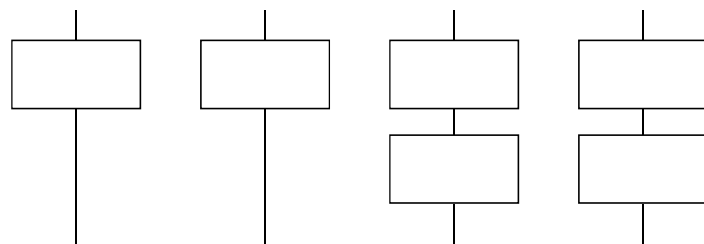
1 32 .

(3) , 3 .

- 1 ....
- 2 ....
- 3 ....



(a) A B 가  
A,B , , + 가 가 .






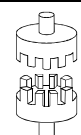
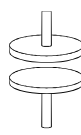
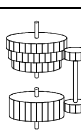
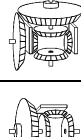

(b) C 가 ( 3)  
C 가 .

가





, 5.1

, 6 ~ 8

5.1

			가									
			Q173CPU				Q172CPU					
			CPU	1	1		CPU	1	1			
가		32	44	32			8	8			· , JOG 가	6. 1
		12		12	34		8	16	8	10	· , 가	6. 2
가	가	32	64	32			8	8			· 가 " "	
	가	32		32		8	16	8		· " "		
		64	64	1	1	16	16	1	1	· · ( )	7. 1	
		64	64	1	1	16	16	1	1	· / · ON/OFF	7. 2	
										가 가 · ON/OFF		
		64	64	1	1	16	16	1	1	· ( ) ·	7. 3	
		32	32	1		8	8	1		· 가	7. 4	
			32	1		8	1			· 가 (가 )		

5. 1 ( )

			가												
			Q173CPU					Q172CPU							
			CPU	1	1		CPU	1	1						
			32	32	32	32	1	1	8	8	8	1	1		8.1
		32	32		8				8						
		32	32		8				8						
		32	32		8				8						

This image shows a full page of white paper with horizontal blue or grey ruling lines. The word "MEMO" is printed in large, bold, black capital letters at the top left corner. The rest of the page is filled with evenly spaced horizontal lines, typical of a notebook or memo pad.

, 가 (가 , 가 ) .  
 , 2 가 .  
 • 가 ..... 6. 1  
 • ..... 6. 2

### 6. 1 가

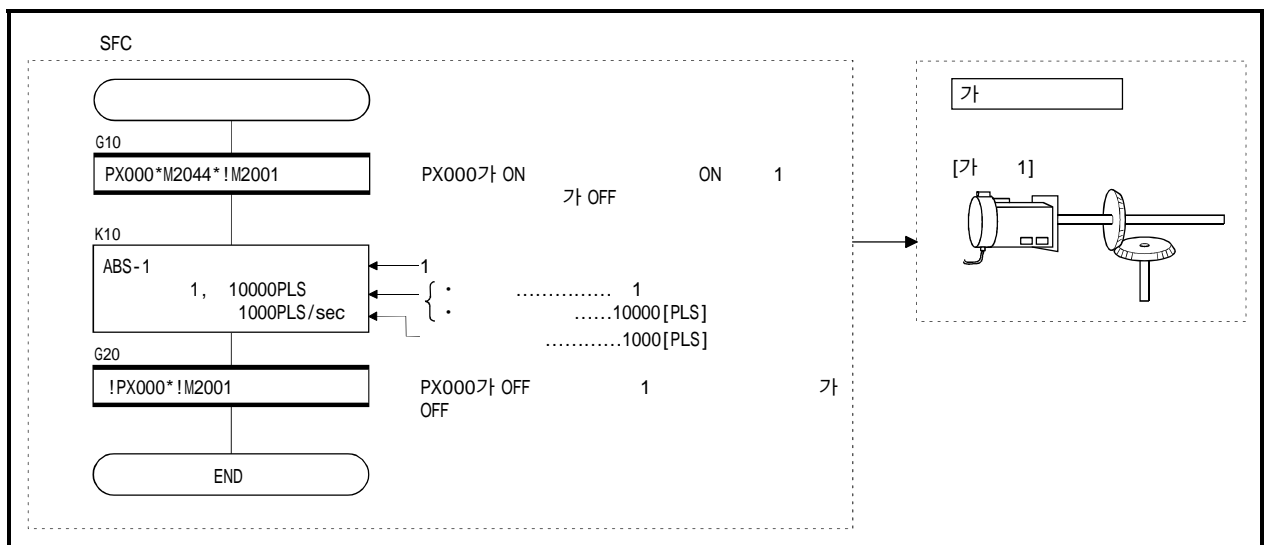
가 , 가 (가 , 가 )  
 JOG  
 가 .

#### 6. 1. 1

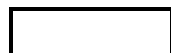
(1) 가 , ( , ) 가 (가 ,  
 , 가 ) . , ( ,  
 , , ) , .

(2) 가 , JOG .  
 (a) SFC ( ) .  
 (M2001~M2032)\*1가 ON .

SFC , .



\* : SFC / .

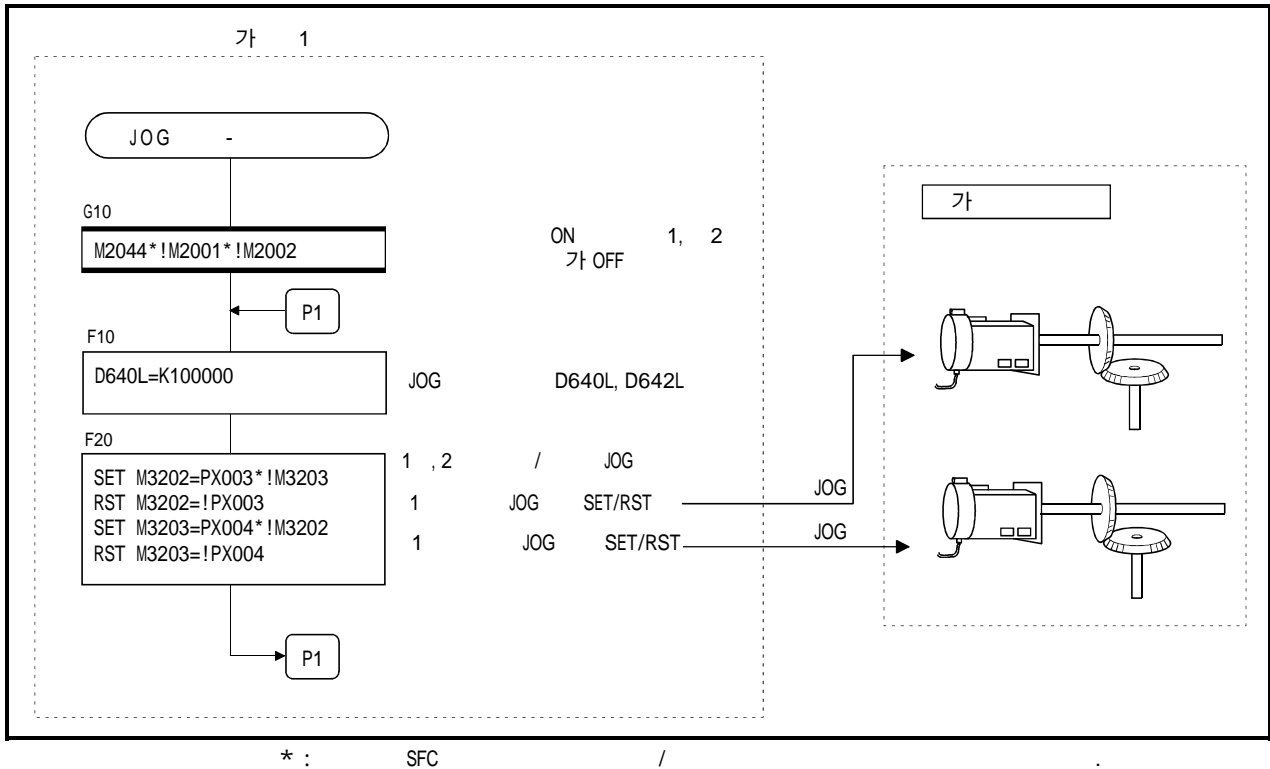


\* 1 : , 4.1.7 (2) .



(b) JOG                      \*1                      ,  
 JOG                      \*2                      ON  
 ....                      JOG                      /                      JOG

JOG                      SFC



..... JOG

(D710~D713)\*3

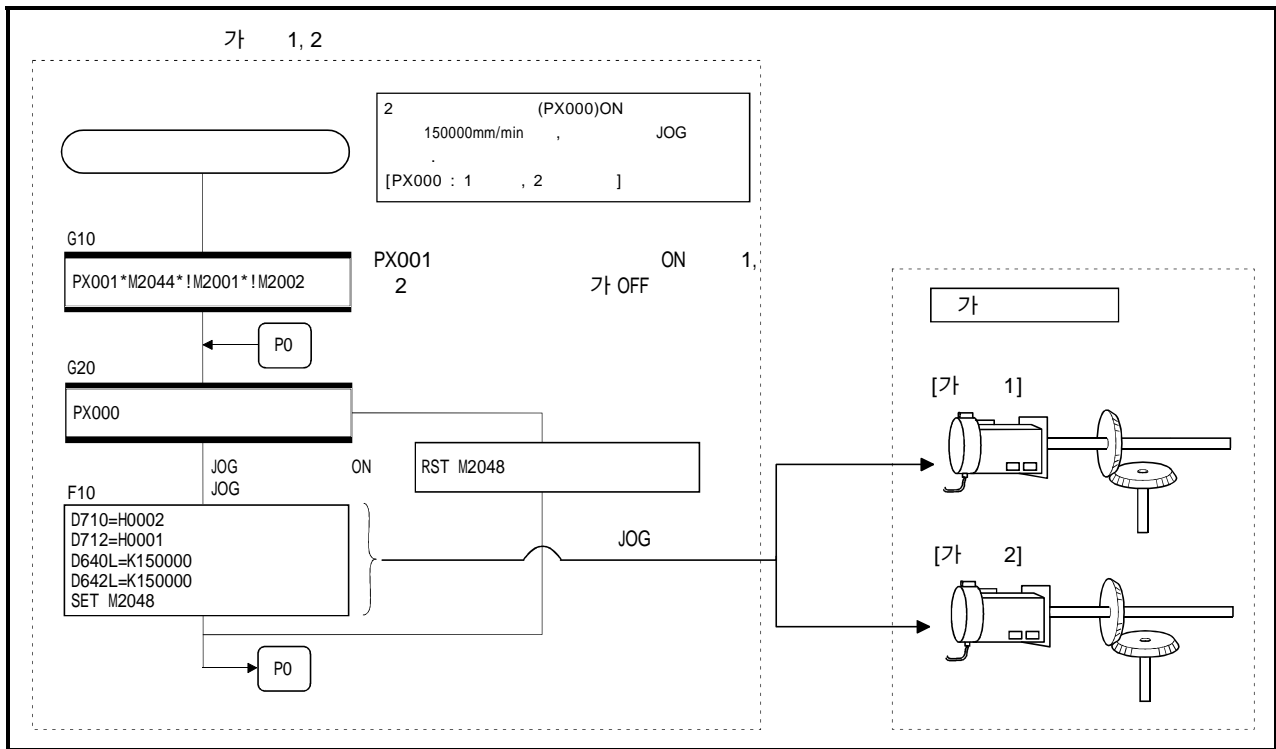
No. ( / )

JOG

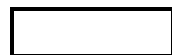
(M2948)\*3 ON

JOG

SFC



\* : SFC /



\* 1 : JOG

, 「Q173CPU/Q172CPU

(SV13/SV22)

( ) 「6.20 JOG」

\* 2 : JOG / JOG

, 4.1.4 (3)

\* 3 : JOG

, 4.2.8 (2), JOG

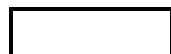
, 4.1.7 (13)

(3) 가 (M4800+20n)/ (M4801+20n) ON , SFC . )  
(가 , (STOP, FLS, RLS) .)

(4)  
(a) , 가 "0" .  
(b) 가 , 가 , " " " " .  
(c) 가 , CPU ON ,  
가 .  
, CPU OFF 가 ,  
가 가 \*1가 ON .  
가 가  
, 가 .

(5) 가 , .  
.

, CHGA , CHGV , 「Q173CPU/Q172CPU (SV13/SV22)  
CHGA , CHGV (SFC )」 9.2 (CHGA ), 7.12 (CHGV )



\*1 : 가 가 , 4.1.5 (3) .

(6)

1  
가 가 (6.1.2 )

(a)

가 ,  
(M2407+20n)가 ON , 가  
/ /

SFC

(b)

OFF

가 , 1 OFF ,  
.

.)

ON/OFF

, OFF

ON/OFF

ON/OFF

OFF

가

SFC

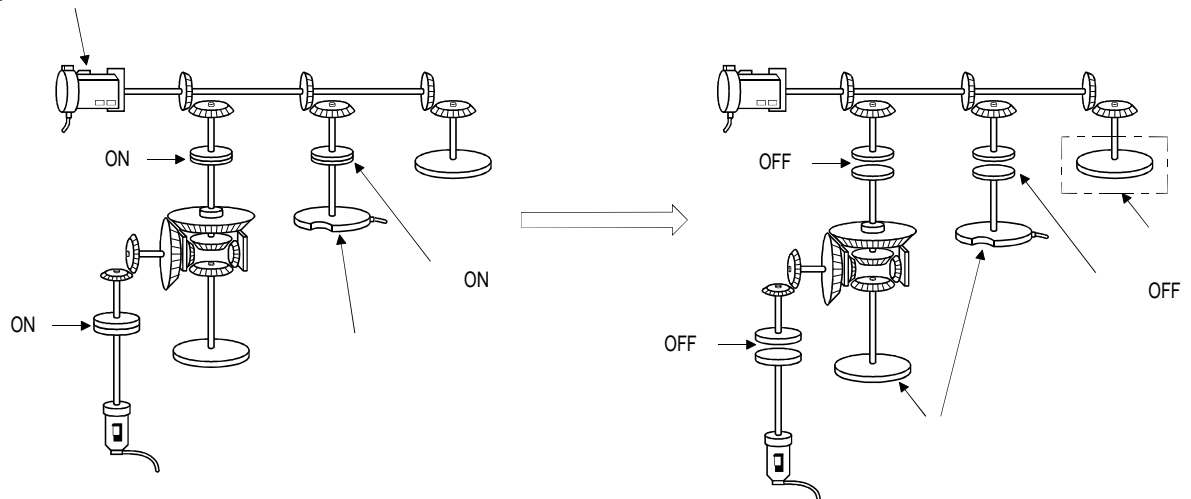
ON/OFF

OFF ON

[ ]

[ ]

가



(7) 가  
가  
『

, = ,  
가 가  
, 32 가  
, 32 -

→ - 2147483648...2147483648←

( )	• 「ABS」, 32 . 32
	• 「INC」, 32
( )	가
	• , 32 가
	• , 32 가
	• . ( )
JOG	
( / )	• 「ABS」 「ABH」, 「INC」, 「INH」 (([107][108][109])
( / )	가

(8)

, CHGV (-)

	<div>ABS - 1</div> <div>ABS - 2</div> <div>ABS - 3</div> <div>ABS - 4</div> <div>INC - 1</div> <div>INC - 2</div> <div>INC - 3</div> <div>INC - 4</div>	•
/	<div>ABS</div> <div>INC</div> <div>ABH</div> <div>INH</div>	
	<div>FEED-1</div> <div>FEED-2</div> <div>FEED-3</div>	
	<div>CPSTART1</div> <div>CPSTART3</div> <div>CPSTART2</div> <div>CPSTART4</div>	•
( )	<div>VF</div> <div>VR</div>	•
	PFSTART	• 가
	VSTART	•
JOG		• [305]*가

\* : [305] : 가 0~

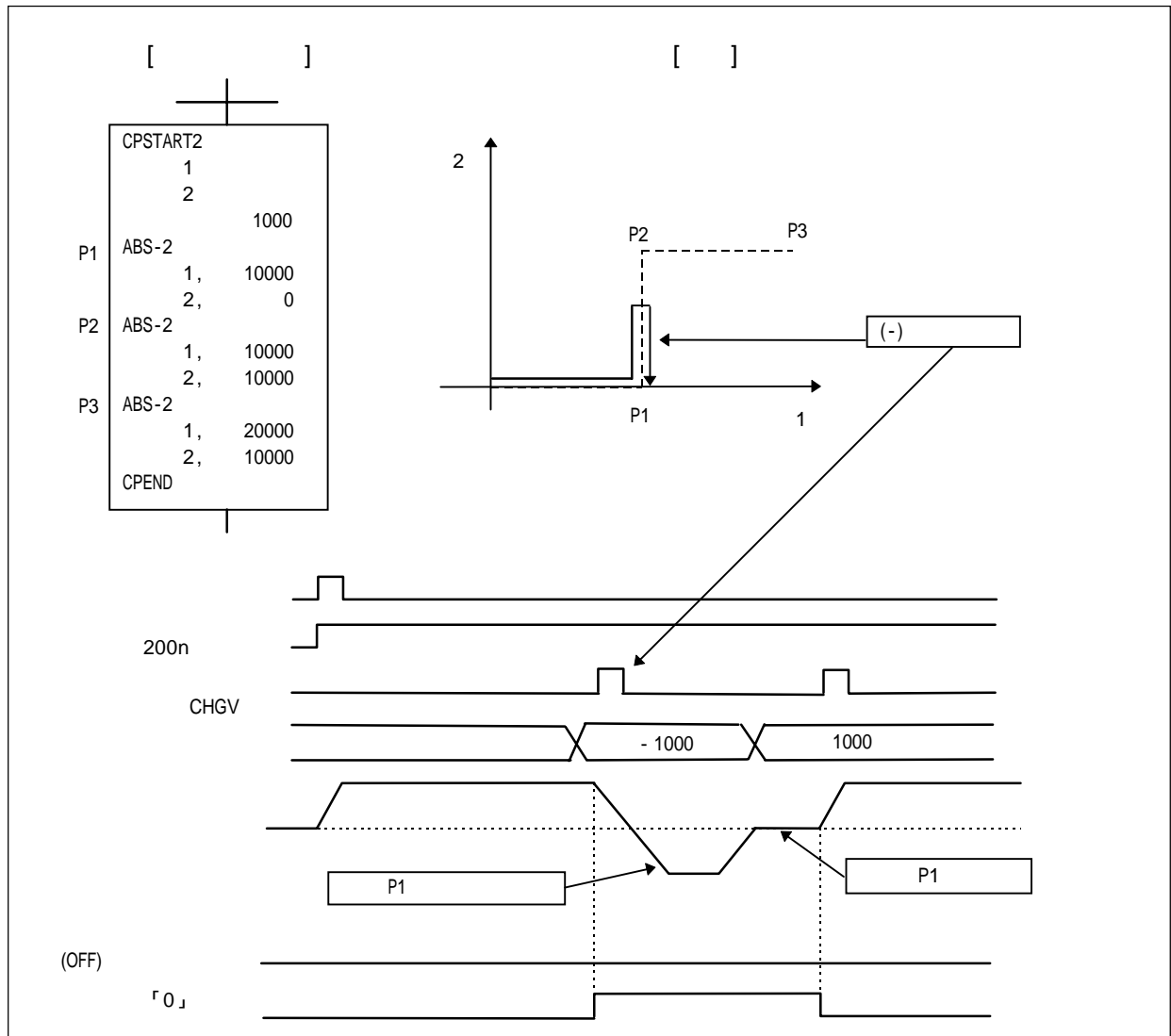
【      】

- (1) (-) , , .
- (2) [305]가 , .
- (3) , .
- (a)
- (M2001+n) ON (CHGV )
  - (M4000+20n) ON (CHGV )
  - (M4001+20n) OFF
  - (M4003+20n) OFF
  - 「0」 (M2240+n) ON
- (b) , .
- (c) , ON .
- (d) (-) , .
- (4) , .
- (a) , .
- (b) , ON .
- (c) (-) , .

【      】

- (1) [305]가 , (-) , .
- (2) , (-) , . ( ) , 가 .
- (3) . [305]가 .

【                      】

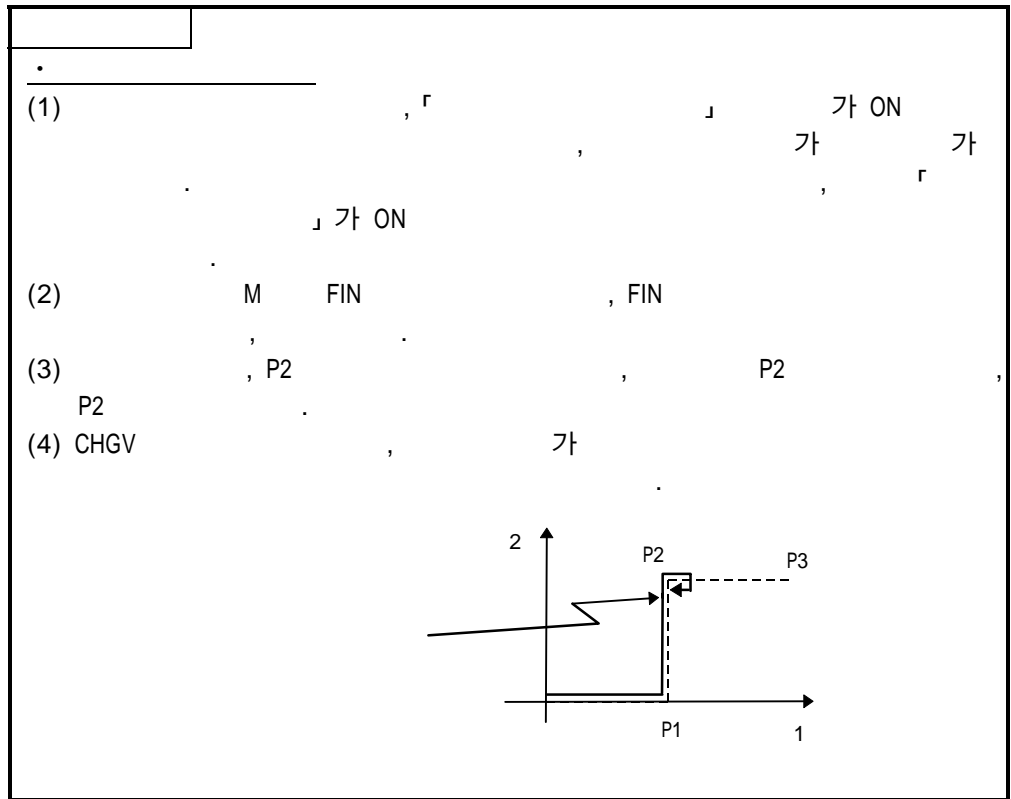


, P2

(-)

P1

, P1





## 6.

### 6. 1. 2

가 6.1 , 6.1 (1)~(4) .  
가 , SW6RN-GSV22P .  
가 (5) .

#### 6. 1 가

No.						
1	가				Q173CPU : 1 ~ 32 Q172CPU : 1 ~ 8	
2			2147483647	PLS	- 2147483648 ~ 2147483647	PLS
3			0	PLS	- 2147483648 ~ 2147483647	PLS
4			100	PLS	1 ~ 32767	PLS
5	JOG	JOG	20000	PLS/s	1 ~ 10000000	PLS/s
6		No.	1		1 ~ 64	
7				-	/ OFF	-

(1) 가  
가 , 가  
가 가 가

(2) /  
가  
(a) r J

		*				
		106	207	208	220	
						가 .
/						
						[0]
JOG						
						가 .

\* : ,

6.

< >

106	• , 가 .	

< >

207	• , 가 .	
208	• , 가 .	
220	• , 가 .	

(b)

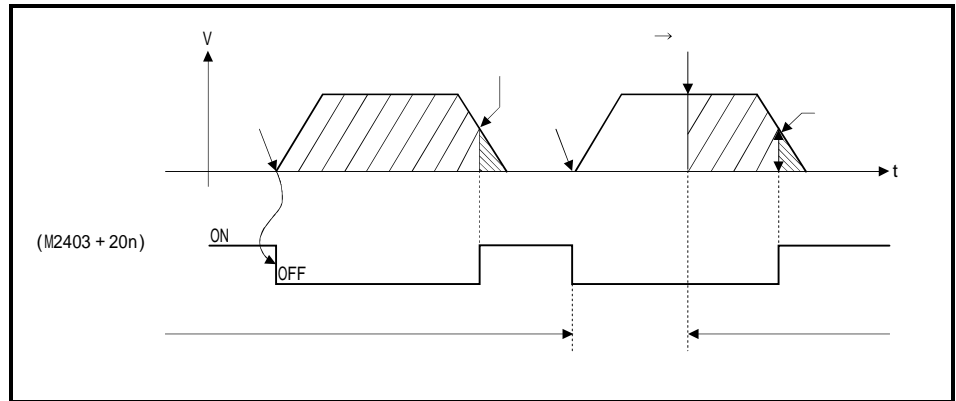
「 = 」  
 , 32  
 가 , 32 -

▶ - 2147483648.....2147483648 ◀

( )	• 「ABS 」 , 32
	32
	• 「INC 」 , 32
( )	가 .
	• , 32 가 .
	• , 32
JOG	
( / )	• 「ABS 」 「INC 」 「ABH 」 「INH 」 ([107] [108], [109])가 ,
( / )	

(3)

가  
[( ) ( )]가  
ON  
JOG  
.)



(4) JOG

No.

JOG

JOG

No.

(a) JOG

가

JOG

JOG

JOG

, JOG

(b)

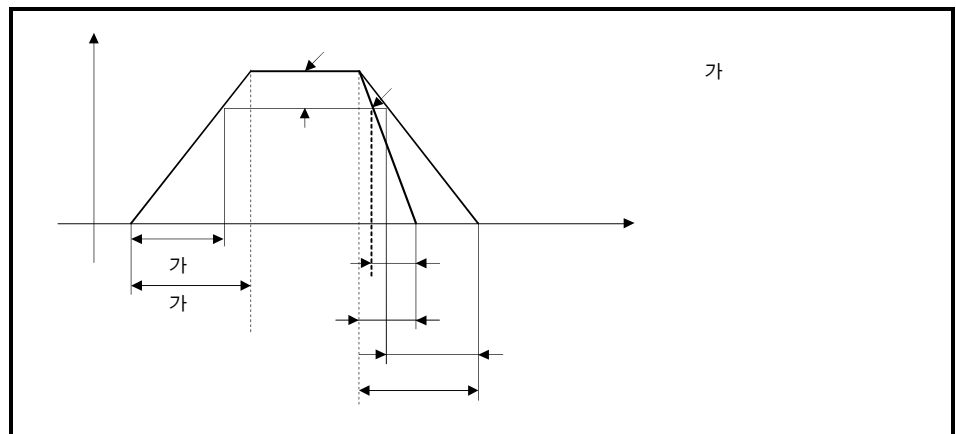
No.

JOG

No.

JOG

가



6. 2 JOG

, 가

JOG	,	[PLS]
-----	---	-------

(5) 가 No. , 가 No. , 가  
 . ( No. , 가  
 No.1 . )

	[PLS] *1
	[PLS/s] *1
가	
S	
	× *2
Stop	×
	[PLS] *1

: , × :

\*1 : [PLS], [PLS/s] , [PLS]

\*2 :

< >

	[mm]	[PLS]
	2000.00[mm/min]	200000[PLS/s]
가	1000[msec]	1000[msec]
	1000[msec]	1000[msec]
	1000[msec]	1000[msec]
S	0[%]	0[%]
	300[%]	
Stop		
	0.0100[mm]	100[PLS]

6. 1. 3 가 ( , )

(1) 가 , 4.1.3 .  
 가

(2) 가 , 4.1.4 .  
 가

(3) 가 , 4.2.3 .  
 가

(4) 가 -  
 가 -  
 4.2.4 .

## 6.

### 6.2

, 가 (가 , 가 )

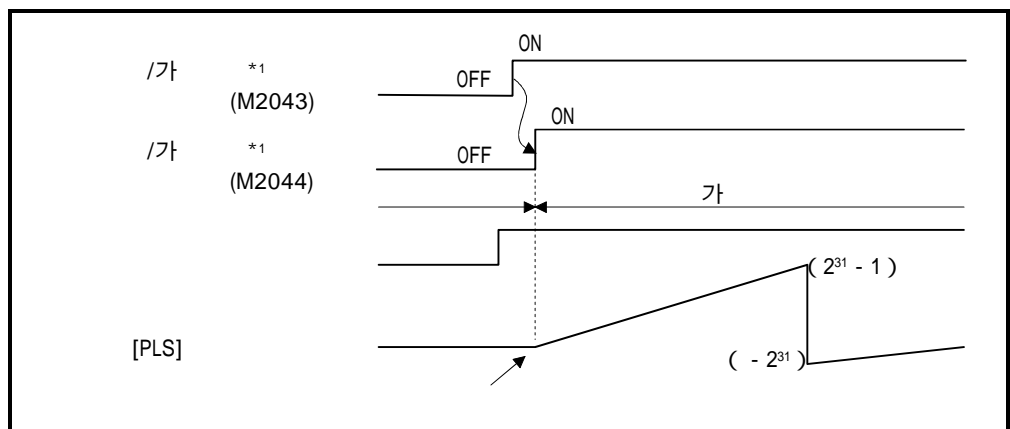
#### 6.2.1

(1)

가

(a)

- 가
- $*^2(TREN :$  )
- 가
- 1) 가

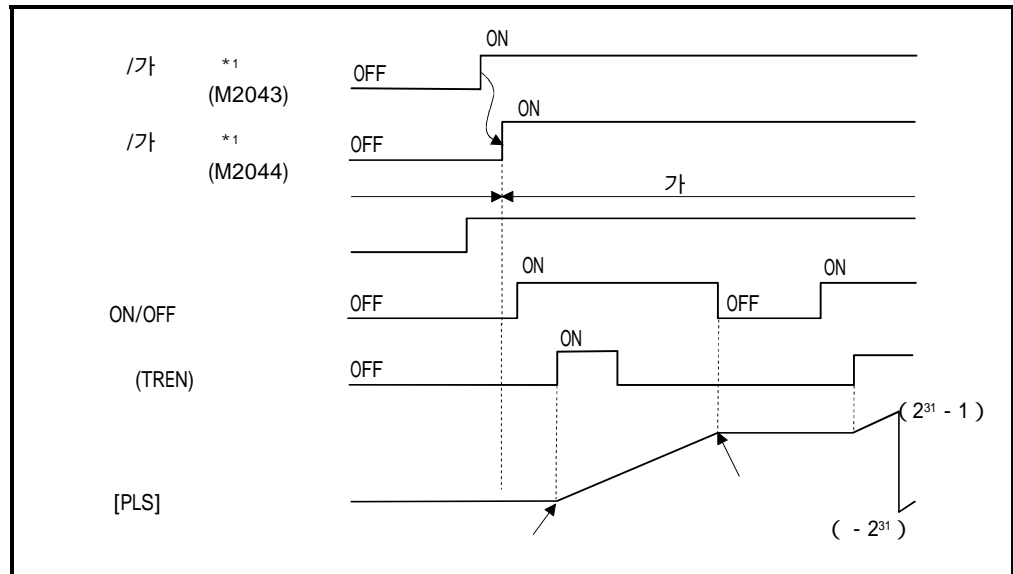


2)  $*^3$ 가 ON/OFF

- 3) 가 가/
- 가 ON ..... .
  - 가 OFF ..... .

		<p>ON 가 , ON 가 , 가</p>	

## 1) 가 ON 가



## 2) \*3가

가

(b)

OFF), , 가 (M2043 ON

1)

2) 가

OFF



가 , 가 ,



- \* 1 : /가 , 4.1.7 (9) /가 .
- \* 2 : 가 , 9 .  
Q173PX TREN , Q172PX TREN .  
Q173CPU/Q172CPU , 「 Q173CPU/Q172CPU 」 .
- \* 3 : , 7.2.1 .

(3)

, (FLS, RLS, STOP), SFC .

(4)

(a) , 가 , " " " " .

(b) , CPU ON  
가 .

, CPU OFF ,  
가 , 가 ON .  
가 .

(5)

, 가 .

CHGA-E , 「 Q173CPU/Q172CPU (SV13/SV22)  
CHGA-E (SFC )」 9.3 .

(6)

1  
가

( 6.4 )

(a)

.....

가

(M2407+20n)가 ON

가

SFC

(b)

OFF...

가

, 1

OFF

ON/OFF

, OFF

ON/OFF

ON/OFF

ON/OFF

OFF

가

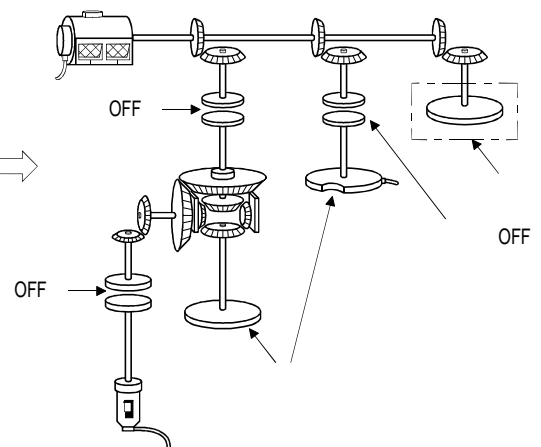
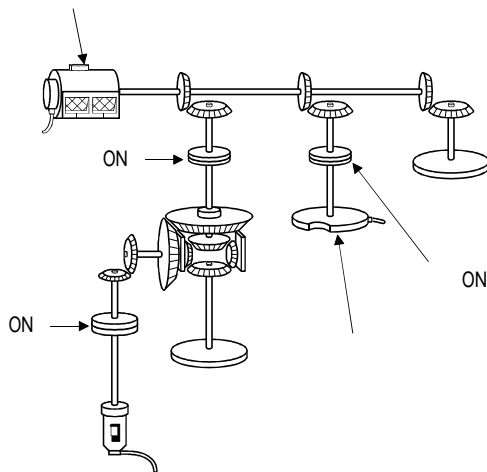
SFC

ON/OFF

, OFF ON

[ ]

[ ]





## 6.

### 6. 2. 2

6.4 , 6.4 (1)

, SW6RN-GVS22P

#### 6. 4

No.			
1			Q173CPU : 1 ~ 12 Q172CPU : 1 ~ 8
2			/ OFF

(1)

I/F

I/F	
P1/E1	1
P2/E2	2
P3/E3	3
P4/E4	4
P5/E5	5
P6/E6	6
P7/E7	7
P8/E8	8
P9/E9	9
P10/E10	10
P11/E11	11
P12/E12	12

P1~P12 :

I/F

E1~E12 :

I/F



\* 1 :

( )가

\* 2 : Q172CPU

,

1~8

6. 2. 3

( , )

(1)

, 4.1.5 .

(2)

, 4.1.6 .

(3)

, 4.2.5 .

(4)

4.2.6

.

## 6.

### 6.3 가 /

가 , JOG

CHGA , CHGV . CHGA /CHGV  
 , 「Q173CPU/Q172CPU (SV13/SV22) (SFC )」

#### 6.3.1 가

(1)

No.																											
1	D640, D641	<table><tr><td></td><td></td><td></td><td>가</td><td></td><td></td><td></td></tr><tr><td>0</td><td rowspan="2">JOG</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>1</td><td></td><td></td><td></td><td></td><td></td></tr></table>									가				0	JOG						1					
									가																		
0	JOG																										
1																											
2	D642, D643																										
3	D644, D645																										
4	D646, D647																										
5	D648, D649																										
6	D650, D651																										
7	D652, D653																										
8	D654, D655																										
9	D656, D657																										
10	D658, D659																										
11	D660, D661																										
12	D662, D663																										
13	D664, D665																										
14	D666, D667																										
15	D668, D669																										
16	D670, D671																										
17	D672, D673																										
18	D674, D675																										
19	D676, D677																										
20	D678, D679																										
21	D680, D681																										
22	D682, D683																										
23	D684, D685																										
24	D686, D687																										
25	D688, D689																										
26	D690, D691																										
27	D692, D693																										
28	D694, D695																										
29	D696, D697																										
30	D698, D699																										
31	D700, D701																										
32	D702, D703																										

\* : Q172CPU , No.1~ No.8 가 .

(2)

SFC ,

```

graph TD
    CHGA([CHGA]) --> G10[G10]
    G10 --> K10[K10]
    K10 --> G20[G20]
    G20 --> END([END])

```

CHGA

G10

PX000\* M2043\* M2044\* !M2001

K10

CHGA

1, 1000PLS

G20

!PX000\* !M2001

END

PX000 ON ON 1 /가 , RK

OFF

가

{ . ..... 1 ...1000 [PLS]

가

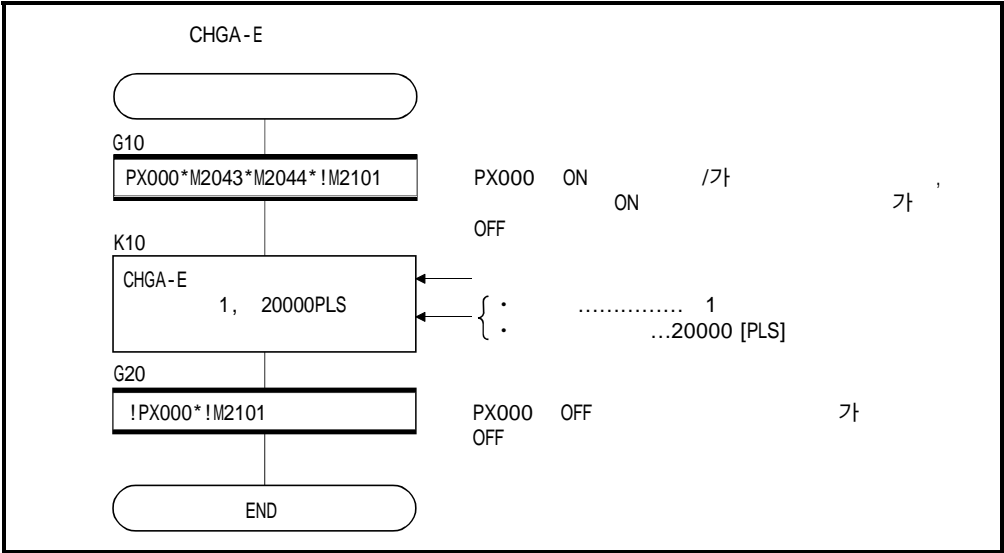
OFF OFF 1 가

\* : SFC /

6. 3. 2

(1) CHGA-E

SFC ,



\* : SFC /

- (a) , (D) }  
... (W)  
... 10 (#)  
(K)

- (b) , 가  
, 가 ( )  
,

- 4 가
- ..... 7. 1
  - ..... 7. 2
  - ..... 7. 3
  - ..... 7. 4

(1)

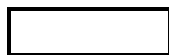
	ON/OFF		<table><tr><td></td><td></td></tr><tr><td>X</td><td>0000 ~ 1FFF</td></tr><tr><td>Y</td><td>0000 ~ 1FFF</td></tr><tr><td>M/L</td><td>0 ~ 8191</td></tr><tr><td>M</td><td>9000 ~ 9255</td></tr><tr><td>B</td><td>0000 ~ B1FFF</td></tr><tr><td>F</td><td>0 ~ F2047</td></tr></table>			X	0000 ~ 1FFF	Y	0000 ~ 1FFF	M/L	0 ~ 8191	M	9000 ~ 9255	B	0000 ~ B1FFF	F	0 ~ F2047	
			X	0000 ~ 1FFF														
			Y	0000 ~ 1FFF														
			M/L	0 ~ 8191														
M	9000 ~ 9255																	
B	0000 ~ B1FFF																	
F	0 ~ F2047																	
	1	<table><tr><td></td><td></td></tr><tr><td>D</td><td>800 ~ 3069 3080 ~ 8191</td></tr><tr><td>W</td><td>0000 ~ 1FFF</td></tr></table>			D	800 ~ 3069 3080 ~ 8191	W	0000 ~ 1FFF										
D	800 ~ 3069 3080 ~ 8191																	
W	0000 ~ 1FFF																	
ON	2																	
OFF	2																	
	2																	
		1																
		1																
		1																

(1) 2	SFC	32
(2) SFC	2	32

(2)

가  
가

				가	가	
	ON/OFF				· ·	
	ON					
	OFF					
					(가 )	
					· ·	



\* : , 「 」  
 , 「 Q173CPU/Q172CPU  
(SV13/SV22) (SFC )」 「 1.5.3 」

SFC

		Q173CPU	Q172CPU
		32	8
( )	SV22	0.88[ms] / 1 ~ 4	0.88[ms] / 1 ~ 4 1.77[ms] / 5 ~ 8
		1.77[ms] / 5 ~ 12	
		3.55[ms] / 13 ~ 24	
		7.11[ms] / 25 ~ 32	

## 7.

### 7.1

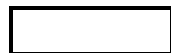
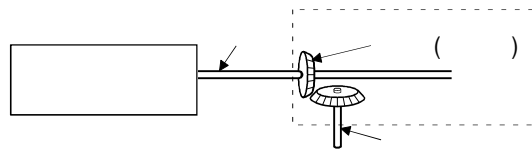
#### 7.1.1

가

(1) , (가 , ) ( )

$$= ( ) \times ( ) \text{ [PLS]}$$

(2) , .



, 7.1.2 .

#### 7.1.2

7.1 , 7.1 (1)~(2) .  
 , SW6RN-GSV22P .

#### 7.1

No.					
1		(GI)	1	1 ~ 65535	D800 ~ D3069 * D3080 ~ D8191
					W0 ~ W1FFF
		(G0)	1	1 ~ 65535	D800 ~ D3069 * D3080 ~ D8191
					W0 ~ W1FFF
2				,	

\* : D800~D1559 가 , 가 , [ ] 가  
가 . 가 , , 가



(1) (a)  $\frac{1}{2}$ ,  $\frac{1}{2}$ ,  $\frac{1}{2}$ .

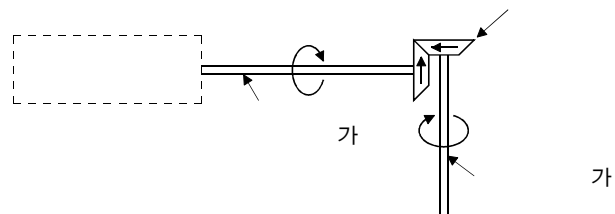
(b) , (GI) (GO) .

$$= \frac{(GI)}{(GO)}$$

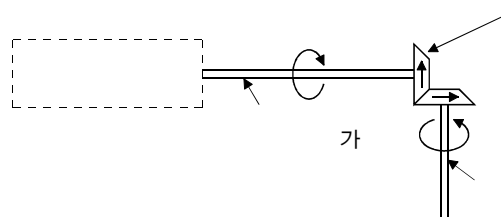
(2) (a)  .

(b) , ( ) ( ) 2 가

가 , 가



가 ,



		, SFC	가	가
	가	.		
가				

## 7.2

, / ,  
/ ,  
2 가 .  
ON/OFF 가  
가 / 가  
.

(1)

(a)

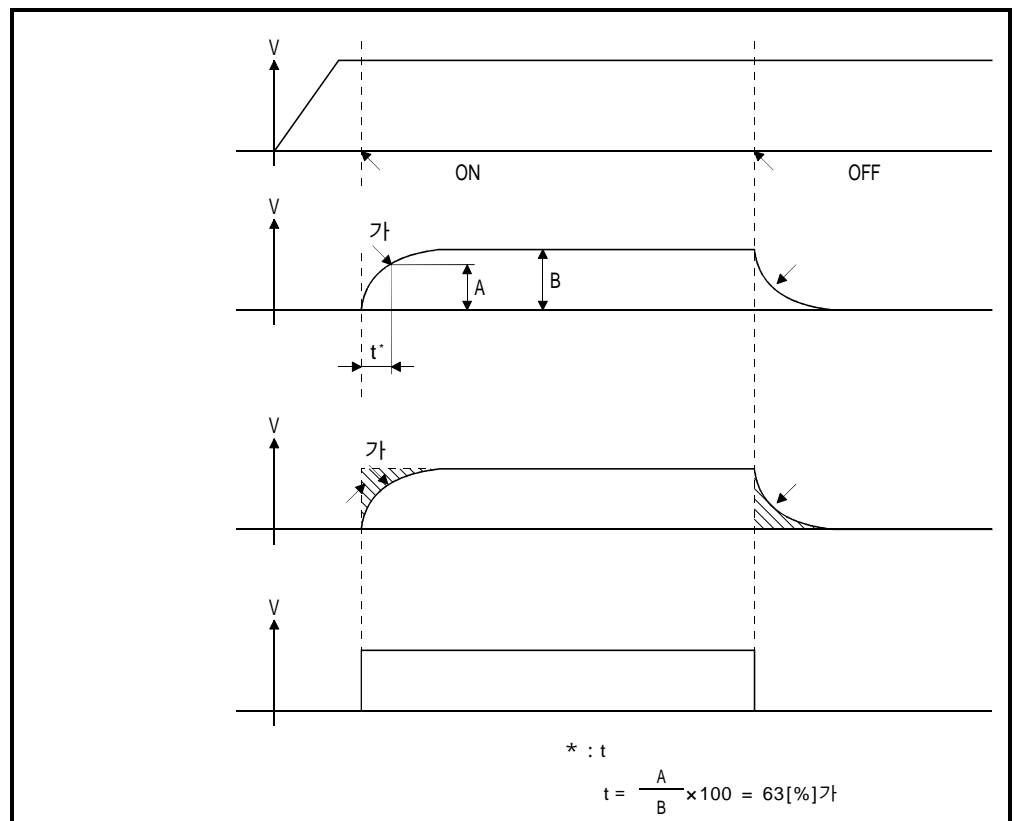
ON/OFF

가 ( ) ,

(b)

ON/OFF

, 가

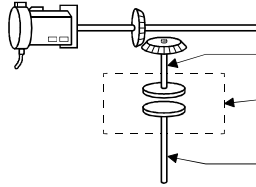


7. 1



(1)

ON/OFF

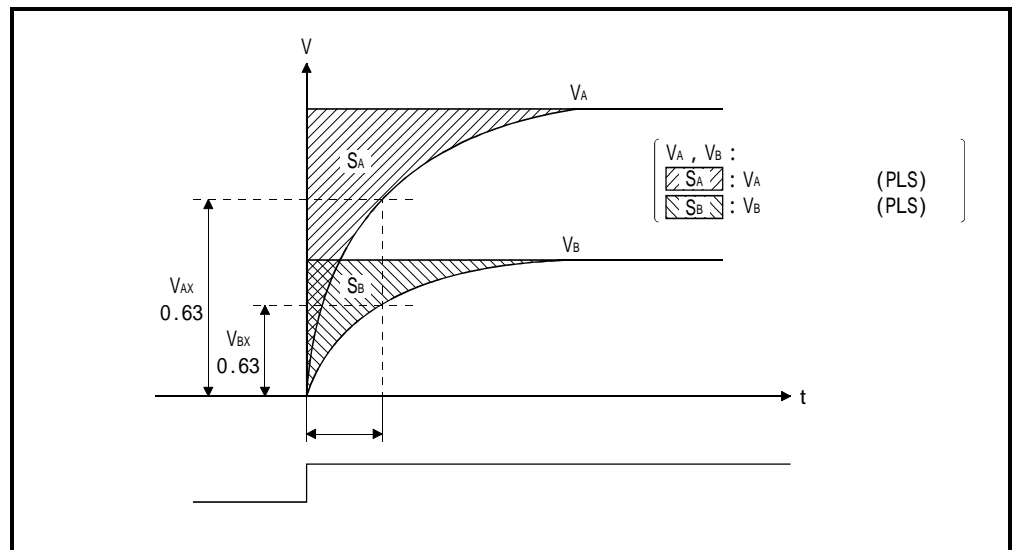


( )

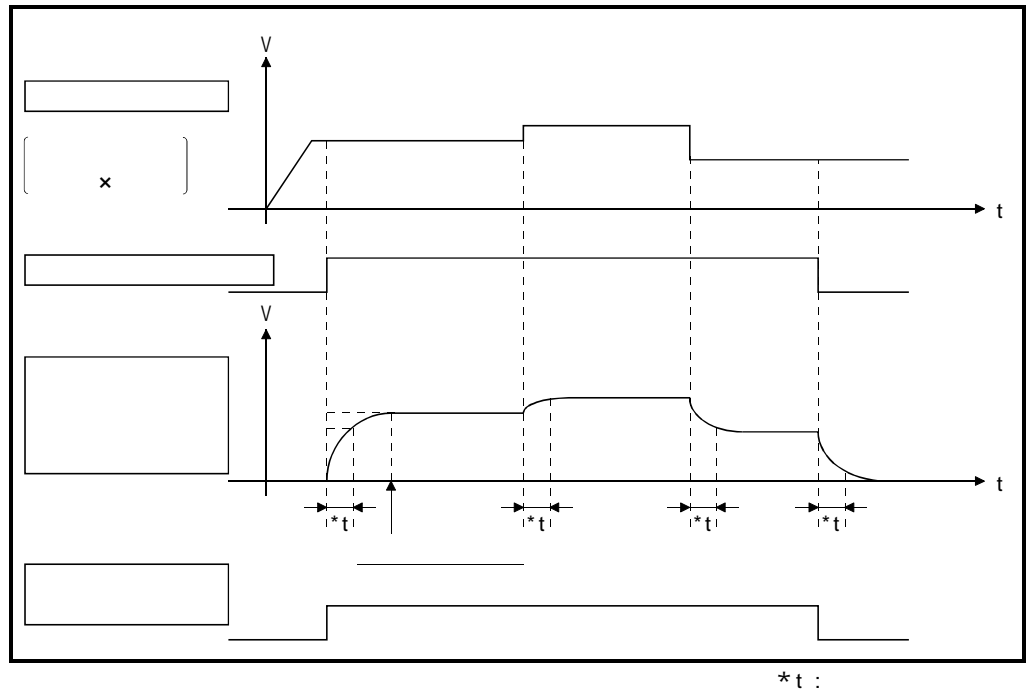
- ON ..... .
- OFF ..... .

(2)

(a)

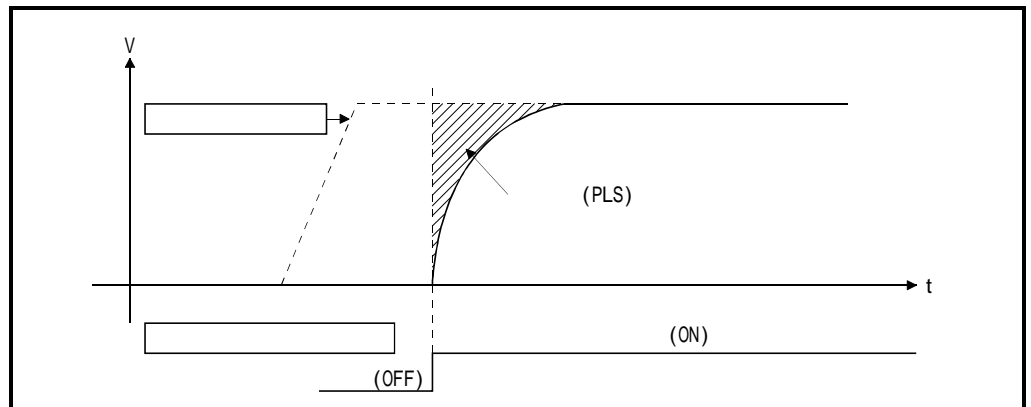


, ( × ) ,  
가 .

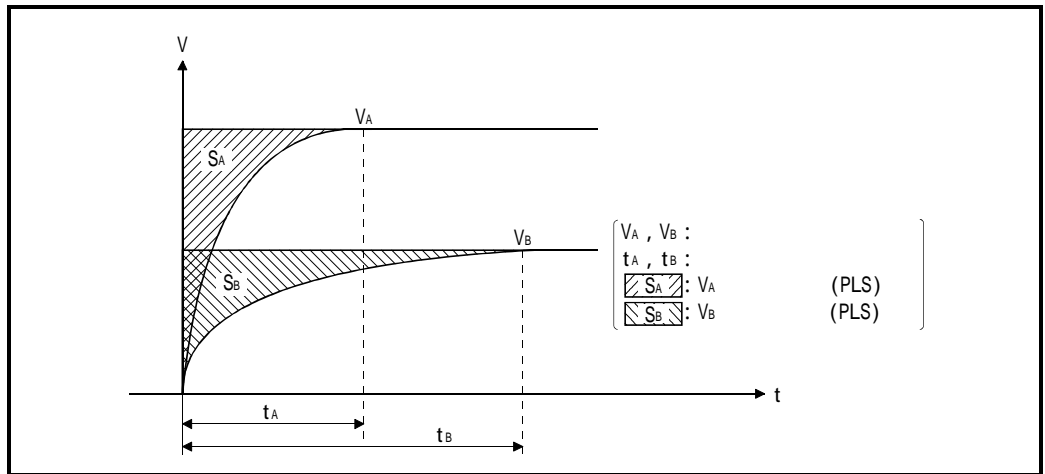


(b)

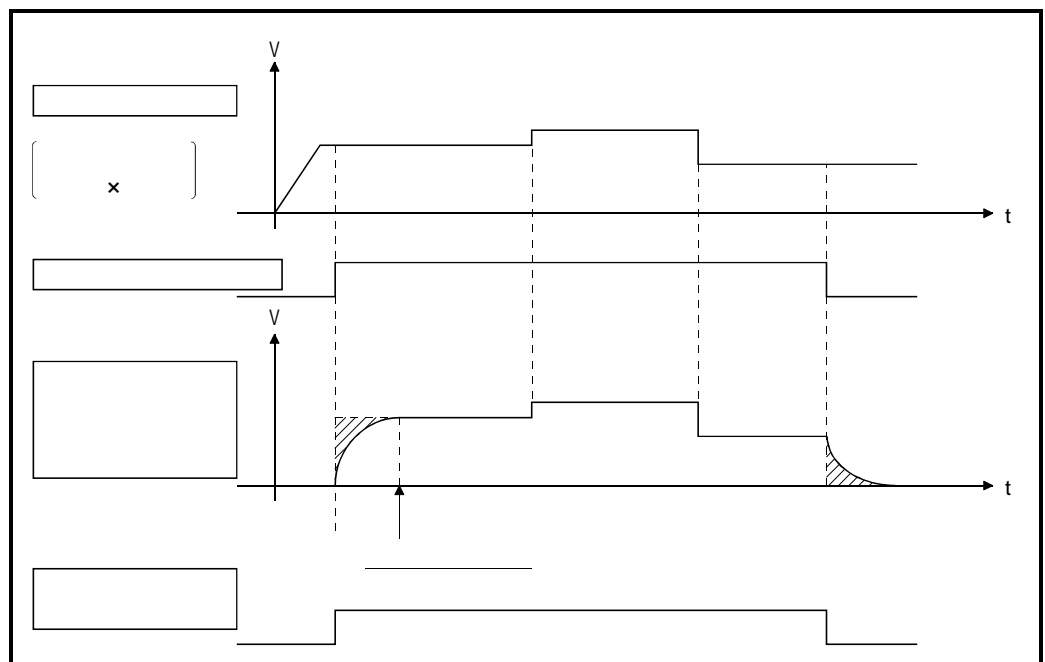
( × ) .



가 , ON/OFF 가 가 .



, ( × ) ,



7. 2. 1

- ON/OFF , 5 가 .
  - 
  - 2
  - 
  -
- (1) ON/OFF
- (a) ON/OFF , ON/OFF ON/OFF
- ON/OFF 가 ON , ON 가 .
- ON/OFF 가 OFF , OFF 가 .
- (b) ON/OFF , ON/OFF ON/OFF , 가
- ON/OFF 가 , " " .

(c) ON/OFF , ON/OFF

1		M2160	17		M2192
		M2161			M2193
2		M2162	18		M2194
		M2163			M2195
3		M2164	19		M2196
		M2165			M2197
4		M2166	20		M2198
		M2167			M2199
5		M2168	21		M2200
		M2169			M2201
6		M2170	22		M2202
		M2171			M2203
7		M2172	23		M2204
		M2173			M2205
8		M2174	24		M2206
		M2175			M2207
9		M2176	25		M2208
		M2177			M2209
10		M2178	26		M2210
		M2179			M2211
11		M2180	27		M2212
		M2181			M2213
12		M2182	28		M2214
		M2183			M2215
13		M2184	29		M2216
		M2185			M2217
14		M2186	30		M2218
		M2187			M2219
15		M2188	31		M2220
		M2189			M2221
16		M2190	32		M2222
		M2191			M2223

\* : Q172CPU , 1 ~8 가 .





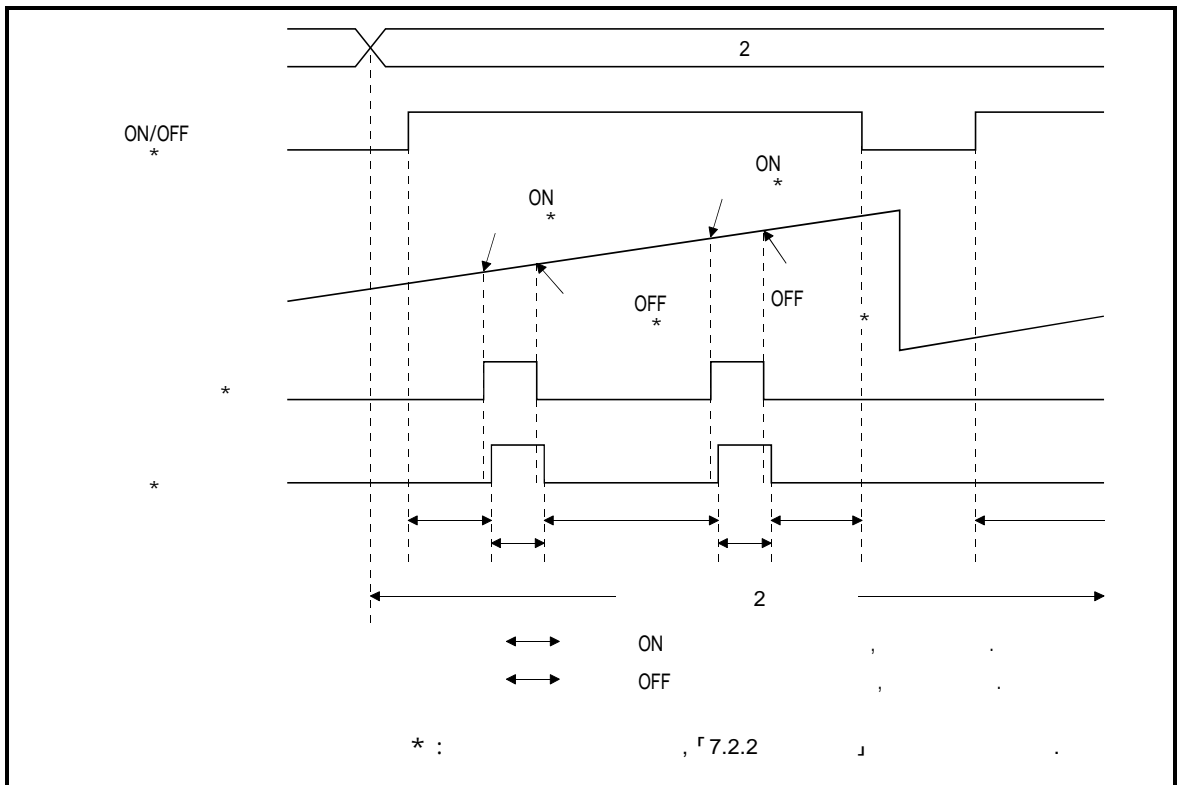
(d) ON/OFF , ON/OFF

1		M2160	17		M2192
		M2161			M2193
2		M2162	18		M2194
		M2163			M2195
3		M2164	19		M2196
		M2165			M2197
4		M2166	20		M2198
		M2167			M2199
5		M2168	21		M2200
		M2169			M2201
6		M2170	22		M2202
		M2171			M2203
7		M2172	23		M2204
		M2173			M2205
8		M2174	24		M2206
		M2175			M2207
9		M2176	25		M2208
		M2177			M2209
10		M2178	26		M2210
		M2179			M2211
11		M2180	27		M2212
		M2181			M2213
12		M2182	28		M2214
		M2183			M2215
13		M2184	29		M2216
		M2185			M2217
14		M2186	30		M2218
		M2187			M2219
15		M2188	31		M2220
		M2189			M2221
16		M2190	31		M2222
		M2191			M2223

\* : Q172CPU , 1 ~8 가

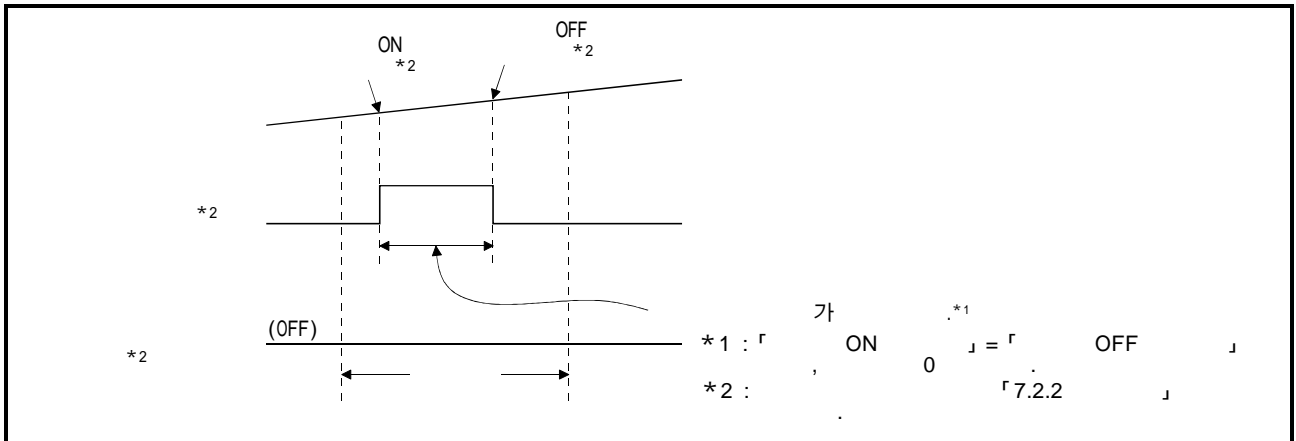


- (3) 「 2 」 「 2: 2」 가 2
- (a) 「 ON/OFF 」 가 ON , ,  
가 OFF  
「 ON 가 , 가 ,  
ON 가 ,  
「 OFF 가 , 가 ,  
OFF 가 , 가 ,
- (b) 「 ON/OFF 」 가 OFF OFF ,  
ON , 「 ON/OFF 」  
ON

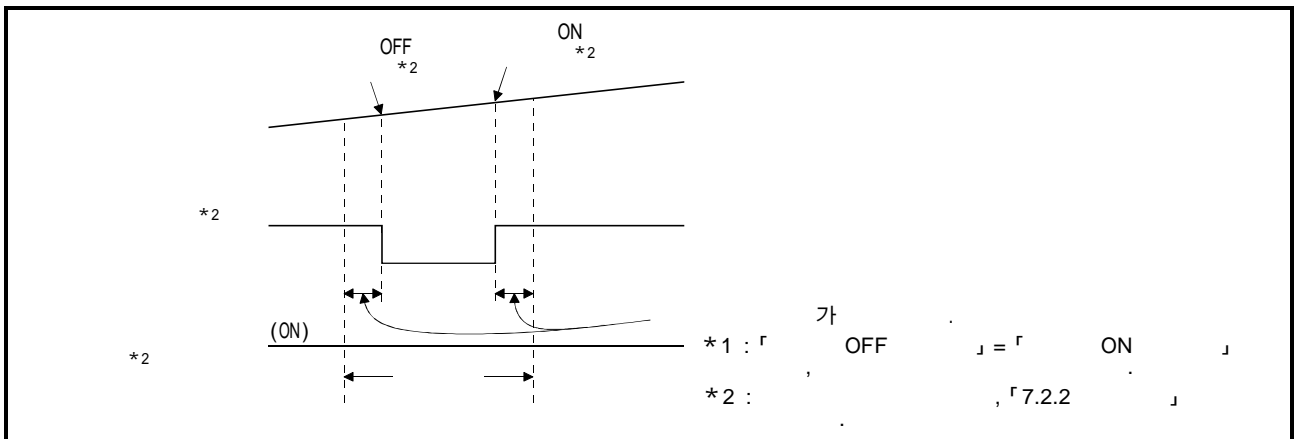


「 ON	」 , 「 OFF	」
. , 2 , 32		

(c) ON/OFF , . 1 ON  
 , OFF ,  
 가 OFF , ON , OFF



가 ON , OFF , ON



(d) 「 OFF」 , OS OFF

ON/OFF OFF

ON/OFF ON

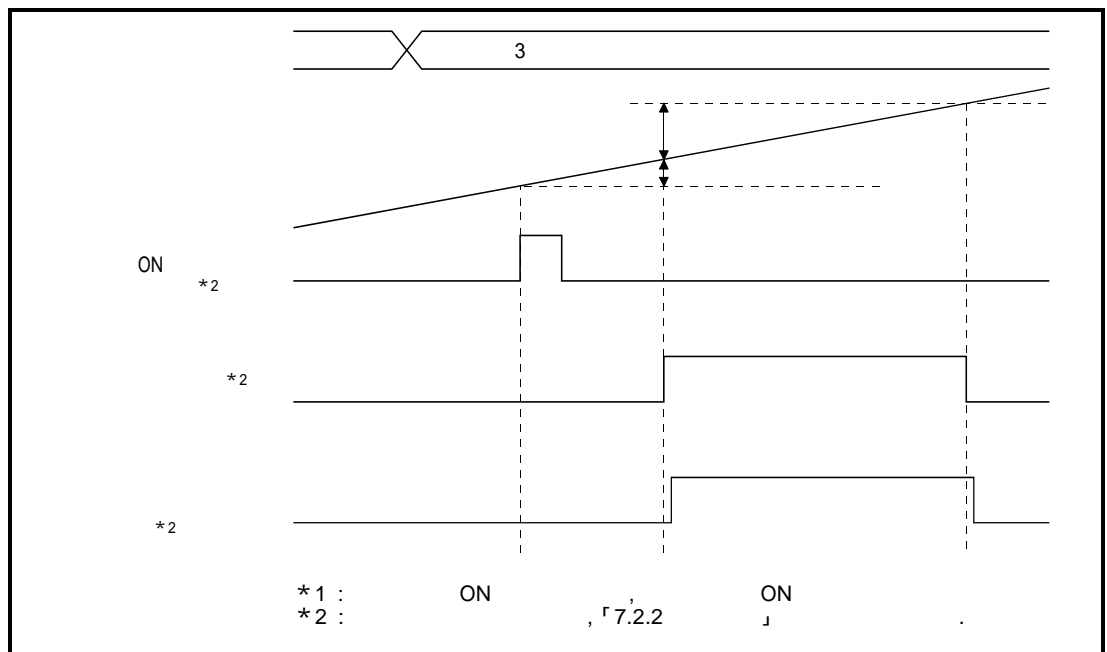
(e) OFF , OFF

ON/OFF OFF

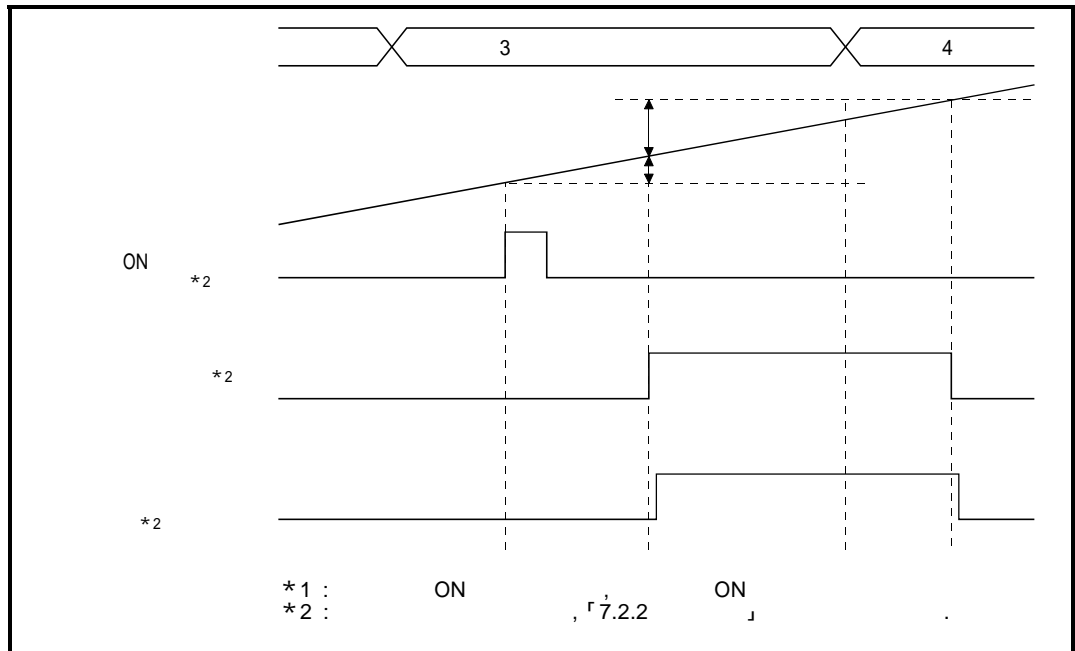
가 OFF 가 OFF

가 OFF , OFF

- (f) OFF, OFF ,
- ON .
- ON  
ON/OFF  
ON
- ON ,
- (4)
- (a) 「 3: ON , 「4: ON 가 ,
- (b) 「 "3" , ON/OFF , 「 ON OFF 가 , ON/OFF , 「 ON OFF 가 OFF ON , ON 가 , ON/OFF 가 OFF ON , ON 가 OFF .
- ON/OFF 가 OFF ON ON , ON 가 , ON/OFF 가 OFF ON OFF가 ,
- ON/OFF 가 ON OFF ON/OFF 가 ON OFF가 ,



(c) 「가 , 「 "4" ON/OFF  
 "3" , ON/OFF ON ON/OFF  
 , 「 "4" , ON/OFF  
 ON/OFF 가 , 「 "3" ON/OFF  
 가 ON/OFF 가 , 「 "3" ON/OFF



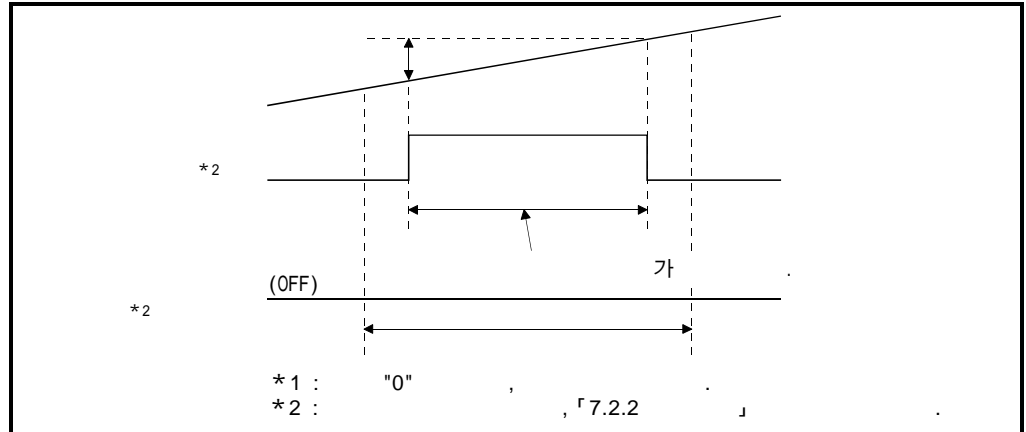
(d) , .

ON/OFF	ON 가 ON ON/OFF
ON	가 ON 가 , OFF ( ON ) ON (-) ( : - 2147483648( - 2 <sup>31</sup> ) ~ 2147483647(2 <sup>31</sup> - 1)[PLS])
OFF	ON/OFF 가 ON , 가 ON ( ON ) ON (-) ( : - 2147483648( - 2 <sup>31</sup> ) ~ 2147483647(2 <sup>31</sup> - 1)[PLS])

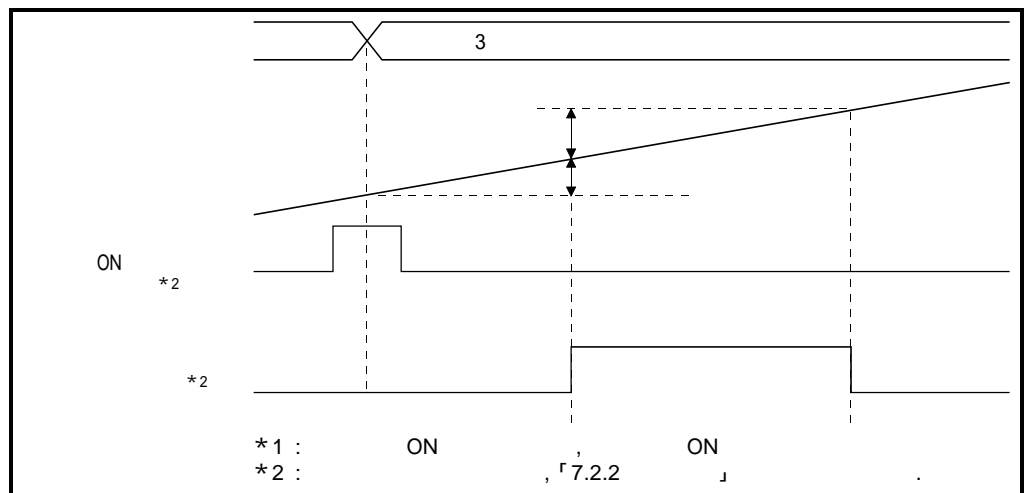
\* : ON 0 , ON/OFF 가 OFF ON  
 ON 가 .

(1) 「 ON , 「 OFF , 32
(2) , .

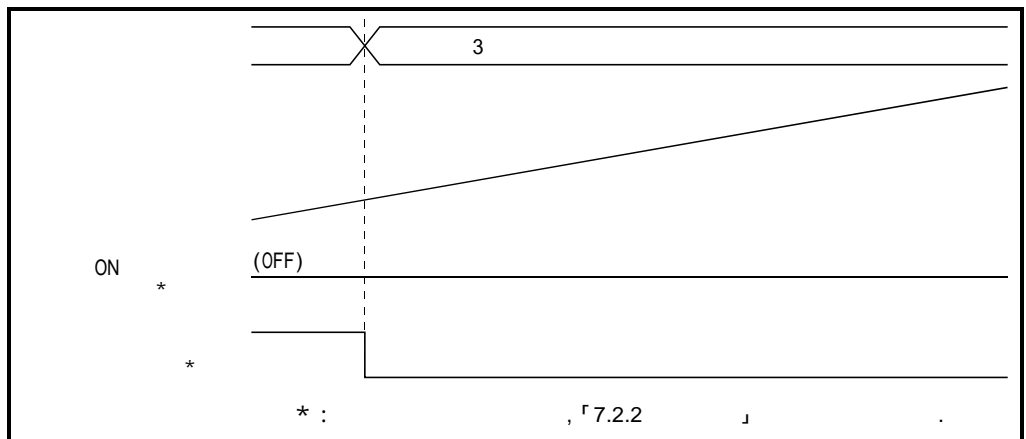
(e) ON/OFF , . 1  
가 OFF ON OFF , .



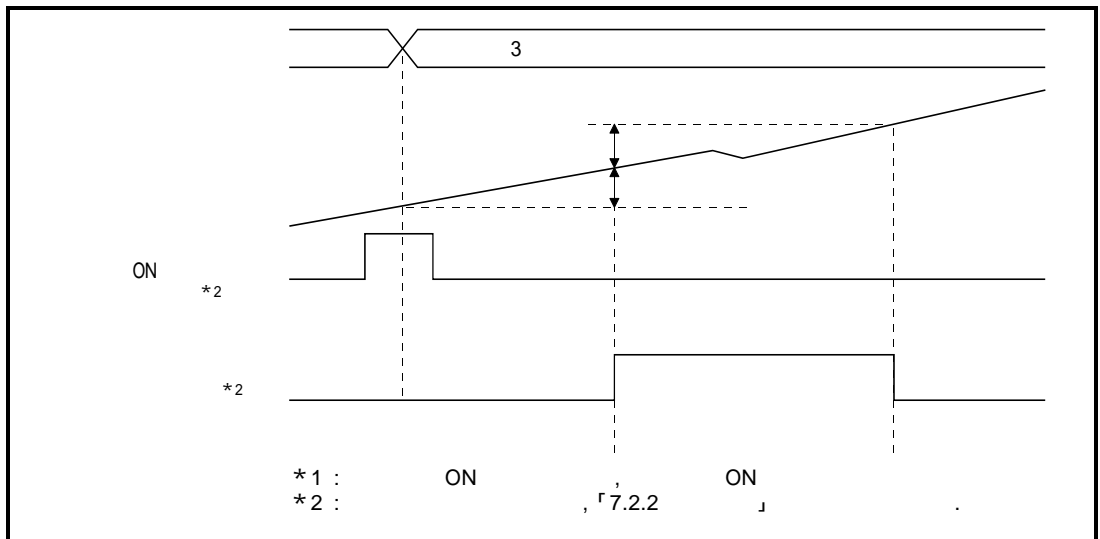
(f) 「 , "3" , ON/OFF  
가 ON , ON/OFF



(g) 「 , "3" , ON/OFF  
가 OFF , 가 ON , OFF가



- (h) 「 3 "4"가 , ON/OFF  
ON/OFF , OFF가 .
- (i) 「 ON , 「 OFF  
OFF ON 가 . ON/OFF
- (j) ON/OFF ON ON/OFF  
ON , ON ON/OFF
- (k) ON/OFF ON ON/OFF  
ON , ON ON ,  
ON OFF가 .
- (l) ON/OFF ON ON/OFF  
ON , ON ON  
가 ON/OFF .



- (m) , ON , ON  
가 ,  
ON/OFF  
ON/OFF  
가 1 , ON/OFF  
가 1



- (n) ON , ON  
가 , 가 1 ,  
가 -2147483648 ~ 2147483647  
[PLS] , + - , - +가  
가 ON/OFF .
- (o) 「 , ' OFF' ,  
가 , OS OFF .  
ON/OFF OFF .  
ON 가 ON .
- (p) ON/OFF , OFF  
ON/OFF OFF , 가  
ON , 가 OFF가  
가 OFF 가 , OFF  
가 OFF .  
OFF , OFF .
- (q) OFF, OFF ,  
ON .  
ON  
ON/OFF ON .

- (5)
- (a) , ON/OFF (TREN  
: ) ON/OFF .  
 , 가 .  
 ON/OFF ON , (OFF  
ON) ON 가 .  
 ON/OFF 가 OFF , 2  
 OFF가 .
- (b) (TREN )가 ON , ON/OFF ON  
 가 .  
 , ON/OFF ON ,  
 가 가 2 .  
 ON/OFF 가 OFF , OFF ON  
 ON .  
 ON ON/OFF 가 ON ON  
 가 ON 가 , OFF , ON .

(c) ON/OFF , ON/OFF ,  
ON/OFF ,

1		M2160	17		M2192
		M2161			M2193
2		M2162	18		M2194
		M2163			M2195
1		M2164	19		M2196
		M2165			M2197
4		M2166	20		M2198
		M2167			M2199
5		M2168	21		M2200
		M2169			M2201
6		M2170	22		M2202
		M2171			M2203
7		M2172	23		M2204
		M2173			M2205
8		M2174	24		M2206
		M2175			M2207
9		M2176	25		M2208
		M2177			M2209
10		M2178	26		M2210
		M2179			M2211
11		M2180	27		M2212
		M2181			M2213
12		M2182	28		M2214
		M2183			M2215
13		M2184	29		M2216
		M2185			M2217
14		M2186	30		M2218
		M2187			M2219
15		M2188	31		M2220
		M2189			M2221
16		M2190	32		M2222
		M2191			M2223

\* : Q172CPU , 1 ~8 가



(g)

No.

,

-

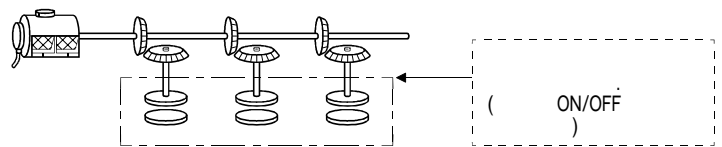
,

-

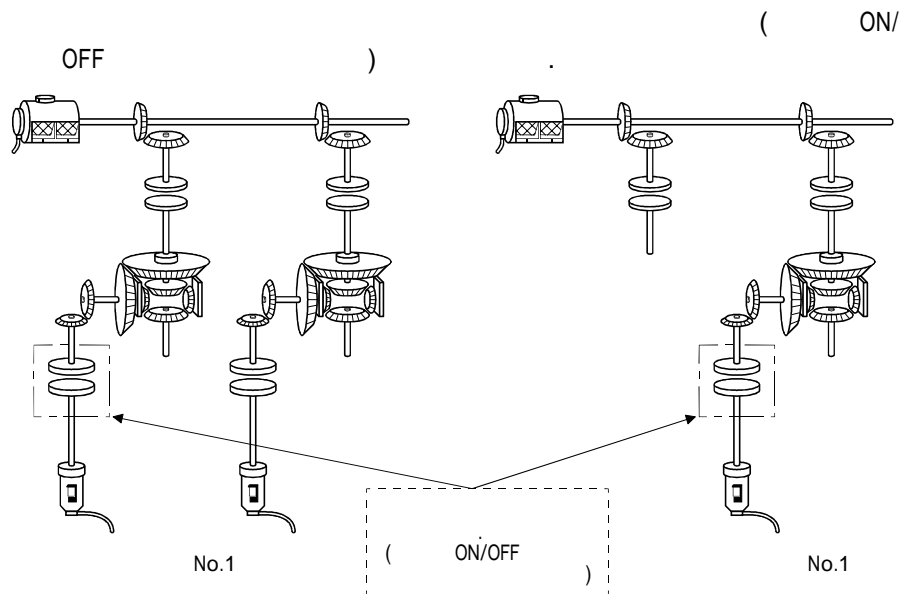
.

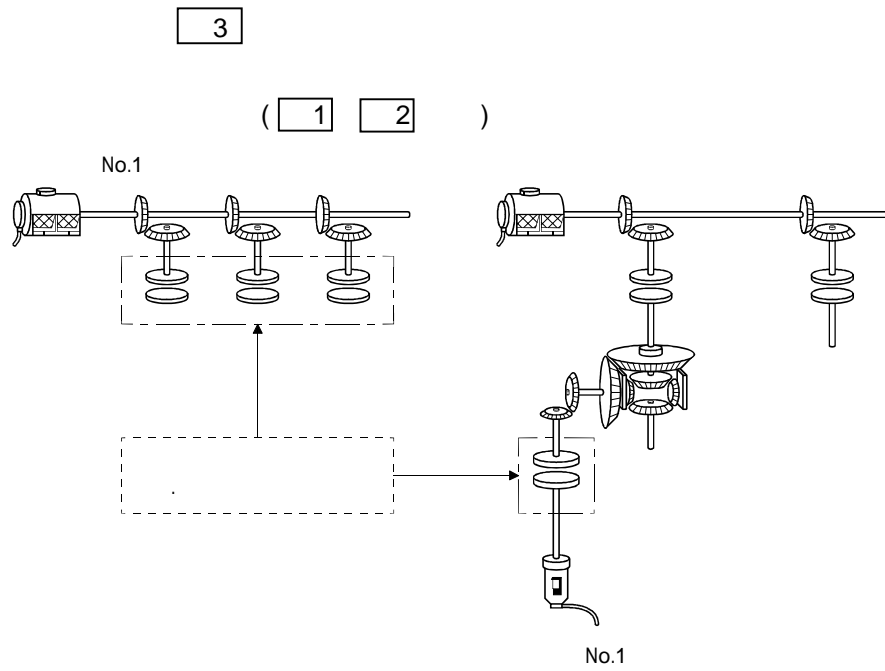
1

( , ON/OFF )



2





7.

7. 2. 2

7.2 , 7.2 (1)~(6) .  
, SW6RN-GVS22P .

7. 2

No.						가	
1		ON/OFF	ON/OFF	ON/OFF 2 } }			
2	(1 )	-	-		-		
3	ON/OFF	-					
4	ON (2 )	-	-		-		
5	OFF (2 )						
6		-	-			-	-
7			/			-	
8		0	0 ~ 65535ms			-	
9	(2 )	-				-	

(1)

(a) ON/OFF  
가 , 3 .  
• ON/OFF  
• ON/OFF , , 2,  
.

, 「7.2.1 」 .

(b)

I/F 가 가 , Q173PX/Q172EX .

I/F			
	ON/OFF	, 2,	
(INC)			
(ABS)			×

: 가 , × : 가

(2) (ON/OFF , , 2, , 1 )

(a) ON/OFF

, 가 .

No.	
0	ON/OFF
1	
2	2
3, 4	

"0" ~ "4"

,

(b)

,

	D800 ~ D3069 <sup>*1</sup> D3080 ~ D8191 <sup>*2</sup>
	W0 ~ W1FFF

\*1 :

,

가 .

\*2 : D800~D1559

가

, 가

,

「 」

가

가

,

가

.

(3) ON/OFF

(a) ON/OFF

.

(b) ON/OFF

,

가 가

.

	X0 ~ X1FFF
	Y0 ~ Y1FFF
/	M0 ~ M8191 / L0 ~ L8191
	M9000 ~ M9255
	B0 ~ B1FFF
	F0 ~ F2047



(4) ON/OFF (ON/OFF ,  
가 , 2 )  
(a) , ON ON/OFF

(b) ON/OFF , 가 가 .

	D800 ~ D3068 <sup>*1</sup> D3080 ~ D8190 <sup>*2</sup>
	W0 ~ W1FFE <sup>*2</sup>

\*1 : D800~D1559 가 , 가 , 「 」  
가 가 ,  
가 .

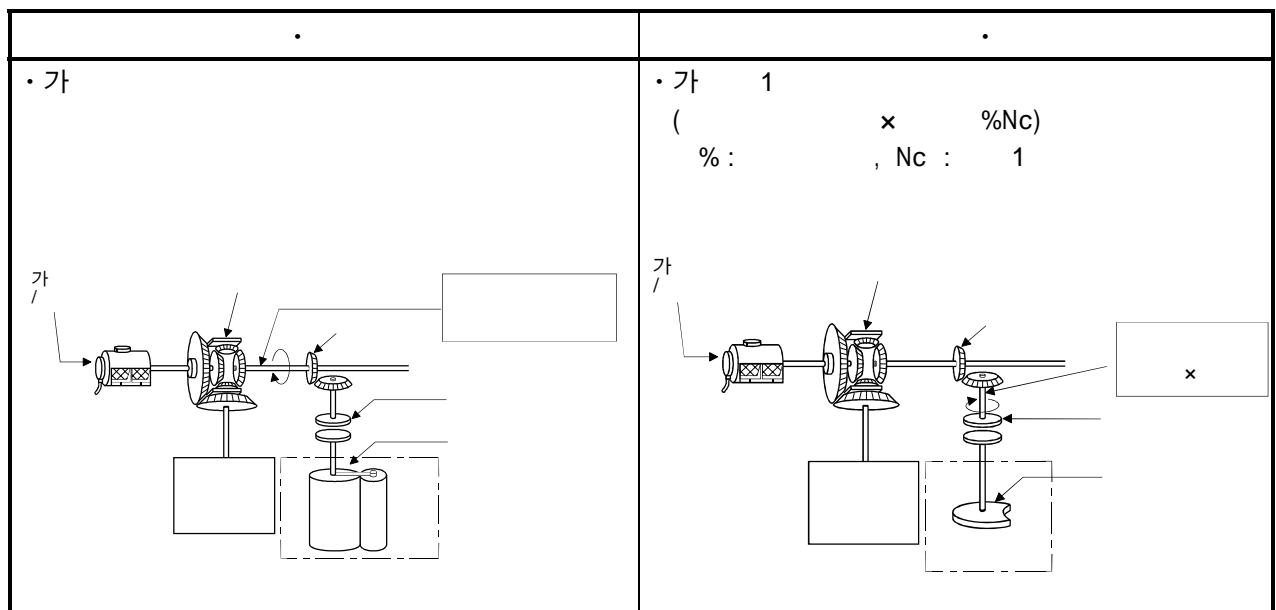
\*2 : .

(c) 가 ON/OFF .

- 2147483648( - 2<sup>31</sup>) ~ 2147483647(2<sup>31</sup> - 1) [PLS]

0 ~ 1 - 1[PLS]

(d) , ON/OFF , 7.2.1 (1)~(5)



(5)

(a)

가 , 2 .  
 .  
 .

(b)

, 7.2 .

(6)

63[%] .

(7)

(2 )

(a)

.

(b)

, 가 가 .

	D800 ~ D3068 <sup>*1</sup> D3080 ~ D8190 <sup>*2</sup>
	W0 ~ W1FFE <sup>*2</sup>

\*1 : D800~D1559 가 , 가 ,  
 「 」 가 . 가 ,  
 가 .

\*2 : .

(c)

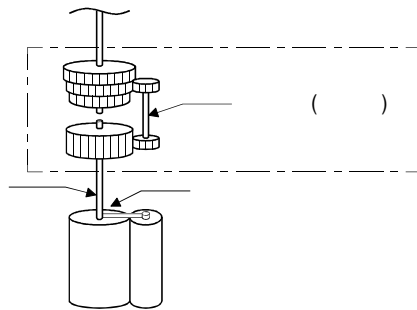
가 , 0~2147483647[PLS] .

7.3

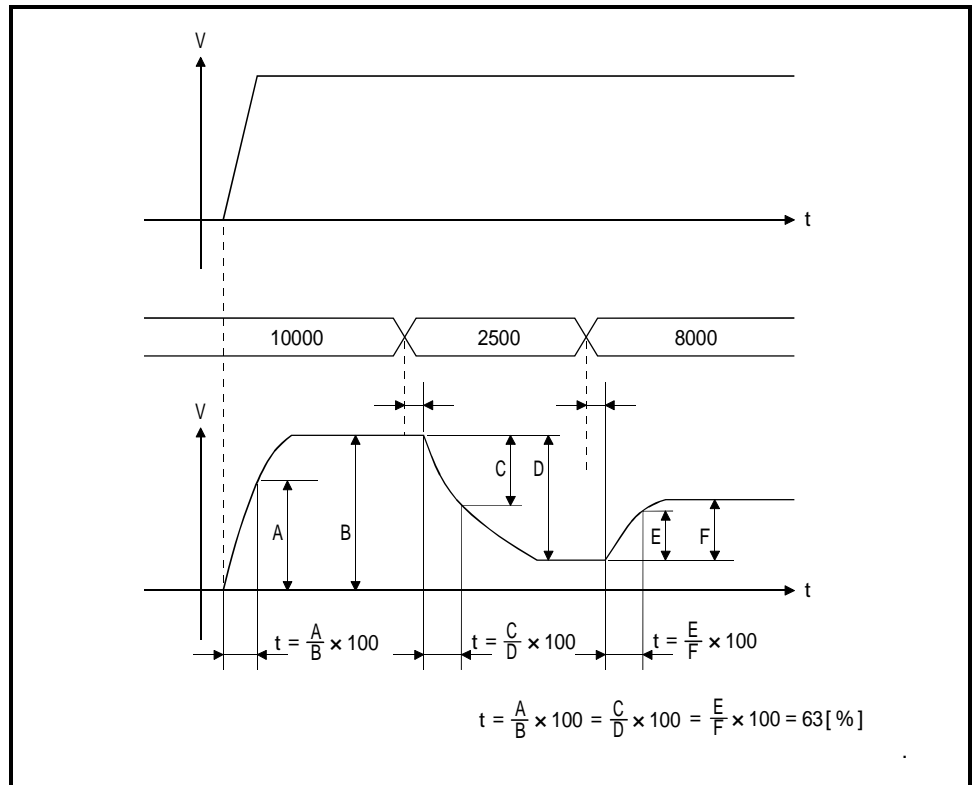
7.3.1

(1)

$$= ( \quad ) \times \frac{(\quad)}{10000} \text{ [PLS]}$$



(2) 가 , (t)  
가



7. 3. 2

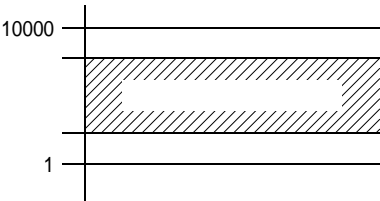
7.3 , 7.3 (1)~(3) .  
 , SW6RN-GSV22 .

7. 3

No.			
1		10000	1 ~ 10000
2		1	1 ~ 10000
3	(1 )		D800 ~ D3069 D3080 ~ D8191
			W0 ~ W1FFF
4		0	0 ~ 65535[ms]

(1) /  
(a) (0.01%~100%)

(b) ,  
 ,  
 .



(c) / , 0.01~100[%] 100 1~1000 .

(d) / , .

1 ( ) ( ) 10000
-----------------

(2)

(a)

(b)

	D800 ~ D3069 <sup>*1</sup> D3080 ~ D8191
	W0 ~ W1FFF

\* 1 : D800~D1559 가 , 가 ,  
가 . 가 ,  
가 .

(c)

, ( ) ~ ( ) .

(3)

63[%] .

7. 4

- 가
- 가

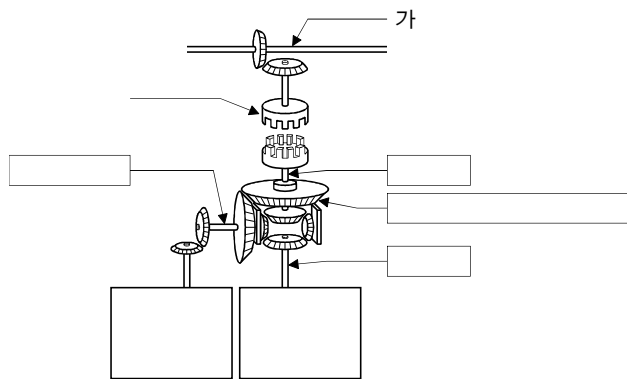
7. 4. 1

(1) 가

(a) 가

,

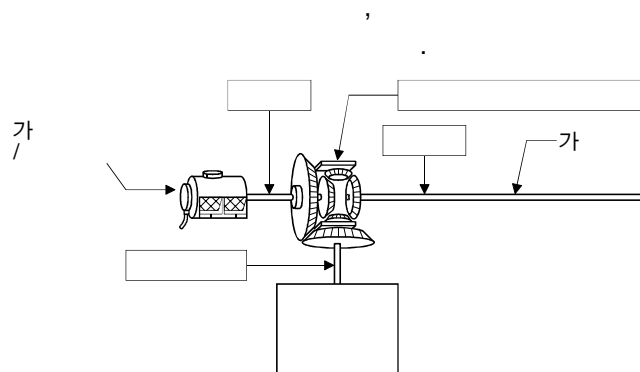
$$= ( \quad ) - ( \quad ) \text{ [PLS]}$$



(b) 가

,

(3) 가



가

7. 4. 2 ( )

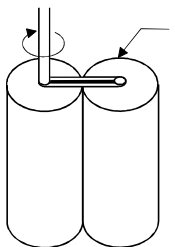
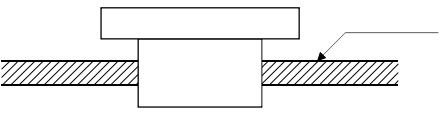
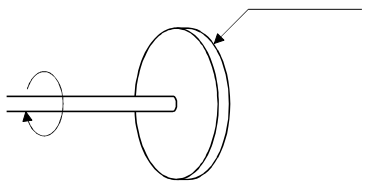
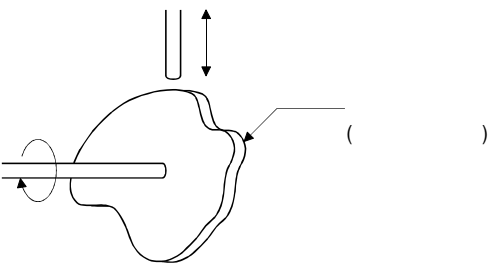
[illegible]

, 가 ,

, 4 가 .

- ..... 8.1
- ..... 8.2
- ..... 8.3
- ..... 8.4

(1)

	• ( )	
	• ( )	
	• ( )	
	• ( )	



(2)

(a)

		1	<table><tr><td></td><td></td></tr><tr><td>D</td><td>800 ~ 3069 3080 ~ 8191</td></tr><tr><td>W</td><td>0 ~ 1FFF</td></tr></table>			D	800 ~ 3069 3080 ~ 8191	W	0 ~ 1FFF	
D	800 ~ 3069 3080 ~ 8191									
W	0 ~ 1FFF									
	1									
	1									
		1								
	가 1 ( )	2								
	가 1 ( )	2								
	No.	1								
		2								
		1								
		2								
	가 1 ( )	2								
	가 1 ( )	2								

(1) 2		SFC		32
(2) SFC	2			32

(b)

가  
가

				가	가	
					*	
	가 1 ( )					*
	가 1 ( )					
	No.				*, No., 가 *	
	가 1 ( )					*
	가 1 ( )					

\* :  
(SV13/SV22)「 Q173CPU/Q172CPU  
(SFC )」\* :  
(SV13/SV22)「 Q173CPU/Q172CPU  
(SFC )」 「1.5.3」

CPU

		Q173CPU	Q172CPU
		32	8
( )	SV22	0.88[ms] / 1~4 1.77[ms] / 5~12 3.55[ms] / 13~24 7.11[ms] / 25~32	0.88[ms] / 1~4 1.77[ms] / 5~8

## 8.

### 8.1

· ,  
· ( , ) ( . ) ,

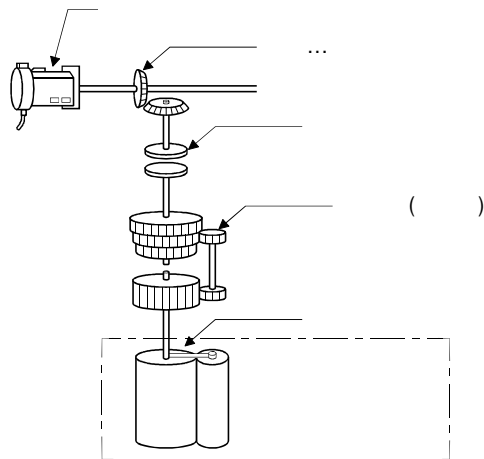
#### 8.1.1

(1)

(a) , / .

$$\begin{aligned} &= ( \quad \text{[PLS/s]} ) \times ( \quad ) \times ( \quad ) \text{[PLS/s]} \\ &= ( \quad \text{[PLS]} ) \times ( \quad ) \times ( \quad ) \text{[PLS]} \end{aligned}$$

/ , .

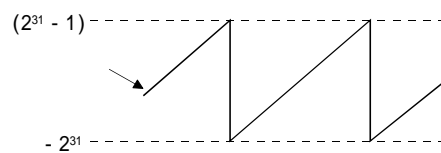


(b) , 가 ON 가 .

(2)

(a) , 가 , 가

· , - 2147483648 ( -  $2^{31}$  ) ~ 2147483647 (  $2^{31} - 1$  ) [PLS]



8.

(b) , 가

(c)

4.2.1 8.1.2 ,

8. 1. 2

8.1 , 8.1 (1)~(6)  
 , SW6RN-GSV22P

8. 1

No.				
1		0	Q173CPU : 1~32 Q172CPU : 1~8	
2		mm	mm	inch
3	(L)	0	0.1 ~ 214748364.7[ μm]	0.00001 ~ 21474.83647[ inch]
4	1 (N 1)	0	1 ~ 2147483647[PLS]	
5	溜り	65535	1 ~ 65535[PLS]	
6	(V <sub>L</sub> )	0	0.01 ~ 6000000.00 [mm/min]	0.001 ~ 600000.000 [inch/min]
7	(1 )	-	-(300[%]) /	
8			16	

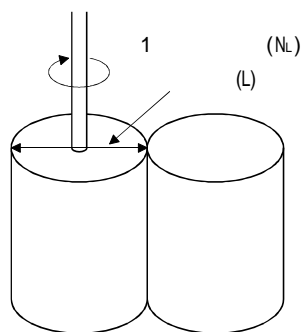
(1)

(a) [mm] / [inch]

(b) ( )  
 , [mm] / [inch] / [degree] / [PLS]

(2) (L) / 1 (N<sub>L</sub>)

가 1



(b) , 1 ,  
가 [mm]  

$$= [1 \quad ] \times \frac{\times L}{N_L} \quad \begin{matrix} [\text{mm/min}] \\ L : [\text{mm}] \end{matrix}$$
  
가 [inch]  

$$= [1 \quad ] \times \frac{\times L}{N_L} \quad \begin{matrix} [\text{inch/min}] \\ L : [\text{inch}] \end{matrix}$$
  
, , 0<sup>n</sup>

(3)

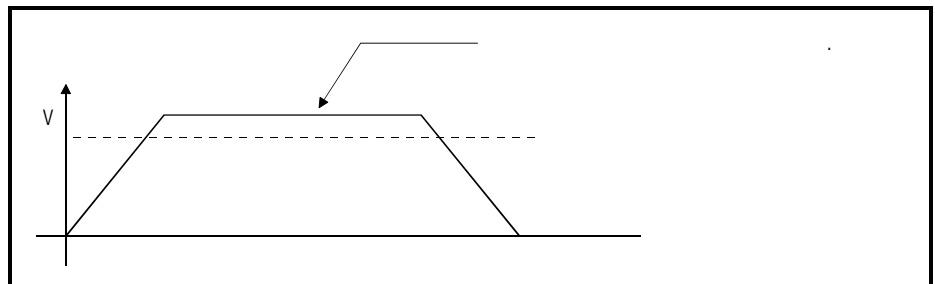
(a) 가 .

(b) , > ,  
(M2407+20n)가 ON .(c) 가 131072[PLS] ,  
100 .

(4) (VL)

(a) .

(b) , .  

$$1 \quad \frac{V_L \times N_L}{60 \times \times L} \quad 10000000 \text{ [ PLS/s ]} \quad \begin{matrix} V_L : [\text{mm/min}] \\ [\text{inch / min}] \\ L : [\text{mm}] \\ [\text{inch}] \end{matrix}$$
(c) 가 , (M2407+20n)가  
ON .

(5) (1 )

(a)

가

, 300[%]

(b)

	D800 ~ D3069 *1 D3080 ~ D8191
	W0 ~ W1FFF

\* 1 : D800~D1559 가 , 가

「 」

가

가

가

(c)

1~500[%]

(6)

(a)

(b)

16

가

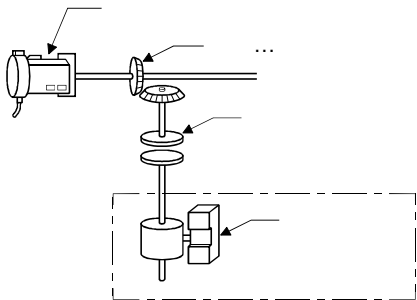
(1)	「 」 「 1 」
(2)	「 」
	, 가 ( )
	, 가 ( )
가	.

8. 2

8. 2. 1

(1)

$$\begin{aligned}
 &= ( \quad \quad \quad [PLS/s] ) \times ( \quad \quad ) [PLS/s] \\
 &= ( \quad \quad \quad [PLS] ) \times ( \quad \quad ) [PLS]
 \end{aligned}$$



, 가 ON 가 .

(2)

(a) 가 /가

(b) , 가 가 ,

(c) 1 , ( , 1 )

1 .

## 8.

### 8. 2. 2

8.2 , 8.2 (1)~(8) .  
 , SW6RN-GSV22P .

#### 8. 2

No.				
1		0	Q173CPU : 1~32 Q172CPU : 1~8	
2		mm	mm	inch
3	(P)	0	0.1 ~ 214748364.7 [ μ m]	0.00001 ~ 21474.83647 [ inch]
4	1 (N p)	0	1 ~ 2147483647 [PLS]	
5		65535	1 ~ 65535 [PLS]	
6		$2^{31}-1$	- 214748364.8 ~ 214748364.7 [ μ m]	- 21474.83648 ~ 21474.83647 [ inch]
7		0		
8	(V <sub>L</sub> )		0.01 ~ 6000000.00 [mm/min]	0.001 ~ 600000.000 [ inch/min]
9			/	
10	(1 )		- (300[%])/	
11			16	

(1)

(a) [mm] / [inch] .

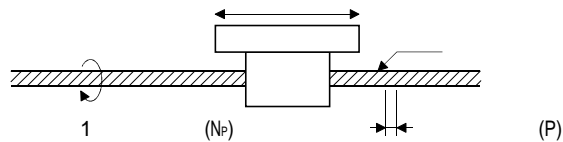
(b) , ( )

가 , 가 ,  
가 .

(2)

(P) / 1 (N<sub>p</sub>)

(a) 가 1



(b) 1 , 1

$$1 = \frac{P}{N_p}$$



(3)

(a)

(b)

(M2407+20n)가 ON

(c)

가 131072[PLS]  
100

(4)

(a) 가

(b)

(M2407+20n)가 ON

(5)

(V<sub>L</sub>)

(a)

(b)

가 [mm]

$$1 \frac{V_L \times 10^4 \times N_P}{60 \times P} \quad 10000000 \text{ [ PLS/s ]}$$

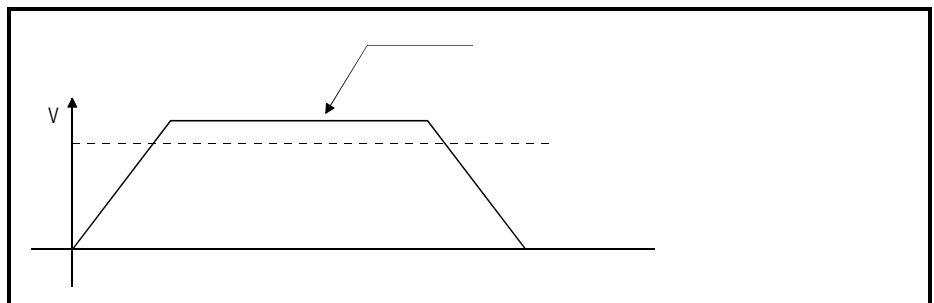
가 [inch]

$$1 \frac{V_L \times 10^5 \times N_P}{60 \times P} \quad 10000000 \text{ [ PLS/s ]}$$

(c)

ON 가

(M2407+20n)가



(6)

(a)

/

.....

...

(7) (1 )

(a)

가

, 300[%]

(b)

	D800 ~ D3069 <sup>*1</sup> D3080 ~ D8191
	W0 ~ W1FFF

\*1 : D800~D1559 가 , 가  
「 」 가 . 가 ,  
가 .

(c) , 1~500[%]

(8)

(a)

(b)

, 16

가

(1)	「 」 「 1 」 , ,
(2)	/가 , 가 . . 「 (P) 」 = 「 AL 」 ( ) . 「 1 (N P) 」 = 「 AP 」 ( )

8. 3

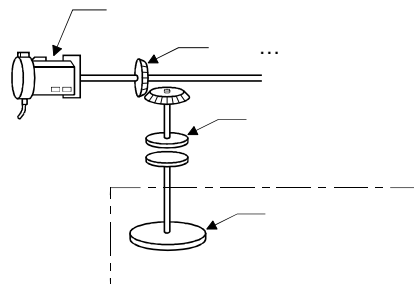
8. 3. 1

(1)

(a)

$$= ( \quad \quad \quad [PLS/s] ) \times ( \quad \quad \quad ) [PLS/s]$$

$$= ( \quad \quad \quad ) \times ( \quad \quad \quad ) [PLS]$$



(b)

가 ON

(2)

(a)

가 /가

(b)

가

(c) 1

( 1 )

1

## 8. 3. 2

8.3 , 8.3 (1)~(9) .  
, SW6RN-GSV22P .

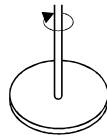
## 8. 3

No.			
1		0	Q173CPU :1~32 Q172CPU :1~8
2	1 (Nb)	0	1 ~ 1073741824[PLS]
3		65535	1 ~ 65535[PLS]
4		0	0 ~ 359.99999[degree]
5		0	0 ~ 359.99999[degree]
6	(VL)	0	0.001 ~ 2147483.647 [degree/min]
7	(1 )	-	-(300[%] /
8			16
9	가 1 ( ) (2 )	-	- /
10	가 1 ( ) (2 )	-	- /

(1) 1 (Nb)

(a)

1



1 (Nb)

(b)

1 , 1

$$1 = \frac{360}{N_D} \text{ [degree]}$$

(2)

(a)

(b)

(M2407+20n)가 ON

(3)

(a) 가

가 . ( / )=( / )  
, 가 .

(b) , (M2407+20n)가 ON .

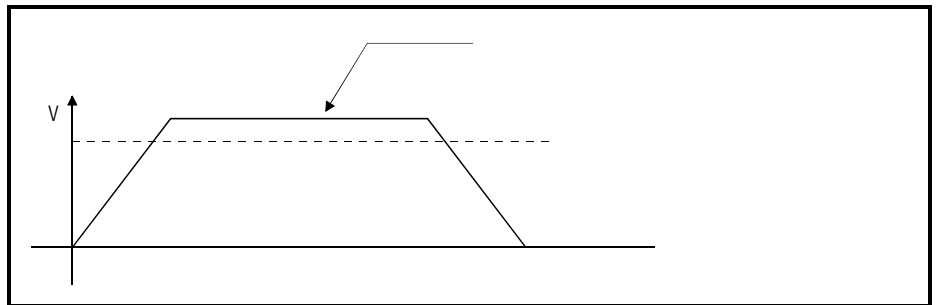
(4) (VL)

(a) .

(b) , .

$$1 \frac{V_L \times 10^5 \times N_D}{60 \times 360 \times 10^5} 10000000[\text{PLS/s}]$$

(c) 가 , (M2407+20n)가 ON .



(5) (1 )

(a) .

. 가 , . 300[%]

(b) , 가 가 .

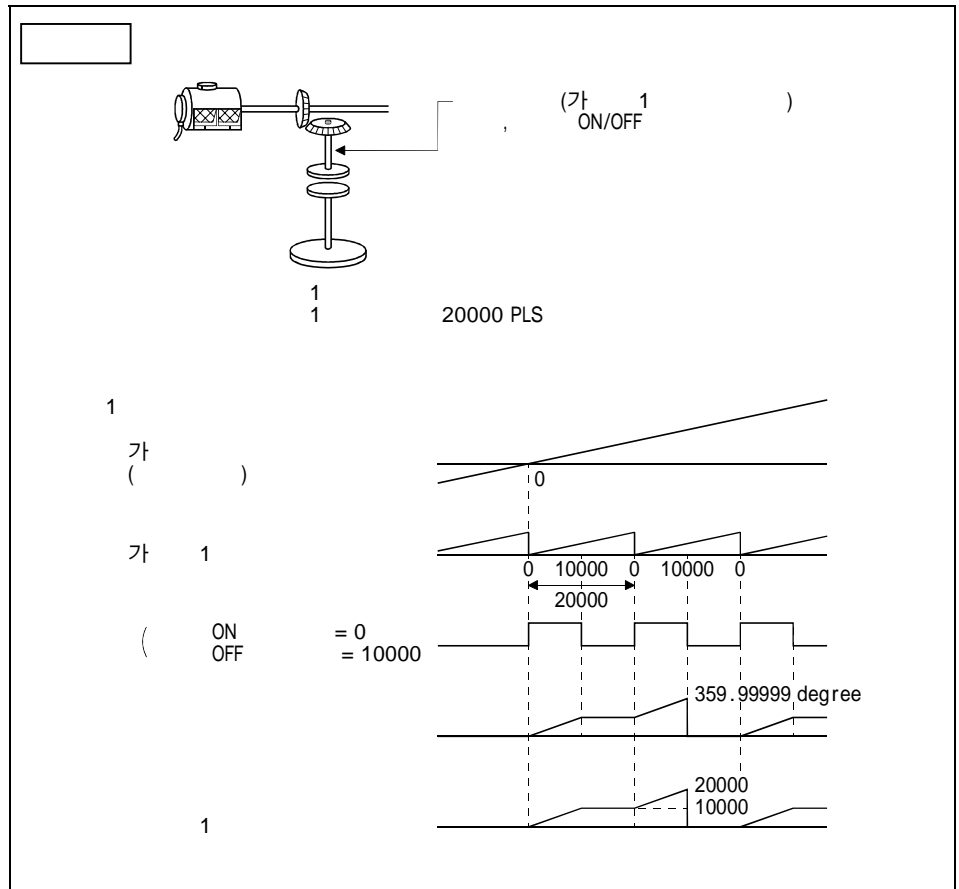
	D800 ~ D3069*1 D3080 ~ D8191
	W0 ~ W1FFF

\* 1 : D800~D1559 가 , 가 ,  
「 」 가 가 ,  
가 .

(c) , 1~500[%] .



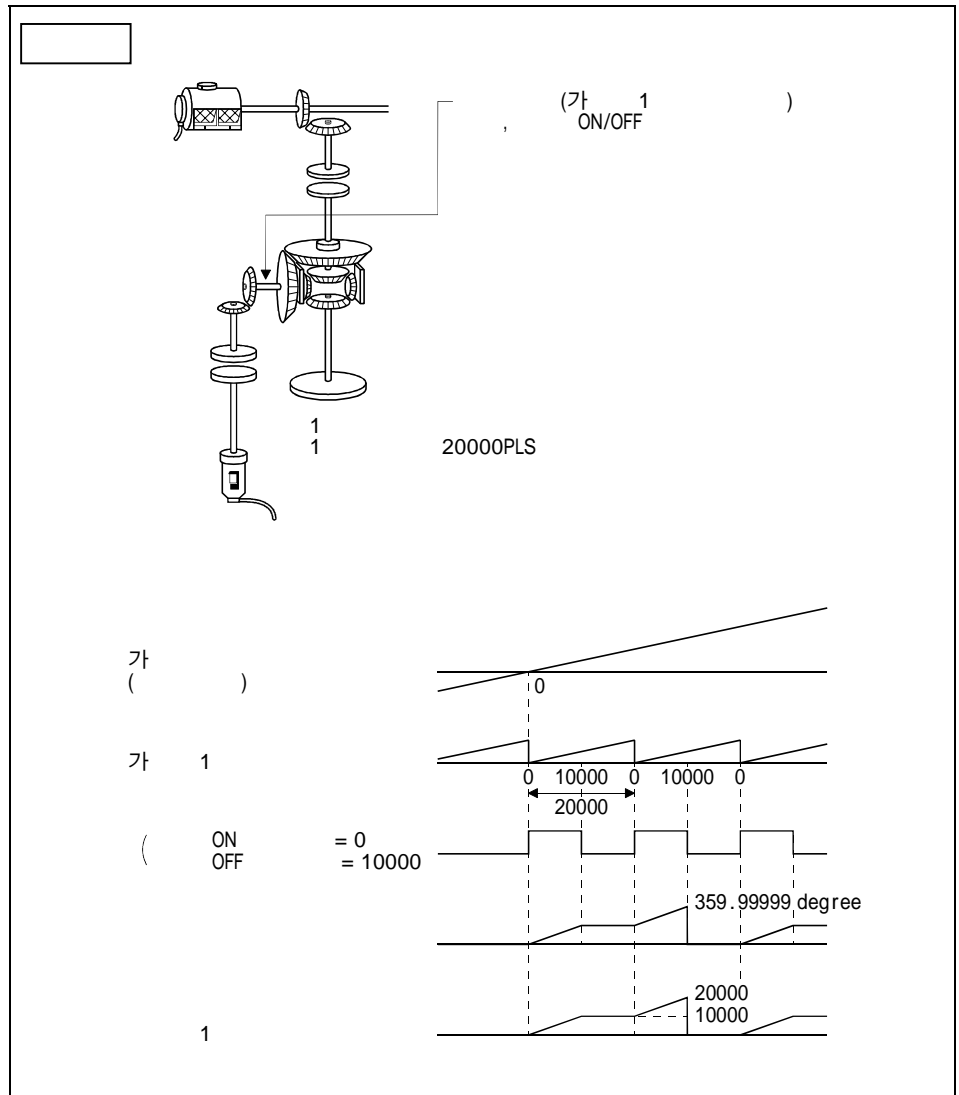
(f)







(f)



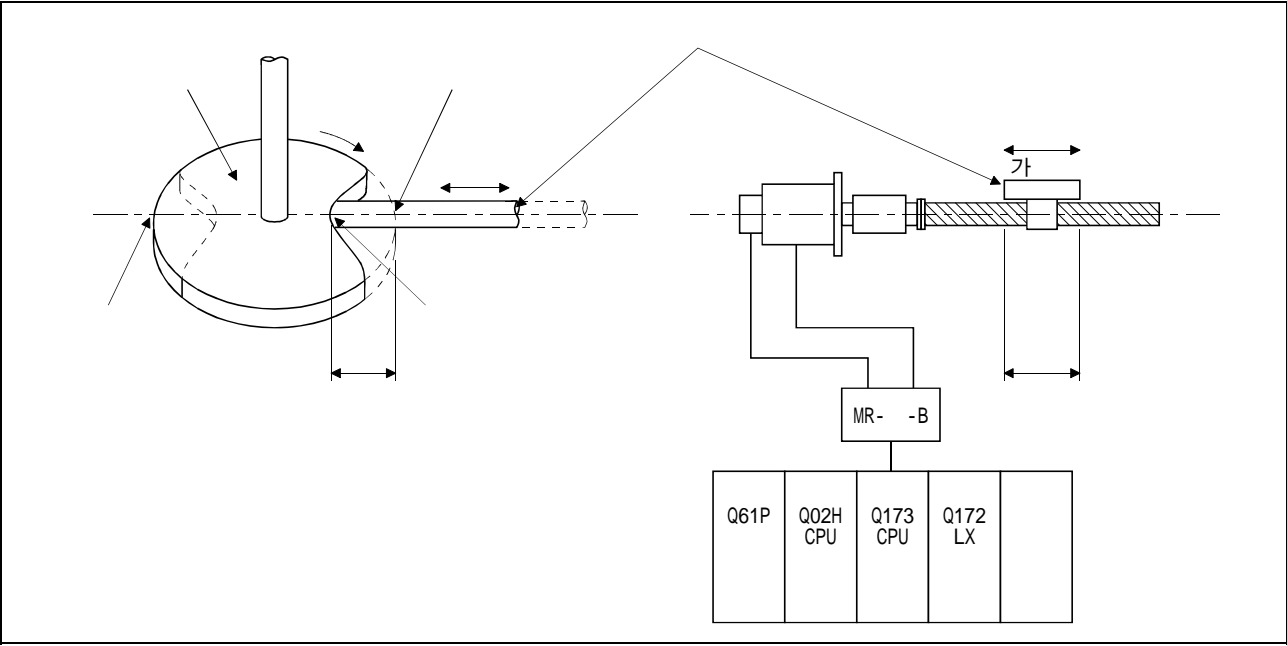
(1) 「 1 」 가

(2) /가 가

「 1 (Nb) 」 =  $\frac{360[\text{degree}]}{\text{「AL」}} \times \text{「AP」}$

( 「AP」 , 「AL」 )

(1)



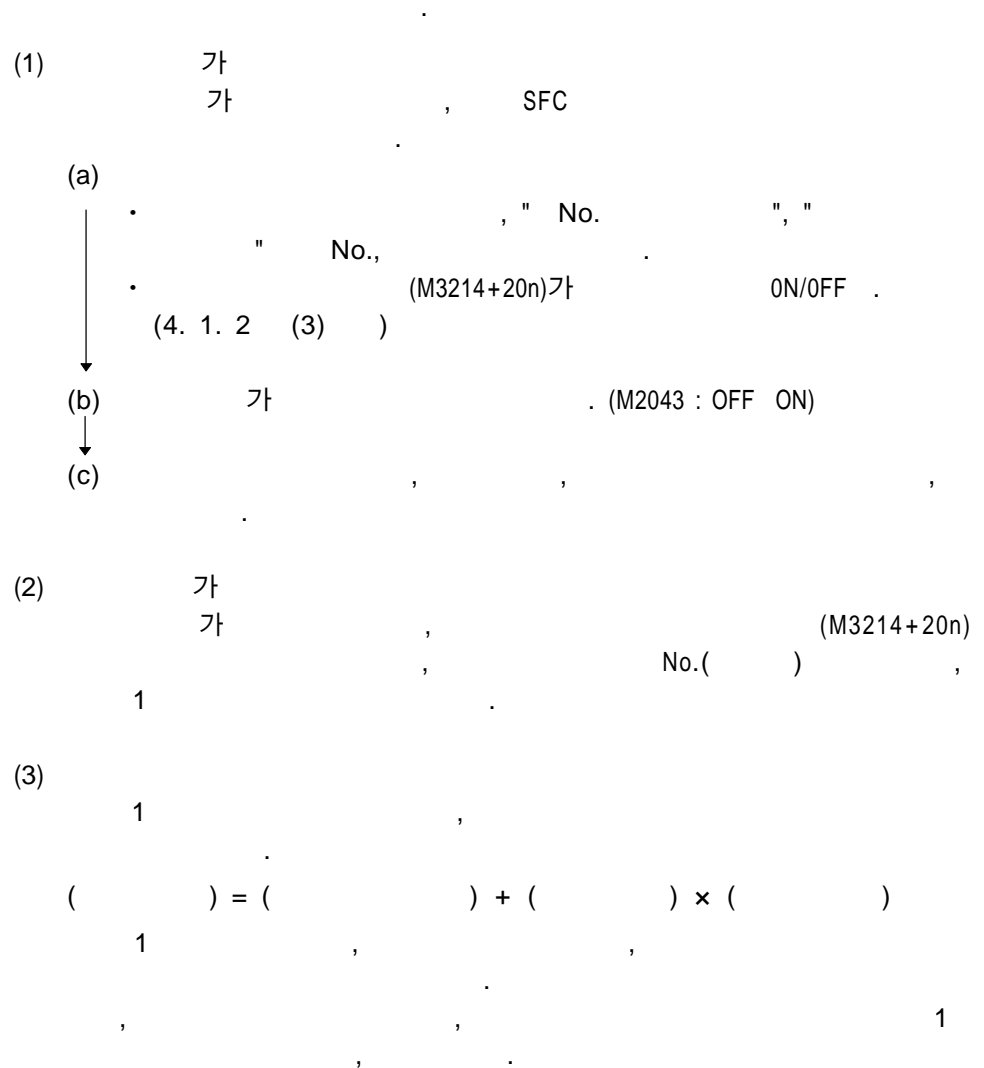
(2)

2 가

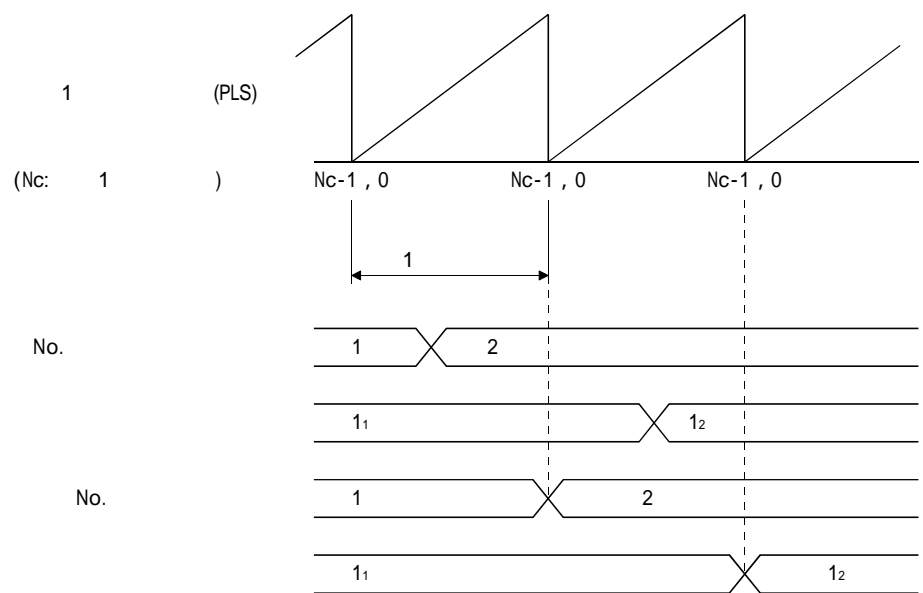
SW3RN-CAMP ( )  
(8. 4. 2 )

(8. 4. 3 )

8. 4. 1



- (4) • No. SFC No.
- (a) 가 .
- (b) No. , " ,  
 No. " , No. " ,  
 No. No.  
 • No.가 .  
 • No. 0 No. 1, No.2  
**l1, l2** , .



- (c) No., No. 가 가  
 가 ,  
 (M2407+20n)가 ON ,  
 가 .  
 • 1~2147483647( $2^{31}-1$ )  
 ,  
 + 2147483647( $2^{31}-1$ )  
 • No. 가

No.,  
 • 가 , 가  
 • " , No. " ( )  
 , / No.  
 .  
 (M3207+20n) .

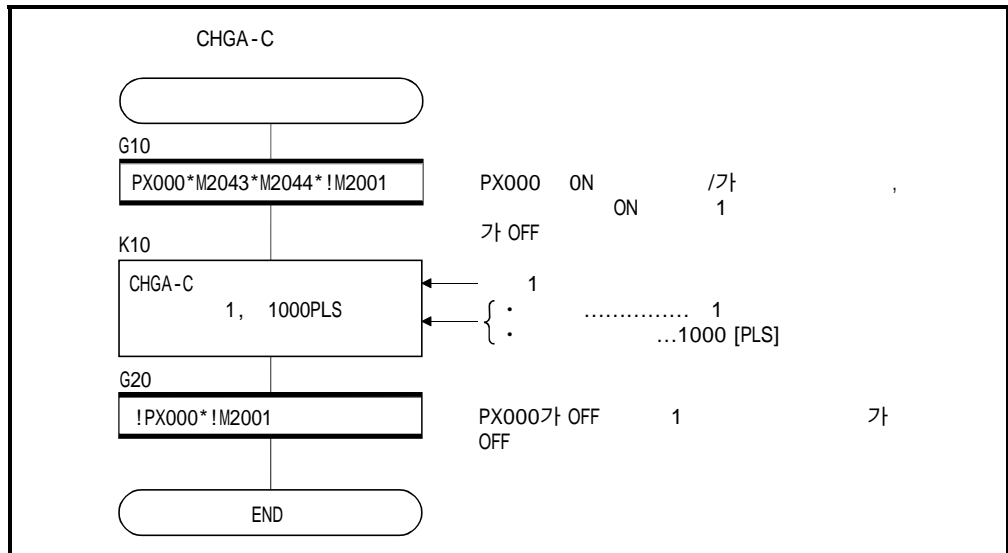
- 1) 가 가 ,  
 • /가 (M2043) OFF .  
 • No.,  
 • /가 ON , 가 .
- 2) 가 , No.,  
 .

(5)

- (a) 가 , 가 ,  
 .
- (b) , 가 ,  
 .
- (c) / ,  
 .

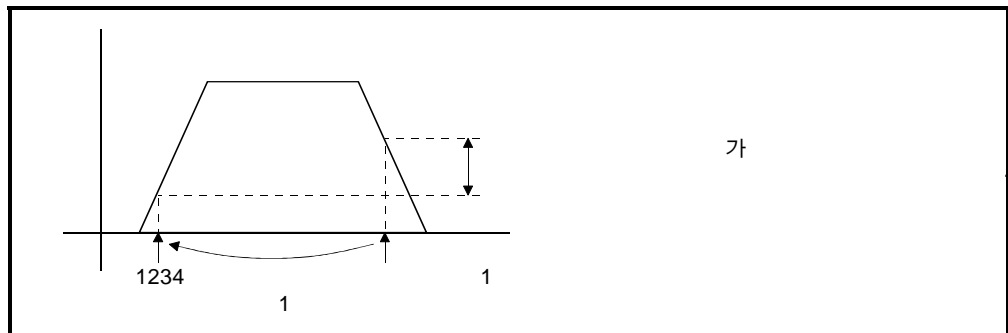
(6)

, 가 , 1  
 .  
 CHGA-C .(「 Q173CPU/Q172CPU (SV13/SV22)  
 (SFC )」 9.4 .)  
 (CHGA-C) SFC



\* : SFC /

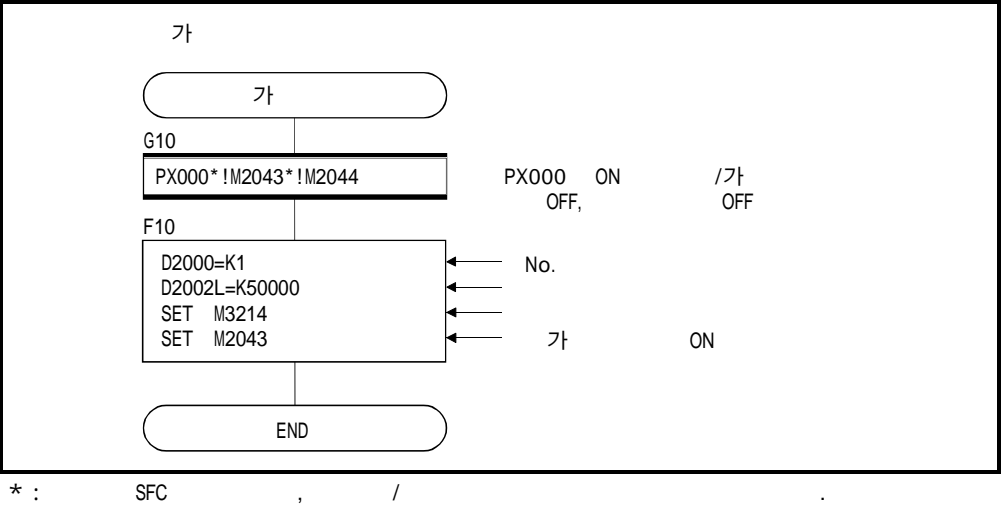
【 】



(7)

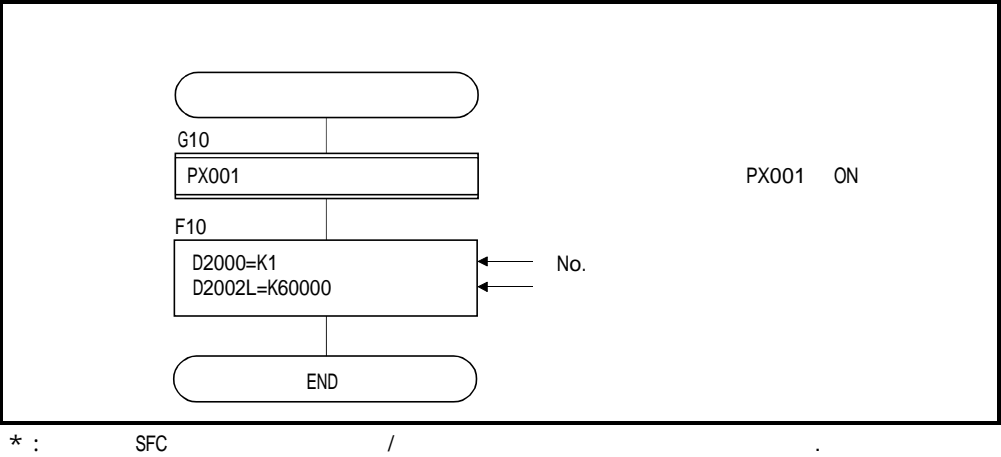
【 가 】

가 SFC ,



【 No., 】

No., SFC



## 8. 4. 2

## 8. 4

No.			
1	No.	-	(1)
2		256	256,512,1024,2048
3	, No.	0	0~( -1)
4			· ·
5		0	0~32767

(1) No.

SFC

No.

	No.
1	1 ~ 64
2	101 ~ 164
3	201 ~ 264
4	301 ~ 364

(2)

(a) 1

가

(b)

- 1 (Nc)
- 1 x

(3)

, No.

(a)

, No.

(b)

[0~( -1)]가

, No.

, No.가



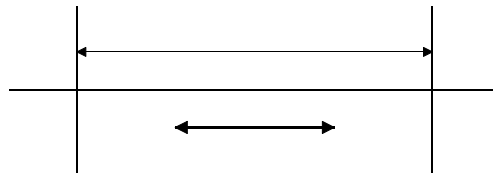
(4)

(a)

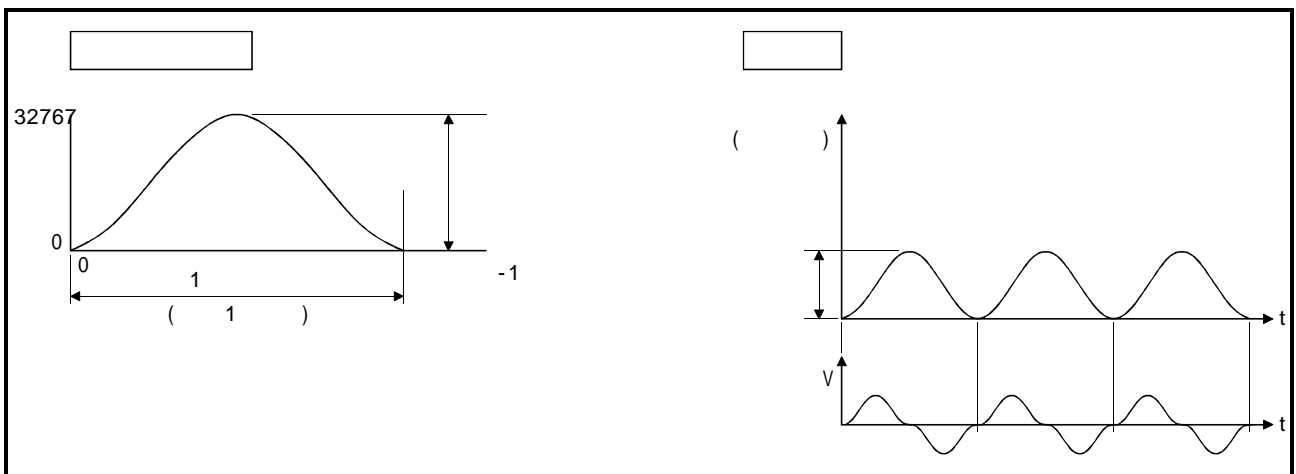
/

.....

( )



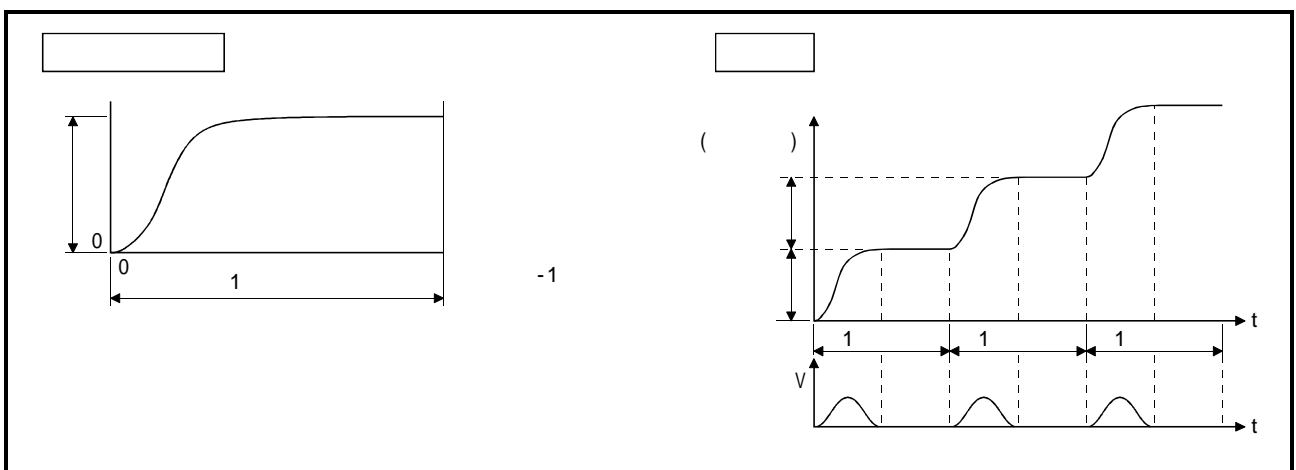
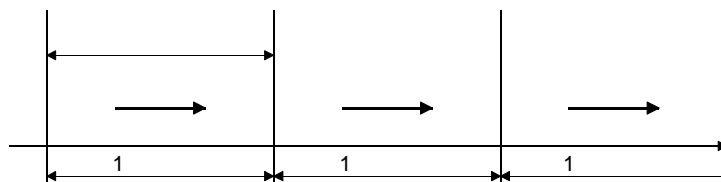
( )



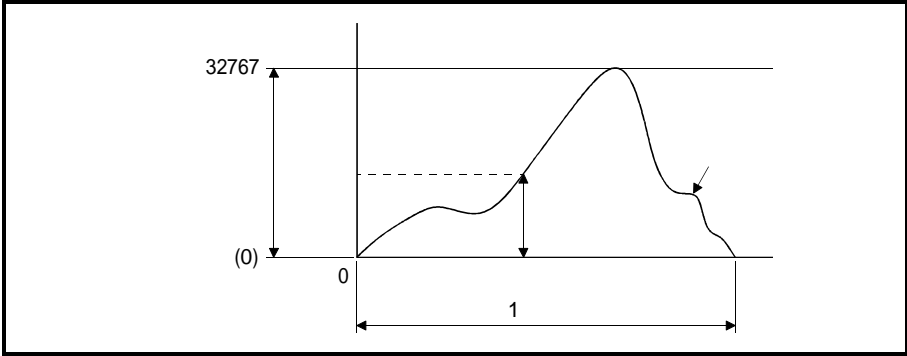
.....

( )

, 1



(5) (a) ( 32767 )



(b) , CPU 가 8. 4. 4 .

8. 4. 3

8.5 , 8.5 No.2~12 (1)~(12)

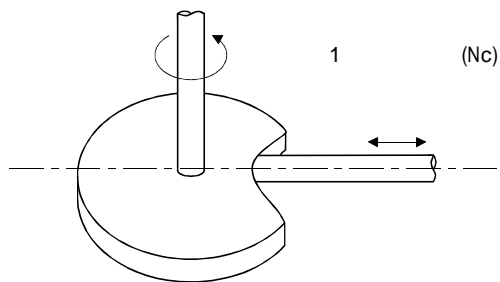
, SW6RN-GSV22P

8. 5

No.					
1		0	1~32		
2	1	0	1~1073741824[PLS]		
3	No.	-	-		
4	(1 ) (Nc)	-			
5		65535[PLS]	1~65535		
6		mm	mm	inch	PLS
7	(2 )	-			
8	(1 )	-	-(300[%])/		
9			16		
10	(2 )	-			
11	가 1 ( , 2 )	-	-/		
12	가 1 ( , 2 )	-	-/		

(1) 1 (Nc)

(a) 1



(b) 1 , 1 ( )

(2) No.

가

No.

가

(3) (1 )

(a) 가 SFC

(b) , 가 가 .

	D800 ~ D3069 <sup>*1</sup> D3080 ~ D8191
	W0 ~ W1FFF

\* 1 : D800~D1559 가 , 가  
「 」 가 . 가 ,  
가 .

(c) " . "

(4)

(a) .

(b) , ( ) > ( )

(M2407+20n)가 ON .  
 , , ,

(c) 가 131072[PLS] (Super-Type) ,  
100 .

(5)

(a) ([mm]/[inch]/[PLS]) .

(b) , ( )  
 ) .

(6) (2 )

(a) .

(b) , 가 가 .

	D800 ~ D3069 <sup>*1</sup> D3080 ~ D8191 <sup>*2</sup>
	W0 ~ W1FFF <sup>*2</sup>

\* 1 : D800~D1559 가 , 가  
「 」 가 . 가 ,  
가 .

\* 2 : .

- (c) , .
- mm : +  $2147483647 \times 10^{-1} [\mu\text{m}]$
  - inch : +  $2147483647 \times 10^{-5} [\text{inch}]$
  - PLS : + 2147483647 [PLS]
  - mm : 0 <  $2147483647 \times 10^{-1} [\mu\text{m}]$
  - inch : 0 <  $2147483647 \times 10^{-5} [\text{inch}]$
  - PLS : 0 < 2147483647 [PLS]

(7) (1 )

- (a) .
- . 가 , . 300[%]

- (b) , 가 가 .

	D800 ~ D3069 <sup>*1</sup> D3080 ~ D8191
	W0 ~ W1FFF

\*1 : D800~D1559 가 , 가 ,  
「 」 가 . 가 ,  
가 .

- (c) , 1~500[%]가 가 .

(8)

- (a) .
- ,
- .

- (b) , 16 가 .

(9) (2 )

- (a) .

- (b) , 가 가 .

	D800 ~ D3069 <sup>*1</sup> D3080 ~ D8191 <sup>*2</sup>
	W0 ~ W1FFF <sup>*2</sup>

\*1 : D800~D1559 가 , 가 ,  
「 」 가 . 가 ,  
가 .

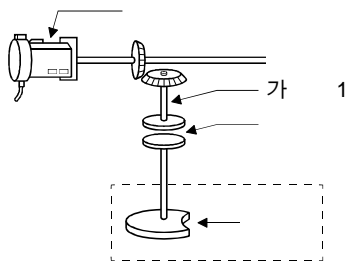
\*2 : .

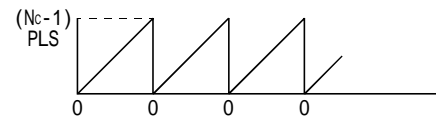
(c)  $_{-2147483648}^{(-2_{31})} \sim 2147483647(2_{31}-1)$  .

mm	:	$\times 10^{-1} [\mu\text{m}]$
inch	:	$\times 10^{-5} [\text{inch}]$
PLS	:	$\times 1 [\text{PLS}]$

(10) 가 1

(2 )


$$가 \quad 1 \quad = ( \quad \times \quad ) \% Nc$$

$$(\% : \quad )$$


(a)

가 1

(b) 가 1 , 가 가 .

	D800 ~ D3069 <sup>*1</sup>
	D3080 ~ D8191 <sup>*2</sup>
	W0 ~ W1FFF <sup>*2</sup>

\*1 : D800~D1559 가 , 가 ,  
「 」 가 . 가 , ,  
가 .

\*2 :

(c)  $\gamma = 1$ ,  $0 \sim (N_c - 1)$  [PLS].

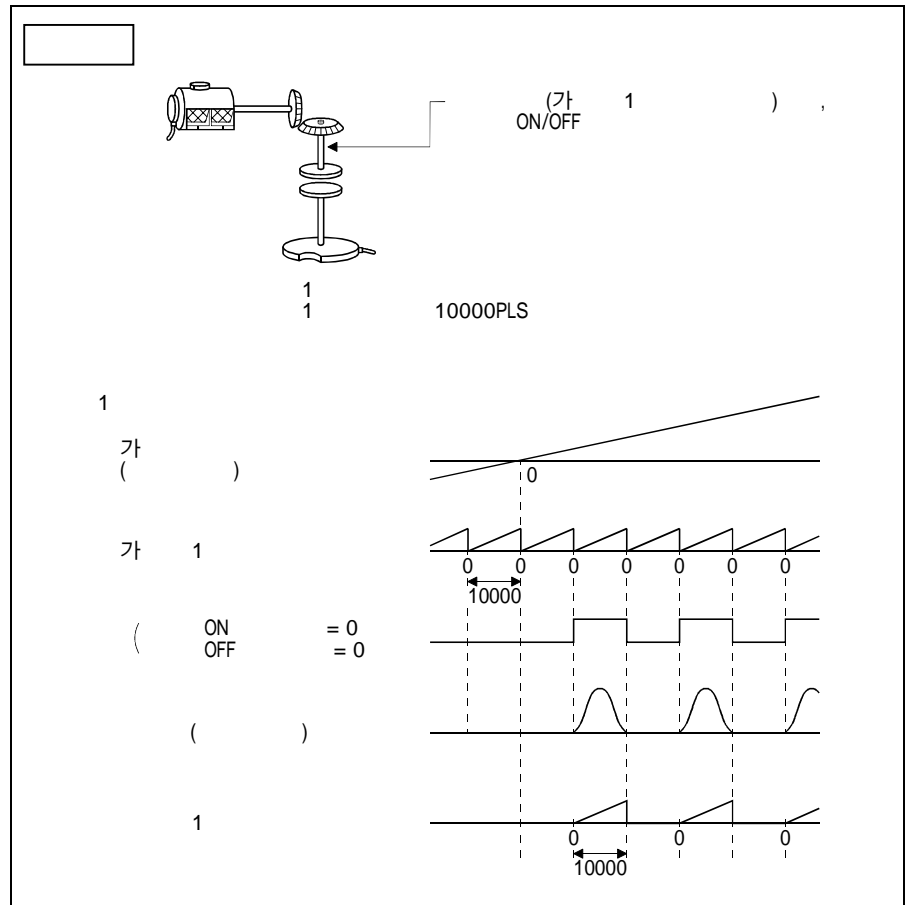
(d) 가	1	0~(Nc-1)[PLS]	ON/OFF
-------	---	---------------	--------

ON/OFF , 0~(Nc-1)[PLS]

(e) 가 1 "0" , (M3213+20n:  
) ON , 가

"0" 가 1  
(M3213+20n) OFF , 가 , 가  
가 1 .

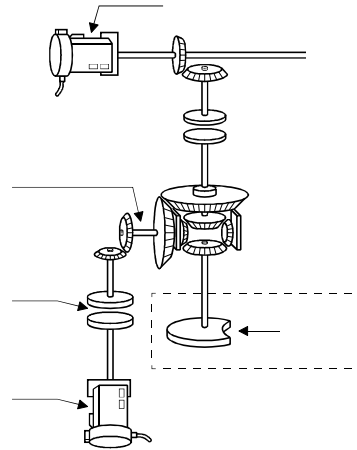
(f)



(11) 가 1

(2 )

가 1



(a) 가 1  
가 1

(b) 가 1 , 가 가

	D800 ~ D3069 <sup>*1</sup> D3080 ~ D8191 <sup>*2</sup>
	W0 ~ W1FFF <sup>*2</sup>

\* 1 : D800~D1559 가 , 가 ,  
「 」 가 . 가 ,  
가 .

\* 2 : .

(c) 가 1 , 0~(Nc-1) [PLS] .

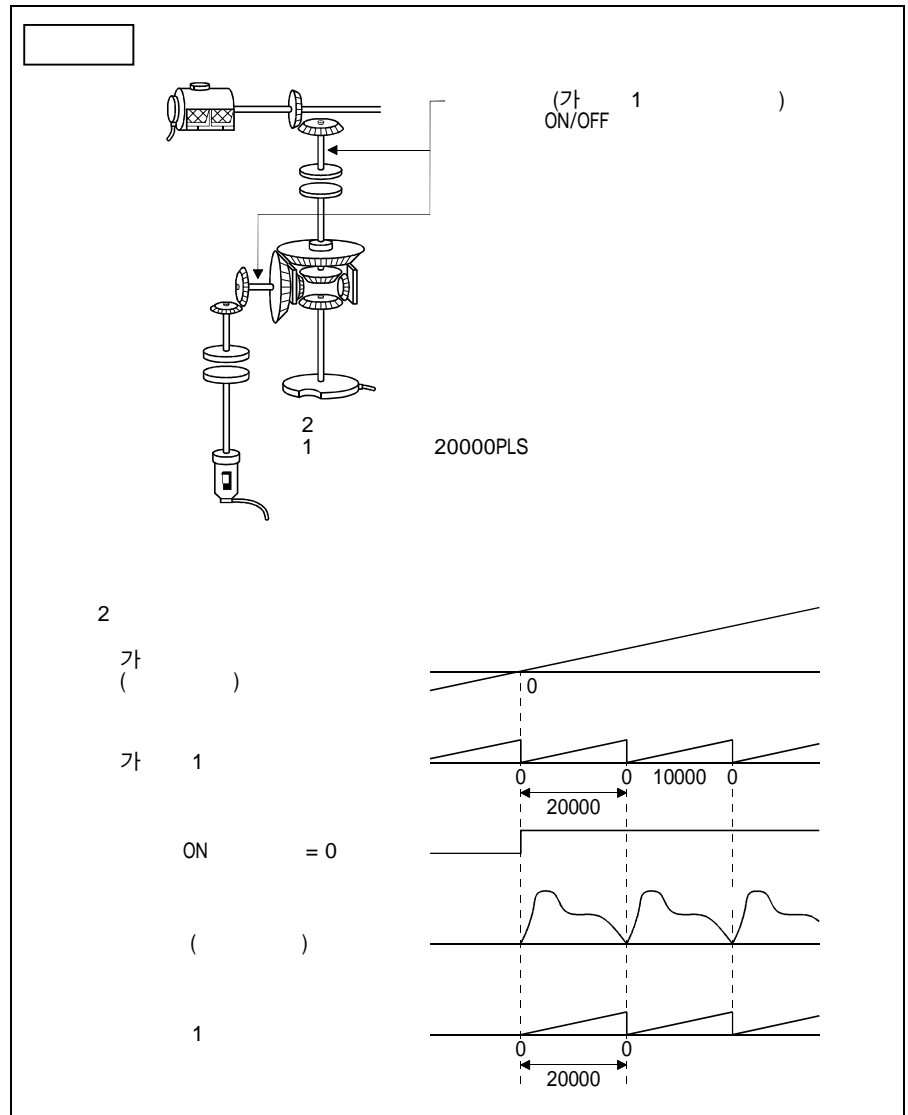
(d) 가 1 0~(Nc-1)[PLS] ON/OFF

ON/OFF , 0~(Nc-1)[PLS]

(e) 가 1 "0" , (M3213+20n:  
) ON , 가  
 , 가 1 "0"  
(M3213+20n) OFF , 가  
1 .



(f)













## 8. 4. 4

가

가

(1)

## 8. 6

		가	$V_m$	$A_m$	$(A \cdot V)_m$	$(V \cdot V)_m$	$(S \cdot V)_m$	
			1.00			1.00	1.00	
	가		2.00	$\pm 4.00$	$\pm 8.00$	4.00	1.09	
	5		1.88	$\pm 5.77$	$\pm 6.69$	3.52	1.19	
			2.00	$\pm 6.28$	$\pm 8.16$	4.00	1.26	
			2.00	$\pm 4.89$	$\pm 8.09$	4.00	1.20	$Ta=1/8$
			1.76	$\pm 5.53$	$\pm 5.46$	3.10	1.13	$Ta=1/8$
			1.28	$\pm 8.01$	$\pm 5.73$	1.63	1.07	$Ta=1/16$ $Ta=1/4$
			2.18	$\pm 6.17$	$\pm 10.84$	4.76	1.28	$m=1$
			2.04	+ 5.55 -9.87	+ 7.75 -9.89	4.16	1.39	
			1.57	$\pm 4.93$	$\pm 3.88$	2.47	1.02	

(2)

가

[illegible]

9 가 /

가 .

(1) 가  
가 , M2043( /가 )

ON/OFF .  
• ..... M2043 ON OFF 가 .

• 가 ..... M2043 OFF ON 가 가 .

(2) 가  
가 가 , M2044( /가 )  
) ON/OFF 가 .

• M2044 : OFF .....  
• M2044 : ON ..... 가

9. 1 가

( 가 (M2043 OFF ON ) ,  
가 9.1~ 9.3 ,

- 가 가 가 ..... 9. 1
- ..... 9. 2
- ..... 9. 3

(1) 가 가 가 가  
(a) 가 가 , 9.1  
가 , 9.1 .

(b) 9.1 , M2045( /가  
)가 ON , D9193~D9195( /가 )  
가 .  
D9193~D9195 , 2.8 .

9. 1 가

1	• PLC (M2000) PCPU (M9074)가 ON 가					ON	OFF
2	• 가(M2001~M2032 가 OFF)						1
3	• SFC 가						
4	• 가						
	• No. 가						
5	• ON (M2042) ON 가					N	OFF
6	• 가						
7	• 가						
8	• 가 가						
9	• (M2408+20n) ON 가					OFF	1 ON
10	• (M2409+20n)가 OFF 가 ( )	-				OFF	1 ON
11	• 가						
12	• 가 가	-	-	-			
13	• 「 No. 」 No.가 가						
14	• [1 ~ (2 <sup>31</sup> - 1)] 가						
15	• 「 가 가」	-	-	-			

(2)

(a)

가 , 가 , 9.2 가 , 가 .

(b)

(M2407+20n)가 ON , / 가 .

9. 2

順							
1	가	-			-		
	가 ~	-	-	-			
2	" 2 <sup>31</sup> - 1 " " + " 가					2 <sup>31</sup> - 1	2 <sup>31</sup> - 1
3	가, " ON/OFF 가						
	I/F 가 " 가						(ABS)
4	가 가 " ON " ON (M2415+20n ON) 가					ON	OFF
	" " " ON " "STOP" OFF 가					OFF	ON
5	가 가 , 1	-	-	-			
6	ON/OFF 가 가						

(3)

(a) , 9.3 .  
, 가 . ,  
,

(b) (M2407+20n)가 ON , /  
가 .

9. 3

順					
1	· 가 Q172EX 가		-		

## 9. 가 /

### 9.2 가

- 가 , OS가 가
- M2043 OFF
  - OS가 ,

#### 9.2.1 가

- (1) 가 (M2043 ON OFF ) 9.4
- M2043 ON OFF , 9.4
- (2) , M2045가 ON , D9193~D9195 가
- ( 2.8 )

#### 9.4 가

1	• (M2001~M2032가 OFF) 가	OFF	ON

#### 9.2.2 OS 가

- (1) 가 , OS
- 가
  - (M2048+20n)가 ON
  - (M2000)가 OFF
- (2) 가 , D9193~D9195 가
- , M2045 , ON



9.3 ↔ 가

가

(1)

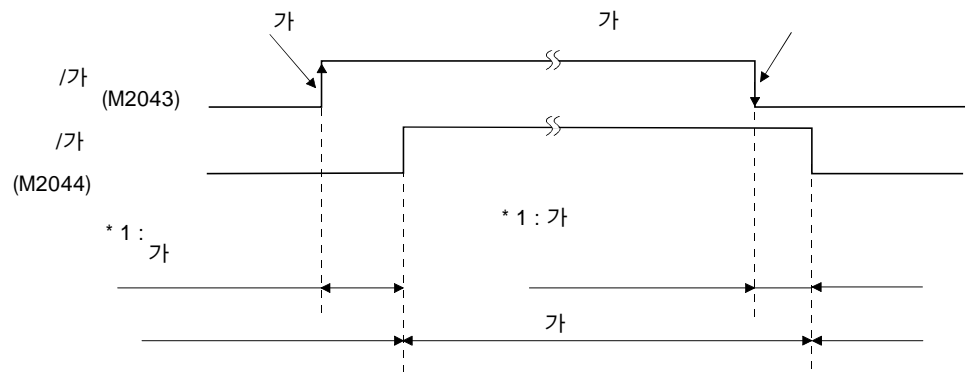
가 /가

( \*1 ) ,

/

M2043 M2044

[ ]



\* :

가

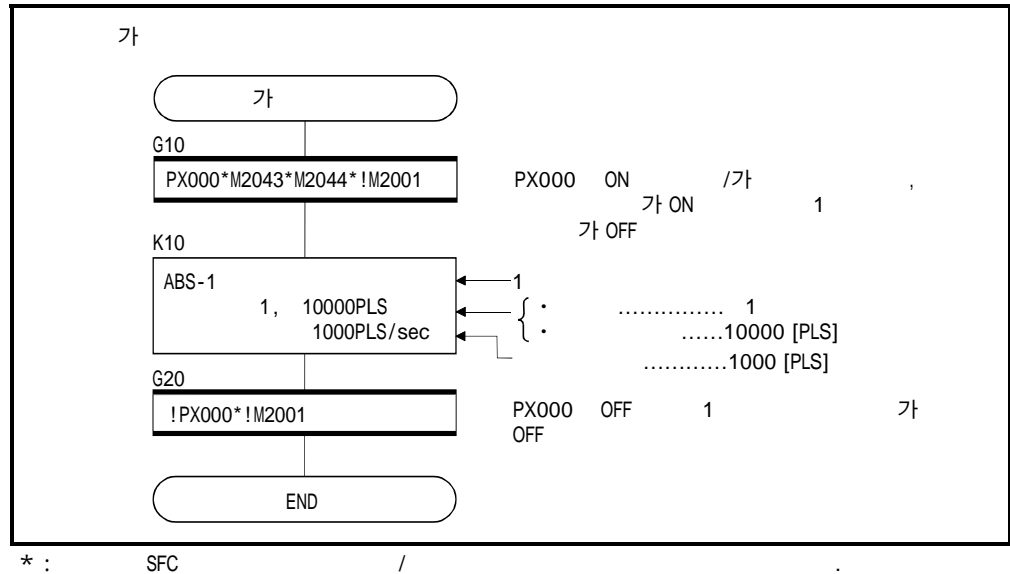
SFC

,

[            ]

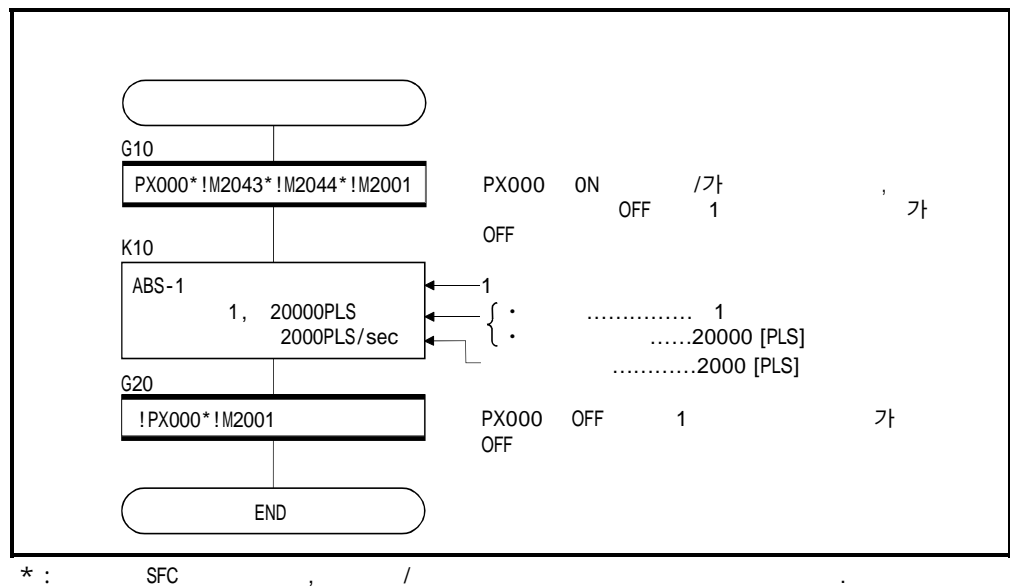
(a) 가

SFC



(b)

SFC





1) , 「Q173CPU/Q172CPU (SV13/SV22)  
( )」 .

2) M2043,M2044 , .  
 • M2043 ..... /가 } (4.1 )  
 • M2044 ..... /가

(2) M2043  
 , M2043 ON/OFF( . 가 )

[ M2044 /가 . OFF/ON . 가 ]



. 가 M2043 OFF ON OFF  
 . (9.1 , 9.2 )

9. 4

가 ( ) , 「 , ,  
 .  
 .  
 . 가 , , , 3 가 .  
 , , ,  
 . ... 「  
 . .... 「  
 . ...  
 , , 가 , , ,  
 ,  
 . ( : M2000 OFF, OFF ) 가  
 ( 가 .)  
 , 가 , (M2046)가 ON .  
 , M2046 OFF ,  
 가 .  
 / .

9. 가 /

9. 4. 1 /

9. 5 /

No.		가					가 OS	(M2046)	
		가			가				
1	ON	( )							
2	ON	( )							
3	OFF M2042 OFF								
4	PLC (2000) OFF								
5	CPU STOP								
6									
7		( )							
8									
9	1								
10	CPU WDT								
11	CPU								
12	CPU OFF								
13	가								
14									

			( :가 , x: 가 )	
		•		• OFF (ON ), 가 .
		•		• OFF , (ON ), 가
		•		• OFF ON ON 가 . ( , OFF , OFF/ON 가 • , 가 ,가
	[200] (가 )	•		• PLC (M2000)ON , 가 (M2043 ON) , 가 .
	[200] (가 )	•		• CPU RUN , 가 (M2043 ON) , 가 .
		•		• , 가 . • , 가 ,가
		•		• , 가 .
		• 가 , OFF 가 .	x	• 가 ( ) 가 , 가. • , ( ) , (M2046) OFF ,가
	[ 가 OFF 가 . • ,가 ,		x	• ( ) , (M2046) OFF ,가 , .
	M9073 (PCPU WDT ) ON	• 가 , OFF 가 .	x	• 가 ( ) 가 가. • CPU , 가 ,
		• 가 , OFF 가 .	x	• 가 ( ) 가 가. • CPU , 가 ,
		• 가 , OFF 가 .	x	• 가 ( ) 가 가. • CPU , 가 ,
		•		• , 가 .
		•	x	• 가 , ,가 , .

# MEMO

[illegible]

가                      가                      가 .  
 (1) 가  
 <                      >

- A : 가
- Am : 가
- T :
- Ta, Tb, Tc : T

(a)

$$A = C0$$

가

- (0 ≤ T ≤ 0.5)

$$A = 4 + C0$$

- (0.5 < T ≤ 1)

$$A = -4 + C0$$

(b)

5

$$A = 120T^3 - 180T^2 + 60T + C0$$

$$Am = 2$$

$$A = 2 \sin 2T + C0$$

$$Ta = \frac{1}{8}$$

$$Am = \frac{1}{\frac{1}{4} - Ta + \frac{2}{Ta}}$$

- (0 ≤ T ≤ Ta)

$$A = Am \sin \frac{T}{2Ta} + C0$$

- (Ta < T ≤ 0.5 - Ta)

$$A = Am + C0$$

- (0.5 - Ta < T ≤ 0.5 + Ta)

$$A = Am \cos \frac{(T - 0.5 - Ta)}{2Ta} + C0$$

- (0.5 + Ta < T ≤ 1 - Ta)

$$A = -Am + C0$$

- (1 - Ta < T ≤ 1)

$$A = -Am \cos \frac{(T - 1 - Ta)}{2Ta} + C0$$



$$Ta = \frac{1}{8}$$

$$Am = \frac{1}{\frac{2Ta}{2} + \frac{2 - 8Ta}{2}}$$

$$\bullet \quad (0 \leq T \leq Ta)$$

$$A = A_m \sin \frac{T}{2Ta} + C_0$$

$$\bullet \quad (Ta < T \leq 1 - Ta)$$

$$A = A_m \cos \frac{(T - Ta)}{1 - 2Ta} + C_0$$

$$\bullet \quad (1 - Ta < T \leq 1)$$

$$A = -A_m \cos \frac{(T - 1 + Ta)}{2Ta} + C_0$$

$$Ta = \frac{1}{16}$$

$$Tb = \frac{1}{4}$$

$$Am = \frac{1}{\frac{2}{2} \left\{ 2 - \frac{8}{2} Ta Tb + \left( \frac{4}{2} - 2 \right) Tb^2 + Tb \right\}}$$

$$\bullet \quad (0 \leq T \leq Ta)$$

$$A = A_m \sin \frac{T}{2Ta} + C_0$$

$$\bullet \quad (Ta < T \leq Tb)$$

$$A = A_m \cos \frac{(T - Ta)}{2(Tb - Ta)} + C_0$$

$$\bullet \quad (Tb < T \leq 1 - Tb)$$

$$A = 0 + A_0$$

$$\bullet \quad (1 - Tb < T \leq 1 - Ta)$$

$$A = -A_m \sin \frac{(T - 1 + Ta)}{2(Tb - Ta)} + C_0$$

$$\bullet \quad (1 - Ta < T \leq 1)$$

$$A = -A_m \cos \frac{(T - 1 + Ta)}{2Ta} + C_0$$

(c)

$$T_a = \frac{1}{8}$$

$$T_b = \frac{2 - 6T_a + T_a}{2 +}$$

$$T_c = \frac{2 - 2T_a + 3 T_a}{2 +}$$

$$A_m = \frac{1}{\left( -\frac{3}{2} + \frac{4}{2} + \frac{4}{2} \right) T_a^2 + \left( 1 + \frac{2}{2} \right) T_a T_b + \frac{1}{2} T_b \left( \frac{2}{2} - \frac{4}{2} \right) (1 - T_c)^2}$$

$$\bullet \quad (0 < T < T_a)$$

$$A = A_m \sin \frac{T}{2T_a} + C_0$$

$$\bullet \quad (T_a < T < T_b)$$

$$A = A_m + C_0$$

$$\bullet \quad (T_b < T < T_c)$$

$$A = A_m \cos \frac{(T - 6T)}{2T_a} + C_0$$

$$\bullet \quad (T_c < T < 1)$$

$$A = A_m \cos \frac{(T - T_c)}{2(1 - T_c)} + C_0$$

$$T_a = \frac{1}{8}$$

$$T_b = \frac{2 - 6T_a + T_a}{2 +}$$

$$T_c = \frac{2 - 2T_a + 3 T_a}{2 +}$$

$$A_m = \frac{1}{\left( -\frac{3}{2} + \frac{4}{2} + \frac{4}{2} \right) T_a^2 + \left( 1 + \frac{2}{2} \right) T_a T_b + \frac{1}{2} T_b \left( \frac{2}{2} - \frac{4}{2} \right) (1 - T_c)^2}$$

$$V_a = \frac{2T_a A_m}{2}$$

$$V_b = A_m (T_b - T_a) + V_a$$

$$S_a = \frac{2T_a^2 A_m}{2} - \frac{4T_a^2}{2}$$

$$S_b = \frac{A_m}{2} (T_b - T_a)^2 + V_a (T_b - T_a) + S_a$$

$$S_c = \frac{8T_a^2 A_m}{2} + 2V_b T_a + S_b$$

- $(0 \leq T \leq 1 - T_c)$   

$$A = A_m \cos \frac{(1 - T_c - T)}{2(1 - T_c)} + C_0$$
- $(1 - T_c < T \leq 1 - T_b)$   

$$A = -A_m \cos \frac{(1 - T_b - T)}{2T_a} + C_0$$
- $(1 - T_b < T \leq 1 - T_a)$   

$$A = -A_m + C_0$$
- $(1 - T_a < T \leq 1)$   

$$A = A_m \sin \frac{(1 - T)}{2T_a} + C_0$$

(d)

$$A = \frac{T^2}{2} (\cos T - \cos 2T) + C_0$$

(e)

$$A = \frac{T^2}{2} \cos T + C_0$$

(2)

(a)

- $0 < I < 0.25(1/4) \quad 0.125(1/8)$

(b)

- $0 < I < 0.5(1/2) \quad 0.125(1/8)$

(c)

- $(I < II)$   
 $0 < I < 0.125(1/4) \quad 0.0625(1/16)$
- $II$   
 $0 < II < 0.5(1/2) \quad 0.25(1/4)$

(d)

- $I$   
 $0 < I < 0.25(1/4) \quad 0.125(1/8)$

(e)

- $I$   
 $0 < I < 0.25(1/4) \quad 0.125(1/8)$

## 2 CPU가

CPU가 , .

SFC  
SFC  
CPU

★ : , 「Q173CPU/Q172CPU  
(SV13/SV22) (SFC )」

(1)

- (9079)가 ON .
- No. (D9189)
- (D9190)

(2)

(a)

, , 가 ,

..... SFC , 1~999, 4000~9990 , SFC /

..... SFC 1000~1999, 10000~11990 , SFC

..... , 2000 ~2999 ,

		1~99	4000~4999
		100~199	5000~5990
		200~299	6000~6990
		300~399	-
		1000~1099	10000~10990
		1100~1199	11000~11990
		-	15000~15990
		-	2000~2799 (2100~2499 )
			2800~2999 (2900~ )

(b) , 가 ON , 가

		1	2	3	4	5	6	7	8	9	10	11	12
가		D802	D812	D822	D832	D842	D852	D862	D872	D882	D892	D902	D912
		D803	D813	D823	D833	D843	D853	D863	D873	D883	D893	D903	D913
		D1122	D1132	D1142	D1152	D1162	D1172	D1182	D1192	D1202	D1212	D1222	D1232
		D1123	D1133	D1143	D1153	D1163	D1173	D1183	D1193	D1203	D1213	D1223	D1233
		D6	D16	D26	D36	D46	D56	D66	D76	D86	D96	D106	D116
		D7	D17	D27	D37	D47	D57	D67	D77	D87	D97	D107	D117
		D8	D18	D28	D38	D48	D58	D68	D78	D88	D98	D108	D118

		13	14	15	16	17	18	19	20	21	22	23	24
가		D922	D932	D942	D952	D962	D972	D982	D992	D1002	D1012	D1022	D1032
		D923	D933	D943	D953	D963	D973	D983	D993	D1003	D1013	D1023	D1033
		D126	D136	D146	D156	D166	D176	D186	D196	D206	D216	D226	D236
		D127	D137	D147	D157	D167	D177	D187	D197	D207	D217	D227	D237
		D128	D138	D148	D158	D168	D178	D188	D198	D208	D218	D228	D238

		25	26	27	28	29	30	31	32		
가		D1042	D1052	D1062	D1072	D1082	D1092	D1102	D1112	M4007 + 20n	M4807 + 20n
		D1043	D1053	D1063	D1073	D1083	D1093	D1103	D1113		
										M4640 + 4n	M5440 + 4n
		D246	D256	D266	D276	D286	D296	D306	D316	M2407 + 20n	M3207 + 20n
		D247	D257	D267	D277	D287	D297	D307	D317		
		D248	D258	D268	D278	D288	D298	D308	D318		

(c) 가 , 가 ,  
(SW6RN-GSV22P )

(d) ON , , 가

(1)	(M3208+20n:ON) ,
	가 가 .
(2)	, ,

(3) . 가  
 . 가 , /가  
 (M2043) OFF ON / ON OFF .  
 9. 1 , 9. 2 , .  
 . . 가  
 . /가 (M2045) ON .  
 . /가 (D9193~9195) .

• D9193~D9195 , .																	
D9193	<div style="display: flex; justify-content: space-between;"> <span>b15</span> <span>b0</span> </div> <div style="border: 1px solid black; height: 40px; width: 100%;"></div>																
D9194	<div style="display: flex; justify-content: space-between;"> <span>b15</span> <span>b0</span> </div> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>16</td><td>15</td><td>14</td><td>13</td><td>12</td><td>11</td><td>10</td><td>9</td><td>8</td><td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td></tr> </table>	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1		
D9195	<div style="display: flex; justify-content: space-between;"> <span>b15</span> <span>b0</span> </div> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>32</td><td>31</td><td>30</td><td>29</td><td>28</td><td>27</td><td>26</td><td>25</td><td>24</td><td>23</td><td>22</td><td>21</td><td>20</td><td>19</td><td>18</td><td>17</td></tr> </table>	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17		

} 가 1 .  
 < >  
 8  
 D9194 , (10 ) "128"  
 (16 ) "0080H"  
 D9183 ,

## 2. 1

(D9182~9183)

	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
D9182	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
D9183	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17

\* Q172CPU 1~ 8 가

• 0 :  
• 1 :

(1) 8 가

• D9182 b7( 8) "1"																
	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
D9182	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
D9183	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

D9182 10 16 128 0080H  
D9183 0 0000H

(2) 12, 20 가

• D9182 b11( 12), D9183 b3( 20) "1"																
	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
D9182	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
D9183	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0

D9182 10 16 2048 0800H  
D9183 8 0008H

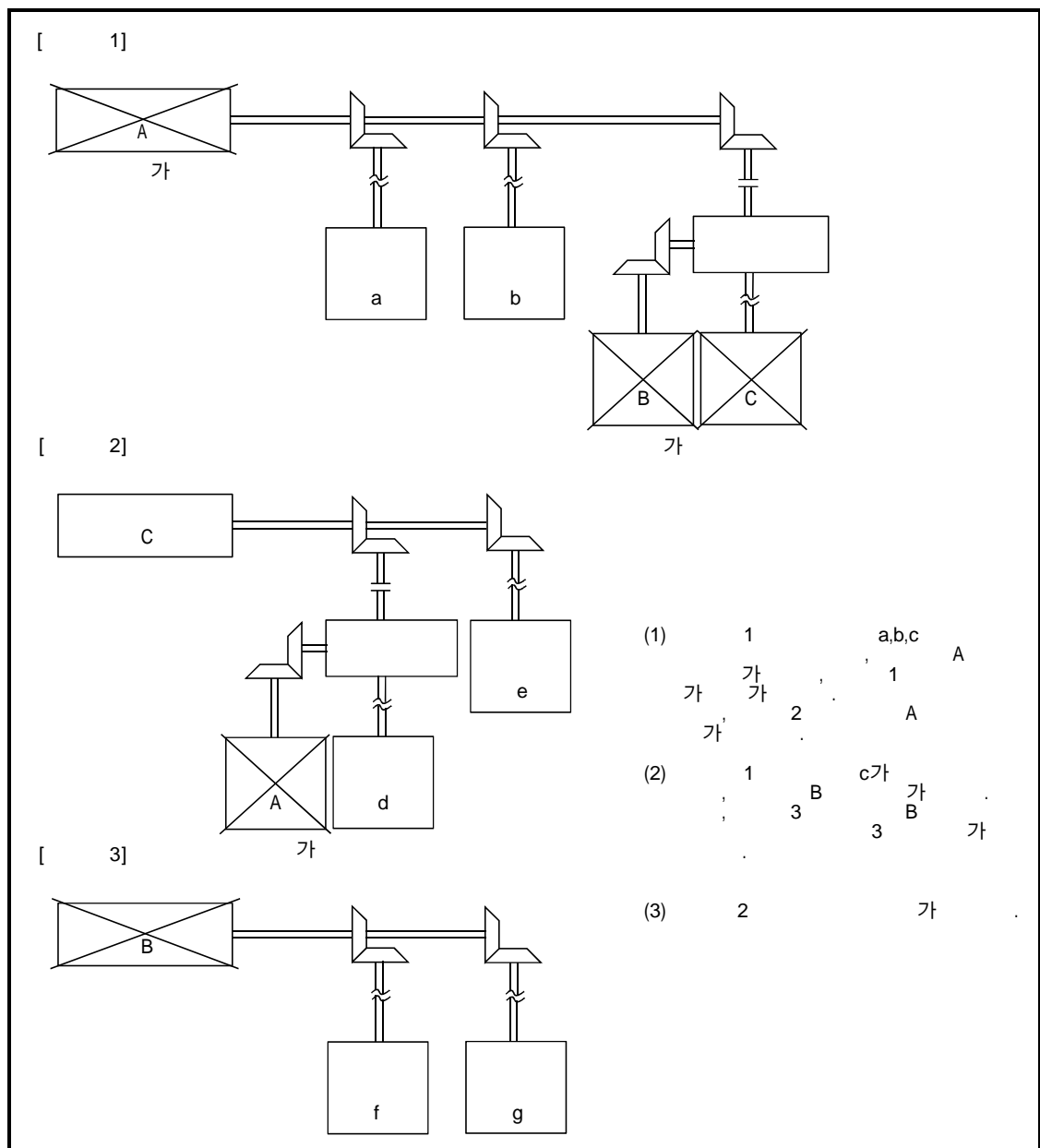
(3) 4, 10 가

• D9182 b3( 4), D9182 b9( 10) "1"																
	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
D9182	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0
D9183	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

D9182 10 16 520 0208H  
D9183 0 0000H

## 2. 2

가 , 2 가 .  
 .  
 .  
 가 , .  
 . 가 ,  
 가 가 .  
 가 가 .  
 . 가 가  
 가 가 .





2. 3

(D9190 )

1.2

2.2\* n , No.(1~32)

2. 2

D9190																	
1	No.	No. 1~64	No. "1"	No. 1~64													
n03*	/ ( , ) ( , ) ( )	(1) 가	(1) ( ) (2) (3) 가	(1) 가 degree 0~35999999 (2) 0 ~ ± (2 <sup>31</sup> - 1)													
		(2) 2147483648 (H800000000) <table><tr><td></td><td colspan="2"></td></tr><tr><td>degree</td><td>0 ~ 35999999</td><td>× 10<sup>-5</sup> [degree]</td></tr></table>				degree	0 ~ 35999999	× 10 <sup>-5</sup> [degree]									
degree	0 ~ 35999999	× 10 <sup>-5</sup> [degree]															
(1) , 1~ (2) , 1~ <table><tr><td></td><td colspan="2"></td></tr><tr><td>mm</td><td>1 ~ 600000000</td><td>× 10<sup>-2</sup>[mm/min]</td></tr><tr><td>inch</td><td>1 ~ 600000000</td><td>× 10<sup>-3</sup>[inch/min]</td></tr><tr><td>degree</td><td>1 ~ 2147483647</td><td>× 10<sup>-3</sup> [degree/min]</td></tr><tr><td>PLS</td><td>1 ~ 10000000</td><td>[PLS/s]</td></tr></table>				mm	1 ~ 600000000	× 10 <sup>-2</sup> [mm/min]	inch	1 ~ 600000000	× 10 <sup>-3</sup> [inch/min]	degree	1 ~ 2147483647	× 10 <sup>-3</sup> [degree/min]	PLS	1 ~ 10000000	[PLS/s]	(1) 0 (2)	1~
mm	1 ~ 600000000	× 10 <sup>-2</sup> [mm/min]															
inch	1 ~ 600000000	× 10 <sup>-3</sup> [inch/min]															
degree	1 ~ 2147483647	× 10 <sup>-3</sup> [degree/min]															
PLS	1 ~ 10000000	[PLS/s]															
5		0~5000	(0)	0~5000													
6	M	M 0~255	(0)	M 0~255													
7		1~500		1~500													

## 2. 2

( )

D9190										
n08*	( ) ( )	(1) 가 <table><tr><td></td><td colspan="2"></td></tr><tr><td>degree</td><td>0 ~ 35999999</td><td><math>\times 10^{-5}</math> [degree]</td></tr></table>				degree	0 ~ 35999999	$\times 10^{-5}$ [degree]		(1) 가[degree] 0~35999999
degree	0 ~ 35999999	$\times 10^{-5}$ [degree]								
(2) 가 -2147483648 (H80000000)	(2) 0 ~ $\pm 2^{31} - 1$									
n09*	( ) ( )	(1) <table><tr><td></td><td colspan="2"></td></tr><tr><td>degree</td><td>0 ~ 35999999</td><td><math>\times 10^{-5}</math> [degree]</td></tr></table>				degree	0 ~ 35999999	$\times 10^{-5}$ [degree]		(1) 가[dgree] 0~35999999
degree	0 ~ 35999999	$\times 10^{-5}$ [degree]								
(2) 0 , (-)	(2) 1 ~ $2^{31} - 1$									
n10*	( ) ( )	(1) 가 <table><tr><td></td><td colspan="2"></td></tr><tr><td>degree</td><td>0 ~ 35999999</td><td><math>\times 10^{-5}</math> [degree]</td></tr></table>				degree	0 ~ 35999999	$\times 10^{-5}$ [degree]		(1) 가[degree] 0~35999999
degree	0 ~ 35999999	$\times 10^{-5}$ [degree]								
(2) -2147483648 (H80000000)	(2) 0 ~ $\pm 2^{31} - 1$									
11		가 0~3	(3)	0~3						
12			(200000[PLS/s])	0~3						

D9190						
13	가	• 가 0	(1000)	• 가 1~65535		
	FIN	• FIN 가 1~5000		• FIN 가 1~5000		
14		• 0		• 1~65535		
15		• 0		• 1~65535		
16		• , 1~500	(300[%])	• 1~500		
17		• 가,	(100[PLS])			
		mm			1 ~ 100000	$\times 10^{-1}$ [ $\mu m$ ]
		inch				$\times 10^{-5}$ [ inch ]
		degree				$\times 10^{-5}$ [ degree ]
		PLS				[ PLS ]
18		• 가 1~32767	1	• 1~32767		
19	START	(1) START		(1) START		
		(2) "START"		(2) START		
		(3)		(3)		
20		• ,		• CPSTART CPEND		
21				•		
22	S	• S 가 , S 0~100[%]	S 100[%]	• S 0~100[%]		
23	VSTART	• VSTART~VEND FOR~NEXT 가 1		• VSTART~VEND FOR~NEXT		
24	No.	• No. 가 0~4095		• No. 0~4095		
25		• 1~2147483647 가		• 1~2147483647		

## 2. 2

( )

D9190				
26		• 0~3599 (× 0.1[degree]) 가 .		• 0~3599 (× 0.1 [degree]) .
27		• 가 1~5000[CPM] 가 .		• 1~5000[CPM] .
28		• 가 1~999 .		• 0~999 .
900		• .		• No. .
901		• No. , No.가		• No. .
902		• ( 가 .)		• .
903		• ,가		• .
904		• 가 ,		• .
905		• 가 , 가 (VPF, VPR, VSTART, ZERO, VVF (VVR, OSC)가		• .
906	No.	• .		• No. .
907		• →가		• M2043 ( /가 ), M2044 ( /가 )
908		• 가 →		

## 2. 4

## 2. 3

(100~1199)

		가									
						J O G					
100										<ul style="list-style-type: none"> <li>PLC (M2000) , PCPU (M9074)가 OFF</li> </ul>	<ul style="list-style-type: none"> <li>CPU RUN</li> <li>PLC (M2000) ON</li> </ul>
101										<ul style="list-style-type: none"> <li>(M2001~M2032)가 ON</li> </ul>	<ul style="list-style-type: none"> <li>( OFF )</li> </ul>
103										<ul style="list-style-type: none"> <li>(M4800+20n)가 ON</li> </ul>	<ul style="list-style-type: none"> <li>(M4800+20n) OFF</li> </ul>
104										<ul style="list-style-type: none"> <li>(M4801+20n)가 ON</li> </ul>	<ul style="list-style-type: none"> <li>(M4801+20n) OFF</li> </ul>
105										<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>JOG</li> </ul>
106*										<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
107										<ul style="list-style-type: none"> <li>[ , , ]</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
108*										<ul style="list-style-type: none"> <li>[ , , ]</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
109										<ul style="list-style-type: none"> <li>[ , , ]</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
110*										<ul style="list-style-type: none"> <li>가,</li> </ul>	<ul style="list-style-type: none"> <li>( )</li> </ul>
116										<ul style="list-style-type: none"> <li>JOG 가 0</li> <li>JOG 가 JOG</li> </ul>	JOG
										<ul style="list-style-type: none"> <li>JOG</li> </ul>	
117										<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
140										<ul style="list-style-type: none"> <li>0</li> </ul>	<ul style="list-style-type: none"> <li>0</li> </ul>
141										<ul style="list-style-type: none"> <li>가</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

\* :

## 2. 3

(100~1199) ( )

		가									
						J O G					
151										<ul style="list-style-type: none"> <li>가 가</li> <li>가 가</li> <li>가 가</li> </ul>	<ul style="list-style-type: none"> <li>가</li> </ul>
152										OFF(M20420FF)	
153											
200										PLC (M2000)가 OFF	PLC (M2000) ON
204										<ul style="list-style-type: none"> <li>PLC (M2000) OFF</li> <li>PLC (M2000)가</li> <li>OFF ON</li> </ul>	<ul style="list-style-type: none"> <li>PLC (M2000)</li> <li>OFF ON</li> <li>PLC (M2000)</li> <li>OFF ON 가</li> </ul>
207											가
208											
211											(1) (2)
214										가가	
215										가	가
										SFC	

2. 3

(100~1199) ( )

		가										
							J O G					
220										가 degree 가 0~35999999	(M2001+n OFF)	가 degree 0~35999999
										가,		
225										가		1~
300												(1) (M2001~ M2032) OFF (2) M2415+20n ON
										OFF		
302												
303												
304										JOG (M4802+20, M4803+ 20n) OFF		JOG (M4802+20n, M4803+20n) OFF
305										가 0~		0~
										0~		0~
309										degree 0~35999999( × 10 <sup>-5</sup> [degree])		0~35999999( × 10 <sup>-5</sup> [degree]
1151										Q172EX H/W		Q172EX (H/W )
1152										Q172EX		
1153										Q172EX		Q172EX H/W

## 2. 5

(1) (2000~2799)  
가 [2000]~[2799]  
, (M2408+20n)가 ON  
, (3208+20n) ON  
, ( [2100]~[2499]  
, ON .)

) : 1. ( [2030]), 1, 2 ( [2050]  
[2051]) , 가  
, OFF , RESET

2. [2030],[2050],[2051] OFF RESET  
, 가 ,

2.4 .



, 가 ,



## 2. 4

(2000~2799)

2010		<ul style="list-style-type: none"> <li>AC160[V] ,</li> <li>(AC400[V] AC320[V] )</li> <li>15[ms]</li> </ul>			<ul style="list-style-type: none"> <li>(R, S, T)</li> </ul>
2012	1	<ul style="list-style-type: none"> <li>SRAM</li> <li>EPR0M</li> </ul>	<ul style="list-style-type: none"> <li>ON</li> <li>PLC (M2000)</li> <li>CPU ON</li> </ul>		
2013					
2014		<ul style="list-style-type: none"> <li>H/W</li> <li>CPU H/W</li> </ul>			<ul style="list-style-type: none"> <li>CPU</li> </ul>
2015	2	<ul style="list-style-type: none"> <li>EEPROM</li> </ul>	<ul style="list-style-type: none"> <li>ON</li> <li>PLC (M2000)</li> <li>CPU ON</li> </ul>		
2016	1		<ul style="list-style-type: none"> <li>ON</li> <li>PLC (M2000)</li> <li>CPU ON</li> </ul>		<ul style="list-style-type: none"> <li>가</li> <li>(2 /4 )</li> </ul>
2017		가	<ul style="list-style-type: none"> <li>ON</li> <li>PLC (M2000)</li> <li>CPU ON</li> </ul>		

2. 4 (2000~2799) ( )

2019	3	<ul style="list-style-type: none"> <li>ROM</li> </ul>	<ul style="list-style-type: none"> <li>ON</li> <li>PLC (M2000)</li> <li>CPU ON</li> </ul>		<ul style="list-style-type: none"> <li></li> </ul>
2020	2				<ul style="list-style-type: none"> <li>가</li> </ul>
2021	RD (AC400[V])	<ul style="list-style-type: none"> <li>(RD)가 OFF (SON) 가 ON</li> <li>1.</li> <li>2.</li> </ul>			<ul style="list-style-type: none"> <li></li> </ul>
2021 *1		<ul style="list-style-type: none"> <li>가</li> </ul>			<ul style="list-style-type: none"> <li>가</li> </ul>
2022 *1	1	<ul style="list-style-type: none"> <li>(MR-J2M-P8B)</li> </ul>			<ul style="list-style-type: none"> <li>(MR-J2P8B) (MR-J2M-BU )</li> </ul>
		<ul style="list-style-type: none"> <li>(MR-J2M-P8B)</li> </ul>			<ul style="list-style-type: none"> <li>(MR-J2M-P8B)</li> </ul>
		<ul style="list-style-type: none"> <li>(MR-J2M-BU )</li> </ul>			<ul style="list-style-type: none"> <li>(MR-J2M-BU )</li> </ul>
2023 *1	2	<ul style="list-style-type: none"> <li></li> </ul>			<ul style="list-style-type: none"> <li>(MR-J2M-BU )</li> </ul>
		<ul style="list-style-type: none"> <li></li> </ul>			<ul style="list-style-type: none"> <li></li> </ul>
		<ul style="list-style-type: none"> <li></li> </ul>			<ul style="list-style-type: none"> <li></li> </ul>
		<ul style="list-style-type: none"> <li>(MR-J2M-BU )</li> </ul>			<ul style="list-style-type: none"> <li>(MR-J2M-BU )</li> </ul>
2024		<ul style="list-style-type: none"> <li>U,V,W가</li> </ul>			<ul style="list-style-type: none"> <li>가 가</li> </ul>
		<ul style="list-style-type: none"> <li></li> </ul>			<ul style="list-style-type: none"> <li></li> </ul>
2024 *1		<ul style="list-style-type: none"> <li></li> </ul>			<ul style="list-style-type: none"> <li>(MR-J2M-BU )</li> </ul>
		<ul style="list-style-type: none"> <li></li> </ul>			<ul style="list-style-type: none"> <li></li> </ul>
		<ul style="list-style-type: none"> <li>(MR-J2M-BU )</li> </ul>			<ul style="list-style-type: none"> <li></li> </ul>
		<ul style="list-style-type: none"> <li></li> </ul>			<ul style="list-style-type: none"> <li></li> </ul>

\* 1 : MR-J2M-P8B

2. 4 (2000~2799) ( )

2025		• ON • PLC (M2000) • CPU ON ( , 가 )			• 2~3 , OFF ON , • OFF , •
2030		• ON/OFF 가 . ( 가 가 ) • ( ) • • • 가			• [%] , 가 • 가 • • ( ) • • •
2031		• 가, 115[%] • 가 가 • 가 •			• • 1 , 1 가 • 가 , 가 , • / , 1,2, / 1,2 • 가

2. 4 (2000~2799) ( )

		<ul style="list-style-type: none"> <li>U,V,W가</li> </ul>			<ul style="list-style-type: none"> <li>U,V,W가</li> </ul>
		<ul style="list-style-type: none"> <li>U,V,W가</li> </ul>			<ul style="list-style-type: none"> <li>U,V,W가</li> </ul>
		<ul style="list-style-type: none"> <li>U,V,W</li> </ul>			<ul style="list-style-type: none"> <li>U,V,W가</li> </ul>
2032		<ul style="list-style-type: none"> <li></li> </ul>			<ul style="list-style-type: none"> <li></li> </ul>
		<ul style="list-style-type: none"> <li></li> </ul>			<ul style="list-style-type: none"> <li></li> </ul>
		<ul style="list-style-type: none"> <li></li> </ul>			<ul style="list-style-type: none"> <li></li> </ul>
		<ul style="list-style-type: none"> <li></li> </ul>			<ul style="list-style-type: none"> <li></li> </ul>
		<ul style="list-style-type: none"> <li>가</li> </ul>			<ul style="list-style-type: none"> <li></li> </ul>
		<ul style="list-style-type: none"> <li>가</li> </ul>			<ul style="list-style-type: none"> <li>가</li> </ul>
		<ul style="list-style-type: none"> <li>400[V]</li> </ul>			<ul style="list-style-type: none"> <li>가</li> </ul>
		<ul style="list-style-type: none"> <li>(AC400[V], 800[V])</li> </ul>			<ul style="list-style-type: none"> <li>C-P</li> </ul>
		<ul style="list-style-type: none"> <li>가</li> </ul>			<ul style="list-style-type: none"> <li>C-P</li> </ul>
2033		<ul style="list-style-type: none"> <li></li> </ul>			<ul style="list-style-type: none"> <li>(가</li> </ul>
		<ul style="list-style-type: none"> <li>가</li> </ul>			<ul style="list-style-type: none"> <li>3</li> </ul>
		<ul style="list-style-type: none"> <li></li> </ul>			<ul style="list-style-type: none"> <li>(R,S,T)</li> </ul>
		<ul style="list-style-type: none"> <li>CPU</li> </ul>			<ul style="list-style-type: none"> <li></li> </ul>
2034					<ul style="list-style-type: none"> <li>가</li> </ul>

2. 4 (2000~2799) ( )

2035		<ul style="list-style-type: none"> <li>CPU 가 .</li> </ul> <hr/> <ul style="list-style-type: none"> <li>CPU 가 .</li> </ul>		<ul style="list-style-type: none"> <li>, 1</li> </ul> <hr/> <ul style="list-style-type: none"> <li>가 .</li> <li>가</li> <li>가</li> </ul>
2036		<ul style="list-style-type: none"> <li>CPU .</li> </ul>		<ul style="list-style-type: none"> <li>가 .</li> <li>가</li> </ul>
2038 *1	DRU	<ul style="list-style-type: none"> <li>DRU No. 2, 23 가 .</li> </ul>		<ul style="list-style-type: none"> <li>DRU .</li> </ul>
2042		<ul style="list-style-type: none"> <li>.</li> </ul>		<ul style="list-style-type: none"> <li>.</li> </ul>
2045	가	<ul style="list-style-type: none"> <li>가</li> <li>( ) ON/OFF</li> </ul>		<ul style="list-style-type: none"> <li>가 ,</li> <li>가</li> <li>가 (MR-H1500B )</li> <li>가</li> <li>가(0~ +55[ ]) .</li> <li>가</li> </ul>
2046		<ul style="list-style-type: none"> <li>가 .</li> </ul> <hr/> <ul style="list-style-type: none"> <li>.</li> </ul> <hr/> <ul style="list-style-type: none"> <li>.</li> </ul>		<ul style="list-style-type: none"> <li>가 ,</li> </ul> <hr/> <ul style="list-style-type: none"> <li>(0~40[ ]) .</li> </ul> <hr/> <ul style="list-style-type: none"> <li>.</li> </ul>

\* 1 : MR-J2M-P8B .

2. 4 (2000~2799) ( )

2050	1	가 200[%] 가 .			가 가 가 U,V,W
2051	2	( 95[%] 가 )			가 가 가 1,2, / 1,2 U,V,W ( 가 )
2052		가			가 가 1,2 ( 가 )

2. 4 (2000~2799) ( )

		가			가
2053 *1		가			가
		1 (U,V,W) 가			OFF
2054 *1		(MR-J2M-BU )			
2086	RS232				
2102					
2103					
2140		[2030]가 가 ( 85[%] )			[2030]
2141		[2050], [2051]가 가 ( 85[%] )			[2050], [2051]
2086	RS232				
2146		CN6 1A,1B ( )			CN6 1A,1B
2147		CPU (EMC) 가			
2149	OFF	OFF ON (SON) ON 50[RPM] 215[V]			ON
2196		가			

\* 1 : MR-J2M-P8B

2. 4 (2000~2799) ( )

2301 } 2336		.( .)			.	
			2301			
			2302			
			2303			
			2304			
			2305			
			2306			
			2307			
			2308			
			2309			
			2310			
			2311			
			2312			
			2313			1
			2314			1
			2315			2
			2316			2
			2317			
			2318			
			2319			
			2320			
			2321			
			2322			
			2323			1
			2324			2
			2325			3
			2326			4
			2327			1
			2328			2
			2329			
			2330			
			2331			
			2332			5
			2333			6
2334	PI - PID					
2335						
2336	( )					



\_\_\_\_\_

\_\_\_\_\_

## 2. 6 PC

## 2. 5 PC

D9196		
01	<ul style="list-style-type: none"> <li>• PC</li> </ul>	<ul style="list-style-type: none"> <li>• PC 가</li> </ul>
02	<ul style="list-style-type: none"> <li>• CRC 가</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
03	<ul style="list-style-type: none"> <li>• ID가</li> </ul>	<ul style="list-style-type: none"> <li>• A30BD - PCF/A30CD - PCF가</li> </ul>
04	<ul style="list-style-type: none"> <li>• 가</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
05	<ul style="list-style-type: none"> <li>• PC 가</li> </ul>	<ul style="list-style-type: none"> <li>• PC</li> </ul>

2. 7

(1) 가 (4000~5990)  
2. 6 (4000~5990)

	4050					• 「 「 「2 <sup>31</sup> - 1( )」 ( )	가 .	• 1 가 No.
	4060					• 가「 , ON/OFF 가		• 「 • , PLC OFF
	4070					• Q172LX 가		• Q172LX
	5000					• 「 • 「」 .( , 1 가 )		•
	5060					• 「 1 가 ( )		• • 0~7FFFH 0~7FFFH
	5080					•	300[%]	•
	5200					• 가	가 가	•
	5210					• ON 가	가 가	
	5220					• OFF 가		
	5230					• 가 1 ( ) 가	가 가	
	5240					• 가 1 ( ) 가		
	5250					• 「 「 (0~2147483647)	=0 (	• 0~2147483647

## 2. 6

(4000~5990) ( )

	5260					• 「 」가	가 가 .
	5270					• 「 No. 」가	• 「1~2 <sup>31</sup> - 1」 • No.
	5280					• 「 」가	•
	5290					• 「 ON 」가	• ON
	5300					• 「 OFF 」가	• OFF
	5310					• 「 ON/OFF 」가	• ON/OFF
	5320					• 「 」가	•
	5330					• 「 」가	=0 ( .)
	5340					• 「 」가	300[%] •
	5350					• 「가 1 )」 (	가 1 ( ) 가
	5360					• 「가 1 )」 (	가 1 ( ) 가
	5370					• 「 」가	가 .
	5380					• 「 」가	가 .
	5390					• 「 」가	•
	5400					• 「 0	•
	5410					• 「 0	•

(2) / ON / ON  
 (6000~6990)  
 2. 7 (6000~6990)

6000					<ul style="list-style-type: none"> <li>OFF (M3115+20n)</li> <li>ON</li> </ul>		<ul style="list-style-type: none"> <li>가</li> <li>OFF , OFF</li> </ul>
6010					<ul style="list-style-type: none"> <li>, 가</li> <li>(</li> <li>)</li> </ul>		<ul style="list-style-type: none"> <li>가</li> <li>,</li> <li>,</li> <li>,</li> <li>,</li> </ul>
6020					<ul style="list-style-type: none"> <li>, 「</li> <li>」</li> <li>.</li> </ul>		<ul style="list-style-type: none"> <li>,</li> <li>,</li> <li>,</li> <li>가</li> </ul>
6030					<ul style="list-style-type: none"> <li>, 「</li> <li>」</li> <li>.</li> </ul>		<ul style="list-style-type: none"> <li>,</li> <li>,</li> <li>,</li> <li>가</li> </ul>
6040					<ul style="list-style-type: none"> <li>「 No. 「 No.」</li> <li>( No. )</li> </ul>		<ul style="list-style-type: none"> <li>No.</li> </ul>
6050					<ul style="list-style-type: none"> <li>「 「1~2<sup>31</sup> - 1」</li> <li>「 + 2<sup>31</sup>-1」</li> <li>가</li> <li>(</li> <li>)</li> <li>OFF 가</li> </ul>	No.	<ul style="list-style-type: none"> <li>.</li> </ul>
6060					<ul style="list-style-type: none"> <li>No. ( / )가</li> <li>( No. )</li> </ul>		<ul style="list-style-type: none"> <li>,</li> <li>.</li> </ul>
6080					<ul style="list-style-type: none"> <li>.</li> </ul>	300[%]	<ul style="list-style-type: none"> <li>.</li> </ul>
6090					<ul style="list-style-type: none"> <li>(MR- -B) ON , OFF</li> <li>(M3215+20n OFF) , ON</li> </ul>	ON	<ul style="list-style-type: none"> <li>OFF , OFF</li> </ul>
6120					<ul style="list-style-type: none"> <li>1 ,</li> </ul>		<ul style="list-style-type: none"> <li>1~( 1 -1)</li> </ul>
6130					<ul style="list-style-type: none"> <li>「 」가</li> <li>0</li> </ul>		<ul style="list-style-type: none"> <li>1~65535</li> </ul>
6140					<ul style="list-style-type: none"> <li>「 」가</li> <li>0</li> </ul>		

(3) OFF OFF (6500~6990)  
2. 8 (6500~6990) ( )

	6500					• ON , OFF .	OFF OFF ON , ON .
	6530					• ON , (M2409 +20n)가 ON . ( MR- -B OFF ON )	OFF • ,가 .
	6540					• ON , 「 」 가 . 1 ( )	ON • 0~7FFFH 0~7FFFH .

(4) (9000~9990)  
2. 9 (9000~9990)

	9000					• 「 」 (MR-J2-B )	가 .
	9010					• 「 OFF 「 Power OFF 」 .	가 가 가 ON . 가 .

(5) 가

2. 10

(10000~10990)

(10000~10990)

	10000					가.	가
	10010						
	10020					OFF , ON	
	10030					(STOP) OFF	

(6)

/

ON

/

ON

(11000~11990)

2. 11

(11000~11990)

	11000					OFF 가	( 2.6 )
	11010						SFC
	11020					(STOP)가 ON	
	11030					(FLS)가 OFF	
	11040					(RLS)가 OFF	OFF

(7)

(12000~12990)

2. 12

(12000~12990)

	12010					가 ( ) 가 ON .	가 .
	12020					가 ON .	가 .
	12030					가 /3.5 [ms] > 180 ° 가 ( ON / OFF )	가 .
	12040					[PLS] [PLS] ( bit ) 가 ( ON / OFF )	가 .



2. 8                   · 가

2. 13                   가

D9193			
10	16		
1	0001	· M2043 OFF ON .	· M2001~M2032가 OFF , M2043 OFF ON .
256	0100	· M2043 ON OFF .	· M2001~M2032가 OFF , M2043 ON OFF .
512	0200	· , M2043 OFF ON .	· CPU .
		· No. ( No.)가 , M2043 OFF ON .	· No. ( No.) , CPU .
513*	0201	· PLC (M2000) PCPU (M9074)가 OFF , M2043 OFF ON .	· PLC , PCPU ON , M2043 OFF ON .
514*	0202	· ON (M2042)가 OFF , M2043 OFF ON .	· M2042 ON , ON 가 ON , M2043 OFF ON .
515*	0203	· (EMG)가 ON , M2043 OFF ON .	· OFF , M2043 OFF ON .
516*	0204	· ADU (M3208+20n) M2043 OFF ON .	· M3208+20n ON , (2408+20n)가 OFF , M2043 OFF ON .
519*	0207	· SFC (M2056:ON) M2043 OFF ON .	· M2056 ON , (M2057)가 ON , M2043 OFF ON .

\* , D9194, D9195 No. , .

## 2. 13

가

( )

D9193			
10	16		
768	0300	가 ON M2043D OFF ON	( ZERO ) M2409+20n OFF M2403 OFF ON
1024	0400	MR- -B가 (M2408+20n : ON) , M2043 OFF ON	MR- -B, ,
1280	0500	가 , M2043 OFF ON	CPU
1536	0600	가 M2043 OFF ON	CPU
2048	0800	No. No. M2043 OFF ON ( No. 가 0 )	No. , No. 2043 OFF ON
2304	0900	, $1 \sim (2^{31} - 1)$	$1 \sim (2^{31} - 1)$ , M2043 OFF ON
2816	0B00	가	,
- 4094 *	F002	가 , PLC (M2000)가 OFF , 가 CPU STOP	M2000 ON CPU RUN
- 4095 *	F001	가 (M2408+20n)가 ON	가 ( 2.4 )
- 4096 *	F000	가 , ON	OFF

\* , D9194, D9195 No. ,

9

### 3. 1

				( )	
M9000		OFF : ON :	가 CPU ON, ON	S ( )	
M9005	AC / DC DOWN	OFF : AC / DC DOWN ON : AC / DC DOWN	• AC 20ms ON, OFF ON • DC 10ms ON, OFF ON • DC 1ms OFF ON	S ( )	
M9006		OFF : ON :	• M9007 OFF	S ( )	
M9007		OFF : ON :	• ON ON • BAT ALARM LED	S ( )	
M9008		OFF : ON :	• 가 ON ON	S ( )	
M9010		OFF : ON :	• 가 ON ON	S ( )	
M9025		OFF : ON :	• 가 OFF ON D9025~D9028	U	
M9026		OFF : ON :	• (D9025~D9028) ON 가 OFF	S ( )	
M9028		OFF : ON :	• 가 ON BCD D9025~ D9028	U	
M9036	ON	ON OFF	• RUN / STOP ON	S ( )	
M9037	OFF	ON OFF	• RUN / STOP OFF	S ( )	
M9060		OFF ON :	•	U	
M9073	PCPU WDT	OFF : ON :	• CPU , "WDT" ON • CPU (D9184)	S ( )	
M9074	PCPU	ON : PCPU OFF : PCPU	• PLC (M2000) OFF ON ON • PLC (M2000)가 OFF OFF	S ( )	
M9075		ON : OFF :	• 가 가 가ON (M9078)	S ( )	
M9076		ON : ON OFF : OFF	• ON/OFF	S ( )	
M9077		ON : 1 OFF :	• (D1012~D1014) / • M9077 ON (D9185~D9187)	S ( )	
M9078		ON : OFF :	• ON • M9078 ON (D9182, D9183)	S ( )	
M9079		ON : OFF :	• SFC (K) / ON D198, D9190	S ( )	

### 3.1 ( )

				( )	
M9240	1	OFF : 1 ON : 1	<ul style="list-style-type: none"> <li>• 1 CPU OFF .</li> <li>• 1 CPU (CPU ) ON .</li> <li>• 가 .</li> </ul>	S ( )	
M9241	2	OFF : 2 ON : 2	<ul style="list-style-type: none"> <li>• 2 CPU OFF .</li> <li>• 2 CPU (CPU ) ON .</li> <li>"MULTI CPU DOWN" ( : 7000) .</li> </ul>		
M9242	3	OFF : 3 ON : 3	<ul style="list-style-type: none"> <li>• 3 CPU OFF .</li> <li>• 3 CPU (CPU ) ON .</li> <li>"MULTI CPU DOWN" ( : 7000) .</li> </ul>		
M9243	4	OFF : 4 ON : 4	<ul style="list-style-type: none"> <li>• 4 CPU OFF .</li> <li>• 4 CPU (CPU ) ON .</li> <li>"MULTI CPU DOWN" ( : 7000) .</li> </ul>		
M9244	1	OFF : 1 ON : 1	<ul style="list-style-type: none"> <li>• 1 CPU ( ) OFF .</li> <li>• 1 CPU ON . *1</li> </ul>		
M9245	2	OFF : 2 ON : 2	<ul style="list-style-type: none"> <li>• 2 CPU ( ) OFF .</li> <li>• 2 CPU ON . *1</li> </ul>		
M9246	3	OFF : 3 ON : 3	<ul style="list-style-type: none"> <li>• 3 CPU ( ) OFF .</li> <li>• 3 CPU ON . *1</li> </ul>		
M9247	4	OFF : 4 ON : 4	<ul style="list-style-type: none"> <li>• 4 CPU ( ) OFF .</li> <li>• 4 CPU ON . *1</li> </ul>		

\* 1 : , 1 .

3. 2

CPU  
SFC  
CPU  
BIN

	•
	•
	•
	•
	•
( )	<p>&lt; &gt;</p> <p>S : ( CPU)</p> <p>U : ( SFC )</p> <p>S / U : ( CPU) /</p> <p>&lt; &gt; ( CPU)</p> <p>: (CPU )</p> <p>: ( ON,</p> <p>: 가</p> <p>: 가 ( )</p> <p>:</p>

### 3. 2

				( )	
D9000	No.	No.	가 I/O No.가	S ( )	
D9005	AC / DC DOWN No.	AC / DC DOWN	• CPU가 +1 BIN 85%(AC / 65%DC )	S ( )	
D9008			• 가 BIN • 「Q173CPU/Q172CPU (SV13/SV22) (SFC )」 「14.4 CPU」	S ( )	
D9010			• D9008 가 ( , 2 ) BCD 2 B15 ~ B7 B8 ~ B0 ( ) 95 10 (0~99) (1~12) H9510	S ( )	
D9011			• D9008 가 , BCD 2 B15 ~ B8 B7 ~ B0 ( ) 25 10 (1~31) (0~23) H2510		
D9012			• D9008 가 , BCD 2 B15 ~ B8 B7 ~ B0 ( ) 35 48 (0~59) (0~59) H3548		
D9013			• (D901) 가 가 가 • 0 : 1 : No. ( No. ) / No. * 2 : No. *: CPU , No. , No. 가 ( 가 ) 1 : 1, 2 : 2, 3 : 3, 4 : 4	S ( )	
D9014			• (D9008) 가 No. . . . No. No. . . . No.	S ( )	

### 3.2 ( )

				(      )	
D9015	CPU	CPU	<div><div>CPU    </div></div>		



### 3.2 ( )

				( )	
D9060		No.	No.	U	
D9061	CPU	CPU		S ( )	
D9062			<p>가 ON</p>	S ( )	
D9063			<p>D9062</p> <p>OFF</p>	S ( )	
D9182			<p>: 0 / : 1</p> <p>D9182 : b0~b15 ( 1~ 16)</p> <p>D9183 : b0~b15 ( 17~ 32)</p>	S ( )	
D9184	CPU WDT	WDT	<p>가</p> <p>1 : S/W</p> <p>2 :</p> <p>3 : WDT</p> <p>4 : S/W 2</p> <p>30 : H/W</p> <p>201 ~ 215 : Q H/W</p> <p>250 ~ 253 : I/F H/W</p> <p>300 : S/W 3</p> <p>301 : 8 CP START 15</p>	S ( )	
D9185			<p>(M9077)가 ON</p> <p>( : 0 / : 1)</p> <p>D9185 : b0~b2 (P1~P3)</p> <p>: b3~b5 (P1~P3)</p> <p>D9186 : 1 b0~b15 ( 1~ 16)</p> <p>D9187 : 1 b0~b15( 17~ 32)</p>	S ( )	
D9188			[μs]	S ( )	
D9189	No.	No.	<p>(M9079)가 ON , 가</p> <p>No.가</p>	S ( )	
D9190			<p>(M9079)가 ON , 가</p> <p>가</p>	S ( )	
D9191			<p>( : 1 / : 0)</p> <p>D9191 : b0~b15 ( 1~ 16)</p> <p>D9192 : b0~b15 ( 17~ 32)</p> <p>( )</p>	S ( )	
D9193	/ 가	/ 가	<p>가 , 가</p> <p>가 가 , 가 가</p> <p>가 가</p> <p>D9193 : b0~b15 ( )</p> <p>D9194 : b0~b15 ( 1~ 16) } 가 ( : 1 / : 0)</p> <p>D9195 : b0~b15 ( 17~ 32) }</p>	S ( )	

### 3. 2 ( )

				( )	
D9196	PC	PC	<div><div>가</div><div>00 : 01 : 02 : CRC 03 : 04 : 05 : ( OFF )</div></div>	S ( )	
D9197			<div><div>[μs]</div><div></div></div>	S ( )	
D9200		CPU	<div><div>CPU가</div><div><div><div><div>B15B12B11B8B7B4B3B0</div><div></div></div><div><div>: CPU0 : RUN 1 : STOP 2 : L. CLR</div><div>:</div><div>OFF.</div><div>:</div><div>B2~B121 SW1~SW5 0 OFF, 1 ON B13~B15</div></div></div></div></div>	S ( )	
D9201	LED	CPU-LED	<div><div>CPU LED가</div><div>0, 1, 2</div><div><div><div>B15B12B11B8B7B4B3B0</div><div></div></div><div><div>: RUN: BOOT : ERROR: : M. RUN: : BAT. ALARM: MODE MODE 0 : 1 : 2 :</div></div></div></div>	S ( )	

가 , M , No.

(1)

M	/	2	<table><tr><td></td><td></td></tr><tr><td>D</td><td>800 ~ 8191</td></tr><tr><td>W</td><td>0000 ~ 1FFF</td></tr><tr><td>#</td><td>0000 ~ 7999</td></tr></table>			D	800 ~ 8191	W	0000 ~ 1FFF	#	0000 ~ 7999					
	D	800 ~ 8191														
	W	0000 ~ 1FFF														
	#	0000 ~ 7999														
		2														
	1															
	1															
	1															
No.	1															
		2														
		2														
		2														
가		1														
		2														
		1														
		1														
		1														
		1														
	STOP	1														
		2														
	S	1														
No.	1															
FIN 가	1															
No.	1															
(    )	1															
(ON/OFF)		<table><tr><td></td><td></td></tr><tr><td>X</td><td>0000 ~ 1FFF</td></tr><tr><td>Y</td><td>0000 ~ 1FFF</td></tr><tr><td>M/L</td><td>0 ~ 8191</td></tr><tr><td>M</td><td>9000 ~ 9255</td></tr><tr><td>B</td><td>0000 ~ 1FFF</td></tr><tr><td>F</td><td>0 ~ 2047</td></tr></table>			X	0000 ~ 1FFF	Y	0000 ~ 1FFF	M/L	0 ~ 8191	M	9000 ~ 9255	B	0000 ~ 1FFF	F	0 ~ 2047
X			0000 ~ 1FFF													
Y			0000 ~ 1FFF													
M/L			0 ~ 8191													
M	9000 ~ 9255															
B	0000 ~ 1FFF															
F	0 ~ 2047															

\*: 가 .

2	,	SFC	,
32	(	: #OL, DOL)	.

(2)

CPU가

	↓	ON 「 」가
	↓ ON	
CP START (FOR~NEXT)	↓ ON ) ↓ 「 」 CPU가	「 」

CPU ,

(1) (ms) ( )

	Q173CPU				Q172CPU	
(SV22)	1 ~ 4	5 ~ 12	13 ~ 24	25 ~ 32	1 ~ 4	5 ~ 8
[ms]	0.88	1.77	3.55	7.11	0.88	1.77

(2) CPU (ms)

		Q173CPU				Q172CPU	
		0.88[ms]	1.77[ms]	3.55[ms]	7.11[ms]	0.88[ms]	1.77[ms]
*1	WAIT ON/OFF+	1.1 ~ 1.6	2.5 ~ 3.2	4.3 ~ 6	8.1 ~ 11.1	1.1 ~ 1.6	2.5 ~ 3.2
		1.8 ~ 2.3	3 ~ 3.9	4.8 ~ 6.6	9.4 ~ 11.5	1.8 ~ 2.3	3 ~ 3.9
		1.2 ~ 2	2.8 ~ 3.6	4.5 ~ 5.9	8.5 ~ 11	1.2 ~ 2	2.8 ~ 3.6
*2		1.7 ~ 2.5	3.5 ~ 4.2	5 ~ 6.5	8.6 ~ 12	1.7 ~ 2.5	3.5 ~ 4.2
PLC (M2000)ON PCPU (M9074) ON		39 ~ 433					

\*1 : FEED ( / )

\*2 :

\*3 : MR-H-BN 0.8ms , MR-H-BN 가  
0.8ms , 1.7ms가

(3) 가 /

	Q173CPU				Q172CPU	
(SV22)	1 ~ 4	5 ~ 12	13 ~ 24	25 ~ 32	1 ~ 4	5 ~ 8
가 [ms]	0.88	1.77	3.55	7.11	0.88	1.77
[ms]	0.88	1.77	3.55	7.11	0.88	1.77

(4)

No.											
1	M2400 ~ M2419										
2	M2420 ~ M2439			가							
3	M2440 ~ M2459										
4	M2460 ~ M2479										
5	M2480 ~ M2499		0		OFF						
6	M2500 ~ M2519	1									
7	M2520 ~ M2539	2									
8	M2540 ~ M2559	3		OFF							
9	M2560 ~ M2579	4									
10	M2580 ~ M2599	5	.								
11	M2600 ~ M2619										
12	M2620 ~ M2639	6									
13	M2640 ~ M2659	7									
14	M2660 ~ M2679	8									
15	M2680 ~ M2699	9									
16	M2700 ~ M2719	10									
17	M2720 ~ M2739	11	FLS								
18	M2740 ~ M2759	12	RLS								
19	M2760 ~ M2779	13	STOP								
20	M2780 ~ M2799	14	DOG/CHANGE								
21	M2800 ~ M2819	15									
22	M2820 ~ M2839	16									
23	M2840 ~ M2859	17	가								
24	M2860 ~ M2879	18	가								
25	M2880 ~ M2899		가 *1								
26	M2900 ~ M2919	19	M	OFF							
27	M2920 ~ M2939										
28	M2940 ~ M2959										
29	M2960 ~ M2979										
30	M2980 ~ M2999										
31	M3000 ~ M3019										
32	M3020 ~ M3039										

\*1 : SV22

\*2 : Q172CPU , No.1~ No.8 가 .

\*3 : Q172CPU , 9 가 .

\_\_\_\_\_

\* 1 : SV22 가 .  
\* 2 : Q172CPU , No.1~ No. 가 .  
\* 3 : Q172CPU , 9 가 .

(6) 가

No.							
1	M4000 ~ M4019						
2	M4020 ~ M4039						
3	M4040 ~ M4059						
4	M4060 ~ M4079						
5	M4080 ~ M4099						
6	M4100 ~ M4119						
7	M4120 ~ M4139						
8	M4140 ~ M4159						
9	M4160 ~ M4179						
10	M4180 ~ M4199						
11	M4200 ~ M4219						
12	M4220 ~ M4239						
13	M4240 ~ M4259						
14	M4260 ~ M4279						
15	M4280 ~ M4299						
16	M4300 ~ M4319						
17	M4320 ~ M4339						
18	M4340 ~ M4359						
19	M4360 ~ M4379						
20	M4380 ~ M4399						
21	M4400 ~ M4419						
22	M4420 ~ M4439						
23	M4440 ~ M4459						
24	M4460 ~ M4479						
25	M4480 ~ M4499						
26	M4500 ~ M4519						
27	M4520 ~ M4539						
28	M4540 ~ M4559						
29	M4560 ~ M4579						
30	M4580 ~ M4599						
31	M4600 ~ M4619						
32	M4620 ~ M4639						

\* 1 : Q172CPU , No.1~ No.8 가 .

\* 2 : Q172CPU , 9

가 .



(7) 가

No.						
1	M4800 ~ M4819					
2	M4820 ~ M4839					
3	M4840 ~ M4859		가			
4	M4860 ~ M4879	0				
5	M4880 ~ M4899	1				
6	M4900 ~ M4919	2	JOG	×		
7	M4920 ~ M4939	3	JOG			
8	M4940 ~ M4959	4	OFF			
9	M4960 ~ M4979	5	가			
10	M4980 ~ M4999	6				
11	M5000 ~ M5019	7		×		
12	M5020 ~ M5039	8	가			
13	M5040 ~ M5059	9	STOP	×		
14	M5060 ~ M5079	10				
15	M5080 ~ M5099	11				
16	M5100 ~ M5119	12				
17	M5120 ~ M5139	13				
18	M5140 ~ M5159	14				
19	M5160 ~ M5179	15				
20	M5180 ~ M5199	16				
21	M5200 ~ M5219	17				
22	M5220 ~ M5239	18				
23	M5240 ~ M5259	19	FIN	×		
24	M5260 ~ M5279					
25	M5280 ~ M5299					
26	M5300 ~ M5319					
27	M5320 ~ M5339					
28	M5340 ~ M5359					
29	M5360 ~ M5379					
30	M5380 ~ M5399					
31	M5400 ~ M5419					
32	M5420 ~ M5439					

\* 1 : Q172CPU , No.1~ No.8 가 .  
 \* 2 : Q172CPU , 9 가 .

(8)

No.																											
1	M4640 ~ M4643	<table><tr><td></td><td></td><td></td><td>가</td><td></td><td></td><td></td></tr><tr><td>0</td><td></td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td></tr><tr><td>1</td><td>TREN</td></tr><tr><td>2</td><td>가 가</td></tr><tr><td>3</td><td>가</td></tr></table>									가				0							1	TREN	2	가 가	3	가
									가																		
0																											
1	TREN																										
2	가 가																										
3	가																										
2	M4644 ~ M4647																										
3	M4648 ~ M4651																										
4	M4652 ~ M4655																										
5	M4656 ~ M4659																										
6	M4660 ~ M4663																										
7	M4664 ~ M4667																										
8	M4668 ~ M4671																										
9	M4672 ~ M4675																										
10	M4676 ~ M4679																										
11	M4680 ~ M4683																										
12	M4684 ~ M4687																										

\* 1 : Q172CPU , No.1 ~ No.8 가 .  
 \* 2 : Q172CPU , 9 가 .

(9)

No.																																								
1	M5440 ~ M5443	<table><tr><td></td><td></td><td></td><td>가</td><td></td><td></td><td></td></tr><tr><td>0</td><td></td><td>×</td><td></td><td></td><td></td><td></td></tr><tr><td>1</td><td rowspan="3">가</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>3</td><td></td><td></td><td></td><td></td><td></td></tr></table>									가				0		×					1	가						2						3					
									가																															
0								×																																
1	가																																							
2																																								
3																																								
2	M5444 ~ M5447																																							
3	M5448 ~ M5451																																							
4	M5452 ~ M5455																																							
5	M5456 ~ M5459																																							
6	M5460 ~ M5463																																							
7	M5464 ~ M5467																																							
8	M5468 ~ M5471	, ×																																						
9	M5472 ~ M5475																																							
10	M5476 ~ M5479																																							
11	M5480 ~ M5483																																							
12	M5484 ~ M5487																																							

\* 1 : Q172CPU , No.1 ~ No.8 가 .  
 \* 2 : Q172CPU , 9 가 .

\_\_\_\_\_

-52 ( ) TEL : 02-3660-9531

( )

M2099	가			
M2100	(2 )			
M2101	1	*3(12 )		*2
M2102	2			
M2103	3			
M2104	4			
M2105	5			
M2106	6			
M2107	7			
M2108	8			
M2109	9			
M2110	10			
M2111	11			
M2112	12			
M2113	가 (15 )			
M2114				
M2115				
M2116				
M2117				
M2118				
M2119				
M2120				
M2121				
M2122				
M2123				
M2124				
M2125				
M2126				
M2127				
M2128	1			*2
M2129	2			
M2130	3			
M2131	4			
M2132	5			
M2133	6			
M2134	7			
M2135	8			
M2136	9			
M2137	10			
M2138	11			
M2139	12			
M2140	13			
M2141	14			
M2142	15			
M2143	16			
M2144	17			
M2145	18			
M2146	19			
M2147	20			
M2148	21			
M2149	22			
M2150	23			
M2151	24			
M2152	25			
M2153	26			
M2154	27			
M2155	28			
M2156	29			
M2157	30			

M2158	31	*3		*2
M2159	32			
M2160				
M2161	1			
M2162				
M2163	2			
M2164				
M2165	3			
M2166				
M2167	4			
M2168				
M2169	5			
M2170				
M2171	6			
M2172				
M2173	7			
M2174				
M2175	8			
M2176				
M2177	9			
M2178				
M2179	10			
M2180				
M2181	11			
M2182				
M2183	12			
M2184				
M2185	13			
M2186				
M2187	14			
M2188				
M2189	15			
M2190				
M2191	16			
M2192				
M2193	17			
M2194				
M2195	18			
M2196				
M2197	19			
M2198				
M2199	20			
M2200				
M2201	21			
M2202				
M2203	22			
M2204				
M2205	23			
M2206				
M2207	24			
M2208				
M2209	25			
M2210				
M2211	26			
M2212				
M2213	27			
M2214				
M2215	28			

( )

M2216				
M2217	29			
M2218				
M2219	30			
M2220				
M2221	31			
M2222				
M2223	32			*2
M2224	가 <16 >			
M2225				
M2226				
M2227				
M2228				
M2229				
M2230				
M2231				
M2232				
M2233				
M2234				
M2235				
M2236				
M2237				
M2238				
M2239				
M2240	1			
M2241	2			
M2242	3			
M2243	4			
M2244	5			
M2245	6			
M2246	7			
M2247	8			
M2248	9			
M2249	10			
M2250	11			
M2251	12			
M2252	13			
M2253	14			
M2254	15			
M2255	16	[0]		*2
M2256	17			
M2257	18			
M2258	19			
M2259	20			
M2260	21			
M2261	22			
M2262	23			
M2263	24			
M2264	25			
M2265	26			
M2266	27			
M2267	28			
M2268	29			
M2269	30			

M2270	31			
M2271	32	[0]		*2
M2272	가 (48 )			
M2273				
M2274				
M2275				
M2276				
M2277				
M2278				
M2279				
M2280				
M2281				
M2282				
M2283				
M2284				
M2285				
M2286				
M2287				
M2288				
M2289				
M2290				
M2291				
M2292				
M2293				
M2294				
M2295				
M2296				
M2297				
M2298				
M2299				
M2300				
M2301				
M2302				
M2303				
M2304				
M2305				
M2306				
M2307				
M2308				
M2309				
M2310				
M2311				
M2312				
M2313				
M2314				
M2315				
M2316				
M2317				
M2318				
M2319				

\* 1 : Q172CPU No.1~ No.8 가 .  
 \* 2 : Q172CPU 9 가 .  
 \* 3 : SV22 가 .

(11)

No.																																																																															
1	D0 ~ D19	<table><tr><td></td><td></td><td></td><td>가</td><td></td><td></td><td></td></tr><tr><td>0</td><td>/</td><td rowspan="10"></td><td rowspan="10"></td><td rowspan="10"></td><td rowspan="10"></td><td rowspan="10"></td></tr><tr><td>1</td><td></td></tr><tr><td>2</td><td></td></tr><tr><td>3</td><td></td></tr><tr><td>4</td><td></td></tr><tr><td>5</td><td></td></tr><tr><td>6</td><td></td></tr><tr><td>7</td><td></td></tr><tr><td>8</td><td></td></tr><tr><td>9</td><td></td></tr><tr><td>10</td><td>ON</td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td></tr><tr><td>11</td><td></td></tr><tr><td>12</td><td>No.</td></tr><tr><td>13</td><td>M</td></tr><tr><td>14</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>15</td><td></td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td><td rowspan="4"></td></tr><tr><td>16</td><td></td></tr><tr><td>17</td><td></td></tr><tr><td>18</td><td>STOP</td></tr><tr><td>19</td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>									가				0	/						1		2		3		4		5		6		7		8		9		10	ON						11		12	No.	13	M	14							15							16		17		18	STOP	19						
									가																																																																						
0	/																																																																														
1																																																																															
2																																																																															
3																																																																															
4																																																																															
5																																																																															
6																																																																															
7																																																																															
8																																																																															
9																																																																															
10	ON																																																																														
11																																																																															
12	No.																																																																														
13	M																																																																														
14																																																																															
15																																																																															
16																																																																															
17																																																																															
18	STOP																																																																														
19																																																																															
2	D20 ~ D39																																																																														
3	D40 ~ D59																																																																														
4	D60 ~ D79																																																																														
5	D80 ~ D99																																																																														
6	D100 ~ D119																																																																														
7	D120 ~ D139																																																																														
8	D140 ~ D159																																																																														
9	D160 ~ D179																																																																														
10	D180 ~ D199																																																																														
11	D200 ~ D219																																																																														
12	D220 ~ D239																																																																														
13	D240 ~ D259																																																																														
14	D260 ~ D279																																																																														
15	D280 ~ D299																																																																														
16	D300 ~ D319																																																																														
17	D320 ~ D339																																																																														
18	D340 ~ D359																																																																														
19	D360 ~ D379																																																																														
20	D380 ~ D399																																																																														
21	D400 ~ D419																																																																														
22	D420 ~ D439																																																																														
23	D440 ~ D459																																																																														
24	D460 ~ D479																																																																														
25	D480 ~ D499																																																																														
26	D500 ~ D519																																																																														
27	D520 ~ D539																																																																														
28	D540 ~ D559																																																																														
29	D560 ~ D579																																																																														
30	D580 ~ D599																																																																														
31	D600 ~ D619																																																																														
32	D620 ~ D639																																																																														

\* 1 : Q172CPU , No.1~ No.8 가 .  
 \* 2 : Q172CPU , 9 가 .

(12)

No.																									
1	D640, D641	<table><tr><td></td><td></td><td></td><td>가</td><td></td><td></td><td></td></tr><tr><td>0</td><td rowspan="2">JOG</td><td></td><td></td><td colspan="2" rowspan="32"></td><td></td></tr><tr><td>1</td><td></td><td></td><td></td></tr></table>									가				0	JOG						1			
									가																
0	JOG																								
1																									
2	D642, D643																								
3	D644, D645																								
4	D646, D647																								
5	D648, D649																								
6	D650, D651																								
7	D652, D653																								
8	D654, D655																								
9	D656, D657																								
10	D658, D659																								
11	D660, D661																								
12	D662, D663																								
13	D664, D665																								
14	D666, D667																								
15	D668, D669																								
16	D670, D671																								
17	D672, D673																								
18	D674, D675																								
19	D676, D677																								
20	D678, D679																								
21	D680, D681																								
22	D682, D683																								
23	D684, D685																								
24	D686, D687																								
25	D688, D689																								
26	D690, D691																								
27	D692, D693																								
28	D694, D695																								
29	D696, D697																								
30	D698, D699																								
31	D700, D701																								
32	D702, D703																								

\* 1 : Q172CPU , No.1~ No.8 가 .  
 \* 2 : Q172CPU , 9 가 .

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



\_\_\_\_\_

\* 2 : Q172CPU , 9

(15)

D704	PLC			
D705				
D706	ON			
D707	/ 가			
D708	JOG			
D709	가			
D710	JOG			
D711				
D712				
D713				
D714	1 No.			
D715				
D716	2 No.			
D717				
D718	3 No.			
D719				
D720	1			
D721	2			
D722	3			
D723	4			
D724	5			
D725	6			
D726	7			
D727	8			
D728	9			
D729	10			
D730	11			
D731	12			
D732	13			
D733	14			
D734	15			
D735	16			
D736	17			
D737	18			
D738	19			
D739	20			
D740	21			
D741	22			
D742	23			
D743	24			
D744	25			
D745	26			
D746	27			
D747	28			
D748	29			
D749	30			
D750	31			
D751	32			
D752	1			


D753	2		가	
D754	3			
D755	1 가			
D756	2 가			
D757	3 가			
D758	가			
D759	PCPU			
D760	가 (32 )			
D761				
D762				
D763				
D764				
D765				
D766				
D767				
D768				
D769				
D770				
D771				
D772				
D773				
D774				
D775				
D776				
D777				
D778				
D779				
D780				
D781				
D782				
D783				
D784				
D785				
D786				
D787				
D788				
D789				
D790				
D791				
D792		ON		
D793				
D794				
D795				
D796				
D797				
D798				
D799				

\* 1 : SV22

\* 2 : Q172CPU

\* 3 : Q172CPU 9

가 .  
No.1~ No.8 가 .  
가 .

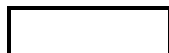
		
SFC	,	가 .

(16)

No.	*1				
1	#8064 ~ #8067				
2	#8068 ~ #8071				
3	#8072 ~ #8075				
4	#8076 ~ #8079				
5	#8080 ~ #8083				
6	#8084 ~ #8087				
7	#8088 ~ #8091				
8	#8092 ~ #8095				
9	#8096 ~ #8099				
10	#8100 ~ #8103				
11	#8104 ~ #8107				
12	#8108 ~ #8111				
13	#8112 ~ #8115				
14	#8116 ~ #8119				
15	#8120 ~ #8123				
16	#8124 ~ #8127				
17	#8128 ~ #8131				
18	#8132 ~ #8135				
19	#8136 ~ #8139				
20	#8140 ~ #8143				
21	#8144 ~ #8147				
22	#8148 ~ #8151				
23	#8152 ~ #8155				
24	#8156 ~ #8159				
25	#8160 ~ #8163				
26	#8164 ~ #8167				
27	#8168 ~ #8171				
28	#8172 ~ #8175				
29	#8176 ~ #8179				
30	#8180 ~ #8183				
31	#8184 ~ #8187				
32	#8188 ~ #8191				

	*1			
+0			<div>3.55ms</div>	
+1				
+2				
+3				

\*1 : , +0,+1..



\* : (#8064~#8191) , SW6RN-SV13Q / 22Q (Ver.OOD ) .

(17)

M9073	PCPU WDT		
M9074	PCPU		
M9075			
M9076			
M9077			
M9078			
M9079			

(18)

D9180	가					
D9181						
D9182						
D9183						
D9184	CPU WDT	CPU WDT				
D9185		가				
D9186						
D9187						
D9188						
D9189	No.					
D9190						
D9191						
D9192		ON				
D9193	/ 가	가				
D9194						
D9195						
D9196	PC					
D9197		ON				
D9198	가					
D9199						
D9200						
D9201	LED					

1. \_\_\_\_\_ ( 「 」 )가

가

【 】 1 18 ( )

【 】  
(1)

(2)

가 가  
가

2 . \_\_\_\_\_

3 . \_\_\_\_\_ ( )

7

4 . \_\_\_\_\_

5 . \_\_\_\_\_  
(1)

(2)

(3)

( ( ))

北海道支店

☎ (011)890 - 7515

新潟サービスステーション

☎ (025)274 - 9165

北陸支店

☎ (076)251 - 0559

京滋機器サービスステーション

☎ (075)611 - 6211

関西機電支店

☎ (0726)41 - 0441

大阪機器サービスステーション

☎ (06)6458 - 9728

堺機器サービスステーション

☎ (0722)29 - 5992

姫路機器サービスステーション

☎ (0792)81 - 1141

中国支店

☎ (082)285 - 2111

東北支店

☎ (022)236 - 3818

東京機電支店

☎ (03)3454 - 5521

千葉機器サービスステーション

☎ (043)232 - 6101

神奈川機器サービスステーション

☎ (042)779 - 9711

関越支店

☎ (048)651 - 3221

関東機器サービスステーション

☎ (048)652 - 0378

静岡機器サービスステーション

☎ (054)287 - 8866

浜松サービスステーション

☎ (053)463 - 8455

中部支社

☎ (052)722 - 7601

神戸機器サービスステーション

☎ (078)651 - 0332

四国支店

☎ (087)831 - 3186

倉敷機器サービスステーション

☎ (086)448 - 5532

北九州機器サービスステーション

☎ (093)642 - 8825

九州支社

☎ (092)483 - 8208

長崎機器サービスステーション

☎ (095)865 - 3667

Q  
SV22 가  
(Q173CPU / Q172CPU)

:  **MITSUBISHI ELECTRIC CORPORATION**

HEAD OFFICE : MITSUBISHI DENKI BLDG MARUNOUCHI, TOKYO 100, FAX 81-3-3218-3579

: ( ) TEL(02)3660-9531 FAX(02)3664-8335

( ) : <http://www.hanneung.com>

MELFANS web : <http://www.nagoya.melco.co.jp>

	SV22KASO PRO Q173/Q172
	1CT763