



PLC

4 PLC

1. PLC
 - 1) PLC
2.
 - 1)
 - 2)
 - 3) PLC
3. CPU
 - 1) CPU
 - 2)



PLC 초급

<3 . PLC

> PLC
(CPU), , ,

가

PLC

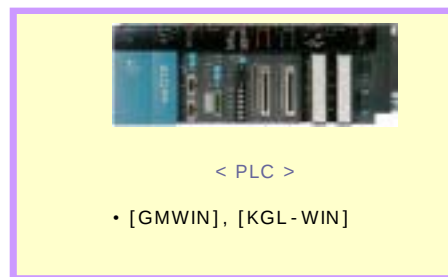
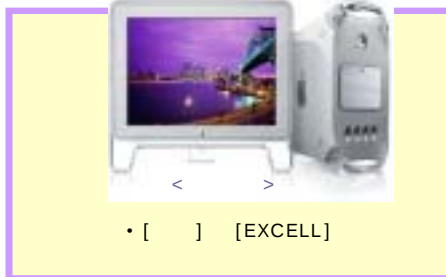
PLC

	가

PLC

가

가



PLC

PLC

가

가

: PLC

가 ?

: PLC PLC

PLC

PLC

가

, 가 _____

PLC

가

가

PLC

(Source Program) :

()

(object program: 가

)

PLC

GMWIN

Assembly Language

Assembly Language :

가

가

1~6

(CPU)



CPU

PLC

PLC

PLC

CPU



- (Hard-wired Logic)
- (Soft-wired Logic)
- CPU

PLC

PLC

- PLC
-

(Hardwired Logic)
(Softwired Logic)



PLC



1. PLC

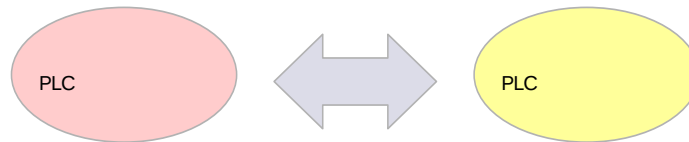
PLC

relay

GMWIN, KGLWIN

PLC

PLC



PLC (PROGRAMMING TOOL)	
PLC	PLC
가	
GMWIN (LG)	
KGLWIN (LG)	
WINFST ()	
WINGPC ()	
SIMATIC MANAGER (SIEMENS)	
RSLogic500(AB)	
FXGP_WINE(Mitsubishi)	



- : ,
- : 가 ,
- : PLC



- : , PLC 가
- - 가 가
- - 가
- - 가
- : 가



PLC PLC



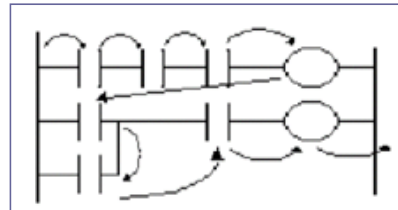
1.

PLC PLC 2가 가

1)

• PLC

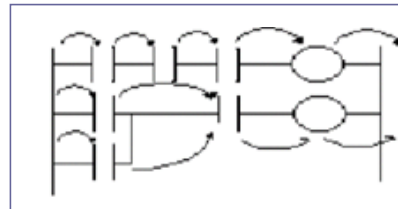
가



< 2-1(a) >

2)

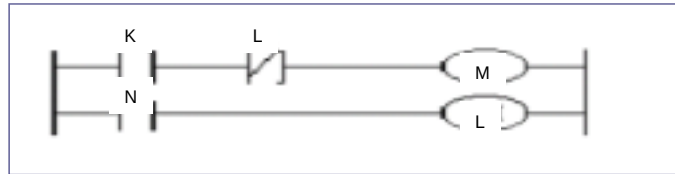
가



< 2-1(b) >



2.



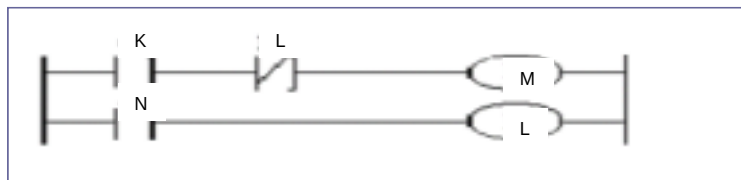
< >

* K~L . K N a L b . M
L , b L

• () ~ K N
M L b M

• PLC () ~ K N
M L b
(M, L)

M L b , M



< 4-1 >

:

b K N , L M L
M 가
PLC K N
M L ON , L M
M,L L
M L b M
PLC
가



3. PLC

1)

PLC
ON/OFF

2)

PLC

a b

가

• a	:	(arbeit contact	a	)	, make
-		(OFF)	가	가	(ON)
-	, ON		, OFF		
• b	:	(break contact	b	)	, make
-		(ON)	가	가	(OFF)
-	, ON		, OFF		
• c	:	(change-over contact	c	)	, make
-					
- a	b		가		



3. PLC

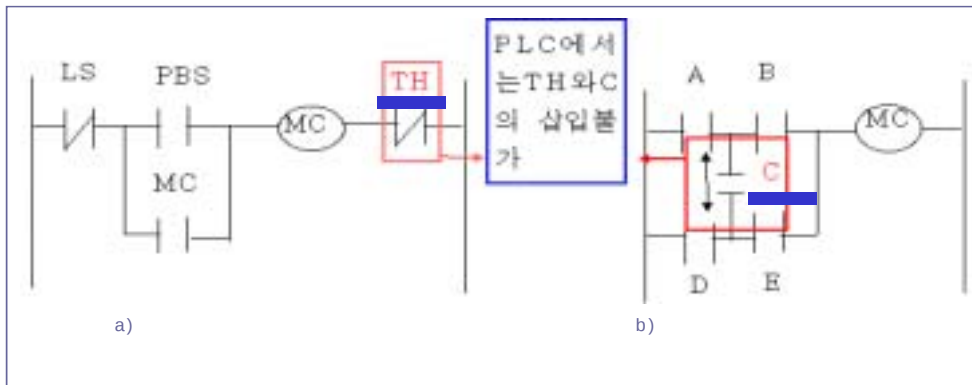
3)

가

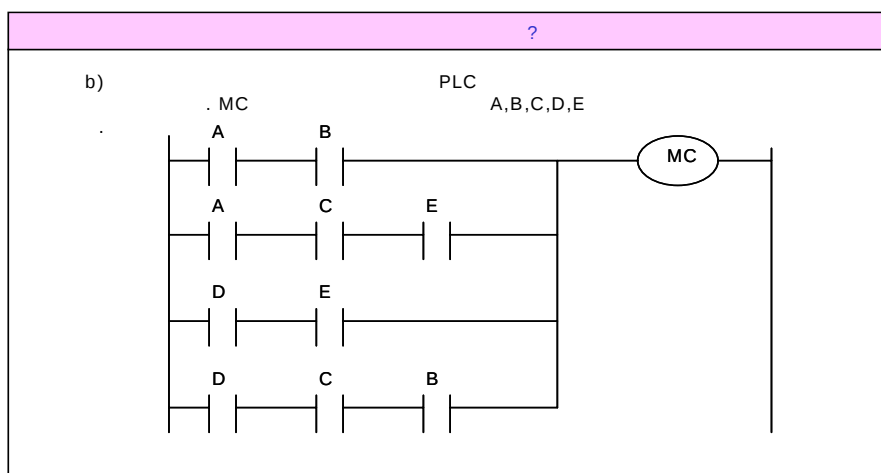
- PLC
-
-

PLC

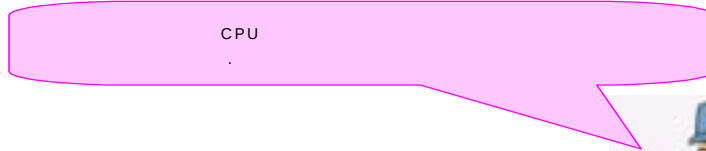
가



< PLC >

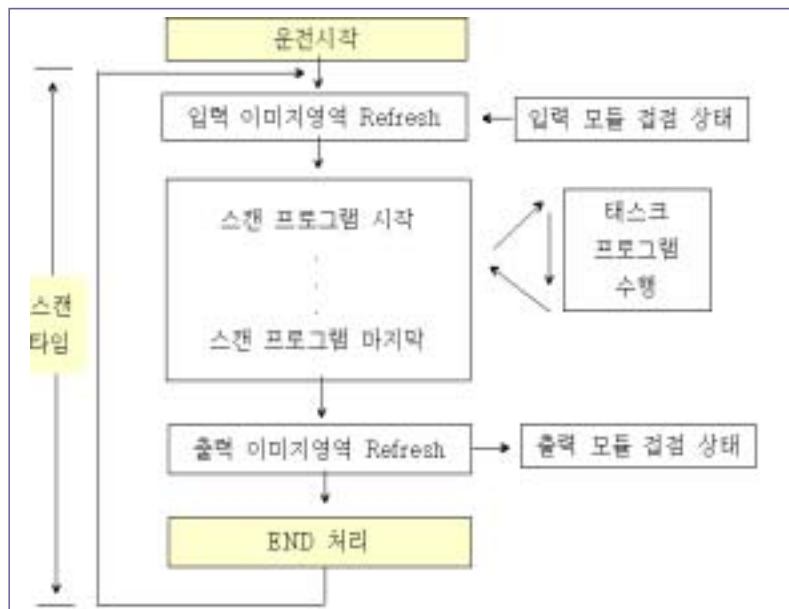


CPU



1. CPU

CPU



< 4-3 CPU >

CPU
PLC

(Run)

(Refresh)

CPU
(Refresh)

CPU



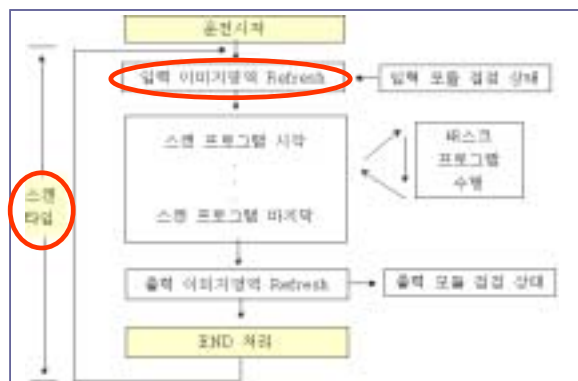
2.

1) (Scan Time)

- : PLC가
1, 1 (Scan Time) PLC (Input Refresh)
END
- PLC : PLC
- (Refresh) :

2) (Input Refresh)

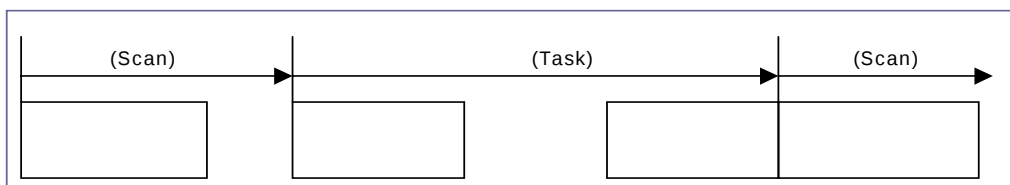
- : (Input Refresh)
- - (:real time)
- (Refresh) ()



2.

3)

가 가





- : CPU가 RUN
- : () , (:real time)
- :

- : (Task) (Interrupt)
- :

4) (Self Diagnosis)

- : PLC CPU가
- - 가
- - 가 ,

5) (Output Refresh)

- : , PLC

6) END

- : Clear(Input Refresh)



PLC 가 ?
PLC
가 PLC



• [] [EXCELL]



< PLC >

• [GMWIN], [KGL-WIN]

1. PLC

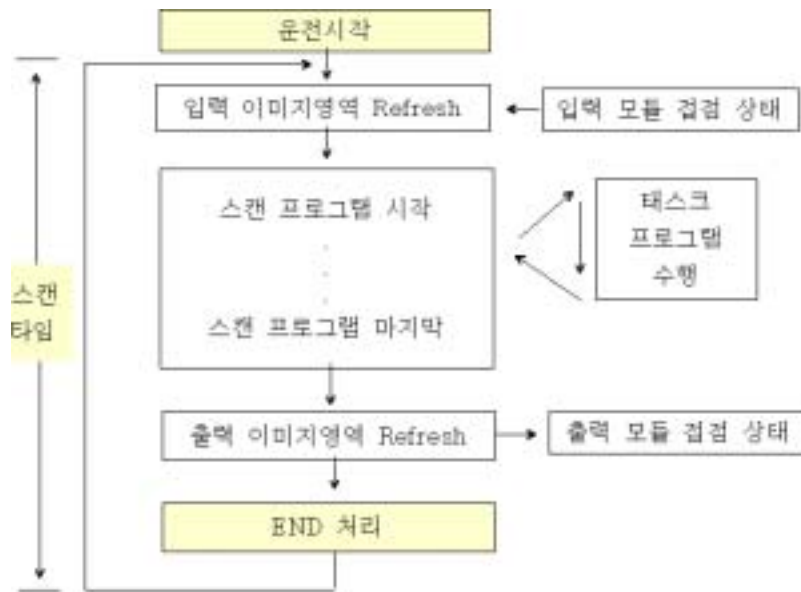
- (Hardwired Logic) :
- :
- :
가
- (Softwired Logic) :
- : , PLC 가
- :
가 가 (가)

2.

- 1)
• PLC
가
- 2)
•
•

3. CPU

- PLC (Refresh)
-
-
- CPU (Refresh)



가

1. _____ ?
 - Relay
 -
 -
 - PLC 가
 - PLC 가
 - Relay

(Hardwired Logic)

1. : Relay
2. : 가
3. : PLC

2. (Softwired Logic) _____ ?
 - 가 가
 - 가
 - Relay
 - Relay



PLC 가

(Softwired Logic)

1. : , PLC 가

2. 가 가

가

가

3:PLC _____ ?

- ○
- ○

PLC

2가

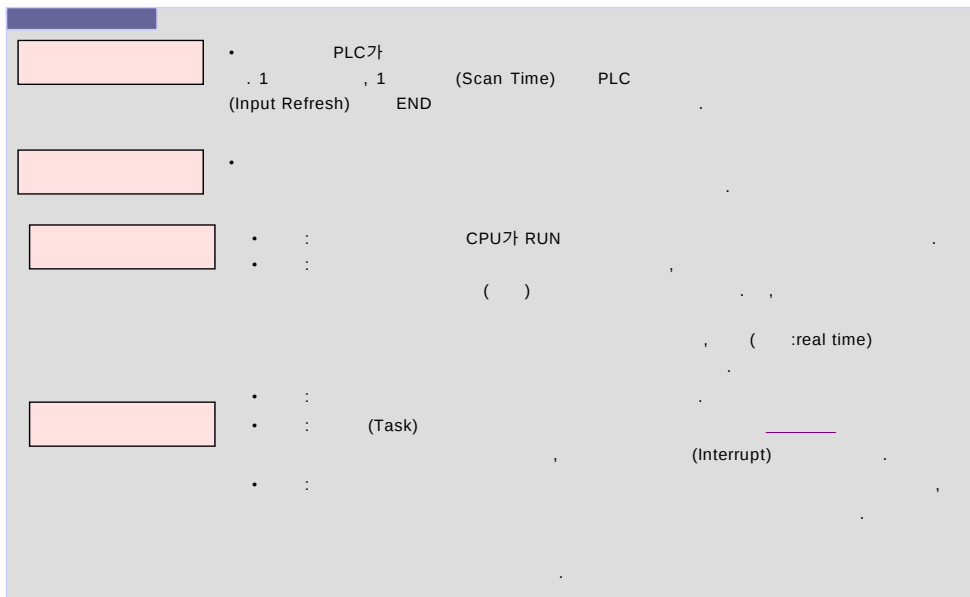
1)
• PLC 가

2)
• Relay

4.

?	
?	PLC가
?	CPU가 RUN
?	(Interrupt)

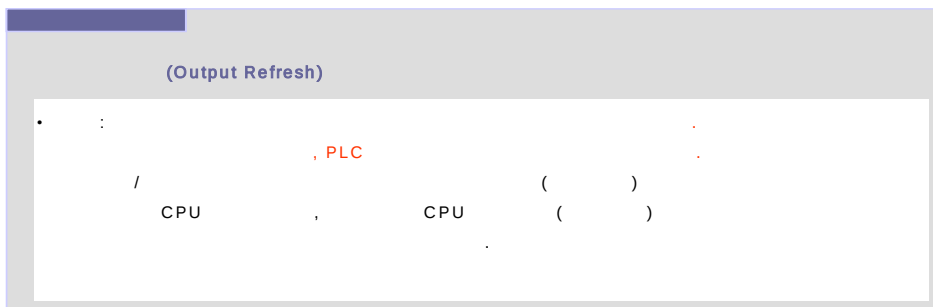
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4.

?

- ○ DMA (Input Refresh)


$$=$$
$$=$$
$$=$$
$$=$$
$$=$$
$$=$$

가



= 가

=

가

=