

PLC

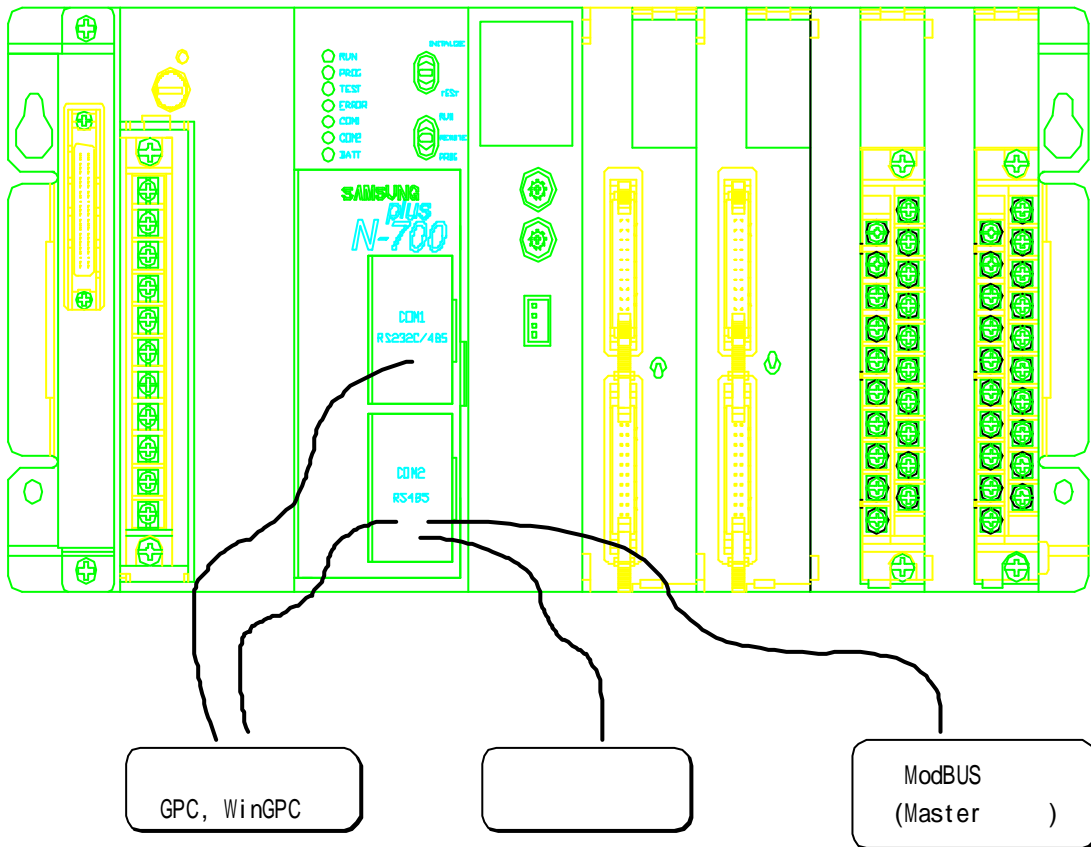
N plus

1. N plus Port
 N700plus 2 Port

) N70 plus Port 2 CPL-9216A 2 Serial Port Modbus Slave . 2 Port

1-1 Port

Port		
Port 1 * RS232/485	SPC	(, PC,)
Port 2 * RS232/485	SPC	(, PC,)
	ModBUS	* ASCII ,HEX 가 * ModBUS RTU Slave * ROM Version 1.02 가



1-2 Port

* Port RS-232C RS-485

1) Port (N700 plus)

Port			
Port 1	9600,19200	No parity,8 bit, 1 Stop bit	SPC
Port 2	4800,9600,19200,38400	Parity(ODD/EVEN), Byte (7/8 bit)	:No Parity,8 Bit, 1 Stop bit가

* DIP Switch

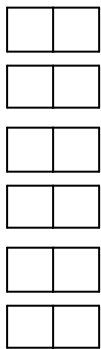
* DIP switch 5,6 Port 2 RS-485

(Port 2 RS-232

(Port 1

Fail-Safe

OFF ON



Switch						
6	5	4	3	2	1	
X	X	X	X	X	OFF	Port 1 : 9600 bps
					ON	Port 1 : 19200 bos
			OFF	OFF	X	Port 2 : 9600 bps
			OFF	ON		Port 2 : 19200 bps
			ON	OFF		Port 2 : 38400 bps
			ON	ON		Port 2 : 4800 bps
OFF	OFF				-	
ON	ON				Port 2 :	

2) Port PIN

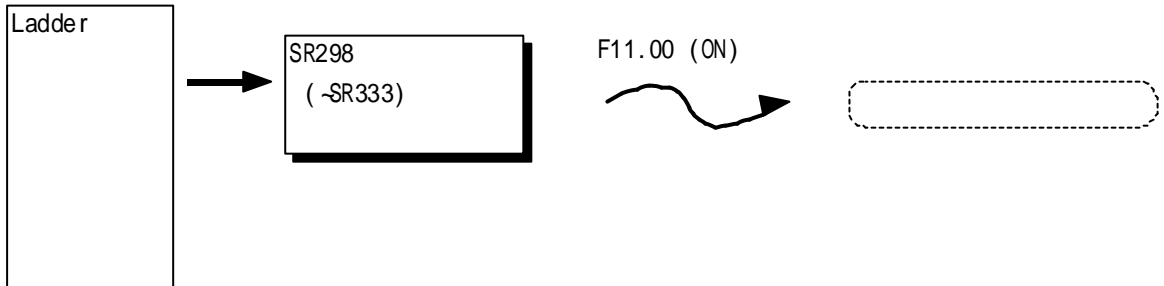
* Port PIN 가

(Pin 가)

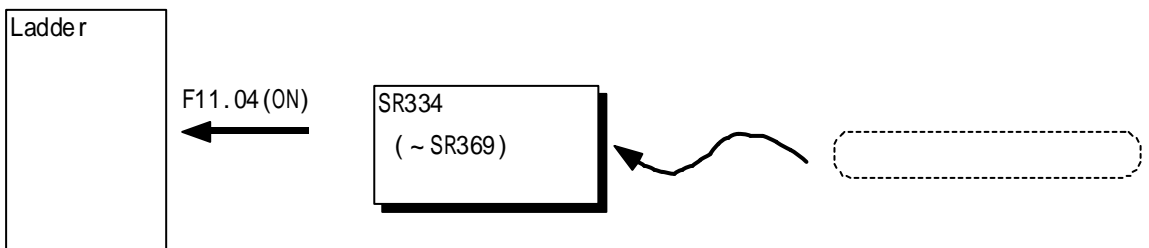
Pin		
1	Frame	
2	RS-232	
3	RS-232	
5	Ground	
6	RS-485	
7	RS-485	

2.
2-1.

- 가 LADDER (ASCII HEX Binary)
- Port 2 Register
- 1)
 - (1) F11 ASCII HEX, Byte (Parity, 7/8 bit)
 - (2) F12.8 SET Port 2가
 - (3) F11.00 ('0')
 - (4) 가 Byte SR370 SET
 - (5) F11.00 '0'
- * (1), (2) Error F11.1
- SCAN 1



- 2)
 - (3) ' (1), (2) '
 - (4) F11.04 가 ('1')
 - Byte) SR371 (
 - (5) F11.05 SET SR334
- * F11.06, 07
- * (1) SCAN 1



2-3.

1)

F12.08	Port 2	' 1 ' :
F12.09	Port 2 Modbus (Modbus F12.8 OFF)	' 1 ' : ModBUS 2)

F11.00		1:
F11.01		1:
F11.02	ASCII	1:
F11.03	ASCII	1:
F11.04		1:
F11.05	(Read '1')	1:
F11.06		1:
F11.07		1:
F11.08	ASCII ASCII	1: ASCII 1)
F11.09		1:
F11.10		1:
F11.11	ODD/EVEN	0: ODD, 1: EVEN
F11.12	7 8 Bit	0: 8 , 1: 7
F11.13	Port 2	0: ASCII, 1: HEX , 2)
F11.14		
F11.15	CRC-16	1: CRC-16

1) HEX code 3130 -> 10

2가

2) ASCII

2 가

* F11.13

ROM Version 1.02

F12.9

* F12.9 Modbus

Version 1.02

2)

SR298 -SR333		36 , 3370
SR334 -SR369	Port	36 , 3406
SR370		Byte
SR371		Byte
SR372		Byte
SR373		

Register		Addressing	
R	R0-R127, 128	0000 ~ 0127	
L	L0-L63, 64	0128 ~ 0191	Network
M	M0-M127, 128	0192 ~ 0319	
K	K0-K127, 128	0320 ~ 0447	
F	F0-F15, 16	0448 ~ 0463	
TC	TC0-TC255, 256	0464 ~ 0479	Timer/Counter
W	W0-W2047, 2048	0512 ~ 2559	
SV	TC0-TC255, 256	2560 ~ 2815	Timer/Counter SET ()
PV	TC0-TC255, 256	2816 ~ 3071	Timer/Counter ()
SR	SR0-SR511, 512	3072 ~ 3583	

3-2 Read Holding Register(03), Read Input Register(04)

3-3 Force Coil (05)

3-4 Preset Register (06)

3-5 Read Exception (07)

700Plus F0

3-6 Force Multiple Coil (15, Hex)

3-7 Preset Multiple (16, Hex)

3-8 Report Slave status (17, Hex)

Offset	Contents	etc
0x00		
0x01		
0x02	8	data length
0x03		CPU ID
0x04		CPU LED ON:0xFF, Off:0x00
0x05		System Register F0 Byte
0x06		System Register F0 Byte
0x07		CPU (Type)
0x08		CPU (ROM Version)
0x09		CPU Type (Byte)
0x0A		CPU Type (te) By

3-9 Illegal Exception

SAMPLE (SPC PLC 4)

1. SPC 4

- 1) SPC 8 data bits, None parity, 1 stop bit, Binary 가 .
- 2) (PC Master) Q(Query) , QA(Query Acknowledge)
 PLC , PC RR(Response Request) , PLC R(Response)
 . (SPC 4)

3) 4 ,

- Q

DA	SA				CRC L	CRC H
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- QA

DA	SA	\$80	\$01	\$00	CRC L	CRC H
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- Q

DA	SA	\$00	\$01	\$00	CRC L	CRC H
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- R

DA	SA				CRC L	CRC H
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- 4) DA ID , SA ID , Q DA
 PLC ID , SA PC ID . QA DA가 PC , PLC SA가 .
 PLC ID
 1 (2 Digits) ,
 가 .

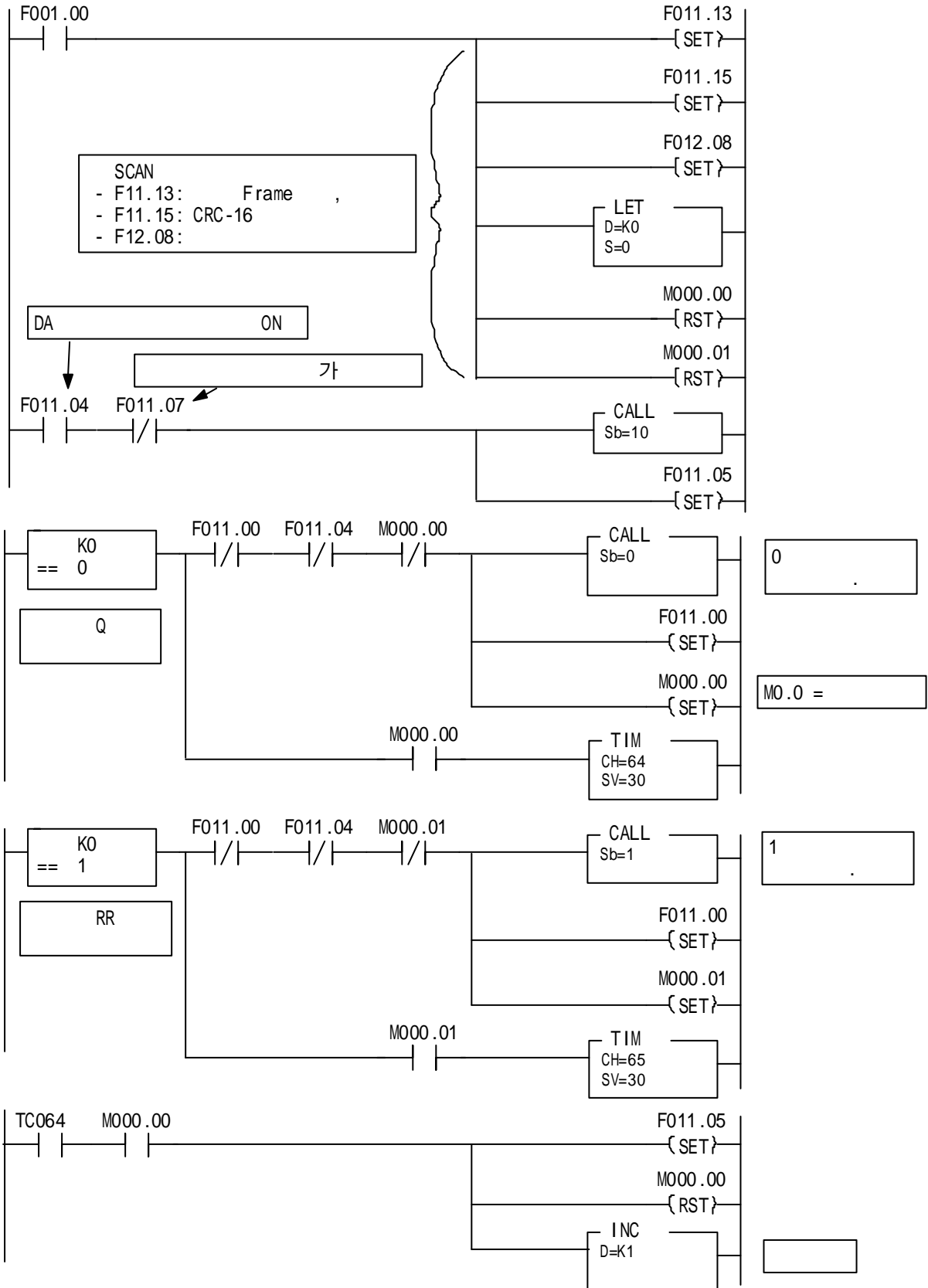
- 5) , , , 16가 가 .
 , 00 -FF , 256
 . CRC CRC-16 .

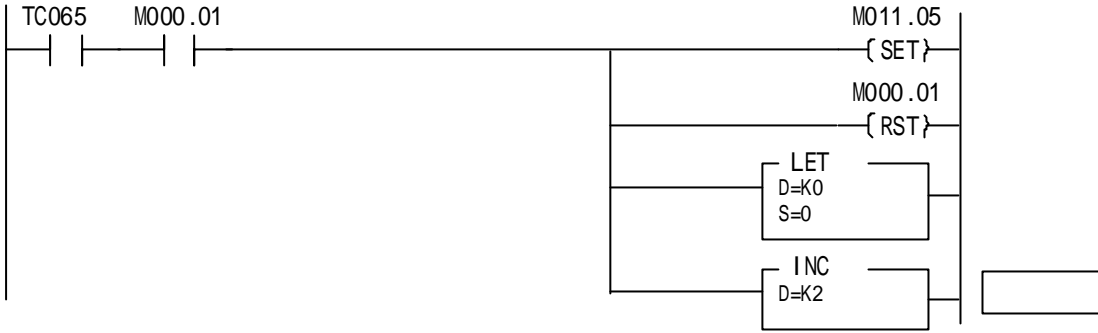
- 6) ' \$ ' HEX
 PLC \$ HEX .

7) PLC

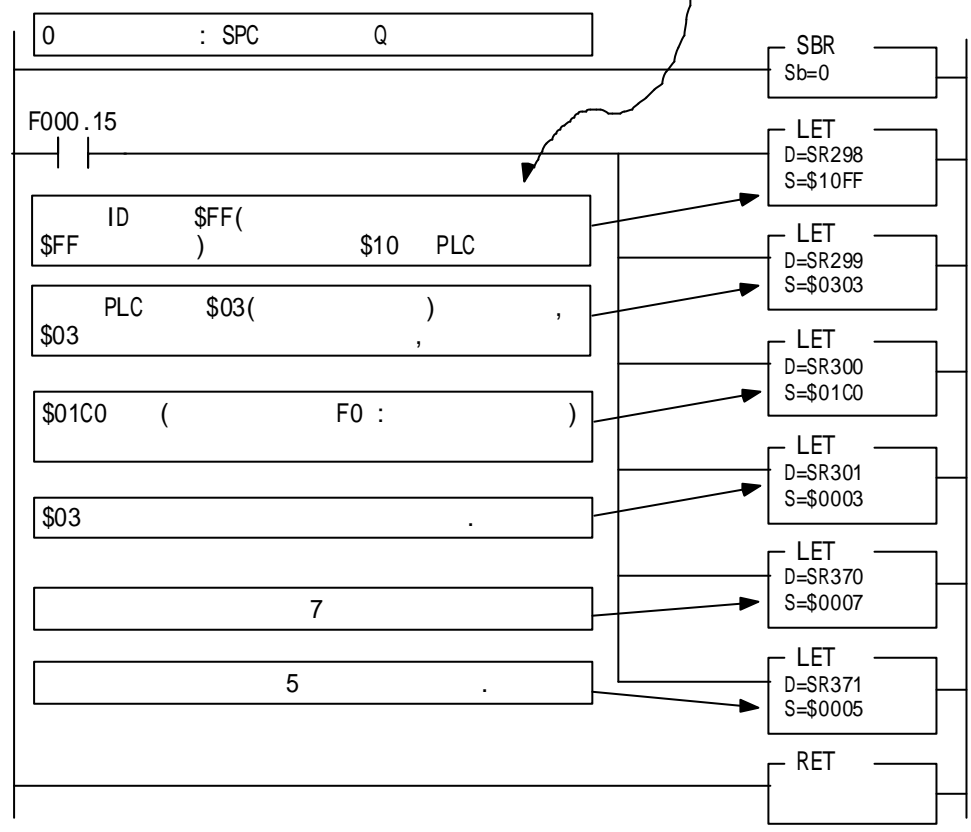
\$1234ABCD5678 , SR298 SR300
 SR298 \$3412 , SR299 \$CDAB , SR300 \$7856

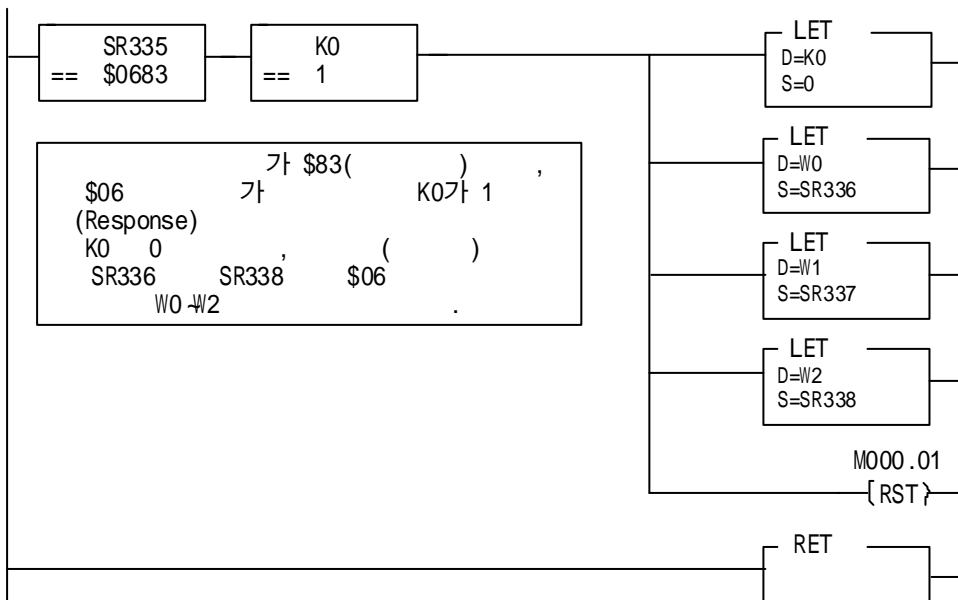
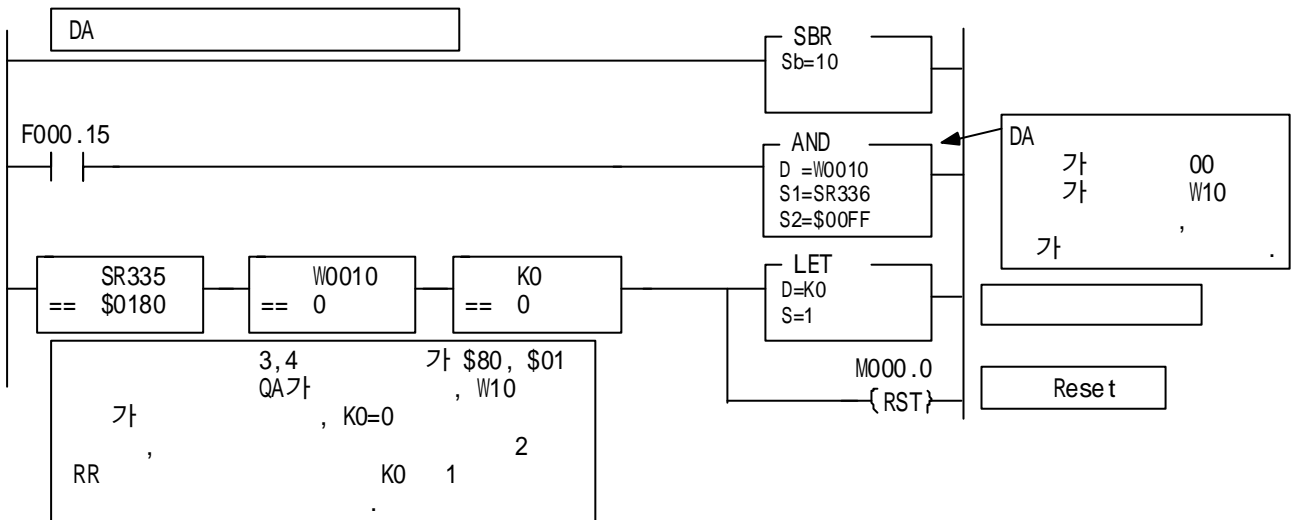
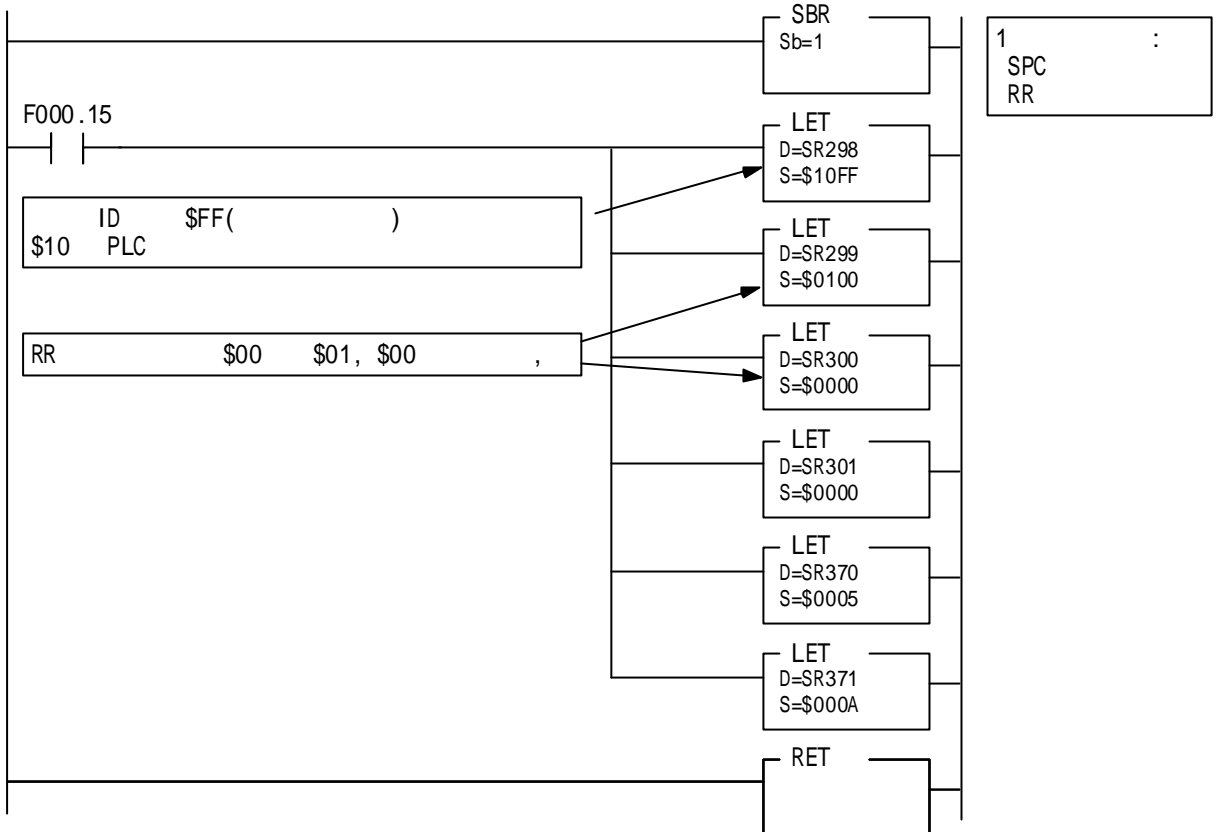
K0 : (0 :Query Q/Ack ,1 :Req)
 K1 :
 K2 :





PLC ID
\$10 (16)





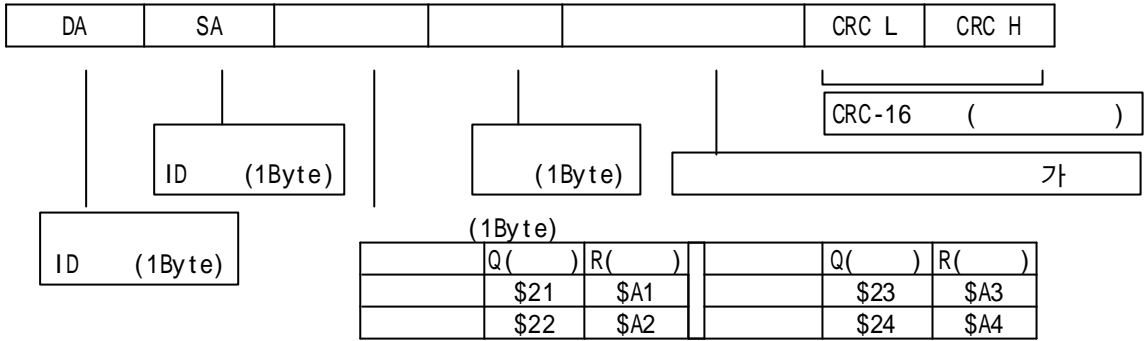
SAMPLE 2 (N plus PLC 2)

1. N plus 2

- 1) N plus SPC 8 bits, None parity, 1 stop bit, Binary 가 .
- 2) (Master) Q(Query) , PLC R(Response)

3) 2

- Q R



- 4) CRC PLC F11.15 Set .
- 5) PLC

\$1234ABCD5678 , SR298 SR300
 SR298 \$3412 , SR299 \$CDAB , SR300 \$7856

- 6) ID 10 PLC가 ID 1 PLC W0000(\$0200) 5 ,
 (ID 1 PLC W0=\$1234, W1=\$5678, W2=\$1234, W3=\$5678, W4=\$1234)

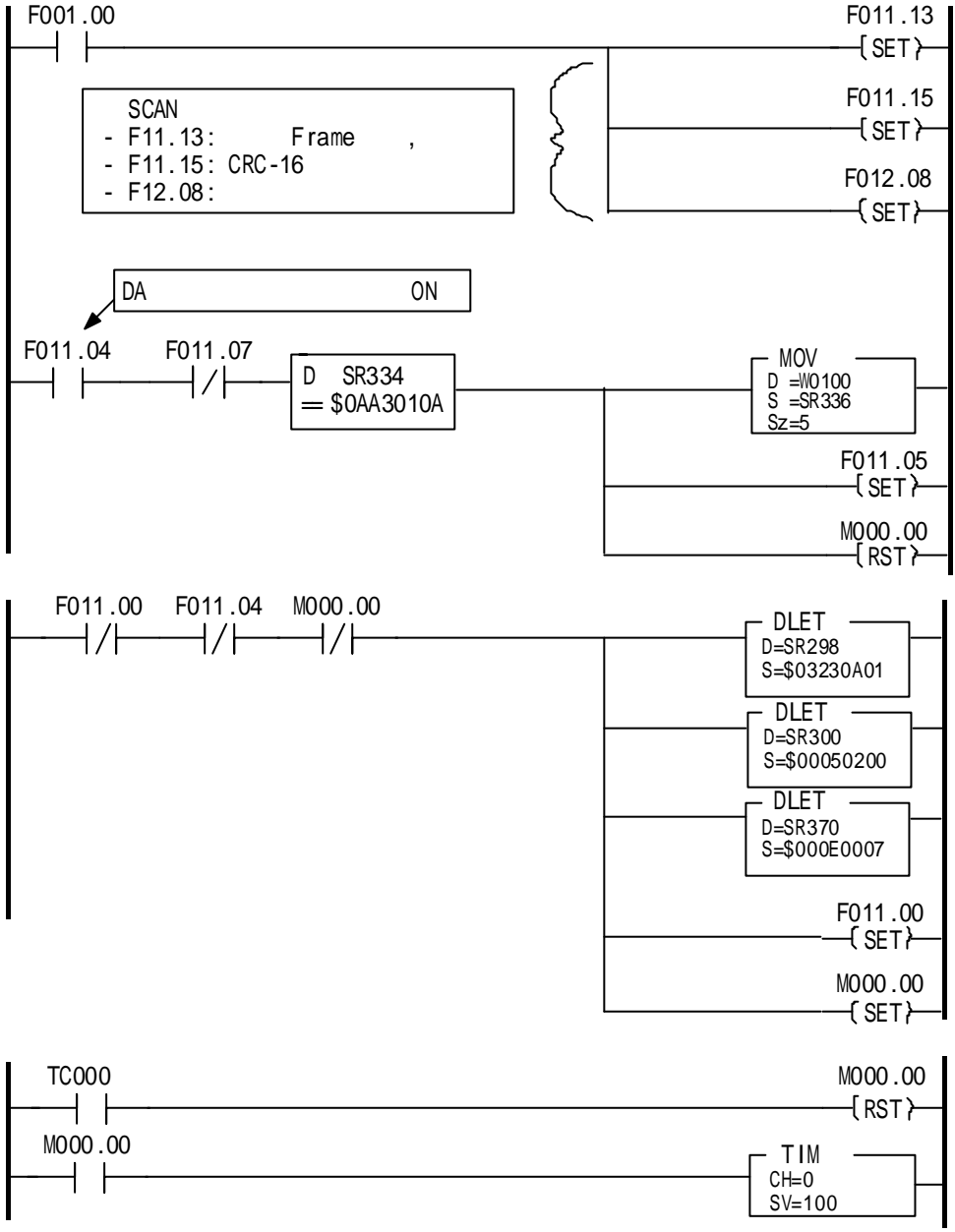
Q : 01 0A 23 03 00 02 05 .
 ID ID FC L Start
 R : 0A 01 A3 0A 34 12 78 56 34 12 78 56 34 12
 ID ID FC L Data1 Data2 Data3 Data4 Data5

7) ,

SR301 SR300 SR299 SR298
05 02 00 03 23 0A 01
 SR370 07
SR340 SR339 SR338 SR337 SR336 SR335 SR334
12 34 56 78 12 34 56 78 12 34 0A A3 01 0A
 SR371 14 OE 가 .

N plus 2 1 ()

N plus PLC ID#10



ID#1

W0=\$1234, W1=\$5678, W2=\$1234, W3=\$5678, W4=\$1234

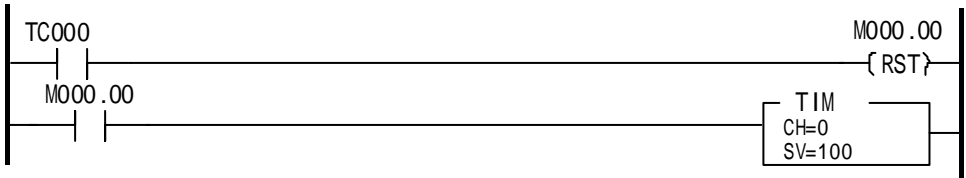
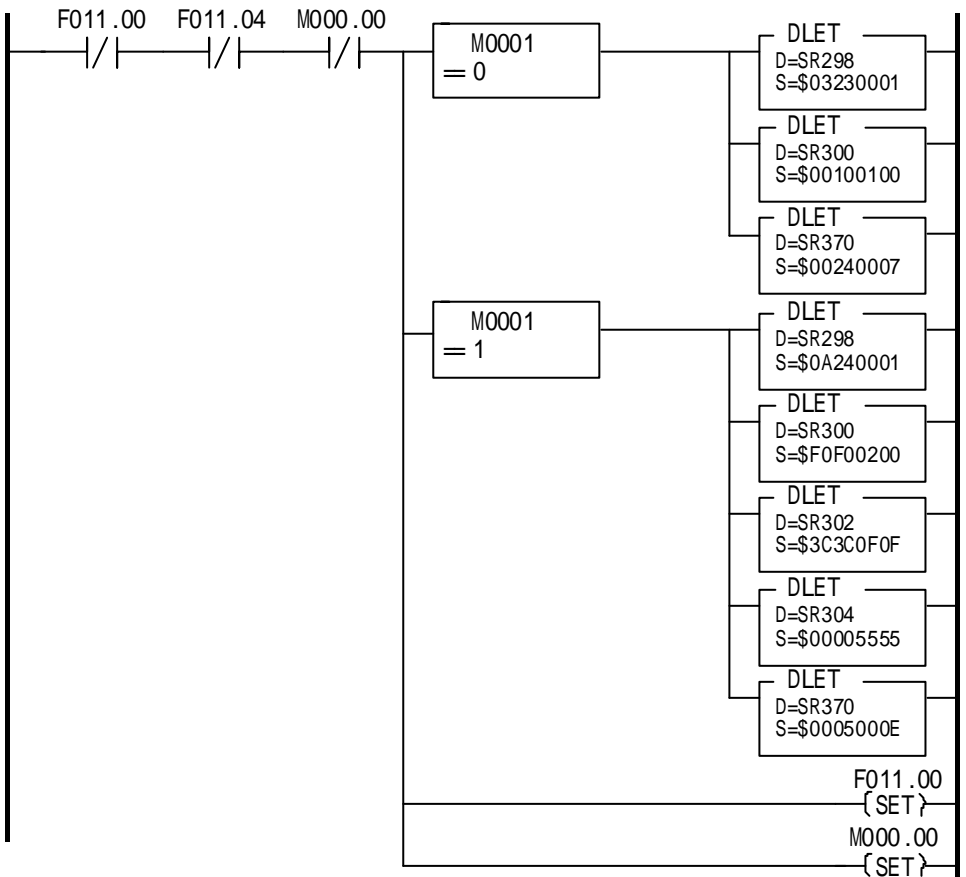
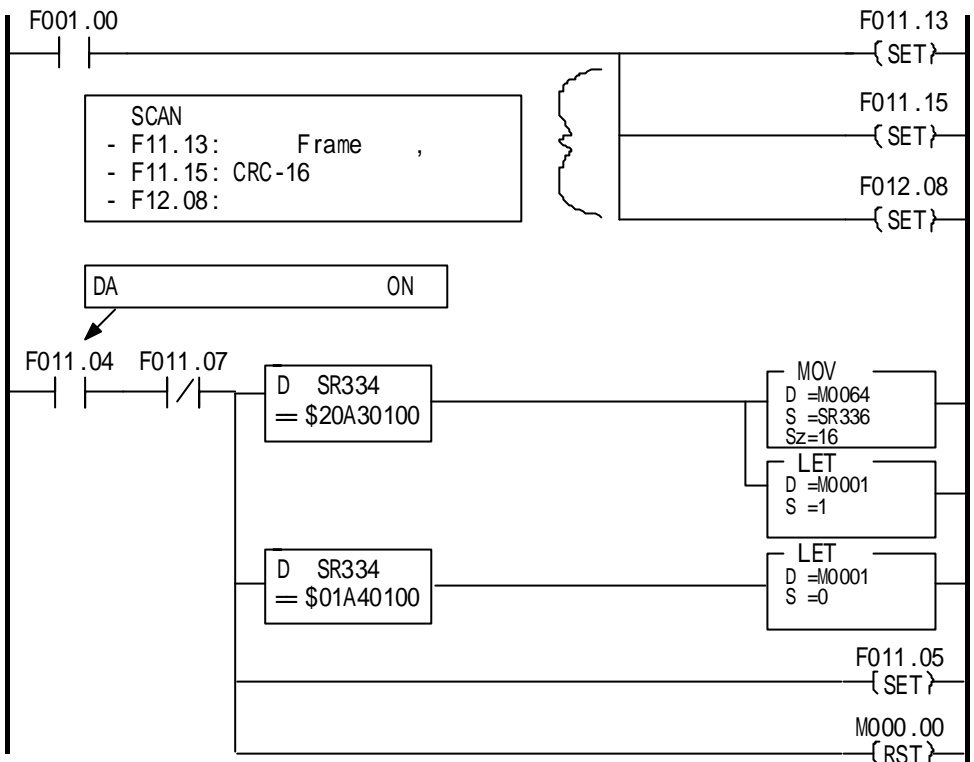
RS-232C

RS-485

, ID# 10

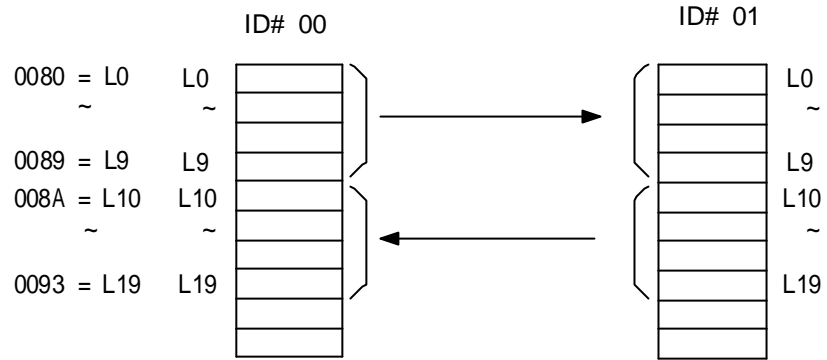
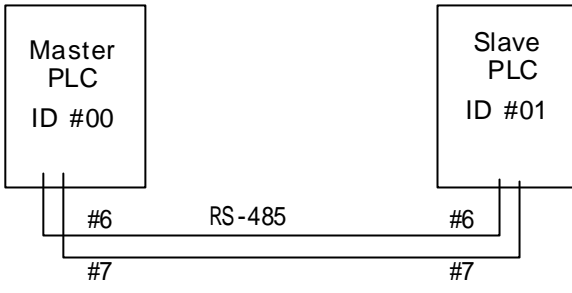
W100

5



N plus 2 3 (/)

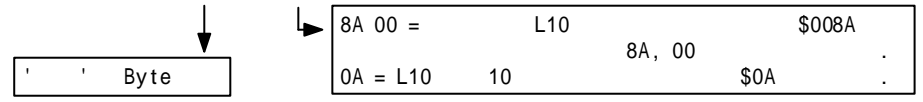
N plus
 ID#00 L0 10
 ID#01 L10 10



N plus 2
 ID 01 L10 10

- Q

DA	SA	(,)		CRC L	CRC H
01	00	23	03	8A 00	0A - -



- R

DA	SA	Data	CRC L	CRC H
00	01	A3 14 34 12 CD AB 78 56 ... (20 Byte)	CRC L	CRC H

