

Supplementary  
Operating Instructions  
for Serial Data Communication

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July. '04 Ver 1.0

TPR3E-PLUS THYRISTOR  
POWER REGULATOR  
MODBUS 통신 PROTOCOL

**TPR 3E PLUS**

산업전기

1.

TPR+

RS-485

2

RS-485

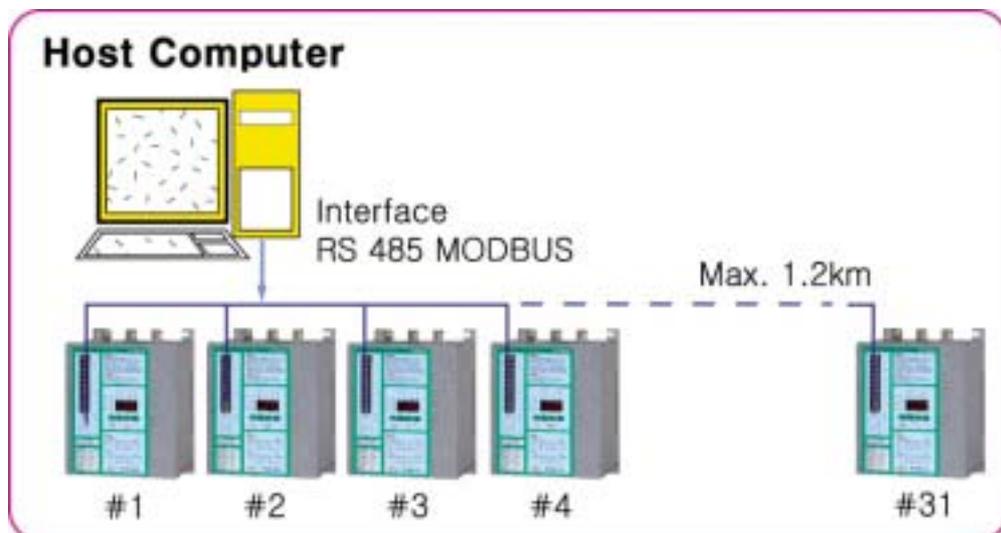
RS-232

RS-485

1.2 Km

- 1) : RS-485
- 2) : 1.2 Km
- 3) : 31 /
- 4) DATA : 1 START, 8 DATA, 1 STOP Bit, NO PARITY
- 5) : 2400, 4800, 9600 BPS
- 6) PROTOCOL : MODBUS ASCII

2. TPR+



### 3. TPR+

1) RS-485

2) PASS WORD 15

(1) 'ADS'

NOTE ) 0

(2) 'SPd'

'24' 2400 BPS가

'48' 4800 BPS가

'96' 9600 BPS가

(3) 'Cdy'

Host Computer

)

가

가

NOTE )

TPR3E Plus

### 4. TPR+

TPR+  
COMPUTER  
가

TPR+

가

가

( 10m ),

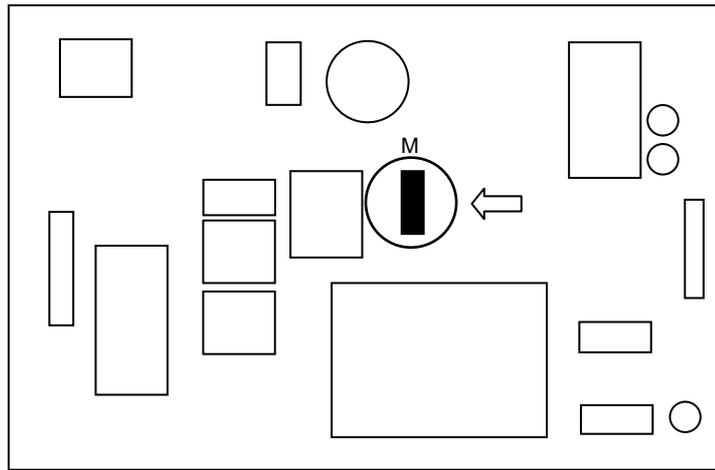
가

.1

Jumper 'M'

)

가/



.1 TPR+

Jumper

## 5. TPR+

## DATA

## (FUNCTION CODE 03)

가 TPR+  
TPR+

DATA

NOTE)

Check-Sum  
MODBUS

Function Code

1)

TPR+

DATA

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
:	:	F-CODE	ADDRESS		C1	C2	CR	LF

(1) START MARK

(2) : 01 31(0x01 0x1F)

(3) FUNCTION CODE : 03

(4) DATA : 7

(5) DATA : 29

(6) CHECK-SUM HIGH NIBBLE

(7) CHECK-SUM LOW NIBBLE

) 1 TPR+ Soft Start  
(DATA , 0003 )

:010300030001 C1,C2,CR,LF TPR+

2) TPR+

```

+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| : |           | F-CODE | BYTE   | DATA | C1 | C2 | CR | LF |
-+(1)| (2)   | (3)   | (4)   | (5)   | (6)| (7)| (8)| (9)+-----

```

- (1) START MARK
- (2) : 01 31(0x01 0x1F)
- (3) FUNCTION CODE : 03
- (4) BYTE :
- (5) DATA : 4 HEXA (2-BYTE)
- (6) CHECK-SUM HIGH NIBBLE
- (7) CHECK-SUM LOW NIBBLE

) 1 TPR+ (Soft Start 10 )  
:010302000A C1,C2,CR,LF .

6. TPR3E-Plus DATA (FUNCTION CODE 06)

가 TPR+  
TPR+

DATA .

NOTE) Check-Sum MODBUS , , Function Code .

1) TPR+ DATA

```

+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| : |           | F-CODE | ADDRESS | DATA | C1 | C2 | CR | LF |
-+(1)| (2)   | (3)   | (4)   | (5)   | (6)| (7)| (8)| (9)+-----

```

- (1) START MARK
- (2) : 01 31
- (3) FUNCTION CODE : 06
- (4) DATA : 7 DATA
- (5) DATA : Data
- (6) CHECK-SUM HIGH NIBBLE
- (7) CHECK-SUM LOW NIBBLE

) 1 TPR+ Soft Start (DATA 3 )  
15

:01060003000F C1,C2,CR,LF TPR+ .

2) TPR+

(1) DATA가 : MESSAGE  
MESSAGE .

(2) DATA가

```

+-----+-----+-----+-----+-----+-----+-----+-----+
| : | | F-CODE | CODE | C1 | C2 | CR | LF |
-+(1)| (2) | (3) | (4) | (5)| (6)| (7)| (8)+-----

```

(1) START MARK :  
(2) : 01 31  
(3) FUNCTION CODE : 86  
(4) DATA CODE : 02  
(5) CHECK-SUM LOW NIBBLE  
(6) CHECK-SUM HIGH NIBBLE

) 1 TPR+ Soft Start  
:018602 C1,C2,CR,LF TPR+ .

## 7. TPR3E-Plus

가 TPR+  
가 .

1) 가 16  
10 .

2) 4  
(0003 3 0013 13 ) .

3) R/W , 가  
R ( 가)

4) (Integer)

5) 0 (Pass ) 16 22 Key .

6) .

) Data  
EEPROM( ) .

NOTE)

TPR+

.1 TPR

0	PAS	Pass	Key	R
1	OUt		0 - 100%	R/W
2	CLm		5 - 240A	R/W
3	SSt	Soft start	0 - 250	R/W
4	Cmd		0(ALm), 1(OFF), 2(Cnt)	R/W
5	Pmd		0(ALm), 1(OFF)	R/W
6	tmd		0(ALm), 1(OFF)	R/W
7	FLt	filter	0 - 10	R/W
8	LbA		0 - 254	R/W
9	bUZ		0(Off), 1(On)	R/W
10	---		0 - 100%	R/W
11	Smd		0(Ana), 1(COm)	R/W
12	AdS		1 - 31	R
13	SPd		0(2400), 1(4800), 2(9600)	R
14	Cdy		1 - 4	R
15	---		0(Input), 1(R), 2(T)	R
23	---			R
24	---	Analog(4-20)	-8 - 108%	R
25	---	#1	0 - 250A	R
26	---	#2	0 - 250A	R
27	---	(VR)	0 - 100%	R
28	---		0 - 80	R