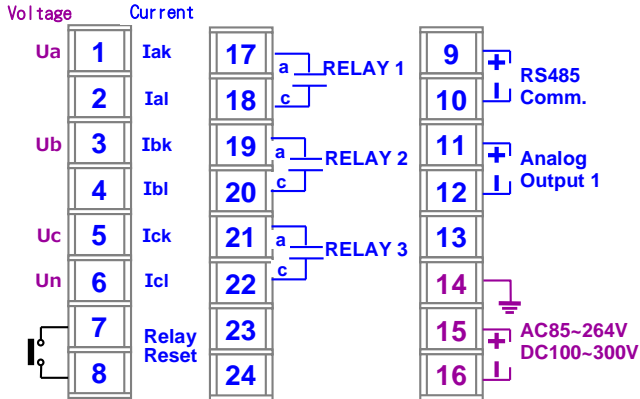


CM3-VA7 3-Phase Voltage/Current meter Manual

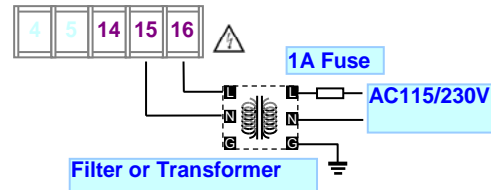
CONNECTION DIAGRAM

Terminals:
10A/300Vac, M2.6, 1.3~2.0mm² (22~16AWG)



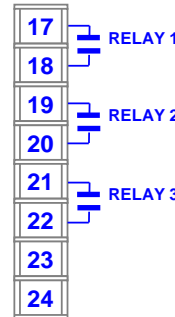
If there is interference at power, please install an isolated transformer.

Power Supply

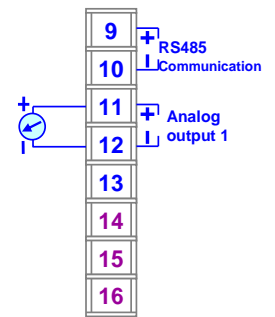


Output wiring

3 relay output

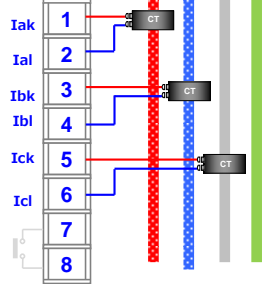


1 analog output

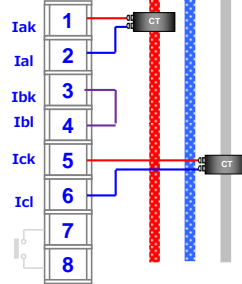


CM3-VA-7input wiring

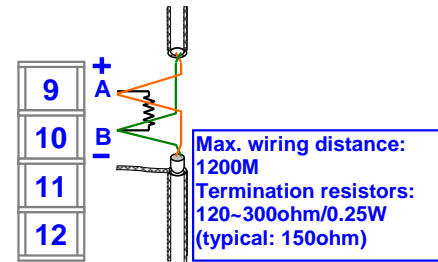
3CT INPUT:SET NORM
MAX INPUT:
1A or 5A



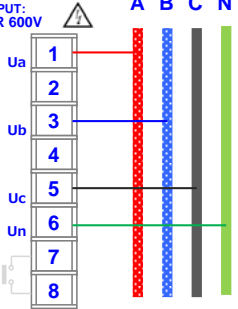
2CT INPUT:SET 3-3.V
MAX INPUT:
1A or 5A



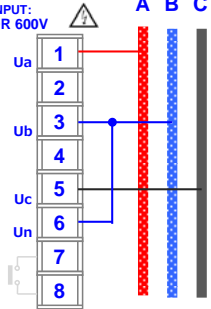
RS485 Communication output



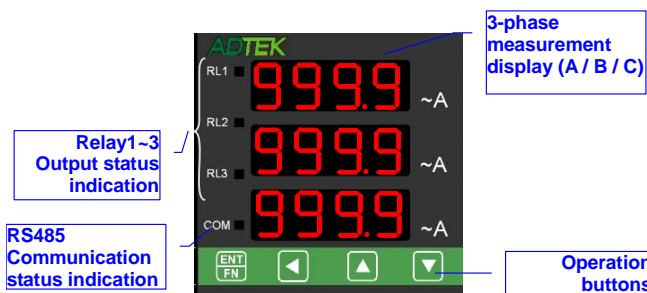
3P4W:SET NORM
MAX INPUT:
20V OR 600V



3P3W:SET 3-3.V
MAX INPUT:
20V OR 600V



FRONT PANEL



Output LED:

- Relay output status display: 3 square in red LED
- RL1 ■ Lit: Group 1 output ; RL2 ■ Lit: Group 2 output ; RL3 ■ Lit: Group 3 output ;
- COM ■ Lit communication status indication: 1 square in orange LED. LED will flash while data is transferred.

Operating Key: 4 Operating Key ENT/FN Enter(Function) / ← Shift(Escape) / ↑ Up key / ↓ Down key

Numeric Screens:

- 8888: 0.39"(10.0mmH) red high-brightness LED

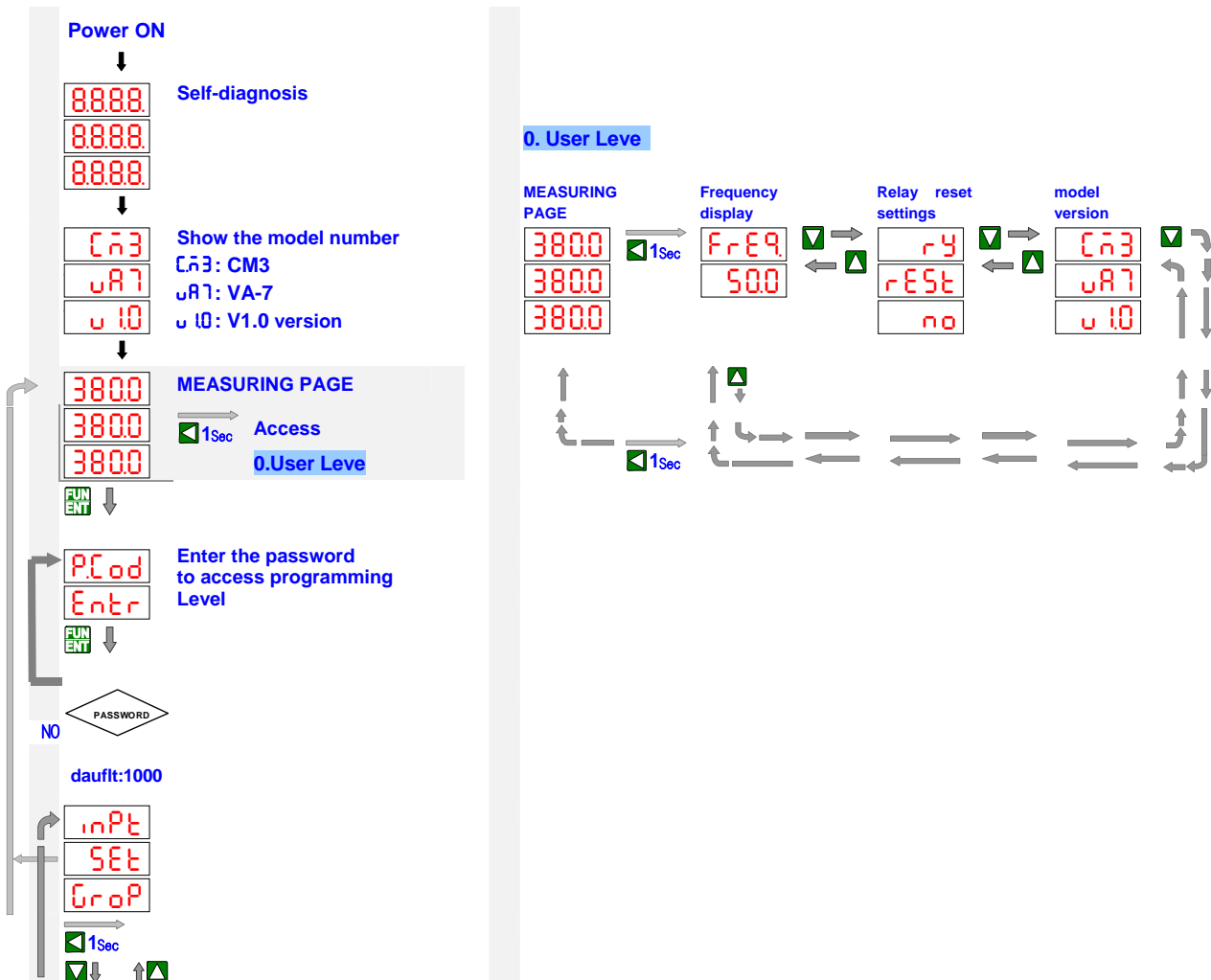
Button Description :

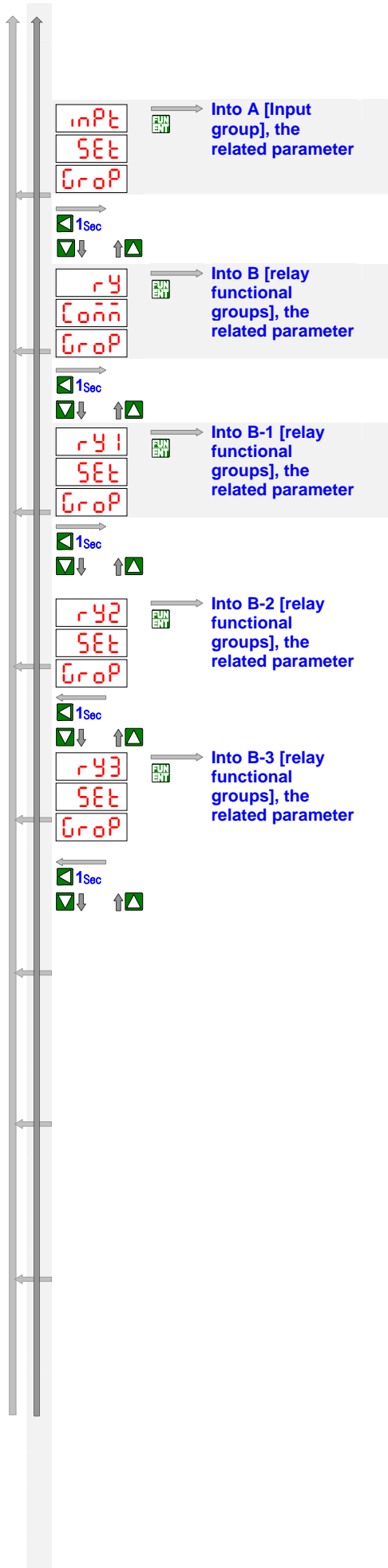
*Please access to the Programming Level to check and set the parameters when users start to run the meter

- **Operating Key:** 4 keys for Enter(Function) / Shift(Escape) / Up key / Down key
- The meter has designed operation similar as PC's and . In any page, press key means "enter" or "confirm setting", and press key means "escape()" or "shift".
- In Programming Level, the screen will return to Measuring Page after do not press any key over 2 minutes, or press for 1 second.

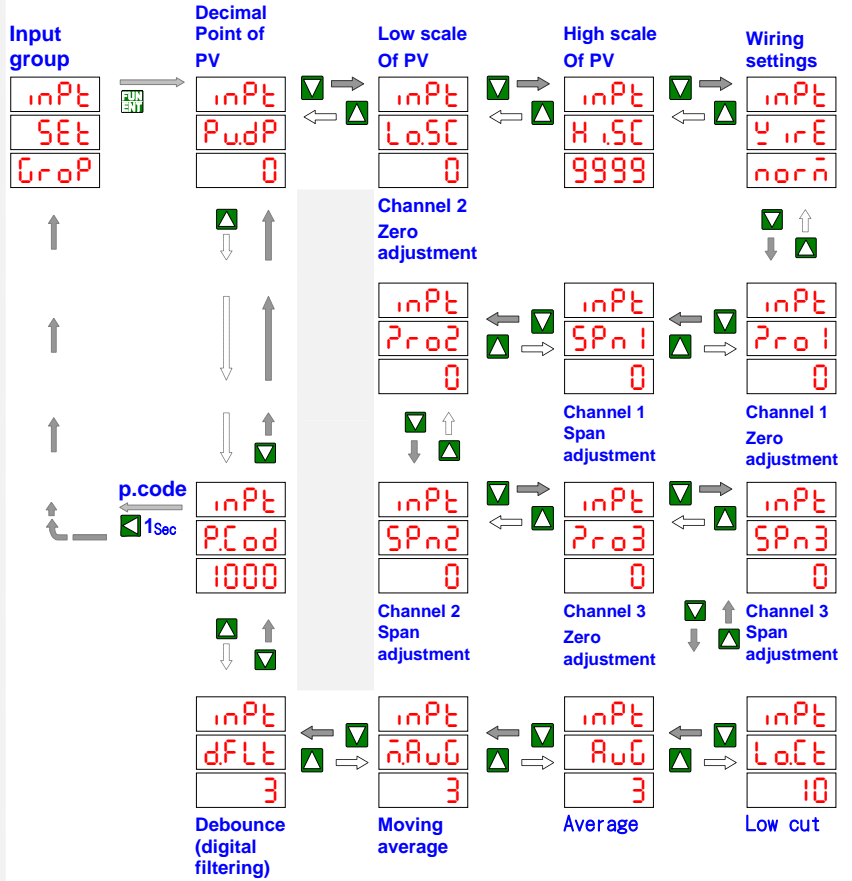
	Function Index	Setting Status
(=) Enter/Fun key	(1) In any page, press to access the level or function index (2) From the function index to access setting status	(3) Setting Confirmed, save to EEPROM and go to next function index
(=) Shift key	(1) In measuring page, press for 1 second to access user level (2) In function index, press for 1 second to go back upper level. (3) In function group index, press for 1 second to go back measuring page	(4) In setting status, press to Shift the setting position (5) In setting status, press for 1 second to abort setting and go back this function index.
(=) Up key	(1) In function index, press to go back to previous function index	(2) In setting status for function, press to select function (3) During number Setting, can roll the digit up °
(=) Down key	(1) In Function Index Page, press will go to the next Function Index Page.	(2) In setting status for function, press select function ° (3) During number Setting, can roll the digit down.

OPERATING DIAGRAM (The detail description of operation, please refer to operating manual.)

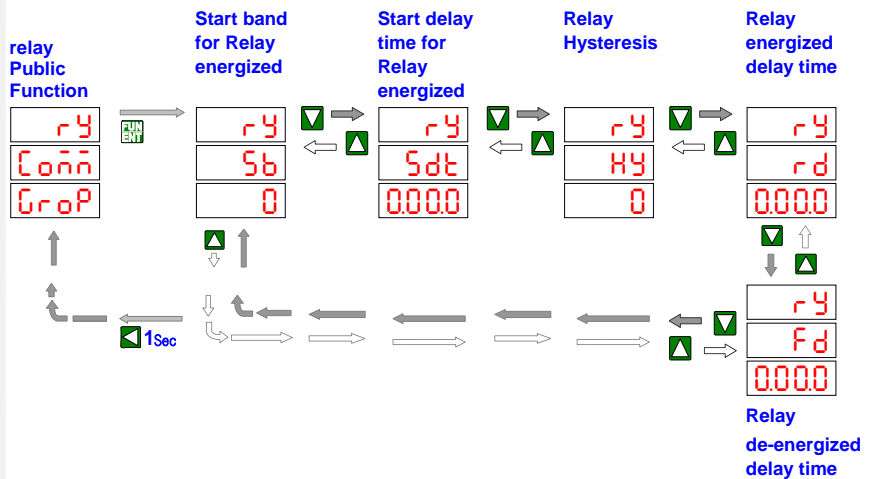




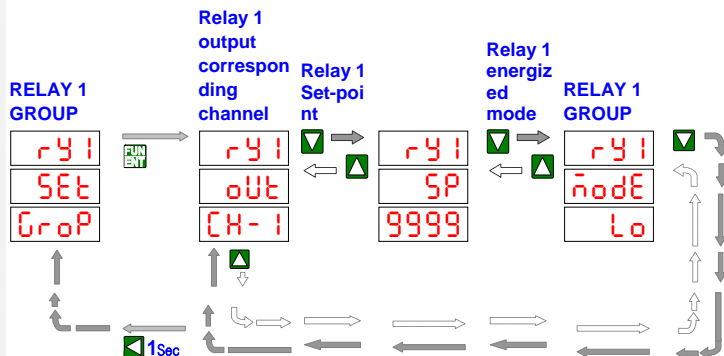
A Input group



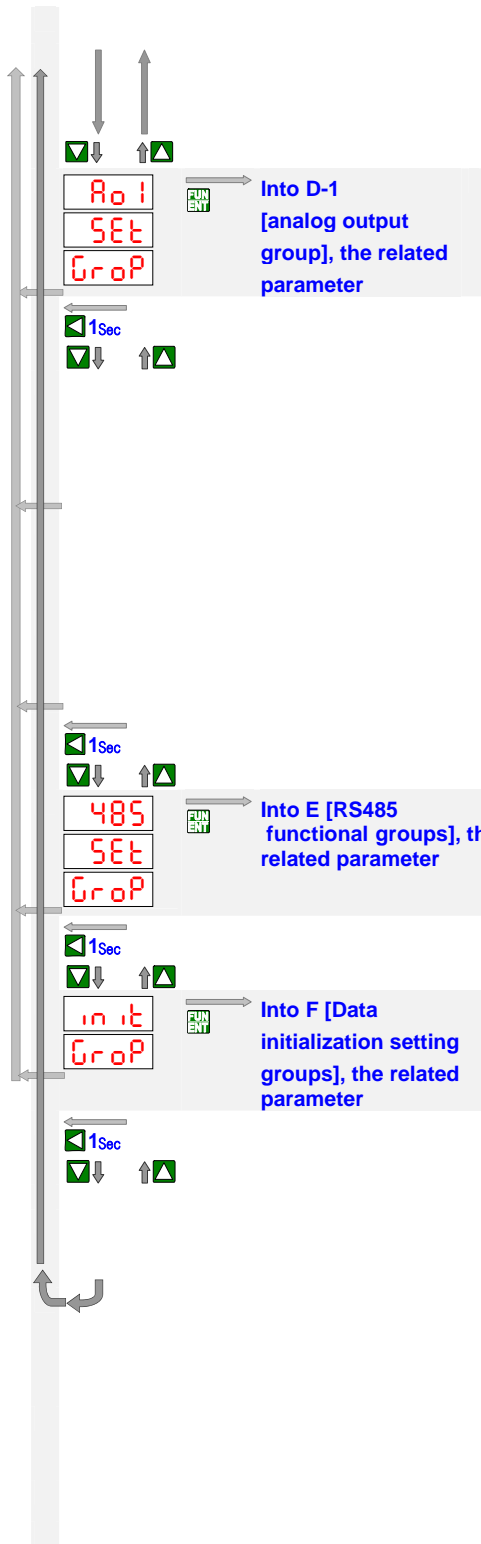
B relay public functional groups



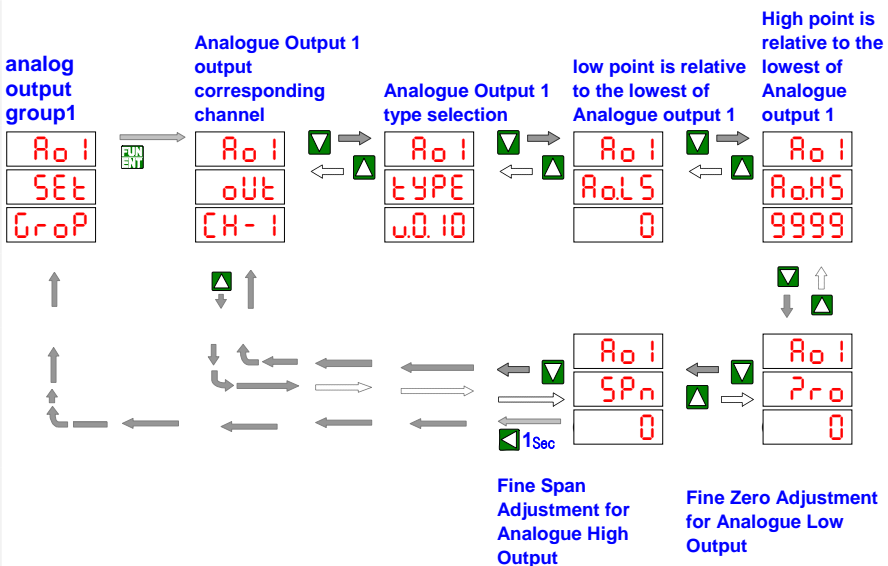
B-1 RELAY 1 GROUP



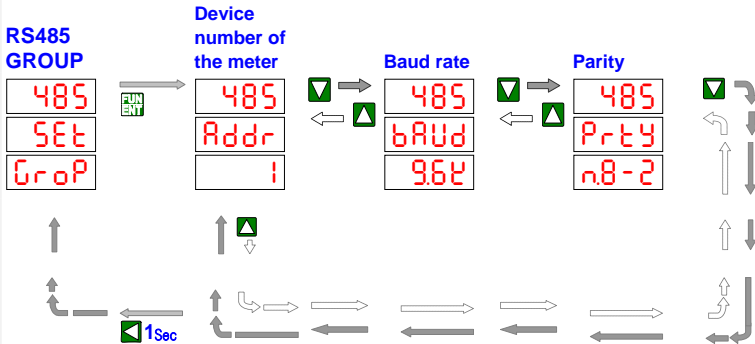
B-X Relay 2, 3 group setting group setting function the same as the first group



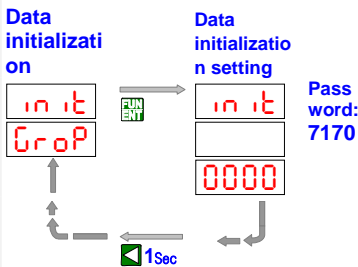
D-1 ANALOGUE OUTPUT GROUP



E. RS485 GROUP



F. Data initialization setting group



ADDRESS TABLE **Address number are Hexadecimal

CM3-VA-7

User Level

Name	Address	Range	Explain	Initial	Write/Read	Note
PV1	0000h	-1999~9999	Present Value 1		R	
PV2	0001h	-1999~9999	Present Value 2		R	
PV3	0002h	-1999~9999	Present Value 3		R	
FREQ	0003h		Frequency display		R	

Engineer Level

【Input Group】						
Name	Address	Range	Explain	Initial	Write/Read	Note
P _{ud} P	0004h	0~3	PV.DP(PV Decimal Point) 0: 0000 1: 000.0 2: 00.00 3: 0,000	1	R/W	
L _o S _C	0005h	-1999~9999	Low Scale	0	R/W	
H _i S _C	0006h	-1999~9999	High Scale	6000	R/W	
W _{ir} E	0007h	0~1	Wire 0: norm(Normal Mode) 1: 3P3W voltage mode (Uac Display as vector sum)	0	R/W	
Z _{ro} 1	0008h	-1999~9999	Channel 1 low value adjustment (Zero 1)	0	R/W	
S _P n1	0009h	-1999~9999	Channel 1 high value adjustment (Span 1)	0	R/W	
Z _{ro} 2	000Ah	-1999~9999	Channel 2 low value adjustment (Zero 2)	0	R/W	
S _P n2	000Bh	-1999~9999	Channel 2 high value adjustment (Span 2)	0	R/W	
Z _{ro} 3	000Ch	-1999~9999	Channel 3 low value adjustment (Zero 3)	0	R/W	
S _P n3	000Dh	-1999~9999	Channel 3 high value adjustment (Span 3)	0	R/W	
L _o C _u t	000Eh	-1999~9999	Low Cut	10	R/W	
A _v G	000Fh	1~99	Average	3	R/W	
M _o v _A v _G	0010h	1~20	Moving Average	3	R/W	
D _F L _t	0011h	1~99	Digital Filter	2	R/W	
P _C o _d E	0012h	0000~9999	Pass Code	1000	R/W	
【Ry comm Group】						
Name	Address	Range	Explain	Initial	Write/Read	Note
S _b	0013h	0~9999	Start band	0	R/W	
S _d	0014h	0~5999	Start delay time	0	R/W	
H _Y	0015h	0~5000	hysteresis	0	R/W	
r _d	0016h	0~5999	Energized delay time	0	R/W	
F _d	0017h	0~5999	De-Energized delay time	0	R/W	
【Ry1 Setting Group】						
Name	Address	Range	Explain	Initial	Write/Read	Note
r _Y I/ [H-1]	0018h	0~2	Relay 1 output corresponding channel 0: CH1(channel 1) 1:CH2(channel 2) 2:CH3(channel 3) 3.Mix 4.Max 5.Avg	0	R/W	
r _Y I/SP	0019h	-1999~9999	Relay 1 set-point	0	R/W	
r _Y I/ M _o dE	001Ah	0~5	Energized mode of Relay 1 0 : Off 1 : Lo 2 : Hi 3 : Lo Hold 4 : Hi Hold 5:Do	2	R/W	
【Ry2 Setting Group】						
Name	Address	Range	Explain	Initial	Write/Read	Note
r _Y 2/ [H-1]	001Bh	0~2	Relay 2 output corresponding channel 0: CH1(channel 1) 1:CH2(channel 2) 2:CH3(channel 3) 3.Mix 4.Max 5.Avg	1	R/W	
r _Y 2/SP	001Ch	-1999~9999	Relay 1 set-point	0	R/W	

rY2/ mode	001Dh	0~5	Energized mode of Relay 2 0 : Off 1 : Lo 2 : Hi 3 : Lo Hold 4 : Hi Hold 5:Do	2	R/W	
【Ry3 Setting Group】						
Name	Address	Range	Explain	Initial	Write/Read	Note
rY3/ CH-3	001Eh	0~2	Relay 3 output corresponding channel 0: CH1(channel 1) 1:CH2(channel 2) 2:CH3(channel 3) 3.Mix 4.Max 5.Avg	2	R/W	
rY3/SP	001Fh	-1999~9999	Relay 3 set-point	0	R/W	
rY3/ mode	0020h	0~5	Energized mode of Relay 3 0 : Off 1 : Lo 2 : Hi 3 : Lo Hold 4 : Hi Hold 5:Do	2	R/W	
Name	Address	Range	Explain	Initial	Write/Read	Note
Relay 1 control	002Bh	0~1	Relay 1 set do , is Control output 0 : None 1 : Forced output Relay 1 not set do , is Read relay status 0 : None 1 : output	0	R/W	
Relay 2 control	002Ch	0~1	Relay 2 set do , is Control output 0 : None 1 : Forced output Relay 2 not set do , is Read relay status 0 : None 1 : output	0	R/W	
Relay 3 control	002Dh	0~1	Relay 3 set do , is Control output 0 : None 1 : Forced output Relay 3 not set do , is Read relay status 0 : None 1 : output	0	R/W	

【AO1 Group】						
Name	Address	Range	Explain	Initial	Write/Read	Note
AO1/CH	0031h	0~2	Analogue Output 1 output corresponding channel 0: CH1(channel 1) 1:CH2(channel 2) 2:CH3(channel 3) 3.Mix 4.Max 5.Avg	0	R/W	
AO1/ TYPE	0032h	0~5	AO1 output signal and range 0: 0~10V 1: 0~5V 2: 1~5V 3: 0~10mA 4: 0~20mA 5: 4~20mA	5	R/W	
AO1/LS	0033h	-1999~9999	AO1 output Low Scale	0	R/W	
AO1/HS	0034h	-1999~9999	AO1 output High Scale	9999	R/W	
AO1/Zro	0035h	-1999~1999	AO1 output Zero	0	R/W	
AO1/ SPAN	0036h	-1999~1999	AO1 output Span	0	R/W	

【RS485 Group】						
Name	Address	Range	Explain	Initial	Write/Read	Note
AdRES	0043h	1~255	RS485 address	1	R/W	
baud	0044h	0~5	RS485 baud rate 0:1200 1:2400 2:4800 3:9600 4:19200 5:38400	3	R/W	
Prty	0045h	0~3	RS485 parity 0: n-8-1 1: n-8-2, 2: odd-8-1, 3: even-8-1,	1	R/W	

【Data initialization function group (init Group)】						
Name	Address	Range	Explain	Initial	Write/Read	Note
init	0046h	0~9999	Initialization code:7170	0	R/W	