Micro processor programmer controller (For 616)

MY106P/MY406P/MY506P/MY706P/MY906P/MY606P

INSTRUCTION MANUAL

MY06P-616-E1

Carefully read all the instructions in this manual. Please place this manual in a convenient location for easy reference.

Specification

- MY06P series instrument: 4 big LED display, 0-100%LED bar display , Accuracy: (Max±0.2% fus or ±1)≤±1 digit
  RTD or TC input, the maximum resolution is 0.1 degree. Analog input ,the maximum resolution is 0.001 degree. Auto/Manual operation function,
- 4 patterns program can be used , 8 segments per pattern.
  Also can be linked together as 32 segments in ramp/soak program
- Output limited in every segment.
- System timer unit "hour" or "minute" or "second"
- Segment end alarm, Program run alarm, Program end alarm
- Power failure option
- SV waiting PV function
- Master and slave communication
- RS-485 communication Modbus-RTU
- PID control: As usual, controllers have PID control before leaving factory, with Autotuning function.
- Clients can set TC, RTD by keyboard ,please set the input type coincide with the sensor, Check details of the manual "6.3" parameter INP1, If need analog signal inputs, please specified when order. (Except 0-20mV or 0-50mV input)
- ON/OFF Control: Set P=0.0, it will be changed as on/off control. Check manual "6.1 parameter P " and "9.cotrol action instruction". Position difference is HYS. when heating :PV>SV, OUT stop, when PV<SV-HYS, OUT start, fitting for OUT1. When Cooling: PV>SV+HYS, output start, when PV<SV, output stop
- when PID Control, we suggest adopt the Autotuning to improve the control effect. Check "8.Autotuning"

1. PRODUCT CHECK

MODEL	MY106P (48mmX48mm)
MODEL (Size: wideXhigh)	MY406P (48mmX96mm)
	MY506P (96mmX48mm)
	MY706P (72mmX72mm)
	MY906P (96mmX96mm)
	MY606P (160mmX80mm)

CODE

□□□□-□□*□□□-□□□-□/□/□/□

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮

(1) Control action

N: No action

F: Reverse PID action (for Heating) D: Direct PID action (for cooling)

(2) Input type, (3) Range code: See "11.INPUT RANGE TABLE"

(4) First control output [OUT1]

N: No action

M: Relay contact V: Voltage pulse(for SSR)

2: Current(DC0~20mA) 8: Current(DC4 ~ 20mA)

5: 0~5VDC 6: 0~10VDC

7: 1~5VDC T:Triac single phase zero crossing control

H:Unidirectional triac single phase zero crossing control

K:Triac 3 phase zero crossing control

L:Unidirectional triac 3 phase zero crossing control

C:Triac single phase angle control

Q:Unidirectional single phase angle control

S:Triac 3 phase angle control

D:Unidirectional 3 phase angle control

⑤. Remark code:N

(6) Alarm 1[AL1] (7) Alarm 2[AL2] (8) Alarm 3[AL3]

See "6.3.1 alarm mode"

A: Deviation high alarm	H: Process high alarm
B: Deviation low alarm	J : Process low alarm
C: Deviation high/low alarm	K: Process high alarm with hold action
D: Deviation band alarm	L: Process low alarm with hold action
E: Deviation high alarm with hold action	2: Segment end alarm (Program)
F: Deviation low alarm with hold action	3: Program run alarm (Program)
G: Deviation high/low alarm with hold action	4: Program end alarm (Program)
M: Deviation band alarm with hold action	

⑨. Remark code: N

⑩. Communication

N: No Communication 5: Rs485 communication Modbus-RTU

6: Communication for Master 7: Communication for Slave

⑪. Transmission

N:No transmission

C: PV transmission (4-20mA) E: SV transmission (4-20mA)

P: PV transmission (0-5V) R: SV transmission (0-5V)

Q: PV transmission (0-10V) S: SV transmission (0-10V))

⑫. Programmable system timer unit

N: No program

H: Hour(0.0~999.9hr) M: Minute(0.0~999.9Min) S: Second (0-9999s)

⑬. Program start up mode

N:No program R:Start by pressing key A:Auto start when power on

⑭. Program starts and Power failure

N: No Programmable

A: Program starts from "0", No power failure option

B: Program starts from "0", With power failure option

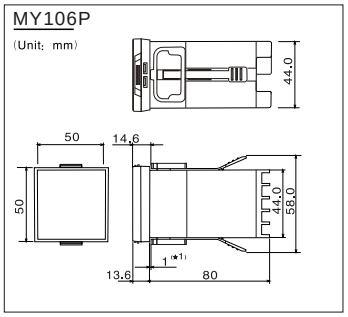
C: Program starts from "PV", No power failure option

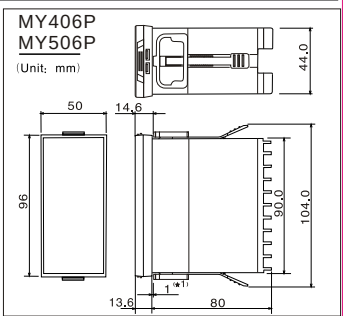
D: Program starts from "PV", With power failure option

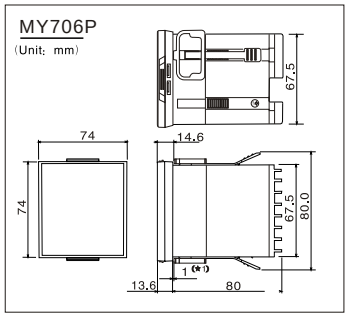
⑮. Program repeat select

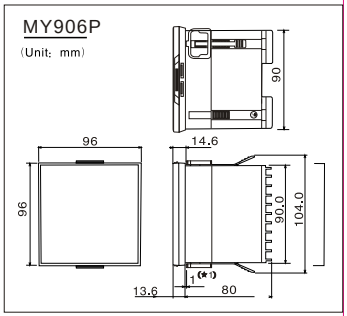
N: No program A:Program not repeat B:Program repeat

2. MOUNTING SIZE

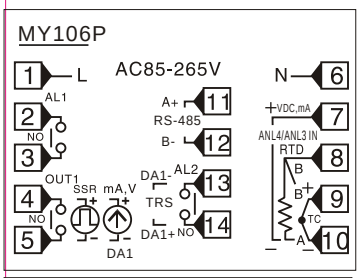


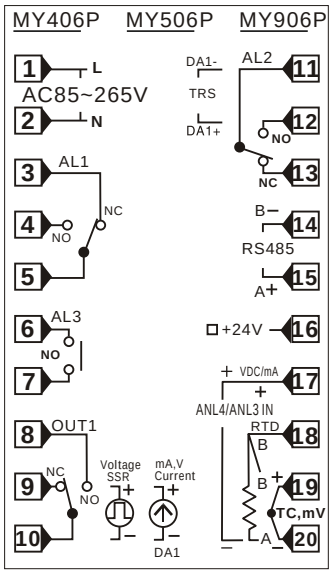


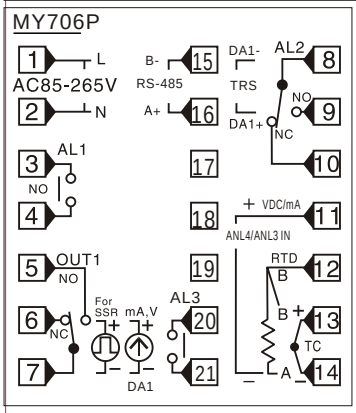




3. WIRING

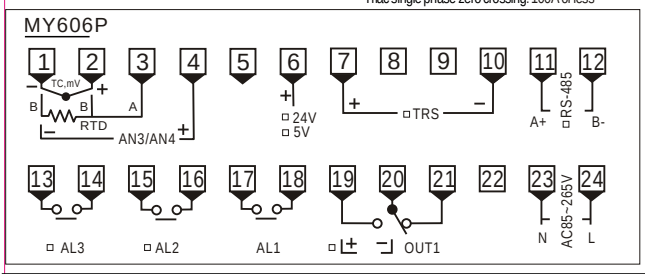




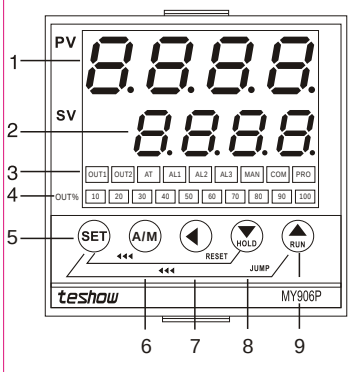


Alarm output rated:
Relay contact output: 250V AC, 3A (Resistive load)

Control output rated:
Relay contact output: 250V AC,5A(Resistive load)
Voltage pulse output: 0/12 V DC or 0/24V DC (Load resistance 600 ohm or more)
Current output: 4 to 20mA DC (Load resistance 500 ohm or less)
Triac single phase zero crossing: 100A or less



4. PARTS DESCRIPTION



1 Measured value (PV) display [RED]
2 Set value(SV)display [GREEN]
3 OUT1lamp: Out1 output indication
OUT2 lamp: Out2 output indication
AT lamp:Autotuning indication
AL1 lamp: Alarm 1 output indication
AL2 lamp: Alarm 2 output indication
AL3 lamp: Alarm 3 output indication
MAN lamp: ,anual mode indication
COM lamp: Communication indication
PRG lamp: Program action indication
4 LED bar: Output1 % value indication
5 SET key: Used for parameter calling up and set value registration
6 A/M key: Auto/Manual key or set value registration
7 ◀ : Shift key
8 ▼ : Down key, Program hold
9 ▲ :Up key ,Program run

4.2 Programmable controller key action

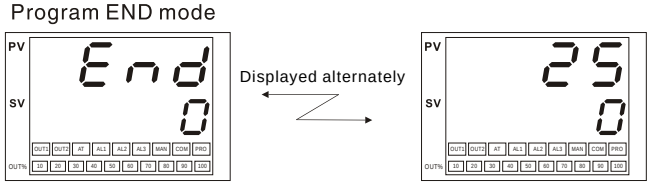
Program (RUN): When program rest or end, press "RUN" key for 3 s, the program start , PRO lamp flash.

Program (HOLD): When prtgram running, press "HOLD" key for 3s, the program pause , PRO lamp light.

Program (JUMP): When program running, Press "▲"key and hold on， then press "SET" key, the program will jump to next segment running.

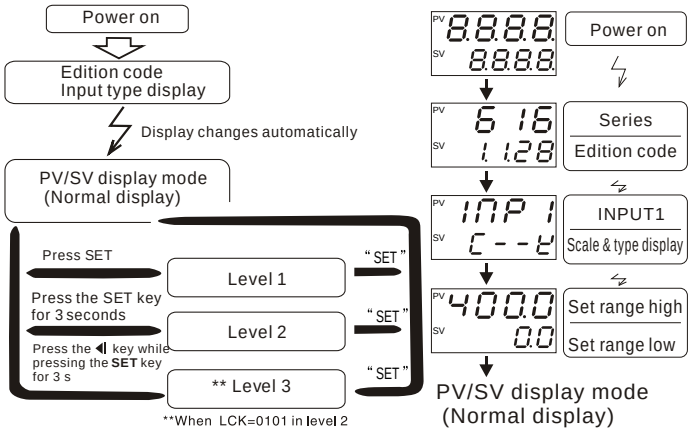
Program (RESET): When program running, Press "▼"key and hold on， then press "SET" key, the program will be rest. PRO lamp slake.

4.3 Program END mode



5. SETTING

5.1 Calling up procedure of each mode

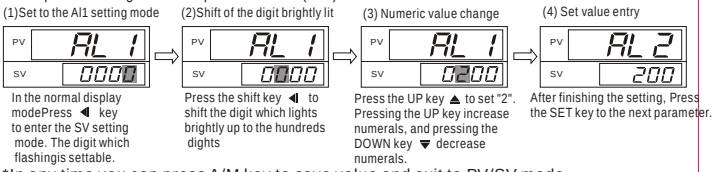


Display	U1	U2	E1	E2	J1	J2	n	u
Input	K	K	E	E	J	J	N	Wu3_Re25
Range	400.0 ℃	1300 ℃	300.0 ℃	600 ℃	400.0 ℃	800 ℃	1300 ℃	2000 ℃

Display	S	t	r	b	AN4	AN3	AN2	AN1	Pt1	Pt2
Input	S	T	R	B	2-10VDC 1-5VDC 4-20mA	0-10VDC 0-5VDC 0-20mA	0-50mV	0-20mV	Pt100	Pt100
Range	1600 ℃	400.0 ℃	1700 ℃	1800 ℃					-199.9~200.0 ℃	-200~800 ℃

5.2 Setting parameter value(AL1)

Example: Following is an example of set value(AL1) to 200℃

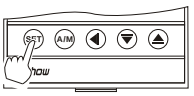


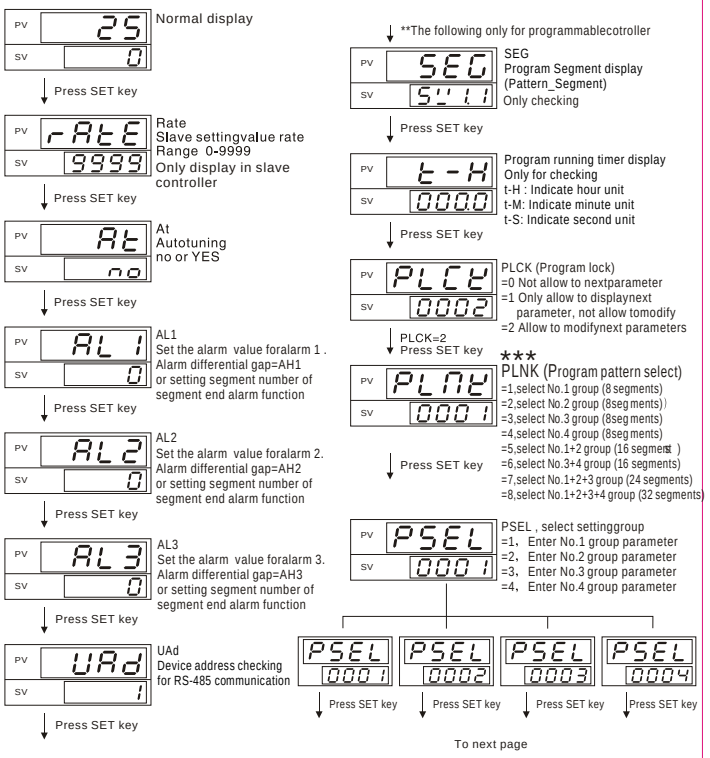
*In any time you can press A/M key to save value and exit to PV/SV mode.

6. LEVEL

6.1 Level 1 (Program Level)

6.1.1 Press the SET key to level 1:
The following parameter symbols are displayed one by one every time the SET key is pressed.





PV PSEL / SV 0001 — PSEL=1 Select No.1 group menu

Press SET key

PV SV1.1 — SV1.1 Set value for Seg.1 of No.1 group

Press SET key

PV Tr1.1 — Tr1.1 Set time for Seg.1 ofNo.1 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot1.1 — Ot1.1 Set output Limit of Seg.1of No.1 group 0.0~100.0%

Press SET key

PV SV1.2 — SV1.2 Set value for Seg.2 of No.1 group

Press SET key

PV Tr1.2 — Tr1.2 Set time for Seg.2 ofNo.1 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot1.2 — Ot1.2 Set output Limit of Seg.2of No.1 group 0.0~100.0%

Press SET key

PV SV1.3 — SV1.3 Set value for Seg.3 of No.1 group

Press SET key

PV Tr1.3 — Tr1.3 Set time for Seg.3 ofNo.1 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot1.3 — Ot1.3 Set output Limit of Seg.3of No.1 group 0.0~100.0%

Press SET key

PV SV1.4 — SV1.4 Set value for Seg.4 of No.1 group

Press SET key

PV Tr1.4 — Tr1.4 Set time for Seg.4 ofNo.1 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot1.4 — Ot1.4 Set output Limit of Seg.4of No.1 group 0.0~100.0%

Press SET key

PV SV1.5 — SV1.5 Set value for Seg.5 of No.1 group

Press SET key

PV Tr1.5 — Tr1.5 Set time for Seg.5 ofNo.1 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot1.5 — Ot1.5 Set output Limit of Seg.5of No.1 group 0.0~100.0%

Press SET key

PV SV1.6 — SV1.6 Set value for Seg.6 of No.1 group

Press SET key

PV Tr1.6 — Tr1.6 Set time for Seg.6 ofNo.1 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot1.6 — Ot1.6 Set output Limit of Seg.6of No.1 group 0.0~100.0%

Press SET key

PV SV1.7 — SV1.7 Set value for Seg.7 of No.1 group

Press SET key

PV Tr1.7 — Tr1.7 Set time for Seg.7 ofNo.1 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot1.7 — Ot1.7 Set output Limit of Seg.7of No.1 group 0.0~100.0%

Press SET key

PV SV1.8 — SV1.8 Set value for Seg.8 of No.1 group

Press SET key

PV Tr1.8 — Tr1.8 Set time for Seg.8 ofNo.1 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot1.8 — Ot1.8 Set output Limit of Seg.8of No.1 group 0.0~100.0%

Press SET key

PV 25 / SV 0 — Normal display

PV PSEL / SV 0002 — PSEL=2 Select No.2 group menu

Press SET key

PV SV2.1 — SV2.1 Set value for Seg.1 of No.2 group

Press SET key

PV Tr2.1 — Tr2.1 Set time for Seg.1 ofNo.2 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot2.1 — Ot2.1 Set output Limit of Seg.1of No.2 group 0.0~100.0%

Press SET key

PV SV2.2 — SV2.2 Set value for Seg.2 of No.2 group

Press SET key

PV Tr2.2 — Tr2.2 Set time for Seg.2 ofNo.2 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot2.2 — Ot2.2 Set output Limit of Seg.2of No.2 group 0.0~100.0%

Press SET key

PV SV2.3 — SV2.3 Set value for Seg.3 of No.2 group

Press SET key

PV Tr2.3 — Tr2.3 Set time for Seg.3 ofNo.2 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot2.3 — Ot2.3 Set output Limit of Seg.3of No.2 group 0.0~100.0%

Press SET key

PV SV2.4 — SV2.4 Set value for Seg.4 of No.2 group

Press SET key

PV Tr2.4 — Tr2.4 Set time for Seg.4 ofNo.2 group 0.0~999.9hr or min or 0-9999s

按SET鍵 key

PV Ot2.4 — Ot2.4 Set output Limit of Seg.4of No.2 group 0.0~100.0%

Press SET key

PV SV2.5 — SV2.5 Set value for Seg.5 of No.2 group

Press SET key

PV Tr2.5 — Tr2.5 Set time for Seg.5 ofNo.2 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot2.5 — Ot2.5 Set output Limit of Seg.5of No.2 group 0.0~100.0%

Press SET key

PV SV2.6 — SV2.6 Set value for Seg.6 of No.2 group

Press SET key

PV Tr2.6 — Tr2.6 Set time for Seg.6 ofNo.2 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot2.6 — Ot2.6 Set output Limit of Seg.6of No.2 group 0.0~100.0%

Press SET key

PV SV2.7 — SV2.7 Set value for Seg.7 of No.2 group

Press SET key

PV Tr2.7 — Tr2.7 Set time for Seg.7 ofNo.2 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot2.7 — Ot2.7 Set output Limit of Seg.7of No.2 group 0.0~100.0%

Press SET key

PV SV2.8 — SV2.8 Set value for Seg.8 of No.2 group

Press SET key

PV Tr2.8 — Tr2.8 Set time for Seg.8 ofNo.2 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot2.8 — Ot2.8 Set output Limit of Seg.8of No.2 group 0.0~100.0%

Press SET key

PV 25 / SV 0 — Normal display

PV PSEL / SV 0003 — PSEL=3 Select No.3 group menu

Press SET key

PV SV3.1 — SV3.1 Set value for Seg.1 of No.3 group

Press SET key

PV Tr3.1 — Tr3.1 Set time for Seg.1 ofNo.3 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot3.1 — Ot3.1 Set output Limit of Seg.1of No.3 group 0.0~100.0%

Press SET key

PV SV3.2 — SV3.2 Set value for Seg.2 of No.3 group

Press SET key

PV Tr3.2 — Tr3.2 Set time for Seg.2 ofNo.3 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot3.2 — Ot3.2 Set output Limit of Seg.2of No.3 group 0.0~100.0%

Press SET key

PV SV3.3 — SV3.3 Set value for Seg.3 of No.3 group

Press SET key

PV Tr3.3 — Tr3.3 Set time for Seg.3 ofNo.3 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot3.3 — Ot3.3 Set output Limit of Seg.3of No.3 group 0.0~100.0%

Press SET key

PV SV3.4 — SV3.4 Set value for Seg.4 of No.3 group

Press SET key

PV Tr3.4 — Tr3.4 Set time for Seg.4 ofNo.3 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot3.4 — Ot3.4 Set output Limit of Seg.4of No.3 group 0.0~100.0%

Press SET key

PV SV3.5 — SV3.5 Set value for Seg.5 of No.3 group

Press SET key

PV Tr3.5 — Tr3.5 Set time for Seg.5 ofNo.3 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot3.5 — Ot3.5 Set output Limit of Seg.5of No.3 group 0.0~100.0%

Press SET key

PV SV3.6 — SV3.6 Set value for Seg.6 of No.3 group

Press SET key

PV Tr3.6 — Tr3.6 Set time for Seg.6 ofNo.3 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot3.6 — Ot3.6 Set output Limit of Seg.6of No.3 group 0.0~100.0%

Press SET key

PV SV3.7 — SV3.7 Set value for Seg.7 of No.3 group

Press SET key

PV Tr3.7 — Tr3.7 Set time for Seg.7 ofNo.3 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot3.7 — Ot3.7 Set output Limit of Seg.7of No.3 group 0.0~100.0%

Press SET key

PV SV3.8 — SV3.8 Set value for Seg.8 of No.3 group

Press SET key

PV Tr3.8 — Tr3.8 Set time for Seg.8 ofNo.3 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot3.8 — Ot3.8 Set output Limit of Seg.8of No.3 group 0.0~100.0%

Press SET key

PV 25 / SV 0 — Normal display

PV PSEL / SV 0004 — PSEL=3 Select No.3 group menu

Press SET key

PV SV4.1 — SV4.1 Set value for Seg.1 of No.4 group

Press SET key

PV Tr4.1 — Tr4.1 Set time for Seg.1 ofNo.4 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot4.1 — Ot4.1 Set output Limit of Seg.1of No.4 group 0.0~100.0%

Press SET key

PV SV4.2 — SV4.2 Set value for Seg.2 of No.4 group

Press SET key

PV Tr4.2 — Tr4.2 Set time for Seg.2 ofNo.4 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot4.2 — Ot4.2 Set output Limit of Seg.2of No.4 group 0.0~100.0%

Press SET key

PV SV4.3 — SV4.3 Set value for Seg.4 of No.3 group

Press SET key

PV Tr4.3 — Tr4.3 Set time for Seg.3 ofNo.4 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot4.3 — Ot4.3 Set output Limit of Seg.3of No.4 group 0.0~100.0%

Press SET key

PV SV4.4 — SV4.4 Set value for Seg.4 of No.4 group

Press SET key

PV Tr4.4 — Tr4.4 Set time for Seg.4 ofNo.4 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot4.4 — Ot4.4 Set output Limit of Seg.4of No.4 group 0.0~100.0%

Press SET key

PV SV4.5 — SV4.5 Set value for Seg.5 of No.4 group

Press SET key

PV Tr4.5 — Tr4.5 Set time for Seg.5 ofNo.4 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot4.5 — Ot4.5 Set output Limit of Seg.5of No.4 group 0.0~100.0%

Press SET key

PV SV4.6 — SV4.6 Set value for Seg.6 of No.4 group

Press SET key

PV Tr4.6 — Tr4.6 Set time for Seg.6 ofNo.4 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot4.6 — Ot4.6 Set output Limit of Seg.6of No.4 group 0.0~100.0%

Press SET key

PV SV4.7 — SV4.7 Set value for Seg.7 of No.4 group

Press SET key

PV Tr4.7 — Tr4.7 Set time for Seg.7 ofNo.4 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot4.7 — Ot4.7 Set output Limit of Seg.7of No.4 group 0.0~100.0%

Press SET key

PV SV4.8 — SV4.8 Set value for Seg.8 of No.4 group

Press SET key

PV Tr4.8 — Tr4.8 Set time for Seg.8 ofNo.4 group 0.0~999.9hr or min or 0-9999s

Press SET key

PV Ot4.8 — Ot4.8 Set output Limit of Seg.8of No.4 group 0.0~100.0%

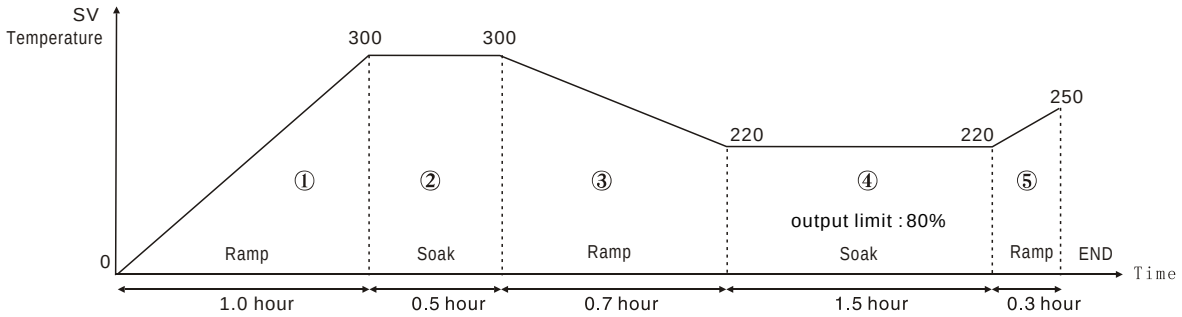
Press SET key

PV 25 / SV 0 — Normal display

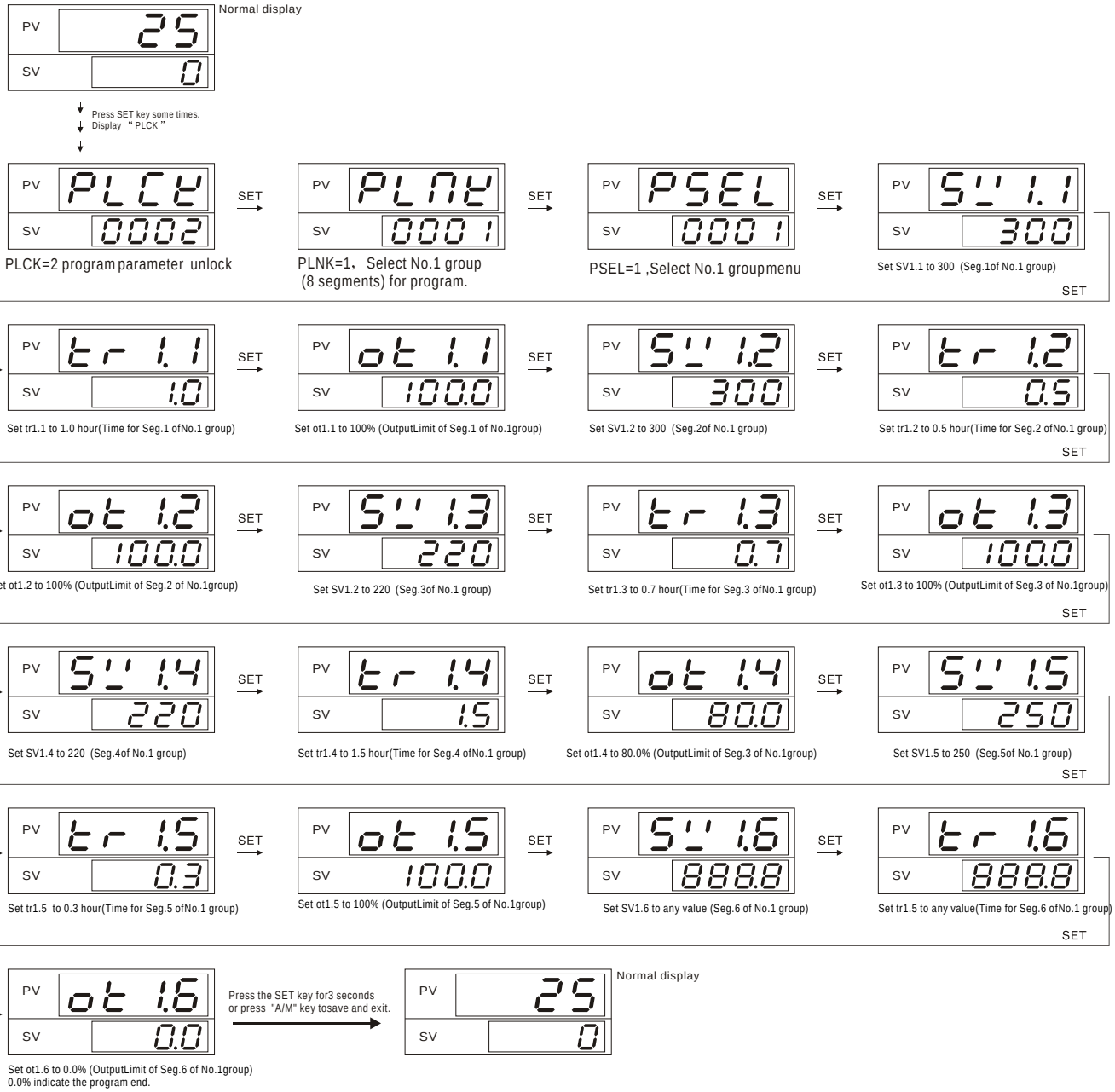
NOTE When no parameter setting isrequired, after the value beregistered ,you can press "A/M"key to return theinstrument tothe PV/SV display.
（E xpect MY106P: Press theSET key for 4 seconds to return the instrument tothe PV/SV display.

6.2 The example of program procedure

Assume the temperature profile is as below (Total 5 segments, and the output limit of segment 4 is 80%)
Unit of timer: hour



Please operate conroller as following steps:



6.3 Program END

If program procedure is less than 8 segments, please set the next segment's "ot_._" of the last segment to "0.0". Program will be end at this segment.
In the above example ,program only need 5 segment, please set "ot1.6" to 0.0%, the program will be end when program run finish at segment 5.

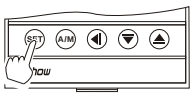
6.4 Program JUMP to next segment

In program procedure ,if some segment will be not used, you can set "tr_._" to 0 or 0.0.
Such when program running in this segment, program will auto jump to next segment running.

6.2 Level 2

Press the SET key for 3 seconds to level 2

The following parameter symbols are displayed one by one every time the SET key is pressed.



1# Factory set value

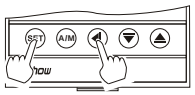
Symbol	Name	Range	1#	Description
P1	Proportional band for out1	0.0~200.0	20.0	Proportional band in PID with unit ℃ for OUT1 P1=0.0, ON/OFF control for ouput1
I1	Integral time	0-3600sec	210	Set the time of integral action to eliminate
d1	Derivative time	0-3600sec	30	Set the time of derivative action to improve control stability by preparing for output changes.
AtvL	Auto tuning offset value (AtVL)	0-199	0	Set ATVL to prevent overshoot occurred during autotuning process.
CYt1	Proportioning	0 to 999sec	20	Proportioning cycle time for PID control
HYS1	Control Hysteresis For out1	0.0 to 100.0	2.0	Control out differential gap=HYS1 For out1 output. Only for ON/OFF action when P1=0.0
rSt1	Proportional reset For out1	-30 to 30	-5.0	Proportional reset for overshoot protection only for out1 output. (Auto setting after autotuning)
OPL	Output1 limit (Low)	0.0 to 100.0%	0.0	Output manipulated variable lowest limit For out1 output.
OPH	Output1 limit (High)	0.0 to 100.0%	100.0	Output manipulated variable highest limit For out1 output.
LCY	Set data lock	0000-0255	0000	LCK=0000:Allow to modify any parameter and SV LCK=0001:Only allow to modify SV LCK=0010:Only allow to modify SV and Level1 LCK=0011:Not allow to modify any parameter and SV LCK=0101:Allow to setting Level3

6.3 Level 3

6.3.1 Go to level 3:

1, Press the SET key for 5 seconds to PID level, then change LCK to 0101.

2, Press the ◀▌ key while pressing the **SET** key for 3 s to Level3



The following parameter symbols are displayed one by one every time the SET key is pressed.

1# Factory set value

Symbol	Name	Range	1#	Description
INP1	Main input type select			

Setting	E1	E2	E1	E2	J1	J2	n	U
Input	K	K	E	E	J	J	N	Wu3_Re25
Range	400.0 ℃	1300 ℃	300.0 ℃	600 ℃	400.0 ℃	800 ℃	1300 ℃	2000 ℃

Setting	S	t	r	b	AN4	AN3	AN2	AN1	Pt1	Pt2
Input	S	T	R	B	2-10VDC 1-5VDC 4-20mA	0-10VDC 0-5VDC 0-20mA	0-50mV	0-20mV	Pt100	Pt100
Range	1600 ℃	400.0 ℃	1700 ℃	1800 ℃					-199.9~200.0 ℃	-200~800 ℃

Note: AN4, AN3 input type can not setting by keyboard, because of without calibration .(Custom - made)

dP	Decimal point	0 ,1,2,3	0	0, 1, 2, 3 Only for Linear analog type input
LSPL	Low setting limiter	-1999 to 9999	0	Set lower setting limiter Lower point of transmission or remove SV
USPL	High setting limiter	-1999 to 9999	400	Set high setting limiter Higher point of transmission or remove SV
UNIt	Display scale	0 ,1,2	0	0: Centigrade, 1: Fahrenheit 2: without scale (for linear analog)
PVOS	PV bias	-199to 199	0.0	Sensor correction is made by adding bias value to measured value(PV).
PVFt	PV follow-up PV input filter	0 to 60	55	PV variable-value control, 0-30: for general, 31-60:for enhanced
ANL1	Lowest value of PV display	-199~9999	0	Lowest value display when linear analog inputs ,Such as 4-20mA input.
ANH1	Highest value of PV display	-1999~9999	2000	Highest value display when linear analog inputs ,Such as 4-20mA input.
ALd1	Alarm1 mode	00 to 16	11	Select the type of alarm1 See(**ALARM TYPE TABLE)
AH1	Alarm1 differential gap	0.0 to 100.0	0.4	Alarm1 differential gap setting
ALd2	Alarm2 mode	00 to 16	10	Select the type of alarm2 See(**ALARM TYPE TABLE)
AH2	Alarm2 differential gap	0.0 to 100.0	0.4	Alarm2 differential gap setting
ALd3	Alarm3 mode	00 to 16	10	Select the type of alarm3 See(**ALARM TYPE TABLE)
AH3	Alarm3 differential gap	0.0 to 100.0	0.4	Alarm3 differential gap setting
OUd	Control action	0 or 1	0	0: Reverse action (Heating) 1: Direct action (Cooling)
ALt	ALt Delay time of segment end alarm	0-9999 s	0	=0: alarm no delay remove =Others value : Ondelay time alarm remove AL1 value: alarm segment No.set
JA It	Wait SV wait PV	0.0-100.0		Used for program to wait continued operation =0: Not wait. =Others value: Wait value
PUNt	PUNt Program system time unit	0,1,2	0	0: Hour (0.0~999.9 hour) 1: Minute (0.0~999.9 minute) 2: Second (0-9999 second)
PrF	PrF Program SV Initial value	0,1	1	0: Program running from "0" 1: Program running from "PV" value
Id170	Device address setting	0-127	1	Communication device address setting.
bAUd	Band-rate setting	0,1,2,3	2	BAUd =0: 2.4K, =1: 4.8K, =2: 9.6K, =3: 19.2K

**ALARM TYPE TABLE (ALd_=00~18)

10: No alarm output
11: Deviation high alarm
12: Deviation low alarm
13: Deviation high/low alarm
14: Deviation band alarm
15: Process high alarm
16: Process low alarm
17: Program run alarm**
18: Program end alarm**

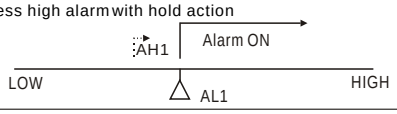
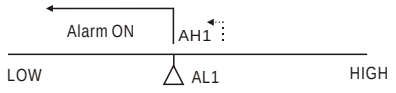
00: No alarm output
01: Deviation high alarm with hold action
02: Deviation low alarm with hold action
03: Deviation high/low alarm with hold action
04: Deviation band alarm with hold action
05: Process high alarm with hold action
06: Process low alarm with hold action
07 : Program segmnet end alarm**

6.3.2 Alarm mode specification

Code	ALd□	Specification (Example for alrm1)
N	10 or 00	No alarm
A	11	AL1≥0: Deviation high alarm — AH1, Alarm ON; LOW, SV, SV+AL1, HIGH AL1<0: Deviation high alarm — AH1, Alarm ON; LOW, SV+AL1, SV, HIGH
B	12	AL1≥0: Deviation low alarm — Alarm ON, AH1; LOW, SV, SV+AL1, HIGH AL1<0: Deviation low alarm — Alarm ON, AH1; LOW, SV+AL1, SV, HIGH
C	13	Deviation high/low alarm — Alarm ON, AH1; AH1, Alarm ON; LOW, SV-AL1, SV, SV+AL1, HIGH
D	14	Deviation band alarm — Alarm ON; LOW, SV-AL1, SV, SV+AL1, HIGH
H	15	Process high alarm — AH1, Alarm ON; LOW, AL1, HIGH
J	16	Process low alarm — Alarm ON, AH1; LOW, AL1, HIGH
E	01	AL1≥0: Deviation high alarm with hold action — AH1, Alarm ON; LOW, SV, SV+AL1, HIGH AL1<0: Deviation high alarm with hold action — AH1, Alarm ON; LOW, SV+AL1, SV, HIGH
F	02	AL1≥0: Deviation low alarm with hold action — Alarm ON, AH1; LOW, SV, SV+AL1, HIGH AL1<0: Deviation low alarm with hold action — Alarm ON, AH1; LOW, SV+AL1, SV, HIGH
G	03	Deviation high/low alarm with hold action — Alarm ON, AH1; AH1, Alarm ON; LOW, SV-AL1, SV, SV+AL1, HIGH
M	04	Deviation band alarm with hold action — Alarm ON; LOW, SV-AL1, SV, SV+AL1, HIGH

To next page

6.3.2 Alarm mode specification

Code	ALd□	Specification （Example for alrm1）
K	05	Process high alarm with hold action 
L	06	Process low alarm with hold action 
2 code	07	Program segmnet end alarm**
3 code	17	Program run alarm**
4 code	18	Program end alarm**

NOTE:
With hold action: When Hod action is ON, the alarm action is suppressed at start-up until the measured value enters the non-alarm range.

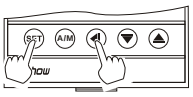
6.3.3 About program alarm specification

Segment end alarm**: There are 3alarm parameters "ALd1、ALd2、ALd3" can be used for segment end alarm. The corresponding paramenters are AL1,AL2.AL3,When AL1,AL2AL3=0-32,it means that segment ends,alarm will act. The corresponding parameters ALT is time, ALT means the time of the relay being on when segment ends and alarm acts.
Example：ALd1=07(Segment end alarm)
AL1=2 （It means when segment 2 end, AL1 relay will act））
ALT=10 (It means the time of relay on is 10 seconds)

Program running alarm**:Also there are 3alarm parameters(ALd1/2/3) which can be used for program run alarm. If ALd1=17 ,It means when the program is running, AL1 relay will act.

Program end alarm**:There are 3 alarm parameters(ALd1/2/3) which can be used for program end alarm. If ALd1=18,It means when the program end, AL1 relay will act.

6.4 Level 4



6.4.1Go to level 4：
1,Press the SET key for 5 seconds to PID level, then change LCK to 0201.
2,Press the ◀| key while pressing the **SET** key for 3s to Level3

The following parameter symbols are displayed one by one every time the SET key is pressed.

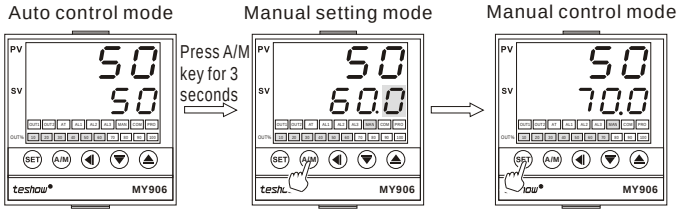
1# Factory set value

Symbol	Name	Range	1#	Description
ConF	ConF Communication configure	0,1,2	0	ConF=0: Disable communication ConF=1: RS-485 communication Modbus-RTU ConF=2: TTL communication (Master or slave）
trSF	TrSF Transmission	0，1	0	TrSF=0: PV transmission trSF=1: SV transmission
PCrL	PCrL Program function configure	0，1	1	PCrL=0: Setting controller for SLAVE PCrL=1: Setting congroller for 32segment programmable controller or MASTER
ot1	Ot1 Analog output configure (DA)	0，1	0	Ot1=0: Setting DA output for transmission output Ot1=1: Setting DA output for PID control output
AUtO	AUtO Configure AUTO/MANUL	0，1	0	AUTO=0: Disable Auto/manul Switching AUTO=1: Enable Auto/manul Switching
PrON	PrON Program start up mode	0，1，2	0	PrON=0: Program start by start key pressing. PrON=1: Power failure option PrON=2: Program auto start when power on.
PrEP	PrEP Program repeat action	0，1	0	PrEP=0: Program do not repeat run when program is END. PrEP=1: Program repeat run when program is END.

7.MANUAL OPERATION

All instrument except MY106P with manual operation key (A/M)

Example: Following is an example of manual setting to 70% output.



MAN lamp is turns off in Auto control mode.

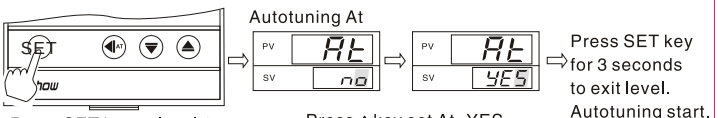
Press A/M key for 3 seconds to manual setting mode. In manual setting mode, MAN lamp light up,The digit which flashing is settable.

Pressing the UP key increase numerals, and pressing the DOWN key decrease numerals. Press SET key after set value to 70.0.

**In manual control mode ,press A/M key for 3 seconds to auto control mode.
**Power-on Manual function can be selected. Pko in level2 for initial output value.
**A/M key can also be used for SAVE and EXIT key.

8. AUTOTUNING

When controller's power are just on,it will be good to autotuning when the measured value is far lower than the set value



Press SET key to level 1

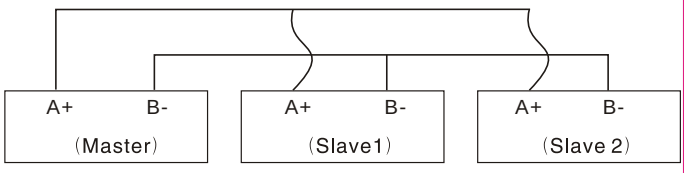
Press ▲key set At=YES

NOTE:
The autotuning target value is the first segment setting value.

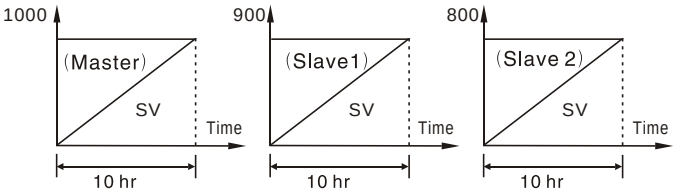
9.TTL Communication(Master & Slave)

9.1 Master :Programmable master controller with TTL communication.
9.2 Slave: Slave controller, SV value auto setting by master communication.

$$SV\ of\ Slave = \left(\frac{rAte}{9999}\right) \times SV\ of\ Master$$



Note: All controller ,please setting the same band-rate communication.



SV1.1=1000
tr1.1=10.0
ot1.1=100.0%
⋮

RATE=9000
Slave 1 SV =900

RATE=8000
Slave 2 SV=800

10.COMMUNICATION SPECIFICATION

(1) Communication protocol is Modbus-RTU, support 03 read command,06 or 10 write command
(2) Communication mode: single-master RS485 asynchronous serial communication
baud rate:2400，4800，9600，19200(9600 baud rate is acquiesced)
Byte date format:1 start bits,+8 data bits+No parity checking+1 Stop bits
(3) Controllers support writing 36 data more.
(4) Controllers support reading 37 data more.
(5) Parameter address please see "MY06P series communication address list"

11. INPUT RANGE TABLE

Input type			Code	
K1	0.0 to 200.0 ℃		2	D2
	0.0 to 400.0 ℃		2	D4
K2	0 to 400 ℃		K	A4
	0 to 600 ℃		K	A6
	0 to 1300 ℃		K	B3
E1	0.0 to 200.0 ℃		3	D2
	0.0 to 300.0 ℃		3	D3
E2	0 to 200 ℃		E	A2
	0 to 400 ℃		E	A4
	0 to 600 ℃		E	A6
J1	0.0 to 300.0 ℃		1	D3
	0.0 to 400.0 ℃		1	D4
J2	0 to 300 ℃		J	A3
	0 to 400 ℃		J	A4
	0 to 800 ℃		J	A8
T	0.0 to 300.0 ℃		T	D3
	0.0 to 400.0 ℃		T	D4
S **	0 to 1600 ℃		S	B6
R	0 to 1700 ℃		R	B7
B	200 to 1800 ℃		B	B8
N	0 to 1300 ℃		N	B3
Wu3_Re25	600 to 2000 ℃		W	B0

Input type			Code	
Pt1 (Pt100)	0.0 to 50.0 ℃		P	06
	0.0 to 100.0 ℃		P	07
	0.0 to 200.0 ℃		P	08
	-50.0 to 100.0 ℃		P	13
	-199.9 to +200.0 ℃		P	02
Pt2 (Pt100)	0 to 100 ℃		D	A1
	0 to 200 ℃		D	A2
	0 to 400 ℃		D	A4
	0 to 800 ℃		D	A8
	-100 to 200 ℃		D	C2
	-200 to 400 ℃		D	C4
	-200 to 600 ℃		D	C6
	-200 to 800 ℃		D	C8

Input type			Code	
AN1	0 to 20mV	-1999 to 9999	V	01
AN2	0 to 50mV		V	02
AN3	0 to 5VDC	-199.9 to 999.9	V	03
AN3	0 to 10VDC		V	04
AN4	1 to 5VDC	-19.99 to 99.99	V	08
AN4	2 to 10VDC		V	09
AN4	4 to 20mA	-1.999 to 9.999	A	03
AN3	0 to 20mA		A	02
AN3	0 to 10mA		A	01

**S type input: 0-100℃ range cannot guarantee the accuracy

Note: Clients can set TC, RTD by keyboard ,please set the input type coincide with the sensor. Check details of the manual"6.3"parameter INP1,If need analog signal inputs, please specified when order.(Except 0-20mV or 0-50mV input)

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