

Micro processor controller

INSTRUCTION MANUAL

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

Specification

- SY series instrument 4 big LED display 0-100% LED bar display output , Accuracy: (Max $\pm 0.2\%$ fus or ± 1) $\leq \pm 1$ digit
RTD or TC input, the maximum resolution is 0.1 degree. Analog input ,the maximum resolution is 0.001 degree.
Auto/Manual operation control function, 2 PID (heating/Cooling) outputs.
- Please make sure that the power and output types are right before using, there is a wire diagram beside the controller, in the code NO4 and No5, you can see the output mode, such as relay, SSR or 4-20mA etc.
(SEE 1. PRODUCT CHECK)
- 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)
- Controller have Auto/Manual function, Check "7. MANUAL OPERATION"
- As usual, controllers were set as out1 (heating), out2 (cooling) before leaving factory, of course, users can select out1 (cooling), check manual "6.3 Parameter Out in level 3 "
- 2 outputs PID heating/cooling function, check manual "10. Heating/cooling specification"
- PID control: As usual, controllers have PID control before leaving factory, with Autotuning function.
- ON/OFF Control: Set P=0.0, it will be changed as on/off control. Check manual "6.1 parameter P" and "9. control 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, fitting for OUT1 or OUT2
- Proportional control: when P $\neq 0$, I=0, d=0, which is purely Proportional control, Proportional reset is set as rSt, proportional cycle is Cyt. When heating, rSt value is smaller, then output is smaller. When cooling: rSt value is smaller, output is bigger. These fit for OUT1 or OUT2.
Check manual " 9. Control mode " " 10. Heating/Cooling " when PID Control, we suggest adopt the Autotuning to improve the control effect. Check "8. Autotuning"
When analog signal output, can using output buffer function when in some special control position, which can make output more stable.
Check manual "6.2 level 2 bUFF parameter, and 6.3 level 3 bEr parameter"

1. PRODUCT CHECK

MODEL (Size: wideXhigh)	SY102 (48mmX48mm)
	SY402 (48mmX96mm)
	SY502 (96mmX48mm)
	SY702 (72mmX72mm)
	SY902 (96mmX96mm)

CODE

□ □ □ □ - □ □ * □ □ □ - □ □ □ - N / N / N / N
(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15)

(1) Control action

- N: No action F: ReversePID action (for Heating)
D: Direct PID action (for cooling) W: Heat/cool double PID action (V6.4)
B: ON/OFF control (for heating) M: ON/OFF control (for cooling)

(2) Input type, (3) Range code: See "12. 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) Second control output [OUT2] (Cool-side)

- 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

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

See " 6.3.1 alarm mode "

- N: No alarm
A: Deviation high alarm G: Deviation high/low alarm with hold action
B: Deviation low alarm M: Deviation band alarm with hold action
C: Deviation high/low alarm H: Process high alarm
D: Deviation band alarm J: Process low alarm
E: Deviation high alarm with hold action K: Process high alarm with hold action
F: Deviation low alarm with hold action L: Process low alarm with hold action

(9) INPUT2 (Remove SV or position feedback)

- N: No input2
A: DC 4~20mA B: DC 0~20mA T: others input
C: DC 0~10mA D: 0~5VDC
E: 0~10VDC F: 1~5VDC
G: 2~10VDC R: resistance input for valve feedback

(10) Communication

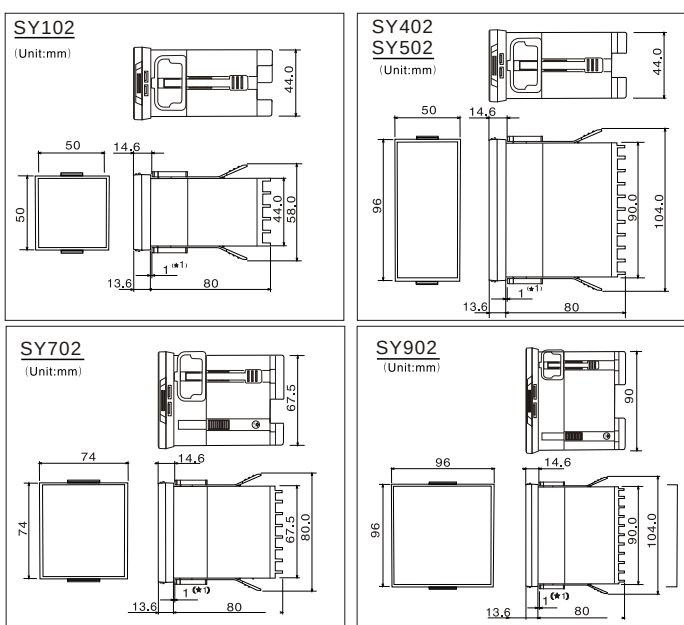
- N: No Communication 5: Rs485 communication Modbus-RTU

(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)

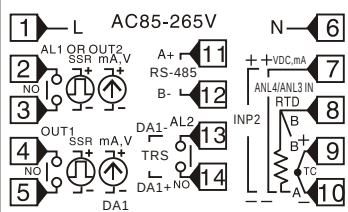
(12)/(13)/(14)/(15) Remark code: N

2. MOUNTING SIZE

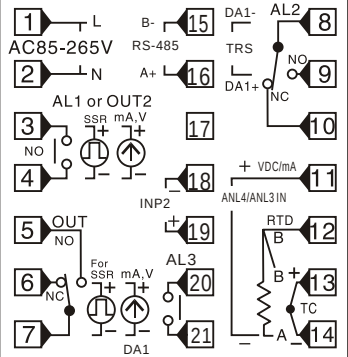


3. WIRING

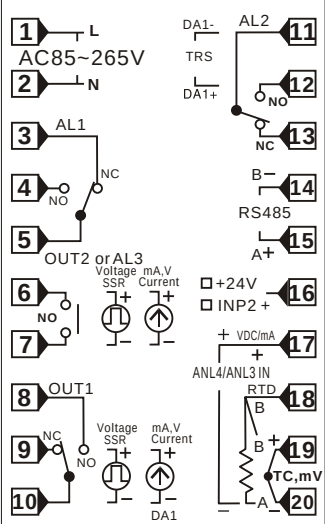
SY102



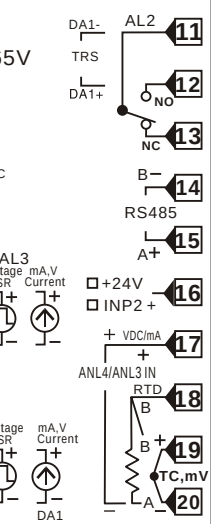
SY702



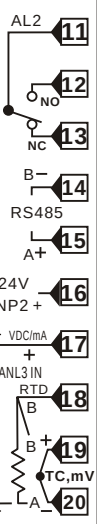
SY402



SY502

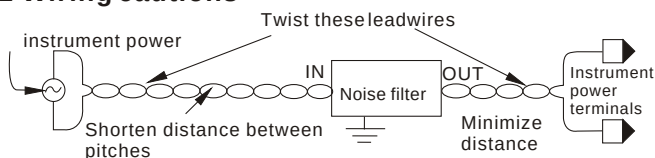


SY902

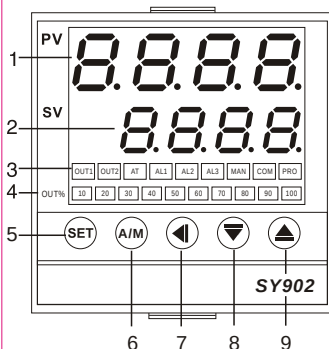


Alarm output rated:
Relay contact output: 250V AC, 3A (Resistive load)
Control output rated:
Relay contact output: 250V AC, 5A (Resistive load)
Voltage pulse output: 0/12V DC or 0/24V DC (Load resistance 600 ohm or more)
Current output: 4 to 20mA DC (Load resistance 500 ohm or less)
Triac single phase zero crossing: 100A or less

3.1 Wiring cautions



4. PARTS DESCRIPTION



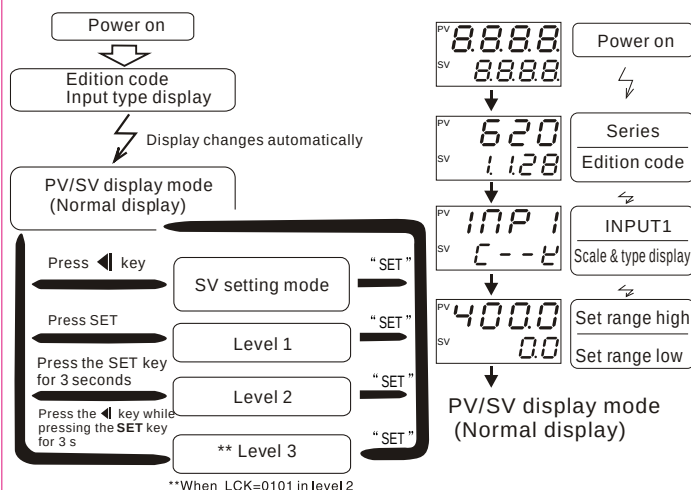
- Measured value (PV) display [RED]
- Set value (SV) display [GREEN]
- OUT1 lamp: Out1 output indication
OUT2 lamp: Out2 output indication
AT lamp: Autotuning indication
AL1 lamp: Alarm 1 output indication
AL2 lamp: Alarm 2 output indication
AL3 lamp: Alarm 3 output indication
MAN lamp: manual mode indication
COM lamp: Communication indication
PRG lamp: Remark lamp
- LED bar: Output1 % value indication
- SET key: Used for parameter calling up and set value registration
- A/M key: Auto/Manual key or set value registration
- ◀: Shift key and setting SV key
- ▼: Down key, decrease numbers
- ▲: Up key, increase numbers

CAUTION

To avoid damage to instrument, never use a sharp object to press keys.

5. SETTING

5.1 Calling up procedure of each mode



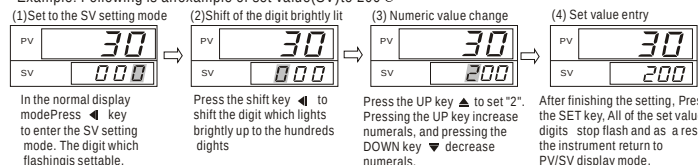
**When LCK=0101 in level 2

Display	E1	E2	E1	E2	J1	J2	N	G
Input	K	K	E	E	J	J	N	Wu3_Re25
Range	400.0 °C	1300 °C	300.0 °C	600 °C	400.0 °C	800 °C	1300 °C	2000 °C

Display	S	T	R	B	AN1	AN2	AN3	AN4	PL1	PL2
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 °C	400.0 °C	1700 °C	1800 °C					-199.9~200.0 °C	-200~800 °C

5.2 Setting set value (SV)

Example: Following is an example of set value (SV) to 200°C



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

5.3 Setting parameters other than set value (SV)

The setting procedures are the same as those of example (2) to (4) in the above "Setting set value (SV)". Press the SET key after the setting end shifts to the next parameter. When no parameter setting is required, return the instrument to the PV/SV display mode.

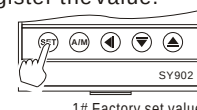
6. LEVEL

In any level you can press the SET key for 3 seconds to return the instrument to the PV/SV display mode, and register the value.

6.1 Level 1

Press the SET key to level 1:

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

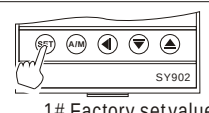


Symbol	Name	Range	1#	Description
AL	Autotuning	NO or YES	NO	YES: Autotuning on, NO: Autotuning off
AL1	Alarm 1	-1999 to 9999	10	Set the alarm value for alarm 1. Alarm differential gap=AH1
AL2	Alarm 2	-1999 to 9999	10	Set the alarm value for alarm 2. Alarm differential gap=AH2
AL3	Alarm 3	-1999 to 9999	10	Set the alarm value for alarm 3. Alarm differential gap=AH3
ADR	Device address checking		1	Communication device address, only for checking. Except V6.4

6.2 Level 2

Press the SET key for 3 seconds to level 2

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



Symbol	Name	Range	1#	Description
P1	Proportional band for out1	0.0~200.0	20.0	Proportional band in PID with unit °C for OUT1 P1=0.0, ON/OFF control for output1. Please set P1=2.0 when analog input.
I1	Integral time for out1	0~3600sec	210	Set the time of integral action to eliminate the offset occurring in proportional control.
D1	Derivative time For out1	0~3600sec	30	Set the time of derivative action to improve control stability by preparing for output changes.
OLAP	Overlap for heat/cool	0.0 to 10.0	1.0	Set control action overlap between heat-side and coll-side proportional bands overlap range: (SV+OLAP) to (SV+OLAP)
ATVL	Auto tuning offset value (ATVL)	0~199	0	Set ATVL to prevent overshoot occurred during autotuning process.
CYT1	Proportioning cycle for out1	0 to 999sec	20	Proportioning cycle time for PID control. Only for out1 output.
HYS1	Control Hysteresis For out1	0.0 to 100.0	1.0	Control out differential gap=HYS1. For out1 output. Only for ON/OFF action when P1=0.0
P2	Proportional band for out2	0.0~200.0	20.0	Proportional band in PID with unit °C for OUT2 P2=0.0, ON/OFF control for output1. Please set P2=2.0 when analog input.
I2	Integral time for out2	0~3600sec	210	Set the time of integral action to eliminate the offset occurring in proportional control.
D2	Derivative time cycle for out2	0~3600sec	30	Set the time of derivative action to improve control stability by preparing for output changes.
CYT2	Proportioning cycle for out2	0 to 999sec	20	Proportioning cycle time for PID control. Only for out2 output.
HYS2	Control Hysteresis For out2	0.0 to 100.0	1.0	Control out differential gap=HYS2. For out2 output. Only for ON/OFF action when P2=0.0
GAP2	Control gap (For output 2)	0.0~200.0	0.0	Set point of output 2 (Cooling side) =SV + GAP2
RE	Spare	0.0 to 100.0	10.0	Spare
RS1	Proportional reset For out1	-30 to 30	-5	Proportional reset for overshoot protection only for out1 output. (Auto setting after autotuning)
RS2	Proportional reset For out2	-30 to 30	0	Proportional reset for overshoot protection only for out2 output (Cooling side).

Symbol	Name	Range	1#	Description
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.
OPL2	Output2 limit (Low)	0.0 to 100.0%	0.0	Output manipulated variable lowest limit For out2 output. (Cooling side)
OPH2	Output2 limit (High)	0.0 to 100.0%	100.0	Output manipulated variable highest limit For out2 output. (Cooling side)
PL0	Initial output value for OUT1	0.0 to 100.0%	0.0	Setting initial output value for manual operation with Power-on Manual function
BUFF	Output buffer only for out1	0.0 to 100%	100.0	Output variance value percentage per second buffer limit Only for 4-20mA output1
LCK	Set data lock	0000-0255	0	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

NOTE: Some function of parameters, please see " 8.", " 9.", " 10." specification.
Some parameter symbols may not be displayed depending on the specification.

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 3s to Level3

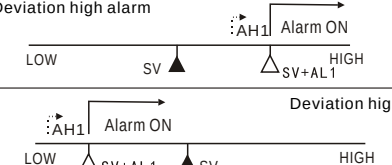
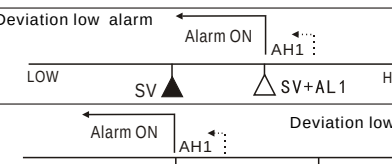
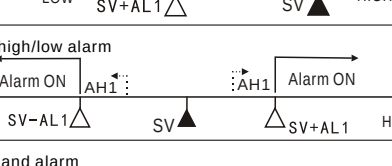
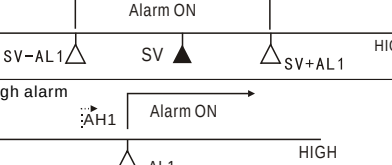
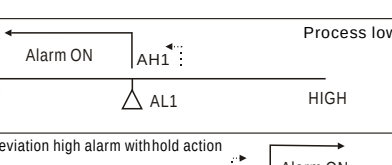
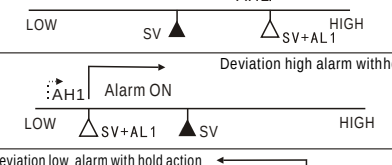
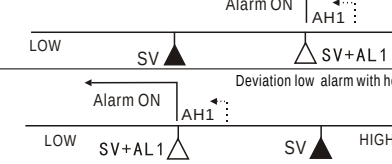
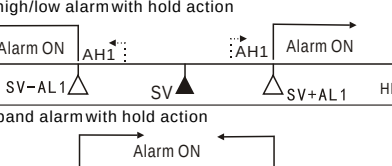
The following parameters symbols are displayed one by one every time the SET key is pressed. 1# Factory set value

Symbol	Name	Range	1#	Description									
INP 1	Main input type select												
	Setting	E1	E2	E1	E2	J1	J2	N	G				
	Input	K	K	E	E	J	J	N	Wu3_Re25				
	Range	400.0 °C	1300 °C	300.0 °C	600 °C	400.0 °C	800 °C	1300 °C	2000 °C				
	Setting	S	T	R	B	AN4	AN3	AN2	AN1	PE1	PE2		
	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 °C	400.0 °C	1700 °C	1800 °C					-199.9-200.0 °C	-200-800 °C			
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)									
PV05	PV bias	-199to 199	0.0	Sensor correction is madeby adding bias value to measured value(PV).									
PVFL	PV follow-up PV input filter	0 to 60	55	PV variable-value control, 0-30: for general, 31-60:for enhanced									
ANL 1	Lowest value of PV display	-199-9999	0	Lowest value display when linear analog inputs ,Such as 4-20mA input.									
ANH 1	Highest value of PV display	-1999-9999	2000	Highest value display when linear analog inputs ,Such as 4-20mA input.									
ALD 1	Alarm1 mode	00 to 16	11	Select the type ofalarm1 See(**ALARM TYPE TABLE)									
ALH 1	Alarm1 differential gap	0.0 to 100.0	0.4	Alarm1 differential gap setting									
ALD2	Alarm2 mode	00 to 16	10	Select the type ofalarm2 See(**ALARM TYPE TABLE)									
ALH2	Alarm2 differential gap	0.0 to 100.0	0.4	Alarm2 differential gap setting									
ALD3	Alarm3 mode	00 to 16	10	Select the type ofalarm3 See(**ALARM TYPE TABLE)									
ALH3	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)									
BEr	Buffer mode for out1analog output	0,1,2	0	0: No buffer for analog output1 1: Always with buffer for analog output1 2: With buffer when the output1 increases only. (Soft-start) Output variance value percentage per second buffer limit according BUFF in Level2									
IDND	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_ =00~16)

10: No alarm output	00: No alarm output
11: Deviation high alarm	01: Deviation high alarm with hold action
12: Deviation low alarm	02: Deviation low alarm with hold action
13: Deviation high/low alarm	03: Deviation high/low alarm with hold action
14: Deviation band alarm	04: Deviation band alarm with hold action
15: Process high alarm	05: Process high alarm with hold action
16: Process low alarm	06: Process low alarm with hold action

6.3.2 Alarm mode specification

Code	ALD	Specification (Example for alarm1)
N	10 or 00	No alarm
A	11	Deviation high alarm  Deviation high alarm 
B	12	Deviation low alarm  Deviation low alarm 
C	13	Deviation high/low alarm
D	14	Deviation band alarm
H	15	Process high alarm
J	16	Process low alarm
E	01	Deviation high alarm with hold action  Deviation high alarm with hold action 
F	02	Deviation low alarm with hold action  Deviation low alarm with hold action 
G	03	Deviation high/low alarm with hold action
M	04	Deviation band alarm with hold action
K	05	Process high alarm with hold action
L	06	Process low alarm with hold action

NOTE:

With hold action:

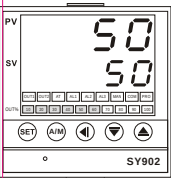
When Hold action is ON, the alarm action is suppressed at start-up until the measured value enters the non-alarm range.

7. MANUAL OPERATION

All instrument except SY102 with manual operation key (A/M)

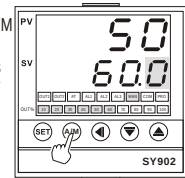
Example: Following is an example of manual setting to 70% output.

Auto control mode



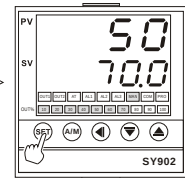
MAN lamp is turns off in Auto control mode.

Manual setting 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.

Manual control mode

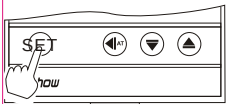


Pressing the UP key increase numerals, and pressing the DOWN key decrease numerals. Press SET key after set value to 70.0.

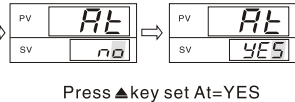
**In manual control mode ,press A/M key for 3 seconds to auto control mode.
**Power-on Manual function can be selected. Pko in level2 for initial output value.
**A/M key can also be used for SAVE and EXIT key.

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



Autotuning At



Press SET key for 3 seconds to exit level. Autotuning start.

Press SET key to level 1

Press ▲ key set At=YES

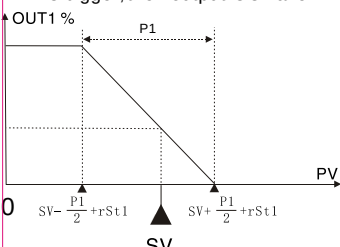
NOTE:

- When begin to autotuning, AT light flash, which means to begin to autotuning, if you want to exit from autotuning, please enter into the AT menu, set AT=no
- In the middle of the autotuning, it is ON/OFF control, according to the different systems, temperature may be have a big variance and the autotuning time is of a long short.
- After finishing autotuning, AT light stops flashing, controller will automatically save P1, I1, d1, rE, rSt1 parameters, then automatic return to the normal control state, controller will continue to run with new P1, I1, d1, rE, rSt1 parameters value
- In some special occasions, if you can not control by autotuning, or the autotuning effect is bad, please set parameters by manual.
- P1 is proportional band of the first group OUT1, the standard proportional band range is Set value=SV±P1/2, as usual, we set P1=10% to 15% of SV.
- I1 is the integration time of the first group OUT1, as usual I1 is settled about 200 before leaving factory. If I1 is smaller, the integral action will be bigger, and the feedback to the temperature difference will be bigger. But if I1 is too small, it will lead to the temperature swinging up and down around the set value.
(1) If temperature is not up for a long time, and the output is still not increased more, can reduce the integration time I1
(2) If temperature is up overshoot for a long time and output is still heating, can reduce the integration time I1
(3) If temperature swings up and down around the set value for a long time, can increase the integration time I1
- D1 is the differential time of the first group OUT1, which is equal to 20% to 30% of the integration time. Derivative action is main used to cause the inhibition of the overshoot (because of integral action). d1 is bigger, derivative action is stronger.
(1) When go into the proportional band, if the output heating is bigger, temperature will overshoot, you can increase the derivative time. If the temperature decrease more, which will lead to the undershoot, then you can increase the derivative time.
(2) In some control situation, if the system feedback is very sensitive, which means that the output slight variations will lead to a big variations in the goal Value, then you can reduce the derivative time, or close the derivative time (d1=0). Using this, control is stable, such as in the constant-pressure water supply system.
- rSt1 is the reset of the OUT1 proportion, which is used to eliminate static errors in the pure time proportion control, in PID control, rSt1 can be used to adjust the proportion band to reach the system stability quickly.
(1) when the thermal inertia is big in the heating system, usually rSt1 is negative, pls note this value can not be too small (when rSt1>-P1/2, e.g P1=30.0, rSt1≥-15). usually rSt1=0, in the heating system, the value is smaller, the heating will be slower
(2) While in the PID cooling system, rSt1 is positive, if this value is bigger, the colling will be slower.

9. CONTROL MODE SPECIFICATION

(1) OUT1 side, PID reverse action (heating)

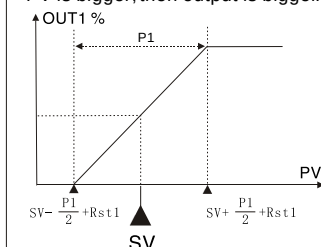
PV is bigger, then output is smaller.



rSt1 value is smaller, then output is smaller.

(2) OUT1 side, PID direct action (cooling)

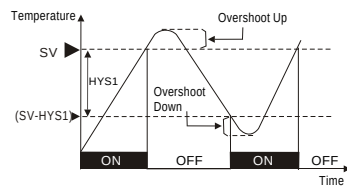
PV is bigger, then output is bigger.



rSt1 value is bigger, then output is smaller.

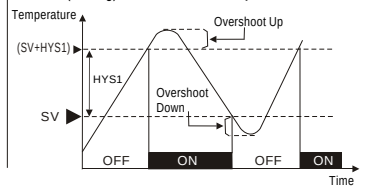
(3) OUT1 side, ON/OFF control (heating)

*OUT1(heating) When P1=0.0, Control hysteresis is HYS1



(4) OUT1 side, ON/OFF control (cooling)

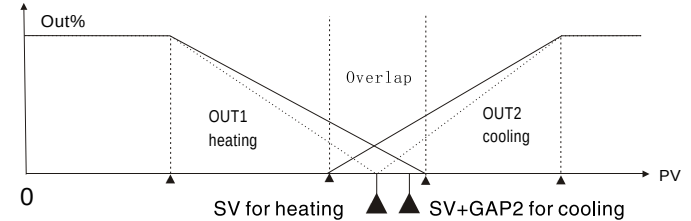
*OUT1(cooling) When P1=0.0, Control hysteresis is HYS1



10. HEATING/COOLING SPECIFICATION

If the thermal inertia of the controlled temperature is bigger, it will be difficult to natural cooling, we can use the cooling output control at the same time, Just use 1 pc controller can have heating and cooling dual output control.

**Setting OLAP for control action overlap between heat-side and coll-side proportional bands
Overlap range: (SV+-OLAP) to (SV++OLAP)



By setting the P2, I2, d2 etc parameters, you can have the different OUT2 controls mode, such as PID control, time proportion control or on/off control, to meet with different requirements of cooling actuator.

11. COMMUNICATION SPECIFICATION

- Communication protocol is Modbus-RTU, support 03 read command, 06 or 10 write command
- 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 databits + No parity checking + 1 Stop bits
- Controllers support writing 36 data more, when writing data, if the address is beyond 0048H, the address will still write data as 0048H.
- Controllers support reading 37 data more, when reading data, if the address is beyond 0048H, then read data=0
- Parameter address please see "MY06 series communication address list"

12. INPUT RANGE TABLE

Input type			Code		
K1	0.0 to 100.0 °C	2	D1	P11 (Pt100)	0.0 to 50.0 °C P 06
	0.0 to 200.0 °C	2	D2		0.0 to 100.0 °C P 07
	0.0 to 300.0 °C	2	D3		0.0 to 150.0 °C P 11
	0.0 to 400.0 °C	2	D4		0.0 to 200.0 °C P 08
K2	0 to 200 °C	K	A2	P12 (Pt100)	-50.0 to 50.0 °C P 12
	0 to 400 °C	K	A4		-50.0 to 100.0 °C P 13
	0 to 600 °C	K	A6		-100.0 to +100.0 °C P 04
	0 to 1300 °C	K	B3		-100.0 to +200.0 °C P 05
E1	0.0 to 100.0 °C	3	D1	P12 (Pt100)	-199.9 to +200.0 °C P 02
	0.0 to 200.0 °C	3	D2		0 to 100 °C D A1
	0.0 to 300.0 °C	3	D3		0 to 200 °C D A2
	0 to 200 °C	E	A2		0 to 400 °C D A4
E2	0 to 400 °C	E	A4	P12 (Pt100)	0 to 600 °C D A6
	0 to 600 °C	E	A6		0 to 800 °C D A8
	0.0 to 100.0 °C	1	D1		-50 to 100 °C D C1
	0.0 to 200.0 °C	1	D2		-100 to 200 °C D C2
J1	0.0 to 300.0 °C	1	D3	P12 (Pt100)	-100 to 300 °C D C3
	0.0 to 400.0 °C	1	D4		-200 to 400 °C D C4
	0 to 200 °C	J	A2		-200 to 500 °C D C5
	0 to 300 °C	J	A3		-200 to 600 °C D C6
J2	0 to 400 °C	J	A4	P12 (Pt100)	-200 to 700 °C D C7
	0 to 800 °C	J	A8		-200 to 800 °C D C8
T	0.0 to 100.0 °C	T	D1	AN1 0 to 20mV AN2 0 to 50mV AN3 0 to 5VDC AN3 0 to 10VDC AN4 1 to 5VDC AN4 2 to 10VDC AN4 4 to 20mA AN3 0 to 20mA AN3 0 to 10mA	V 01
	0.0 to 200.0 °C	T	D2		V 02
	0.0 to 300.0 °C	T	D3		V 03
	0.0 to 400.0 °C	T	D4		V 04
S	0 to 1000 °C	S	B0	AN1 0 to 20mV AN2 0 to 50mV AN3 0 to 5VDC AN3 0 to 10VDC AN4 1 to 5VDC AN4 2 to 10VDC AN4 4 to 20mA AN3 0 to 20mA AN3 0 to 10mA	V 08
	0 to 1600 °C	S	B6		V 09
	0 to 1000 °C	R	B0		A 03
	0 to 1700 °C	R	B7		A 02
B	200 to 1000 °C	B	B0	AN1 0 to 20mV AN2 0 to 50mV AN3 0 to 5VDC AN3 0 to 10VDC AN4 1 to 5VDC AN4 2 to 10VDC AN4 4 to 20mA AN3 0 to 20mA AN3 0 to 10mA	A 01
	200 to 1800 °C	B	B8		
	0 to 1000 °C	N	B0		
	0 to 1300 °C	N	B3		
N	0 to 1000 °C	N	B0	AN1 0 to 20mV AN2 0 to 50mV AN3 0 to 5VDC AN3 0 to 10VDC AN4 1 to 5VDC AN4 2 to 10VDC AN4 4 to 20mA AN3 0 to 20mA AN3 0 to 10mA	
	0 to 1300 °C	N	B3		
	600 to 2000 °C	W	B0		
	600 to 2000 °C	W	B0		

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)

Trihero Group

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