

XMT*-7000 intelligent temperature control meter

Operation Instruction

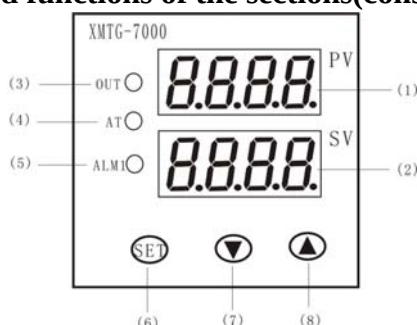
1、Product characteristic:

- The core of the product adopts the up-to-date microprocessor chip.
- Red and green double-bank nixie tube display the measured value and setting value.
- Easy operation in the three keys, & fast setting in the parameter.
- Control in high precision's PID intelligent and two or three bit location check program..
- Upper-bank display the measured value, & bottom-bank display the setting value under normal working conditions.

2、Primary technical standard:

- Input: Thermocouple : K、E、J、S; Thermal resistance: PT100 CU50
- Range: K(0~400℃、0~1300℃)、E (0~400℃、0~800℃)、J (0~1000℃)
S (0~1600℃)、PT100 (-100.0~200.0℃、0~600℃)、CU50 (-50.0~150.0℃)
- Measure error: $\pm 0.5\%F.S \pm \text{byte}$
- Silicon control trigger signal(over zero):Range $\geq 3V$, Width $\geq 40\mu s$
- The output contact potential of the relay: impedance load 7A
- Input power: AC85~242V 50/60Hz
- Entironment: Temperature: 0 to 50℃, Humidity: $\leq 85\%RH$
- Size: XMT : 80×160×80mm hole:76×152; XMTA : 96×96×80mm hole:92×92;
XMTE : 48×96×80mm hole:44×92 ; XMTF : 96×48×80mm hole:92×48;
XMTD : 72×72×100mm hole:68×68; XMTG : 48×48×90mm hole:44×44

3、Name and functions of the sections(consult)



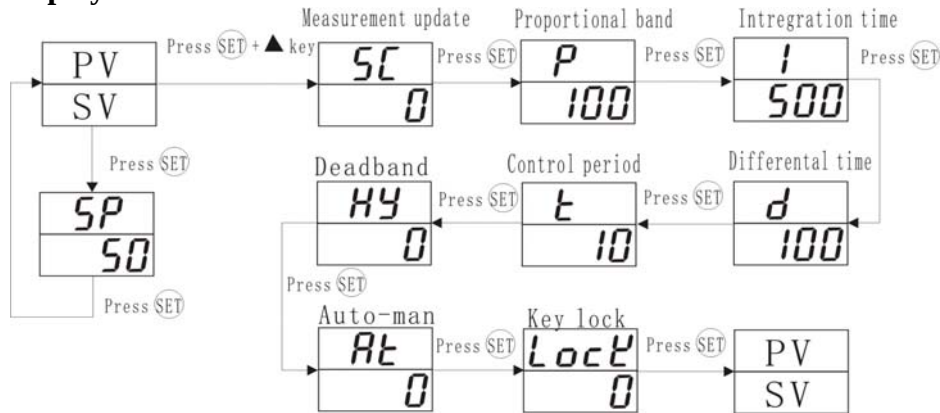
- (1) PV display: Indicates the process variable (PV) with a red LED.
- (2) SV display: Indicates the setting value (SV) with a green LED.
- (3) OUT indicator: When OUT is ON, a green LED lights
- (4) AT indicator: When auto-tuning function is ON, a green LED lights.
- (6) Function key (SET): Switches the setting mode and registers the setting value and selected value..(Setting value and selected value are registered by pressing the mode key.)
- (7) Decrease key (V): Decreases numeric value of the setting value.
- (8) Increase key (^): Increases numeric value of the setting value.

4、Setup flow chart

Code	Description	Setting Range	Instruction	Remarks
SP	Setting control point	Whole range	℃ or 1 defined unit	
SC	Measurement update	-20.0 to 20.0	Measuring value can be modified through increasing or decreasing this data. Note: It may be cause inaccuracy of measuring value when you use this function. Please use the function carefully according to your situation.	0
P	Proportional band	0 to 100	Proportional range is ten for set value	100
I	Integration time	0 to 2000s	It's mainly used to adjust the static difference. To increase it, the static difference will be reduced, but when it is too high, the static difference will drift instability.	500
d	Differential time	0 to 200	It's used to adjust the overshoot in the first time, to increase it can reduce the	100

			overshoot.	
t	Control period	1 to 120s	Only relay output	10
Hy	Deadband	0 to 50 or 0.0 to 50.0	ON/OFF control only	1.0
At	Auto-man	0 to 1	0-Close auto-man function 1-Open auto-man function	0
Lock	Key lock	0 to 1	0-All parameter can rework 1-Only SP value can rework	0

5、Display Status



● Connect the power, the sensor and the external control circuit to the instrument refer to the connection figure. After these, turn on the power and then the instrument will at first begin to auto-test according to the program A, Band C.

A: All LEDS and all indicating lamps will be lighted to test the lighting-system whether good or not. If unlighted LED or indicating lamp were found, please stop using and transmit it to for reparation. (This procedure lasts for 0.5s)

B: The window PV(upper window) display "CJ", the window SV is not display.

C: The window PV display model.

After the three procedures, the instrument will step into the normal measure-control state. The upper window PV display the value that the instrument is measuring and the lower window SV display the value set.

● If want to modify the value in the window SV, press the SET key 3second when the instrument is in its normal display state, then the window PV will display "SP" and the window SV will point wink. At this moment press the key ^ to increase the value or the key v to decrease (Press the key ^ or v for a longer time to accelerate the speed of value setting). Press <key shift (like cursor). Press the key SET to certain the modified value. If no any other operation after modification, the instrument will automatically return to the normal display state and accept the modified value at the same time.

● If want to modify the value other than "SP", press the key (SET + ^) 3 second when the instrument is in its normal display state to set the internal parameter. Please set the value in terms of the actual application. But please pay more attention to the three items " P 、I、d", these must be set by experienced engineer.

● Auto-man: the first set value is Ok, after At being "1", the "AT" indicating to it will light. The instrument begin working as the ordinary one with two control points and three states. After 3 cycles, it will certain the best PID value to the set point and store it forever unless the user's modification or opening the "AT" function.

● The signal "HH" or "LL" in the window PV means that the sensor is out of connection or the measured value is overflow.

6、Connection figure.

