



# XMT\*-918T series intelligence digital temperature control instrument

## Insruction Manual

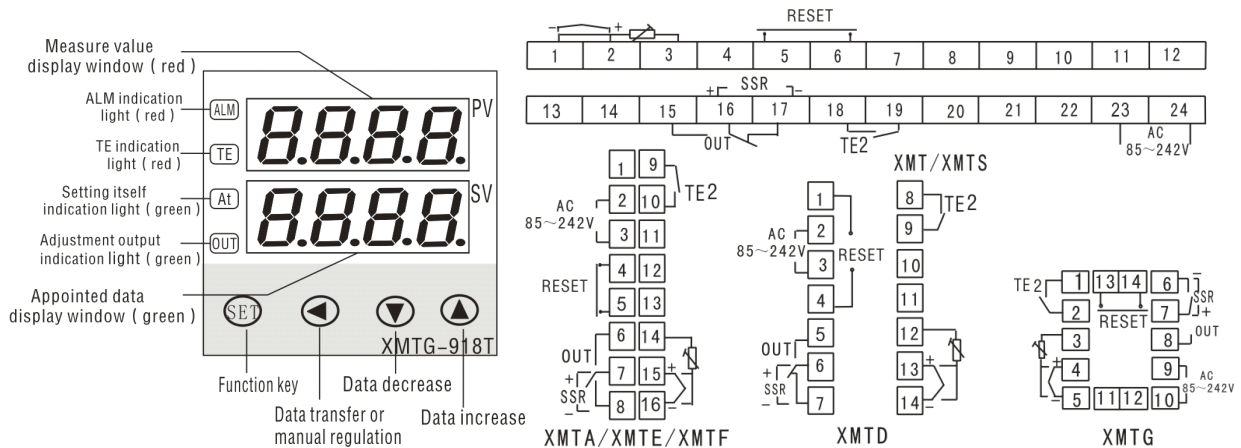
### I、Survey:

**XMT\*-918T** series intellectual ability temperature regulator series controlled by single chip, free input multi-signals of thermocouple, ON/OFF control and PID control,besides,it has time function,you can adjust time unit hour and minute or minute and second .they are widely used in the automatic control system of the temperature, chemical, ceramics, light, metal, petrochemical and heat treatment industry.

### II、Main technical specification

- ◆ Basic deviation:  $\pm 0.5\%F.S \pm 1$
- ◆ Cold end compensating deviation:  $\leq \pm 2.0^{\circ}C$
- ◆ Sampling cycle: 0.5s
- ◆ time range: 1S~59.59H
- ◆ time precision: class 0.005
- ◆ Control cycle: relay output 2~120s and can be adjusted
- ◆ Relay output contact capacity: AC220V/5A (resistance load)
- ◆ Power: AC85V~242V (switching supply) , 50/60Hz, or the other special request.
- ◆ Working condition: temperature 0~50.0 $^{\circ}C$ , relative humidity $\leq 85\%$  RH, without corrode and strong electric radiation.

### III、Panel and connection scheme description (consult)



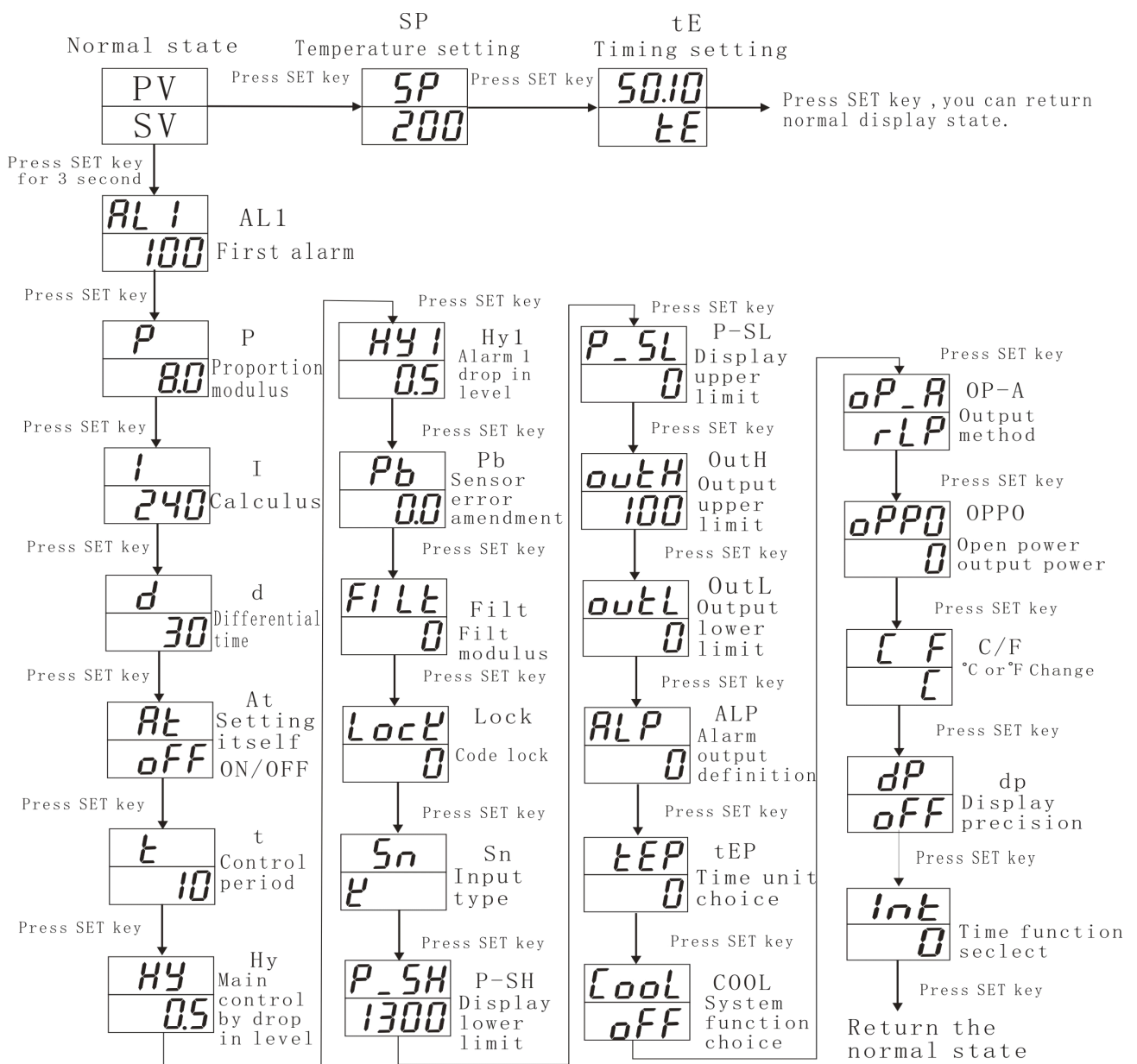
### IV、Parameter code

Series	Code	Name	Setting range	Manual	Remarks
0	<i>SP</i>	Appointed data	Determined by P-SL P-SH	—	50.0
1	<i>TE</i>	Timing setting	1~59.59		Connect the RESET terminal,when Temperature got the setting value,the meter start timing,the terminal TE2 connect and give an alarm(you can install buzzer in meter)
2	<i>AL 1</i>	Temperature upper limit alarm	Determined by P-SL,P-SH, When the upper and lower limit range,it is 0.0~100.0 .	Temperature upper limit alarm	10
3	<i>P</i>	Proportion modulus	0.0~200.0	When the P $\uparrow$ ,the the proportion function $\downarrow$ . <b>When P=0,the meter is ON/OFF control</b>	8.0
4	<i>I</i>	Calculus time	0~3000S	Set the calculus time can relieve the steady-state error which	240
5	<i>d</i>	differential time	0~200S		30
6	<i>At</i>	Setting itself	<i>OFF</i> : close the function	Selection of the Setting itself function	<i>OFF</i>

		function	<i>ON</i> : open the function		
7	<i>E</i>	SSR proportion Control period	2~120 S	the movements cycle ON/OFF of Setting relays control is no meaning	20
8	<i>HY</i>	Main control by drop in level	0.1~100.0	Only have meaning when main control output is ON/OFF(P=0)	0.5
9	<i>HY1</i>	Alarm 1 drop in level	0.1~100.0	It has use drop in level setting of alarm contact output	1.0
10	<i>Pb</i>	Sensor error amendment	±20.0	The sensor have deviation can use item to revisal	0
11	<i>FILT</i>	Filt modulus	0~50	Is the software filter constants of measurement sampling. The constant↑, the Measurements antijamming Capability Measurements antijamming capability↑, but the measurement and system time ↓	20
12	<i>LOCK</i>	Code lock	0~50	0: all the parameter can be revised 1: only the sp can be revised	0
13	<i>Sn</i>	Input type	—	CU50、 PT 、 K 、 E 、 J 、 T 、 S	K
14	<i>P-SH</i>	Display the high limit	P-SL~full range	Can set the high limit displaying input signal	1300
15	<i>P-SL</i>	Display the low limit	Range start ~P-SH	Can set the low limit displaying input signal	0
16	<i>OUTH</i>	Allow output max value	OUTL~100	Can output high amplitude limiting, manual and ON/OFF output with no effect	100
17	<i>OUTL</i>	Allow output min value	0~OUTH	Can output low limit condition, Manual and ON/OFF control output With no effect	0
18	<i>ALP</i>	Alarm output definition	0~1	'0' upper limit alarm '1' follow-up alarm	0
19	<i>TEP</i>	Time unit choice	0~1	0: minute and second display 1: hour and minute display	0
20	<i>COOL</i>	System function choice	ON/ OFF	<i>OFF</i> : reverse control(heating control) <i>ON</i> : positive control(cooling control)	<i>OFF</i>
21	<i>OP-R</i>	Output method	—	SSR solid state relay RLP SSR output method	RLP
22	<i>OPPD</i>	Open power output power	0~100	Soft start function that meters coefficient after first output of electric power	0
23	<i>C F</i>	Fahrenheit and degree centigrade selecting	°C/°F	C: °C ; F: °F	C
24	<i>DP</i>	Display accuracy	ON/ OFF	0: have radix point, 1: have no radix point	OFF

25	<i>Int</i>	Time function selection	0~3( <b>Time control side be switched on</b> )	0: common temperature control 1: start timing when it reaches the temperature , and the alarm relay output after reaching the time, the controller keep on heating; 2: start timing when it reaches the temperature, and the alarm relay output after reaching the time, the controller stop heating; 3: regular temperature control ( no alarm ) + time relay function: <b>start timing when the power is on, alarm relay attracting after reaching the time .</b>	0

**V、Flow chart:**



**VI: operation instrument**

1、The first setting area

Press the SET key 3S enter into the first setting area, the meter will display the parameter code 2~25in the

window at the upper row and display the parameter data at the low row. In this time press the ▲、▼ or ◀ key to adjust the parameter, then press the SET key to preserve. Press the SET key long time will withdraw or press the SET + ◀ key will directly withdraw. If within 10 seconds do not press every key then it will automatically to preserve the data and withdraw the setting.

The parameter 12 is LOCK, all the parameter can be modified when it is 0, or it can't. The user couldn't set the parameter larger than 50, or it will return to factory to test

## 2、The second setting area

When the meter is set up with the electricity, press the ▲ key about 3S enter into the second setting area, you can according the 1 to set the “SP” and “TE”.

## 3、timing function:

**When connect the reset terminal,,the meter starting timing,it get to the timing time,the relay of TE2 connect.**

## VII、 setting itself

When the meter first be used, or the condition changes, the control performance will turn bad. In this condition, the parameter ,such as P、 I、 D, should be set, the method as below:

After setting the desired value, set (HY) 0.5~1.0°C,set “AT”ON, A-M start glittering, the meter enter into the setting state, and the control method is ON/OFF; After three vibration, automatically save P、 I、 D parameter, A-M light goes out, the setting process is over.

**Note:** ①If the power goes off when the meter is setting ,as the meter with memory function, it will restart setting next time.

②During setting, if the setting should be exit artificially, set “AT” OFF, then can exit, but if that, the setting result will be of no effect.

## VIII、 Meaning of the model code

XMT □—9 □ 8 □  
1 2 3 4 5

### 1:The surface dimension (mm)

**Blank:** 160×80×85 Installation hole 156×76 **A:** 96×96×80 Installation hole 92×92  
**D:** 72×72×80 Installation hole 68×68 **E:** 48×96×75 Installation hole 44×92  
**F:** 96×48×75 Installation hole 92×44 **G:** 48×48×110 Installation hole 44×44  
**S:** 80×160×85 Installation hole 76×156

**2: Operation display method:** ‘9’ 4-key gentle push-switch setting, double row 4-LED digital display, PID and ON/OFF (P=0) control can select.

**3:Additional alarm:** ‘1’ No over-temperature alarm, but a group of time control output;

‘3’ A group of alarm ( upper limit alarm or follow-up alarm ) and a group of time-control relay output;

‘5’ No over-temperature alarm, but a group of time control output for buzzer alarm .

**4: Input:** ‘8’ input signal can interchange free (**no voltage and current input**)

**5: Suffix** Blank: relay output G: solid relay output T: Time control function

## IX、 Fault Analysis and Clearance

XMT\*-918T series adopt advanced production process, and have the strict test before leaving factory, it improve the reliability of the meter .The usual fault caused by the wrong operation or parameter setting .If you find the fault couldn't be cope with, please record it,and contact with the agent or us. Sheet 9-1 is the usual fault of XMT\*-918T series in the daily application:

Sheet 9-1 Common fault handling

fault symptom	analysis of causes	Disposal measurement
Abnormal power	1、 poor contact of power cord 2、 power switch without lose	Check the power

Signal display do not correlate with the facts. (display‘HH’)	1、 Sensor model mismatch 2、 wrong signal connection	1、 check sensor model and meter interior input parameter 2、 check signal wire
Abnormal output control	1、 wrong connecting output wire	1、 check output connection

**Attached 1: Statement of meter’s parameter attention letter and English letter**

A	B	C	D	E	F	G	H	I	J	K	L	M
<i>A</i>	<i>b</i>	<i>C</i>	<i>d</i>	<i>E</i>	<i>F</i>	<i>G</i>	<i>H</i>	<i>I</i>	<i>J</i>	<i>K</i>	<i>L</i>	<i>M</i>
N	O	P	Q	R	S	T	U	Y				
<i>n</i>	<i>o</i>	<i>P</i>	<i>q</i>	<i>r</i>	<i>S</i>	<i>t</i>	<i>u</i>	<i>y</i>				

★Remark: Our company will improve product technology、 design and specification, it is confirm to the object.