XMT*-308 Series intellgence digital temperature control instrument

Instruction Manual

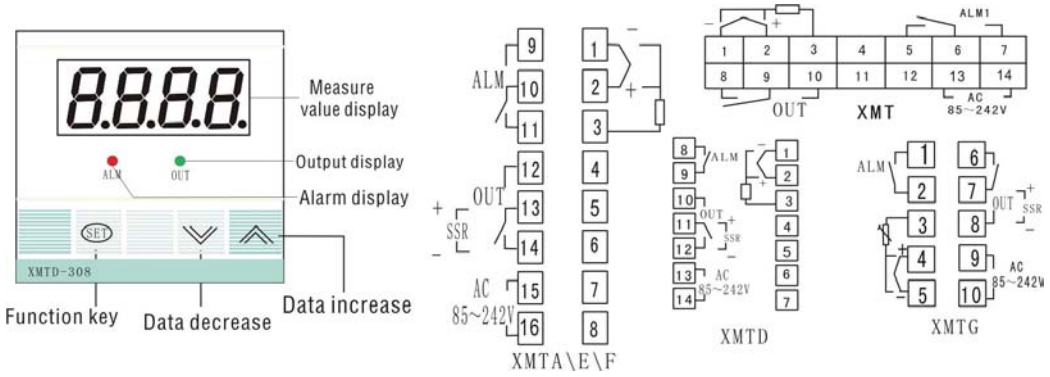
I. Summarize

XMT*-308 series intelligent temperature controller, is single row 4-LED display. The controller can input kinds of signals which are used interchangeably, three-button operation, adopts ON/OFF control and PID control. It can select Fahrenheit and degree centigrade temperature display. It allows an easy parameter setting and convenient inputting, is used widely temperature automatic control systems of machinery, chemical, ceramics, light industrial, metallurgy, petrifaction and heat treatment and so on.

II. Main Technical Indexs

1. Measurement deviation：±0.5F·S±1B, Cold end compensating deviation ≤±2°C
2. Input (can be selected): Cu50, Pt100, K, E, J, T, S
3. Relay output contact capacity: AC220V 7A (resistance load)
   period 2 ~120s can be adjusted
4. Driving solid relay signal output: driving electric current >15m A voltage >9V, period is 2s
5. Power: AC85V~242V, 50/60Hz
6. Work environment: temperature 0~50.0°C, relative humidity ≤85%RH, without corrode and strong electric radiation.

III. Instrument panel and connection scheme (consult)

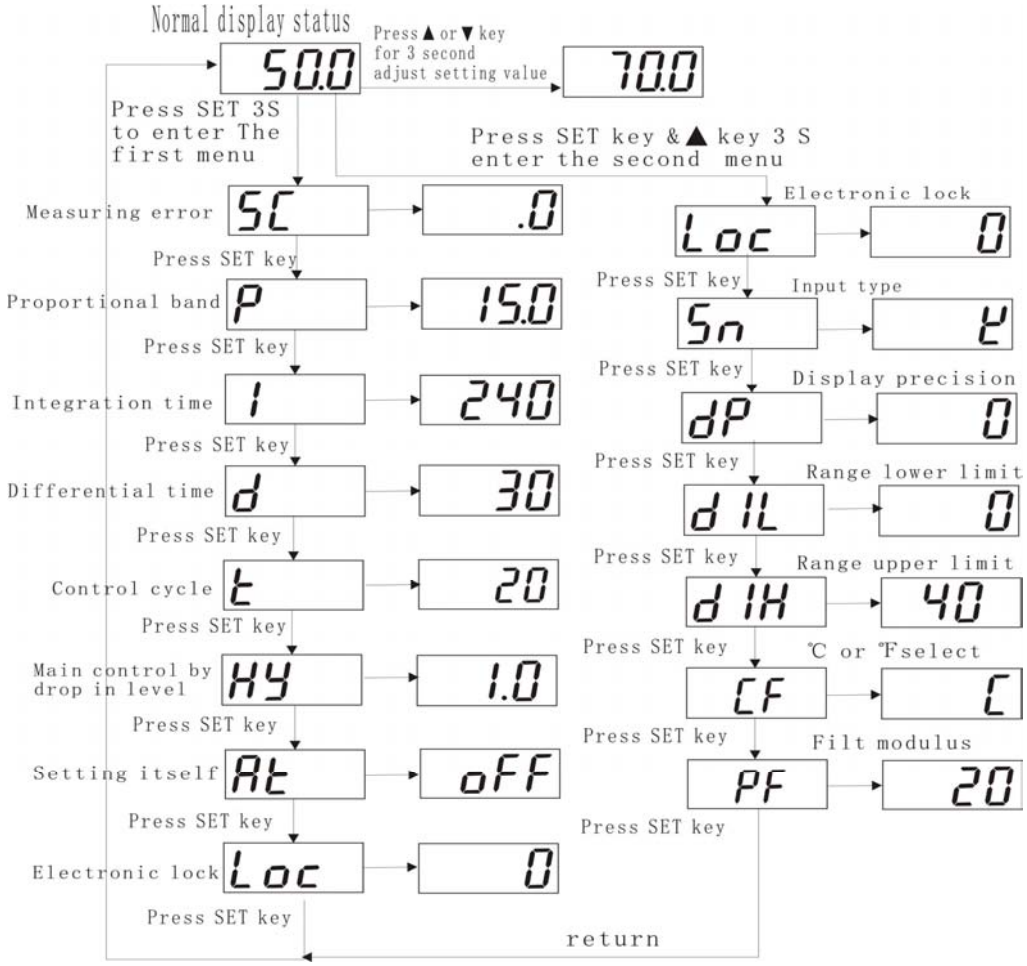


IV. Technical Indexes

Series		Attention	Name	Setting range	Remark	Ex-Factory
First	0	-	Setting value of temperat.	Determined by d IL and d IH	Press▲ or ▼ for 3 seconds and set the temperature setting value you need	-
	1	AL	Uper limit alarm	Determined by d IL and d IH	-	Random
	2	SC	Sensor error amendment	-20.0 ~ 20.0	Measuring value can be modified through increasing or decreasing this data.	0

Menu	3	P	Proportion modulus	0 ~ 99.9 ~ 200	When the P ↑, the proportion and differential function ↑; If the P ↓, the proportion and differential function ↓ When P=0, the meter is ON/OFF control.	15.0
	4	I	Calculus time	0 ~ 3000	It's used to adjust static difference. To increse it, the static difference will be reduced, but when it is too high, the static difference will drift instability.	240
	5	d	Differential time	0 ~ 200	It's used to adjust the overshoot in the First time, to increase it can reduce the overshoot.	30
	6	t	Control period	2 ~ 120s	Control output period	20
	7	HY	Main control by drop in level	0.1 ~ 50.0	It only controls at ON/OFF	1.0
	8	At	Parameter setting itself	on/oFF	oFF: close function of setting itself; on: open function of setting itself; Please reffer to "6.4. Setting itself"	oFF
	9	Loc	Electronics lock	0 ~ 50	Loc=0 all the parameter can be revised Loc=1 only the appointed data can be revised	0
Second Menu	9	Loc	Electronics lock	0 ~ 50	idem	0
	10	Sn	Input type	-	Input type Max. temperature rang Cu50 (-50~150°C / -90~270°F), Pt100 (-199~600°C/ -199~999°F), K (-30~1300°C/ -54~2340°F), E (-30~700°C / -54~1260°F), J (-30~900°C / -54~1620°F), T (-199~400°C / -199~720°F), S (-30~1600°C/ -54 ~2880°F)	K
	11	dP	point	0 ~ 1	dP = 0 display no point dP = 1 display point	0
	12	dIL	Set min. value of temp. range	dIL ≤ dIH	They are used to reset proper temperature range as per user's application. As for the max. temperature range for different inputs, please refer to Sn	0
	13	dIH	Set upper limit			400
	14	CF	°C or °F select	-	C : °C F : °F	C
	15	PF	Filt modulus	0~50	It is the software filter constant of measurement sampling. The constant ↑, the measurement antijamming capability ↑, but the measurement speed and system response time ↓	20

V. Flow chart



VI. Operation

1. Electrify after take into the power, sensor ang control circuit according to the connection scheme, and then the instrument start testing itself for 1 second.

2. Set the setting value

Press ▲ or ▼ key 3 second enter to the setting value states. Press ▲ or ▼ key to modify, for long time to press the key can accelerate. After modification, press SET to save and exit. If you don't do this operation, it can be done itself.

3. Interior Technical parameter setting (Technical parameter refer to the sheet)

(1) The first menu

Press SET key 3 second enter into the first menu, the window display parameter code then display parameter value. Press ▲ or ▼ key to modify for long time to press the key can accelerate. After modification, press SET key to save and enter into next Indexs setting. if you don't do this operation, it can be done itself.

(2)The second menu

Press SET and ▲ key to enter into the second menu, and the setting method is the same as the first menu.

4. Set by itself

First, set the setting value, and enter the menu, set AT to On, and the light turn on, the meter enter the condition setting itself, this time the meter adopt on/off control mode, after three times surge first time, measure value and AT0 display by turns; second time, measure value and AT 1 display by turns; second time, measure value and AT2 display by turns), the meter confirm new P, I, d and save it, the meter reset and (display 8888, CJ by turns) enter control condition.

VII Model Sense

XMT □ — 3 □ 8 □

1 2 3 4 5

1: External size and Installation hole (mm)

Empty:	160x80x90	152x76	**A:**	96x96x90	92x92
D:	72x72x90	68x68	**E:**	48x96x90	44x92
F:	96x48x90	92x44	**G:**	48x48x100	44x44
S:	80x160x90	76x152	**B:**	60x120x90	56x116
C:	80x120x35 wall set installation		**FC**:	77x35x76	71x29
L:	35mm DIN guide rail instalation				

2: Operation display method: "3" 3-key soft push-switch setting, single row digital display, have PID adjustment or ON/OFF control

3: An additional alarm "0" :indicates no alarm "1" upper limit touch alarm "2" lower limit touch alarm

4: Input signal classification "8" input signal can interchange free

5: Suffix **Empty**: relay output **G:** solid state relay output **A:** mono-phase over zero trigger output

VIII Fault Analysis and Clearance

XMT*-308 adopts advanced production process, and has the strict test before leaving factory, it improve the reliability of the meter .The usual fault is 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 8-1 is the usual fault of XMT*-308 in the daily application:

Sheet 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'or'LL')	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
												
N	**O**	**P**	**Q**	**R**	**S**	**T**	**U**	**Y**				
												

★ **Remark :Our company will continue to improve product technology, design and specification. If change, please subject to the material object, without notice.**