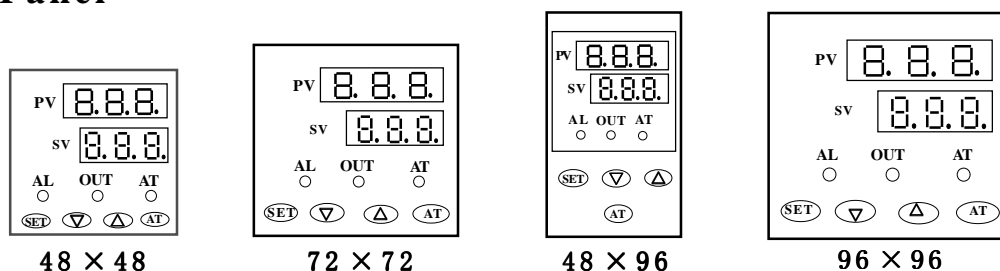


# TE Series of Temperature Controller

## 1、Panel



NO	Panel Words	Specifications
1	PV	Displaying measuring value or Parameter code. Range: -199-999℃
2	SV	Displaying setting value or Parameter setting
3	AL	Indicate lamp for alarm: ON/OFF
4	OUT	Indicate lamp for output: ON/OFF
5	AT(LRD)	Indicate lamp for Auto-turn: ON: Auto-turn OFF: No Auto-turn
6	SET	Select/confirm key
7	▼	Decrease key
8	▲	Increase key
9	SET+▲	Shift key
10	AT(key)	Auto-turn key

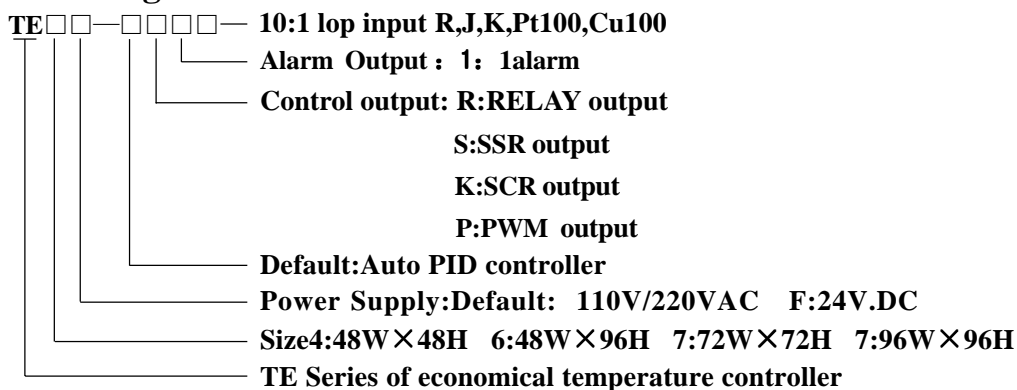
### Applications:

The unit is a temperature controller that with digital displaying, alarm, adjust functions. PID relay control output, SSR output, SCR output, PWM control output make it can be widely applied to the temperature control systems in all the industries.

## 2、Features

- 2.1 Input signals: Thermocouple T/C: K (0~999℃)、E (0~999℃)、J (0~999℃)、T (0~400℃);  
Thermo resistance RTD: Pt100 (-199~800℃)、Cu100 (-50~150℃)  
Select by software. Range: -199℃~999℃. (Cu50 input must be mentioned when order)
- 2.2 Control output: R: RELAY; S: SSR; K: SCR; P: proportional control output (PWM). Change different output only need to change output mode.
- 2.3 Auxiliary control output: One relay high value alarm output. Capacity 250VAC/3A or 30VDC/3A
- 2.4 Sampling rate: ≤0.5S
- 2.5 Accuracy: ±0.5%FS
- 2.6 Power: 220V/110VAC ±15%, 50~60HZ, Consumption <5VA

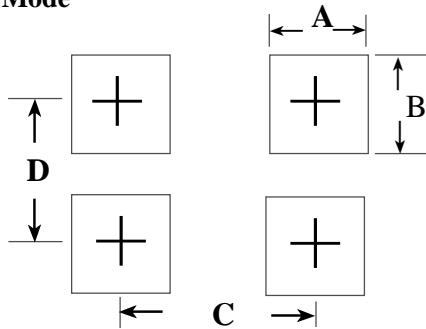
## 3、Ordering Code



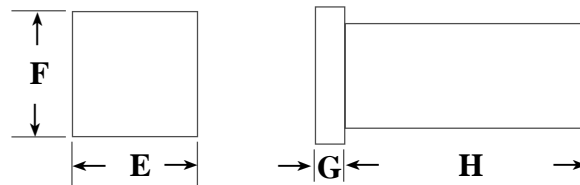
Mode	High Alarm	High Alarm
TE □ -RB10(TE □ -R10)	YES	Relay
TE □ -SB10(TE □ -S10)	YES	SSR control output
TE □ -KB10(TE □ -K10)	YES	SCR control output
TE □ -PB10(TE □ -P10)	YES	PWM proportional control output

## 4、Figure and Dimensions

### ★Mode

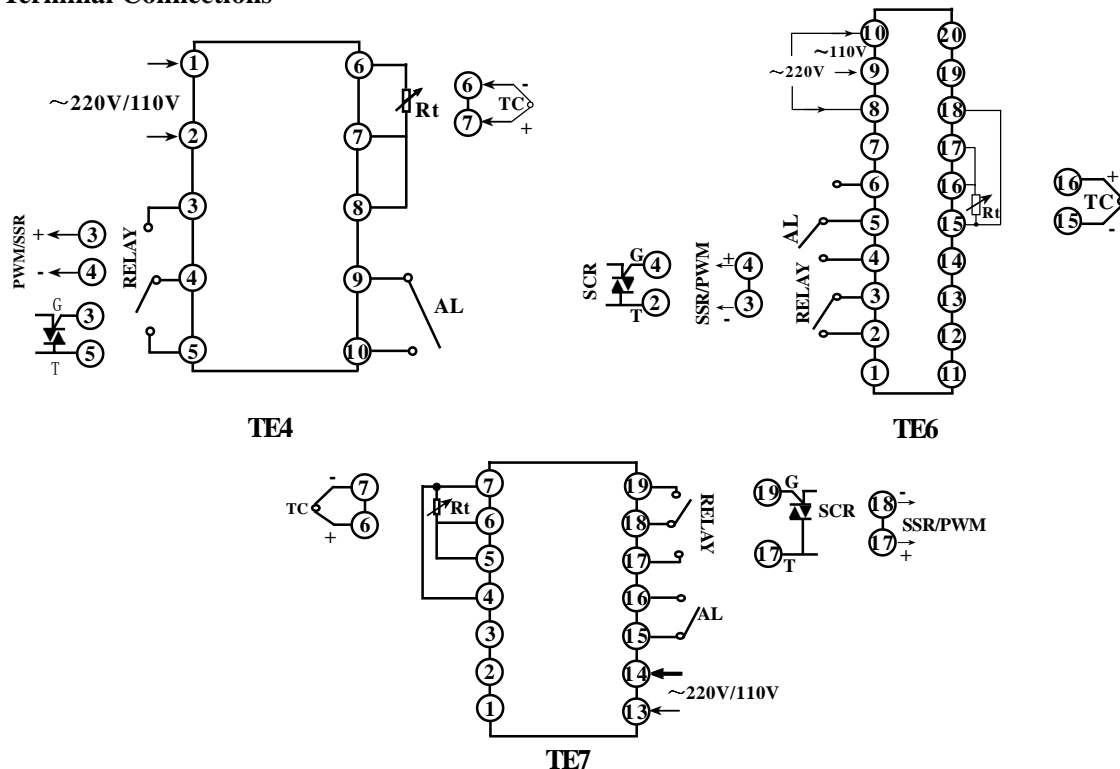


### ★Size



Mode \ Size	A	B	C	D	E	F	G	H
TE4	44+0.5	44+0.5	30	25	48	72	5	102
TE6	44+0.5	91+0.5	25	30	48	96	12	100
TE7	67.5+0.8	67.5+0.8	30	14	72	72	12	100

### ★Terminal Connections



If these connections changed, the user will not be informed. You can refer the connection on the label.

## 5、Key operation:

- 5.1、Press SET key for 3 seconds, enter the PID parameter adjust menu.
- 5.2、Press SET key to select the parameter you want to modify, then press SET+△, key at the same time, LED flashes. Hold SET press △ key again and shift the figure you want to modify, Then release SET key and press △/▽ key you can increase/de crease the value. Press SET key to confirm at last.
- 5.3、The unit will go back to measuring estate without key operation for 25 seconds. Or SET key for 3 seconds, it also go back to the measuring estate.

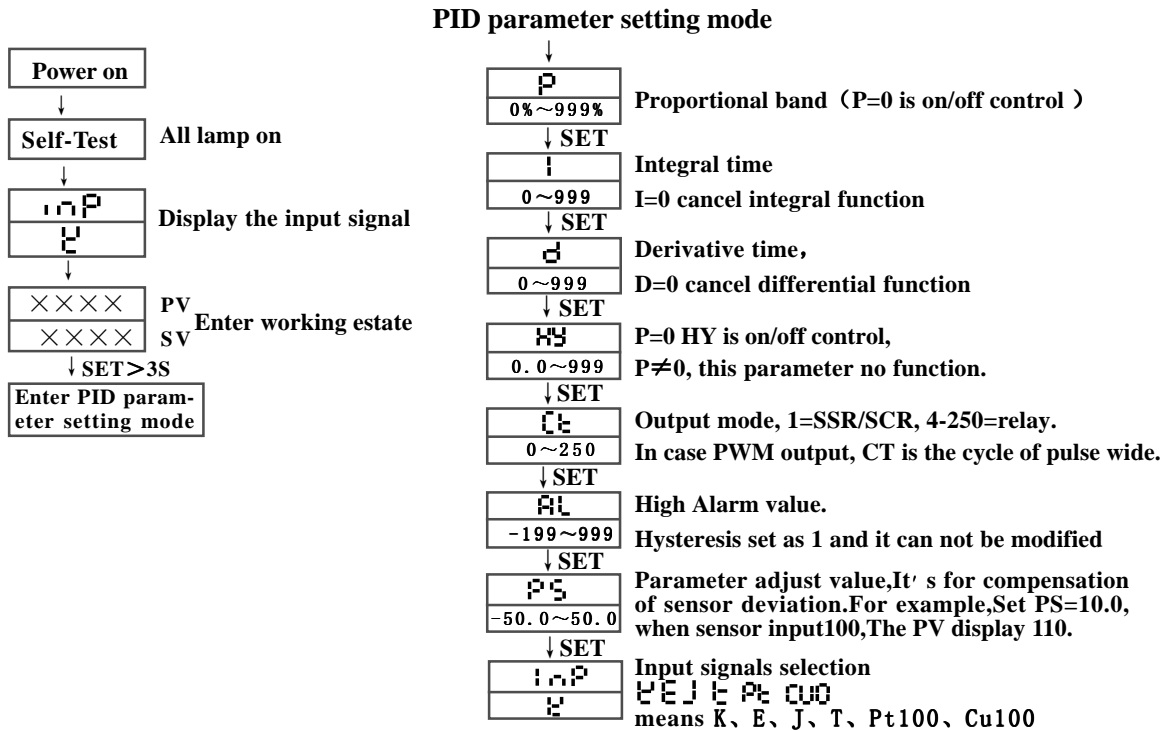
## 6、SV setting and Auto-turn operation

**SV setting:**In the measuring estate,the SV can be set as you want as the process of 5.2.

**Auto-tune operation:**When PID not work ( $P \neq 0$ ), press AT key for 3 seconds,When PID not work ( $P \neq 0$ ), press AT key for 3 secondsdon't modify the parameter at this moment. The AT lamp will off when the auto-turn finished. The unit will refresh PID value and go to the adjust estate. Press AT key for 3 seconds, AT lamp off, the unit also can go to the adjust estate during the course of auto-turn. If necessary, the user can modify the PID parameter by themselves to get better result.

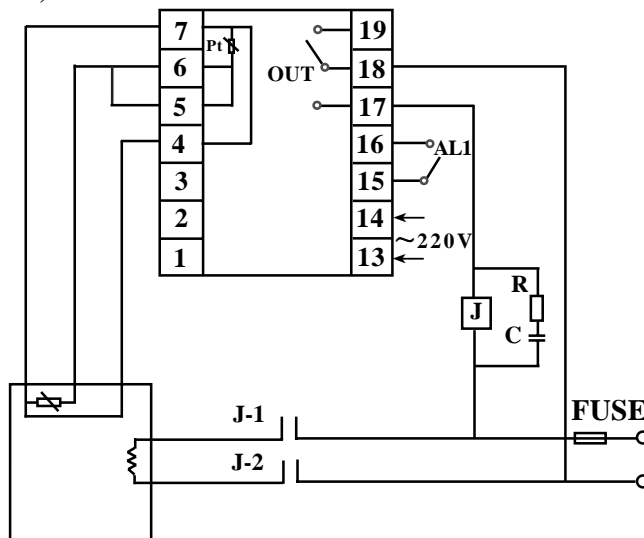
The unit can be select ( $^{\circ}\text{C}$ ) or ( $^{\circ}\text{F}$ ) to display temperature.

## 7、Operation Process



## 8、Application examples

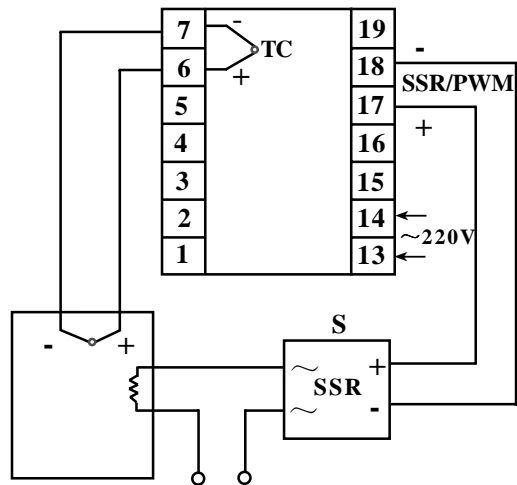
### 1、Relay control (TE7)



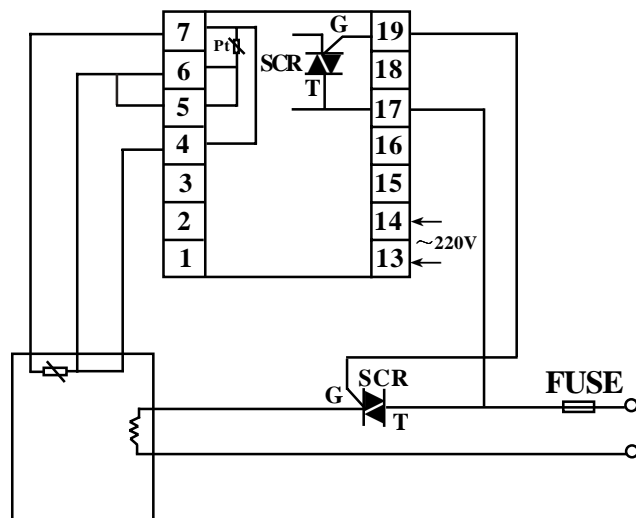
**Note:**The use life of the relay and the instrument will be,much more longer if you use AC contactor to control the heater.

**Reference value:**R:100  $\Omega$  /1W,C:103P,>275V.

## 2、Heating control



## 3、SCR control connection



## 9、Malfunction information indicate :

Information	Specifications	Eliminate method
高低	No sensor connected or input signal lower than low SV	Check sensor connection or modify low SV
高低	No sensor connected or input signal higher than high SV	Check sensor connection or modify high SV
CC	TC compensation off or overload	Check if connection of compensation diode is correct