TP-TCP-400J digital temperature controller

Operation Instruction

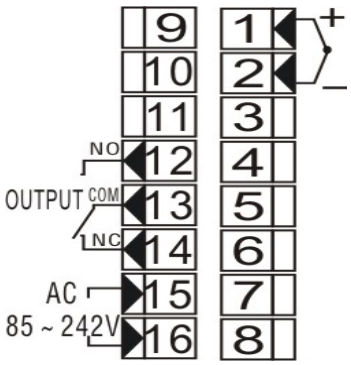
58520 digital temperature controller has digital display of the temperature measured value and time proportion control function. It has high precision, good reliability, strong cushioning, easy i nstallation and other advantages. This controller is widely used as temperature measurement and automatic control in light and heavy industry, such as metallurgy, chemical, electronic, machinery, textile, plastic, refrigeration, medical treatment, electric oven, and so on.

. Technical specification:

1. Input type: J
2. Measure and control range: 0~399
3. Accuracy: ≤1.0%F.S±1B
4. Proportional band range: ±12
5. Control period: 30±3Sec
6. Output contact capacity: 220VAC, 5A (resistance load)
7. Power sup ply: AC 85～242V, 50/60HZ
8. Power consumption: ＜3W
9. Overall size and installation hole （mm）: 96×96×85; 92×92
10. Working environment: temperature: 0~50 ; relative humidity: ＜ 85%RH, without corrode gas.

. Connection s cheme (consult) :

1. Terminal No. 1, No.2 are input of thermocouple signal J
2. Term inal No. 12, No. 13 and No. 14 are relay output. When the green light of " ON " brighten, terminal No. 12 and No. 13 are connected and terminal No. 13 and No. 14 are disconnected. When the green light of " ON " goes out, terminal No. 12 and No. 13 are disconnected and terminal No. 13 and No. 14 are connected.
3. Terminal No. 13 and No. 14 are power supply of AC85 ～242V.



.Method to use:

1. This temperature controller should be fixed in the installation hole. Connect the power, sensor and output controlling wires properly according to the connection scheme. It will display the actual measured temperature after swi tching on.

2. The dial button on the panel of the controller can be set to any temperature you want between 0 and 399 .

3. Control mode:

When the actual measured temperature don't enter the proportional band and the setting temperature is higher than the actual measured temperature, the terminal "12" and "13" connect, the terminal "13" and "14" disconnect. The load starts heating at the moment and its temperature is going up.

When the actual measured temperature don't enter the proportional band and the setting temperature is lower than the actual measured temperature, the terminal "12" and "13" disconnect , the terminal "13" and "14" connect . The load does not heat at the moment and its temperature is going down.

After the actual measured temperature entry into the proportional band, the relay start opening and closing according to the controlling rule. The higher temperature , the shorter connecting time of relay between terminal "12" and "13", vice versa .The meter control the temperature by the way of changing the average heating power of load.

4."RESET" potentiometer: When between the setting temperature and measurement temperature have static difference deviation, you can use this potentiometer for regulation proportional band. The potentiometer is setting in the middle in the factory.

Ⅳ. The maintenance and attention of controller

1.The controller should be installed in the condition without corrode gas.

2.Thermocouple should be put in the place where it can measure real temperature inside the furnace and has good insulation.

3.Before powering on the controller, please check it carefully to see if all connection is correct and if thermocouple can match with input type of controller.

4.When heat initially, though the furnace has been turned off, but the temperature of furnace will keep going up owing to the heating inertia inside furnace. So it is better to set about 80% of the temperature you want to set normally before power on the controller every time. After the controller carry out "on-off control'' for several times, then set temperature value you want to set normally , so as to avoid over surging.

5.If the controller displays abnormally, check the sensor to see whether its connection is open circuit or short circuit, also check whether the working voltage of controller is normal.

Ⅴ. Other explanation:

Welcome to use our controller, we can supply various kinds of temperature controllers.

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