Temperature Controller With Dual Set Point And Single Relay TC - 06

It is an ON / OFF temperature controller with dual set points and single relay. This instrument is used to control the output relay in such a way that the relay can be switched ON with one temperature set point and switched OFF with the other temperature set point. This can reduce the switching time span of the output relay with respect to the temperature of two set points. It is used in boiler or other machines where the switching ON and OFF of the machine are related with dual temperature set points.

The two set points are TP1 and TP2. The set temperature of TP1 is always lower than that of TP2. That means if the value of TP1 is to be increased; the set point of TP2 has to be increased first. .When the TP1 is set on 100 degree and TP2 is on 120 degree, the temperature directly reaches 120 degree and gets cut off. When the temperature comes down, the relay will not operate until it reaches TP1, which has been set at 100 degree. Set temperature of TP1 and TP2 will be shown on main display simultaneously as per the progress of temperature

The main advantage of this controller is the calibration which has been done digitally through software. So there is no need to do the calibration every year and the setting cannot be altered as it is protected with a password.

Dual display for set and current temperature, microprocessor based design, electrical noise-resistance even in a rough industrial environment and user friendly key operations are the main features of this instrument.

How to set the temperature

The temperature can be set by pressing the START STOP key which will show TP1 on the main display. Change the parameter through ▲ / ▼ key and press SET key to save the parameter of TP1.Then TP2 will appear on the main display. The parameter of TP2 can be set by following the instruction as of TP1. After setting TP1 and TP2 the temperature controller can be restarted by using the START STOP key.

Other Specification

1) Input supply: 150-270 VAC.
2) Details of output relay: SPDT, Goodsky RWH-SH-112D, load 1Amp. /230VAC
3) Size of the enclosure: 96x96x85, Cut out of panel 92x92.
4) Temperature range: 0 – 300 degree.
5) Display: 3 digit, size ½ x ¾ inch and 7 segment with red color.
6) Temperature sensing probe: PT 100
7) Resolution: 1 degree
8) Status indication: LED for relay status.
9) Sensor break protection: Auto switch off on sensor break, "OPEN / SHORT will be displayed.

Wiring Diagram

C	NO	NC				S1	S2	
P	N	E						

C : COMMON OF THE RELAY
NO : NORMALLY OPEN
NC : NORMALLY CLOSED
S1 : PT100 SENSOR
S2 : PT100 SENSOR
P : PHASE
N : NEUTRAL
E : EARTH