48 x 48

AUTOTUNE PID TEMPERATURE CONTROLLER

Temperature range (°C)	Resolution (°C)
-99 to 750	0.1
-99 to 1350	0.1
-99 to 400	0.1
-99 to 1750	1
-99 to 1750	1
-99 to 850	0.1

DISPLAY TYPE	7 segment LED Upper Display: 10mm high Red (Process value) Lower Display: 7mm high Green(Set value)
MAIN CONTROL	
CONTROL	Set1 is in PID or ON/OFF Set2 is in ON/OFF
OUTPUT	Time Proportioning or Linear DC
A) PROPORTIONAL BAND	0 to 4000 (Programmable) Cycle time : Auto/Manual (1 to 100 sec Programmable)
B) ON/OFF CONTROL	Hysteresis from 0.1 to 99.9
AUTO TUNE	Via Keys on front Panel
MANUAL RESET	For 1 resolution (-99 to 999) For 0.1 to 99.9
ACCURACY	± 0.25 % of full scale/ ±1 (Whichever is greater)
*SET POINT LIMIT	High limit settable by user
RELAY ACTION	a) Forward- for Cooling b) Reverse - for Heating
SENSOR BREAK	Indicated on display
TC REVERSE	Indicated on display
OUTPUT	One relay per set point (SSR drive models available on request) Relay rating: For SET1 : 5A For SET2 : 5A

POWER SUPPLY	85 to 270 VAC/DC @ 50/60 Hz, 24 VAC/DC models available on request
OPERATING TEMP	0 - 50°C
HUMIDITY	95% RH
WEIGHT	200 grams
COMPLIANCE	CE

This manual is meant for the person involved in viewing, installation, operation, and routine maintenance of the equipment. All safety related codifications, symbols and instructions that appear in this operating manual on the equipment must be strictly followed in order to ensure the safety of the operating personnel as well as the instrument.

If the equipment is not handled in a manner specified by the manufacturer, it might impair the protection provided by the equipment.

CAUTION: Read complete instructions prior to installation and operation of the unit.

CAUTION: Risk of electric shock.

CAUTION:

1. This equipment being built-in-type, normally has part of main control panel and in such case the terminals must not be accessible to the end user after installation and wiring.
2. Conductor must not come in contact with the internal circuitry of the equipment as it may create a safety hazard that may injure and endanger or cause electric shock to the operator.
3. Circuit breaker or mains switch must be installed between power source and supply terminals, to facilitate power ON and OFF function. However this switch or breaker must be installed at a convenient position normally accessible to an operator.

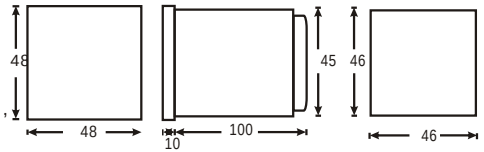
CAUTION

1. The equipment shall not be installed in environmental conditions other than those specified in this manual.
2. Over Current Protection: The equipment does not contain built-in fuse, installation of external fuse for electrical circuit is highly recommended. Recommended rating of such fuse is supposed to be 275 VAC/1 Amp.
3. Since this is a built-in-type equipment (for installation in main control panel), output terminals must be connected to host equipment. Such equipment shall also comply with basic EMC / EMC safety requirements like BS EN 61326 and BS EN 61010 respectively.
4. Thermal dissipation of equipment is to be through ventilation holes provided on chassis of equipment. Such ventilation holes shall not be obstructed as it can lead to a safety hazard.
5. The output terminals shall be strictly loaded to the manufacturer specified values/range.

For installing the controller

1. Prepare the panel cutout with proper dimensions as shown

Outline Dimensions (in mm) | Panel Cut Out Dimensions



2. Remove the clamp from the controller
3. Push the controller into the panel cutout. Secure the controller in its place by pushing the clamp on the rear side.

CAUTION:

The equipment is installed must not come in close proximity to any heating source, as it via pouring, steam, or other unwanted process by-products.

EMC Guidelines:

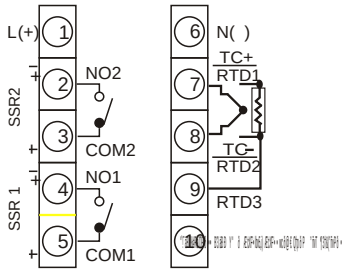
1. Use proper input/output cables with shortest connections and twisted type.
2. Layout of connecting cables should be away from any internal EMI source.

CAUTION

1. To prevent the risk of electric shock power supply to the equipment must be kept OFF while doing the wiring arrangement.
2. Terminals of electrical hazard carrying parts must not be touched when the power is ON.
3. Wiring should be done strictly according to the terminal layout with shown connections. Continuation connections are correct.
4. Use suggested terminal screw M3.5 screws.
5. To eliminate electromagnetic interference, shorter wire with adequate twisting and twists/ft same equal size can be made.
6. Cables used for connection to power source must have cross section of 1 or greater. These wires should have insulation capacity of at least 1.5 KV

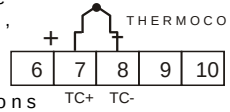
MAINTENANCE

1. The equipment should be cleaned regularly to avoid blockage of ventilation openings.
2. Clean the equipment with a soft cloth. Do not use isopropyl alcohol or any other cleaning agent.



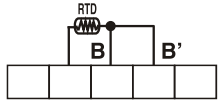
CONNECTION DIAGRAM :

1) FOR THERMOCOUPLE



Connect Thermocouple according to polarity sh
Positive of TC at termin
Negative of TC at termi

2) FOR - RTD (2 WIRE / 3 WIRE



1) FOR 2 WIRE RTD: PT
Short terminals 8 &
Connect PT100
between terminal n
2) FOR 3 WIRE RTD: PT
Connect RTD1 & RTD2
of 3 wire PT100 to te
no. 7 & Connect RTD3
of 3 wire PT100 to
terminal no. 9.

TYPICAL CONNECTIONS FOR LOADS

1) For load current than 1 or less 5A

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