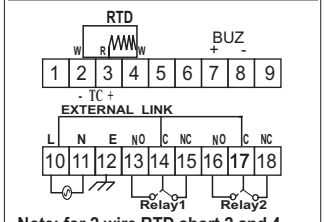
Model : MULTI-96
Sr. No.:



Note: for 2 wire RTD short 2 and 4

Terminal Connections-96

2 - Negative of TC / White or Black of 3 wire(Short Wire)

3 - Possitive of RED of 3 wire RTD

4- White or Black of 3 wire RTD (Short Wire)

10 - Live (supply)

11- Neutral (supply)

12- Earth

13- Normally open contact of relay

14- Common contact of relay1

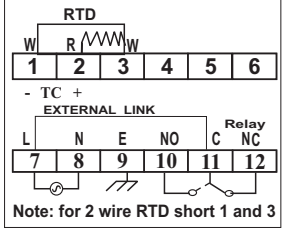
15 - Normally close contact of relay1

16 -Normally open contact of relay2

17 -Common contact of relay2

18 - Normally close contact of relay2

Model : MULTI-72
Sr. No.:



Note: for 2 wire RTD short 1 and 3

Terminal Connections-72

1 - Negative of TC / White or Black of 3 wire(Short Wire)

2 - Possitive of RED of 3 wire RTD

3- White or Black of 3 wire RTD (Short Wire)

7 - Live (supply)

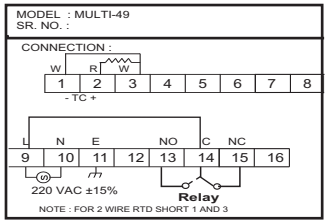
8 - Neutral (supply)

9 - Earth

10 - Normally open contact of relay

11 - Common contact of relay

12 -Normally close contact of realy



Terminal Connections-49

1 -Negative of TC / White or Black of 3 wire(Short Wire)

2 - Possitive of RED of 3 wire RTD

3- White or Black of 3 wire RTD (Short Wire)

9 - Live (supply)

10 - Neutral (supply)

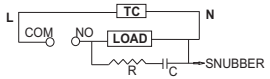
11 - Earth

13 -Normally open contact of relay1

14 - Common contact of relay1

15 -Normally close contact of relay1

CONNECTION FOR LOAD



R=56 OHMS / 2 WATT.
C=0.1 MFD / 250 V AC
TC=TEMPERATURE CONTROLLER

If load is inductive, connect snubber across load

ION ELECTRICALS PRIVATE LIMITED
आयन् इलेक्ट्रिकल्स प्रा. लि.

MULTI

MULTI 49/72 / 96 WITH 1 SET

Features

1) On/Off control & proportional action

2) Proportional band adjustment by front keys.

3) Cycle time adjustment for proportional action by front keys.

4) Offset adjustment for proportional action by front keys.

5) logic selection, heating / cooling (user selectable).

6) Input sensor selection by front keys.

Specifications

1) Input sensor : PT-100 (RTD), J-type, K-type.Thermocouple
2) Differential : 1 to 100 deg,
3) Proportional band: 1 to 100%.
4) Time Delay : 1 to 255 seconds,
5) Cycle time : 1 to 60 seconds.
6) Offset adjustment : 0 to 500.
7) Range: - 99 to 400^{0}C for RTD, 0 to 750^{0}C for J, 0 to 1200^{0}C / 0 to 999^{0}C for K
8) Mounting : panel mounting.
9) Cut-out :70 x 70 mm / 91 x 91 mm. 49 X96 mm
10) Power consumption :10 VA max.
11) Display : 3 digit / 4 digit 7-seg, red led display.
12) Supply :220 V AC +/- 15% 50 Hz

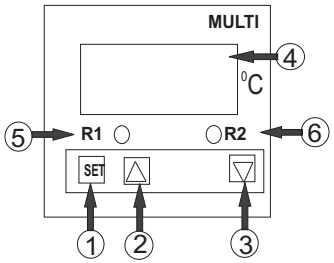
Trouble Shooting :

1) Sensor open indication : Display shows “Err”

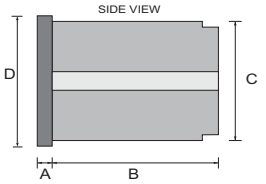
2) Sensor reverse :If thermocouple not connected according to polarity temp goes on decreasing while heating

3) Not show proper temp. : Loose connection on terminal or calibration problem.

4) Problem in relay operation - check **ht1** time delay for relay operation. It should not be more than 4 sec.for heating logic.



1:- SET1 KEY
2:- INCREMENT KEY
3:- DECREMENT KEY
4:- DISPLAY
5:- RELAY-1 ON INDICATION
6:- RELAY-2 ON INDICATION



MODEL	A	B	C	D
MULTI 72	10	120	68	72
MULTI 96	12	118	88	96
MULTI 49	10	120	45	49

Model	Control Range	Input Sensor
MULTI	-100^{0}C to 400^{0}C	Pt 100
MULTI	0^{0}C to 750^{0}C	J Type
MULTI	0^{0}C to 1200^{0}C / 0^{0}C to 999^{0}C	K Type

Operating manual MULTI

Check all the connections & Switch on the mains supply.

Display will show process temperature.

Setting:

Push **"SET"** key, display will start flashing with previous set no. Set it using up or down key to desired value. After setting new value push set key again to store it.

Note: If no key is pressed in set mode then display will go to normal mode after 4 seconds (in which it shows process temperature). So to store new value push set key otherwise it will go to normal mode by saving current value.

Push SET key.

"hys1" with some number will flash simultaneously. This is differential in degree

Celsius.(Selectable upto 100 degree celsius.

Push SET key.

“LoG1" will flash with “hET/COL” simultaneously. Here one can set logic . (hET:-Heating logic & COL :- cooling logic). using up or down arrow keys.

Push SET key,

"dly1" with some number will flash simultaneously. This is time delay in seconds .set it using up or down arrow keys. (settable upto 255 seconds).

Push SET key.

"hys2" with some number will flash simultaneously. This is differential in degree

Celsius.(Selectable upto 100 degree celsius.

Push SET key.

How to set logic mode?

Push **up & down** arrow key, Hold both the keys for 5 seconds.**"SEn"** along with selected type of sensor will flash simultaneously. Here one can set type of sensor by pushing **up or down** arrow keys. **(rtd : PT100 (RTD) ,J :- J-type thermocouple, :- K-type thermocouple).**

Push set key,

"rnGL" will flash with some number simultaneously. here one can lock minimum limit of Range. Set it using up or down arrow keys.

Push set key,

"rnGH" will flash with some number simultaneously. here one can lock maximum limit of Range. Set it using up or down arrow keys.

Push set key,

Con (controlling action) will flash with some

controlling action (like ON/OFF, Pi).the controlling action can set by using up or down arrow keys.

"Pi" along with O**n/OFF** will flash simultaneously.. Here one can set control action .Set **"pi"** for proportional action or **"On"** for simple on/off action . Set it by up or down arrow keys.

<u>If pi action is selected then,</u>

Push SET keys,

"Cy-t" (cycle time) will flash with some number. This is cycle time in seconds for proportional logic . .set it by up or down arrow keys. (settable from 1 to 60 Seconds).

Push set key

"P-b"(proportional band) with some number will flash simultaneously. This is