



Temperature Controller

RE 56



Measure



Control



Record



Analyze

Temperature Controller

RE 56



The controller is designed for the temperature control. Controller works directly with the resistance sensors or thermocouple sensors. The controller is equipped with outputs that allows for control and alert signalization. Control output can be programmed for PID or ON/OFF algorithm.

Applications:

- Plastics Industries
- Food Industries
- Dehydration Industries

Product Features:

Programmable input temperature sensors:

- ▶ RTD : PT100(2 or 3 wire)
- ▶ Thermocouple: J,T,K,S,R

Independent Relay output & SSR output:

- ▶ Either Relay or SSR output can be configured to Control output while other output can be used as Alarm Output

Control Output:

- ▶ Control Method : ON-OFF ,PID.
- ▶ Type of control output : Relay or SSR

Alarm Output:

- ▶ Different Alarm modes available.
- ▶ Type of alarm output : Relay or SSR.

Configuration through:

- ▶ Front keys.

Auto Tunning Function

- ▶ Auto tuning of PID Parameters.

Measurement are available on:

- ▶ 3 digit 7 segment display with 14.2 mm digit height

Manual mode

- ▶ Output can be controlled manually.

Timer Function

- ▶ Control Output can be configured for timer function. Timer output can be assigned to following functions
 - 1.Stop Control Output
 - 2.Switch to Manual Mode
 - 3.Start Auto Tunning
 - 4.Stop Auto tuning
- ▶ Alarm Output can be configured to Timer Alarm

Output on Sensor Failure

- ▶ User can set the value for safe operation of process on failure of input sensor

Input Digital filter

- ▶ The time constant of the filter can be set from 0 to 99.9 sec.

Heating / Cooling control

- ▶ Output can be configured as Heating or Cooling control.

Enclosure Protection for dust and water:

- ▶ Conforms to IP 54 for front face as per IEC 60529.

Compliance to International Safety standards

- ▶ Compliance to International Safety standard IEC 61010-1- 2010.



Measure



Control



Record



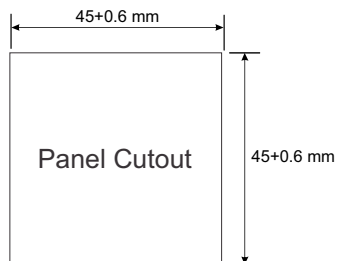
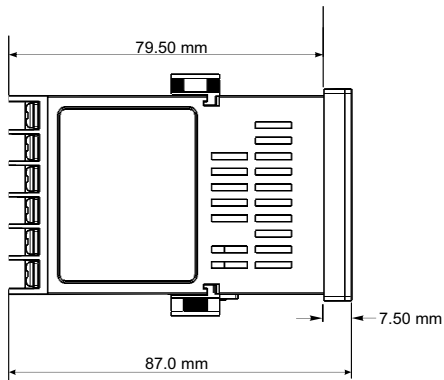
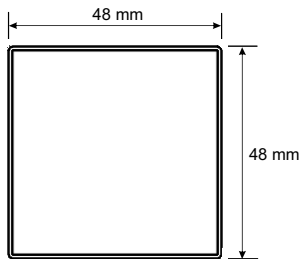
Analyze

Datasheet subject to change without notice

Temperature Controller

RE 56

Dimensions Details :



Technical Specifications:

Input Signals:

Input type	Ranges	
Pt100	-199 ... 850°C	-199 ... 999°F
Fe-CuNi (J)	-100 ... 999°C	-148 ... 999°F
Cu-CuNi (T)	-100 ... 400°C	-148 ... 752°F
NiCr-NiAl (K)	-100 ... 999°C	-148 ... 999°F
PtRh10-Pt (S)	0 ... 999°C	32 ... 999°F
PtRh13-Pt (R)	0 ... 999°C	32 ... 999°F

Measurement time: 0.2 sec

Resolution 1 °

Auxiliary Supply:

Higher Aux 60 V – 280 V AC/DC

Higher Aux supply frequency 45 to 65 Hz range

Higher Aux Nominal Value 230 V AC/DC 50/60 Hz for AC Aux

VA Burden:

Auxiliary Supply burden < 6VA approx.

Types of outputs:

Relay contact SPDT-NO/NC, rated load: 10A,250VAC / 30VDC

SSR drive output 12VDC, maximum load capacity: 40 mA

Accuracy :

Reference Conditions 23°C

RTD 0.1% of range ± 1°C

Thermocouple 0.25% of range (0.5% of range - for R,S) ± 1°C

Influence of Variations

Temperature coefficient 0.025% / Deg

Applicable Standards:

EMC immunity IEC 61326 - 1 : 2012, Table 2 *

Safety IEC 61010-1-2010 , Permanently connected use

IP for water & dust IEC60529

Pollution degree: 2

Installation category: II

*Note:- The instrument continues to operate at a measuring accuracy of within ± 2% of the range during test.



Measure



Control

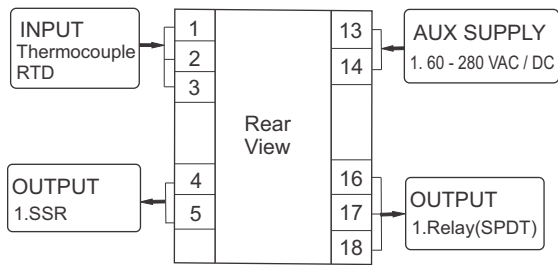


Record



Analyze

Main I/O Function



Technical Specifications:

Isolation:

Protective Class	2
High Voltage Test	
Input+Output+Aux Vs Surface	2.2kV RMS, 50Hz, 1min
Input+SSR Output Vs	1.5kV RMS, 50Hz, 1min
Relay output	
Aux Vs Remaining circuit	2.2kV RMS, 50Hz, 1min

Environmental

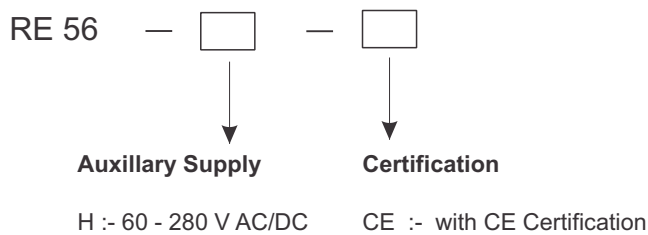
Operating temperature	-10 to +55°C
Storage temperature	-30 to +80°C
Relative humidity	0... 90%RH (non condensing)
Warm up time (Pre-conditioning)	20 minute
Shock (As per IEC60068-2-27)	Half sine wave, Peak acceleration 30g _n (300 m/s ²), duration 18ms.
Vibration	10... 150... 10 Hz, 0.15mm amplitude
Number of Sweep cycles	10 per axis
Enclosure front face	IP 54

Additional Error (Cold Junction Compensation for thermocouple)	≤ 3 °C
---	--------

Dimensions and Weight

Bezel Size	48 mm X 48 mm DIN 43718
Panel Cut-out	45 + 0.6 mm X 45 + 0.6 mm
Weight	Approx. 0.3 Kg

Ordering Information :



Order Code Example:

RE 56 – H

RE 56 temperature controller (48 X 48), Auxiliary supply (60V – 280V AC/DC) without CE certification.



Measure



Control



Record



Analyze



RISHABH

All specifications are subject to change without notice



Measure



Control



Record



Analyze

RISHABH INSTRUMENTS LIMITED

Domestic (India): +91 253 2202028/99 | marketing@rishabh.co.in

International: +91 253 2202004/06/08/99 | global@rishabh.co.in

www.rishabh.co.in