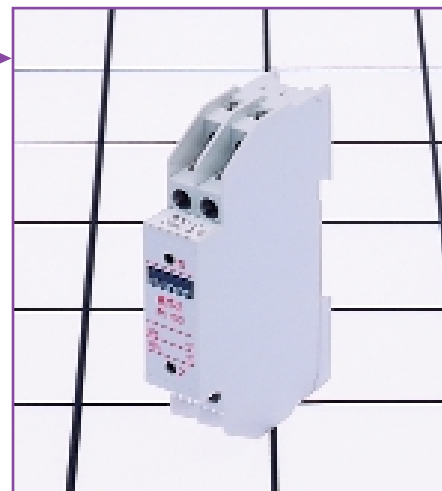


RTD 2 Wire DIN Rail Mounting Transmitter RTT-2

Function: Non-isolating multi-range 2 wire temperature transmitter which will convert an RTD input into a standardised load-independent 4 to 20mA current output, linearly proportional to the measured temperature. The RTT-2 instrument is housed in a low profile polycarbonate plastic enclosure suitable for mounting on TS35 DIN rail. The RTT-2 has excellent lead resistance compensation and PT100 linearisation conforming to BS1904 characteristics. Calibration is performed by means of an internal DIP switch array for coarse settings and two potentiometers brought out to the front panel for fine tuning. The RTT-2 is equipped with "test" terminals which enable monitoring of the output current by measuring the voltage across an internal 10 ohm resistor without breaking the current loop. Options on the RTT-2 include: PT50, PT500, CU10 and NI120 RTD inputs.



TempTrans
CONVERTERS

SPECIFICATIONS

Please note that the following are typical standard ranges. We will manufacture instruments to cater for other ranges too, within certain limitations. Please contact our internal sales department for further clarification.

INPUTS:

Resistance Thermometer
3 wire PT100 to BS1904 and DIN43760 characteristics
100 ohms at 0°C

Options
PT50, PT500, CU10, NI120

Span Temperature
Minimum span temperature 30°C
Maximum span temperature 810°C

Zero Temperature
Minimum zero temperature -55°C
Maximum zero temperature 202°C

Sensor Lead Resistance
Less than 50 ohms (two ways)

Lead Compensation Error
Less than $\pm 0.05^\circ\text{C} / 10$ ohms lead resistance

OUTPUTS:

DC Current
4 to 20mA

Overload
Current limited to 28mA max

Loading
 $R_L \text{ maximum} = (V_{\text{Supply}} - 10) / 0.02$

| | | |
|------|---------------------|-------------------|
| i.e. | V_{Supply} | $R_L \text{ max}$ |
| | 10 Volt | 0 ohms |
| | 12 Volts | 100 ohms |
| | 15 Volts | 250 ohms |
| | 24 Volts | 700 ohms |
| | 30 volts | 1000 ohms |
| | 36 Volts | 1300 ohms |

Input/Output Calibration
Three "Zero" DIP switches
Three "Span" DIP switches
and two fine-tuning potentiometers

Test Terminals
40 to 200mV representing
4 to 20mA

SUPPLY:

Power Supply Voltage
10 to 36 Volt DC
Reverse polarity protected

Supply Variation Effect
Less than $\pm 0.03\%$ of span for full change

Sensor Excitation
Less than 1mA

GENERAL:

Accuracy (including linearity hysteresis and repeatability)
Better than $\pm 0.1\%$ of span

Temperature Coefficient
Better than $\pm 0.15\%$ of span/ $\Delta 10^\circ\text{C}$

Operating Temperature Range
-20 to +70°C

Option
Operating Temperature Range
-30 to +85°C

Storage Temperature Range
-40 to +90°C

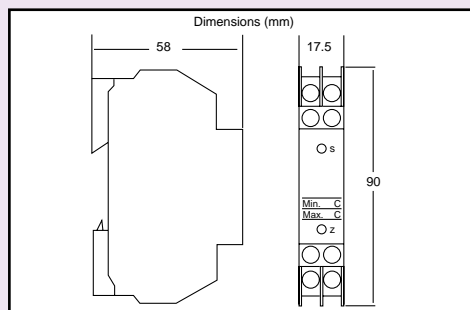
Operating/Storage Humidity Range
5 to 95% RH non-condensing

Mounting
Standard 35mm DIN rail

Protection Level
Box to IP40
Terminals to IP20

Weight
70 gms

MECHANICAL DETAILS



TERMINATION DETAILS

Terminal

- 1 R_{Load} to Power Supply -ve
- 2 Power Supply +ve
- 3 Test +ve
- 4 Test -ve
- 5
- 6
- 7

ORDERING DETAILS

- (a) Give identification code, i.e. RTT-2
- (b) Give details of sensor type, i.e. PT100
- (c) Give details of temperature range, i.e. 0 to 600°C
- (d) Please specify if optional Operating Temperature Range required



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