PT100 plus integral 2 Wire Transmitter   RTP-2

Function: An integral PT100 and 2 wire transmitter that will output a standardised load-independent 4 to 20mA current, linearly proportional to the measured temperature. The RTP-2 is housed in an IP65 polycarbonate plastic enclosure suitable for use in high humidity applications. Calibration is performed by changing two resistors for coarse settings and tweeking two potentiometers, Span and Zero, for fine tuning. Both the resistors and the potentiometers are located inside the housing.

Application Notes: The RTP-2 is ideally suited for use in greenhouses, agricultural applications and climate control systems.

SPECIFICATIONS

INPUTS:

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

Probe Length
100mm

Temperature Range
Minimum temperature –25ºC
Maximum temperature   85ºC

Temperature Span
Minimum temperature span   25ºC
Maximum temperature span 110ºC

OUTPUTS:

DC Current
4 to 20mA

Overload
Current limited to 34mA max

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

i.e.	V_{Supply}	R_L 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
Two coarse range resistors and two fine-tuning potentiometers

SUPPLY:

Power Supply Voltage
10 to 36 Volt DC
Reverse polarity protected

Supply Variation Effect
Less than ±0.03% of span for full change

GENERAL:

Accuracy (including linearity hysteresis and repeatability)
Better than ±0.1% of span

Temperature Coefficient
Better than ±0.15% of span/△ 10ºC

Operating Temperature Range
–25 to +85ºC

Storage Temperature Range
–35 to +85ºC

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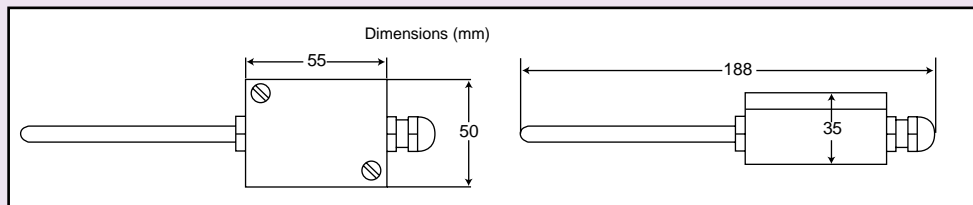5 to 95% RH non-condensing

Mounting
Screw fixing to a wall

Cable Gland
Accepts 3 to 6mm diameter cable – seals to IP65

Protection Level
Box to IP65

Weight
100 gms

MECHANICAL DETAILS

Dimensions (mm)

55   50   188   35

TERMINATION DETAILS

Terminal
1   R_{Load} to Power Supply –ve
2   Power Supply +ve

ORDERING DETAILS

(a)   Give identification code, i.e. RTP-2
(b)   Give details of temperature range, i.e. 0 to 50ºC

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