RS PRO

Features

- SUITABLE FOR Pt100 TEMPERATURE SENSORS

- 3 WIRE (0 to 10) VOLT OUTPUT

- PC PROGRAMMABLE TEMPERATURE RANGE
- HIGH STABILITY

- CONNECTION HEAD or RAIL MOUNT

RS PRO IN-HEAD TEMPERATURE TRANSMITTER, (0 to 10) V OUTPUT

RS Stock No.: 0458745

RS Professionally Approved Products bring to you professional quality parts across all product categories. Our product range has been tested by engineers and provides a comparable quality to the leading brands without paying a premium price.

Product Description

This RS PRO article is a cost-effective digital in-head transmitter that accepts Pt100 temperature sensors and converts sensor output over a configured range to a standard industrial (0 to 10) V control signal.

The output is linear to temperature.

PC configuration allows the user to select Range and Burnout direction, without requiring calibration equipment. Configuration Kit – Article 0458750

Configuration is performed quickly using our USB port-driven configurator by simply connecting two clips to the products power terminals and following the software instructions. Configuration Kit – Article 0458750

Calibration set up may be saved as a file on the PC for later use.

The transmitter will be shipped with the default range of (0 to 100) °C and upscale burnout.

INPUT		SPECIFICATIONS @20°C
Type/ Function	Range/ Description	Accuracy/ Stability
Pt100 2 or 3 wire	(-200 to 850) °C	± 0.2°C ± 0.05 % of reading *2
Thermal drift	Zero at 20°C	±0.02°C/°C
Minimum span	25°C *1	
Linearization	BS EN 60751(IEC 751) standard / JISC 1604	
Excitation current	Approximately	1 mA
Lead resistance effect	0.002°C / Ohms	
Maximum lead resistance	20 Ohms per leg	
*1 Any span may be selected; full accuracy is only guaranteed for spans greater than the minimum recommended		
*2 Basic measurement accuracy includes the effects of calibration, linearization and repeatability		

OUTPUT		SPECIFICATIONS @20°C
Type/ Function	Range/ Description	Accuracy/ Stability/ Notes
Three wire voltage	(0 to 10) Volts	(V output /2000) or 3 mV (Whichever is the greater)
Thermal drift	Zero at 20°C	1 mV /°C Typical (2 mV /°C Max)
Maximum output Voltage	10.5 V	In high-burnout condition
Minimum output Voltage	< 0.0 V	In low-burnout condition
Supply voltage effect	0.05 mV / V	
Minimum output load	5000 Ohms	2 mA @ 10V
Supply	(15 to 30) V DC	SELV

USB USER INTERFACE

Type/ Function	Range/ Description	Notes
Configuration hardware	USB configuration module	USB–CONFIG–MK3
Configuration software	USBSpeedLink	
Sensor configuration	Temperature range for (0 to 10) V retransmission Sensor offset ~~Power to voltage~~	°C or °F °C or °F
Read live data	Temperature Output	°C or °F Volts
Save/ Open configuration		To/ From file

GENERAL

Function	Description
Update time (Input)	500 ms
Response time (Output)	1 second to 70% of final value
Start–up time	4 seconds
Warm–up time	60 s to full accuracy
Default configuration	Pt100 (0 to 100) °C, upscale burnout
Connection terminals	3,4,5 (RTD) input; 1(+),2 (–) supply; terminal 6 (V out)

ENVIRONMENTAL

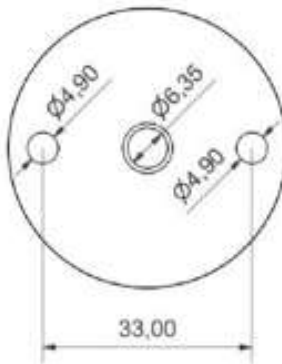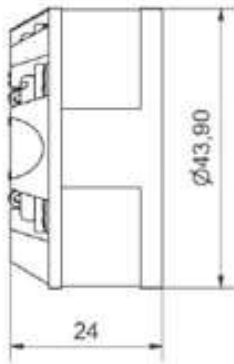| Function	Description
Temperature	Operating/Storage (–30 to 70) °C / (–40 to 85) °C
Humidity	Operating/Storage (10 to 90) %RH non–condensing
Protection requirement	>= IP65 for housing
USB configuration ambient	To be configured within (10 to 30) °C

MECHANICAL

Function	Description
Dimensions	43.9 mm diameter; 24 mm height
Fixing centres	2 x 4.9 mm holes on 33 mm centres
Centre hole	6.35 mm hole for wiring aid
Weight	31 g
Terminals	Screw clamp

APPROVALS

EMC	BS EN 61326: Note – Compliance tested with 3 m input wires
Ingress protection	BS EN 60529
RoHS Directives 2 & 3	2011/65/EU & EU 2015/863, and the UK designated standards

RS PRO

Dimensions in mm

Fixing holes 2 x Ø5.5 mm, Centre hole Ø4.5 mm

Ø43,90

24

Ø4,90

Ø6,35

Ø4,90

33,00