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# Temperature Transmitter

## Features

- ACCEPTS PT100, Cu100, Cu53, Ni100, Ni120 SENSORS
- (0 to 10) mA THREE WIRE OUTPUT
- USER OUTPUT TRIM (ZERO and SPAN)
- PC CONFIGURATION USING USB PORT
- LIVE DATA CAN BE VIEWED ON AN ANDROID PHONE OR TABLET

# RS PRO DIN RAIL WITH RTD (Pt100) I/P AND VOLTAGE O/P

RS Stock No.: 0458742




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

# Temperature Transmitter

This RS PRO product is a DIN rail mounted Voltage Output temperature transmitter.
It has been designed to accept common RTD temperature sensor inputs and provide the user with a standard three wire (0 to 10) volt output signal.
The output signal is linear to temperature.
Designed for ease of use, our latest USB interface is fitted for quick and easy configuration.
Connect a standard USB cable between the product and your PC.
Our free configuration software will guide you through any changes you wish to make.
To further help save time, the product does not need to be wired to a power supply during the configuration process, it is powered via the USB interface from your PC.

| SENSOR INPUT | | SPECIFICATIONS @20°C |
|---|---|---|
| RTD | | |
| **Type** | **Range** | **Accuracy/ Stability** |
| PT100 (IEC) | (-200 t0 850) °C | 0.2°C + (°0.05% of reading) Plus sensor error |
| PT100 0.391 | (-200 to 630) °C | |
| PT100 0.392 | (-200 to 630) °C | |
| PT100 0.393 | (-200 to 630) °C | |
| Cu53 | (-40 to 180) °C | |
| Cu100 | (-80 to 260) °C | |
| Ni100 | (-70 to 180) °C | |
| Ni120 | (-70 to 180) °C | |
| Excitation current | | 660 uA |
| Maximum lead resistance | 2 or 3 wire | 20 □ |
| Thermal stability | | ± 0.02 °C / °C |

| OUTPUT | | SPECIFICATIONS @20°C |
|---|---|---|
| **Type/ Function** | **Range/ Description** | **Accuracy/ Stability/ Notes** |
| Three wire voltage | (0 to 10) V | (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 |
| Minimum output load | 5000 Ohms | 2mA @ 10V |
| Supply | (15 to 30) V DC | SELV |
| Power | | < 1 W full power |

| USB USER INTERFACE | | |
|---|---|---|
| **Type/ Function** | **Range/ Description** | **Notes** |

# Temperature Transmitter

| | | |
|---|---|---|
| Configuration hardware | | USB A to mini B lead |
| Configuration software | USBSpeedLink | |
| Sensor configuration | Sensor type | RTD list |
| | Temperature range for (0 to 10) V Output | °C or °F |
| | Sensor offset | ±10 °C or ±18°F |
| | Burnout Voltage | Upscale, downscale or user-set |
| Pre-set temperature (diagnostics) | Any within sensor range | °C or °F |
| Pre-set output voltage (diagnostics) | Any within output range | V |
| Tag | | 20 characters |
| Button function | | Trim, active range, off |
| Read live data | Temperature<br>Output | °C or °F<br>V |
| Save/ open configuration | | To/ from PC file |

## USER PUSH BUTTON INTERFACE

| Function | Description | |
|---|---|---|
| Active range | Range 0 Volt and 10 Volt points against live input | |
| User trim | Adjust at maximum and minimum input range value | Offset (0 V) and span (10 V) adjustment |

## GENERAL

| Function | Description |
|---|---|
| Response time | 500 ms to 70% of final value |
| Start-up time | 8 s |
| Warm-up time | 120 s to full accuracy |
| Default configuration | PT100 (0 to 100) °C, upscale burnout |
| LED (red) | If Voltage output < -0.1% or > 100.1 % LED ON |
| Protection | Reverse connection |

## ENVIRONMENTAL

| Function | Description |
|---|---|
| Ambient temperature | Operating (-30 to 70) °C<br>Storage (-40 to 85) °C |
| Ambient humidity | Operating/Storage (10 to 90) %RH non-condensing |
| Protection requirement | Device must be installed in an enclosure offering >IP65 Protection |
| USB configuration ambient | (10 to 30) °C |

## MECHANICAL

| Function | Description |
|---|---|
| Dimensions | 12.5 mm width, 56.4 mm depth from rail, 90 mm height |

# Temperature Transmitter

| | |
|---|---|
| Enclosure | DIN rail mount |
| Material | Polyamide 6.6 self-extinguishing UL94-HB: Grey |
| Connections | Screw terminals 2.5 mm wire maximum |
| Weight | 60 g approximate |

## APPROVALS

| | |
|---|---|
| EMC | BS EN 61326: Note - Compliance tested with 30 m input wires |
| Ingress protection | BS EN 60529 |
| RoHS Directives 2 & 3 | 2011/65/EU & EU 2015/863, and the UK designated standards |

Mechanical

**Dimensions in mm**

