

T/PS PRT Temperature Sensor



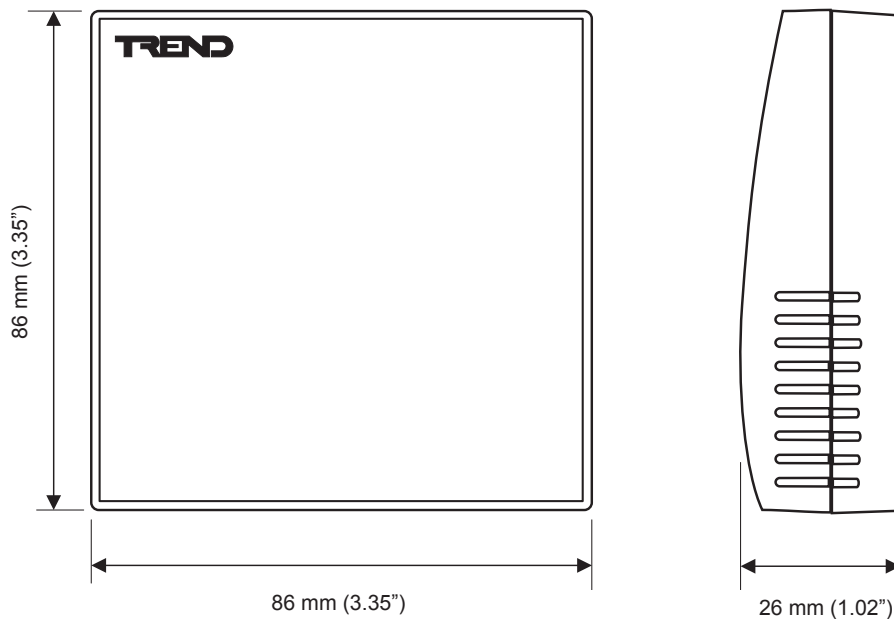
Description

The T/PS PRT Room Temperature sensor provides an accurate way of measuring room temperature, in a low profile enclosure designed for good thermal response. The electronics are fully enclosed in a well ventilated housing which clips onto a separate backplate for ease of installation.

Features

- Pt 100 accuracy.
- 4 to 20 mA output.
- Precalibrated for ease of commissioning.

Physical



FUNCTIONALITY

Housing

The T/PS is suitable for mounting on a wall, and can be mounted on either a standard electrical back box or a flat surface.

Sensor

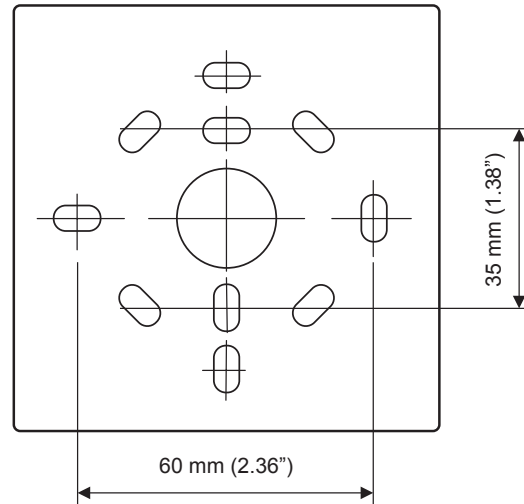
The T/PS sensor provides a standard PRT sensing element ($100\ \Omega \pm 0.1\% @ 0\ ^\circ\text{C}$ (32°F)). The output requires a 24 Vdc supply and provides a 4 to 20 mA signal over the range $-10\ ^\circ\text{C}$ to $+40\ ^\circ\text{C}$ (14°F to $104\ ^\circ\text{F}$).

INSTALLATION

Choose an accessible location for the sensor where the surrounding air temperature is representative of the room. The backplate is

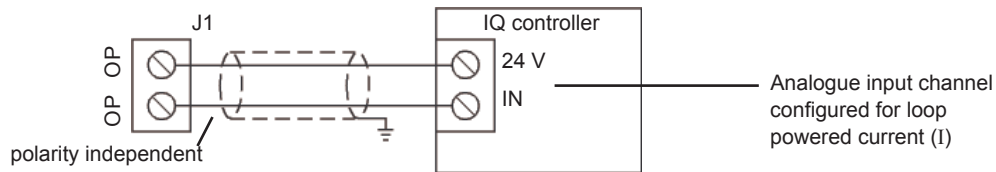
designed so that it can be mounted on a recessed wiring box, or surface mounted with mini-trunking by knocking out a section of one side wall.

- Choose location
- Mount sensor (via two screws - minimum)
- Connect terminals
- Assemble sensor unit
- Set up strategy
- Test




For full installation details see T/PS Installation Instructions TG200760.

CONNECTIONS



DISPOSAL

COSHH (Control of Substances Hazardous to Health - UK Government Regulations 2002) ASSESSMENT FOR DISPOSAL OF T/PS. No parts affected.

RECYCLING.  All plastic and metal parts are recyclable. The printed circuit board may be sent to any PCB recovery contractor to recover some of the components for any metals such as gold and silver.



WEEE Directive:

At the end of their useful life the packaging, product, and battery (if fitted) should be disposed of by a suitable recycling centre.
Do not dispose of with normal household waste.
Do not burn.

ORDER CODES

T/PS PRT Space Temperature Sensor

SPECIFICATIONS

PRT range	: -10 (14°F) to +40 °C (104 °F)
Accuracy PRT element	: Platinum RTD, 100 Ω @ 0 °C (32 °F) DIN EN60751 (according to IEC 751) Class A. dt= ±(0.15+0.002. t) °C
Accuracy transmitter	: 0.2 % span.
Output	: 4 to 20 mA 2 wire
Ambient limits :	: -10 °C (14 °F) to +50 °C (122 °F)
Enclosure material	: Flame retardant (V0) ABS
Dimensions	: 86 mm (3.35") x 86 mm (3.35") x 26 mm
Connections	: 1 part screw terminals for 0.5 to 2.5 mm ² (14 to 20 AWG) cable
Supply Voltage	: 24 Vdc ±15%
Current	: 4 to 20 mA

Input Channel and sensor scaling

For IQ controllers link input channel for current, I, and set up the sensor type scaling; the recommended method of setting the sensor type scaling is to use SET.

For all IQ2 series controllers with firmware of version 2.1 or greater, or IQ3/4 series controllers, one of the following SET Unique Sensor References should be used:

PRT I -10+40 (for °C)

PRT I +14+104 F (for °F)

Alternatively use sensor scaling mode 5, characterise, and enter the scaling manually as defined in the table below.

Note that for IQ3/4 the scaling mode and exponent (E) don't need to be set up.

Units		°C	°F
Y	Input type	2 (current)	
E	Exponent	3	
U	Upper	40	104
L	Lower	-10	14
P	Points	2	
x	I_x	O_x (°C)	O_x (°F)
1	4	-10	14
2	20	40	104

For all other IQ controllers see the Sensor Scaling Reference Card, TB100521A, for scaling settings.

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