

PRT Outside Air Temperature Sensor

PRT Outside Air Temperature Sensor



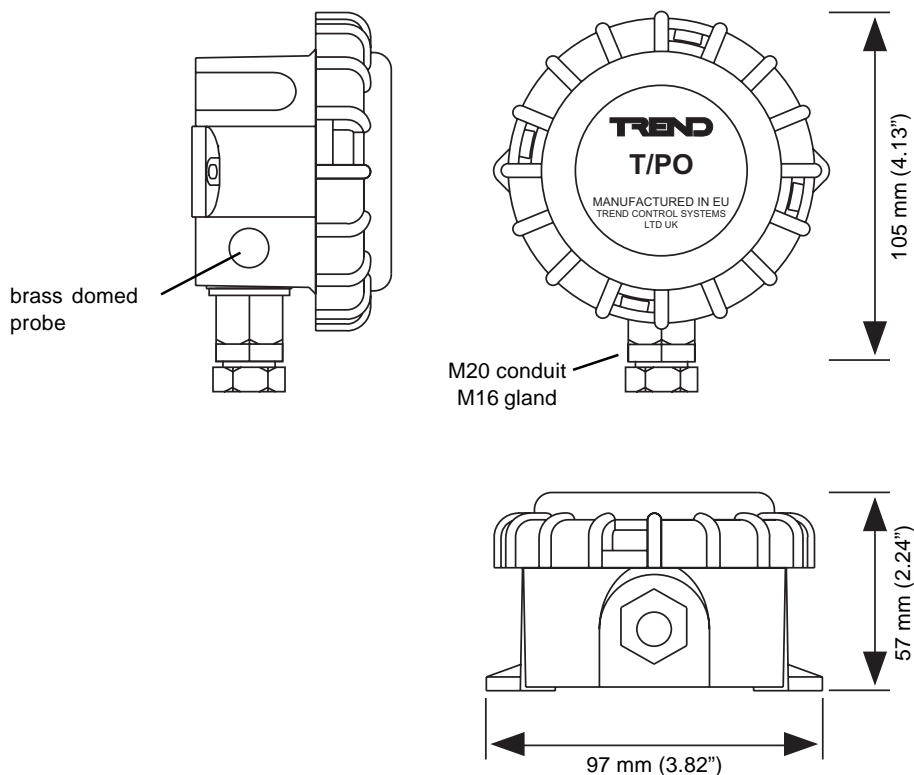
Description

Highly accurate PT100 sensor for accurate measurement of outside air temperature. 4 to 20 mA electronics are mounted in an IP67 rated housing which has an M20 conduit entry fitted with an M16 cable gland. Wide temperature range, -40 °C (-40 °F) to +50 °C (122 °F) is suitable for any ambient conditions.

Features

- PT100 accuracy
- Fast response
- 4 to 20 mA output
- Brass probe
- IP67(NEMA6) housing
- M20 conduit entry/M16 cable gland

Physical

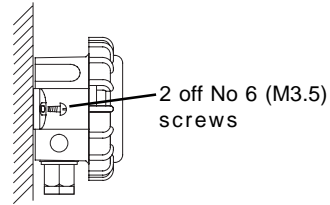


INSTALLATION

MECHANICAL

Choose an accessible location on a north facing wall (unless in the southern hemisphere), ensuring that the sensor is sited away from direct sunlight, and any heat sources which may come from the building - e.g. heating flues, open windows etc. Do not install the sensor in a location where it will be exposed to temperatures outside the sensor's ambient temperature range (-40 °C to +50 °C, -40 °F to 122 °F). The sensor's measurement range is also -40 °C to +50 °C (-40 °F to +122 °F).

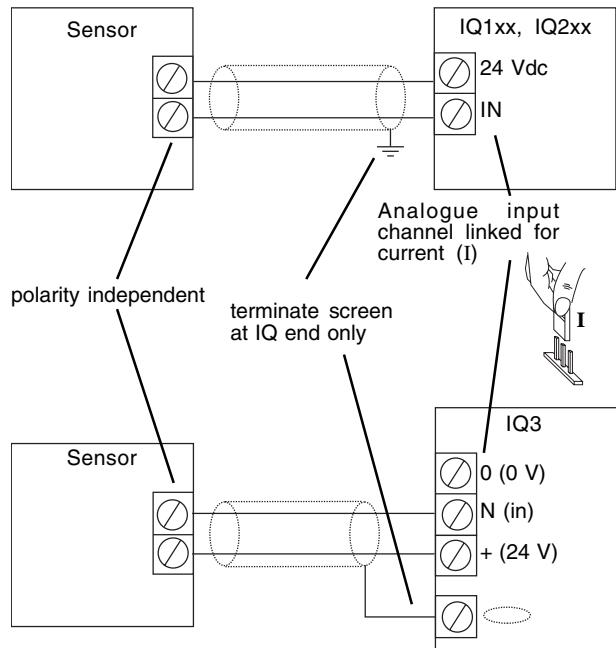
Mark the position of the 2 mounting holes with 85 mm (3.35") fixing centres. Drill holes in the positions marked. Mount the sensor to the wall using suitable wall plugs and 2 off No 6 (M3.5) screws.



CONNECTIONS

Connect to the IQ controller as below:

- (1) Remove quarter turn quick release box lid and unplug 2 part connector.
- (2) Insert cable through cable gland and connect signal wires as shown using either polarity.
- (3) The cable screen should be terminated at the controller.
- (4) Configure controller input channel for current (I).



Note: The IP67, NEMA6 rating is only achieved if correctly installed with cable gland, or conduit connection, fully tightened.


Note: If connecting to an IQ22x controller (including /ADL and /OC), do not connect to C (+24V), instead connect to AUX+ (+24V).

Full installation details are given in the T/PO installation instructions TG200241A.

ORDER CODE

T/PO Outside Air PRT Temperature Sensor -40 °C to +50 °C (-40 °F to +122 °F)

DISPOSAL



WEEE Directive :

At the end of their useful life the packaging and product should be disposed of by a suitable recycling centre.

Do not dispose of with normal household waste.

Do not burn.

SPECIFICATIONS

| | |
|----------------------|--|
| Sensing Element | :PRT, 100Ω ± 0.1 % @ 0 °C BS1904-1980 Class B |
| Measurement range | :-40 °C to +50 °C (-40 °F to +122 °F) |
| Output Signal | :4 to 20 mA |
| Accuracy transmitter | :0.2 % span |
| Supply voltage | 24 Vdc ±15 % |
| Ambient limits | :-40 °C to +50 °C (-40 °F to +122 °F) |
| Humidity | :0 to 90 % RH non condensing |
| Cable entry | :M20 conduit (or M16 cable gland) |
| Connections | :2 part screw terminal for 0.5 to 2.5 mm ² cross section area (14 to 20 AWG) cable |

Dimensions :57 mm (2.24") x 105 mm (4.13") max diameter

Material
enclosure :impact resistant ABS
probe :brass

Environmental protection :IP67, NEMA6

Input channels 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 series controller, the following SET Unique Sensor References should be used:

PRTI -40 +50 (°C)

PRTI -40 +122 F (°F)

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

| Y | input type | 2 (current) | |
|----------|------------|-------------|-----|
| E | Exponent | 3 | |
| | Units | °C | °F |
| U | Upper | 50 | 122 |
| L | Lower | -40 | -40 |
| P | Points | 2 | 2 |
| x | lx | Ox | Ox |
| 1 | 4 | -40 | -40 |
| 2 | 20 | 50 | 122 |

System Accuracy (including controller)

:±0.4 °C, ±0.72 °F (-40 °C to + 50 °C, -40 °F to 122 °F)

For all other IQ Controllers see the Sensor Scaling Reference Card, TB100521A.

Manufactured for and on behalf of the Environmental and Combustion Controls Division of Honeywell Technologies Sàrl, Ecublens, Route du Bois 37, Switzerland by its Authorized Representative, Trend Control Systems Limited.

Trend Control Systems Limited reserves the right to revise this publication from time to time and make changes to the content hereof without obligation to notify any person of such revisions or changes.

Trend Control Systems Limited

P.O. Box 34, Horsham, West Sussex, RH12 2YF, UK. Tel:+44 (0)1403 211888 Fax:+44 (0)1403 241608 www.trend-controls.com

Trend Control Systems USA

6670 185th Avenue NE, Redmond, Washington 98052, USA. Tel: (425)897-3900, Fax: (425)869-8445 www.trend-controls.com