

Stack Temperature Transmitter

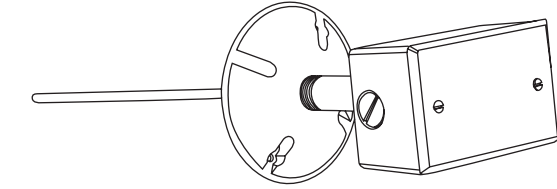
Installation Instructions

INTRODUCTION

The single point rigid stack temperature transmitter utilizes a precision, high temperature rated platinum RTD sensor that is encapsulated in 6.35 mm (0.25") OD, 304 series stainless steel probe and is available in various lengths. All probes provide excellent heat transfer, fast response and resistance to moisture penetration. A weatherproof enclosure is provided for wire termination. A transmitter that provides a high accuracy signal with excellent long term stability, low hysteresis and fast response is provided.

BEFORE INSTALLATION

Read these instructions carefully before installing and commissioning the temperature transmitter. Failure to follow these instructions may result in product damage. Do not use in an explosive or hazardous environment, with combustible or flammable gases, as a safety or emergency stop device or in any other application where failure of the product could result in personal injury. **Do not exceed the device ratings.**



MOUNTING

The stack temperature transmitter installs directly into an industrial stack with several lengths available for a wide range of widths/diameters. Select a suitable installation area in the side of the stack. To achieve the best reading, do not place in an area where air stratification may be present. Avoid areas where the sensor is exposed to vibrations or rapid temperature changes.

Once a suitable spot is selected, drill a 9.5 - 12 mm (3/8" - 1/2") hole for the probe.

Slide the probe in the drilled hole until the mounting bracket is flush against the stack. The airflow direction is not important. Secure the mounting bracket to the stack with two #10 x 25 mm (1") self tapping screws (not provided). Tighten screws until the mounting bracket is tight against the stack and there is no movement of the enclosure as shown in Figure 1.

Unscrew the cover using a Phillips screw driver as shown in figure 2.

A 1/2" NPT threaded connection hole is provided on the side of the enclosure. Screw the EMT connector in until tight. See Figure 3. It is recommended that steel conduit be used.

Make wiring connections as per the "Wiring" illustrations on Page 2.

Screw the cover to the enclosure using a Phillips screw driver, ensure the cover is secured tightly.

Figure 1

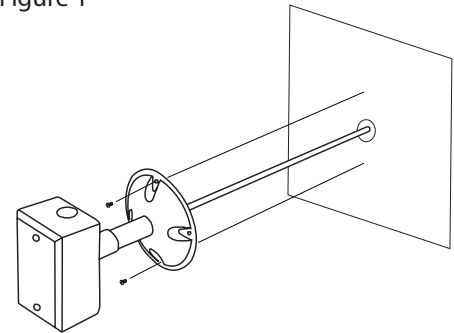


Figure 2

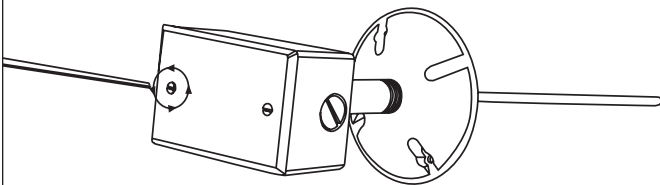
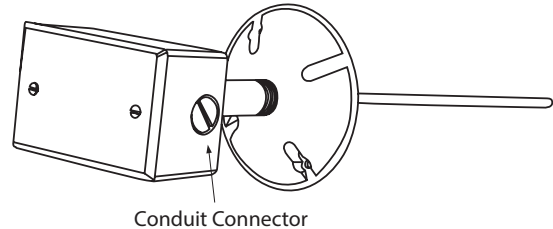
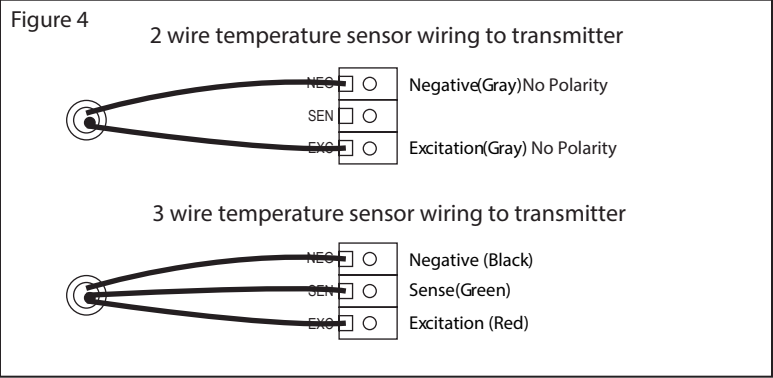
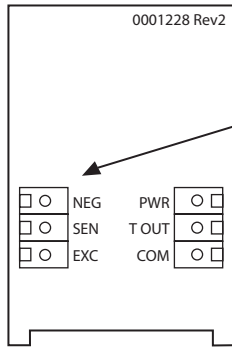


Figure 3



WIRING

- Deactivate the 24 Vac/dc power supply until all connections are made to the device to prevent equipment damage.
- Use 14-22 AWG shielded wiring for all connections and do not locate the device wires in the same conduit with wiring used to supply inductive loads such as motors. Make all connections in accordance with national and local codes.
- The temperature transmitter comes with the temperature sensor pre-wired to the transmitter board. If removal is required for installation then it may be re-wired as shown in Figure 4.
- Pull at least six inches of control wire into the enclosure, then complete the wiring connection according to the wire diagram for the applicable power supply and output signal type as shown in Figure 5.
- Connect the DC positive or the AC voltage hot side to the PWR terminal. For voltage output or AC power, the supply Common is connected to the COM terminal. The device is reverse voltage protected and will not operate if connected backwards. It has a half-wave power supply so the supply Common is the same as the signal Common. See Figure 5.
- The analog output is available on the OUT terminal. Check the controller Analog Input to determine the proper connection before applying power as shown in Figure 5.
- Once all connections are made and checked, power can be applied.



SPECIFICATIONS

Sensor..... 100 Ω Platinum RTD or 1000 Ω Platinum RTD
 Wire wound, 3 wire, IEC 751, 385 Alpha

Sensor Accuracy..... ±0.3°C (±0.54°F) @ 0°C (32°F)

Probe Temperature Range..... -100 to 600°C (-148 to 1112°F)

Wire Material..... 22 AWG, Fibreglass jacket

Probe Material..... 304 series stainless steel

Probe Diameter..... 6.35 mm (0.25")

Output Signal..... 4-20 mA current loop, 0-5 Vdc, or 0-10 Vdc (factory configured)

Transmitter Accuracy..... ±0.1% of span, including linearity

4-20 mA loop power supply. 15-35 Vdc or 22-32 Vac

Minimum Current Loop..... 2 mA nominal (occurs with shorted sensor)

Maximum Current Loop..... 22.5 mA nominal (occurs with open sensor)

Maximum Loop Load..... >600 Ω

0-5 Vdc Power Supply..... 10-35 Vdc or 10-32 Vac

0-10 Vdc Power Supply..... 15-35 Vdc Or 15-32 Vac

Maximum Current (Voltage). 5 mA nominal

Maximum Output (Voltage). Limited to <5.5 Vdc for 0-5 Vdc, <10.5 for 0-10 Vdc

Input Voltage Effect..... Negligible over specified operating range

RFI Rejection..... Good RFI rejection of normal frequencies

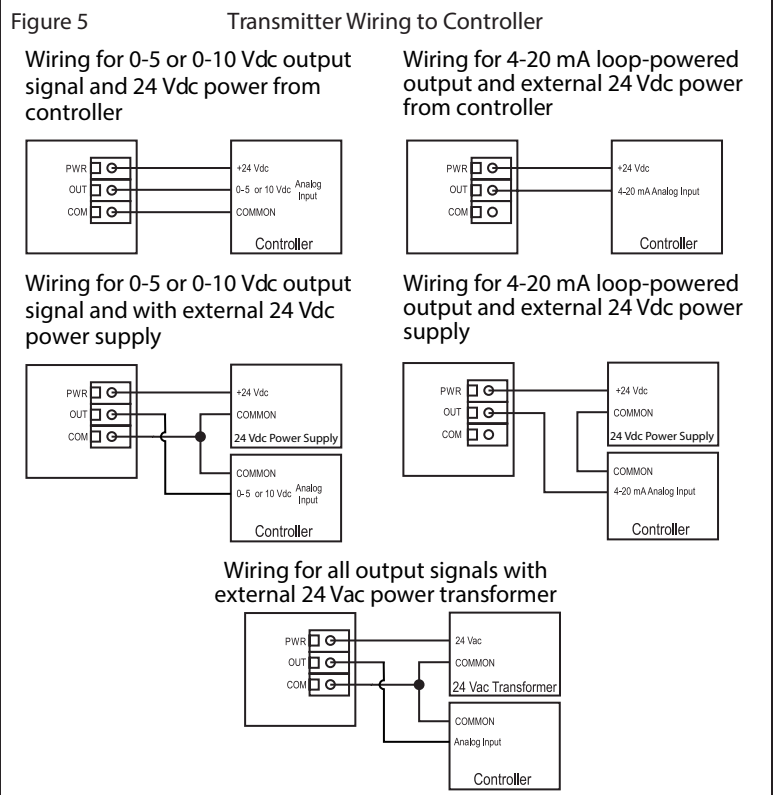
Protection Circuitry..... Reverse voltage protected and output limited

Ambient Conditions..... 0 to 70°C (32 to 158°F), 0 to 95 %RH non-condensing

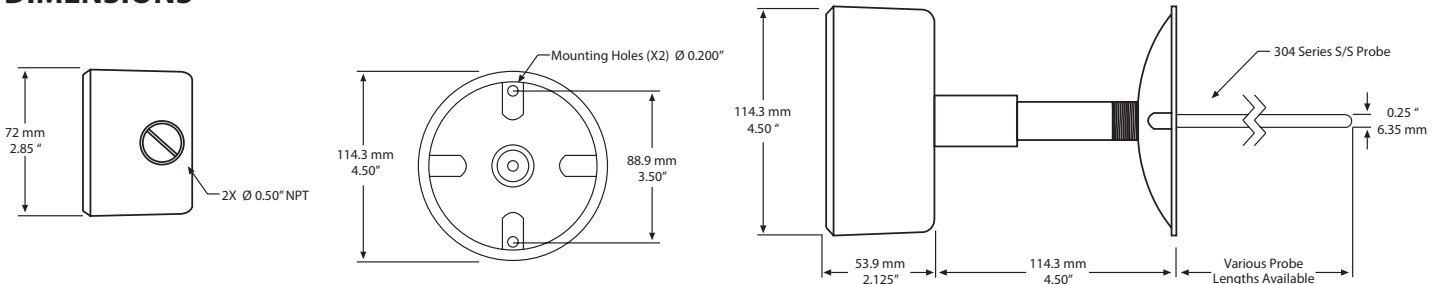
Enclosure..... Cast aluminum IP64 (NEMA 3X)

Wiring Connections..... Screw terminal block (14 to 22 AWG)

Country of Origin..... Canada



DIMENSIONS



PRINTED IN CANADA