

Introduction

The single point strap-on temperature sensor incorporates a precision platinum RTD temperature sensor that is attached to a 38 mm x 38 mm (1.5" x 1.5") aluminum plate and adhered to a 38 mm x 25.4 mm (1.5 x 1") compressible foam. A 254 mm (10") S/S Pipe clamp is provided to secure the assembly to various sizes of pipe.

Before Installation

Read these instructions carefully before installing and commissioning the temperature thermostat. 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. **Take electrostatic discharge precautions during installation and do not exceed the device ratings.**

Mounting

The strap-on sensor installs directly onto any pipe where an immersion sensor with thermowell can't be installed.

Once a suitable spot is selected, remove a small block of insulation if present. It is recommended that thermal compound be used to improve heat transfer. Spread on the pipe where sensor plate will be located.

Open the worm gear clamp by swiveling the worm gear away from the clamp and pull the clamp apart, as shown in Figure 1.

Place the sensor plate on the selected mounting area and wrap clamp around the pipe. Re-insert clamp under the worm gear and pull until snug. Lock in place by swiveling the worm gear towards the clamp. Tighten worm gear clamp by using a standard screw driver or hex nut driver as shown in Figure 2.

The sensor cover is secured with 4 rotating latches. Remove the cover by rotating the latch using a Phillips screwdriver. See Figure 3.

Feed the conduit or cable gland fitting through the provided hole in bottom of enclosure as show in Figure 4. It is recommended that weatherproof conduit or cable gland fittings be used.

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

Replace cover and secure with the 4 rotating latches.

Figure 1

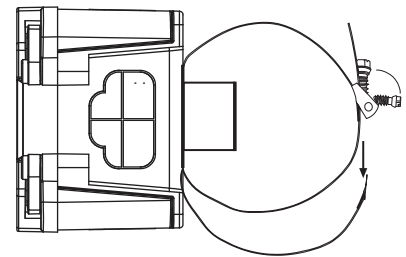


Figure 2

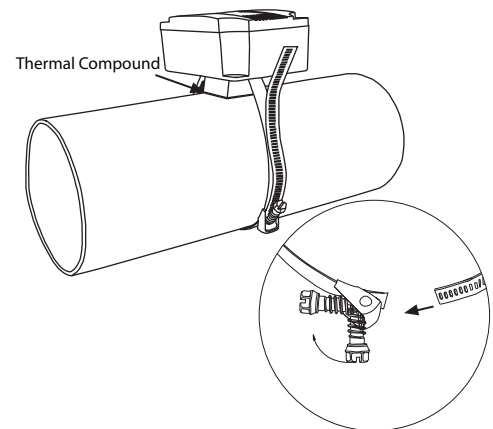


Figure 3

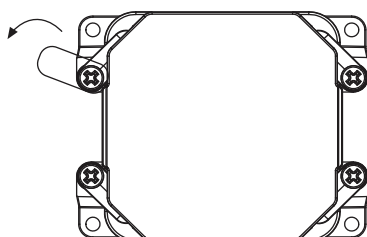
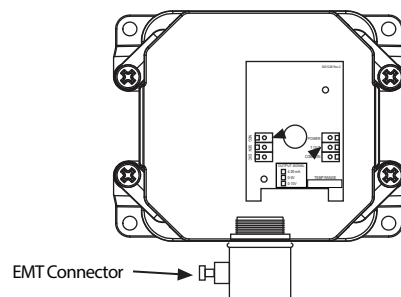


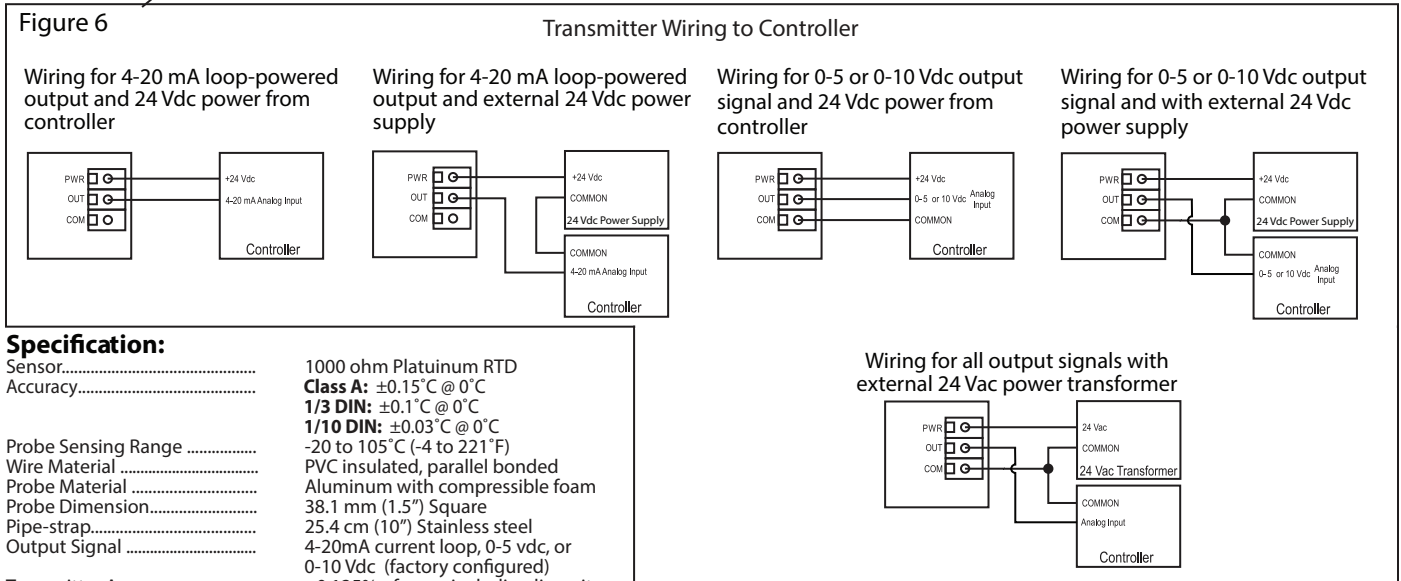
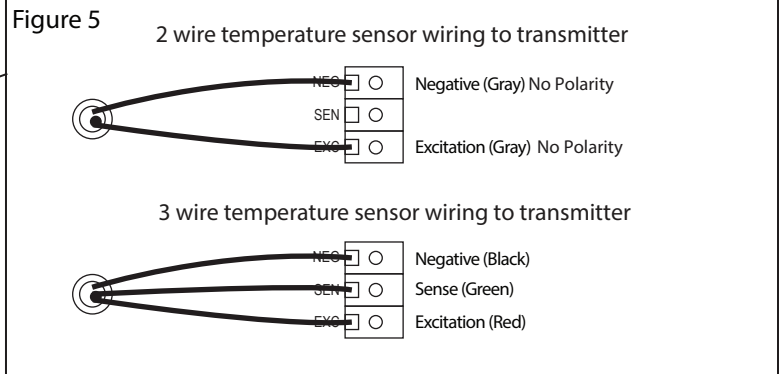
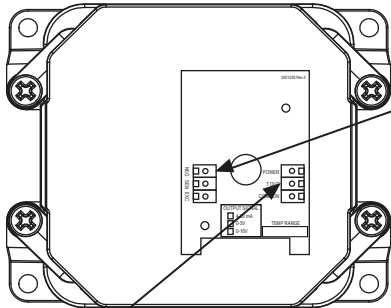
Figure 2

Figure 4



Wiring

- Deactivate the 24 Vac/dc power supply until all connections are made to the device to prevent electrical shock or 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 5.
- 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 6.
- Once all connections are made and checked, power can be applied.



Specification:

Sensor.....	1000 ohm Platinum RTD
Accuracy.....	Class A: $\pm 0.15^{\circ}\text{C}$ @ 0°C 1/3 DIN: $\pm 0.1^{\circ}\text{C}$ @ 0°C 1/10 DIN: $\pm 0.03^{\circ}\text{C}$ @ 0°C
Probe Sensing Range	-20 to 105°C (-4 to 221°F)
Wire Material	PVC insulated, parallel bonded
Probe Material	Aluminum with compressible foam
Probe Dimension.....	38.1 mm (1.5") Square
Pipe-strap.....	25.4 cm (10") Stainless steel
Output Signal	4-20mA current loop, 0-5 vdc, or 0-10 Vdc (factory configured)
Transmitter Accuracy	$\pm 0.125\%$ 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 loop Current	22.5 mA nominal (occurs with open sensor)
Maximum Loop Load	>600 ohms
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 Vdc 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 Operating Range	-40 to 85°C (-40 - 185°F), 0 to 95% RH non-condensing
Enclosure	PVC, IP65 (NEMA 4X)
Wiring Connections	Screw terminal block (14 to 22 AWG)

Dimensions:

