The Series BTT Temperature Transmitter can be used for the following applications: monitoring the temperature inside air ducts for HVAC, transmitting temperature inside water lines for chillers, or measuring the outside air temperature of any new or existing facility. Mounting configurations include duct, immersion, and outside air. For duct and immersion models, probes can be ordered from 2.5” up to 18” in length. The OSA models can be ordered with an optional radiation shield that allows the sensor to be mounted in direct sunlight.

**SPECIFICATIONS**

- **Temperature Sensor:** Pt1000 RTD.
- **Range:** -40 to 140°F (-40 to 60°C) or 32 to 212°F (0 to 100°C) depending on model.
- **Temperature Limits:** Ambient: -40 to 140°F (-40 to 60°C); Process: -40 to 140°F (-40 to 60°C) or 32 to 212°F (0 to 100°C) depending on model.
- **Accuracy:** ±0.5°C @ 25°C.
- **Thermal Effect:** ±0.01%/°C.
- **Response Time:** 100 msec.
- **Wetted Materials:** All models: 304 SS (probe), polycarbonate (housing); Duct and immersion models: Neoprene (gasket); Outside air models: Nylon (insert), silicone (O-ring).
- **Process Connection:** 1/2˝ NPS (immersion models only).
- **Electrical Connection:** Removable terminal block.
- **Conduit Connection:** PG11 and PG16 knockout.
- **Probe Lengths:** 2.5 to 18˝ (depending on configuration).
- **Output Signal:** 4-20 mA or 0-10 VDC (depending on model).
- **Enclosure Rating:** NEMA 4X (IP66) (immersion models require thermowell).
- **Weight:** 5.11 oz (145 g) (duct/immersion); 8.4 oz (238 g) (OSA without radiation shield); 1 lb 7.4 oz (663.4 g) (OSA with radiation shield).
- **Agency Approvals:** CE.
Duct Mount
The transmitter should be mounted in a location that receives adequate air flow for proper operation. The transmitter should be mounted such that the conduit connection points down to prevent moisture from entering.
1. Drill a 0.26˝ diameter hole into the duct at the desired location.
2. Insert the transmitter probe through the hole such that the mounting flange is flush to the duct.
3. Use two #8 x 1/2˝ pan head sheet metal screws to attach the mounting flange to the duct. Do not over tighten.
4. Twist off the top cover to access wiring terminals.
5. Proceed with wiring according to Figure 1 or Figure 2.
6. Replace top screw cover.

Immersion Mount
The transmitter should be mounted to a thermowell since the process connection is not sealed against water ingress. It should also be mounted such that the conduit connection points down to prevent moisture from entering.
1. Before mounting the transmitter, mount the thermowell to the pipe.
2. Slide the temperature sensor into the thermowell.
3. Hand tighten the plastic threaded connection of the sensor into the thermowell.
4. Twist off the top cover to access the wiring terminals.
5. Proceed with wiring according to Figure 1 or Figure 2.
6. Replace top screw cover.

OSA (Outside Air)
The transmitter should be mounted under an eave, shield, or in an area that is out of the elements or direct sunlight. The transmitter should be mounted with the sensor pointing down to prevent water collection in the sensor cavity.
1. Remove the cover plugs from the face of the unit and the top cover.
2. Position the transmitter where it is to be mounted and mark the mounting holes in each corner of the housing.
3. Drill or punch out marked locations.
4. Place the transmitter box over mounting holes on wall and align. Install wall mount screws (not provided) in mounting holes.
5. Proceed with wiring according to Figure 1 or Figure 2.
6. Replace cover and cover plugs on the face of the unit.

OSA (Outside Air with Radiation Shield)
1. Position the transmitter where it is to be mounted and mark the mounting holes.
2. Drill or punch out marked locations.
3. Place the transmitter box over mounting holes on wall and align. Install wall mount screws (not provided) in mounting holes.
4. Remove the cover plugs from the face of the unit and the top cover.
5. Proceed with wiring according to Figure 1 or Figure 2.
6. Replace cover and cover plugs on the face of the unit.

Wiring
The Series BTT Temperature Transmitter can be ordered for current or voltage outputs. For current output models, the supply power must be between 13-36 VDC and the unit should be wired as shown in Figure 1.

For voltage output models, the power requirement must be between 13-36 VDC or 16-28 VAC. The unit should be wired as shown in Figure 2.

MAINTENANCE/REPAIR
Upon final installation of the Series BTT Temperature Transmitter no routine maintenance is required. The Series BTT Temperature Transmitter is not field serviceable and should be returned if repair is needed. Field repair should not be attempted and may void warranty.

WARRANTY/RETURN
Refer to “Terms and Conditions of Sales” in our catalog and on our website. Contact customer service to receive a Return Goods Authorization number before shipping the product back for repair. Be sure to include a brief description of the problem plus any additional application notes.