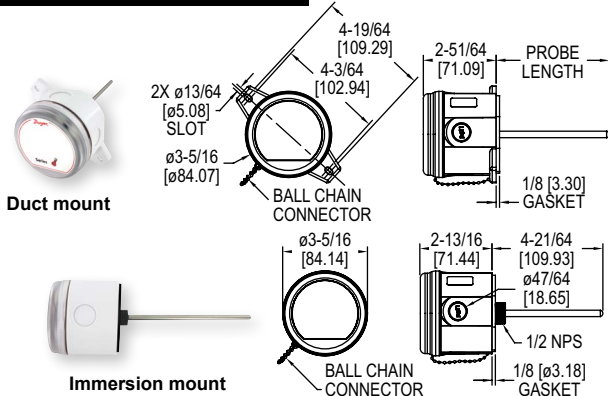


# TEMPERATURE TRANSMITTERS

Current or Voltage Output, NEMA 4X Enclosures

CALIBRATION SERVICES AVAILABLE



Outside air without radiation shield



Outside air with radiation shield

The **Series BTT Temperature Transmitters** offer transmitter output signals with the same form and fit as our popular TE thermistor and RTD sensors for building HVAC applications. Thermowells are required when using immersion models in liquid applications.

## BENEFITS/FEATURES

- Duct, immersion, and outside air models available
- Radiation shield available for mounting in direct sunlight
- Transmitter output allows for longer wire runs than standard thermistor sensors

## APPLICATIONS

- Building automation system temperature monitoring

| MODEL CHART                                                                                                                                 |     |    |    |       |                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------|-----|----|----|-------|----------------------------------------|
| Example                                                                                                                                     | BTT | -D | 04 | -1    | BTT-D04-1                              |
| Series                                                                                                                                      | BTT |    |    |       | Temperature transmitter                |
| Mounting Configuration                                                                                                                      |     | D  |    |       | Duct mount                             |
|                                                                                                                                             |     | I  |    |       | Immersion mount                        |
|                                                                                                                                             |     | O  |    |       | Outside air                            |
|                                                                                                                                             |     | R  |    |       | Outside air with radiation shield      |
| Probe Length*                                                                                                                               |     |    | 25 |       | 2.5" (required for "O" and "R" models) |
|                                                                                                                                             |     |    | 04 |       | 4"                                     |
|                                                                                                                                             |     |    | 06 |       | 6"                                     |
|                                                                                                                                             |     |    | 08 |       | 8"                                     |
|                                                                                                                                             |     |    | 12 |       | 12"                                    |
|                                                                                                                                             |     |    | 18 |       | 18"                                    |
| Output                                                                                                                                      |     |    | 1  |       | 4-20 mA                                |
|                                                                                                                                             |     |    | 2  |       | 0-10 V                                 |
| Options                                                                                                                                     |     |    |    | Blank | None                                   |
|                                                                                                                                             |     |    |    | FC    | Factory calibration certificate        |
|                                                                                                                                             |     |    |    | NIST  | NIST calibration certificate           |
| *For BTT-I models, actual probe length is approximately 0.75" longer than listed probe length to ensure maximum immersion into thermowells. |     |    |    |       |                                        |

## SPECIFICATIONS

**Temperature Sensor:** Pt1000 RTD.  
**Range:** -40 to 140°F (-40 to 60°C).  
**Temperature Limits:** Operating: -40 to 302°F (-40 to 150°C).  
**Accuracy:** ±0.5°C @ 25°C.  
**Thermal Effect:** ±0.01%/°C.  
**Response Time:** 100 ms.  
**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, knocks out for conduit fitting.  
**Conduit Connection:** 1/2" NPT.  
**Probe Lengths:** 2.5 to 18" (depending on configuration).  
**Power Requirements:** 13-36 VDC for current models, 13-36 VDC or 16-28 VAC for voltage models.  
**Output Signal:** 4-20 mA or 0-10 VDC (depending on model).  
**Enclosure Rating:** NEMA 4X (IP66) (immersions 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).  
**Compliance:** CE.

## THERMOWELLS - WELDED

| Model           | Material | Connection (Internal/External) | Insertion Length |
|-----------------|----------|--------------------------------|------------------|
| TE-TNS-N253N-00 | 304 SS   | 1/2" NPSM/1/2" NPT             | 2.5"             |
| TE-TNS-N043N-00 | 304 SS   | 1/2" NPSM/1/2" NPT             | 4"               |
| TE-TNS-N063N-00 | 304 SS   | 1/2" NPSM/1/2" NPT             | 6"               |
| TE-TNS-N083N-00 | 304 SS   | 1/2" NPSM/1/2" NPT             | 8"               |
| TE-TNS-N123N-00 | 304 SS   | 1/2" NPSM/1/2" NPT             | 12"              |
| TE-TNS-N183N-00 | 304 SS   | 1/2" NPSM/1/2" NPT             | 18"              |



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