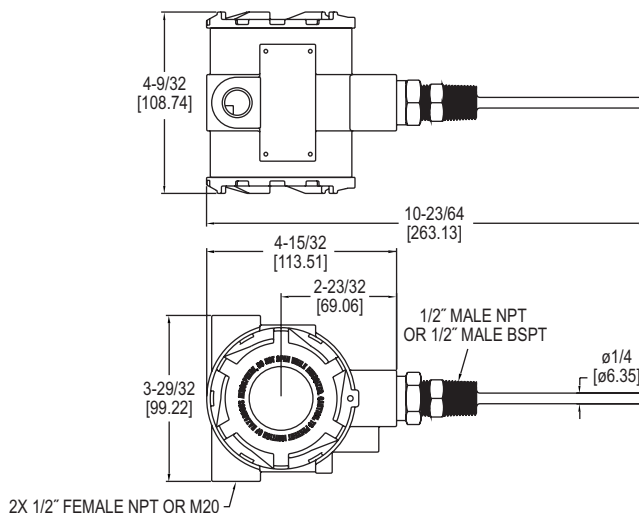


# EXPLOSION-PROOF RTD TEMPERATURE TRANSMITTER

User Selectable Ranges, Optional LCD Display



\*Shown with optional LCD display



The **Series TTE Explosion-Proof RTD Temperature Transmitter** is the ideal product for hazardous temperature measurement applications. The TTE series has seven pre-programmed temperature ranges that are selectable via an internal dip switch. For those applications that need a custom range, the transmitter can be easily configured for any range between -30 to 250°F with a minimum span of 40°F. The span and zero can be quickly adjusted with a simple push-button design. This unit has optional listings of FM for use in Class I, Division 1, Groups B, C and D, Class II, Division 1, Groups E, F and G and Class III atmospheres or ATEX (Directive 2014/34/EU) for **CE** II 2 G Ex db IIC T6...T4 Gb (-20°C ≤ Ta ≤ +70°C), **CE** II 1 D Ex ta IIIC T111°C Da (-20°C ≤ Ta ≤ +70°C) and IECEx for Ex db IIC T6...T4 Gb (-20°C ≤ Ta ≤ +70°C), Ex ta IIIC T111°C Da (-20°C ≤ Ta ≤ +70°C). The compact housing allows for the transmitter to be mounted in virtually any application.

## FEATURES/BENEFITS

- FM approved for Class I, Groups B, C, D; Class II, Groups E, F, G classified explosive environments
- Optional LCD
- Output span selected from seven common ranges or user determined

## APPLICATIONS

- Explosive process environments
- Offshore HVAC monitoring

## MODEL CHART

| Example      | TTE | -1 | 04                                     | -W | -LCD                              | TTE-104-W-LCD                                                                                                                                    |
|--------------|-----|----|----------------------------------------|----|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Series       | TTE |    |                                        |    |                                   | Explosion-proof RTD temperature transmitter                                                                                                      |
| Agency       |     | 1  |                                        |    |                                   | FM*                                                                                                                                              |
|              |     | 2  |                                        |    |                                   | ATEX/IECEx flameproof                                                                                                                            |
| Probe Length |     |    | 02<br>04<br>06<br>09<br>12<br>15<br>18 |    |                                   | 2" probe<br>4" probe<br>6" probe<br>9" probe<br>12" probe<br>15" probe<br>18" probe                                                              |
| Construction |     |    |                                        | W  |                                   | Well probe                                                                                                                                       |
| Options      |     |    |                                        |    | Blank<br>BSPT<br>C5<br>LCD<br>M20 | No LCD display<br>1/2 male BSPT process connection<br>C5-M housing paint specification<br>LCD display<br>Female M20 thread electrical connection |

\*Options that do not have ATEX and IECEx.

Attention: Units without the "2" suffix following "TTE" are not directive 2014/34/EU (ATEX) Compliant. These units are not intended for use in potentially hazardous atmospheres in the EU. These units may be CE marked for other directives of the EU.

## ACCESSORIES

| Model | Description                                                                         |
|-------|-------------------------------------------------------------------------------------|
| A-287 | Mounting bracket for pipe or surface mounting (Includes bracket and two 2" U-bolts) |

## SPECIFICATIONS

**Temperature Sensor:** Pt1000, 0.00385 DIN.

**Output Temperature Ranges:** User selectable – any range between -30 to 250°F with a minimum span of 40°F.

**Temperature Limits:** Ambient: -4 to 158°F (-20 to 70°C); Process: -30 to 250°F (-34.4 to 120°C).

**Accuracy:** Transmitter ±0.1% FS; Probe ±0.3% FS.

**Thermal Drift Effects:** ±0.02%/°C max.

**Response Time:** 250 ms.

**Wetted Materials:** 316 SS.

**Process Connection:** 1/2" male NPT or 1/2" male BSPT.

**Conduit Connection:** 1/2" female NPT or M20.

**Probe Length:** 2" to 18" (depending on model).

**Pressure Limits:** 2000 psi (137.9 bar).

**Power Requirements:** 10 to 35 VDC.

**Output Signal:** 4 to 20 mA (two wire loop powered).

**Optional Display:** 2 lines X 8 character LCD.

**Enclosure Rating:** Weatherproof and Explosion-proof. Listed with FM for Class I, Division 1, Groups B, C and D, and dust-ignitionproof for Class II, Division 1, Groups E, F and G and Class III atmospheres.

**ATEX Certified:** **CE** 0518 **Ex** II 2 G Ex db IIC T6...T4 Gb, **CE** II 1 D Ex ta IIIC T111°C Da, T6 Process Temp ≤80°C, Temperature Class T5 Process Temp ≤95°C, Temperature Class T4 Process Temp ≤120°C as defined on nameplate. EU-type Certificate No.: EMT17ATEX0021 X.

ATEX Standards: EN 60079-0:2012+A11:2013; EN 60079-1:2015; EN 60079-31:2014.

**IECEx Certified:** For Ex db IIC T6...T4 Gb, Ex ta IIIC T111°C Da, T6 Process Temp ≤80°C, Temperature Class T5 Process Temp ≤95°C, Temperature Class T4 Process Temp ≤120°C as defined on nameplate.

**IECEx Certificate of Conformity:** Element IECEx EMT 17.0007X; IECEx Standards: IEC 60079-0:2011 (Edition 6); IEC 60079-1:2014 (Edition 7); IEC 60079-31:2013 (Edition 2).

**Weight:** 2 lb 8 oz (1134 g).

**Agency Approvals:** FM, CE, ATEX/IECEx.

## THERMOWELLS - MACHINED

| Model           | Material | Length | Connection (Internal/External) (NPT) |
|-----------------|----------|--------|--------------------------------------|
| TE-TNS-N044N-12 | 304 SS   | 4"     | 1/2" / 3/4"                          |
| TE-TNS-N064N-12 | 304 SS   | 6"     | 1/2" / 3/4"                          |
| TE-TNS-N094N-12 | 304 SS   | 9"     | 1/2" / 3/4"                          |
| TE-TNS-N124N-12 | 304 SS   | 12"    | 1/2" / 3/4"                          |



Machined thermowell

## FIELD-SELECTABLE RANGES

|                                                      |
|------------------------------------------------------|
| 40 to 90°F (4.4 to 32.2°C)                           |
| -20 to 140°F (-28.9 to 60°C)                         |
| 0 to 100°F (-17.8 to 37.8°C)                         |
| 30 to 240°F (-1.1 to 115.6°C)                        |
| 32 to 212°F (0 to 100°C)                             |
| 32 to 122°F (0 to 50°C)                              |
| -30 to 65°C (-1.1 to 18.3°C)                         |
| Custom range between -30 to 250°F (-34.4 to 121.1°C) |