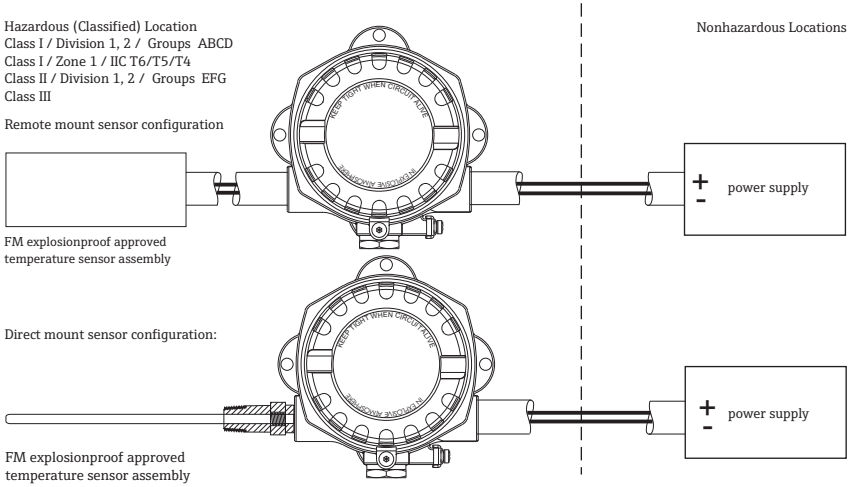


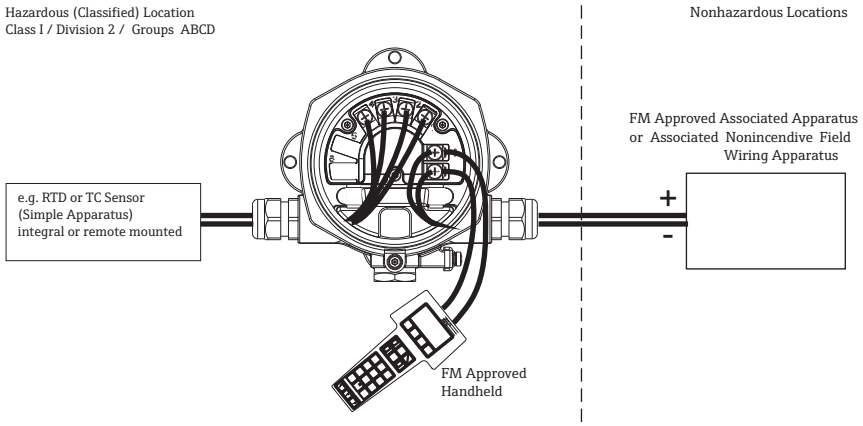


**NONINCENDIVE, FIELD WIRING NI Class I / Div. 2 / Groups ABCD**

Sensor circuits (Terminals 1...4)

| | | |
|---|---|---|
| Uo or Voc or Vt = 7.6 V | Io or Isc = 29.3 mA | Po = 55.6 mW |
| Group A, B resp. IIC | Co or Ca = 10.4 µF | Lo or La = 40 mH |
| Group C, D resp. IIB, IIA | Co or Ca = 160 µF | Lo or La = 400 mH |

**Installation Notes TMT142**

FM APPROVED

- FM Approved Apparatus must be installed in accordance with manufacturer's instructions.
- Use supply wires suitable for 5°C above surroundings.
- Only simple apparatus should be terminated to the sensor connection.
  Simple apparatus are components as defined by the NEC (1.2 V, 0.1 A, 0.25 mW or 20 µJ).
- Warning: Substitution of components may impair intrinsic safety or suitability for Class I, Division 2.

**EXPLOSION PROOF XP Class I / Div. 1 / Groups ABCD**
**DUST IGNITION PROOF DIP Class II,III / Div. 1 / Groups EFG**

- Install per National Electrical Code (NFPA 70)
- For Group A, seal all conduits within 18 inches of enclosure; otherwise, conduit seal not required for compliance with NEC 501.5(A)(1)(1).
- All conduits must be assembled with a minimum of five full threads engagement.
- Temperature sensor assembly must be FM approved for appropriate area classification.
- Class II use a dust tight seal
- Keep tight when circuits alive
  U ≤ 40 V DC P ≤ 3 W

**NONINCENDIVE NI Class I / Div. 2 / Groups ABCD**

- Depending on location install per National Electrical Code (NEC) using wiring methods described in article 500 through article 510.
  Intrinsic safety barrier not required. Vmax ≤ 40 V DC.
- Warning: Do not disconnect equipment unless power has been switched off or the area is known to be non-hazardous.
- Nonincendive field wiring installation
  The Nonincendive Field Wiring Circuit Concept allows interconnection of Nonincendive Field Wiring Apparatus with Associated Nonincendive Field Wiring Apparatus or Associated Intrinsically Safe Apparatus or Associated Apparatus not specifically examined in combination as a system using any of the wiring methods permitted for unclassified locations, when Voc ≤ Vmax, Ca ≥ Ci + Ccable, La ≥ Li + Lcable.
  Transmitter Nonincendive Field Wiring parameters are as follows:
  Ui or Vmax ≤ 40 V DC Ci = 5.3 nF Li = 0 Ii or Imax = see following note below
  For these current controlled circuits, the parameter Imax is not required and need not to be aligned with parameter Isc and It of the Associated Nonincendive Field Wiring Apparatus or Associated Apparatus.
- Voc + Voc of Handheld device < Vmax, Isc + Isc of Handheld device < Imax,
  Po + Po of Handheld device < Pi, Ca > Ci + Ccable + Ci of Handheld device,
  La > Li + Lcable + Li of Handheld device, when Programming Handheld device is used.

**Functional ratings**

These ratings do not supersede Hazardous Location values
Unom ≤ 40 DC Inom ≤ 4 to 20 mA

**Temperature range**

T4 -40°C ... +85°C T5 -40°C ... +70°C T6 -40°C ... +55°C

| | Approved | Date (yyyy-mm-dd) | Drawing No. | Dwg.rev. | Revision no. | Revision date (yyyy-mm-dd) | Name | Material | |
|---|---|---|---|---|---|---|---|---|---|
| | Pfanzelt | 2005-02-16 | 14 25 00 113 | - | - | - | - | 71540248 XA02330T/09/EN/01.20 | Endress+Hauser |
| Volume (mm³) | Designed | Date (yyyy-mm-dd) | Unit | Scale | Title | | | Series | |
| | Meroth | 2005-02-16 | iTEMP TMT142 | 1:1 | CONTROL DRAWING FM XP, DIP, NI | | | | |
| Refer to protection notice ISO 16016 | Edge of working parts ISO 13715 | Geometrical tolerancing ISO 2768-mH-E | Part No. - | Format A4 | | | | Objekt version / Sheet 1 of 1 | Endress + Hauser GmbH+Co. KG Wetzer Nesselwang / Germany |