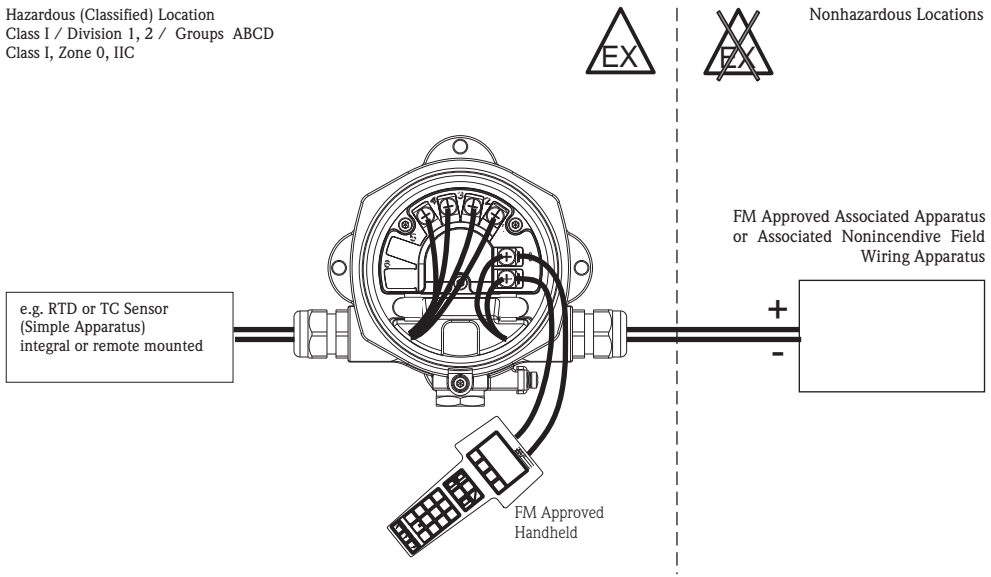

Temperature range

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

INTRINSICALLY SAFE IS Class I / Div. 1 / Groups ABCD
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 TMT 142

FM APPROVED

- FM Approved Apparatus must be installed in accordance with manufacturer 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.

INTRINSICALLY SAFE IS Class I / Div. 1 / Groups ABCD

- Installation should be in accordance with ANSI/ISA RP 12.6.01 “Installation of Intrinsically safe systems for Hazardous (classified) locations” and the National Electrical Code (ANSI/NFPA 70).
- FM Approved Associated Apparatus must meet the following parameters:
  Uo ≤ Ui Io ≤ Ii Po ≤ Pi Ca ≥ Ci + Ccable La ≥ Li + Lcable
  Transmitter entity parameters are as follows:
  Ui or Vmax ≤ 30 V DC Ci = 5.3 nF
  Ii or Imax ≤ 300 mA Li = 0
  Pi ≤ 1000 mW
- 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.

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 nonhazardous.
- 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.

Functional ratings

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

	Approved	Date (yyyy-mm-dd)	Drawing No.	Dwg.rev.	Revision no.	Revision date (yyyy-mm-dd)	Name	Material	
	Pfanzelt	2005-02-16	14 25 00 111	-	-	-	-	51010091 ZD 038R/09/en/02.05	Endress+Hauser
Volume (mm³)	Designed	Date (yyyy-mm-dd)	Unit	Scale	Title			Series	
	Meroth	2005-02-16	iTEMP TMT142	1:1	CONTROL DRAWING FM IS, 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