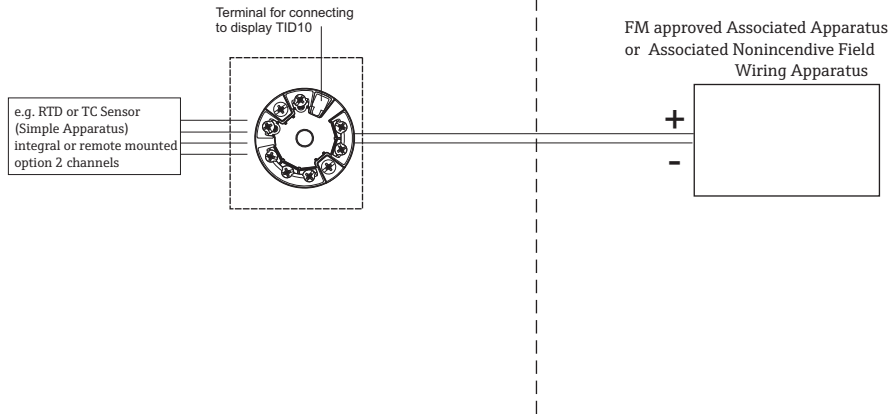


Hazardous (Classified) Location
Class I / Division 1, 2 / Groups ABCD
Class I, Zone 0, IIC

Nonhazardous Locations



Installation Notes TMT82

- 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:
 $U_o \leq U_i$ $I_o \leq I_i$ $P_o \leq P_i$ $C_a \geq C_i + C_{cable}$ $L_a \geq L_i + L_{cable}$
 Transmitter entity parameters (terminal 1 and 2) are as follows:
 U_i or $V_{max} \leq 30$ V DC $C_i = 0$
 I_i or $I_{max} \leq 130$ mA $L_i = 0$
 $P_i \leq 800$ mW
- $V_{oc} + V_{oc}$ of Handheld device < V_{max} , $I_{sc} + I_{sc}$ of Handheld device < I_{max} ,
 $P_o + P_o$ of Handheld device < P_i , $C_a > C_i + C_{cable} + C_i$ of Handheld device,
 $L_a > L_i + L_{cable} + L_i$ 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. $V_{max} \leq 35$ 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 $V_{oc} \leq V_{max}$, $C_a \geq C_i + C_{cable}$, $L_a \geq L_i + L_{cable}$.
Transmitter Nonincendive Field Wiring parameters are as follows:
 U_i or $V_{max} \leq 35$ V DC $C_i = 0$ $L_i = 0$
 I_i or I_{max} = see following note below
 For these current controlled circuits, the parameter I_{max} is not required and need not to be aligned with parameter I_{sc} and I_t of the Associated Nonincendive Field Wiring Apparatus or Associated Apparatus.

Functional ratings

These ratings do not supersede Hazardous Location values
 $U_{nom} \leq 42$ DC $I_{nom} \leq 4$ to 20 mA

Temperature range

without display, TID10

T4	-50°C ... +85°C
T5	-50°C ... +75°C
T6	-50°C ... +58°C

with display, TID10

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 3...7)

U_o or V_{oc} or $V_t = 7.6$ V	I_o or $I_{sc} = 13$ mA	$P_o = 24.7$ mW
Group A, B resp. IIC	C_o or $C_a = 10.4$ µF	L_o or $L_a = 236$ mH
Group C, D resp. IIB	C_o or $C_a = 160$ µF	L_o or $L_a = 946$ mH
Group C, D resp. IIA	C_o or $C_a = 1000$ µF	L_o or $L_a = 1.893$ H



Approved	Pfanzelt	Date (yyyy-mm-dd)	2010-06-16	Dwg.rev.	A	Revision no.	W11208	Revision date (yyyy-mm-dd)	2011-06-08	Name	MP	Material	71540291 XA02287T/09/EN/01.20	Endress+Hauser
Volume (mm³)	Designed	Pfanzelt	Date (yyyy-mm-dd)	2010-06-15	Unit	iTEMP TMT82	Scale	1:1	Title	CONTROL DRAWING FM		Series		
Refer to protection notice ISO 16016	Edge of working parts ISO 13715	Geometrical tolerancing ISO 2768-mH-E	Part No.	-	Format	A4	IS, NI		Objekt version	Sheet	1 of 1		Endress + Hauser Wetzler GmbH+Co. KG Nesselwang / Germany	