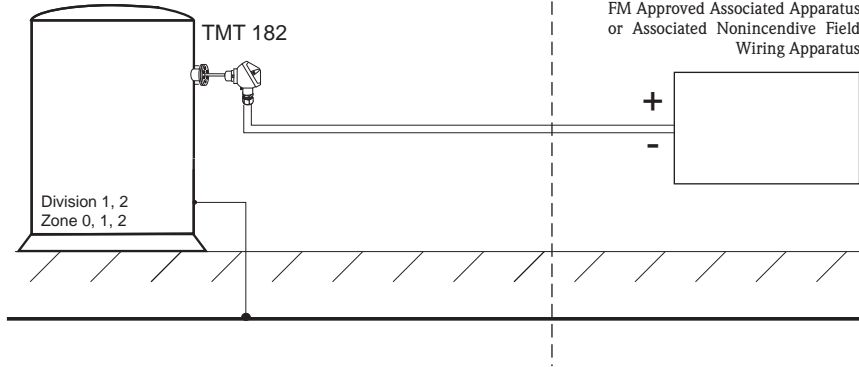


Hazardous (Classified) Location  
 Class I / Division 1, 2 / Groups ABCD  
 Class I, Zone 0, IIC  
 Class I, Zone 1, IIC  
 Class I, Zone 2, IIC



Nonhazardous Locations



### Installation Notes TMT 182



- 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 are as follows:  
 $U_i$  or  $V_{max} \leq 30$  V DC    $C_i = 0$   
 $I_i$  or  $I_{max} \leq 100$  mA    $L_i = 0$   
 $P_i \leq 750$  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.  $V_{max} \leq 30$  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  $V_{oc} \leq V_{max}$ ,  $C_a \geq C_i + C_{cable}$ ,  $L_a \geq L_i + L_{cable}$ .  
Transmitter Nonincendive Field Wiring parameters are as follows:  
 $U_i$  or  $V_{max} \leq 30$  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  
 $U_{nom} \leq 30$  V DC    $I_{nom} \leq 4$  to 20 mA

### 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 3...6)

$U_o$  or  $V_{oc}$  or  $V_t = 5.0$  V    $I_o$  or  $I_{sc} = 3.6$  mA    $P_o = 4.3$  mW  
 Group A, B resp. IIC    $C_o$  or  $C_a = 40$  µF    $L_o$  or  $L_a = 100$  mH  
 Group C, D resp. IIB, IIA    $C_o$  or  $C_a = 1000$  µF    $L_o$  or  $L_a = 100$  mH

	Approved Meroth	Date (yyyy-mm-dd) 2004-11-20	Drawing No. 14 06 00 131	Dwg.rev.	Revision no.	Revision date (yyyy-mm-dd)	Name	Material 510 09467 ZD 033R/09/en/11.04	<b>Endress+Hauser</b>
Volume (mm³)	Designed Meroth	Date (yyyy-mm-dd) 2004-11-20	Unit ITEMP TMT182	Scale 1:1	Title CONTROL DRAWING FM IS, NI			Series	
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 Wetzer GmbH+Co. KG Nesselwang / Germany		