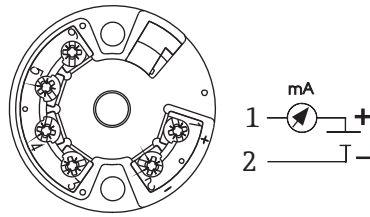
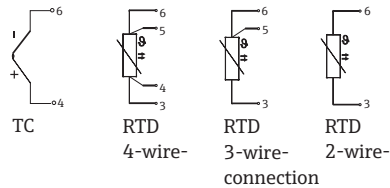
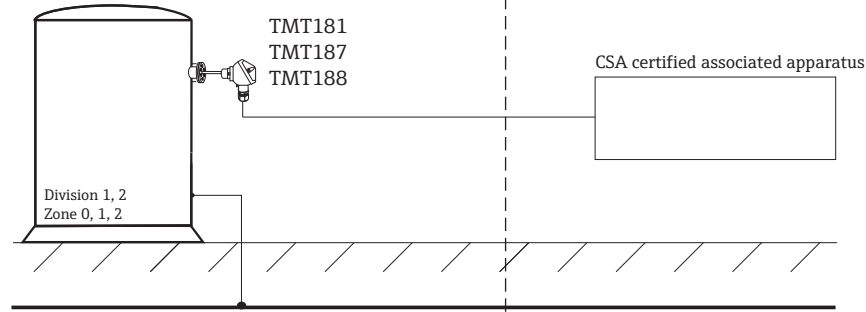


Hazardous (Classified) Location
 Class I / Division 1 / Groups ABCD
 Class I / Zone 0 / Ex ia IIC
 Class I / Division 2 / Groups ABCD

Nonhazardous Locations



Temperature range

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

INTRINSICALLY SAFE

Class I / Div. 1 / Groups ABCD
Class I / Zone 0 / Ex ia IIC

NONINCENDIVE, FIELD WIRING

Class I / Div. 2 / Groups ABCD

Sensor output circuits (Terminals 3...6)

Uo or Voc or Vt = 8.2 V Io or Isc = 4.6 mA Po = 9.35 mW
 Group A, B resp. IIC Co or Ca = 974 nF Lo or La = 4.5 mH
 Group C, D resp. IIB, IIA Co or Ca = 1900 nF Lo or La = 8.5 mH

Installation Notes TMT181, TMT187, TMT188



- CSA certified Apparatus must be installed in accordance with manufacturer's instructions.
- The installation must be in accordance with the Canadian Electrical Code.
- Use supply wires suitable for 5°C above surroundings.
- Shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
- The configuration of the transmitter TMT18x is only permitted in non-hazardous locations.
- The voltage of the "tools" used for configuration should not exceed Um = 30 V. This can be achieved e.g. by a battery powered laptop. An approved adapter with barrier has to be used for configuration using a PC with mains connection (Um < 253V).
- Terminals 3 to 6 provide Intrinsically Safe and Nonincendive circuits to RTD, Thermocouples and other passive resistive devices.
- Only simple apparatus should be terminated to the sensor connection.
Simple apparatus are components as defined by the CEC (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

Class I / Div. 1 / Groups ABCD

- CSA certified 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 $L_i = 0$
 $P_i \leq 750$ W

NONINCENDIVE

Class I / Div. 2 / Groups ABCD

- 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 $V_{max} \leq 30$ 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
 $U_{nom} \leq 35$ DC $I_{nom} \leq 4-20$ mA

Approved	Pfanzelt	Date (yyyy-mm-dd)	2001-09-01	Drawing No.	14 05 00 112	Dwg.rev.	B	Revision no.	M06401	Revision date (yyyy-mm-dd)	2006-04-03	Name	MP	Material	71540232 XA02347T/09/EN/01.20	Endress+Hauser
Volume (mm³)	Designed	Pfanzelt	2001-09-01	Unit	iTEMP TMT181(7)(8)	Scale	1:1	Title			CONTROL DRAWING CSA		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		