

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

e.g. RTD or TC Sensor
(Simple Apparatus)
remote mounted

TMT122

Nonhazardous Locations

FM approved Associated Apparatus
or Associated Nonincendive Field
Wiring Apparatus

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(Simple Apparatus)
remote mounted

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Temperature range

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

INTRINSICALLY SAFE NONINCENDIVE, FIELD WIRING

IS Class I / Div. 1 / Groups ABCD
NI Class I / Div. 2 / Groups ABCD

Sensor circuits (Terminals 3...6)

U_o or V_o or $V_t = 6.0$ V	I_o or $I_{sc} = 11.9$ mA	$P_o = 17.9$ mW
Group A, B resp. IIC	C_o or $C_a = 40$ µF	L_o or $L_a = 222$ mH
Group C resp. IIB	C_o or $C_a = 1000$ µF	L_o or $L_a = 900$ mH
Group D resp. IIA	C_o or $C_a = 1000$ µF	L_o or $L_a = 900$ mH

Installation Notes TMT122



- FM approved apparatus must be installed in accordance with manufacturer's instructions.
- Use supply wires suitable for 5°C above surroundings.
- Stating that only simple apparatus should be terminated to the sensor connection.
Simple apparatus is defined as a device that will neither generate nor store more than 1.2V, 0.1A, 0.25mW or 20µJ. Examples are Thermocouples or RTDs.

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
- $V_o + V_o$ 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.
- Warning: Substitution of components may impair intrinsic safety.


NONINCENDIVE

NI / Class I / Div. 2 / Groups ABCD

- Intrinsic safety barrier is 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.
- Transmitter provides nonincendive field wiring to the Thermocouple/RTD
- 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 $V_o \leq V_{max}$, $C_a \geq C_i + C_{cable}$, $L_a \geq L_i + L_{cable}$.
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
 $U_{nom} \leq 35$ V DC $I_{nom} \leq 4$ to 20 mA

	Approved Pfanzelt	Date (yyyy-mm-dd) 2001-12-04	Drawing No. 14 14 01 111	Dwg.rev. A	Revision no. W15105	Revision date (yyyy-mm-dd) 2015-01-08	Name MP	Material 71342007	Endress+Hauser 
Volume (mm³)	Designed Pfanzelt	Date (yyyy-mm-dd) 2001-12-04	Unit iTEMP TMT122	Scale 1:1	Title CONTROL DRAWING FM ZD00016R/09/EN/13.16			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	
								Endress + Hauser Wetzer GmbH+Co. KG Nesselwang / Germany	