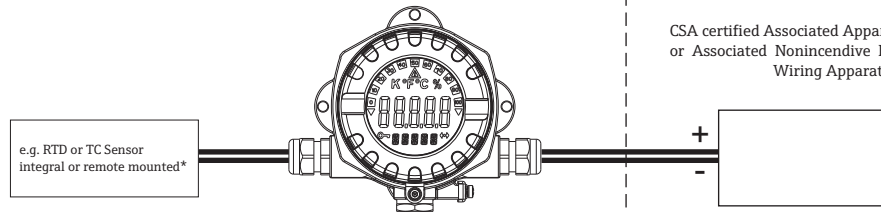


Hazardous (Classified) Location
Class I / Division 1, 2 / Groups ABCD
Class I, Zone 0, IIC

Nonhazardous Locations

CSA certified Associated Apparatus
or Associated Nonincendive Field
Wiring Apparatus



* The temperature sensor assembly is shown for illustration purpose only. The remote mount or direct mount sensor, or its assembly with TMT142 is not covered by this certificate.

Temperature range:	Sensor circuits (Terminals 1...4):			
T4	-50°C ... +85°C	Uo or Voc or Vt = 4.3 V	Io or Isc = 20.5 mA	Po = 22 mW
T5	-50°C ... +70°C	Group A, B resp. IIC	Co or Ca = 1 µF	Lo or La = 80 mH
T6	-50°C ... +55°C	Group C resp. IIB	Co or Ca = 10 µF	Lo or La = 300 mH
		Group D resp. IIA	Co or Ca = 10 µF	Lo or La = 600 mH

Applicable requirements see CSA certificate **80047477**

Installation Notes TMT142 (Intrinsic safety & Non-Incendive configurations)

- CSA approved apparatus must be installed in accordance with manufacturer's instructions.
- Install per Canadian Electrical Code or National Electrical Code (NFPA 70).
- 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.

- **WARNING:** POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS.

AVERTISSEMENT: RISQUE POTENTIEL DE DÉCHARGES ELECTROSTATIQUES – VOIR CONSIGNES.

INTRINSICALLY SAFE

Ex ia IIC T6...T4 Gb

Class I, Zone 0, AEx ia IIC T6...T4 Ga

Class I, Division 1, Groups A, B, C, D; T6...T4

- CSA Approved Associated Apparatus must meet the following parameters:

$$U_o \leq U_i \quad I_o \leq I_i \quad P_o \leq P_i \quad C_a \geq C_i + C_{cable} \quad L_a \geq L_i + L_{cable}$$

Transmitter entity parameters are as follows:

$$U_i \text{ or } V_{max} \leq 30 \text{ V DC} \quad C_i = 5 \text{ nF}$$

$$I_i \text{ or } I_{max} \leq 300 \text{ mA} \quad L_i = 0$$

$$P_i \leq 1000 \text{ mW}$$

- $V_{oc} + V_{oc}$ 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.

- **WARNING:** SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY.

AVERTISSEMENT: LA SUBSTITUTION DE COMPOSANTS PEUT COMPROMETTRE LA SÉCURITÉ INTRINSÈQUE

NONINCENDIVE

Class I, Division 2, Groups A, B, C, D; T6...T4 (Non Incendive Field Wiring (NIFW))

- Intrinsic safety barrier is required. $V_{max} \leq 30 \text{ V DC}$.
- **WARNING:** EXPLOSION HAZARD - DO NOT CONNECT OR DISCONNECT WHILE CIRCUITS ARE LIVE UNLESS AREA IS KNOWN TO BE NON-HAZARDOUS.
- **AVERTISSEMENT:** RISQUE EXPLOSIF- NE JAMAIS BRANCHEZ OU DECONNECTEZ QUAND LES CIRCUITS INTERNES SONT SOUS TENSION À MOINS QUE LA ZONE SOIT PAS À RISQUES.
- 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

$$V_{oc} = V_{max}, C_a = C_i + C_{cable}, L_a = L_i + L_{cable}.$$

Transmitter Nonincendive Field Wiring parameters are as follows:

$$U_i \text{ or } V_{max} = 30 \text{ V DC}$$

$$I_i \text{ or } I_{max} = 300 \text{ mA}$$

Functional ratings

These ratings do not supersede Hazardous Location values

$$U_{nom} \leq 36 \text{ DC} \quad I_{nom} \leq 4 \text{ to } 20 \text{ mA}$$

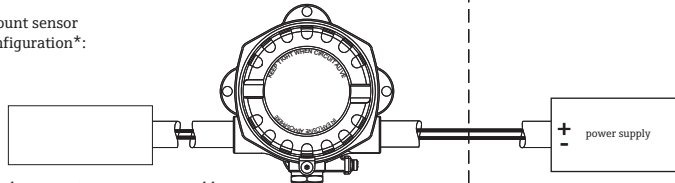


	Approved Pfanzelt	Date (yyyy-mm-dd) 2019-10-15	Drawing No. 10000011430	Dwg.rev. -	Revision no. -	Revision date (yyyy-mm-dd) -	Name -	Material 71487655 XA02100T/09/EN/02.20	Endress+Hauser
Volume (mm³)	Designed Pfanzelt	Date (yyyy-mm-dd) 2019-10-14	Unit iTEMP TMT142	Scale 1:1	Title CONTROL DRAWING CSA Intrinsic Safety		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 2	Endress + Hauser Wetzer GmbH+Co. KG Nesselwang / Germany

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

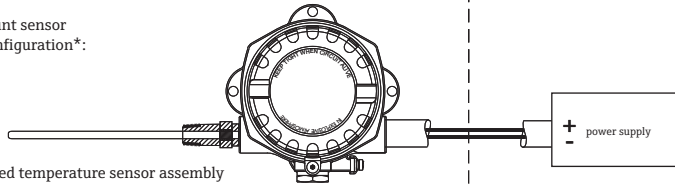
Nonhazardous Locations

Remote mount sensor
sample configuration*:



CSA certified temperature sensor assembly

Direct mount sensor
sample configuration*:



CSA certified temperature sensor assembly

Temperature range:

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

* The temperature sensor assembly is shown for illustration purpose only.
The remote mount or direct mount sensor, or its assembly with TMT142 is not covered by this certificate.

Applicable requirements see CSA certificate **80047477**

Installation Notes TMT142 (Increased safety/Div. 2 installation with wiring methods)

- CSA approved apparatus must be installed in accordance with manufacturer's instructions.
- Install per Canadian Electrical Code or National Electrical Code (NFPA 70) Wiring methods for Division 2 or Zone 2.
- Temperature Sensor assembly must be CSA certified for appropriate area classification and type of protection.
- Use supply wires suitable for 5°C above surroundings.
- Keep tight when circuits alive.
- Garder bien fermé tant que les circuits sont sous tension

- Terminal specification:

	Torque*	Cable version	Cable cross-section
Screw terminals	max. 1 Nm	Solid or flexible	= 2.5 mm ² (12 AWG) plus ferrules

*Do not overtighten the screw terminals, as this could damage the transmitter.

- **WARNING:** POTENTIAL ELECTROSTATIC CHARGING HAZARD - SEE INSTRUCTIONS.
- **AVERTISSEMENT:** RISQUE POTENTIEL DE DÉCHARGES ELECTROSTATIQUES - VOIR CONSIGNES.

INCREASED SAFETY

Ex ec IIC T6...T4 Gc
Class I, Zone 2, AEx ec IIC T6...T4 Gc
Class I, Div. 2, Groups ABCD; T6...T4



- Intrinsic safety barrier is not required. $V_{max} \leq 36$ V DC.
- **WARNING:** EXPLOSION HAZARD - DO NOT CONNECT OR DISCONNECT WHILE CIRCUITS ARE LIVE UNLESS AREA IS KNOWN TO BE NON-HAZARDOUS.
- **AVERTISSEMENT:** RISQUE EXPLOSIF- NE JAMAIS BRANCHEZ OU DECONNECTEZ QUAND LES CIRCUITS INTERNES SONT SOUS TENSION Á MOINS QUE LA ZONE SOIT PAS Á RISQUES.

Functional ratings

These ratings do not supersede Hazardous Location values
 $U_{nom} \leq 36$ DC $I_{nom} \leq 4$ to 20 mA

CONDITIONS OF ACCEPTABILITY

- For the use as an equipment in type of protection increased safety, and for Zone 2 (EPL Gc), and Class I, Division 2 applications, the field transmitter TMT142 shall not be connected or disconnected unless the area is known to be non-hazardous.
- If the field transmitter TMT142 was used in a Zone 2 (EPL Gc) or Class I, Division 2 application it is not allowed to use it in Zone 1 (EPL Gb), Zone 0 (EPL Ga) or Class I, Division 1 applications in the future.
- Final acceptance of this equipment when installed is subject to the jurisdiction of the local inspection authority.
- The end user shall ensure appropriate earthing of the metallic field housing upon installation.
- The equipment shall only be powered by limited energy circuits such as Class 2 SELV circuits.

	Approved Pfanzelt	Date (yyyy-mm-dd) 2019-10-15	Drawing No. 10000011430	Dwg.rev. -	Revision no. -	Revision date (yyyy-mm-dd) -	Name -	Material 71487655 XA02100T/09/EN/02.20	Endress+Hauser
Volume (mm ³)	Designed Pfanzelt	Date (yyyy-mm-dd) 2019-10-14	Unit iTEMP TMT142	Scale 1:1	Title CONTROL DRAWING CSA Increased Safety		Series		
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