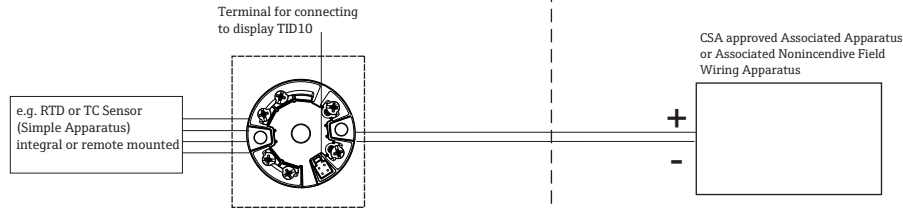


Hazardous (Classified) Location  
Class I / Division 1, 2 / Groups ABCD  
Class I, Zone 0 (EPL Ga), IIC

Nonhazardous Locations



**INTRINSICALLY SAFE**

**Class I / Div. 1 / Groups ABCD Ex ia IIC**

- Installation should be in accordance with the Canadian Electrical Code (CEC).
- CSA 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  $I_{max} \leq 130$  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.
- **WARNING: SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY.**

**AVERTISSEMENT: LA SUBSTITUTION DE COMPOSANTS PEUT COMPROMETTRE LA SÉCURITÉ INTRINSÈQUE**

**Temperature range**

	without display, TID10	with display, TID10
T4	-52°C ... +85°C	-40°C ... +85°C
T5	-52°C ... +75°C	-40°C ... +70°C
T6	-52°C ... +58°C	-40°C ... +55°C

**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

Combined values:

Group A, B resp. IIC	$C_o$ or $C_a = 1$ $\mu$ F	$L_o$ or $L_a = 10$ mH
Group C, D resp. IIB	$C_o$ or $C_a = 4.5$ $\mu$ F	$L_o$ or $L_a = 50$ mH
Group C, D resp. IIA	$C_o$ or $C_a = 6.7$ $\mu$ F	$L_o$ or $L_a = 50$ mH

Applicable requirements see CSA certificate **80153053**

**Installation Notes TMT82**

- CSA 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 20 $\mu$ J. Examples are Thermocouples or RTDs.
- **WARNING: POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS.**  
**AVERTISSEMENT: RISQUE POTENTIEL DE DÉCHARGES ELECTROSTATIQUES – VOIR CONSIGNES.**

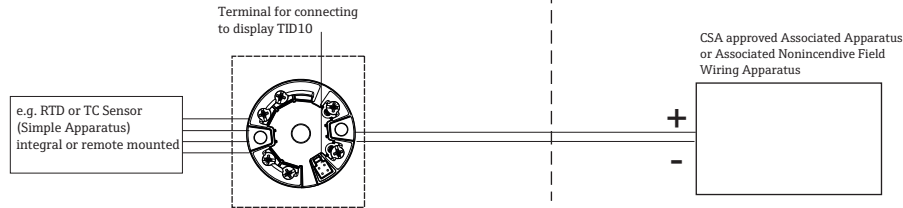
**CONDITIONS OF ACCEPTABILITY**

- The equipment is for use under atmospheric conditions only, the permissible pressure range is to 1.1 bar (80 to 110 kPa) and the permissible normal oxygen content is typically 21 % v/v.
- These models are optionally provided without enclosure. They shall be installed within a suitable end-use enclosure, providing a degree of protection of not less than IP20 according to CSA 60079-0 and CSA 60079-11. The ambient temperature within the end-use enclosure shall not exceed the limits of the permissible ambient temperature range. Clearances, creepage distances and separations as defined in CSA 60079-11 must be considered for the installation. The final combination shall be subjected to acceptance of the local authority having jurisdiction.
- The end user shall ensure appropriate earthing of the metallic field housing (optional) and all metallic accessories if used (wall or pipe mounting accessories for the field housing and the DIN rail clip for the head transmitter) upon installation.
- Only simple apparatus shall be connected to the sensor terminals. Simple apparatus is defined as a device that neither generates or stores more than 1.2V, 0.1A, 0.25 mW, or 20 uJ. Examples are thermocouples and RTDs.
- If the transmitter head TMT82 has been used in a Zone 1 (EPL Gb), Zone 2 (EPL Gc) or Class I, Division 2 application, it is not allowed to be used in Zone 0 (EPL Ga) or Class I, Division 1 applications in the future.
- In hazardous areas it is not permitted to use the CDI interface for configuration

Approved	Pfanzelt	Date (yyyy-mm-dd)	2010-06-16	Drawing No.	34 05 00 112	Dwg.rev.	A	Revision no.	-	Revision date (yyyy-mm-dd)	2024-01-17	Name	MP	Material	71649103 XA02354T/09/EN/02.24-00	Endress+Hauser
Volume (mm³)	Designed	Date (yyyy-mm-dd)	2010-06-15	Unit	iTEMP TMT82	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 GmbH+Co. KG		Wetzer Nesselwang / Germany				

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

Nonhazardous Locations



**Temperature range**

without display, TID10  
T4 -52°C ... +85°C  
T5 -52°C ... +75°C  
T6 -52°C ... +58°C

with display, TID10  
T4 -40°C ... +85°C  
T5 -40°C ... +70°C  
T6 -40°C ... +55°C

**NONINCENDIVE, FIELD WIRING 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  $I_{sc} = 13 mA$      $P_o = 24.7 mW$

Combined values:

Group A, B resp. IIC	$C_o$ or $C_a = 1 \mu F$	$L_o$ or $L_a = 10 mH$
Group C, D resp. IIB	$C_o$ or $C_a = 4.5 \mu F$	$L_o$ or $L_a = 50 mH$
Group C, D resp. IIA	$C_o$ or $C_a = 6.7 \mu F$	$L_o$ or $L_a = 50 mH$

**NONINCENDIVE**

**Class I / Div. 2 / Groups ABCD Ex ic IIC**



- Installation should be in accordance with the Canadian Electrical Code (CEC).
- Intrinsic safety barrier is required.  $V_{max} \leq 35 V DC$ .
- **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.**

- 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

	Approved Pfanzelt	Date (yyyy-mm-dd) 2010-06-16	Drawing No. 34 05 00 112	Dwg.rev. A	Revision no. -	Revision date (yyyy-mm-dd) 2024-01-17	Name MP	Material 71649103 XA02354T/09/EN/02.24-00	Endress+Hauser
Volume (mm³)	Designed Pfanzelt	Date (yyyy-mm-dd) 2010-06-15	Unit ITEMP TMT82	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 2 of 2	Endress + Hauser Wetzer GmbH+Co. KG Nesselwang / Germany	