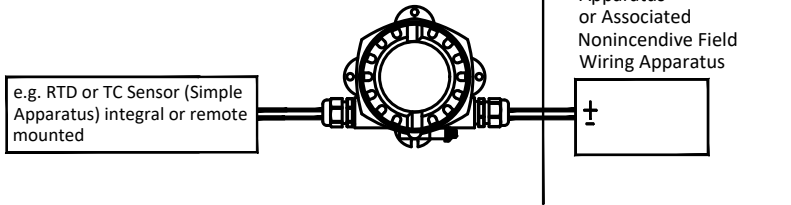


Hazardous (Classified) Location  
Class I / Division 1, 2 / Groups ABCD  
Class I, Zone 0, IIC



\*The temperature sensor assembly is shown for illustration purpose only. The remote mount or direct mount sensor, or its assembly with T142 is not covered by this certificate.

**I.S. and NI Temperature Range**

T-class	Without Display	With Display
T4 / T135°C	Ta: -40 TO +85°C	Ta: -40 TO +70°C
T5 / T100°C	Ta: -40 TO +70°C	Ta: -40 TO +70°C
T6 / T85°C	Ta: -40 TO +55°C	Ta: -40 TO +55°C

Applicable requirements see CSA certificate 80147722

**Installation Notes T142 (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.
- The temperature transmitter must be installed so, that even in the event of rare incidents, an ignition sources due to static electricity; impact or friction between the enclosure and iron / steel is excluded.

**NONINCENDIVE**

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

- Intrinsic safety barrier is required.  $V_{max} \leq 30$  V DC.
- See Intrinsically Safe instructions, applicable to the enclosure and transmitter.
- Nonincendive field wiring installation  
The Nonincendive Field Wiring Circuit Concept allows interconnection of Nonincendive Field Wiring Apparatus with Associated Nonincendive FieldWiring 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:  
 $U_i$  or  $V_{max} = 30$  V DC  
 $I_i$  or  $I_{max} = 300$  mA

**Functional ratings**

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

**Field Wiring Entry Threads**

3 x 1/2" NPT

Nonhazardous Locations

CSA certified Associated Apparatus or Associated Nonincendive Field Wiring Apparatus



**INTRINSICALLY SAFE - SÉCURITÉ INTRINSÈQUE**



- **WARNING:** SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY.  
**AVERTISSEMENT:** LA SUBSTITUTION DE COMPOSANTS PEUT COMPROMETTRE LA SÉCURITÉ INTRINSÈQUE
- **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.
- **WARNING:** POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS.  
**AVERTISSEMENT:** RISQUE POTENTIEL DE DÉCHARGES ELECTROSTATIQUES – VOIR CONSIGNES.


**INTRINSICALLY SAFE**

Ex ia IIC T6...T4 Ga  
Class I, Zone 0, AEx ia IIC T6...T4 Ga  
Ex/AEx ia IIC Ga and NI/NIFW  
I.S. Class I, Division 1, Groups A,B, C, D T6...T4  
Class I Division 2, Groups A,B,C,D; T6...T4 (I.S. Associated Equipment, NIFW for sensor connections)

- CSA Approved Associated Apparatus must meet the following parameters:  
 $U_o \leq U_i$   $I_o \leq I_i$   $P_o \leq P_i$   $C_a \geq C_i + C_{cable}$   $L_a \geq L_i + L_{cable}$   
-See Entity Parameter Table
- $V_{oc} + V_{oc}$  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.

Entity Parameters Table

Terminals	Entity Parameters		
Supply Terminals (+ and -)	$U_i / V_{max} = 30$ V $I_i / I_{max} = 300$ mA $P_i = 1000$ mW $L_i =$ negligibly small $C_i = 5$ nF		
Sensor Terminals (1 to 4)	$U_o / V_{OC} = 4.3$ V $I_o / I_{SC} = 20.5$ mA $P_o = 22$ mW Maximum permissible external inductance ( $L_o$ ) and capacitance ( $C_o$ ) for single appearance		
	Gas Groups	$L_o$	$C_o$
	Group IIC / Group A & B	80 mH	1 µF
	Group IIB / Group C	300 mH	10 µF
	Group IIA / Group D	600 mH	10 µF

<b>TITLE:</b> CONTROL DRAWING CSA, INTRINSIC SAFETY T142		<b>PART NUMBER:</b>		<b>REVISION DATE:</b> 10/04/2022		 FORT WAYNE, INDIANA 260-484-2580
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