

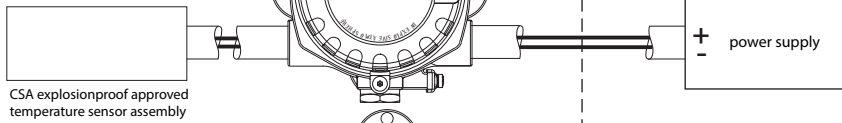


Hazardous (Classified) Location  
 Class I / Division 1, 2 / Groups ABCD  
 Class II / Division 1, 2 / Groups EFG  
 Class III



Nonhazardous Locations

Remote mount sensor configuration



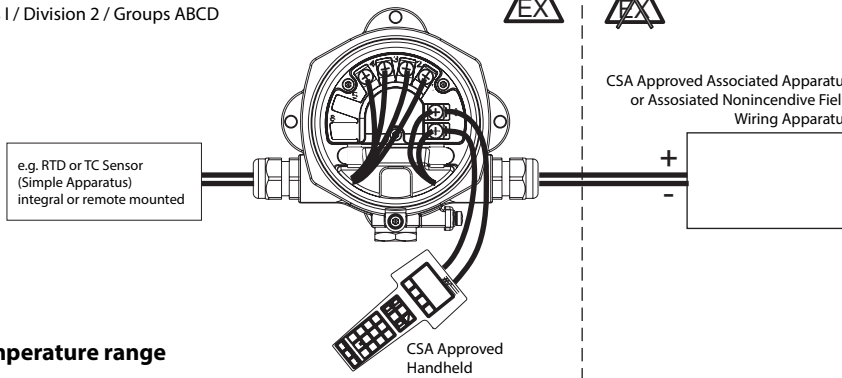
Direct mount sensor configuration



Hazardous (Classified) Location  
 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

**NONINCENDIVE, FIELD WIRING NI Class I / Div. 2 / Groups ABCD**

Sensor circuits (Terminals 1...4)

$U_o$ or $V_{oc}$ or $V_t = 7.6 V$	$I_o$ or $I_{sc} = 29.3 mA$	$P_o = 55.6 mW$
Group A, B resp. IIC	$C_o$ or $C_a = 10.4 \mu F$	$L_o$ or $L_a = 40 mH$
Group C resp. IIB	$C_o$ or $C_a = 160 \mu F$	$L_o$ or $L_a = 150 mH$
Group D resp. IIA	$C_o$ or $C_a = 1000 \mu F$	$L_o$ or $L_a = 300 mH$

**Installation Notes Series 642**

**EXPLOSION PROOF  
 DUST IGNITION PROOF**

**Class I / Div. 1 / Groups ABCD  
 Class II, III / Div. 1 / Groups EFG**

- CSA certified apparatus must be installed in accordance with manufacturer's instructions.
- Installation must be in accordance with Canadian Electrical Code.
- All Conduits must be assembled with a minimum of five full threads engagement.
- Temperature Sensor assembly must be CSA approved for appropriate area classification.
- Use supply wires suitable for 5 °C above surroundings.
- Stating that only simple apparatus should be terminated to the sensor connection.
- Simple apparatus are components as defined by the CEC (1.2V, 0.1A, 0.25mW or 20μJ)
- Seal all conduits within 18 inches of enclosure.
- In Class II use a dust tight seal.
- A dust tight seal must be used for conduit entry when the field display is used in a Class II or Class III location.
- Keep tight when circuits alive.
- Supply circuit (Terminals + and -)
  - $U \leq 40 V dc$
  - $P = 3 W$
- Warning: Substitution of components may impair suitability for Class I, Division 2.
- Warning: Do not disconnect equipment unless power has been switched off or the area is known to be nonhazardous.

**NONINCENDIVE**

**Class I / Div. 2 / Groups ABCD**

- Intrinsic safety barrier is not required.  $V_{max} \leq 40 V dc$ .
- Warning: Do not disconnect equipment unless power has been switched off or the area is known to be nonhazardous.
- 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  $V_{max} \leq 40 V dc$        $C_i = 5.3 nF$        $L_i = 0$
  - $I_i$  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  
 $U_{nom} \leq 40 dc$      $I_{nom} \leq (4 \text{ to } 20) mA$

TITLE: <b>Series 642 CSA Control Drawing XP, NI, DIP</b>		PART NUMBER:		DATE: <b>11/05/2012</b>	
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