

Hazardous (Classified) Location
 Class I / Division 1 / Groups ABCD
 Class I / Zone 0 / Ex ia IIC
 Class I / Division 2 / Groups ABCD
 Class II / Division 1 / Groups EFG
 Class III / Division 1 / Hazardous Locations

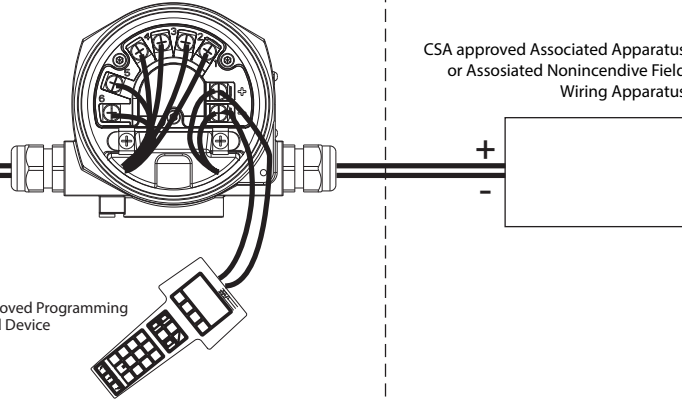


Nonhazardous Locations

CSA approved Associated Apparatus
 or Associated Nonincendive Field
 Wiring Apparatus

e.g. RTD or TC Sensor
 (Simple Apparatus)
 integral or remote mounted
 option 2 channels

CSA Approved Programming
 Handheld Device



Installation Notes Series 662



- CSA approved apparatus must be installed in accordance with manufacturer's instructions.
- Use supply wires suitable for 5 °C above surroundings.
- 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: Substitution of components may impair intrinsic safety.

INTRINSICALLY SAFE

Class I / Div. 1 / Groups ABCD

- 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 $C_i = 5.3$ nF
 I_i or $I_{max} \leq 300$ mA $L_i = 0$
 $P_i \leq 1000$ 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.

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
 $U_{nom} \leq 40$ V dc $I_{nom} \leq (4 \text{ to } 20)$ mA

Temperature range


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

INTRINSICALLY SAFE NONINCENDIVE, FIELD WIRING

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Sensor circuits (Terminals 1...6)

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 $C_a = 10.4$ µF	L_o or $L_a = 40$ mH
Group C resp. IIB	C_o or $C_a = 160$ µF	L_o or $L_a = 150$ mH
Group D resp. IIA	C_o or $C_a = 1000$ µF	L_o or $L_a = 300$ mH

TITLE: 662 CSA Control Drawing IS, NI		PART NUMBER:		DATE: 12/10/2013		 pyromation [®] <small>beyond measure</small>
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