

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

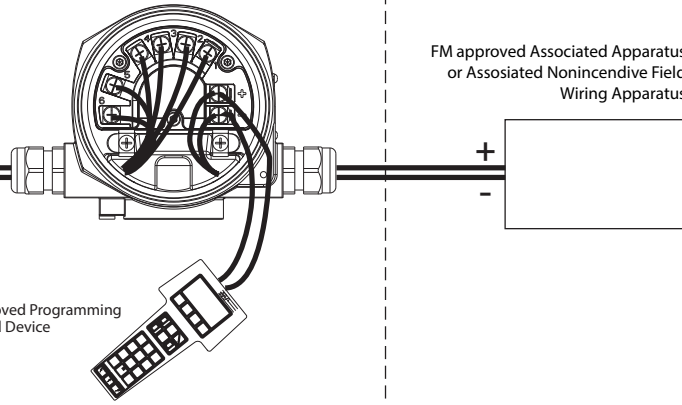


Nonhazardous Locations

FM approved Associated Apparatus
or Associated Nonincendive Field
Wiring Apparatus

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

FM Approved Programming
Handheld Device



Temperature range

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

INTRINSICALLY SAFE **IS** **Class I / Div. 1 / Groups ABCD**
NONINCENDIVE, FIELD WIRING **NI** **Class I / Div. 2 / Groups ABCD**

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, D resp. IIB, IIA	C _o or C _a = 160 μF	L _o or L _a = 400 mH

Installation Notes Series 662



- FM Approved Apparatus must be installed in accordance with manufacturer instructions.
- Use supply wires suitable for 5 °C above surroundings.
- Only simple apparatus should be terminated to the sensor connection.
- Simple apparatus are components as defined by the NEC (1.2 V, 0.1 A, 0.25 mW or 20 μJ).
- Warning: Substitution of components may impair intrinsic safety or suitability for Class I, Division 2.

INTRINSICALLY SAFE **IS** **Class I / Div. 1 / Groups ABCD**

- Installation should be in accordance with ANSI/ISA RP 12.6.01 "Installation of Intrinsically safe systems for Hazardous (classified) locations" and the National Electrical Code (ANSI/NFPA 70).
- FM 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 (terminal 1 and 2) 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 **NI** **Class I / Div. 2 / Groups ABCD**

- Depending on location install per National Electrical Code (NEC) using wiring methods described in article 500 through article 510.
- Intrinsic safety barrier 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

TITLE: 662 FM Control Drawing IS, NI		PART NUMBER:		DATE: 12/10/2013		 FORT WAYNE, INDIANA (260) 484-2580
This document is PROPRIETARY to Pyromation, Inc.		SIZE: A	DRAWING NO: M009202	REV: -	SCALE: N/A	