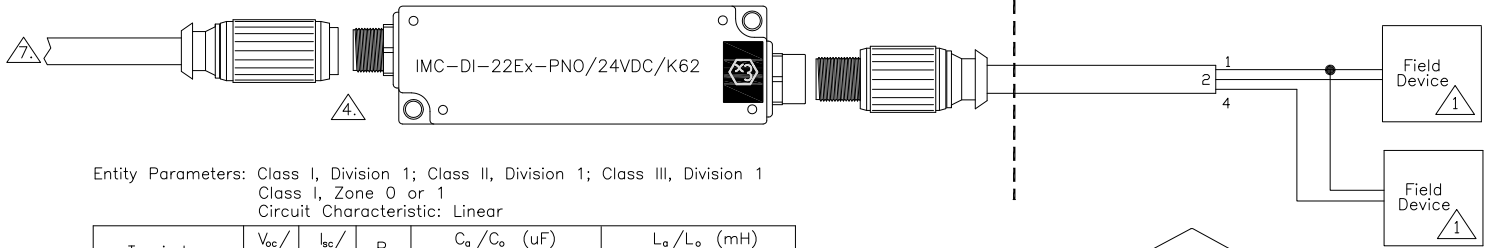
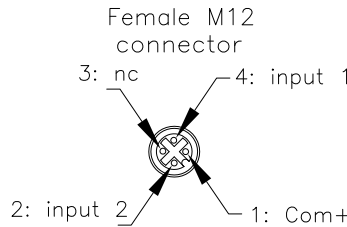
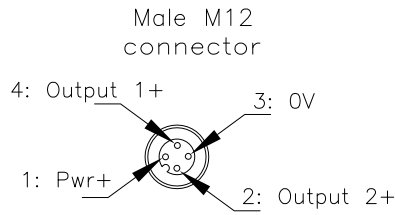


Discrete Input Devices with Intrinsically Safe Field Circuits



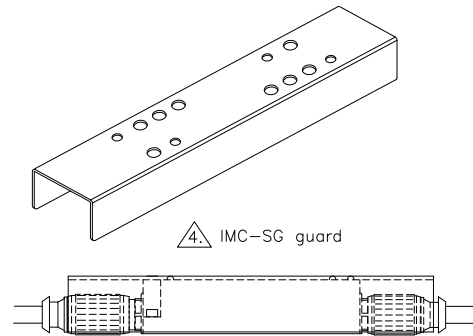
NON-HAZARDOUS LOCATION
Class I, Div. 2, Groups A,B,C,D
or
Class I, Zone 2, Group IIC

HAZARDOUS (CLASSIFIED) LOCATION
Class I, Div. 1, Groups A,B,C,D;
Class II, Div. 1, Groups E,F,G;
Class III, Div. 1
Class I, Div. 2, Groups A,B,C,D;
Class I, Zone 0, Group IIC, IIB, or IIA
or
Class I, Zone 2, Group IIC, IIB, or IIA



Entity Parameters: Class I, Division 1; Class II, Division 1; Class III, Division 1
Class I, Zone 0 or 1
Circuit Characteristic: Linear

Terminals	V _{oc} /U _o (V)	I _{sc} /I _o (mA)	P _o (mW)	C _a /C _o (uF)		L _a /L _o (mH)	
				AB/IIC	CDEFG/IIB,IIA	AB/IIC	CDEFG/IIB,IIA
1-2	9.6	9.9	23.7	1.1	4.4	1	5
1-4	9.6	9.9	23.7	1.1	4.4	1	5
Class I, Division 2 Class I, Zone 2 [AEx ic]							
Terminals	V _{oc} /U _o (V)	I _{sc} /I _o (mA)	P _o (mW)	C _a /C _o (uF)		L _a /L _o (mH)	
				AB/IIC	CDEFG/IIB,IIA	AB/IIC	CDEFG/IIB,IIA
1-2	9.6	9.9	23.7	1.9	7.5	1	5
1-4	9.6	9.9	23.7	1.9	7.5	1	5



Notes:

1. FMRC Approved Intrinsically safe apparatus with entity parameters that meet the conditions below, or simple apparatus. The entity concept allows interconnection of intrinsically safe apparatus and associated apparatus not specifically examined in combination as a system when the following conditions are met:

$$V_{max} \geq V_{oc} \text{ or } V_t \quad I_{max} \geq I_{sc} \text{ or } I_t \quad U_i \geq U_o \quad I_i \geq I_o \quad P_i \geq P_o$$

$$C_i + C_{cable} \leq C_a \quad L_i + L_{cable} \leq L_a \quad C_i + C_{cable} \leq C_o \quad L_i + L_{cable} \leq L_o$$

Where the cable capacitance and inductance are not known, the following values shall be used: C_{cable} = 60 pF/ft, L_{cable} = 0.2 uH/ft.

- A simple apparatus is defined as an electrical component or combination of components of simple construction with well-defined electrical parameters that does not generate more than 1.5V, 100mA, and 25mW, or a passive component that does not dissipate more than 1.3W and is compatible with the intrinsic safety of the circuit in which it is used.
- Multiple circuits extending from the same piece of Associated Apparatus equipment must be installed in separate cables or in one cable having suitable insulation. Refer to Instrument Society of America Recommended Practice ISA RP12.6 for installing intrinsically safe equipment.
- When installed in a Class I, Division 2 or Zone 2/22 location, the IMC-DI-22Ex-PNO/24VDC/K62 must be protected against any kind of mechanical damage. This can be done using a Turck IMC-SG protective housing.
- When installed in a Class I, division 2 or Zone 2/22 location, the IMC-DI-22Ex-PNO/24VDC/K62 must be protected against any static charge, e.g. by conductive fastening with connection to protective ground potential.
- Wiring methods must be in accordance with:
 - For US jurisdictions - the National Electrical Code, ANSI/NFPA 70, Article 504 (for Division 1 or 2 installations) or Article 505 (for Zone 0, 1 or 2 applications), and ANSI/ISA RP12.06.01.
 - For Canadian jurisdictions - the Canadian Electrical Code, CSA 22.1, for Division 1 or 2 or Zone 1 or 2 installations.
- Control equipment must not use or generate more than 250V rms or dc with respect to earth.
- WARNING: To prevent ignition of flammable or combustible atmospheres, disconnect power before servicing.
- WARNING: Substitution of components may impair intrinsic safety. AVERTISSEMENT: La substitution de composants peut compromettre la securite intrinseque.

Drawing No.:

IS-1.119

TURCK
3000 Campus Drive
Plymouth, MN 55441
Phone: (763) 553-7300

Title: Control Drawing for FM Approved
IMC-DI-22Ex-PNO/24VDC/K62 with
I/S (Entity) Field Circuits

A	Release	BVL	11/5/13
Rev	Description	Drft	Date

Scale: None

Sheet 1 of 1