**FM Approved Isolator Barriers**

**Discrete Input Devices with Intrinsically Safe Field Circuits**

**Non-Hazardous Location, or Class I, Division 2, Groups A,B,C or D**

**Hazardous (Classified) Location**
- Class I, Div. 1, Group A, B, C or D;
- Class II, Div. 1, Group E, F or G;
- Class III, Div. 1, or
- Class I, Zone O or 1, or 2, Group IIIC, IIB or IIA

**Circuit Characteristics**

### Linear

<table>
<thead>
<tr>
<th>Model</th>
<th>Terminals</th>
<th>V_{oc} (V)</th>
<th>I_{oc} (mA)</th>
<th>R_{oc} (ohm)</th>
<th>C_{oc}(UL)</th>
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**Notes:**

1. The symbol \( - \) designates any of the following:
   - For US jurisdictions = Any FM approved intrinsically safe apparatus with Entity Concept parameters, or any simple apparatus.
   - For Canadian jurisdictions = Any Canadian certified intrinsically safe apparatus with Entity Concept parameters, or any simple apparatus.

2. The Entity concept allows interconnection of intrinsically safe apparatus and associated apparatus not specifically examined in such combination as a system when the conditions above are met.

3. Simple apparatus is defined as an electrical component or combination of components of simple construction with well-defined electrical parameters that does not dissipate more than 1.5W, 100mA, and 22.5mW, 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.

4. When the field device is in contact with live energy, the connection should be made as shown below for proper performance.

5. Wiring methods must be in accordance with:
   - For U.S. jurisdictions = the National Electrical Code, ANSI/NFPA 70, Article 504 (for Division installations) or Article 505 (for Zone applications), and ANSI/CSA RP12.06.01.
   - For Canadian jurisdictions = the Canadian Electrical Code, CSA 22.1, Appendix F.

6. Associated apparatus must not be connected to any device that uses or generates in excess of 250V rms.

7. If the electrical parameters of the cable are unknown, the following values may be used:
   - Capacitance = 60pF/foot
   - Inductance = 0.2H/foot

**Drawing No:**

IS-1101

**Title:**

Control Drawing for RM-Ex, and RM12-Ex, Isolator Barriers with 1/S (Entity) Field Circuits

**Drawing Date:**

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

Title: Control Drawing for RM-Ex, and RM12-Ex, Isolator Barriers with 1/S (Entity) Field Circuits