ISS-100

Single-Channel Intrinsically Safe Switch

Description
The ISS-100 switches are UL 913 listed as an associated apparatus for interfacing between hazardous and non-hazardous areas. These units must be installed in a non-hazardous area.

Features & Benefits

<table>
<thead>
<tr>
<th>FEATURES</th>
<th>BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finger-safe terminals</td>
<td>Meets IEC 61000 safety requirements</td>
</tr>
<tr>
<td>Compact design for DIN rail or</td>
<td>Allows flexibility in panel installation</td>
</tr>
<tr>
<td>surface mount</td>
<td></td>
</tr>
<tr>
<td>LED Status Indicator</td>
<td>Visual indication of relay engagement</td>
</tr>
<tr>
<td>Isolated output relay</td>
<td>Allows connection to PLC or control voltage</td>
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</tbody>
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Specifications

- **Input Characteristics**
  - Supply Voltage: 90-120VAC

- **Functional Characteristics**
  - Probe Sense Voltage: 5vdc continuous

- **Output Characteristics**
  - Output Contact Rating:
    - Pilot Duty: 180VA @120VAC, C300
    - General Purpose: 8A @120VAC
  - Relay Contact Life (Electrical): 100,000 cycles min. @ rated load
  - Relay Contact Life (Mechanical): 10,000,000 cycles

- **General Characteristics**
  - Temperature Range: -20° to 55°C (-4° to 131°F)
  - Maximum Input Power: 1.5 W
  - Wire range: 12 to 20 AWG
  - Terminal Torque: 3.5 to 4.5 in.-lbs. (max. 4.5 in.-lbs.)

- **Provides Intrinsically-Safe Circuits in the following locations:** Division 1 and 2, Class I, Groups A,B,C,D; Class II, Groups E,F,G; and Class III

- **Entity Parameters**
  - \[ V_{oc} = 16.8 \text{V}, \quad I_{sc} = 1.2 \text{mA}, \quad L_a = 100 \text{mH}, \quad C_{av} = 0.39 \text{uF} \]

- **Standards Passed**
  - Electrostatic Discharge (ESD): IEC 61000-4-2, Level 3, 6kV contact, 8kV air
  - Radio Frequency Immunity (RFI): IEC 61000-4-3, Level 3, 10V/m
  - Fast Transients: IEC 61000-4-4, Level 3, 4kV input power
  - Safety Mark: UL913 Sixth Edition (File #E23355)
  - Dimensions: H 88.9 mm (3.5"), W 52.93 mm (2.08")
  - Weight: 0.5 lb. (8 oz., 226.8 g)
  - Mounting Method: 35mm DIN rail or Surface Mount (#6 or #8 screws)

1. Maximum distance between unit and switch contact is 10,000 feet.
2. All non-intrinsically safe wiring shall be separated from intrinsically safe wiring. Description of special wiring methods can be found in the National Electrical Code ANSI/NFPA 70, Article 504 Intrinsically Safe Systems. Check your state and local codes for additional requirements.
3. All switch contacts shall be non-energy storing, containing no inductance or capacitance.

Wiring Diagram

115 VAC INPUT

LOAD

ISS-100

OUTPUT ENERGIZED

See Notes 1 & 2

See Note 3

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Rev. 1-A-062116