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

\[
V_e = 16.8 \quad P_o = \frac{V_e \cdot I_{sc}}{4} \\
I_{sc} = 1.2mA \\
L_o = 100mH \\
C_{in} = 0.39uF
\]

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 UL
Dimensions H 88.9 mm (3.5”); W 52.93 mm (2.08”);
D 59.69 mm (2.35”)
Weight 0.5 lb. (8 oz., 226.8 g)
Mounting Method 35mm DIN rail or Surface Mount (#6 or #8 screws)

Wiring Diagram

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.

See Notes 1 & 2
See Note 3