

# ISS-100

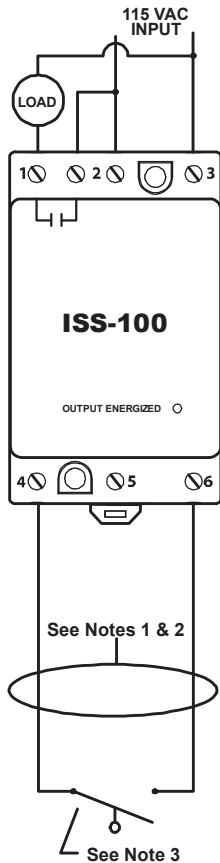
## Single-Channel Intrinsically Safe Switch



### Wiring Diagram

8

PUMP CONTROLS & LIQUID LEVEL CONTROLS



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.

### 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

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

### Specifications

#### Input Characteristics

##### Supply Voltage

90-120VAC

#### Functional Characteristics

##### Probe Sense Voltage

5vdc continuous

#### Output Characteristics

##### Output Contact Rating

180VA @120VAC, C300

##### Pilot Duty

8A @120VAC

##### General Purpose

##### 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

$V_{oc} = 16.8V$   $P_o = \frac{V_{oc} \cdot I_{sc}}{4}$   
 $I_{sc} = 1.2mA$   
 $L_a = 100mH$   
 $C_a = 0.39uF$

#### 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

UL913 Sixth Edition (File #E233355)

##### 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)

For dimensional drawing see: Appendix, page 510, Figure 10.