

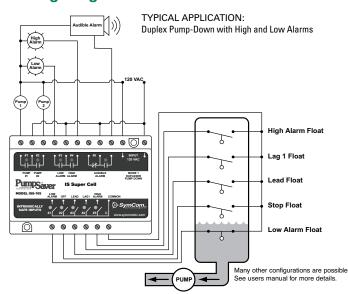
## **ISS-105 SERIES**

#### Five-Channel Intrinsically Safe Switch





#### Wiring Diagram



### Ordering Information

MODEL	LINE VOLTAGE	DESCRIPTION
ISS-105	120VAC	Intrinsically-Safe & Pump Controller
ISS-105-ISO	120VAC	Intrinsically-Safe Only
ISS-105-ISO-3	120VAC	3-Channel Intrinsically-Safe Only
ISS-105-ISO-4	120VAC	4-Channel Intrinsically-Safe Only
ISS-105-ISO-F	120VAC	ISO with Fast Trip Relays

#### **Description**

The ISS-105 is a "smart" five-channel intrinsically safe relay and pump controller. The ISS-105 can be configured for pump-up or pump-down applications or as a five-channel relay covering a wide variety of applications.

The ISS-105 has a long list of features that are needed for multiple pump applications and can indicate low, high and out-of-sequence alarms. If an out-of-sequence alarm occurs, the skipped pump(s) will be started as intended.

The Model ISS-105 can be set-up to do non-alternating control, alternating control and alternating control with one non-alternating pump. The non-alternating pump is intended for use with an emergency or jockey pump. The ISS-105 can start an emergency pump once every 50 cycles to keep it working freely. Using the built-in DIP switches, individual pumps can be disabled when taken out of service for repair or maintenance.

#### **Features & Benefits**

- 5 intrinsically-safe input channels meeting UL913 Sixth Edition
- 4 normally open output relays and 1 SPDT output relay
- Field selectable pump control options
- Monitors float sequencing and sends signal to alarm if out-of-sequence condition occurs
- High and/or low alarm options depending on the number of pumps and settings
- Output contacts for audible alarm
- Meets IEC EMC standards for Electrical Fast Transients (EFT), Electrostatic Discharge (ESD) and Radio Frequency Immunity (RFI)
- DIN rail or surface mountable allows flexibility in panel installation
- User-selectable alternator/non-alternator option
- Non-alternating pump option for emergency or jockey applications
- Pump disable switches make it easy to disable individual pumps when they are out for service or repair
- Adjustable lag pump delay for all pumping modes
- Adjustable delay-on-make/break timer in five-channel relay mode
- Finger-safe terminals meet IEC 61000 safety requirements

# Littelfuse® Expertise Applied | Answers Delivered

IEC 61000-4-2, Level 3, 6kV contact, 8kV air.

IEC 61000-4-4, Level 3, 4kV input power

IEC 61000-4-3, Level 3, 10V/m

## **ISS-105**

**Specifications** 

Input Characteristics

**Supply Voltage** 120VAC **Frequency** 50\*/60Hz

**Functional Characteristics** 

Probe Sense Voltage 5vdc continuous

Output Characteristics Relay Output Rating

**Pilot Duty** 480VA @ 240VAC, B300

**General Purpose** 7A @ 240VAC

**Relay Contact Life (Electrical)** 100,000 cycles min. @ rated load

Relay Contact Life (Mechanical) 10,000,000 cycles

**General Characteristics** 

**Temperature Range** -40° to 55°C (-40° to 131°F)

Maximum Input Power 5 \

Wire range 12 to 20 AWG

**Recommended 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  $V_{oc} = 16.8V$   $\underline{Po=Voc*Isc}$   $I_{sc} = 1.2mA$  4

 $I_{sc} = 1.2 \text{mA}$   $L_a = 100 \text{mH}$  $C_a = 0.39 \text{uF}$  Standards Passed

Electrostatic Discharge (ESD) Radio Frequency Immunity (RFI)

**Fast Transients** 

**Safety Marks** 

**UL** UL913 Sixth Edition (File #E233355) **Dimensions H** 94.06 mm (3.703"); **W** 127.64 mm (5.025");

**D** 59.69 mm (2.350")

2kV inputs/outputs

Weight 1.2 lbs. (19.2 oz., 544.31 g)

Mounting Method 35 mm DIN rail or Surface Mount

(#6 or #8 screws)

<sup>\*</sup>Note: 50Hz will increase all delay timers by 20%.