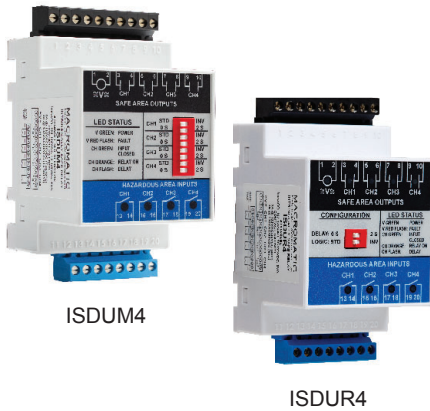


# 60 MM INTRINSICALLY SAFE BARRIER RELAYS

## ISD SERIES

INTRINSICALLY SAFE BARRIER RELAYS | DIN RAIL



- ◆ Approved for use in these Hazardous Locations:  
Class I, Div 1 (Zones 0 and 1 Canada), Groups A, B, C, D  
Class II, Div 1 (Zones 20 and 21 Canada), Group E, F, G  
Class III, Div 1
- ◆ 4-Channel
- ◆ Terminals support 2-wire inputs
- ◆ Isolated 5A relay outputs
- ◆ Pluggable terminals offer easy installation & replacement
- ◆ Universal input voltage of 102-132V AC & 10-125V DC
- ◆ Compact 60mm wide enclosure for both DIN-rail or panel-mount
- ◆ Standard & inverse logic
- ◆ Instantaneous & delayed response times
- ◆ LED status indicator

**UL** US  
UL913 8th Edition



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The ISD Series of Intrinsically Safe Barrier Relays provide a safe and reliable method to control up to four loads (motor starters, relays, etc.) with up to four input devices (switches, sensors, etc.) located in a hazardous area.

The ISD Series relays utilize a compact 60mm wide enclosure that can be both mounted on 35mm DIN rail or panel-mounted with two screws. Terminals for the input devices from the hazardous area are on the bottom of the unit for easy access in the enclosure to incoming field wiring from the hazardous area. Pluggable terminal blocks on both the input and output sides allow for easy initial wiring of the unit as well as replacement without having to remove any wires.

Each input has two terminals supporting direct connection of 2-wire input devices eliminating the need to mount a separate terminal block. Each output relay is isolated with two wiring terminals providing a true normally-open contact. This allows the output contacts to be used in complex control circuits and allows for each output to switch different voltages with respect to other outputs and the input voltage. A universal input voltage of 102-132V AC & 10-125V DC covers a variety of applications with one device.

### Operation

Each ISD Series product consists of 4 intrinsically safe inputs and four corresponding normally-open relay outputs. With input voltage applied, the V LED will be ON (GREEN) to indicate power is applied. When the input device is closed, the input LED is ON (GREEN). When the output relay is closed, the output LED is ON (ORANGE). The ISD series offers four user-selectable configurations built in.

**ISDUR4** has a two-position DIP-switch that selects a single configuration for all channels.

**ISDUM4** has an eight-position DIP-switch that selects a configuration for each channel, independently.

### Configurations

Standard Logic (DIP Switch set to "STD"):

When the input device is closed, the corresponding output contact is closed. When the input device is open, the corresponding output contact is open.

Inverse Logic (DIP Switch set to "INV"):

When the input device is open, the corresponding output contact is closed. When the input device is closed, the corresponding output contact is open.

No Time Delay (DIP Switch set to "0 S"):

The output contact changes state immediately in response to a change in input device state.

2 Second Delay (DIP Switch set to "2 S"):

The output contact will delay 2 seconds before changing state in response to a change in input device state.

CONTROL VOLTAGE	NUMBER OF CHANNELS	CONFIGURATION	CATALOG NUMBER	WIRING
102-132V AC (50/60Hz) and 10-125V DC	4	SELECTED FOR ALL CHANNELS	ISDUR4	
		SELECTED FOR EACH CHANNEL	ISDUM4	

**DIAGRAM 814**

# 60 MM INTRINSICALLY SAFE BARRIER RELAYS

## ISD SERIES

### APPLICATION DATA

**Input Voltage:** 102-132V AC (50/60Hz.) & 10-125V DC

**Load (Burden):** 5VA Maximum

**Input Switch Open Circuit Voltage:** 10V DC

**Output Contacts:**

SPST-NO (Form A) 3A Resistive @ 125V AC @60°C & 30V DC Resistive, Pilot Duty Rating D300

SPST-NO (Form A) 5A Resistive @ 125V AC @40°C & 30V DC Resistive, Pilot Duty Rating D300

**Life:**

Electrical: 50,000 Closures @ Full Load AC

Mechanical: 5 Million Closures @ No Load

**Response Times:**

Standard (DIP Switch set to "0S"): < 50ms

Delay (DIP Switch set to "2S"): Fixed 2 Seconds

**Temperature:**

Operating: -28° to + 60° C (-18° F to +140° F)

Storage: -55° to +85° C (-67° to 185° F)

**LED Indication:**

V: ON (Green); Inputs: ON (Green); Outputs: ON (Orange)

**Insulation Voltage:**

1500 V AC between coil & contacts

750 V AC between open contacts

1500 V AC between contacts of different output channels

1500 V AC between hazardous and safe circuits

**Wire Sizes:**

One #14-24 AWG Conductor or

Two #16 or 18 AWG Conductors

**Mounting:**

Mounts on 35mm DIN-rail or panel-mounted with two #8 screws when DIN-rail clips are fully extended from under the enclosure.

**Control Drawing:**

See Instruction Sheet 901-0000-328, which includes Control Drawing ISD1A04.

**Approvals:**



### ACCESSORIES

**Terminal Kit Part # 70700:** Replacement kit for Intrinsically Safe Barrier Relay plugable terminals, includes 1 black and 1 blue block.

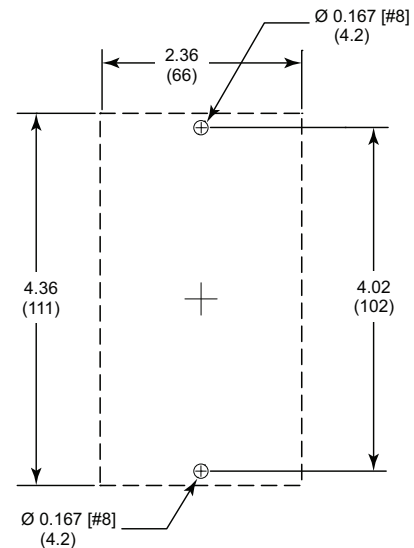
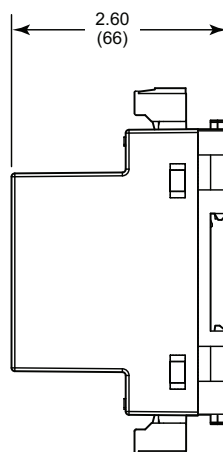
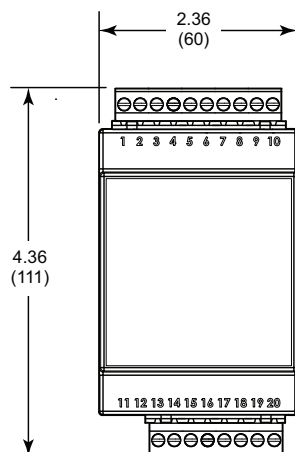
**Input Voltage:** 102-132V AC and 10-125V DC

**Output:** 5A



Kit Part # 70700

### DIMENSIONS



All Dimensions in Inches (Millimeters)

Panel Mount Template