

# PLUG-IN INTRINSICALLY SAFE BARRIER RELAYS

## ISP SERIES



- ◆ Approved for use in these Hazardous Locations:  
Class III, Div 1
- ◆ 1-Channel
- ◆ Terminals support 2-wire inputs
- ◆ Input voltage of 120V AC
- ◆ Isolated 10A relay output
- ◆ Plug-in design for easy installation and replacement
- ◆ LED status indicator



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The ISP Series of Intrinsically Safe Barrier Relays provide a safe and reliable method to control a single load (motor starters, relays, etc.) with a single input device (switches, sensors, etc.) located in a hazardous area.

The ISP Series relay must be installed following Macromatic Control Drawing Number ISR2A01D as shown in Instruction Sheet 901-0000-260.

The ISP Series relays utilize an 8 pin plug-in design with socket (included) that can be both mounted on 35mm DIN rail or panel-mounted with two screws.

### Operation

Each ISP Series relay consists of an intrinsically safe input and a corresponding normally-open relay output. There is one LED for status indication. With input voltage applied, the LED will be OFF. When the input device is closed, the output contact is closed and the LED is ON (Green). When the input device is open, the output contact is open and the LED will be OFF.

CONTROL VOLTAGE 50/60Hz	NUMBER OF CHANNELS	CATALOG NUMBER	WIRING/SOCKETS ■
120V AC	SINGLE	ISP120A	<p>DIAGRAM 160</p>

- The appropriate 8 pin socket is included with the plug-in relay.

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### APPLICATION DATA

#### Input Voltage:

120V AC,  $\pm 10\%$ , 50/60Hz

#### Load (Burden):

1.25 VA

#### Input Switch Open Circuit Voltage:

6V DC

#### Output Contacts:

SPST-NO 10A @ 120V AC Resistive

#### Life:

Mechanical: 10,000,000 operations

Full Load: 100,000 operations

#### Response Times:

Operate: 11 ms

Release: 4 ms

#### Temperature:

Operate:  $-20^{\circ}$  to  $60^{\circ}\text{C}$  ( $-4^{\circ}$  to  $140^{\circ}\text{F}$ )

Storage:  $-45^{\circ}$  to  $85^{\circ}\text{C}$  ( $-49^{\circ}$  to  $185^{\circ}\text{F}$ )

**Insulation Voltage:** 2,000 volts (between coil and contacts)

#### LED Indicator:

Green ON when output contact is closed and OFF when output contact is open.

#### Mounting:

The socket can be both mounted on 35 mm DIN rail or panel-mounted with two #8 screws.

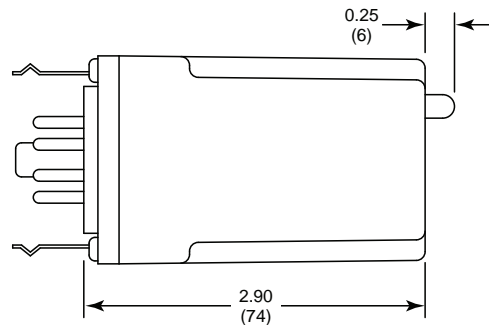
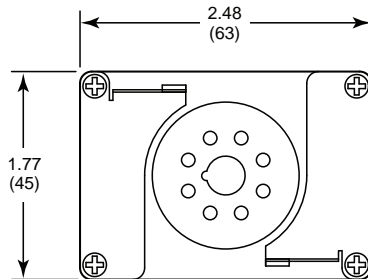
#### Control Drawing:

See Instruction Sheet 901-0000-260, which includes Control Drawing ISR2A01D

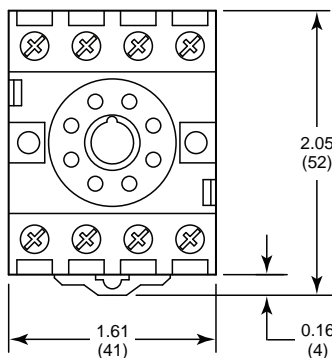
#### Approvals:



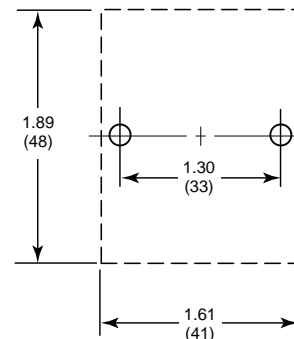
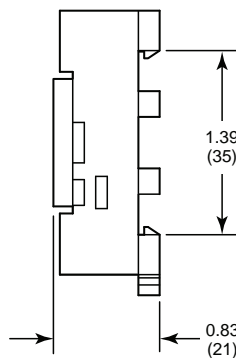
### DIMENSIONS



ISP Series



. Socket Provided with Relay



. Panel Mount Template

All Dimensions in Inches (Millimeters)