



# **INTRINSICALLY SAFE RELAYS**

**Cost-effective Solutions for Hazardous Areas**

**MACROMATIC**

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# INTRINSICALLY SAFE RELAYS

Interfacing with Hazardous Location Devices

## FEATURES AND BENEFITS

### IMPROVE SYSTEM SAFETY



- Listed per UL913 8th Edition
- Universal solution-all Divisions & Zones
- Color-coded, touch-safe terminals

### IMPROVE INSTALLATION EFFICIENCY



- Compact size
- Pluggable terminal blocks
- DIN-rail or panel-mount

### INCREASE APPLICATION PRODUCTIVITY



- Advanced functionality-choice of operating modes & time delay
- Advanced LED indication
- Universal input voltage

INTRINSICALLY SAFE RELAYS CAN BE MORE COST-EFFECTIVE THAN OTHER HAZARDOUS LOCATION PROTECTION TECHNIQUES ON CLASS 1, DIVISION 1 (ZONES 0 AND 1) LOCATIONS.



## A SIGNAL INTERFACE BETWEEN HAZARDOUS LOCATION INPUT DEVICES & SAFE AREA CONTROL SYSTEM

Macromatic's ISD & ISE Series Relays provide a safe, reliable and cost-effective method to control multiple loads (motor starters, relays, etc) with multiple input devices (switches, sensors, etc) located in the hazardous area.

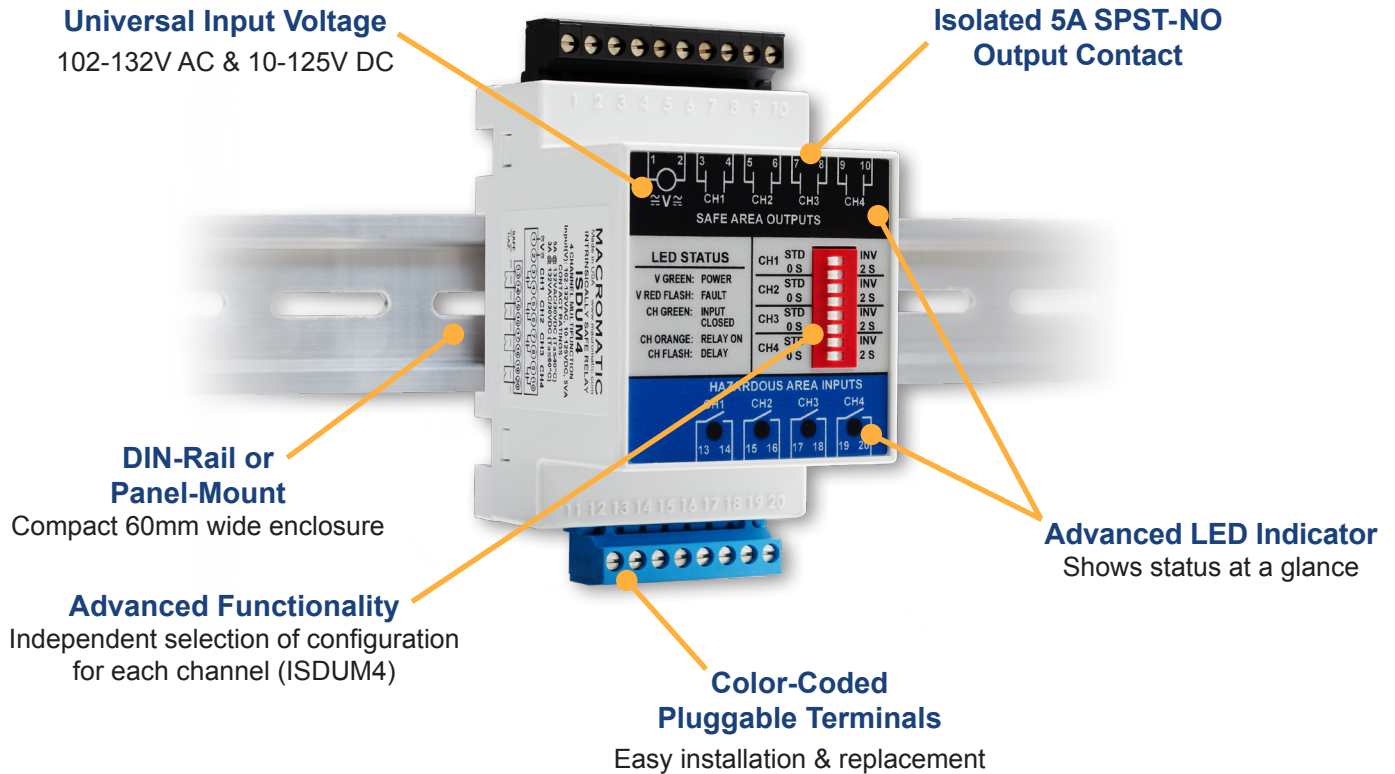
Intrinsic safety circuits are designed to operate at low enough energy levels that igniting hazardous materials will be averted - even in the event of a fault condition, such as a short circuit.



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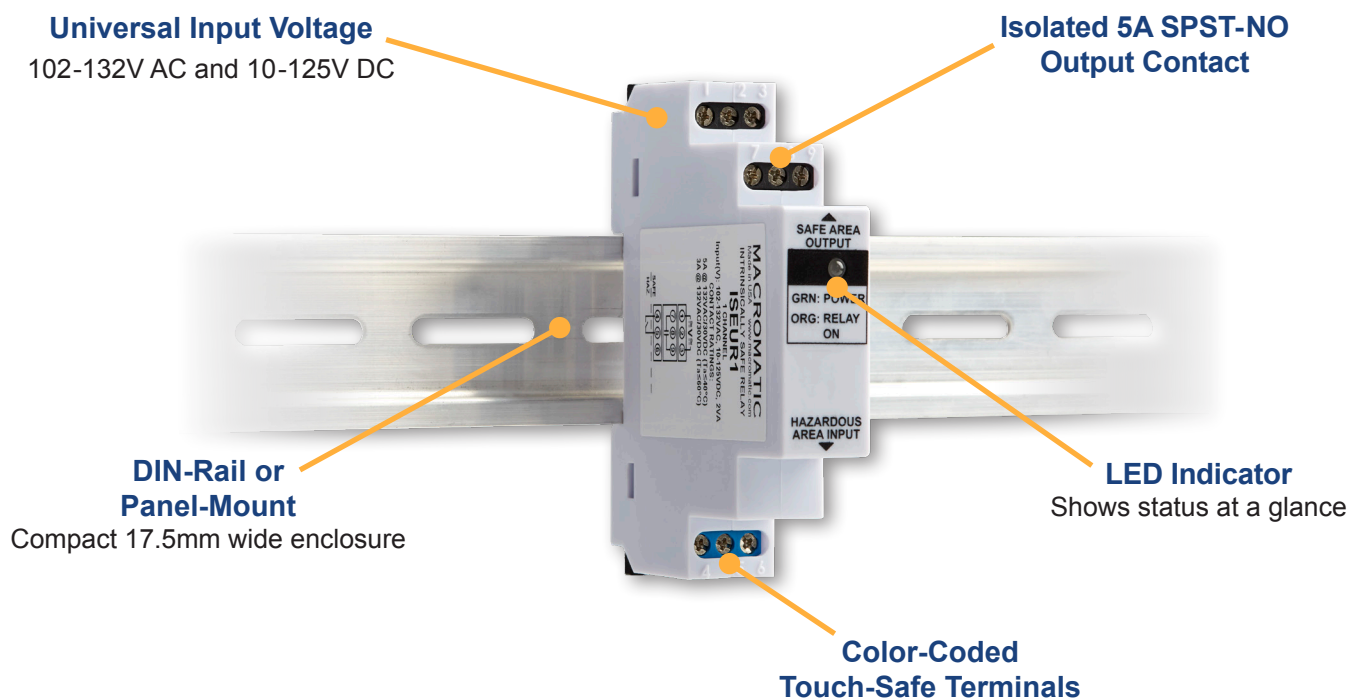
# ISD SERIES

4-Channel | ISDUR4 and ISDUM4



# ISE SERIES

1-Channel | ISEUR1



# SPECIFICATIONS

ISD & ISE Series

# ABOUT MACROMATIC







- Five-year warranty
- Short lead time
- Superior customer service
- Advanced technical support
- Products meet UL and CE
- RoHS manufacturing

Located in Menomonee Falls, Wisconsin, Macromatic Industrial Controls engineers and manufactures industrial relays that control electrical processes and monitor power for damaging fault conditions. Providing solutions for most applications in any industry, Macromatic specializes in the HVACR, pump control, material handling, motor control, generator, and lift and elevator industries.

As an independently-owned manufacturer of state-of-the-art control and monitoring products for over 40 years, Macromatic takes pride in its short lead-time, flexible product design, and exceptional technical support.

- Alternating Relays
- Current Sensing Relays
- Intrinsically Safe Relays
- Liquid Level Control Relays
- Seal Leakage Relays
- Over Temperature Relays
- Three-Phase Monitor Relays
- Time Delay Relays
- Voltage Monitor Relays
- Custom-Engineered Controls
- Accessories

Electrical Ratings	
Input Voltage	102-132V AC & 10-125V DC
Contact Rating	SPST-NO (Form A)  3A at 60°C @ 120V AC, Resistive and 30V DC Resistive  5A at 40°C @ 120V AC, Resistive and 30V DC Resistive
Response Times	Standard: <50ms (ISD & ISE Series) Time Delay (if enabled): 2 seconds (ISD Series only)
Construction	
Mounting	35mm DIN-rail & panel mounting with screws
Terminals	Pluggable & keyed (ISD Series only), touch-safe, color-coded with rising cage clamp terminals & plus/minus captive screw heads
Wire Sizes	One #14-24 AWG Connector or Two #16-18 AWG Connectors
Environmental	
Operating Temperature	-28°C to +60°C
Storage Temperature	-40°C to +85°C
Degree of Protection	IP20
Hazardous Location Classifications	
Class I, Div 1 (Zones 0 & 1 Canada), Group A, B, C, D Class II, Div 1 (Zones 20 & 21 Canada), Group E, F, G Class III, Div 1	
Agency Approvals	
    LISTED LISTED UL913 8th Edition	



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