



## Smart 8 Input Sensor/Relay Output

SM8-IN-XX-1/SM8-OUT-1

### Monitor and Control 8 Digital Inputs / 8 Relay Outputs Over Copper or Fiber Ethernet With Real-Time Alerts

The Smart 8 Input Sensor and Relay Output are programmable Ethernet I/O controllers that interface with field devices such as sensors, push buttons, alarms, locks and motors.

Each of the Digital Input and Relay Output channels are configurable through a built-in web management portal, and can be integrated with network management systems, industrial control systems, Internet of Things (IoT) frameworks, and script-driven automation platforms.

The Smart 8 Input Sensor and Relay Output support TLS/SSL encryption, IEEE 802.1X via RADIUS authentication (AAA), role based access control (RBAC), and event logging. Their versatile 2-port (1xRJ45, 1xSFP) Ethernet interface offers network access redundancy and segmentation.

Each device can operate as a standalone unit, independently monitoring and controlling the state of their 8 inputs or 8 relay outputs, or pair together over a secure TLS/SSL-encrypted tunnel.

This System Pairing feature allows Input Sensors to transmit I/O across an Ethernet network to one or multiple remote locations.

### Features

#### System

- 8 independent channels for monitoring and controlling 8 Digital Inputs / 8 Relay Outputs
- SPDT-style relays simplify Normally Open or Normally Closed relay configuration
- Optically isolated Digital Input channels that ensure signal integrity and protection against surges

#### Environment

- Hardened to operate in -40°C to +70°C (-40°F to +158°F)
- DIN rail or Wall Mount (Wall mount ears included)

#### Power

- 12-48VDC and 125VDC models available with redundant power terminals
- Relay Outputs support up to 3 Amps of current and 60 Watts of power

#### Quality

- Designed, Engineered, and Assembled in the USA
- Covered by our Lifetime Warranty



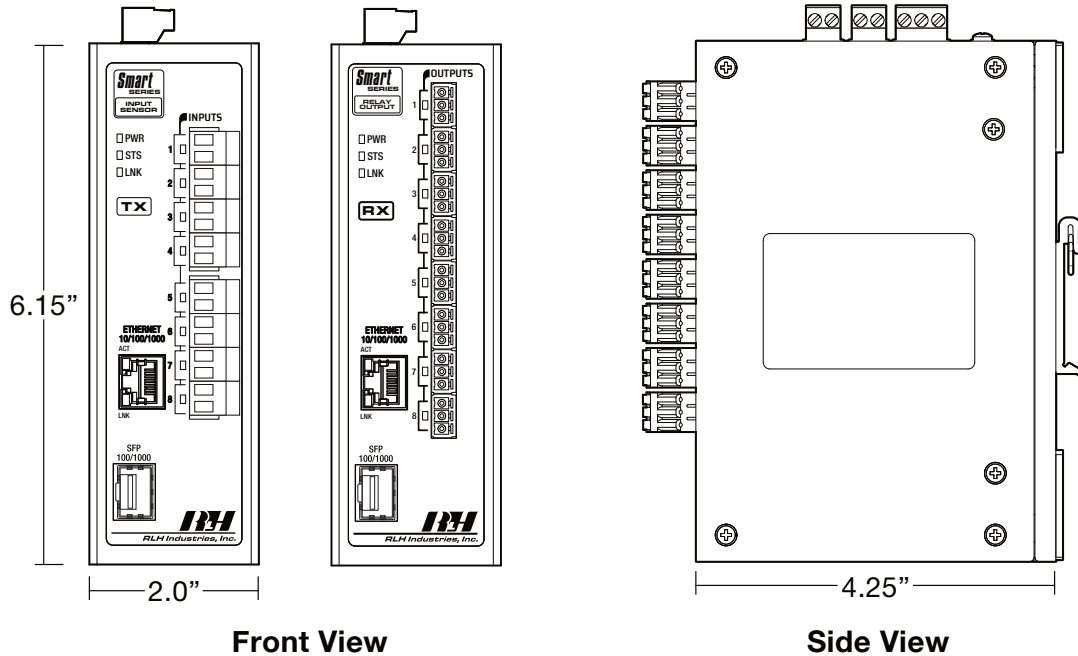
Smart 8 Input and Output



#### Ethernet IO

- 2-Port Gigabit Ethernet Interface featuring 1xRJ45 port (Copper) and 1xSFP port (Fiber Optics)
- User-friendly embedded web management portal
- Transport I/O between Smart Series units via System Pairing
- NMS and SCADA/DCS integration options include: SNMPv1/v2c/v3, Modbus TCP, and DNP3 TCP
- SNMP-driven I/O oversight with Trap Notifications and Receiver
- MQTT stack for Publish/Subscribe telemetry messaging
- Session-based HTTPS API with GET/POST request support
- Encrypted, custom email alert generation during I/O state changes
- Time-stamped Event Log tool with Export-to-CSV feature

## Dimensions



## Ethernet I/O Specifications

Digital Inputs 1~8	Model: SM8-IN-DR-1	Dry Contacts (0-100 ohms) contact closure		
	Model: SM8-IN-24-1	Wet Contacts (8~27VDC / 5mA) contact closure		
	Model: SM8-IN-48-1	Wet Contacts (20~52VDC / 5mA) contact closure		
	Optical isolation:	3.5kv		
Digital Relay Outputs 1~8	Relay Type:	Mechanical, SPDT Relay, Form C, Normally Open/NO or Normally Closed/NC		
	Relay Ratings:	Max. Power	Max. Voltage	Max. Current
		60W / 125VA	220VDC / 250VAC	2A AC/DC
Ethernet Interface	1x RJ45 Port (10/100/1G), 1x SFP Port (100/1G)		*Data Transmission is auto-negotiated	
Compliant IEEE Standards	IEEE 802.3 10Base-T (Ethernet)		IEEE 802.3u 100Base-TX/FX (Fast Ethernet)	
	IEEE 802.3ab/z 1000Base-T/X (Gigabit Ethernet)		IEEE 802.1X (Port-Based Network Access Control)	
Network Protocols	HTTP/HTTPS, SMTP, DHCP, DNS, NTP, IEEE 802.1X/RADIUS, TLS/SSL Encryption			
	SNMPv1/v2c/v3, Modbus TCP, DNP3, MQTT, Session-based HTTPS API			
System Pairing Topologies	One-to-One:	1x Smart Input Sensor to 1x Smart Relay Output		
	One-to-Many:	1x Smart Input Sensor to >1x Smart Relay Outputs		
	Many-to-One:	>1x Smart Input Sensors to 1x Smart Relay Output		
System Pairing Latency	One-to-One:	(TCP)	Typical 8ms, Maximum 45ms	
	One-to-Many:	(TCP)	< 250ms	
	Many-to-One:	(TCP)	< 250ms	
*Latency specification listed is based on direct connections between Input Sensors and Relay Outputs				



## General Specifications

LED Indicators	Power, CPU Status, System Pairing, Digital Inputs / Relay Outputs 1~8, Ethernet Link/Activity			
Power	Power Input	12-48VDC (11-53VDC)		
	-A powering option	125VDC (42~160V)		
	Dual redundant power options - Polarity insensitive			
	Power Consumption	6 Watts Maximum		
DC Input Isolation (In/Out)	1.5kV	*For -A power option models only		
Overcurrent Protection	1.0A	Automatic Recovery		
System Status Alarm	Relay Type:	Mechanical, SPDT Relay, Form C, Normally Open/NO or Normally Closed/NC		
	Relay Ratings:	Max. Power	Max. Voltage	Max. Current
		60W / 125VA	220VDC / 250VAC	2A AC/DC
Operating Temperature	-40°C to +70°C (-40°F to +158°F)			
Storage Temperature	-40°C to +85°C (-40°F to +185°F)			
Dimensions	H 4.93" x W 2.0" x D 3.93" (125mm x 51mm x 100mm) - not including DIN clip			
Weight	1.6 lbs. (0.73kg)			
Mounting	Standard T-35 DIN rail clip and wall mount ears (Included)			
Humidity	95% non-condensing			
Compliance	Reach, RoHS			
Warranty	Lifetime - Visit <a href="http://www.fiber opticlink.com">www.fiber opticlink.com</a> for warranty information and coverage details			

## Ordering Information

Description	Part Number
Smart 8 Input Sensor, 8 Digital Inputs (Dry), Powered by 12-48VDC	<b>SM8-IN-DR-1</b>
Smart 8 Input Sensor, 8 Digital Inputs (Wet 12-24V), Powered by 12-48VDC	<b>SM8-IN-24-1</b>
Smart 8 Input Sensor, 8 Digital Inputs (Wet 24-48V), Powered by 12-48VDC	<b>SM8-IN-48-1</b>
Smart 8 Relay Output, 8 Normally Open/Closed Output Relays, 12-48VDC	<b>SM8-OUT-1</b>

- Add **-A** to the end of the part number for 125 VDC input power option

## Contact

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