



## 4+1 Fiber Switch

## ETH-41-XX-1

### Industrial, Rugged, & Compact

RLH industrial Ethernet switches are engineered to provide reliable network performance in harsh environments. The 4+1 Fiber Switch is an unmanaged switch with 4-ports 10/100BASE-T, and 1 fiber port. The 100BASE-FX fiber port supports Single and Dual fiber configurations, Singlemode and multimode, and ST and SC connectors.

RLH Switches are engineered with robust features and construction to meet the demands of a variety of industrial applications. The 4+1 Switch includes standard design features such as 12~48VDC dual redundant power inputs, fault alarm relay, DIN rail and wall mounting hardware, and -40°C to 75°C operating temperature range.

RLH Switches are an ideal solution for a wide range of utility and automation network environments.

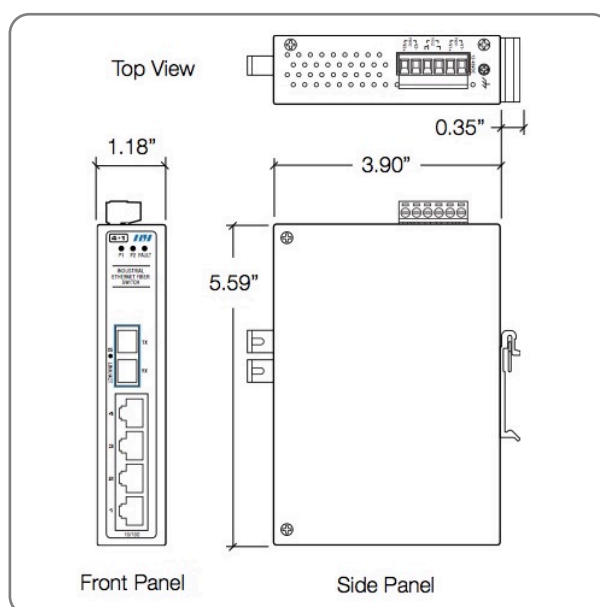
### Features

- 4 Fast Ethernet ports
- 1 Fiber 100BaseFX port, ST or SC
- Wide operating temperature range of -40°C to +75°C (-40°F to +167°F)
- 12-48VDC Dual redundant power inputs
- Power fault alarm relay
- Rugged IP30 housing, DIN rail & wall mountable
- UL, CE, and FCC certification
- TAA and NDAA compliant
- NEMA TS2 (ITS) compliant
- Hazardous Location UL Class 1/Div.2 certified
- 5 Year Warranty



Industrial 4+1 Fiber Switch

### Dimensions





## Specifications

<b>Data Process:</b>	Store and Forward, CSMA/CD				
<b>Standards:</b>	<b>IEEE 802.3</b> 10Base-T (Ethernet) <b>IEEE 802.3u</b> 100Base-TX (Fast Ethernet) <b>IEEE 100BaseFX</b> Ethernet over Fiber				
<b>Transfer Rates:</b>	14,880pps for Ethernet port 148,800pps for Fast Ethernet port				
<b>Transmission Distance:</b>	Up to 100 Meters over twisted pair				
<b>Transmission Speed:</b>	Up to 100Mbps				
<b>MAC Address:</b>	8K table size				
<b>Fiber Specifications:</b>	<b>Fiber Type</b>	<b>Mode</b>	<b>Fiber Diameter</b>	<b>Connector Type</b>	<b>Distance</b>
	Single Fiber Bi-Directional	Singlemode	9/125 µm	SC	20km / 12.4miles 60km / 36 miles
		Multimode	62.5/125 50/125 µm	ST/SC	2km / 1.2 miles
	Dual Fiber				
		Singlemode	9/125 µm	ST/SC	20km / 12.4 miles 60km / 36 miles 120km / 74 miles
<b>Note:</b> Distances equated using industry standard fiber and connector attenuation of 3dB/Km. Fiber condition, splices and connectors may affect actual range.					
<b>Ethernet Interface:</b>	Auto MDI/MDI-X, Auto-Negotiation				
<b>Ethernet Ports:</b>	(4) 10/100 Mbps				
	(1) Fiber 100BaseFX				
<b>LED Status Indicators:</b>	Power 1 (P1), Power 2 (P2), Fault				
	Ethernet Ports (Link and Activity)				
<b>Power Protection:</b>	Over Current, Power Reversal, Polarity Protection				
<b>Power Input:</b>	12~48VDC redundant power inputs (6 position pluggable terminal block)				
<b>Max Power Consumption:</b>	6 Watts				
<b>Fault Output:</b>	1 Relay output rated for 24VDC @ 1 Amp				
<b>Operating Temperature:</b>	-40°C to 75°C (-40°F to 167°F)				
<b>Storage Temperature:</b>	-40°C to 85°C (-40°F to 185°F)				
<b>Operating Humidity:</b>	5% to 95% (Non-Condensing)				
<b>Construction:</b>	Powder coated IP30 steel housing				
<b>Case Dimensions:</b>	1.18" (W) x 3.90" (D) x 5.59" (H), (30mm x 99mm x 142mm) *Not including connectors or DIN bracket				
<b>Installation:</b>	Standard DIN rail (TS-35) or wall mount *Wall mount brackets included				
<b>EMI:</b>	FCC Class A, CE EN61000-4-2/3/4/5/6/8/11/12, CE EN61000-6-2, CE EN61000-6-4				
<b>Stability Testing:</b>	IEC60068-2-32 (Free fall), IEC60068-2-27 (Shock), IEC60068-2-6 (Vibration)				
<b>Safety:</b>	CE, FCC Class A, UL 61010-1, UL 61010-2-201, ISA 12.12.01, UL Class 1/Div.2				
<b>Compliance:</b>	NDAA, TAA, NEMA TS2 (ITS), RoHS and REACH compliant				
<b>Warranty:</b>	5 Years Visit <a href="http://www.fiber optic link.com">www.fiber optic link.com</a> for warranty details				



## Ordering Information

Description	Connector	Fibers	Wavelength	Distance	Part Number
Multimode	ST	Dual Fibers	1310nm	2km/1.2 miles	<b>ETH-41-04-1</b>
	SC	Dual Fibers	1310nm	2km/1.2 miles	<b>ETH-41-03-1</b>
Singlemode	ST	Dual Fibers	1310nm	20km/12.4 miles	<b>ETH-41-50-1</b>
				60km/37 miles	<b>ETH-41-51-1</b>
			1550nm	120km/74 miles	<b>ETH-41-55-1</b>
Singlemode	SC	Dual Fibers	1310nm	20km/12.4 miles	<b>ETH-41-40-1</b>
				60km/37 miles	<b>ETH-41-41-1</b>
			1550nm	120km/74 miles	<b>ETH-41-45-1</b>
Singlemode	SC	Single Fiber - Side A	T-1310/R-1550	20km/12.4 miles	<b>ETH-41-10-1</b>
		Single Fiber - Side B	R-1310/T-1550	20km/12.4 miles	<b>ETH-41-11-1</b>
Singlemode	SC	Single Fiber - Side A	T-1310/R-1550	60km/37 miles	<b>ETH-41-14-1</b>
		Single Fiber - Side B	R-1310/T-1550	60km/37 miles	<b>ETH-41-15-1</b>

- Single fiber (bi-directional) systems must always be paired, side A and side B
- Please contact your RLH sales representative for pricing and delivery information

## Contact

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