

4+1 Fiber Switch

INDUSTRIAL, RUGGED, & COMPACT

RLH industrial switches are engineered to provide reliable network performance in harsh environments. The 4+1 Fiber switch provides both copper and fiber Ethernet access. It is environmentally hardened to operate in a wide temperature range, which is the standard for RLH equipment.

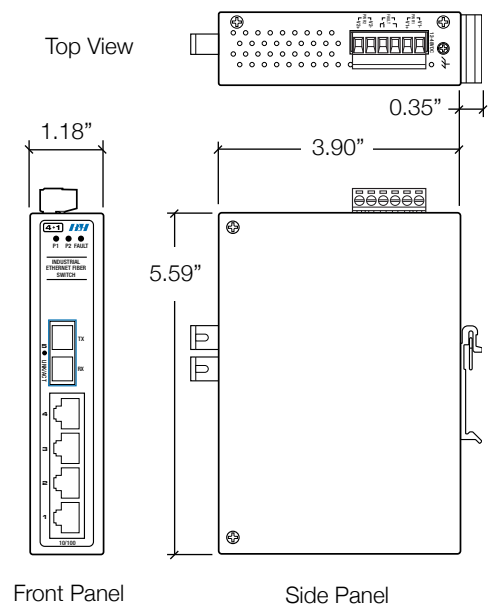
Our industrial switches robust features and construction meet the demands of a variety of applications, and are an ideal solution for a wide range of utility and automation environments.



4+1 Fiber Switch

Key Features

- Hardened design has a wide operating temperature range -40°F to +167°F (-40°C to +75°C)
- 1 Fiber 100BaseFX port
- Multimode or single-mode fiber, SC or ST connectors
- Extend Ethernet over fiber, up to 74 miles (120km)
- 4 ports of Fast Ethernet
- Auto MDI/MDI-X
- Store-and-forward switching architecture
- Rugged case rated to IP30
- 12-48VDC Redundant power inputs with built-in alarm
- 2kV surge protection
- DIN rail & wall mountable
- UL Listed



Dimensional Information

General Specifications

Data Process	Store & Forward, CSMA/CD			
Standards	IEEE 802.3 10BaseT Ethernet IEEE 802.3u 100BaseTX Fast Ethernet IEEE 100BaseFX			
Transfer Rate(s)	14,880pps - Ethernet port 148,800pps - Fast Ethernet port			
Transmission Distance	Up to 100 Meters over Twisted Pair			
Transmission Speed	Up to 100Mbps			
MAC Address	8K table size			
Fiber	Multimode	62.5/125, 50/125 μ m		
	Single-mode	9/125 μ m		
Fiber Type / Connector / Distance	Single Fiber (Bi-directional)	Single-mode	SC	20km / 12.4 miles 60km / 36 miles
	Dual Fiber	Multimode	ST,SC	2km / 1.2 miles
		Single-mode	ST,SC	20km / 12.4 miles 60km / 36 miles 120km / 74 miles
	Note: Distances equated using industry standard fiber and connector attenuation of 3dB/Km. Fiber condition, splices and connectors may affect actual range.			
Ethernet Interface	Auto MDI/MDI-X, Auto-Negotiation			
Ethernet Ports	(4) 10/100 Mbps (1) Fiber 100BaseFX			
LED Status Indicators	Power 1 (P1), Power 2 (P2), Fault Ethernet Ports (Link and Activity)			
Power Protection	Over Current, Power Reversal, Polarity Protection			
Power Input	12~48VDC redundant power inputs (6 position pluggable terminal block)			
Max Power Consumption	6 Watts			
Fault Output	1 Relay output rated for 24VDC @ 1 Amp			
Operating Temperature	-40°F to 167°F (-40°C to 75°C)			
Storage Temperature	-40°F to 185°F (-40°C to 85°C)			
Operating Humidity	5% to 95% (Non-Condensing)			
Construction	Powder coated IP30 steel housing			
Case Dimension	1.18" (W) x 3.90" (D) x 5.59" (H), (30mm x 99mm x 142mm) *Not including connectors or DIN bracket			
Installation	Standard DIN rail (TS-35) or wall mount *Wall mount brackets included			
EMI	FCC Class A, CE EN61000-4-2/3/4/5/6/8/11/12, CE EN61000-6-2, CE EN61000-6-4			
Stability Testing	IEC60068-2-32 (Free fall), IEC60068-2-27 (Shock), IEC60068-2-6 (Vibration)			
Safety	CE, FCC Class A, UL 508 File Number: E480850			
Warranty	Limited 5 years <i>Visit www.fiberopticlink.com for warranty details</i>			

Ordering Information

Each 4+1 Fiber Switch is identified with a part number.

Standard Options

Optics	Distance	Wavelength	Fiber	Part Number
Multimode SC	2 km/1.2 mi	1310nm	62.5/50 μ m	ETH-41-03-1
Multimode ST	2 km/1.2 mi	1310nm	62.5/50 μ m	ETH-41-04-1
Single-mode SC	20km/12.4mi.	1310nm	8~9 μ m	ETH-41-40-1
Single-mode ST	20km/12.4mi.	1310nm	8~9 μ m	ETH-41-50-1

Extended Distance & Single Fiber Bi-directional Options

Optics	Side	Distance	Wavelength	Fiber	Part Number
Single-mode SC	-	60km / 37mi.	1310nm	8~9 μ m	ETH-41-41-1
	-	120km / 74 mi.	1550nm	8~9 μ m	ETH-41-45-1
Single-mode ST	-	60km / 37mi.	1310nm	8~9 μ m	ETH-41-51-1
	-	120km / 74 mi.	1550nm	8~9 μ m	ETH-41-55-1
Bi-Directional Single-mode SC	A	20km/12.4mi.	Tx 1310nm / Rx 1550nm	8~9 μ m	ETH-41-10-1
	B	20km/12.4mi.	Tx 1550nm / Rx 1310nm	8~9 μ m	ETH-41-11-1
	A	60km / 37mi.	Tx 1310nm / Rx 1550nm	8~9 μ m	ETH-41-14-1
	B	60km / 37mi.	Tx 1550nm / Rx 1310nm	8~9 μ m	ETH-41-15-1

- ▶ Bi-directional single fiber models require an **A** Side and **B** Side unit for a complete system.
- ▶ Please contact your RLH sales representative for pricing and delivery information.