

## 2 Channel POTS with I/O DIN Fiber Link System

The RLH 2 Channel Plain Old Telephone Service (POTS) DIN Fiber Link system transports two analog phone lines over fiber optic cable. Each unit also features bi-directional contact closure for remote relay transportation. The system will operate over a wide temperature range and has been designed to provide reliability in harsh environments.

Common applications include extending analog lines over fiber for the benefit of electrical isolation, to achieve long distances, or through noisy environments to reduce EMI. The system is compatible with all traditional analog phone services, dial-up modems, meters, and fax machines.

A comprehensive set of LED's on the front panel indicate the status of the power, fiber, phone lines, and contact closure. The standard system powering requirement is 24-48VDC, with an optional 125VDC available. This rugged system features dual redundant power inputs with a system alarm contact relay, and comes standard with DIN clip and wall mount ears. RLH Fiber Link systems are designed and Made in the USA, and are covered by our Limited Lifetime Warranty.



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## Key Features

### Environment

Hardened to operate in -40°C to +70°C environment

### Power

Redundant power capable, 24-56VDC or 125VDC depending on model

### Application

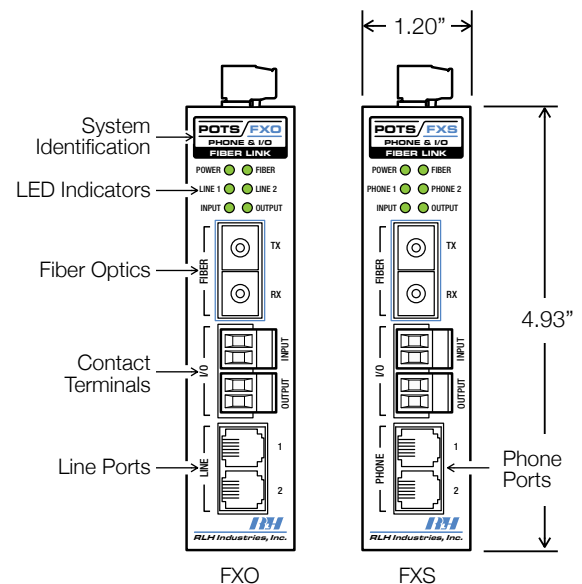
Available with ST or SC connectors for single-mode or multimode fiber  
Supports Caller ID  
Supports Call-Forward Disconnect (Hook Flash)  
Ringdown Function (FXS to FXS Hotline Phone)  
Bi-Directional Contact Closure

### Compatibility

Standard 2 wire analog phone lines, dial-up modems, and fax machines

### Quality

Made in the USA and covered by our Limited Lifetime Warranty



Feature & Dimensional Information

## General Specifications

<b>Fiber Connector Options</b>	ST or SC				
<b>Wavelength</b>	<b>Multimode</b>	1310nm			
	<b>Single-mode</b>	1310nm/1550nm			
<b>Maximum Fiber Attenuation / Distance*</b>	<b>Dual Fiber</b>	Multimode (50/125µm & 62.5/125µm):	1.25mi./2 km range		
		Single-mode (9/125µm):	12.4 mi./20km range		
			37 mi./60km range		
	<b>Single Fiber, Bi-directional</b>	Single-mode (9/125µm):	12.4 mi./20km range		
			37 mi./60km range		
<i>*Note: Distances equated using industry standard fiber and connector attenuation. Fiber condition, splices and connectors may affect actual range.</i>					
<b>Phone Connectors</b>	(2) RJ-11 Female				
<b>Audio Bandwidth</b>	300Hz to 3400Hz				
<b>Analog Phone (POTS) Interface</b>	<b>FXO Device</b>	Impedance	600 ohms		
		Ring Frequency	Acceptable 20 ~50Hz		
	<b>FXS Device</b>	Impedance	600 ohms		
		Dial	DTMF and Pulse		
		Battery Source	48VDC ± 4V		
		Ring Voltage	80Vrms at 20Hz (Depending on the ringing load)		
		REN	REN 3.0 (Ring Equivalence Number)		
			*REN value is per channel.		
<b>Ringling Waveform</b>	Sine wave				
<b>Ring Cadence</b>	FXS to FXS	On → 2 sec, Off → 4 sec			
	FXO to FXS	Reproduces the cadence detected by FXO			
<b>Return Loss</b>	40dB				
<b>Supports</b>	Caller ID & Call Forward Disconnect				
<b>Bi-Directional Contact Closure (I/O)</b>	Inputs	Dry contact (1-100 ohms)			
	Outputs	Relay - Normally Open			
		Relay Max. Rating	125VAC	0.5A	62.5VA
			30VDC	2.0A	60 Watts
<b>Relay Response Time</b>	20ms				
<b>LED Indicators</b>	Power, Fiber, Phone or Line 1~2, Input, Output (See User Guide for more details)				
<b>Power Input</b>	24~48VDC or 125VDC nominal (Depending on model)				
	Dual redundant power inputs				
<b>Power Consumption</b>	<b>FXO Device</b>	2.5 Watts			
	<b>FXS Device</b>	5 Watts			
<b>System Alarm Output</b>	Normally Open / Closed Relay				
<b>DC Input Isolation (In/Out)</b>	1.5KV				
<b>Voltage Reversal Protection</b>	Will operate with V+ or V- in either power terminal				
<b>Over Current Protection</b>	1.0A (Automatic Recovery)				
<b>Temperature</b>	Storage	-40°C to +85°C (-40°F to +185°F)			
	Operating	-40°C to +70°C			
<b>Dimensions</b>	H 4.93" x W 1.20" x D 3.93" (not including DIN clip)				
<b>Mounting</b>	Includes standard T-35 DIN rail clip and wall mount ears				
<b>Humidity</b>	95% non-condensing				
<b>Warranty</b>	Limited Lifetime	Visit <a href="http://www.fiberopticlink.com">www.fiberopticlink.com</a> for warranty details			

## Ordering Information

Each 2 Channel POTS with I/O Fiber Link device is identified with a part number.

Optics	Distance	Fiber	Side	Type	Part Number
Multimode SC	2.4km / 1.5 mi.	62.5/50µm	-	FXO	<b>PD-2FXO-IO-03-1</b>
				FXS	<b>PD-2FXS-IO-03-1</b>
Multimode ST	2.4km / 1.5 mi.	62.5/50µm	-	FXO	<b>PD-2FXO-IO-04-1</b>
				FXS	<b>PD-2FXS-IO-04-1</b>
Single-mode SC (Single Fiber)	20km / 12.4 mi.	8-9µm	A	FXO	<b>PD-2FXO-IO-10-1</b>
			B	FXS	<b>PD-2FXS-IO-11-1</b>
	60km / 37 mi.	8-9µm	A	FXO	<b>PD-2FXO-IO-14-1</b>
			B	FXS	<b>PD-2FXS-IO-15-1</b>
Single-mode SC	20km / 12.4 mi.	8-9µm	-	FXO	<b>PD-2FXO-IO-40-1</b>
				FXS	<b>PD-2FXS-IO-40-1</b>
	60km / 37 mi.	8-9µm	-	FXO	<b>PD-2FXO-IO-41-1</b>
				FXS	<b>PD-2FXS-IO-41-1</b>
	120km / 74 mi.	8-9µm	-	FXO	<b>PD-2FXO-IO-45-1</b>
				FXS	<b>PD-2FXS-IO-45-1</b>
Single-mode ST	20km / 12.4 mi.	8-9µm	-	FXO	<b>PD-2FXO-IO-50-1</b>
				FXS	<b>PD-2FXS-IO-50-1</b>
	60km / 37 mi.	8-9µm	-	FXO	<b>PD-2FXO-IO-51-1</b>
				FXS	<b>PD-2FXS-IO-51-1</b>
	120km / 74 mi.	8-9µm	-	FXO	<b>PD-2FXO-IO-55-1</b>
				FXS	<b>PD-2FXS-IO-55-1</b>

- ▶ A complete system requires 2 devices of either configuration:
  - One (1) **FXO** device paired with one (1) **FXS** device for a typical phone line extension, or
  - Two (2) **FXS** devices paired for a ringdown hotline.
- ▶ Bi-directional single fiber models require an **A** Side and **B** Side unit for a complete system.
- ▶ Add **-A** to the end of the part number for 125VDC input power option.
- ▶ Please contact your RLH sales representative for pricing and delivery information.



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Specifications subject to change without notice.