

4 Wire Data with E&M DIN Fiber Link System

This industrial fiber optic media converter is designed to extend a 4 Wire Voice Frequency signal over fiber optic cable. By extending 4 Wire signals over fiber cable you gain the advantage of sending the signal long distances, up to 120km, as well as gain noise immunity to RF and Electromagnetic Interference.

This system transports one circuit of 4 Wire Data and supports E&M signaling. The devices can be ordered with dual fiber or single fiber transceivers. The 4 wire data supports constant transmission of voice frequency ranging from 300Hz-3,400Hz which is suitable for a wide range of radio and SCADA applications. This RLH Fiber Link system is designed and made in the U.S.A. and covered by our **Limited Lifetime Warranty**.



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Key Features

Environment

Hardened to operate in -40°F to +158°F (-40°C to +70°C)

Power

Dual power capable, local 24/48VDC

Application

Available with ST or SC connectors for single or multi-mode fiber
Built-in alarm relay to indicate system failure
Single fiber and dual fiber models available
Critical, high voltage, remote or un-manned locations operating 24/7/365

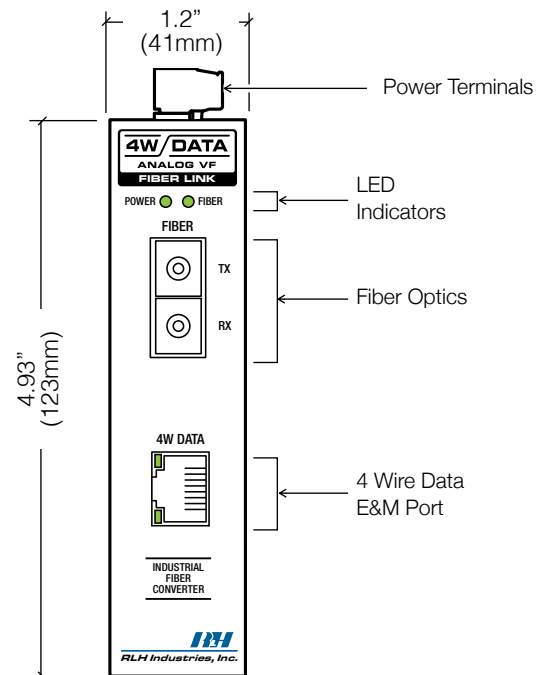
Compatibility

4 wire voice frequency data systems
Supports E&M

Quality

Made in the USA

Covered by our **Limited Lifetime Warranty**



Feature & Dimensional Information

Ordering Information

Optics	Distance	Fiber	Side	Part Number
Multimode SC	2km / 1.2 mi.	62.5/50µm	-	4D-1EM-03-1
Multimode ST	2km / 1.2 mi.	62.5/50µm	-	4D-1EM-04-1
Single-mode SC (Single Fiber)	20km / 12.4 mi.	8~9µm	A	4D-1EM-10-1
			B	4D-1EM-11-1
	60km / 37 mi.	8~9µm	A	4D-1EM-14-1
			B	4D-1EM-15-1
Single-mode SC	20km / 12.4 mi.	8~9µm	-	4D-1EM-40-1
	60km / 37 mi.	8~9µm	-	4D-1EM-41-1
	120km / 74 mi.	8~9µm	-	4D-1EM-45-1
Single-mode ST	20km / 12.4 mi.	8~9µm	-	4D-1EM-50-1
	60km / 37 mi.	8~9µm	-	4D-1EM-51-1
	120km / 74 mi.	8~9µm	-	4D-1EM-55-1

- ▶ A complete system requires 2 units.
- ▶ Add **-A** for 125 VDC Powering Option
- ▶ Please contact your RLH sales representative for pricing and delivery information.

General Specifications

Transmission method	Frequency modulated light via two optical fibers
	Multimode: 1310nm
	Single-mode: 1310/1550nm
Maximum Fiber Loss / Distance*	Multimode: 1.25 mi. / 2km range
	Single-mode: 12.4 mi. / 20km range
	37 mi. / 60km range
	74 mi. / 120km range
	Single Fiber, Bi-directional
	Single-mode: 12.4 mi. / 20km range
	37 mi. / 60km range
	<i>*Note: Distances equated using industry standard fiber and connector attenuation. (Multimode: 3.5dB/km, Single-mode: 0.4db/km, + 0.5dB per connector, + 0.3dB per splice)</i>
Fiber Type	Multimode: 62.5/125µm, 50/125µm ; Single-mode: 9/125µm
Fiber Connector Types	ST or SC
Analog Bandwidth	300Hz to 3,400Hz
Channel Noise	< 20dBmC (15dBmC typical)
Nominal Impedance	600 Ohm input and output
Insertion Loss	0dB +/- 0.5dB each direction
Overload Level	8dBm into 600 Ohms
E&M Input	24-48VDC, 3000Vrms optically isolated
E&M Output	1500VRMS isolation by normally open solid state relay: Closed resistance 35 Ohms (220VAC or 330VDC @ 150mA max.) Open resistance >1M Ohms
Response Time	Input to output 15-18ms.
Surge Protection	PTC thermistors varistors
Power Requirements	24-56VDC
Power Consumption	6 Watts Maximum
Operating Temperature	-40° to +158° F (-40° to +70° C), 95% non-condensing
Dimensions	H 4.93" x W 1.20" x D 3.93" (not including DIN clip)
Warranty	Limited Lifetime Visit www.fiberopticlink.com for warranty details