



RLH Industries, Inc.

DATA SHEET

The leader in rugged fiber optic technology.

DS-133 2024A-1217

RS-232 Industrial Media Converter

INDUSTRIAL, RUGGED, & COMPACT

This Industrial Serial Data media converter transports a full 9-Pin RS-232 copper signal over fiber optic cable. This is an ideal solution for extending serial data communications over long distances or near large electrical equipment. Fiber optics provide long distance communication up to 74 mi. (120km) and immunity to EMI/RFI and potential transient surges which can cause noise or damage equipment.

The system supports asynchronous serial data rates from 50 bps to 1Mbit/s and has an auto-sensing feature that eliminates the need to manually set serial data rates. A comprehensive set of LEDs on the front panel indicate power status, fiber status, and serial data activity. Powering options include standard 24-48VDC or high range DC powering of 125VDC. This rugged system is designed to operate over a wide operating temperature -40 to +70°C and features dual redundant power inputs, and a system alarm relay for maximum uptime and reliability. Included is a DIN clip and wall mount ears for easy installation into to a wide range of environments.

Key Features

Environment

Hardened to operate in -40°C to +70°C environment
Critical, high voltage, remote or un-manned locations operating 24/7/365

Power

Redundant power capable, 24-48VDC or 125VDC depending on model

Application

Available with ST or SC connectors for singlemode or multimode fiber
Selectable DTC/DCE switch for easy installation
DC power, fiber break, and/or system failure alarm relay
Optional Breakout Cable for 3 channels of serial data

Compatibility

Supports baud rates of 50 bps to 1Mbit/s

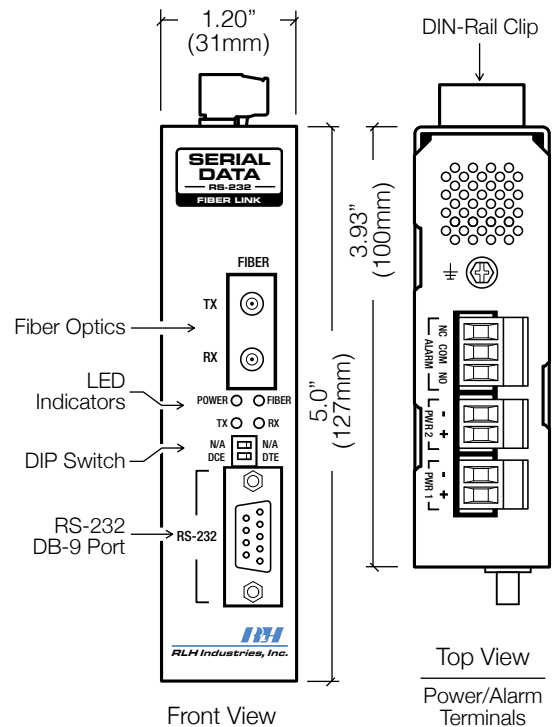
Quality

Made in the USA and covered by our Limited Lifetime Warranty

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RS-232 DIN Fiber Link



Feature & Dimensional Information



General Specifications

Power Input	24-48VDC or 125VDC nominal Redundant power inputs		Transmission Method	Frequency modulated light via two optical fibers	
Power Consumption	150mA @ 24VDC or 3.6 Watt			Multimode	1310nm
DC Input Isolation (In/Out)	1.5KV			Single-Mode	1310/1550nm
Voltage Reversal Protection	Will operate with V+ or V- in either power terminal		Maximum Fiber Attenuation / Distance*	Single Fiber	Single-mode (8-9/125µm) up to 37mi. / 60km
Over Current Protection	1.0A (Automatic Recovery)				Multimode (50/62.5/125µm) up to 1.25mi. / 2km
LED	POWER	DC Power OK		Dual Fiber	Single-mode (8-9/125µm) up to 74mi. / 120km
	FIBER	Fiber Connection OK			
	TX	RS-232 Copper Transmit			
	RX	RS-232 Copper Receive			
Temperature	Storage	-40°C to +85°C (-40°F to +185°F)			
	Operating	-40°C to +70°C (-40°F to +158°F)			
Dimensions/ Mounting	H 4.93" x W 1.20" x D 3.93" (not including DIN clip, wall mount brackets)		Connector Type	ST or SC Multimode or Single-mode	
Warranty	Limited Lifetime		Power Margin	11dB(2Km, M/M), 12dB ~ 35dB (20 ~ 120Km, S/M)	
			Protocols	RS-232	Latency 100ns
			DB-9 Port (Female)	RS-232	DCD, RXD, TXD, DTR, GND, DSR, RTS, CTS, RI
			Signal Isolation	Optical Isolation 3000 Vrms	
			Dip Switches	Specifies DCE or DTE of the DB-9's operation mode	
			Baud Rates	50bps-1Mbit/s Automatic Detection	
			Dip Switches	Specifies DCE or DTE DB-9 operation	

**Note: Distances equated using industry standard fiber and connector attenuation. Fiber condition, splices and connectors may affect actual range.*

Ordering Information

Optics	Side	Distance	Wavelength	Fiber	Part Number
Dual Fiber Multimode SC	-	2 km/1.2 mi	1310nm	50/62.5 μm	SED-03-2
Dual Fiber Multimode ST	-	2 km/1.2 mi	1310nm	50/62.5 μm	SED-04-2
Single Fiber Single-mode SC	A	20km/12.4mi.	Tx 1310nm Rx 1550nm	8~9 μm	SED-10-2
	B	20km/12.4mi.	Tx 1550nm Rx 1310nm	8~9 μm	SED-11-2
	A	60km / 37mi.	Tx 1310nm Rx 1550nm	8~9 μm	SED-14-2
	B	60km / 37mi.	Tx 1550nm Rx 1310nm	8~9 μm	SED-15-2
Dual Fiber Single-mode SC	-	20km/12.4mi.	1310nm	8~9 μm	SED-40-2
	-	60km / 37mi.	1310nm	8~9 μm	SED-41-2
	-	120km / 74 mi.	1550nm	8~9 μm	SED-45-2
Dual Fiber Single-mode ST	-	20km/12.4mi.	1310nm	8~9 μm	SED-50-2
	-	60km / 37mi.	1310nm	8~9 μm	SED-51-2
	-	120km / 74 mi.	1550nm	8~9 μm	SED-55-2

- ▶ Add **-A** to the end of the part number for 125VDC input power option.
- ▶ Bidirectional single fiber models require an **A Side** and **B Side** unit for a complete system.
- ▶ DB-9 cables are available. Contact your sales representative or review the User Guide for more information.
- ▶ Please contact your RLH sales representative for pricing and delivery information.