Serial to Fiber Optic Modem

Model BB-9PFLST

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PRODUCT FEATURES

- Fiber optic data transmission between two RS-232 devices
- EMI/RFI transient immunity to surges, spikes, ground loops
- Data rate: 115.2 kbps; up to 4 km (2.5 mi) range
- Quick, inline installation
- Note: use in pairs; one at each end of fiber transmission line
- Port-powered, no external power required
- Optional external powering (power supply not included, sold separately)

Model BB-9PFLST allows any two pieces of RS-232 asynchronous serial equipment to communicate full-duplex over two multi-mode fibers. Typical distances up to 4 km (2.5 mi) are possible with no external power required. The BB-9PFLST supports both data signals at up to 115.2 kbps as well as the RTS/CTS handshake lines. This means model BB-9PFLST can replace short haul modems and isolators when connecting remote devices, while providing the EMI/RFI and transient immunity of optical fiber.

RS-232 connections are provided on the same DB9 female connector, while the multi-mode fiber is connected via two ST connectors. The unit is port-powered by the RS-232 Transmit Data and handshake lines. When handshake lines are not available, or when using a low power RS-232 port, the BB-9PFLST can be powered by an external 12VDC supply, drawing 50 mA maximum (power supply not included, sold separately).

ORDERING INFORMATION

MODEL NUMBER	SERIAL CONNECTOR	FIBER CONNECTOR	OUTPUT
BB-9PFLST	DB9 Female	Multi-mode ST	RS-232

Note: Must be used in pairs.

ACCESSORIES - sold separately

BB-SMI612V-P230C1 – Power Supply, 12 VDC 6 W, 2.5mm Plug, International AC Input, International AC Blades

BB-9PAMF6 - DB9M/DB9M extension cable, 1.8m

Fiber Optic Benefits

Fiber optic cable carries serial data up to 4 kilometers (2.5 mi), much farther and reliably than conventional copper lines.

Power surges, spikes and groupd loops are created by electrical equipment, by nearby lightning strikes, and from other sources. They are easily picked up by copper data lines and transmitted to connected devices, garbling data communications and damaging equipment.

However, fiber optic data transmission uses light in glass fiber cable as a communication medium. Being inherently non-electric, fiber optic cable will not pick up noise and provides the most reliable system possible – ideal for spanning areas with severe interference, such as near heavy electrical equipment, welding or radio transmissions. It does not transmit power spikes or surges and prevents ground loops by not providing a conductive path for the ground.

All product specifications are subject to change without notice.

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SPECIFICATIONS

SERIAL TECHNOLOGY	
Data Rate	115.2 kbps, maximum
RS-232	
RS-232 Connector	DB9 female
RS-232 Signals	TD, RD, RTS, CTS, GND
FIBER OPTIC TECHNOLOGY	
Connector	Multi-mode ST
Typical Range	Up to 4 km (2.5 mi) on multi-mode glass fiber
Transmission Line	Dual multi-mode optical cable
Transmission Mode	Asynchronous, half or full-duplex, point-to-point
POWER	
Source	Port-powered from serial port TD, RTS, DTR lines
Optional	External 12 VDC (power supply not included, sold separately)
Coupled Power Budget	12.1 dB
Optic Wavelength	820 nm

MECHANICAL	
Dimensions	10.9 x 4.3 x 2.4 cm (1.3 x 1.7 x 1.0 in)
Enclosure	Plastic, inline
ENVIRONMENT	
Operating Temperture	0 to +50 °C, maximum
MEANTIME BETWEEN FAILURE (MTBF)	
MTBF	404846 hours
MTBF Calc. Method	MIL 217F Parts Count Reliability Prediction
REGULATORY, APPROVALS	
FCC Part 15, EN 55032 Class B Emissions	
CE – Directives	2014/30/EU: Electromagnetic Compatibility Directive 2011/65/EU -as amended by Directive (EU) 2015/863 Reduction of Hazardous Substances Directive (RoHS-3) 2012/19/EU: Waste Electrical and Electronic Equipment Directive (WEEE)

TYPICAL SETUP