

BB-9PFLST

Serial to Fiber Optic Modem



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)

Introduction

Model BB-9PFLST allows any two RS-232 asynchronous serial devices 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).

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 ground 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.

Ordering Information

| Model No. | Serial Connector | Fiber Optic Connector | Output |
|-----------|------------------|-----------------------|--------|
| BB-9PFLST | DB9 Female | Multi-mode ST | RS-232 |

Note: Must be used in pairs.

Accessories Sold Separately

BB-SMIB-12V-P230C1 – Power supply, 12 Vdc, 6 W, 2.5 mm plug, International AC input, International AC blades

BB-9PAMF6 – Serial adapter cable, DB9 male to DB9 female, 1.8 m (6 ft)

Specifications

| Serial Technology | |
|------------------------|--|
| Data Rate | Up to 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 Source | External 12 Vdc (power supply not included, sold separately) |
| Coupled 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 |
| Mounting | In-line installation |
| Environmental | |
| Operating Temperature | 0 to +50 °C, maximum |
| Meantime Between Failures (MTBF) | |
| MTBF | 404846 hours |
| Calculation Method | MIL 217F Parts Count Reliability Prediction |
| Regulatory – Approvals / Standards / Directives | |
| Approvals | FCC Part 15 |
| CE - Directives | 2014/30/EU – Electromagnetic Compatibility Directive (ECD) 2011-65/EU – amended by (EU) 2015/863 Reduction of Hazardous Substances Directive (RoHS) 2012/19/ EU – Waste Electrical and Electronic Equipment (WEEE) |
| CE - Standards | EN 55032 Class B - Electromagnetic Compatibility of Multimedia Equipment EN 55035 Class B - Electromagnetic Compatibility of Multimedia Equipment Emission Requirements |

Typical Set-up

