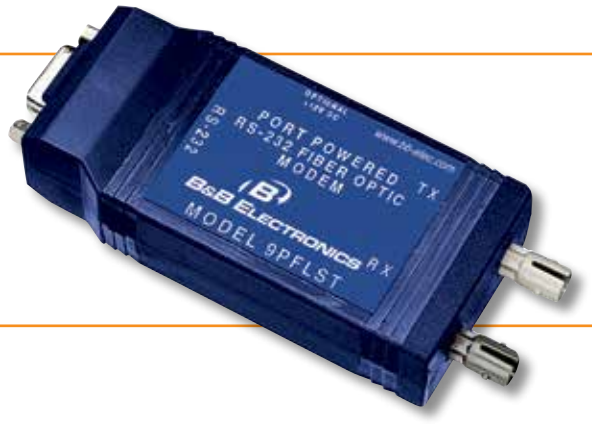
Fiber Optic Modem

9PFLST, 232FLST



PRODUCT FEATURES

- Transparent asynchronous RS-232 at 115.2 Kbps
- Full or half-duplex
- Range up to 4 km (2.5 mi)
- TD, RD, RTS and CTS supported
- EMI/RFI transient immunity to surges, spikes, ground loops
- Port powered, no external power required

These port-powered fiber optic modem allows two RS-232 serial devices to communicate transparently over longer distances and with greater reliability. The inherent immunity of fiber optic protects data from line surges, spikes and ground loops.

They transmit RS-232 data, full or half duplex, over two fibers at distances up to 4 km (2.5 mi) and data rates up to 115.2 kbps.They have a DCE female serial connector and multi-mode ST fiber connectors. TD, RD, and RTS/CTS handshake lines are supported.

The modem is powered from the RS-232 data and handshake lines. A power jack is provided for connecting an optional +12 VDC supply (not included) for use with low powered ports such as laptops and PCs.

ORDERING INFORMATION

MODEL NUMBER	SERIAL CONNECTOR	FIBER CONNECTOR	OUTPUT
9PFLST	DB9 Female	Multi-mode ST	RS-232
232FLST	DB25 Female	Multi-mode ST	RS-232

Note: Must be used in pairs

ACCESSORIES

232PS - 12VDC@1000ma, Wall Transformer Power Supply, 2.5 mm male plug

E1250BL-BB3 - 230 VAC to 12 VDC Wall Transformer Power Supply, 2.5 mm male plug

9PAMF6 - RS-232 serial cable DB9 Male To DB9 Female, 6 ft. (1.8 m)

232AMF5 - RS-232 serial cable DB25 Male To DB25 Female, 6 ft. (1.8 m)

DFMM-STST-3M - Multi-Mode Duplex Fiber Cable, ST To ST, 9.8 ft. (3 m)

Fiber Optic Benefits

Fiber optic cable carries serial data up to 4 kilometers (2.5 miles), 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.

Fiber Optic Modem

9PFLST, 232FLST

SPECIFICATIONS

SERIAL TECHNOLOGY	
Data Rate	115.2 kbps maximum
RS-232	
Connector	DB9 female
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, and DTR lines
Optional	External 10–16 VDC @ .5 Watt max
Coupled Power Budget	12.1 dB
Optic Wavelength	820 nm
MECHANICAL	
9PFLST Dimensions	10.9 x 4.3 x 2.4 cm (1.3 x 1.7 x 1.0 in)
232FLST Dimensions	10.9 x 5.8 x 2.4 cm (4.3 x 2.3 x 1.0 in)
Enclosure	Plastic, inline
MTBF	404846
MTBF Calc. Method	Parts Count Reliability Prediction

ENVIRONMENTAL	
Operating Temperature	0 to +70 °C (+32 to +158 °F)
Storage Temperature	-40 to +85 °C (-40 to +185 °F)
APPROVALS / CERTIFICATIONS - 9PFLST	
FCC Part 15, CISPR, EN 55022: 2010 + AC:2011 Class A Emissions	
CE	
EN 61000-6-1: 2007 Generic Standards for Residential, Commercial and Light-Industrial Environments	
EN 61000-4-2: 2009 Electro-Static Discharge (ESD)	
EN 61000-4-3: 2006 +A1 +A2 +IS1 Radiated Field Immunity (RFI)	
EN 61000-4-4: 2012 Electrical Fast Transients-Burst Immunity (EFT)	
EN 61000-4-6: 2009 Conducted Immunity	
Download complete Declaration of Conformity at www.bb.elec.com	

FIBER OPTIC CABLES

MULTI-MODE DUPLEX FIBER		LENGTH							
MODEL NUMBER	**CONNECTOR TYPE**	**1M**	**2M**	**3M**	**5M**	**10M**	**15M**	**20M**	**30M**
DFMM-LCLC-XX	LC TO LC	✔	✔	✔	✔				
DFMM-SCLC-XX	SC TO LC	✔	✔	✔	✔	✔			
DFMM-SCSC-XX	SC TO SC	✔	✔	✔	✔	✔			
DFMM-STLC-XX	ST TO LC	✔	✔	✔	✔	✔			
DFMM-STSC-XX	ST TO SC	✔	✔	✔	✔	✔			
DFMM-STST-XX	ST TO ST	✔	✔	✔	✔	✔	✔	✔	
SINGLE-MODE DUPLEX FIBER		**LENGTH**							
MODEL NUMBER	CONNECTOR TYPE	1M	2M	3M	5M	10M	15M	20M	30M
DFSM-LCLC-xx	LC to LC	✔	✔	✔	✔	✔			
DFSM-SCLC-xx	SC to LC	✔	✔	✔	✔	✔			
DFSM-SCSC-xx	SC to SC	✔	✔	✔	✔	✔			
DFSM-STLC-xx	ST to LC	✔	✔	✔	✔	✔			
DFSM-STSC-xx	ST to SC	✔	✔	✔	✔	✔			
DFSM-STST-xx	ST to ST	✔	✔	✔	✔	✔	✔		✔

Note: Model Number change the xx to its fiber length number for the actual Model Number.
Example: If you want a 1M Multi-Mode LC to LC Fiber the part number would be DFMM-LCLC-1M.