FTD4/FRD4 Fiber Transmitter and Receiver

4-CHANNEL BIDIRECTIONAL DATA

Product Features

- 4 Bidirectional Data Channels Support RS-232, RS-422, RS-485 (2-wire/4-wire), Manchester, and Bi-Phase Communication
- Multimode Fiber Support for Distances up to 3 km (1.9 mi)
- Single-Mode Support for Distances up to 69 km (42.9 mi)
- Laser Diode for Transmission of Optical Signals
- Designed to Meet NEMA TS 1/TS 2 and Caltrans Traffic Signal Control Equipment Environmental Standards
- LED Status Indicators for Monitoring All Critical Operating Parameters
- Voltage Transient Protection on All Power and Signal Input/Output Lines
- Hot-Swappable Rack Modules
- Stand-Alone or Rack-Mountable Modular Design

FTD4S1ST

The **FTD4/FRD4** fiber transmitter and receiver provide transmission of four bidirectional data channels over one optical fiber in a two-slot wide design. The **FTD4** transmitter and **FRD4** receiver can be used with multimode or single-mode optical fiber. When using single-mode fiber, the **FTD4/FRD4** transmitter and receiver offer an optical budget of 23 dB and provide a transmission distance of 69 km (42.9 mi).

The **FTD4/FRD4** plug-and-play design ensures ease of installation by requiring no electrical or optical adjustments. Modular in design, **FTD4** and **FRD4** units can be rack-mounted using the EURACK/USRACK chassis, or stand-alone modules can be placed on a desktop or mounted to a wall (wall mount kit not required).

For stand-alone and wall mount installations, external power is required for the **FTD4/FRD4** units. The units can be powered with the recommended FEXTPS fiber external power supply.

TECHNICAL SPECIFICATIONS

MODELS

Transmitter	Compatible Receiver	Fiber Optical Connector Type	Number of Fibers	Wavelength	Optical Power Budget	Maximum Transmission Distance
Multimode (62.5/125 µm)						
FTD4M1ST	FRD4M1ST	ST	1	1310/1550 nm	16 dB	3 km (1.9 mi)
Single Mode (9/125 µm)						
FTD4S1ST	FRD4S1ST	ST	1	1310/1550 nm	23 dB	69 km (42.9 mi)
FTD4S1FC	FRD4S1FC	FC	1	1310/1550 nm	23 dB	69 km (42.9 mi)
Note: This product requires a fiber installation with a minimum 30 dB connector return loss.						

DATA

Number of Channels	4
Data Communication	RS-232, RS-422, and RS-485 (2-wire/ 4-wire), Manchester, and Bi-Phase
Maximum Baud Rate	250 Kbps
Operating Mode	Simplex or full-duplex
Bit Error Rate	<1 in 10^{-9} at maximum optical loss budget

ELECTRICAL

Power	
Surface Mount	8 to 15 VDC at 4 W
Rack Mount	Provided by rack
Current Protection	Automatic resettable solid-state current limiters
LED Indicators	Received Data, Transmitted Data, Optical Carrier Detect
MTBF	>100,000 hours
Circuit Board	Meets IPC standards

MECHANICAL

Connectors	
Power	Terminal block
Optical	ST or FC
Data	Terminal block
Number of Rack Slots	2

GENERAL

Operating Temperature	–40° to 75°C (–40° to 167°F)
Storage Temperature	–40° to 85°C (–40° to 185°F)
Relative Humidity	0% to 95%, noncondensing
Dimensions	15.5 × 13.5 × 5.6 cm (6.1" D × 5.3" W × 2.2" H)
Unit Weight	0.5 kg (1.15 lb)
Shipping Weight	0.9 kg (2.00 lb)

CERTIFICATIONS/RATINGS*

- CE, Class A
- FCC, Class A
- UL/cUL Listed
- C-Tick
- Designed to meet NEMA TS 1/TS 2 and Caltrans traffic signal control equipment environmental standards

*At the time of this printing, all certifications are pending. Please consult the factory, our Web site (*www.pelco.com*), or the most recent B.O.S.S.® update for the current status of certifications.

RECOMMENDED ACCESSORIES

EURACK	4 RU rack accessory with European power supply
USRACK	4 RU rack accessory with North American power supply
FEXTPS	Fiber External Power Supply with multiple plug adaptors (North American, Australian, United Kingdom, and European); 100 to 240 VAC, 50 to 60 Hz input, 9 VDC output

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Pelco, Inc.
625 W. Alluvial Ave., Fresno, CA 93711 United States
USA & Canada Tel (800) 289-9100 Fax (800) 289-9150
International Tel +1 (559) 292-1981 Fax +1 (559) 348-1120
www.pelco.com

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