

# 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
<b>Multimode (62.5/125 µm)</b>						
FTD4M1ST	FRD4M1ST	ST	1	1310/1550 nm	16 dB	3 km (1.9 mi)
<b>Single Mode (9/125 µm)</b>						
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)
<b>Note:</b> 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 <sup>-9</sup> at maximum optical loss budget

## ELECTRICAL

Power	8 to 15 VDC at 4 W
Surface Mount	Provided by rack
Rack Mount	
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](http://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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