FTD1/FRD1 Fiber Transmitter and Receiver

SINGLE-CHANNEL BIDIRECTIONAL DATA

Product Features

- Bidirectional Data Channel That Supports EIA RS-232C/D, RS-422/RS-485 (2-wire/4-wire) with Tri-State, Manchester, and Bi-Phase Communication
- Multimode Fiber Support for Distances up to 4 km (2.5 mi)
- Single-Mode Support for Distances up to 69 km (42.9 mi)
- Designed to Meet NEMA TS 1/TS 2 and Caltrans Traffic Signal Control Equipment Environmental Standards
- Laser Diode for Transmission of Optical Signals
- Voltage Transient Protection on All Power and Signal Input/Output Lines
- LED Status Indicators for Monitoring All Critical Operating Parameters
- Hot-Swappable Rack Modules
- Stand-Alone or Rack-Mountable Modular Design

FTD1M1ST

The **FTD1/FRD1** fiber transmitter and receiver provide transmission of bidirectional data over one optical fiber. The **FTD1** transmitter and **FRD1** receiver can be used with multimode or single-mode optical fiber. When using single-mode fiber, the **FTD1/FRD1** transmitter and receiver offer an optical budget of 23 dB and provide a transmission distance of 69 km.

The **FTD1/FRD1** plug-and-play design ensures ease of installation by requiring no electrical or optical adjustments. Modular in design, **FTD1** and **FRD1** 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 **FTD1/FRD1** 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)						
FTD1M1ST	FRD1M1ST	ST	1 in, 1 out	1310/1550 nm	16 dB	4 km (2.5 mi)
Single Mode (9/125 µm)						
FTD1S1ST	FRD1S1ST	ST	1 in, 1 out	1310/1550 nm	23 dB	69 km (42.9 mi)
FTD1S1FC	FRD1S1FC	FC	1 in, 1 out	1310/1550 nm	23 dB	69 km (42.9 mi)
Note: The unit can be used for transmission of RS-232 or RS-422, but not simultaneously.						

DATA/ELECTRICAL

Number of Channels	1
Data Communication	RS-232, RS-422, and RS-485 (2-wire/4-wire) with Tri-State, Manchester, and Bi-Phase
Maximum Baud Rate	250 Kbps
Operating Mode	Asynchronous, simplex or full-duplex
Bit Error Rate	<1 in 10^{-9} at maximum optical loss budget
Power	
Surface Mount	8 to 15 VDC at 2 W
Rack Mount	Provided by rack
MTBF	>100,000 hours
Current Protection	Automatic resettable solid-state current limiters
Circuit Board	Meets IPC standard
LED Indicators	Power, Data In, Data Out, Link, Loop Back

MECHANICAL

Connectors	
Power	Terminal block
Optical	ST or FC
Data	Terminal block
Relay	Terminal block
Number of Rack Slots	1

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 × 2.8 cm (6.1" D × 5.3" W × 1.1" H)
Unit Weight	0.34 kg (0.75 lb)
Shipping Weight	0.90 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

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

⚠**WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov.
⚠**ADVERTENCIA:** Cáncer y Daño Reproductivo - www.P65Warnings.ca.gov.
⚠**AVERTISSEMENT:** Cancer et Troubles de l'appareil reproducteur - www.P65Warnings.ca.gov.

Pelco, the Pelco logo, and other trademarks associated with Pelco products referred to in this publication are trademarks of Pelco, Inc. or its affiliates. All other product names and services are the property of their respective companies. Product specifications and availability are subject to change without notice.
©Copyright 2012, Pelco, Inc. All rights reserved.