

FTV80D2/FRV80D2 Fiber Transmitter and Receiver

8-CHANNEL VIDEO WITH BIDIRECTIONAL DATA AND CONTACT CLOSURE

Product Features

- 10-Bit Digitally Encoded Video for High-Quality Transmission over a Single Fiber
- 2 Bidirectional Data Channels Support RS-232, RS-422, RS-485 (2-wire/4-wire), Manchester, and Bi-Phase Communication
- 1 Bidirectional Contact Closure
- Multimode Fiber Support for Distances up to 2 km (1.2 mi)
- Single-Mode Support for Distances up to 69 km (42.9 mi)
- Exceeds All Requirements for the EIA RS-250C Short-Haul Transmission Specification
- Laser Diode for Transmission of Optical Signals
- Compatible with NTSC, PAL, and SECAM Video Standards
- Designed to Meet NEMA TS 1/TS 2 and Caltrans Traffic Signal Control Equipment Environmental Standards
- 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



FRV80D2M1ST

The **FTV80D2/FRV80D2** transmitter and receiver transmit eight channels of unidirectional video, two channels of bidirectional data, and one bidirectional contact closure over one optical fiber in a three-slot wide design. The **FTV80D2** transmitter and **FRV80D2** receiver are available in multimode and single-mode versions.

The **FTV80D2/FRV80D2** plug-and-play design ensures ease of installation and no electrical or optical adjustments are required. Modular in design, **FTV80D2** and **FRV80D2** 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 **FTV80D2/FRV80D2** 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) | | | | | | |
| FTV80D2M1ST | FRV80D2M1ST | ST | 1 | 1310/1550 nm | 16 dB | 2 km (1.2 mi) |
| Single Mode (9/125 μm) | | | | | | |
| FTV80D2S1ST | FRV80D2S1ST | ST | 1 | 1310/1550 nm | 23 dB | 69 km (42.9 mi) |
| FTV80D2S1FC | FRV80D2S1FC | 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. | | | | | | |

VIDEO/ELECTRICAL

| | |
|--|---|
| Number of Channels | 8 |
| Video Input (FTV80D2)/ Video Output (FRV80D2) | 1.0 Vp-p, 75 ohms; NTSC, PAL, SECAM |
| Overload | >1.5 Vp-p |
| Bandwidth | 10 Hz to 6.5 MHz per channel |
| Differential Gain | <2% |
| Differential Phase | <0.7° |
| Tilt | <1% |
| Signal-to-Noise Ratio | 67 dB at maximum optical loss budget |
| Max. Coaxial Cable (RG59) | 100 m (300 ft) camera to fiber optic module maintains 6 Mhz bandwidth |
| Power | |
| Surface Mount | 8 to 15 VDC at 4 W |
| Rack Mount | Supplied by rack |
| MTBF | >100,000 hours |
| LED Indicators | Link, Video, Data |

DATA

| | |
|--------------------|--|
| Number of Channels | 2 |
| Data Communication | RS-232, RS-422, and RS-485 (2-wire/4-wire), Manchester, and Bi-Phase |
| Maximum Baud Rate | 250 Kbps |

CONTACT CLOSURE

| | |
|--------------------|--------------------------------|
| Number of Channels | 1 |
| Contact Interface | 0.5 ms response time |
| Input | Dry |
| Output | SPST relay, 0.5 contact rating |

MECHANICAL

| | |
|----------------------|------------------------------|
| Connectors | |
| Optical | ST or FC |
| Power | Terminal block |
| Video | BNC (gold-plated center pin) |
| Data | Terminal block |
| Number of Rack Slots | 3 |

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 × 8.3 cm (6.1" D × 5.3" W × 3.3" H) |
| Unit Weight | 0.75 kg (1.65 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 |

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