



# FT8304/FR8304 Fiber Transmitter and Receiver

## FOUR-CHANNEL DIGITALLY ENCODED VIDEO

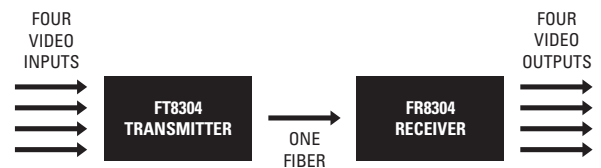
### Product Features

- 8-Bit Digitally Encoded Video for High-Quality Multichannel Video Transmission over a Single Fiber
- Multimode Fiber Support for Distances up to 2 km
- Single-Mode Fiber Support for Distances up to 30 km
- Exceeds All Requirements for the RS-250C Medium-Haul Transmission Specification
- Compatible with NTSC, PAL, and SECAM Video Standards
- Meets NEMA TS 2 and Caltrans Traffic Signal Control Equipment Environmental Standards
- No Performance Adjustments Required
- 12 VDC or 24 VAC Power Supply
- Stand-Alone and Rack-Mountable Modular Design
- LED Indicators for Monitoring of Signal Status, Laser Status, and Operating Power



The **FT8304/FR8304** fiber transmitter and receiver provide the ability to transmit up to four composite video channels over one optical fiber. The **FT8304** transmitter and the **FR8304** receiver are available in multimode and single-mode versions.

Modular in design, the **FT8304** and **FR8304** units can be rack mounted or can be used as stand-alone modules. Rack mounting is accomplished using the RK5000 Series rack mount chassis. Stand-alone modules can be placed on a desktop or can be mounted to a wall.



C1644 / REVISED 6-06



International Standards  
Organization Registered Firm;  
ISO 9001 Quality System



# TECHNICAL SPECIFICATIONS

## MODELS

| Model No.                                     |                     | Fiber Optic Connector Type | Wavelength | Optical Power Budget | Maximum Transmission Distance |
|---|---------------------|----------------------------|------------|----------------------|-------------------------------|
| Transmitter                                   | Compatible Receiver |                            |            |                      |                               |
| <b>Multimode (62.5/125 <math>\mu</math>m)</b> |                     |                            |            |                      |                               |
| FT8304MSTR                                    | FR8304MSTR          | ST                         | 1310 nm    | 20 dB*               | 2 km (1.2 mi) <sup>†</sup>    |
| <b>Single-Mode (9/125 <math>\mu</math>m)</b>  |                     |                            |            |                      |                               |
| FT8304SSTR                                    | FR8304SSTR          | ST                         | 1310 nm    | 20 dB                | 30 km (18.6 mi) <sup>‡</sup>  |
| FT8304SFCR                                    | FR8304SFCR          | FC                         | 1310 nm    | 20 dB                | 30 km (18.6 mi) <sup>‡</sup>  |

\*When using 50/125  $\mu$ m multimode fiber, subtract 3 dB from the optical power budget.

<sup>†</sup>Maximum transmission distance is limited by fiber bandwidth.

<sup>‡</sup>Maximum transmission distance is based on attenuation of 0.5 dB/km plus a 5 dB buffer for connector and splice losses.

### Notes:

- For conformal coated models, replace the first letter *F* in the model number with the letter *C*. The conformal coated version of FT8304MSTR, for example, is CT8304MSTR.
- For models with higher optical power budgets, contact the factory.

## Supplied Accessories

- Regulated switching power supply with multiple plug adapters (North American, Australian, United Kingdom, and European); 100-240 VAC, 50-60 Hz input, 12 VDC output  
**Note:** In extreme temperature conditions, it is recommended that an industrial-rated outdoor power supply such as the Pelco<sup>®</sup> WCS1-4 power supply be used.
- Wall clip for attachment of single module to wall

## VIDEO

|  |  |
|--|--|
| Number of Channels                             | 4  |
| Modulation Type                                | Pulse code modulation, 8-bit resolution              |
| Video Input (FT8304)/<br>Video Output (FR8304) | 1.0 V <sub>p-p</sub> , 75 ohms; NTSC, PAL, and SECAM |
| Bandwidth                                      | 6.5 MHz  |
| Gain   | Unity  |
| Crosstalk                                      | -50 dB typical at 3.58 MHz                           |
| Differential Gain                              | <1%  |
| Differential Phase                             | <1.2°  |
| Tilt   | <1%  |
| Signal-to-Noise Ratio                          | >60 dB (CCIR weighted)                               |

## GENERAL

|                          |  |
|--------------------------|--|
| Operating Temperature    | -40° to 167°F (-40° to 75°C)                             |
| Input Power Requirements | 12 VDC or 24 VAC, 280 mA                                 |
| LED Indicators           | Power<br>Video Present (per channel)<br>Optic Fault      |
| Dimensions               | 8.75" D x 1.08" W x 4.81" H<br>(22.23 x 2.74 x 12.22 cm) |
| Unit Weight              | 1.46 lb (0.66 kg)  |
| Shipping Weight          | 3 lb (1.36 kg)   |

## MECHANICAL

|                   |  |
|-------------------|--|
| Connectors        |  |
| Video             | BNC (per channel)  |
| Rack Power/Alarm  | 4-pin connector  |
| Stand-Alone Power | 2-pin connector, screw terminal                          |
| Fiber Optic       | ST for multimode fiber<br>ST or FC for single-mode fiber |

## CERTIFICATIONS

- CE, Class A
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class A
- C-Tick
- Complies with FDA requirements for Class 1 laser products
- Meets NEMA TS 2 and Caltrans traffic signal control equipment standards for ambient operating temperature, mechanical shock and vibration, humidity with condensation, high-line/low-line voltage conditions, and transient voltage protection—certified by an independent testing laboratory

**Note:** Conformal coating is required for operation in environments with relative humidity above 95% (condensing).

## OPTIONAL ACCESSORIES

|              |   |
|--------------|---|
| WM5001-3U    | Wall mount base kit for single-width module   |
| WM5001-3UEXP | Wall mount expansion kit for single-width module  |
| RK5000-3U    | 19-inch rack mount chassis for 14 slots, no power (3 RUs)   |
| RK5000PS-3U  | 19-inch rack mount chassis for 12 slots with power (3 RUs)  |
| EPS5000-120  | External rack power supply, 1 RU, dual 120 W power outputs  |
| RK5001B-3U   | Blank filler panel, single width  |
| RK5002B-3U   | Blank filler panel, double width  |
| RK5001-1UEXP | Adapter kit that allows a 3 RU single-width fiber module to be used in RK5000PS-5U rack mount chassis |



**Pelco Worldwide Headquarters:**  
3500 Pelco Way, Clovis, California 93612-5699 USA  
**USA & Canada** Tel: (800) 289-9100 • FAX (800) 289-9150  
**International** Tel: (559) 292-1981 • FAX (559) 348-1120  
[www.pelco.com](http://www.pelco.com)

Pelco and the Pelco logo are registered trademarks of Pelco.  
Specifications subject to change without notice.  
©Copyright 2006, Pelco. All rights reserved.