FT8301A Miniature Fiber Transmitter

SINGLE-CHANNEL DIGITALLY ENCODED VIDEO
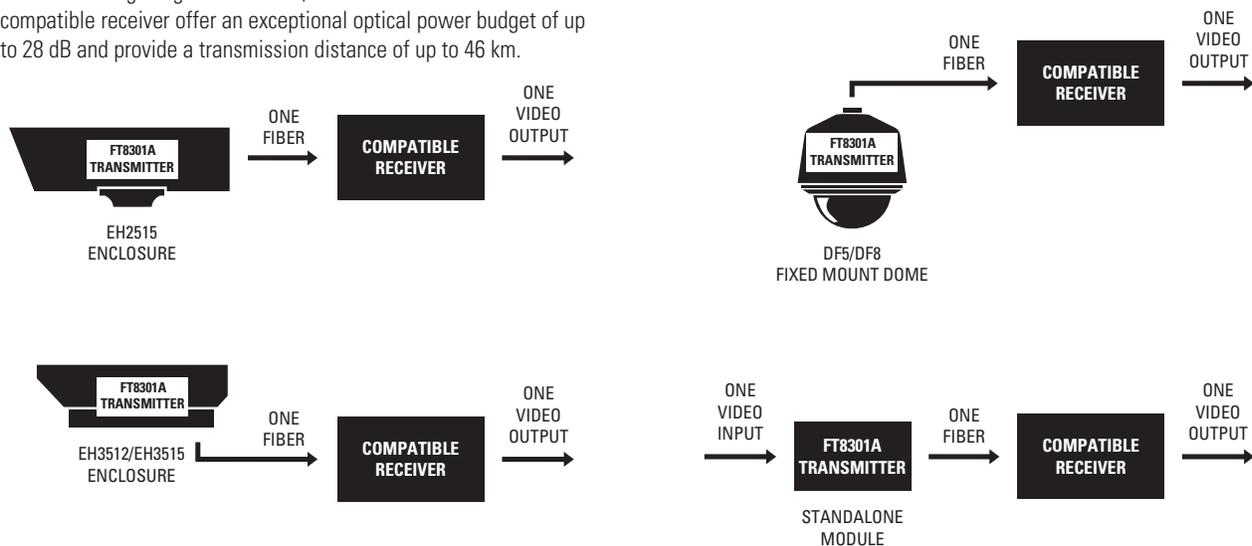
Product Features

- Miniature Module Designed for Use in Pelco® EH2515/EH3512/EH3515 Series Camera Enclosures and in DF5/DF8 Series Fixed Mount Domes or for Use as a Standalone Module

- 8-Bit Digitally Encoded Video for High-Quality Video Transmission over a Single Fiber

- Multimode Fiber Support for Distances up to 6 km

- Single-Mode Fiber Support for Distances up to 46 km

- Exceeds All Requirements for the RS-250C Medium-Haul Transmission Specification

- Compatible with NTSC, PAL, and SECAM Video Standards

- Designed to Meet NEMA TS 2 and Caltrans Traffic Signal Control Equipment Environmental Standards

- No Performance Adjustments Required

- 12 VDC or 24 VAC Power Supply

- LED Indicators for Monitoring of Signal Status and Laser Status

The **FT8301A** miniature fiber transmitter provides the ability to transmit one composite video channel over one optical fiber. The **FT8301A** transmitter is compatible with the FR8301A and FR8302A receivers and is also backward compatible with the FR8301 receiver.

The **FT8301A** transmitter is available in multimode and single-mode versions. Using single-mode fiber, the **FT8301A** transmitter and compatible receiver offer an exceptional optical power budget of up to 28 dB and provide a transmission distance of up to 46 km.

Specially designed for use in EH2515/EH3512/EH3515 Series camera enclosures and in DF5/DF8 Series fixed mount domes, the **FT8301A** transmitter can also be used as a standalone module. As a standalone module, the unit can be placed on a desktop or can be mounted to a wall.

International Standards Organization Registered Firm; ISO 9001 Quality System

MODELS

Model No.		Fiber Optic Connector Type	Wavelength	Optical Power Budget	Maximum Transmission Distance
FT8301A Miniature Transmitter	Compatible Receivers				
Multimode (62.5/125 µm)					
FT8301AMST	FR8301AMSTR, FR8302AMSTR-2	ST	850 nm	20 dB*	2 km (1.2 mi)[†]
	FR8301MSTR	ST	850 nm	15 dB*	2 km (1.2 mi)[†]
Multimode – Extended Distance (62.5/125 µm)					
FT8301AMSTE	FR8301AMSTRE, FR8302AMSTRE-2	ST	1310 nm	26 dB*	6 km (3.7 mi)[†]
	FR8301MSTRE	ST	1310 nm	20 dB*	6 km (3.7 mi)[†]
Single-Mode (9/125 µm)					
FT8301ASST	FR8301ASSTR, FR8302ASSTR-2	ST	1310 nm	28 dB	46 km (28.6 mi)[††]
	FR8301SSTR	ST	1310 nm	20 dB	30 km (18.6 mi)[††]
FT8301ASFC	FR8301ASFCR, FR8302ASFCR-2	FC	1310 nm	28 dB	46 km (28.6 mi)[††]
	FR8301SFCR	FC	1310 nm	20 dB	30 km (18.6 mi)[††]

*When using 50/125 µm multimode fiber, subtract 3 dB from the optical power budget.
[†]Maximum transmission distance is limited by fiber bandwidth.
[††]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 FT8301AMST, for example, is CT8301AMST.
- 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® WCS1-4 power supply be used.
- Wall-mounting brackets
- BNC-to-BNC RG179/U coaxial cable
- EH2500 Series mounting kit
- EH3500 Series mounting kit
- DF5/DF8 Series mounting kit

VIDEO
Number of Channels	1
Modulation Type	Pulse code modulation, 8-bit resolution
Video Input/Output	BNC, 1.0 Vp-p, 75 ohms or UTP, 100 ohms; NTSC, PAL, and SECAM
Bandwidth	6.5 MHz
Gain	Unity
Differential Gain	<2%
Differential Phase	<1°
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, 140 mA
LED Indicators	Video Present, Optic Fault
Dimensions	2.25" D x 3.00" W x 1.08" H (5.72 x 7.62 x 2.74 cm)
Unit Weight	0.34 lb (0.15 kg)
Shipping Weight	1 lb (0.45 kg)

MECHANICAL
Connectors
Video	BNC
	UTP, 2-pin connector, spring-cage terminal
Standalone Power	2-pin connector, screw terminal
Fiber Optic	ST for multimode fiber
	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
- Designed to meet 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 (certification pending)

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