

10-bit digital video with 1 bi-directional data channel/ dual optical port redundant point-to-point configuration + 8 contact closures



Description

The ComNet™ FVT/FVR107 series of optical video links provides 10-bit digital video, 10 Mhz bandwidth, short haul video quality, one bi-directional data channel and a dual optical port redundant Point-to-Point topology plus eight contact closures and two alarm relays.

The redundant Point-to-Point topology using the dual optical ports provide fail safe operation in the event of loss of one fiber. Each optical port uses wavelength division multiplexing (WDM) to both transmit and receive on one optical fiber. Microprocessor-based logic sends the contact information in packets that are ordered and encoded, ensuring extremely robust transmission. Packets that are garbled, packets out of sequence, and transmission bit errors will not cause random changes of state on the contact relays. Also, the mechanical latching relays maintain their state even when the unit loses power. The data channel supports RS232, RS422 and 2 wire and 4 wire RS485. Plug-and-play design ensures ease of installation and no electrical or optical adjustments are ever required. Bi-color (Red/Green) LED indicators are provided for rapidly ascertaining equipment operating status. Packaged in the exclusive ComNet ComFit housing, these units may be either wall or rack-mounted, or may be DIN-rail mounted by the addition of ComNet model DINBKT1 adaptor plate.

Features

- 10-bit digital video transmission
- Bi-directional data channel supports RS232, RS422 or RS485 (2 or 4-wire) interfaces.
- Eight SPST latching relays (with individual LED indicators)
- Microprocessor-based logic and latching relays in receiver unit eliminate random contact closure status in the event of loss of link or loss of prime operating power.
- Two separate alarm relay outputs indicate when a fiber link is lost and which optical port.
- Dual optical port Redundant Point-to-Point (RPP) configuration
- Exceeds all requirements for RS-250C short-haul video transmission: True broadcast video performance
- Compatible with all NTSC, PAL, or SECAM CCTV camera systems
- Tested and certified by an independent laboratory for full compliance with the environmental requirements (ambient operating temperature, mechanical shock, vibration, humidity with condensation, high-line/low-line voltage conditions and transient voltage protection) of NEMA TS-1/TS-2 and the Caltrans Specification for Traffic Signal Control Equipment.
- Voltage transient protection on all power and signal input/output lines provides unconditional protection from power surges and other voltage transient events.
- Automatic resettable fuses on all power lines
- Hot-swappable rack modules
- Interchangeable between stand-alone or rack mount use - ComFit
- Distances up to 30 miles (48 km)
- Bi-color (Red/Green) LED status indicators provide rapid indication of critical operating parameters
- Lifetime Warranty



FVT/FVR107(M)(S)1 SERIES REDUNDANT POINT-TO-POINT

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configuration + 8 contact closures

specifications

VIDEO

Video Input: 1 volt pk-pk (75 ohms)
 Overload: >1.5V pk-pk
 Bandwidth: 5 Hz - 10 MHz
 Differential Gain: <2%
 Differential Phase: <0.7°
 Tilt: <1%
 Signal-to-Noise Ratio (SNR): 67 dB @ Maximum Optical Loss Budget
 Max. RG-59 COAX Distance: 100m (300ft) Camera to Fiber Optic Module to maintain 6Mhz Bandwidth

DATA

Data Interface: RS232, RS422 and RS485 (2W/4W), UTC (Up-the-Coax)
 Data Format: NRZ, NRZI Manchester, Bi-phase and Sensornet
 Data Rate: DC-250 Kbps (NRZ)

CONTACT CLOSURE

Input/Output Channels: 8
 Input Contacts: Normally Open
 Output Contacts: 1.0A @ 30 VDC, Normally Open
 Response Time: 25 msec maximum

FIBER ALARM RELAYS

Contact Rating: 0.10A @ 30VDC, Normally Closed
 Fiber Loss: Port A, Port B
 Port A or Port B (System Fault FVR Only)
 WAVELENGTH: 1310/1550 nm, MM and SM
 NUMBER OF FIBERS: 2
 OPTICAL EMITTER: Laser Diode
 LED INDICATORS: - Link A and B - Video - Data - Power
 - Contact Status (x8)

CONNECTORS

Optical: 2 ST connectors for the Dual Port configuration
 Power: Terminal Block
 Video: BNC
 Data: Terminal Block
 Contact Closure: Terminal Block

ELECTRICAL & MECHANICAL

Power: 8-15 VDC @ 3W
 Surface Mount: From Rack
 Rack Mount: 2
 Number of Rack Slots: Automatic Resettable Solid-State Current Limiters
 Current Protection: Meets IPC Standard
 Circuit Board: 6.1 x 5.3 x 2.2 in., (15.5 x 13.5 x 5.6 cm)
 Size (in./cm) (LxWxH): <2 lb./0.9 kg
 Shipping Weight:

ENVIRONMENTAL

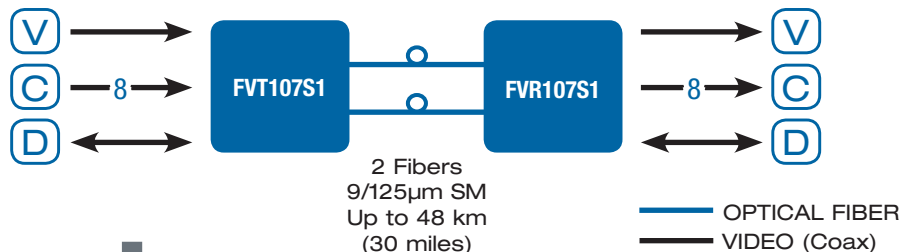
MTBF: >100,000 hours
 Operating Temp: -40° C to +75° C
 Storage Temp: -40° C to +85° C
 Relative Humidity: 0% to 95% (non-condensing)†

† May be extended to condensation conditions by adding suffix 'C' to model number for conformal coating.



PART NUMBER	DESCRIPTION	FIBERS REQUIRED	FIBER	OPTICAL PWR BUDGET	MAX. DISTANCE**	# RACK SLOTS
FVT107M1	Video Transmitter/Data Transceiver	2	Multimode 62.5/125µm	16 dB	3 km (2 miles)	2
FVR107M1	Video Receiver/Data Transceiver					
FVT107S1	Video Transmitter/Data Transceiver	2	Single Mode 9/125µm	16 dB	48 km (30 miles)	2
FVR107S1	Video Receiver/Data Transceiver					
Accessories	9 Volt DC Plug-in Power Supply, 90-264 VAC, 50/60 Hz (Included)					
Options	Add 'C' for Conformally Coated Circuit Boards (Extra charge, consult factory) DIN-Rail Mounting Adaptor Plate Kit – With mounting hardware (Optional, order model DINBKT1)					

NOTE: This product requires a fiber installation with a minimum 35 dB connector return loss. The use of Super Polish Connectors is recommended.
 Complies with FDA Performance Standard for Laser Products, Title 21, Code of Federal Regulations, Subchapter J
 In a continuing effort to improve and advance technology, product specifications are subject to change without notice. **Distance may be limited by optical dispersion.



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