10-Bit Digital Video with 1 Bi-Directional Data Channel/ Dual Optical Port Redundant Point-To-Point Configuration + 8 Contact Closures

FVT/FVR107(M,S)1

INCLUDED | HARDENED | 8 | 1 | 1

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.

FEATURES

› 10-bit digital video transmission

› Bi-directional data channel supports RS232, RS422 or RS485 (2 or 4-wire) interfaces.

› Distances up to 30 miles (48 km)

› 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

› Designed for installation in harsh out-of-plant/unconditioned industrial or roadside operating environments (-40° to +75°C ambient). Fully compliant with the environmental requirements of NEMA TS-2 for Traffic Signal Control Equipment

› Voltage transient protection on all power and signal input/output lines provides protection from power surges and other voltage transient events.

› Automatic resettable fuses on all power lines

› Bi-color LED status indicators confirm operating status

› Hot-swappable rack modules

› Interchangeable between stand-alone or rack mount use – ComFit

› Can be DIN-rail mounted with optional DINBKT1 or DINBKT4 mounting kit.

› Lifetime Warranty

› Made in the USA

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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

Power

Operating Votlage Range	8 to 15 VDC
Power Consumption	3W
Rack Mount	From Rack

Electrical & Mechanical

Number of Rack Slots	2
Current Protection	Automatic Resettable Solid-State Current Limiters
Circuit Board	Meets IPC Standard
Size (in./cm) (L×W×H)	6.1 × 5.3 × 2.2 in (15.5 × 13.5 × 5.6 cm)
Shipping Weight	<2 lb / 0.9 kg

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)[1]

AGENCY COMPLIANCE

PART 15 COMPLIANT · E322911 · N24621

MADE IN THE USA

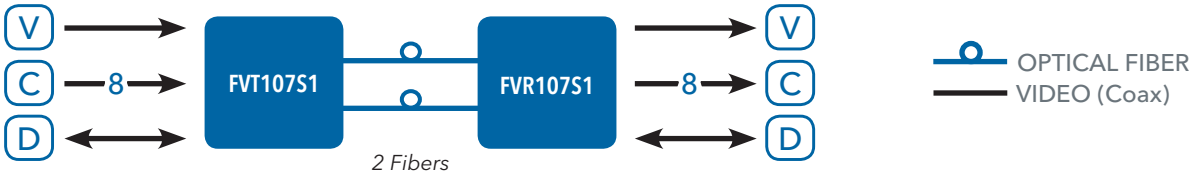
ORDERING INFORMATION

Part Number	Description	Fibers Required	Fiber	Optical PWR Budget	Max. Distance[2]	# Rack Slots
FVT107M1	Video Transmitter/Data Transceiver	2	Multimode 62.5/125µm	16 dB	3 km (2 mi)	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	[1] Add suffix '/C' for Conformally Coated Circuit Boards to extend to condensation conditions (Extra charge, consult factory) DIN-Rail Mounting Adaptor Plate Kit – With mounting hardware (Optional, order model DINBKT1 or DINBKT4)					

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. [2] Distance may be limited by optical dispersion.

TYPICAL APPLICATION



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