comnet
Communication Networks

ValueLine

FVT/FVR812(M)(S)1

8-channel digitally encoded video + 2 bi-directional data channels + bi-directional contact closure

V 8 D 2 C 1

Description

The ComNet™ FVT/FVR812(M)(S)1 Series transmits eight (8) channels of video utilizing state of the art digital encoding and decoding for high-quality video transmission, along with two (2) channels of bi-directional data and one (1) bi-directional contact closure over one single mode or multimode optical fiber. This equipment is environmentally hardened and suitable for use in unconditioned roadside or out-of plant installations. The FVT/FVR812 is compatible with NTSC, PAL and SECAM video transmission protocols and supports bi-directional RS232, 422 and 485 (2 & 4 Wire) data. Plug-and-play design ensures ease of installation and no electrical or optical adjustments are required. Bi-Color LED indicators are provided to indicate the status of the system, video and data. 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. No additional parts or power supplies are required.

Applications

- High-Performance CCTV (Fixed Video)

Features

- Digitally-encoded video transmission: transmits 8 real-time color video signals and 2 bi-directional data signals on one optical fiber
- Supports RS232, RS422, and 2- or 4-wire RS485
- One bi-directional contact closure
- 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.
- Robust design ensures extremely high reliability in unconditioned out-of-plant environments
- Bi-color (Red/Green) LED status indicators provide rapid indication of critical operating parameters
- Hot-swappable rack modules
- Interchangeable between stand-alone or rack mount use – ComFit
- Five year warranty

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specifications

VIDEO

Video Input:	1 volt pk-pk (75 ohms)
Overload:	>1.5V pk-pk
# Input/Output Channels:	8
Bandwidth (minimum):	10 Hz - 6.5 MHz per channel
Differential Gain:	<4%
Differential Phase:	<0.7˚
Tilt:	<1%
Signal-to-Noise Ratio (SNR):	57 dB Typical
Max. RG-59 COAX Distance:	100m (300ft) Camera to Fiber Optic Module to maintain 6Mhz Bandwidth

DATA

Data Channels:	2
Data Interface:	RS232, RS422 and RS485 (2W/4W)
Data Format:	NRZ, NRZI, Manchester, Bi-Phase and Sensornet
Data Rate:	DC-250 Kbps (NRZ)
Bit Error Rate:	<1 in 10-9 @ Maximum Optical Loss Budget
Operating Mode:	Simplex or Full-Duplex

CONTACT

Contact Interface: Response Time	0.5 msec
Input:	Dry Contact Closure
Output:	SPST Relay, 0.5 A Contact Rating – normally open

WAVELENGTH
1310/1550 nm, Multimode and Single Mode

NUMBER OF FIBERS
1

LED INDICATORS
- Video Sync Presence for Each Video Channel
- Received Data - Transmitted Data
- Optical Carrier Detect

OPTICAL EMITTER
Laser Diode

CONNECTORS

Optical:	ST
Power:	Terminal Block
Video:	BNC (Gold Plated Center-Pin)
Data:	Terminal Block

ELECTRICAL & MECHANICAL

Power:	
Surface Mount:	8-15 VDC @ 5W
Rack Mount:	From Rack
Number of Rack Slots:	3
Current Protection:	Automatic Resettable Solid-State Current Limiters
Circuit Board:	Meets IPC Standard
Size (in./cm) (L×W×H)	6.1 × 5.3 × 3.3 in., (15.5 × 13.5 × 8.3 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)*

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

AGENCY COMPLIANCE
PART 15 COMPLIANT · E322911 · N24621

MADE IN THE USA

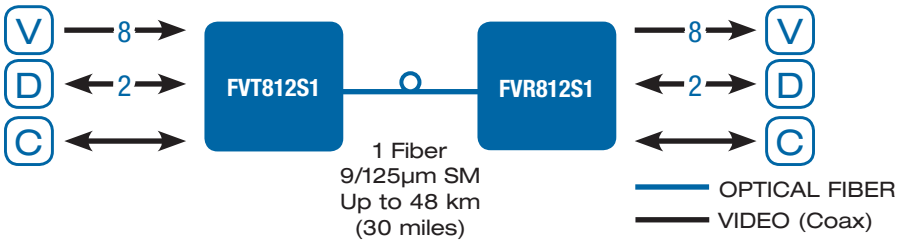
PART NUMBER	DESCRIPTION	FIBERS REQUIRED	FIBER	OPTICAL PWR BUDGET	MAX. DISTANCE†	# RACK SLOTS
FVT812M1	Video Transmitter/Data Transceiver (1310/1550 nm)	1	Multimode 62.5/125µm	16 dB	2 km (1.2 miles)	3
FVR812M1	Video Receiver/Data Transceiver (1550/1310 nm)					
FVT812S1	Video Transmitter/Data Transceiver (1310/1550 nm)	1	Single Mode 9/125µm	16 dB‡	48 km (30 miles)	3
FVR812S1	Video Receiver/Data Transceiver (1550/1310 nm)					

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 30 dB connector return loss. The use of Super Polish Connectors is recommended.

† Distance may be limited by optical dispersion. High bandwidth 50/125µm fiber is required to achieve maximum multimode distance. Contact ComNet tech support before using these units for distances greater than 2 km.

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.



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