Specifications

Video Performance*

Video Output Impedance	75 ohm (unbalanced)
Video Output Voltage	1 V p NTSC, 1.3 V p PAL
Video Connector	BNC
Frequency Response	10 Hz to 7 MHz (3dB)
Signal to Noise Ratio	62 dB as per RS250C
Differential Gain (-20°C to +70°C)	<4%
Differential Gain (-30°C to +85°C)	<7%
Differential Phase (-20°C to +70°C)	<4°
Differential Phase (-30°C to +85°C)	<7°
Field Tilt	<2%
Luminance Non-Linearity (-20°C to +70°C)	<4%
Luminance Non-Linearity (-30°C to +85°C)	<7%

Optical Performance

Single mode - Core Diameter	8 - 10u
Optical Connector	ST, FC or SC
Receiving Wavelength	1310 nm
Receiver Sensitivity*	- 34 dBm
Transmitting Light Source	Laser 1550 nm
Optical Power Output	-8 dBm (+/- 2 dBm @ -30 °C to +85 °C)

Data Interface

Data Interface	RS-422 Bi-directional – 4 wire
Data Rate*	Up to 200Kb/s

* *measured with 144S-VT/DX-M1ST or 144SR-VT/DX-M1ST unit as per RS-250C @ 1km single mode optical cable.*

Operating Temperature	-30 °C to +85 °C
Dimensions	170mm(L) x 126mm(W) x 34mm(D)
Power Requirements	12V AC or DC @ 300mA; 24VAC @ 200mA

144S-VR/DX-M1

Fiber Optic Video Receiver & 2Ch. RS-422 Data Transceiver

Singlemode

Single Fiber Operation

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Introduction :

The Elcommtech 144S-VR/DX-M1 forms part of a singlemode, single fiber video and data fiber optic transmission system. Using frequency modulation and operating as a dual window 1310/1550nm single fiber unit, the 144S-VR/DX-M1 provides the following facilities in a 170mm x 126mm x 34mm free standing module.

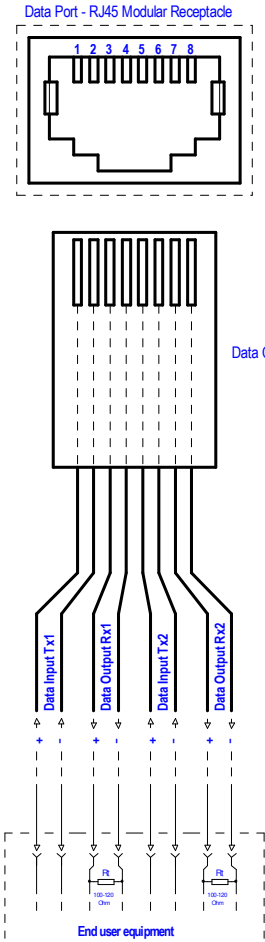
Optical Receiver for : Composite Video signal &
2x RS-422 Data Channels

Optical Transmitter for : 2x RS-422 Data Channels

Indicators :- All indicators are located on the top of the module.

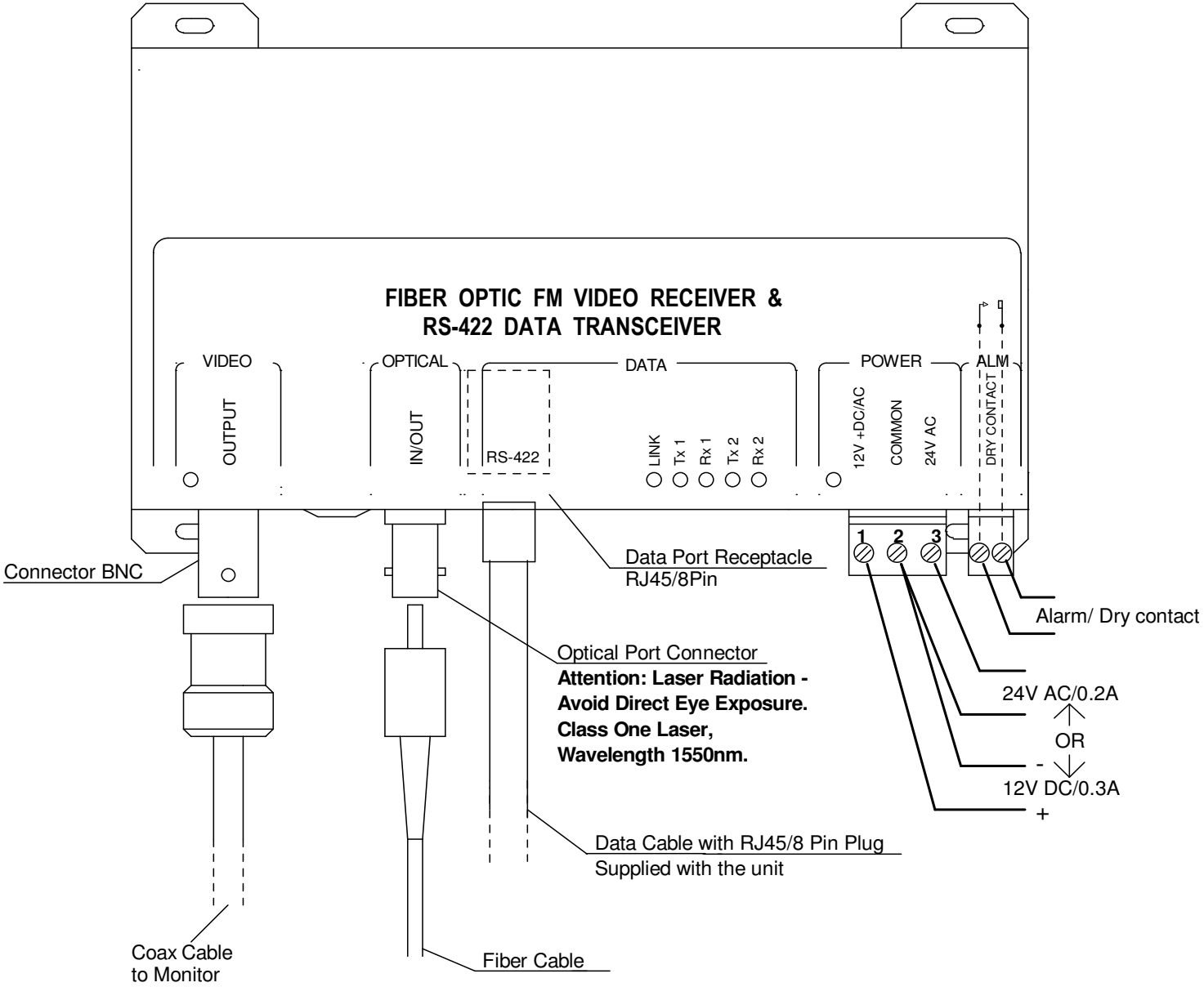
Indicator		
Power	off	The unit is not powered
	green	Power connected
Video Output	off	No link - no carrier signal present
	red	Link on – carrier signal present, but no video signal present
	green	Composite video signal present
Data Link	off	No received optical signal present
	green	Optical signal received
Data Tx1	off	No data signal present at the optical transmitter Ch.1 input
	red	Data signal is present at the optical transmitter Ch.1 input
Data Rx1	off	No data signal present at the optical receiver Ch.1output
	green	Data signal is present at the optical receiver Ch.1 output
Data Tx2	off	No data signal present at the optical transmitter Ch.2 input
	red	Data signal is present to the optical transmitter Ch.2 input
Data Rx2	off	No data signal present at the optical receiver Ch.2 output
	green	Data signal is available at the optical receiver Ch.2 output

Data Connector Pinouts

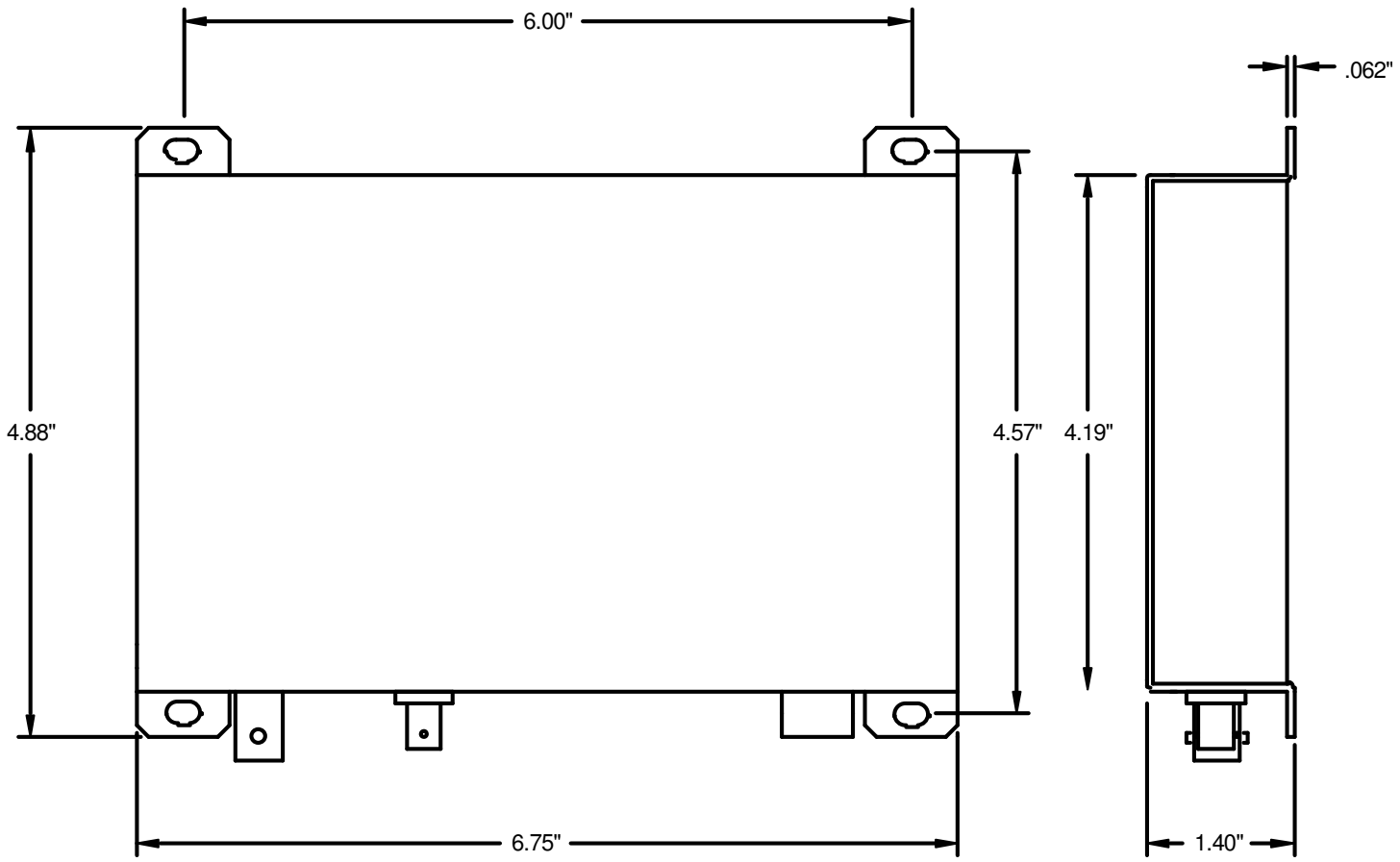


RS-422 Data Port Connector

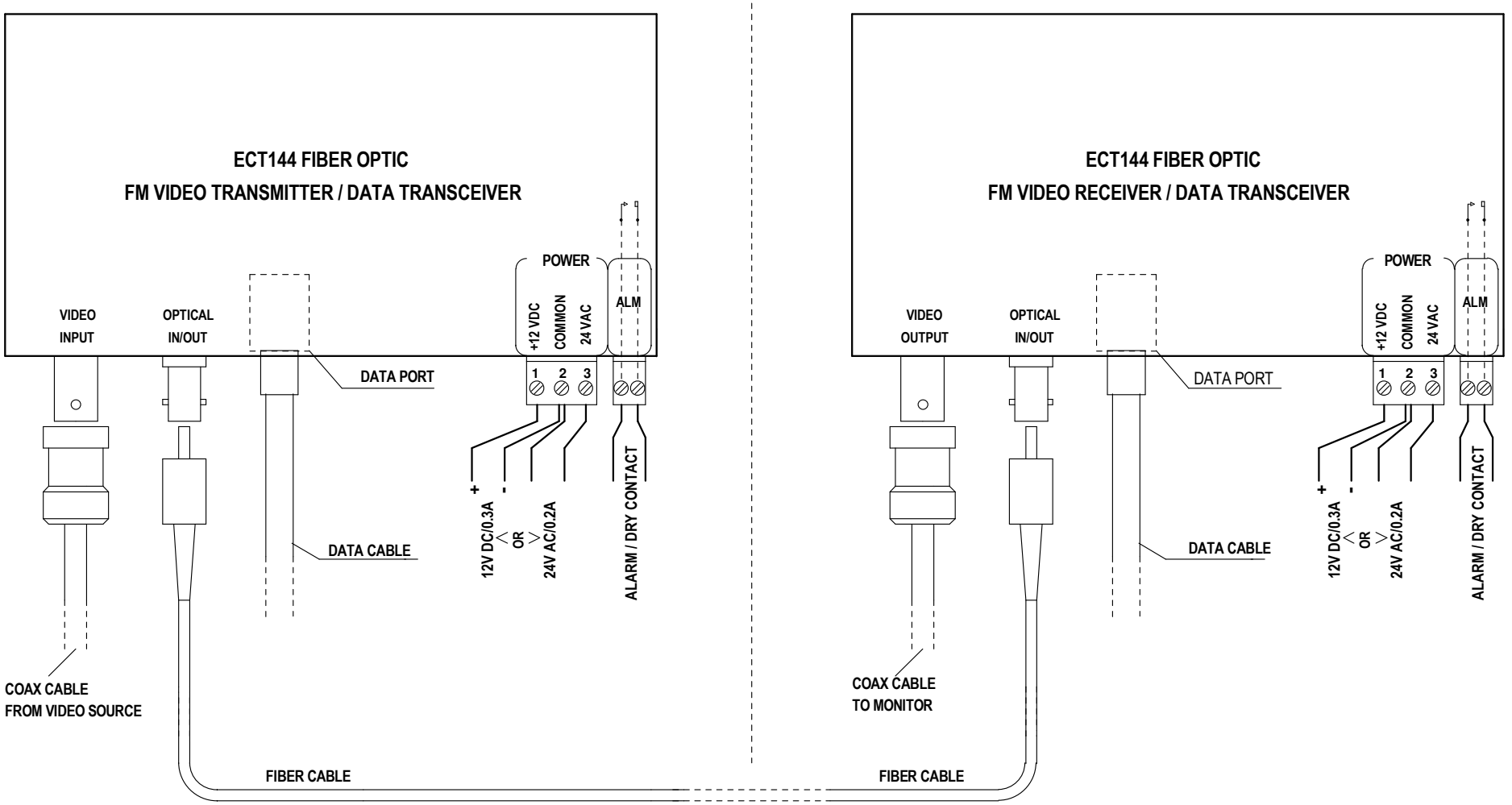
RS-422	Tx1 (IN1)	Rx1 (OUT1)	Tx2 (IN2)	Rx2 (OUT2)
DATA SIGNAL +	1	3	5	7
DATA SIGNAL -	2	4	6	8



144S-VR/DX-M1 Video Receiver / Data Transceiver Connections

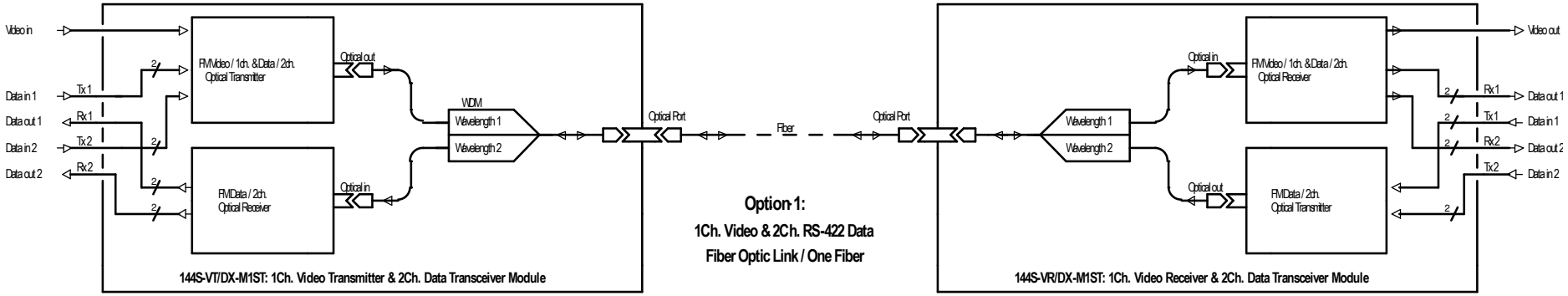


Installation Drawing



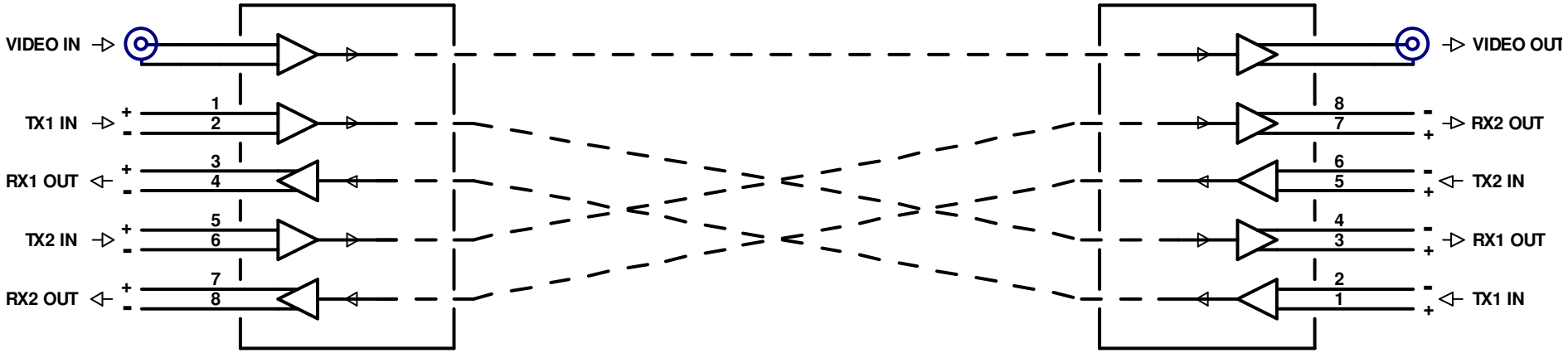
ECT144 Video & Data Link

Connection Diagram



Video & RS-422 Data Fiber Optic Link Configurations

Block Diagram



ECT144 Fiber Optic FM Video & RS-422 Data Optical Link

Communication Logical Diagram