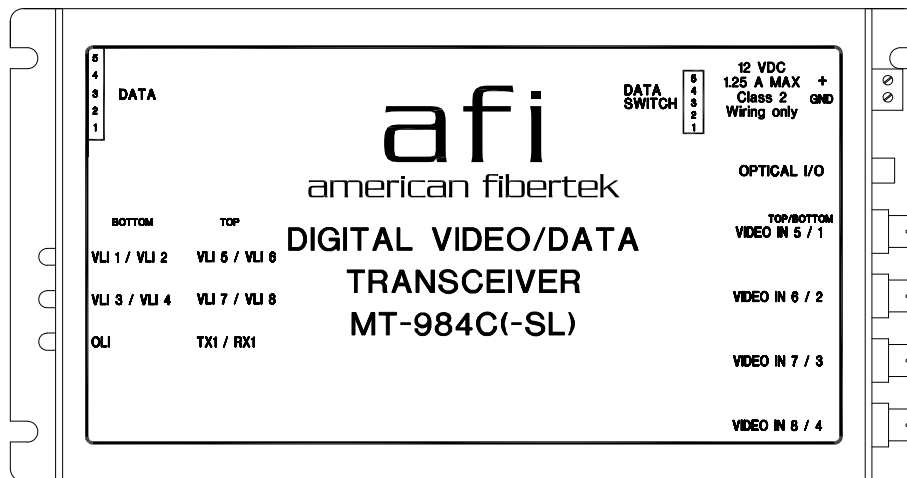


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Instruction Manual

MT-984C-SL Eight Channel Digital Transmitter With RS485, RS-422, RS232 or Manchester Data

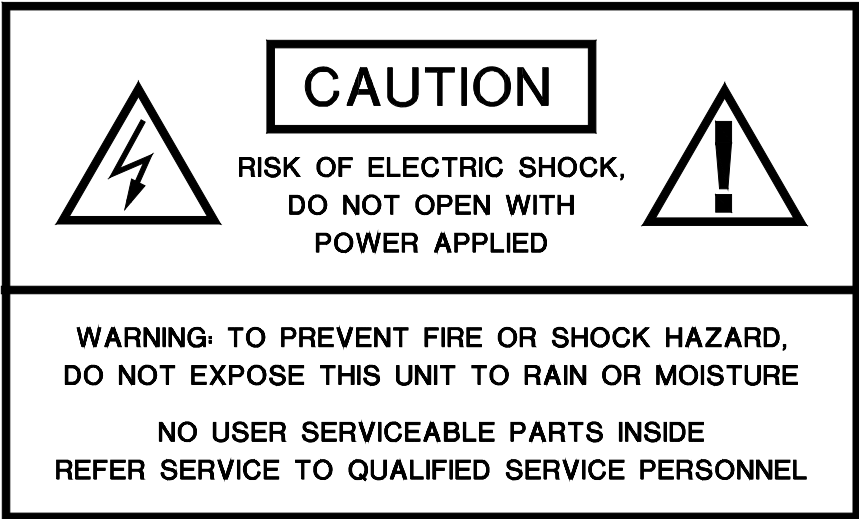


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INSTALLATION AND OPERATION INSTRUCTIONS

INTRODUCTION

Thank you for purchasing your American Fibertek MT-984C-SL singlemode eight channel digital video transmitter with RS485, RS422, RS232 or Manchester data. Please take a few minutes to read these installation instructions in order to obtain the maximum performance from this product.

FUNCTIONAL DESCRIPTION

The MT-984C-SL operates as half of a transmitter / receiver pair for the transmission of eight channels of high performance 10 bit digital NTSC, PAL, RS170, or RS343 video signals. The MT-984C-SL also supports one bi-directional RS485, RS422, RS232 or a return Manchester data channel. The RS485 channel may be configured for 2-wire (half duplex) or 4-wire (full duplex) operation. The MT-984C-SL is designed to operate with MR-984C-SL or RR-984C-SL video receiver with bi-directional data over one singlemode fiber optic cable. LED indicators provide for easy monitoring of video, data, and optical power.

The MT-984C-SL multiplexes eight video input signals along with one data signal into a high speed serial data stream. This serial data stream modulates a laser at 1310 nm wavelength. The MT-984C-SL also detects and demultiplexes a return optical serial data stream containing one data signal at 1550 nm wavelength. Refer to the data sheets for detailed performance specifications.

INSTALLATION

THIS INSTALLATION SHOULD BE MADE BY A QUALIFIED SERVICE PERSON AND SHOULD CONFORM TO THE NATIONAL ELECTRICAL CODE, ANSI/NFPA 70 AND LOCAL CODES.

POWER SOURCE

THIS PRODUCT SHALL BE POWERED BY A LISTED CLASS 2 POWER SUPPLY ONLY.

This unit requires a +12VDC power source with a current rating of 1.25 amps for proper operation. The DC input is diode protected. The negative side of the power input is directly connected to ground. ANSI/NFPA 70 Class 2 wiring is recommended.

POWER CONNECTION

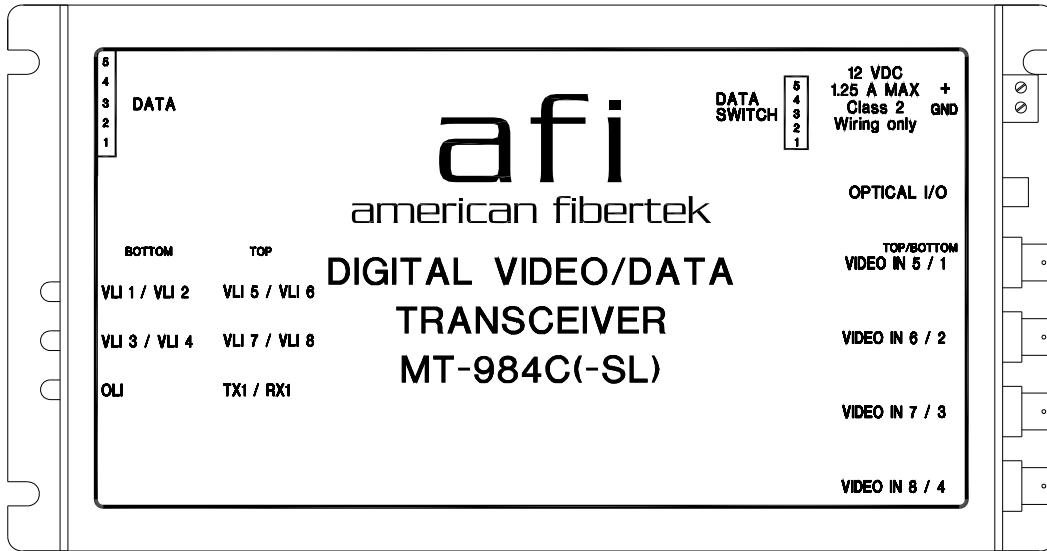
Power is supplied to the unit via a two pin terminal connector on the right side of the unit. Follow the label on unit for proper orientation of +12 volt dc and ground.

FIBER CONNECTION

The fiber optic connection is made via an FC/PC singlemode optical connector on the MT-984C-SL.

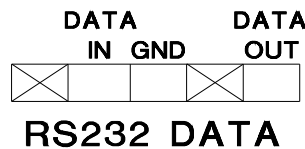
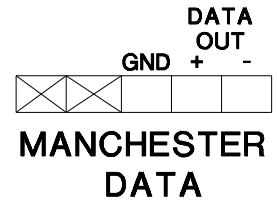
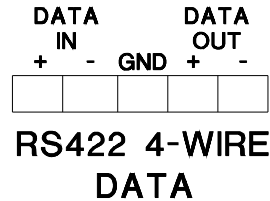
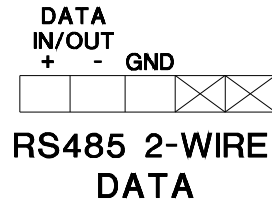
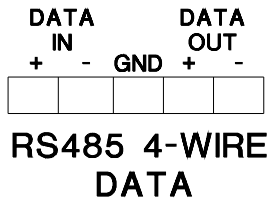
VIDEO INPUT CONNECTIONS

The video input connections are made via BNC connectors on the unit. The video input should be connected to an appropriate 75Ω baseband video source such as a camera or a video recorder output. For optimum performance the video cables should be the shortest length of coax practical.



DATA INPUT / OUTPUT CONNECTIONS

Data input and output connections are made via a terminal block on the unit. Follow the drawings below for proper orientation of input and output connections. Please note that the far left pin on each connection drawing corresponds with the far left pin on the terminal block. For example RS485 DATA IN + is pin 5 as shown above and on the label.



TYPICAL SYSTEM DATA CONNECTIONS

The RS422 or RS485 four wire interconnection between the MT-984C-SL and the copper device to which it is attached is based on industry standard EIA terminology for the transmission of electronic data signals. Using this terminology, the driver of an electronic signal is labeled TX or Data Out. Correspondingly, the receiver of an electronic signal is labeled RX or Data In. Following this standard, the TX or Data Out of the copper device is connected to the RX or Data In of the MT-984C-SL. The plus terminal of the copper device is connected to the plus terminal of the MT-984C-SL and the minus is connected to the minus. The reverse flow of data from the MT-984C-SL to the copper device follows the same pattern. Not all manufactures follow standard EIA terminology. Consult the installation instructions for your copper device if you are unsure which two wires are the drive (data out) wires and which two wires are the received (data in) wires.

DATA CONFIGURATION

The MT-984C-SL is factory shipped with the data channel configured in the 4-wire RS485 mode.

See table below for a summary of switch settings.

Data Switch Off=Up On=Down

1	2	3	4	5	
Off	Off	Off	Off	Off	RS485-4W/Manchester
On	Off	On	Off	Off	RS485-2W
Off	On	Off	On	Off	RS422
On	On	On	On	Off	RS 232

MT-984C-SL STATUS INDICATORS

The MT-984C-SL transmitter provides the following LED status indicators to aid in installation and troubleshooting:

DATA TX

A green LED indicator is provided to monitor input data from the electrical interface, through the MT-984C-SL, and out onto the fiber. The intensity of this indicator will vary with input data patterns. However, in typical applications it will cycle on and off as data is transmitted. Data status associated with this LED is summarized below.

Data TX LED	Data Status
Green	Data Flow Present
Off	Data Flow Not Detected

DATA RX

A green LED indicator is provided to monitor the data coming in from the fiber, through the MT-984C-SL, and out onto the electrical interface. The intensity of this indicator will vary with input data patterns. However, in typical applications it will cycle on and off as data is received. Data status associated with this LED is summarized below.

Data RX LED	Data Status
Green	Data Flow Present
Off	Data Flow Not Detected

VIDEO 1 THROUGH VIDEO 8

A bi-color LED indicator is provided for each of the eight video inputs to the MT-984C-SL. DC power and video status associated with each of these LED's are summarized below.

Video Presence LED	DC Power Status	Video Status
Green	On	Proper Input Video /DC Power Present
Red	On	Input Video Not Detected/DC Power Present
Off	Off	Check Power Supply

OLI

A bi-color LED indicator monitors the optical input power that is being received into the MT-984C-SL from either the MR-984C-SL, or the RR-984C-SL. DC power and optical input status associated with this LED are summarized below.

Optical Level Indicator	DC Power Status	Optical Status
Green	On	Proper Optical Input/DC Power Present
Red	On	Optical Input Not Detected/DC Power Present
Off	Off	Check Power Supply

**This unit complies with 21 CFR
1040.10 and 1040.11**

LIFETIME WARRANTY INFORMATION

American Fibertek, Inc warrants that at the time of delivery the products delivered will be free of defects in materials and workmanship. Defective products will be repaired or replaced at the exclusive option of American Fibertek. A Return Material Authorization (RMA) number is required to send the products back in case of return. All returns must be shipped prepaid. This warranty is void if the products have been tampered with. This warranty shall be construed in accordance with New Jersey law and the courts of New Jersey shall have exclusive jurisdiction over this contract. **EXCEPT FOR THE FOREGOING WARRANTY, THERE IS NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, EXPRESSED OR IMPLIED, WHICH EXTENDS BEYOND THE WARRANTY SET FORTH IN THIS AGREEMENT.** In any event, American Fibertek will not be responsible or liable for contingent, consequential, or incidental damages. No agreement or understanding, expressed or implied, except as set forth in this warranty, will be binding upon American Fibertek unless in writing, signed by a duly authorized officer of American Fibertek.

SERVICE INFORMATION

There are no user serviceable parts inside the unit.
In the event that service is required to this unit, please direct all inquiries to:

American Fibertek, Inc.
120 Belmont Drive
Somerset, NJ 08873

Phone: (877) 234-7200
Phone: (732) 302-0660
FAX (732) 302-0667

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