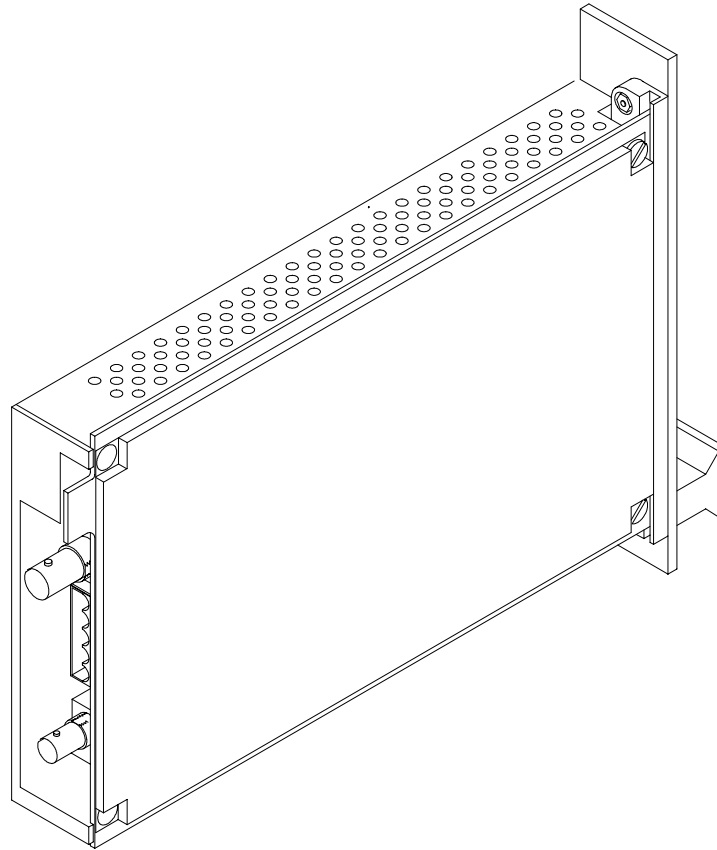




120 Belmont Drive
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American Fibertek

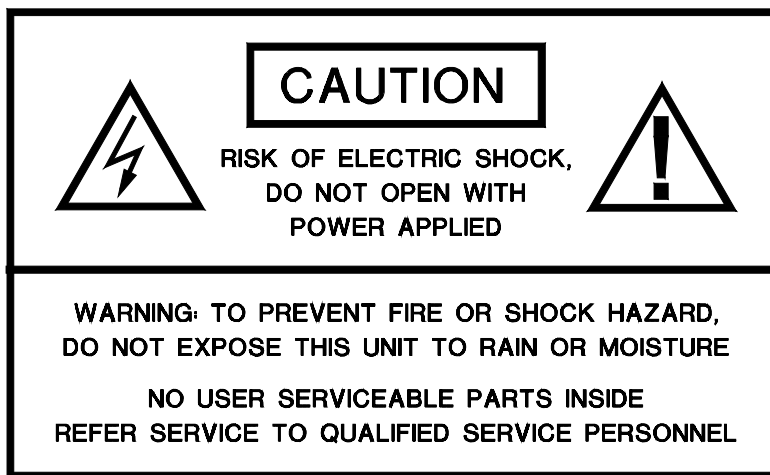
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Instruction Manual

RTM-61

Video Transmitter With
Bi-directional Sensonet Data



INSTALLATION AND OPERATION INSTRUCTIONS

INTRODUCTION

Thank you for purchasing your American Fibertek RTM-61 multimode video transmitter. Please take a few minutes to read these installation instructions in order to obtain the maximum performance from this product.

FUNCTIONAL DESCRIPTION

The RTM-61 operates as half of a transmitter / receiver pair for the transmission of baseband NTSC, PAL, RS170, or RS343 video signals and bi-directional Sensornet data. It is designed to operate with the MRM-61 or RRM-61 video transmitter over a single multimode fiber optic cable.

The RTM-61 converts a single video input and a single Sensornet input into an optical output using a 1300 nm wavelength source. The RTM-61 also converts an optical input signal returning on the same fiber into a Sensornet output signal using an 850 nm wavelength detector. The M61 Series product is designed to operate over an optical loss budget range of 0 to 12 dB. The RTM-61 operates on 50 um or 62.5 um multimode fiber. Refer to the data sheets for detailed performance specifications.

This unit is designed for rack mounting in any of the three American Fibertek subracks available. The subrack model numbers are SR-20/1, SR-20R/1, and SR-20/2. Slide in rack mounting and LED indicators provide for easy installation and monitoring of video and power.

The RTM-61 is designed for rack mounting only. For a modular stand alone version please see the MTM-61.

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.

The unit slides into any open slot in the SR-20 subrack. Use a small screwdriver to push and lock the two ¼ turn fasteners into place.

POWER SOURCE

Power to the unit is supplied by the subrack. Please refer to the SR-20 and PSR instructions for further details.

POWER CONNECTION

Power is supplied to the unit via a four finger backplane connector. The RTM-61 can be inserted into the subrack or removed from the subrack with power applied to the backplane.

VIDEO INPUT CONNECTION

The video input connection is made via a BNC connector on the back of 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.

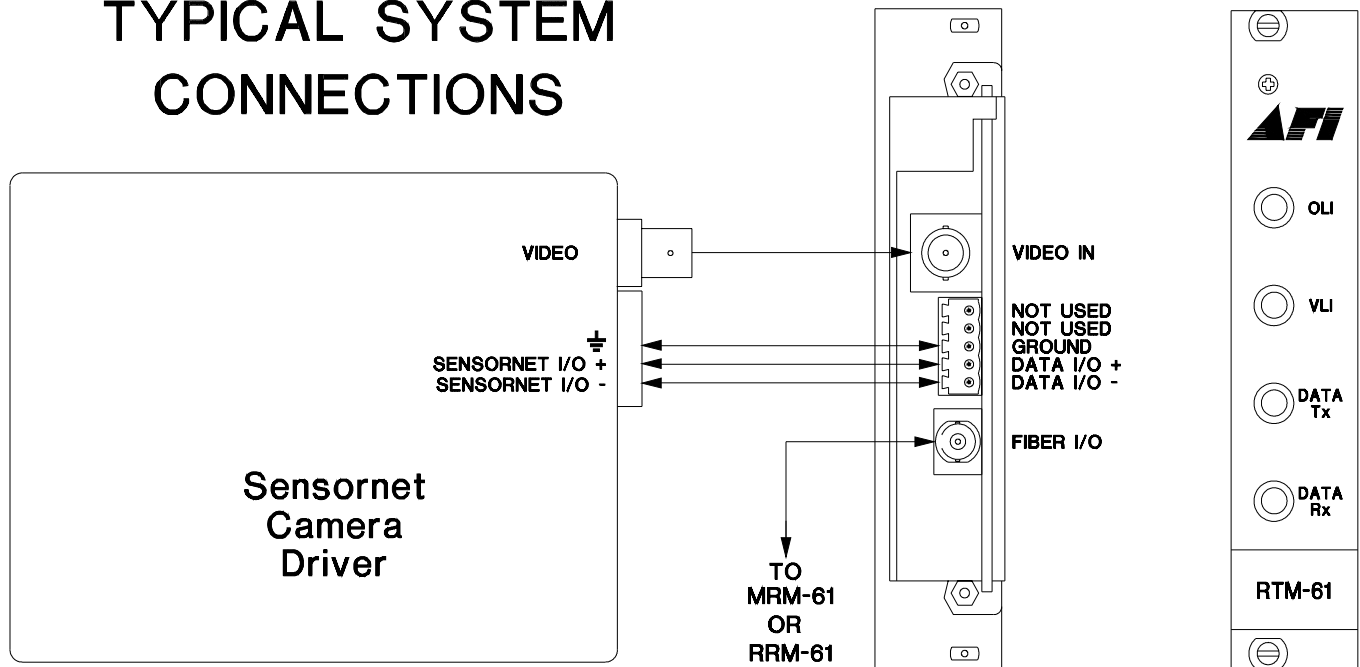
FIBER CONNECTION

The fiber optic connection is made via a ST connector located on the right side of the unit. Be sure to allow sufficient room for the required minimum bend radius of the fiber cable used.

SENSORNET INPUT / OUTPUT CONNECTIONS

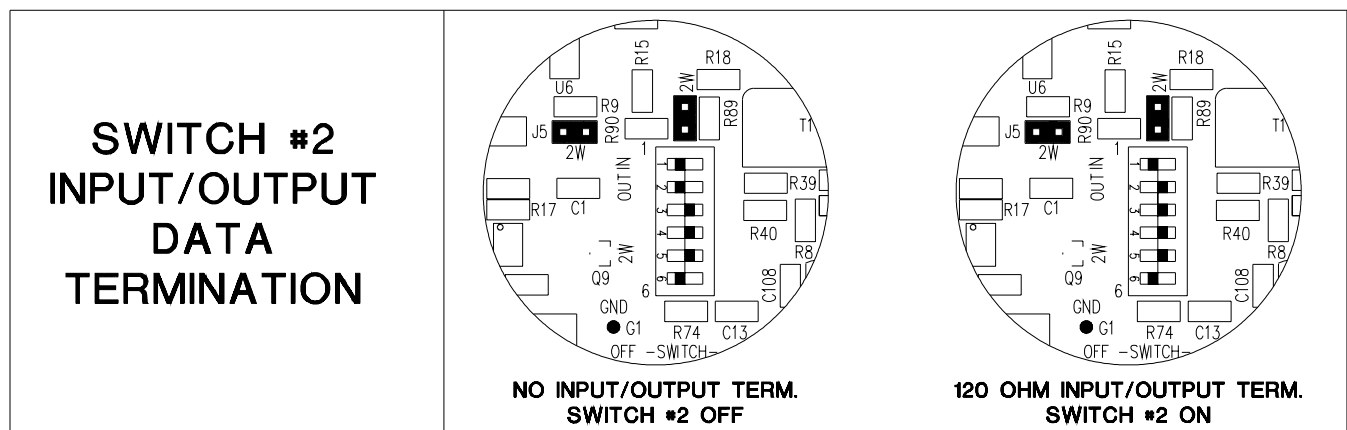
Data input and output connections are made via a terminal block on the right side of the unit. Follow the drawing below for proper orientation of Sensornet data input/output wires.

TYPICAL SYSTEM CONNECTIONS



DATA TERMINATION REQUIREMENTS

The RTM-61 is shipped from the factory with internal data input/output 120 ohm termination switched off. In order to configure the internal termination, the unit needs to be opened up and switch setting #2 needs to be modified using the internal switch/jumper settings shown below. There are several other switches on the same switch bank with the data termination switch. These switches must not be changed. The drawing below indicates their original positions.



To open the RTM-61, remove the three Phillips head screws holding the top cover, then remove the top cover. The six position switch bank is located near the center of the card.

RTM-61 STATUS INDICATORS

The RTM-61 provides the following LED status indicators to aid in installation and troubleshooting:

VLI

A bi-color LED indicator is provided for the video input to the RTM-61. DC power and video status associated with this LED is summarized below.

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

OLI

A bi-color LED indicator monitors the power of the optical input signal that is being received at the RTM-61 from the MRM-61 or the RRM-61. 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 Power Present
Red	On	Optical Input Not Detected
Off	Off	Check Power Supply

DATA TX and DATA RX

A red DATA TX LED indicator is provided to monitor the Sensornet input data from the electrical interface, through the RTM-61, and out onto the fiber. A red DATA RX LED indicator is provided to monitor the Sensornet data coming in from the fiber, through the RTM-61, and out onto the electrical interface. The intensity of these data indicators will vary, however in typical applications they will cycle on and off as data is transmitted and received. Data status associated with each of these LEDs is summarized below.

DATA TX / RX LED	Sensornet Status
Red	Data Flow Present
Off	Data Flow Not Detected

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 unit. In the event that service is required, please direct all inquiries to:

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120 Belmont Drive
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Phone: (877) 234-7200

Phone: (732) 302-0660

FAX (732) 302-0667

E-mail: techinfo@americanfibertek.com