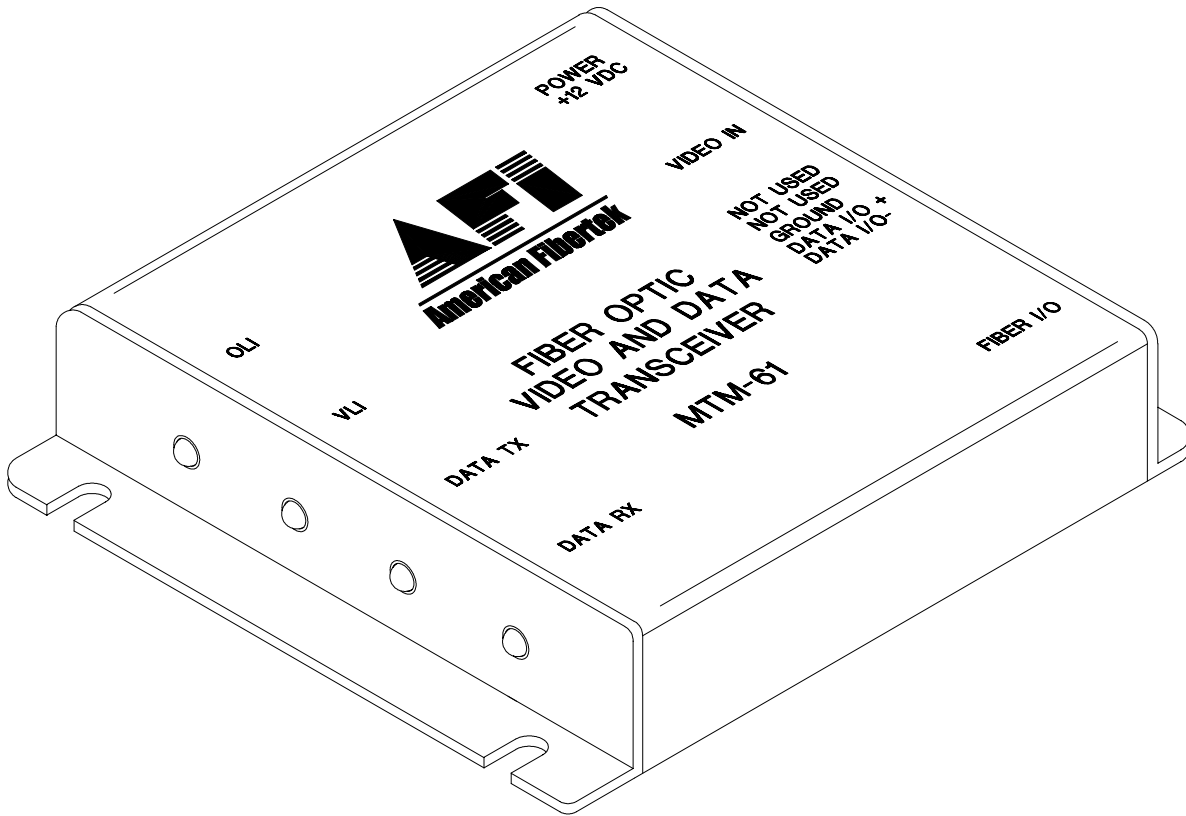




120 Belmont Drive  
Somerset, NJ 08873-1204

**American Fibertek**

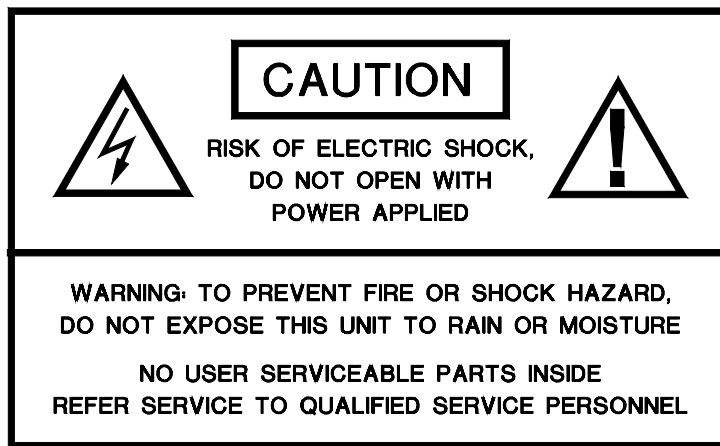
Phone: 732.302.0660 Fax: 732.302.0667



## Instruction Manual

MTM-61

Video Transmitter With  
Bi-directional Sensornet Data



## INSTALLATION AND OPERATION INSTRUCTIONS

### INTRODUCTION

Thank you for purchasing your American Fibertek MTM-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 MTM-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 MTM-61 converts a single video input and a single Sensornet input into an optical output using a 1300 nm wavelength source. The MTM-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 MTM-61 operates on 50 um or 62.5 um multimode fiber. Refer to the data sheets for detailed performance specifications.

This unit is contained in a compact and rugged aluminum housing with internal dc voltage regulation. The detachable terminal block and LED indicators provide for easy installation and monitoring of video, data, and dc power.

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

Mount the unit to a secure surface using #8 (3mm) hardware in four places. See the drawing on the next page for mounting dimensions. Be sure to allow sufficient room for the required minimum bend radius of the fiber cable used.

### POWER SOURCE

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

This unit requires a +12VDC power source for proper operation. The DC input is diode protected. In the USA and in Canada an American Fibertek PS-12 is supplied with this unit. 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. Follow label on unit for proper orientation of +12 volt dc and ground.

## VIDEO INPUT CONNECTION

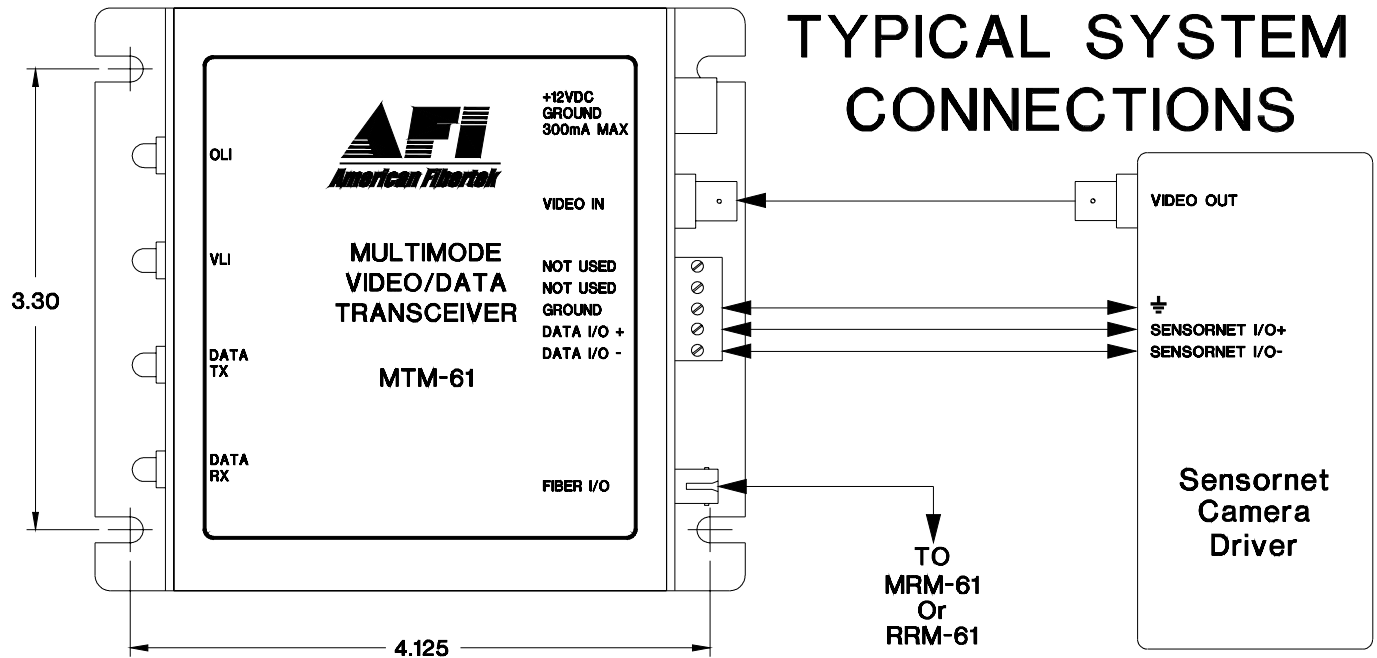
The video input connection is made via a BNC connector on the side of the unit. The video input should be connected to an appropriate 75Ω baseband video source such as a camera or a video recorder output. For optimum performance the video cables should be the shortest length of coax practical.

## FIBER CONNECTION

The fiber optic connection is made via a ST connector located on the right side of the unit.

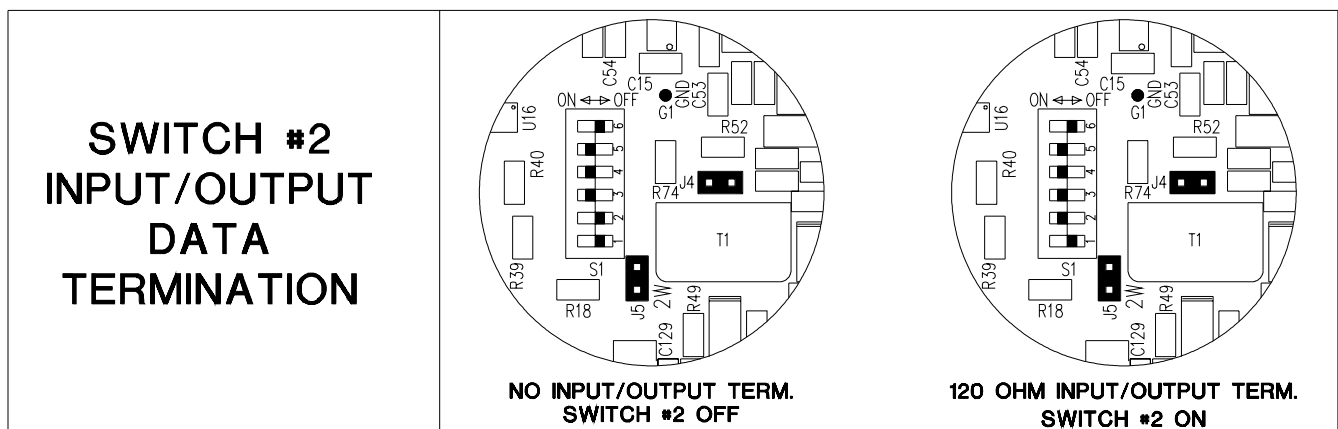
## SENSORNET INPUT / OUTPUT CONNECTIONS

Data input and output connections are made via a terminal block on the right side of the unit. Follow the label on the MTM-61 for proper orientation of Sensornet data input/output wires.



## DATA TERMINATION REQUIREMENTS

The MTM-61 is shipped from the factory with internal data input/output 120 ohm termination switched on. In order to remove 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 MTM-61, remove the screw on the bottom of the module. Also remove two screws holding the end panel to the chassis on the side with the video and data connections. Slide PCB assembly out of chassis to access the switch and jumper locations.

## MTM-61 STATUS INDICATORS

The MTM-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 MTM-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 MTM-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 MTM-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 MTM-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:

American Fibertek, Inc.  
120 Belmont Drive  
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Phone: (877) 234-7200

Phone: (732) 302-0660

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