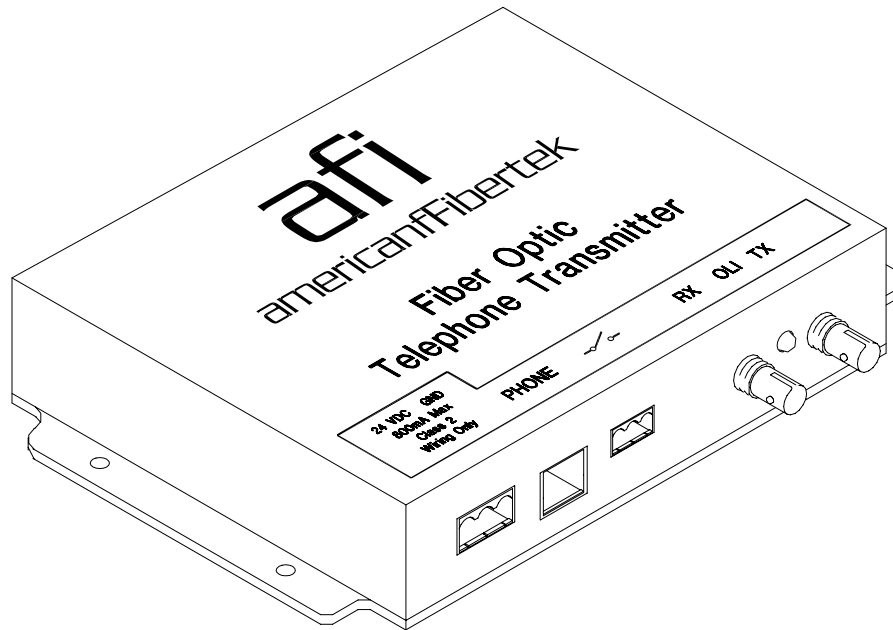




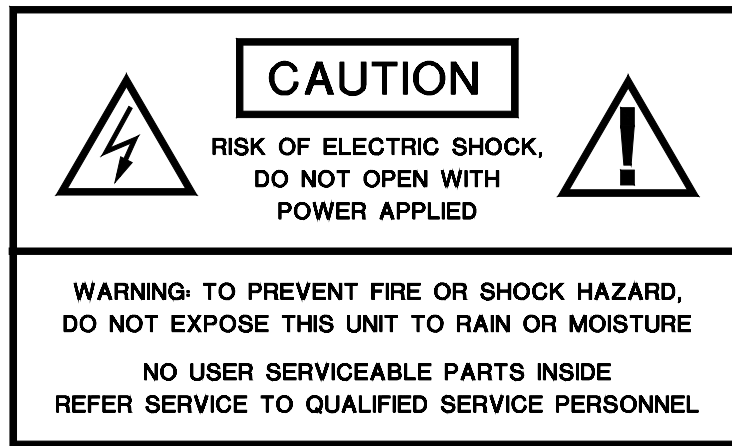
120 Belmont Drive  
Somerset, NJ 08873-1204

**American Fibertek**

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Instruction Manual  
MT-86  
Telephone Transceiver



## INSTALLATION AND OPERATION INSTRUCTIONS

### INTRODUCTION

Thank you for purchasing your American Fibertek MT-86 series multimode telephone transceiver. Please take a few minutes to read these installation instructions in order to obtain the maximum performance from this product.

### FUNCTIONAL DESCRIPTION

The MT-86 operates as half of a transceiver pair for the transmission of bi-directional Plain Old Telephone Signals (POTS). It is designed to operate with the MR-86 or RR-86 telephone transceiver over a single multimode fiber optic cable. In addition, the MT-86 can transmit one independent dry contact closure to the MT-86 or RR-86.

The MT-86 converts a telephone set audio input along with calling signals into an optical output using a 1310nm wavelength source. The MT-86 also encodes a contact closure on the same fiber. Audio and calling signals from the telephone line are received from the MR-86 (orRR-86) using an 850nm wavelength detector. The 86 Series product is designed to operate over an optical loss budget range of 0dB to 12dB. The MT-86 operates on 50um or 62.5um 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 blocks and LED indicator provide for easy installation and monitoring of optical and DC power.

The MT-86 is designed for mounting as a modular stand alone unit. For a rack mounted version please see the RT-86.

### INSTALLATION

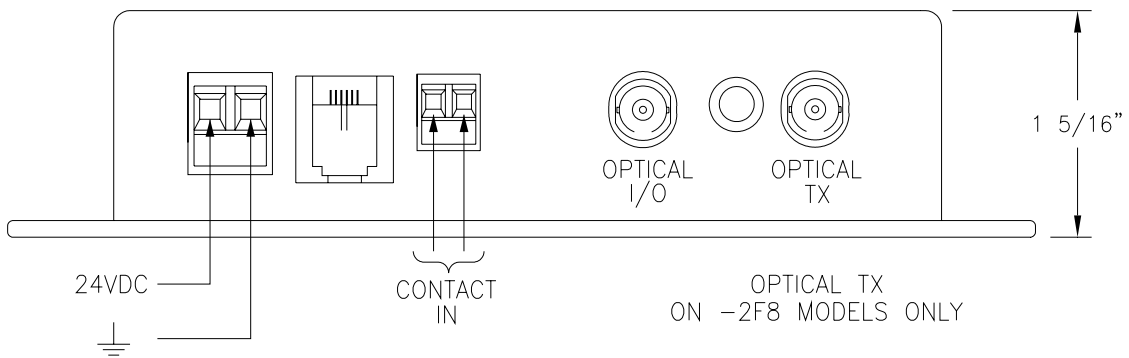
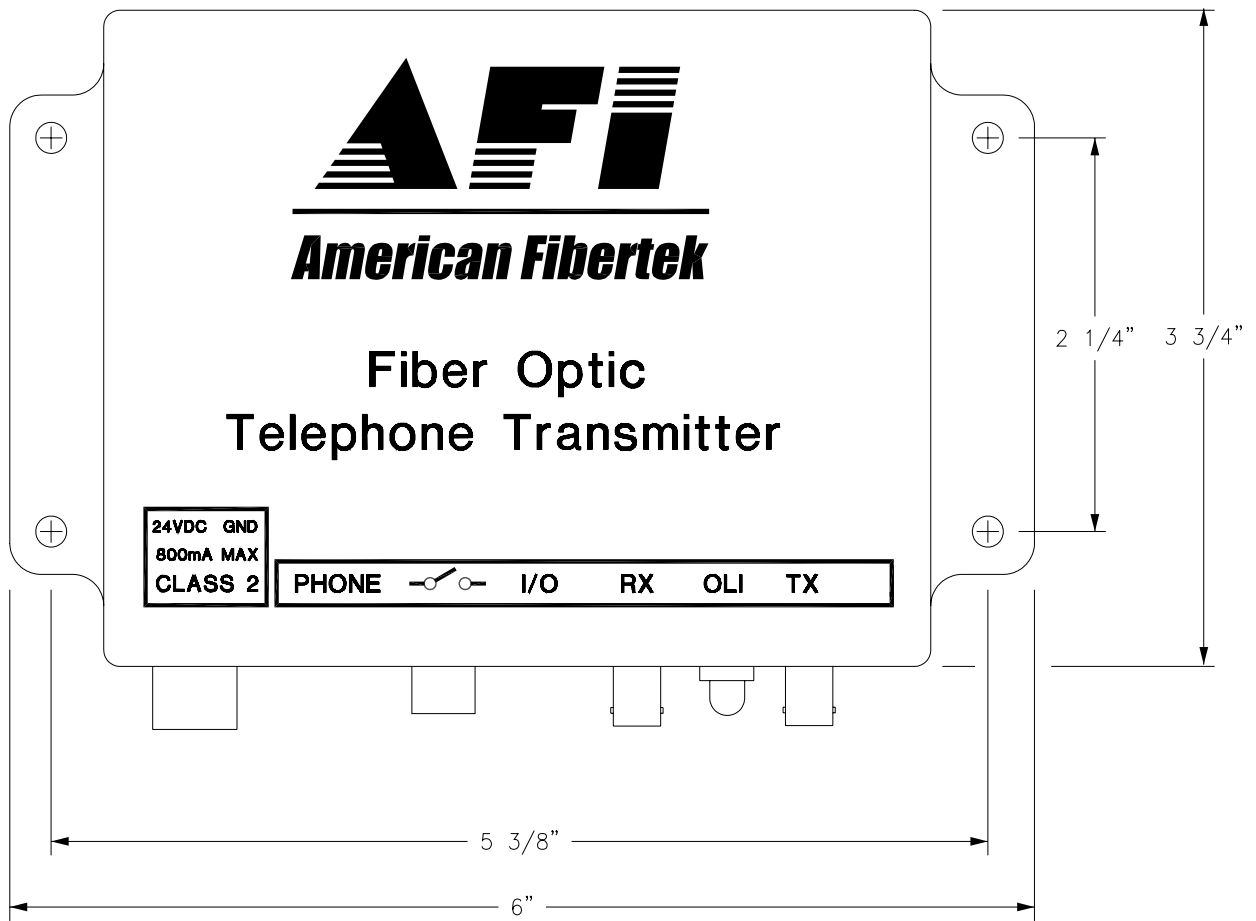
THIS INSTALLATION SHOULD BE MADE BY A QUALIFIED SERVICE PERSON AND SHOULD CONFORM TO THE NATIONAL ELECTRICAL CODE, ANSI/NFPA 70 AND LOCAL CODES.

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 an isolated 24VDC power source for proper operation. In the USA and in Canada an American Fibertek PS-24DC is supplied with this unit. ANSI/NFPA 70 Class 2 wiring is recommended.



## POWER CONNECTION

Power is supplied to the unit via a two pin terminal connector on the side of the unit. See drawing on the previous page for proper location of input power.

## FIBER CONNECTION

The fiber optic connection is made via ST connectors located on the side of the unit. The units are available in single fiber bid-directional or two fiber versions. The MT-86-2F8 provides both TX and RX fiber connections. For this model series, both optical TX and RX signals operate at 850nm. The MT-86-2F8 model must be paired with an MR-86-2F8 or RR-86-2F8.

## TELEPHONE CONNECTIONS

Telephone connections are made via a RJ-11 connector on the side of the unit. The connector is configured for standard Tip and Ring telephone wiring. The unit will provide 90 VAC RMS ringing voltage when a ringing signal is detected at the phone line at the MT-86 (or RR-86).

## CONTACT INPUT CONNECTION

Contact closure output connections are made via a terminal block on the side of the unit. See the drawing at the bottom of the last page for the location of the two contact input connections. A potential free contact switch is required.

## MT-86 STATUS INDICATOR

The MT-86 provides the following LED status indicator to aid in installation and troubleshooting:

### OLI

A bi-color LED indicator monitors the input power of the optical signal that is being received at the MT-86 from the MR-86 (or the RR-86). Internal 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

## 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.                      Phone: (877) 234-7200  
120 Belmont Drive                          Phone: (732) 302-0660  
Somerset, NJ 08873                        FAX (732) 302-0667  
E-mail: [techinfo@americanfibertek.com](mailto:techinfo@americanfibertek.com)