afi
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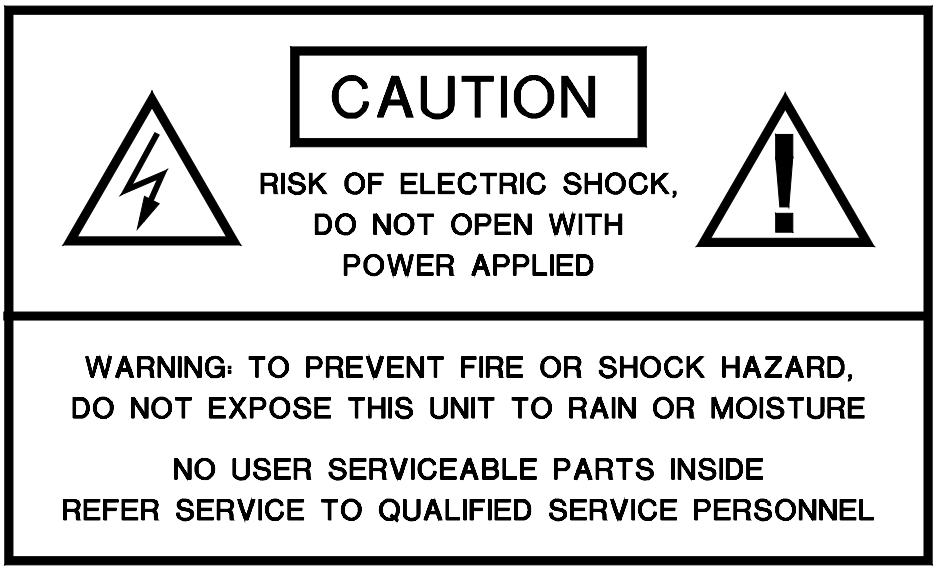
Instruction Manual

MX-04 RX-04-13 MX-04S
RX-04 RX-04-13 RX-04S
RS422 Transceivers



INSTALLATION AND OPERATION INSTRUCTIONS

INTRODUCTION

Thank you for purchasing your American Fibertek 04 Series RS422 data transmitter. Please take a few minutes to read these installation instructions in order to obtain the maximum performance from this product.

FUNCTIONAL DESCRIPTION

The 04 Series operates as full duplex transmitter / receiver pair for the transmission of balanced RS422 data signals over multimode or singlemode fiber optic cable depending upon the model suffix. Two units are required to make a transmission pair.

MODEL NUMBERS

Model Number	Wavelength	Fiber
MX-04	850 nm	Multimode 50 or 62.5u
RX-04	850 nm	Multimode 50 or 62.5u
MX-04-13	1300 nm	Multimode 50 or 62.5u
RX-04-13	1300 nm	Multimode 50 or 62.5u
MX-04S	1300 nm	Singlemode
RX-04S	1300 nm	Singlemode

The transmitter converts a single data input into a AM modulated optical output. The standard model operates at 850 nm, the -13 at 1300nm, both on 50 um or 62.5 um multimode fiber. The –S model transmits at 1300 nm and is compatible with singlemode 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 indicator provide for easy installation and monitoring dc power.

The MX is designed for mounting as a modular stand alone unit. For a rack mounted version please see the RX.

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 12 VDC power source for proper operation. Current draw is approximately 150 mA maximum. In the USA and in Canada an American Fibertek PS-12 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. See the customer assembly drawing for proper location of the 12 volt dc input.

POWER

A green LED indicator monitors the internal dc voltage created within the MT-05B. Power status associated with this LED is summarized below.

Power Indicator	Power Status
Green	Voltage Present
Off	Voltage Not Present

DATA CONNECTION

The signal connector is a 5 pin detachable terminal block on the rack card (RX) and a 7 pin combined power and data block on the module (MX) units. Connections should be made according to the customer assembly drawing. The data input connections pass data to the fiber optic transmitter Tx port for transmission on the fiber cable. Optical data on the Rx optical port is present on the Data Output terminals.

FIBER CONNECTION

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

DIP SWITCHES

There are four DIP switches on the unit. Sw1 is used to boost the optical output by approximately 3 dB. At low fiber loss, the use of this switch may introduce distortions at high data rates. Only apply this switch with fiber loss of 6 dB or greater.

Sw2 determines the output logic state with no fiber connected. This switch must be set to the same position on both sides of the link for proper operation. For a standard RS422 logic 1 with no fiber connected, this switch should be Open. This switch may also be used to temporarily turn on the optical transmitter with no data signal applied to aid in troubleshooting fiber cables or verify optical output power of the transmitter.

Sw3 and SW4 are not used on these models.

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.

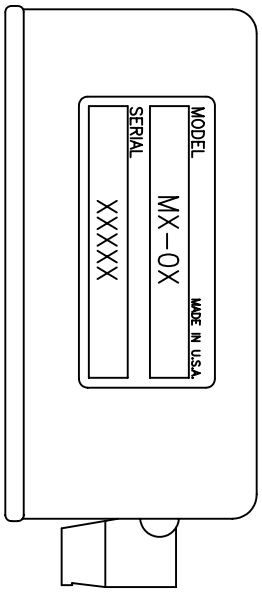
SERVICE INFORMATION

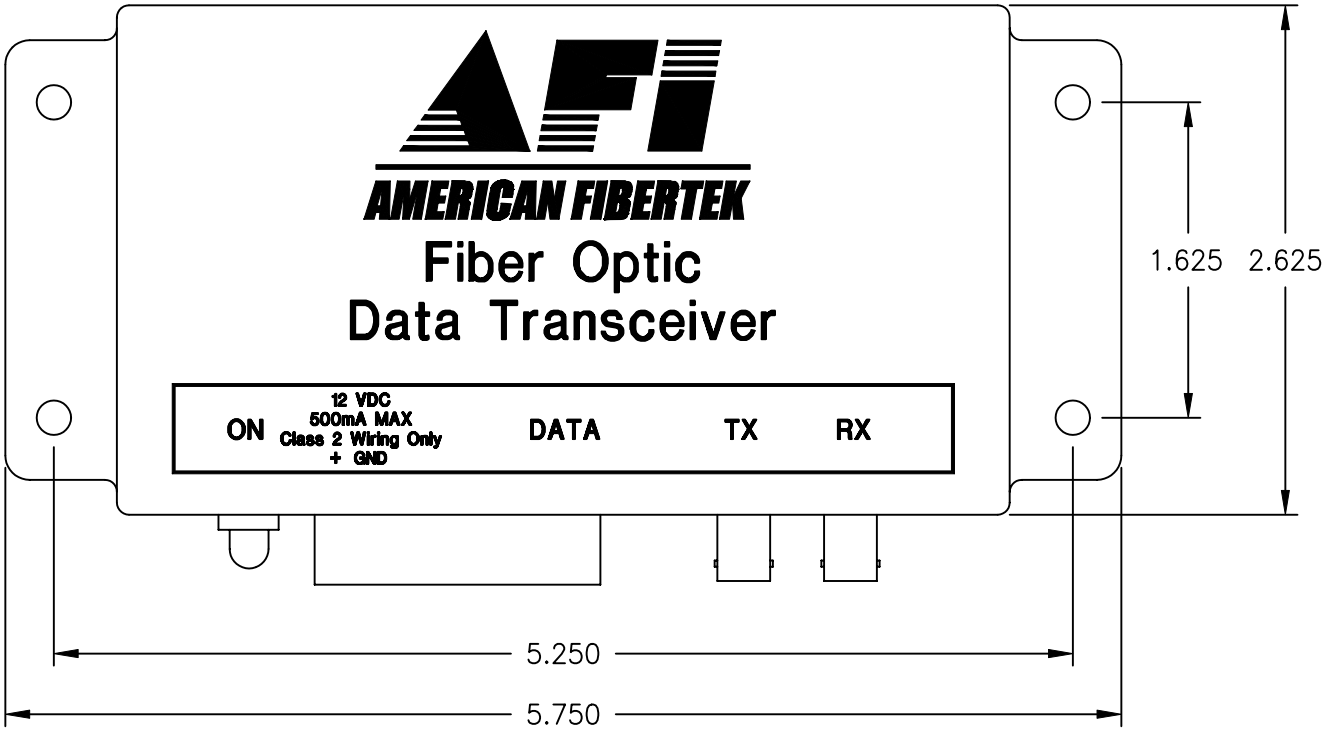
There are no user serviceable parts inside the unit.
In the event that service is required to this unit, please direct all inquiries to:

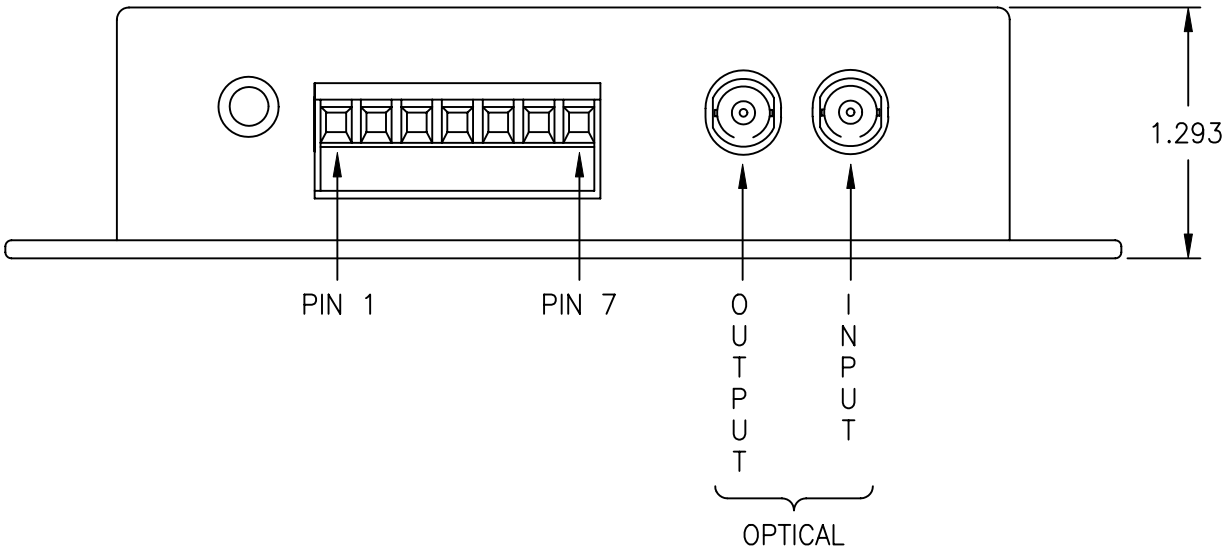
American Fibertek, Inc.
120 Belmont Drive
Somerset, NJ 08873

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

E-mail: techinfo@americanfibertek.com







PIN#	MX-04
1	POWER*
2	POWER GND
3	DATA IN (+)
4	DATA IN (−)
5	DATA GND
6	DATA OUT (−)
7	DATA OUT (+)

* POWER REQUIREMENTS:
12 TO 16 VDC

NOTE:
MOUNTING DIMENSIONS
1 5/8" x 5 1/4"

AMERICAN FIBERTEK
120 BELMONT DRIVE SOMERSET N.J.

DATE: 19 JULY 05		MX-04 CUSTOMER ASSEMBLY DRAWING	
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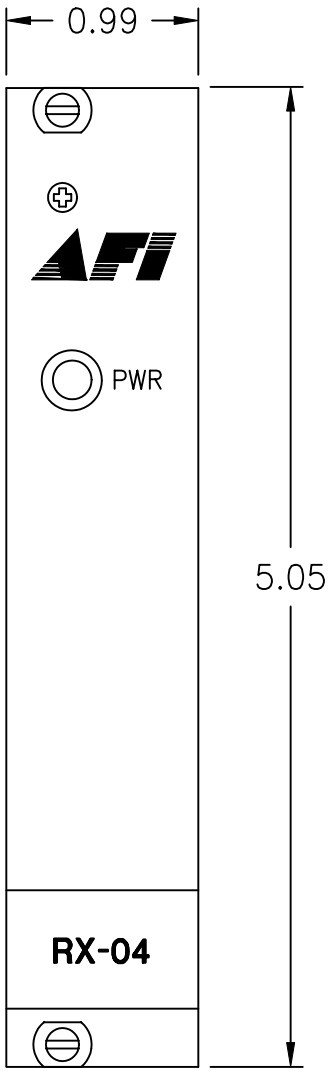

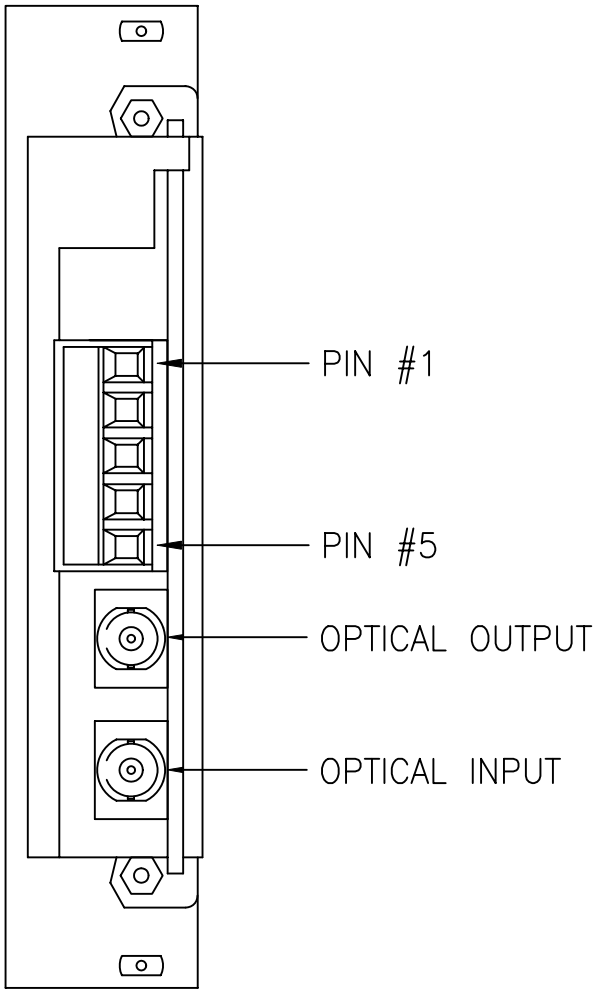

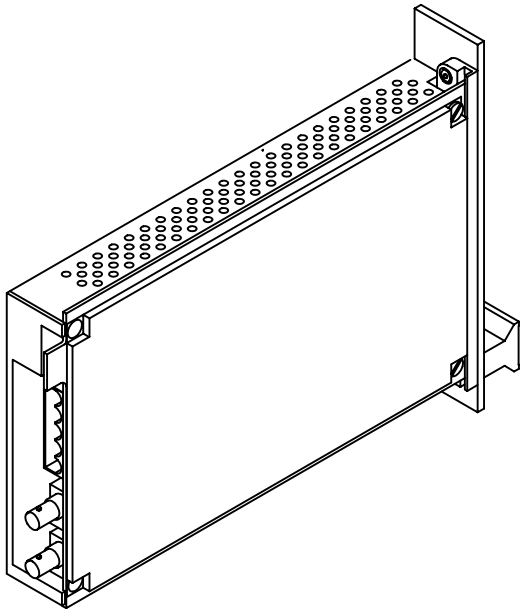

PIN #	
1	DATA IN (+)
2	DATA IN (−)
3	DATA GND
4	DATA OUT (−)
5	DATA OUT (+)

AMERICAN FIBERTEK
120 BELMONT DRIVE SOMERSET N.J.

DATE: 21 OCT 99		RX−04 CUSTOMER ASSEMBLY DRAWING				
ACAD FN.: RX03CC						
SCALE: NONE	DWG BY: BLB	DWG. NO.:	SH. 1 OF 1	REV.:	CHK.:	