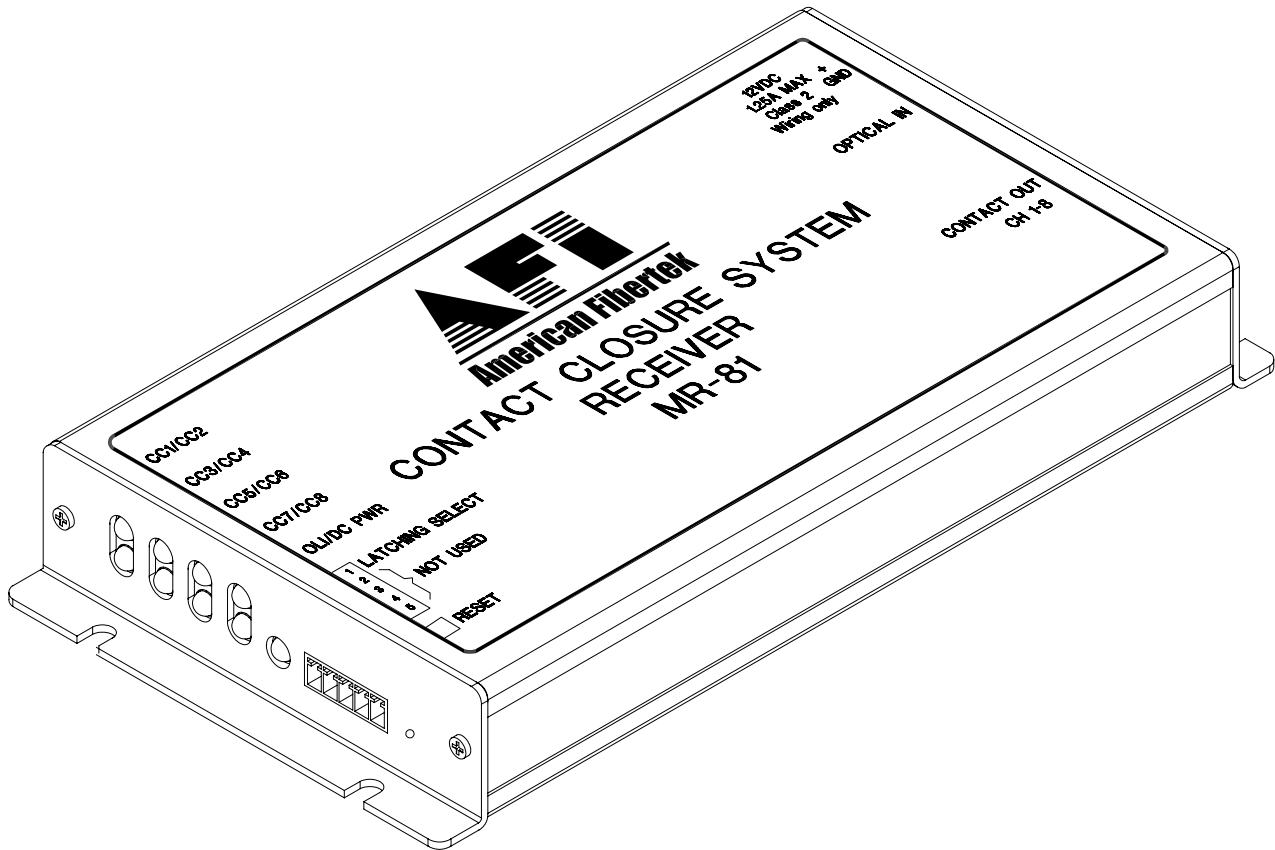


afi

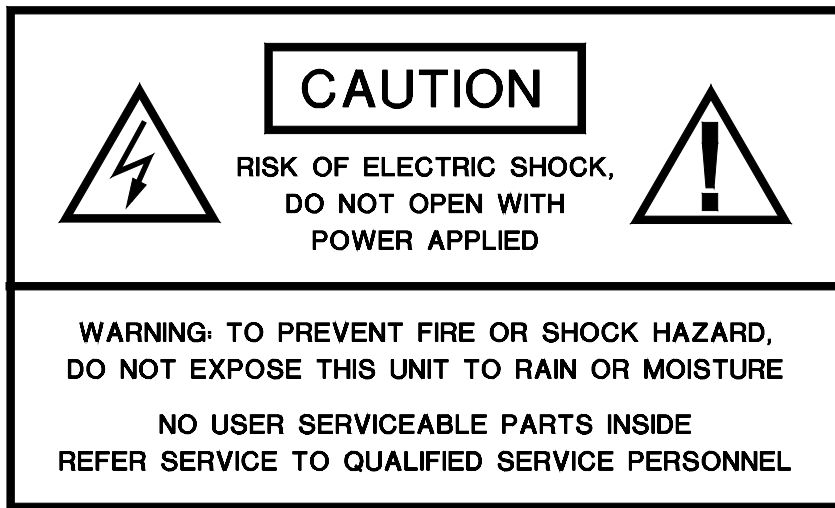
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Instruction Manual

MR-81 Eight Channel Contact Closure Receiver



INSTALLATION AND OPERATION INSTRUCTIONS

INTRODUCTION

Thank you for purchasing your American Fibertek MR-81 singlemode contact closure receiver. Please take a few minutes to read these installation instructions in order to obtain the maximum performance from this product.

FUNCTIONAL DESCRIPTION

The MR-81 operates as half of a transmitter/receiver pair for the transmission of eight dry latching contact closure signals. It is designed to operate with the MT-81 or RT-81 contact closure transmitter over one multimode fiber optic cable. The MR-81 has a user selectable switch that allows the contact status sent by the MT-81 or RT-81 to be maintained unchanged through loss of optical or electrical power at the receiver. Both the transmitter and receiver include a recessed button to clear all contacts to a default state.

The MR-81 converts an optical input into eight contact closure outputs using a 1310 nm wavelength detector. The 81 Series product is designed to operate over an optical loss budget range of 0 to 12 dB. The MR-81 operates on 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 blocks and LED indicators provide for easy installation and monitoring of contact closure and power.

The MR-81 is designed for mounting as a modular stand alone unit. For a rack mounted version please see the RR-81.

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.

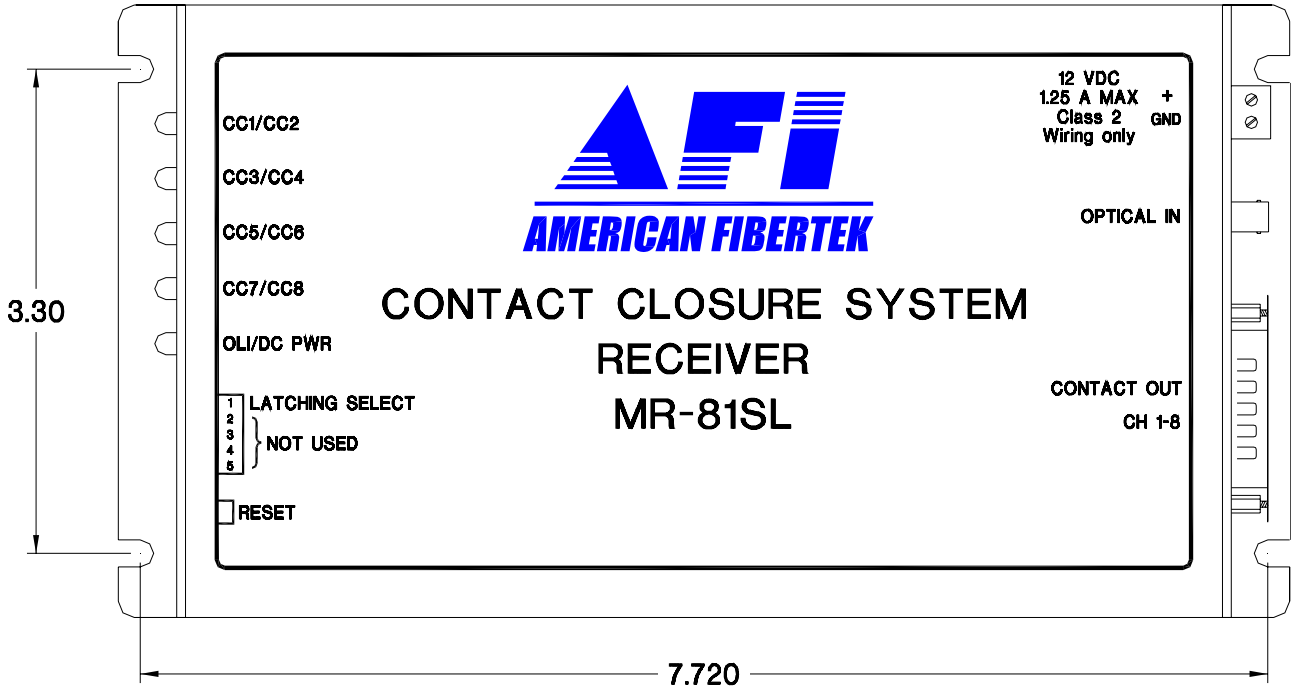
POWER SOURCE

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

This unit requires a 12 volt DC power source for proper operation. In the USA and in Canada an American Fibertek PS-12D is supplied with this unit. ANSI/NFPA 70 Class 2 wiring is recommended.

POWER CONNECTION

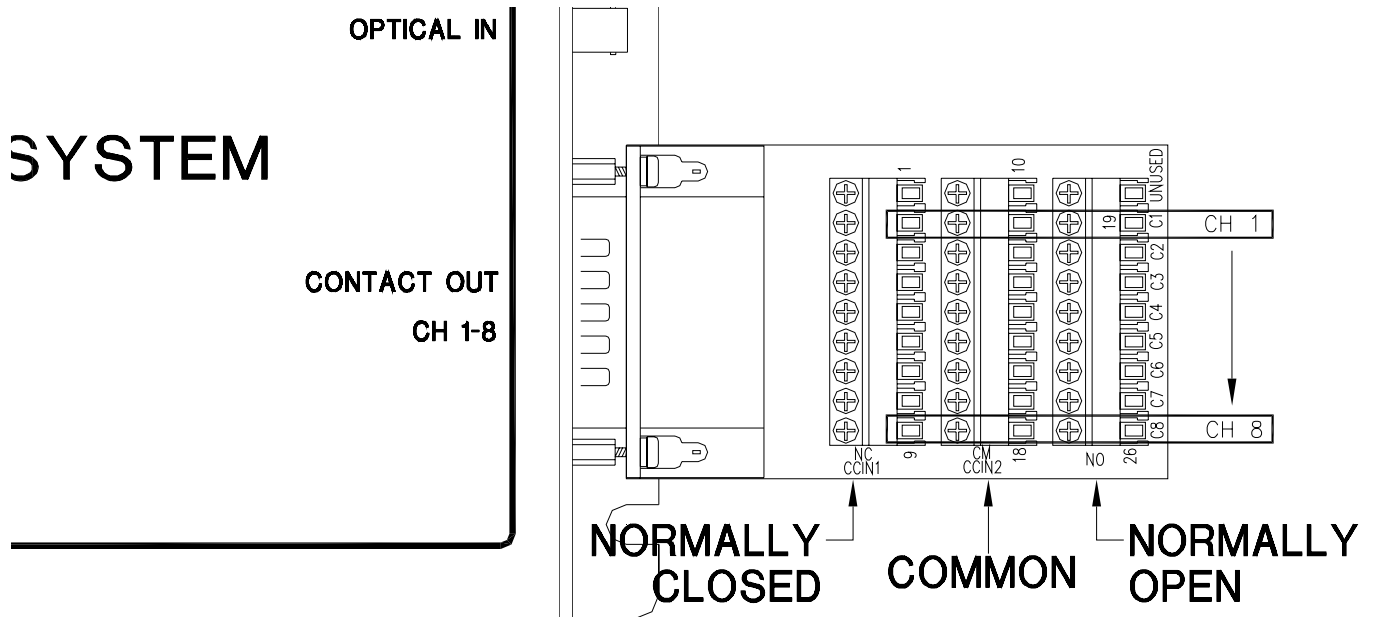
Power is supplied to the unit via a two pin terminal connector on the right side of the unit. See label on unit for proper location of input power.



FIBER INPUT CONNECTION

The optical input connection is made via a FC/PC connector located on the right side of the unit.

CONTACT CLOSURE OUTPUT CONNECTIONS



Contact closure output connections are made via terminal blocks attached to the right side of the unit. Please note that the three Channel 1 output connections begin at the second terminal screw closest to the fiber connection on each of the three nine pin terminal strips. Channels 2 through 8 connections continue down the terminal strip. Each channel has one common output connection that can be used with a normally closed connection or a normally open connection. For optimum performance the copper cables carrying the contact closure signal should be the shortest length of wire practical.

RESET PUSH BUTTON

A recessed momentary contact push button is located on the left side of the chassis near the LED indicators. Pushing this button causes the MR-81 outputs to be reset to their default states.

LATCHING SELECT SWITCH

A latching select switch is located on the left side of the chassis near the LED indicators. When switch #1 is set to the up (off) position, all contact output states remain unchanged during a loss of optical connection or DC power to the MR-81. Contact outputs will remain unchanged until DC power is restored to the MR-81 and a valid data stream is received from the MT-81 or RT-81 or the Reset button is depressed. When switch #1 is set to the down (on) position, all contact output states will revert to their default states during a loss of optical connection or DC power to the MR-81.

MR-81 STATUS INDICATORS

The MR-81 provides the following LED status indicators to aid in installation and troubleshooting:

CC1 THROUGH CC8

A green LED indicator is provided for each of the contact closure outputs of the MR-81. Contact closure status associated with these LED's is summarized below.

Contact Closure LED	Contact Closure Output Status
Green	Normally Open Contact Output Terminals Closed (Shorted)
Off	Normally Closed Contact Output Terminals Closed (Shorted)

OLI/DC PWR

A bicolor LED indicator monitors the power of the optical signal that is being received at the MR-81 from the MT-81 or RT-81. 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.
120 Belmont Drive
Somerset, NJ 08873

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Phone: (732) 302-0660
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