

Specifications

| | |
|----------------------------------|---|
| Power Requirements | 9VDC @ 200mA via the interconnection Bus from a 2A06 or 2A16 power supply or the MUX Base Module (2M55, 2M57, 2M59 or 2M61) |
| Connections | Pluggable, Cage Clamp Screw Terminal Blocks, Accept 12 to 24 AWG |
| Serial Communications | Bi-directional, Half-Duplex |
| Baud Rates | RS-232: 9.6K to 115.2K RS-485: 9.6K to 230.4K |
| Wire Cable Termination | RS-232 none required RS-485 User supplied based on cable specifications |
| Maximum Devices and Cable Length | RS-232 1 Device, 50ft (15m) RS-485 30 Devices, 2000ft (600m) |
| Ambient Conditions | -40 to 85°C 0 to 95% Humidity (Non-condensing) |
| Mounting | 35mm DIN Rail |
| Weight | < 9oz |
| Flammability Rating | UL V-0 |

Safety and Warning Information



Connect the DIN Rail, via the Model 2A09 End Clamp, to protective earth ground with low impedance. The modules are grounded to PE when they are snapped onto the DIN Rail. A Model 2A09 End Clamp on each side of the module bundle on the DIN rail prevents accidental disconnection of the modules' interconnection bus.

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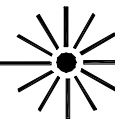
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Weed Instrument

Fiber Optics



EOTec 2000 MUX Model

2M30

Dual Channel, RS-232/485

Installation Instructions



**2 Channel, RS-232 or RS-485
Serial Communications Module**

**For use with the EOTec 2000
Multiplexer (MUX)**

Description

The Model 2M30, RS-232/485 Module is designed to provide two channels of bi-directional, half-duplex serial communications. The input signals from a 2M30 module on one end of the fiber link are passed to its MUX Base Module where they are multiplexed and converted to a fiber optic signal. The MUX Base Module at the other end of the fiber link demultiplexes the signals and passes them to the mated 2M30 Module for conversion back to their original serial data format.

Connections

POWER: The 2M22 obtains its operating power from the module interconnection bus. The operating power originates from the MUX Base Module (2M55, 2M57, 2M59 or 2M61) or from an EOTec 2000 universal power supply (2A06 or 2A16)

SERIAL DATA: The Channel 1 output terminal block is towards the bottom-front of the unit and the Channel 2 output terminal block is directly behind and below Channel 1. On both terminal blocks, the individual screw terminal connections are numbered from left-to-right as follows:

| | |
|------------|----------------|
| RS-232 | |
| Terminal 1 | no connection |
| Terminal 2 | Common (COM) |
| Terminal 3 | Transmit (TXD) |
| Terminal 4 | Receive (RXD) |
| RS-485 | |
| Terminal 1 | no connection |
| Terminal 2 | no connection |
| Terminal 3 | A Input/Output |
| Terminal 4 | B Input/Output |

Operational Settings

Use a small screwdriver to press on the latches (indentations) at the top and bottom of the housing. Slide the housing open.



MODULE ADDRESS SETTING: A two position DIP switch, SW1, is used to set the **address** of the module and it must **match** the address of its mating module at the **opposite** end of the fiber link. **Do not** set two modules at the **same** end of the fiber link to the same address setting. The 4 possible address settings are:

| Address | SW1-1 | SW1-2 |
|---------|-------|-------|
| 00 | OFF | OFF |
| 01 | OFF | ON |
| 10 | ON | OFF |
| 11 | ON | ON |



DIP switch locations

CHANNEL SETTINGS: The setting of a five position DIP switch determines each channel's communications parameters, independently. Use SW2 to set the Channel 1 parameters and use SW3 to set the Channel 2 parameters. The settings for the switches are as follows:

- Position 1:
ON = Use parity bit; OFF = No parity bit
- Position 2:
ON = RS-485; OFF = RS-232
- Positions 3, 4 & 5 respectively (Baud rate):
ON, OFF, ON = 9.6K Baud
ON, OFF, OFF = 19.2K Baud
OFF, ON, ON = 38.4K Baud
OFF, ON, OFF = 57.6K Baud
OFF, OFF, ON = 115.2K Baud
OFF, OFF, OFF = 230.4K Baud (RS-485)

Close the housing by sliding it back together until both the top and bottom latches "click" into place.

System Troubleshooting Tips

Non-illuminated LED status indicators or LED indicators that are red or flashing red can point to problem areas of the individual modules of the EOTec 2000 MUX system.

The upper LED indicator on each module is illuminated green when operating power is present at the module. If this LED is not illuminated, verify that power is applied, that the modules' interconnection bus is fully seated at each module, that the voltage levels and current ratings of the power source are sufficient for operation and that the polarities of the connections are correct. Cycling the power will reset the units and restart internal programming.

On the MUX Base Module, directly above the fiber ports is a bi-color (red/green) LED status indicator. When this LED is green, the MUX Base Module is operating normally. If this LED is illuminated constant red, it is indicating that its receive optical signal level is inadequate for system operation. Verify the fiber optic cables are not broken, are connected from TX to RX and are securely fastened. If this LED is *flashing red* it is indicating duplicate or non matching I/O module addresses. Verify that there is an address match between the input module and its corresponding output module and that no two modules on the same side of the fiber link are set to the same address.

On the I/O modules, there are two channel status LED indicators marked CH1 and CH2 that are illuminated Green when input/output signals are present. If a channel status LED indicator is not illuminated, verify that the input/output connections are connected to the correct terminals and that the polarities are also correct. On the analog input modules, measure the input signal levels and ensure they are present and are *at least* 1mVDC for 0 to 10VDC input module or 0.002mADC for 4 to 20mA input module. These same levels on each output of the analog output modules will illuminate its corresponding channel status LED.

If you are still experiencing difficulty, contact the factory for assistance.