

USB FIBER-OPTIC LINK

USB to Multi-Mode Fiber-Optic converter
ST Fiber Connectors
DIN Rail Mount

101-0089

Installation Operation & Specifications Manual

- USB 2.0 Virtual Serial Port
- Supports BAUD rates up to 115,200
- Fiber optic range of up to 4 km (2.5 mi)
- 820nm wavelength technology
- Point-to-Point transmission
- Plug-and-Play, no switches or jumpers
- 9 to 30 Vdc Supply voltage range
- Wide operating temperature range
-30 to 60°C (-22 to 140°F)



The USB Fiber-Optic Link is a simple to use, plug-and-play, USB to Multi-Mode Fiber Optic converter. When connected to a 101-0079 RS-485 Fiber-Optic Link the maximum RS-485 communications distance can be extended up to 4 km (2.5 miles) in a Point-to-Point transmission using a wide range of Multi-Mode Fiber Optic cables such as 50/125um or 62.5/125um.

The Fiber-Optic Link converter provides a simple, interface between a PC or laptop computer with a USB port and fiber optic devices.

Fiber Optic transmission offers immunity to radio and electrical interference such as EMI/RFI, transient surges, and ground loops.

The Fiber-Optic Link is equipped with an industry standard 35mm DIN rail. Allowing the converter to be quickly installed in your equipment rack, along with other DIN mounted equipment

The Fiber-Optic Link keeps the light in the fiber turned ON when no data is transmitted. The light in the fiber turns OFF/ON in step with the data.



For an RS-485 Fiber-Optic Link order part number 101-0079.



USB

The Fiber-Optic Link comes equipped with a USB 2.0 compatible interface. USB drivers will create a virtual serial COM port and appear as a serial port to your application software. If your PC is connected to the internet the drivers will be automatically downloaded and installed when the Fiber-Optic link is first connected to a USB port.

For manual driver installation, please visit www.microflx.com/pages/drivers

Fiber Optic Connection

The Fiber-Optic Link is equipped with 820nm output wavelength ST type connectors capable of working with standard Multi-Mode fiber optic cables such as 50/125 and 62.5/125um. The maximum length of the fiber optic cables should not exceed 4 km (2.5 mi). The Fiber-Optic Link works as a pair, the first device's TX should be connected to RX on the second device. The second device's TX should connect to RX on the first device.

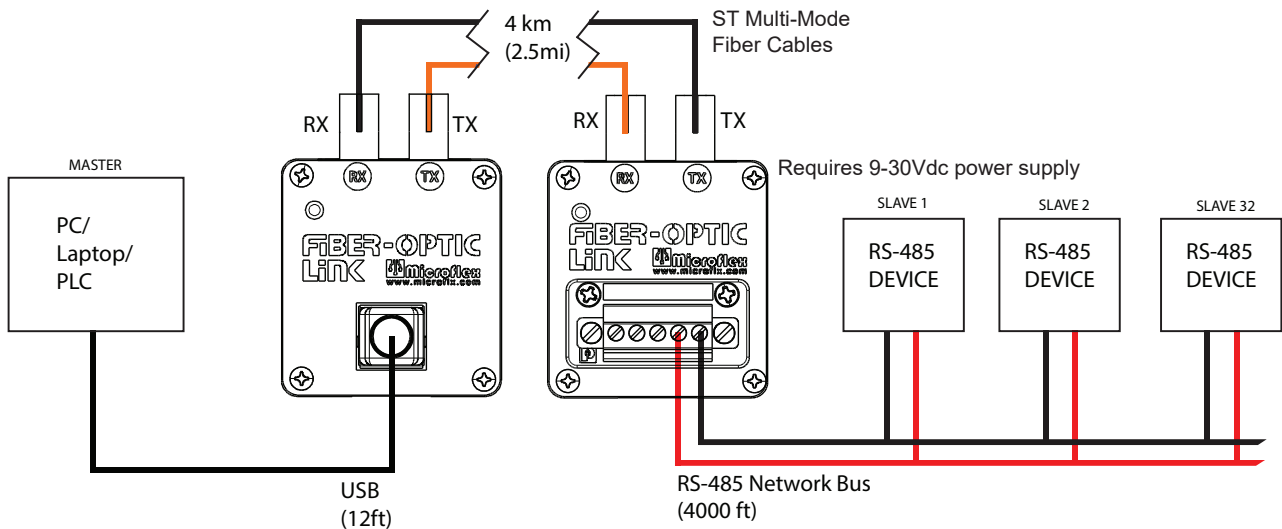
DIN Rail Mounting

The converter is designed to mount on standard 35mm EN 50022 rails. It can be snap mounted and removed from the mounting rail without tools for quick installation and servicing.

Power Supply

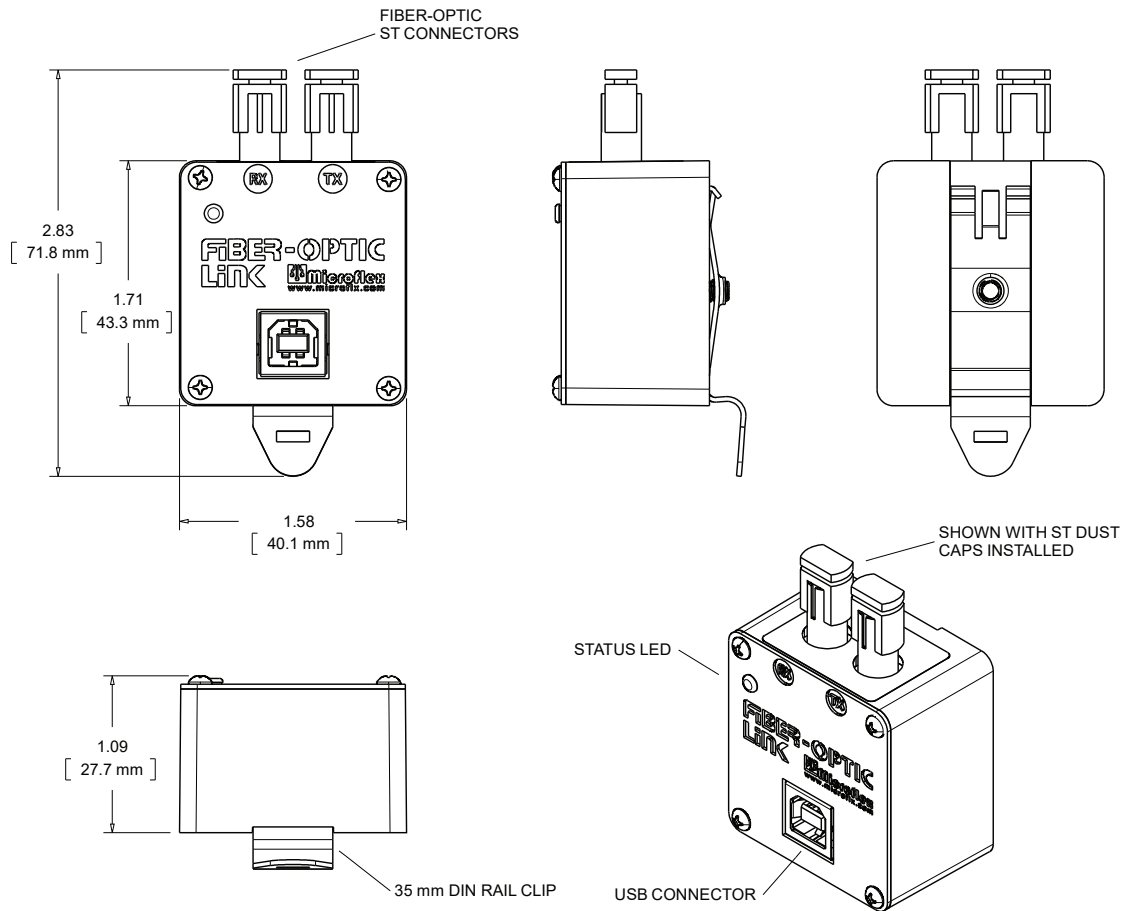
Power for the converter is taken from the USB port eliminating the need for an external converter power supply.

Typical Application



Typical application; fiber optic connection to a RS-485 network using a 101-0089 USB to Fiber-Optic Link connected to a 101-0079 RS-485 Fiber-Optic Link.

Specifications



Enclosure

Polycarbonate plastic with Stainless Steel Cover
 Weight 5 ounces
 Mounting 35mm DIN Rail Clip

Environmental

Operating Temperature -30°C to 60°C (-22°F to 140°F)
 Storage Temperature -40°C to 85°C (-40°F to 185°F)
 Humidity 0 to 95% (non-condensing)

Status LED

Green Transmitting USB data
 Red Receiving USB data

At power on the Fiber-Optic Link will have the LED turn RED when the Fiber Optic RX (Receive/In) is not connected. Once connected to another Fiber-Optic Link or another fiber optic converter with the light ON at idle the RED status LED will turn OFF.


USB

Connector USB-B
 Compatibility USB 1.1, USB 2.0, and USB 3
 Active Current 80mA Max
 Suspend Current Less than 600µA Typical

Fiber Optic

Type/Wavelength Multi-Mode/820nm
 Output Power (-) 17 to (-) 13 Typical (-) 15dBm
 Receive Sensitivity (-) 25.4 to (-) 24dBm
 Cable MM Fiber Optic cable: 50/125 and 62.5/125um
 Maximum Distance 4 km (2.5 mi)
 Idle State Transmitter light ON

Safety Considerations

-  Conformity in accordance with Part 2, and Part 15, Subparts A and B of the Federal Communications Rules and Regulations, and ICES-003 of the Industry Canada standards.




This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications not expressly approved by Microflex could void the user's authority to operate this equipment.

Emissions EN55022: 1998

Electrostatic Discharge EN61000-4-2: 1995, A1: 1998, A2: 2001

Radiated Immunity EN 61000-4-3: 2002

Safety Compliance EN 60950-1: 2002

-  This device is not intended for connection to the phone line through the appropriate converters and shall not be connected to telecommunication lines because it has no protection against over-voltages which may exist in these lines.
-  The user shall ensure the protection of the operator from access to areas with hazardous voltages or hazardous energy in their equipment.
-  The user shall ensure that the connection port of the field device and the modem is separated at least by basic insulation from any primary circuit existing in the field device.

Limited Warranty

Microflex, LLC warrants this unit against defects in materials and workmanship for a period of one year from the date of shipment. Microflex, LLC will, at its option, repair or replace equipment that proves to be defective during the warranty period. This warranty includes parts and labor.

A Return Materials Authorization (RMA) number must be obtained from the factory and clearly marked on the outside of the package before equipment will be accepted for warranty work.

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