MOXA ICF-1150I RS485 TO FIBER CONVERTER

Converters are available for use with multi-mode or single-mode optical fiber, with ST or SC connectors. The converters are offered in stand-alone versions and should be mounted inside an enclosure near the associated RS485 circuit.

Regulatory Approvals

- **UL** Underwriters Laboratories
- **CE** Class B, (European Union)
- **FCC** Part 15 sub Class B
- **LVD** EN 60950-1
- **EMI** EN55032 1998, Class B
- **EMS** EN 6100-4-2 (ESD): Contact: 8 kV; Air: 15 kV EN 61000-4-3 (RS): 80 MHz to 1 GHz: 3 V/m EN 61000-4-4 (EFT: Power: 4 kV; Signal: 2 kV EN 61000-4-5 (Surge): Power: 4 kV; Signal: 1 kV EN 61000-4-6 (CS): 150 kHz to 80 MHz: 3 V/m EN 61000-4-8 (PFMF)

For exact certification listings, please reference the respective agency web site.

Features

- 3-way communication: fiber and RS-422/485
- Rotary switch to change the pull high/low resistor value
- Extend RS-485 transmission up to 40 km (24.8 miles) with single-mode or 5 km (3.1 miles) with multi-mode
- 3-way isolation protection (for I models only)
- Class I Division 2, ATEX, and IECEx certified for harsh industrial environments

General

The MOXA RS485 to Fiber converters provide a means to facilitate increased distances between devices connected to Fike's RS485 circuits by providing point-to-point transmission of Fike's high-speed RS485 signals over fiberoptic cable for the following circuits associated with Fike's CyberCat™ and Cheetah Xi™ family of control systems:

- RS485 peripheral bus
- RS485 panel network
- RS485 audio bus (voice subsystem)

Ordering Information

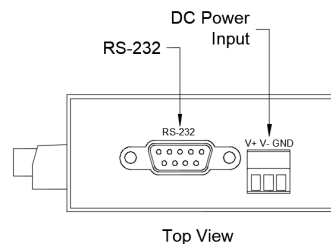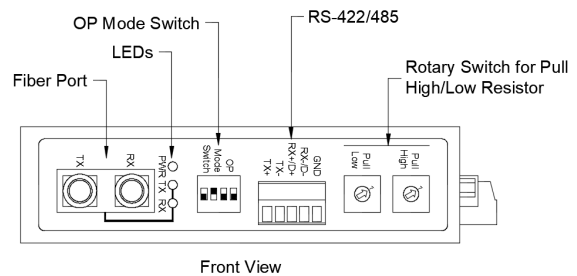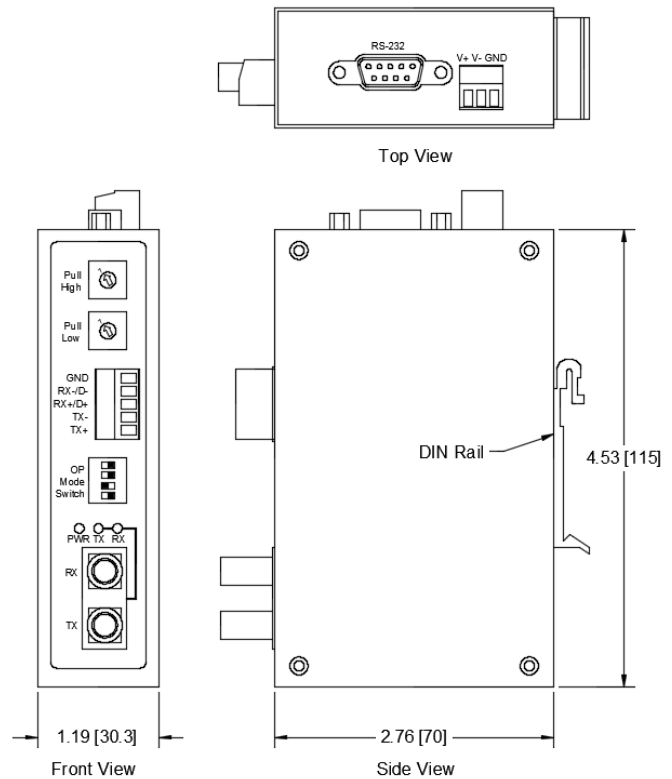| Part Number	Description
02-14784	RS485 to multi-mode fiber, ST
02-14849	RS485 to multi-mode fiber, SC
02-14850	RS485 to multi-mode fiber, SC
02-14851	RS485 to multi-mode fiber, ST
10-2936	Enclosure Kit, 2 converters 6 in x 6 in x 6 in (152 mm x 152 mm x 152 mm)
10-2937	Enclosure Kit, 4 converters 10 in x 8 in x 6 in (254 mm x 203 mm x 152 mm)
10-2938	Enclosure Kit, 6 converters 14 in x 8 in x 6 in (356 mm x 203 mm x 152 mm)

This document is only intended to be a guideline and is not applicable to all situations. Information is subject to Fike's full disclaimer at http://www.fike.com/disclaimer.

Specifications

LED Indicators	
PWR (green)	Steady ON: Power is ON
Tx (green)	Sending data from the fiber port
Rx (yellow)	Receiving data from the fiber port

Serial Communication	
Signals for 2-wire RS485	GND (pin 1); Data- (pin 2), Data+ (pin 3)
RS-232	Not connected
Baudrate	50 bps to 921.6 Kbps
ESD Protection	15 kV ESD

Fiber Communication	
Connector Type	ST or SC
Distance	Single-mode fiber: 40 km (24.8 miles)
	Multi-mode fiber: 5 km (3.1 miles)
Support Cable	Single-mode fiber: 8.3/125, 8.7/125, 9/125, or 10/125 µM
	Multi-mode fiber: 50/125, 62.5/125, or 100/140 µM
Wavelength	Single-mode: 1310 nm
	Multi-mode: 850 nm
Tx Output	> -8dBm
Rx Sensitivity	-16 dB maximum
Point-to-Point Transmission	Half or Full duplex
Multi-drop Transmission	Half duplex, fiber ring

Environmental	
Operating Temp	0 to 49°C (32 to 120°F)
Relative Humidity	93%, non-condensing

Power	
Operating Voltage[1]	15 to 30 VDC, 100 mA (max.)
Reverse Power Protection	Protects against V+/V- reversal
Over Current Protection	Protects against two signal shorted together: 1.1 A

Physical Characteristics	
Dimensions (W x D x H)	30.3 x 70 x 115 mm (1.2 x 2.8 x 4.5 in.)
Material	Aluminum (1 mm)
Gross Weight	135 g / 0.3 lb.
IP Rating	IP30
Mounting	DIN-rail
Freefall	IEC 60068-2-32
MTBF	1,770,450 hours

Hazardous Certifications	
ATEX	10 ATEX 0917344X
IECEx	IECEx UL 13.0034X

[1] Supplied by control panel or a 24VDC regulated, power limited power supply listed for fire protective signaling.

Product Diagram/Dimensions

Top View

Front View   Side View

Front View

Top View