

# FOSTCDRI-INV

## Industrial Serial to Multimode Fiber Converter

- ✓ Data Rates up to 115.2 kbps
- ✓ 10 – 48 VDC Input Power Range
- ✓ Wide Operating Temperature
- ✓ 3-Way 2000V Optical Isolation
- ✓ MODBUS ASCII/RTU Compatible
- ✓ EMI / RFI Protection
- ✓ UL 508
- ✓ Built-in, Switchable Termination & Bias
- ✓ Inverted Fiber State

The FOSTCDRI-INV is an Industrial Serial to Multi-mode Fiber Optic Converter. Designed for rugged industrial environments, it is UL approved. In addition to direct point-to-point connectivity, it is capable of operating in a multi-drop mode. This allows one serial device to communicate with up to 31 others around a fiber ring. Since it supports mixed standards, you can replace other converters and isolators and add the EMI / RFI protection inherent to fiber optic communications.

In RS-232 mode, the converter supports transmit and receive data. Handshaking signals are not passed through. An Automatic Send Data Control circuit controls the RS-422/485 driver chip, eliminating the requirement for external software.

Easy to install and configure, it has a 12 position DIP Switch on the bottom to configure RS-422/485 parameters. The serial data and power cables connect to removable terminal blocks. ST connectors are used for the fiber.

This model is configured so that the fiber optic transmit light is OFF in the idle state. If you require the transmitter light to be ON in the idle state, order model number FOSTCDRI.

Remember, when it comes to reliable communications in harsh duty industrial environments, B&B Electronics ILineX™ brand is your number one choice.



### Specifications

#### Serial Technology

RS-232	TD, RD, GND
RS-485 2-Wire	Data A(-), Data B(+), GND
RS-422/485 4-Wire	TDA(-), TDB(+), RDA(-), RDB(+), GND
Serial Connector	5 Position, Removable Terminal Block
Data Rate	9.6 to 115.2 kbps
Isolation	2KV RMS, 1 minute
Surge Protection	600 W Peak Power Dissipation
	Clamping time < 1 pico-second
Industrial Bus	MODBUS ASCII/RTU
Bias	Built-in, Switchable, 1.2KΩ
Termination	Built-in, Switchable, 120Ω

#### Fiber Optic Technology

Type / Wavelength	Multimode / 820 nm
Output Power	-16dBm min, -12dBm typical, -9dBm max
Receive Sensitivity	-24dBm min, -25.4dBm max
Cable	62.5/125 micro-meter
Connector	ST
Data Rate	9.6 TO 115.2 kbps
Maximum Distance	2.5 miles (4 km)
Idle State	Transmitter Light OFF

#### Power

Source	External – Class 2 Input Only.
Power Connector	2 Position, Removable Terminal Block
Input Voltage	10 to 48 VDC (56 VDC max)
Power Consumption	0.5 W (Typical), 1.3W (With Termination)

#### Terminal Blocks

Wire Size Accepted	28 to 12 AWG
Pitch	5.08 mm
Insulation Resistance	≥ 500 MΩ @ 500 VDC
Maximum Torque	5 Kg / cm

#### Indicators

Power	Red LED
FO Receive	Red LED
FO Transmit	Red LED

#### Mechanical

Dimensions	4.9 x 4.5 x 1.3 in (12.3 x 11.3 x 3.2 cm)
Enclosure	IP 20 Plastic, 35 mm DIN Mount
Weight	0.44 lbs (199.6 g)
MTBF	138904 hours
MTBF Calc. Method	Parts Count Reliability Prediction MIL 217F

#### Environmental

Op Temperature	- 40 to 80°C (-40 to 176°F)
Storage Temp	- 40 to 85°C (-40 to 185°F)
Op Humidity	0 to 95% Non-condensing

#### Regulatory

Approvals	FCC, CE,
	UL 508
UL File Number	E222870

### Ordering Information

FOSTCDRI-INV	Serial to Multimode fiber optic converter
Required but not included	
Power Supply	MDR-20-24



