RS232/422 point-to-point data transceiver

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Description

The ComNet™ FDX50M2 and FDX51M2 data transceivers are interchangeable by application and provide point-to-point transmission of simplex or duplex EIA RS232/RS422 data signals over two multimode optical fibers. The transceivers are transparent to data encoding allowing for broad-range compatibility. Plug-and-play design ensures ease of installation requiring no electrical or optical adjustments. Each transceiver incorporates a bi-color (Red/Green) indicating LED for monitoring proper system operation. The FDX50 has a small footprint and is designed for surface mounting. Packaged in the exclusive ComNet ComFit housing, FDX51 units may be either wall or rack-mounted, or may be DIN-rail mounted by the addition of ComNet model DINBKT1 adaptor plate.

Features

- Meets EIA RS232/422 specifications

- Distances up to 4.5 km (2.5 miles)

- Transparent to data encoding/compatible with major data protocols

- Point-to-Point topology

- Tested and certified by an independent laboratory for full compliance with the environmental requirements (ambient operating temperature, mechanical shock, vibration, humidity with condensation, high-line/low-line voltage conditions and transient voltage protection) of NEMA TS-1/TS-2 and the Caltrans Specification for Traffic Signal Control Equipment.

- Data rates up to 115 Kbps (NRZ)

- Voltage transient protection on all power and signal input/output lines provides unconditional protection from power surges and other voltage transient events.

- Bi-Color (Red/Green) Transmit and Receive LED's

- NTCIP compatible

- Automatic resettable solid-state current limiters

- FDX50 is a compact size module for surface mounting

- FDX51 is a hot-swappable rack module

- FDX51 is interchangeable between stand-alone or rack mount use – ComFit

- Five year warranty

Applications

- Access Control Systems
- Building Automation and Environmental Control Systems
- Computer/Data Equipment
- Fire and Alarm Systems
- Traffic Signal Control Equipment

specifications

DATA

Data Format:	RS232 (data lines only), RS422, Manchester, bi-phase
Data Rate:	DC-115 kbps (NRZ)
Operating Mode:	Asynchronous, simplex or full duplex
Bit Error Rate:	<1 in 10°

WAVELENGTH

850 nm, Multimode

FIBERS

2

OPTICAL EMITTER

LED

LED INDICATORS

- Receive Data
- Transmit Data

CONNECTORS

Optical:	ST
Data and Power:	Terminal Block

ELECTRICAL & MECHANICAL

Power:	
Surface Mount:	8-15 VDC @ 70 mA
Rack:	From Rack (FDX51)
Number of Rack Slots:	1
Current Protection:	Automatic Resettable Solid-State Current Limiters
Circuit Board:	Meets IPC Standard
Size (in./cm) (L×W×H)	
Surface Mount (FDX50):	4.1 × 3.7 × 1.1 in., (10.4 × 9.4 × 2.8 cm)
Rack Mount (FDX51):	6.1 × 5.3 × 1.1 in., (15.5 × 13.5 × 2.8 cm)
Shipping Weight:	<2 lbs./0.9 kg

ENVIRONMENTAL

MTBF:	>100,000 hours
Operating Temp:	-40° C to +75° C
Storage Temp:	-40° C to +85° C
Relative Humidity:	0% to 95% (non-condensing)†

† May be extended to condensation conditions by adding suffix '/C' to model number for conformal coating.
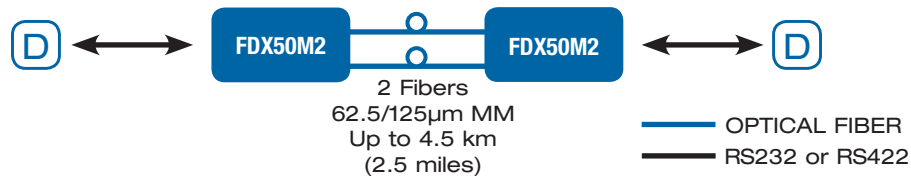
AGENCY COMPLIANCE
FC CE cULus RoHS C
PART IS COMPLIANT E322931 N24621

MADE IN THE
USA

PART NUMBER	DESCRIPTION	FIBERS REQUIRED	FIBER	OPTICAL PWR BUDGET	MAX. DISTANCE	# RACK SLOTS
FDX50M2	RS232/RS422 Transceiver (850 nm)	2	Multimode‡ 62.5/125μm	16 dB	4.5 km (2.5 miles)	NA
FDX51M2	RS232/RS422 Transceiver (850 nm)	2				1
Options	Add '/C' for Conformally Coated Circuit Boards (Extra charge, consult factory) DIN-Rail Mounting Adaptor Plate Kit – With mounting hardware (Optional, order model DINBKT1)					

NOTE: 9 Volt DC Plug-in Power Supply, 90-264 VAC, 50/60 Hz (Included). This product requires a fiber installation with a minimum 30dB connector return loss. The use of Super Polish Connectors is recommended. ‡ For 50/125μm fiber, subtract 4 dB from the optical power budget.

Complies with FDA Performance Standard for Laser Products, Title 21, Code of Federal Regulations, Subchapter J

In a continuing effort to improve and advance technology, product specifications are subject to change without notice.

D ←→ FDX50M2 —— FDX50M2 ←→ D

2 Fibers
62.5/125μm MM
Up to 4.5 km
(2.5 miles)

—— OPTICAL FIBER
—— RS232 or RS422

NOTE: Unit can be used for transmission of RS232 or RS422, but not simultaneously.

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