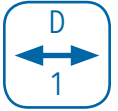# APPEARANCE

DESCRIPTION

The ComNet™ FDX70 data transceivers provide point-to-point transmission of simplex or duplex EIA RS232/RS422/RS485 (2W/4W) data signals over one single mode or multimode optical fiber. The transceivers are transparent to data encoding allowing for broad-range compatibility. Models within this series are available for use with multimode or single mode optical fiber. 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. Packaged in the exclusive ComNet ComFit housing, the FDX70 standard size units may be either wall or rack-mounted, or may be DIN-rail mounted by the addition of ComNet model DINBKT1 adaptor plate.

APPLICATIONS

› Access Control Systems

› Building Automation and Environmental Control Systems

› Computer/Data Equipment

› Fire and Alarm Systems

› Traffic Signal Control Equipment

FEATURES

› Meets EIA RS232C/D and RS422/RS485 (2 or 4-wire) specifications

› 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.

› Robust design assures extremely high reliability in unconditioned out-of-plant/roadside environments

› LED status indicators provide rapid indication of all critical operating parameters

› NTCIP compatible

› Remote Fault Indication allows the user to determine when a fiber break or loss of prime operating power has occurred, or a transceiver in the field has failed

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

› Wide optical dynamic range: optical attenuators are never required

› Hot-swappable rack modules

› Interchangeable between stand-alone or rack mount use – ComFit

› Lifetime Warranty

SPECIFICATIONS

Data

Data Format:	RS232, RS422, 2 or 4-wire RS485
	w/Tri-State, Manchester, bi-phase, Sensornet
Data Rate:	DC-1Mbaud (RS422 & RS485)
	DC-250kbps (RS232)
Operating Mode:	Asynchronous, simplex or full-duplex
Bit Error Rate:	<10-12 @ Maximum Optical Loss Budget

Wavelength

1310/1550 nm, MM and SM

Number Of Fibers

1

Optical Emitter

Laser Diode

LED Indicators

1. Power   2. Status   3. Receive Data Active
4. Transmit Data Active   5. Port A Fiber Link Status
6. Port B Fiber Link Status

Failure Relay

Normally closed contact: Solid-State relay contacts rated at 0.5 mA, resistive load.

Connectors

Power:	Terminal Block
Optical:	ST
Data:	Terminal Block
Relay:	Terminal Block

Electrical & Mechanical

Surface Mount Power:	8-15 VDC @ 4 W
Rack Power:	From Rack
Number of Rack Slots:	1
Current Protection:	Automatic Resettable Solid-State Current Limiters
Circuit Board:	Meets IPC Standard
Size (L×W×H):	6.1 × 5.3 × 1.1 in (15.5 × 13.5 × 2.8 cm)
Shipping Weight:	<2 lbs./0.9 kg

Environmental

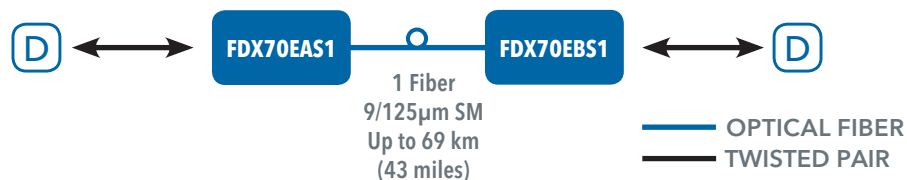|	
MTBF:	>100,000 hours
Operating Temp:	-40˚ C to +75˚ C
Storage Temp:	-40˚ C to +85˚ C
Relative Humidity:	0% to 95% (non-condensing)*

* May be extended to condensation conditions by adding suffix '/C' to model number for conformal coating.

ORDERING INFORMATION

Part Number	Description	Fibers Required	Fiber	Optical Pwr Budget	Max Distance†	# Rack Slots
FDX70EAM1	Universal Data Point To Point "A" End, 1 Fiber, MM	1	Multimode 62.5/125μm	16 dB	4 km (2.5 mi)	1
FDX70EAS1	Universal Data Point To Point "A" End, 1 Fiber, SM	1	Single mode 9/125μm	23 dB	69 km (43 mi)	1
FDX70EBM1	Universal Data Point To Point "B" End, 1 Fiber, MM	1	Multimode 62.5/125μm	16 dB	4 km (2.5 mi)	1
FDX70EBS1	Universal Data Point To Point "A" End, 1 Fiber, SM	1	Single mode 9/125μm	23 dB	69 km (43 mi)	1
Accessories Options	9 Volt DC Plug-in Power Supply, 90-264 VAC. 5060 Hz (Included) Add '/C' for Conformally Coated Circuit Boards (Extra charge, consult factory) DIN-Rail Mounting Adaptor Plate Kit - With Mounting Hardware (Optional, order model DINBKT1)					

TYPICAL APPLICATION

D ←→ **FDX70EAS1** —○— **FDX70EBS1** ←→ D

1 Fiber
9/125μm SM
Up to 69 km
(43 miles)

—— OPTICAL FIBER
—— TWISTED PAIR

Low Power Consumption

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Communication Networks

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