comnet
Communication Networks

RS232/RS422/RS485 Data Transceiver

FDX60(M,S)[-M]

INCLUDED | HARDENED | 1

The ComNet™ FDX60 series data transceivers provide point-to-point transmission of simplex or duplex EIA RS232/RS422/RS485 (2W/4W) data signals over one or two optical fibers. 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. The FDX60 has a built-in fiber link test feature that allows for the testing of the fiber.

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

› NTCIP compatible

› Fiberlink Fiber Link Tester

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

› Wide optical dynamic range: optical attenuators are never required

› Indicating LEDs display equipment operating status

› Hot-swappable rack modules

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

› Standard size FDX60 may be DIN-rail mounted by the addition of ComNet model DINBKT1 or DINBKT4 adaptor plate.

› FDX60-M has a small footprint and is designed for surface mounting

› Lifetime 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, RS422, 2 or 4-wire RS485 w/Tri-State, Manchester, bi-phase, Sensornet
Data Rate	DC-250 kbps
Operating Mode	Asynchronous, simplex or full-duplex
Bit Error Rate	<10-9 @ Maximum Optical Loss Budget

Wavelength

1310/1550 nm

Fibers

1 In/1 Out

Optical Emitter

Laser

LED Indicators

› Power › Data In › Data Out › Link › Loop Back

Connectors

Power	Terminal Block
Optical	ST
Data	Terminal Block
Relay	Terminal Block

Power

Operating Voltage Range	8 to 15 VDC (or from C1 Rack, sold separately)
Power Consumption	2 W

Electrical & Mechanical

Number of Rack Slots	1 (ComFit)
Current Protection	Automatic Resettable Solid-State Current Limiters
Circuit Board	Meets IPC Standard
Size, Mini	4.1 × 3.7 × 1.1 in (10.4 × 9.4 × 2.8 cm)
Size, ComFit	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)[1]

AGENCY COMPLIANCE

MADE IN THE USA

ORDERING INFORMATION

Part Number	Description	Fibers Req'd	Fiber	Optical Pwr Budget	Maximum Distance	# Rack Slots
FDX60M1(A)Z(B)-M	RS232, RS422, RS485(2W & 4W), Mini	1	Multimode 62.5/125µm	16 dB	4 km (2.5 miles)	NA
FDX60M1(A)(B)	RS232, RS422, RS485(2W & 4W)	1	Multimode 62.5/125µm	16 dB	4 km (2.5 miles)	1
FDX60S1(A)(B)-M	RS232, RS422, RS485(2W & 4W), Mini	1	Single Mode 9/125µm	23 dB	69 km (43 miles)	NA
FDX60S1(A)(B)	RS232, RS422, RS485(2W & 4W)	1	Single Mode 9/125µm	23 dB	69 km (43 miles)	1
FDX60M2-M	RS232, RS422, RS485(2W & 4W), Mini	2	Multimode 62.5/125µm	16 dB	4 km (2.5 miles)	NA
FDX60M2	RS232, RS422, RS485(2W & 4W)	2	Multimode 62.5/125µm	16 dB	4 km (2.5 miles)	1
FDX60S2-M	RS232, RS422, RS485(2W & 4W), Mini	2	Single Mode 9/125µm	23 dB	69 km (43 miles)	NA
FDX60S2	RS232, RS422, RS485(2W & 4W)	2	Single Mode 9/125µm	23 dB	69 km (43 miles)	1
Accessories	DC Plug-in Power Supply, 90-264 VAC, 50/60 Hz (Included)					
Options	[1] Add '/C' for Conformally Coated Circuit Boards to extend to condensation conditions (Extra charge, consult factory)					
	DIN-Rail Mounting Adaptor Plate Kit – With mounting hardware (Optional, order model DINBKT1 or DINBKT4)					

NOTE: This product requires a fiber installation with a minimum 30 dB connector return loss. The use of Super Polish Connectors is recommended.
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.

TYPICAL APPLICATION

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

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