Description
The ComNet™ FDX4D(M)(S)1 Series data transceiver series provide transmission of four bi-directional data channels over one optical fiber and are ideal for use in unconditioned roadside or out-of-plant installations. The data channels can be set independently for RS232, RS422 and 2 or 4-wire RS485 with tri-state support. Plug-and-play design ensures ease of installation and no electrical or optical adjustments are ever required. Bi-color (Red/Green) LED indicators are provided for rapidly ascertaining equipment operating status. Packaged in the exclusive ComNet ComFit housing, these units may be either wall or rack-mounted, or may be DIN-rail mounted by the addition of ComNet model DINBKT1 adaptor plate.

Features
- Available with FC or ST Optical connectors
- Supports RS232, RS422, and 2 or 4-wire RS485 with tri-state data interfaces
- Four bi-directional data channels
- 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.
- Voltage transient protection on all power and signal input/output lines provides unconditional protection from power surges and other voltage transient events.
- Robust design ensures extremely high reliability in unconditioned out-of-plant environments
- Bi-color (Red/Green) LED status indicators provide rapid indication of critical operating parameters
- Hot-swappable rack modules
- Interchangeable between stand-alone or rack mount use
  - ComFit
- Lifetime Warranty
FDX4D(M)(S)1 Series

4 bi-directional data channels

**DATA**
- Data Channels: 4
- Data Interface: RS232, RS422 and RS485 (2W/4W)
- Data Format: NRZ, NRZI, Manchester, Bi-Phase and Sensornet
- Data Rate: DC-250 Kbps (NRZ)
- Bit Error Rate: <1 in 10^9 @ Maximum
- Operating Mode: Simplex or Full-Duplex

**WAVELENGTH**
- 1310/1550 nm, Multimode and Single Mode

**NUMBER OF FIBERS**
- 1

**LED INDICATORS**
- Received Data - Transmitted Data
- Optical Carrier Detect

**OPTICAL EMITTER**
- Laser Diode

**CONNECTORS**
- Optical: ST or FC
- Power: Terminal Block
- Data: Terminal Block

**ELECTRICAL & MECHANICAL**
- Power: 8-15 VDC @ 4W
- Surface Mount: From Rack
- Rack Mount: From Rack
- Rack Mount: From Rack
- Number of Rack Slots: 2
- Current Protection: Automatic Resettable Solid-State Limiters
- Circuit Board: Meets IPC Standard
- Size (in./cm) (LxWxH): 6.1 x 5.3 x 2.2 in., (15.5 x 13.5 x 5.6 cm)
- Optical Loss Budget
- Shipping Weight: <2 lb./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.

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**PART NUMBER**
- FDX4DM1A: Data Transceiver (1310/1550 nm)
- FDX4DM1B: Data Transceiver (1550/1310 nm)
- FDX4DS1A: Data Transceiver (1310/1550 nm)
- FDX4DS1B: Data Transceiver (1550/1310 nm)

**FIBERS REQUIRED**
- Multimode 62.5/125µm
- Single Mode 9/125µm
- 1 Fiber

**OPTICAL PWR BUDGET**
- 16 dB
- 23 dB
- 3 km (2 miles)
- 69 km (43 miles)
- 16 dB

**MAX. DISTANCE†**
- 3 km (2 miles)
- 69 km (43 miles)

**# RACK SLOTS**
- 2
- 2

**ACCESSORIES**
- 9 Volt DC Plug-in Power Supply, 90-264 VAC, 50/60 Hz (Included)
- Add '/C' for Conformally Coated Circuit Boards (Extra charge, consult factory)
- Add '/FC' for FC Optical Connector
- Add '/ST' for ST Optical Connector
- Add '/G' for Gold-Plated Connector
- DIN-Rail Mounting Adaptor Plate Kit – With mounting hardware (Optional, order model DINBKT1)

**NOTE:** This product requires a fiber installation with a minimum 30 dB connector return loss. The use of Super Polish Connectors is recommended. † Distance may be limited by optical dispersion.

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.

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FDX4D(M)(S)1 Series

3 CORPORATE DRIVE I DANBURY, CT 06810 USA
T: 203.796.5300 I F: 203.796.5303 I TECH SUPPORT: 1.888.678.9427 I INFO@COMNET.NET
8 TURNBERRY PARK ROAD I GILDERSOME I MORLEY I LEEDS, UK LS27 7LE
T: +44 (0)113 307 6400 I F: +44 (0)113 253 7462 I INFO-EUROPE@COMNET.NET

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