

## 4 bi-directional data channels



### 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



## specifications

## 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 <sup>9</sup> @ Maximum
Operating Mode:	Optical Loss Budget 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 &amp; MECHANICAL

Power:	
Surface Mount:	8-15 VDC @ 4W
Rack Mount:	From Rack
Number of Rack Slots:	2
Current Protection:	Automatic Resettable Solid-State Current Limiters
Circuit Board:	Meets IPC Standard
Size (in./cm) (L×W×H)	6.1 × 5.3 × 2.2 in., (15.5 × 13.5 × 5.6 cm)
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.

AGENCY COMPLIANCE

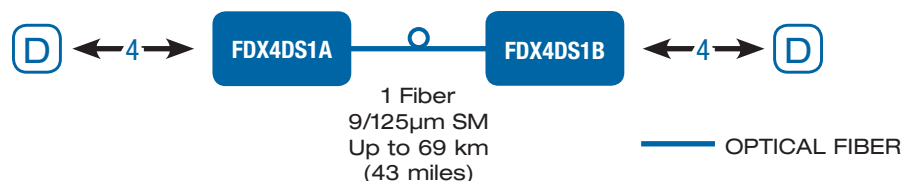


MADE IN THE  
**USA**

PART NUMBER	DESCRIPTION	FIBERS REQUIRED	FIBER	OPTICAL PWR BUDGET	MAX. DISTANCE†	# RACK SLOTS
FDX4DM1A	Data Transceiver (1310/1550 nm)	1	Multimode 62.5/125µm	16 dB	3 km (2 miles)	2
FDX4DM1B	Data Transceiver (1550/1310 nm)					
FDX4DS1A	Data Transceiver (1310/1550 nm)	1	Single Mode 9/125µm	23 dB	69 km (43 miles)	2
FDX4DS1B	Data Transceiver (1550/1310 nm)					

Accessories 9 Volt DC Plug-in Power Supply, 90-264 VAC, 50/60 Hz (Included)  
Options 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.



**comnet**  
Communication Networks

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