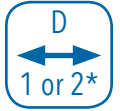


### APPEARANCE



### DESCRIPTION

The ComNet™ FDX72(M,S)1 series Drop-Insert-Repeat Transceiver unit is a fully-digital modem designed for implementing RS232, RS422 or RS485 2 or 4-wire data communications networks of the highest possible reliability. A network of FDX72 units can support one full-duplex or two half-duplex data channels. These transceivers also feature data translation to convert between data protocols. Data re-clocking and regeneration permit an almost unlimited number of transceiver/controller units to be used within the network. These environmentally hardened transceivers are ideal for use in unconditioned out-of-plant or roadside installations and, unlike many competing designs, only one optical fiber is required between units. Combine these units with the ComNet FDX70E(A,B)(M,S)1 series products as an end link to create a linear Drop-Insert-Repeat chain.

Bi-color (Red/Green) LED indicators are provided for rapidly ascertaining equipment operating status, including the location of fiber breaks. Packaged in the exclusive ComNet ComFit housing, these units may be either shelf or rack-mounted, or may be DIN-Rail mounted by the addition of ComNet model DINBKT1 adaptor plate. Plug-and-play design ensures ease of installation, and no electrical or optical adjustments are ever required.

### APPLICATIONS

- › High Reliability Traffic Signalization Networks
- › Access Control Networks
- › Industrial Control/Factory Automation and SCADA Networks
- › Serial Data Protocol Conversion

### FEATURES

- › Meets EIA RS232 and RS422/RS485 (2 or 4-wire) specifications (Simplex or Duplex Operation)
- › Two Data Channel Capability: One full duplex or two half-duplex channels
- › Only one optical fiber required between units
- › Full data re-clocking and regeneration: no limit to the number of transceiver units used within the network
- › Supports supervised multiple master architecture for unparalleled network reliability
- › 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
- › LED status indicators provide rapid indication of all critical operating parameters, including the location of fiber breaks or failed transceivers
- › May be used to provide serial data protocol conversion between nodes (consult factory)
- › 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
- › 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 - ComFit package
- › Lifetime Warranty

\* 1 channel of full-duplex or 2 channels of half-duplex serial data

## 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 in / 1 out

**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

Optical: ST

Power: Terminal Block

Data: Terminal Block

Relay: Terminal Block

### Electrical & Mechanical

Surface Mount Power: 8-15 VDC @ 4 W

Rack Supplied Power: From Power Supply Integral to Rack

Number of Rack Slots: 1

Current Protection: Automatic Resettable Solid-State Current Limiters

Circuit Board: Meets IPC Standard

Size (in./cm) (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.

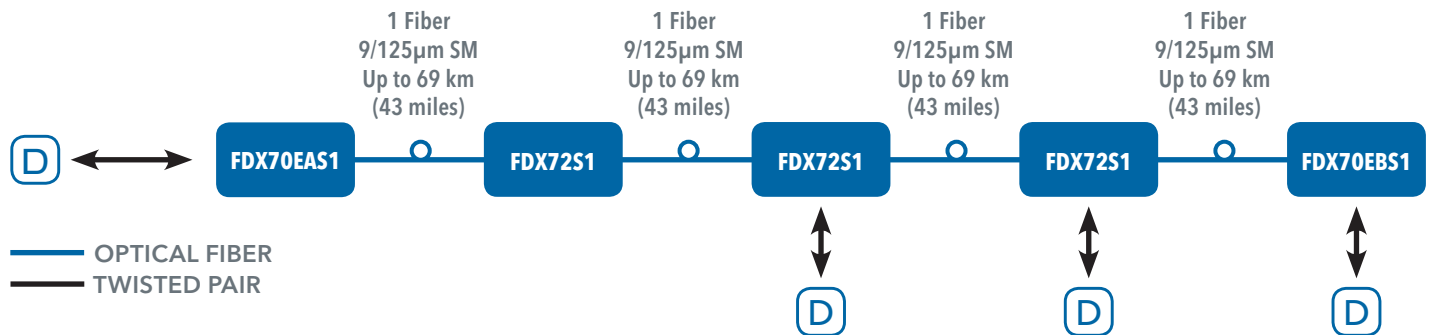


## ORDERING INFORMATION

Part Number	Description	Fibers		Optical Pwr Budget	Max Distance†	# Rack Slots
		Required	Fiber			
FDX72M1	Universal Data Drop & Repeat	1 in/1 out	Multimode 62.5/125µm	16 dB	4 km (2.5 mi)	1
FDX72S1	Universal Data Drop & Repeat	1 in/1 out	Single mode 9/125µm	19 dB	40 km (25 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) Add 'B' for Battery Backup					

## TYPICAL APPLICATION

In the event of an optical fiber break, the color and pattern of LEDs will aid in locating the fiber break..



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