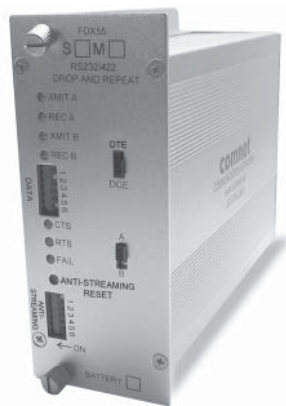


anti-streaming RS232/422 drop and repeat data transceiver



Description

The ComNet™ FDX55 series consists of fully-digital transceiver units designed for implementing simplex or full-duplex RS232 Drop-and-Repeat poll-and-respond traffic signalization/communications data networks utilizing one or two optical fibers. These environmentally-hardened units are ideal for use in unconditioned out-of-plant or roadside installations and the master-configured transceiver unit may be located anywhere within the network, making this equipment ideal for applications involving on-street master controllers with upstream and downstream communication requirements. These units are compatible with FDX50, FDX51 and FDX52 Series of optical modems. Manually resettable anti-streaming is included for unparalleled network protection. Optional battery backup capability provides the highest level of network reliability in the event of a loss of local prime operating power, and maintains continuous communications channel operation. 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. These units are interchangeable between stand-alone or card mount configurations.

Applications

- Access Control Systems
- Building Automation & Environmental Control Systems
- Computer/Data Equipment
- Fire and Alarm Systems
- Traffic Signal Control Equipment

Features

- Meets EIA RS232C/D specifications (Simplex or Duplex)
- NTCIP compatible
- 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 roadside environments
- User-selectable DTE or DCE interface ensures ease of installation and maximum versatility
- Supports Request to Send (RTS) and Clear to Send (CTS) signals
- RJ-11 expansion port provides network branching capability by electrically linking co-located transceiver units
- Voltage transient protection on all power and signal input/output lines provides unconditional protection from power surges and other voltage transient events.
- Optional internal battery backup provides 12 hours operating time in the event of loss of 115 VAC prime operating power, and maintains continuous channel communications.
- Wide optical dynamic range: optical attenuators are never required
- User-configurable optical and electrical Anti-Streaming provides network protection against faulty streaming controller operation
- Hot-swappable rack modules
- Interchangeable between stand-alone or rack mount use
 - ComFit
- Lifetime Warranty



specifications

DATA

Data Format:	RS232, RS422
Data Rate:	DC-115 kbps
Operating Mode:	Asynchronous, simplex or full duplex
Bit Error Rate:	<1 in 10 ⁶ @ Max. Optical Loss Budget
Anti-Streaming Time-out:	4, 8, 16, 64 Seconds or Infinity (disabled)

WAVELENGTH

FDX55M2, FDX55M2E:	1310 nm, Multimode
FDX55M28:	850 nm, Multimode
FDX55S1, FDX55S1(A)(B)E:	1310/1550 nm, Single Mode
FDX55S2, FDX55S2E:	1310/1550 nm, Single Mode

FIBERS

FDX55M28, FDX55M2, FDX55S2:	2 In/2 Out
FDX55M2E:	2
FDX55S1:	1 In/1 Out
FDX55S1(A)(B)E:	1

OPTICAL EMITTER

Laser

LED INDICATORS

- Transmit Data - Receive Data
- Clear to Send (CTS) - Request to Send (RTS)
- Fault/Anti-Streaming Activated

CONNECTORS

Optical:	ST standard (SC, FC as options only)
Power:	Terminal Block
Data:	Type DB-25S
Expansion Port:	RJ-11

ELECTRICAL & MECHANICAL

Power:	9-30 VDC @ 2.5 W
Surface Mount:	From Rack
Rack:	2
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 × 13.2 × 5.6 cm)
Shipping Weight:	<2 lbs./0.9 kg

BATTERY BACKUP OPTION

Internal, rechargeable Nickel Metal Hydride (NiMH) battery.
Operating Period: 12 hours typical

ENVIRONMENTAL

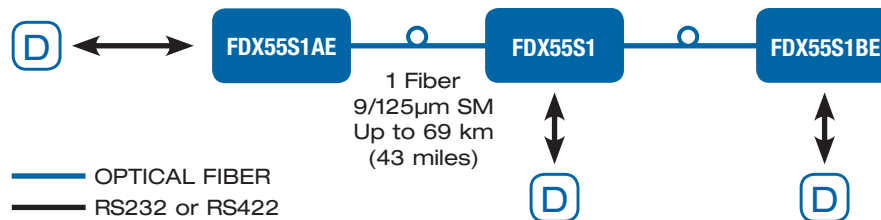
MTBF:	>100,000 hours
Operating Temp:	-40° C to +75° C
Storage Temp:	-40° C to +85° C
Relative Humidity:	0% to 95% (non-condensing)*

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



PART NUMBER	FIBERS REQUIRED	FIBER
FDX55S1	1 In/1 Out	Single Mode 9/125µm
FDX55M2	2 In/2 Out	Multimode 62.5/125µm
FDX55M28	2 In/2 Out	Multimode 62.5/125µm
FDX55S2	2 In/2 Out	Single Mode 9/125µm

PART NUMBER	FIBERS REQUIRED	FIBER
FDX55S1(A)(B)E	1	Single Mode 9/125µm
FDX55M2E	2	Multimode 62.5/125µm
FDX55S2E	2	Single Mode 9/125µm



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

specifications

PART NUMBER	DESCRIPTION	FIBERS REQUIRED	FIBER	OPTICAL PWR BUDGET	MAX. DISTANCE	# RACK SLOTS
FDX55S1	232/422 Drop and Repeat Transceiver (1310/1550 nm)	1 In/1 Out	Single Mode 9/125µm	23 dB	69 km (43 miles)	2
FDX55M2	232/422 Drop and Repeat Transceiver (1310 nm)	2 In/2 Out	Multimode 62.5/125µm	14 dB	4 km (2.5 miles)	2
FDX55M28	232/422 Drop and Repeat Transceiver (850 nm)	2 In/2 Out	Multimode 62.5/125µm	14 dB	3 km (1.8 miles)	2
FDX55S2	232/422 Drop and Repeat Transceiver (1310/1550 nm)	2 In/2 Out	Single Mode 9/125µm	23 dB	69 km (43 miles)	2

PART NUMBER	DESCRIPTION	FIBERS REQUIRED	FIBER	OPTICAL PWR BUDGET	MAX. DISTANCE	# RACK SLOTS
FDX55S1AE	232/422 Drop and Repeat Transceiver (1310/1550 nm)	1	Single Mode 9/125µm	23 dB	69 km (43 miles)	2
FDX55S1BE	232/422 Drop and Repeat Transceiver (1310/1550 nm)	1	Single Mode 9/125µm	23 dB	69 km (43 miles)	2
FDX55M2E	232/422 Drop and Repeat Transceiver (850 nm)	2	Multimode 62.5/125µm	14 dB	4 km (2.5 miles)	2
FDX55S2E	232/422 Drop and Repeat Transceiver (1310/1550 nm)	2	Single Mode 9/125µm	23 dB	69 km (43 miles)	2
Accessories	9 Volt DC Plug-in Power Supply, 90-264 VAC, 50/60 Hz (Included)					
Options	Add '-B' for NIMH battery backup Add '/C' for Conformally Coated Circuit Boards (Extra charge, consult factory) Add '/SC' for SC connectors Add '/FC' for FC connectors } (1 meter adapter cables supplied at no cost)					

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.



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