

fiber optic cable breakage monitor/detector



Description

The ComNet™ FDC1 single-channel and FDC2 dual-channel modems are designed to detect and report a breakage or the loss of optical signal in either multimode or single-mode fiber plants. Featuring a self-contained transmitter and receiver, these units provide an optical output that is transmitted continuously through a customer-furnished fiber loop, where it returns to the internal receiver section. Should the optical path be lost through a deliberate or unintentional breakage of the fiber, relay contacts in the modem immediately change their state and report the loss of optical signal. These contacts are user-configurable as either normally open (NO) or normally closed (NC), and may be utilized for either a local or remote indication of cable plant tampering, damage, or failure. An LED status indicator is provided for a local indication of the optical path continuity. 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. The dual-channel version contains two independent transmitter and receiver units in one compact package, and is ideal for continuously monitoring the optical status of two separate fiber loops. As these modems are industrially hardened and rated for operation from -40 to +75 degrees C, they may be deployed in virtually any unconditioned out-of-plant or roadside environment. Plug-and-play design ensures ease of operation, and no optical or electrical adjustments are ever required.

Applications

- Fencing and Perimeter Surveillance: Optical fiber woven into fencing or other structures
- Solar Panel/Photovoltaic Array (PVA) Theft Protection
- Protection of High-Value Assets and Facilities
- Continuous Status/Continuity Monitoring of Mission-Critical Fiber Optic Trunk Cables

Features

- One or two fiber loop units available
- Instantaneously reports optical fiber breakage or damage locally or remotely
- Dry relay contacts may be configured for NO or NC operation
- Automatic resettable solid state current limiters for unconditional modem protection
- Lifetime warranty



specifications

CONTACTS

Contact Interface: Response Time: 0.5 msec
 Output: Relay, 30VDC @ 0.5 A Contact Rating

WAVELENGTH

1300 nm, Multimode or Single Mode

NUMBER OF FIBERS

1 per loop

CONNECTORS

Optical: ST

CONTACTS

Contact and Power: Terminal Block

LED STATUS INDICATORS

- Fiber Continuity, each channel

ELECTRICAL & MECHANICAL

Surface Mount: 8-27 VDC @ 1W
 Rack: From Rack Power Supply
 Number of Rack Slots: 1
 Current Protection: Automatic Resettable Solid-State Current Limiters Meets IPC Standard
 Circuit Board: 6.1 x 5.3 x 1.1 in., (15.5 x 13.5 x 2.8 cm)
 Size (in./cm) (LxWxH)
 Surface Mount:
 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.

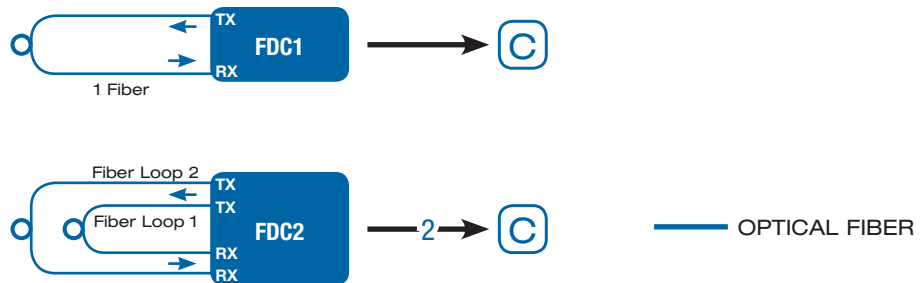


PART NUMBER	DESCRIPTION	FIBERS REQUIRED	FIBER	OPTICAL PWR BUDGET	MAX. DISTANCE†	# RACK SLOTS
FDC1M	Single Channel Fiber Break Detector	1 per loop	Multimode	12 dB	12 km (7.5 mi)	1
FDC2M	Dual Channel Fiber Break Detector	2, 1 per loop	62.5/125µm			
FDC1S	Single Channel Fiber Break Detector	1 per loop	Single Mode	12 dB	36 km (22.4 mi)	1
FDC2S	Dual Channel Fiber Break Detector	2, 1 per loop	9/125µm			

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) DIN-Rail Mounting Adaptor Plate Kit – With mounting hardware (Optional, order model DINBKT1)

† Optical transmission distance is limited to optical loss of the fiber and any additional loss introduced by connectors, splices and patch panels. Distance can also be limited by fiber bandwidth.

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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