



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. 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.

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 modem protection
- › Voltage transient protection on all power and signal input/output lines provides protection from power surges and other voltage transient events.
- › Ambient operating temperature range: -40° C to +75° C for deployment in virtually any unconditioned out-of-plant or roadside environment
- › Bi-color status indicating LEDs provide rapid indication of critical operating parameters
- › Plug-and-play design for ease of operation - no optical or electrical adjustments required

- › Hot-swappable rack modules
- › Interchangeable between stand-alone or rack mount use - ComFit
- › May be DIN-rail mounted by the addition of ComNet DIN-Rail adaptor plate (Model DINBKT1 or DINBKT4, sold separately)
- › Lifetime warranty

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

SPECIFICATIONS

Contacts

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

Wavelength

1300 nm, Multimode or Single Mode

Number of Fibers

1 per loop

Connectors

Optical ST
 Contact and Power Terminal Block

Indicating LEDs

Fiber Continuity, each channel

Power

Operating Voltage Range 8 to 27 VDC
 Power Consumption 1 W
 Rack From Rack Power Supply

Electrical & Mechanical

Number of Rack Slots 1
 Current Protection Automatic Resettable
 Solid-State Current Limiters
 Circuit Board Meets IPC Standard
 Size 6.1 × 5.3 × 1.1 in (15.5 × 13.5 × 2.8 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)¹



ORDERING INFORMATION

Part Number	Description	Fibers Required	Fiber	Optical PWR Budget	Maximum Distance ²	# Rack Slots
FDC1M	Single Channel Fiber Break Detector	1 per loop	Multimode 62.5/125µm	12 dB	12 km (7.5 mi)	1
FDC2M	Dual Channel Fiber Break Detector	2, 1 per loop	Multimode 62.5/125µm	12 dB	12 km (7.5 mi)	1
FDC1S	Single Channel Fiber Break Detector	1 per loop	Single Mode 9/125µm	12 dB	36 km (22.4 mi)	1
FDC2S	Dual Channel Fiber Break Detector	2, 1 per loop	Single Mode 9/125µm	12 dB	36 km (22.4 mi)	1

Accessories DC Plug-in Power Supply, 90-264 VAC, 50/60 Hz (Included, for benign 0 to 50°C applications only. Hardened power supply available, consult factory)
 Options [1] Add suffix 'C' for Conformally Coated Circuit Boards to extend to condensation conditions (Extra charge, consult factory)
 DIN-Rail Mounting Adaptor Plate Kit - With mounting hardware (Optional, order model DINBKT1 or DINBKT4)

[2] 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.

TYPICAL APPLICATION

