

bi-directional contact closure transceiver



**Description**

The ComNet™ FDC10 Series bi-directional contact closure transceiver provides bi-directional transmission of contact closure over one multimode or single mode optical fiber. The transceiver has a contact input and a 0.5 amp contact output. Plug-and-play design ensures ease of installation requiring no electrical or optical adjustments. The bi-directional contact closure module has two relay outputs and one relay input. One relay output follows the “relay input” at the remote end. When the remote “relay input” is shorted, the local relay output is closed and vice-versa. The second relay output is closed when “carrier” is detected from the remote end, this indicates that the optical fiber is connected and that the remote end has power and is operating. The relay position (open for RED and closed for GREEN) is indicated by separate bi-color indicators for each relay.

**Applications**

- Alarm Event Triggering
- Building Automation and Environmental Control Systems
- Fire and Alarm Systems
- Gate Control
- PIR Signal Transmission
- Traffic Signal Control Equipment

**Features**

- Transmits a single contact closure in one or two directions
- Distances up to 69 km (43 miles)
- 24 VDC, 0.5 amp relay output, normally open
- Voltage transient protection on all power and signal input/output lines provides unconditional protection from power surges and other voltage transient events.
- Point-to-Point transmission architecture
- 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.
- No in-field electrical or optical adjustments required
- Bi-Color (Red/Green) Carrier Detect and Relay closed indicators
- Relay contact for Carrier Detect (normally closed with carrier present)
- Automatic resettable solid-state current limiters
- Lifetime Warranty



specifications

CONTACTS

Contact Interface: Response Time: 0.5 msec  
 Input: Dry Contact Closure  
 Output: SPST Relay, 0.5 A Contact Rating - normally open

WAVELENGTH

A = 1310/1550 nm  
 B = 1550/1310 nm

NUMBER OF FIBERS

1

CONNECTORS

Optical: ST  
 Contact and Power: Terminal Block

LED INDICATORS

- Contact Relay  
 - Carrier Detect

ELECTRICAL & MECHANICAL

Power: 8-15 VDC @ 80 mA  
 Surface Mount: Automatic Resettable  
 Current Protection: Solid-State Current Limiters  
 Circuit Board: Meets IPC Standard  
 Size (in./cm) (L×W×H): 4.0 × 3.7 × 1.0 in., (10.4 × 9.5 × 2.7 cm)  
 Surface Mount:  
 Shipping Weight: <1 lb./0.5 kg

ENVIRONMENTAL

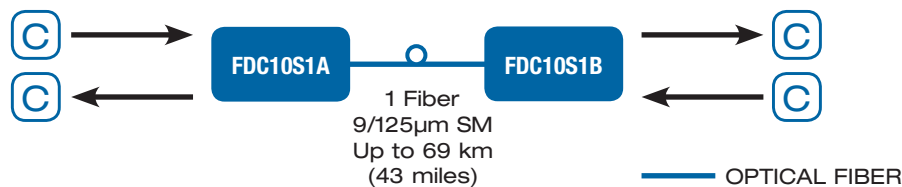
MTBF: >100,000 hours  
 Operating Temp: -40° C to +75° C  
 Storage Temp: -40° C to +85° C  
 Relative Humidity: 0% to 95% (non-condensing)\*

\* 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
FDC10M1(A)	Contact Closure Transceiver (1310/1550 nm)	1	Multimode 62.5/125µm	16 dB	16 km (10 miles)	NA
FDC10M1(B)	Contact Closure Transceiver (1550/1310 nm)					
FDC10S1(A)	Contact Closure Transceiver (1310/1550 nm)	1	Single Mode 9/125µm	23 dB	69 km (43 miles)	NA
FDC10S1(B)	Contact Closure 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)					

† 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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