



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. 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.



-40° TO +75°C



1

APPLICATIONS

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

Key Features

- ✓ Transmits a single contact closure in one or two directions
- ✓ Distances up to 69 km (43 miles)
- ✓ 30 VDC, 0.5 amp relay output, normally open
- ✓ Point-to-Point transmission architecture
- ✓ Designed to meet 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.
- ✓ Plug-and-play design ensures ease of installation requiring no electrical or optical adjustments.
- ✓ Relay contact for Carrier Detect (normally closed with carrier present)
- ✓ Automatic resettable solid-state current limiters
- ✓ Voltage transient protection on all power and signal input/ output lines provides protection from power surges and other voltage transient events.
- ✓ FDC10(M,S)1(A,B) models are housed in a smaller-sized package for stand-alone mounting only, for use in those applications where space may be limited
- ✓ FDC10R(M,S)1(A,B) ComFit models may be utilized as a stand-alone package, or may be mounted within the Comnet C1 Card Cage, and is fully hot-swappable
- ✓ Indicating LEDs are provided for confirming equipment operating status. The relay position (open for RED and closed for GREEN) is indicated by separate bi-color indicators for each relay.
- ✓ Limited Lifetime Warranty

Specifications

CONTACTS

CONTACT INTERFACE

RESPONSE TIME: 0.5 MSEC

INPUT

DRY CONTACT CLOSURE

OUTPUT

SPST RELAY, 30 VDC @ 0.5 A, RESISTIVE LOADS ONLY.
0.5 A CONTACT RATING - NORMALLY OPEN

WAVELENGTH

A END = 1310/1550 NM

B END = 1550/1310 NM

NUMBER OF FIBERS

NUMBER OF FIBERS

1

CONNECTORS

OPTICAL

ST

CONTACT AND POWER

TERMINAL BLOCK

LED INDICATORS

CONTACT RELAY

CARRIER DETECT

POWER

OPERATING VOLTAGE RANGE

8 TO 15 VDC

POWER CONSUMPTION

2 W MAX

ELECTRICAL & MECHANICAL

CURRENT PROTECTION

AUTOMATIC RESETTABLE SOLID-STATE CURRENT LIMITERS

CIRCUIT BOARD

MEETS IPC STANDARD

SIZE

COMFIT

6.1 × 5.3 × 1.1 IN (15.5 × 13.5 × 2.8 CM)

SURFACE MOUNT

4.0 × 3.7 × 1.0 IN (10.4 × 9.5 × 2.7 CM)

SHIPPING WEIGHT

<1 LB./0.5 KG

ENVIRONMENTAL

MTBF

>100,000 HOURS

OPERATING TEMP

-40° C TO +75° C

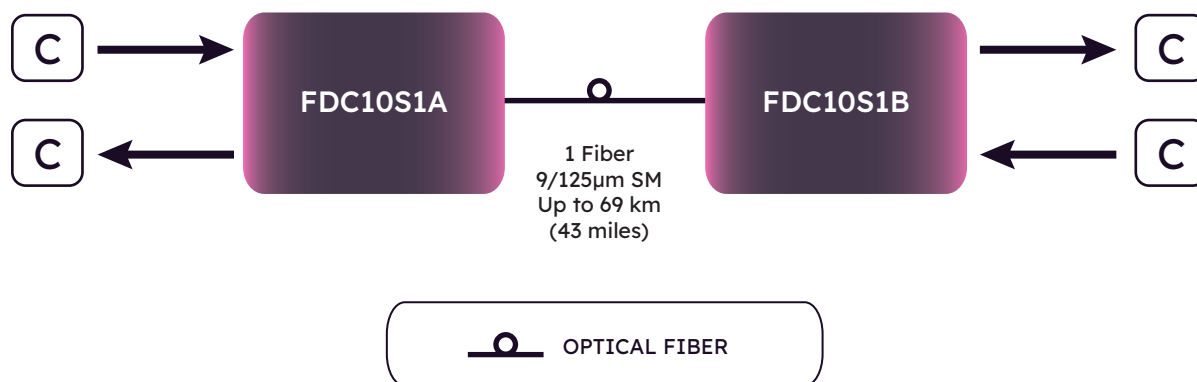
STORAGE TEMP

-40° C TO +85° C

RELATIVE HUMIDITY

0% TO 95% (NON-CONDENSING)¹

Typical Applications



Ordering Information

PART NUMBER	DESCRIPTION	FIBERS REQUIRED	FIBER	OPTICAL PWR BUDGET	MAXIMUM DISTANCE ²	# RACK SLOTS
FDC10M1A	SMALL SIZE CONTACT CLOSURE TRANSCEIVER (1310/1550 NM)	1	MULTIMODE	16 DB	16 KM (10 MILES)	N/A
FDC10M1B	SMALL SIZE CONTACT CLOSURE TRANSCEIVER (1550/1310 NM)	1	62.5/125µM			
FDC10S1A	SMALL SIZE CONTACT CLOSURE TRANSCEIVER (1310/1550 NM)	1	SINGLE MODE	23 DB	69 KM (43 MILES)	N/A
FDC10S1B	SMALL SIZE CONTACT CLOSURE TRANSCEIVER (1550/1310 NM)	1	9/125µM			
FDC10RM1A	COMFIT CONTACT CLOSURE TRANSCEIVER (1310/1550 NM)	1	MULTIMODE	16 DB	16 KM (10 MILES)	1
FDC10RM1B	COMFIT CONTACT CLOSURE TRANSCEIVER (1550/1310 NM)	1	62.5/125µM			
FDC10RS1A	COMFIT CONTACT CLOSURE TRANSCEIVER (1310/1550 NM)	1	SINGLE MODE	23 DB	69 KM (43 MILES)	1
FDC10RS1B	COMFIT CONTACT CLOSURE TRANSCEIVER (1550/1310 NM)	1	9/125µM			

OPTIONS

- [1] Add suffix '/C' for Conformally Coated Circuit Boards to extend to condensation conditions (Extra charge, consult factory)
- [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.

NOTE: 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.