comnet
Communication Networks

INSTALLATION AND OPERATION MANUAL

FDC10 Series

BI-DIRECTIONAL CONTACT CLOSURE TRANSCEIVER

This manual serves the following ComNet Model Numbers:

FDC10M1A
FDC10M1B
FDC10S1A
FDC10S1B
FDC10RM1A
FDC10RM1B
FDC10RS1A
FDC10RS1B

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 for each channel. 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.

See **Figures 1 – 2** and **A - B** for complete installation information.

FIGURE 1 – Physical Features of FDC10R ComFit Unit

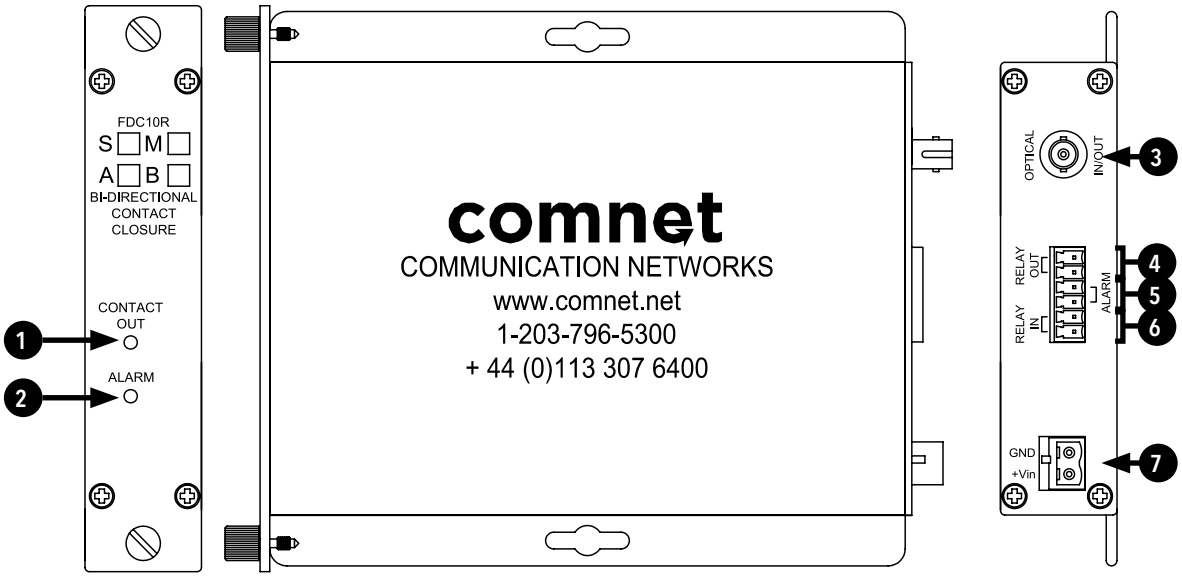

Table 1 – Physical Feature Descriptions

Call-out	Description	Manual Reference
1	Contact Out Indicating LED	See Table 4 - Indicating LEDs
2	Alarm Condition Indicating LED	See Table 4 - Indicating LEDs
3	Optical Fiber Connection	
4	Normally Open (NO) Relay Output Pair	
5	Normally Open (NO) Optical Link Alarm Relay	
6	Dry Contact Closure Input Pair	
7	Power Connections	See Table 3 – Power Connections per Use Case

FIGURE 2 – Physical Features of FDC10 Small Size Unit

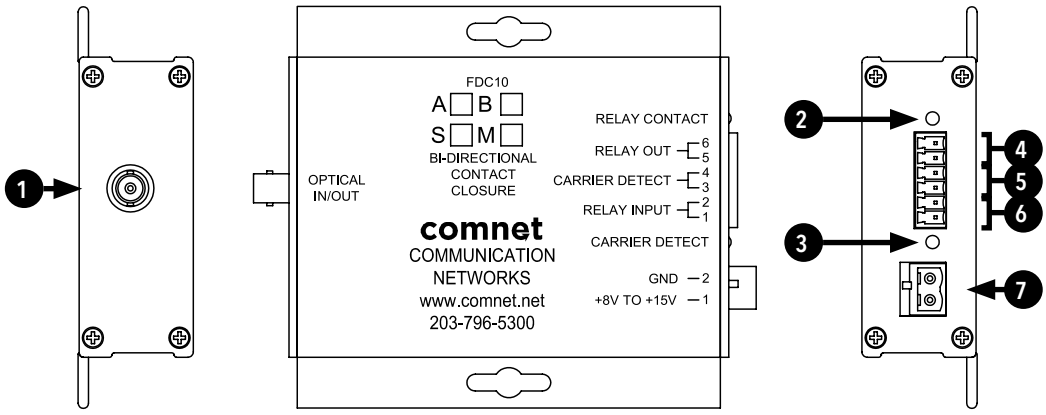

Table 2 – Physical Feature Descriptions

Call-out	Description	Manual Reference
1	Optical Fiber Connection	
2	Relay Contact Indicating LED	See Table 4 - Indicating LEDs
3	Carrier Detect Indicating LED	See Table 4 - Indicating LEDs
4	Normally Open (NO) Relay Output Pair	
5	Normally Open (NO) Optical Link Alarm Relay	
6	Dry Contact Closure Input Pair	
7	Power Connections	See Table 3 – Power Connections per Use Case

Table 3 – Power Connections per Use Case

	FDC10R	FDC10
Surface Mount	12 to 24 VDC	8 to 15 VDC
C1 Rack	9 VDC (Supplied by Rack, Remove Electrical Connector)	NA

Table 4 – Indicating LEDs

	CONTACT OUT / RELAY CONTACT	ALARM / CARRIER DETECT
SOLID GREEN	Closure detected on opposite end input pair Optical Link is Good	Power Applied Good Optical Link (Relay Closed)
SOLID RED	No Closure detected on opposite end input pair OR Optical Link Failure	Red Both Ends, Optical Link Failure (Relay Open)
OFF	Power Not Applied	Power Not Applied

INSTALLATION CONSIDERATIONS

The FDC10R is supplied as a ComFit Standalone / Rack module.
The FDC10 is supplied as a Standalone / Surface Mount module.
Units should be installed in dry locations protected from extremes of temperature and humidity.

19 INCH RACK-MOUNTABLE CARD CAGES

CAUTION: Although the units are hot-swappable and may be installed without turning power off to the rack, ComNet recommends that the power supply be turned off and that the rack power supply is disconnected from any power source.

Note: Remove electrical connector before installing in card cage rack.

1. Make sure that the card is oriented right side up, and slide it into the card guides in the rack until the edge connector at the back of the card seats in the corresponding slot in the rack's connector panel. Seating may require thumb pressure on the top and bottom of the card's front panel.

CAUTION: Take care not to press on any of the LEDs.

2. Tighten the two thumb screws on the card until the front panel of the card is seated against the front of the rack.

IMPORTANT SAFEGUARDS:

A) Elevated Operating Ambient - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (Tma) specified by the manufacturer.

B) Reduced Air Flow - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.

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FIGURE A

Dimensions are for a standard ComNet ComFit one slot module

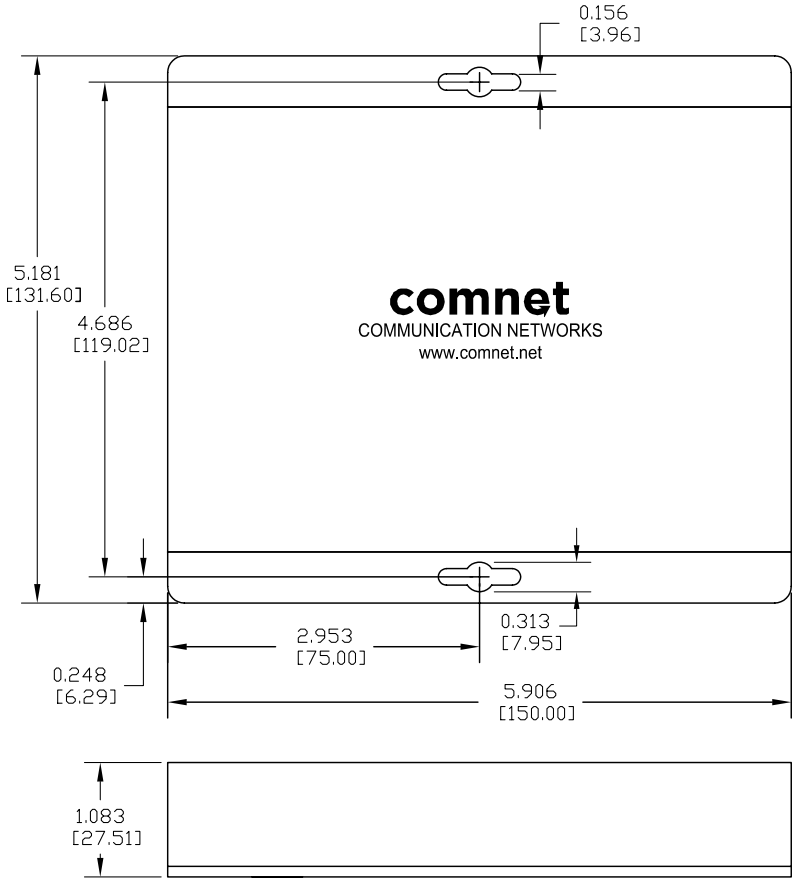
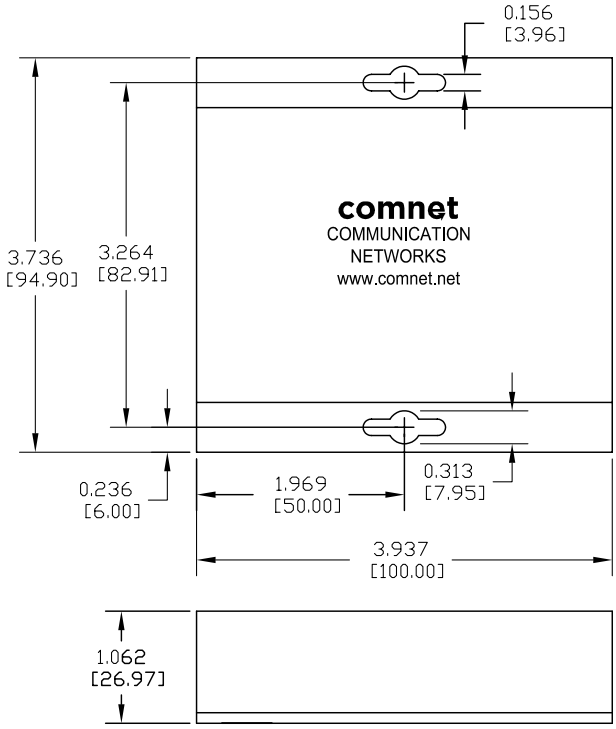


FIGURE B

Dimensions are for a small size ComNet surface mount module



comnet Communication Networks

3 CORPORATE DRIVE | DANBURY, CT 06810 | USA
T: 203.796.5300 | F: 203.796.5303 | TECH SUPPORT: 1.888.678.9427 | INFO@COMNET.NET

8 TURNBERRY PARK ROAD | GILDERSOME | MORLEY | LEEDS, UK LS27 7LE
T: +44 (0)113 307 6400 | F: +44 (0)113 253 7462 | INFO-EUROPE@COMNET.NET