



INSTALLATION AND OPERATION MANUAL

FDX4D(M)(S)1

4 BI-DIRECTIONAL DATA CHANNELS

The ComNet™ FDX4D(M)(S)1 Series data transceiver series provide transmission of four bi-directional data channels over one optical fiber and are ideal for use in unconditioned roadside or out-of-plant installations. The data channels can be set independently for RS232, RS422 and 2 or 4-wire RS485 with tri-state support. See **Figures 3 – 5** starting on **Page 3** for a description of data settings.

Each transceiver incorporates a bi-color (Red/Green) indicating LED for monitoring proper system operation. See **Figure 6** on **Page 5** for LED Indicator explanations.

The FDX4D(M)(S)1 may be directly plugged into the ComNet Rack (Part C1) or can operate as a standalone module. See **Figure A** on **Page 6** for mounting instructions.

See **Figures 1 – 6** for complete installation details.

FIGURE 1 - FDX4D 1 FIBER TRANSCEIVER

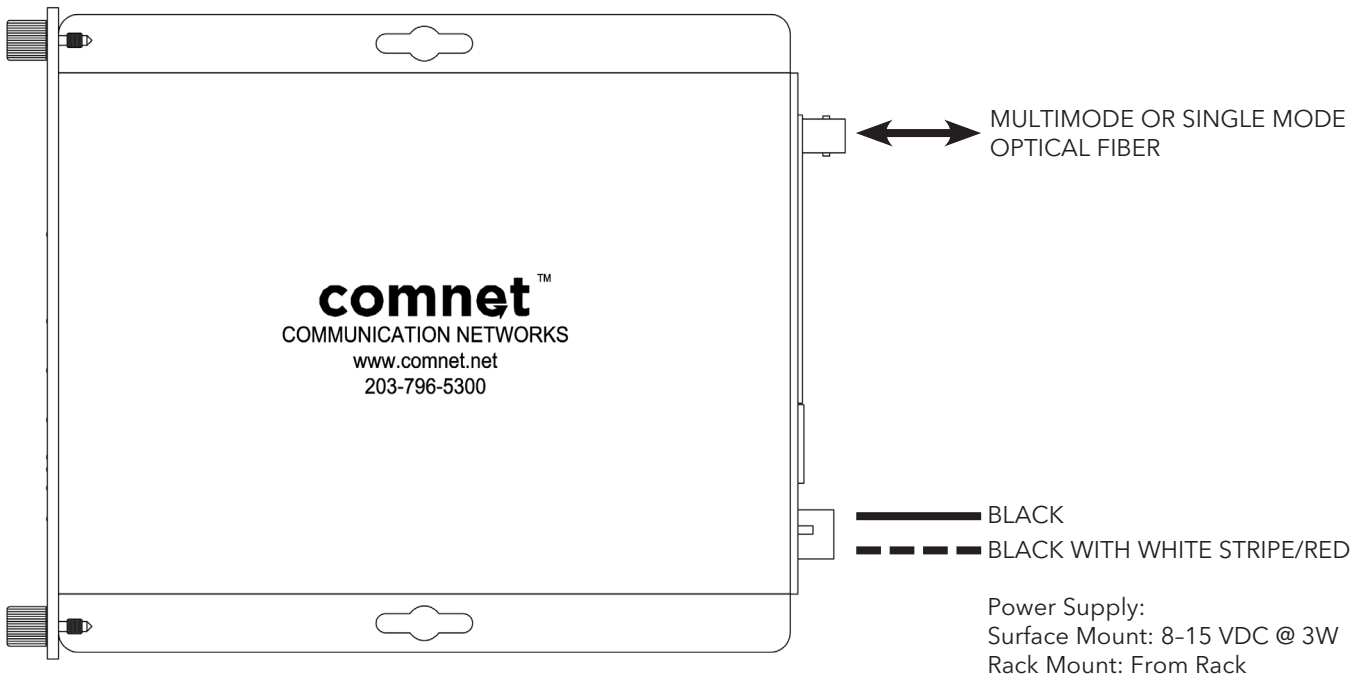


FIGURE 2 - FDX4D 1 FIBER TRANSCEIVER

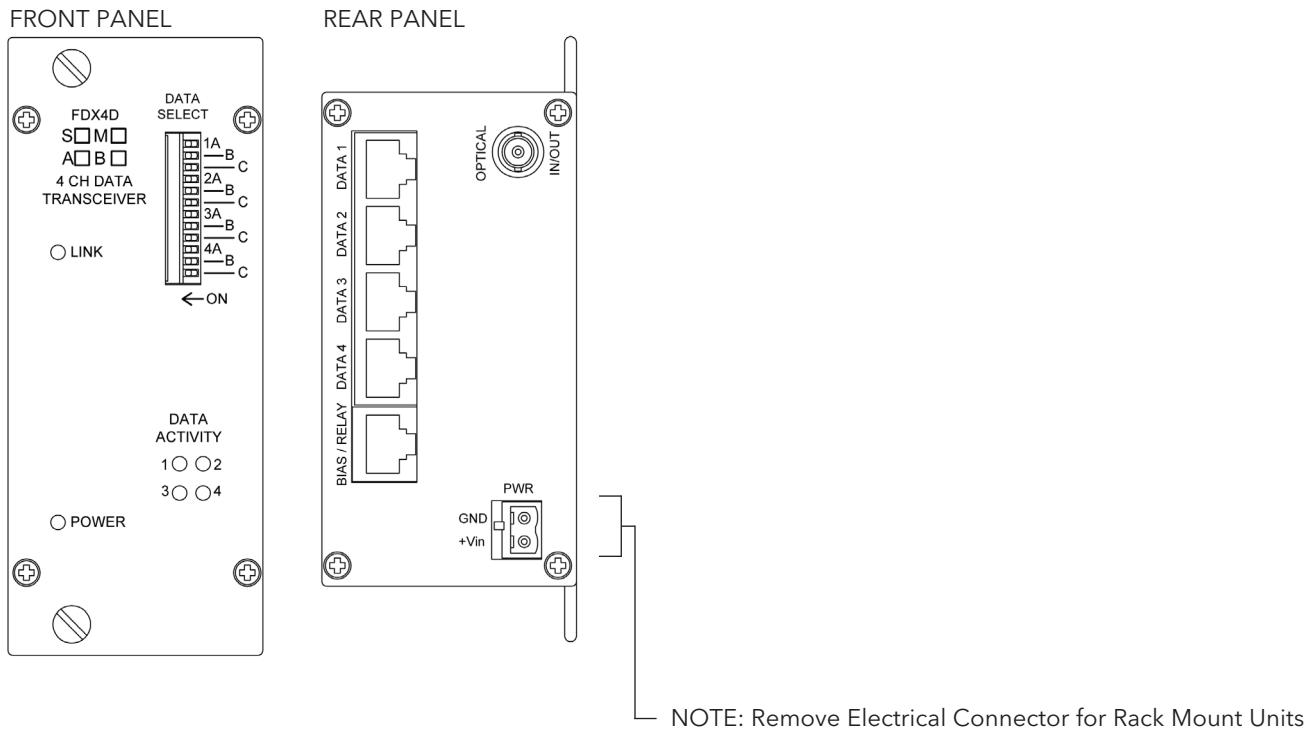
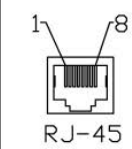


FIGURE 3 - RJ45 BREAK-OUT

5 pc. Factory Supplied

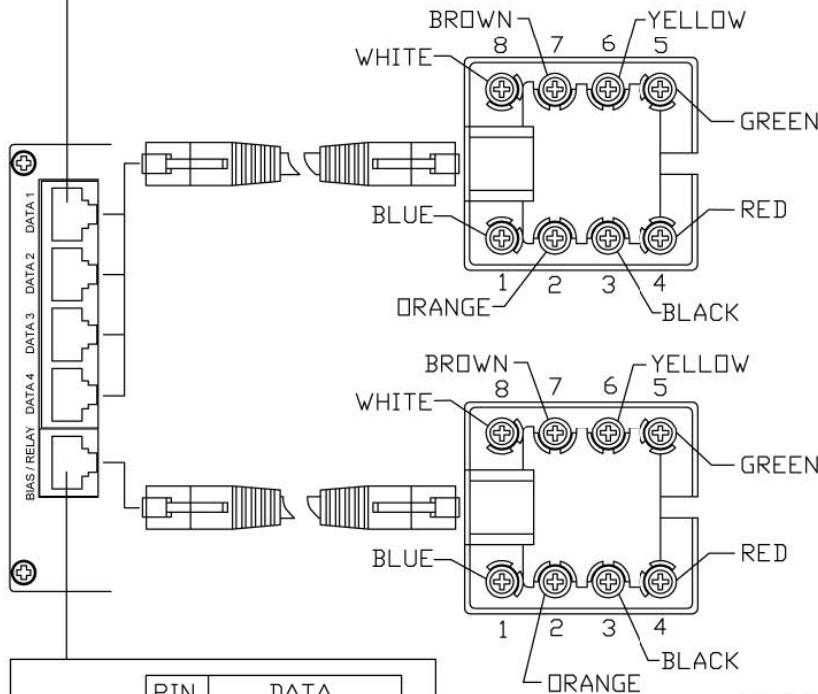
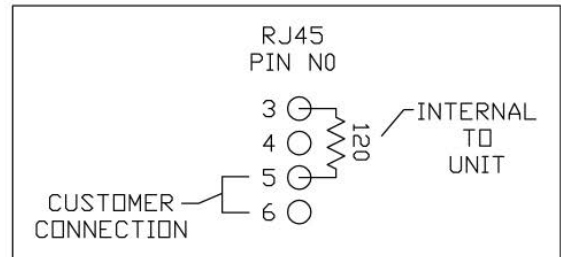
CONNECTIONS FOR EACH DATA CHANNEL

NOTE: A 120 OHM TERMINATION RESISTOR IS APPLIED TO THE DIFFERENTIAL INPUTS WHEN "TERMINATION (PIN 5)" IS WIRED DIRECTLY TO "DIN- (PIN 6)" SEE DIAGRAM BELOW



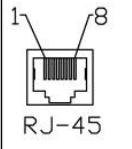
PIN NO	DATA CONNECTION
1	DOUT+
2	DOUT-
3	DIN+
4	NC
5	TERMINATION
6	DIN-
7	GND
8	+5V BIAS

VIEW INSIDE PORT



RJ45 PIN NO	WIRE COLOR	DATA CONNECTION
1	BLUE	DOUT+
2	ORANGE	DOUT-
3	BLACK	DIN+
4	RED	NC
5	GREEN	TERMINATION
6	YELLOW	DIN-
7	BROWN	GND
8	WHITE	+5V BIAS

RJ45 PIN NO	WIRE COLOR	DATA CONNECTION
1	BLUE	+5V BIAS
2	ORANGE	+5V BIAS
3	BLACK	+5V BIAS
4	RED	GND
5	GREEN	GND
6	YELLOW	GND
7	BROWN	ALARM RELAY
8	WHITE	ALARM RELAY



PIN NO	DATA CONNECTION
1	+5V BIAS
2	+5V BIAS
3	+5V BIAS
4	GND
5	GND
6	GND
7	ALARM RELAY
8	ALARM RELAY

VIEW INSIDE PORT

BIAS AND RELAY CONNECTIONS

FIGURE 4 - SWITCH POSITIONS

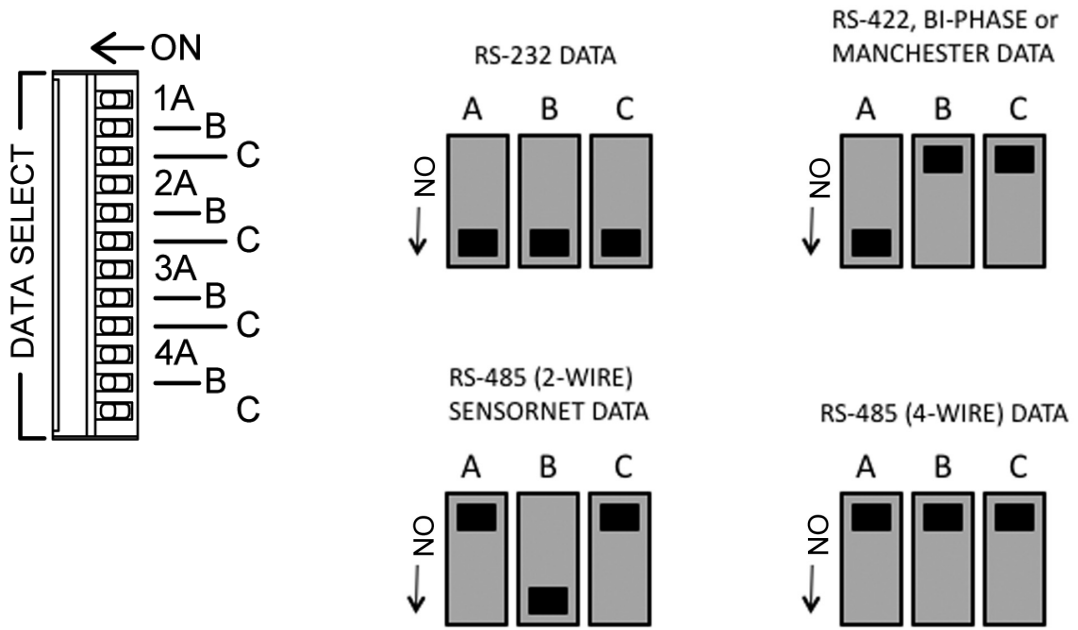


FIGURE 5 - DATA SETTINGS

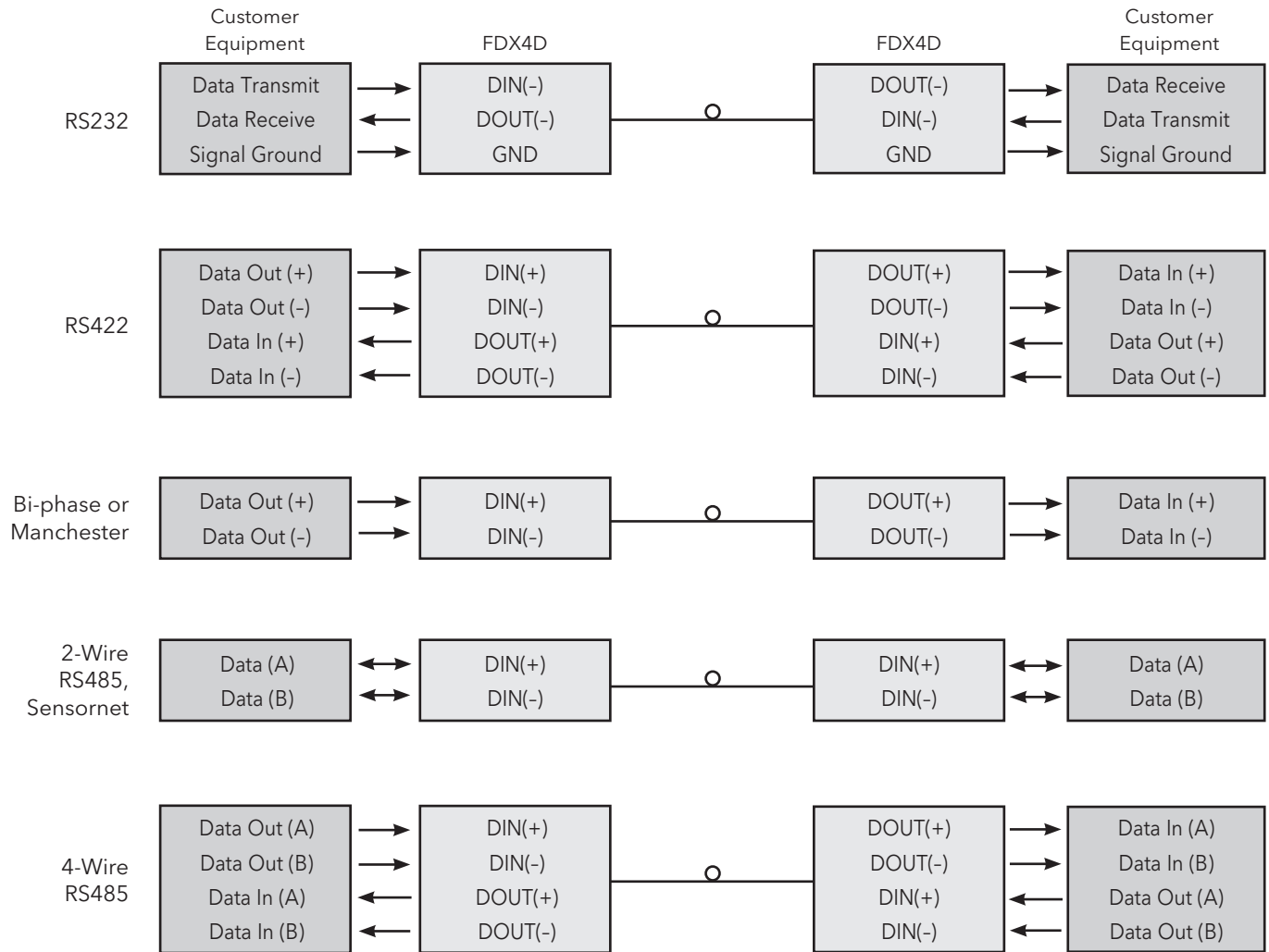


FIGURE 6 - LED INDICATORS

	LINK	DATA ACTIVITY (1 - 4)	POWER
GREEN	Unit In Sync	Activity	Unit Powered Up
RED	Unit Not In Sync	No Activity	-
OFF	No Optical Link	-	Unit Powered Down

MECHANICAL INSTALLATION INSTRUCTIONS

INSTALLATION CONSIDERATIONS

This fiber-optic link is supplied as a Standalone/Rack module. Units should be installed in dry locations protected from extremes of temperature and humidity.

C1-US, C1-EU, C1-AU OR C1-CH CARD CAGE RACKS

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.

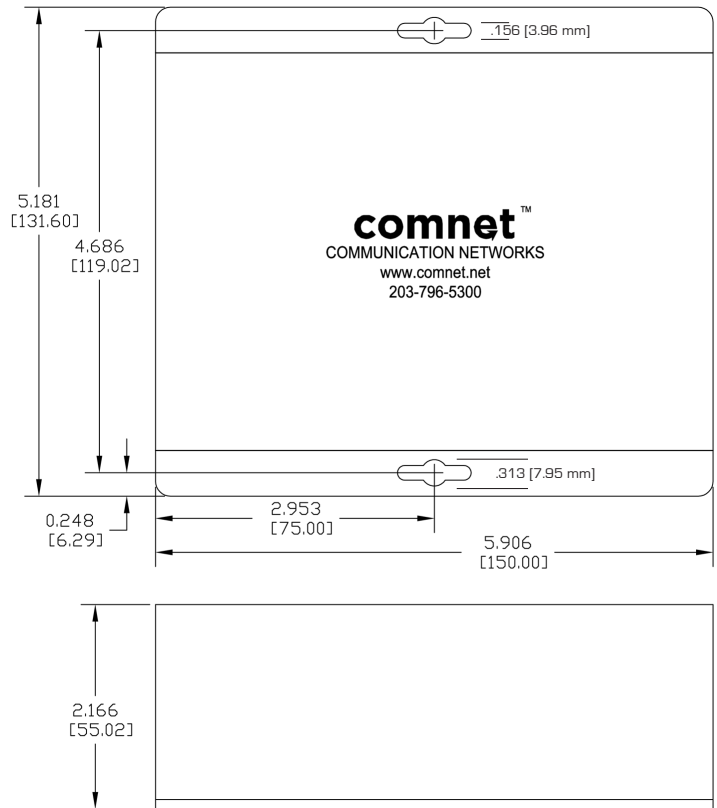
WARNING: Unit is to be used with a Listed Class 2 or LPS power supply rated 9-12 VDC @ 1A.

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 (T_{ma}) 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.

FIGURE A

Dimensions are for a standard ComNet™ two slot module



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