comnet
Communication Networks

8-Channel Supervised Contact Closure Transmitter and Receiver

FDC80 Series

APPEARANCE

DESCRIPTION

ComNet FDC80 Series contact closure transmitter and receiver units provide transmission of up to eight independent supervised or unsupervised dry switch or relay contact closures over a single optical fiber, or any two-wire RS-485 copper circuit. Microprocessor-based logic transmits the contact closure information in packets that are ordered and encoded, ensuring extremely robust and reliable transmission. Packets that are garbled, or packets out of sequence with transmission bit errors will not cause random changes of state in the FDC80R receiver unit relays. The supervising function in the FDC80T transmitter allows for the detection of short and open circuit conditions, and normally open or normally closed contact inputs are supported. System faults are displayed via LED status indicators, and user-programmable summary fault alarm contacts are triggered in the FDC80R receiver unit. The FDC80R receiver is offered in both latching and non-latching relay configurations. External series and shunt resistors are included for each of the 8 contact input channels, for contact supervision. Packaged in the exclusive ComNet ComFit housing, these units may be either wall or rack-mounted, or may be DIN-Rail mounted by the addition of model DINBKT1 adaptor plate. Fully compliant with the requirements of NEMA TS-1/TS-2, these industrially-hardened units are designed for use in virtually any out-of-plant environment.

APPLICATIONS

› Alarm Event Triggering

› Fire Alarm & Intrusion Detection Systems

› Lane/Gate Control

› PIR Signal Transmission

› Building Automation and Environmental Control Systems

FEATURES

› Transmits up to eight independent supervised or unsupervised dry switch or relay contacts over one optical fiber, or via a 2-wire RS-485 point-to-point copper circuit

› LED indicators for power, contact closure status, and summary fault

› Microprocessor-based logic and latching relays in the receiver unit eliminate random contact closure states in the event of a loss of the link, or a loss of prime operating power.

› Automatic resettable solid-state current limiters

› Hot-swappable rack modules

› Unique ComFit Packaging- Interchangeable between stand-alone/wall-mount or rack mount use

› 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

› Lifetime Warranty

8-Channel Supervised Contact Closure Transmitter and Receiver

SPECIFICATIONS

Contacts

Input/Output Channels:	8
Input Contacts:	Normally open or normally closed
Output Contacts Rating:	30 VDC, 1A, resistive load only, normally open
Response Time:	25 msec, typ. 35 msec, max
Summary Fault Alarm:	1 (RX Only), dry relay contacts, Form C, 30 VDC 1A, non-latching

Electrical & Mechanical

Power:	
Surface Mount:	8 – 15 VDC @ 150mA
Rack:	From Rack
Rack Slots:	1 (Transmitter), 2 (Receiver)
Current Protection:	Automatic Resettable Solid-State Current Limiters
Circuit Board:	Meets IPC Standard
Size (L×W×H):	
Transmitter:	6.1 × 5.3 × 1.1 in. (15.5 × 13.5 × 2.8 cm)
Receiver:	6.1 × 5.3 × 2.2 in. (15.5 × 13.5 × 5.6 cm)
Shipping Weight:	<2 lb./0.9 kg

Connectors

Contact Input:	Screw Terminals
Contact Output:	Screw Terminals
Power:	Screw Terminals
Summary Fault Alarm::	Screw Terminals

LED Indicators

– Contact – Power – Summary Fault

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.

AGENCY COMPLIANCE

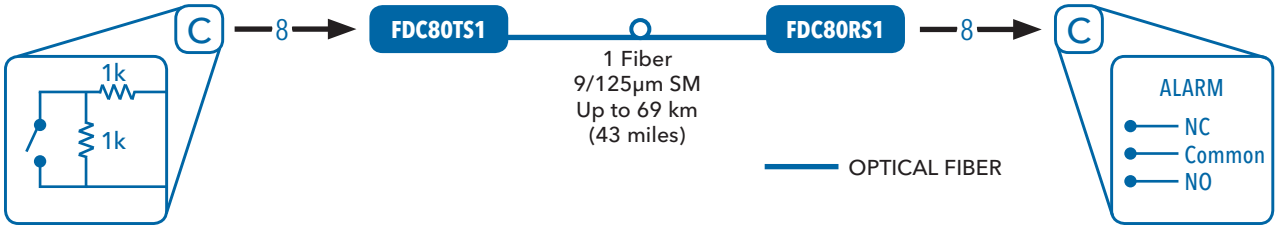
MADE IN THE USA

ORDERING INFORMATION

Part Number	Description	Fibers Required	Fiber	Optical Power Budget	Maximum Distance†	# Rack Slots
FDC80TM1	8-Channel Supervised Contact Closure Transmitter	1	Multimode‡ – 62.5/125µm	16 dB	16 km (10 mi)	1
FDC80TS1	8-Channel Supervised Contact Closure Transmitter	1	Single Mode‡ – 9/125µm	23 dB	69 km (43 mi)	1
FDC80NLRM1	8-Channel Supervised Contact Closure Receiver (Non-Latching)	1	Multimode‡ – 62.5/125µm	16 dB	16 km (10 mi)	2
FDC80NLRS1	8-Channel Supervised Contact Closure Receiver (Non-Latching)	1	Single Mode‡ – 9/125µm	23 dB	69 km (43 mi)	2
FDC80RM1	8-Channel Supervised Contact Closure Receiver	1	Multimode‡ – 62.5/125µm	16 dB	16 km (10 mi)	2
FDC80RS1	8-Channel Supervised Contact Closure Receiver	1	Single Mode‡ – 9/125µm	23 dB	69 km (43 mi)	2
FDC80T485	8-Channel Supervised Contact Closure Transmitter, RS-485 Interface	–	–	–	457 m (1500 ft)‡	1
FDC80R485	8-Channel Supervised Contact Closure Receiver, RS-485 Interface	–	–	–	457 m (1500 ft)‡	2
FDC80NLR485	8-Channel Supervised Contact Closure Receiver (Non-Latching), RS-485 Interface	–	–	–	457 m (1500 ft)‡	2
Accessories Options	9 Volt DC Plug-in Power Supply, 90-264 VAC, 50/60 Hz (Included) Add '/C' for Conformally Coated Circuit Boards (Extra charge, consult factory) DIN-Rail Mounting Adaptor Plate Kit – With mounting hardware (Optional, order model DINBKT1)					

† 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. For 50/125µm Fiber subtract 4 dB from Optical Power Budget. ‡ Distances greater than 1500 ft are possible. Contact factory for further details.

TYPICAL APPLICATION



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