



The 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.

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
- › 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
- › 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
- › Indicating LEDs for monitoring power, contact closure status, and summary fault
- › Automatic resettable solid-state current limiters
- › Hot-swappable rack modules
- › Interchangeable between stand-alone or rack mount use - ComFit
- › Lifetime Warranty

APPLICATIONS

- › Alarm Event Triggering
- › Fire Alarm & Intrusion Detection Systems
- › Lane/Gate Control
- › PIR Signal Transmission
- › Building Automation and Environmental Control Systems

SPECIFICATIONS

Contacts

Input/Output Channels	8
Input Contacts	Normally open or normally closed
Output Contact 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

LED Indicators

Contact
Power
Summary Fault

Power

Operating Voltage Range	8 to 15 VDC (or from C1 Rack, sold separately)
Power Consumption	3 W Max



Electrical & Mechanical

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

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

ORDERING INFORMATION

Part Number	Description	Fibers Req'd	Fiber	Optical Pwr Budget	Maximum Distance ²	# 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
FDC80NLR51	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) ³	1
FDC80R485	8-Channel Supervised Contact Closure Receiver, RS-485 Interface	-	-	-	457 m (1500 ft) ³	2
FDC80NLR485	8-Channel Supervised Contact Closure Receiver (Non-Latching), RS-485 Interface	-	-	-	457 m (1500 ft) ³	2
Accessories	9 Volt DC Plug-in Power Supply, 90-264 VAC, 50/60 Hz (Included)					
Options	[1] Add '/C' for Conformally Coated Circuit Boards to extend board to condensation conditions(Extra charge, consult factory) DIN-Rail Mounting Adaptor Plate Kit - With mounting hardware (Optional, order model DINBKT1)					

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

TYPICAL APPLICATION

