

8-channel contact closure non-latching receiver



Description

The ComNet™ FDC8NLR 8-Channel Contact Closure Receiver unit provides up to eight independent normally-open (NO) dry contact closures over one multimode or single-mode optical fiber, when used in conjunction with the companion ComNet model FDC8 Transmitter unit. Microprocessor-based logic in the FDC8 transmitter detects a customer-furnished switch or contact closure, and encodes the closure into robust data packets that are mapped and transmitted to the FDC8NLR Receiver. Packets received with excessive bit errors will not result in random changes in the receiver relay contact resting or actuated states, making this system ideal for mission-critical remote switching applications. Solid-state non-latching relays are utilized for the highest level of long-term system reliability and trouble-free operation; electromechanical relay switching is not employed. The relay contacts automatically default to a normally-open state in the event of a loss of prime operating power or a loss of the received optical signal. These receiver modules incorporate status indicating LEDs for rapidly providing a local indication of each contact closure channel, optical link continuity, and operating power. Packaged in the exclusive ComNet ComFit housing, these units may be either shelf or rack-mounted, or may be DIN-rail mounted by the addition of ComNet model DINBKT1 Adaptor Plate Kit. Industrially hardened and rated for operation from -40 to +75 degrees C, the FDC8NLR may be deployed in virtually any unconditioned out-of-plant or trackside/roadside environment, and voltage transient protection is provided across the operating voltage input and relay contact output rails. Plug-and-play design ensures ease of installation and operation, and no optical or electrical adjustments are ever required.

Applications

- Remote control of mission-critical vital trackside relaying or roadside signaling equipment
- Remote operation of lane, gate, or door operators or controllers
- Building HVAC, industrial control, and SCADA networks
- Non-latching fire and intrusion alarm systems
- Non-latching triggered alarm & PIR (Passive Infrared) detection systems

Features

- Receive up to eight contact closures over one optical fiber
- Eight channel Point-to-Point architecture
- Power and eight individual channel status LED indicators
- Eight solid-state relays
- Built-in relay surge protection
- 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.
- Microprocessor-based logic in receiver unit eliminate random contact closure status in electrically noisy environments.
- Relay contact rating: 30 VDC, 0.700 Amp, normally open
- Automatic resettable solid-state current limiters
- Hot-swappable rack modules
- Interchangeable between stand-alone or rack mount use
 - ComFit
- Lifetime Warranty



specifications

CONTACTS

Input/Output Channels:	8
Input Contacts:	5 VDC, 0.5 mA, normally open
Output Contacts:	30 VDC, 0.700 Amp, normally open
Response Time:	25 msec maximum

CONNECTORS

Contacts:	Terminal Block
FDC8NLR(M)(S)1:	ST Optical Connectors

LED INDICATORS

- Power
- Channel Status
- Link (receiver only)

ELECTRICAL & MECHANICAL

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

* May be extended to condensation conditions by adding suffix 'C' to model number for conformal coating.



MADE IN THE
USA

PART NUMBER	DESCRIPTION	FIBERS REQUIRED	FIBER	OPTICAL PWR BUDGET	MAX. DISTANCE†	# RACK SLOTS
FDC8TM1	8-Channel Contact Closure Transmitter	1	Multimode	16 dB	16 km (10 miles)	1
FDC8NLRM1	8-Channel Contact Closure Receiver		62.5/125µm			
FDC8TS1	8-Channel Contact Closure Transmitter	1	Single Mode	23 dB	69 km (43 miles)	1
FDC8NLRS1	8-Channel Contact Closure Receiver		9/125µm			
Accessories	9 Volt DC Plug-in Power Supply, 90-264 VAC, 50/60 Hz (Included)					
Options	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.

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.

