



DESCRIPTION

The IFS DT/DR3000 series contact mapping transmitter and receiver provides transmission of up to eight independent contact closures over one optical fiber. Utilizing microprocessor-based logic for exceptionally robust communications channel redundancy, and a trickle-charged nickel-cadmium (NiCd) battery back-up memory within the receiver module, the DT/DR3000 series eliminates the possibility of any of the relay contacts returning to a random resting state in the event of an optical fiber breakage or loss of prime operating power at the receiver end of the link. Models within this series are available for use with multimode or singlemode optical fiber. Plug-and-play design ensures ease of installation requiring no electrical or optical adjustments. Each module incorporates power and individual status indicating LED's for monitoring confirmation of contact closure of each of the eight channels. The modules are available in either stand-alone or rack mount versions.

APPLICATION EXAMPLES

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

FEATURES

- Transmits Up to Eight Contact Closures Over One Fiber
- Eight Channel Point-to-Point Transmission Architecture
- Power and Eight Individual Channel Status LED Indicators
- Eight SPST Reed Relays (with individual indicators)
- Exceeds the Environmental Requirements of NEMA TS-1/TS-2 & Caltrans Specifications (Temperature/Humidity, Shock/Vibration, and Voltage Transient Protection) for Traffic Control Equipment.
- Microprocessor-based logic and battery back-up in receiver unit eliminate random contact closure status in the event of loss of optical fiber path or loss of prime operating power.
- Loss of Carrier Relay for Alarm Notifications
- Relay Contact Rating: 200 VDC, 0.5 Amps, Normally Open
- No In-field Electrical or Optical Adjustments Required
- Automatic Resettable Solid-State Current Limiters
- Hot-Swappable Rack Modules
- Distances up to 25 Miles (40 km)
- Comprehensive Lifetime Warranty



Available at: www.ifs.com

- A & E Specifications, (CSI)
- AutoCAD Drawings
- Operation Manuals
- Technical Bulletins

ORDERING INFORMATION

	PART NUMBER	DESCRIPTION	FIBERS REQUIRED	OPTICAL PWR BUDGET	MAX. DISTANCE*
MULTIMODE 62.5/125µm**	DT3010	Contact Mapping Transmitter (850 nm)	1	13 dB	2.5 miles (4 km)
	DR3010	Contact Mapping Receiver (850 nm)			
	DT3020	Contact Mapping Transmitter (1310 nm)	1	13 dB	8 miles (13 km)
	DR3030	Contact Mapping Receiver (1310 nm)			
SINGLEMODE 9/125µm	DT3025	Contact Mapping Transmitter (1310 nm)	1	14 dB	25 miles (40 km)
	DR3030	Contact Mapping Receiver (1310 nm)			
ACCESSORIES ♦	PS-12VDC 12 Volt DC Plug-in Power Supply (Included) PS-12VDC-230 12 Volt DC Plug-in Power Supply, 230 VAC Input (Included if specified at time of order)				
OPTIONS	Add '-R3' to Model Number for R3 Rack Mount (Requires R3 Rack purchased separately) Add '-C' for Conformally Coated Printed Circuit Boards (Extra charge, consult factory) Add '-B' for DR Battery Backup				

* 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 50/125 Fiber, subtract 4 dB from Optical Power Budget.

♦ All accessories are third party manufactured.



SPECIFICATIONS

DATA

Input/Output Channels: 8
 Contacts: 200 VDC, 0.5 amp, 12 watts.
 Normally open
 Response Time: 25 msec maximum

WAVELENGTH

DT3010, DR3010: 850 nm, Multimode
 DT3020: 1310 nm, Multimode
 DT3025, DR3030: 1310 nm, Singlemode
 DR3030: 1310 nm, Multimode and Singlemode

NUMBER OF FIBERS: 1

CONNECTORS

Optical: ST
 Data and Power: Terminal Plug with screw clamps

ELECTRICAL & MECHANICAL

Power: 12 VDC @ 150 mA
 Surface Mount: From Rack
 Rack: 2
 Number of Rack Slots: Automatic Resettable Solid-State Current Limiters
 Current Protection: Meets IPC Standard
 Circuit Board: 7.0 x 4.9 x 2.0 in., 17.8 x 12.5 x 5.0 cm.
 Size (in./ cm.) (LxWxH): 7.7 x 5.0 x 2.0 in., 17.8 x 12.5 x 5.0 cm.
 Surface Mount: < 2 lbs./0.9 kg
 Rack Mount: Shipping Weight:
 Shipping Weight:

ENVIRONMENTAL

MTBF: >100,000 hours
 Operating Temp: -40° C to +74° C*
 Storage Temp: -40° C to +85° C*
 Operating Temp: -10° C to +45° C▲
 Storage Temp: -20° C to +35° C▲
 Relative Humidity: 0% to 95% (non-condensing)†

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

* W/O Battery ▲ W/ Battery

AGENCY COMPLIANCE

FCC PART 15 COMPLIANT



MADE IN THE USA

Complies with FDA Performance Standard for Laser Products, Title 21, Code of Federal Regulations, Subchapter J

OPTICAL POWER BUDGET

FIBER	WAVELENGTH	TRANSMITTER		RECEIVER		OPTICAL PWR BUDGET	MAX. DISTANCE*
		MODEL	OUTPUT	MODEL	SENSITIVITY		
Multimode 62.5/125µm**	850 nm	DT3010	20 µw (-17 dBm)	DR3010	1 µw (-30 dBm)	13 dB	2.5 miles (4 km)
	1310 nm	DT3020		DR3030			8.5 miles (14 km)
Singlemode 9/125µm		1310 nm	DT3025	25 µw (-16 dBm)		14 dB	25 miles (40 km)

* 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 50/125 Fiber, subtract 4 dB from Optical Power Budget.

SYSTEM DESIGN

