

16-Channel Contact Closure / TTL Data



Description

This system transmits up to 16 channels of low-speed digital data, switch/status information, or control-function signals. Using microprocessor technology, the user may program the receiver to provide 16 channels of alternate-action outputs, or 16 channels of momentary outputs, or eight channels of each type. Outputs are TTL drivers and Normal Open (N/O) relays. The unit may be ordered either as standalone units in miniature enclosures, or rack cards for mounting in card cage or racking systems.

Features

- ✓ One-Way Transmission Over One Fiber
- ✓ 16-Channel Contact Closure and TTL
- ✓ AGC Circuitry
- ✓ FM Transmission
- ✓ Operates Distances Up to 11 mi (18 km)
- ✓ Diagnostic Indicators
- ✓ Standalone Modules or Rack Cards
- ✓ Forever Warranty™

SERIES 250D

TECHNICAL INFORMATION

ELECTRICAL

Input Voltage:		Rack Module Power Factor: 3*	
Standalone Modules	12 - 16 VAC	Power Consumption @14 V:	4 W
	12 - 16 VDC	Heat Equivalent**:	0.2 Btu/min
Rack Units	13.5-16 VDC		0.05 cal/min
Current Requirement:	300 mA		

*For an explanation of the Power Factor, please see the product specification for the 515R or 517R racks or the Fiber Finder™.

**This represents the conversion of all input power to heat. The actual heat generated will be less.

DATA SIGNAL

Number of Data Channels:	16	Impedance:	Per TTL/dry contact
Data Format:	Contact Closure & TTL	Operating Mode:	Asynchronous
Baud Rate:	5 kbps	Bit Error Rate:	<10 ⁻⁹
I/O Logic Level	Per TTL/dry contact		

DATA INTERCONNECTION

Recommended Maximum Distances		Recommended Cable	
Data Equip to Tx:	≤ 50 ft (15 m)	Type:	Shielded Twisted Pair
Rx to Data Equip:	≤ 50 ft (15 m)	Gauge:	20-22 AWG
		Conductors:	Two per channel

AGENCY COMPLIANCE AND MTBF

Emissions:	FCC Part 15, ICES-003, AS/NZS 3548, EN55022	Safety:	UL1950, CAN/CSA 22.2, NO.950-95
Immunity:	ENVS0204 EN61000-4-2, 3, 4, 5, 6, 11	MTBF:	>100,000 hours

FCC PART 15
COMPLIANT



OPTICAL

Wavelength:	850 and 1300 nm	Emitter Type:	LED
Optical Mode:	Multimode	Fiber Type:	62.5 μm
Signal Direction:	Tx → Rx	Gain Control:	Optical automatic (OAGC)
Optical Budget:	13 dB	Transmitter Launch Power:	-15 dBm
Operating Distance*:		Receiver Sensitivity:	-28 dBm
250D Units:	3.2 mi (5.2 km)		
250DL Units:	11 mi (18 km)		

*Operating distance is approximate and assumes best fiber. It will be affected by the type of fiber used and the number of splices.

SERIES 250D

TECHNICAL INFORMATION

ENVIRONMENTAL

Temperature Range in Operation:	-40° to 167° F (-40° to 75° C)	Humidity Range in Operation:	0 - 95% relative, noncondensing
Temperature Range in Storage:	-40° to +185° F (-40° to +85° C)	Humidity Range in Storage:	0 - 95% relative, noncondensing

MECHANICAL

Standalone Modules

Dimensions:	Length: 7.0 in.(178 mm) Width: 4.55 in. (116 mm) Height:1.1 in (28 mm)
Weight:	0.74 lb (0.34 kg)
Shipping Dimensions:	Length: 9.9 in (252 mm) Width: 5.4 in (137 mm) Height: 1.1 in (28 mm)
Shipping Volume:	0.034 cu ft (0.001 cu m)
Shipping Weight:	0.9 lb (0.4 kg)
Construction:	Aluminum
Finish:	Black semigloss paint
Mounting Method:	No. 6 (3 mm) screws

Rack Modules

Module Width:	1 slot, 1.0 in (25 mm)
Weight:	0.66 lb (0.30 kg)
Shipping Dimensions:	Length: 9.9 in (252 mm) Width: 5.4 in (137 mm) Height 1.1 in (28 mm)
Shipping Volume:	0.034 cu ft (0.001 cu m)
Construction:	Aluminum
Finish:	Black semigloss paint

INDICATORS

Receiver:	Level/Loss™	Transmitter	Status
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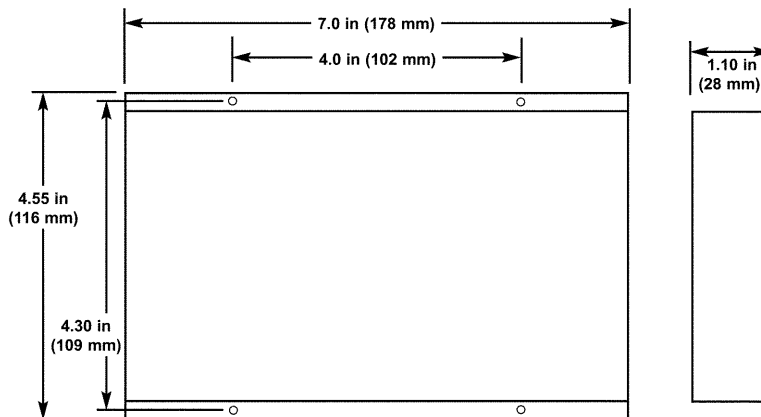
CONNECTORS

Optical:	ST type
Data/Power:	50 pin connector

OPTIONS

Power Supply:	Model 611P (AC)
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FIGURE 1: OUTLINE DRAWING



SERIES 250D

TECHNICAL INFORMATION

TABLE 1: MODEL VARIATIONS

Model Number	Function	Enclosure Type*	Fiber Size	No. of Fibers	Max. Atten.	Wave-length	Power Supply Model
Standalone Modules							
250D-T/1B3X	Transmitter	7 X 4 X 1	62.5	1	13 dB	850	611P
250D-R/1B3X	Receiver	7 X 4 X 1	62.5	1	13 dB	850	611P
250DL-T/1B3X	Transmitter	7 X 4 X 1	62.5	1	13 dB	1300	611P
250DL-R/1B3X	Receiver	7 X 4 X 1	62.5	1	13 dB	1300	611P
Rack-Mount Modules							
250D-T-R/1B3X	Transmitter	515R, 517R	62.5	1	13 dB	850	powered by rack
250D-R-R/1B3X	Receiver	515R, 517R	62.5	1	13 dB	850	powered by rack
250DL-T-R/1B3X	Transmitter	515R, 517R	62.5	1	13 dB	1300	powered by rack
250DL-R-R/1B3X	Receiver	515R, 517R	62.5	1	13 dB	1300	powered by rack

*For exact dimensions, see the MECHANICAL section.

FIGURE 2: SYSTEM DIAGRAM

