

Overview

The IFS D2315 series data transceivers provide drop and repeat transmission of full-duplex (4-wire) EIA RS-485 data signals over two optical fibers. The transceivers feature optical "drop & repeat" capability that allows the user to easily configure the network operation. The transceivers are transparent to data encoding allowing for broad-range compatibility. The D2315 series transceivers can be used as line-terminating devices with these modules. Models within this series are available for use with multimode or single mode optical fiber. Plug-and-play design ensures ease of installation requiring no electrical or optical adjustments. Each transceiver incorporates power and transmit/receive data status indicating LED's for monitoring proper system operation. The modules are available in either stand-alone or rack mount versions.

Application Examples

- Access Control Systems
- Building Automation and Environmental Control Systems
- Computer/Data Equipment
- Fire & Alarm Systems
- ITS Traffic Signalization Networks

Standard Features

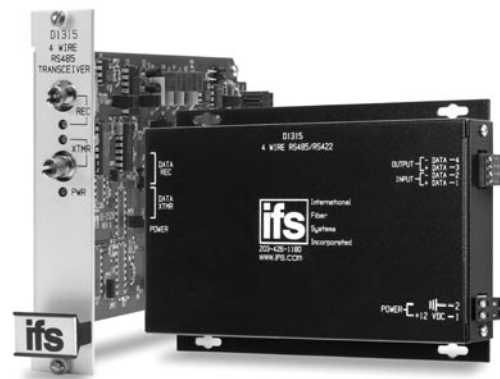
- Meets EIA RS-485 Specifications
- Tested and Certified by an Independent Testing Laboratory for Full Compliance with the Environmental Requirements (Ambient Operating Temperature, Mechanical Shock, Vibration, Humidity with Condensation, High-Line/Low-Line Voltage Conditions and Transient Voltage Protection) of NEMA TS-1/TS-2 and the Caltrans Specification for Traffic Signal Control Equipment.
- Automatic Resettable Solid-State Current Limiters
- Power, Transmit and Receive Data Status LED Indicators
- No In-field Electrical or Optical Adjustments Required
- Data rates up to 200 kbps NRZ (400 kbps for -HS option)
- Data Re-clocking
- Transparent to Data Encoding / Compatible with Major Data Protocols
- Drop and Repeat Network Architecture
- 4-Wire (Full-Duplex)
- True Tri-State Output
- Distances up to 20 Miles (33 km)
- Comprehensive Lifetime Warranty

RS-485 (4-wire) Drop and Repeat Data Transceivers

Transmission of full-duplex (4-wire)
EIA RS-485 data signals over
two optical fibers.



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gesecurity.com/ifs

Specifications subject to
change without notice

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Specifications

Data	
Data Interface:	RS-485 (4-wire)
Data Rate:	DC - 200 Kbps*
Total Network Pulse Distortion:	<1µs
*-HS Option Data Rate:	DC - 400 Kbps
Wavelength	
D2315:	850 nm, Multimode
All others:	1310 nm, Multimode or Single Mode
Number Of Fibers	
	2 In/2 Out
Connectors	
Data and Power:	Terminal Block with Screw Clamps
Optical:	ST
Electrical & Mechanical	
Power:	12 VDC @ 250 mA to 24 VDC @ 125 mA
Surface Mount:	From Rack
Rack:	1
Number of Rack Slots:	Automatic Resettable Solid-State Current Limiters
Current Protection:	Meets IPC Standard
Circuit Board:	
Size (in./cm.) (LxWxH)	7.0 x 4.9 x 1.0 in., 17.8 x 12.5 x 2.5 cm
Surface Mount:	7.0 x 4.9 x 1.0 in., 17.8 x 12.5 x 2.5 cm
Rack Mount:	< 2 lbs./0.9 kg
Shipping Weight:	
Environmental	
MTBF:	> 100,000 hours
Operating Temp:	-40° C to +74° 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.

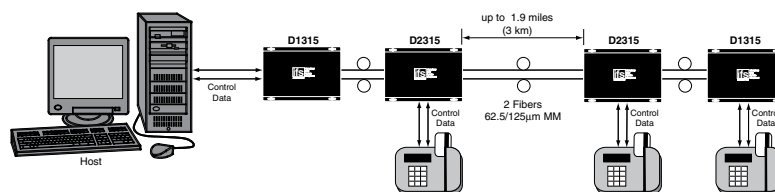
Agency compliance



Made in the USA

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

System Design



Ordering Information

	Part Number	Description	Fibers Required	Opt. Pwr. Budget	Max. Distance*
Multimode 62.5/125µm**	D2315	RS-485, 4-Wire Repeater (850 nm)	2 In/2 Out	10 dB	1.9 miles (3 km)
	D2315	RS-485 4-Wire Repeater (1310 nm)			6 miles (10 km)
Single Mode 9/125µm	D2315-SM	RS-485 4-Wire Repeater (1310 nm)	2 In/2 Out	11 dB	20 miles (33 km)
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 '-24' for 24 VDC Power (Extra charge, consult factory) Add '-R3' to Model Number for R3 Rack Mount - No Charge (Requires R3 Rack purchased separately) Add '-C' for Conformally Coated Printed Circuit Boards (Extra charge, consult factory) Add '-HS' for High Speed Data (DC - 400 kbps).				

*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.



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