Overview
The IFS D1315 series data transceivers provide point-to-point transmission of full-duplex (4-wire) EIA RS-485 tri-state data signals over two optical fibers. The transceivers are transparent to data encoding allowing for broad-range compatibility. When used as a line-terminating device, these modules are also compatible with the IFS D2315 series drop and repeat data transceivers. 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

RS-485 (4-wire) Point-to-Point Data Transceivers
For implementing point-to-point transmission of full-duplex (4-wire) EIA RS-485 tri-state data signals over two optical fibers.

Standard Features
- Meets EIA RS-485 Specifications
- 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
- Point-to-Point Network Architecture
- 2-Wire (Half-Duplex)
- True Tri-State Output
- Hot-Swappable Rack Modules
- Distances up to 25 Miles (40 km)
- Comprehensive Lifetime Warranty
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**
- D1315: 850 nm, Multimode
- All others: 1310 nm, Multimode or Single Mode

**Number of Fibers**
- 1 or 2

**Connectors**
- **Data and Power:** Terminal Block with Screw Clamps
- **Optical:** ST

**Electrical & Mechanical**
- **Power:**
  - Surface Mount: 12 VDC @ 200 mA to 24 VDC @ 100 mA
  - Rack: From Rack
- **Number of Rack Slots:** 1
- **Current Protection:** Automatic Resettable Solid-State Current Limiters
- **Circuit Board:** Meets IPC Standard
- **Size (in./cm.) (LxWxH):**
  - Surface Mount: 7.0 x 4.9 x 1.0 in., 17.8 x 12.5 x 2.5 cm
  - Rack Mount: 7.0 x 4.9 x 1.0 in., 17.8 x 12.5 x 2.5 cm
- **Shipping Weight:** < 2 lbs./0.9 kg

**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.

**Part Number | Opt. Pwr. Budget | Max. Distance**
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Multimode
- D1315 | 2 | 11 db | 1.9 miles (3 km)
- D1315 | 2 | 10 db | 6 miles (10 km)
- D1315-WDMA | 1 | 11 db | 1.9 miles (3 km)
- D1315-WDMB | 1 | 11 db | 1.9 miles (3 km)

**Single Mode**
- 9/125μm
- D1315-SM | 2 | 11 db | 25 miles (40 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 Rates up to 400 Kbps (Extra charge, consult factory)

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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.