Bi-directional, RS-232, RS-422 & RS-485 (4WIRE) Data Transceiver

RS-232

+

RS-422

+
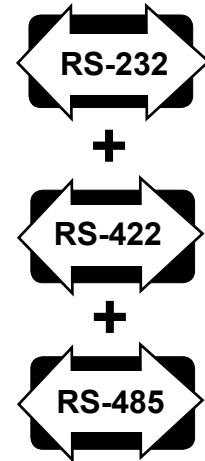
RS-485

FEATURES:

- Laser Based Systems for Multimode and Singlemode Fiber

- RS-232, RS-422 & RS-485 (4 Wire) Data Format

- Surface Mount Technology (SMT) for High Reliability and Repeatability

- *SpectraSmart* Network Management Compatible

- Local LED Status Indicators to Monitor Critical System Diagnostics and Performance Parameters

- ST, FC Optical Connector

- Hot Swappable Rack Cards

- Back - Biased Photo Detector Circuitry for Stable Optical Laser Output Over Full Temperature Range

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- Meets NEMA TS1 / TS2 & CALTRANS Specifications

- Utilizes Internal Switching Power Supplies

- Automatically Resettable Solid-State Current Limiters on All Power Lines: Provides Equipment Protection

- DB 9 Type Connectors for Data

- DC to 1 Mb/s Data Rate[*]

- Wide Optical Dynamic Range: Optical Attenuators are Never Needed

DESCRIPTION:

The DX-DFK series product incorporates a new digital encoding technology. This fiber optic system has One Channel each of Bi-directional RS 232, RS-422 & RS-485 (4wire) data signals over one Singlemode or Multimode fiber. Meridian's digital product line incorporates plug-in personality circuit cards to easily configure a wide variety of data channels on this system. The functionality of the DX-DFK series are furthure enhanced by their compatibility with Meridian's PC based SpectraSmart Network Management & Diagnostic Software system. SpectraSmart supervises the operating parameters of the transmission system such as the status on Digital carrier detect, voltages, temperatures, optical levels etc. See SpectraSmart brochure for further details.

CONFIGURATIONS:

The DX-DFK product family is available as rack mount cards suitable for mounting in Meridian card chassis and utilizes 2 card slots. These products can easily be converted to a Standalone module with the SR-1000/S, Desk / Wall mount 2-slot chassis (87- 264 VAC). See SR-1000 brochure for further details.

MARKETS:

- √ Security and surveillance
- √ Access control systems
- √ Intelligent transportation systems (ITS)
- √ SCADA

SPECIFICATIONS:

Data

Formats	RS-232D, RS-422 & RS-485 (4Wire)
Rate	DC to 125 Kb/s - RS-232
	DC to 1 Mb/s - RS-422 & 485
Bit Error Rate	10^{-9}*

Power **

Card	6 Watts

Connectors

Data	DB 9 F
Optical	ST™ , FC
Power	See SR-1000/S Spec. Sheet

Enviromental

Operating Temperature	-34°C to +74°C
Storage Temperature	-55°C to +85°C
Relative Humidity	0 to 95% Non-condensing (98% with Conformal Coating, with min. condensation)

Indicators (LEDs)

1- Green	Power On
1- Bi-color	TX Carrier/ Laser Over Current
1- Bi-color	RX Carrier - Present / Error
1- Bi-color	RX optical signal - Present / Absent
3- Green	Data Present (One Per Channel)
1 - Bi-color (Optional)	Card Diagnostics

Physical

Dimensions:	
Card	160 mm (6.3") L, 100 mm (4") W
	44mm (1.7") H
Weight:	
Card	450 g (16 oz.)
Number of Rack Slots	Two

Optical

Bandwidth	250 Mb/s

Quality

MTBF	>200,000 hours, @ 35°C Ground Fix as per MIL 217F

* measured @ max. optical budget
** Due to variations of drivers and diagnostic options, power shown @ max value

Model No.

SIDE "A"	SIDE "B"
DXA-DFK-2. . . . . Transceiver, 1300 / 850 nm, MM	DXB-DFK-2. . . . . Transceiver, 850 / 1300 nm, MM
DXA-DFK-5. . . . . Transceiver, 1550 / 1310 nm, SM	DXB-DFK-5. . . . . Transceiver, 1310 / 1550 nm, SM

ADD THE SUFFIX "C" FOR CONFORMAL COATING & "D" FOR DIAGNOSTIC AT THE END OF THE PART NUMBER FOR THESE OPTIONS

RS-232 RS-422 RS-485 FIBER RS-232 RS-422 RS-485

DXA-DFK DXB-DFK

OPTICAL:

Fiber Type/Size (um)	Optical Output (dBm)	Reciever Sensitivity (dBm)	Optical Budget (dB)	Wavelength (nm)	Optical Connector	Optical Dynamic Range (dB)
Multimode (FP) 62.5 / 125	-4	-24	20	850 / 1300	ST	25
Singlemode (FP) 9 / 125	-4	-24	20	1310 / 1550	ST , FC	25
Singlemode (DFB) 9 / 125	+3	-24	27	1310 / 1550	ST , FC	25