Dymec Serial Links

SubStation Hardened EIA 422/485 Serial Copper to Fiber Link/Repeaters

Features

- Signal protection and electrical isolation for data connections and devices
- Certified to IEEE 1613 and Class 1 Div2
- Operates at –40°C to 85°C
- Extended distances of 5km over Multi-mode fiber and 30km over Single-mode fiber.
- Diagnostic LEDs for easier debug of installation
- Built-in mounting brackets and optional mounting shelf
- Packaged in rugged, industrial-quality Galva Neal and powder coated shells
- Conformal coated PC Boards
- Powered from Station Battery Bus
- Compatible with all earlier 5845/5846 versions of Dymec Link/Repeaters

Dymec model 5845 and 5846 Serial Fiber Links are link/repeaters for EIA 422 and 485 data connections. The 5845/5846 Links provide reliable serial data connectivity over fiber optic facilities in harsh environments where immunity and signal isolation are critical. Optical connectivity provides flexibility, extended-distance, operational safety, reduced equipment outages due to electrical surges, and improved signal quality and network performance.

5845/5846 Links support signal rates from DC to 2 Mbps and operate either full- or half-duplex over single- or multimode fiber. Links are easily field-configurable for point-to-point, master/slave, loop, bus or star topologies. The 5845/5846 also interoperate with 5843/5844 RS232 Links, the Dymec Network Integration System and Optical Star products to cost-effectively create highly scaleable data networks with minimum electrical signal exposure.

Dymec Links are substation-hardened to IEEE 1613 specifications. They operate in an extended temperature range and optionally take DC power directly from station battery. Flexible mounting options, diagnostic LEDs and integrated optical and electrical signal test features make turning up Link networks simple.

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Specifications

Optical Parameters @ Max Temp	Multimode	Single-Mode
Optical Budget Typical	19.5dB	19dB
Output Power Typical	-10.5 dBm peak	-14.5 dBm peak
Receiver Sensitivity Typical	-30 dBm peak	-33.5 dBm peak
	(62.5µ/125 Multimode)	(9µ/125 Single-mode)
Wavelength	850nm	1310nm
Connector Type	ST	
Compatible Fiber Type	Multimode (50-200µm)	Single-Mode (9-13µm)
Configuration (Switches)	Half/Full Duplex	
	AC/DC Coupled	
	Link/Repeat	
	Biasing Resistors In/Out	
	Data Inversion Mode	
	Enable Holdover (4 settings)	
	Diagnostic Mode	
Data Rate	DC to 2M bps	
Data Transmission	Asynchronous, simplex	
	Or Full Duplex	
Transmission Distance	Up to 5000 meters	Up to 30K meters
	(62.5µ/125 Cable@3dB/km)	(9µ/125 Cable@.5dB/km)
Bit Error Rate	10-E9 Max.	
Point to Point Latency	500 nsec Max	
Repeat Latency	400 nsec Max	
Electrical Parameters		
Inputs		
I/O Data Format	EIA 422/485	
Data Connector	9 pin D-Type Female	
Input Impedance	750Ohms	
Input Voltage	+12 to -7 Volts Max referenced to signal common +/-6 Volts differential Max	
Outputs		
Output Impedance	>250 Ohms	
Driver Output	50 mA	
Ambient Temperature		
Operating Temperature	-40 to +85 C	-40 to +70 C
Storage Temperature	-40 to 85 C	
Power Required		
5846	6.0 Watts	8.0 Watts
	45 mA @ 90-250 V	60 mA @ 90-250 V
	250 mA @ 18-60 V	340 mA @ 18-60 V
5845	3.0 Watts	4.0 Watts
	250mA @ 12Vdc	340mA @ 12Vdc
Power Dissipation BTU/H		
5846	20 BTU/hr	27 BTU/hr
5845	10 BTU/hr	14 BTU/hr
Physical Parameters		
Weight		
5846	17 oz.	17 oz.
5845	9 oz.	9 oz.
Dimensions Inches		
5846	4.1W x 5.1L X 1.3H	
5845	2.0W x 5.1L X 1.3H	
Indicators	Power	
	Transmit Fiber	
	Transmit Electrical	
	Receive Fiber	
	Receive Electrical	

Ordering Information			
Model	Input	Fiber Type	Input Power Rating
5845HRT	RS-422/485	Multi-Mode	9-15 Vdc
5846HRT-H	RS-422/485	Multi-Mode	90-250Vdc/90-250Vac
5846HRT-L	RS-422/485	Multi-Mode	24-48 Vdc
5845SHRT	RS-422/485	Single-Mode	9-15 Vdc
5846SHRT-H	RS-422/485	Single-Mode	90-250Vdc/90-250Vac
5846SHRT-L	RS-422/485	Single-Mode	24-48 Vdc
ACC-LCS	Link Cantilever Mounting Bracket		
ACC-CBL1	DB9 Male/Tinned Lead 10 Foot Cable/Pigtail		

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