

### Features

- Single Channel RS232 or TTL Logic
- Powered from Station Battery Bus
- Operates reliably at temperatures of -40°C to 85°C
- Extended distances of 5km over Multi-mode fiber and 30km over Single-mode fiber.
- Multiple Mounting choices with built-in mounting brackets and optional mounting shelf
- Packaged in rugged, industrial-quality Galva Neal and powder coated shells
- 4 Diagnostic LEDs for easier debug of installation
- Conformal coated PC boards
- Compatible with all earlier 5843/5844 versions of Dymec Link/Repeaters
- Certified to IEEE 1613 and Class 1 Div 2



Dymec models 5843 and 5844 are hardened fiber optic Link/Repeaters that convert RS232 or TTL level copper to amplitude based fiber output. Supports data rates from dc to 250k bps, DCE or DTE port configuration and a diagnostic/test mode that allows testing of the copper and fiber connections before the connected IED is active in the network.

By simply setting a few switches, the Dymec 5843 and 5844 Link/Repeaters can be configured for point-to-point, star, optical bus, or loop networks, and permit quick, easy connection of devices. For example, an extensive multi-drop network—where two or more intelligent electrical devices are connected and communicating—can be constructed simply by connecting the devices through Link/Repeaters.

Dymec 5843 and 5844 Link/Repeaters may optically connect devices of different formats, eliminating the need for format converters. For example, an RS232 IED may be connected to a model 5844 which is optically connected to a model 5846, which, in turn, can communicate electrically to its IED in EIA 485.



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Industrial Networking at Its Best™

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	-33.4 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)		DTE/DCE	
		AC/DC Coupled	
		Link/Repeat	
		Pin 8 Drive Current	
		Pin 6 +5 Vdc (DSR or CTS pull up)	
		Diagnostic Mode	
Data Rate		DC to 250kbps	
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		4µS	
Repeat Latency		400 nsec Max	
<b>Electrical Parameters</b>			
<b>Inputs</b>			
I/O Data Format		EIA RS232; CCITT v.24	
Data Connector		9 pin D-Type Female	
Input Impedance		>3000Ohms	
Input voltage		+/-30 Volts Max	
<b>Outputs</b>			
Output Impedance		>300Ohms	
Driver Output		+/-5Volts into 3000Ohms	
Pin 8 Output		0 to 5V	
		67 or 207 Ohm Source Impedance	
<b>Ambient Temperature</b>			
Operating Temperature		-40 to +85 C	-40 to +70 C
Storage Temperature		-40 to 85 C	
<b>Power Required</b>			
5844		4.0 Watts	5.5 Watts
		35 mA @ 90-250 V	50 mA @ 90-250 V
		250 mA @ 18-60 V	340 mA @ 18-60 V
5943		3.0 Watts	4.1 Watts
		250mA @ 12Vdc	340mA @ 12Vdc
Power Dissipation BTU/H			
5844		10.9 BTU/hr	12.3 BTU/hr
5843		8.2 BTU/hr	10.2 BTU/hr
<b>Physical Parameters</b>			
<b>Weight</b>			
5844		17 oz.	
5843		9 oz.	
<b>Dimensions Inches</b>			
5844		4.1W x 5.1L X 1.3H	
5843		2.0W x 5.1L X 1.3H	
<b>Indicators</b>			
		Power	
		Transmit Fiber	
		Transmit Electrical	
		Receive Fiber	
		Receive Electrical	

Ordering Information			
Model	Input	Fiber Type	Input Power Rating
5843HRT	RS-232/TTL	Multi-Mode	9-15 Vdc
5844HRT-H	RS-232/TTL	Multi-Mode	90-250Vdc/90-250Vac
5844HRT-L	RS-232/TTL	Multi-Mode	24-48 Vdc
5843SHRT	RS-232/TTL	Single-Mode	9-15 Vdc
5844SHRT-H	RS-232/TTL	Single-Mode	90-250Vdc/90-250Vac
5844SHRT-L	RS-232/TTL	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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