



The Model 542B ensures fast communications for your multi-drop SCADA system.

## Model 542B Features

- **Plug-in optical modules for varying distances between stations**
- **Accommodates as many as 3 RTUs per transceiver**
- **Unlimited PLCs or RTUs linked in a multi-drop system permitting future expansion**
- **Highly reliable fault-tolerant redundant fiber ring topology**
- **Fastest communications rates over greater distances**
- **Vastly superior for noise immunity and electrical isolation**

## Fiberoptic Transceiver

For multi-drop SCADA systems, use H&L Instruments Model 542B Fiberoptic Transceivers. The Model 542B is a transceiver (a transmitter/receiver) with a built-in repeater and resynchronizing circuitry. At 1200 baud, the delay is 8.0 milliseconds per transceiver (the bit time is 1.6 ms). The delay is approximately linear with bit time. At 300 baud it is 32ms and at 19,200 baud it is 0.5 ms.

### Model 542B Specifications

#### Serial Port:

300, 600, 1200, 2400, 4800, 9600, 19,200b/sec;  
3 DCE EIA-232 half duplex; 5, 6, 7 and 8-bit word lengths; 1, 1.5 or 2 stop bits; even, odd or no parity all byte protocols; opto-isolated EIA-485 input for PML RTUs

#### Environmental/Mechanical:

Operating Temperature: -40°C to +85°C  
5% to 95% RH  
Net Weight: 3.5lbs

#### Fiberoptic Connector Options:

ST

#### Power Options (5.5 Watts):

12Vdc, 24Vdc, 48Vdc, 125Vdc/120Vac 50-60Hz,  
250Vdc/230Vac 50-60 Hz

#### Optical Budget:

20dB multimode LED @ 850nm (62/125 fiber)  
16 dB singlemode LED @ 1310nm  
32 dB singlemode Laser @ 1310nm

#### Optical Output Power:

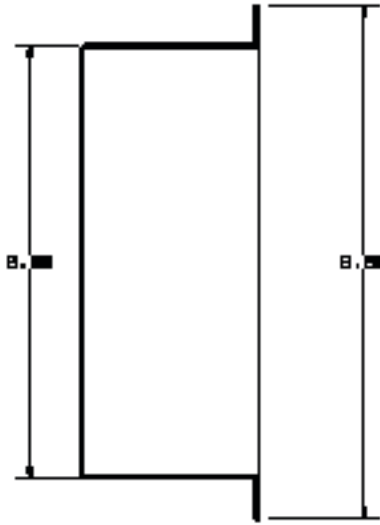
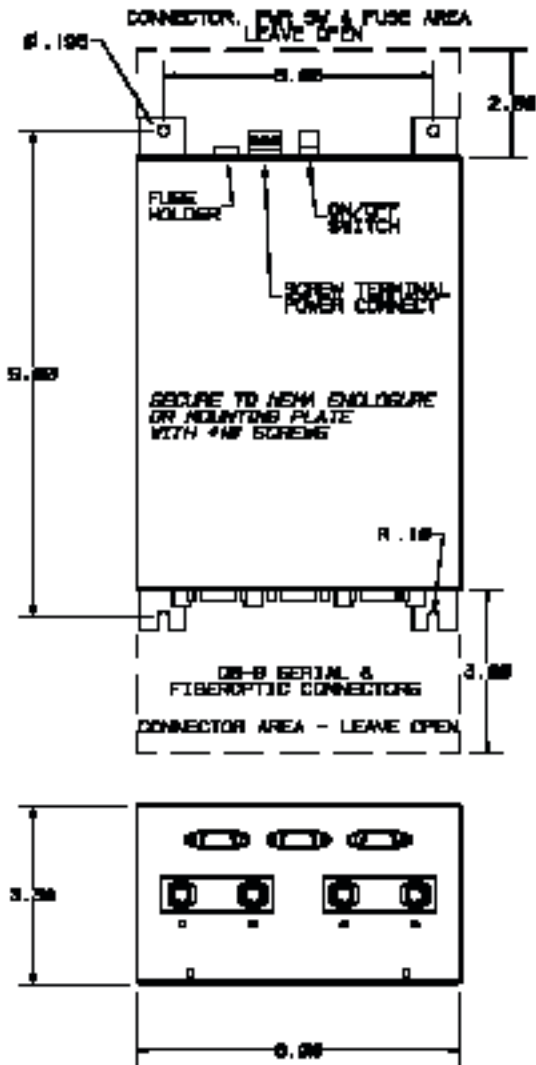
LED> -18dBm @ 850nm multimode (62/125 fiber)  
LED> -24dBm @ 1310nm singlemode  
Laser> -8dBm @ 1310nm singlemode

#### Optical Receiver Sensitivity:

> -38dBm multimode or >-42 dbm singlemode  
@1310nm (1 x 10<sup>-9</sup> BER)

Model 542B

## Model 542B Details



DB-9 Female Connector Pin-Out (DCE) Table

	Flow	EIA-232	EIA-485*
1		Frame Ground	
2	In	Transmit Data (TD)	
3	Out	Received Data (RD)	shield
4			+
5			-
6	Out	Data Set Ready (DSR)+12V	
7		Signal Ground	
8	Out	Carrier Detect (CD) +12V	
9			

\*serial port 3 only

### Other H&L Fiberoptic Products:

Model 508B Fiberoptic TransNet Extender  
(fiberoptic isolation)

Model 531-8 Fiberoptic Digital I/O  
(transfer-trip relaying)

Model 532A Modem/Multiplexer  
(point-to-point communications)

Model 561 Fiberoptic Transceiver (FiberLoop II™ multi-drop self-healing system)

Model 570E Fiberoptic Transceiver (FiberLoop III™ multi-drop self-healing system with Ethernet option)

Model 561-16 and 570-16 Transceivers (16 serial port transceivers)

Model 570X Fiberoptic DNP3 Gateway Transceiver

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