

Features

- In most applications, one pair of 5940 links will replace 8 standard links and 3 fiber pairs lowering capital and installation costs.
- Packaged in rugged, industrial-quality Galva Neal and powder coated shells
- Conformal coated PCBs
- Powered from Station Battery Bus
- Operates reliably at temperatures of -40°C to 85°C
- Extended distances of 5km over Multi-mode fiber and 25km over Single-mode fiber.
- Multiple Mounting choices with built-in mounting brackets and optional mounting shelf
- Continuous monitoring of Link Status via status LED or built-in logic annunciator
- Each channel has its own diagnostic LED's for easier debug when installing
- Certified to IEEE 1613 and Class 1 Div2



GarrettCom[®]
Industrial Networking at Its Best™



Dymec 5941 and 5942 Data Links are designed as full duplex four channel devices. Four channels have bandwidth of DC to 64k bps (D4 version), and on the (D1 version) three of the channels have bandwidth of DC to 4k bps. Used in point-to-point RS-232 application, 5941 and 5942 Data Links are designed to pass handshaking or flow control signals along with data. These links do not utilize the flow signals for their operation. Like all Dymec digital-to-fiber optic products, they are passive to all software protocols, and simply send the communications signals from one node to the other.

- Sending four RS-232 non-handshaking signals together on a single pair of fibers (provided at least three of the signals are at 4000 baud or slower for the D1 version).
- Interfacing RTUs to radios that require push-to-talk control
- Passing up four contacts bi-directionally or KYZ meter contacts.
- Transmitting data and IRIG-B timing signals with a single Link.
- 1 or 2 Synchronous data ports (D4 model only).

5941 and 5942 Data Links feature a power-on light, a "SYNC" LED, and eight diagnostic LEDs.

| 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) | | Channel 3 IRIG-B Output/Standard | |
| | | Channel 3 Drive Current Select | |
| | | Channel 4 Sync Indicator/Data Out | |
| Data Rate | D1 Version | DC to 64kbps Channel 1 | |
| | | DC to 4kbps Channels 2,3,4 | |
| | D4 Version | DC to 64kbps all 4 channels | |
| Data Transmission | | Asynchronous, simplex | |
| | | Half 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 | | 25µS | |
| | D1 Version Only | 100µS Channels 2,3,4 | |
| | | 1µS | |
| | D4 Version Only | 12µS Channels 2,3,4 | |
| Electrical Parameters | | | |
| Inputs | | | |
| I/O Data Format | | EIA RS232; CCITT v.24 | |
| Data Connector | | 9 pin D-Type Female | |
| Input Impedance | | >3000Ohms | |
| Input voltage | | +/-30 Volts Max | |
| Outputs | | | |
| Output Impedance | | >300Ohms | |
| Driver Output | | +/-5Volts into 3000Ohms | |
| Channel 3 | | 0 to 2.5V @10mA | |
| | | 0 to 3V @ 20mA | |
| Ambient Temperature | | | |
| Operating Temperature | | -40 to +85 C | -40 to +70 C |
| Storage Temperature | | -40 to 85 C | |
| Power Required | | | |
| | 5942 | 2.4 Watts | 3.6 Watts |
| | | 35 mA @ 90-250 V | 40 mA @ 90-250 V |
| | | 170 mA @ 18-60 V | 200 mA @ 18-60 V |
| | 5941 | 2.4 Watts | 3.0 Watts |
| | | 200mA @ 12Vdc | 250mA @ 12Vdc |
| Power Dissipation BTU/H | | | |
| | 5942 | 10.9 BTU/hr | 12.3 BTU/hr |
| | 5941 | 8.2 BTU/hr | 10.2 BTU/hr |
| Physical Parameters | | | |
| Weight | | | |
| | 5941 | 17 oz. | |
| | 5942 | 9 oz. | |
| Dimensions Inches | | | |
| | 5942 | 4.1W x 5.1L X 1.3H | |
| | 5941 | 2.0W x 5.1L X 1.3H | |
| Indicators | | | |
| | | Power | |
| | | Sync Status | |
| | | Transmit Each Channel | |
| | | Receive Each Channel | |

| Ordering Information | | | | |
|----------------------|--------------|-------------|---------------------|--------------------|
| Model | EIA Standard | Fiber Type | Input Power Rating | 64K Baud Data Rate |
| 5941D1HRT | RS-232/TTL | Multi-Mode | 9-15 Vdc | 1Channel |
| 5942D1HRT-H | RS-232/TTL | Multi-Mode | 90-250Vdc/90-250Vac | 1Channel |
| 5942D1HRT-L | RS-232/TTL | Multi-Mode | 24-48 Vdc | 1Channel |
| 5941SD1HRT | RS-232/TTL | Single-Mode | 9-15 Vdc | 1Channel |
| 5942SD1HRT-H | RS-232/TTL | Single-Mode | 90-250Vdc/90-250Vac | 1Channel |
| 5942SD1HRT-L | RS-232/TTL | Single-Mode | 24-48 Vdc | 1Channel |
| 5941D4HRT | RS-232/TTL | Multi-Mode | 9-15 Vdc | 4 Channels |
| 5942D4HRT-H | RS-232/TTL | Multi-Mode | 90-250Vdc/90-250Vac | 4 Channels |
| 5942D4HRT-L | RS-232/TTL | Multi-Mode | 24-48 Vdc | 4 Channels |
| 5941SD4HRT | RS-232/TTL | Single-Mode | 9-15 Vdc | 4 Channels |
| 5942SD4HRT-H | RS-232/TTL | Single-Mode | 90-250Vdc/90-250Vac | 4 Channels |
| 5942SD4HRT-L | RS-232/TTL | Single-Mode | 24-48 Vdc | 4 Channels |

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| ACC-LCS | Link Cantilever Mounting Bracket |
| ACC-CBL2 | DB9 Male/4 DB9 Female 1 X 4 Interface Cable 1 Foot |



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