

Very High Speed Ruggedized ST Fiber-to-RS485/422/232 Interface Converter

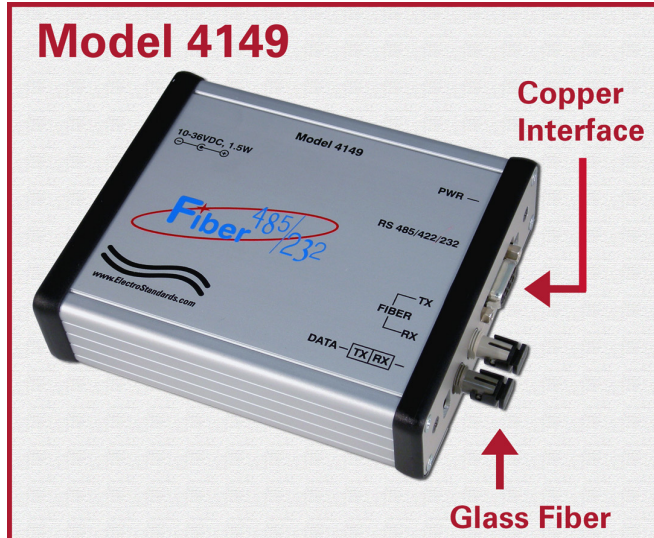
■ Four popular configurations, Fiber-to-Copper Media Converters.

The Model 4149/4149-DIN/4159/4159CC is a very high speed ruggedized, protocol independent, Fiber to RS485/422/232 interface converter from Electro Standards Laboratories. Typical operating speeds are up to 1.5 Mbps for RS232 to fiber conversion and up to 5 Mbps for RS485/422 to fiber conversion. Designed to operate from -40°C to +85°C, it is a member of Electro Standards Laboratories' (ESL) rugged community fiber-to-copper media converter family.

The unit features protection circuitry on all receivers and transmitters for both RS232 and RS485/422 interfaces. The converter is available in a desktop package (Model 4149) with optional DIN rail mounting hardware (Model 4149-DIN). It is also available as a board only (Model 4159/4159CC) with front mounted threaded brackets for rack mounting in embedded applications. **Model 4159-CC is a Conformal Coated Printed Circuit Board (PCB) for military and harsh environments.**

The unit's power input is protected from transients and features 3kVDC isolation to prevent system ground loops. It can be powered from a wide input range of 10VDC-36VDC. Custom models are also available for other voltage ranges such as 4.5VDC-9VDC and 19VDC-72VDC.

Other features include user selectable fiber polarity, TX, RX and Power indicator LEDs. There are also dual DB9 power connectors (Model 4159/4159CC only) for convenience in bus power applications.



SPECIFICATIONS:

Glass Fiber Interface:

Connectors: Fiber Optic ST
TX Power: -12.5 dBm
RX Sensitivity: -27.5 dBm
Optical Budget: 15 dB
Max. Link Distance with 62.5/125 µm fiber:
5.35 km at up to 5 Mbps, 25°C
3.75 km at up to 5 Mbps, -40°C to +85°C
Wavelength: 820 nm/850 nm, multimode
Fiber Size: 50/125 µm, 62.5/125 µm, 100/140 µm

Fiber Polarity:

Logical 1 = Light ON/OFF: User Selectable

Copper Interface:

Connectors: DB9, Female
Type: RS485, RS422, RS232
Terminations: RS485/422 120 Ohm insertable

Bit Rate (nom.):

RS232: 0 to 1.5 Mbps
RS485/422 0 to 5 Mbps

Indicators:

LEDs: TXD, RXD, PWR



★ **Municipalities, schools, government:**
Model 4149 and Model 4159 are offered on the GSA Schedule.

Power:

Input Power: 10VDC-36VDC std, 4.5VDC-9VDC, 19VDC-72VDC, Others at 1.5W.
Isolation: 3 kVDC
Connectors: Dual DB9F for Power Daisy Chaining (board only), DC Power Jack (desktop unit)

Operating Environment:

-40°C to +85°C

Model 4159/4159CC Mechanical (Board Only):

Model 4159, Cat No 304159/529806
Size: 3.9" x 3.9" x 0.63"
Weight: Approx. 3.5 oz (99g)
Mounting: Mounting Holes, Right Angle Brackets

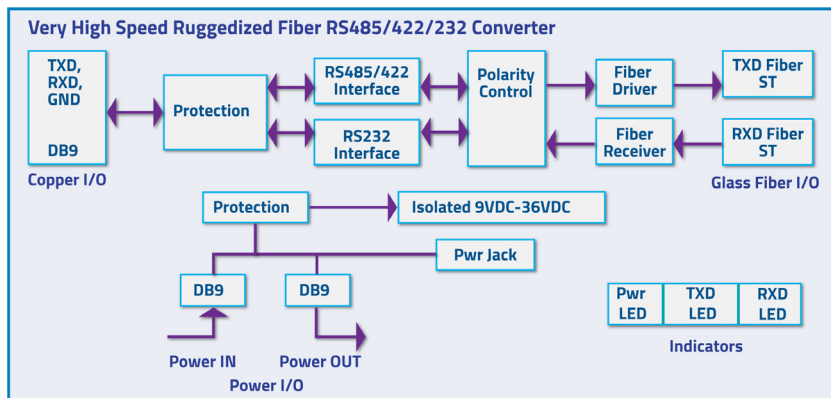
Model 4149 Mechanical (Desktop Unit):

Model 4149, Cat No 304149
Size: 5" x 4.25" x 1.4"
Weight: Approx. 10.1 oz (286g)

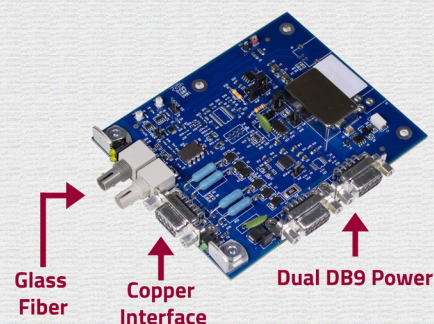
Model 4149-DIN Mechanical (DIN Rail Mounted Unit):

Model 4149-DIN, Cat No 304149-DIN
Size: 5" x 4.25" x 1.4"
Weight: Approx. 10.1 oz (286g)
Mounting: 2 Threaded Holes Standard, DIN rail
DIN Rail Bracket Size: 2.84" x 1.24" x 0.16"
DIN Rail Bracket Weight: 0.9 oz (25.5g)

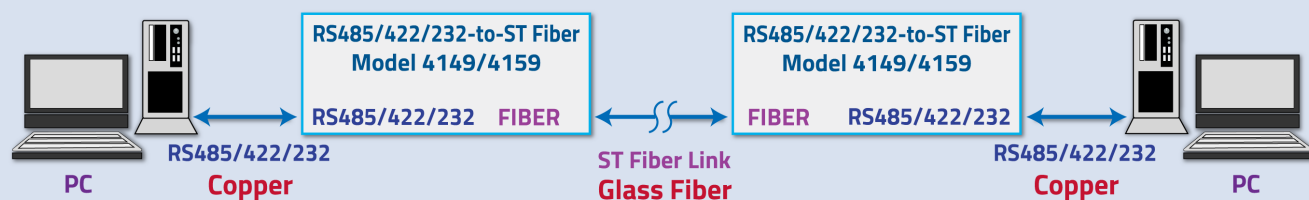
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Model 4159 / Model 4159CC

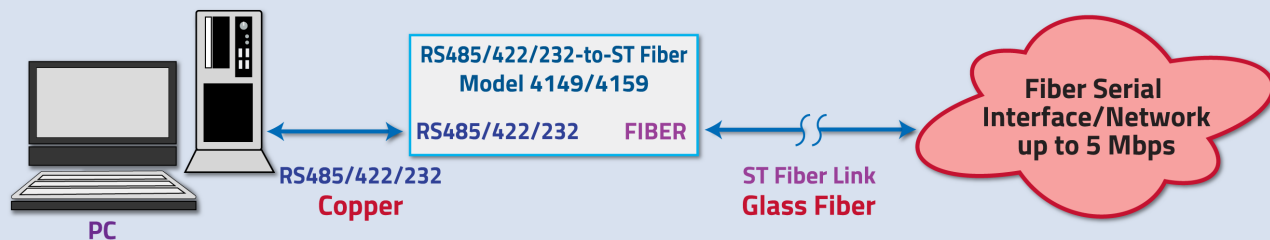


Model 4149/4149-DIN/4159/4159CC Application:



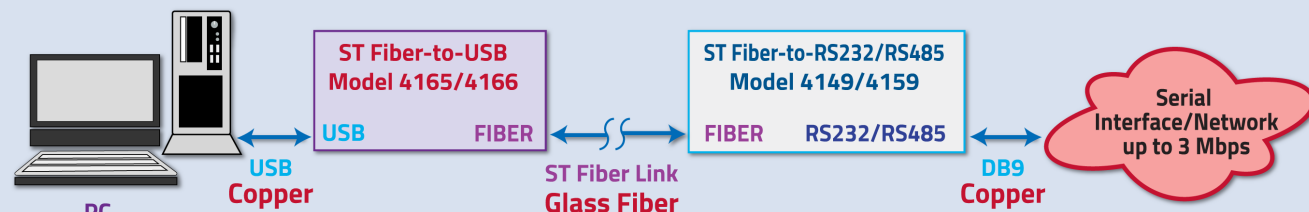
Point-to-Point Isolated PC RS485/422/232 Communication

Model 4149/4149-DIN/4159/4159CC Application:



Isolated PC RS485/422/232 communications to fiber serial interface/network.

Model 4165/4165-DIN, & 4166 to Model 4149/4149-DIN & 4159/4159CC Application:



Isolated PC USB to RS232/RS485 communications serial interface/network.