



Electro Standards Laboratories
ADVANCED SYSTEMS DESIGN & SERVICES



SPECIFICATIONS
Desktop Unit... Model 4042
(Cat No. 304042)

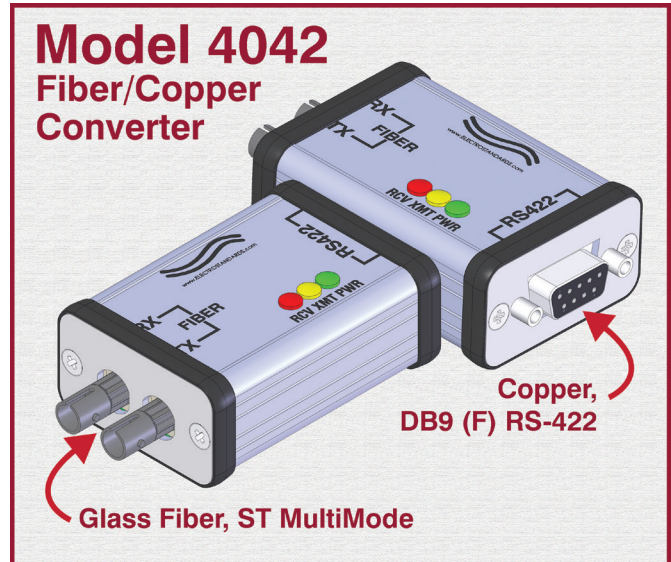
Very High Speed Ruggedized ST Fiber-to-RS422 Interface Converter

- **Field proven, highly reliable performance!**
- **High quality manufacturing consistency maintained via stringent design documentation control.**

The **Model 4042** is a high speed ruggedized **ST Fiber to RS422** interface converter. Typical operating speeds are up to 5 Mbps for RS422 to fiber conversion. When operating in RS422 mode, the converter is configured for 4-wire full duplex operation.

Applications: The converter provides an industrial solution for applications requiring a single point-to-point or a communications link over short and long distances. Applications include: PC to PC long distance communications, factory automation, data collection devices, barcode readers, time clocks, scales, data entry terminals, ATM's and **serial communications in harsh environments.**

The Model 4042 is designed to operate from -40°C to +85°C. The unit features ESD protection circuitry on the RS422 copper interface. The power input is protected from transients, as well as, over voltage and over current. The converter is powered from a +5V power supply or a +28V power supply via the DB9 connector. Other features include user selectable fiber polarity, TX, RX and Power indicator LEDs.



FEATURES:

- Model 4042 converts ST Duplex Fiber to Copper RS422 DB9 (F) port.
- Supports constructing an optically isolated high speed communication link between connected devices.
- Typical operating speeds are up to 5 Mbps for RS422 to fiber conversion.
- Provides full galvanic isolation (no metallic connection) between connected devices.
- LED Status indicators display Fiber RX, TX activity and power indication.
- **Circuit boards conformal coated in accordance with IPC-CC 830 using the type UR Class B using HumiSeal A133 Urethane conformal coating.**
- **The circuit board is fabricated to Class 2 standards.**

SPECIFICATIONS:

Fiber Interface:

Connectors: Fiber Optic ST Female, Multimode
TX Power: -12.5 dBm
RX Sensitivity: -27.5 dBm
Optical Budget: 15 dB
Max. Link Distance with 62.5/125 mm 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: 850 nm, multimode
Fiber Size: 50/125 mm, 62.5/125 mm, 100/140 mm

Copper Interface:

Connectors: DB9, Female
Type: RS422 (4-wire)
Terminations: RS422 120 Ohm jumper selectable

Bit Rate (nom.):

RS422 0 to 5 Mbps

Network Configurations:

RS422 Point-to-Point

Indicators:

LEDs: RXD, TXD, PWR

Power:

Input Power: +5VDC or +28VDC
Connectors: DB9F, Pin9 (+5V), Pin 1 (+28V), Pin 5 (GND)

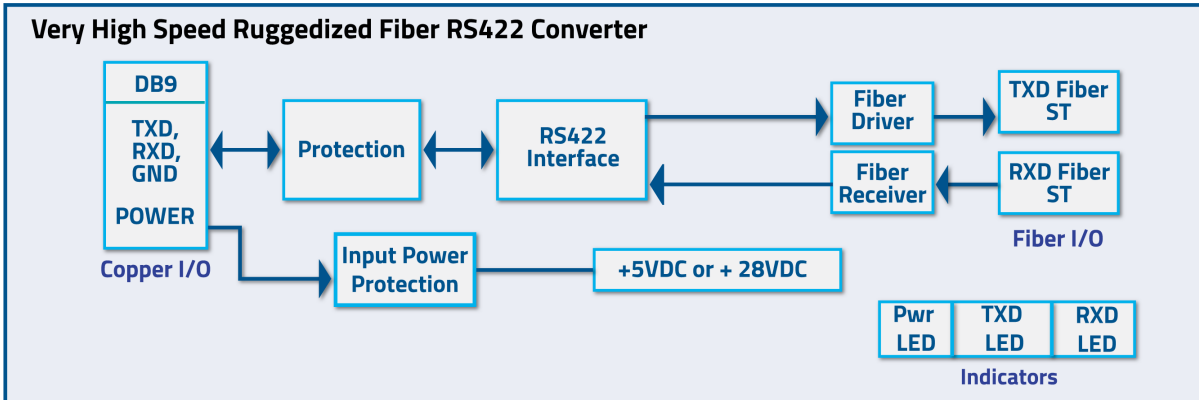
Operating Environment:

-40°C to +85°C

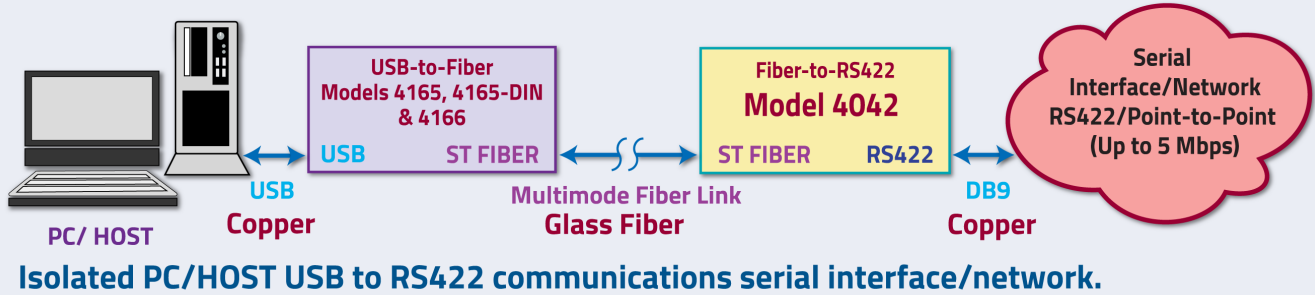
Model 4042 Mechanical (Desktop Unit):

Model 4042, Cat No: 304042
Size: 2.36" x 1.77" x 0.95" [60mm x 45mm x 25mm]
(does not include connectors beyond the enclosure)
Weight: 0.5 lb (226g)

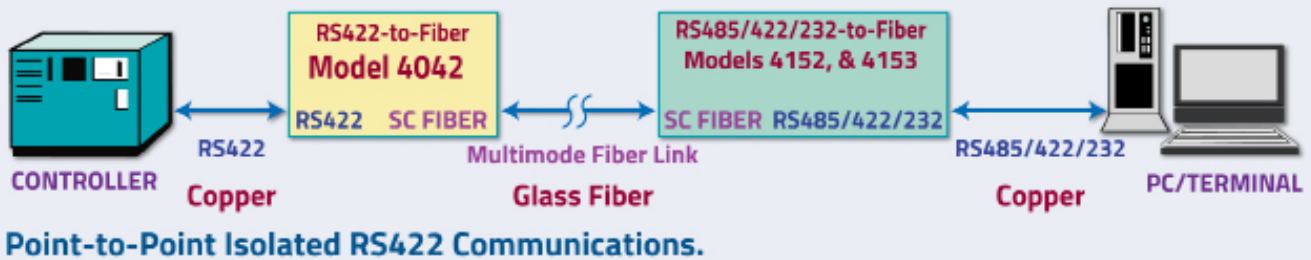
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Models 4165, 4165-DIN, and 4166 to Model 4042 Application



Model 4042 to Models 4152, 4153 Application



MODEL 4042 APPLICATION: RS422 to Multimode Fiber to (POF) Fiber

