PATTON ELECTRONICS COMPANY
PRODUCT QUICK REFERENCE

FAQs

Model 1104 RS-485 Fiber Converter Frequently Asked Questions

Applications

What are the applications for the 1104?
The Model 1104 is used in industrial, utility, hospital, and other environments where RS-485 2-wire, half-duplex communications is used. The Model 1104 offers immunity to environmental interference, data security, and can extend 2-wire, half-duplex RS-485 links up to 2 Km over dual multi-mode fiber. The 1104 can be used to connect host computers/controllers to Programmable Logic Controllers (PLCs), environmental control systems, patient monitoring systems, etc.

RS-485 Related Questions

What is RS-485?
RS-485 is a data communications interface standard approved by the Electronic Industries Association (EIA) for multipoint communications with serial devices. RS-485 standards, as well as RS-422/423, were designed to replace the older RS-232 standard because they support higher data rates over longer distances and offer greater immunity to electrical interference.

RS-485 offers bi-directional, half-duplex, multipoint communications over single or dual twisted pair cable. Maximum cable length is up to 4,000 feet (1.22 Km). Up to 32 nodes are allowed on one multipoint network. Data rates of up to 10 Mbps are supported over short distances and up to 115.2 Kbps are supported at the 4,000 feet distance limit.

How many wires does the Model 1104 require to operate?
The Model 1104 supports 2-wire, half-duplex, RS-485 communications and therefore requires 2 wires on the RS-485 side to operate.

What RS-485 data rates does the Model 1104 support?
The Model 1104 will support RS-485 data rates up to 115.2 Kbps.

Does the Model 1104 operate in pairs?
Yes, two (2) Model 1104s connected by dual multimode fiber are required to operate. The Model 1104 is not compatible with other fiber converters or equipment.

Will the Model 1104 support a multipoint RS-485 network?
Yes, the Model 1104 supports multipoint RS-485 networks. This is accomplished on the RS-485 side of the 1104 by connecting the + and - Data I/O pins to the RS-485 2-wire network.

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Fiber Related Questions

What type of fiber does the Model 1104 require to operate?
The Model 1104 is optimized to work with 62.5/125μ multimode fibers with a wavelength of 850 nm.

How many fiber strands does the Model 1104 require?
Two strands (dual) of multimode fiber are required for the 1104 to operate, one to transmit (TX) and one to receive (RX).

What type of fiber connector options does the Model 1104 offer?
The Model 1104 comes standard with ST type fiber connectors. No other fiber connector options are available at this time.

What are the fiber distance capabilities of the Model 1104?
The Model 1104 can extend distances up to 1.25 miles (2.01 Km) using dual 62.5/125μ multimode fiber.

What type of line coding does the Model 1104 support?
The Model 1104 uses a proprietary line coding technique that requires the Model 1104 to operate in pairs.

Power Supply

What are the power supply options for the Model 1104?
The Model 1104 comes standard with an external universal input (100 – 240VAC) power supply that provides an output of 9 VDC (1.3A). Country specific power cords are ordered separately. No other power supply options are available at this time.