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Model 9271/9271A - Auto- Powered Fiber Optic Line Driver
Reference Manual

Warranty

TELEBYTE warrants the equipment to be free from defects in material and workmanship, under normal and proper use and in its unmodified condition, for 12 months, starting on the date it is delivered to you. TELEBYTE's sole obligation under this warranty shall be to furnish parts and labor for the repair or replacement of products found by TELEBYTE to be defective in material or workmanship during the warranty period. Warranty repairs will be performed at the point of manufacture. Equipment approved for return for warranty service shall be returned F.O.B. TELEBYTE factory and will be redelivered by TELEBYTE freight prepaid, except for non-continental U.S.A. locations. Non-continental deliveries will be sent COD freight plus import/export charges.

The above warranty is in lieu of all other warranties, expressed or implied, statutory or otherwise, including any implied warranty of merchantability or fitness for a particular purpose. TELEBYTE shall not be liable for any damages sustained by reseller or any other party arising from or relating to any equipment failure, including, but not limited to consequential damages nor shall TELEBYTE have any liability for delays in replacement or repair of equipment.

Out of warranty equipment may be returned to the Greenlawn, NY customer service facility prepaid as described above. Return shipping charges will be billed to the customer. The repaired unit will have a 90-day warranty. In those cases where "NO TROUBLE" is found, a reduced charge will be billed to cover handling, testing and packaging.

Whether in or out of warranty, a Return Material Authorization (RMA) number is necessary and can be obtained by calling (631) 423-3232 or 1-(800) 835-3298, by faxing (631) 385-8184/7060 or by e-mailing us at support@telebyteusa.com. You can also visit us on the web at www.telebyteusa.com/rma.htm. Reference the RMA number on the outside container.

Document 0315-0319 Rev -

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1.0 General Description

The Model 9271, Auto-Powered Fiber Optic Line Driver, provides full duplex, asynchronous communication over two fibers. The Model 9271 will allow for communication in harsh/hostile environments and has the benefit of immunity from EMI/RFI interference. In addition, it provides secure data transmissions. The Model 9271A comes with an AC power transformer.

2.0 Specification

2.1 Interface

Conforms to EIA RS-232C and CCITT, V.24 specifications

- Pins 3 and 2, "Transmit" and "Receive Data," are switch selectable.
- Pin 7 is internally connected to Pin 8.
- Pins 6, 1, and 4 are internally connected.
- Pin 5 is the Signal Ground.

2.2 Connections

2.2.1 RS-232

RS-232 9271 & 9271A Female DB-9

2.2.2 Fiber Optic

Both models have ST Connectors

2.3 Data Rate

300Baud to 115.2 KBPS

2.4 Operating Distance

Fiber Diameter (Microns) (Core/Cladding)	Distance (Meters/Feet)
50/125	1400/4600
62.5/125	2000/6500
100/140	2600/8500

2.5 Wave Length

850 NM

2.6 Power Budget

With 62/125 micron fiber 12db

2.7 Power

The Model 9271 power is derived from an RS-232 interface.

Model 9271A is supplied with a small transformer that connects to 115VAC (1510-0033) or an optional 220 VAC (1510-0034).

2.8 Size

2.0" W x 3.3" L x 1.45" H

5.0 cm x 8.4 cm x 3.7 cm

2.9 Environment

0, sup > 0 to 50o C, 5 to 95% RH

3.0 Installation

3.1 Digital Interface

The digital interface for both the 9271 and 9271A is a DB-9.

3.2 Fiber Interface

The fiber interface is an ST connector.



Figure 1: The Model 9271/9271A

4.0 Operation

The Model 9271 comes equipped with a switch that allows pins 2 and 3 of the RS-232 connector to be reversed.

When the "DCE" position, pin 2 of the RS-232 connector is an output (transmit to host device) and pin 3 is an input.

When the switch is reversed, pin 2 becomes an input and pin 3 becomes an output.

Note: When interfacing to a terminal or PC the switch should be in the "DCE" position.

5.0 Troubleshooting

Operation can be verified if one of the devices to which the modems are attached is capable of operating in a full duplex mode, such as terminal.

- 1) Connect the 9271 to the terminal.
- 2) Using a short piece of fiber with two ST connectors, connect the transmitter back to the receiver.
- 3) If the modem is functioning, any data entered on the keyboard will appear on the screen.

6.0 Connector Pin

Pin	EIA	CCITT	Name	Note
1	CF	109	Data Carrier Detect	***
2	BB	104	Receive Data	*
3	BA	102	Transmit Data	*
4	CD	1082	Data Terminal Ready	***
5	AB	102	Signal Ground	
6	CC	107	Data Set Ready	***
7	CA	105	Request to Send	**
8	CB	106	Clear to Send	**

* These signals can be reversed using the selector switch.

**Connected together.

*** Connected together.

7.0 Power

The Model 9271 can be powered in one of two ways:

One:

The unit derives positive power from pins 1, 4, 6, 7, and 8 (if available) and negative power from the data input pin (must be at least - 5.0V in its quiescent state with the 9271 attached).

Two:

If the device the unit is connected to does not support any control signals, all power is then derived from the data input signal (must be at least - 5.0V in the quiescent state and with the 9271 attached.)

The Model 9271A is powered from the DC transformer supplied.

8.0 Assistance

If you require assistance, please call Telebyte Customer Service at (631) 423-3232, fax us at (631) 385-8184 or e-mail us at support@telebyteusa.com.

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