



RS-232 to RS-485 Converter Installation Instructions

Specifications:

Mechanical

2.74" W x 4.6" L x 1.4" H

Electrical:

Operating Voltage: 12-24 VAC/DC

Current Draw: XXmA (typical)

Environmental:

Environment: For indoor use only.

Temperature Tolerance: -20° to 130° F

Description:

The IEI RS-232 to RS-485 Converter is used to communicate with an RS-485 device using a PC. A computer COM port communicates using RS-232 protocol and the converter is required to convert the data to RS-485.

Packing List:

- 1 RS-232 to RS-485 Converter
- 1 Installation Instructions
- 1 6-foot straight cord
- 1 DB-9 Serial Connector
- 1 DB-25 Serial Connector

Connecting power to the converter

The converter can be powered with 12 to 24 Volts AC or DC. The power supply is connected to the V+ (pin 1), V- (pin 2) and EGND (pin 3) terminals on TS1. The diagram on the next page shows the terminal strip location. To access the terminal strip you must remove the cover. The cover is secured with 4 screws on the bottom side.

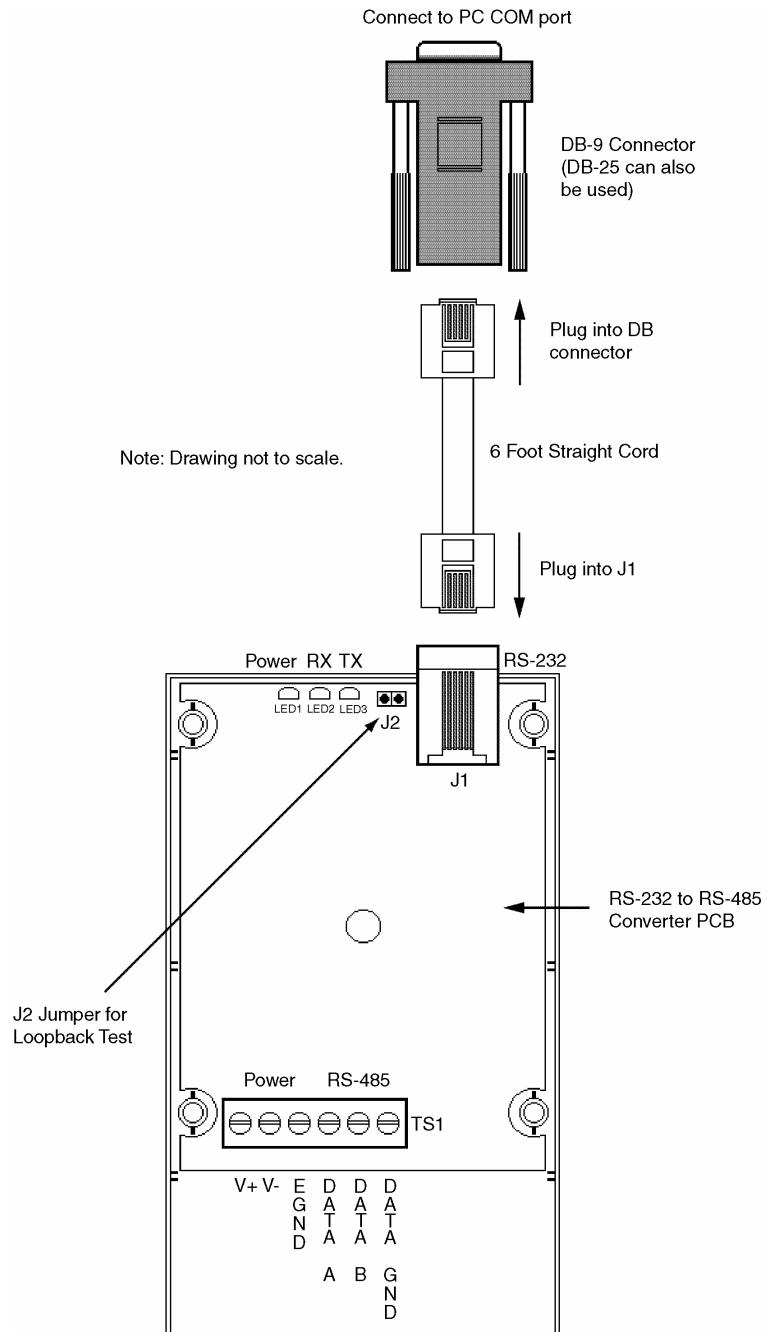
Connecting the RS-485 device

The RS-485 device is connected to the Data A (pin 4), Data B (pin 5) and Data GND (pin 6) terminals on TS1. The diagram on the next page shows the terminal strip location. To access the terminal strip you must remove the cover. The cover is secured with 4 screws on the bottom side.

The recommend cable for RS-485 networks is 24 AWG, shielded two twisted-pair telephone cable with a shunt capacitance of 16pF/Ft. Devices can be wired up to 4000 feet from the converter. When connecting multiple devices to the converter wire them in parallel.

Connecting the converter a PC COM port:

To connect the converter to your PC COM port, first plug the 6 foot straight cord into J1 on the converter. Then plug the straight cord into the DB connector. Next connect the DB connector to your COM port. You can use either the DB-9 or DB-25 connector, depending on your COM port. The diagram below shows this connection.



LED Indicators:

The converter is equipped with three status LEDs with the following functions:

LED1: Power LED (green). This LED indicates the unit is powered.

LED2: RX LED (yellow). This LED indicates data is being sent from the PC to the device.

LED3: TX LED (yellow). This LED indicates data is being sent from the device to the PC.

Performing the Loopback Test

If you are unable to communicate to your device there may be a problem with the RS-232 connections to the converter. On the converter board there is a loopback jumper labeled J2, which is next to the RJ-11 jack (see diagram above). To access the jumper you must remove the cover on the converter. Use this jumper and the COM port test supplied with Hub Manager PC software to perform this test. Follow the steps below to perform the loopback test.

1. Power down the RS-232 to RS-485 converter.
2. Start the COM port test
3. Verify the COM port you are using is available for use.
4. When the COM port test tells you to connect the loopback connector, place the J2 jumper cap on both pins. The 6 foot straight cord must be connected to J1 on the converter before continuing.
5. Continue with the test and verify the COM port you are using says "Test Connector Found"
6. Remove the J2 jumper cap and place it on one pin.

If the COM port test passes then you have verified that the RS-232 connection from the PC to the RJ-11 jack on the converter is functioning properly. This test only tests the COM port, serial cable (if used), DB connector, 6 foot straight cord and the RJ-11 jack on the converter. This test does not test the RS-232 to RS-485 converter itself or the RS-485 connection to your device.



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