

CNV-100

2 to 4 Wire Converter for Modbus® Networks

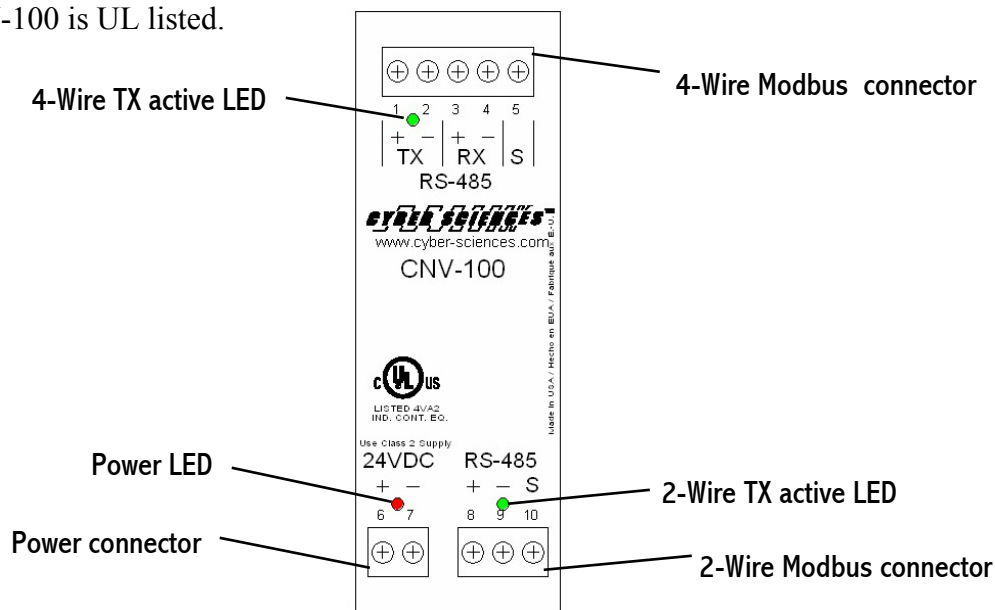
Introduction

The Cyber Sciences CNV-100 can be used to connect two-wire Modbus devices to a four-wire Modbus network, or alternatively to connect a four-wire device to a two-wire Modbus network. More exotic configurations are also possible, such as converting from four-wire to two-wire and back to four-wire. As dictated by the Modbus specification, both 2-wire and 4-wire CNV-100 interfaces utilize RS-485 signal levels.

The CNV-100 will work satisfactorily on Modbus networks operating at the following Baud rates: 9600, 19,200, and 38,400. No adjustment of the unit is required. Use of the CNV-100 on networks operating at other speeds is not recommended.

The CNV-100 is intended to be DIN rail mounted and has an integrated mounting foot for that purpose. LEDs are provided to indicate presence of 24 VDC control power and serial data transfer in both directions.

The CNV-100 is UL listed.



DANGER

HAZARD OF ELECTRIC SHOCK, BURN, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E.
- Only qualified electrical workers should install and wire this unit.
- Turn off all power supplying this unit and the equipment in which it is installed before working on it.
- Always use a properly rated voltage sensing device to confirm that all power is off.

Failure to observe these instructions will result in death or serious injury.

Installing the CNV-100

The CNV-100 is installed by executing the following steps:

1. Plan your 2-wire network.
2. Plan your 4-wire network.
3. Mount the CNV-100.
4. Make the 2-wire and 4-wire network connections to the CNV-100 according to the device label.
5. Power the CNV-100.
6. Test: The power LED should be illuminated. The 4-wire LED will be illuminated when valid data from the 2-wire network is retransmitted on the 4-wire network. Conversely, the 2-wire LED will be illuminated when valid data from the 4-wire network is retransmitted on the 2-wire network.

Specifications

Power Requirements :	24 Volts DC at approximately 50mA (3kV minimum isolation)
Dimensions :	4.1L x 1.5W x 1.5H in (10.5 x 3.8 x 3.8 cm)
Temperature Rating :	-20 to +70 degrees C
Humidity Rating :	0 to 95% non-condensing
Data Rates Supported :	9600, 19,200, 38,400 Baud
Mounting :	Standard DIN rail
Surge Suppression :	Bi-directional over-voltage surge suppressors on all RS-485 lines
Isolation :	No Isolation is provided by this device. The external power supply should maintain a minimum of 3kV RMS isolation. The 3090PS24 power supply from Square D provides the correct output voltage, power rating, and isolation.

Cyber Sciences Inc.
PO Box 10188
Murfreesboro, TN 37129
(615) 890-6709