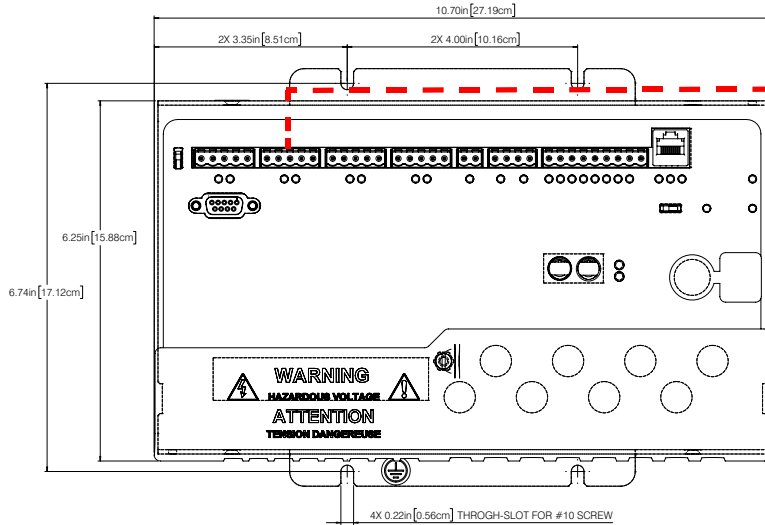


# Nexus® 1450 Meter Quickstart Guide

## Mechanical Installation:

Mount the Nexus® 1450 Meter against any firm, flat surface. Use a #10 screw in each of the four slots on the flange to ensure that the unit is installed securely. For safety reasons, mount the meter in an enclosed and protected environment, such as in a switchgear cabinet. Install a switch or circuit breaker nearby; label it clearly as the meter's disconnecting mechanism.



Connect from one of the meter's RS485 ports to the RS485 connection on the back of this display

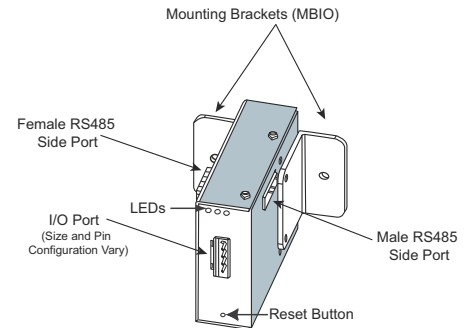
## Installing an External Display:

The LED Display Model # P40N+ (shown above on the right) mounts using a standard ANSI C39.1 drill plan. Secure the four mounting studs to the back of the panel with the supplied nuts. Insert one end of the supplied RS485 cable into one of the meter's RS485 ports set to Modbus RTU, Slave, Address 1, and Baud Rate of 9600. Insert the other end of the cable into the back of the P40N+ display.

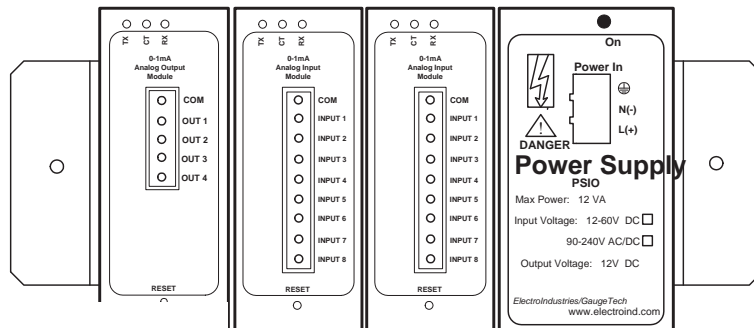
**NOTE:** RS485 communication is viable for up to 4000 feet (1220 meters). If your cable length exceeds 200 feet you must use a remote power supply, such as the PSIO.

## Installing Input Output (I/O) Modules:

1. Secure the mounting brackets to the I/O module using the supplied screws (#440 pan-head screws).
2. Secure the brackets to a flat surface using a #8 screw with a lock washer.
  - Six feet of RS485 cable harness is supplied. Using the cable, connect the I/O module's male RS485 side port to the meter's Port 4.
  - If multiple I/O modules are connected together, secure a mounting bracket to both ends of the group. (See figure below.) Connect multiple I/O modules by connecting the male RS485 port on one module to the female RS485 port on the next module.

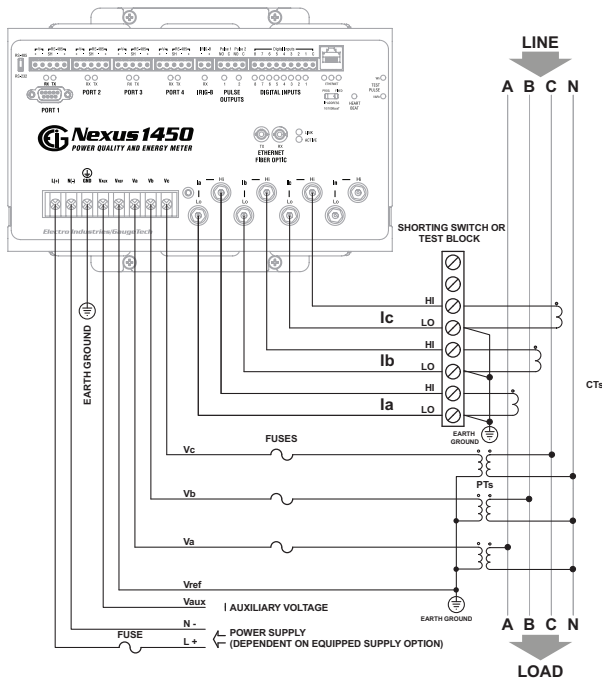


See Chapter 10 of the meter's User Manual for more information.

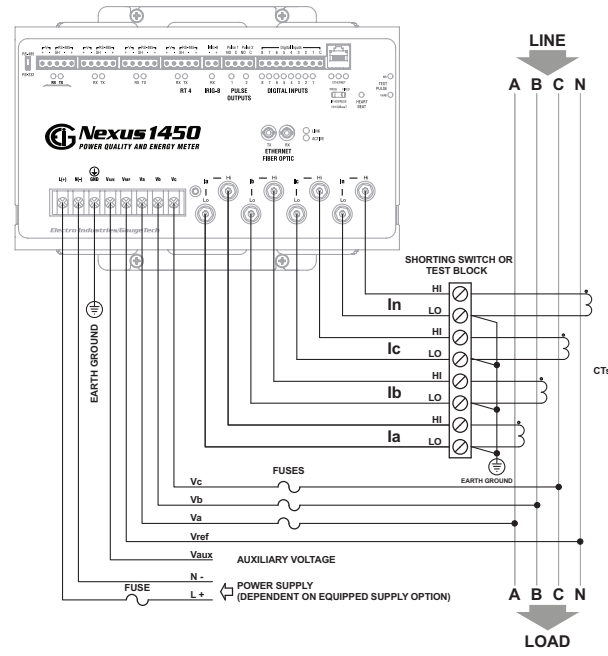


**Wiring Diagrams:**

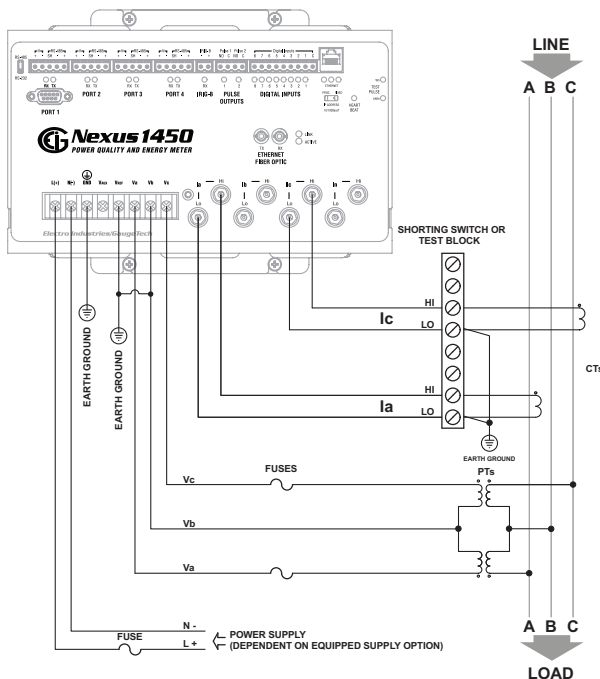
Please refer to the **Nexus® 1450 Meter User Manual** for additional wiring diagrams and information.



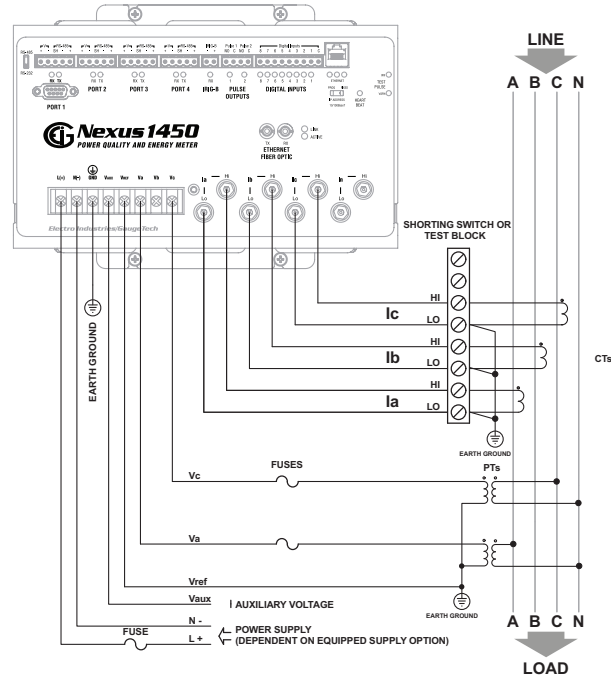
4 Wire 3 Element with 3 PTs and 3 CTs



4 Wire 3 Element Direct Voltage with 4 CTs



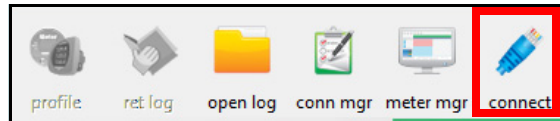
3 Wire 2 Element Open Delta with 2 PTs and 2 CTs



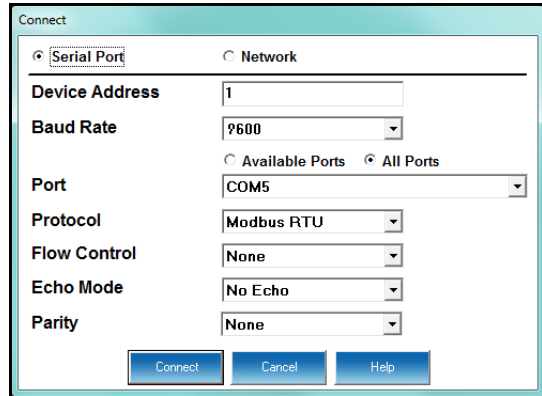
3 Phase 4 Wire 2.5 Elements with 2 PTs and 3 CTs

**Programming the Meter through Communicator EXT™ 4.0 Software**

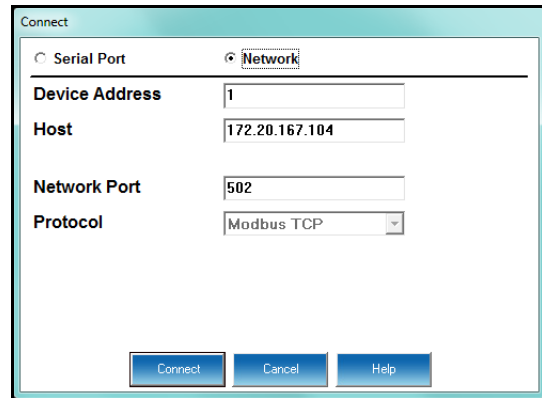
1. From the Communicator EXT™ software’s Main screen, click the Connect icon in the Icon Bar.



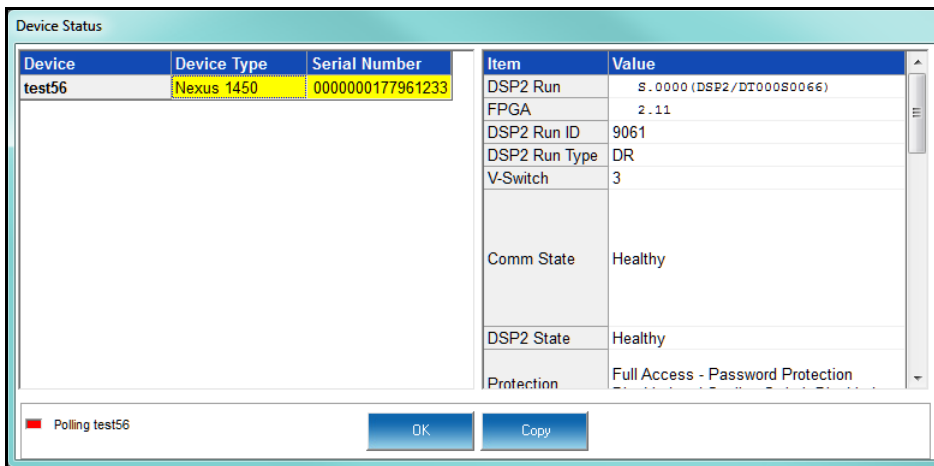
- If you are connecting through a serial port (ports 1-4), use a cable to communicate from the meter to your PC and click the Serial Port radio button.
  - a. Enter device address.
  - b. Select baud rate (default for both RS485 and RS232 ports is 9600), communication port you are using, protocol (default for RS485 is Modbus RTU and for RS232 is Modbus ASCII), and parity (for RS485 - the default is None). You can leave the other fields as they are.
  - c. Click Connect.



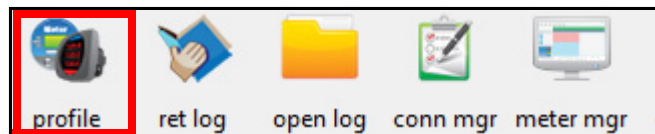
- If you are connecting through an Ethernet port, click the Network radio button.
  - a. Enter device address.
  - b. Enter the meter’s IP address
  - c. Enter the Network port (the default is 502).
  - d. Network protocol is Modbus TCP.
  - e. Click Connect.



2. The Device Status screen opens, displaying information about the meter.



3. Click OK to close the Device Status screen, and then click the Profile icon in the Icon Bar.



4. The meter’s Device Profile screen opens, giving you access to the programmable settings for the meter.

**Program CT, PT Ratios:**

1. From the Device Profile screen, double-click General Settings>CT, PT Ratios and System Hookup>one of the items in the list.
  - a. Enter CT Ratios Primary (1-65535). The Secondary is display only.
  - b. Enter PT Ratios Primary (1-99999999) and Secondary (1-65535) voltage.

Example CT Setting:

200/5 Amps: set the Primary current value as 200.00.

Example PT Settings:

14400/120 Volts: set the Primary voltage value as 14400.00; set the Secondary voltage as 120.00.

- c. Select the Hookup (e.g., Wye).
- d. Operational Frequency Range is display only.
- e. Click OK.

CT Ratio			PT Ratio (Line to Neutral)		
	Primary Current	Secondary Current		Primary Voltage	Secondary Voltage
I A, B, C	5000.00	5.00	V A, B, C	14400.00	120.00
I N	5000.00	5.00	V AUX	14400.00	120.00

Hookup: Wye

Operational Frequency Range: 45Hz to 69Hz

**Program Communications Setting:**

1. From the Device Profile screen, double-click General Settings>Communications>one of the listed ports.
2. The settings shown here for the four serial ports (ports 1-4), the Main Network card (port 5), and the Fiber Optic Network card (port 6) are the default settings. You can change the settings, if necessary for your system.

- a. For the serial ports, the settings are Address, Baud Rate, Data Bits, Parity, Stop Bits, Tx Delay, Protocol, and Mode.
- b. For the Network card ports, the settings are IP Address, Subnet Mask, and Default Gateway.
- c. The Advanced Settings button lets you set up additional features for the Network cards. See the *Communicator EXT™ 4.0 and MeterManager EXT Software User Manual* for instructions on these settings.
- d. Click OK.

Serial port 1: Address 1, Baud Rate 9600, Data Bits 8, Parity None, Stop Bits 1, Tx Delay 20ms, Protocol Modbus RTU, Mode Slave

Serial port 2: Address 1, Baud Rate 9600, Data Bits 8, Parity None, Stop Bits 1, Tx Delay 20ms, Protocol Modbus RTU, Mode Slave

Serial port 3: Address 1, Baud Rate 9600, Data Bits 8, Parity None, Stop Bits 1, Tx Delay 20ms, Protocol Modbus RTU, Mode Slave

Serial port 4: Address 1, Baud Rate 9600, Data Bits 8, Parity None, Stop Bits 1, Tx Delay 20ms, Protocol Modbus RTU, Mode Slave

Main Network Card Settings(Port 5 RJ45): IP Address 172.20.166.57, Subnet Mask 255.255.248.0, Default Gateway 172.20.161.23

Optional Network Card Settings(Port 6 Fiber): IP Address 10.0.1.11, Subnet Mask 255.255.0.1, Default Gateway 10.0.0.17

**IMPORTANT!** When you have made changes to the meter’s Device Profile, click Update Device at the bottom of the Device Profile screen, to send the new settings to the meter.

**NOTE:** For additional meter operation and programming information, refer to the *Nexus® 1450 Meter Installation and Operation Manual* and the *Communicator EXT™ 4.0 and MeterManager EXT Software User Manual* on the Nexus® Series CD. You can also view the software manual by clicking the Help button on a settings screen, or by selecting Help>Contents from the top of the Communicator EXT™ software’s Main screen.