Quick Start Guide **IM02601002E** Effective April 2017

PXM 2250
PXM 2260
PXM 2270
PXM 2280
PXM 2290

Power Xpert Meter 2000 Series

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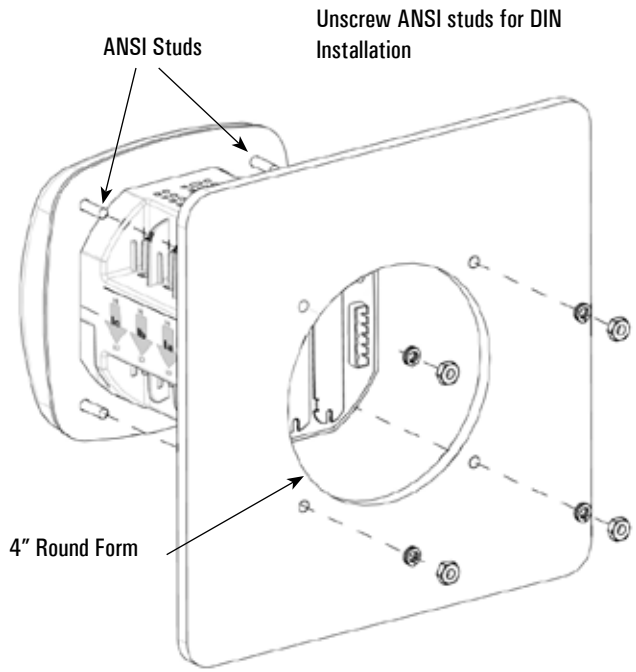
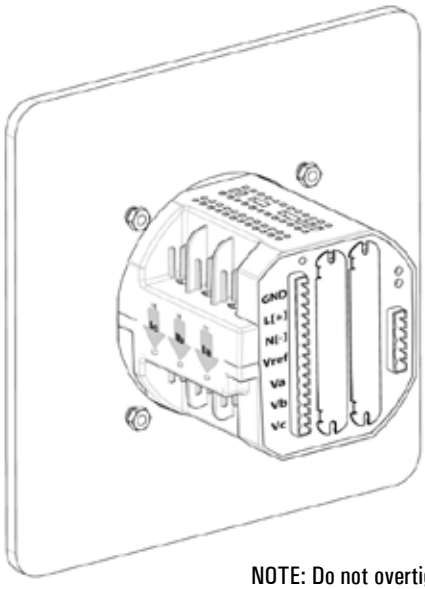
Mechanical Installation

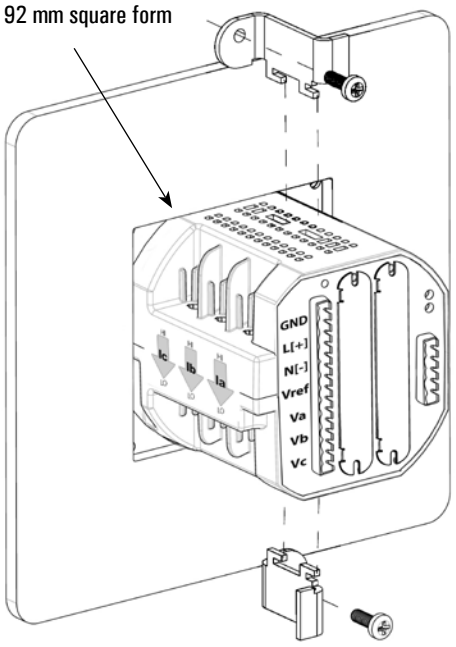
4" Diameter round mounting

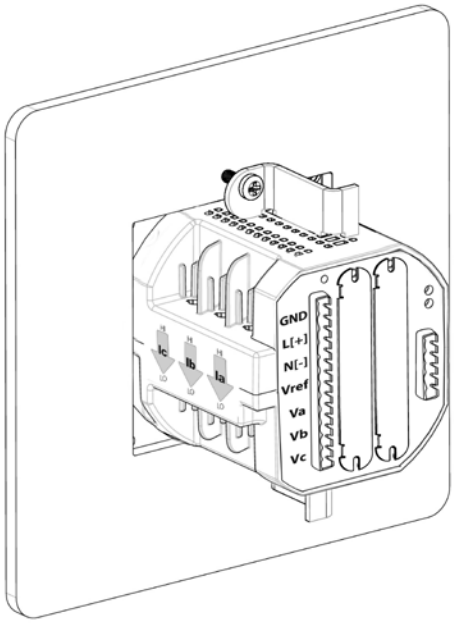




NOTE: Do not overtighten nuts. The maximum installation torque is 0.4 Newton-Meter.

92 mm Square Form

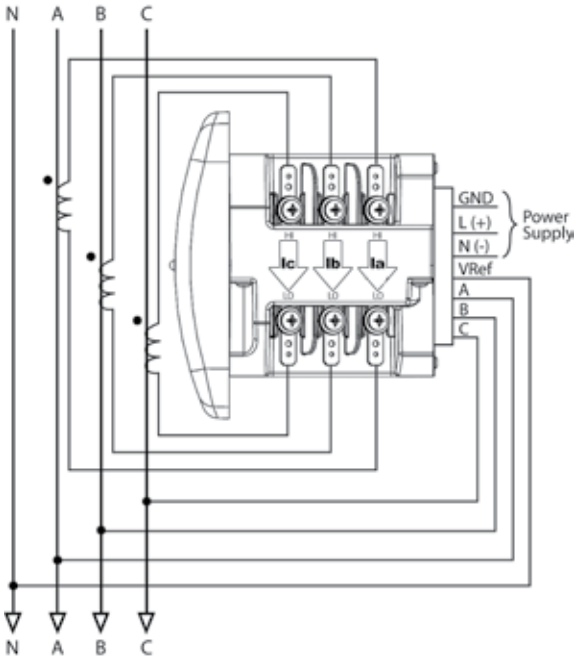




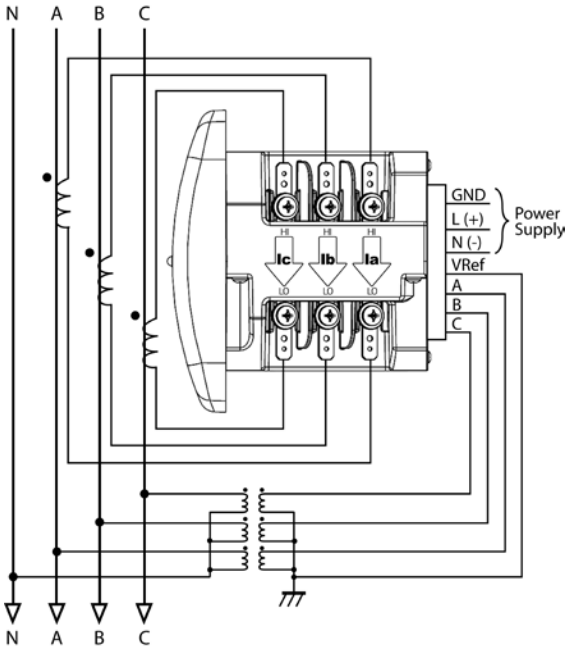
Electrical Wiring

Note: Other wiring configurations are available. See the *Power Expert Meter 2000 User and Installation Guide* for additional information

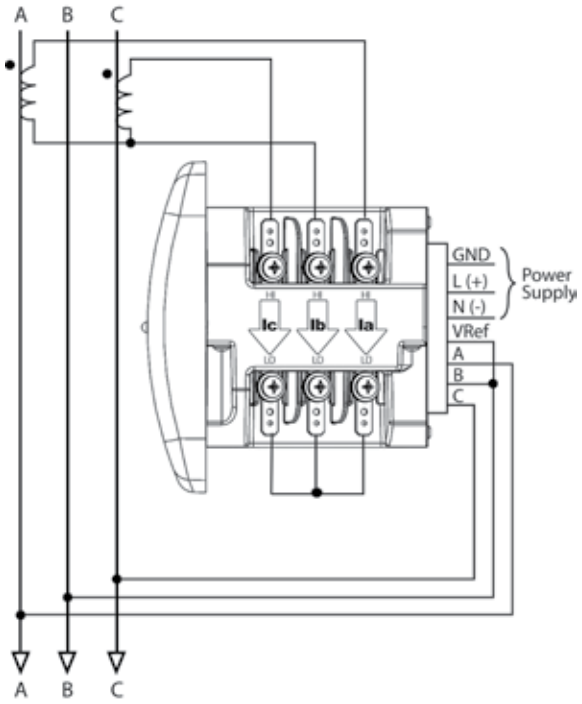
WYE Direct 3 Phase, 4-wire



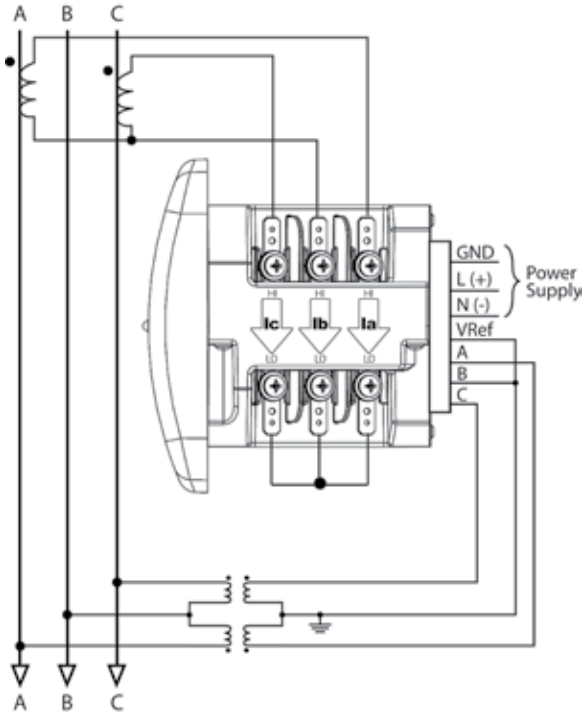
WYE with PTs 3 Phase, 4-wire



DELTA Direct 3 Phase, 3-wire



DELTA with PTs 3 Phase, 3-wire



Network Planning

The hardware for the Power Xpert Meter 2000 family is similar to other EATON IQ 250 and 260 meters except that these meters include an integrated, multi-function Ethernet network gateway card. The Power Xpert Meter 2000 Gateway Card provides many of the features found in the rest of the Power Xpert line of meters, including:

- Local web server
- Modbus/TCP communitations
- SNMP communications
- BACnet/IP communications

The Network PC requires a web browser. See the *Power Expert Meter 2000 User and Installation Guide* for additional information.

An Ethernet connection is used for configuring the meter's gateway card communication settings via a web browser. You may need to contact your network administrator for some network and configuration information. In preparation, you will need to decide if the meter will be manually assigned a fixed (static) IP address or will be automatically assigned a fixed IP address by a DHCP server somewhere on the network. With either method the assigned network address must not change once the meter has been deployed. Changing the IP address will cause loss of communication until the associated client PCs change the corresponding meter's IP addresses.

Discuss with your network administrator whether you should manually configure the meter with an assigned IP address or whether the DHCP server will assign one. For the DHCP server to provide a fixed IP address, your network administrator will need to know the MAC address assigned to the meter.

⚠ Caution

Eaton strongly recommends using a fixed IP address if an Eaton PXS system will be accessing the meter. Otherwise, should the IP address change (after a power outage, for example), PXS will no longer be able to access data from the meter.

The MAC address is found on a small label that consists of 14 letters and numbers. It looks something like:

002080850047EF

Locate the MAC address on your meter and record it here.

MAC Address: _____

Is DHCP going to be used to assign the IP address to your meter? ___ Yes ___ No

If Yes:

Provide the MAC address to the network administrator and record the fixed IP address the network administrator will assign to your meter in the DHCP server here:

IP Address:_____

The card will be configured remotely. Skip to the section entitled *Verify the IP address*

If No:

Record the following information provided by the network administrator here:

IP Address: _____

Subnet Mask: _____

Default Gateway: _____

Primary DNS Server IP Address _____

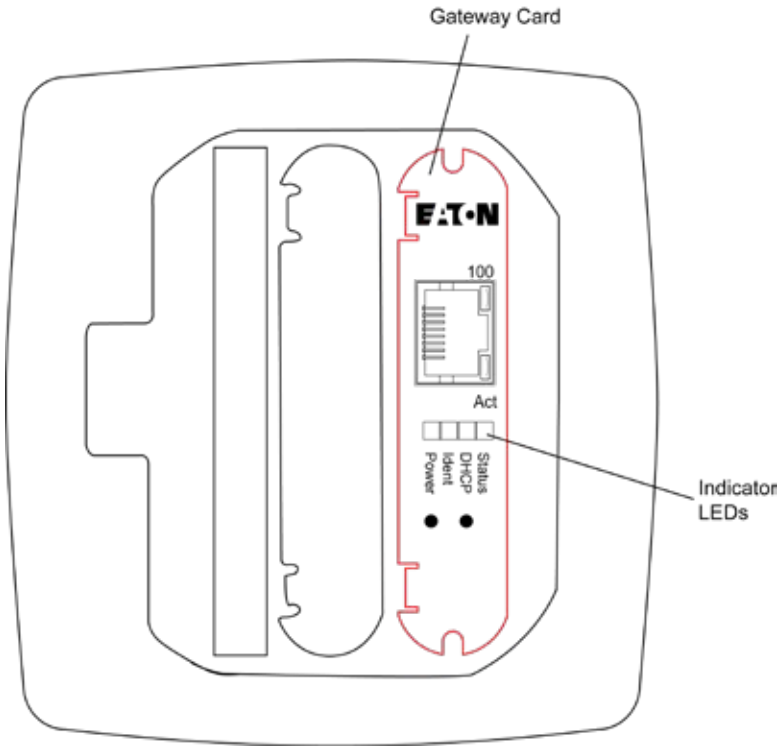
Secondary DNS Server IP Address _____

Locating the Gateway Card

First, ensure power is applied to the meter.

The Power Expert Meter 2000 Gateway Card is the blue card installed in the right-most option slot (slot 2) on the rear of the meter. The card is labeled: Power Xpert Gateway PXM Series 2000.

Location of Gateway Card



There are four indicator LEDs on the gateway card labeled: Status, DHCP, Ident, and Power. When power is applied all the lights should be on for a few seconds and then the right (Power) light should illuminate. This indicates the card has power and is running. The left (Status) light will illuminate after 30 to 60 seconds.

Configuring the Meter's Gateway Card for Network Accessibility

Configuring a Fixed IP Address for the Gateway Card using a local PC

Your network administrator provided an IP address, a subnet mask, and a default gateway (which you entered in the previous section). This information must be entered into the Gateway Card using a local PC, such as a laptop.

This method requires a PC with the following:

- an Ethernet port
- an Ethernet cable (either straight-through or cross-over)
- one of the following web browsers -
  - Microsoft Internet Explorer 11
  - Google Chrome
  - Mozilla Firefox
  - Edge
  - Safari

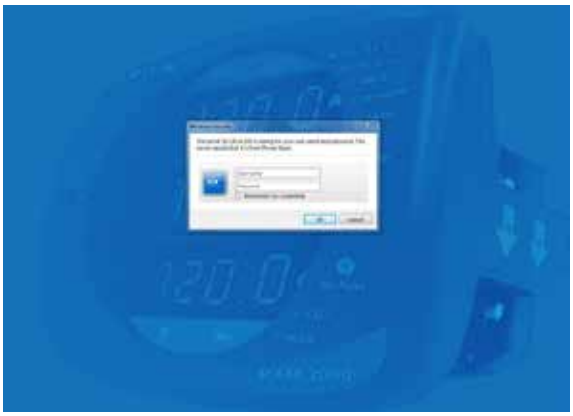
To configure the Gateway Card:

1. Connect the PC to the Gateway Card through an Ethernet cable (either a straight though or cross-over CAT 5 cable).

   There are two green lights (LEDs) located on the gateway card's Ethernet port. If the Ethernet cable is connected to an active Ethernet port on the PC both lights should be illuminated (the light labeled Act may be flickering reflecting network activity).
2. The card's default Ethernet IP address is 192.168.1.1. Set the PC's address to an address on the same subnet, such as 192.168.1.100. To do this, use the following steps:
   a. Click Window's Start.
   b. Then click Settings. Navigate to the Control Panel of your computer.
   c. In the Control Panel, click Network Connections and right-click Local Area Connection. Select Properties from the shortcut menu.
   d. Click the Properties button.
   e. In the Properties dialog box, select Internet Protocol (TCP/IP) and click the Properties button.
   f. In the Internet Protocol (TCP/IP) Properties dialog box, select Use the following IP address and enter the following in the IP address field: 192.168.1.100
   g. Click OK throughout the various dialog boxes.
3. Open the browser and type the IP address of the meter followed by the path "/ca.html" in the address bar. For example: https://192.168.1.1/ca.html. Install the SSL Certificate found on this page. For step by step instructions, see the User and Installation Manual, Section 11.
4. Launch your web browser and navigate to the following IP address: 192.168.1.1

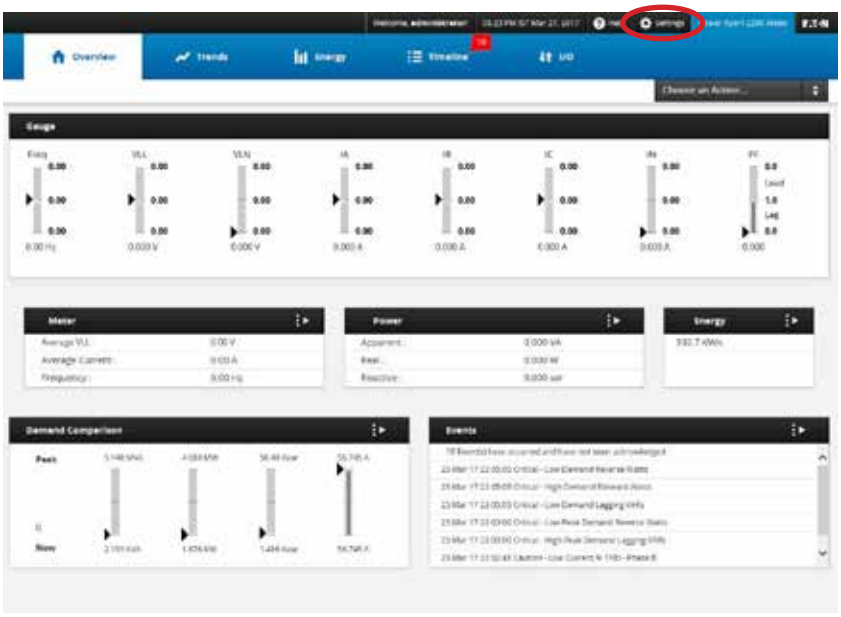
   If an information screen appears stating the certificate cannot be verified and asking if you want to run anyway, select run.

Loading Page



The meter's **Overview** page will appear.

Meter Overview Page



5. Click the **Settings** button. The **Settings** page will appear.
6. Select the Comms tab.

Opening the Comms Tab

7. Expand the Ethernet/LAN Setup section.
8. Click the **Edit** button.

Edit Button (on the right of the page)

You may be prompted to provide administrative credentials.

9. If you successfully logged in as **admin** you may now configure the card for the settings specified by your network administrator. Refer to the previously recorded network settings. You can also enter such optional information as the meter's location, who to contact in case of problems, etc.
10. When you've completed configuration, click the **Save** button.

    The new IP address will take effect shortly after clicking **Save**. The Gateway Card will redirect you to the new IP address and reload the Java applet. You can continue to configure the meter after it is connected to your LAN.

    Refer to the *PXM 2000 Meter User's Guide (IM02601001E)* for additional configuration details.
11. Disconnect the Ethernet cable to the PC and connect the meter to the LAN.

Note: Remember to reconfigure the PC's network settings for your LAN.

This concludes network configuration. You can now proceed to verify the IP address.

Verify the IP address

To check the IP address from the meter's front panel:

1. If the meter has power the display should be showing normal data, such as voltage, current, etc.
2. Push the MENU button on the face of the meter. The main menu screen appears.
3. Push DOWN repeatedly until IP blinks.
4. Push ENTER and the meter's IP address appears, which should appear something like the following:

   010.2
   22.05
   1.066

   In this example the IP address is 010.222.051.066. This should match the address the network administrator provided for this meter.
5. Push MENU to return to the main menu.

Network Access

Once the network IP address is known, most meter functions and configuration can be done via the network. Use a networked client PC and web browser to navigate to the meter's IP address. See the meter's complete user's manual for additional information.

Restarting and Factory Defaults

The gateway card provides the ability to restart and to reset itself to the factory defaults. There is a momentary push-button switch accessed through a small hole in the face plate of the gateway card. Although it is not used in normal operations, this switch allows you to restart the gateway card in the meter.

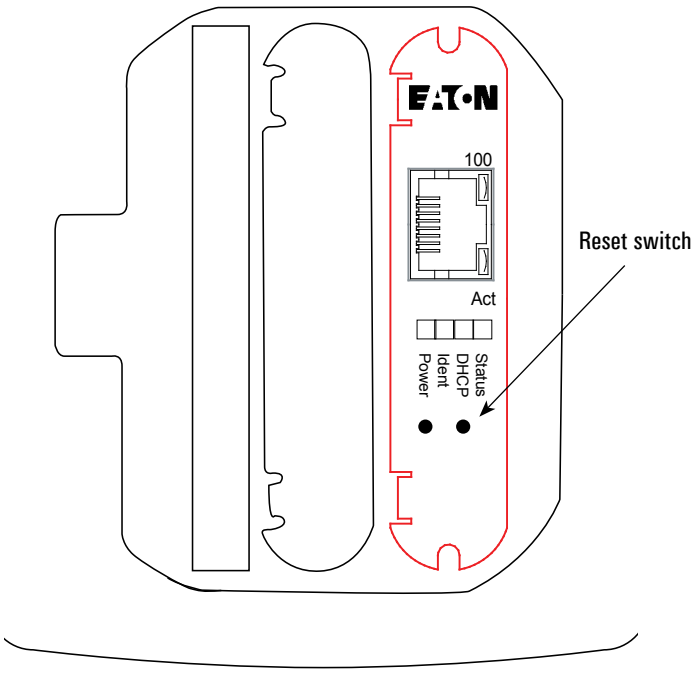
Restart the Gateway Card

The gateway card restart push-button switch is located behind the hole in the card face plate closest to the LED labelled DHCP. This switch is used to restart just the gateway card (not the meter) should it be necessary to recover from some abnormal condition.

Momentarily press the switch by pushing a small device into the hole to activate the switch.

Note: It may take around five minutes before the meter pages begin to display values.

Gateway Card Reset Switch



Additional Information

Detailed information on applications and options can be found in the *PXM 2000 Meter User's Guide (IM02601001E)* on the CD shipped with the meter. The guide can also be found at http://www.eaton.com/meters.

Eaton
Electrical Group
1000 Eaton Boulevard
Cleveland, Ohio 44122
United States
877-ETN-CARE (877-386-2273)
Eaton.com

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