Shark® 100B Meter Quickstart Guide

CAUTION! Installation of the Shark® 100B meter must be performed only by qualified personnel who follow standard safety precautions during all procedures. Those personnel should have appropriate training and experience with high voltage devices. Appropriate safety gloves, safety glasses and protective clothing are recommended.

During normal operation of the Shark® meter, dangerous voltages flow through many parts of the unit, including: Terminals and any connected CTs (Current Transformers) and PTs (Potential Transformers), all I/O Modules and their circuits. All Primary and Secondary circuits can, at times, produce lethal voltages and currents. Avoid contact with any current-carrying surfaces.

Do not use the meter or any I/O device for primary protection or in an energy-limiting capacity. The meter can only be used as secondary protection.

IMPORTANT! Refer to your meter's Installation and Operation Manual for additional safety warnings before performing installation, wiring, or maintenance of your meter. See the link to the manual, below.

NOTE: This Quickstart Guide gives basic installation, wiring, and programming instructions.For additional meter operation and programming information, refer to your meter's *Installation and Operation Manual* and the *Communicator PQA™, MeterManagerPQA™, and EnergyPQA.com™ Software User Manual* on EIG's website:

User Manual:
https://www.electroind.com/products/shark-100b-bacnet-ip-communicating-multifunction-meter/
From the webpage, click Technical Documents>User Manual.

Software Manual:

https://www.electroind.com/products/communicatorpqa-software-application-5/
From the webpage, click Technical Documents>User Manual.

CommunicatorPQA™ Setup Software:

https://www.electroind.com/products/communicatorpqa-software-application-5/
From the webpage, click Download ComPQA Pro. To get a Professional license for the software, email sales@electroind.com or call 516-334-0870.

All EIG's metering and software products' literature can be accessed from:
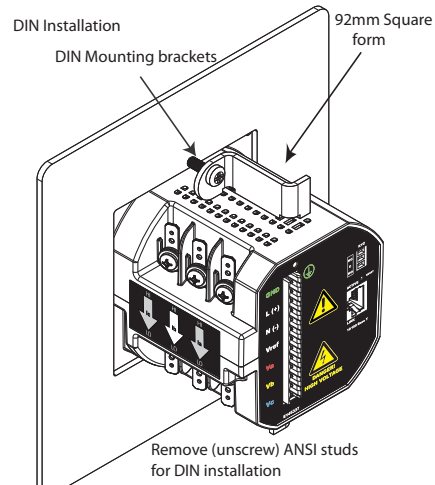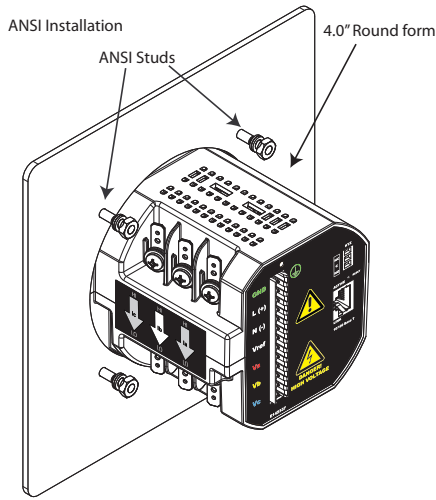https://www.electroind.com/all-products/

For software and metering integration, EIG's Technical Support Engineers are available on an hourly or daily basis to help with typical commissioning assistance, which includes:
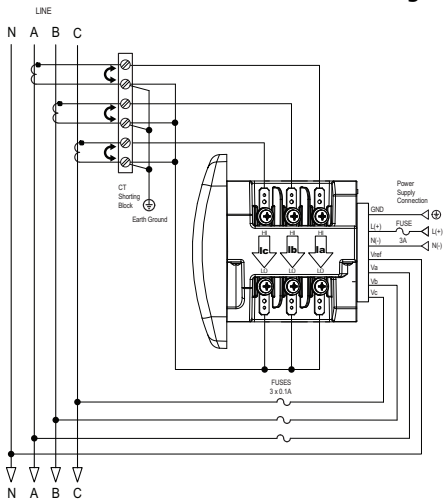
• Verifying meter installation and wiring.

• Verifying proper system integration.

• Working with 3rd parties to ensure cross compatibility.

• Advising users on best practices for optimal implementation.

You can reach Technical Support from 8 a.m. to 8 p.m. EST, Monday-Friday, at 516-334-0870.

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

ANSI Installation
ANSI Studs
4.0" Round form

DIN Installation
DIN Mounting brackets
92mm Square form

Remove (unscrew) ANSI studs for DIN installation
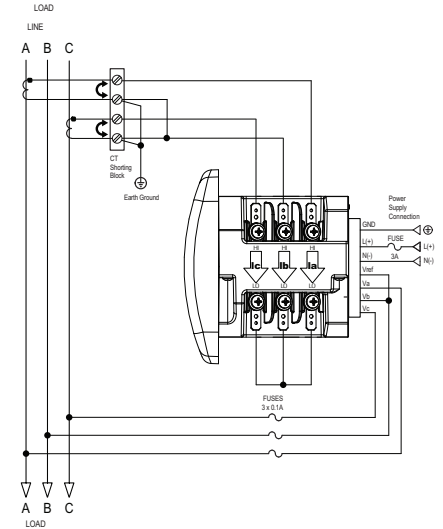
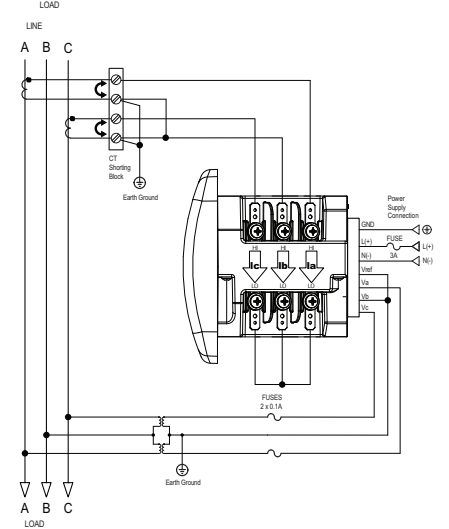**Electrical Installation:** Select diagram for your application.

WYE direct, 3 phase, 4 wire
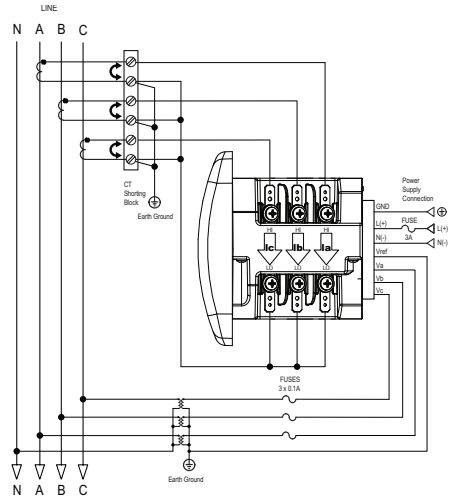
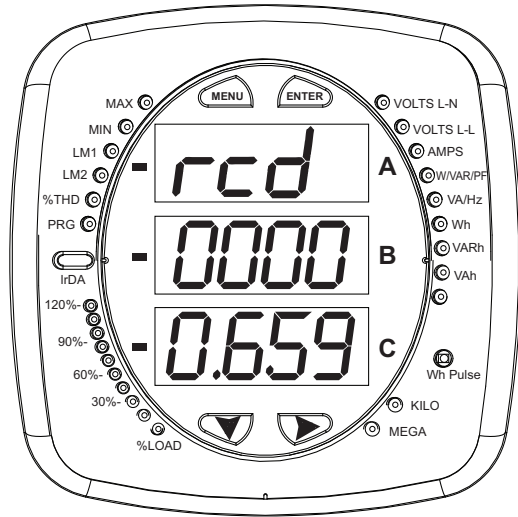WYE with PTs, 3 phase, 4 wire

Delta direct, 3 phase, 3 wire

Delta with PTs, 3 phase, 3 wire

NOTE: Other wiring configurations are available. See the Shark® 100/100B meter User Manual (see page QS-1 for the download link).
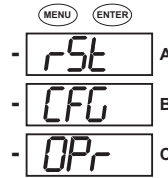
Program Settings Using the Faceplate Buttons:
(MENU, ENTER, DOWN ARROW, RIGHT ARROW)
See the figure on the right for the location of the
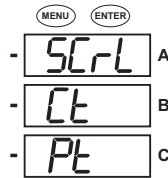faceplate buttons.

Access Configuration Mode:

1. Push the **MENU** button - you will see
   the display on the right; rSt will be
   blinking.

2. Press the **DOWN ARROW** once.
   CFG (Configuration) moves to the
   top of the display.

3. Press the **ENTER** button. You will
   see the Configuration menu, shown
   on the right.

4. Press the **DOWN ARROW** and then press the **ENTER** button. You will see the CT
   numerator setting screen (Ct-n). The current CT numerator is shown in the second
   line. To change the setting, press the **DOWN ARROW** until the value you want is
   displayed. Then press the **RIGHT ARROW** to move to the next digit. Repeat until
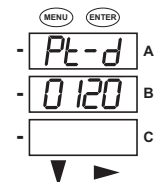   the setting is done.
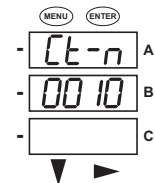
5. Press the **ENTER** button to go to the CT denominator screen (CT-d). This setting is
   display only - it can't be changed.
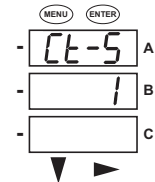
6. Press the **ENTER** button to go to the CT Scaling setting screen (CT-S). The current
   Scaling is shown in the second line. Press the **DOWN ARROW** to choose another
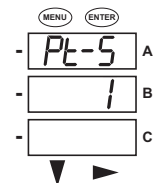   value. You can choose 1, 10, or 100.
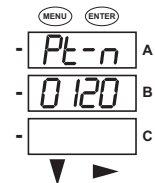
7. Press the **ENTER** button to go to the PT numerator setting screen (Pt-n).The current
   PT numerator is shown in the second line. To change the setting, press the **DOWN
   ARROW** until the value you want is displayed. Then press the **RIGHT ARROW** to
   move to the next digit. Repeat until the setting is done.

8. Press the **ENTER** button to go to the PT-denominator screen (Pt-d). The current
   PT denominator is shown in the second line. To change the setting, press the **DOWN
   ARROW** until the value you want is displayed. Then press the **RIGHT ARROW** to
   move to the next digit. Repeat until the setting is done.

9. Press the **ENTER** button to go to the PT Scaling setting screen (PT-S). The current
   Scaling is shown in the second line. Press the **DOWN ARROW** to choose another
   value. You can choose 1, 10, 100, or 1000.
   NOTE: See example CT and PT Settings beginning on the next page.

10. Press the **ENTER** button to go to the Connection setting screen (Cnct). The current setting is shown in the second line. Press the **DOWN ARROW** to choose another value. You can choose 3 EL (element) WYE, 2 Ct del (Delta), or 2.5 EL WYE.
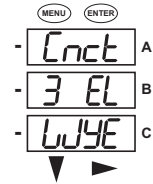
11. Press the **ENTER** button four times. (You will pass through the Address, Baud Rate, and Protocol screens. **You DO NOT change any of the settings on these screens.****You will see the Scroll setting screen (SCrL). The current setting is shown in the second line. Press the **DOWN ARROW** to choose another setting. You can choose YES (the meter readings will scroll on the display) or no (the meter readings will not scroll on the display).
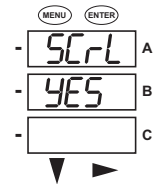
12. Press the **MENU** button twice. You will see the Store Settings screen (Stor ALL?). The default setting is YES. To save the settings you've made, press the **ENTER** button. You will see the confirmation screen (Stor ALL done) and then the meter resets.

   NOTE: If you do not want to save your settings, press the **RIGHT ARROW.** YES changes to no. Press the **ENTER** button.
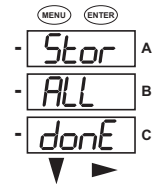
Example CT Settings:

200/5 Amps:	set the Ct-n value as 200, Ct-S value as 1.
800/5Amps:	set the Ct-n value as 800, Ct-S value as 1.
2000/5 Amps:	set the Ct-n value as 2000, Ct-S value as 1
10,000/5 Amps:	set the Ct-n value as 1000, Ct-S value as 10.

Example PT Settings:

14400/120 Volts:	set the Pt-n value as 1440, Pt-d value as 120, Pt-S value as 10.
138000/69 Volts:	set the Pt-n value as 1380, Pt-d value as 69, Pt-S value as 100.
345000/115 Volts:	set the Pt-n value as 3450, Pt-d value as 115, Pt-S value as 100.
345000/69 Volts:	set the Pt-n value as 345, Pt-d value as 69, Pt-S value as 1000.

**The default communication settings are Address 001, Baud Rate 57.6, and Protocol Mod rtU (Modbus RTU). In the event that the communication settings are accidentally changed, change them back to these default values.

NOTE: For additional wiring options, meter configuration screens, and instructions on using the Shark® 100B's BACnet®*, refer to the *Shark® 100/100T/100B Meter Installation and Operation Manual* and the *CommunicatorPQA™, MeterManagerPQA™, and EnergyPQA.com™ Software User Manual* (see page QS-1 for the download links).