Shark® 250T Quickstart Guide

Mechanical Installation:

Installation Steps: Slide top groove of meter onto DIN Rail. Press gently until the meter clicks into place. If mounting with DIN Rail provided, use Black Rubber Stoppers (also provided) shown above. To remove meter, pull down on Release clip. **Electrical Installation:** Select diagram for your application.

**DIN Installation**

**NOTE:** Other wiring configurations are available. See the full User Manual on the enclosed CD.
Communication Wiring: The Shark® 250T meter’s RS485 port uses standard 2-wire, half duplex architecture.

Factory Initial Default Settings: When the Shark® 250T is powered up, for 10 seconds you can connect to the meter using the Factory Default Settings (even if the Device Profile has been changed). After 10 seconds the Device Profile reverts to the actual Device Profile in use. This is one way you can always connect to the meter. The Factory Initial Default Settings are:
- Device Address: 1
- Baud Rate: 57600
- Protocol: Modbus RTU

Connection Steps:
1. Open Communicator EXTTM software (download from product CD).
2. Click Connect on the Icon Bar.
3. You will see the Connect screen. Make sure your settings match the ones shown on the right (use pull-down menus).

![Connect screen](image)

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

![Device Status screen](image)

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

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

**NOTE:** A few basic settings are explained here. Refer to the Shark® 250 Meter Installation and Operation Manual and the Communicator EXT™ 4.0 and MeterManager EXT Software User Manual on the Shark® Series CD for expanded instructions. 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.
Program CT, PT Ratios:
1. The first Device Profile screen is the CT, PT Ratios and System Hookup. If you were on another setting screen, double-click General Settings>CT, PT Ratios and System Hookup>one of the items in the list to redisplay this screen.

a. CT Ratio, enter:
   - Primary (CT Numerator): 1 - 9999
   - Secondary (CT Denominator): 5 or 1 Amp

b. PT Ratio, enter:
   - Primary (PT Numerator): 1 - 9999
   - Secondary (PT Denominator): 1 - 9999

Example Settings:
For a CT of 2000/5 A, set the following CT Ratios in the entry fields:
   CT Numerator (Primary)    2000
   CT Denominator (Secondary)    5
   The Current Full Scale field will read 2000.

For a system that has 14400 V primary with a 120 V secondary line to neutral (PT Ratio of 120:1), set the following PT Ratios in the entry fields:
   PT Numerator (Primary)    1440
   PT Denominator (Secondary)    120
   The Voltage Full Scale field will read 14.4k.
c. System Wiring, select from pull-down menu:
   - 3 Element Wye; 2.5 Element Wye; 2 CT Delta
   This value must be set properly for the meter to calculate readings correctly.

d. Use the Minimum Voltage Threshold box to enter the minimum voltage threshold, which is a percentage of the voltage full scale. This setting adjusts the pick up threshold for the voltage. You set a percentage of the PT primary (PT numerator X PT multiplier) up to 12.7 in the entry field, to configure when the meter will start reading values above 0 voltage.

e. Total Demand Distortion (TDD Setting): This setting of the Device Profile allows you to set the maximum value for current, which is used for the TDD (Total Demand Distortion) calculation. TDD is an index used to measure harmonics. In this field enter the maximum load current for TDD. To disable TDD, enter 0 in the field.

f. CT Reversal Phase Enables: Use this setting to enable CT reversal for any phase. This feature is useful if a CT is wired the wrong way and you do not want to (or cannot) change the wiring. This setting is only available for a three element WYE hookup. For any other hookup, this setting will be ignored.

**Program Communications Setting:**

1. From the Device Profile screen, double-click General Settings>Communications>a listed port.

![Communications](image)

2. The setting shown here is for the meter's RS485 port. Enter:
   - Address (1-247 for Modbus); (1-65520 for DNP)
- Protocol (Modbus RTU, Modbus ASCII, or DNP3)
- Baud Rate (1200, 2400, 4800, 9600, 19200, 38400, or 57600)
- Response Delay (0 - 750 in 50 ms increments)
  Response Delay is the delay the meter should use before responding to queries.
- Parity (Odd, Even, or None)

**Program Meter Time:**

The meter is preset to Eastern time. To change the meter time:

1. From the Main screen's Title bar, click Tools>Set Device Time.
2. You can either enter the time in the Time fields, or click Use PC Time to set the time using your PC's time.
3. Click Send.

**NOTE:** The meter offers multiple Time Synchronization methods. See Chapter 28, Section 28.1.3 in the software manual (click Help>Contents from the Main screen to open the manual) for instructions on setting up Time Sync for the meter.

**Program Meter Name:**

To enter an name/ID for the meter:

1. From the Device Profile screen, double-click General Settings>System Settings.
2. Input a new meter designation into the field. Note that it is important to name each meter individually, since the meter name is used to name the log databases when logs are downloaded.

**IMPORTANT!** When you have made changes to the meter’s Device Profile, click Update Device at the top left of the Device Profile screen’s Icon Bar, to send the new settings to the meter. The meter will reboot and then you can reconnect to it.
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