Using the ION Setup Phasor Viewer

This document outlines the procedures for using the Phasor functionality of PowerLogic® ION Setup v2.1. It includes information on the Harmonics Analyzer module as well as configuration issues to be aware of if your ION8300, ION8400 or ION8500 meter has Advanced Security enabled.

NOTE

The Advanced Security issues discussed in this document apply only to the ION8300, ION8400 and ION8500 meters (**not** the ION8600).

For more information on Advanced Security, see the ION System Security technical note available from the Schneider Electric website.

In this document

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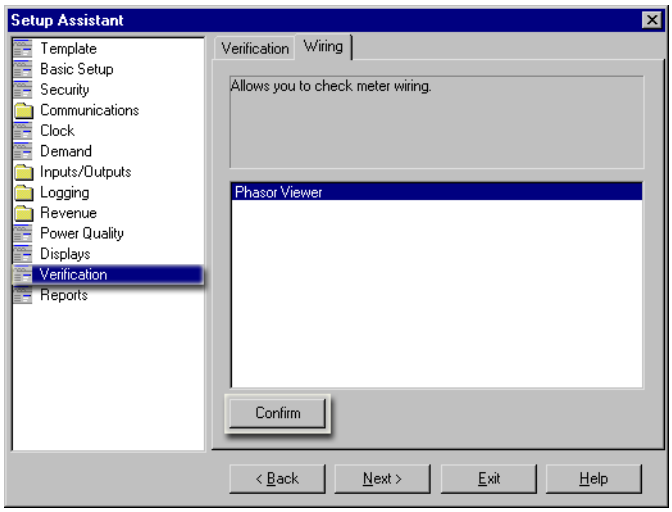
Introduction

The Phasor Tool in ION Setup makes use of the Harmonics Analyzer module to provide detailed harmonics calculations for a voltage and/or current input on the meter. This information is valuable for power quality analysis, selecting properly rated transformers, and fault detection.

Using the ION Setup 2.1 Phasor Viewer

To access the Phasor Viewer:

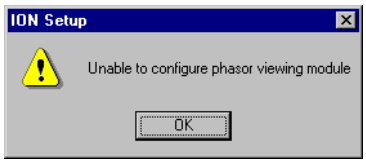
1. In the Setup Assistant, select 'Verification' and click the 'Wiring' tab.
2. Select 'Phasor Viewer' and click the Confirm button.



3. The Phasor Viewer appears, displaying the meter's real-time Phasor diagram.

'Unable to Configure' message

If you receive an 'Unable to configure...' message, your meter may have its Advanced Security feature enabled. See "Phasor Viewer and Advanced Security Requirements" on page 3 for setup procedures.



Phasor Viewer and Advanced Security Requirements

During a 'first run' of the Phasor Viewer, ION Setup checks the meter to verify an operative Power Harmonics module. If none are present, it automatically configures the necessary module. However, if Advanced Security is enabled on the ION8000 series meter, you must have full configuration permissions for ION Setup to perform this 'first run' Power Harmonics module setup.

NOTE

The Advanced Security procedures described below do not apply to the ION8600 meter.

Once ION Setup has configured a Power Harmonics module, you no longer require full meter configuration privileges to view Phasor diagrams.

Advanced Security features (ION8300, ION8400, ION8500)

The Advanced Security feature of some ION meters allow you to configure up to 16 users, each with unique access rights to the meter. Access rights consist of the following levels where you can:

- **Read:** view any parameter except the security configuration.
- **Peak Demand Reset:** perform a reset of peak demand values (for example, sliding window demand for kW, kVAR, kVA etc.).
- **Timesync:** set the time on the meter.
- **Full Meter Configuration:** configure any programmable register on the meter except for registers related to the security setup, registers that result in a demand reset, or actions that place the meter in test mode.
- **Test Mode:** put the meter into test mode.
- **Advanced Security Configuration:** configure Advanced security for the meter, full meter configuration must also be set to YES.

For more information on Advanced Security, see the ION System Security technical note available from the Schneider Electric website.

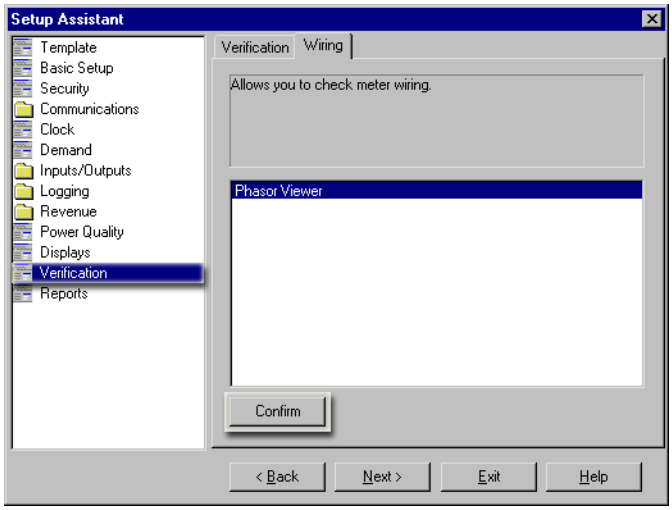
Setting up the Phasor Tool in the Setup Assistant (Advanced Security enabled)

NOTE

This procedure applies only to 'first run' configuration. Once the module is configured, all users with read access can view the Phasor Viewer in real time.

1. Open ION Setup and connect to the appropriate meter. Ensure your login privileges include Full Meter Configuration permissions.
2. Select 'Phasor Viewer' and click the Confirm button.

   ION Setup checks the meter to ensure an operative Power Harmonics module. If it finds none, it automatically inserts the module and sets its Setup Register to '1' (one).



3. The Phasor Viewer appears, displaying the meter's real-time Phasor diagram.

The first-run configuration procedures are complete. All users with meter access can now view the meter's real-time Phasor Viewer.

Setting up the Phasor Tool in Advanced Mode (Advanced Security enabled)

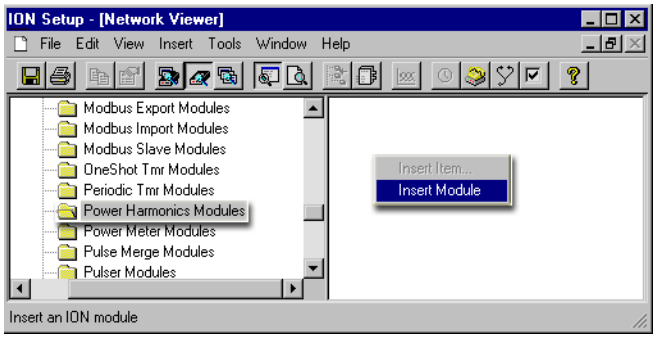
1. Open ION Setup and connect to the appropriate meter.

NOTE

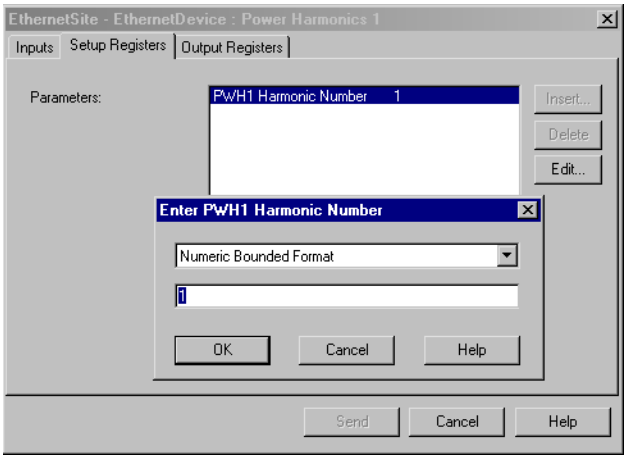
While Advanced Security is enabled on the meter you must have full write privileges to perform this operation.

2. In the Network Viewer, right-click on the meter and select 'Properties'.
3. Click the 'Tools' tab. In the Device Setup selection list, select 'Show Advanced ION Setup'.
4. Click OK. The Network Viewer displays in Advanced Mode.
5. Scroll down the Modules list and click the Power Harmonics Modules folder.
6. Right-click in the right-hand pane of the Network Viewer and select 'Insert Module'.

   The Power Harmonics 1 module appears.



7. Double-click the Power Harmonics 1 module. In the Module Properties window, select the Setup Registers tab and click the 'Edit' button.



8. Ensure the Power Harmonics 1 module setup register is set to 1 (one), in Numeric Bounded Format, and click 'OK'.
9. Click 'Send' to complete the operation.

The Power Harmonics module is now configured. ION Setup users using the Setup Assistant can now click Verification > Wiring Tab > Phasor Viewer > Confirm to view the meter's real time Phasor diagram.

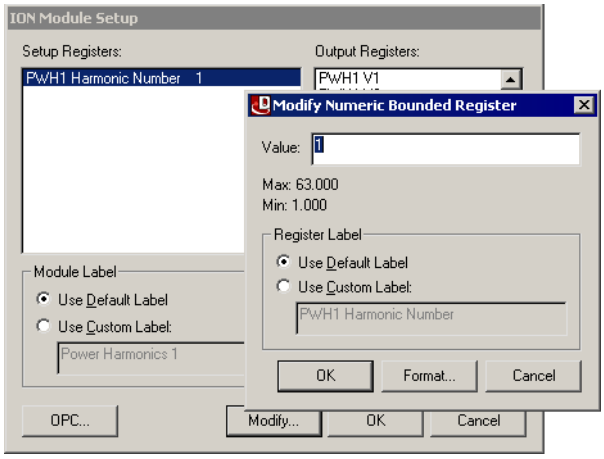
Setting up the Phasor Tool using ION Enterprise (Advanced Security enabled)

NOTE

If Advanced Security is enabled on your meter, you must have full write privileges to perform this procedure (only on its first run).

1. Log on to Designer.
2. Connect to the appropriate meter. Ensure your login permissions include Full Meter Configuration permissions.

3. In Designer, click 'Options > Show Toolbox' (if you cannot see Designer's Toolbox).
4. From the Toolbox, drag out a Power Harmonics module ( ).
5. Right-click the module. In the ION Module Setup window that appears, click the 'Format' button of the 'PWHM 1' Setup Register.
6. Ensure the Setup Register is set to '1' (one) and click 'OK'.
7. Click 'OK' again to close the ION Module Setup window.



The Power Harmonics module is now configured. ION Setup users using the Setup Assistant can now click Verification > Wiring Tab > Phasor Viewer > Confirm to view the meter's real time Phasor diagram.

For more information on Advanced Security, see the ION System Security technical note available from the Schneider Electric website.

