PowerLogic™ Series EM4000/EM4800
Multi-Circuit Meters

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11/2013

Schneider Electric
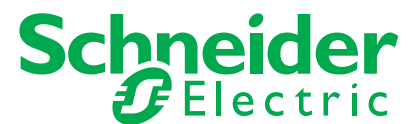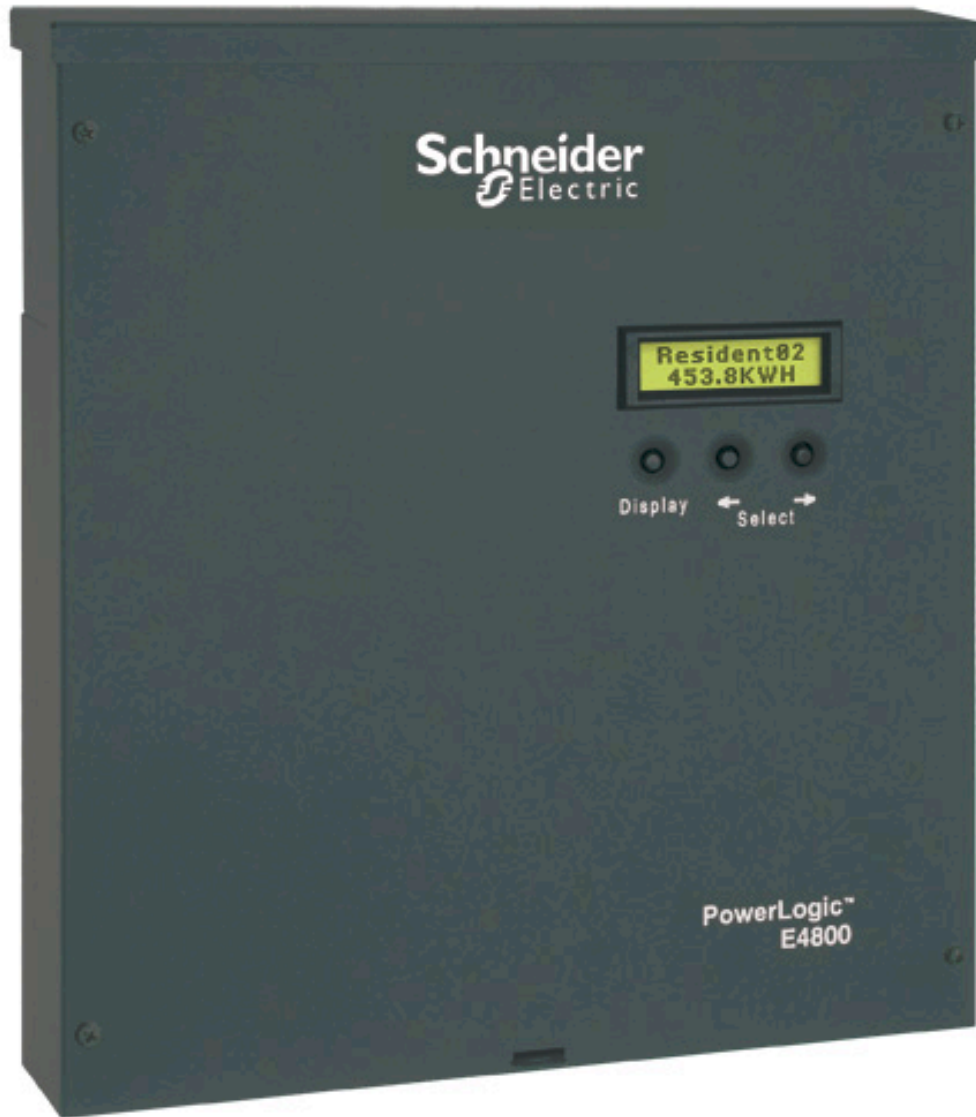
Safety Information

Important Information

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, service or maintain it. The following special messages may appear throughout this manual or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.

The addition of either symbol to a "Danger" or "Warning" safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER

DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, can result in death or serious injury.

⚠ CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, can result in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury. The safety alert symbol shall not be used with this signal word.

Please note

Electrical equipment should be installed, operated, serviced and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.

Notices

FCC Part 15 Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This Class B digital apparatus complies with Canadian ICES-003.

FCC Part 68 Notice

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the Administrative Council for Terminal Attachments (ACTA). On the side of this equipment is a label that contains, among other information, a product identifier in the format US: AAAEQ##TXXXX. If requested, this number must be provided to the telephone company.

This equipment uses the following Universal Service Order Codes ("USOC") jacks: RJ11.

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug or compliant modular jack is provided with this product.

The REN is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company. The REN for this product is part of the product identifier that has the format US: AAAEQ##TXXXX. The digits represented by ## are the REN without a decimal point (e.g., 03 is a REN of 0.3).

If this equipment, Digital Power Meter with Internal Modem, causes harm to the telephone network, the telephone company will notify you in advance that service may be temporarily discontinued. When advance notice is not practical, the

telephone company will notify you as soon as possible. You will also be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of this equipment. If this happens, the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

If you experience trouble with this equipment, Digital Power Meter with Internal Modem, please contact Schneider Electric at 615-287-3400. If this equipment is causing harm to the telephone network, the telephone company may request that you disconnect this equipment until the problem is resolved.

There are no user serviceable parts in this equipment.

Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

If your premises has specially wired alarm equipment connected to the telephone line, ensure that the installation of this Digital Power Meter with Internal Modem does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.

Network Compatibility Notice for the Internal Modem

The internal modem in meters equipped with this option is compatible with the telephone systems of most countries in the world, with the exception of Australia and New Zealand. Use in some countries may require modification of the internal modem's initialization strings. If problems using the modem on your phone system occur, please contact Schneider Electric Technical Support.

Table of Contents

PowerLogic configuration tool

This document describes how to configure the PowerLogic EM4000/EM4800 Series meters, using the PowerLogic configuration tool. It includes the following configuration tool information:

This documentation is intended for those responsible for configuring the PowerLogic meters.

System Set-up and Description

The configuration tool supports the following PowerLogic meters

- PowerLogic EM4000 Series: PowerLogic EM4033 and EM4080 meters
- PowerLogic EM4800 Series: PowerLogic EM4805, EM4833, and EM4880 meters

Depending on how the meters are installed and configured, they can meter 8, 12, or 24 individual meter points. The PowerLogic meters are designed for residential, commercial, and industrial use and display the power and consumption readings for each measurement point.

Configuration and Programming

The configuration tool is used to set any of the programmable parameters of the PowerLogic EM4000/EM4800 Series meter. The combination of the configuration tool and the state of the meter programming switches determine which parameters can be set or changed. As shown in Figure 1, the programming switches are two-position DIP switches labeled SW1, and are located inside the meter cover below the Display button. To enable meter configuration, both switches must be physically set to the ON (down) position (default).
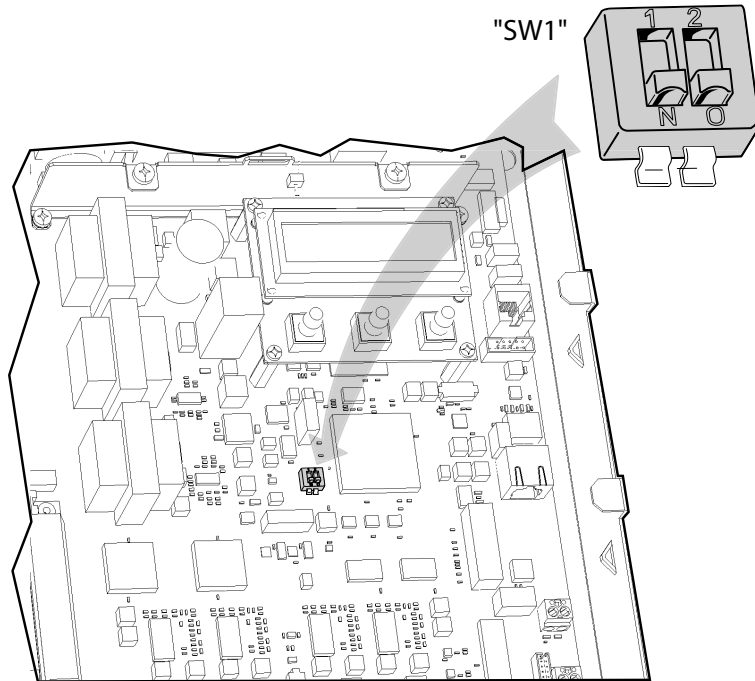
Figure 1: Programming Switch location

Table 1 lists the programming capabilities associated with each parameter in combination with the programming switches. After the meter has been programmed, the programming switches can be turned OFF to prevent tampering with metering parameters.

Table 1: Programming access to meter parameters

Parameter	Read access	Write access	Activation time
Meter name	Configuration tool	Configuration tool	Immediate
Badge number	Configuration tool	Configuration tool	Immediate
Phone number	Configuration tool	Configuration tool	Immediate
Alternate phone number	Configuration tool	Configuration tool	Immediate
AT string	Configuration tool	Configuration tool	Immediate
Host upload directory	Configuration tool	Configuration tool	Immediate
Host download directory	Configuration tool	Configuration tool	Immediate
Host IP address	Configuration tool	Configuration tool	Immediate
PPP user name	Configuration tool	Configuration tool	Immediate
PPP password	Configuration tool	Configuration tool	Immediate

Parameter	Read access	Write access	Activation time
FTP user name	Configuration tool	Configuration tool	Immediate
FTP password	Configuration tool	Configuration tool	Immediate
Daily report interval start time	Configuration tool	Configuration tool	Immediate
Daily report interval end time	Configuration tool	Configuration tool	Immediate
Report period	Configuration tool	Configuration tool	Immediate
Report interval in minutes	Configuration tool	Configuration tool	Immediate
PT ratio	Configuration tool	Configuration tool + prog. switch ON	Immediate
Default IP address	Configuration tool	Configuration tool	Immediate
Default netmask	Configuration tool	Configuration tool	Immediate
Default gateway	Configuration tool	Configuration tool	Immediate
Reset dial readings	No Access	Configuration tool + prog. switch ON	Immediate
Send PC time	No Access	Configuration tool	Immediate
Programming switch state	Configuration tool	No Access	Immediate
MAC address	Configuration tool	No Access	Immediate
Report types	Configuration tool	Configuration tool	Immediate
Manufacturing			
Serial number	Configuration tool	No Access	N/A
Part number	Configuration tool	No Access	N/A
Model number	Configuration tool	Configuration tool + prog. switch ON	After reset
Revision	Configuration tool	No Access	
Firmware revision	Configuration tool	No Access	N/A
Build number	Configuration tool	No Access	
Meter and probe points			
Name	Configuration tool	Configuration tool	After reset
CT 1 current	Configuration tool	Configuration tool + prog. switch ON	After reset
CT 2 current	Configuration tool	Configuration tool + prog. switch ON	After reset
CT 3 current	Configuration tool	Configuration tool + prog. switch ON	After reset
CT 1 phase	Configuration tool	Configuration tool + prog. switch ON	After reset
CT 2 phase	Configuration tool	Configuration tool + prog. switch ON	After reset
CT 3 phase	Configuration tool	Configuration tool + prog. switch ON	After reset

Display Navigation

The display on the front of the meter provides status information for each circuit, and general information for metering. The PowerLogic meter has three buttons for navigating: a Display button, and left ← and right → arrow buttons. The display has a normal and a diagnostics mode.

Normal Mode

In Normal mode, the Display button scrolls through the information for each meter. The left ← and right → arrow buttons select the previous or next meter points respectively. The following information is available:

- Real Energy Delivered kWh D
- Real Energy Received kWh R
- Real Power Watts
- Reactive Energy Delivered kVarhD
- Reactive Energy Received kVarhR
- Reactive Power Var
- Peak Demand PeakW (Watts)

In Normal mode, the right and left arrow buttons scroll the display from meter points 1 to 8, 1 to 12, or 1 to 24, depending on your configuration.

Diagnostics Mode

Diagnostics mode is accessed by pressing and holding the Display button for 5 seconds. In Diagnostics mode, pressing the Display button will scroll through the following information in addition to the Normal mode data:

- Send data command
- CT Primary value and Real Power (Watts) per phase
- Current (Amps) per phase
- Power Factor (pf) per phase
- Phase angle (Degrees) per phase
- Voltage per phase
- Local IP address
- Reset factory default IP address command
- Verify
- Badge #
- Date and time (UTC)

In Diagnostics mode, the right and left arrow buttons scroll the display from meter 1 through N. When the local IP address is shown on the LCD, use the right and left arrow buttons to scroll through the following information:

- Remote host server IP address
- Time server IP address
- Default IP address
- Default NetMask
- Default gateway
- PPP user name
- Phone number
- AT command string
- Alternate phone number
- Unit serial number
- Firmware build number

- Ethernet port MAC address
- Firmware revision
- Potential transformer ratio

Communications Connections

If you are configuring the meter at an installation site, see the *PowerLogic EM4000 Series Meter Installation Guide* or the *PowerLogic EM4800 Series Meter Installation Guide* for instructions on connecting the power. Power connections vary depending on whether the meter is configured for single-phase or three-phase operation.

If you are pre-configuring the meter in the shop, only Phase A, Neutral, and protective earth connections are required to power up the meter for configuring.

The PowerLogic EM4000/EM4800 Series Configuration Tool runs on a Windows PC and communicates with the PowerLogic meters through an Ethernet network connection. A network connection can be accomplished in two ways: either Direct, or by connecting to a LAN (Local Area Network).

Direct Connection Ethernet Requirements

⚠ DANGER
HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH
- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E.   - This equipment must only be installed and serviced by qualified electrical personnel.   - Turn off all power supplying this equipment before working on or inside equipment.   - Always use a properly rated voltage sensing device to confirm power is off.   - Replace all devices, doors and covers before turning on power to this equipment.   - The meters must be connected to the sense voltage and control voltage through a properly rated disconnect.
Failure to follow these instructions will result in death or serious injury.

To connect a PC directly to the PowerLogic meter:

1. Disconnect power from the meter with the installed breaker or disconnecting device. Use a properly rated voltage sensing device to confirm power is off.
2. Remove the outer cover.
3. If you are changing parameters that require the programming switch to be on, remove the inner cover and ensure the programming switches are in the ON position.
4. Re-install the inner cover.
5. Remove the local LAN Ethernet cable if present and connect the CAT 5 Ethernet cable between the PC and the PowerLogic meter. If the PC does not have auto-crossover detection, an Ethernet crossover cable will be required.
6. Restore power to the meter.

7. Assign the PC a static IP address such that the first three segments are the same as the default IP address, and the last segment is different from the default IP address.
    For example, 169.254.0.xxx, where xxx differs from the last segment of the default IP address.

    Enter 255.255.255.0 into the subnet mask field.

    For Windows 7 users, you must enter the IP address of the meter into the Default Gateway field.

8. Configure the meter. See "Configuring the Meters" on page 7 for configuration instructions.

9. Remove power. Use a properly rated voltage sensing device to confirm power is off.

10. If you wish to lock the configuration parameters, remove the inner cover and move the programming switches (SW1) to the OFF (up) position.

11. Re-install the inner cover.

12. Connect the LAN Ethernet cable if present.

13. Re-install the outer cover.

14. Restore power.

    NOTE: All PowerLogic meters have a default IP address of 169.254.0.10 in the absence of a DHCP service.

Network Connection Ethernet Requirements

⚠ **DANGER**

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Turn off all power supplying this equipment before working on or inside equipment.
- Always use a properly rated voltage sensing device to confirm power is off.
- Replace all devices, doors and covers before turning on power to this equipment.
- The meters must be connected to the sense voltage and control voltage through a properly rated disconnect.

Failure to follow these instructions will result in death or serious injury.

To connect the PowerLogic meter to the network:

1. Turn off power to the meter with the installed breaker or disconnecting device. Use a properly rated voltage sensing device to confirm power is off.

2. Remove the outer cover.

3. If you are changing parameters that require the programming switch to be on, remove the inner cover and ensure the programming switches are in the ON position.

4. Re-install the inner cover.

5. Using a CAT 5 Ethernet patch cable, connect the meter and the PC to a local Ethernet switch.

6. Re-install the outer cover.

7. Restore power. When control power is restored, the meter will receive an IP address from a local DHCP server. This IP address can be viewed from the Diagnostics menu.

   NOTE: To use a static IP address, have your local network administrator assign the desired IP address to the MAC address of the meter in the DHCP server configuration. To display the MAC address, see "Display Navigation" on page 3.

Configuring the Meters

The PowerLogic EM4000/EM4800 Series configuration tool is available on the CD shipped with each unit, and is used to configure all programmable parameters listed in Table 1.

NOTE: Disable any firewall software on your PC before attempting to connect to a meter using the configuration tool.

Login

Use the following procedure to log in to the meter.

1. Establish an Ethernet network connection with the meter using one of the methods described in "Communications Connections" on page 5.

2. Ensure the programming switches are in the ON position. The programming switches are two-position DIP switches labeled SW1, and are located inside the meter cover below the Display button. To enable meter configuration, both switches must be physically set to the ON position. When both switches are in the OFF position, meter configuration is disabled.

3. Start the configuration tool by entering "PowerLogic" as the **User Name**, and "E4800" as the **Password** (see Figure 2). Click **Ok**.

Figure 2: Login screen
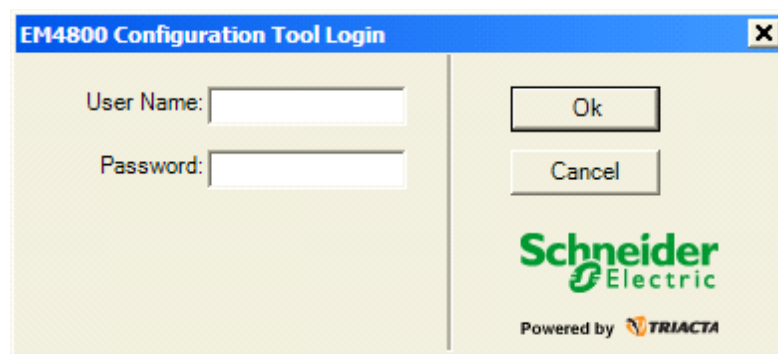
4. The main window displays as shown in Figure 3.
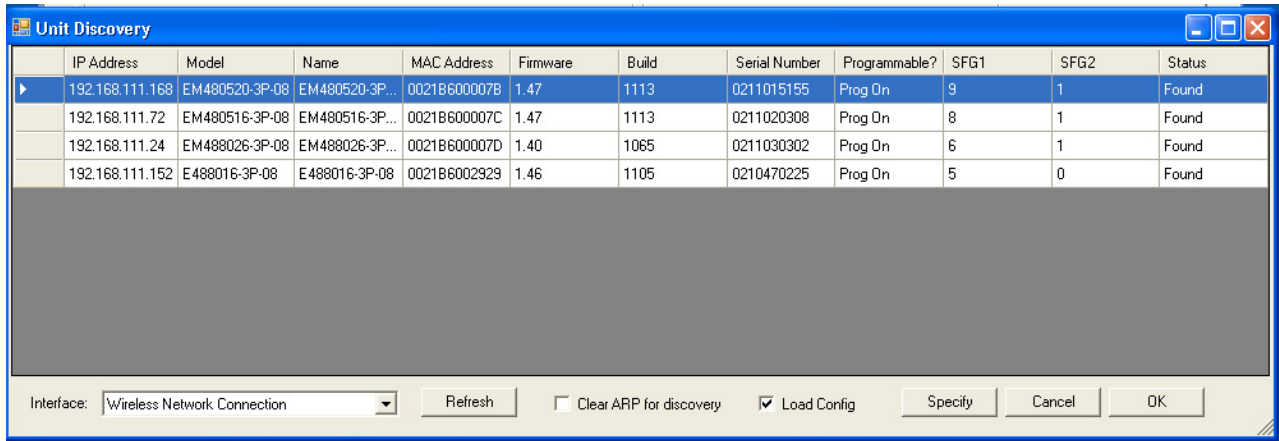
Figure 3: Configuration tool main window

Connecting to a Meter

The configuration tool automatically detects and lists the PowerLogic meters on the same network segment as the PC. The configuration tool can also be used with meters on a different network.

To connect to a meter on the same network:

1. Click **Unit** in the menu bar, then select **List** from the drop-down menu. The Discovered Units window appears, displaying a list of meters available for configuration. See Figure 4.

**Figure 4: Discovered Units dialog box**

2. Select the L**oad Unit Configuration** check box, then click **Ok**. The main configuration tool window appears populated with the current programming information for the selected meter. See Figure 5.
3. Proceed to "Unit Field Configuration Tab" on page 10.

To connect to a meter on a different network:

1. Click **Unit** in the menu bar, then select **Connect** from the drop-down menu. The Connect to Unit window appears. See Figure 5.

Figure 5: Connect function window
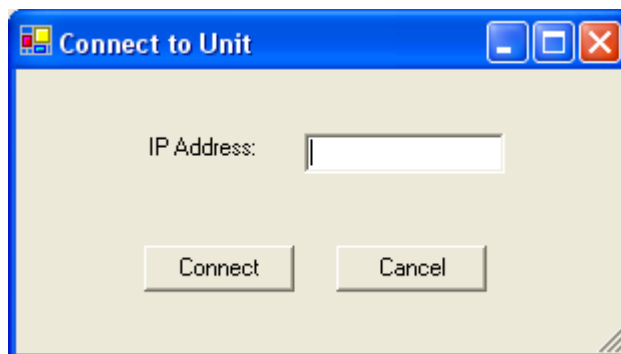
2. Enter the IP address of the meter to be configured, then click **Connect.** The configuration tool main window appears populated with the current programming information for the selected meter. See Figure 6.

3. Proceed to "Unit Field Configuration Tab" on page 10.

Figure 6: Main configuration window with configured parameters

Unit Field Configuration Tab

Use Table 2 to set meter configuration parameters in the Unit Field Configuration tab.

Table 2: Unit Field Configuration tab parameters

Field	Parameter	Description
Unit Field Configuration	Current IP Address	The current IP address for the unit .This parameter is read only and cannot be changed by the user.
	Mac Address	The current MAC address for the unit. This parameter is read only and cannot be changed by the user.
	Revision	The revision number of the unit.
Default IP Configuration	IP Address	The default IP address. This parameter is configured when DHCP has been disabled, or DHCP services are not available on the network.
	Netmask	The default subnet mask. This parameter is configured when DHCP has been disabled, or DHCP services are not available on the network.
	Gateway	The default gateway. This parameter is configured when DHCP has been disabled, or DHCP services are not available on the network.
	DNS Primary	The primary domain name server. This parameter is configured when DHCP has been disabled, or DHCP services are not available on the network.
	DNS Secondary	The secondary domain name server. This parameter is configured when DHCP has been disabled, or DHCP services are not available on the network.
	DHCP Enabled	If DHCP is not enabled, the meter uses the Default IP Configuration parameters. If DHCP is enabled, the meter uses the IP configuration parameters provided by the network DHCP service.
Report	See "Report Parameters" on page 12	
Main Meter	PT Ratio	The main meter potential transformer ratio. This is an internal multiplier used by the meter for external potential transformers. External PTs can be used with a PT ratio of 1 if the billing system will apply the PT multiplier. Use a PT Ratio of 1 with no external PTs.
Modem	Phone #	The phone number of your internet service provider's PPP service.
	Alternate Phone #	An alternate phone number of your internet service provider's PPP service.
	AT String	AT command string to customize modem operation. Default string is ATX3, do not wait for dial tone.
	Wait for Dial Tone	Do not enable this parameter if the line has a broken dial tone due to a message waiting feature.
Host Server	IP Address	The IP address or domain name of the FTP server for data storage.
	Upload Directory	The sub-directory used for data reporting within the root directory. The root directory is determined by the FTP user name and the FTP server configuration. The FTP account must have write access to this directory.
	Download Directory	The sub-directory used by the meter to retrieve configuration updates. The FTP account must have read access to this directory..
FTP Login	User Name	The user name for the FTP account.
	Password	The password for the FTP account.
PPP Login	User Name	The user name for the PPP account. This is only required if using dial-up reporting.
	Password	The password for the PPP account. This is only required if using dial-up reporting.
NTP Host (Time Server)	IP Address	The IP address of the NTP server that provides timing to the meter.

Report Parameters

The **Report** section in the main configuration window has six tabs:

- **Intervals** tab allows the user to configure the recording interval at which meter data is collected, and the demand interval for which demand readings are calculated. Figure 7 shows the Intervals tab, and Table 3 lists the configuration parameters within the tab.

- **Types** tab allows the user to define the metering data parameters that are to be logged on each recording interval, then reported per the Reporting Schedule. Figure 8 shows the Types tab, and Table 4 lists the configuration parameters within the tab.

- **Reporting Schedule** tab allows the user to configure how often the meter is to send recording interval data to a server. Figure 9 shows the Reporting Schedule tab, and Table 5 lists the configuration parameters within the tab.

- **Calculations & Format** tab allows the user to configure the type of power factor calculation and the display format for leading vs. lagging power factor. Figure 10 shows the Calculations & Format tab, and Table 6 lists the configuration parameters within the tab.

- **BACnet** tab allows the user to configure the BACnet Device interface. Figure 11 shows the BACnet tab, and Table 7 lists the configuration parameters within the tab.

- **Comms** tab allows the user to configure the communications module and change the Meter Utility Password. Figure 12 shows the Comms tab, and Table 8 lists the configuration parameters within the tab.
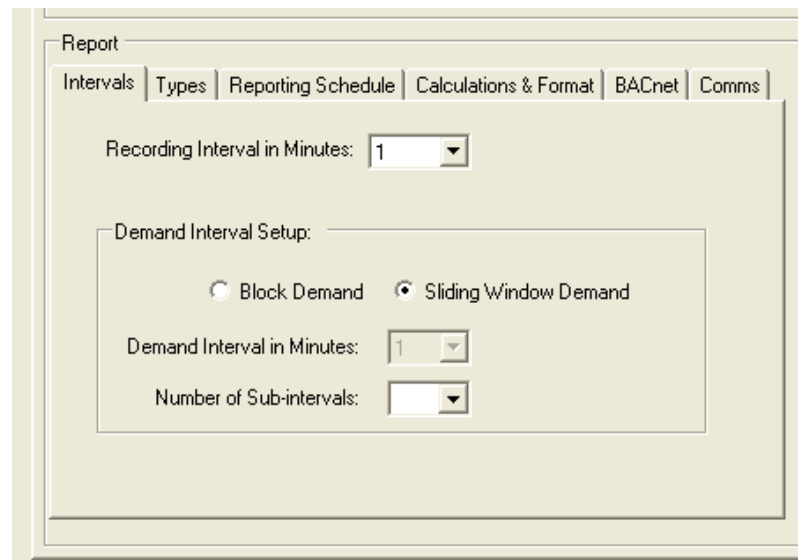
Figure 7: Intervals tab in the Report section

Table 3: Intervals tab configuration parameters

Parameter	Description
Recording Interval in Minutes	The interval at which meter data is collected.
Demand Interval Setup	
Block Demand	Select Block Demand calculation for demand data.
Sliding Window Demand	Select Sliding Window Demand calculation for demand data.

Parameter	Description
Demand Interval in Minutes	The size of the block demand window in minutes (select from the pull-down menu).
Number of Sub-intervals	The number of recording sub-intervals that make up the sliding demand interval (select from the pull-down menu).

Example: Selecting a Recording Interval of 5 minutes with Sliding Window Demand enabled and 3 Sub-intervals, creates a demand calculation every 5 minutes based on the previous 15 minutes. This is the common demand measurement used by North American utilities when billing for Demand.

*NOTE: To activate the Demand Interval Setup settings, Peak Demand must be enabled (✓) in the **Types** tab (see Figure 8).*

Figure 8: Types tab in the Report section

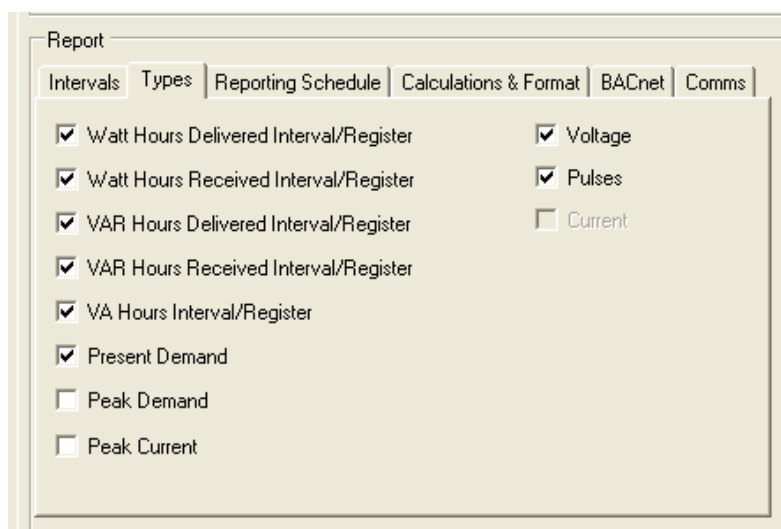

Table 4: Types tab configuration parameters

Parameter	Description
Watt Hours Delivered Interval/Register	These types of records can be enabled by selecting (✓) the check box.
Watt Hours Received Interval/Register	
VAR Hours Delivered Interval/Register	
VAR Hours Received Interval/Register	
VA Hours Interval/Register	
Present Demand	
Peak Demand	
Peak Current	
Voltage	
Pulses	

NOTE: If parameters are grayed out, they are not available on the variant or firmware revision of the meter being configured.

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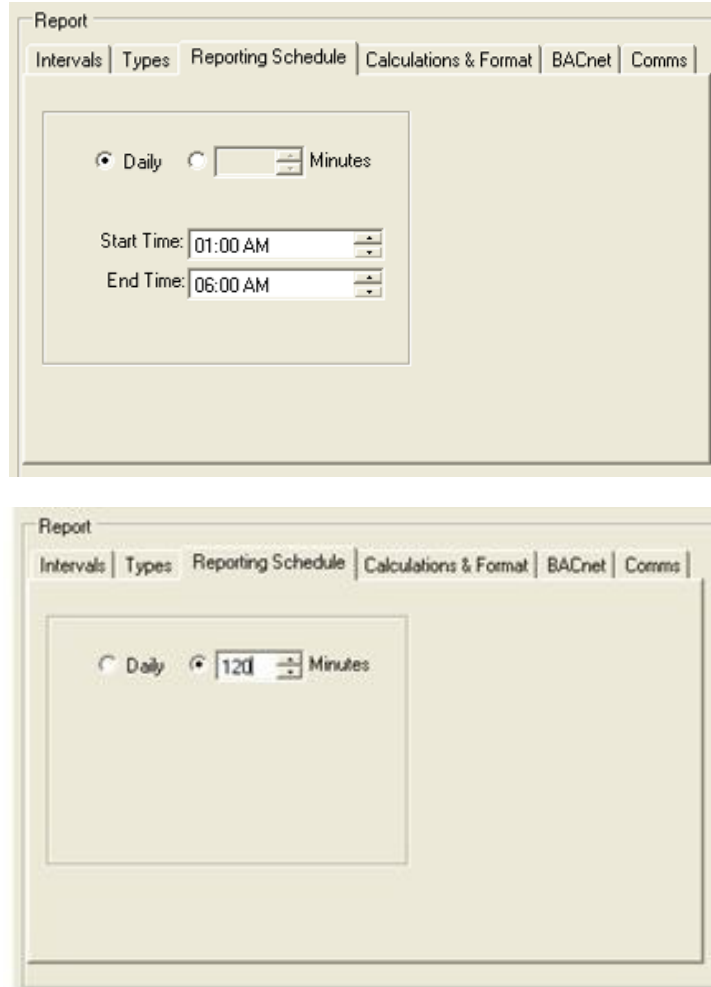**Figure 9: Reporting Schedule tab in the Report section**

Table 5: Reporting Schedule tab configuration parameters

Parameter		Description
Daily (default)		Enables daily real time reporting. The unit sends the data file at a randomly selected time within the report window specified by the start and end time .
	Start Time	When daily reporting is enabled, select the reporting period start time.
	End Time	When daily reporting is enabled, select the reporting period end time.
Minutes		Enables real time reporting every x number of minutes by selecting the radial button and entering the interval in minutes.

NOTE: When selecting a Daily report schedule, the Start Time must occur before the End Time within the midnight to midnight 24-hour time period.

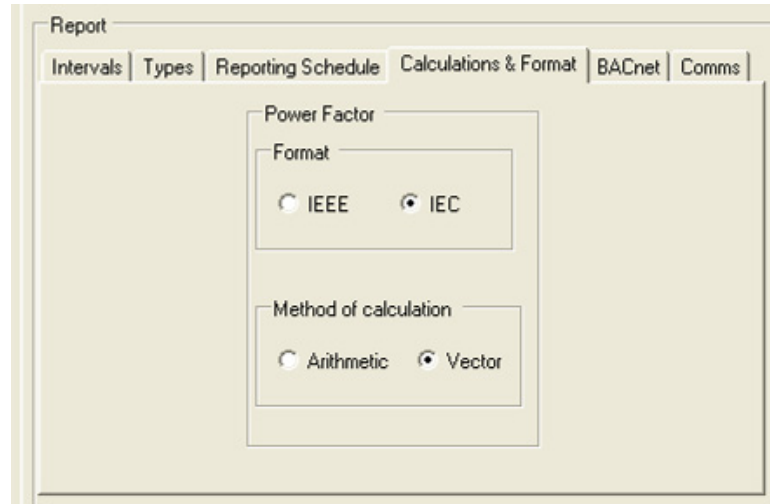**Figure 10: Calculations & Format tab in the Report section**

Table 6: Calculations & Format tab configuration parameters

Parameter		Description
Power Factor		
Sign Format	IEEE	In the display, the sign (+ or -) indicates leading (+) or lagging (-) power. The direction of active power is not indicated.
	IEC (default)	In the display, the sign (+ or -) indicates the direction of active power. Lead or lag indicates capacitive or inductive power.
Method of Calculation	Arithmetic	Selects the arithmetic method for calculating Power Factor.
	Vector (default)	Selects the vector method for calculating Power Factor

Figure 11: BACnet tab in the Report section

Table 7: BACnet tab configuration parameters

Parameter	Description
Device ID	Set the BACnet device ID by entering a a numeric ID between 0 and 4194303.
Network Port	The BACnet specific port number for this device (default is 47808).
BBMD Timeout	Enter the amount of time (seconds) required for connection to a BACnet network.
BBMD Address	Enter the address of the BBMD device that controls all devices in the BACnet network.
Description	A user selectable description of the device (default is Power Meter)
Vendor ID	BACnet Vendor Identification number (default is 10)
Vendor Name	Schneider Electric (default)
Software Version	The software version of the PowerLogic product (fixed).
UTC Offset	Fixed at 0
Location	A user selectable description of the physical location of the unit (default is Unknown).
Object Name	PowerHawk Meter (default)

Figure 12: Comms tab in the Report section

Table 8: Comms tab configuration parameters

Parameter			Description
Parameters			
Comms Option	Modem		Selecting Modem configures the communications module as a dial-up modem for remote reporting via a phone line.
	None		Selecting None disables the communications module interface
	RTU Adapter		Selecting RTU Adapter configures the communications module as a Modbus RS422/RS485 serial interface.
		RTU comms config	Enter the RTU serial port parameters as a string with the following selections: baud rate (19200 or 9600), number of bits (8), number of start bits (1), number of stop bits (1), parity type (e – even, n – none Example: 19200,8,1,e (default)
		Modbus base address	Enter the Modbus RTU address for this device (1 to 255)
Utility Password			
	Current Password		The default meter Utility Password is listed here whenever the Configuration Tool is started or when a configuration is uploaded from a meter. If the Utility Password for the meter is not the default password, enter the Current Password here to change metering specific parameters or to change the password again.
	Enter new password		To change the password, enter the new password.
	Enter new password again		To confirm, re-enter the new password.

NOTE: The Modbus and RTU Adapter Comms Option parameters are valid only when a Modem module or an RTU adapter module is present.
The RTU Adapter parameters apply only to Modbus RTU communications.
There are no configuration options when Modbus over TCP/IP is used.

NOTE: : The meter Utility Password is used to control access to changing the metering specific parameters in the PowerLogic meter. The following parameters and functions cannot be changed or activated unless the correct Utility Password is entered before sending the new config to the meter:

PT Ratio
CT Current and Phase
Reset Dial Readings
Model Number
Change Password
All other parameters and functions can be changed or accessed without entering the correct Utility Password for the meter being configured.

Manufacturing Tab

The **Manufacturing** tab allows the user to define the metering configuration for the PowerLogic meters. The meters support the configurations listed in Table 9.

Table 9: List of supported PowerLogic metering configurations

EM4033xx	EM4080xx	EM4805xx	EM4833xx	EM4880xx
EM4033xx-1P-12	EM4080xx-1P-12	EM4805xx-1P-12	EM4833xx-1P-12	EM4880xx-1P-12
EM4033xx-1P-24	EM4080xx-1P-24	EM4805xx-1P-24	EM4833xx-1P-24	EM4880xx-1P-24
EM4033xx-2P-12	EM4080xx-2P-12	EM4805xx-2P-12	EM4833xx-2P-12	EM4880xx-2P-12
EM4033xx-2P-24	EM4080xx-2P-24	EM4805xx-2P-24	EM4833xx-2P-24	EM4880xx-2P-24
EM4033xx-3P-08	EM4080xx-3P-08	EM4805xx-3P-08	EM4833xx-3P-08	EM4880xx-3P-08

To view the manufacturing information for a specific meter, select a model number from the **Model #** pull-down list shown in Figure 13. The part number, revision number and serial number for the selected model will be shown.

Figure 13: Manufacturing tab
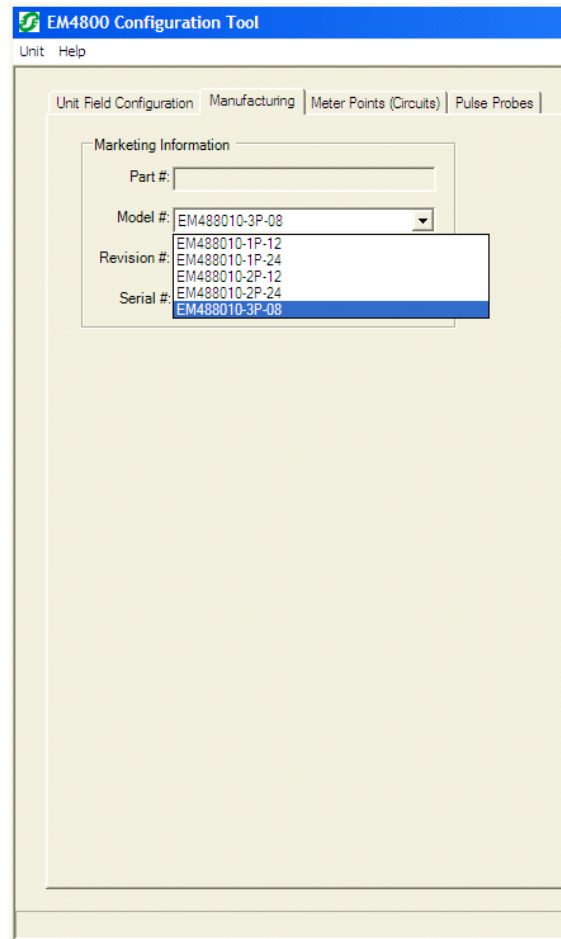
Meter Points (Circuits) Tab

The **Meter Points (Circuits)** tab contains the configuration information for each of the metering points. It shows the number of elements used, the phase, the current ratings, and the user-defined identification string for each meter point. Default information is entered when the metering configuration is selected in the **Manufacturing** Tab (see "Manufacturing Tab" on page 19).

Meter Point Configuration

The current rating and phase assignment for each meter point can be configured individually, by meter, or all at once. The configuration in all three cases does not take effect until the new settings have been sent to the meter (see "Completing the Meter Configuration" on page 26).

To change the current rating and phase assignment for an individual meter point:

1. Select one probe at a time from the **Meter Points (Circuits) List.** The selected probe number will appear in the middle pane beside **Probe**, and its assigned **Current** and **Phase** are shown beneath it. See Figure 14.
2. To change the **Current**, enter the required number. To change the **Phase**, select the required phase type from the pull-down list.

Figure 14: Meter Points configuration screen
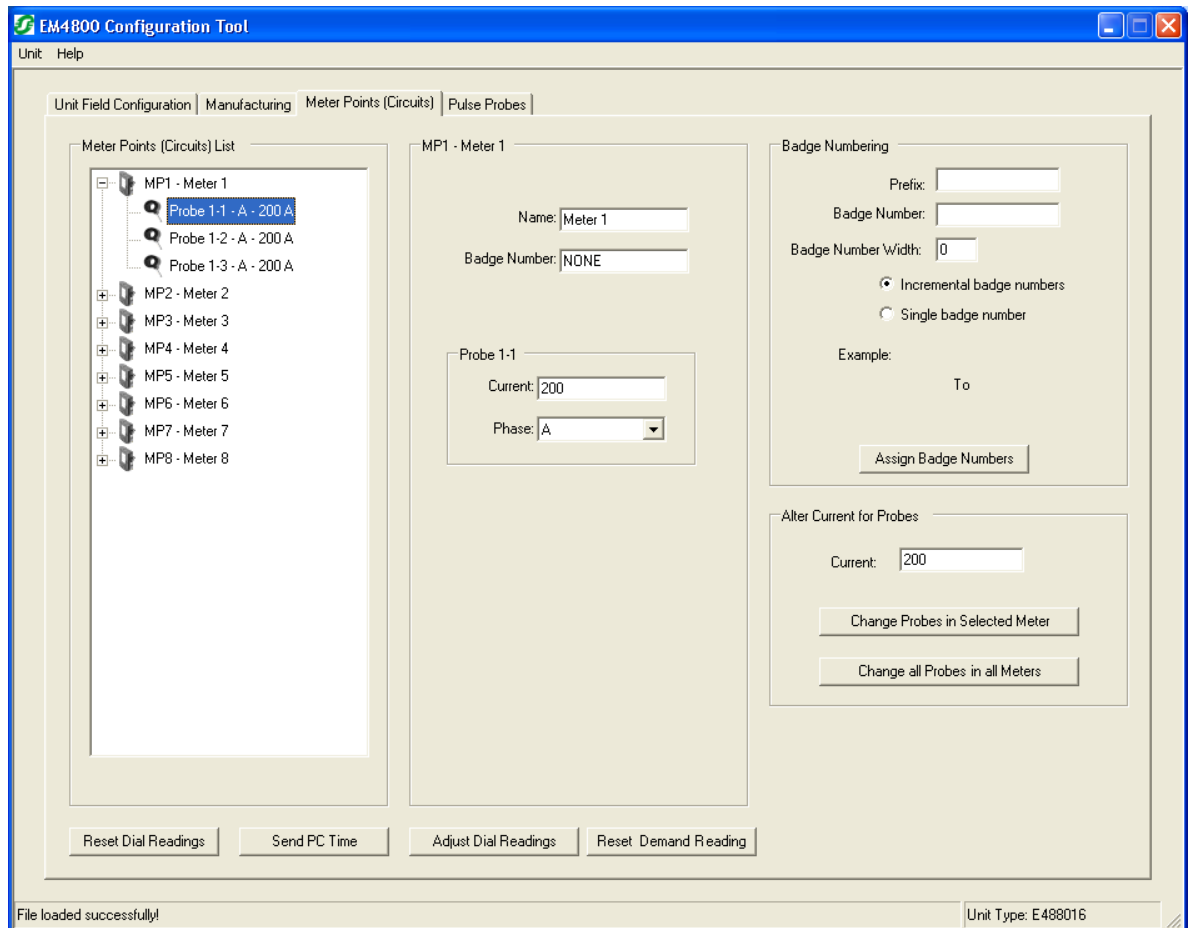
To change the current rating for all probes assigned to a meter point:

1. Select a meter from the **Meter Points (Circuits) List.** The selected meter will appear in the **Name** field of the middle pane. See Figure 14.

2. In the **Alter Current for Probes** pane, enter the desired value referenced to the CT primary rating in the **Current** field, and click on **Change Probes in Selected Meter**.

To change the current rating for all probes assigned to all meter points:

1. In the **Alter Current for Probes** pane, enter the desired value referenced to the CT primary rating in the **Current** field, and click on **Change all Probes in all Meters**. See Figure 14.

Badge Numbering

Each meter point can be configured with a name defined by the user. The meter point name, known as the badge number, can be up to 13 alphanumeric characters in length. The **Badge Numbering** pane allows the user to set two types of badge numbers:

- sequential, which assigns a badge number to each meter point after the prefix (for example CORP-00000001 to CORP-00000012)

- grouped by meter, which uses a base prefix to designate the meter, then assigns a sequential badge number suffix to each meter point assigned to that meter (for example CORP-00001-01 to CORP-00001-12)

The configuration tool provides examples before the badge number is assigned to the meter. In the **Badge Numbering** pane shown in Figure 15, the following fields and buttons are provided for assigning badge numbers:

- **Prefix** field - an alphanumeric field that prefixes the number field.

- **Badge Number** field - a numeric field that becomes part of the prefix for meter points assigned to that meter, or the first number in the sequence to be assigned to individual meter points.

- **Badge Number Width** field - a numeric field that defines the number of digits in the badge number field. Zeroes (0) are automatically entered at the beginning of the badge number field until the total number of digits in the badge number field equals the number of digits defined in the badge number width field.

- **Incremental badge numbers** button - selecting this button assigns a sequential badge number for each meter point

- **Single badge number** button - selecting this button assigns one badge number prefix followed by a numeric suffix for each meter point assigned to that meter.

- **Assign Badge Numbers** button - selecting this button implements the badge numbering defined by the user in the previous fields.

Figure 15: Badge Numbering pane

Reset Buttons

- **Reset Dial Readings** button - selecting this button resets all registers for all energy types and pulse counts to zero. This function takes effect immediately and does not require a send action.

- **Send PC Time** button - selecting this button configures the meter with the current PC UTC and local time. This function takes effect immediately and does not require a send action. This function can be used when access to the network time service is not available.

- **Adjust Dial Reading** button - selecting this button allows the operator to set all of the following energy type registers to the same fixed initial value:
  - Delivered Watt Hours
  - Received Watt Hours
  - Delivered VAR Hours
  - Received VAR Hours
  - VA Hours

    This function takes effect immediately and does not require a send action.

- **Reset Demand Reading** button - selecting this button resets the Peak Demand register for all meter points to zero. This function takes effect immediately and does not require a send action.

Pulse Probes Tab

The **Pulse Probes** tab contains the configuration information for each pulse input. It shows the measurement type in units for each input, and the scale factor applied to the collected pulse counts. Figure 16 shows the Pulse Probes tab of the main configuration tool window.

To configure a pulse probe:

1. Enable (✓) **Pulses** in the **Types** tab of the Report section in the Unit Field Configuration tab. See Figure 8 on page 13.

   *NOTE: The Pulse Probe settings are not active unless **Pulses** are enabled in the **Types** tab.*

2. Select a pulse probe from the **Probe List**.
3. Select a measurement type from the **Type** pull-down list.
4. Enter a value in the **Scale Factor** field.

   NOTE: This scale factor only changes the pulse values in the TR3 report. The pulse count in the device web page is not scaled.
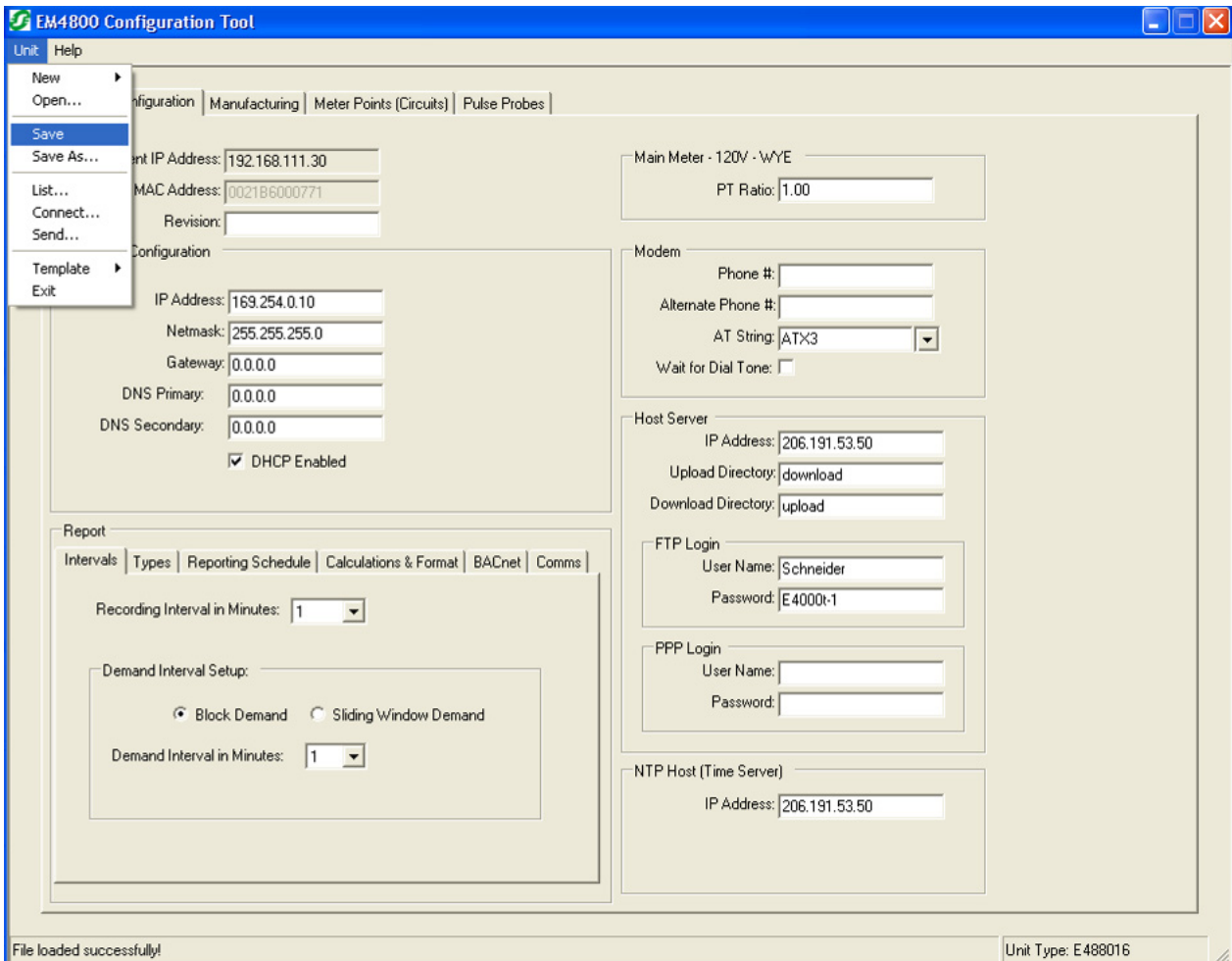
Figure 16: Pulse Probes tab
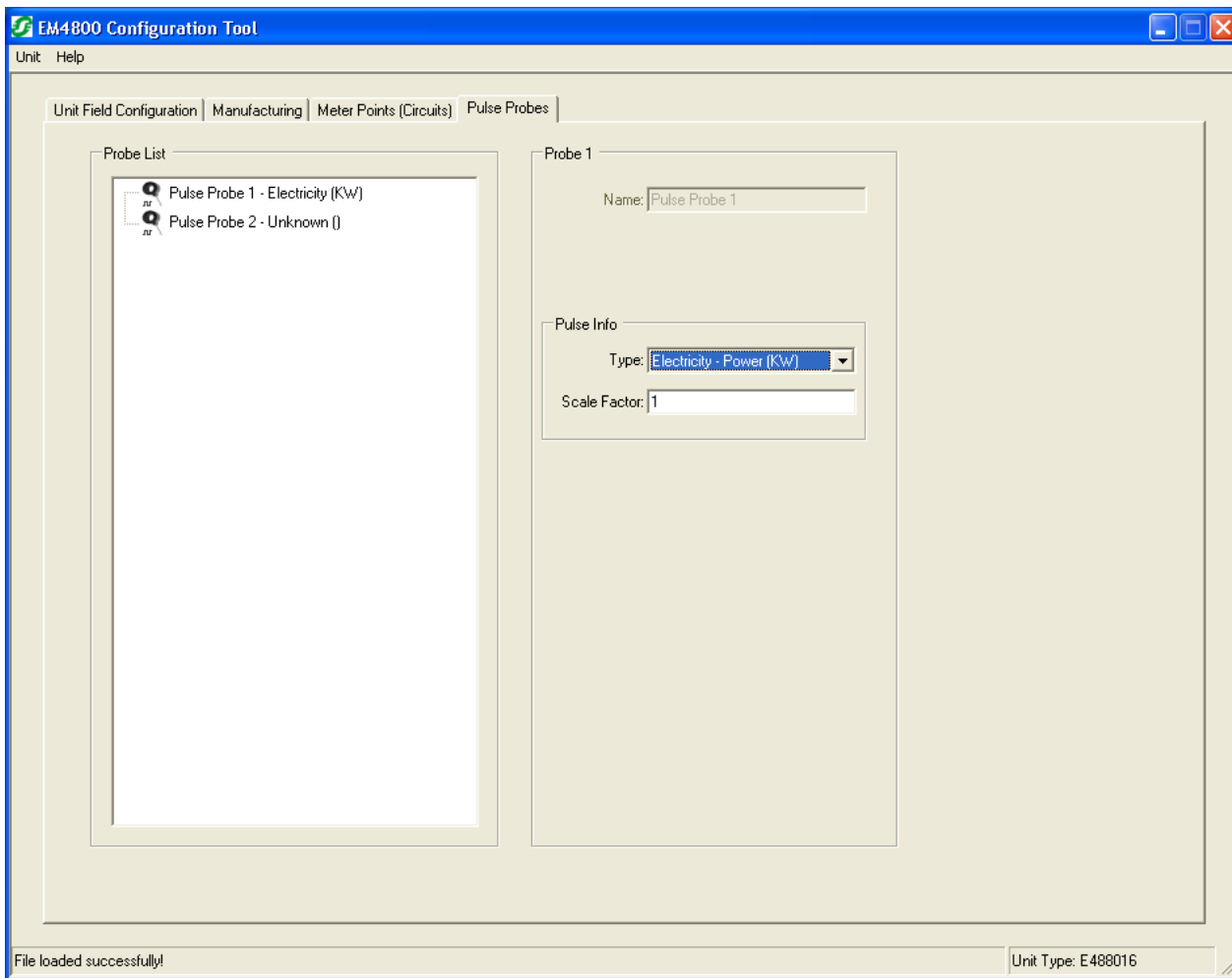
Completing the Meter Configuration

Once you have defined all of the configurable parameters, the PowerLogic meter is ready to be programmed.

To complete the meter configuration:

1. Click **Unit** in the menu bar, then select **Save** from the drop-down menu. See Figure 17.

Figure 17: Saving the configuration settings

2. Click **Unit** in the menu bar, then select **Send** from the drop-down menu to transmit the configuration settings from your PC to the selected PowerLogic meter. The confirmation message **File loaded successfully!** should appear in the bottom left corner of the window. See Figure 18.

Figure 18: Sending the configured settings to the meter
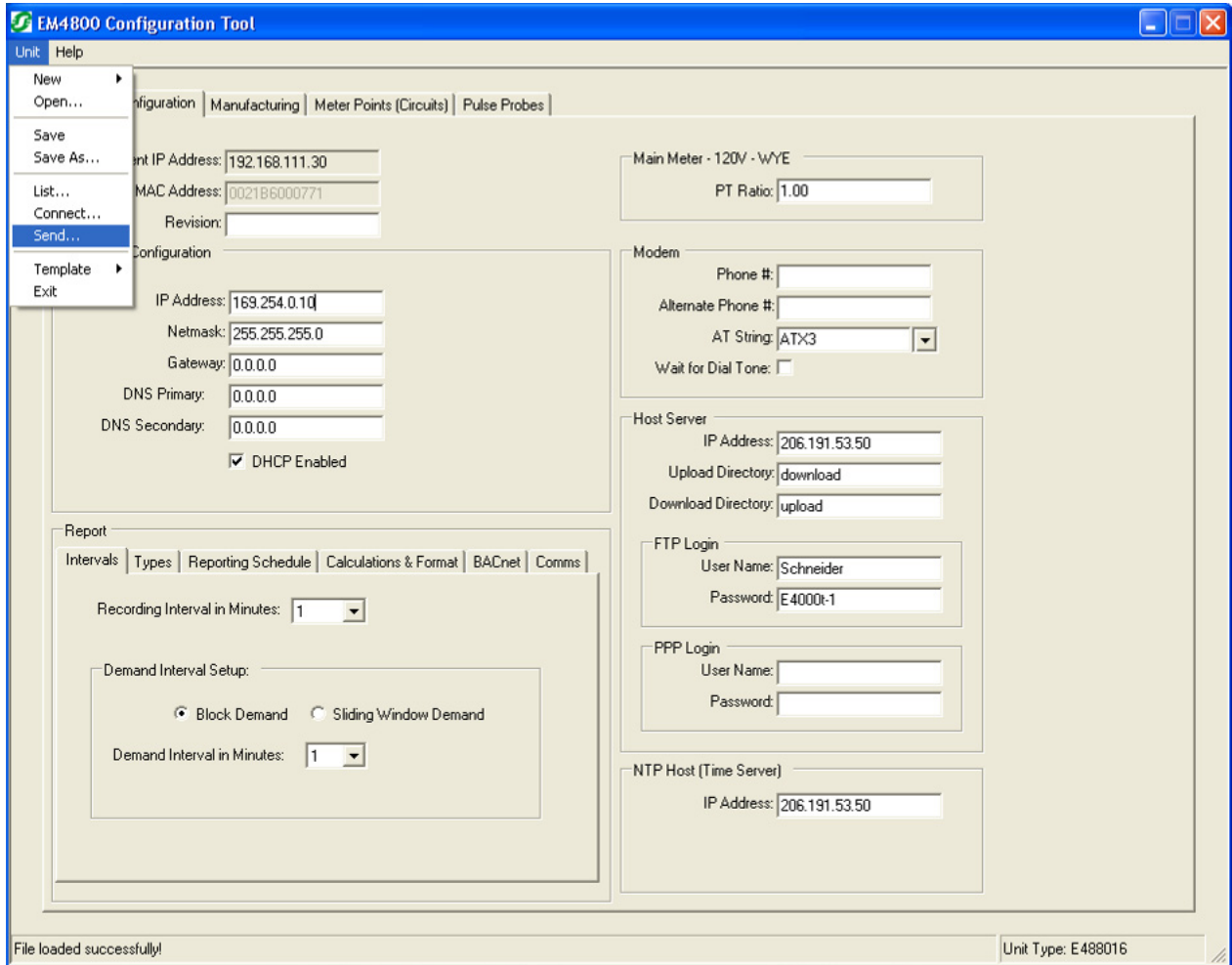
User notes

PowerLogic™ Series EM4000/EM4800
Multi-Circuit Meters

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