

PM3200 Series SE Driver for Power Monitoring Expert 8.0 Release Notes

This document contains information about the Power Monitoring Expert 8.0 SE (Standard Edition) driver for the PM3200 Series devices.

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Additional Information

- [PM3000 Series device documentation](#)
- [Power Monitoring Expert 8.0 documentation](#)

Version History

The following table lists the version history of the PM3200 Series device driver:

Version Number	Description of Changes
8.0.15355.01	What is New? Supports new firmware version of 1.2.003 that supports simultaneous logging of Demand and Energy measurements in the Flex Log. Issues Resolved Alarms not being retrieved after alarm log roll-over.
PME 8.0	Available as native

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 a hazardous situation which, if not avoided, **will result in** death or serious injury.

WARNING

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

CAUTION

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

NOTICE

NOTICE is used to address practices not related to physical injury.

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.

Safety Precautions

During installation or use of this software, pay attention to all safety messages that occur in the software and that are included in the documentation. The following safety messages apply to this software in its entirety.

▲ WARNING

UNINTENDED EQUIPMENT OPERATION

- Do not use the software for critical control or protection applications where human or equipment safety relies on the operation of the control action.
- Do not use the software to control time-critical functions because communication delays can occur between the time a control is initiated and when that action is applied.
- Do not use the software to control remote equipment without securing it with an authorized access level, and without including a status object to provide feedback about the status of the control operation.

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

▲ WARNING

INACCURATE DATA RESULTS

- Do not incorrectly configure the software, as this can lead to inaccurate reports and/or data results.
- Do not base your maintenance or service actions solely on messages and information displayed by the software.
- Do not rely solely on software messages and reports to determine if the system is functioning correctly or meeting all applicable standards and requirements.
- Consider the implications of unanticipated transmission delays or failures of communications links.

Failure to follow these instructions can result in death, serious injury, equipment damage, or permanent loss of data.

PM3200 Series SE Driver

Power Monitoring Expert 8.0 Requirements

The driver can only be installed on systems with Power Monitoring Expert 8.0.

NOTE: This driver upgrades the existing PM3200 Series driver.

The device can be connected to Power Monitoring Expert using one of the following methods:

- As a translating gateway, such as an EGX300 or through some other method of connection that allows the device to use Modbus™ TCP.
- As a Serial connection using a suitable RS-485 to RS-232 converter.

Driver Version

This release note applies to the device driver version 8.0.15355.01.

Supported Models

The supported device variants are:

- PM3250
- PM3255

The supported firmware versions are:

PM3250	PM3255
-	V1.2.003
-	V1.0.901
-	V1.0.800
-	V1.0.600
-	V1.0.500
V1.0.300	V1.0.300
-	V1.0.200

Some features may not work for the other firmware versions.

Features

The PM3200 device driver supports the following features:

- All real-time registers
- On-board alarm logs
- Digital output control
- On-board Demand/Flex Log and Daily Energy Log (PM3255 only)
- Device time synchronization to Server Local Time without DST at an interval of 15 minutes
- Real-time data transfer using OPC
- The following factory-provided default reports in the Web-based Reports application:
 - Energy Cost
 - Energy Period Over Period
 - Energy Usage by Shift
 - Hourly Usage
 - Load Profile
 - Multi Device Usage
 - Single Device Usage
 - Tabular
 - Trend
- The following factory-provided default reports in the Excel-based Reporter application:
 - Energy and Demand
 - Load Profile

Installation

Device Driver Installer

WARNING

LOSS OF CONTROL

Do not ignore alerts during the driver installation. If you choose to ignore such alerts, the driver will be installed but may operate incorrectly.

Failure to follow this instruction can result in death or serious injury.

The associated device driver installer is used to add this driver and all the required supporting files to the target Power Monitoring Expert system. The supporting files consist of:

- Device map and tree files
- Vista diagrams
- xlpm3250.dll

NOTE: The device driver installation process restarts the ION Site Service of Power Monitoring Expert. This results in a brief disruption of communication between the Power Monitoring Expert server and the devices connected to it.

Uninstalling

Uninstalling by Add/Remove programs removes all the files that were added by the Device Driver Installer. This method does not remove the files that have been modified.

Refer to *Known Issues* for an exception regarding the removal process.

Implementation Details

Device Configuration and Upgrade

NOTE: Power Monitoring Expert cannot be used to configure this device or to upgrade the device firmware.

The device configurations can be done using ION Setup tool. The device type name in ION Setup is **PowerLogic PM3000 Series Power Meter**.

Digital Output

⚠ WARNING

UNINTENDED EQUIPMENT OPERATION

- Do not use the control objects for time-critical functions because delays can occur between the time a control action is initiated and when that action is applied.
- Do not create a custom control object in a Vista diagram for remote equipment operation without configuring it with the appropriate access level, and without configuring a status object to indicate the status of the control operation.

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

The PM3255 device supports two digital outputs which can be operated remotely using Power Monitoring Expert. To operate the digital outputs, create custom Vista diagrams with the necessary control objects.

NOTE:

- Be aware that the time to complete an I/O command operation depends on many factors, most notably network traffic. Under the normal network traffic conditions, it takes approximately 10 seconds to complete the command sequence. In case of heavy network traffic, the command sequence may take longer to complete.
 - It is important to realize that the system control paths contain communications links that may have unanticipated transmission delays or failures.
-

Alarm Configuration

The alarm configuration can be done using Vista.

NOTE: Use ION Setup to configure the device, including the configuration of alarms. Use Vista only for alarm configuration on the device.

Alarm Log

The PM3250 and PM3255 devices support on-board alarm logging. The device driver polls the device and checks for new log entries at regular intervals. The default polling interval is 30 seconds.

The polling interval can be modified by changing the value of the attribute "EL1 Poll Period Seconds" in ext_pm3250.ion and ext_pm3255.ion in the ...\\system\\translators folder. The lowest possible polling interval is 5 seconds.

On-Board Logging (PM3255 only)

The PM3255 Power Meter supports the following on-board data logs:

Data Log Name	Firmware Rev.	Logged Measurements
24 hr Energy Log	All	Active Energy Delivered Interval
Demand Log	<V1.0.600	Demand Real Power
Flex Log	>=V1.0.600 & <V1.2.003	Depending on the flex log settings: • Demand Real Power • Active Energy Delivered • Apparent Energy Delivered • Reactive Energy Delivered
Flex Log V2	>=V1.2.003	Following measurements or a combination of them depending upon the flex log settings: • Demand Real Power • Demand Apparent Power • Active Energy Delivered • Apparent Energy Delivered • Reactive Energy Delivered

The energy log interval is set to 24 hours. The demand log interval and the parameter can be modified from the front panel of the meter. Refer to the device documentation for more information about the on-board logging feature.

NOTE: While configuring the logs in the device (onboard data logging) and PME (PC logging), ensure that the same measurements are not logged in both the places."

PC-Based Logging

The PM3200 Series device driver allows users to log data using the PC-based logging feature.

The following measurements are logged by default using the PC-based logging feature:

Measurements	Logging Interval (in secs)	PM3250	PM3255
Current Phase A	900	✓	✓
Current Phase B	900	✓	✓
Current Phase C	900	✓	✓
Apparent Power Total	900	✓	✓
Real Power Total	900	✓	✓
Demand Real Power	900	✓	✓
WAGES External Input 1 Cumulative Usage	900	Not applicable	✓
WAGES External Input 2 Cumulative Usage	900	Not applicable	✓

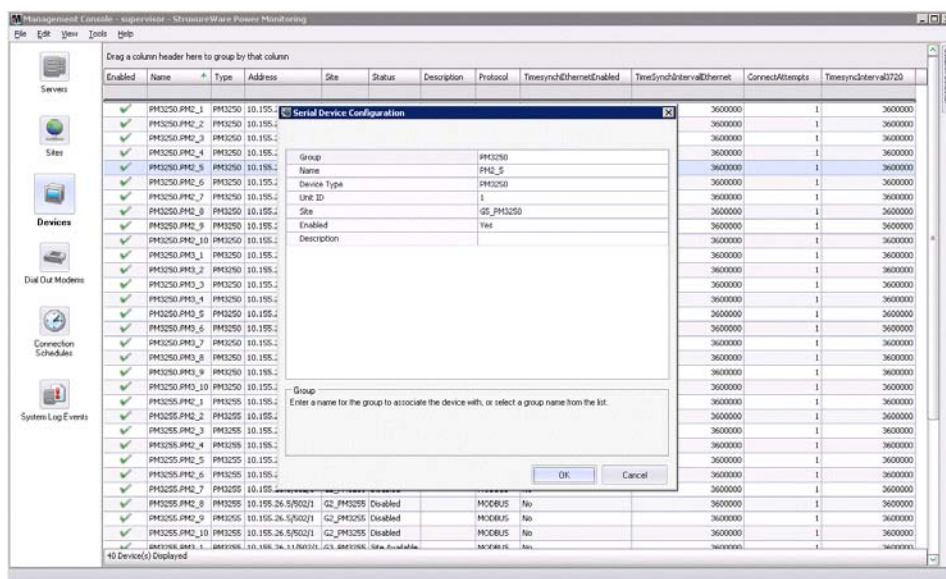
To change the list of measurements being logged, use the Modbus Device Importer, accessed from the **Tools > System** menu in Management Console.

Time Synchronization

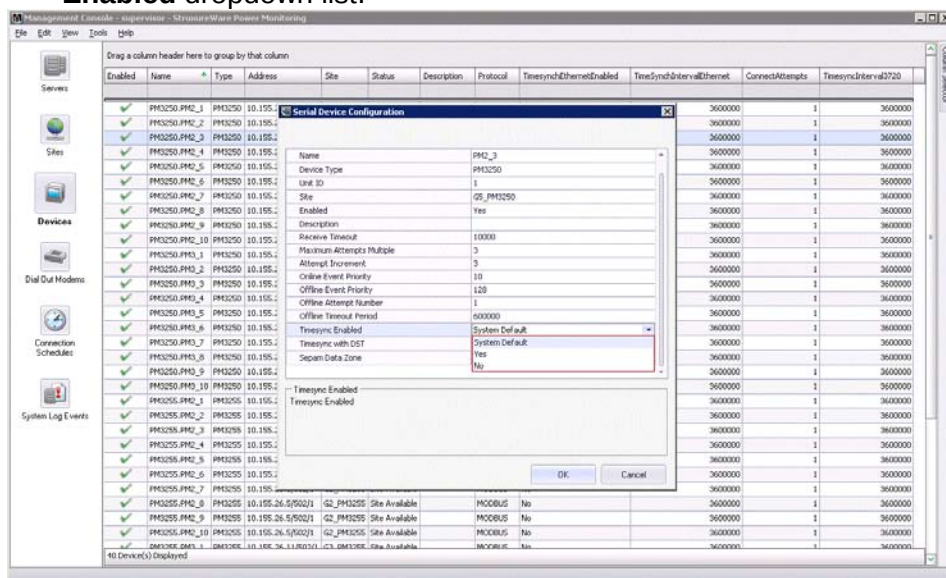
By default, the Power Monitoring Expert server synchronizes the device time with the server local time without DST adjustment at an interval of 15 minutes.

For a particular device instance, disable time synchronization through Management Console as follows:

1. Click the **Devices** icon, right-click the device instance and select **Configure Device**.
2. Right-click the grid area and select the **Advanced Properties** menu option.



- To enable **Timesync**, select **Yes** from the **Timesync Enabled** dropdown list. To disable **Timesync**, select **No** from the **Timesync Enabled** dropdown list.



By default, the time synchronization interval is 900 seconds (15 minutes). The time synchronization interval can be modified by changing the **TimeSyncInterval** attribute in the pm3250.xml or pm3255.xml files.

NOTE: The minimum value for the **TimeSyncInterval** attribute is 300 seconds. The **TimeSyncInterval** attribute takes effect only if **Timesync Enabled** is set to **System Default** in Management Console. The time synchronization occurs at fixed hourly intervals if **Timesync Enabled** is set to **Yes**.

Known Issues

Following is the known issue as of the publication date of this document.
This issue might be resolved in future release:

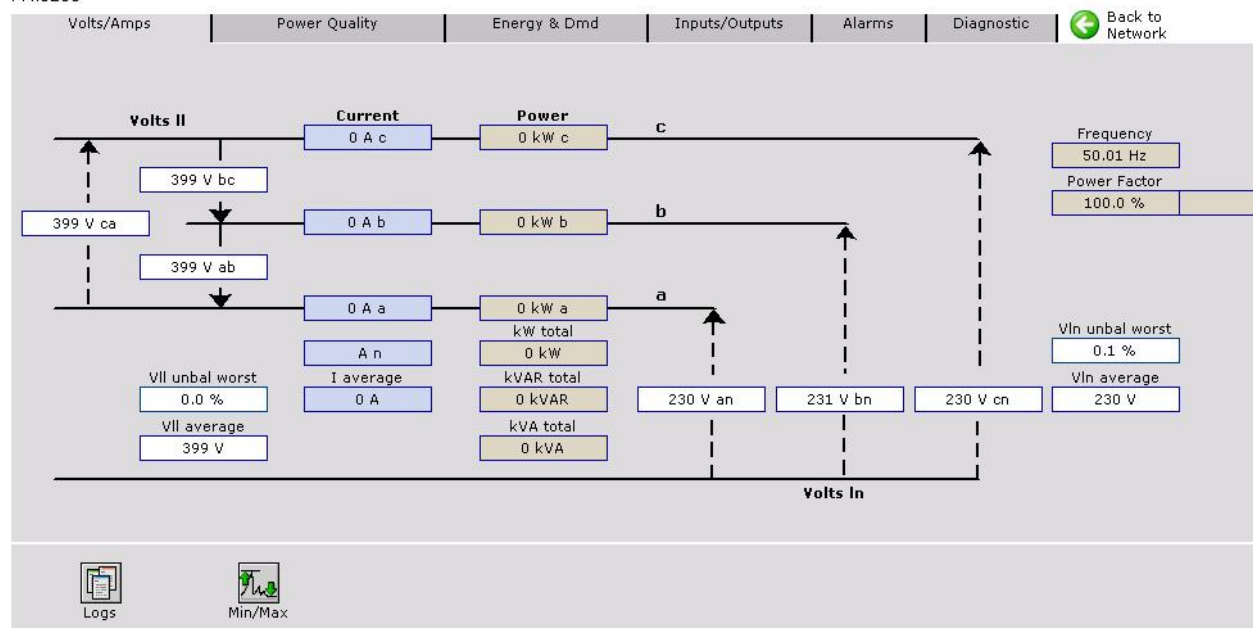
- When the driver is uninstalled, the device instances in the Management Console and the device type definition contained in the Device Type table in the ION_Network database are not removed.

Vista Factory Diagrams

This section contains samples of the Vista factory diagrams for the device.

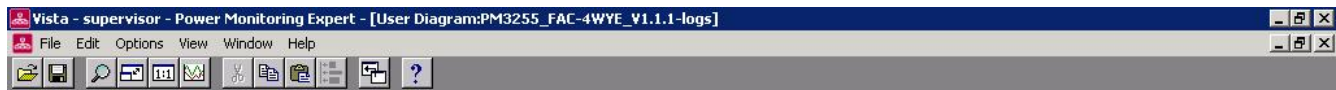


PM.3255



Device Time 4/22/2014 08:47:05.000 PM
Device Type PM3255





PM.3255

 Back to
Volts/Amps

Historic Data Logs

Trending

Current



Power



Events

Meter events



Device Time 4/22/2014 08:48:15.000 PM
Device Type PM3255

Text Box	8:48 PM	 
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Vista - supervisor - Power Monitoring Expert - [User Diagram:PM3255_FAC-4WYE_V1.1.1-minmax]

File Edit Options View Window Help

PM.3255

Min/Max Voltage Min/Max Current Min/Max

Back to Volts/Amps

Min		Max	
	Value		Value
kW total	-0.549 kW	kW total	0.455 kW
kVAR total	-6.295 kVAR	kVAR total	6.129 kVAR
kVA total	0.000 kVA	kVA total	6.296 kVA
Frequency	49.96 Hz	Frequency	50.04 Hz
PF Total	0 %	PF Total	0 %

Reset Min/Max
(also resets harmonics min/max)

Device Time 4/22/2014 08:49:18.000 PM
Device Type PM3255

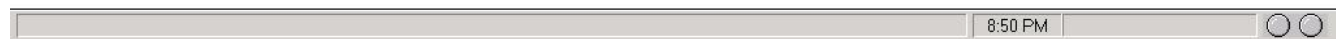
8:49 PM



PM.3255

Min/Max		Voltage Min/Max		Current Min/Max		Back to Volts/Amps	
Min				Max			
	Value		Value		Value		Value
Vll ab	399 V	Vll ab	399 V	Vll bc	400 V	Vll bc	399 V
Vll bc	399 V	Vll ca	398 V	Vll ca	399 V	Vln a	231 V
Vll ca	398 V	Vln a	230 V	Vln b	231 V	Vln b	231 V
Vln a	230 V	Vln b	230 V	Vln c	231 V	Vln c	231 V
Vln b	230 V	Vll avg	399 V	Vll avg	399 V	Vln avg	231 V
Vln c	230 V	Vln avg	230 V	Vln avg	231 V		
Reset Min/Max (also resets harmonics min/max)							

Device Time 4/22/2014 08:50:36.000 PM
Device Type PM3255



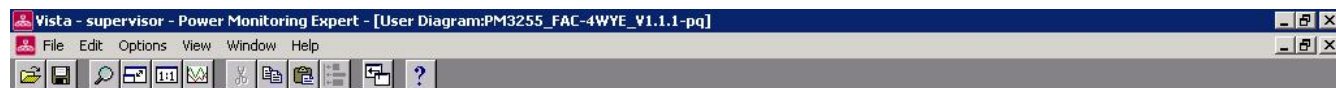
Vista - supervisor - Power Monitoring Expert - [User Diagram:PM3255_FAC-4WYE_V1.1.1-minmaxc]

File Edit Options View Window Help

PM.3255

Min/Max	Voltage Min/Max	Current Min/Max																								
Back to Volts/Amps Min Max																										
<table border="1"> <thead> <tr> <th></th> <th>Value</th> <th></th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>I a</td> <td>0.00 A</td> <td>I a</td> <td>0.00 A</td> </tr> <tr> <td>I b</td> <td>0.00 A</td> <td>I b</td> <td>27.30 A</td> </tr> <tr> <td>I c</td> <td>0.00 A</td> <td>I c</td> <td>0.00 A</td> </tr> <tr> <td>I n</td> <td>A</td> <td>I n</td> <td>A</td> </tr> <tr> <td>I avg</td> <td>0.00 A</td> <td>I avg</td> <td>9.10 A</td> </tr> </tbody> </table>				Value		Value	I a	0.00 A	I a	0.00 A	I b	0.00 A	I b	27.30 A	I c	0.00 A	I c	0.00 A	I n	A	I n	A	I avg	0.00 A	I avg	9.10 A
	Value		Value																							
I a	0.00 A	I a	0.00 A																							
I b	0.00 A	I b	27.30 A																							
I c	0.00 A	I c	0.00 A																							
I n	A	I n	A																							
I avg	0.00 A	I avg	9.10 A																							
Reset Min/Max (also resets harmonics min/max)																										
Device Time 4/22/2014 08:53:14.000 PM Device Type PM3255																										

8:51 PM



PM.3255

Volts/Amps	Power Quality	Energy & Dmd	Inputs/Outputs	Alarms	Diagnostic	Back to Network
Total Harmonic Distortion						 Harmonics Min/Max
Ia 312.4 %	V ab 0.4 %	V an 0.9 %				
Ib 433.0 %	V bc 0.4 %	V bn 0.8 %				
Ic 699.6 %	V ca 0.4 %	V cn 0.9 %				
In %	V ll 0.4 %	V ln 0.9 %				

Device Time 4/22/2014 08:54:05.000 PM
Device Type PM3255



Vista - supervisor - Power Monitoring Expert - [User Diagram:PM3255_FAC-4WYE_V1.1.1-harmv]

File Edit Options View Window Help

PM.3255

Voltage Harmonics | Current Harmonics

Back to Power Quality

Min THD

Vll ab	0.3 %
Vll bc	0.3 %
Vll ca	0.3 %
Vln a	0.6 %
Vln b	0.7 %
Vln c	0.6 %
Vll	0.3 %
Vln	0.7 %

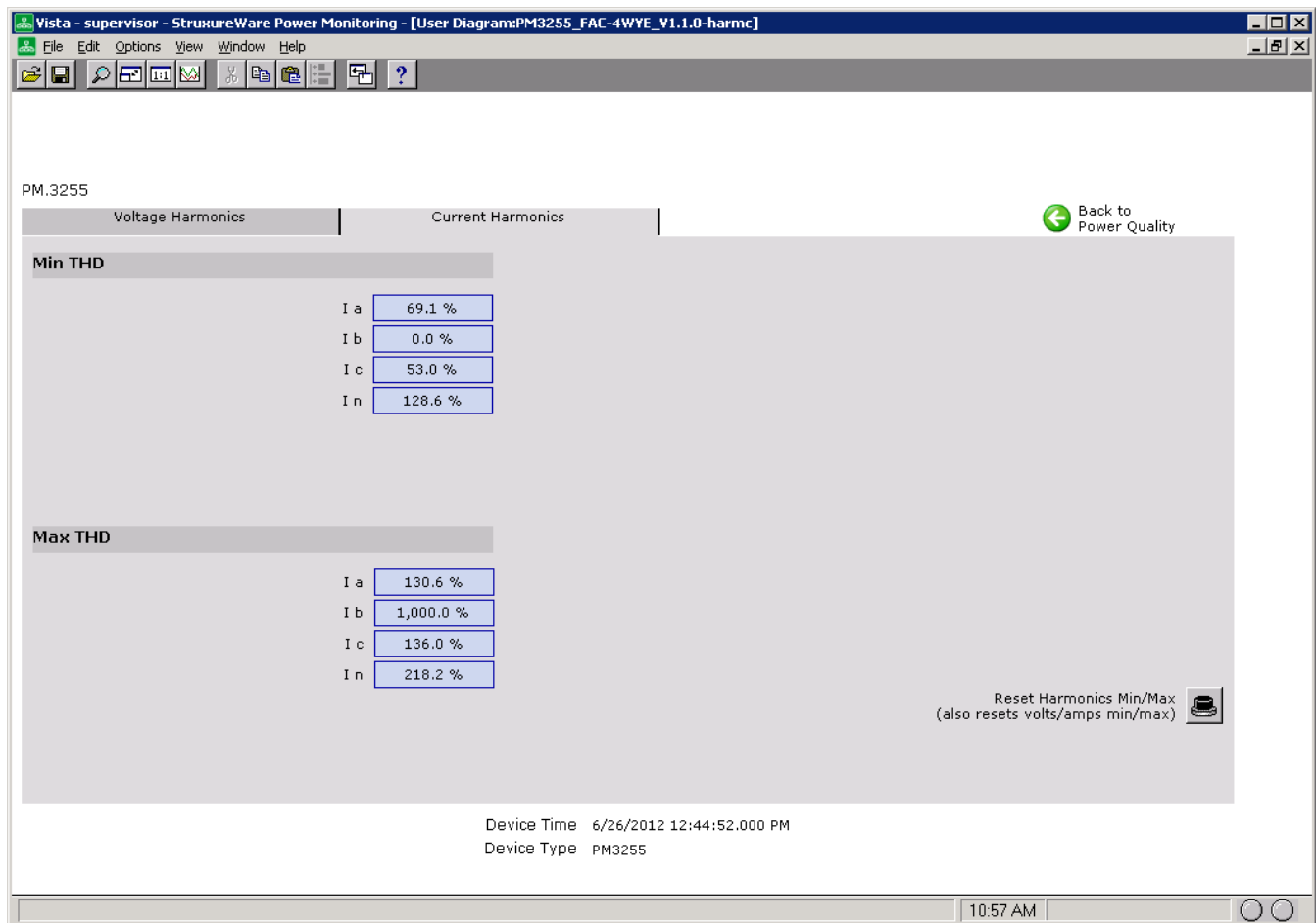
Max THD

Vll ab	0.6 %
Vll bc	0.6 %
Vll ca	0.6 %
Vln a	1.4 %
Vln b	1.2 %
Vln c	1.2 %
Vll	0.6 %
Vln	1.2 %

Reset Harmonics Min/Max
(also resets volts/amps min/max)

Device Time 4/22/2014 07:33:33.000 AM
Device Type PM3255

8:54 PM





PM.3255

Volts/Amps	Power Quality	Energy & Dmd	Inputs/Outputs	Alarms	Diagnostic	Back to Network																			
Demand Interval Demand kW: 0 kVAR: 0 kVA: 0 Ia: 0 Ib: 0 Ic: 0 Peak Demand kW: 0 kVAR: 0 kVA: 0 4/20/2014 07:14:41.000 PM 4/19/2014 10:08:01.000 PM 4/19/2014 09:07:30.000 PM Ia: 0 Ib: 1 Ic: 0 4/19/2014 09:07:30.000 PM Reset Peak Demand		Energy Energy - Cumulative <table border="1"> <thead> <tr> <th></th> <th>kWh</th> <th>kVARh</th> <th>kVAh</th> </tr> </thead> <tbody> <tr> <td>imp</td> <td>290,216</td> <td>127,500</td> <td>370,534</td> </tr> <tr> <td>exp</td> <td>3</td> <td>26,682</td> <td>164</td> </tr> </tbody> </table> Energy - Since Last Reset <table border="1"> <thead> <tr> <th></th> <th>kWh</th> <th>kVARh</th> <th>kVAh</th> </tr> </thead> <tbody> <tr> <td>imp</td> <td>0</td> <td>0</td> <td>2</td> </tr> </tbody> </table> Reset Accum Energy (also resets Time of Use)				kWh	kVARh	kVAh	imp	290,216	127,500	370,534	exp	3	26,682	164		kWh	kVARh	kVAh	imp	0	0	2	Time of use
	kWh	kVARh	kVAh																						
imp	290,216	127,500	370,534																						
exp	3	26,682	164																						
	kWh	kVARh	kVAh																						
imp	0	0	2																						

Device Time 4/22/2014 08:58:14.000 PM
Device Type PM3255

Text Box	8:57 PM	
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PM.3255

 Back to
Energy & Dmd

Time Of Use - kWh Del

	Rate A	Rate B	Rate C	Rate D
Energy [kWh]	0	0	0	0
Time of Use Active Rate	1			

Device Time 4/22/2014 08:59:34.000 PM
Device Type PM3255

Text Box 8:58 PM  

Vista - supervisor - Power Monitoring Expert - [User Diagram:PM3255_FAC-4WYE_V1.1.1-dio]

File Edit Options View Window Help

PM.3255

Volts/Amps | Power Quality | Energy & Dmd | **Inputs/Outputs** | Alarms | Diagnostic | [Back to Network](#)

Digital I/O

Inputs

Port	Status	Control Mode
DI1	Off	Input Status
DI2	Off	Input Status

Outputs

Port	Status	Control Mode
DO1	Off	External
DO2	Off	Energy Pulse Output

Input Metering

Device Time 4/22/2014 09:00:37.000 PM
Device Type PM3255

8:59 PM

Vista - supervisor - Power Monitoring Expert - [User Diagram:PM3255_FAC-4WYE_V1.1.1-inptmtr]

File Edit Options View Window Help

PM.3255

Back to Inputs/Outputs

Input Metering

Channel	Usage	Pulse Weight	Digital Input Association
CH1	0	500.00	
CH2	0	500.00	

Input Metering log 

Reset Cumulative Usage 

Device Time 4/22/2014 09:02:03.000 PM
Device Type PM3255

9:00 PM



PM.3255

Volts/Amps | Power Quality | Energy & Dmd | Inputs/Outputs | Alarms | Diagnostic | [Back to Network](#)

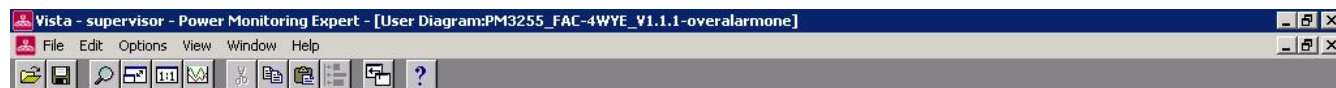
Source	Enabled	Status
Over Current, Phase	Yes	Inactive
Under Current, Phase	Yes	Active
Over Voltage, L-L	No	Inactive
Under Voltage, L-L	Yes	Inactive
Over Voltage, L-N	No	Inactive
Under Voltage, L-N	Yes	Inactive
Over Active Power	Yes	Inactive
Under Active Power	Yes	Active
Over Reactive Power	No	Inactive
Over Apparent Power	Yes	Inactive
Lead PF, True	No	Inactive
Lag PF, True	Yes	Inactive
Over kW Dmd, Present	Yes	Inactive
Over kVA Dmd, Present	No	Inactive
Over Voltage THD	No	Inactive
Over Current THD	No	Inactive
Over Voltage THD L-N	No	Inactive
Over Active Energy	No	Inactive

Setup

Device Time 4/22/2014 09:01:45.000 PM

Device Type PM3255





PM.3255

Over Alarm Setup	Under Alarm Setup	Global Alarm Setup
Back to Alarms		
Over Alarm Setup		
Source	Pickup Setpoint	Enabled
Over Current, Phase	2.00 A	Yes
Over Voltage, L-L	5.00 V	No
Over Voltage, L-N	2.00 V	No
Over Active Power	2.00 kW	Yes
Over Reactive Power	2.00 kVAR	No
Over Apparent Power	5.00 kVA	Yes
Lead PF, True	1.00 %	No
Over kW Dmd, Present	800.00 kW	Yes
Over kVA Dmd, Present	800.00 kVA	No
Over Voltage THD	1.00 %	No
Over Current THD	1.00 %	No
Over Voltage THD L-N	50.00 %	No
Over Active Energy	1.00 kWh	No

Device Time 4/22/2014 09:04:36.000 PM
Device Type PM3255



Vista - supervisor - Power Monitoring Expert - [User Diagram:PM3255_FAC-4WYE_V1.1.1-underalarmone]

File Edit Options View Window Help

PM.3255

Over Alarm Setup

Under Alarm Setup

Global Alarm Setup

Back to Alarms

Under Alarm Setup

Source	Pickup Setpoint	Enabled
Under Current, Phase	1.00 A	Yes
Under Voltage, L-L	100.00 V	Yes
Under Voltage, L-N	1.00 V	Yes
Lag PF, True	0.50 %	Yes
Under Active Power	1.00 kW	Yes

Device Time 4/22/2014 09:08:06.000 PM

Device Type PM3255

Text Box

9:06 PM

Vista - supervisor - Power Monitoring Expert - [User Diagram:PM3255_FAC-4WYE_V1.1.1-globalalarmone]

File Edit Options View Window Help

PM.3255

Over Alarm Setup Under Alarm Setup Global Alarm Setup  Back to Alarms

Global Alarm Setup

Source	Dropout Setpoint	Pickup Delay(secs)	Digital O/P
All Alarms	5.00 %	3.00	None

Note: Dropout Delay is same as Pickup Delay.

Device Time 4/22/2014 09:09:18.000 PM
Device Type PM3255

9:08 PM

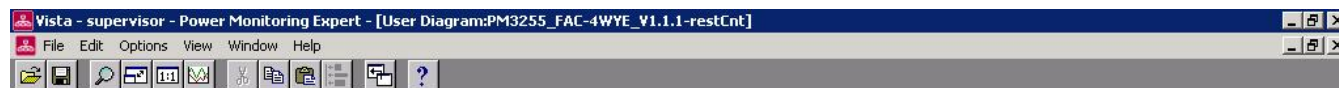


PM.3255

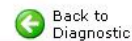
Volts/Amps	Power Quality	Energy & Dmd	Inputs/Outputs	Alarms	Diagnostic	Back to Network
Power Meter Module				Miscellaneous		Maintenance Log Log Resets
VT Primary 100.0 V				Temperature 29 deg C		
VT Secondary 100.0 V				Meter ON Duration 7,458 Hrs		
CT Primary 25,000.0 A						
CT Secondary 5.0 A						
Nominal Frequency 50.0 Hz						
Nominal Phase Rotation ABC						
Volts Mode 3-phase 4-wire Wye						
Demand Interval				Diagnostic Indication		
Power (in mins) 15				RTC Error No		
Current (in mins) 15				Wiring Error No		
Demand Calculation Method				NVRAM Error No		
Power Sliding, Timed Intvl Sliding Block				Oscillator Error No		
Current Sliding, Timed Intvl Sliding Block				Calibration Error No		
Serial Number 13,116,029				F/W Rev 10,600		
				Current Reversed No		
				Energy Pulse Overrun No		
				Frequency Setting Error No		
				Phase Sequence Reversed Yes		

Device Time 4/22/2014 07:48:49.000 AM
Device Type PM3255





PM.3255



Maintenance Log - Resets

Resets

Energy

	Last Operation
Accumulated	4/19/2014 01:35:00.000 AM

Min/Max

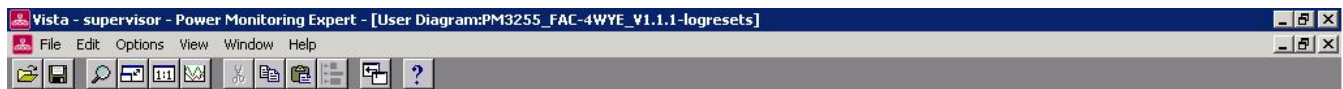
	Last Operation
Long Term	4/19/2014 01:38:33.000 AM
Power Demand	4/19/2014 01:39:11.000 AM
Current Demand	4/19/2014 01:39:11.000 AM

Input Metering

	Last Operation
Usage	4/19/2014 01:35:44.000 AM

Device Time 4/22/2014 07:50:09.000 AM
Device Type PM3255





PM.3255

 Back to Diagnostic

Log Resets

	Mode	Records Left	Fully Uploaded	State	Affected Viewers
Data Log 1	Circular	NA	YES	Enabled	Demand
Data Log 2	Circular	NA	NO	Enabled	Energy

Device Time 4/22/2014 09:15:08.000 PM
Device Type PM3255

9:13 PM