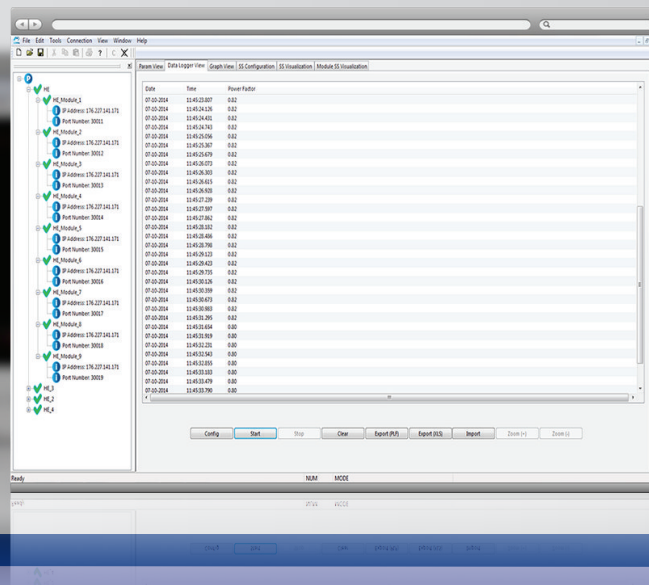


PowerComms



PowerComms Software Tool Getting Started Manual



PowerComms Software Tool

Getting Started Manual

PowerComms v1.2.1

Edition: October 2014

GIM01AI Rev. A

SAFETY SYMBOLS

Always follow safety instructions to prevent accidents and potential hazards from occurring.

**WARNING**

This symbol means improper operation may results in serious personal injury or death.

**CAUTION**

Identifies shock hazards under certain conditions. Particular attention should be given because dangerous voltage may be present. Maintenance operation should be done by qualified personnel



Identifies potential hazards under certain conditions. Read the message and follow the instructions carefully.



Identifies shock hazards under certain conditions. Particular attention should be given because dangerous voltage may be present.

Edition of October 2014

This publication could present technical imprecision or misprints. The information here included will be periodically modified and updated, and all those modifications will be incorporated in later editions. To consult the most updated information of this product you might access through our website www.power-electronics.com where the latest version of this manual can be downloaded.

Revisions

Date	Revision	Description
07 / 10 / 2014	A	First Edition. v1.2.1.

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SAFETY INSTRUCTIONS

IMPORTANT!

- Read this manual carefully to maximise the performance of this product and to ensure its safe use.
- In this manual, safety messages are classified as follows:



CAUTION

The PowerComms tools enables to start-up the drives or inverters remotely. Do not start without the supervision of a qualified technician. Otherwise you may get an electric shock or damage the equipment.

Before using PowerComms, read thoroughly the Software and Programming manual. Otherwise you may damage the equipment.

Do not run remotely the drive or inverter with the front cover removed. Otherwise you may get an electric shock due to the high voltage terminals or exposure of charged capacitors.

Do not use communication cables with damaged insulation. Otherwise you may get an electric shock.

Do not subject the cables to abrasions, excessive stress, heavy loads or pinching. Otherwise, you may get an electric shock.



WARNINGS

RECYCLING

- Packing of the equipments should be recycled. For this, it is necessary to separate different materials included (plastic, paper, cardboard, wood, ...) and deposit them on proper banks.
 - Waste products of electric and electronic devices should be selectively collected for their correct environmental management.
-

TRIAL RUN

- Verify all parameters before operating the drive, soft starter or inverter. Alteration of parameters may be required depending on application and load.
 - Always apply voltage and current signals to each terminal that are within levels indicated within this manual. Otherwise, damage to the drive may result.
-

1. INTRODUCTION

PowerComms is a desktop based tool used to monitor and control Power Electronics' solar inverter, drives and soft starters in the network. PowerComms can communicate with the devices using MODBUS protocol over Serial and TCP/IP networks.

All the devices in the plant are organized in projects and stored as a PCP (PowerCommPlant) file format.

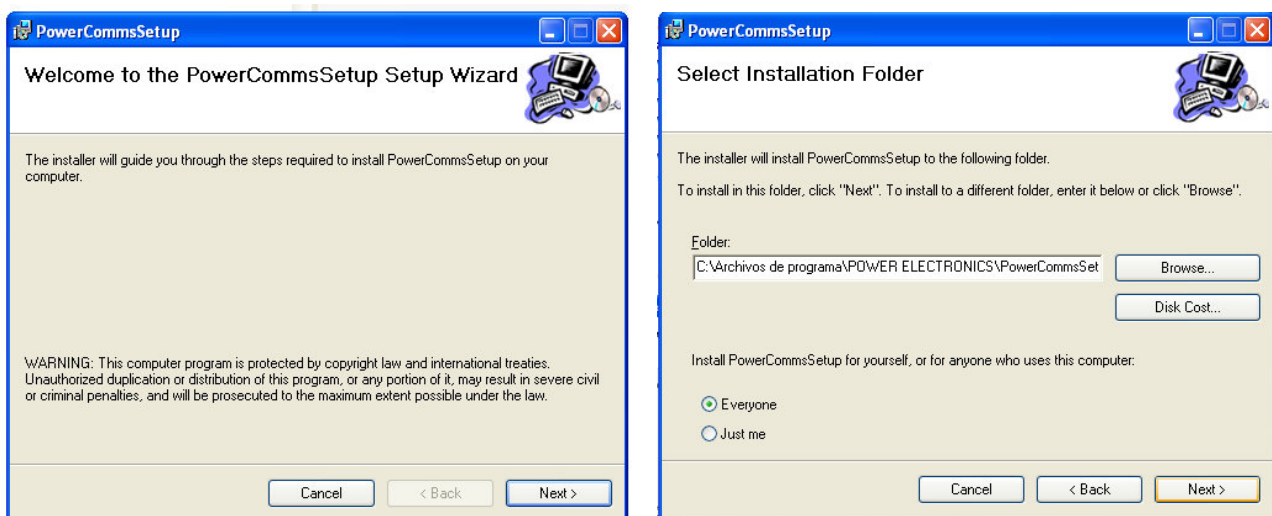
The application communicates with all the connected devices at the same time.

1.1. System Requirements

- Intel i3 2.5GHz or higher
- 1GB RAM (recommended 2GB RAM)
- At least 1 GB of free hard disk space
- Screen resolution 1024 x 768 pixels (recommended 1280 x 1024 pixels)
- Operating system Windows XP, Vista, 7, 8 (32/64 bits).

1.2. Install and Uninstall

To install PowerComms, click on the installation file and follow the wizard setup installation guide. Click Next > select the installation folder > confirm installation > wait until the program is installed.



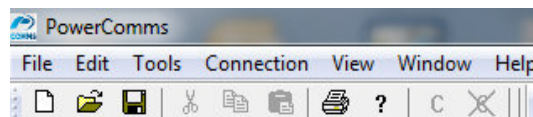
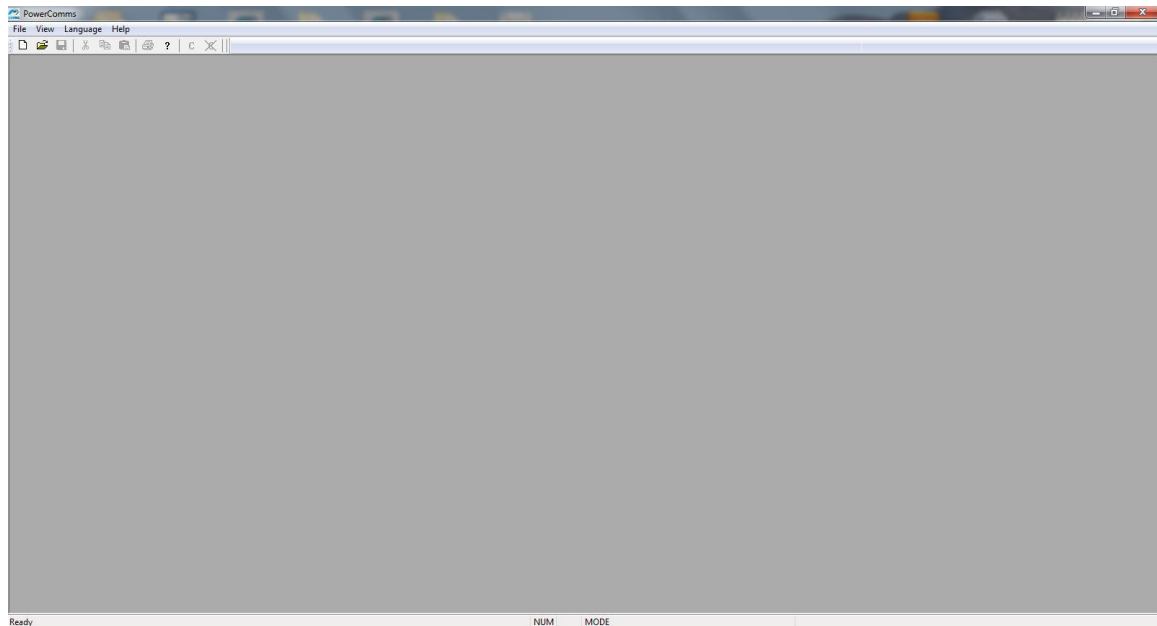
To uninstall PowerComms use the Windows uninstall system to remove completely the tool and reboot your computer for the changes to take effect.

1.3. Starting PowerComms

To access PowerComms application, the user needs to click the shortcut in the desktop.

Or Click Start->programs->Power Electronics->PowerComms.

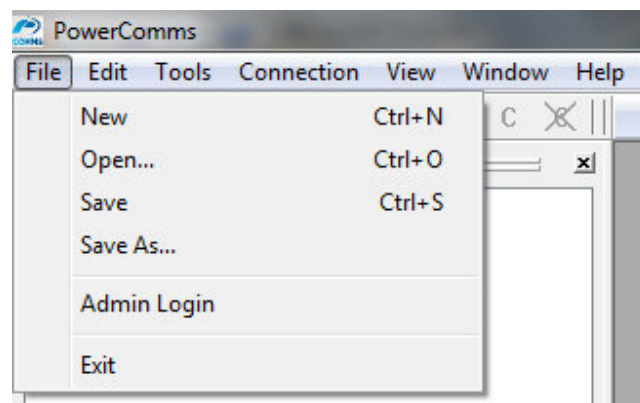
On clicking the PowerComms application will be opened.



1.4. PowerComms Menus

Various functionalities of the PowerComms application are organized in the following menus: File, Edit, Tools, Connection, View, Window and Help. Extended icon will appear in administrator mode.

1.4.1. File menu

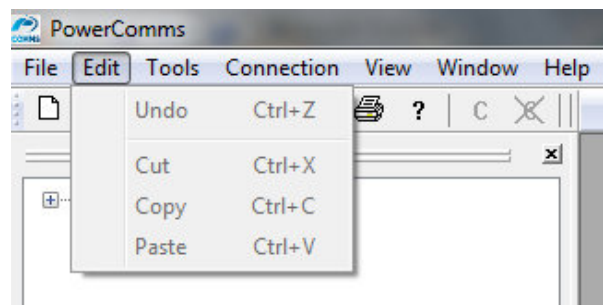


All the functionalities related to creating new projects, opening existing projects, storing them after modification and Administrator login are grouped inside the File menu. Also options are provided to print pages of the projects from this menu.

The File menu includes the following options:

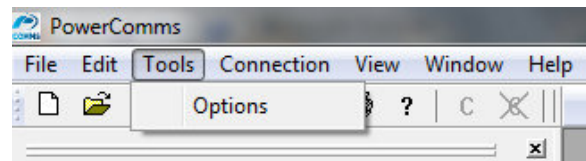
- **New:** This menu option is used to create a new project. Once the new project has been created, a new child view is automatically added to the project.
- **Open...:** This menu option is used to open any previously saved project.
- **Close:** This menu option is used to close the current project.
- **Save:** Save the summary of the project in the existing file.
- **Save As...:** Using this menu, it is possible to save the summary of the current project in xml file format.
- **Admin Login:** This option is reserved for Power Electronics staff.
- **Recent File List:** This option is used to load the recently opened projects by the user. The recently opened projects will be listed in the menu.
- **Exit:** This option is used to exit from the PowerComms application.

1.4.2. Edit Menu



The Edit menu contains the undo, copy, cut and paste menus.

1.4.3. Tools Menu



The Tools menu options change depending on the project status.

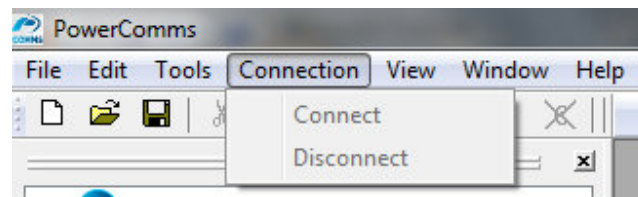
Before creating/opening a project, the Tools menu contains the following option:

- **Languages:** This option permits to select the software languages between Spanish, English and German.

After a new project is created or opened, the Tools menu will contain options to configure the Connection type, Map Address, Sampling interval, Language and Updates.

- **Connection type:** This option will allow the user to configure the connection type as well as configure the serial port communication properties.
- **Map Address:** This option will allow the user to configure the Modbus TCP/IP communication properties.
- **Sampling Interval:** This option will allow user to configure the sampling interval.
- **Updates:** This option will allow seeing FTP server configuration.

1.4.4. Connection Menu



The Connection menu includes the following options:

- **Connect:** This option is used to connect the device via serial port communication or TCP/IP communication.

The device parameter view will contain information regarding the connection status on top in this case shows "Online Status".

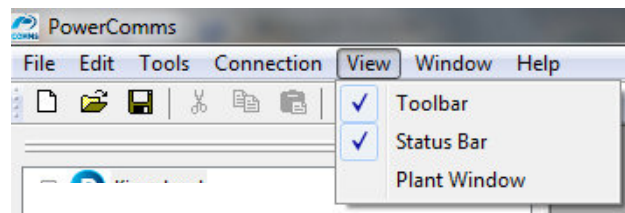
Device Type :	FreeSun HE Module	Software Revision :	HE_R2.0	COM State :	Online
---------------	-------------------	---------------------	---------	-------------	--------

- **Disconnect:** This option is used to discount the device.

The connection status will be Shown as offline as shown.

Device Type :	FreeSun HE Module	Software Revision :	HE_R2.0	COM State :	Offline
---------------	-------------------	---------------------	---------	-------------	---------

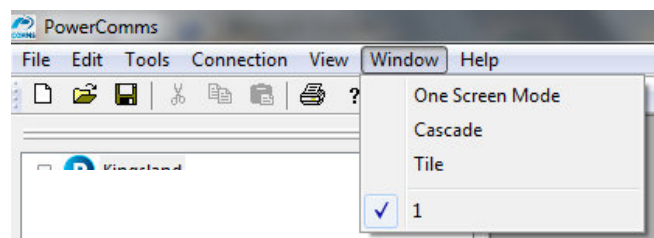
1.4.5. View Menu



The View menu includes the following options:

- **Toolbar:** This option will allow the user to show or hide the toolbar.
- **Status Bar:** This option will allow the user to show or hide the status bar.
- **Plant Window:** This option will show the plant view control bar if it is hidden.

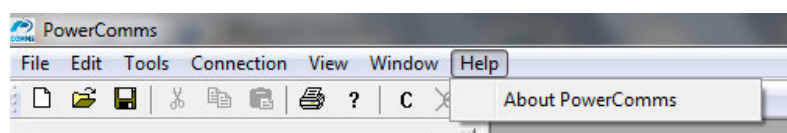
1.4.6. Window Menu



The Window menu includes the following options:

- **Cascade:** This option will allow the user to see the device windows one above the other overlapping with each other.
- **Tile:** This option will allow user to see the device windows without overlapping with each other.

1.4.7. Help Menu



The Help menu includes the following options:

- **About PowerComms:** This option will display the information about PowerComms application.

1.5. Shortcut icons - Tool bar

The tool incorporate shortcut icon bar with the following icons.



- **New:** This menu option is used to create a new project. Once the new project has been created, a new child view is automatically added to the project.
- **Open:** This menu option is used to open any previously saved project.
- **Save:** Save the summary of the project in the existing file.
- Cut, copy and paste.
- Print
- Help
- **Connect:** This option is used to connect the device via serial port communication or TCP/IP communication.
- **Disconnect:** This option is used to disconnect the device.

1.6. PowerComms Exit

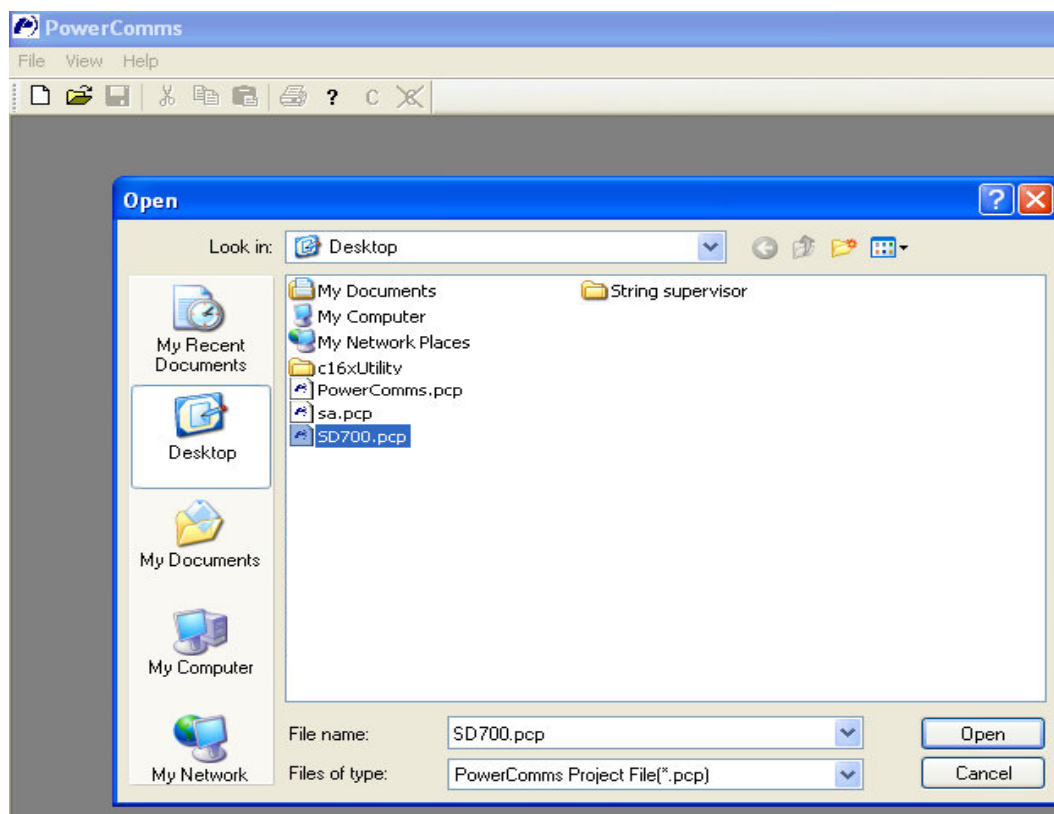
To exit from the PowerComms application, either **Exit** from the **File** menu or the **Exit** icon in the toolbar can be selected.

2. PROJECTS MANAGEMENT

Projects navigation tree is shown in the left part of the Power Comms window once a project is opened. The project structure is organized hierarchically per Plant and Devices. In each device, the IP address and communication port are indicated.

2.1. Opening an Existing Project

The existing project can be opened by selecting the **Open Project** in **File** menu or by selecting the **Open Project** icon in the toolbar, the **Open Project** dialog box will be displayed as shown below.



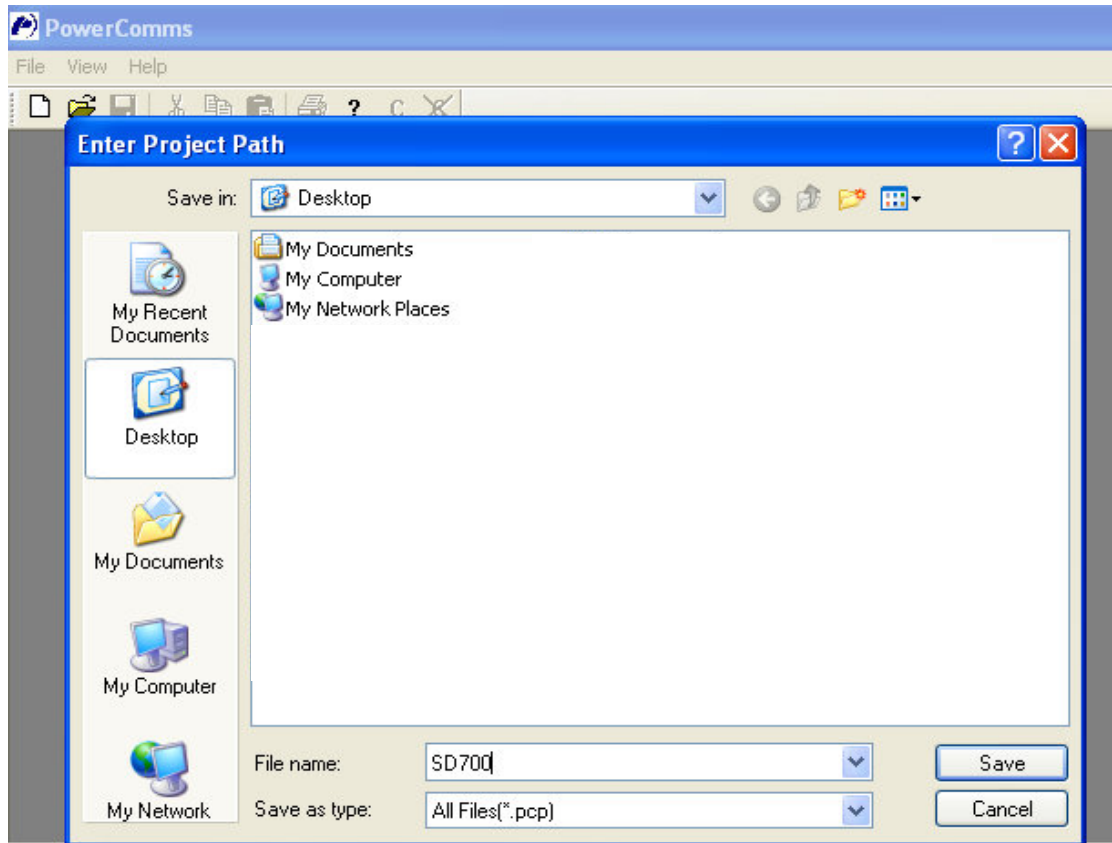
The list of project names (*.pcp) that are created earlier will be displayed in the table.

After selecting the Project name from the list and pressing Open button, the device list will be shown in the plant tree.

Connect the Device and visualize the Screen information.

2.2. Creating a New Project

Select the **New** option in the **File** menu or select the **New Project** icon in the toolbar. The new dialog box will be displayed as shown below:



In the **New Project** pop up window, write the project's name.

On pressing **Save** button, the project will be created.

2.3. Adding Device

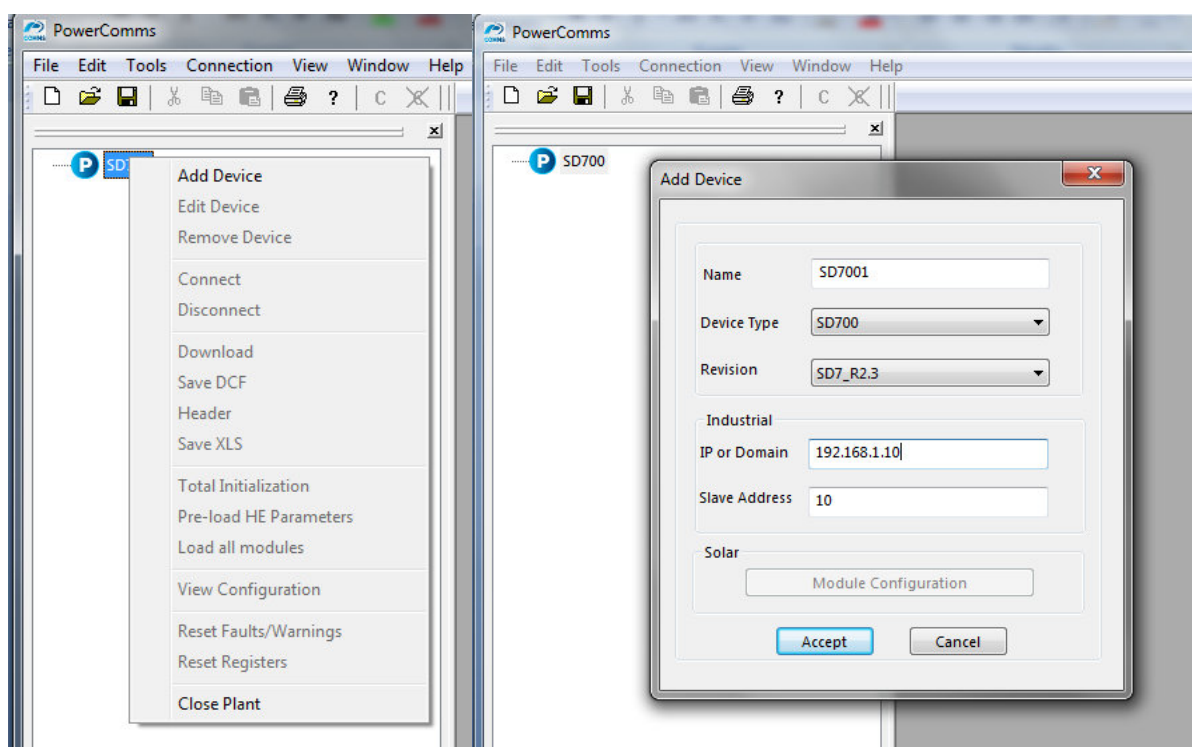
Right click the plant information dialog and select the **Add Device** option in the popup menu.

Enter the device information in the popup dialog and press **Accept** button.

Note: depending on the Device Type, Industrial or Solar fields will be enabled.

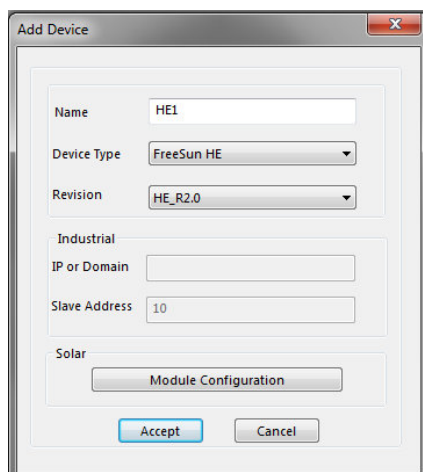
Device name is added in the plant view dialog.

In our next example, we will add a SD700 drive called "SD7001". Select the type as SD700, select revision as SD7_R2.3, provide TCP/IP address Information and the MODBUS Unit address.



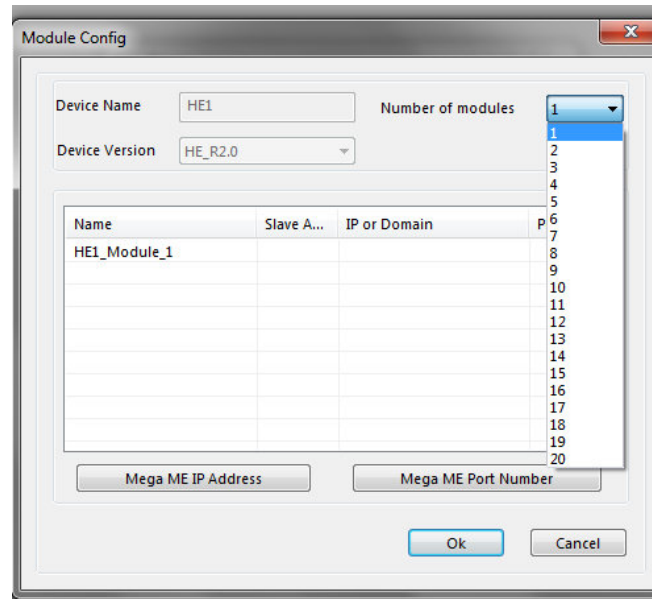
Note: to complete this process, it is not necessary to introduce the drive's IP or Domain data.

In our next example, we will add a Freesun HE inverter called "HE1". Select the type as Freesun HE, select revision as HE_R2.0 and click module configuration.

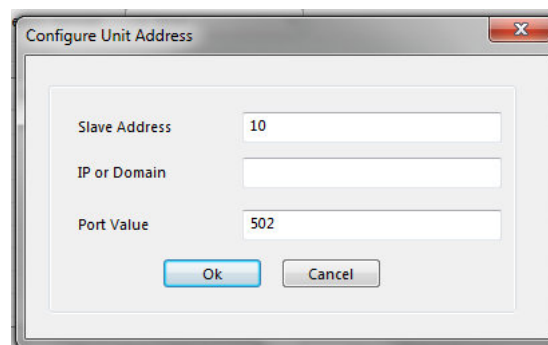


Select the number of modules installed in the Freesun HE inverter. In this example we select 9 modules.

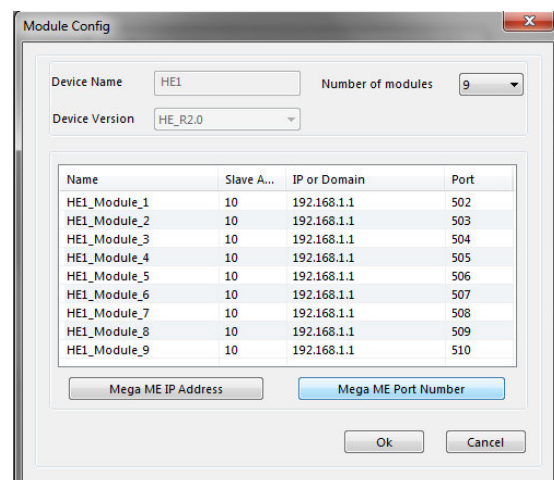
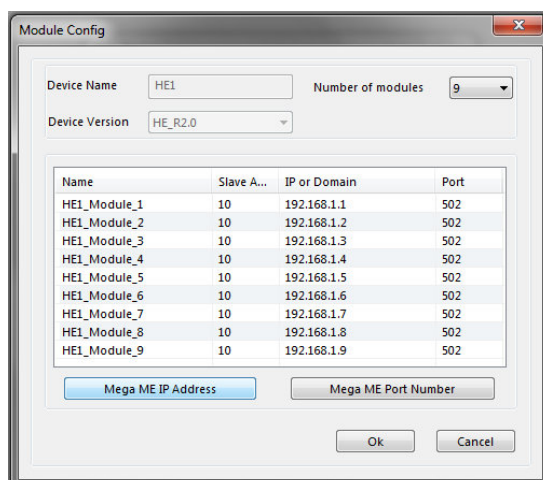
Note: In LVT inverters select 1 module.



Double click the IP field of the first module and introduce the IP or Domain address.



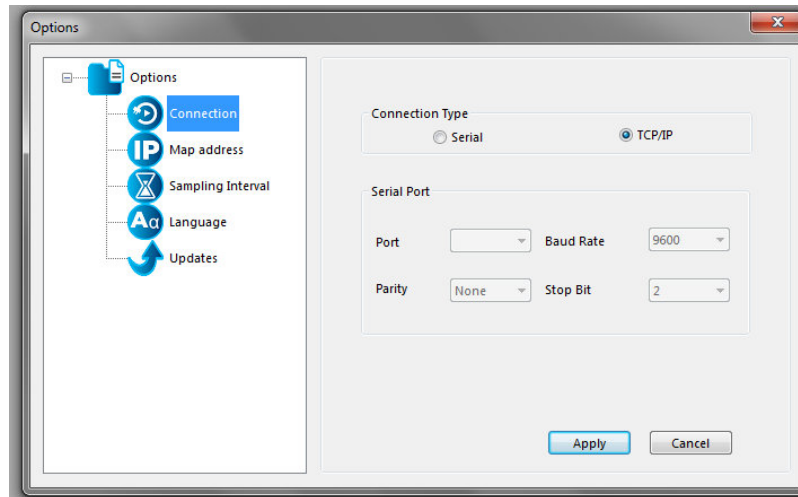
Selecting Mega ME IP Address or Mega ME Port Number it is possible to set automatically the IP address or Port number respectively. System will assign successive numbers.



2.4. Device Options

2.4.1. Connection Option

Selecting the **Connection option** in the **Tools** menu, the **Setting** dialog box will be displayed as shown below:

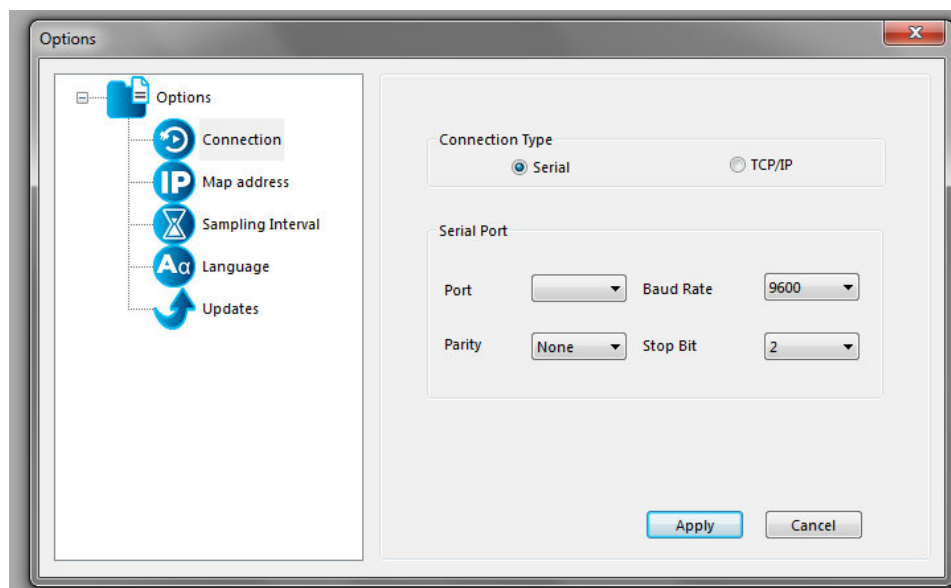


User can select between Serial Communication and TCP/IP connection types.

To enable the serial communication port:

- Click serial port ratio button.
- Select the communication port in Port combo box.
- Select the Baud rate in Baud rate combo box.
- Select the Parity value in Parity combo box.
- Select the Stop bit value in Stop bit Combo box.

Click the **Apply** button.



To enable the Modbus TCP/IP communication, click TCP/IP radio button.

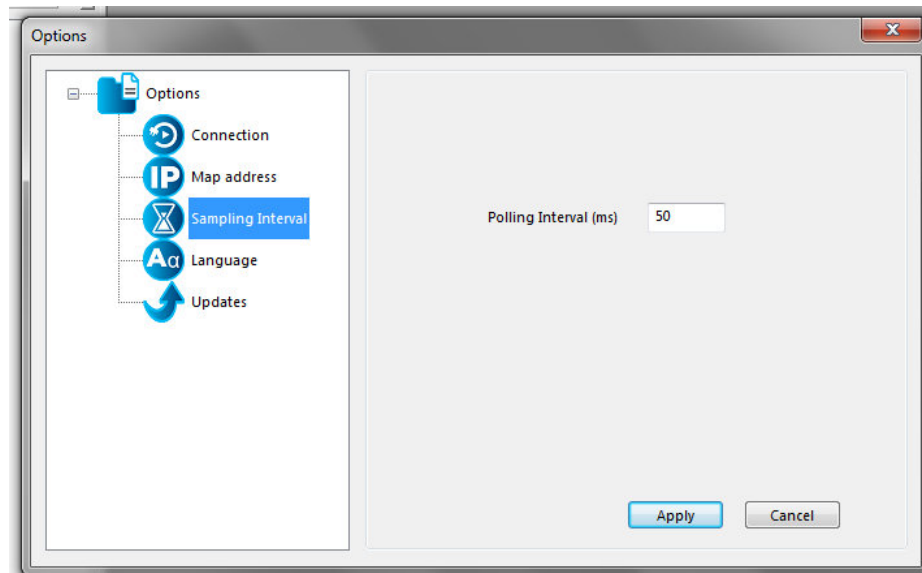
Note: The communication type selected must be followed in all the devices of the plant.

2.4.3. Sampling Interval Option

The polling interval is the time between the start of each polling session for this system.

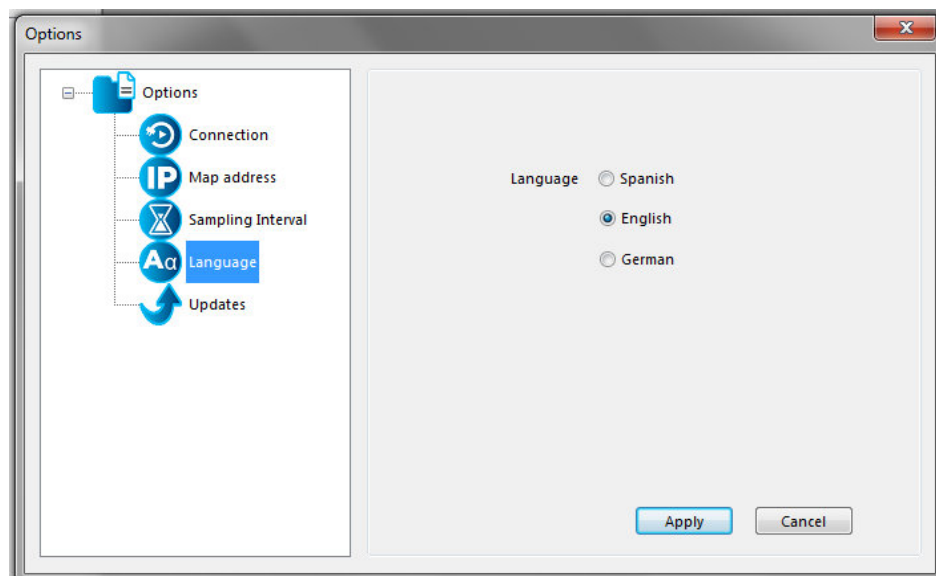
The sampling interval is the frequency in which data collection takes place.

The entered value must range between 50ms and 5000ms. Otherwise, an error message will appear.



2.4.4. Language Option

This option allows changing the application language. User can choose between Spanish, English or German.

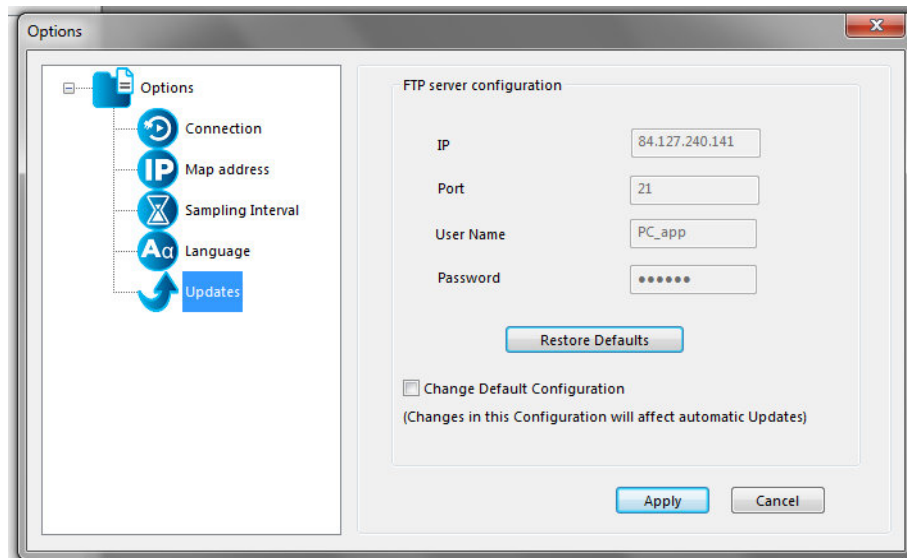


2.4.5. Updates Option

This option allows searching any database update file present in the FTP server.

The system will search updates automatically every 7 days, if a new file is found it will be downloaded and updated.

The details such as the IP address, port number, user name and Password must be entered to change the FTP server from the default settings, as it is shown in the following dialog:



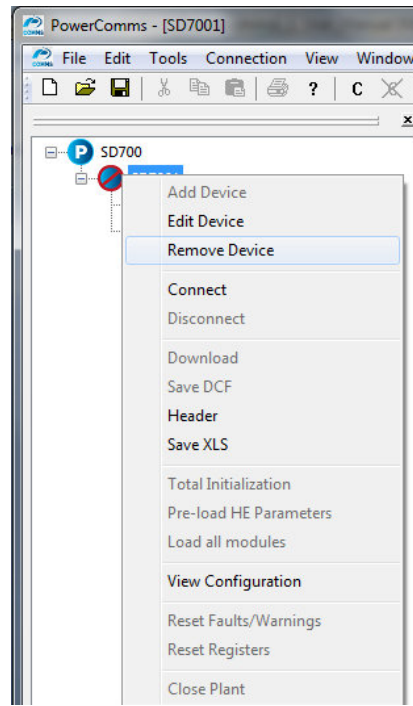
During the update process the status bar will display the message with the status of the file being downloaded as shown below:

NUM	MODE	AFE/PE_DB_AFE_AFE_R1.1.pcs - Downloading 1393.8 KB/ 3242.7 KB
-----	------	---

2.5. Remove Device

To remove the device from a plant, right click in the plant name.

Select the “Remove device” option from the popup menu as shown below:



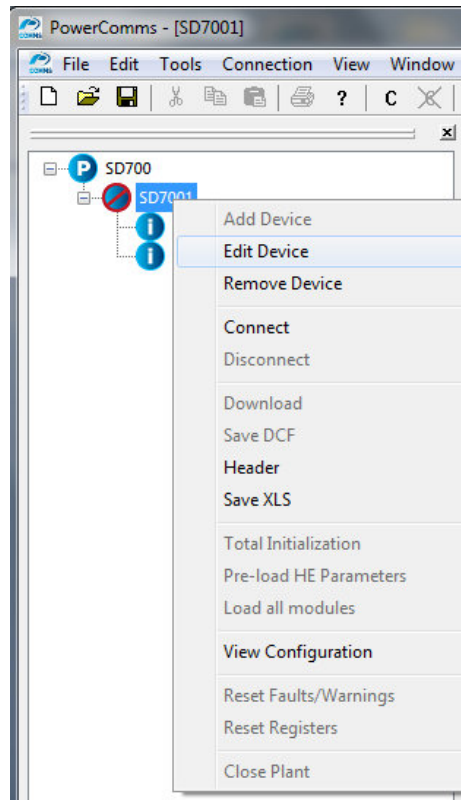
After selecting this option a message will appear and if it is accepted, the device will be removed from the plant and its corresponding view closed.

If the device is Online, this option is disabled.

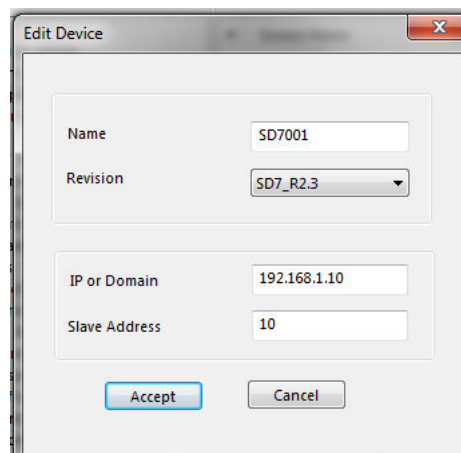
2.6. Edit Device

To edit the device information, right click in the device name.

Select the Edit device option from the popup menu.



Edit device information popup dialog will appear.

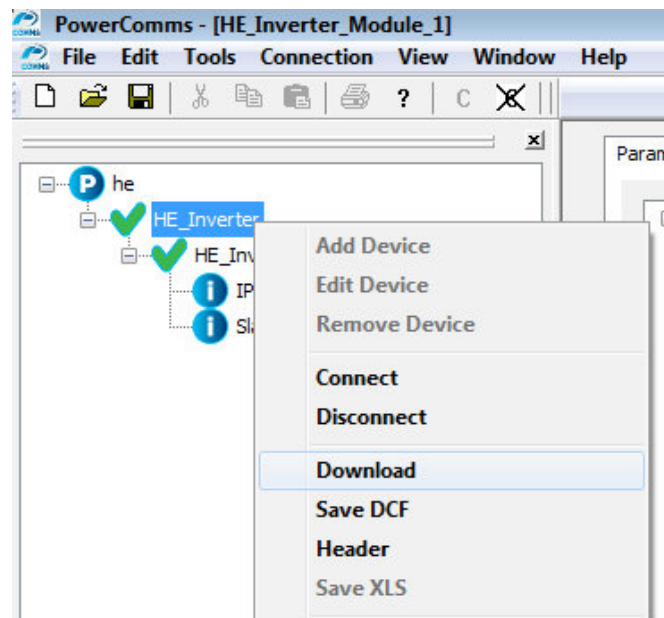


Modify the device information and click the **Accept** button.

2.7. Download

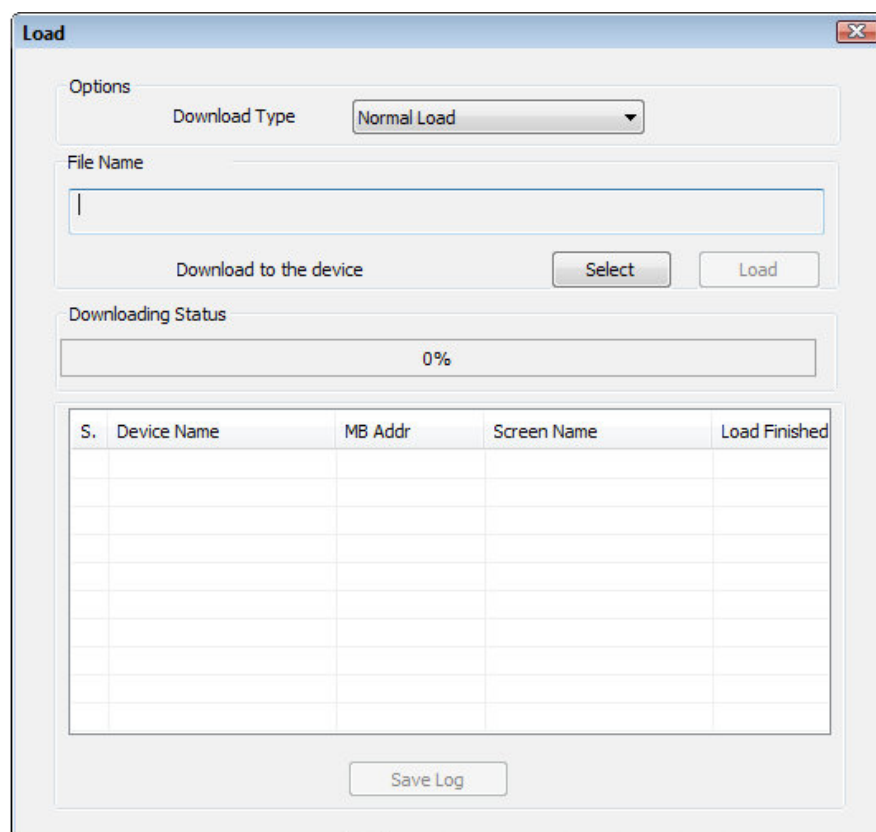
The option is used to load all the parameters from a Device Configuration File (.dcf file) to the Device.

To download the device configuration, right click in the device name. Select the “Download” option from the popup menu as shown below.



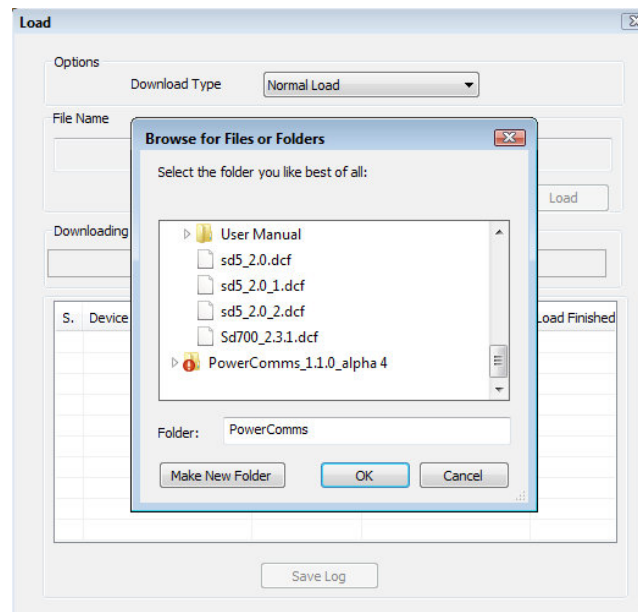
Note: this option is enabled while the device is connected.

Then, another dialog called “Load” appears.



Select the **Normal Load** option.

Click on the **Select** button. The following popup dialog appears to select the location of the device configuration file (*.dcf) in the system.



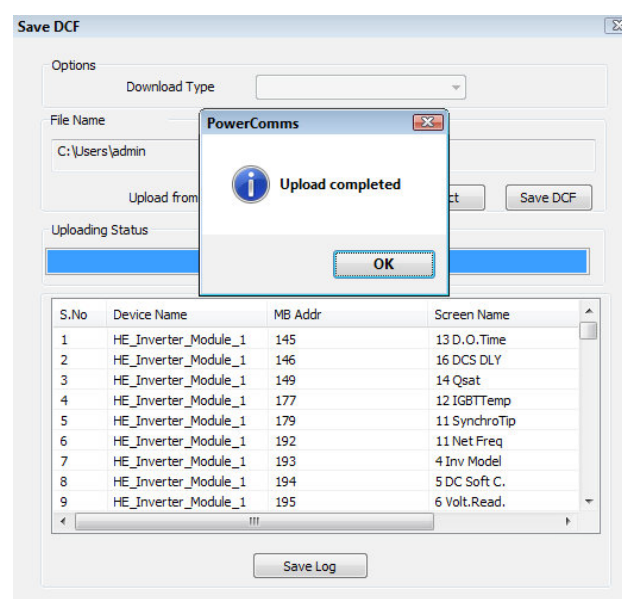
Click on the button **Ok**.

The Load action will be enabled once the button **Load** is clicked. At this time, the parameters start to be written into the device.

If any parameters are failed to be written to device, check the following reasons and try again:

- Off to modify parameters.
- Pump mode variables; drive running in Standard mode.
- Protection locked variables.
- Communication failure.

The list will be generated in the table as shown below:



The generated list can be saved in the system by clicking on the button **Save Log**. Provide the location and the file name of the log file in the Popup dialog to export the list into an Excel File.

2.7.1. HE Download Type Options

There are 2 download options for Freesun HE devices:

1. **Normal Load:** this download type is similar to the default download option, which will load all the parameters from the .dcf file to the device.
2. **Production Mode Load:** this download type is used during the production test, where only G1 and G8.5 parameters will be loaded into the Device. Reserved for Power Electronics staff.

2.7.2. SD700 Download Type Options

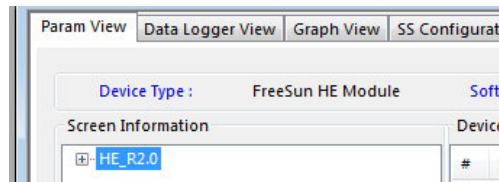
There are 3 download options for the SD700 device:

1. **Legacy Download:** this download type is similar to the default download option, which will load all the parameters from the .dcf file to the device.
2. **Legacy with Priority Download:** this download type will load all parameters except
 - Digital Inputs.
 - Limit Variables.
3. **Special Download:** this Download type will send a special request to the drive called "write request" and the drive will approve the request only if any of the following conditions are satisfied:
 - 1) The drive is not currently downloading any other parameters.
 - 2) The drive is not in RUN state or commissioning mode.
 - 3) The special download command is enabled for that version. Otherwise, an error message will appear.
 - 4) The selected directory is found.
 - 5) The path is valid.

Once the Download is complete another special request will be sent to confirm the download has been completed and to stop the process, to the Device.

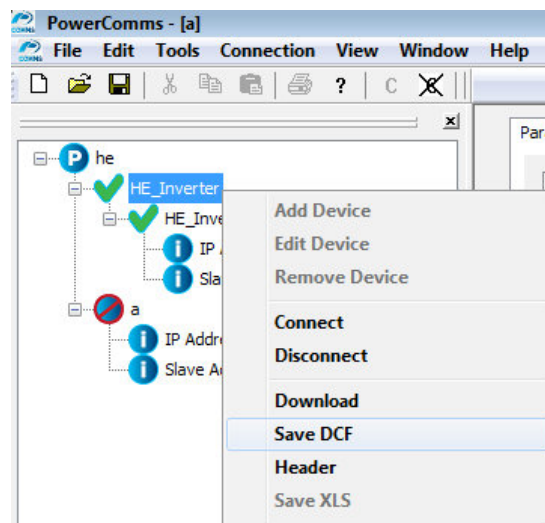
2.8. Save DCF

This option is used to store the device configuration into the system as a .dcf file. It is necessary to select the complete software in the visualization window that appears after clicking in a device.



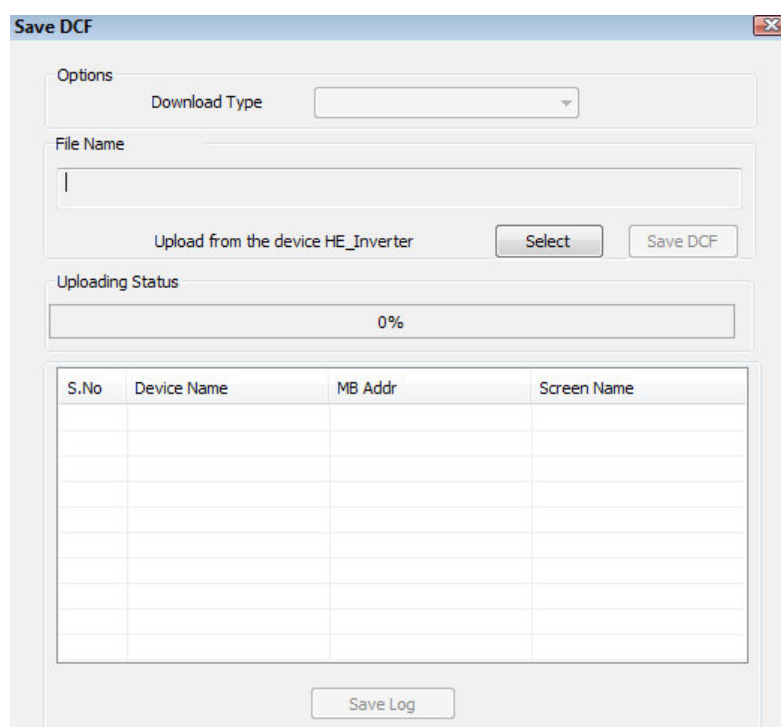
To access this option, right click on the device name.

Click on the Save DCF option as shown below:

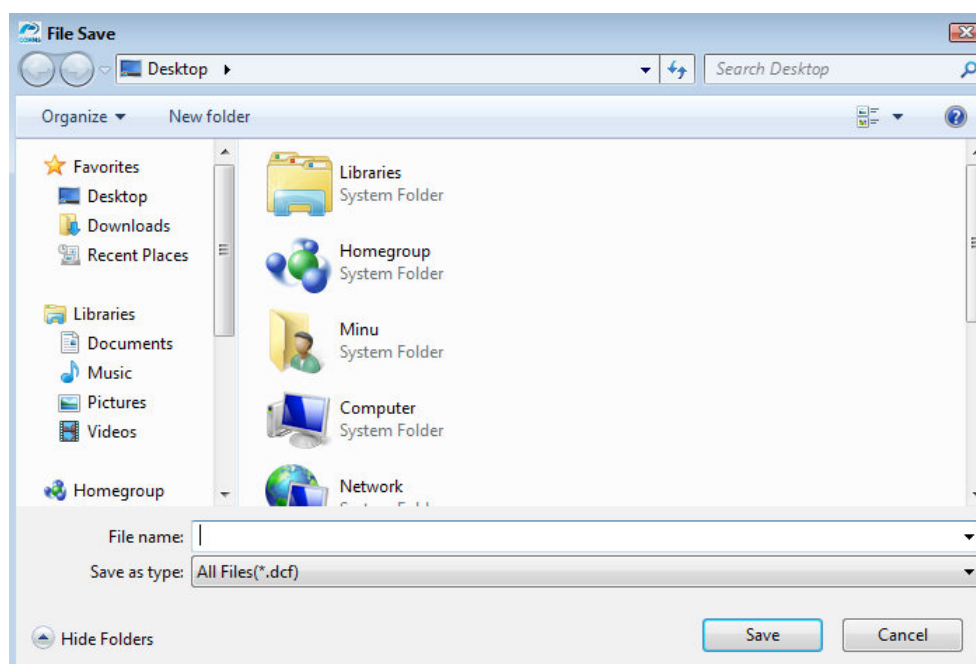


Note: this option is enabled while the device is connected.

This action will open a popup dialog box to save the parameters.



Clicking on **Select**, will open a popup dialog to enter the location and name of the .dcf file to be saved:

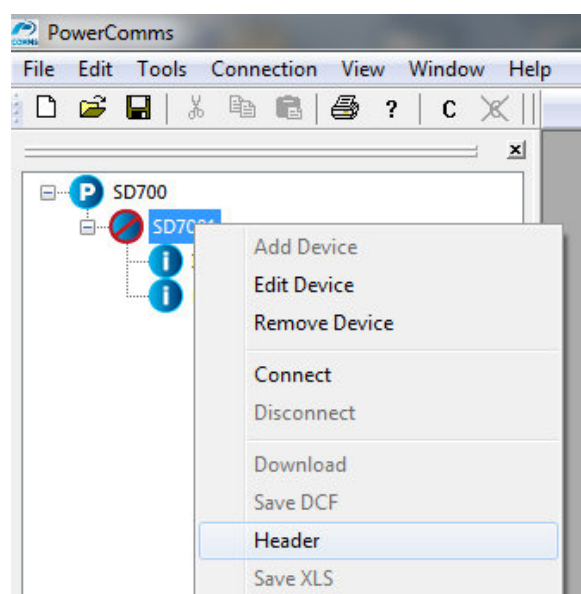


Click on the **Save DCF** button to save the file.

The list can also be stored in the system as a log file by clicking on the **Save Log** button.

2.9. Header

This option will let the user to enter motor and commissioning details. Motor fields will be disabled for solar inverters. To access this option, right click on the device.



These details will be saved in the XLS file header when the device configuration information is copied to the system.

The dialog will contain the following edit fields to be completed by the user:

The 'Header' dialog box contains the following fields:

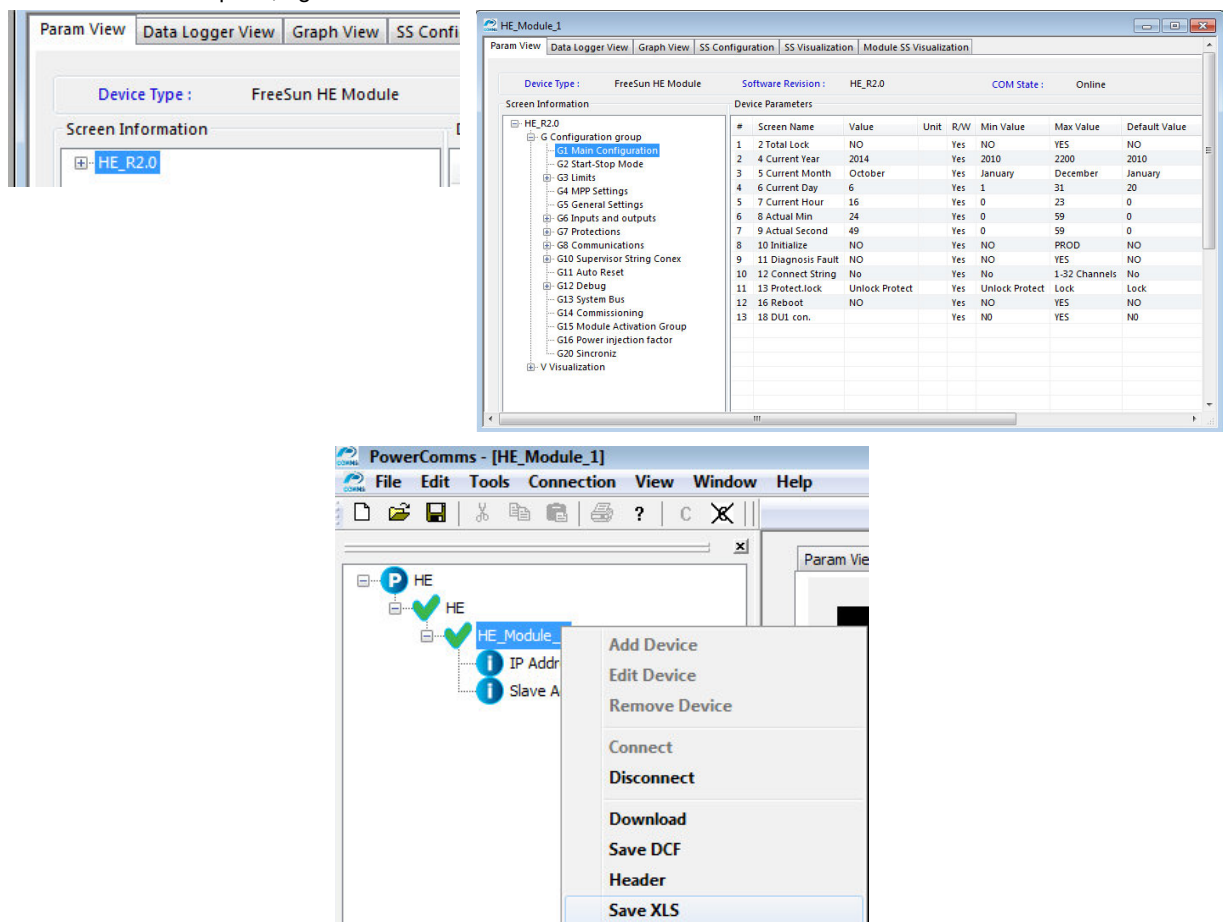
- Model a: [Text Field]
- S.No a: [Text Field]
- Motor KW: [Text Field]
- Motor RPM: [Text Field]
- Motor A: [Text Field]
- Motor V: [Text Field]
- Location: [Text Field]
- Commissioned By: [Text Field]
- Date: [Text Field] (Pre-filled with 24-4-2014)

Buttons: OK, Cancel

Note: Date is taken from the system.

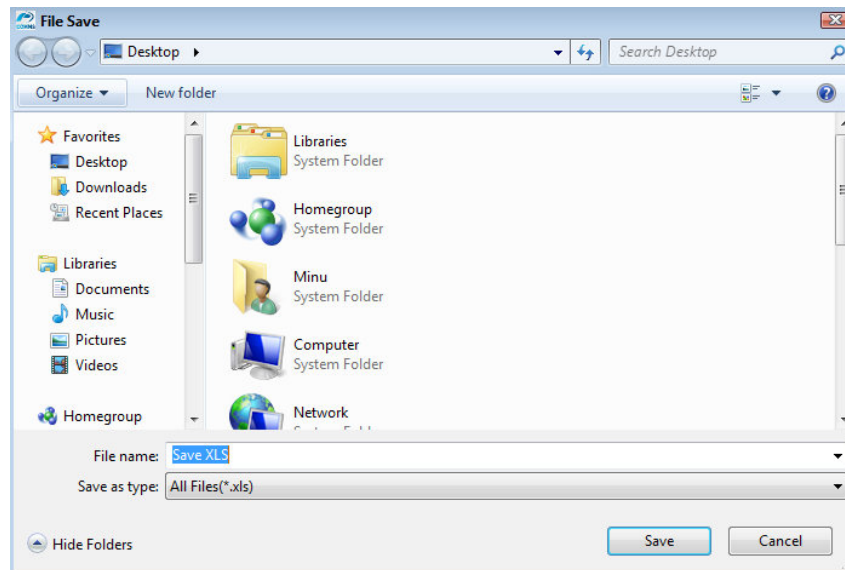
2.10. Save XLS

This option is used to save the device configuration in a .xls file. It is necessary to select the complete software or a parameter group in the visualization window that appears after clicking in a device. To access to this option, right click on the device name.



Note: this option is enabled while the device is connected.

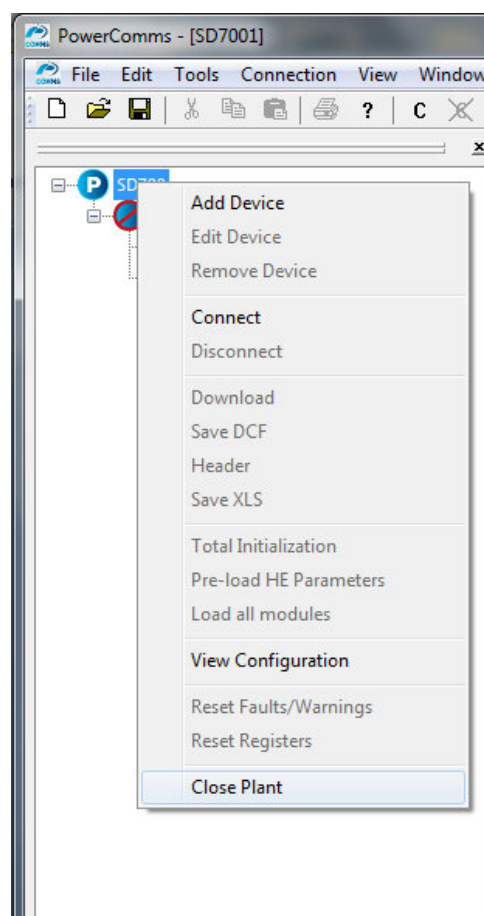
Once the option is selected, another popup dialog asking for the .xls file saving location appears.



Click on the **save** button and the file will be uploaded and saved in the system.

2.11. Close the plant

To close the plant, right click in the plant name. Select the “Close Plant” option from the popup menu as shown below.







The plant tree view will be closed as the views corresponding to the plant.

3. VISUALIZATION AND CONFIGURATION

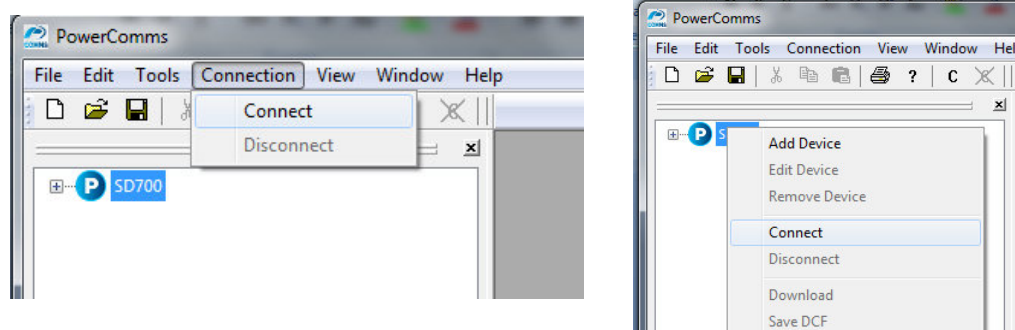
3.1. Connection and Disconnection

To access to the visualization and configuration screens, it is necessary to connect the devices. In the navigation tree, there are four connection statuses shown by icons as follows.

Icon	Description
	Connecting
	Connected
	Disconnected
	Connection error. (Verify IP address)

3.1.1. Connecting the Device

Select the **Connect** option from the **Connection** menu, select the **Connect icon** in the toolbar, or right click in the device or Plant name and select the “Connect” option in the popup menu.



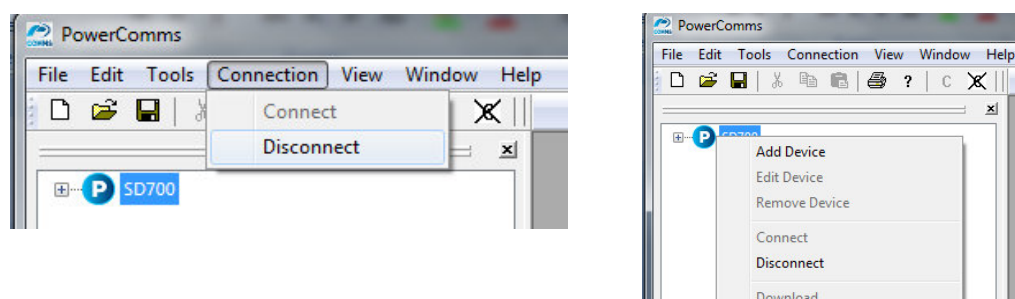
Verify that the status connection icon has been changed to connected.

The device status will be updated in the parameters view.

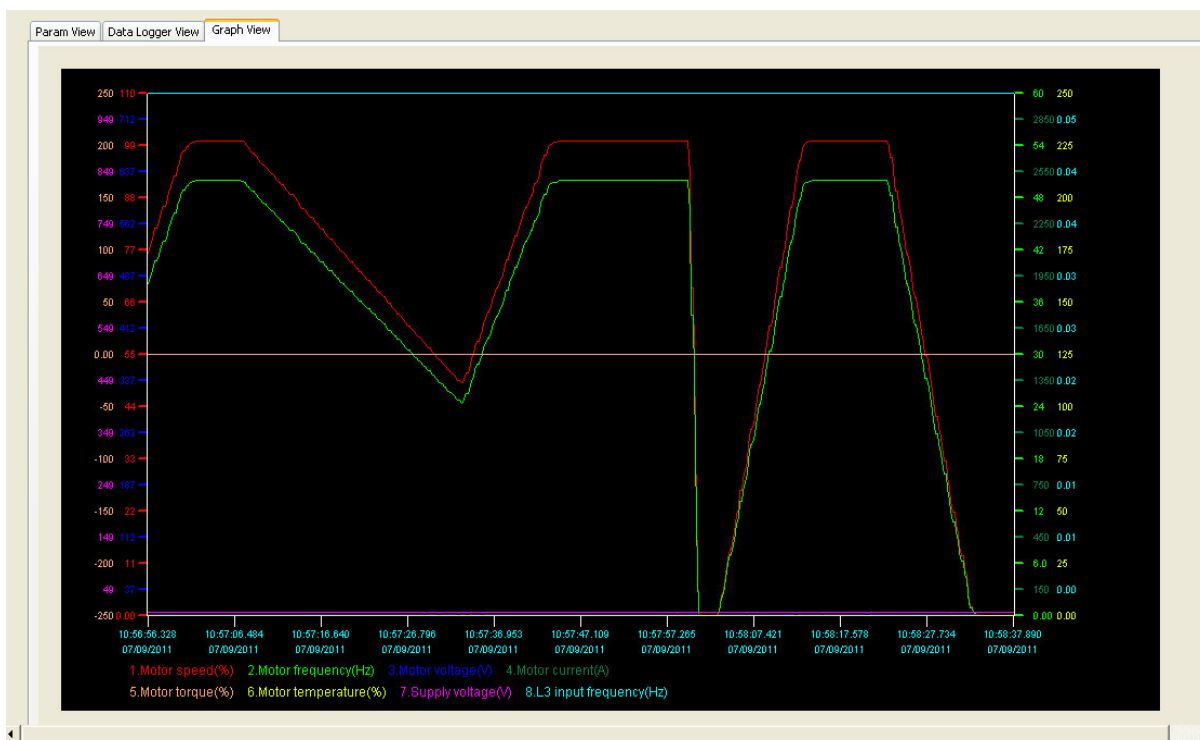
Device Type :	FreeSun HE Module	Software Revision :	HE_R2.0	COM State :	Online
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3.1.2. Disconnecting the Device

Select the **Disconnect** option from the **Connection** menu, select the **Disconnect icon** in the toolbar, or right click in the device or Plant name and select the “Disconnect” option in the popup menu.



Param View Data Logger View Graph View										
Date	Time	Motor speed	Motor freq...	Motor volt...	Motor curr...	Motor torque	Motor tem...	Supply volt...	L3 input fr...	
07-09-2011	10:56:39.671	0.0 %	0.0 Hz	0 V	0.0 A	0.0 %	0.1 %	7 V	11.1 Hz	
07-09-2011	10:56:39.875	0.0 %	0.0 Hz	0 V	0.0 A	0.0 %	0.1 %	7 V	11.1 Hz	
07-09-2011	10:56:40.078	0.0 %	0.0 Hz	0 V	0.0 A	0.0 %	0.1 %	7 V	35.5 Hz	
07-09-2011	10:56:40.281	0.0 %	0.0 Hz	0 V	0.0 A	0.0 %	0.1 %	7 V	13.1 Hz	
07-09-2011	10:56:40.484	0.0 %	0.0 Hz	0 V	0.0 A	0.0 %	0.1 %	7 V	7.9 Hz	
07-09-2011	10:56:40.687	+0.3 %	+0.1 Hz	2 V	0.1 A	+0.0 %	0.1 %	7 V	17.9 Hz	
07-09-2011	10:56:40.890	+0.3 %	+0.1 Hz	2 V	0.1 A	+0.0 %	0.1 %	7 V	17.9 Hz	
07-09-2011	10:56:41.093	+1.7 %	+0.8 Hz	2 V	0.4 A	+0.2 %	0.1 %	7 V	84.3 Hz	
07-09-2011	10:56:41.296	+3.1 %	+1.5 Hz	2 V	0.5 A	-0.2 %	0.1 %	7 V	16.7 Hz	
07-09-2011	10:56:41.500	+3.8 %	+1.9 Hz	2 V	0.6 A	-0.3 %	0.1 %	7 V	69.1 Hz	
07-09-2011	10:56:41.703	+5.4 %	+2.6 Hz	2 V	0.6 A	+0.1 %	0.1 %	7 V	96.6 Hz	
07-09-2011	10:56:41.906	+6.4 %	+3.1 Hz	2 V	0.7 A	+0.1 %	0.1 %	7 V	25.8 Hz	
07-09-2011	10:56:42.109	+6.4 %	+3.1 Hz	2 V	0.7 A	+0.1 %	0.1 %	7 V	25.8 Hz	
07-09-2011	10:56:42.312	+7.6 %	+3.7 Hz	2 V	0.8 A	+0.1 %	0.1 %	7 V	35.4 Hz	
07-09-2011	10:56:42.515	+9.1 %	+4.5 Hz	2 V	0.8 A	-0.4 %	0.1 %	7 V	72.3 Hz	
07-09-2011	10:56:42.718	+10.1 %	+5.0 Hz	2 V	0.8 A	+0.1 %	0.1 %	7 V	56.7 Hz	
07-09-2011	10:56:42.921	+11.6 %	+5.7 Hz	2 V	0.8 A	0.0 %	0.1 %	6 V	67.9 Hz	
07-09-2011	10:56:43.125	+12.6 %	+6.2 Hz	2 V	0.8 A	+0.2 %	0.1 %	6 V	2.7 Hz	
07-09-2011	10:56:43.328	+12.6 %	+6.2 Hz	2 V	0.8 A	+0.2 %	0.1 %	6 V	2.7 Hz	
07-09-2011	10:56:43.531	+14.1 %	+7.0 Hz	2 V	0.8 A	-0.2 %	0.1 %	7 V	12.7 Hz	
07-09-2011	10:56:43.734	+15.2 %	+7.6 Hz	2 V	0.8 A	+0.0 %	0.1 %	7 V	11.9 Hz	
07-09-2011	10:56:43.937	+16.2 %	+8.1 Hz	2 V	0.8 A	-0.1 %	0.1 %	7 V	3.0 Hz	
07-09-2011	10:56:44.140	+17.9 %	+8.9 Hz	2 V	0.8 A	-0.2 %	0.1 %	6 V	8.3 Hz	
07-09-2011	10:56:44.343	+17.9 %	+8.9 Hz	2 V	0.8 A	-0.2 %	0.1 %	6 V	8.3 Hz	
07-09-2011	10:56:44.546	+18.9 %	+9.4 Hz	2 V	0.8 A	-0.1 %	0.1 %	7 V	21.9 Hz	
07-09-2011	10:56:44.750	+20.1 %	+10.0 Hz	2 V	0.8 A	-0.2 %	0.1 %	7 V	59.5 Hz	
07-09-2011	10:56:44.953	+21.0 %	+10.4 Hz	2 V	0.8 A	+0.0 %	0.1 %	7 V	95.1 Hz	
07-09-2011	10:56:45.156	+22.5 %	+11.2 Hz	2 V	0.8 A	-0.1 %	0.1 %	7 V	17.9 Hz	
07-09-2011	10:56:45.359	+23.6 %	+11.8 Hz	2 V	0.8 A	-0.1 %	0.1 %	7 V	78.2 Hz	
07-09-2011	10:56:45.562	+23.6 %	+11.8 Hz	2 V	0.8 A	-0.1 %	0.1 %	7 V	78.2 Hz	
07-09-2011	10:56:45.765	+24.8 %	+12.4 Hz	2 V	0.8 A	+0.0 %	0.1 %	7 V	58.6 Hz	
07-09-2011	10:56:45.968	+26.3 %	+13.1 Hz	2 V	0.8 A	-0.1 %	0.1 %	7 V	34.3 Hz	
07-09-2011	10:56:46.171	+27.3 %	+13.6 Hz	2 V	0.8 A	-0.2 %	0.1 %	7 V	85.1 Hz	
07-09-2011	10:56:46.375	+28.8 %	+14.4 Hz	2 V	0.8 A	-0.1 %	0.1 %	7 V	68.3 Hz	
07-09-2011	10:56:46.578	+30.0 %	+15.0 Hz	2 V	0.8 A	-0.0 %	0.1 %	7 V	62.3 Hz	
07-09-2011	10:56:46.781	+30.0 %	+15.0 Hz	2 V	0.8 A	-0.0 %	0.1 %	7 V	62.3 Hz	
07-09-2011	10:56:46.984	+31.0 %	+15.5 Hz	2 V	0.8 A	-0.1 %	0.1 %	7 V	100.3 Hz	
07-09-2011	10:56:47.187	+32.5 %	+16.2 Hz	2 V	0.8 A	-0.1 %	0.1 %	7 V	9.1 Hz	
07-09-2011	10:56:47.390	+33.5 %	+16.7 Hz	2 V	0.8 A	-0.2 %	0.1 %	7 V	10.7 Hz	
07-09-2011	10:56:47.593	+35.0 %	+17.5 Hz	2 V	0.8 A	+0.2 %	0.1 %	7 V	65.1 Hz	
07-09-2011	10:56:47.796	+35.0 %	+17.5 Hz	2 V	0.8 A	+0.2 %	0.1 %	7 V	65.1 Hz	
07-09-2011	10:56:48.000	+36.2 %	+18.0 Hz	2 V	0.8 A	-0.2 %	0.1 %	7 V	27.9 Hz	



If the device version is not available, the version selection popup dialog will appear. Select one database from the available list.

3.3. Parameter View

After double clicking the device name in the plant tree view, the first window that appears allows user to visualize and modify the configuration and visualization parameters.

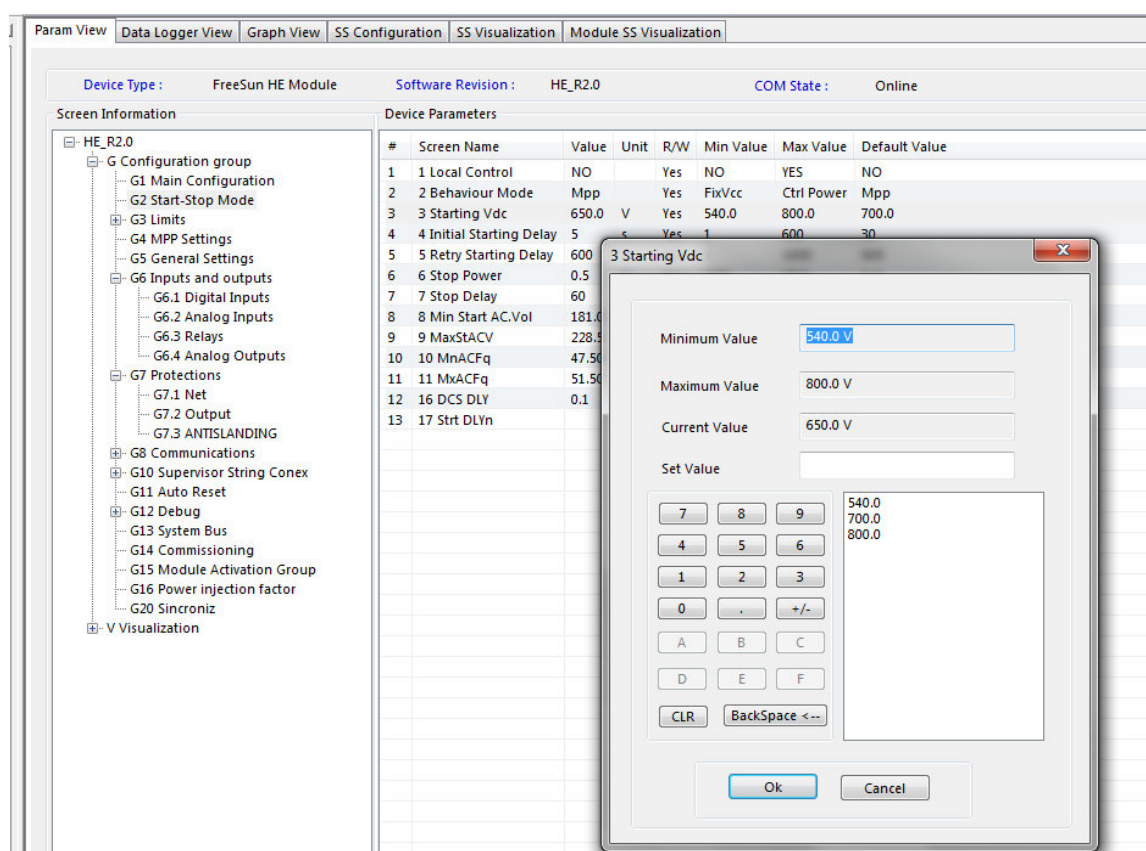
The information contained in this screen includes the Screen name, the value, the value's unit, the parameter R/W type, and the maximum, minimum and default values.

To visualize parameters and set parameters at real time, the device must be connected.

3.3.1. Modify the screen value

To modify the screen value, double click the value field in the device parameters table.

Then, a new popup dialog will appear.



Enter the new value in the Set Value field.

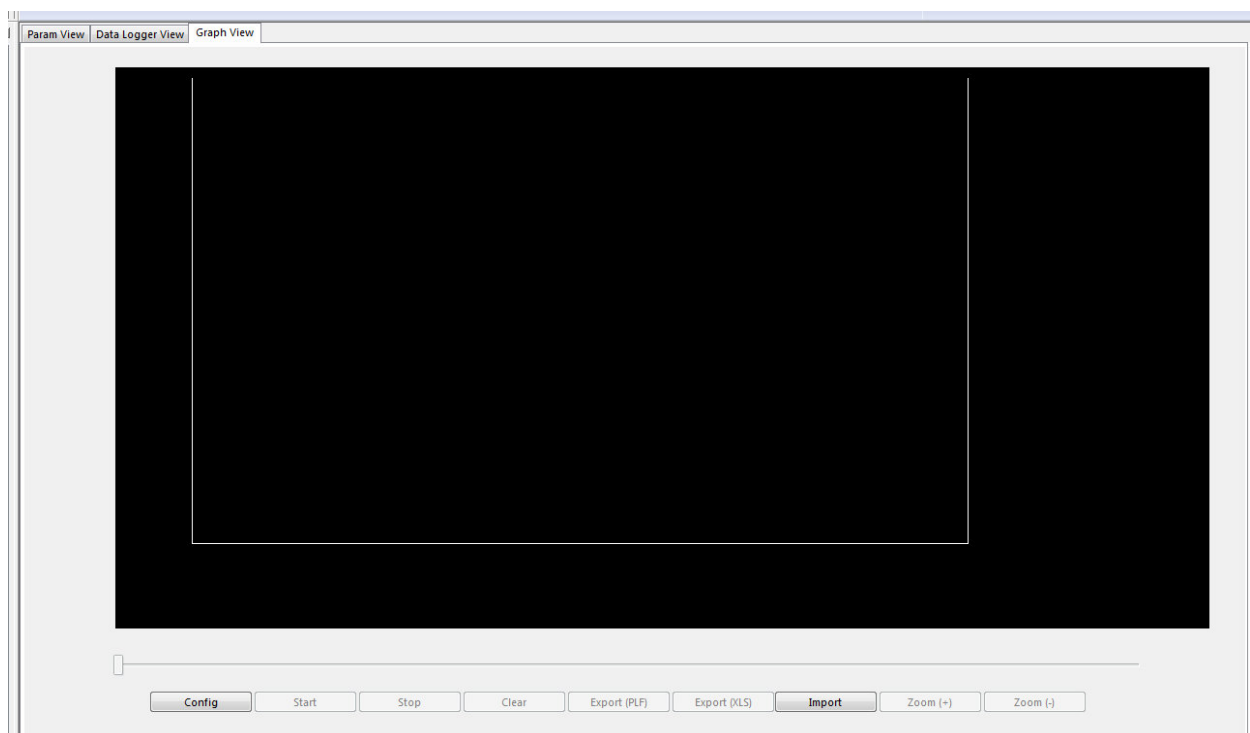
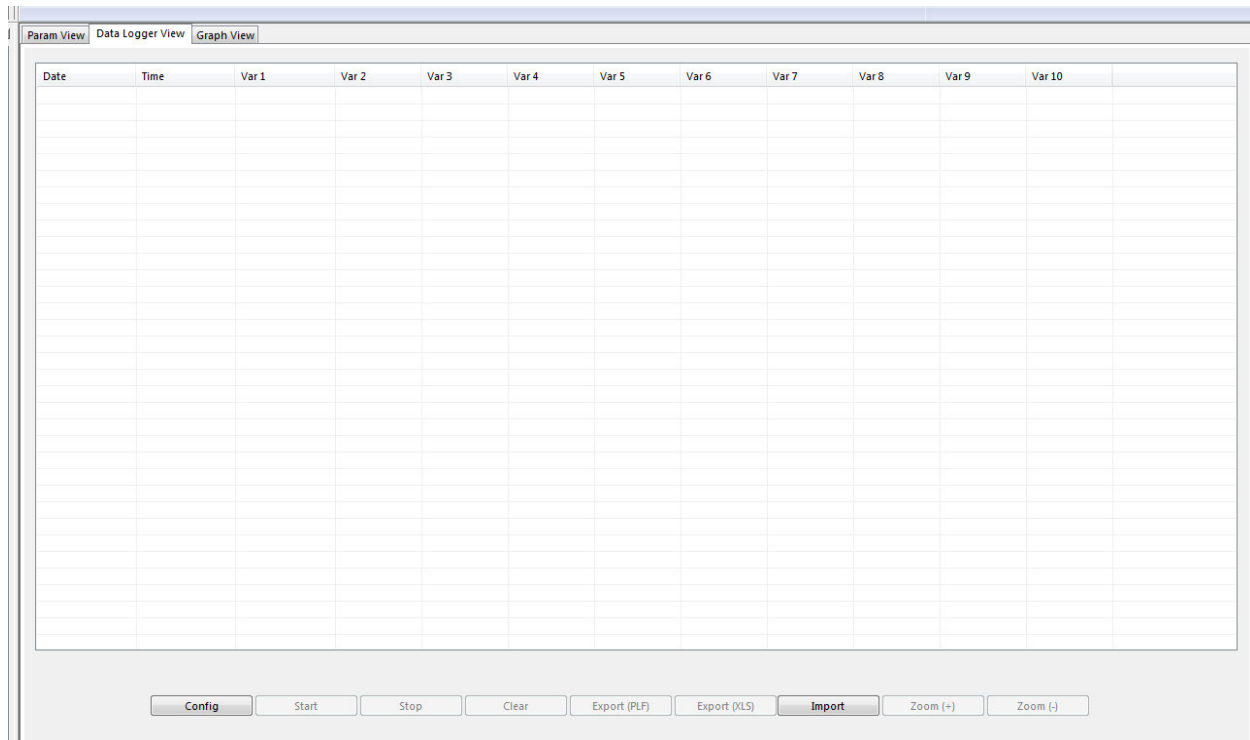
Click the **OK** button.

3.4. Data Logger and Graph View

The **Data Logger View** tab is where the device data can be collected and stored following the specified polling interval in a table.

The **Graph View** tab is where the device data is collected and stored following the specified polling interval in a graphic.

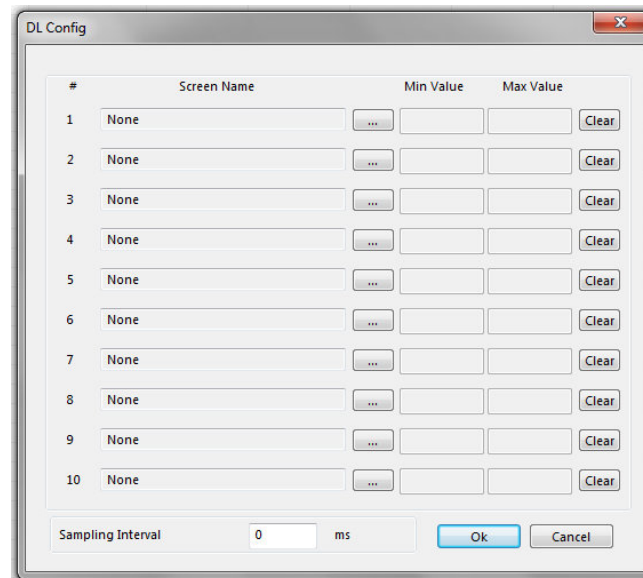
The collected data can be exported from the application or imported to the application.



3.4.1. Configure the Datalogger parameter list and sample interval time

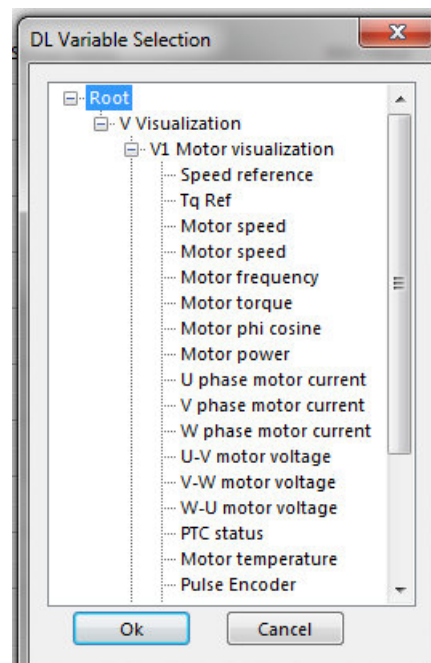
To configure the Datalogger (DL) parameter list, click the “configure” button of the DL tab or of the Graphic tab.

The DL configuration dialog will appear as follows:



To select the variable, press the “...” button in the DL configuration dialog.

Select the variable from the popup tree dialog shown below:



Enter the sample interval value in edit box.

Press the ok button.

Enter the range in Minimum and Maximum value edit box.

Note: the clear button allows deleting the data introduced in its corresponding line.

3.4.2. Start the Data logger

To start the data logger, click the start button in the DL tab or the Graphic tab.

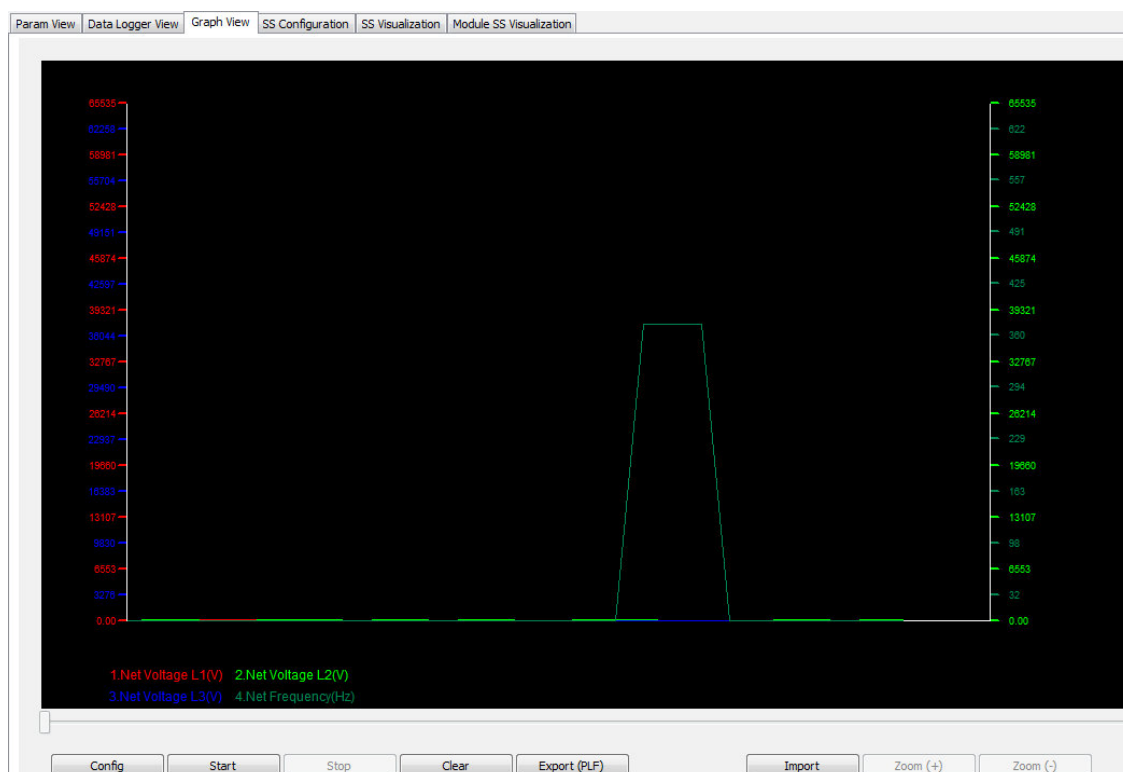
If the device is in online status, the selected variables will be logged.

- The values of the logged variables are shown in a table format in the data logger view.
- The values of the logged variables are shown in a line graphic format in the graphic view.

The following figures are two examples of the two tabs.

If the device is not in online status, the data logger will not start.

Param View Data Logger View Graph View									
Date	Time	Velocidad ...	Voltaje motor	Coseno phi...	Corriente ...	Voltaje ent...	Voltaje ent...	Referencia...	Tráfico MO...
30-08-2011	14:34:29.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.1	X
30-08-2011	14:34:30.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.4	X
30-08-2011	14:34:31.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.1	X
30-08-2011	14:34:32.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.4	X
30-08-2011	14:34:33.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.4	X
30-08-2011	14:34:34.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.1	X
30-08-2011	14:34:35.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.1	X
30-08-2011	14:34:36.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.4	X
30-08-2011	14:34:37.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.1	X
30-08-2011	14:34:38.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.1	X
30-08-2011	14:34:39.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.4	X
30-08-2011	14:34:40.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.1	X
30-08-2011	14:34:41.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.1	X
30-08-2011	14:34:42.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.1	X
30-08-2011	14:34:43.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.4	X
30-08-2011	14:34:44.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.4	X
30-08-2011	14:34:45.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.1	X
30-08-2011	14:34:46.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.4	X
30-08-2011	14:34:47.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+9.8	X
30-08-2011	14:34:48.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.1	X
30-08-2011	14:34:49.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.1	X
30-08-2011	14:34:50.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.4	X
30-08-2011	14:34:51.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.1	X
30-08-2011	14:34:52.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.1	X
30-08-2011	14:34:53.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.1	X
30-08-2011	14:34:54.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.4	X
30-08-2011	14:34:55.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.4	X
30-08-2011	14:34:56.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.1	X
30-08-2011	14:34:57.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.1	X
30-08-2011	14:34:58.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.1	X
30-08-2011	14:34:59.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.1	X
30-08-2011	14:35:00.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.1	X
30-08-2011	14:35:01.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.1	X
30-08-2011	14:35:02.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.1	X
30-08-2011	14:35:03.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.1	X
30-08-2011	14:35:04.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.1	X
30-08-2011	14:35:05.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.4	X
30-08-2011	14:35:06.312	0.0 %	0 V	0.00	0.0 A	0 V	0 V	+10.1	X



3.4.3. Stop the Data logger

To stop the data logger, click the stop button in the DL tab or the Graphic tab.

Once data logging is stopped, the x-axis time interval values are updated in the graph.



The graph view will show the last 31 samples values in a line graphic.

If the number of log samples is greater than 31, the track bar and the Zoom (-) buttons are enabled in the graph view.

To visualize the previous samples, move the track bar in the graphic view. The line graph will be updated depending on the track bar position.

After every Zoom (-) button click, the number of viewed samples is increased by 10.

If the number of viewed samples reaches 151, the Zoom (-) button is disabled.

After every Zoom (+) button click, the number of viewed samples is decreased by 10.

If the number of viewed samples reaches 31, the Zoom (+) button is disabled.

3.4.4. Export the DL samples

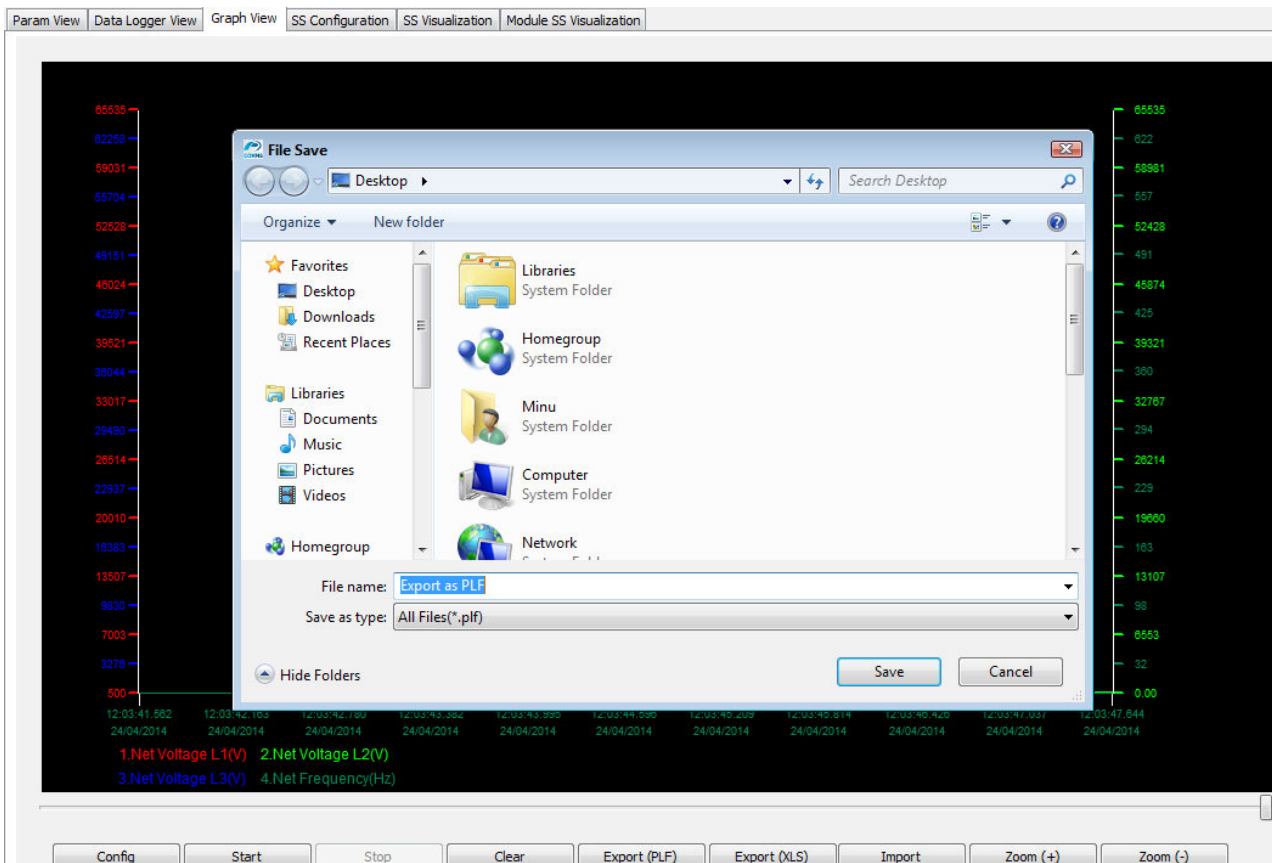
The logged data can be saved into the system using the export option.

There are 2 ways to perform this:

1. Export in Configuration file (I.e PowerComms Log File format (.plf)).

Enter the file name in the file save dialog.

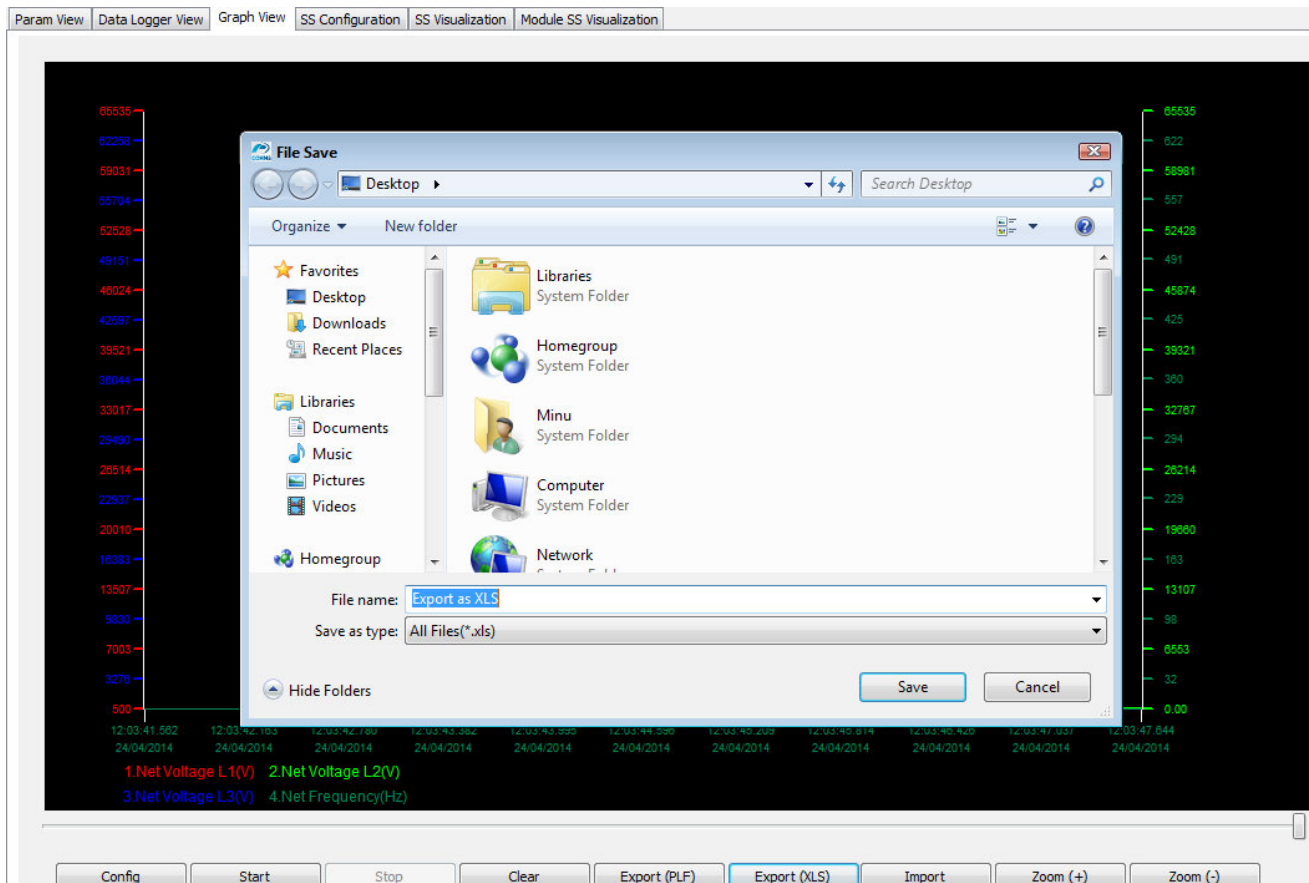
Press the **Save** button.



2. Export in Microsoft Excel file format (.xls).

Enter the file name in the file save dialog.

Press the **Save** button.



3.4.5. Import the DL Samples

To import the datalogger samples from a file:

- Click the **Import** button in DL View tab or Graphic View tab.
- Select the file (xxx.plf) from the dialog.
- Press the **Ok** button.

The values of the logged variables are shown in a table format in the datalogger view.

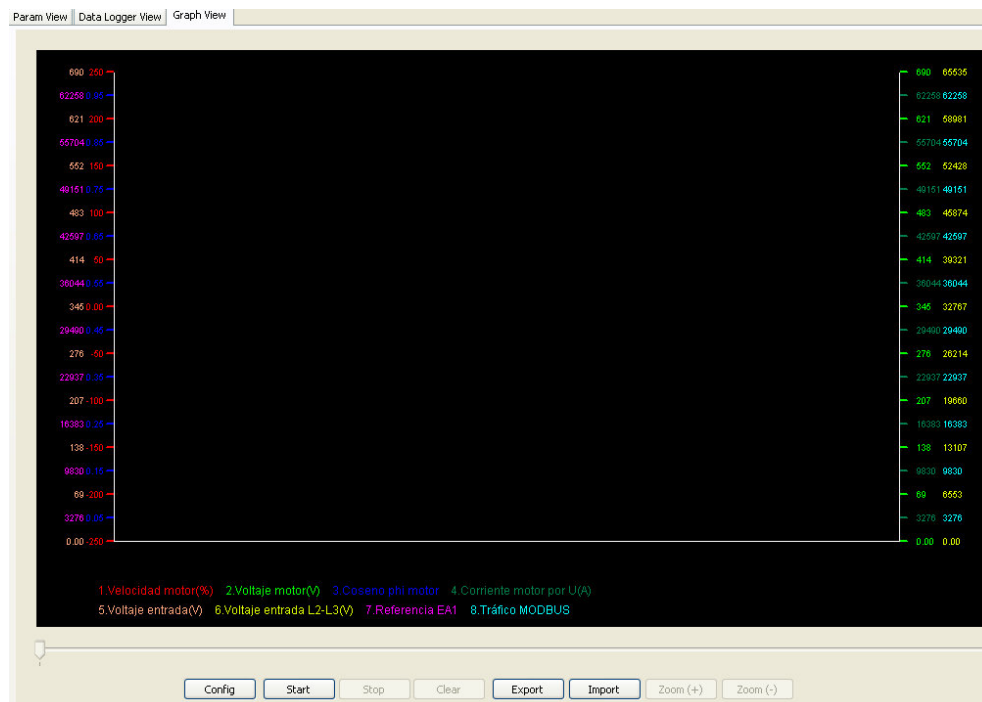
Date	Time	Net Voltage...	Net Voltage...	Net Voltage...	Net Freque...
24-04-2014	12:03:39.527	1 V	1 V	0 V	0.00 Hz
24-04-2014	12:03:39.732	0 V	0 V	0 V	0.00 Hz
24-04-2014	12:03:39.936	0 V	0 V	0 V	0.00 Hz
24-04-2014	12:03:40.136	0 V	1 V	0 V	0.00 Hz
24-04-2014	12:03:40.343	0 V	0 V	0 V	0.00 Hz
24-04-2014	12:03:40.541	0 V	1 V	0 V	0.00 Hz
24-04-2014	12:03:40.743	0 V	1 V	0 V	0.00 Hz
24-04-2014	12:03:40.951	0 V	1 V	0 V	0.00 Hz
24-04-2014	12:03:41.155	1 V	1 V	0 V	0.00 Hz
24-04-2014	12:03:41.352	0 V	0 V	0 V	0.00 Hz
24-04-2014	12:03:41.562	0 V	0 V	0 V	0.00 Hz
24-04-2014	12:03:41.760	0 V	0 V	0 V	0.00 Hz
24-04-2014	12:03:41.964	0 V	0 V	0 V	0.00 Hz
24-04-2014	12:03:42.163	0 V	0 V	0 V	0.00 Hz
24-04-2014	12:03:42.371	0 V	1 V	0 V	0.00 Hz
24-04-2014	12:03:42.568	1 V	1 V	0 V	0.00 Hz
24-04-2014	12:03:42.780	0 V	1 V	0 V	0.00 Hz
24-04-2014	12:03:42.980	1 V	1 V	0 V	0.00 Hz
24-04-2014	12:03:43.182	0 V	0 V	0 V	0.00 Hz
24-04-2014	12:03:43.382	0 V	0 V	0 V	0.00 Hz
24-04-2014	12:03:43.587	1 V	0 V	0 V	0.00 Hz
24-04-2014	12:03:43.788	0 V	1 V	0 V	0.00 Hz
24-04-2014	12:03:43.995	0 V	1 V	0 V	0.00 Hz
24-04-2014	12:03:44.193	0 V	1 V	0 V	0.00 Hz
24-04-2014	12:03:44.399	1 V	0 V	0 V	0.00 Hz
24-04-2014	12:03:44.596	1 V	0 V	0 V	0.00 Hz
24-04-2014	12:03:44.807	0 V	0 V	0 V	0.00 Hz
24-04-2014	12:03:45.009	1 V	0 V	0 V	0.00 Hz
24-04-2014	12:03:45.209	1 V	0 V	0 V	0.00 Hz
24-04-2014	12:03:45.410	1 V	1 V	0 V	0.00 Hz
24-04-2014	12:03:45.617	0 V	0 V	0 V	0.00 Hz
24-04-2014	12:03:45.814	0 V	0 V	0 V	0.00 Hz
24-04-2014	12:03:46.023	0 V	1 V	0 V	0.00 Hz
24-04-2014	12:03:46.219	1 V	1 V	0 V	0.00 Hz
24-04-2014	12:03:46.426	0 V	1 V	0 V	0.00 Hz
24-04-2014	12:03:46.637	0 V	1 V	0 V	0.00 Hz



3.4.6. Clear DL Samples

To clear the data logger samples from the table and graph.

Click the Clear button in the DL View tab or the Graphic View tab.



3.5. SS Configuration View

This tab will be visible for HE inverters. The tab will be available only if the String Supervisor (SS) is connected to the inverter.

The string supervisor monitors the solar panel strings statuses to detect quickly the incorrect operation of a part of the photovoltaic field.

By default, the first SS configuration information will be displayed in the SS Configuration view.

If the SS configuration tab is currently selected, the SS configuration values will be read from the inverter. Otherwise, the SS configuration information will not be read.

The SS configuration values are read only when the SS configuration tab is selected.

[illegible]

3.7. Module SS Visualization View

This tab is visible only for HE inverters. The tab will be enabled only if the String Supervisor (SS) is connected to the Inverter.

The tab will have information about the SS Visualization parameters of all the modules present in the HE inverter.

By default, the first SS Visualization information will be displayed in the SS Visualization view.

If the SS Visualization tab is currently selected, the SS Visualization values will be read from the inverter. Otherwise, the SS Visualization information will not be read.

The SS Visualization values are read only when the SS Visualization tab is selected.

[illegible]

3.8. HE Plant View

The window displayed when the device type is Freesun HE (Module SS Visualization View) is part of Module SS Visualization View.

Click the Plant name. The Plant data of all the Freesun HE installed will be displayed.

It contains information about SV.15.1 group.

Plant HE Information						
System Power	Global Energy	Daily Global Energy	Yesterday Global Energy	Last System Fault	Last System Fault Date	Total Faults
1454.6 kW	2059.958 MWh	11.852 MWh	9.002 MWh	F05 FAULT 05	06-10-2014 08:20	66136
INVERTER INFORMATIONS						
HE						
System Power	Global Energy	Daily Global Energy	Yesterday Global Energy	Last System Fault	Last System Fault Date	Total Faults
380.2 kW	531.940 MWh	2.996 MWh	2.285 MWh	F05 FAULT 05	05-10-2014 18:30	12740
HE_3						
System Power	Global Energy	Daily Global Energy	Yesterday Global Energy	Last System Fault	Last System Fault Date	Total Faults
382.6 kW	536.589 MWh	3.087 MWh	2.333 MWh	F05 FAULT 05	06-10-2014 08:19	7211
HE_2						
System Power	Global Energy	Daily Global Energy	Yesterday Global Energy	Last System Fault	Last System Fault Date	Total Faults
373.2 kW	529.297 MWh	3.044 MWh	2.312 MWh	F05 FAULT 05	06-10-2014 08:20	2782
HE_4						
System Power	Global Energy	Daily Global Energy	Yesterday Global Energy	Last System Fault	Last System Fault Date	Total Faults
318.6 kW	462.132 MWh	2.726 MWh	2.071 MWh	F05 FAULT 05	06-10-2014 08:19	43403

Note: this option is enabled while the device is connected.

3.9. HE Inverter View

The window displayed when the device type is FreeSun HE (Module SS Visualization View) is part of Module SS Visualization View.

Click the HE inverter name. The HE inverter view will be displayed.

It contains information about SV.15.1 group, SI Master Info menu screen value is the same in all the modules present in the HE Inverter.

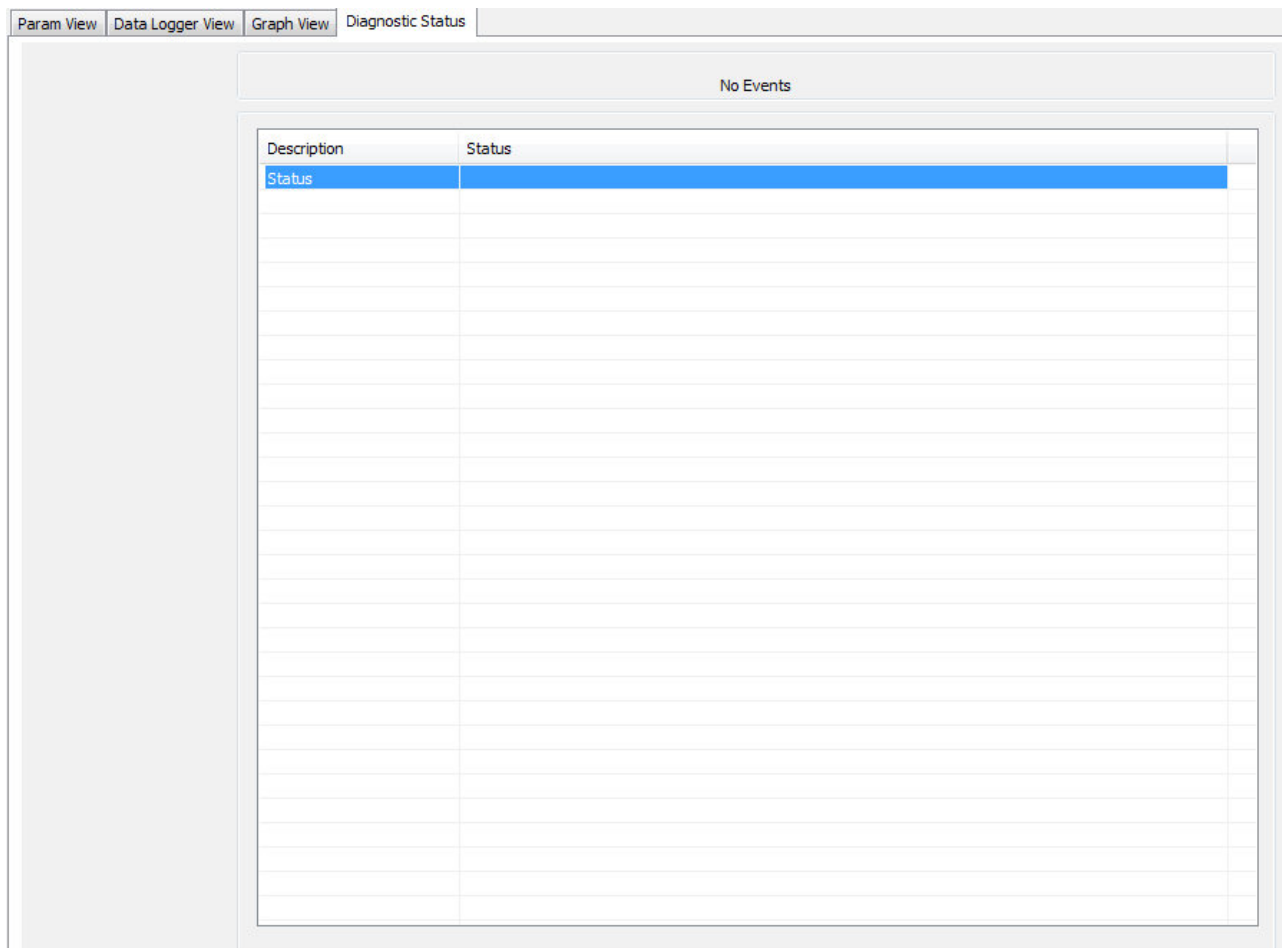
The screenshot shows the 'PowerComms - [HE]' window. On the left is a tree view under 'Kingsland' with 'HE', 'HE_3', 'HE_2', and 'HE_4'. The main area is titled 'HE - Inverter Information' and displays a summary of system power and energy. Below this is a table with 13 columns: #, IP, Command, State, Status, Power, Last Fault, Last Fault Date, Start/Stop, DC Relay, AC Relay, DC Voltage, Total Energy, Daily Energy, and IGBT Temp. The table lists 9 inverters with their respective statuses and data.

#	IP	Command	State	Status	Power	Last Fault	Last Fault Date	Start/Stop	DC Relay	AC Relay	DC Voltage	Total Energy	Daily Energy	IGBT Temp
1	1.11	Conn_Start	Start	MPP+	55.7 kW	F20 PDINT	23-08-2014 16:29	Enabled	Enabled	Enabled	604 V	104.289 MWh	151.9 KWh	+57 °C
2	1.12	Conn_Start	Start	MAVP	53.5 kW	F20 PDINT	25-09-2014 08:48	Enabled	Enabled	Enabled	601 V	104.293 MWh	125.0 KWh	+56 °C
3	1.13	Conn_Start	Start	MPP+	60.8 kW	F05 FAULT 05	02-10-2014 18:30	Enabled	Enabled	Enabled	587 V	104.289 MWh	140.7 KWh	+57 °C
4	1.14	Conn_Start	Start	MPP+	61.0 kW	F41 NET.V.U.L.	10-07-2014 15:46	Enabled	Enabled	Enabled	598 V	104.302 MWh	186.4 KWh	+57 °C
5	1.15	Conn_Start	Start	MPP+	60.2 kW	F05 FAULT 05	18-07-2014 21:10	Enabled	Enabled	Enabled	586 V	104.283 MWh	144.4 KWh	+56 °C
6	1.16	Offline	Offline	MPP+	63.2 kW	F19 AC OVE...	06-09-2014 12:43	Enabled	Enabled	Enabled	639 V	109.102 MWh	147.9 KWh	+58 °C
7	1.17	Offline	Offline	MPP+	64.1 kW	F00 NO FAULT	00-00-2000 00:00	Enabled	Enabled	Enabled	645 V	109.099 MWh	124.0 KWh	+58 °C
8	1.18	Offline	Offline	MPP+	63.5 kW	F00 NO FAULT	00-00-2000 00:00	Enabled	Enabled	Enabled	631 V	109.040 MWh	183.4 KWh	+59 °C
9	1.19	Offline	Offline	MPP+	63.1 kW	F05 FAULT 05	18-07-2014 21:06	Enabled	Enabled	Enabled	627 V	113.289 MWh	183.5 KWh	+56 °C

Note: this option is enabled while the device is connected.

3.10. Diagnostic Status

The diagnostic status tab is only available with a SD700FR drive connected. The tab lists out all the diagnostic data that has been generated when the event is raised.



3.11. Cell Status

The cell status tab is only available with a XMV660 drive connected. The screen will be different depending on the number of cells per phase of the XMV660 drive. The Cell Status view will be shown in the below tab.

Param View

Data Logger View

Graph View

Cell Status

System Status

Number of Cells

S.No	Phase U	Phase V	Phase W
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