CRE CONFIG SOFTWARE

User manual

A70 Z1 90003 K EN

Technical documentation history

Date	Version	Comment
December, 2010	A	Initial edition
July, 2015	F	CRE Config v2.50 for compatibility with GENSYS Compact v1.00
November, 2015	G	CRE Config v2.51 for compatibility with GENSYS Compact v1.01
February, 2016	H	CRE Config v2.55 for compatibility with GENSYS 2.0 v5.00 and corporate identity and style guide updated.
September 2016	I	CRE Config v2.60 for compatibility with GENSYS Compact v1.20
February 2017	J	CRE Config v2.70 for compatibility with UNIGEN 2.0 range
March 2017	K	Print screen update (download/upload arrows and main windows). Expansion of MASTER 2.0 product range.
February 2019	L	Updating picture and version table.

Content

1   PRESENTATION

CRE Config Software allows the user to easily access to multiple CRE technology modules of the GENSYS range through an Intranet network as well as a UNIGEN family module through a modem connection (a single UNIGEN module at a time). Engineers or technicians can configure a device online/offline and monitor the device in real-time. The software's organization follows exactly the classical GENSYS 2.0 embedded web-server so that users who are used to it can be operational immediately with this software. His friendly and innovative interface gives the users a total new and ergonomic working experience.

The *CRE Config Software* should only be used by competent, qualified personnel, as changes to the operation of the module may have safety implications on the panel/generating set to which it is fitted. Access to critical operational sequences and settings are to be used by qualified engineers, only a security code set by the generator provider will prevent unauthorized access.

This application should be used together with the technical documentation of the module you want to connect.

It is necessary to use CRE technology products that handle the communication protocol used by *CRE Config Software*. Table below indicates the minimal firmware version for each product family that will be compatible with *CRE Config Software*.

Product family	*CRE Config Software version*	Product version
A51Zx – UNIGEN	v2.00	Starting from v2.00
A53Zx – GENSYS 2.0 / MASTER 2.0	v2.00	Starting from v3.00
A53Zx – GENSYS 2.0 / MASTER 2.0	v2.02	Starting from v4.66
A53Zx – GENSYS 2.0 / MASTER 2.0	v2.55	Starting from v5.00
A56Z0 – GENSYS Compact PRIME	v2.50	Starting from v1.00
A56Z1 – GENSYS Compact MAINS	v2.60	Starting from v1.20
A51Vx – UNIGEN 2.0	v2.70	Starting from v1.00
GENSYS 2.0 / MASTER 2.0 A53Zx – A54Zx – A53Cx	V2.80	Starting from v5.01
A56-PRIME – GENSYS COMPACT PRIME A56-MAINS – GENSYS COMPACT MAINS A56-AMF – AMF COMPACT	V2.90	Starting from v2.00
A56-SYNCHRO – SYNCHRO COMPACT	V2.91	Starting from v2.01
A56-MAST – MASTER COMPACT A56-MAST1 – MASTER COMPACT 1B	V2.92	Starting from v2.02

A56-BTB – COMPACT BTB		

2   INSTALLATION

2.1   SYSTEM REQUIREMENTS

- **Supported Operating Systems:** Windows 10, Windows 8.1, Windows 8, Windows 7
- **Processor:** 400 MHz Pentium processor or equivalent (minimum); 1GHz Pentium processor or equivalent (recommended)
- **RAM:** 128 MB (Minimum); 256 MB (Recommended)
- **Hard Disk:** Up to 200 MB of available space may be required
- **Display:** 800 x 600, 256 colors (Minimum); 1024 x 768 high color, 32-bit (Recommended)
- **Ethernet:** 10 Mbps - 10Base-T Ethernet or higher
- **Microsoft .NET Framework 3.5 Service Pack 1**

2.2   HARDWARE INSTALLATION

Connect GENSYS module directly to PC via Ethernet cable or connect it to LAN (Local Area Network).
CRE Config Software doesn't handle the modem connection with UNIGEN, you must manually establish this modem connection (see specific UNIGEN documentation A51Z1 9 0015A).

2.3   SOFTWARE INSTALLATION

To install the software, run the executable file Setup CRE Config Software.

3   PASSWORD PROTECTION

CRE Config Software uses the integrated password system of CRE technology modules for access permissions and parameter configuration of the connected module.

Level	Default password	Authorization	Accessible menu
0$^{(*)}$	No password, just press [Connect] button	This level is not password protected	Display
1	1 (Digit « One »)	User level Parameters settings & level 1 equations	All menus
2	Reserved to CRE Technology distributors	Distributor level Level 1 & 2 equations and parameters	All menus

(*) Not available on UNIGEN range.

Note: If you are not connected to a physical product, you can select the desired level of menu displayed on the screen using Options menu. See further details below

To connect to your device, enter its hostname and password in fields **Device name (or IP address)** and **Password** in the **Connect to Device** section (see image below and next chapters for further details).

Device Name can be found in the **System** menu of the CRE technology device menu. In the case of UNIGEN, IP address of the module (default is 192.168.11.1) serves as the **Device Name**. Thus only one UNIGEN connection can be established at a time.

Password is the same as the one used to access the embedded Web site of your CRE technology module.

Note: If you try to connect to a module that is different from the one you selected on the main page ("New device"), you will be prompted to adapt to the physical unit. If you choose to keep the type of unit you selected on the main page, then the connection will be aborted.

4   DESCRIPTION

4.1   HOMEPAGE

This page will be displayed when the user starts the application. Click on a product icon to create a new session or open a recent file from File menu or Toolbar.

*Note: **CRE Config Software** can configure and monitor several modules simultaneously with one tab for each of them. **CRE Config Software** can control a set of several GENSYS at the same time, but only one UNIGEN tab can be open.*

4.2   MENU AND TOOLBAR

Menu and Toolbar are located at the top of the screen.

4.2.1   File menu

New	Create a new module configuration file.
Open	Open an existing file from disk or flash memory device
Save parameters	Save the current configuration into a file
Save parameters As	Save the currently open file with a new name. Users will be prompted to enter the file name.
Print Preview	Preview what the configuration file will look like on the page after printing.
Print	Print the current open configuration file.
Exit	Exit the software. If the current open file has changed since it was last saved, users will be prompted to save it.

4.2.2   Options menu

Language ▶	Choose the language of your *CRE Config Software*
Options ▶	Display level of the pages that are not connected to a physical product. *Standard/Advanced* levels are equivalents to password levels 1 and 2 on physical products.

4.2.3   Help menu

|	
Contents	Open this help file.
About	Show the software version *CRE Config Software*

4.2.4   Toolbar

Toolbar contains the most used commands from the menu and is a quicker way to access these commands.

	Create a new configuration file.

	Open an existing file from disk or flash memory device
	Save the current open file with the path it was loaded from previously. If this is a new file, users are prompted to enter the filename.
	Print the current open configuration file.
	Send configuration parameters of the current page to the module.
	Send configuration pages to the module.
	Read the settings from the module for viewing/editing

4.3   SCADA(*)/CONFIGURATION/SYSTEM
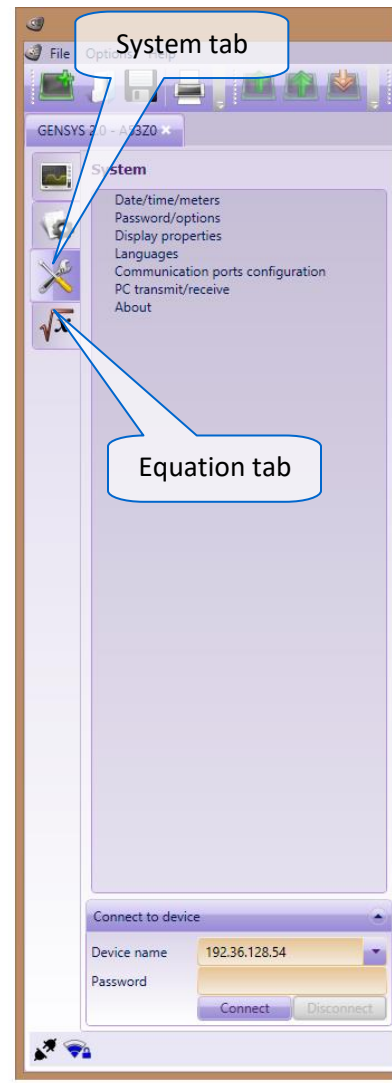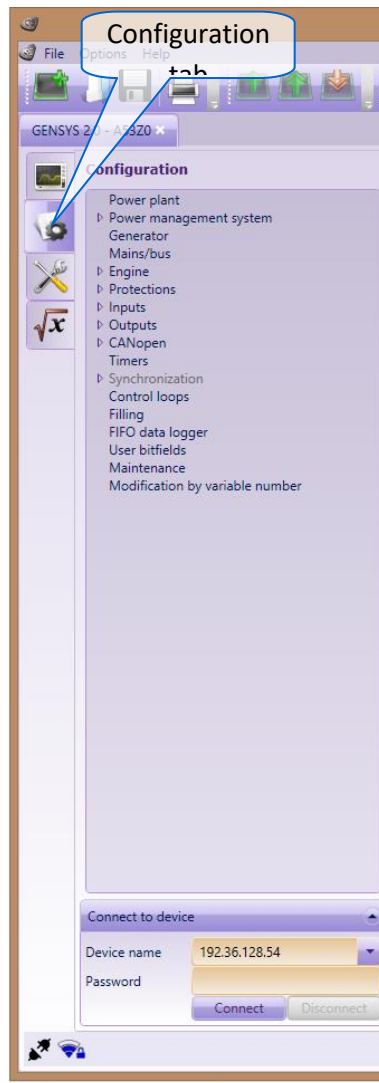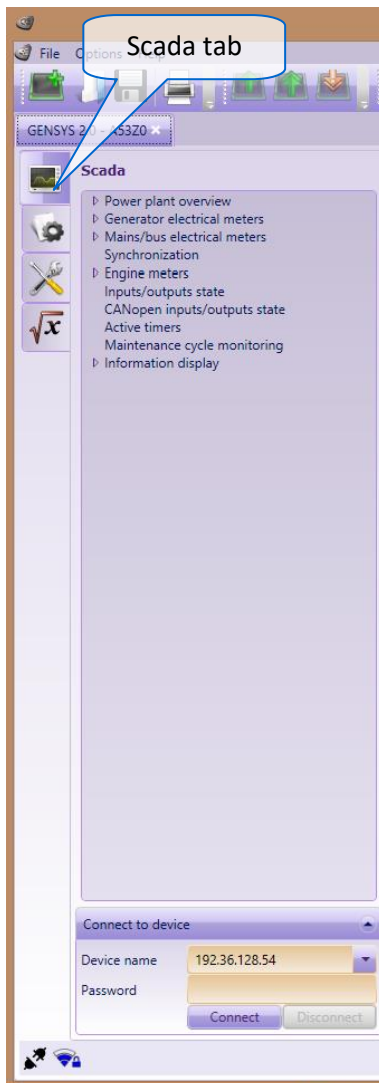
3 main sections are available to the user:

- ***Scada**^(*)*: to monitor all measurements (electrical, engine meters...).
  *^(*)**Display** on UNIGEN range.*
- ***Configuration***: to read and modify configuration parameters of your CRE technology product.
- ***System***: to read and modify system parameters of your CRE technology product (date, hour, module language...).

GENSYS 2.0 (except LT modules) and MASTER 2.0 also have a fourth section called ***Equations*** that displays custom text equations that may be present in the configuration that you just downloaded from a connected device or that may be written inside a configuration text file that you loaded from a disk.

*Note: Starting from **CRE Config Software** v2.02 and GENSYS 2.0 firmware v4.66, equations can be managed for both password levels 1 and 2. The use of older **CRE Config software** or GENSYS firmware will limit equations to level 1 or will not manage equations at all.*

For more details concerning these different sections, please refer to chapters §5 and §6.

5   GENSYS, MASTER 2.0 AND UNIGEN 2.0 FAMILIES

5.1   SCADA

In this mode, **CRE Config Software** allows the users to monitor the electrical and mechanical parameters in real time.

Before running in Scada mode, users have to insert **Device Name (or IP address)** and **Password** to connect to the CRE technology module to be monitored.

Users can use "Information Display" page to read the value of 50 different variables by inserting their labels.

5.1.1   Trendview

In the **Scada/Information** section, you will find an **Oscilloscope** page that enables you to trace up to 4 variable trends as shown on the picture below.
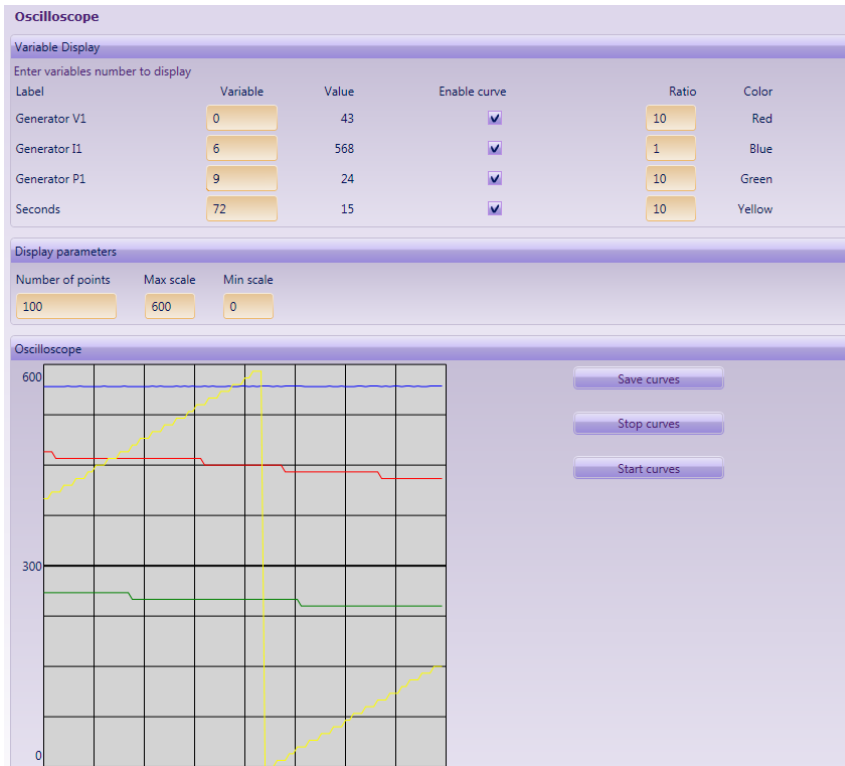
You can select the following settings:
- Variables you want to display.
- Enable/Disable each curve individually.
- Attribute a multiplying ratio to each curve individually.
- Minimum and maximum value of the trend graph.

The graph displayed can then be saved as a CSV file (Comma Separated Values) that can be imported under Microsoft Excel or any other spreadsheet software.

5.2   CONFIGURATION

In **Configuration** section [icon], users can set parameter values. But this only affects the parameters in GENSYS when users transfer them into the device. There are 2 ways to do so:

- "Upload current page to device" [icon] : Transfer all parameters of the actual displayed page into the device

- "Upload all to device" [icon] : Transfer all parameter into the device.

Note: The module may to save or reject parameters depending on password level and option enabled.

For more information about how to change the value of parameters, users should refer to Technical Documentation.

No Download is allowed if your are connected to the device without password (See « 3 Password Protection »)

| WARNING |
|---|
| Never initiate any file transfer when the engine is running! |
| Starting from **CRE Config software** v2.02, downloads are disabled if an engine speed is detected by a connected GENSYS. |
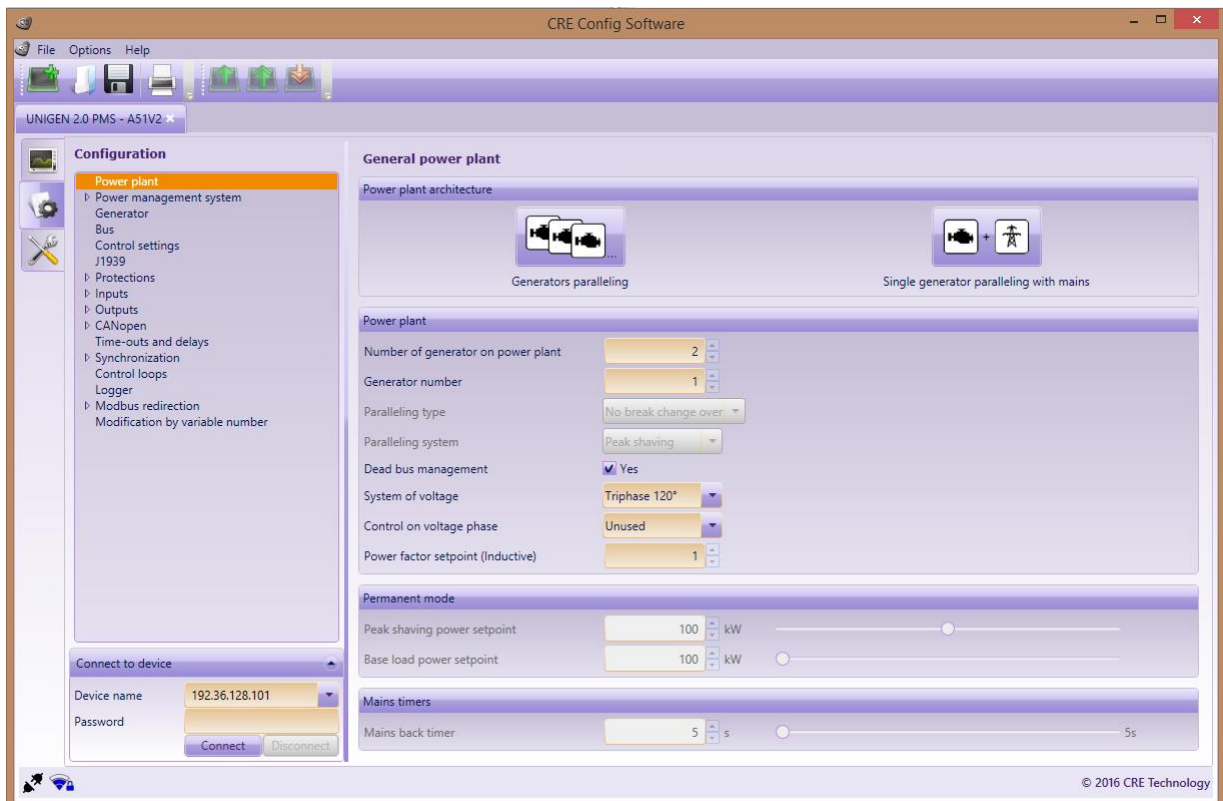
5.3   GENERAL

Users should consult technical documentation for right adjustment.
To modify value of corresponding variable, user selects page that contains the variable and edit it.
For example:
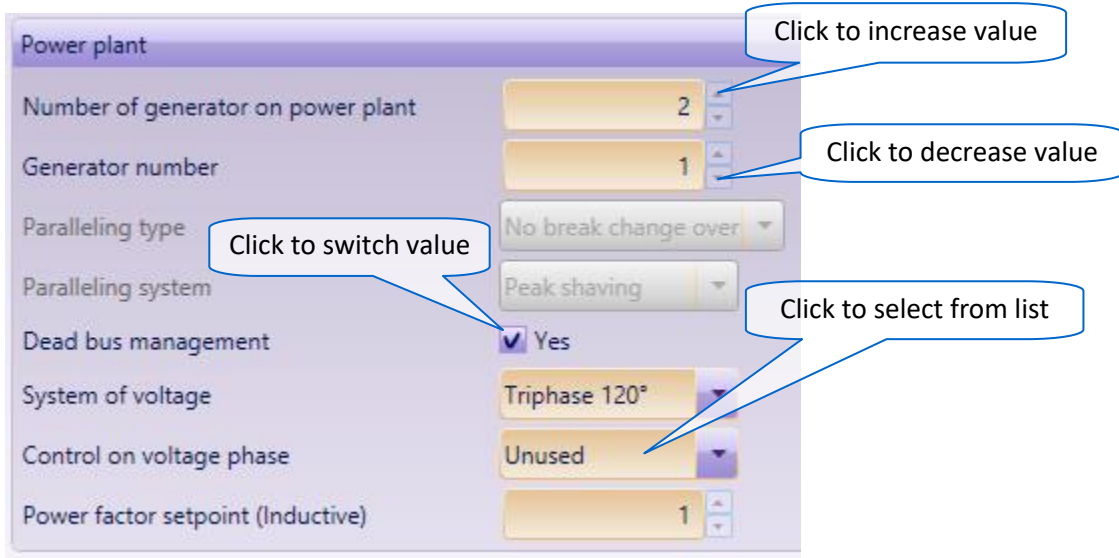
After modifying, users can select "Transfer current page to device" to upload the variables shown in the current page to configure the module or select "Transfer all page to device" to upload all pages to the module.

Note: Some parameters can be inhibited according to the current configuration. In the example below, selecting "Alternator" as the speed measurement source makes parameter "number of teeth" of the pick-up useless. It is therefore inhibited.
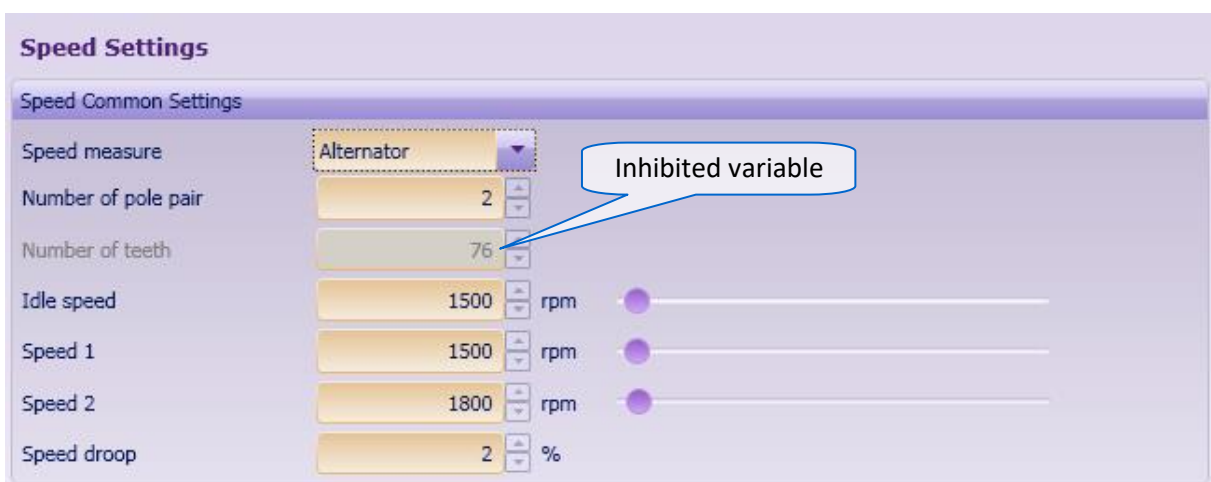
5.4   CALIBRATING AN ANALOG INPUT

Resistive analog inputs can be calibrated to fit the sensor you want to connect. Picture below shows the calibration table for the two dedicated resistive inputs (oil pressure and water temperature sensors).

Oil Pressure and Water Temperature Calibration

Oil Pressure Calibration		Water Temperature Calibration	
OPI Accuracy	1	WTI Accuracy	1
OPI Unit	mBar	WTI Unit	°C
OPI Calibration	Edit	WTI Calibration	Edit
Ohm	**mBar**	**Ohm**	**°C**
0	0	0	130
40	100	40	120
80	200	80	100
120	300	120	80
160	400	160	70
200	500	200	60
240	600	240	55
280	700	280	52
320	800	320	50
360	900	360	48
400	1000	400	46

For an easier set up of an analog input, users can also edit the calibration by using a graphical editor as shown below.
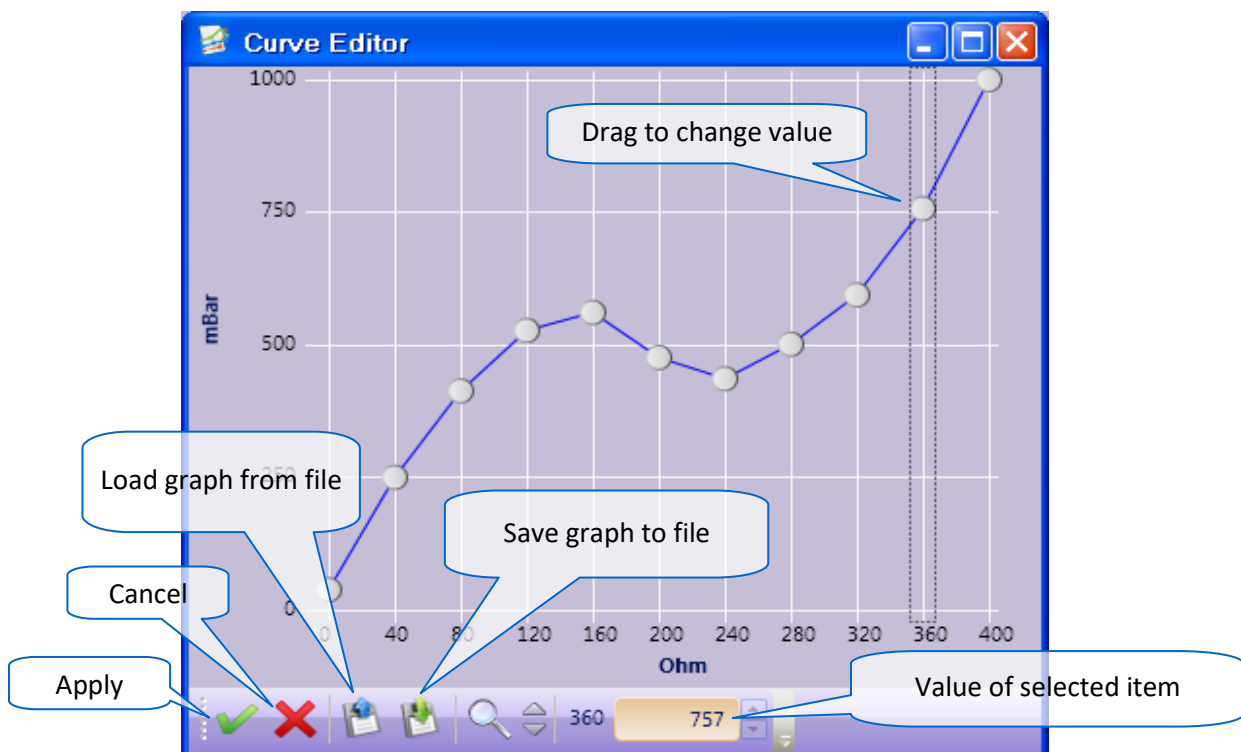
In this case it is also possible to use predefined calibration tables for different brands of sensors by using the "load graph from file" icon in the graphical editor. You can also save your own curves adapted to your favorite sensors for later use. These calibration files store the range of the x-axis, the unit, the accuracy and the values of calibration points.

## 5.5   ENABLE/DISABLE MODULE OPTIONS

In order to enable or disable an option, type the device name and the corresponding option password in the connection fields and then click Connect.

Please contact your CRE technology distributor to obtain the password corresponding to the desired option.

5.6   SYSTEM SETTING

In the system mode, users can modify the system configuration: date, time, screen saver, timer, logo…
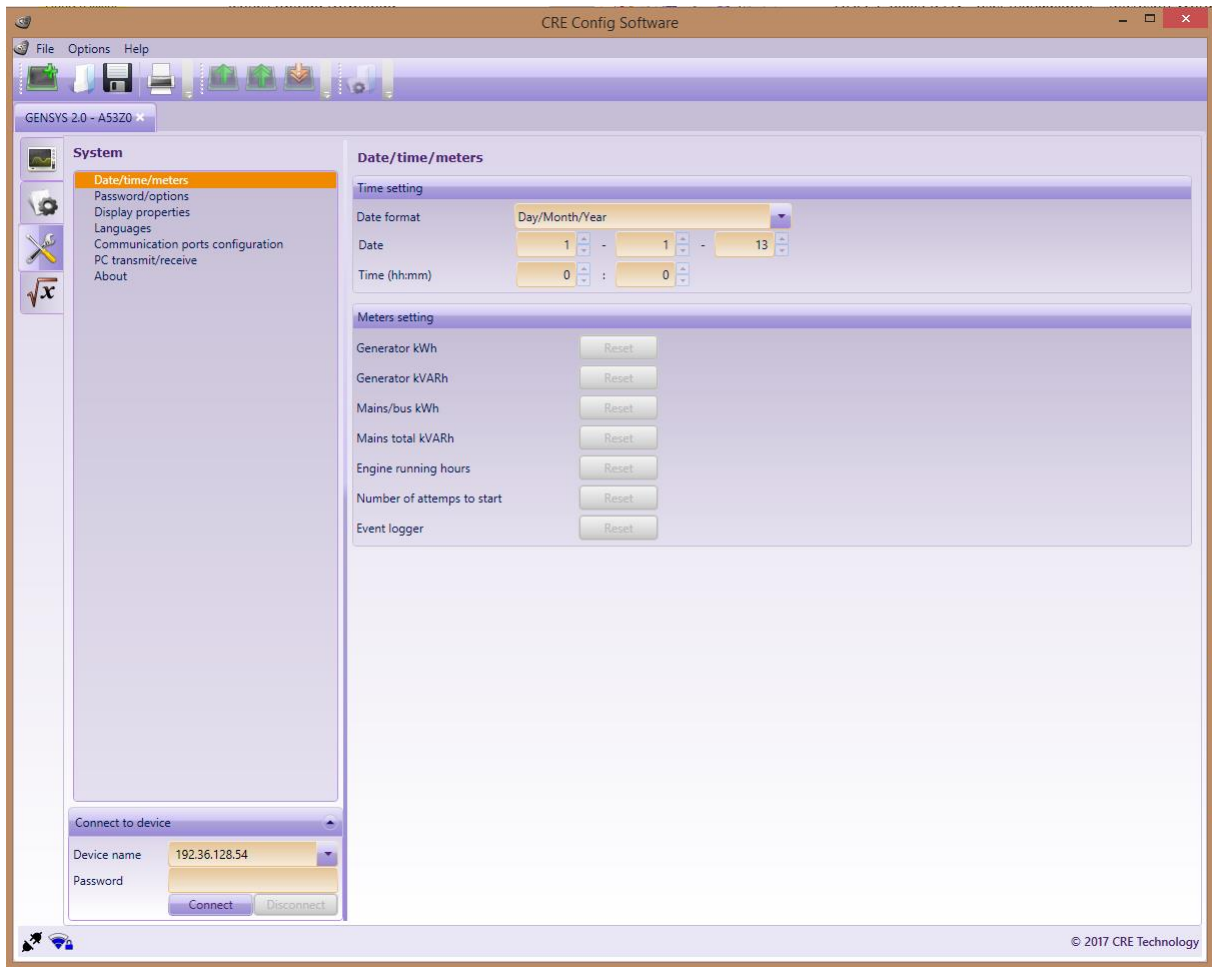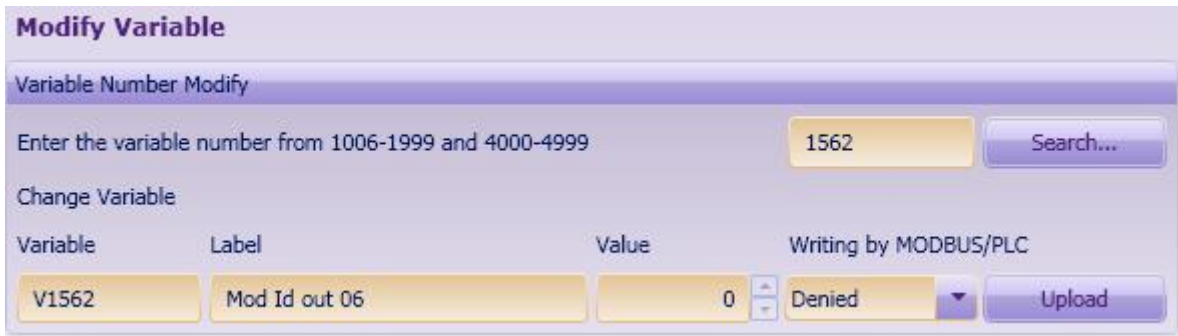
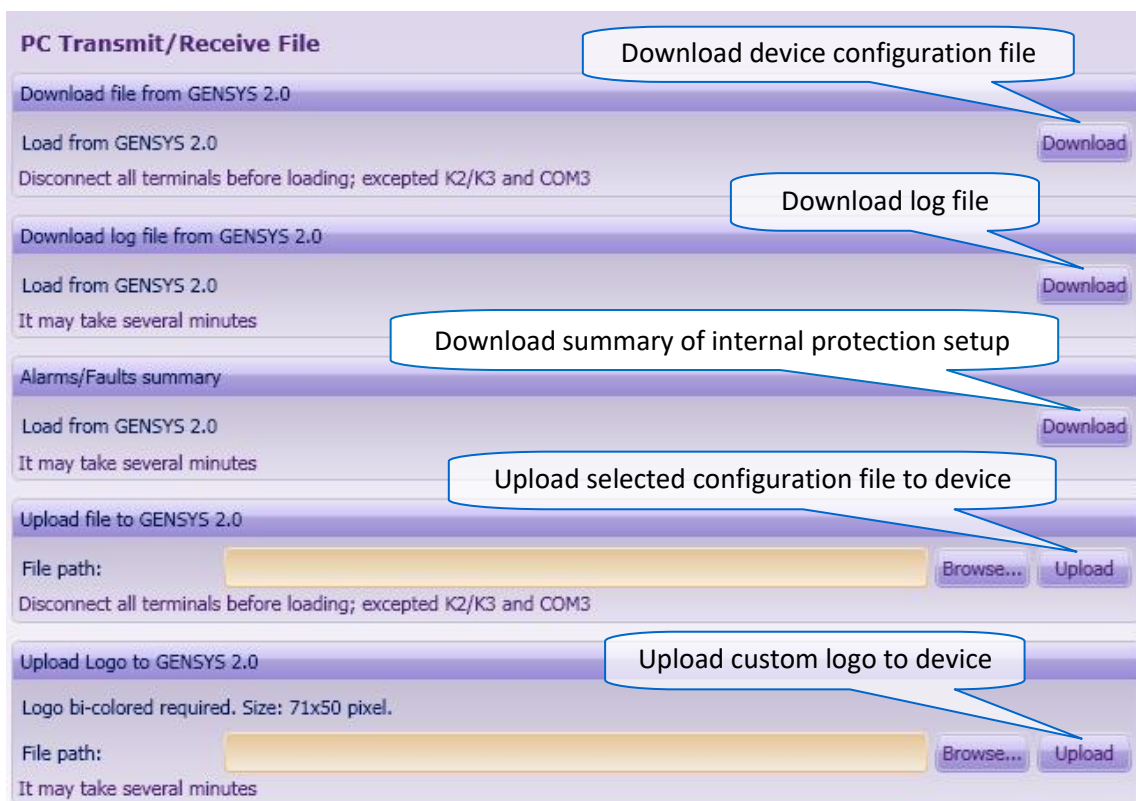## 5.7   MANUALLY MODIFYING A VARIABLE

In this mode, users can change value of a corresponding variable by inserting its number in "Modify Variable by Number" page.
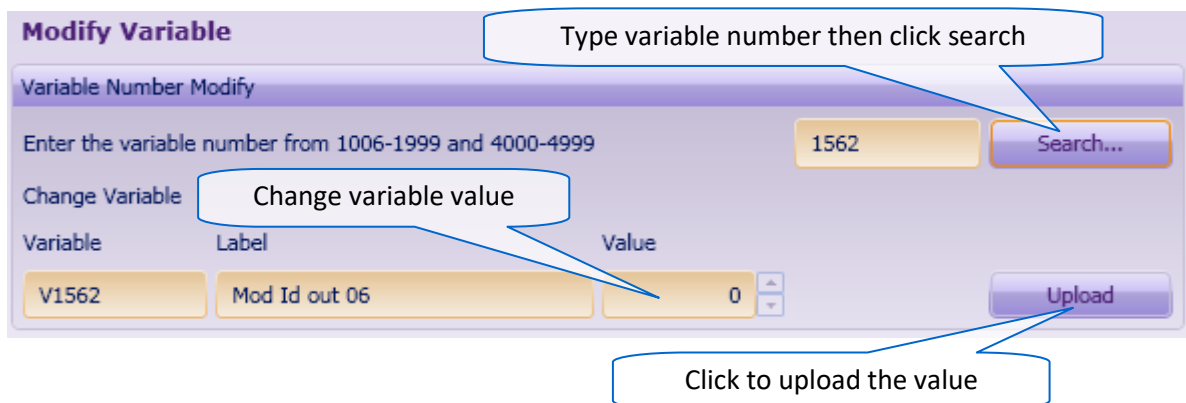
If password level is 2, user can change "Modify by MODBUS/PLC" option. In this case, the variable can be changed in the module equation or through MODBUS communication.
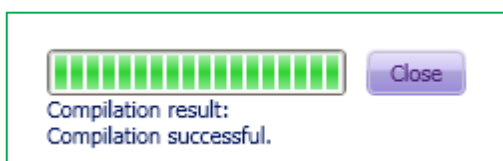
Modify Variable

Variable Number Modify

Enter the variable number from 1006-1999 and 4000-4999   1562   Search...

Change Variable

Variable	Label	Value	Writing by MODBUS/PLC	
V1562	Mod Id out 06	0	Denied ▼	Upload

5.8 FILE UPLOAD/DOWNLOAD

PC Transmit/Receive File

Download file from GENSYS 2.0

Load from GENSYS 2.0   Download

Disconnect all terminals before loading; excepted K2/K3 and COM3

> Download device configuration file

Download log file from GENSYS 2.0

Load from GENSYS 2.0   Download

It may take several minutes

> Download log file

Alarms/Faults summary

Load from GENSYS 2.0   Download

It may take several minutes

> Download summary of internal protection setup

Upload file to GENSYS 2.0

File path: Browse...   Upload

Disconnect all terminals before loading; excepted K2/K3 and COM3

> Upload selected configuration file to device

Upload Logo to GENSYS 2.0

Logo bi-colored required. Size: 71x50 pixel.

File path: Browse...   Upload

It may take several minutes

> Upload custom logo to device

Once clicked on Upload/Download, a progress dialog will appear:

Uploading...   Cancel

When upload completes or fails, the result is displayed as shown below:

Compilation result:
Compilation successful.   Close

Upload failed   Close

5.9   UPDATE FIRMWARE FROM SD CARD

Only available for GENSYS 2.0/MASTER 2.0 range from firmware v5.00.

This feature allows you to update firmware by choosing a firmware file on the SD card.

First, plug a standard size SD card on your computer and copy firmware file supplied exclusively by CRE Technology to the root directory and insert your card into the product slot.
Thus, connect to the product in advanced level (password level 2) and go to "PC transmit/receive" page into System section.

Press the button Read files from SD card.

A drop-down menu will appear listing all firmware files on your card.
Choose the file you want to update and press on update button.

Once update is launched, "Updating…" status will appear and you will be disconnected automatically from the product.

Wait until the device flash the new firmware, reboot and load factory settings.

6   UNIGEN FAMILY

6.1   DISPLAY

In this mode, users can see the different electrical measurements and Inputs/Outputs of the module in real time. Before running the Display mode, users must connect to the CRE Technology module.
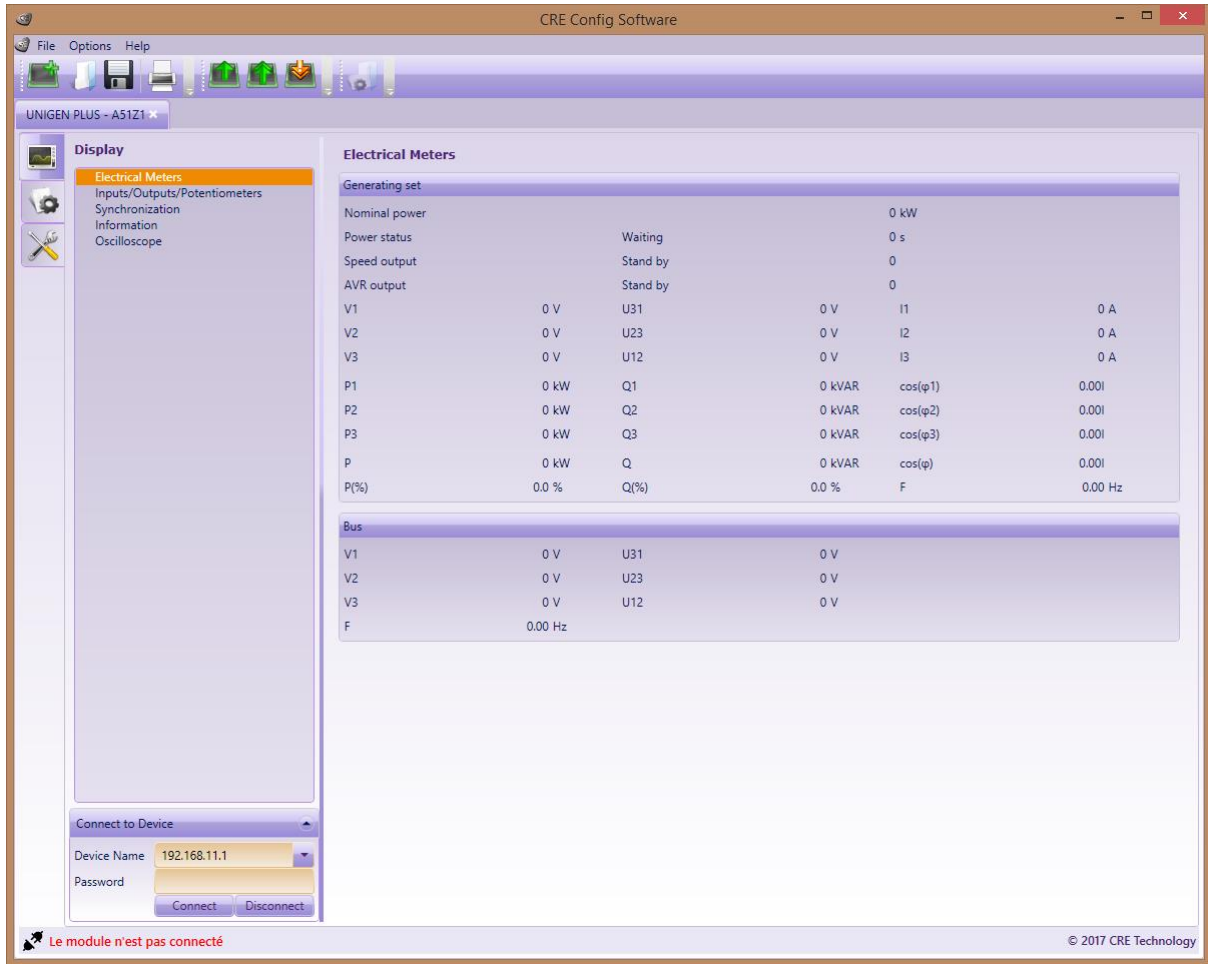
Information page allows users to view on the same page parameters and measurements of their choice. To do this, enter the number of each measure/parameter to display.

6.2   UNIGEN CONFIGURATION

In **Configuration** section , users can read and set parameters values. The changes only take effect when new values are sent to the connected module.

There are 2 ways to do so:

- "Upload current page to device" : transfers all parameters of the actual displayed page into the device

- "Upload all to device" : transfers all parameters into the device.

Note: module may save or reject parameters depending on password level and enabled options.

For more information about how to change the value of parameters, users should refer to the technical documentation of the module.
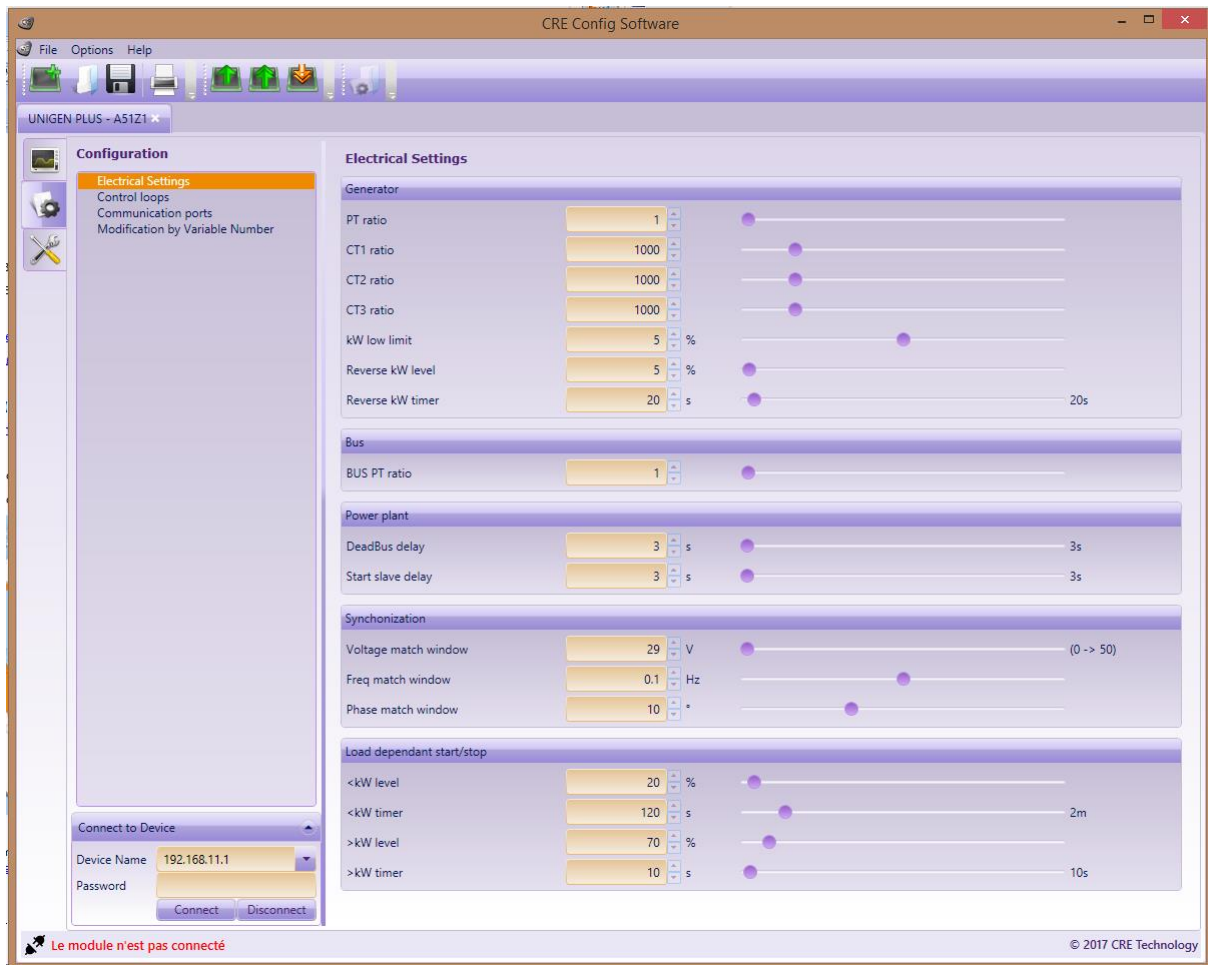
WARNING
Refer to section §6.5 in order to keep the configuration changes permanently saved into a module
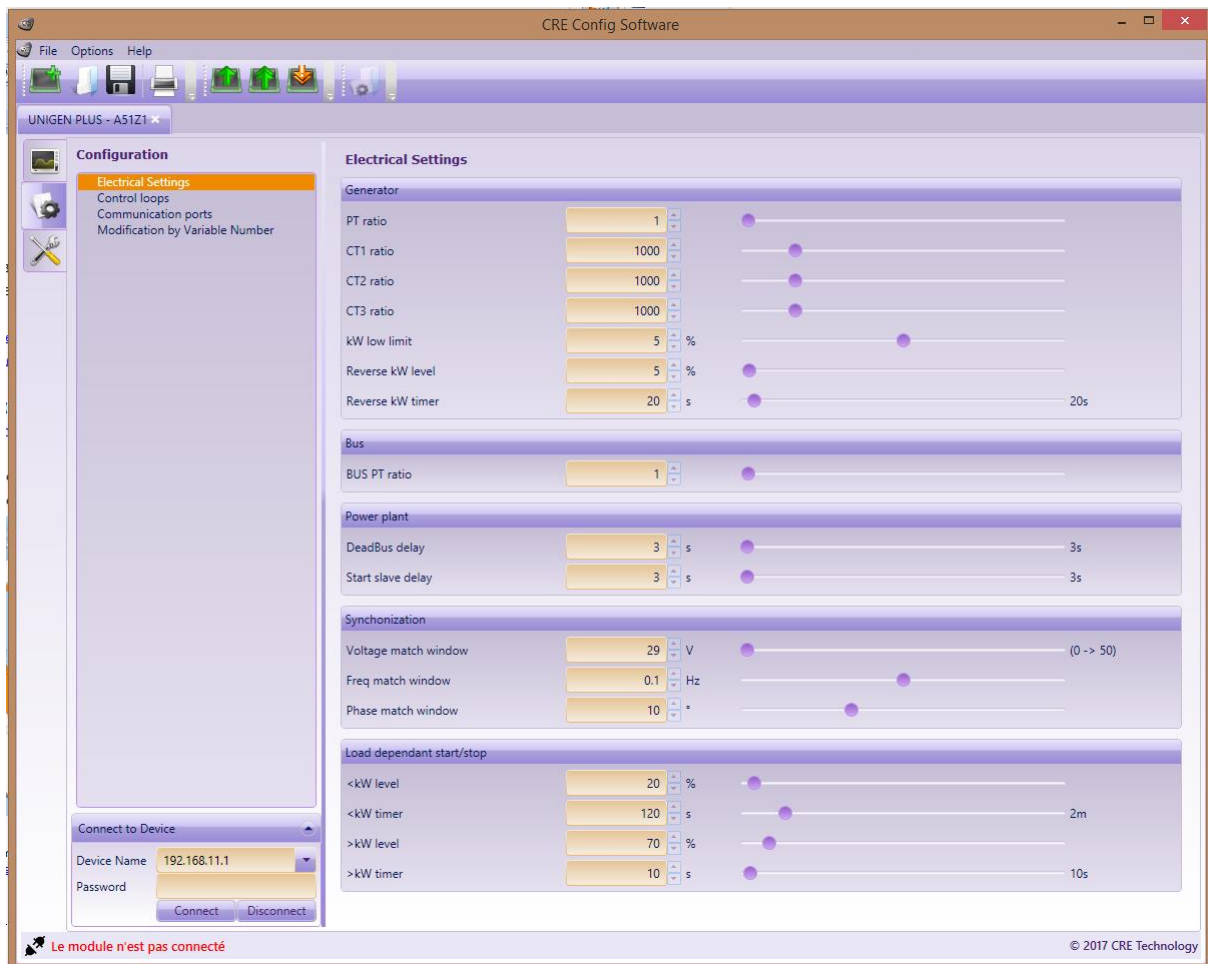
6.3   MODIFYING A PARAMETER

To change the value of a parameter, go to the configuration page and edit the associated value.

For more details concerning the setup of a UNIGEN module, refer to technical documentation A51 Z0 9 0004.

After modification, select the "Upload current page to device" icon to send displayed settings to the connected module. Select "Upload all to device" icon to send the entire configuration to the connected module.

6.4   MODIFICATION DE VARIABLE

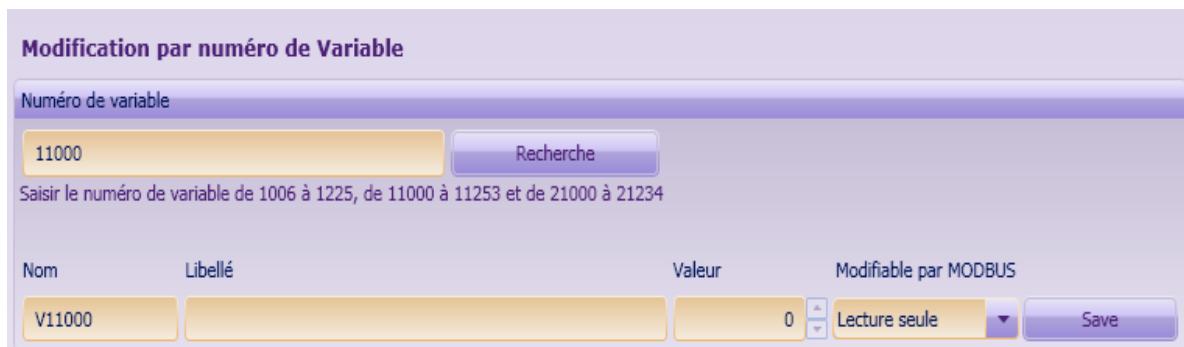This page allows you to change a parameter using its variable number.

Note that if you are connected to the module using level 2 password, it is also possible to change the read/write attribute of the parameter. This attribute is checked by the module for MODBUS write accesses.
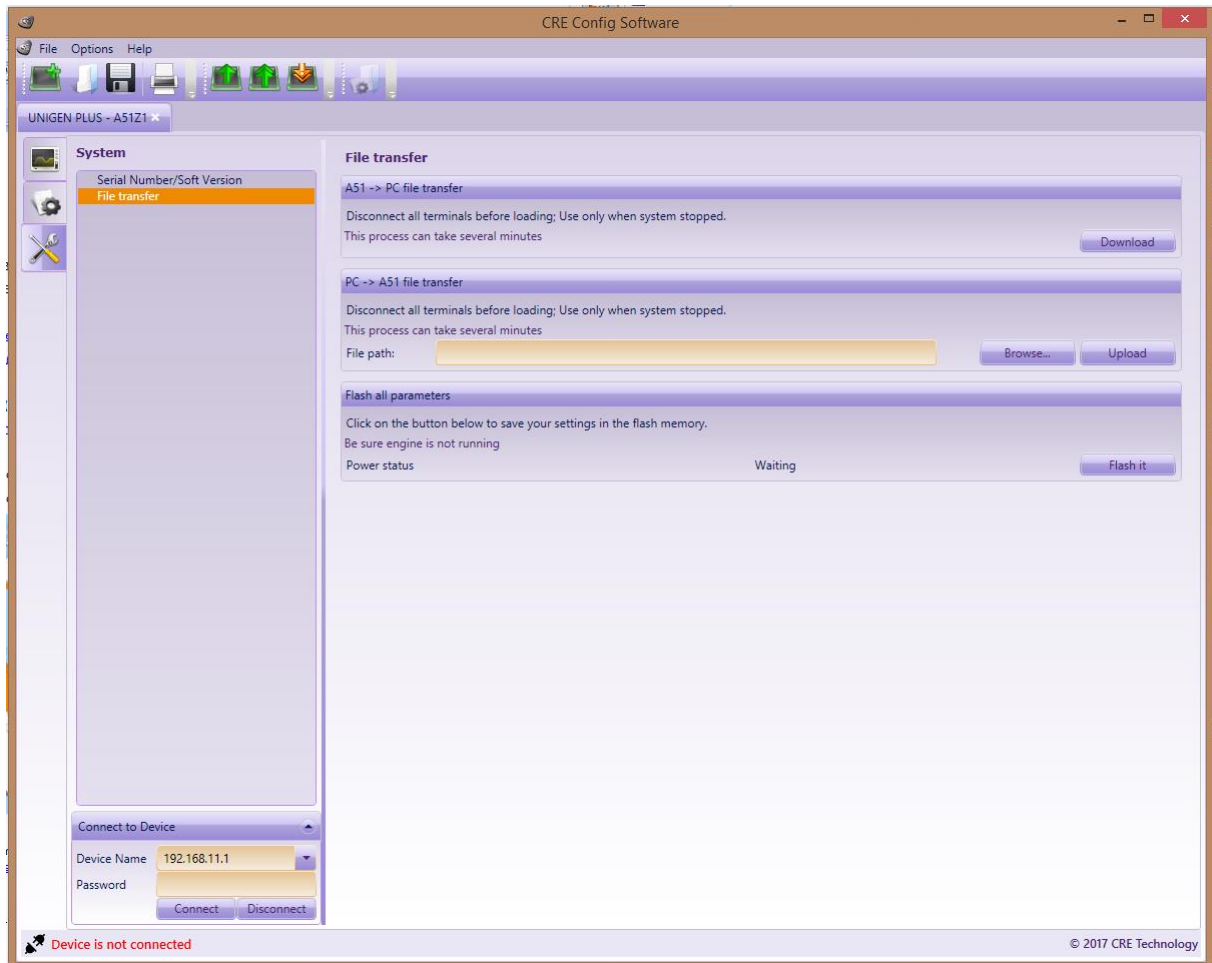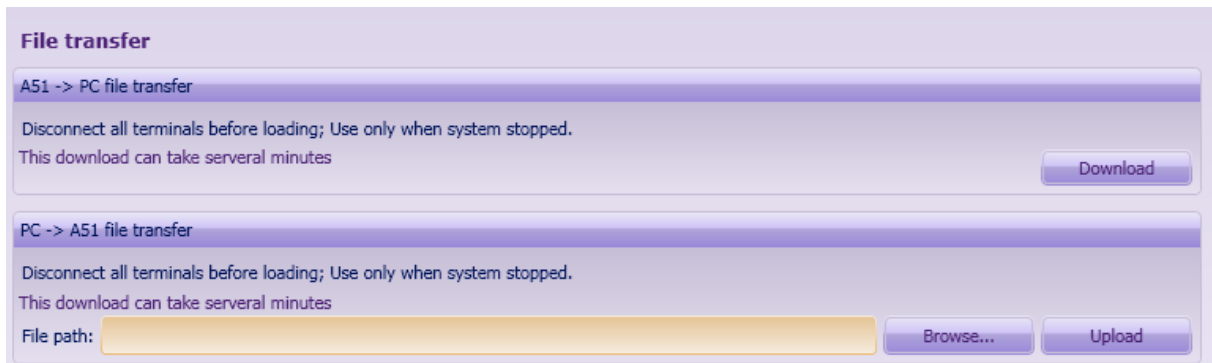
6.5   UNIGEN SYSTEM

This section allows you to read the serial number of your module and to download, upload and save its configuration.

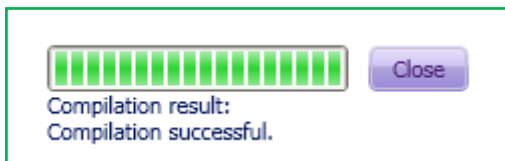| WARNING |
|---|
| After sending parameters to the module, press "Flash it" button to permanently save the new configuration. |

6.6   TÉLÉCHARGEMENT DE FICHIER

Once clicked on Upload/Download, a progress dialog will appear:

When upload completes or fails, the result is displayed as shown below:

CRE TECHNOLOGY

130 allée Charles-Victor Naudin

Zone des Templiers

Sophia-Antipolis

06410 BIOT

FRANCE

Phone: +33 (0)4 92 38 86 82

Fax: +33 (0)4 92 38 86 83

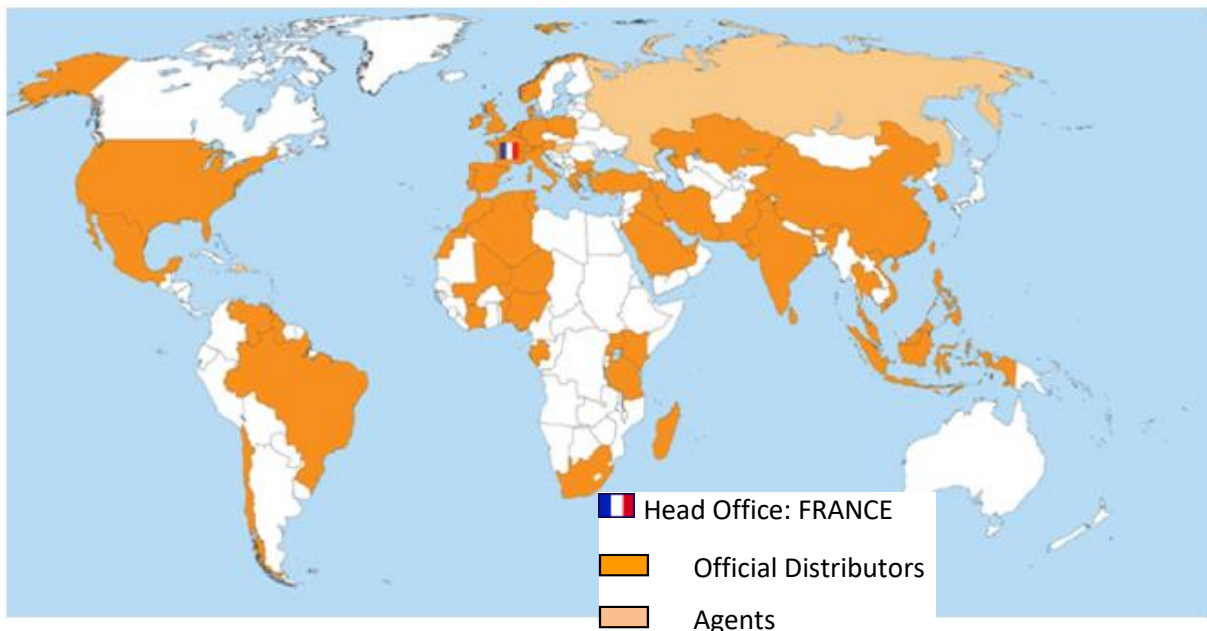Website: http://www.cretechnology.com

Email: info@cretechnology.com

Technical support: +33 (0)4 92 38 86 86 (office hours: 8.30AM - 12AM / 2PM - 6PM GMT +1)

Email: support@cretechnology.com

SKYPE: support-cretechnology.com (voice only)

A worldwide coverage:

Check our entire distributors list around the world on our Web site http://www.cretechnology.com.

NEW WEB SITE

www.cretechnology.com

CRE TECHNOLOGY has provided the engine and generator industry for over 25 years with standard products and dedicated solutions for engine control, generator protection and paralleling.

All application fields where power is the core resource of performance are covered by CRE TECHNOLOGY. The company is a reference in the industrial, marine and defense businesses.

Our very strong situation allows us to invest, feeding our ambition to be always more advanced, always closer to you. The coming years will see the broadening of our distribution network and of our innovative products portfolio.

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By creating your account, you'll have access to all your personal data. All the prices of the new CRE TECHNOLOGY website correspond to your business rates.

GET INFORMATION THE WAY YOU WANT IT
Fill your cart by choosing the products you want and get all the information you need.

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It allows you to consult the documents related to the CRE TECHNOLOGY's ranges of products.