



TECHNICAL DOCUMENTATION

I4GEN SUITE



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INTRODUCTION

USER'S NOTICE

Copyright of this manual belongs to the manufacturer. No part of this manual, including the products and software described in it may be reproduced, transmitted or translated into any language in any form or by any means without written permission of the manufacturer.

This manual contains all the information required for the use of this product to meet the user s requirements. It may change or be corrected at any time without notice.

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PRESENTATION

CRE TECHNOLOGY developed a new PC software which allows you to connect to multiple COMPACT platform. This user-friendly software allows you to, control, configure and monitor your power plant in real time.

You will then have access to the software interface, which is composed of three parts:

- Supervision mode
 - Settings mode
 - Application settings mode
- Automatic firmware update for **i4Gen Suite** and controllers.

Visit our website to get the firmware, free of charge.

Compatibility

i4Gen Suite is compatible with the following controller versions:

- **GENSYS COMPACT PRIME**: v2.10 or later
- **GENSYS COMPACT MAINS**: v2.10 or later
- **AMF COMPACT**: v2.10 or later
- **SYNCHRO COMPACT**: v2.10 or later
- **MASTER COMPACT**: v2.10 or later
- **MASTER COMPACT 1B**: v2.10 or later
- **BTB COMPACT**: v2.10 or later
- **PV COMPACT**: v2.30 or later
- **BAT COMPACT**: v2.30 or later

INSTALLATION

SOFTWARE INSTALLATION

Download the executable file on www.cretechnology.com and run it.

First, you'll have to accept the software license terms then choose installation options/destination folder and click the Install button.

At the end of the installation, you can choose to launch **i4Gen Suite** on closing the installer.

NETWORK CONNECTION

There are several possible connection types between **i4Gen Suite** and the controller.

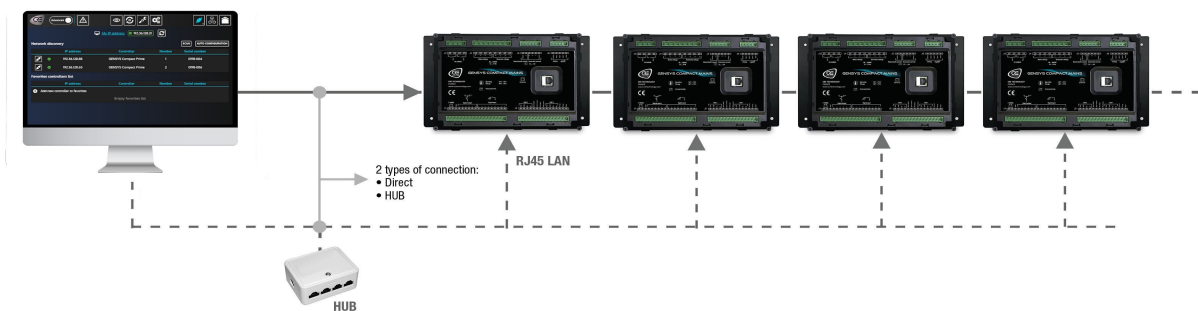
Direct connection

- Connect the Ethernet port (RJ45-LAN) of your computer to the Ethernet port of the controller.
- Connect the Ethernet port of the controller to one of the Ethernet ports of the switch.

Connection via a Switch

- Connect the Ethernet port (RJ45-LAN) of your computer on one of the switch's Ethernet ports.
- Connect the Ethernet port of the controller to one of the Ethernet ports of the switch.

You will then be able to supervise each controller, one by one, using **i4Gen Suite**:



COMMUNICATION

PRE-REQUISITE

To be able to establish communication between **i4Gen Suite** and the controller, the network addresses of both devices must be configured:

- For PC network configuration, please refer to your Windows network settings.
- The controller network configuration can be done from the controller front panel or via **i4Gen Suite** software.

The network configuration of both devices has to be compatible:

- The IP address by default of **CRE TECHNOLOGY** controllers is: 192.168.11.1

Note that you'll have to change either your PC's IP or the controller IP to be able to communicate together. Please make sure that if you change the IP addresses, the subnet mask is set accordingly.

OFFLINE/ONLINE MODE

i4Gen Suite can be used in offline/online mode.

Offline Mode

The controller supervision part doesn't display any values.

The static configuration part allows you to:

- Make a configuration for a controller and save it on a configuration file.
- Import a configuration file and modify an existing controller configuration.

Online Mode (connected to a controller)

i4Gen Suite is synchronized with the controller:

- The pages reflect the controller's measures, configuration, alarms/faults...

The controller's parameters configuration is done in real time and they are sent one by one in most cases.

LOGIN/CONNECTION



Press "Login/connection" icon to open login/connection window.

i4Gen Suite uses the classic password system of the **CRE TECHNOLOGY** modules for access rights and parameter modification of the connected module.

Level	Default password	Rights	Menu
0	None	None	Display
1	1	User settings	All menus
2	CRE Technology reserved distributor	Advanced settings	All menus

Connection window in offline mode:

To connect to a module, you have to fill the following information:

- The IP address of the controller.
- The Modbus/TCP port of the controller.
- The HTTP port of the controller.
- A password according to your needs.

CONNECT

Once you have filled this information, push the button **CONNECT** to connect and log in with the entered password.

Once you are connected, you will always be synchronized with the controller.

In level 1 or above, a pop-up message (see below) will ask you to choose between 3 actions:

- Use controller configuration: **i4Gen Suite** configuration is overwritten by the current configuration of your controller.
- Use PC configuration: Upload **i4Gen Suite** configuration to your controller.
- Disconnect: Go back in offline mode.

Once logged in, you can change the login password level by changing the "**Password**" field and pressing the button: **LOGIN**

Passwords are the same as those used to connect directly to the module via its front panel or embedded website.

It is possible to disconnect by pressing the button:



When the connection to the controller is lost, **i4Gen Suite** attempts to reconnect to the remote controller for several seconds and then stops after a while.

During reconnection attempts, the

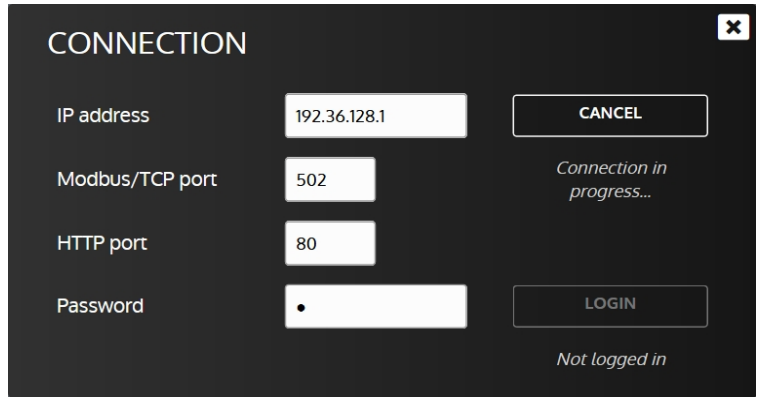


button is replaced by a



button to manually cancel the attempts.

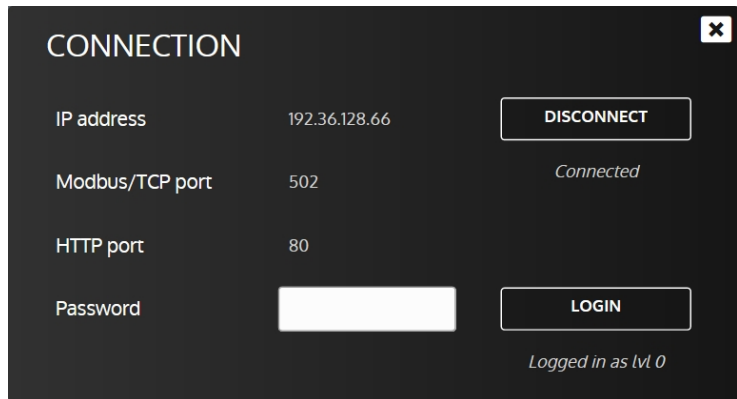
Connection window in "**Connection in progress...**" mode:



To disconnect a module from **i4Gen Suite**, open the connection window then press the button:



Connection window in "**Connected**" mode:

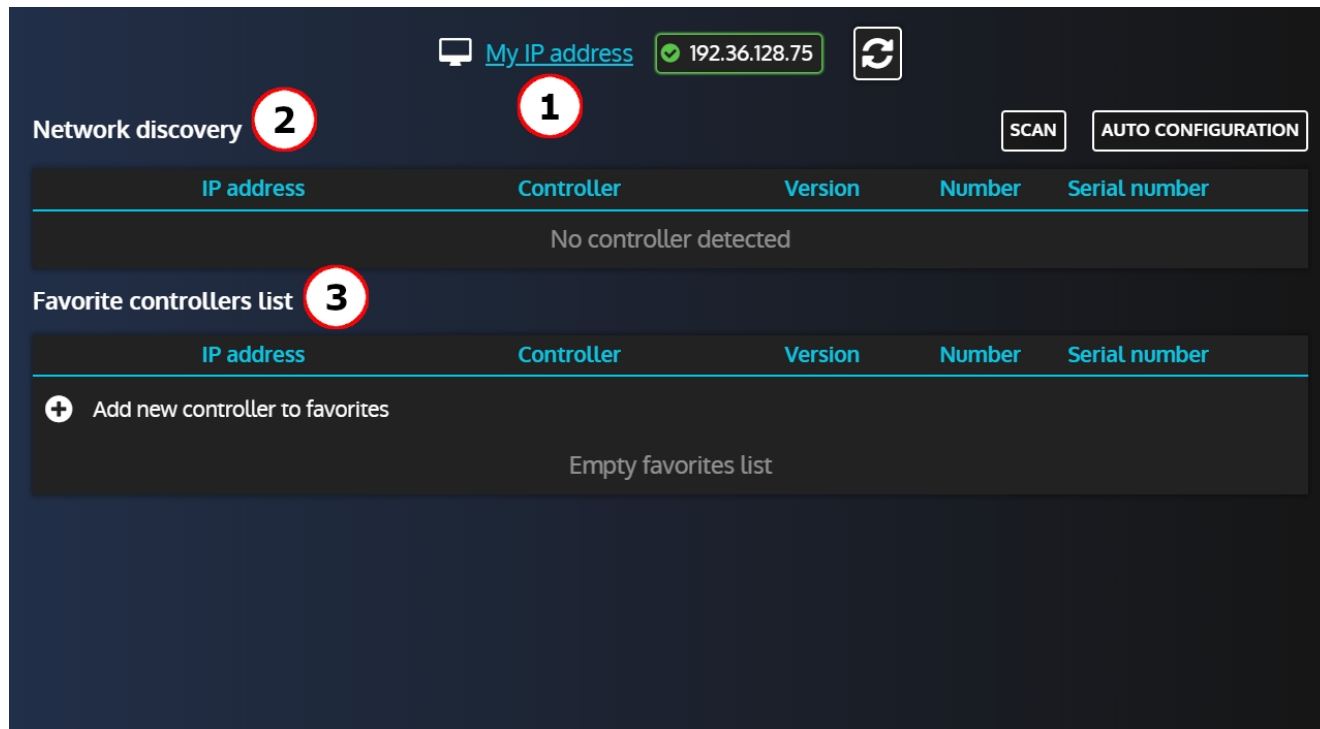



EASY CONNECT

Easy connect function has three main purposes:

- Automatically detects **CRE TECHNOLOGY** controllers on an Ethernet network
- Allow to quickly switch the connection between controllers
- Auto configure **CRE TECHNOLOGY** controllers IP address to be able to access them with the current network configuration.

Interface



1. Display current **PC** IP address. If there is multiple IP addresses available, they will be displayed as a list. Pressing the "**My IP address**" link will open the Windows Network and Share center to quickly access the **PC** IP settings. Pressing  will refresh the list of available IP addresses.

2. The "**Network discovery**" section will display all **CRE TECHNOLOGY** controllers automatically found on the network and allow to connect to them. The "**Scan**" button allows to refresh the list of controllers and the "**Auto configuration**" button will automatically configure detected controllers according to the **PC** IP settings to ensure that it can connect to them.

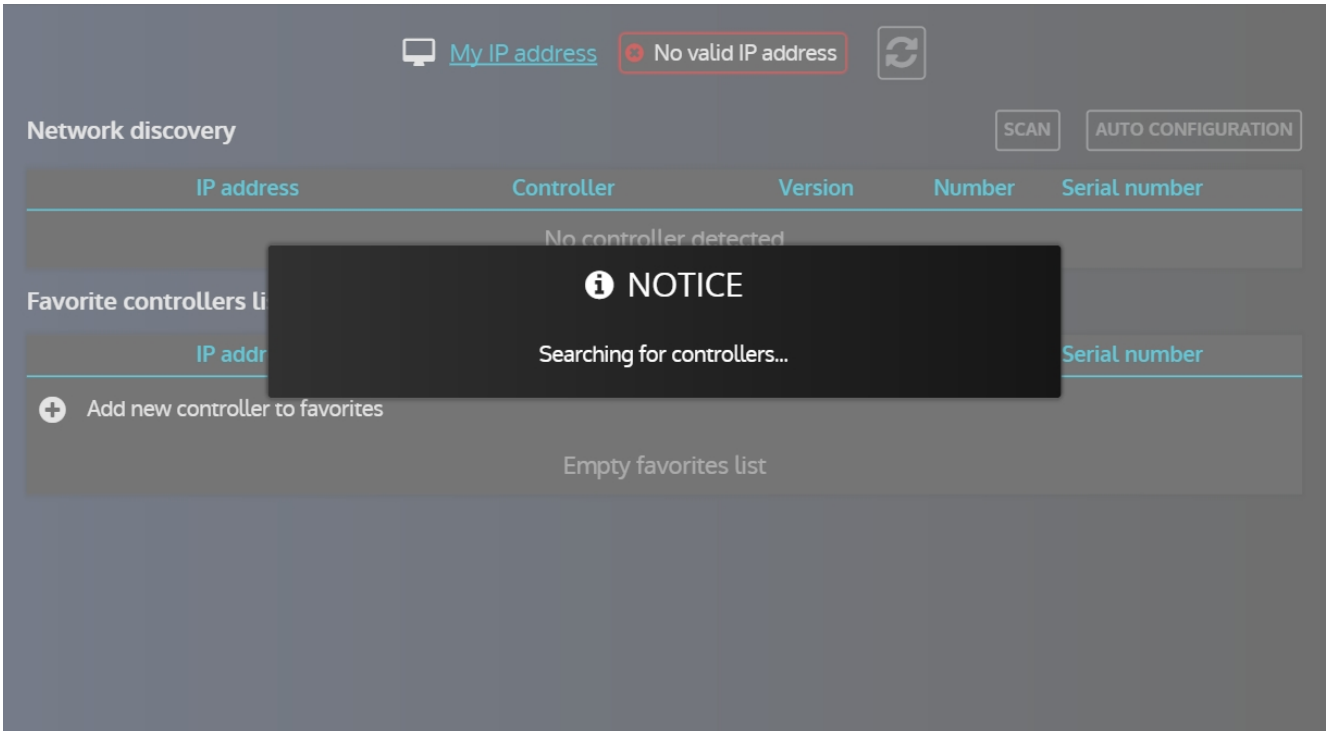
Note that if a controller's IP settings already allow a connection in their current state, **i4Gen Suite** will not change them.

3. The "**Favorite controllers list**" allows to manually add a controller. Both "**Scan**" and "**Auto configuration**" buttons have no impact on the controllers in this list.

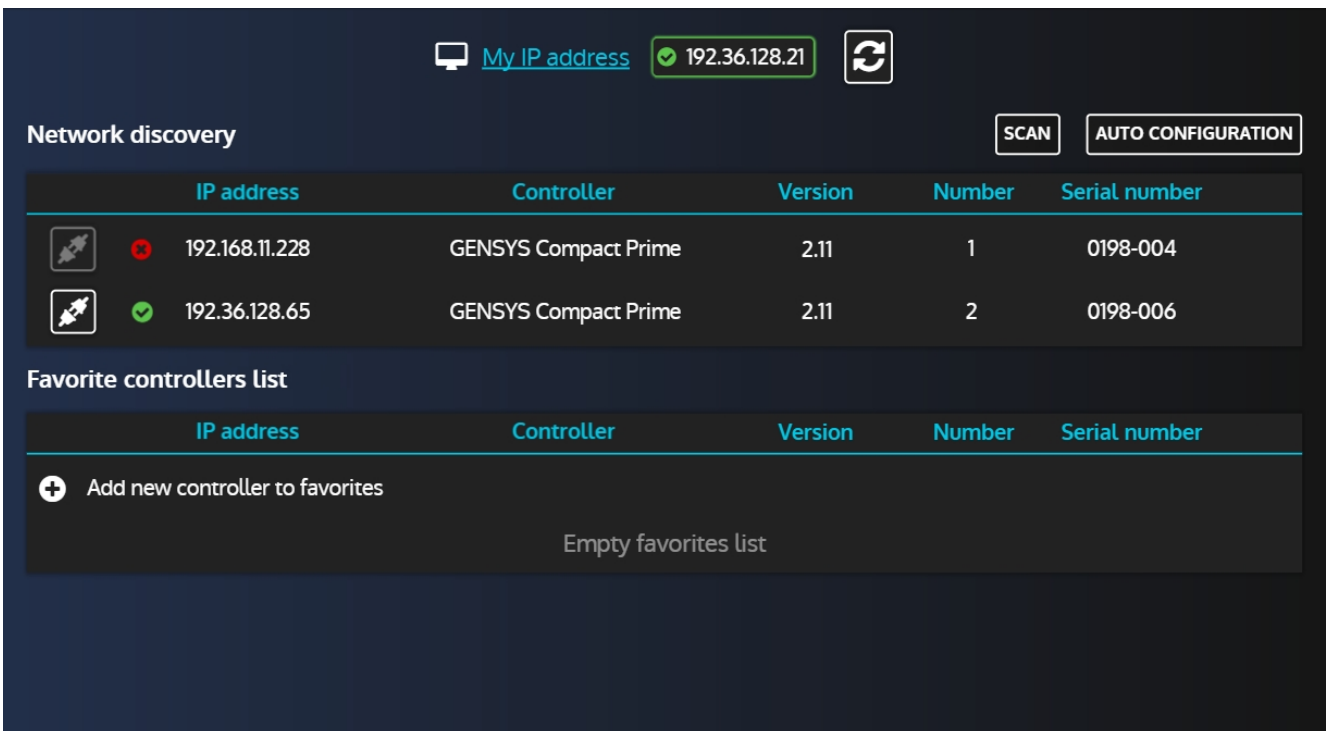
You will also be able to connect to the controllers in this list (only if the **PC** IP settings matches).


Network discovery

When entering the page, **i4Gen Suite** will automatically scan the network to find controllers:

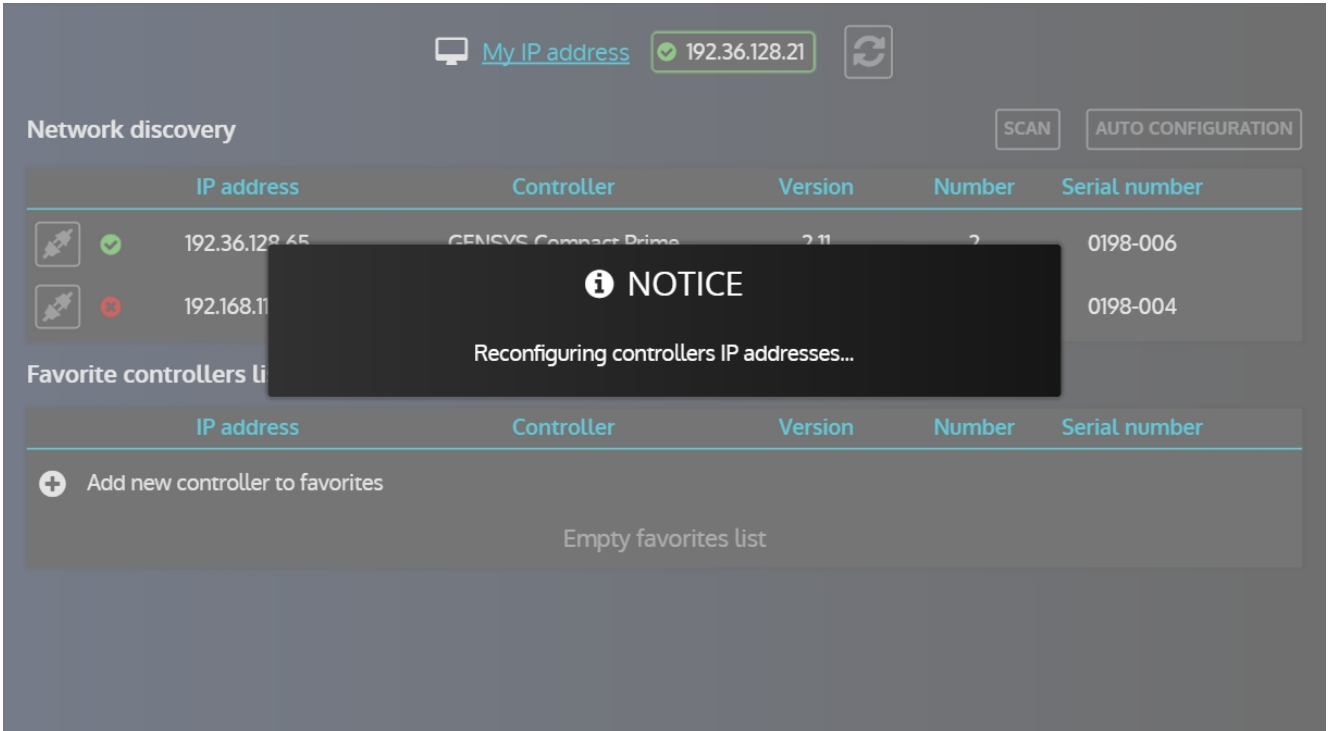


And display the controllers found:



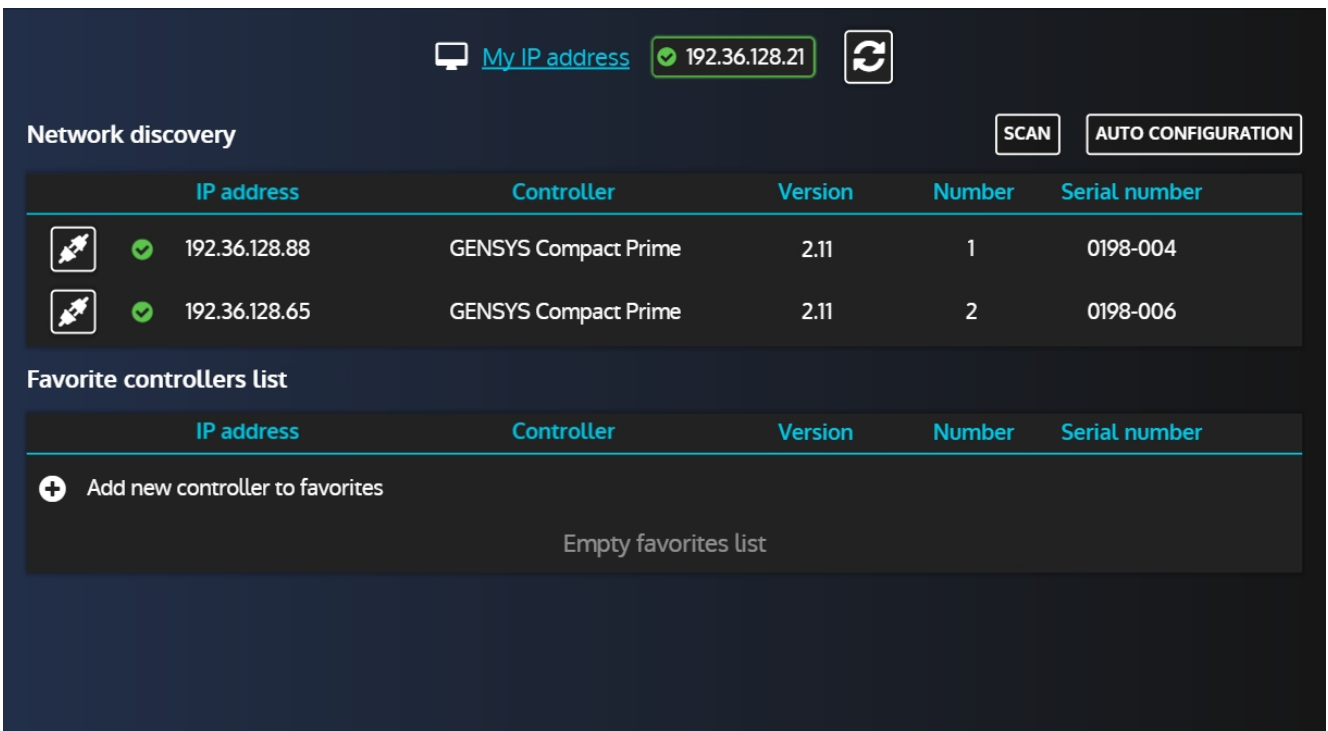
In the list, we can see that one controller has a red cross next to it and the  is disabled. This is because its current IP settings doesn't match ours thus it is not possible to connect to it.


Pressing the "Auto configuration" button will resolve this situation for us:

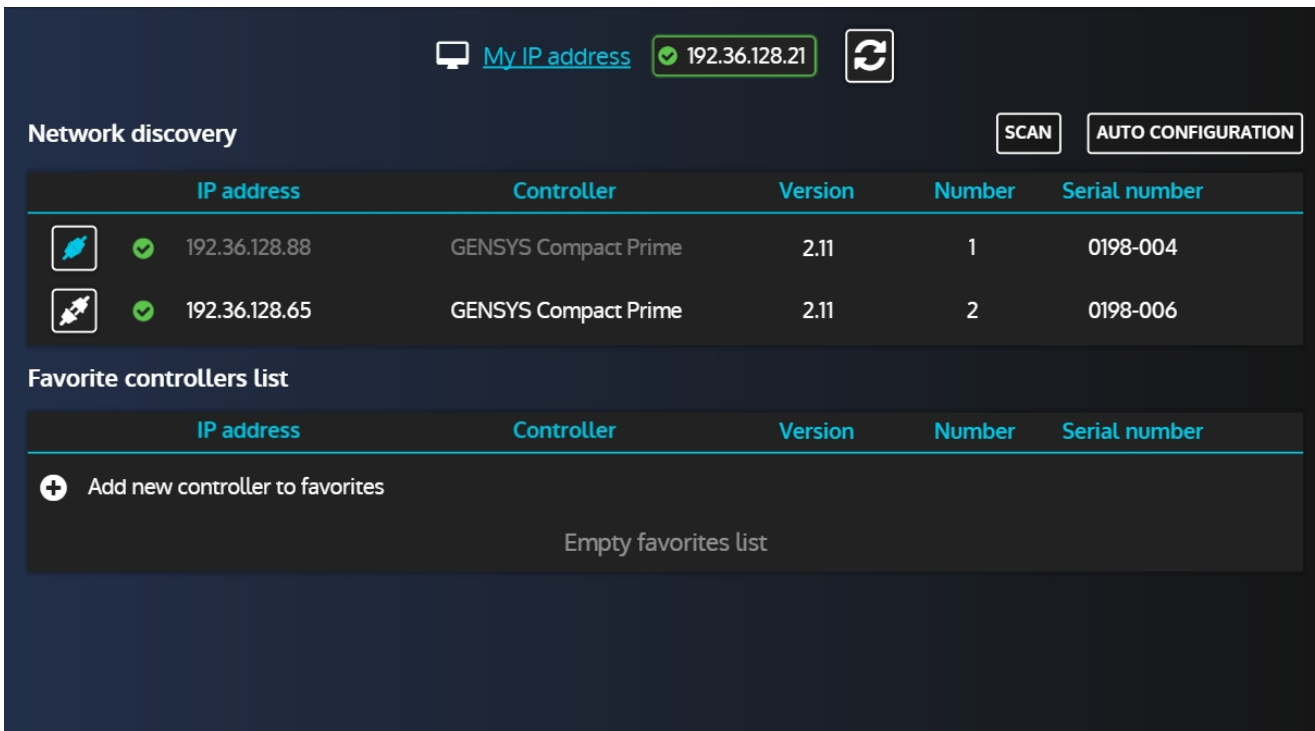


Note that you'll be prompted to validate the auto configuration before it starts.



After a few seconds, the auto configuration is done and both controllers are now green:



Using the  button, we can now connect to one of the controllers:



The screenshot shows a network discovery interface with a dark theme. At the top, there is a 'My IP address' field with a checkmark and the value '192.36.128.21', and a refresh icon. Below this are two buttons: 'SCAN' and 'AUTO CONFIGURATION'. The main section is titled 'Network discovery' and contains a table with the following data:


	IP address	Controller	Version	Number	Serial number
	✓ 192.36.128.88	GENSYS Compact Prime	2.11	1	0198-004
	✓ 192.36.128.65	GENSYS Compact Prime	2.11	2	0198-006

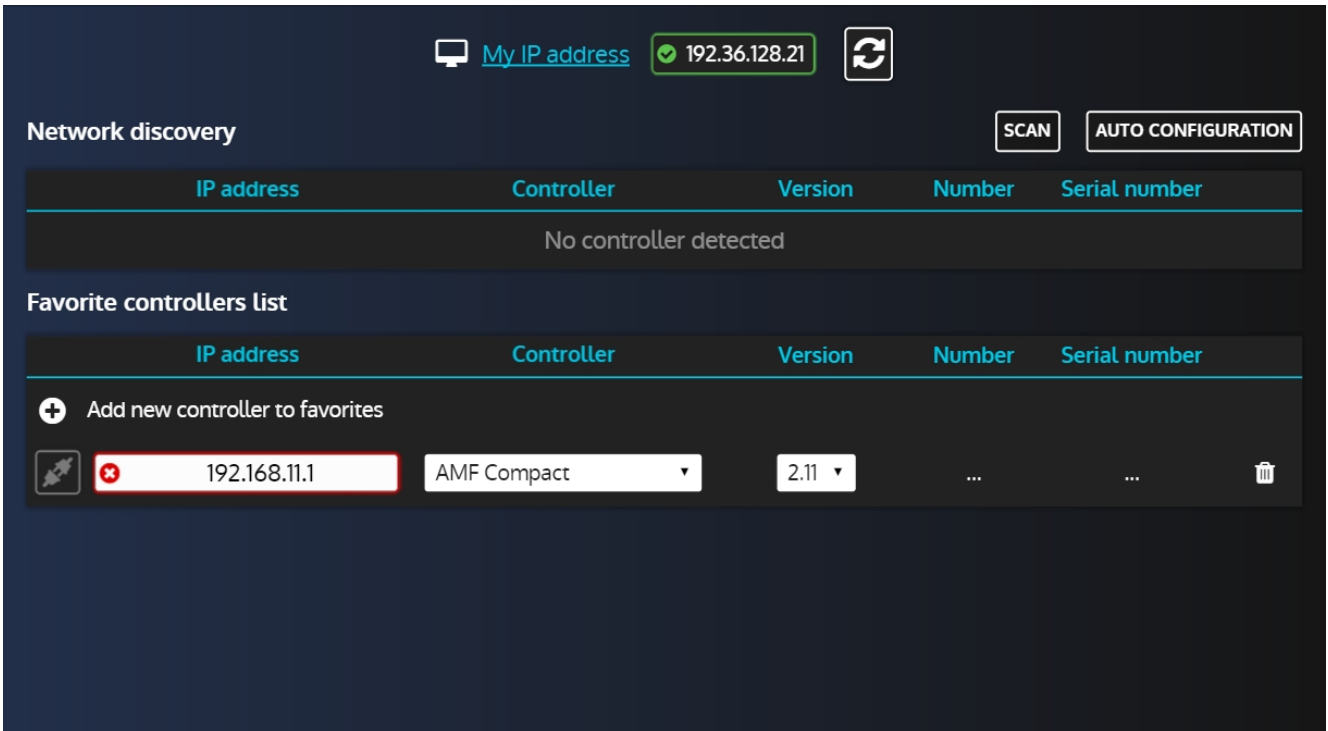
Below the table is a section titled 'Favorite controllers list' with a sub-header table:

IP address	Controller	Version	Number	Serial number
+ Add new controller to favorites				
Empty favorites list				

Note that you'll be prompted a password. Beware, if you used a password level 1 or above, the controller's configuration will automatically be downloaded.

Favorite controllers list

You can add a controller by pressing the  button:



The screenshot shows the following interface elements:

- Top right: **My IP address** 192.36.128.21 (with a checkmark icon) and a refresh icon.
- Network discovery** section with **SCAN** and **AUTO CONFIGURATION** buttons.
- Table with columns: **IP address**, **Controller**, **Version**, **Number**, **Serial number**. Content: "No controller detected".
- Favorite controllers list** section with a plus icon and "Add new controller to favorites" text.
- Table with columns: **IP address**, **Controller**, **Version**, **Number**, **Serial number**. Content:

IP address	Controller	Version	Number	Serial number
192.168.11.1 (with red cross icon)	AMF Compact	2.11

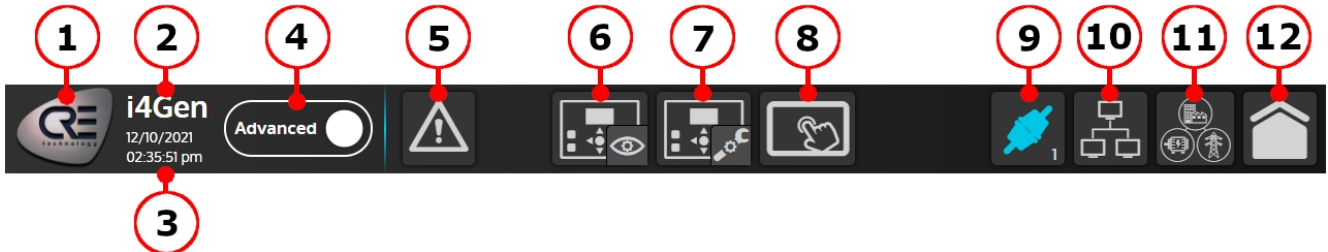
Note that, as stated previously, there will be no automatic actions for the elements in this list. If there is a red cross next to the controller's IP address, you'll have to either adjust the **PC** IP settings or the controller's IP setting to be able to connect to it.

The Favorite controllers list is part of the user configuration thus it is saved and you'll keep the list after restarting **i4Gen Suite**.

INTERFACE

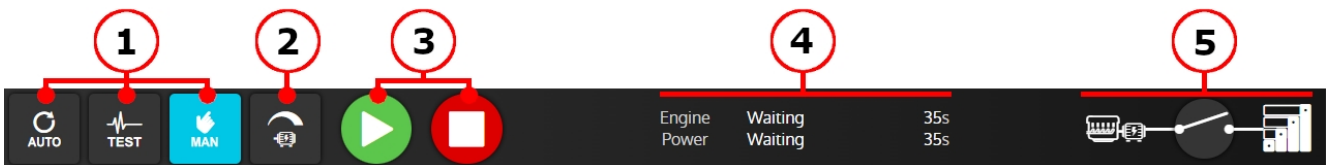
The **i4Gen Suite** interface replaces the front panel of the **CRE TECHNOLOGY** controllers and offers a better ergonomoy to facilitate the supervision of our products.

Header



1. **CRE Logo**: Press this button to open "about" page.
2. **Product name**.
3. **Date/Time**: The date/time displayed on i4Gen is the date/time of the connected controller.
4. **Configuration mode**:
 - o Standard: Only the most important parameters of the controller are available.
 - o Advanced: All the parameters of the controller are available.
5. **Alarms/Faults page**:
 - o Blinking in orange/red means there is atleast one unacknowledged alarm/fault.
 - o Static means there is atleast one alarm/fault acknowledged and in progress.
 - o Press this button to open alarms/faults page.
6. **Controller supervision menu**: Press this button to open the supervision menu where you can access all supervision pages.
7. **Controller settings menu**: Press this button to open the controller settings menu where you can access all the pages that contain controller parameters. You must be logged at least in level 1 to access this button.
8. **i4Gen Suite menu**: Press this button to open the i4Gen Suite menu where you can access all the pages that contain i4Gen Suite settings.
9. **Connection/Login button**: The connection icon shows the connection state (connected/disconnected) and the number below shows the login level. Press this button to open the connection/login window in order to connect to a controller.
10. **Easy Connect page**: Press this button to open the Easy Connect page where you can automatically detect the available controllers and easily switch the connection between them.
11. **Scada page**: Press this button to open the Scada page that displays a complete diagram of the powerplant.
12. **Home page**: Press this button to open the home page. This is a dynamic page that display a different content according to the current controller engine/power state.

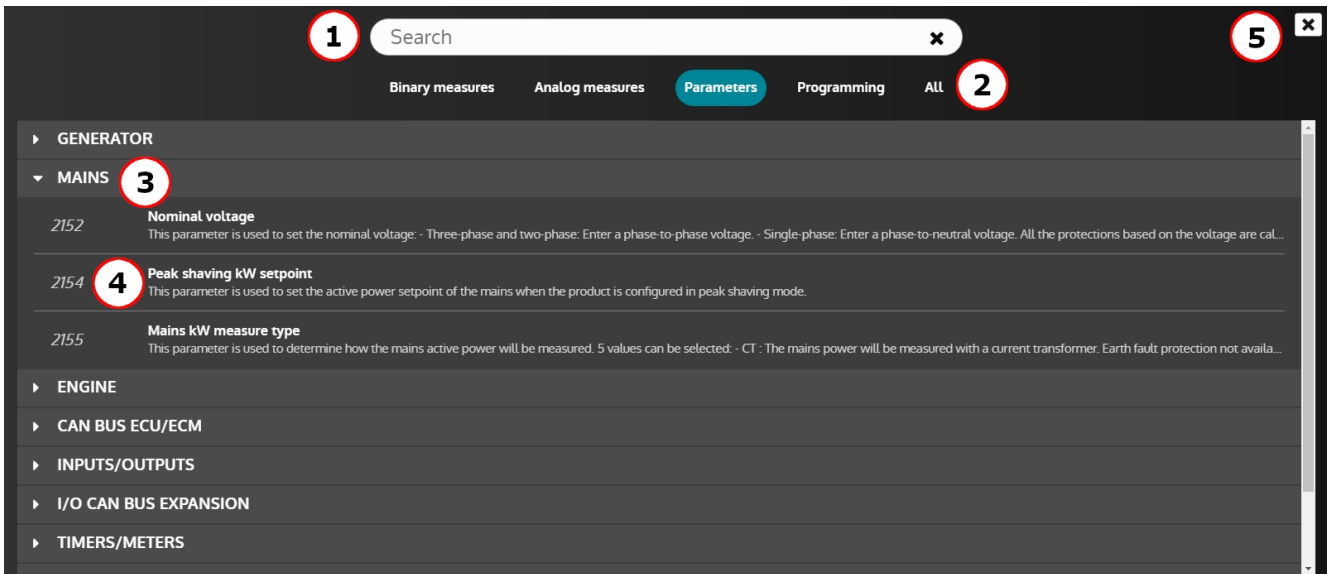
Footer



1. **Controller mode buttons**: Press one of this button to change controller functioning mode (auto/test/man).
2. **Alternator control button extension**: Press this button to open a tab width additional buttons for manual frequency/voltage control. Only available in manual mode.
3. **Start/Stop buttons**: Press these buttons to start/stop the generator. Only available in manual mode.
4. Engine state, Power state and states timers of current connected controller.
5. Synoptic of current selected/connected controller.

SEARCH ENGINE

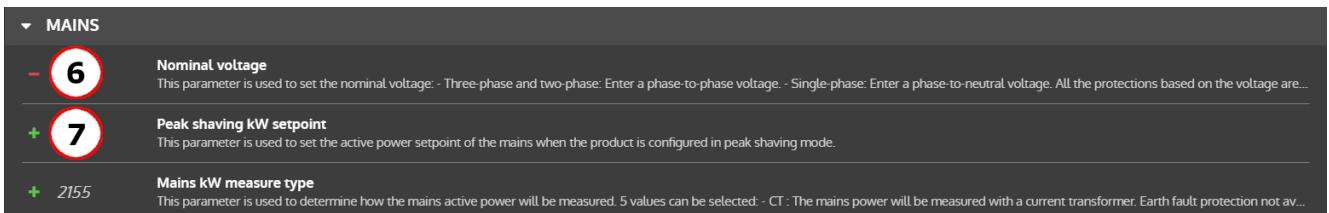
In several pages of **i4Gen Suite**, a search engine is available to search for a controller variable.



- Search bar:** Type part of the label or address of a variable and press enter or leave the input to find the matching result
- Categories:** The variables are organised into 4 categories. Select a category to display the matching variables:
 - Binary measures: measures with a value range from 0 to 1
 - Analog measures: measures with a value range different from 0 to 1
 - Parameters: all the parameters excepted the user variables and the input functions
 - Programming: the user variables and the input functions
 - All: Combine all of the above
- Sections:** The variables displayed are arranged in several sections:
 - The sections are collapsed by default
 - Press a section to expand it
 - Press an expanded section to collapse it
- Variable:** Each variable displayed shows its address, label and description (if the description is too long, hover it to display the full description). Press a variable to select it.
- Close button:** Press the close button to close the search engine

Note: Depending on the page, the search engine may display more or less variables to fit the user's need.

In some pages (*Easy Flex®* and *Alternative selection*), the search engine is used to add/remove multiple variables to the workspace.



- Removing a variable:** Press a variable with a red "-" icon to remove it from the workspace
- Adding a variable:** Press a variable with a green "+" icon to add it to the workspace

CONTROLLER SUPERVISION



"Controller supervision" part displays controller measures in real time. Select the supervision icon to open the menu that gives access to all controller supervision pages.

GRAPHIC OBJECTS

i4Gen Suite offers several graphical objects to display the different measures of the connected controller in order to offer an ergonomic, dynamic and aesthetic display.

NUMERICAL DISPLAY

Composition: label + value + unit (not that in this case, there is no unit for this parameter):



This is the simplest graphical object of the application, but also the most effective for displaying a large number of measures on the screen.

NUMERICAL DISPLAY BY VARIABLE NUMBER

Composition: label + editable address field + value + unit:



This is the graphic object used in the "Info" page of **i4Gen Suite**. It allows you to search for a controller's variable through a search engine to display its label, value and unit.

The variables of the "Info" page are automatically saved when a variable of the page is changed. Each controller type has its own custom "Info" page.

Note that this page is local to **i4Gen Suite** and doesn't reflect the controller's Info page.

BOOLEAN DISPLAY (LED)

Composition: label + LED:



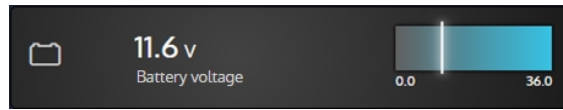
This is the graphic object used for most boolean (binary) variables.

LED color codes:

- Green: Active
- Grey: Inactive

BAR-GRAPH



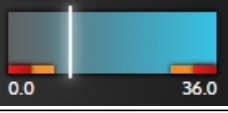

The bar-graph displays graphical information on generator mechanical measures (from a minimum to a maximum):






Note: The slider is the value of the measurement relative to the min and max shown below the bar-graph.

User Configuration Reminder

The protection levels configured for the measurement associated with the bar graph are directly represented on the bar graph:

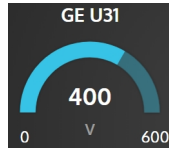
	Representation of a minimum protection threshold configured as an alarm.
	Representation of a maximum protection threshold configured as a fault.
	It is possible to display up to two maximum and two minimum protection thresholds per bar-graph.
	If no protection is configured, no threshold will be displayed on the bar-graph.

Bar-graph States

	Nothing to report: When the cursor remains outside of the alarm/fault ranges or no protection threshold has been configured, the background of the bar-graph is colored with the selected theme and the numeric value on the left side of the bar-graph is white colored.
	Alarm active: When the cursor overlaps an alarm range, the bar-graph and its numeric value turn into orange color.
	Active fault: When the cursor overlaps a fault range, the bar-graph and its numerical value turn into red color.

GAUGE

This is the graphic object used for electrical measures and whose representation of the measure with respect to a minimum and a maximum is important:



Note: The gauge fill part corresponds to the value of the measurement with respect to the minimum and maximum indicated below the gauge.

User Configuration Reminder

The protection levels configured for the gauge associated measure are directly represented on the gauge:

	<p>Representation of a minimum protection threshold configured as an alarm.</p>
	<p>Representation of a maximum protection threshold configured as a fault.</p>
	<p>It is possible to display up to two maximum and two minimum protection thresholds per gauge. If no protection is configured, no threshold is displayed on the gauge.</p>

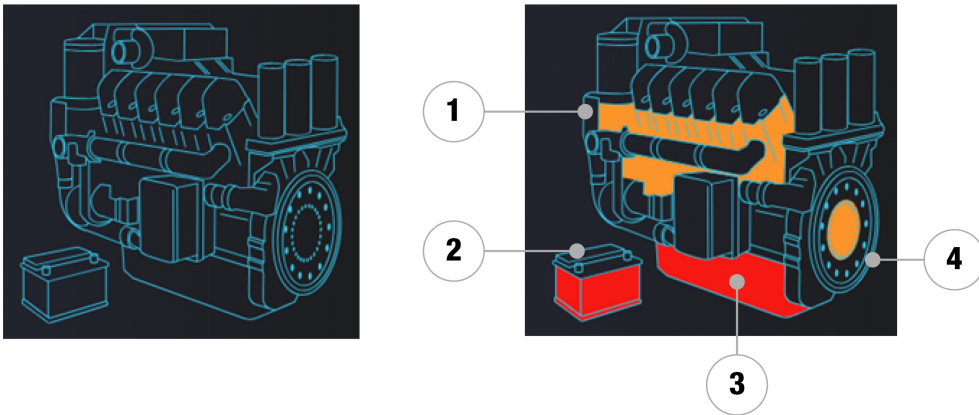
States of the Gauge

	<p>Nothing to report: When the gauge fill part remains out of the alarm/fault ranges or no protection threshold has been configured, the gauge background is colored with the selected theme and the gauge numerical value is white colored.</p>
	<p>Alarm active: When the gauge fill overlaps an alarm range, the gauge fill part and its digital value turn into orange color.</p>
	<p>Active fault: When the gauge fill overlaps a fault range, the gauge fill part and its numerical value turn into red color.</p>

3D PICTURES

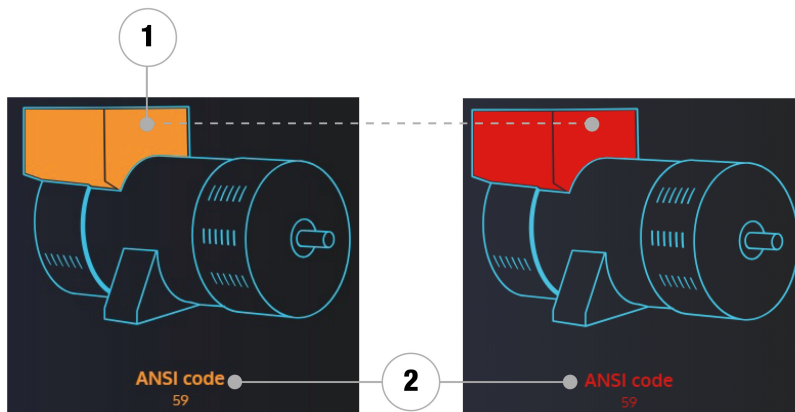
Some pages of supervisions display 3D pictures that change according to the state of the associated protections in each of these pages.

Engine/Battery



1. Indicates the presence of a water temperature alarm/fault.
2. Indicates the presence of a battery voltage alarm/fault.
3. Indicates the presence of an oil pressure alarm/fault.
4. Indicates the presence of an engine speed alarm/fault.

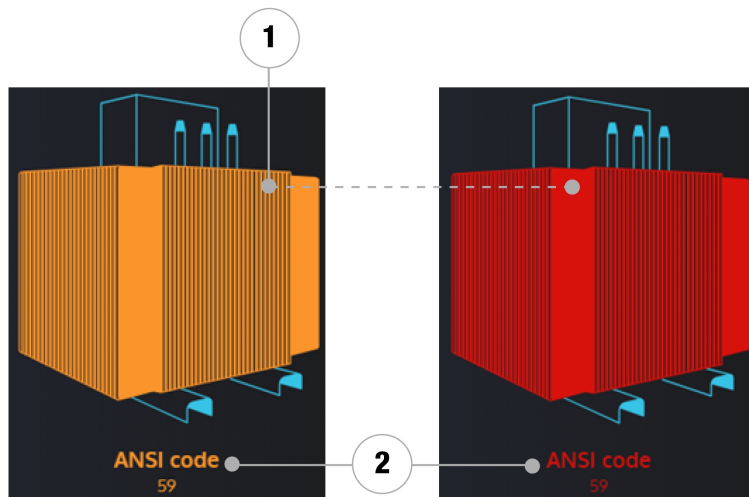
Alternator



1. Indicates the presence of a generator electrical alarms/faults.
2. Indicates the ANSI code(s) of the alarms/faults present on the generator.

Note: The color of the fault has priority over the color of the alarm.

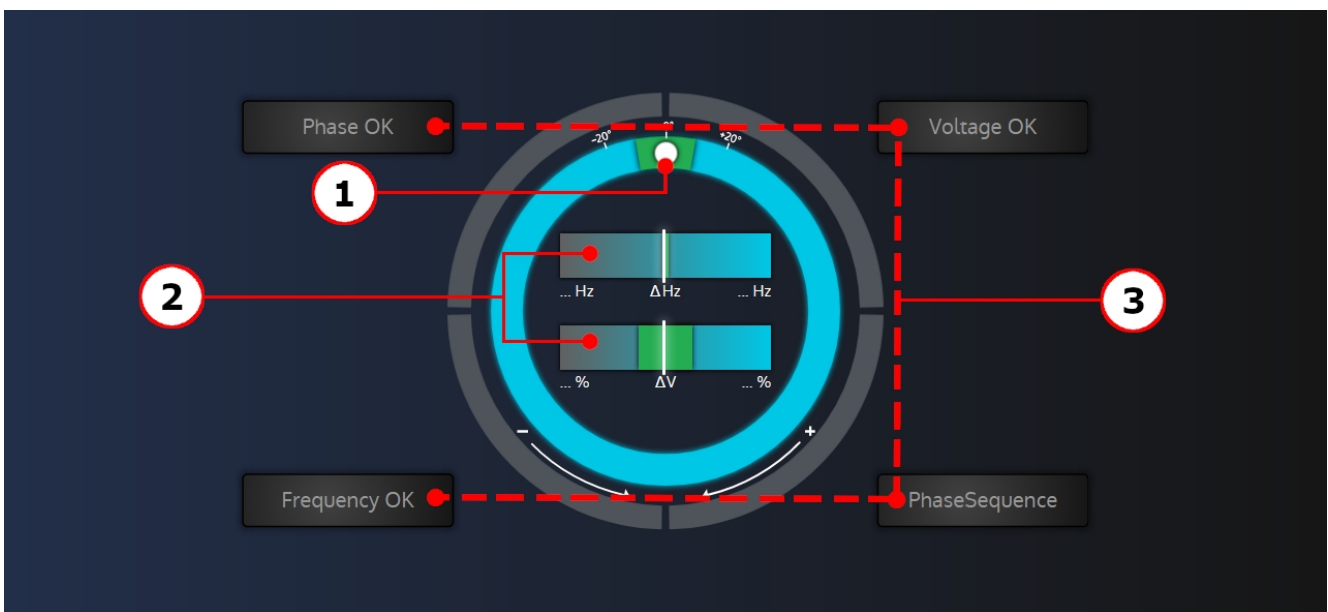
Mains



1. Indicates the presence of a mains electrical alarms/faults.
2. Indicates the ANSI code(s) of the alarms/faults present on the mains.

Note: The color of the fault has priority over the color of the alarm.

SYNCHROSCOPE






This is the graphical object used in the "**Synchronization**" page of **i4Gen Suite**. It allows, during synchronization, to visualize the phase, frequency and voltage differences between the generator and the mains/bus-bar as well as the synchronization conditions.

1. The position of the white circle indicates the phase shift (from -180° to $+179^{\circ}$) between the generator/power plant and the mains/bus-bar. The green area displayed on the phase circle indicates the maximum phase deviation accepted to allow the circuit breaker to close.
2. In the bar-graphs located in the center of the synchroscope, the cursor position represents the frequency/voltage difference between the generator/power plant and the mains/bus-bar. The green area displayed on each bar-graph indicates the maximum frequency/voltage deviation accepted to allow the circuit breaker to close. If the frequency difference is too high, the cursor becomes red colored and the phase measure (white circle) is not displayed anymore.
3. The four dials around the phase circle represent the synchronization conditions. Each dial is:
 - Colored in grey if the condition is not respected.
 - Colored in green if the condition is respected.

POP-UP

i4Gen Suite can display pop-up windows to give information to the user.

There are three kinds of pop-up windows:

	Notice: Display an information message.
	Warning: Display a warning message.
	Error: Display an error message.

ALARM/FAULT PAGE



Select the "alarms/faults/events" icon to open alarms/faults/events page and stop the controller's horn.
 When **i4Gen Suite** is connected to the module, this page allows you to view the alarms/faults/events of the controller and acknowledge/reset the active alarms/faults.

VISUALIZATION

Alarms/Faults/Events history

DATE	HOUR	TYPE	STATE	N°	LABEL	ANSI
02/05/20	15:56:43		OFF	4203	Battery maximum voltage	
02/05/20	15:56:23		ON	4203	Battery maximum voltage	
02/05/20	15:55:35		OFF	4250	Generator over frequency	81H
02/05/20	15:55:21		ON	4250	Generator over frequency	81H
02/05/20	15:54:22		OFF	4252	Generator over voltage	59
02/05/20	15:54:07		OFF	252	Emergency stop	
02/05/20	15:53:38		ON	252	Emergency stop	
02/05/20	15:53:38		ON	4252	Generator over voltage	59
02/05/20	15:53:38		ON	600	Isolated product (sees nothing on CAN bus)	
02/05/20	15:53:38		ON	5009	Manual mode	
02/05/20	15:53:38		ON	5006	Generator breaker opened	
02/05/20	15:53:38		ON	5002	Engine stop	

The alarms/faults/events history is displayed as a table, from the most recent alarm/fault to the oldest one.

Each line in history shows the following information:

1. Date of event activation.
2. Time of event activation.
3. Event type: alarm (orange), fault (red) or event (white).
4. Event status: On or Off (for events, only the On state is recorded).
5. The variable number corresponding to the event.
6. Event label.
7. Ansi code of the protection (if applicable).

Active alarms/faults/events

DATE	HOUR	TYPE	STATE	N°	LABEL	ANSI
02/05/20	16:01:21		ON	4203	Battery maximum voltage	
02/05/20	16:01:15		ON	4252	Generator over voltage	59

The current active alarms/faults can be displayed.

The red lines correspond to active faults and the orange lines correspond to active alarms.

RESET/ACKNOWLEDGE**Reset/acknowledge button****Actions:**

- Reset alarms/faults that are no longer active.
- Inform the **i4Gen Suite** that alarms/faults have been acknowledged.

Alarm/fault acknowledgment status:

- When alarms/faults are active and have not been acknowledged, the alarm/fault panel blinks red/orange.
- When alarms/faults are active and have been acknowledged, the alarm/fault panel has a fixed color.

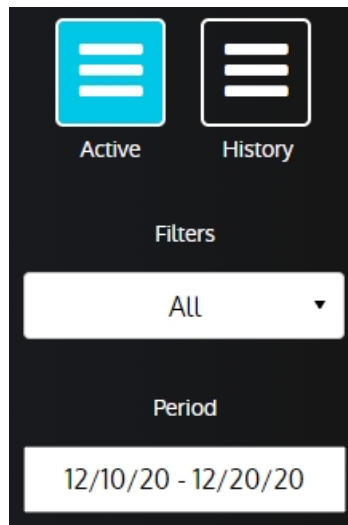
ERASE ARCHIVED DATA**Erase archived data****Action:**

- Erase controller recorded alarms/faults/events and archived data.

Note: This function is available only if connected with level 2 password.

FILTERS

Several filters are available to filter the display of the alarms/faults/events table.



Example of filter configuration: display of active alarms from 12/10/2020 to 12/20/2020

Description of filters:

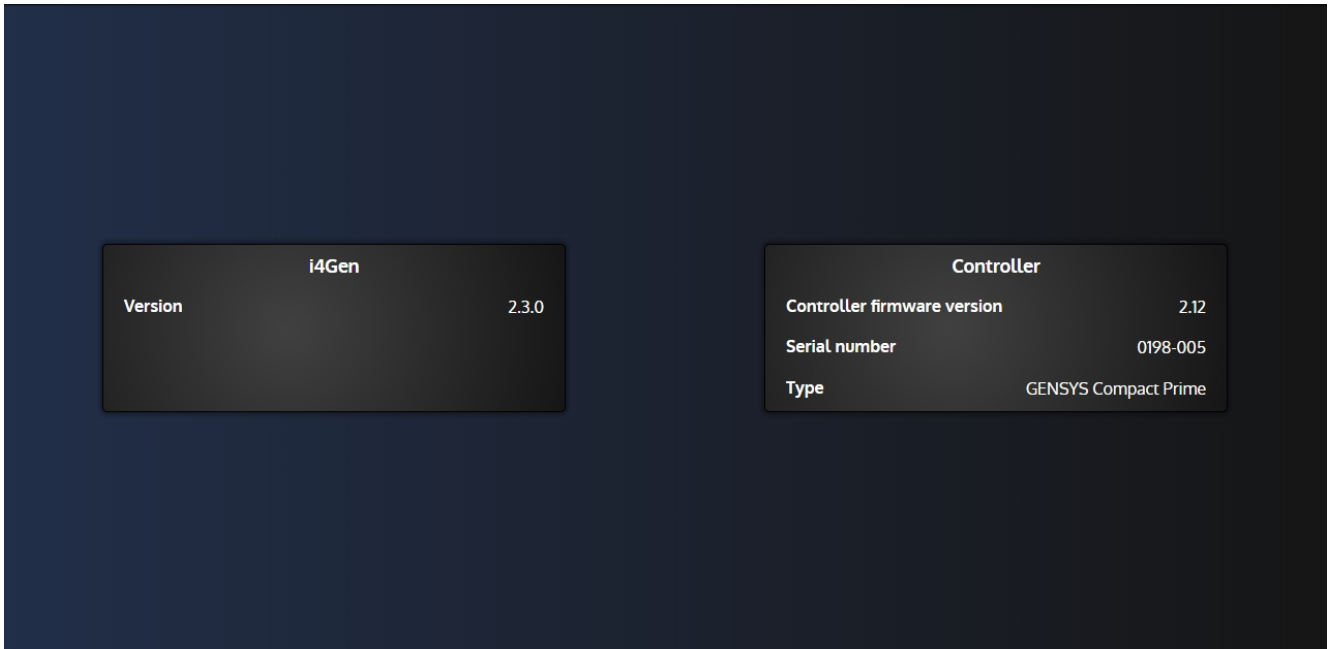
- Active/History: You can choose to display either the current active alarms/faults, or the alarms/faults/events history of the controller.
- Filters: You can chose to enable/disable several filters:
 - Select all: to enable/disable all filters
 - Events: to display or not the controller's events
 - Alarm: to display or not the controller's alarms
 - Fault: to display or not the controller's faults
 - Date: to display or not the period filter field

Note: You can mix up filters as you wish.
- Period: If the period filter is enabled, you can use this field to filter the alarms/faults/events according to a specific date range.

ABOUT PAGE



Select the **CRE TECHNOLOGY** logo in the application header to display the "**About**" page.



This page displays:

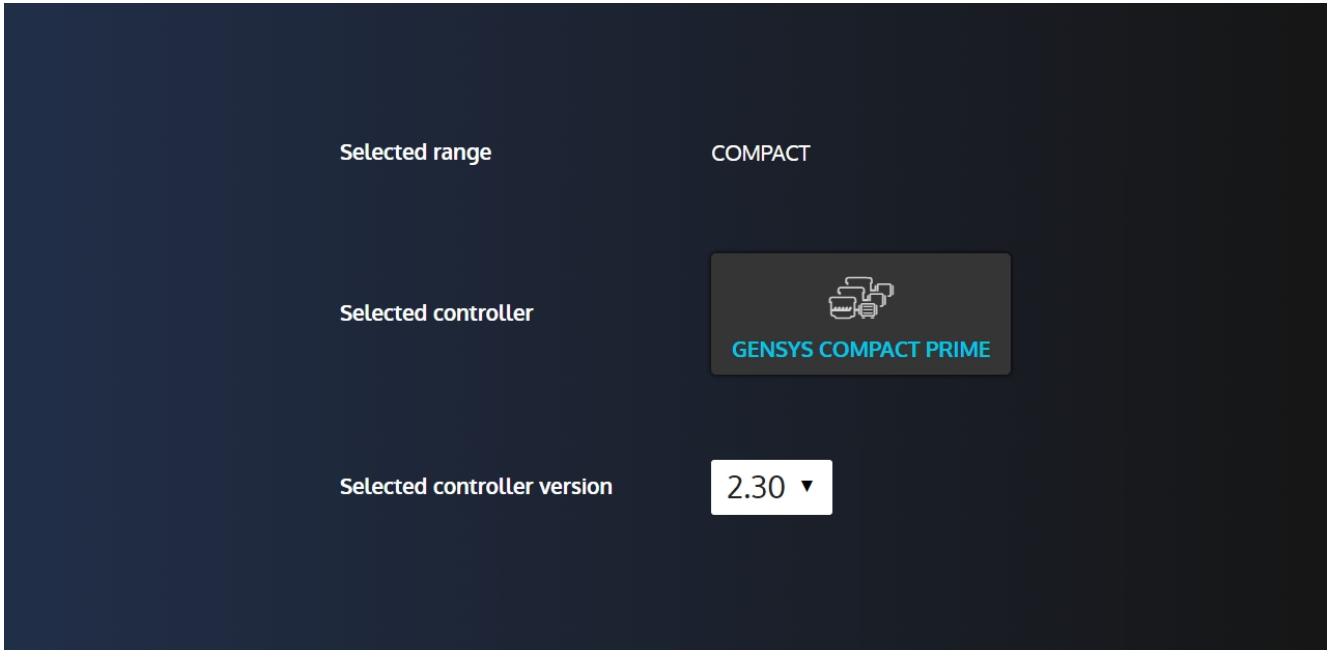
1. An **i4Gen Suite** section with:
 - o The software version.
2. A controller section with:
 - o The firmware version of the controller.
 - o The serial number of the controller (if connected to a controller).
 - o The type of controller connected to **i4Gen Suite**.
 - o The active options of the controller (optional)

HOME PAGE



Select home icon to open "**Home**" page.

Offline Mode



In offline mode, home page allows you to select the controller's model and version you want to manage with your **i4Gen Suite**.

Click on the controller image to load its configuration into the application.

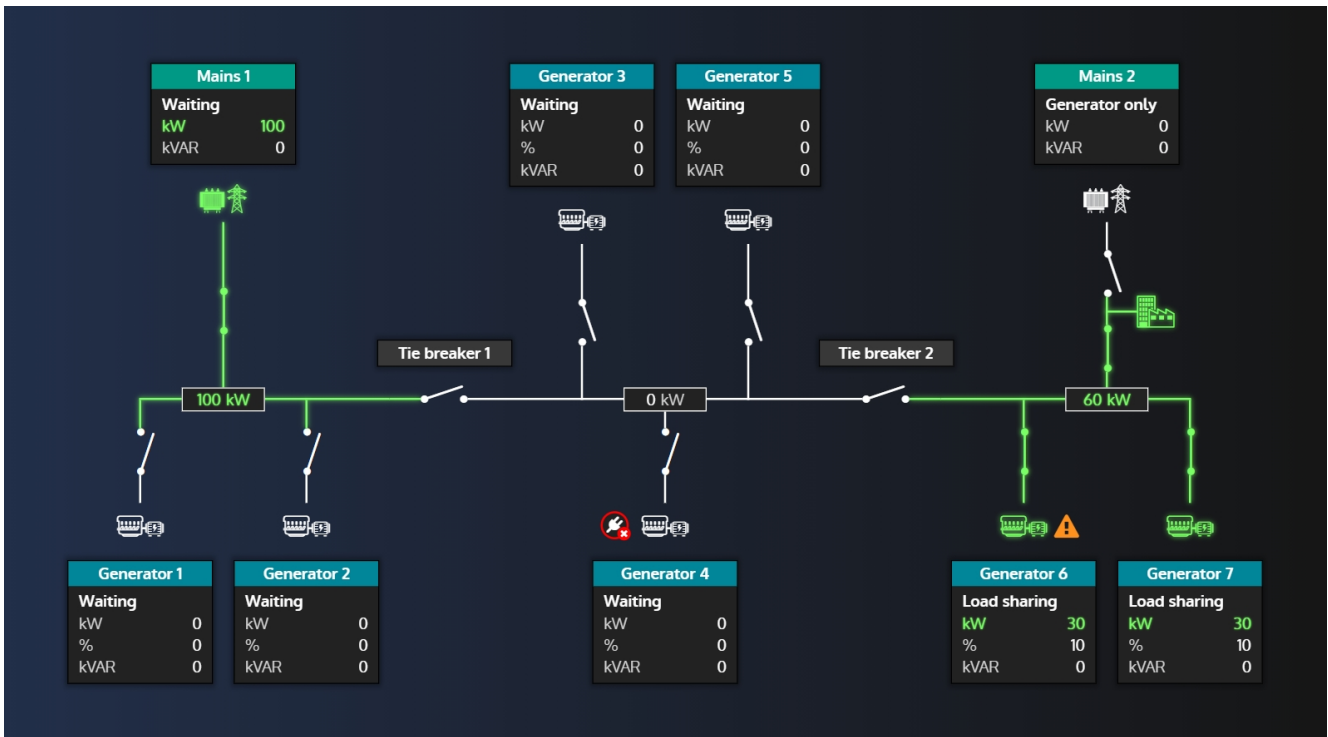
Note: Pressing the current selected controller will show a popup windows asking if you want to reset the current configuration. Beware, switching version and controller's model will reset the current configuration.

SCADA



Select the scada icon to open the "**Scada**" page (available only for controllers that manage multi-controller applications: GENSYS COMPACT PRIME, MASTER COMPACT, MASTER COMPACT 1B, BTB COMPACT, PV COMPACT, BAT COMPACT).

The **Scada** page displays a complete diagram of the powerplant (including **CRE TECHNOLOGY** controllers). **i4Gen Suite** automatically build the Scada display without any user intervention needed as long as few conditions are met:




Conditions

To display the **Scada** view of a powerplant, certain conditions must be met:

- **i4Gen Suite** must be connected to a controller.
- The number of controllers set must be greater than one and properly assigned for each controller of the powerplant.
- All the controllers of the powerplant must be connected via CAN bus.
- The controller which **i4Gen Suite** is connected to must not have an active CAN bus fault.

Controller information

For each controller, the following information are available (may vary depending on the controller type):

- Power state
- Active power in kW and %
- Reactive power in kVAR.
- A warning sign  indicating the presence of an active alarm (orange blinking), an active fault (red blinking), or both (alternately blinking orange/red).
- The type of voltage source represented by an icon and its "supplied" state (green = power supplied, white = not supplied).
- The breaker(s) and their state (opened/closed).

Bus information

There is additional information available related to the bus bar:

- Tie breakers that separate each segment of the powerplant (if any).
- Active power in kW for each segment.
- Supplied state of each wire of the bus bar (green = power supplied, white = not supplied).

EasyConnect

The **Scada** page can be used to easily/quickly switch connection between controllers.


In order for the function to be available, each controller must be connected to an Ethernet switch and the Ethernet settings must be set accordingly.

To switch to another controller, simply click on the desired controller block.

The current connected controller is highlighted with its associated theme color.

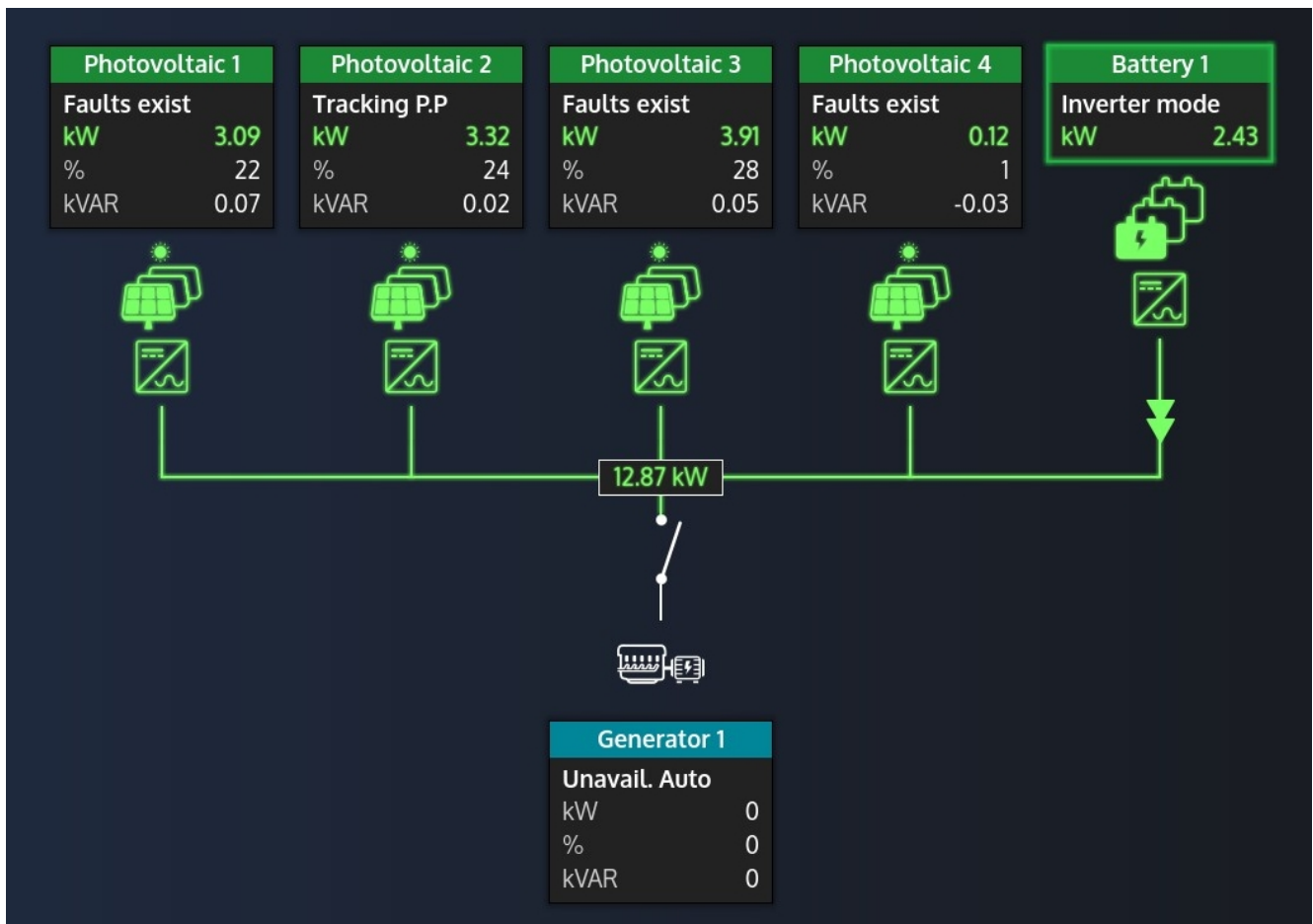
Controllers matching one of the following conditions will not be available through EasyConnect:

- There is a network configuration mismatch between **i4Gen Suite** and the target controller.
- Two controllers of the same type have the same product number and are on the same Ethernet network.

Thus, they will be signaled by a plug icon with a red cross: .

Note: If the controllers of two separated powerplants are connected to the same Ethernet network, the subnet mask of the controllers must be set in order to have the two powerplant in different sub networks. In that case, please contact your network administrator to make the correct configuration.

Example of a SCADA view of a photovoltaic and battery storage powerplant:



CONTROLLER SETTINGS



Select "**Controller settings**" icon to open the menu that gives access to all controller settings pages.

Note: the number of menu/parameters displayed changes according to the configuration mode (standard/advanced).

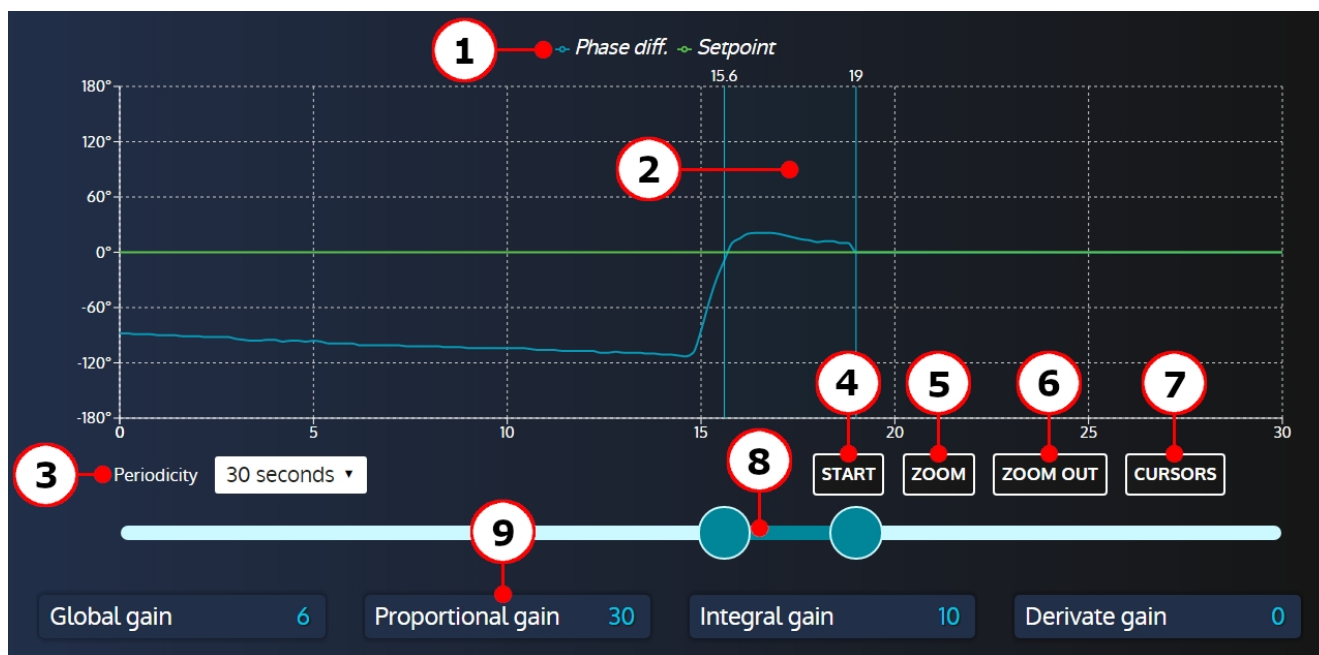
CONTROLLER DYNAMIC SETTINGS

The "Dynamic" menu group gives access to the pages that contain all the parameters you need to set while engine is running.

Note: the number of menu/parameters displayed changes according to the configuration mode (standard/advanced).

CURVES

The PID settings pages provide curves display to help you during PID adjustment.



1. Curves legend.
2. Cursors zoom window.
3. Periodicity of the curve: 30 seconde, 1 minute or 2 minute.
4. Button to start/stop the curve recording.
5. Button to zoom in on the period between the two cursors.
6. Button to zoom out to the initial selected period.
7. Button to display/hide abscisse cursors.
8. Double slider to set the cursors window.
9. Parameters that affect the curve's measure.

PARAMETERS CONFIGURATION

The most of "**Controller Settings**" pages contains a list of parameters which are organized into different sections.

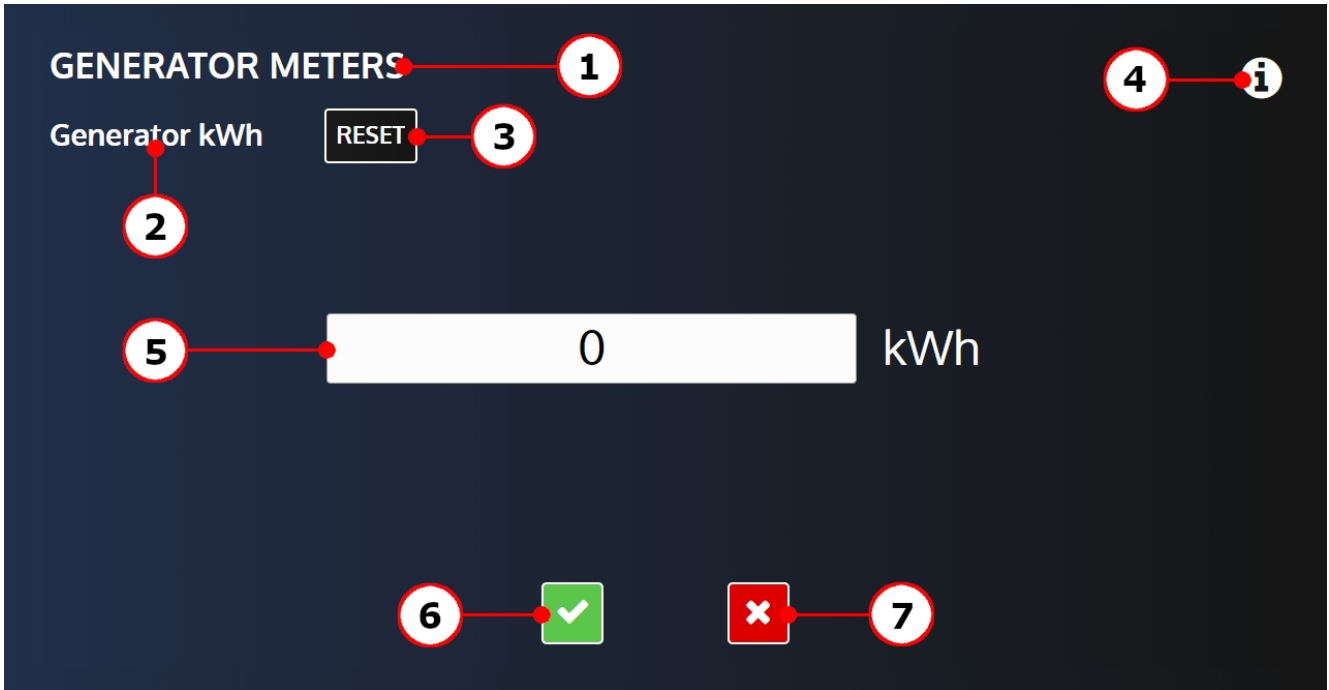
General	
Engine type	Diesel
Speed sensor type	Alternator
Number of poles pair	2
Number of teeth for pick-up	100
Oil pressure switch	Analog input 1
Coolant temperature switch	Analog input 2
Speed setpoint	1500 rpm
Speed setpoint (2)	1800 rpm
Idle speed	700 rpm

Content

SELECTABLE ITEMS	
	Parameter display. Select this area to open the editing window.
	Disabled parameter display (cannot be edited in this state). This parameter can be enabled by modifying another one on the same page.
	Read only variable display (supervision measure related to a parameter).
	Open an information pop-up related to the page/section.

EDITING WINDOWS

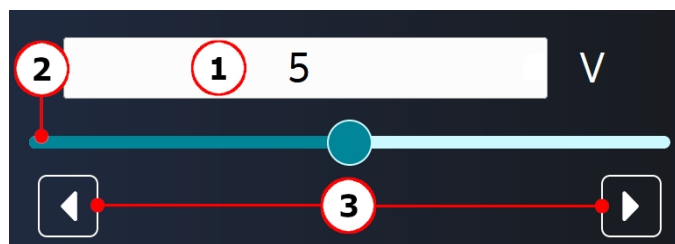
When a configuration variable is selected, an editing window opens to change the variable settings.



1. Title of the configuration section.
2. Label of the configuration variable.
3. Button linked to the configuration variable (optional).
4. Info button: Display the configuration variable number and a description of the variable.
5. Content: The content of the edit window vary depending on the type of variable.
6. Validation button:
 - Save your modification locally in Offline mode.
 - Send your modification to the controller in Online mode.
7. Cancel button: Cancel your modification.

NUMERIC

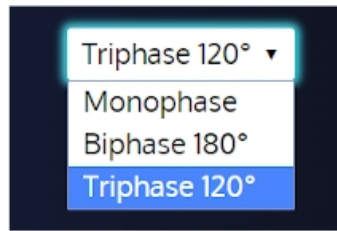
Input field to set the value of the parameter being edited. The unit of the parameter is displayed beside it.



1. Current value and unit of the parameter being edited.
2. Configuration slider.
3. Increment/decrement arrows.

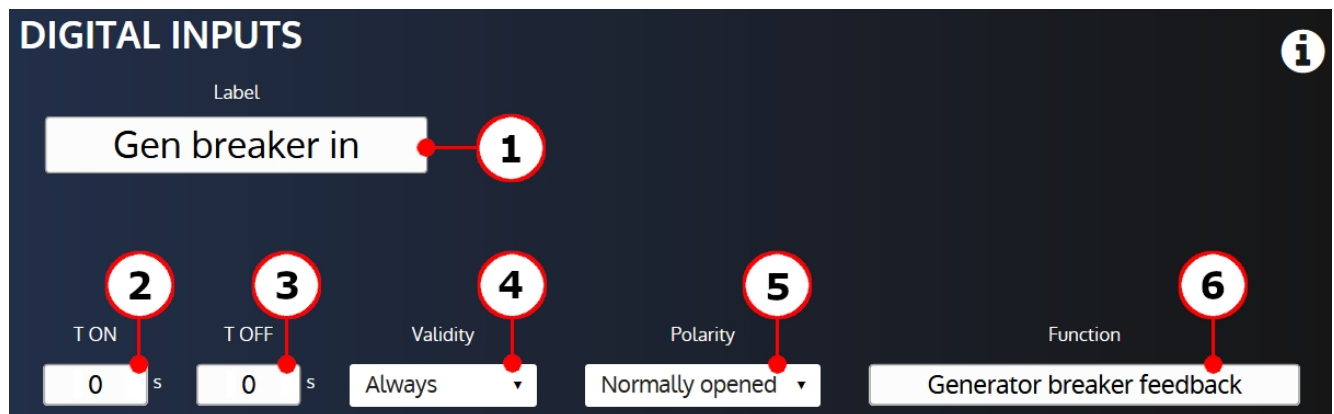
LIST

Some variables can be set through a drop-down list:



Select the list to open the drop-down menu and select an item to change the value.

DIGITAL INPUT



The editing window of digital inputs allows you to configure:

1. Label: The digital input's label (limited to 14 characters).
2. T ON: Delay before which the input becomes active.
3. T OFF: Delay after which the input becomes inactive.
4. Validity: Condition to take the digital input into account.
5. Polarity: Digital input's polarity.
6. Function: Digital input's function.

DIGITAL/RELAY OUTPUT

The editing window of digital/relay outputs allows you to configure:

1. Label: The digital/relay output's label (limited to 14 characters).
2. Polarity: Digital/relay output's polarity.
3. Function: Digital/relay output's function.
4. Pulse delay: Duration of the pulse high state. A pulse delay set to 0 correspond to a continuous activation.
5. Activation delay: Delay to wait before activating/deactivating the output.

TEXT

A text input is available to edit editable texts of the controller (limited to 21 characters):

PASSWORD

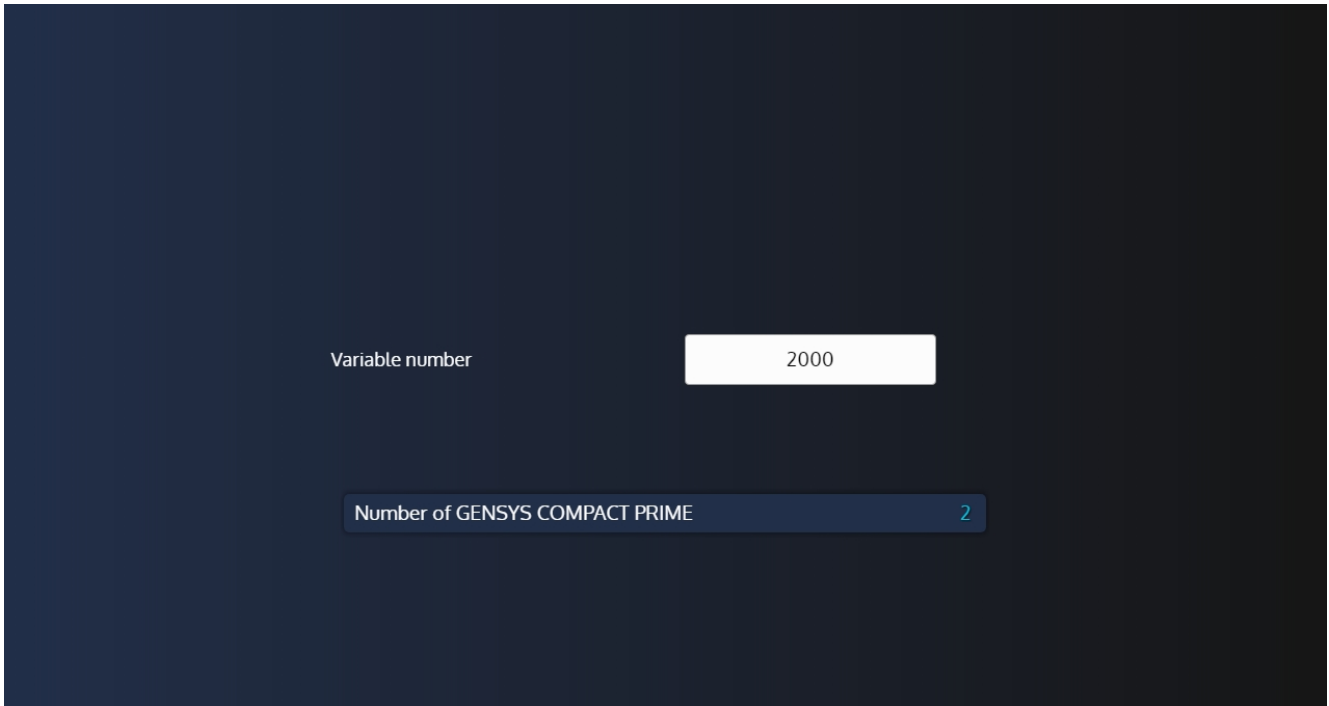
Two text inputs are available to edit a firmware password:

- Password: enter the new password in this input (limited to 8 characters).
- Confirm: enter the new password in this input in order to make a password verification (limited to 8 characters).

The "**Password**" and "**Confirm**" input content must be the same to validate the password change.

MODIFICATION BY VARIABLE NUMBER

The page titled "**Modification by variable number**" allows to search for a controller parameter through a search engine, and to change its value at your convenience:



To change the value of a parameter:

1. Press the variable input field to open the search engine.
2. Search for the variable you want in the search engine.
3. Press the "+" button to select the variable you want to modify.
4. Press the parameter that has just been displayed to enter the editing mode.

Note: If the variable is not a parameter, it will still be displayed but greyed out and cannot be changed.

RESET FACTORY SETTINGS

Update controller firmware

The page System/Reset factory settings is available only in level 2 password. This function allows you to reset controller configuration to factory settings:

1. Click on the "**Reset**" button.
2. If reset is successful, a success message is displayed.

UPDATE CONTROLLER FIRMWARE

Update controller firmware

The page System/Update allows you to update your controller firmware:

1. Click on the "**Update**" button to open the browser pop-up.
2. Browse and select the archive version you want to send to your controller.
3. Click on the browser "**Update**" button (and then press "**OK**" in the confirmation pop-up) to start the update.
4. Wait until all of update's steps are completed:
 - Updating firmware
 - Module initialization
 - Upload of language files
5. If the update is successful, a success message is displayed.

I4GEN SETTINGS



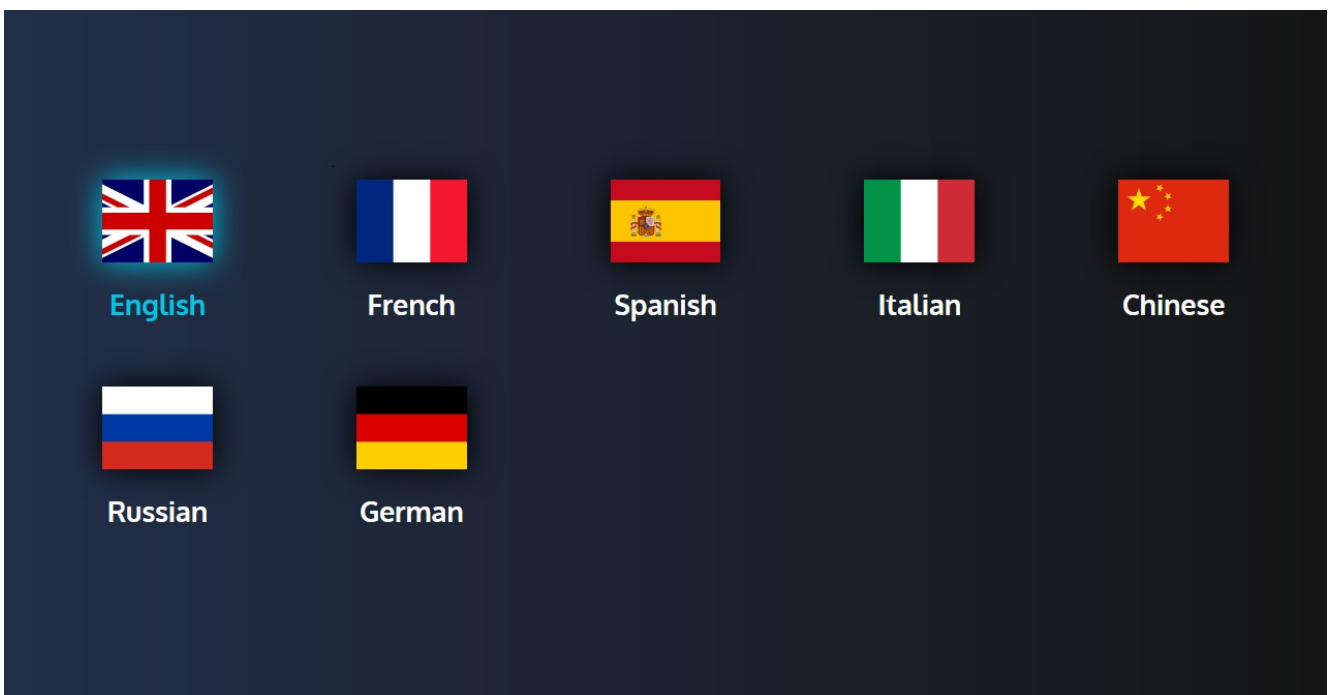
i4Gen Suite menu allows user to display and modify the **i4Gen Suite** settings. Press the computer icon to open the menu that gives access to all **i4Gen Suite** settings pages.

LANGUAGE

The "**Language**" menu allows you to change the application's textual language.

Display

The Display page allows you to modify the language of any text of the application:



The available languages are:

- English
- French
- Spanish
- Italian
- Chinese
- Russian
- German

CONNECTION

The "**Connection**" page allows you to configure the connection parameters of the **i4Gen Suite**:

Check for updates

Used to manually check for the latest available updates (**i4Gen Suite** and controller firmware).

Note:

- Internet connection is required to download updates.
- Once controller firmware updates have been downloaded, updates will be asked when connecting to a controller if needed (the "auto update" parameter needs to be enabled for this feature).

Auto updates

Used to enable/disable automatic updates.

Automatic updates can be done at two different times:

- On **i4Gen Suite** start (application update).
- When connecting to a controller (controller firmware update).

*Note: **i4Gen Suite** will never do a silent installation for any update. The user will always have the choice to perform new updates or not.*

CRE Technology recommends to have the "auto update" parameter enabled to benefit from the latest fixes and innovation.

Password Expiration

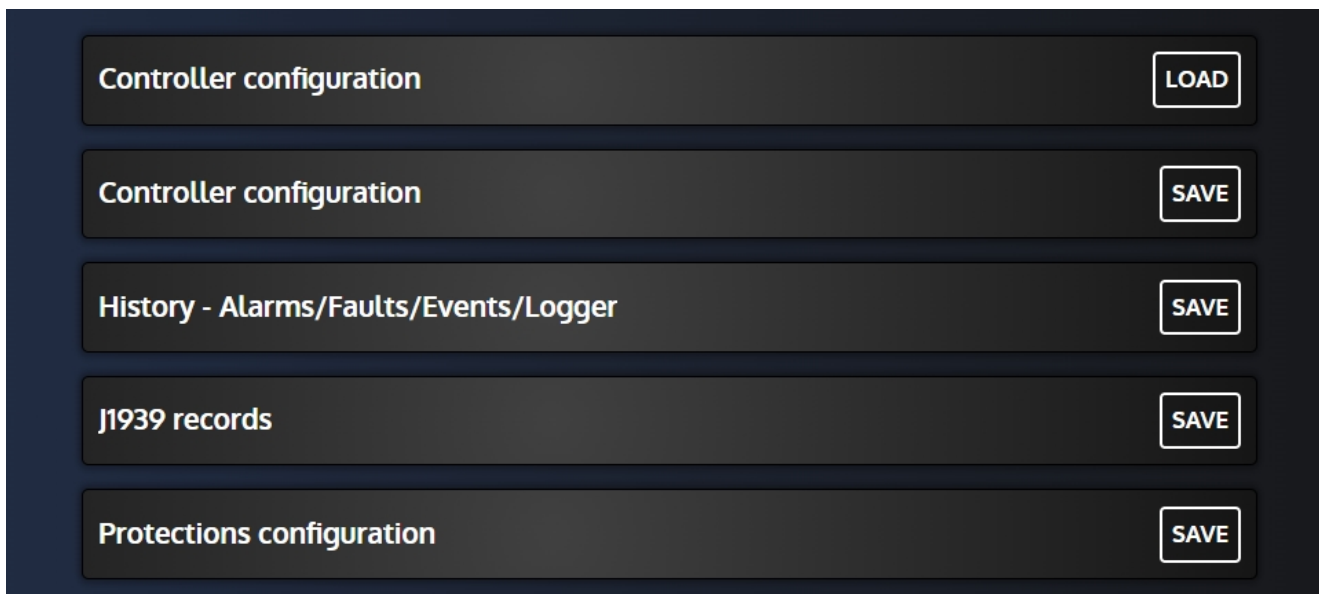
This parameter is used to enable/disable the password level expiration.

Expiration Delay

If the password expiration is enabled, this parameter is used to configure the delay after which the password will expire.

FILE TRANSFER

The File transfer page allows you to save controller files on your computer and to load a configuration file to a controller.



Saving a controller file on your computer

1. Click on the **"Save"** button to open the browser pop-up.
2. Select the folder in which you want to save the file.
3. Enter the name you want to attribute to your file in the **"File name"** input. If no name is entered, a default config file name is applied.
4. Click on the browser **"Save"** button to start the save.
5. If the save is successful, a success message is displayed.

Loading a configuration file to a controller (available only when a controller is connected)

1. Click on the **"Load"** button to open the browser pop-up.
2. Browse and select the configuration file you want to load to the controller.
3. Click on the browser **"Load"** button to start the upload.
4. If the file has been successfully load, a success message is displayed.