XWEB PRO

OPERATING MANUAL (V.1.2)

INDEX

CAUTION: TO PREVENT FLAMES FROM DEVELOPING OR ELECTRIC SHOCK, AVOID ANY CONTACT BETWEEN THIS DEVICE AND RAIN OR WATER	
	CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER. IT DOES NOT CONTAIN ANY PARTS THAT REQUIRE SERVICING BY THE USER. ALWAYS HAVE QUALIFIED STAFF PERFORM THE PROCEDURES.
	THE SYMBOL OF THE LIGHTNING BOLT INSIDE AN EQUILATERAL TRIANGLE IS USED TO ALERT THE USER OF THE POTENTIALLY DANGEROUS NON-INSUL ATED ELECTRICAL VOLTAGES
	THE SYMBOL OF THE EXCLAMATION MARK INSIDE AN EQUILATERAL TRIANGLE IS USED TO WARN THE USER THAT HE/SHE MUST PAY CLOSE ATTENTION TO THE TOPIC COVERED IN THIS MANUAL

CAUTION 	This device must be installed exclusively by service staff with suitable technical training and experience, who are aware of the dangers that they are exposed to. The operations described herein are set forth exclusively for the service staff

CAUTION 	Only use modems that are officially supported by this monitoring unit. Dixell srl cannot be held responsible for any damage caused by the use of non-supported modems.

CAUTION 	Dixell srl reserves the right to amend this manual without prior notice. The latest available version can be downloaded from the internet site.

CAUTION 	The instructions in this manual are common to all “XWEB 300D” / “XWEB 500D” / “XWEB 1000D” / “XWEB 5000” models. Any particular features are specified expressly.

CAUTION 	This control and monitoring unit fulfils EN 12830 for use with probes to detect measurements referred to in 13485

CAUTION 	This is a class A product. It can cause radio-interference in residential environments. Should this occur, the user should take suitable counter-measures

CAUTION 	Dixell srl reserves the right to vary the composition of its products without prior notice to the customer, ensuring the identical and unchanged features of the same

CAUTION 	The customer shall bear full responsibility and risk for product configuration in order to achieve the results pertaining to installation and/or final equipment/system. Upon the customer's request and following a specific agreement, Dixell s.r.l. may be present during the start-up of the final machine/application, as a consultant, however, under no circumstances can the company be held responsible for the correct operation of the final equipment/system.

CAUTION 	Since Dixell products form part of a very high level of technology, a qualification/configuration/programming/commissioning stage is required to use them as best as possible. Otherwise, these products may malfunction and Dixell cannot be held responsible. The product must not be used in any way that differs from that stipulated in the documentation

1. INTRODUCTION

Congratulations for having purchased this product.
XWEB represents one of the most advanced monitoring, control and supervision systems available on the market today. The user will benefit from a power device, which is easy to use and highly customisable for all requirements. It uses the most advanced technology for displaying the web pages and is based on the Linux™ operating system which guarantees its efficiency and reliability. The hardware is based on highly reliable industrial boards that require practically no maintenance whatsoever.
The web interface is always available remotely through the ethernet interface, as well as locally on model XWEB5000 with ports for monitor, keyboard and mouse. Remotely, in order to use the web interface, you just need to connect from a normal home computer with an Internet browser, such as Mozilla Firefox® or Google Chrome®.
Models XWEB300D/500D/1000D can be easily installed on a DIN guide rail; model 5000 on desktop or on 19" rack.


XWEB is designed and bases its operation not only on the Dixell network of controllers. Its main applications are supermarkets of any size, industrial refrigeration and air conditioning.
In addition to normal monitoring features, XWEB PRO is able to:

- record temperatures in compliance with food hygiene standards UNI EN 12830, HACCP
- track and notify adjustment and system alarms
- manage devices with scheduled operations (models 500D/1000D/5000 only)
- program device parameters

It also provides special features, such as:

- Compressor Rack Optimizer, CRO: to optimally manage the availability of cooling power (only for models 500D/1000D/5000)
- Compressor Guard Management: to manage the safety of starting up compressors
- XeCO2: the innovative and complete system that makes it possible t work in complete safety with flooded evaporators, thereby optimising the operation of CO2 systems
- and much more

Model XWEB 5000 has the following additional tools:

- Supervision (SPV). For load control, light control, etc.;
- Anti-Sweat Heater Control (DEWP). Useful for the management of the anti-sweat heaters

These tools are particularly useful for Energy Saving optimisation.

2. THE RECIPIENTS OF THIS MANUAL

The contents of this manual are intended for professional users, such as the XWEB installer and/or its end user. The configuration and usage procedures of the XWEB are an integral part of this manual. Users may be professionals such as energy-managers or supermarket directors. In addition to this manual, we also recommend reading the installation manual provided in paper form, inside the product package, and in electronic form on the Dixell site, under the "manual" section.

3. USARE XWEB

In its configuration, the XWEB system requires connection to its interface of Modbus devices. Make sure that:

1. the controller network is suitably connected paying particular attention to the configuration of the device addresses, to avoid non-admitted duplications.
2. all devices are properly powered. Create the list of all connected devices. Then compare this list with the number of devices effectively detected by means of the automatic procedure

The XWEB allows for the management of different device lines (also called "nodes"), which can use different types of physical connections and configurations for communication. Obtain the network documentation.

The PC that you wish to use for the connection must fulfil and support the minimum characteristics for installation and use of the following software:

3.1 DESKTOP (PC) SOFTWARE REQUIREMENTS

Browser	Support	Minimum Version
Microsoft Edge	SUPPORTED	16+
Mozilla Firefox	SUPPORTED	54+
Google Chrome	SUPPORTED	58+
Apple Safari	SUPPORTED	10.1+
Opera	SUPPORTED	44+
Microsoft Internet Explorer	NOT SUPPORTED	

3.2 MOBILE (SMARTPHONE/TABLET) SOFTWARE REQUIREMENTS

Browser	Support	Minimum Version
Apple iOS Safari	SUPPORTED	10.3+
Android Google Chrome	SUPPORTED	58+
Android Mozilla Firefox	SUPPORTED	54+

Display of customised *Layouts* on mobile devices with display smaller than 10” might not be accurate.

All of the most recent computers are able to meet the requirements in the table. Nevertheless, we recommend following the advice of an IT expert to assess which computers to buy and/or those already in your possession.

In the following sections, general information is provided on the possible network configurations, suitable for connecting XWEB and your computer. From the outset, we recommend following the advice of an IT expert and/or your network administrator to assess which configurations are most suited to your needs.

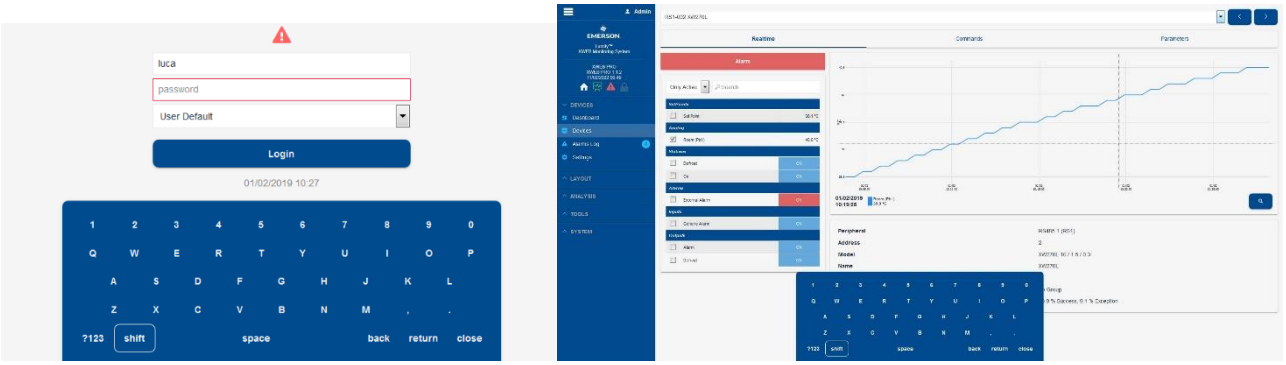
Antivirus, firewall and toolbar software (for example YAHOO and/or GOOGLE) can impede you from viewing XWEB pages correctly. We recommend checking the configuration of this software and adding their XWEB IP addresses to the list of safe sites. With firewalls, make sure that ports 80 and 22 are mapped towards XWEB so that it can be reached from outside.

3.3 WEB INTERFACE

Access the system from your PC by entering the XWEB IP in the browser address bar. With a direct local connection [screen, mouse and keyboard or touchscreen], this operation is not required, simply switch on the screen.

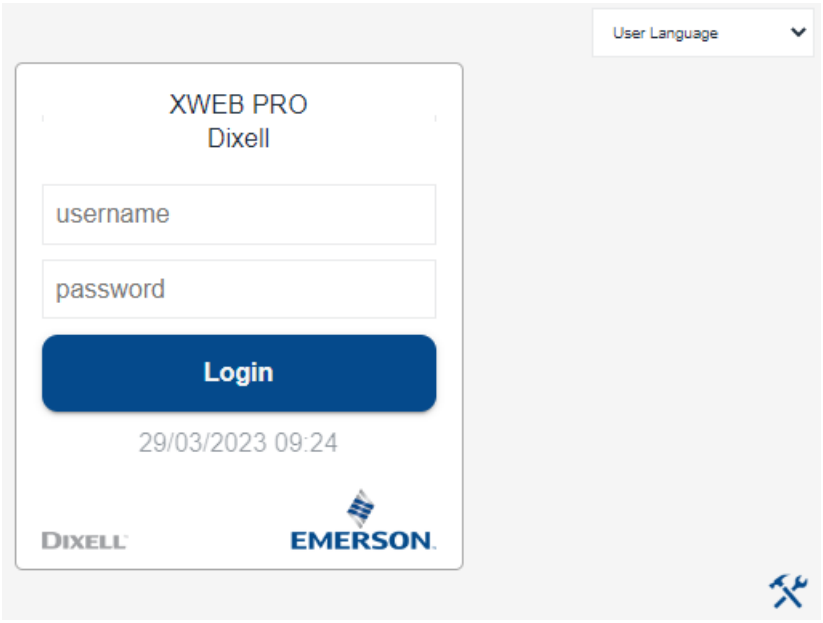
To use the product with screen interface, it must have been connected prior to switching on the machine.
The local interface of the product can be used with a generic touch screen with virtual keyboard, which can be opened by clicking the button on the left  always found in the bottom part of the screen. By tapping the button on the right once or more, the menu changes and the keyboard rests on a different side of the screen.

When the keyboard is open, it appears as pictured below:



Note: the keyboard layout cannot be modified.

The Web interface can be accessed with browser; we recommend using a high resolution device (typically available on a display of at least 7 inches) in order to be able to all information on all pages.



The user will be directed to the "login" page. From which all users will consistently have access to the system's user interface. Enter Username and Password to access the system. If the entered details are correct the homepage is loaded, otherwise repeat the operation. Pay attention to the presence of alphanumeric characters or capital letters in the password.
The drop-down menu in the top right-hand corner allows the user to select the interface language; if “User Default” is selected, the language used will be the one set in the system for the user.

You can only connect to a system being accessed for the first time, which has just completed the "initial wizard" procedure, with:
Username: Admin
Password Admin

Caution: On first access, for security reasons, XWEB will ask you to enter a new password

The icon indicates that access to the user interface for non-administrator users is blocked. This block is normally executed to indicate a system maintenance operation by a specialised operator.

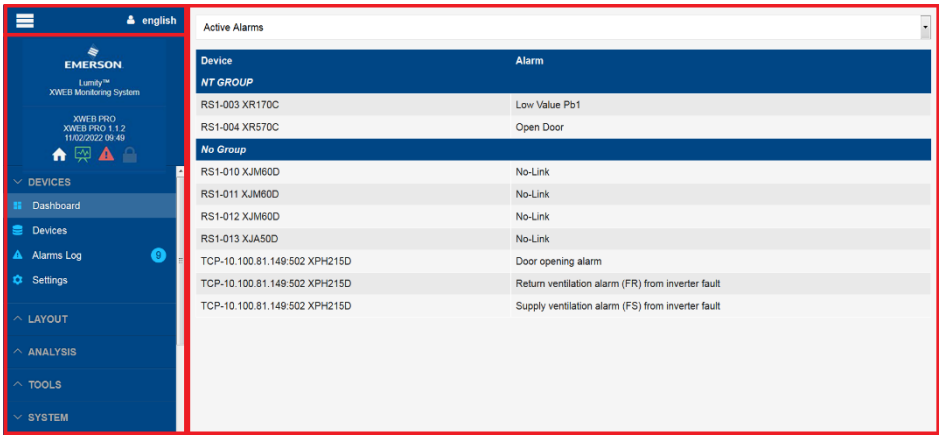
The icon indicates an alarm situation (e.g.: high temperature). It will be necessary to login with a valid username and password to be able to recognise the type of alarm and to analyse the system situation. The alarm icon does not automatically assume that the XWEB has activated the relay outputs (e.g. to pilot an alarm siren) nor that someone has been notified of the alarm. This depends on how the administrator has decided to configure the XWEB.

Click on the icon to download the “Debug Report”, a file used by technical support in the event of XWEB malfunctions. The encrypted file must be sent when necessary for an analysis to dixell.service@emerson.com

Once logged in with the appropriate credentials, XWEB shows the user the navigation bar (with red border in the image below) that can be hidden/shown by pressing the key at the top and always visible.

The position set by the user on the navigation bar defines the contents of the remainder of the web page.

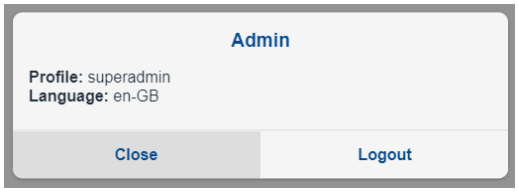
The navigation bar is always visible on all pages and it enables the user to run the LOGOUT, in other words, to display the interface on the page requesting the username and password.



The visible bar shows:

- System Name
- Date and time of system
- Connected user name

  By clicking on the user name, the system shows:

  -
  - User language
  - Current user profile
  - Logout button

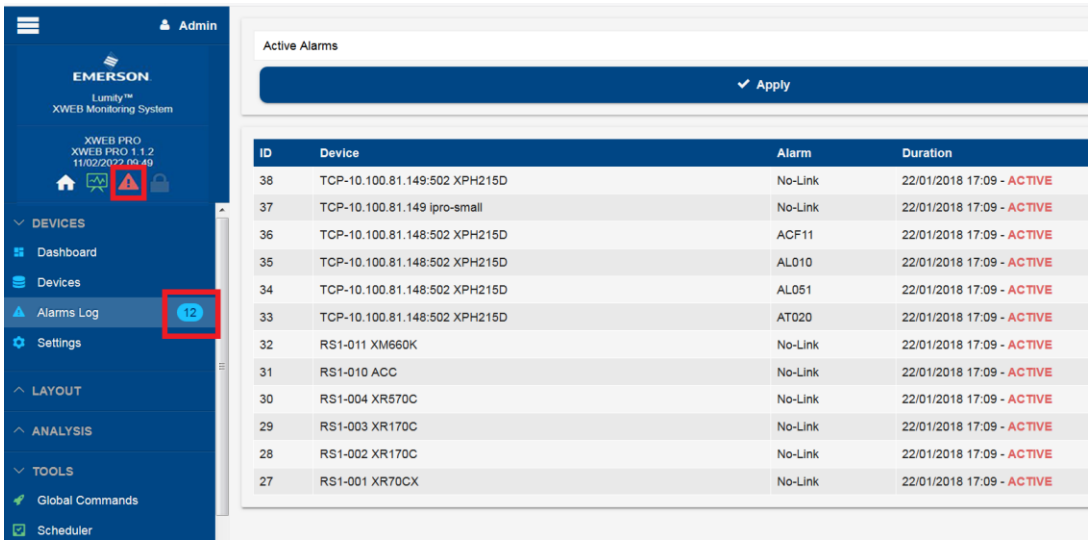
- Access status for non “admin” users;  /  = locked / unlocked

  Click on the padlock icon to activate and deactivate the block: a dialog will appear to confirm the operation.

- State of the acquisitions;  /  = active / not active

  Click on the computer icon to activate and deactivate the block: a dialog box will appear to confirm the operation. Start and stop acquisitions are fast but not instantaneous operations and the system during the transaction makes the icon flash green (during start) and yellow (during stop).

- Active alarms number



3.3.1 FIRST INSTALLATION

On first access to the XWEB interface of unconfigured product, the system proposes the following WIZARD SETP screen in which the user can retrieve the configuration from a possible backup file (“RESTORE SETUP”) or configure it by following the wizard procedure.

The procedure can also be activated with the system fully configured and is described in the chapter SYSTEM→WIZARD SETUP.

3.3.2 INTERFACE WITH SYSTEM CONFIGURED

- DEVICES
- LAYOUT
- ANALYSIS
- TOOLS
- SYSTEM

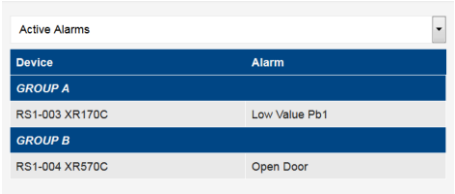
3.3.2.1 DASHBOARD

The dashboard has several views of the device network status.
Where the tool network is displayed in graphical form, the tool box colour indicates:

- green in case of “no detected alarm” status;
- red when at least one alarm has been detected;
- grey when the tool is in maintenance mode

By clicking on the tool box, the interface moves to “Devices” for the selected tool.

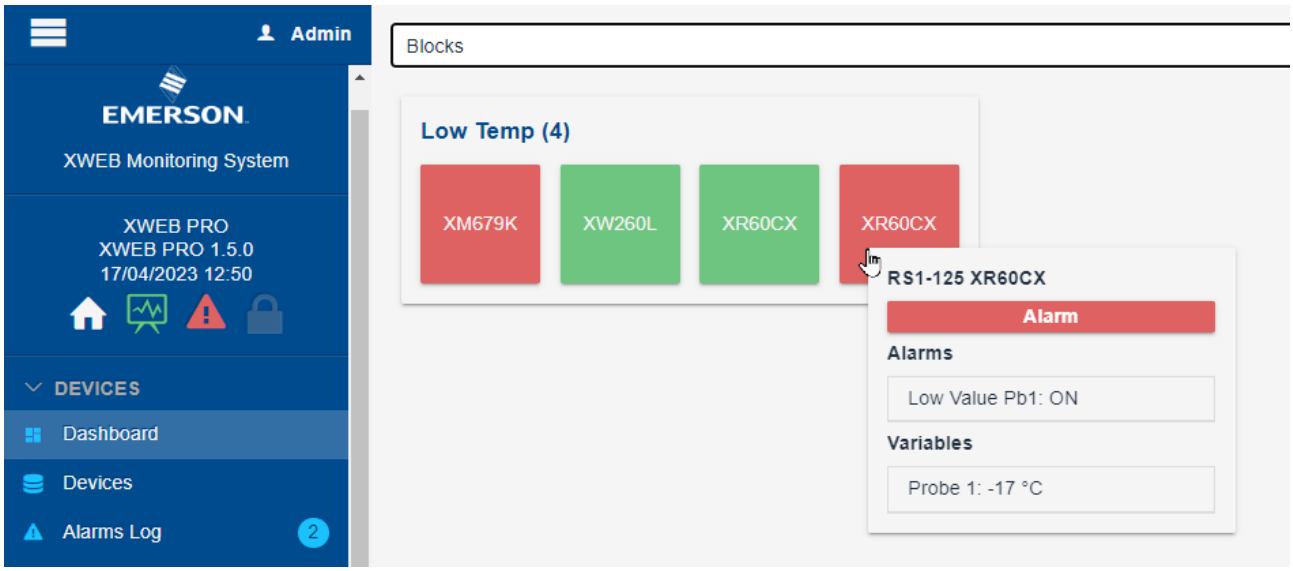
- “Active Alarms”



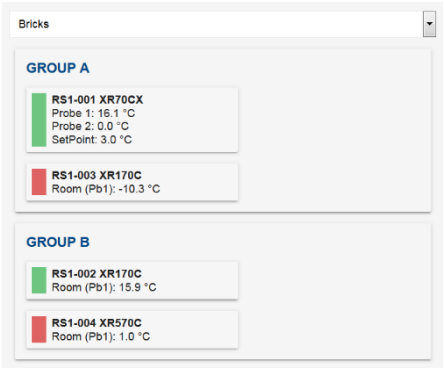
All active alarms detected by the tool network are listed

- “Blocks”

by hovering the mouse over a block, a box appears as shown below with information on the variables displayed as per devices settings, and active alarms.

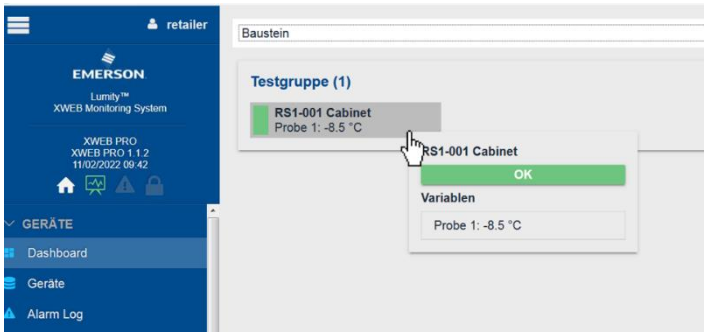


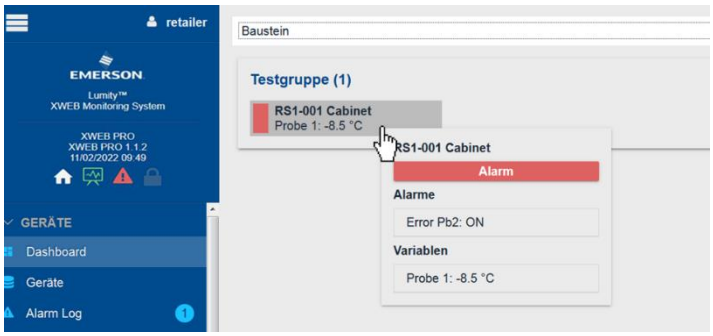
- “Bricks”



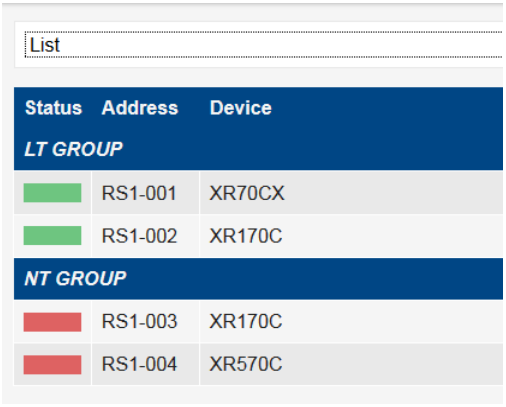
The variables selected as “Chart Default” (see “Devices→Settings”) are displayed for each tool with their name, their current value with the unit of measurement.
By clicking on the tool box, the interface moves to “Devices” for the selected tool.

By hovering the mouse over a block, a box appears as shown below with information on the variables displayed as per devices settings, and active alarms.





- “List”



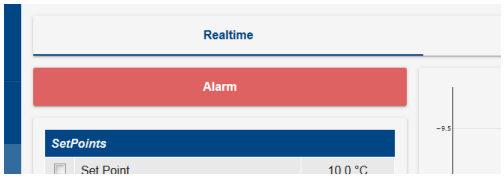
3.3.2.2 DEVICES

The Devices page is a panel for controlling the specific tool; the page is divided into sections.

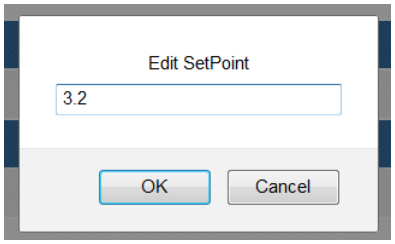
3.3.2.2.1 REALTIME

It shows, for the selected tool, the values of its variables updated in real time. And for the selected variables, it shows the chart of the trend of the last period.

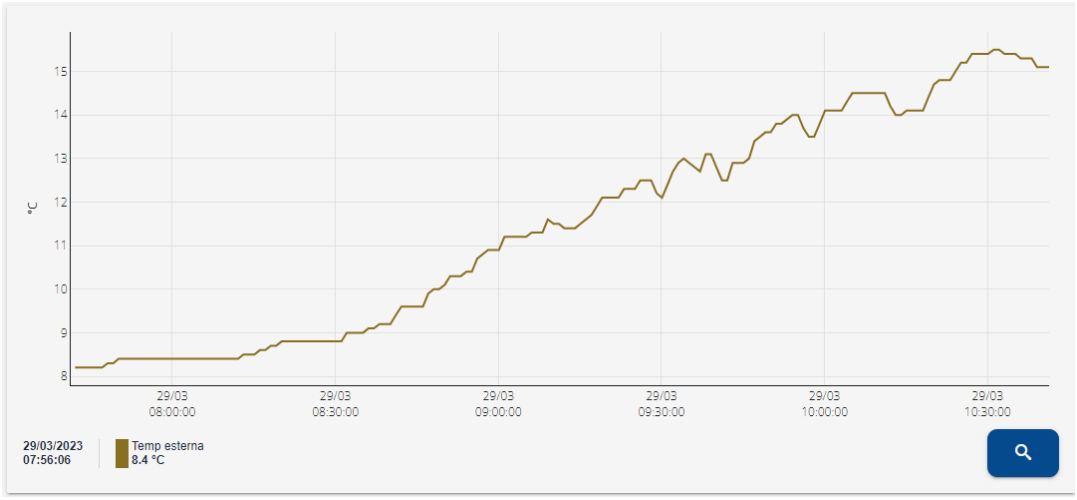
If the tool detects at least one alarm condition, it highlights it with a red bar.



The setpoints are variables whose value can be set by the user; press on the area where the value is displayed to change it.



the chart cursor, typically the mouse, shows the value of the variables based on its position.

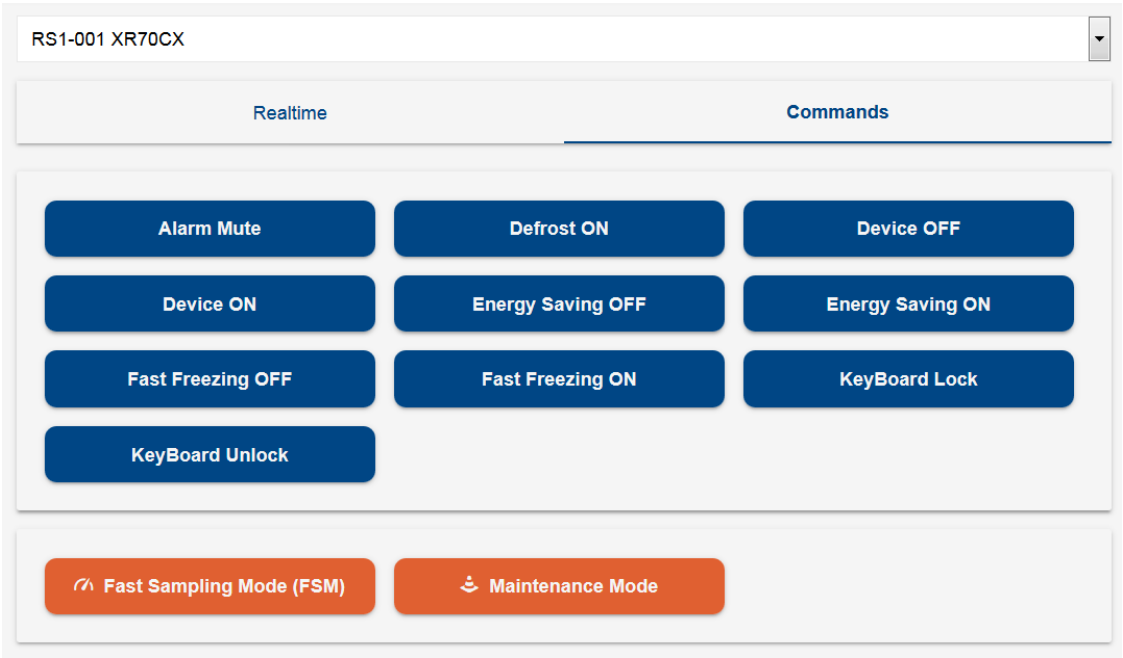


the “magnifying glass” key takes the user to the Analysis→Chart page to view the same data on full screen.

A summary of the main information of the tool is shown below the chart

Peripheral	RS485 1 (RS1)
Address	3
Model	XR170C 16 (0010) / 2.0 (0014) / 0.4 (0004)
Name	XR170C
Description	-
Group	NT GROUP
Communication Statistics	95.28 % Success, 4.72 % Exception

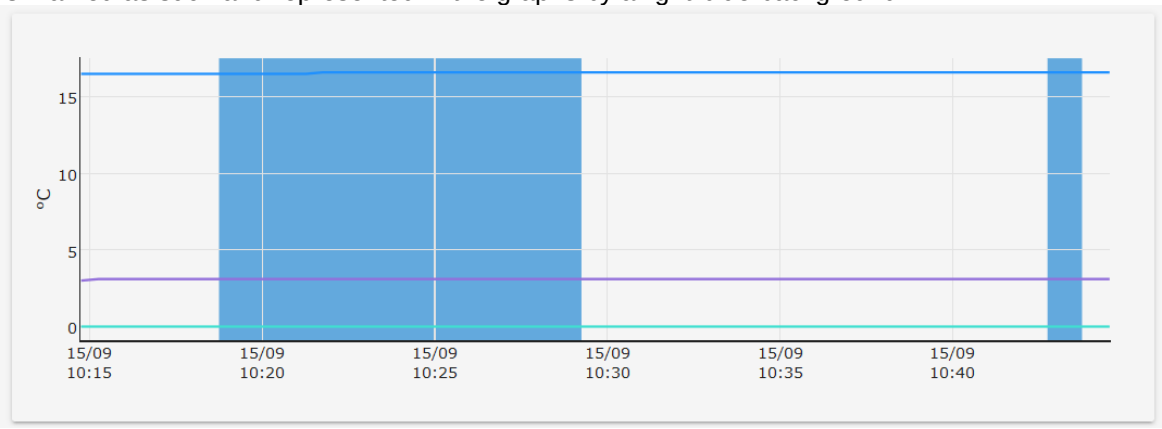
3.3.2.2.2 COMMANDS



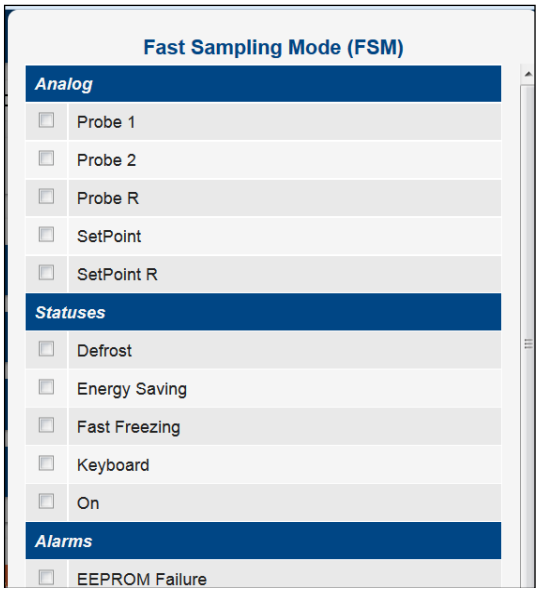
for the selected tool it shows, with blue keys, the available commands that can be sent to the device itself. The list of available commands depends on the type of tool.

Also available below, the orange keys for the commands

- FSM
  The FSM mode aims to perform a high speed selective monitoring of the resources for a set time limited to 10 minutes. This type of monitoring allows the user to run the controller debug and/or of its application, as if the other devices were "disconnected" from the device network. The delay in the acquisition time of the controller values is at a minimum, the device is read more or less in real time.
  Attention: to allow for a higher speed of a controller, the others will be affected. During FSM mode, the sampling time of the other controllers may appear to have increased.
  The FSM mode saves all read samples in the main data archives. All data sampled during FSM mode is marked as such and represented in the graphs by a light-blue background.



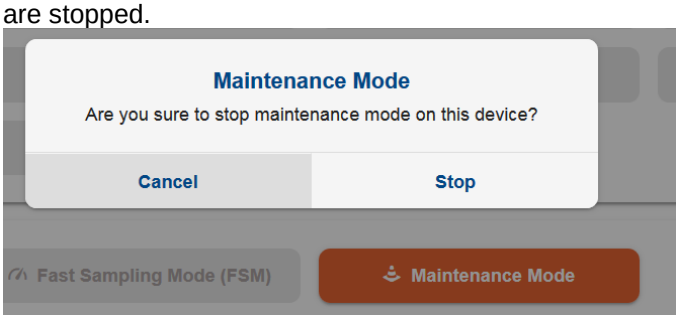
When the FSM mode is activated, the user is asked on which variables should priority be given



The FSM mode is not compatible with the “High Frequency” feature. If the “High Frequency” feature is enabled, the FSM button and feature are disabled.

- Maintenance Mode
  the user can set the device in Maintenance mode for “Service” or “Cleaning” for a certain period, at the end of which the device will go back to being monitored normally.

  Return to normal status can also be forced by the user by clicking on the “maintenance” key again; the user will be requested to confirm the stop. The maintenance status stops even if the acquisitions are stopped.

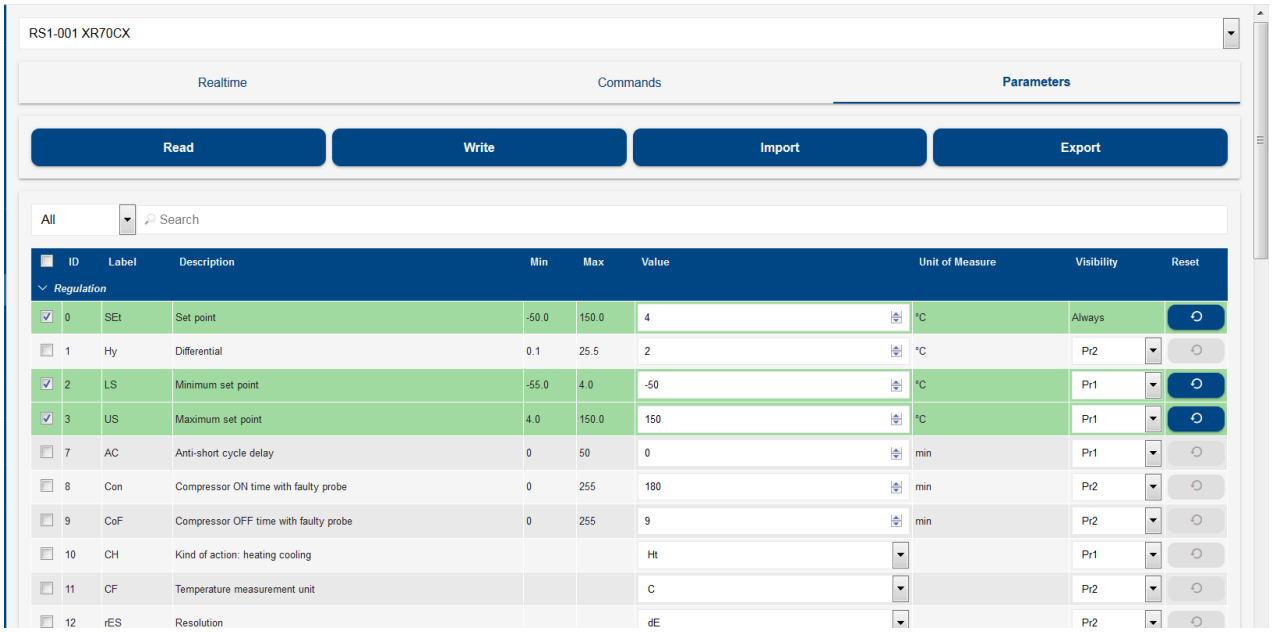


With the maintenance modes any alarm generated by a connected tool is ignored. In general, every reading and writing operation on the tool is inhibited.

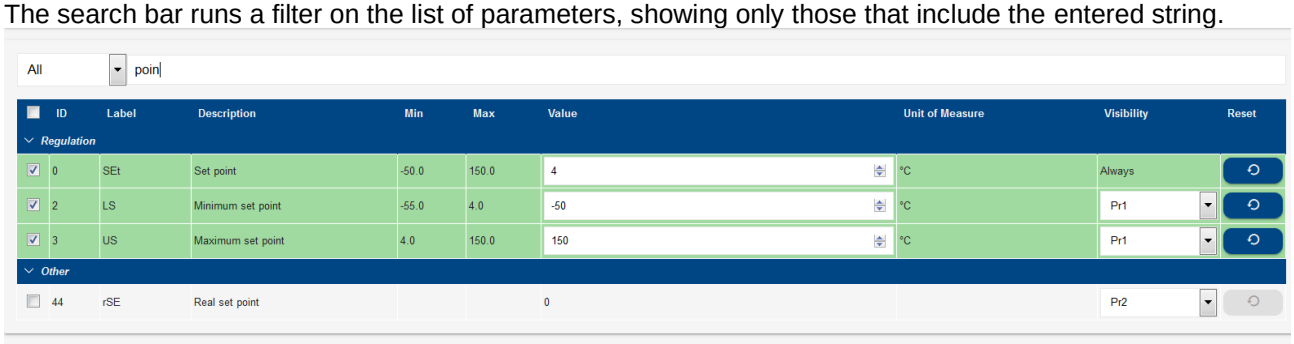
3.3.2.2.3 PARAMETERS

The “Parameters” page allows for the management of the parameters associated with the device operation.

Press “**Read**” to read all parameters and show them on the screen table; any unsaved changes on the devices will be lost. The parameters are shown divided by parameter group.

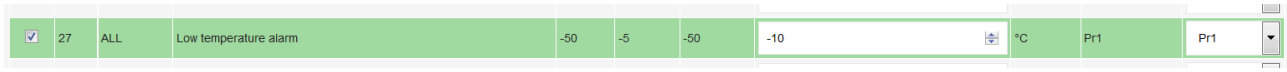


The search bar runs a filter on the list of parameters, showing only those that include the entered string.

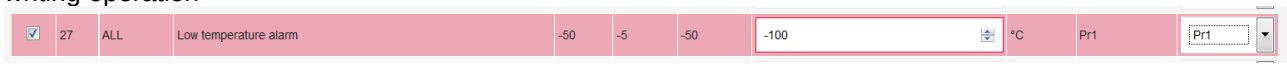


Each parameter whose value has been changed, is highlighted with the following colours:

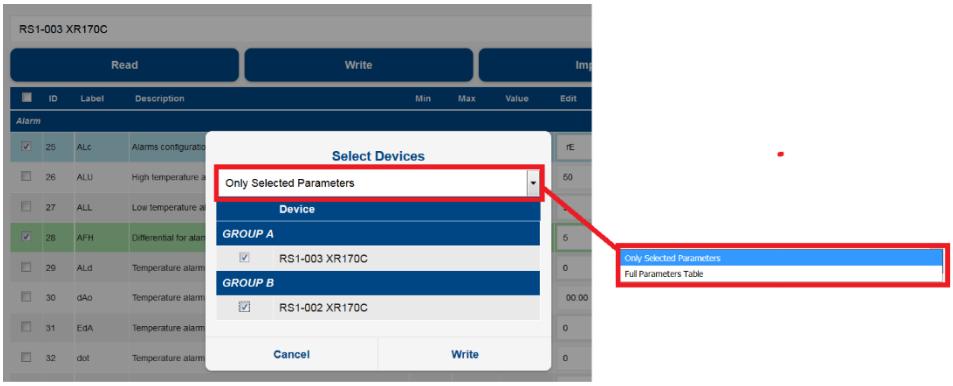
1. green, when the parameter value is correctly validated according to the tool rules and is ready to be written



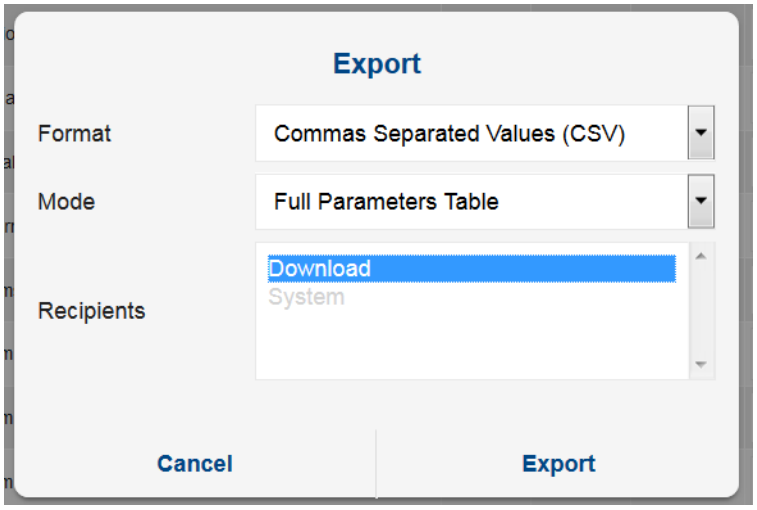
2. red, when the parameter value is in conflict with the tool rules. A single red parameter cannot allow the writing operation



Press “**Write**” to transfer the parameter values on the screen, to the devices. The user can choose on which tools to write and whether to write all parameters or only the selected ones.

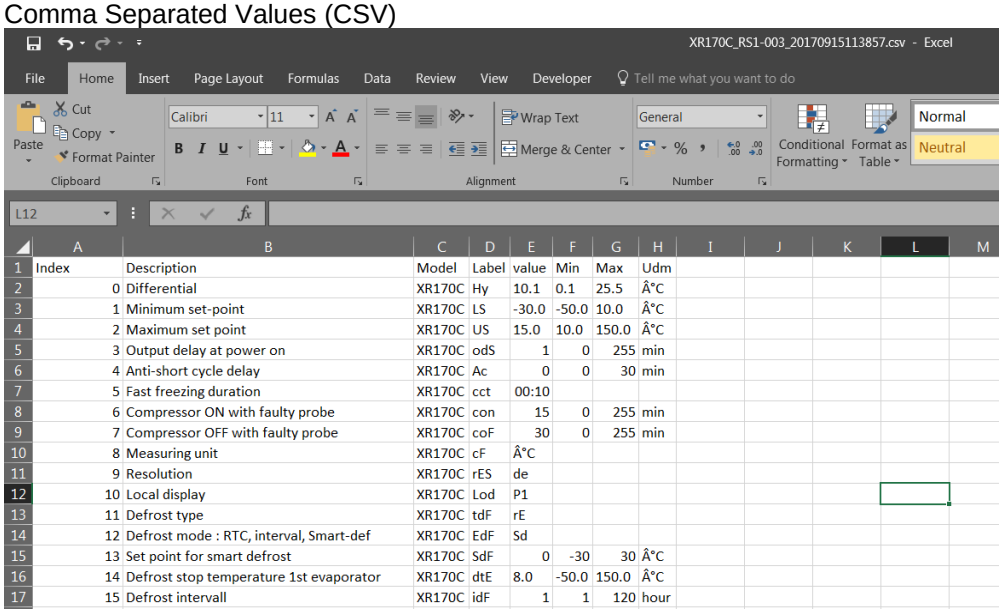


Press “**Export**” to save the parameter map creating a backup. The parameter map can be saved in the XWEB or downloaded on a PC as a ZIP file, through the browser.



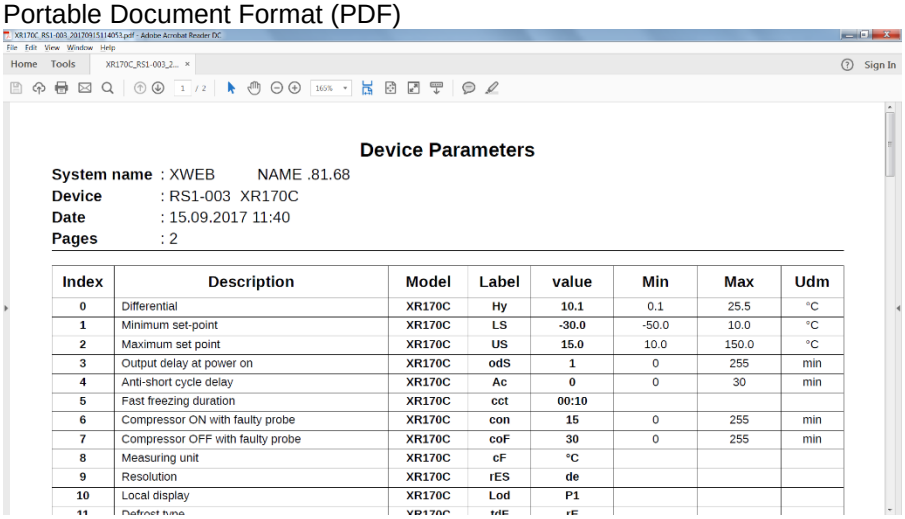
The options available are:

1) Comma Separated Values (CSV)



	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Index	Description	Model	Label	value	Min	Max	Udm					
2	0	Differential	XR170C	Hy	10.1	0.1	25.5	Â°C					
3	1	Minimum set-point	XR170C	LS	-30.0	-50.0	10.0	Â°C					
4	2	Maximum set point	XR170C	US	15.0	10.0	150.0	Â°C					
5	3	Output delay at power on	XR170C	odS	1	0	255	min					
6	4	Anti-short cycle delay	XR170C	Ac	0	0	30	min					
7	5	Fast freezing duration	XR170C	cct	00:10								
8	6	Compressor ON with faulty probe	XR170C	con	15	0	255	min					
9	7	Compressor OFF with faulty probe	XR170C	coF	30	0	255	min					
10	8	Measuring unit	XR170C	cF	Â°C								
11	9	Resolution	XR170C	rES	de								
12	10	Local display	XR170C	Lod	P1								
13	11	Defrost type	XR170C	tdF	rE								
14	12	Defrost mode : RTC, interval, Smart-def	XR170C	EdF	Sd								
15	13	Set point for smart defrost	XR170C	SdF	0	-30	30	Â°C					
16	14	Defrost stop temperature 1st evaporator	XR170C	dtE	8.0	-50.0	150.0	Â°C					
17	15	Defrost intervall	XR170C	idF	1	1	120	hour					

2) Portable Document Format (PDF)

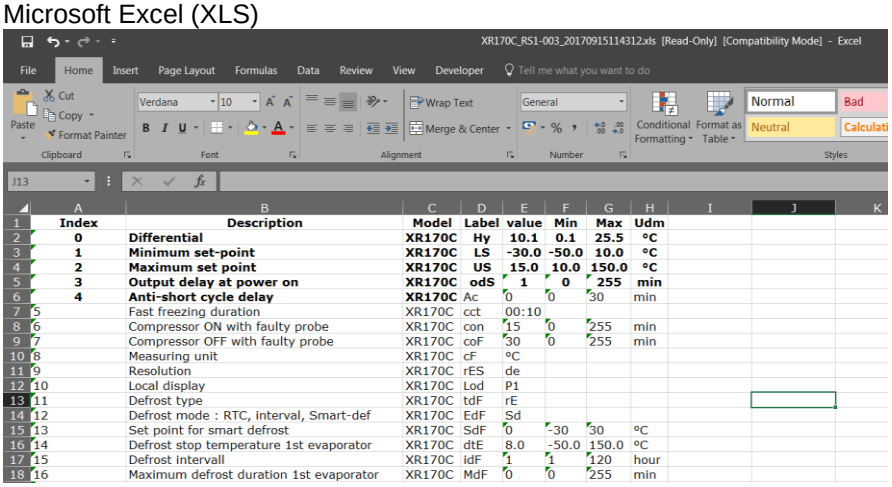


Device Parameters

System name : XWEB NAME .81.68
Device : RS1-003 XR170C
Date : 15.09.2017 11:40
Pages : 2

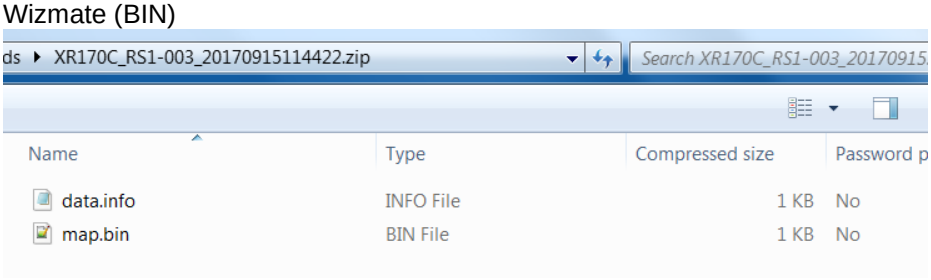
Index	Description	Model	Label	value	Min	Max	Udm
0	Differential	XR170C	Hy	10.1	0.1	25.5	°C
1	Minimum set-point	XR170C	LS	-30.0	-50.0	10.0	°C
2	Maximum set point	XR170C	US	15.0	10.0	150.0	°C
3	Output delay at power on	XR170C	odS	1	0	255	min
4	Anti-short cycle delay	XR170C	Ac	0	0	30	min
5	Fast freezing duration	XR170C	cct	00:10			
6	Compressor ON with faulty probe	XR170C	con	15	0	255	min
7	Compressor OFF with faulty probe	XR170C	coF	30	0	255	min
8	Measuring unit	XR170C	cF	°C			
9	Resolution	XR170C	rES	de			
10	Local display	XR170C	Lod	P1			

3) Microsoft Excel (XLS)



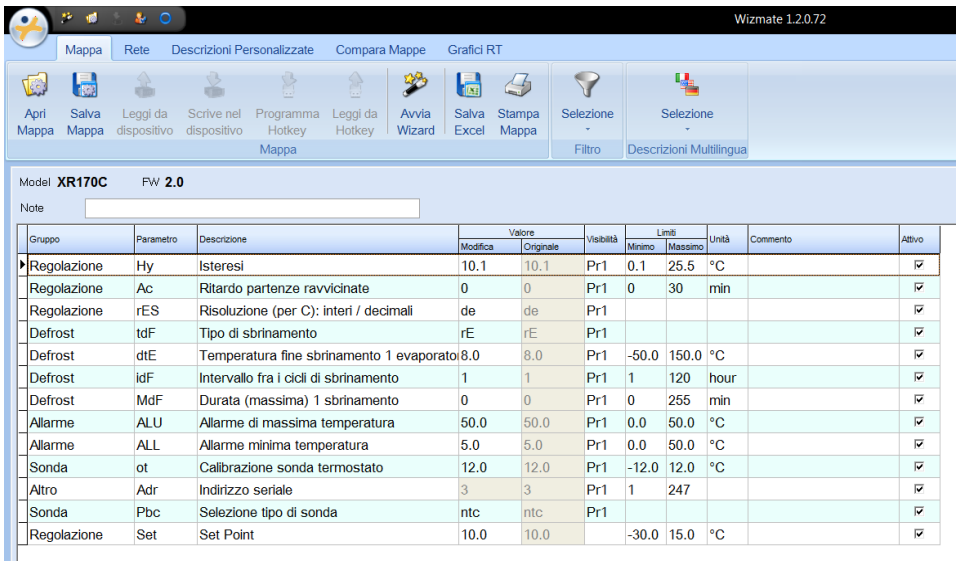
	A	B	C	D	E	F	G	H	I	J	K
1	**Index**	**Description**	**Model**	**Label**	**value**	**Min**	**Max**	**Udm**			
2	**0**	**Differential**	**XR170C**	**Hy**	**10.1**	**0.1**	**25.5**	**°C**			
3	**1**	**Minimum set-point**	**XR170C**	**LS**	**-30.0**	**-50.0**	**10.0**	**°C**			
4	**2**	**Maximum set point**	**XR170C**	**US**	**15.0**	**10.0**	**150.0**	**°C**			
5	**3**	**Output delay at power on**	**XR170C**	**odS**	**1**	**0**	**255**	**min**			
6	**4**	**Anti-short cycle delay**	**XR170C**	Ac	0	0	30	min			
7	5	Fast freezing duration	XR170C	cct	00:10						
8	6	Compressor ON with faulty probe	XR170C	con	15	0	255	min			
9	7	Compressor OFF with faulty probe	XR170C	coF	30	0	255	min			
10	8	Measuring unit	XR170C	cF	°C						
11	9	Resolution	XR170C	rES	de						
12	10	Local display	XR170C	Lod	P1						
13	11	Defrost type	XR170C	tdF	rE						
14	12	Defrost mode : RTC, interval, Smart-def	XR170C	EdF	Sd						
15	13	Set point for smart defrost	XR170C	SdF	0	-30	30	°C			
16	14	Defrost stop temperature 1st evaporator	XR170C	dtE	8.0	-50.0	150.0	°C			
17	15	Defrost intervall	XR170C	idF	1	1	120	hour			
18	16	Maximum defrost duration 1st evaporator	XR170C	MdF	0	0	255	min			

4) Wizmate (BIN)



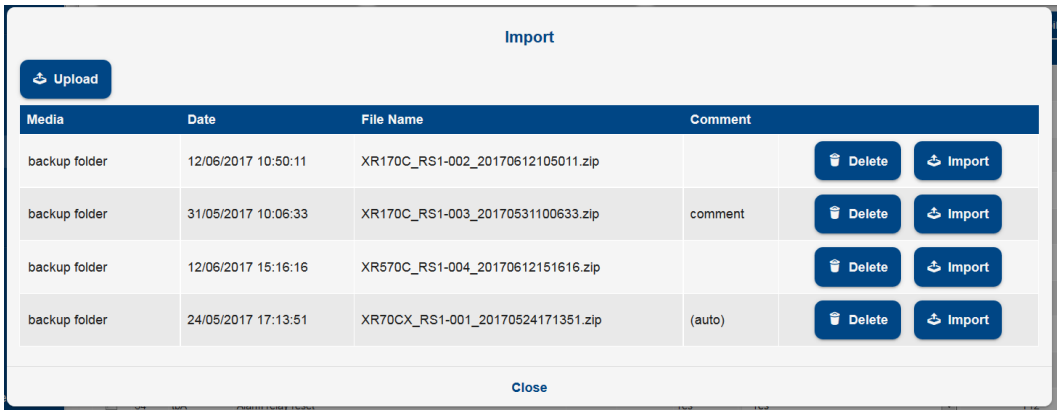
Name	Type	Compressed size	Password p
data.info	INFO File	1 KB	No
map.bin	BIN File	1 KB	No

with this option, XWEB exports a ZIP file that includes the “data.info” and “map.bin” files. For use with WIZMATE simply open the BIN file, assuming that the tool WIZMATE library is already installed correctly in the same WIZMATE.



Gruppo	Parametro	Descrizione	Valore		Visibilità	Limiti		Unità	Commento	Attivo
			Modifica	Originale		Minimo	Massimo			
Regolazione	Hy	Isteresi	10.1	10.1	Pr1	0.1	25.5	°C		☑
Regolazione	Ac	Ritardo partenze ravvicinate	0	0	Pr1	0	30	min		☑
Regolazione	rES	Risoluzione (per C): interi / decimali	de	de	Pr1					☑
Defrost	tdF	Tipo di sbrinamento	rE	rE	Pr1					☑
Defrost	dtE	Temperatura fine sbrinamento 1 evaporato	8.0	8.0	Pr1	-50.0	150.0	°C		☑
Defrost	idF	Intervallo fra i cicli di sbrinamento	1	1	Pr1	1	120	hour		☑
Defrost	MdF	Durata (massima) 1 sbrinamento	0	0	Pr1	0	255	min		☑
Allarme	ALU	Allarme di massima temperatura	50.0	50.0	Pr1	0.0	50.0	°C		☑
Allarme	ALL	Allarme minima temperatura	5.0	5.0	Pr1	0.0	50.0	°C		☑
Sonda	ot	Calibrazione sonda termostato	12.0	12.0	Pr1	-12.0	12.0	°C		☑
Altro	Adr	Indirizzo seriale	3	3	Pr1	1	247			☑
Sonda	Pbc	Selezione tipo di sonda	ntc	ntc	Pr1					☑
Regolazione	Set	Set Point	10.0	10.0		-30.0	15.0	°C		☑

Press “**Import**” to load the parameter set saved previously with the Export procedure, into the parameter table on the screen.



Press "Upload" in case the backup you want to upload is not present among those saved in the memory of the same XWEB; in this case a ZIP file must be loaded onto XWEB which must have been previously exported. Apply the following procedure:

1. export the zip file to the browser (download option)
2. save the BIN file from wizmate
3. open the zip file of point # 1 with a program like 7zip and replace the BIN file with the one of point # 2

Controller parameter visibility and editability management

Maximum level parameters are managed in the configuration of each profile: visibility and editability.
Visibility: permission to read the parameter value.
Editability: permission to edit the parameter value.

The following are the available parameters:

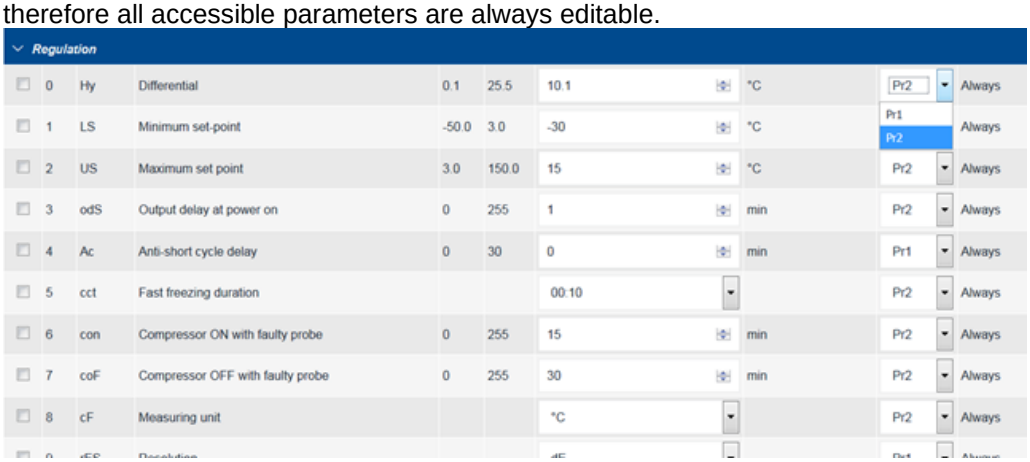
- **Edit Parameters Visibility**: to set the value of the visibility parameter and it is present in the instrument. The maximum settable value will depend on the instrument itself and on its "Parameters Visibility Level".

- **Edit Parameters Editability:** manages the value of the editability parameter for the controllers that use this function (for example ICHILL) and it is present in the instrument. The maximum settable value will depend on the instrument and on its "Parameters Visibility Level".

- **Parameters Visibility Level**: it is present in the XWEB system and can be set between Pr0 and Pr9. The value identifies the maximum visibility/editability level of the parameters.

Example:

- Admin User: “Parameters Visibility Level” = Pr9.
  Reading the parameters from the XR170C instrument, these are presented to the user as shown below. The user sees all the parameters and can set their visibility between Pr1 and Pr2 (the only options managed by the regulator). On this controller it is not possible to manage editability, therefore all accessible parameters are always editable.

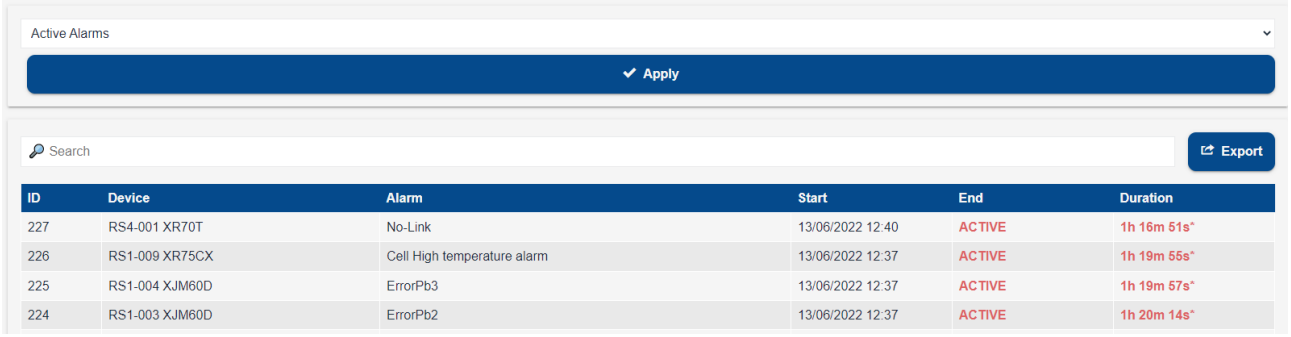


- User Pr1: “Parameters Visibility Level” = Pr1.
  Reading the parameters from the same instrument, these are presented to the user as shown below. The user sees all parameters up to Pr1.

3.3.2.3 ALARMS LOG

The “alarms” page displays the list of:

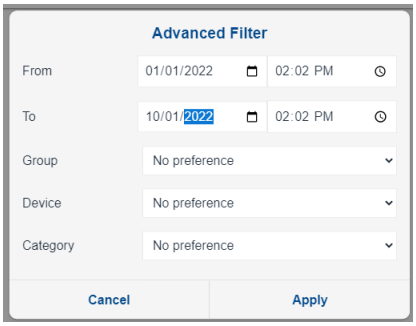
Active Alarms



as in the above image, all alarms currently detected on the active tool line(s) are displayed.

ID = unique alarm sequence number
DEVICE = device description
ALARM = alarm description
START = date and time of when the alarm was detected as such
END = date and time of when the alarm went off
DURATION = actual duration calculated between Start and End

Advanced Filter
If “Advanced Filter” is chosen from the drop-down menu, the active alarms and the log of alarms occurred in the past are displayed.



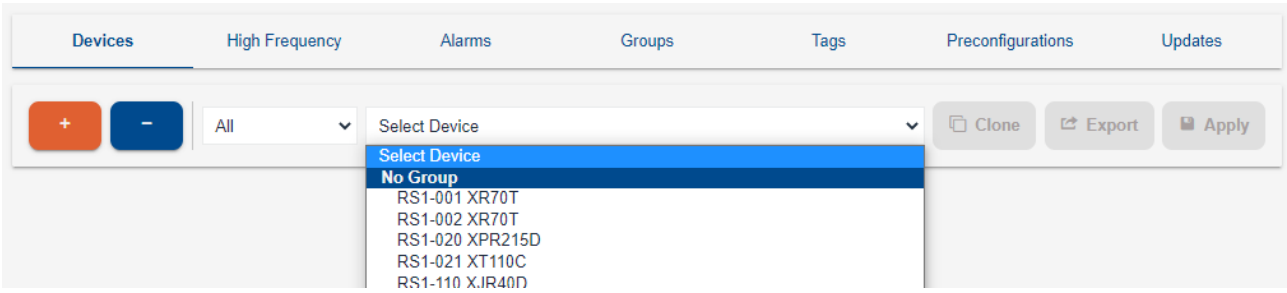
By clicking on the “Advanced Filter” button, the user can finally limit the alarms to be displayed by defining criteria for displaying only those alarms of particular interest.

The “Delete” button at acquisitions stopped, allows the deletion of the entire alarm list

3.3.2.4 SETTINGS

The configuration parameters of the tools connected to XWEB are set in this section.

3.3.2.4.1 DEVICES

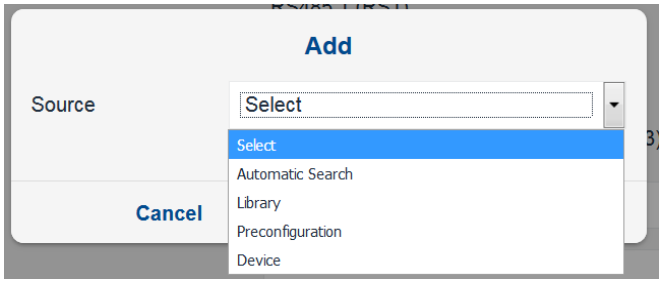


Here you can configure the XWEB parameters for the tool. In this page you can also add or remove tools from the XWEB configuration.

3.3.2.4.1.1 ADD

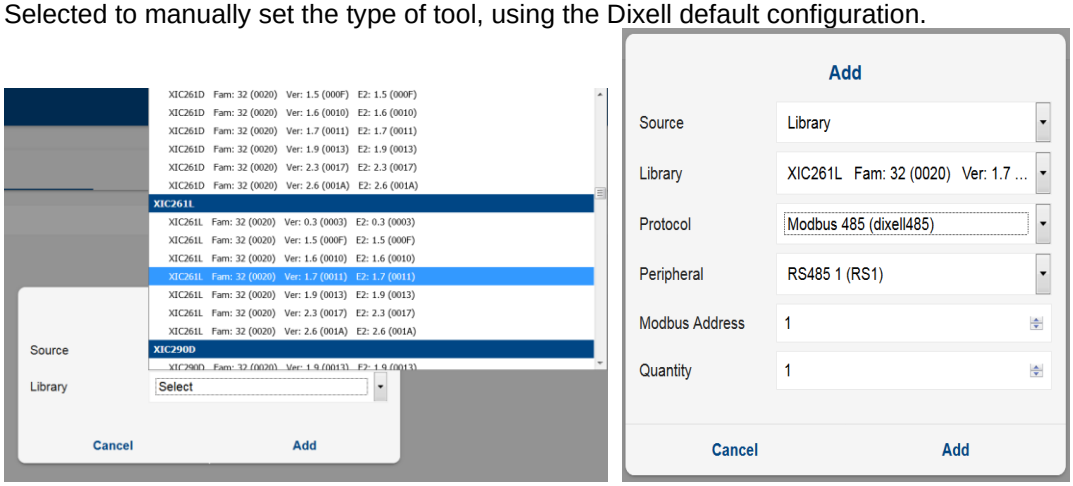
By pressing the **ADD key**, the user chooses to add a new tool to the XWEB device network.

The options available are:



1. Library

Selected to manually set the type of tool, using the Dixell default configuration.



The user must manually set

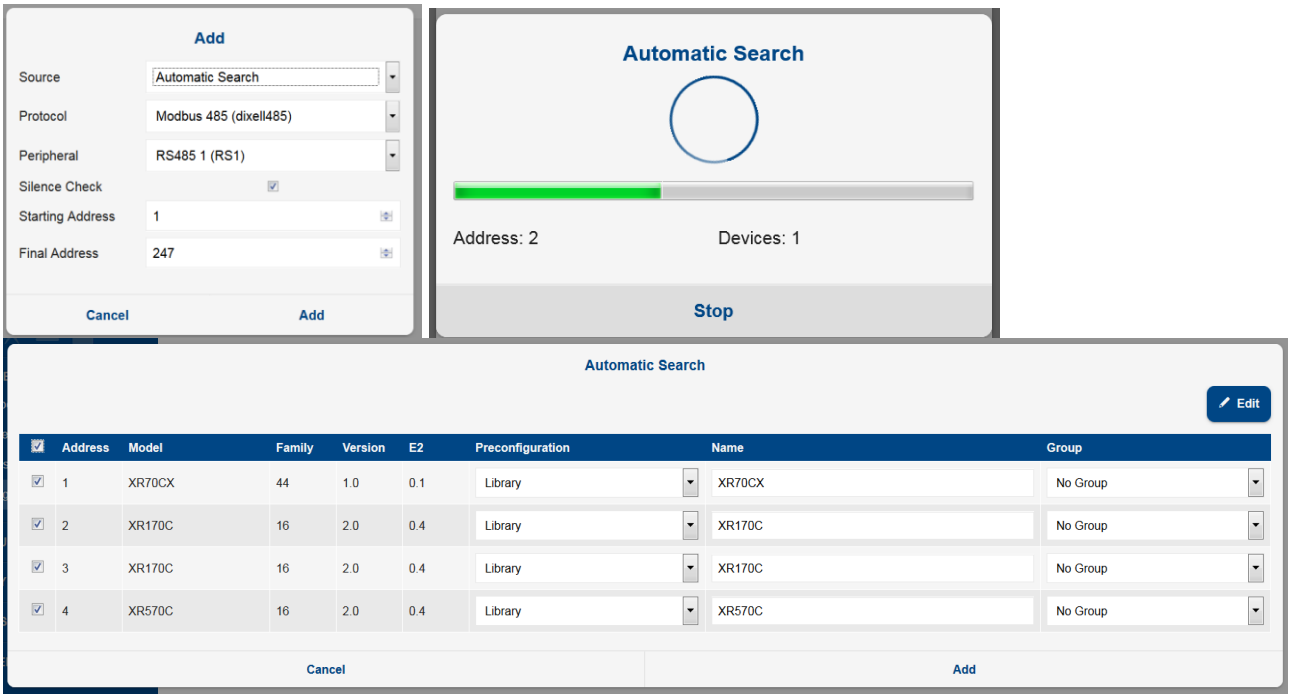
- Library name
- Protocol
  - **Modbus 485 (dixell485)**: for wired networks (no wireless)
  - **Modbus 485 iCool (dixell485-icool)**: for wireless networks with the use of iCOOL modules
  - **Modbus ASCII (mdb_ASCII)**: for ASCII modbus devices
  - **Modbus TCP/IP (mb485tcpip):** for modbus-485 devices connected on gateway tcp/ip
  - **Modbus 485 over TCP/IP (mbtcpip)**: for modbus devices on tcpip
- Peripheral
  - XWEB 300D makes it possible to manage 1 serial line that can route up to 247 devices.
  - XWEB 500D makes it possible to manage 2 serial lines that can route up to 247 devices.
  - XWEB 1000D makes it possible to manage 4 serial lines that can route up to 247 devices.
  - XWEB5000 two lines and each line can route a maximum of 247 devices.
- Modbus Address
  - Modbus address to which the tool must respond
- Quantity
  - number of tools with the same characteristics to add to the tool network configuration

2. Preconfiguration

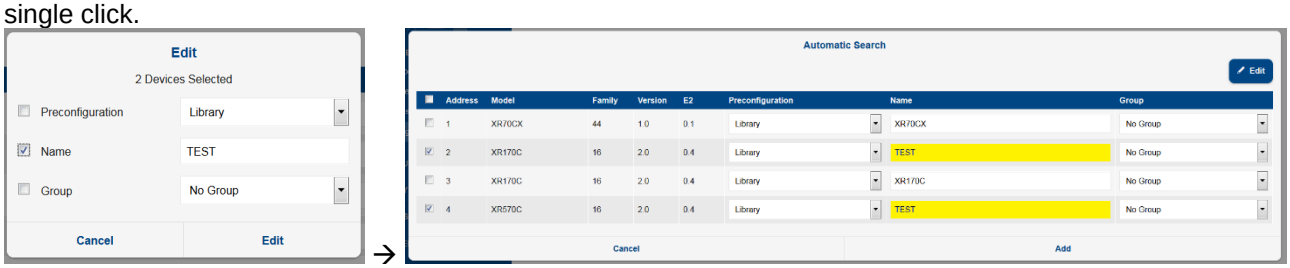
   You choose to manually set the tool, using a customised configuration and previously saved in the system from Devices→Export.

3. Automatic Search

You choose the automatic search to set devices with unknown Modbus address.

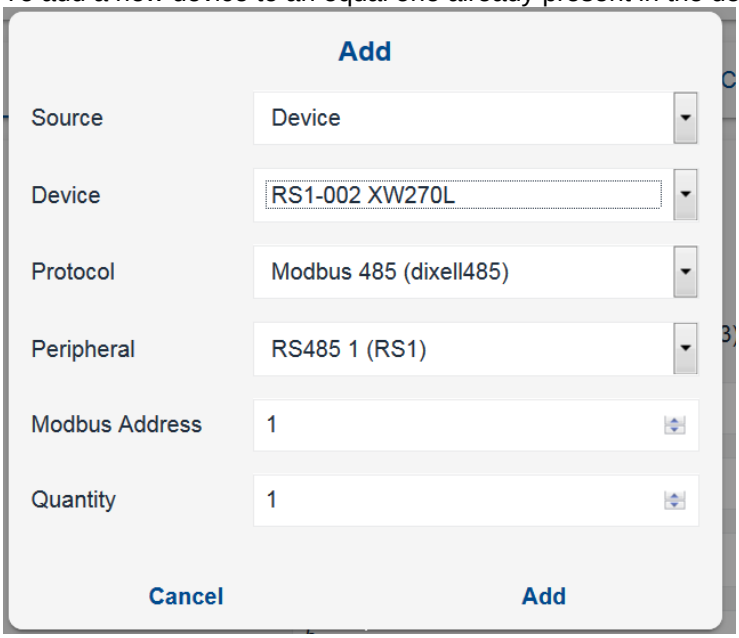


The EDIT key allows setting the preconfiguration/name/group, the configuration of selected devices in a single click.



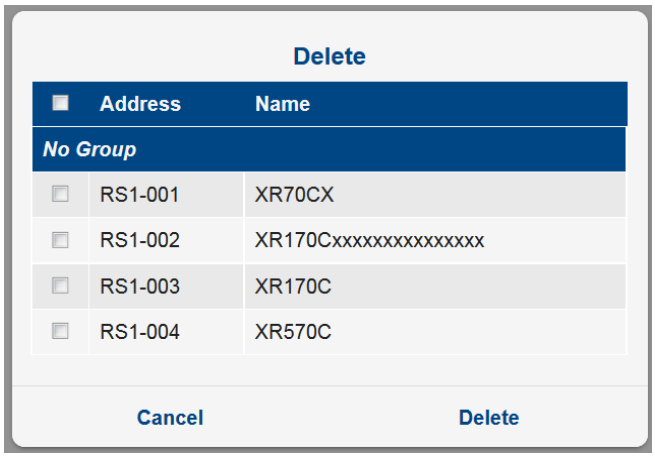
4. Device

To add a new device to an equal one already present in the device configuration.



3.3.2.4.1.2 DELETE

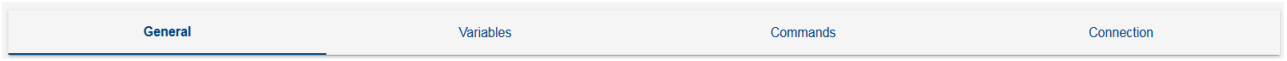
By pressing the **Delete key**, the user chooses to remove an already configured tool from the XWEB device network.



You can remove the configuration of the selected tools. The removal is permanent and cannot be subsequently cancelled: please be careful when removing the devices and you are advised to always make a backup/preconfiguration for subsequent retrieval, if necessary.

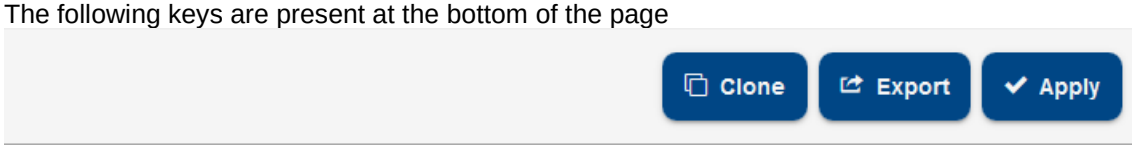
3.3.2.4.1.3 DEVICE SELECTION

By **selecting the tool** from the combobox, its configuration parameters are displayed.
When the selection is made, the page updates and is divided into sections



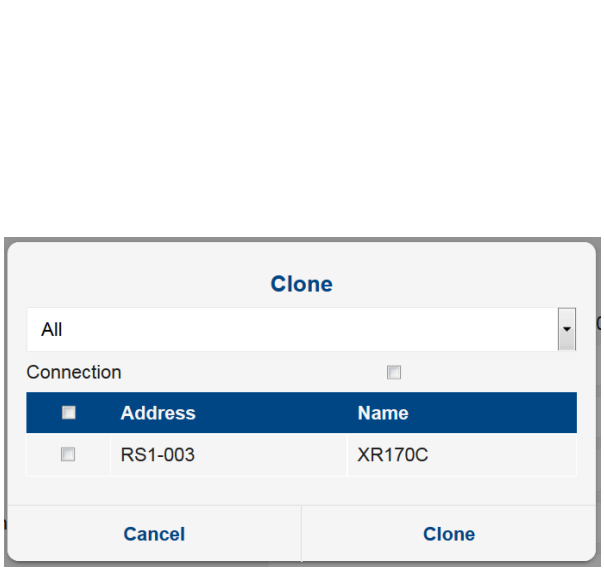
Each of these sections includes a part of the parameters necessary for the operation of the individual device.

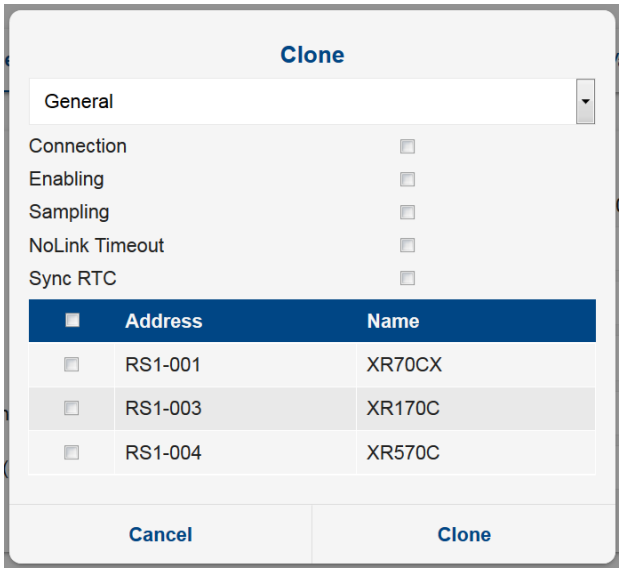
The following keys are present at the bottom of the page



3.3.2.4.1.3.1 CLONE

To clone the configuration parameters between tools.





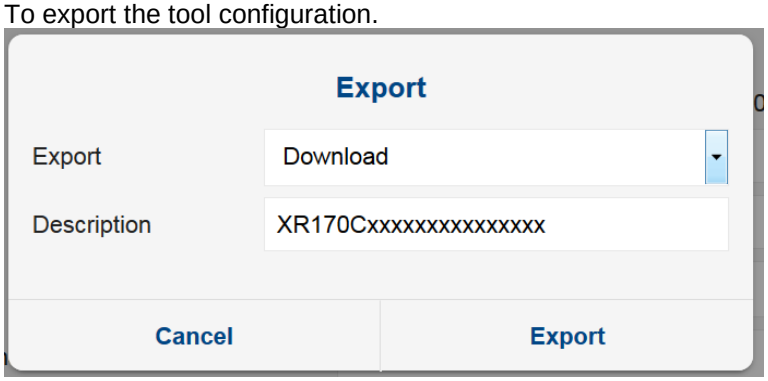
There are two possible options:

- "All": applicable only to compatible devices. For a copy of all device parameters.
- "General": applicable to all devices. For a copy of parameters only.

Select the devices to which you wish to apply the copy of configuration parameters on the network and click OK. The 'name', 'sampling', 'no-link time out' and 'clock syncro' parameters, at this point, are all duplicated alongside all descriptions of the variables and their display parameters.

3.3.2.4.1.3.2 EXPORT

To export the tool configuration.



The following options are available:

- System

Saves the configuration for the tool in the XWEB memory. The configuration thus produced is subsequently available from the Devices→Settings→Preconfigurations menu.

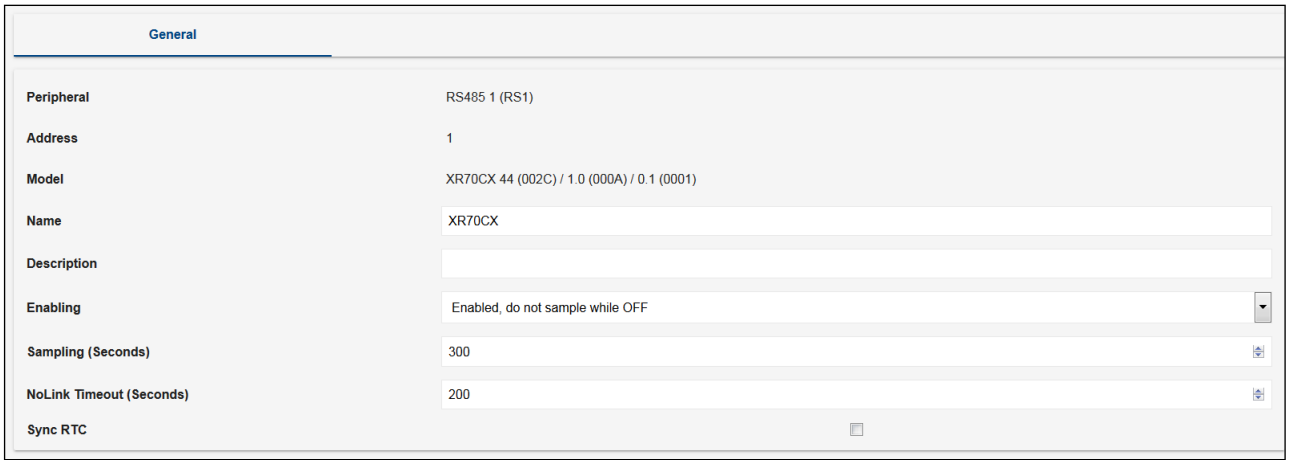
- Download

To save the tool configuration through computer memory, from the browser.

3.3.2.4.1.3.3 APPLY

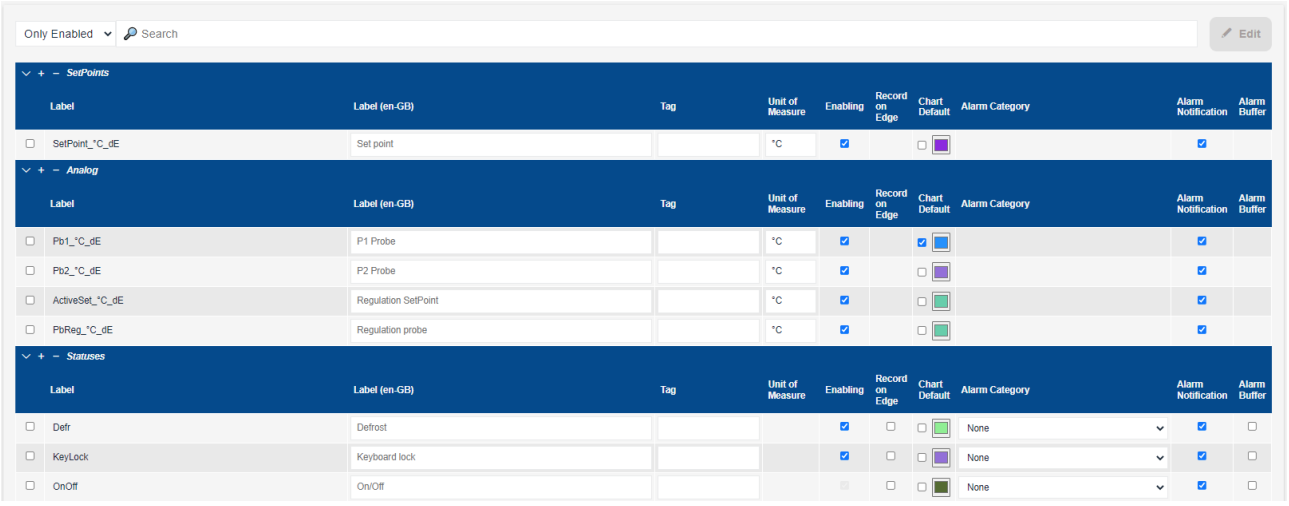
To make the configuration changes operational. The operation has immediate effect.

3.3.2.4.1.3.4 GENERAL



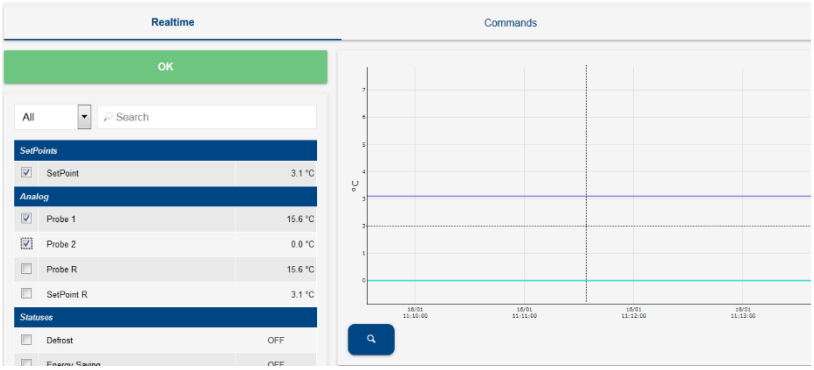
- **Peripheral**: communication channel (e.g. serial port)
- **Address**: Modbus address
- **Model**: for each model there is a specific library/driver
- **Name**: name
- **Description**: description
- **Enabling**: enabling status
- **Sampling**: recording interval in permanent memory of the configured variables (in seconds)
- **No Link Timeout**: maximum time of failed communication with device before the no-link alarm (in seconds)
- **Sync RTC**: enabling to clock synchronisation (where available) with XWEB. The update operation is automatic.

3.3.2.4.1.3.5 VARIABLES

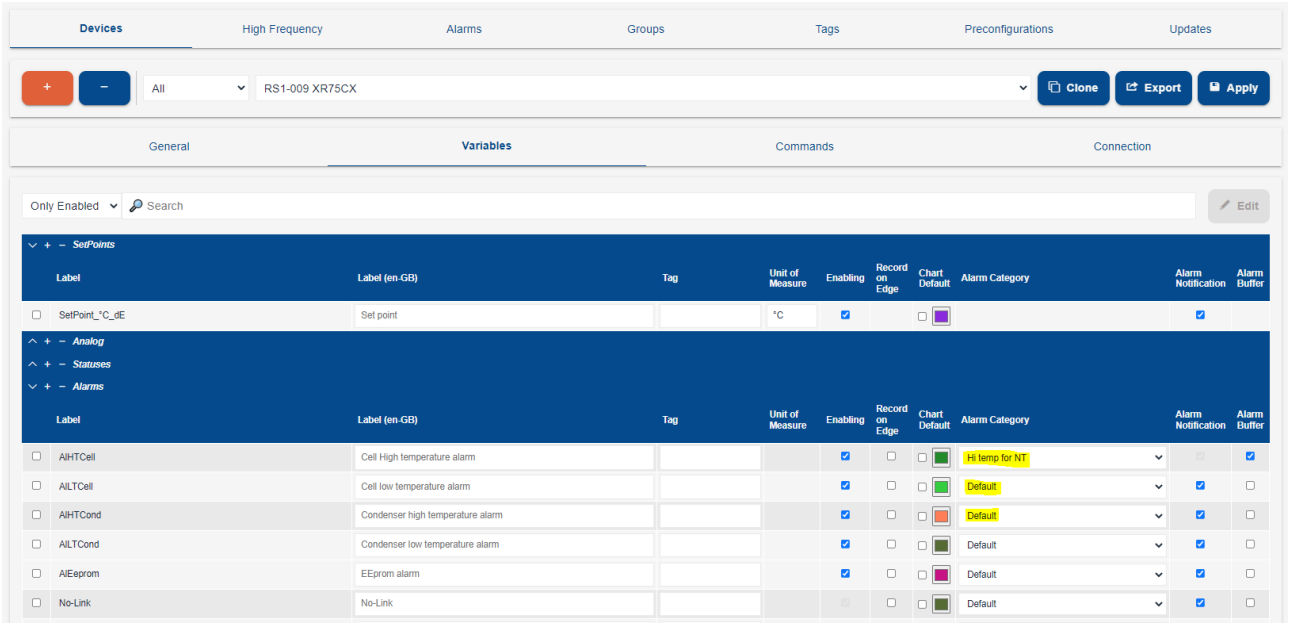


On this page the user can set the description (***Label*** field) as variable, i.e. the string with which the variable appears in the other XWEB windows. The description string is in the original language and this allows customising the text for each language with which the system is accessed. For example, “Probe 1” (default string) can be set to “Sonda 1” for Italian users and “Sonde 1” for German users; to configure the string per language, the administrator must access the system with the language to be customised.

TAG is used to select a description defined in the dictionary loaded from the TAGS menu. This optional description can be used to identify the logical function of the variable. The XWEB API allows this value to be extracted.
Unit of Measure is used to enter or change the unit of measure.
Enabling indicates to the system whether the variable must be read or not by the tool; the enabling of the variable must be limited as much as possible since the higher the number of variables read by XWEB, the lower will their update speed be.
Record on edge (only available for digital type variables) indicates to the system to sample at threshold change or in time (default).
Chart Default: this parameter defines whether the variable is enabled or not and its default colour for the device's charting. For example:



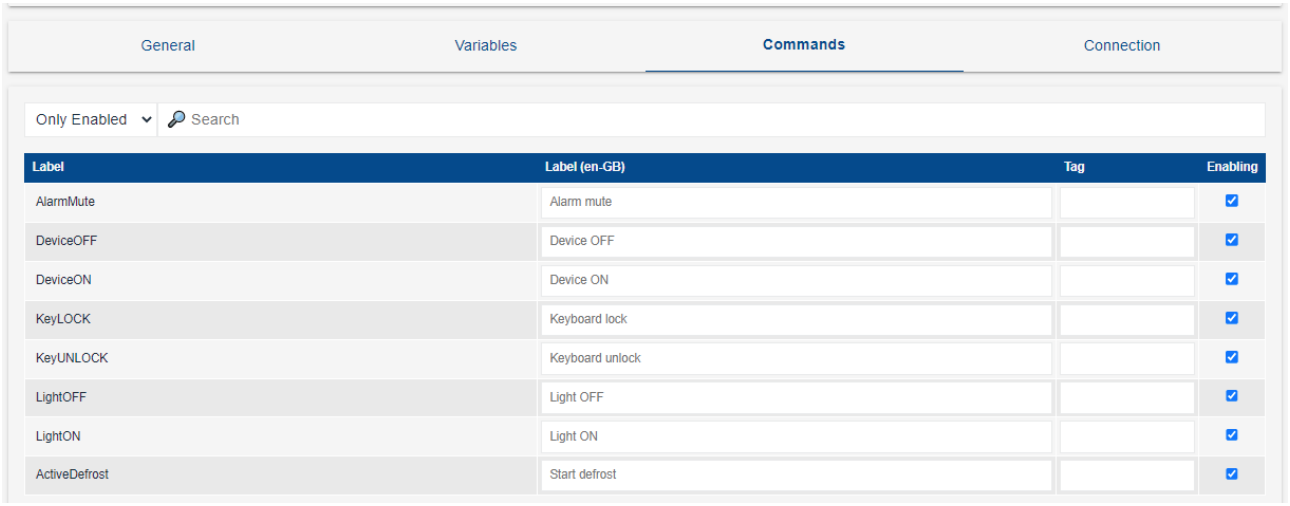
Alarm Category: this parameter, only settable for the digital variables, defines the notification enabling as alarm with relay, email, sms, etc.



Alarm Notification: this parameter enables the inclusion of the values of the selected variables in the alarm email notification in order to have an overview of the instrument situation at the time of the alarm.

Alarm Buffer: this selection lets you attach the High Frequency (HF) variable data record in CSV format to the alarm notification email.

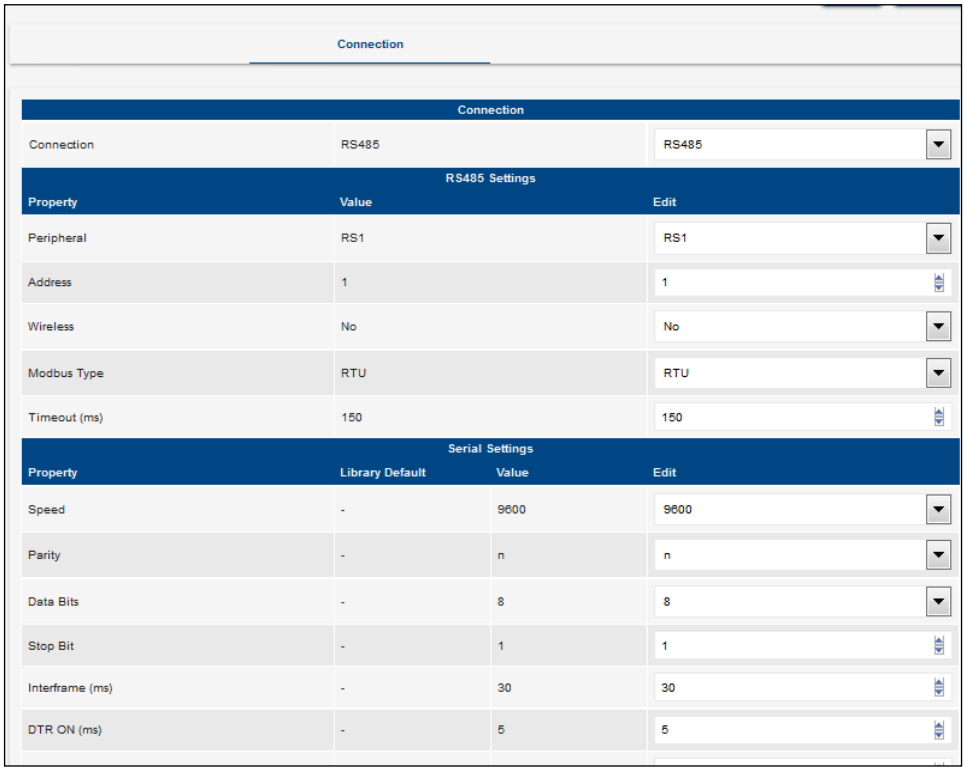
3.3.2.4.1.3.6 COMMANDS



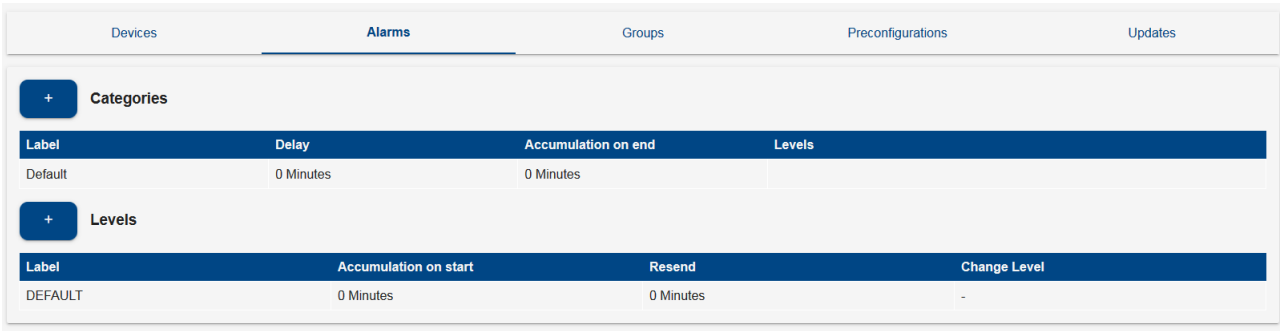
This page selects the list of available commands for the tool. The description can be customised and is in original language, i.e. valid for all users accessing the xweb interface with the same language. The command becomes available on the tool page when “Enabling” is ticked A description by TAGs is available as for “Variables”.

3.3.2.4.1.3.7 CONNECTION

The XWEB connection parameters with the tool are defined in this page. These parameters are defined in the tool library. Only to be changed if not identical with tool configuration. **Incorrect configuration causes the instrument to be disconnected from XWEB**.
Changing these parameters does not delete the historical data of the tool itself.



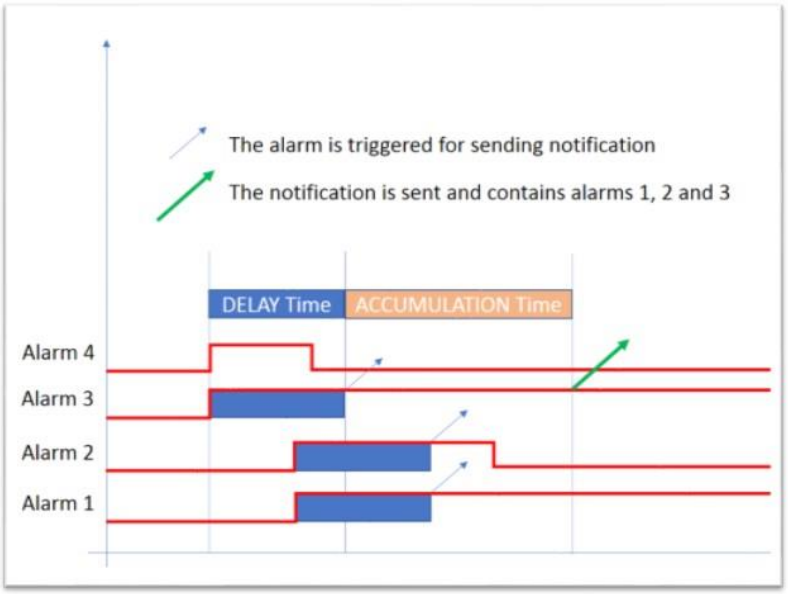
3.3.2.4.2 ALARMS



In this section you configure the device alarm variables and how they make the XWEB system react when they are detected. The XWEB uses this information to detect the alarms from the controllers and notify their status to the users in the book.

3.3.2.4.2.1 PRINCIPLES OF OPERATION

For the alarms to be considered as such, they must be part of an alarm category. Once the alarm has been detected, the system confirms this after a certain period of time (see Delay parameter, "alarm category parameters"). Upon alarm confirmation, the first level users are also notified. If the alarm persists, other notifications may be sent to the same recipients (see re-send time, "alarm level parameters"). If the alarm persists beyond the maximum time permitted to the level (see re-send life time, level parameters), the level shifts, sending the subsequent notifications to the recipients of the subsequent level. The alarm recovery is also normally notified: there are many parameters that can be used to customise notifications according to your requirements; these will be individually described in the following pages.



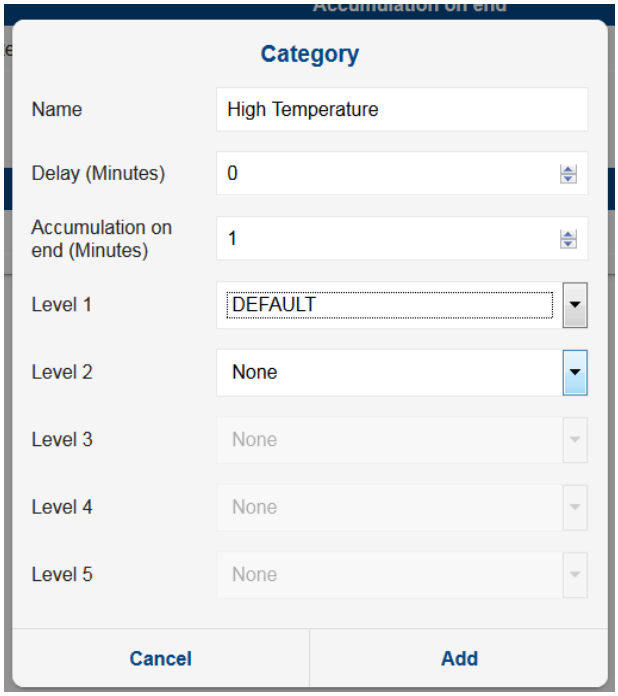
in the image example above alarm # 4 resets before the "Delay" time and therefore no notification is generated for it. Alarm # 2 resets before the Accumulation time but its notification is still queued.

3.3.2.4.2.2 CATEGORIES

The Alarm-Categories is a list of types of alarm, with the purpose of grouping the alarms that must be dealt with in the same manner, from a point of view concerning alarm detection and their notification.

For example, it is possible to create a category named "Temperature Alarms" or "Pressure Alarms"; and associate all alarms of this type with the above-mentioned alarm-categories.

- **Name**: identifies the category itself;
- **Delay**: stand-by time for the processing of the alarm, from when it is read by the controller network to when it is effectively considered an alarm: if the alarm is resolved before this time runs out, the source of the alarm is ignored. This parameter is useful for the delayed management of the "open door" status which comes from an I/O board: the variable is not an alarm but with the XWEB it can be used as if it were.
- **Accumulation on end**: the system sends notification when the alarm is reset. However, the system waits for the resetting of other alarms for the period indicated in this parameter, before sending a cumulative notification. This therefore reduces the notification line's task; relieving it of any critical conditions such as is the case when the line is slow. This parameter works similarly to the "Accumulation" time present amongst the "alarm notification parameters": However, in the case of the alarm-categories, the time is divided between all of the "Alarm Level Settings";
- **Levels**: notification levels. The order is important: the first level to be notified (entry level) is that with the lowest number (“Setting 1”). The up-scaling of the notification level occurs based on the parameters set in "Settings".



3.3.2.4.2.3 LEVELS

The alarm notification parameters identify the notification levels. Each level includes the users who receive the alarm notifications.

- **Name**: identifies the notification level
- **Site Manager Priority**: priority for Emerson Site Manager
- **Notify on Start**: enabled for the sending of new alarm notifications
- **Notify on End**: enabled for the sending of alarm-over notifications
- **Send Single Notification**: the enabling of this parameter invalidates the accumulation time. If the system detects two alarms simultaneously, the users will receive two separate notifications
- **Accumulation at start-up Time**: the time during which the system awaits the detection of new alarms for the sending of a cumulative notification
- **Re-send Time**: interval between notifications of persisting alarms. For example, if a new alarm message is sent but ignored or lost, the system notifies the same message again after the indicated time. This

parameter is critical to "level" climb logic: if this parameter value is 0 after the first notification, the level is scaled upwards

- **Level change time**: maximum time within which the continuously active alarm is notified of the current level rules. After this time, the level is up-scaled to the next level indicated in the alarm-category.

If the alarm is still active after the "Resend" time (after the first notification), XWEB will send another email like the first as a reminder of a pending active alarm. This cycle will continue until the alarm is reset OR if a level change occurs.

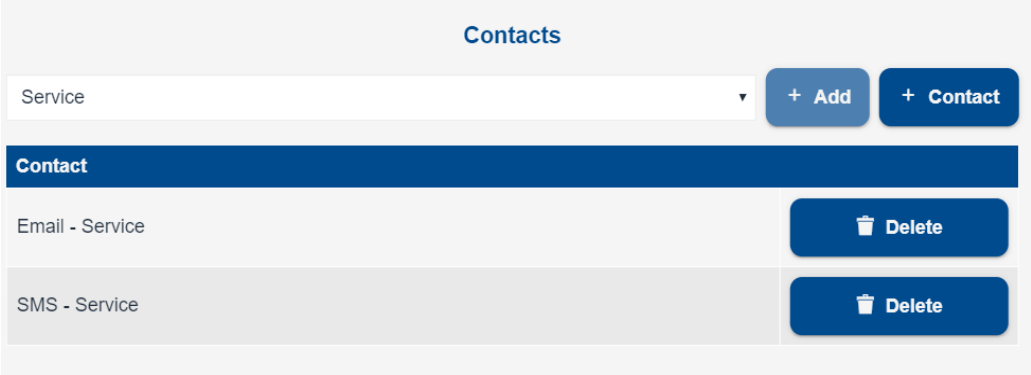
If the alarm is still active after the level change time (which must always be longer than the "Resend" time), XWEB will move the Category to the next level, notifying all resources of this level. The return time is now reconfigured on these level settings. In case Resend is set to 0, the Change level function is disabled.

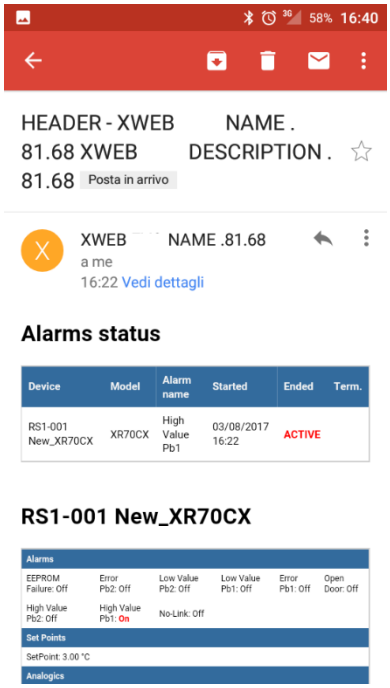
Alarms in the same category may only send a cumulative e-mail when they end in the time period configured in “Accumulation at the end”. For example. A group of No-link alarms that all end in 2 minutes could only generate an email. As for the Accumulation at the start “

- **Notification services**:
    - AUX2/AUX3: the alarm notification occurs by means of the local relay, physically present on rear of the XWEB machine. The configuration parameters of these relays are available on page “SYSTEM→SETTINGS→INPUTS/OUTPUTS”. Caution: on models 500D the entries AUX2/AUX3 are identified with names AUX1 and AUX2. For XWEB300D the system relay is called SYSAUX
    - RAUX1/ RAUX2/ RAUX3/RAUX4: the alarm notification occurs by means of the remote relay physically present on an XJR40D controller connected to the Modbus network. The relay parameters of this controller are available on page “Menu→XWEB SYSTEM SETUP→System Setup→AUX Outputs”

- **Contacts**:

list of alarm notification e-mails/sms





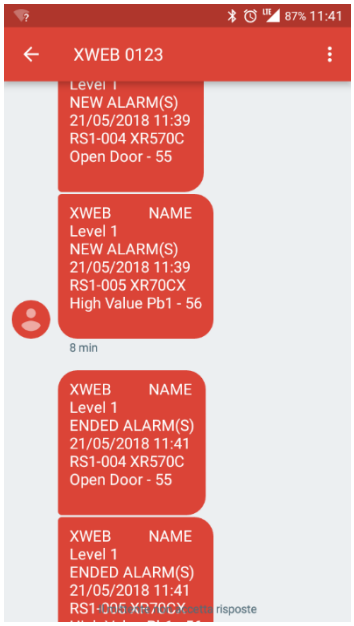
The HTML part is the format rendered by the browser. The text is better suited to automatic parser and is as follows.

```
Content-Type: text/plain; charset=”UTF-8”
Content-Transfer-Encoding: 8bit

Alarm Report: XWEB Xweb 34system name|XWEB 34system description
START|18/10/2013 17:26|RS1-007 New_XR170Cxxxxx|Low Value Pb1
```

The email format can be analysed by automatic robots examining the section "text/plain".
Below is an example of an alarm email:

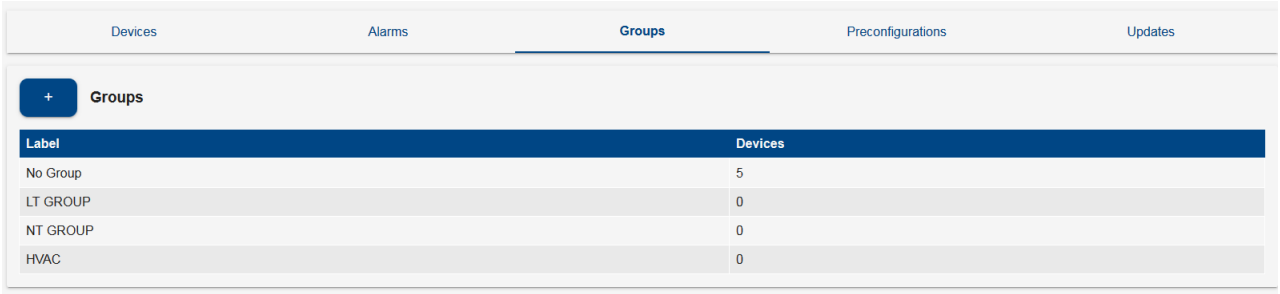
```
Thread-Topic: Alarm(s) Notification - Xweb     XWEB
Content-Type: multipart/alternative; boundary="----_=_NextPart_001_00dbe1c4.5236b

This is a multi-part message in MIME format.

------_=_NextPart_001_00dbe1c4.5236b6ac
Content-Type: text/plain

Report Allarmi: XWEBEVO Xweb     |XWEB      START|13/09/2013 17:34|RS1-040
New_XC1008D|No-Link
Device      Model Alarm name Started     Ended Term.
RS1-040 New_XC1008D   XC1008D     No-Link     13/09/2013 17:34


------_=_NextPart_001_00dbe1c4.5236b6ac
Content-Type: text/html

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN" "http://www.w3.org/TR/xhtml11/D
```

7. SMS: the alarm notification is performed by means of the sending of an SMS message

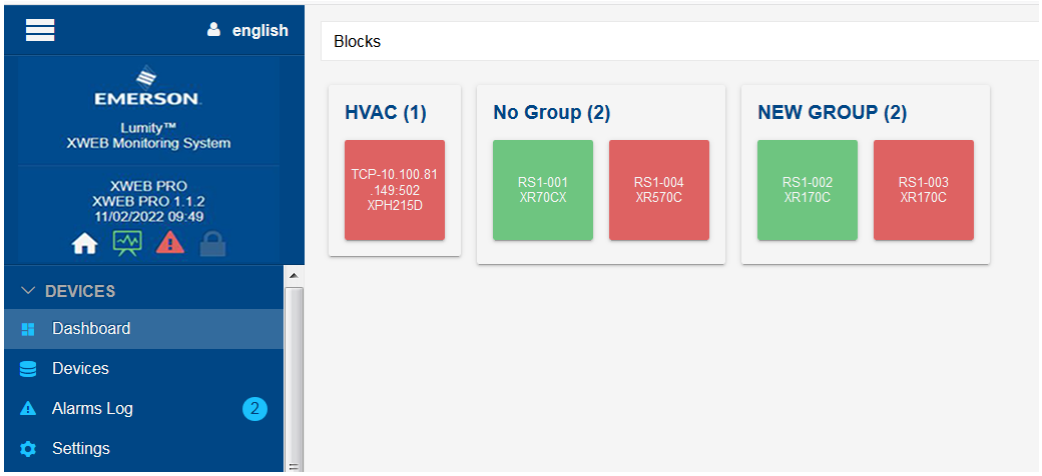


- **Email/FAX header**: customised text entered in the object
- **Calendar**: filter calendar on alarm notifications; the calendar identifies the period during which the notification messages will not be issued. The calendars are set from TOOLS→CALENDAR.

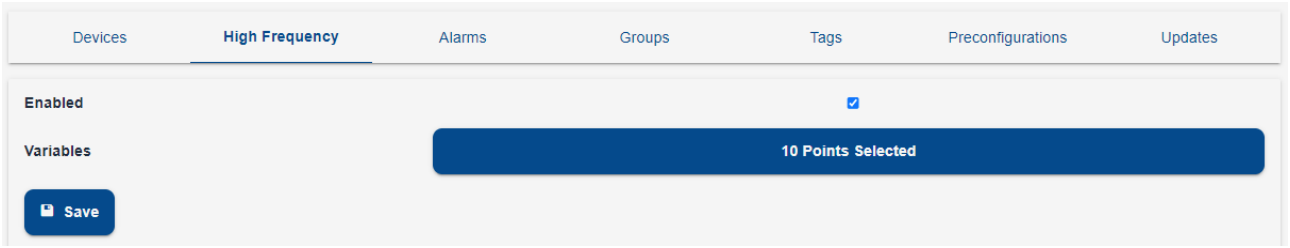
3.3.2.4.3 GROUPS



The user can assign controller devices to groups so as to order the configuration according to a functional diagram or physical positioning within the supermarket.
The separate representation of the groups can be seen in the DEVICES/DASHBOARD page.



3.3.2.4.4 HIGH FREQUENCY POLLING



XWEB provides a function for updating and recording specific variables in High Frequency. This section configures those variables that will be part of the fastest sampling variables in the data update cycle. The speed of their sampling is automatically decided by XWEB, which sets the shortest possible time depending on the number of devices in configuration and their model. XWEB is only able to determine the minimum time if the entire tool network is wired and configured. This makes an XWEB perform a communication test before it can be made operational.

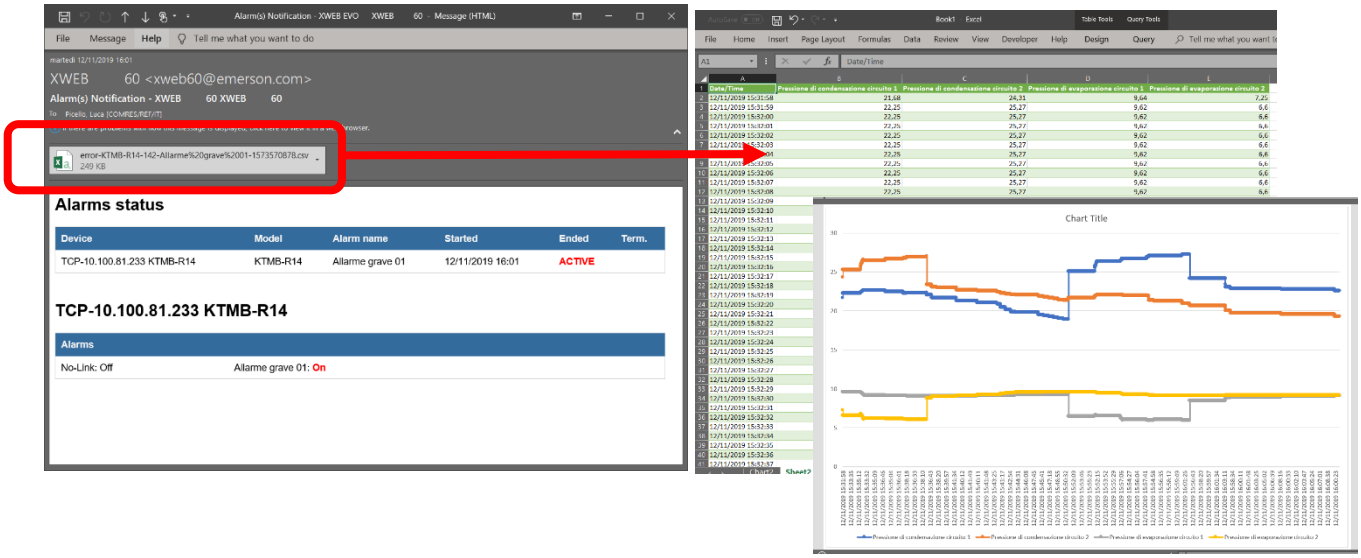
The minimum sampling time is 2 seconds. The maximum number of variables that can be handled as “high frequency” is 10.

The total polling time, i.e. the time for refreshing the value of the lowest priority variables, is not bound and can be controlled with active acquisitions from the SYSTEM / INFO menu.

With the acquisitions active, xweb will be able to sample and render a graph like the following where the increased frequency of some variables (reduced sampling times) in the dashed area is evident.

The storage of these values, and thus the possibility of graphing them, is limited to about 30 minutes. The data are stored in volatile memory, i.e. they are lost if xweb is restarted.

In the event of an alarm, this memory can also be sent as data in text format (CSV) as an attachment to the alarm notification email (Alarm Buffer function).



3.3.2.4.5 TAGS

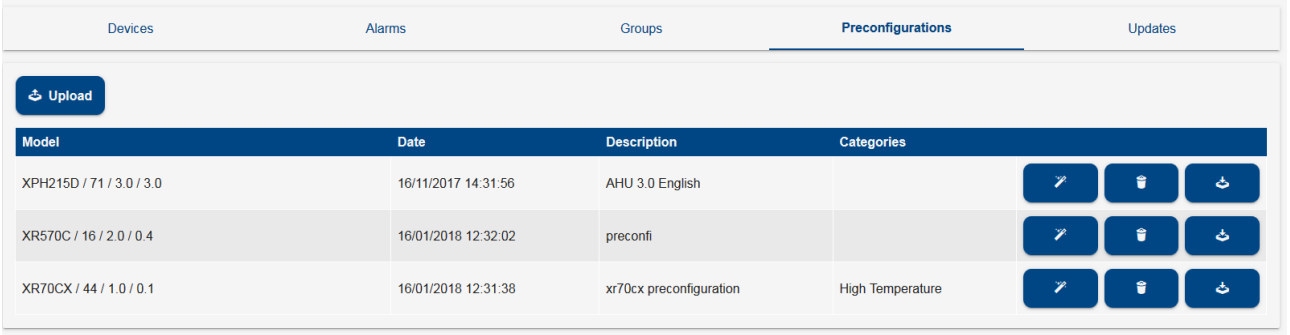
This functionality allows you to add an additional user-defined description (tag) to device variables and commands (not parameters). Tags can be useful to identify specific variables and commands or to identify a logical function. More generally, to identify and treat data downloaded via API in a homogeneous manner.
The user must select tags from a default list that can be loaded into XWEB.

3.3.2.5 TAG DICTIONARY

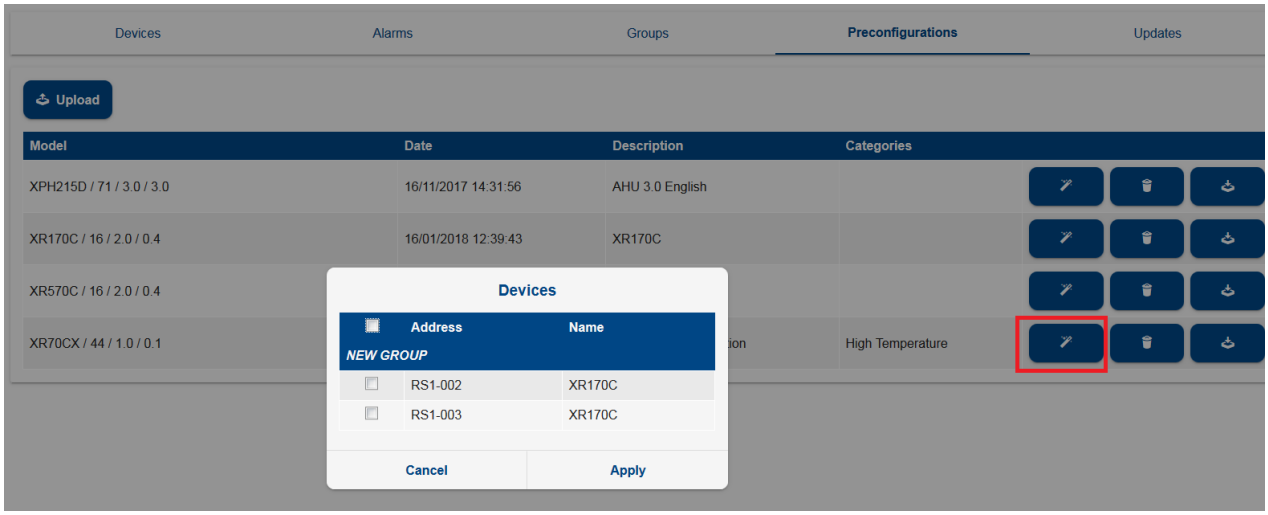
The tag dictionary is a file created and managed by the user that contains a list of tags. A dictionary file can be loaded onto an XWEB system, so the tags listed in the file will be available for use on that system. It is possible to load the same dictionary file in several XWEBs to have a common tag list or to use different tag dictionaries on different systems.
The XWEB system supports many formats for defining a tag dictionary, and the use of one or the other is transparent to the system: when the dictionary is loaded into the XWEB, the system will analyse it to extract the information useful to it and skip all other information. Duplicate tags are invalid, so only one copy of a tag will be stored.

A tag must meet the following requirements:
• Only contain lower case Latin letters, upper case Latin letters, numerals and the underscore character.
• The length of the text must be between 1 character and 64 characters.
• A tag makes a distinction between upper and lower case. “Probe” and “PROBE” are considered two different tags.

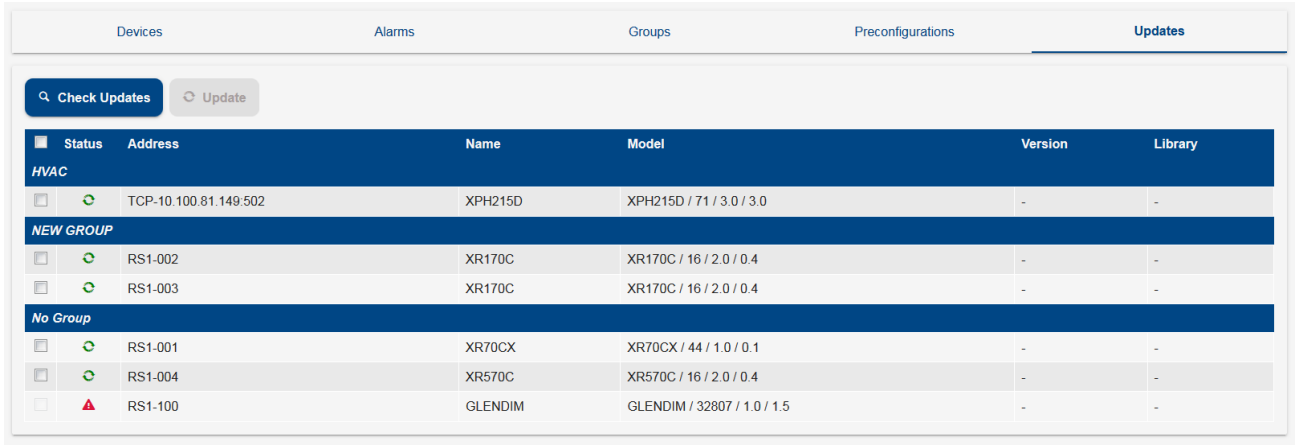
3.3.2.5.1 PRECONFIGURATIONS



This section displays the preconfigurations in the XWEB memory.
The preconfigurations can be applied to tools already at setup by pressing on the “magic wand” key: the system will ask to which compatible tools the preconfiguration is to be applied.



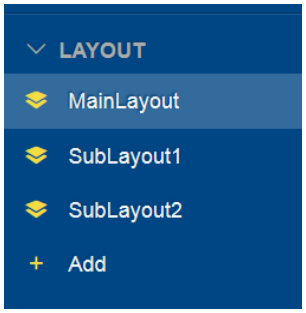
3.3.2.5.2 UPDATES



From this window you can adapt the device configuration with possible library updates. If the new library is compatible, the update can be applied without having to loose any log data and without having to redo any configuration; if the new library is incompatible, devices that cannot be updated are indicated with the red triangle. If the user needs to update those devices, he/she must remove and then add again the device from the xweb configuration and reconfigure it completely.
The icon is applied to all devices at setup, even if an update has not been installed.

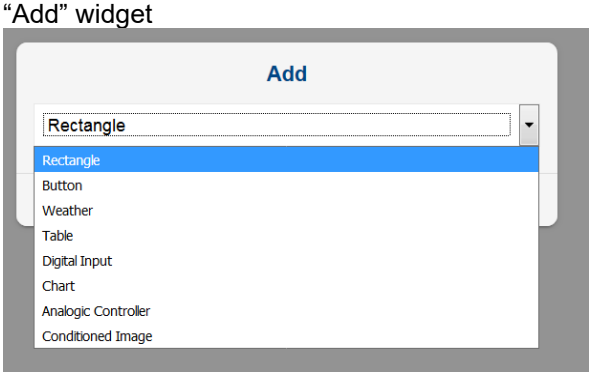
3.3.3 LAYOUT

The Layout tool allows the creation of customised pages with graphic widgets.
Each customised page takes the name of “layout” and the pages can be added to the system by pressing “Add”.

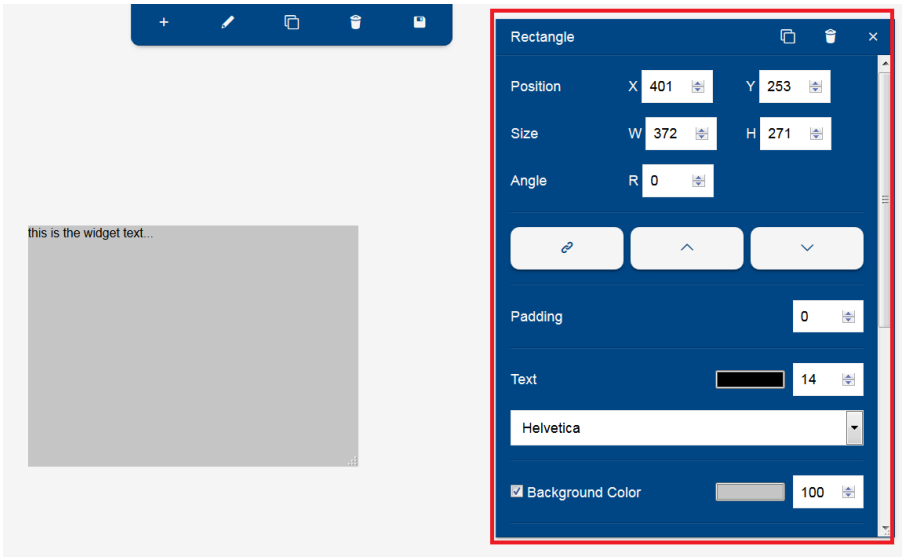


The user must then edit the page by pressing  , which enables the user to perform the following operations:

a. “Add” widget

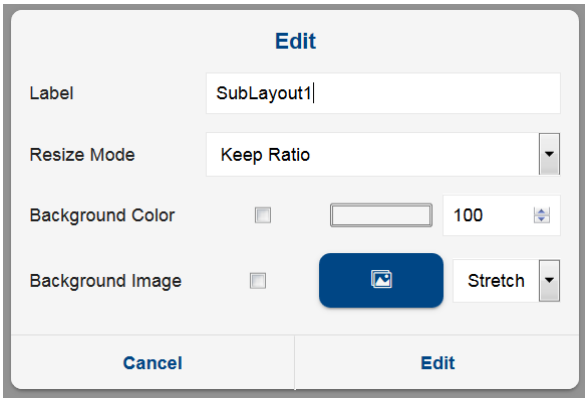


each selected widget shows a set of attributes on its palette that the user can define. The palette is a modal window and can be moved; the palette is only displayed during the layout modification procedure.



← example of palette

b. “Edit”



Label: text of the page name
Resize Mode:
Background Colour:
- enabling to colour rendering
- background colour
- transparency percentage

Background Image:
- enabling to colour rendering

- image
- resizing

c. “Clone”. Creates an identical copy of the current page

d. “Delete”. Deletes the current page

e. “Save”. Saves the current page

accessible by pressing “Menu”. The procedure requires the user to hold down the left key of the mouse over the desired widget, i.e. "image", and to then drag it onto the work area for positioning.
Once the widget is in place, proceed with dimensioning and configuration. The latter must always be performed by pressing the "wrench" key.

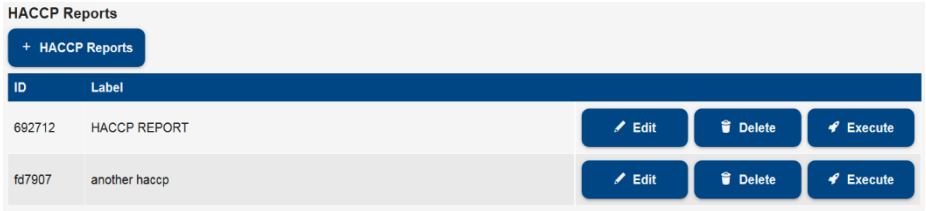
Note: if you upload an image with the same name as an image already existing in the system, the new image will overwrite the previous one (if the upload is successful, of course)

3.3.4 ANALYSIS

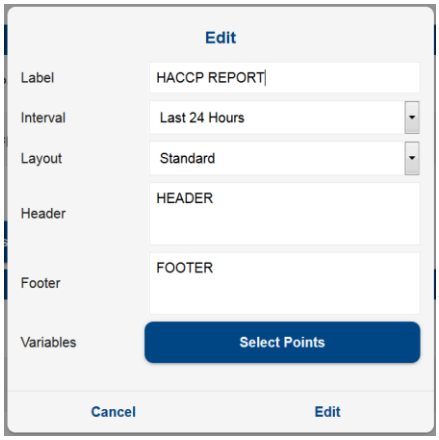
3.3.4.1 REPORTS

Here you can configure, and retrieve, three different types of reports of the data recorded in XWEB.

3.3.4.1.1 HACCP REPORTS



The “+ HACCP Reports” key is used to add a haccp configuration to the list.



specify the fields:

- Label: report name
- Interval:
  - snapshot; to export the current value data

HACCP printout

XWEB NAME .81.68 - HACCP printout page:1/2
HEADER
date: 25.09.17 time: 11:24

RS1-001 XR70CX	
Probe 1	16.7 °C
No-Link	0
Probe 2	0.0 °C
Generic Digital Input	1
Alarm	0
Fan	1
Probe 3	0.0 °C
Cooling	0
On	1
Defrost	0
Fast Freezing	0
Keyboard	0
Energy Saving	0
Probe R	16.7 °C
Error Pb1	0
Error Pb2	0
High Value Pb1	0
Low Value Pb1	0
High Value Pb2	0
Low Value Pb2	0
SetPoint R	3.1 °C
Open Door	0
EEPROM Failure	0
SetPoint	3.1 °C
RS1-002 XR170Cxxxxxxxxxxxxxxx	
Room (Pb1)	15.9 °C
Door Switch	0
No-Link	0
Generic Alarm	0
Evaporator (Pb2	-5.7 °C
Defrost	0
Alarm	0
Fan	1
Cooling	0
On	1
Defrost	0
Keyboard	0
Energy Saving	0
Low Value Pb1	0
High Value Pb1	0
Error Pb1	0
Error Pb2	0
Set Point	3.0 °C
Error Pb3	- - -
Open Door	0
External Alarm	0

FOOTER

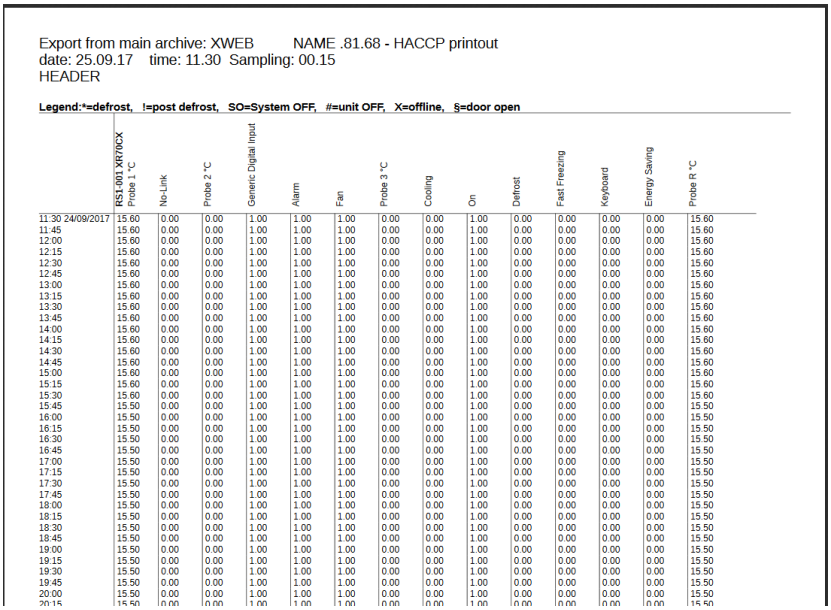
- Today/Yesterday/Last 24 Hours/Last 48 Hours/Last Week/Last Month to export log data.
  In this mode you can export data in two formats (Layout):
  - Standard; the data is tabulated with one row per variable

Export from main archive: XWEB NAME .81.68 - HACCP printout
date: 25.09.17 time: 11.27 Sampling: 04.00
HEADER

Legend:*=defrost, !=post defrost, SO=System OFF, #=unit OFF, X=offline, §=door open

TIME TABLE:		**24/09 15:27**	**24/09 19:27**	**24/09 23:27**	**24/09 03:27**	**25/09 07:27**	**25/09 11:27**
RS1-001 XR70CX							
Probe 1	°C	15.60	15.51	15.45	15.39	15.18	15.75
No-Link		0.00	0.00	0.00	0.00	0.00	0.00
Probe 2	°C	0.00	0.00	0.00	0.00	0.00	0.00
Generic Digital Input		1.00	1.00	1.00	1.00	1.00	1.00
Alarm		1.00	1.00	1.00	1.00	1.00	0.67
Fan		1.00	1.00	1.00	1.00	1.00	1.00
Probe 3	°C	0.00	0.00	0.00	0.00	0.00	0.00
Cooling		0.00	0.00	0.00	0.00	0.00	0.00
On		1.00	1.00	1.00	1.00	1.00	1.00
Defrost		0.00	0.00	0.00	0.00	0.00	0.00
Fast Freezing		0.00	0.00	0.00	0.00	0.00	0.00
Keyboard		0.00	0.00	0.00	0.00	0.00	0.00
Energy Saving		0.00	0.00	0.00	0.00	0.00	0.00
Probe R	°C	15.60	15.51	15.45	15.39	15.18	15.75
Error Pb1		0.00	0.00	0.00	0.00	0.00	0.00
Error Pb2		0.00	0.00	0.00	0.00	0.00	0.00
High Value Pb1		0.00	0.00	0.00	0.00	0.00	0.00
Low Value Pb1		0.00	0.00	0.00	0.00	0.00	0.00
High Value Pb2		0.00	0.00	0.00	0.00	0.00	0.00
Low Value Pb2		0.00	0.00	0.00	0.00	0.00	0.00
SetPoint R	°C	3.10	3.10	3.10	3.10	3.10	3.10
Open Door		0.00	0.00	0.00	0.00	0.00	0.00
EEPROM Failure		0.00	0.00	0.00	0.00	0.00	0.00
SetPoint	°C	3.10	3.10	3.10	3.10	3.10	3.10
RS1-002 XR170Cxxxxxxxxxxxxxxx							
Room (Pb1)	°C	15.90	15.90	15.90	15.90	15.90	15.90

  - Extended; for the extended format, indicate the sampling time between the points (first column); the data is tabulated in a column per variable

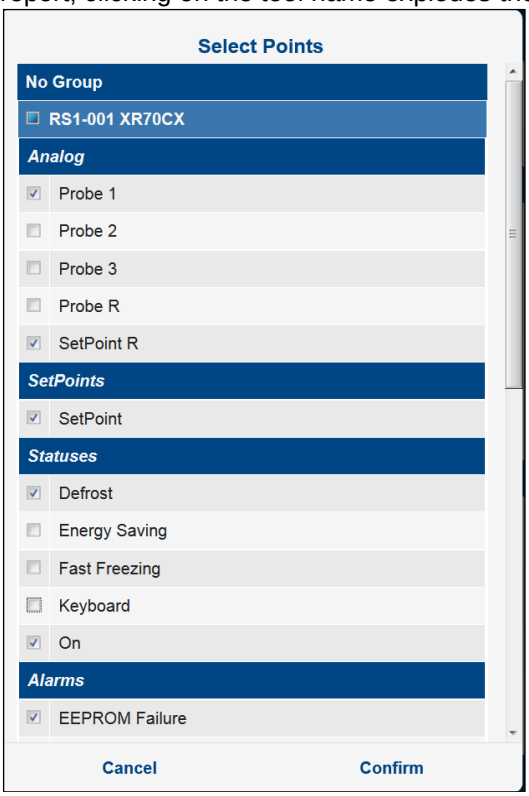


Export from main archive: XWEB NAME .81.68 - HACCP printout
date: 25.09.17 time: 11.30 Sampling: 00.15
HEADER

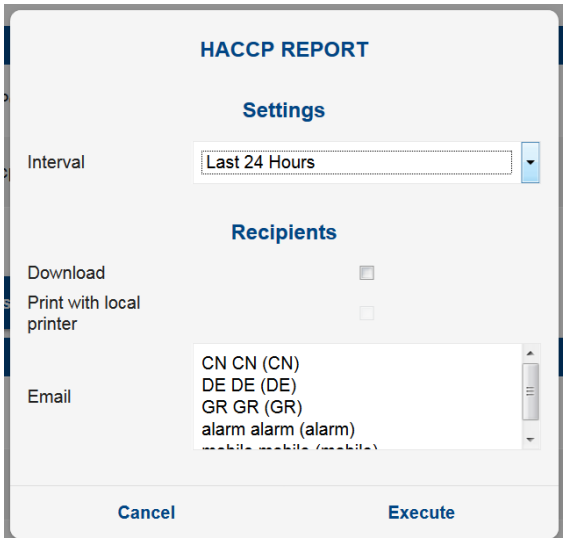
Legend:*=defrost, !=post defrost, SO=System OFF, #=unit OFF, X=offline, §=door open

	RS1-001 XR70CX Probe 1 °C	No-Link	Probe 2 °C	Generic Digital Input	Alarm	Fan	Probe 3 °C	Cooling	On	Defrost	Fast Freezing	Keyboard	Energy Saving	Probe R °C
11:30 24/09/2017	15.60	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.60
11:45	15.60	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.60
12:00	15.60	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.60
12:15	15.60	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.60
12:30	15.60	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.60
12:45	15.60	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.60
13:00	15.60	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.60
13:15	15.60	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.60
13:30	15.60	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.60
13:45	15.60	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.60
14:00	15.60	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.60
14:15	15.60	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.60
14:30	15.60	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.60
14:45	15.60	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.60
15:00	15.60	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.60
15:15	15.60	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.60
15:30	15.60	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.60
15:45	15.50	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.50
16:00	15.50	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.50
16:15	15.50	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.50
16:30	15.50	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.50
16:45	15.50	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.50
17:00	15.50	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.50
17:15	15.50	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.50
17:30	15.50	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.50
17:45	15.50	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.50
18:00	15.50	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.50
18:15	15.50	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.50
18:30	15.50	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.50
18:45	15.50	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.50
19:00	15.50	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.50
19:15	15.50	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.50
19:30	15.50	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.50
19:45	15.50	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.50
20:00	15.50	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.50
20:15	15.50	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	15.50

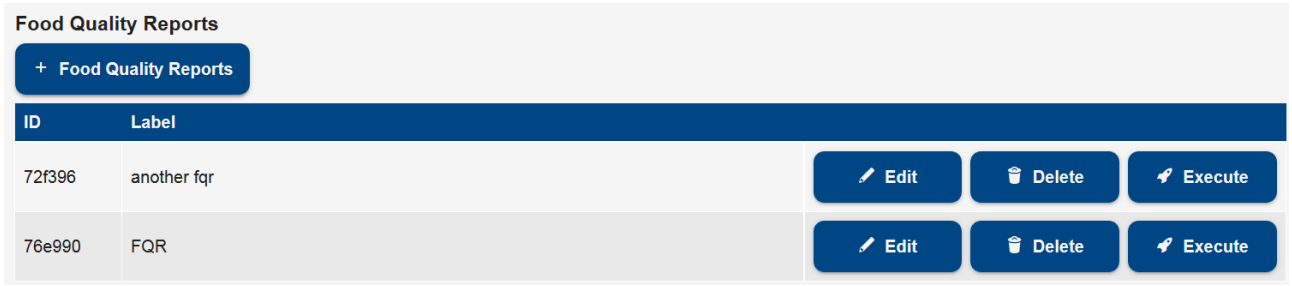
- Header/Footer: text that appears on the edges of the report
- Select Points: the key opens a window from which to select the list of variables to be included in the report; clicking on the tool name explodes the list with the complete list of variables per tool.



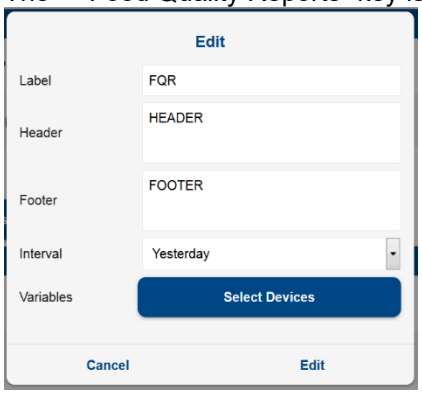
For an existing report-haccp configuration, the Edit key allows its editing.
The Delete key permanently deletes the configuration.
The Execute key allows preparing the report for immediate download, print or sending via email.



3.3.4.1.2 FOOD QUALITY REPORTS

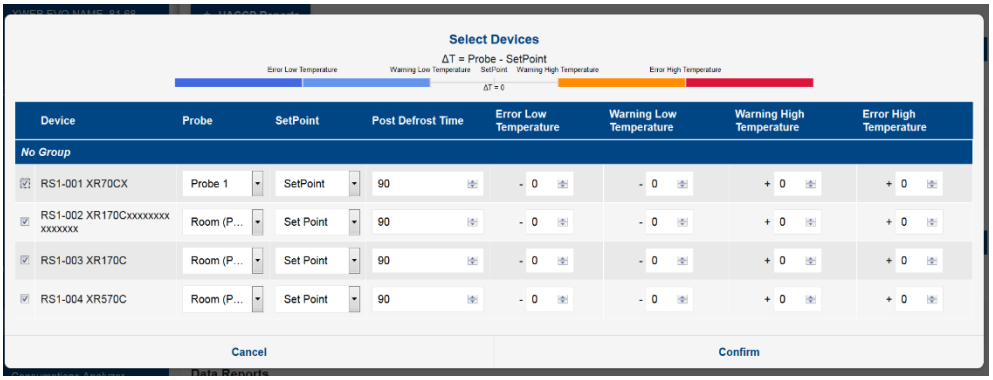


The "+ Food Quality Reports" key is used to add an FQR configuration to the list.

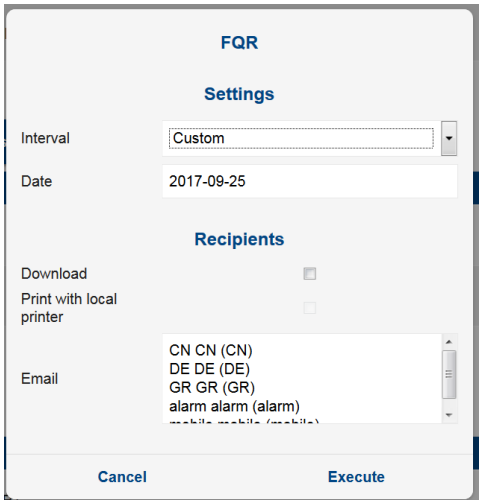


specify the fields:

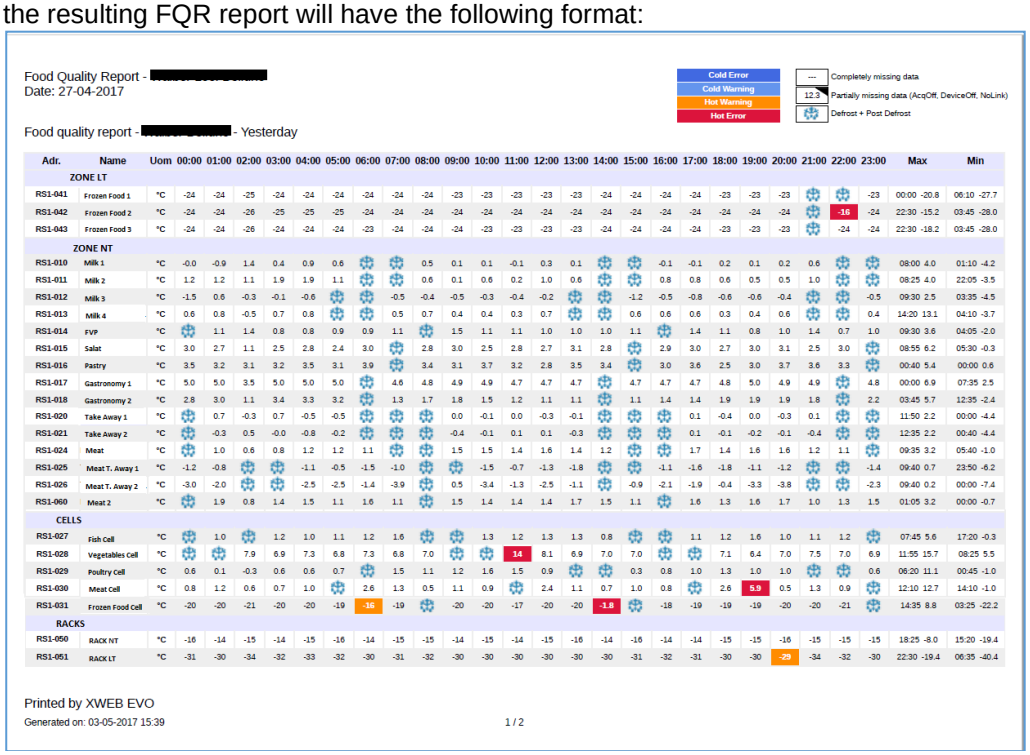
- Label: report name
- Header/Footer: text that appears on the edges of the report
- Interval: Today, Yesterday.
- Variables: press "Select Devices" to select the devices for which the report is to be created. Each temperature variable is accompanied by the following parameters
    - Setpoint
    - Post-Defrost Time
    - Low Error (offset applied to the setpoint value)
    - Low Warning (offset applied to the setpoint value)
    - High Warning (offset applied to the setpoint value)
    - High Error (offset applied to the setpoint value)



For an existing report-fqr configuration, the Edit key allows its editing.
The Delete key permanently deletes the report configuration.
Execute immediately creates the report according to its configuration parameters, for downloading, printing or sending via email.



the resulting FQR report will have the following format:

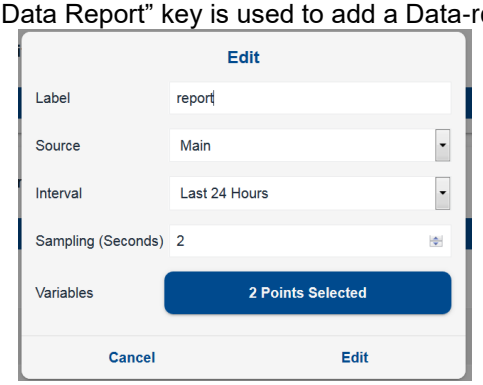


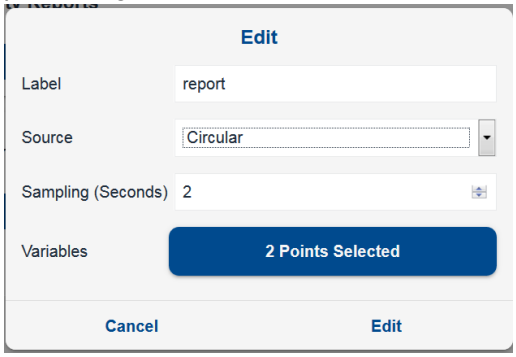
the report consists of a table in which the temperatures of the day are listed for each device.

The cells containing the temperature values can assume different colours in cases where the same temperature is higher/lower than the setpoint value, considering the error or alarm thresholds. The temperature values are omitted in case of defrost and/or missing data.
The minimum and maximum temperature values, and when this was detected, are indicated for each device.

3.3.4.1.3 DATA REPORTS

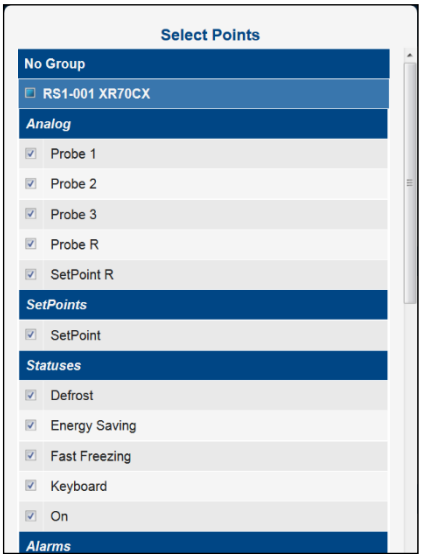
- The “+ Data Report” key is used to add a Data-report configuration to the list.



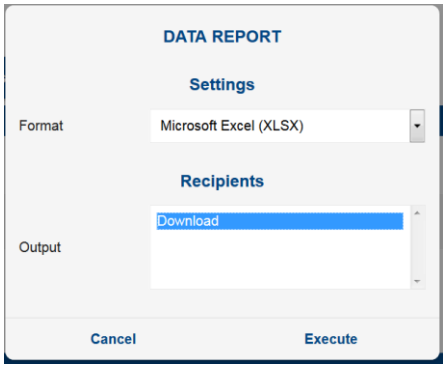


specify the fields:

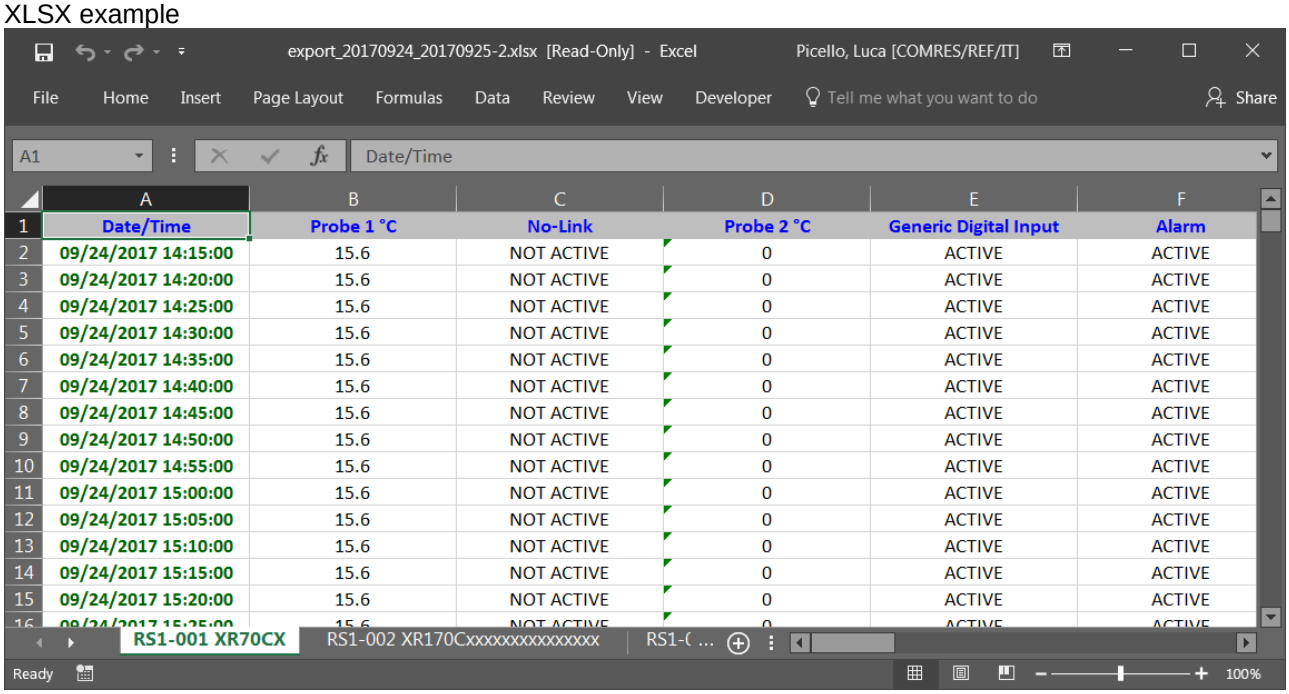
- Label: report name
- Source: circular data or master data; the former may provide high sampling data but limited in time since the last sampled data; the latter may provide all data in xweb at the maximum sampling resolution as configured in devices in devices/settings/devices/<device>/general/sampling.
- Interval (main only): interval on which to extract data from the XWEB archives (options available: Today, Yesterday, Last 24 hours, Last 48 hours, Last week, Last month)
- Sampling: minimum interval filter between samples. 0 indicates the export of all samples stored for the interval.
- Variables: the “Select Points” button accesses the window indicating the list of variables with which to build the report. Clicking on the tool name explodes the list of variables for the selected instrument.



For an existing report-data configuration, the Edit key allows for its editing and Delete for its permanent deletion. The Execute key immediately generates a report; the options available are the CSV (“Comma Separated Values”) and XLSX (Microsoft Excel) formats; these reports are available for downloading on the browser (download option).



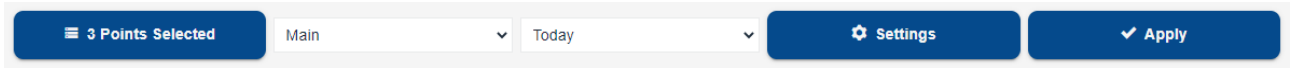
XLSX example



	A	B	C	D	E	F
1	Date/Time	Probe 1 °C	No-Link	Probe 2 °C	Generic Digital Input	Alarm
2	09/24/2017 14:15:00	15.6	NOT ACTIVE	0	ACTIVE	ACTIVE
3	09/24/2017 14:20:00	15.6	NOT ACTIVE	0	ACTIVE	ACTIVE
4	09/24/2017 14:25:00	15.6	NOT ACTIVE	0	ACTIVE	ACTIVE
5	09/24/2017 14:30:00	15.6	NOT ACTIVE	0	ACTIVE	ACTIVE
6	09/24/2017 14:35:00	15.6	NOT ACTIVE	0	ACTIVE	ACTIVE
7	09/24/2017 14:40:00	15.6	NOT ACTIVE	0	ACTIVE	ACTIVE
8	09/24/2017 14:45:00	15.6	NOT ACTIVE	0	ACTIVE	ACTIVE
9	09/24/2017 14:50:00	15.6	NOT ACTIVE	0	ACTIVE	ACTIVE
10	09/24/2017 14:55:00	15.6	NOT ACTIVE	0	ACTIVE	ACTIVE
11	09/24/2017 15:00:00	15.6	NOT ACTIVE	0	ACTIVE	ACTIVE
12	09/24/2017 15:05:00	15.6	NOT ACTIVE	0	ACTIVE	ACTIVE
13	09/24/2017 15:10:00	15.6	NOT ACTIVE	0	ACTIVE	ACTIVE
14	09/24/2017 15:15:00	15.6	NOT ACTIVE	0	ACTIVE	ACTIVE
15	09/24/2017 15:20:00	15.6	NOT ACTIVE	0	ACTIVE	ACTIVE

3.3.4.2 CHARTS

In this page you can benefit from the charting, and its configuration, of the values in XWEB memory.



- **configuration**

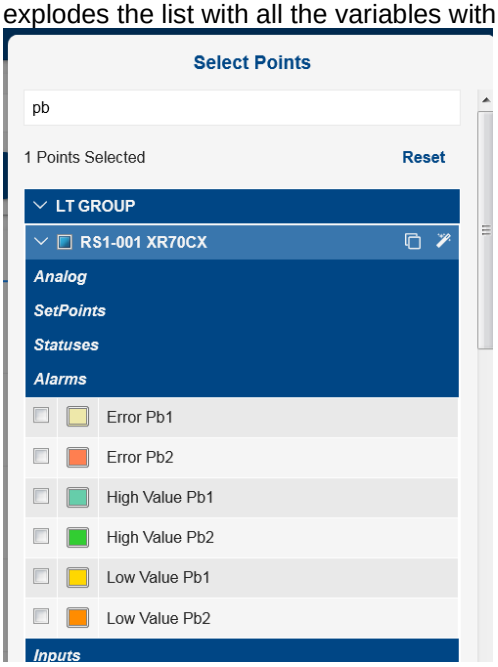
the configuration parameters for a chart are:

- ***type of database source***: the options available are:
  a. ***Circular***: These archives provide more frequent records but for a limited period. For the XWEB3000/5000 models, the archive contains a maximum of two days of recordings, while for the XWEB300/500/1000 models, the archive contains the last two hours. Recordings are saved in volatile memory, so they will no longer be available when the XWEB is restarted

  b. ***Main***: This is the history archive recorded in the permanent memory of XWEB. The sampling frequency is decided on the configuration page of the individual tool.

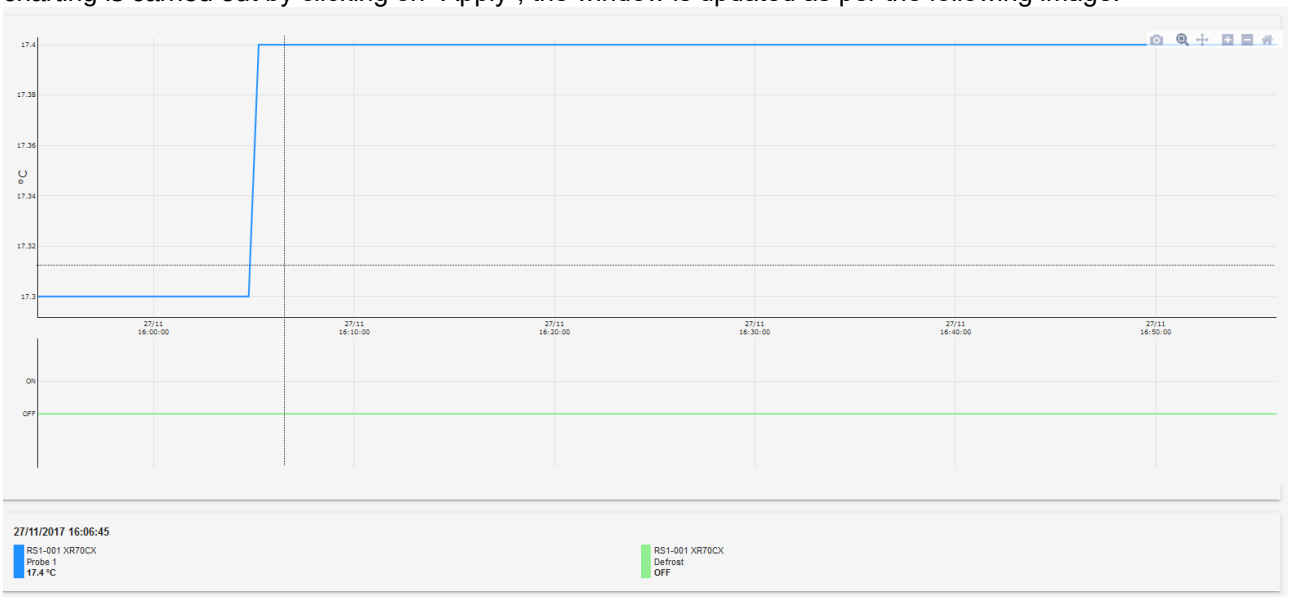
- **period**: period to charge, the available options are
  a. Last … : indicates that once charting is performed, the chart is no longer updated.
  b. Realtime … : indicates continuous charting, updated in real time

- **Selected points:** resources to be graphed. these are the variables configured for storage in xweb, for each device. For graphics, it is necessary to define the list of variables and possibly their colour. Pressing the “Select Points” key open the following window: clicking on the tool name (red area) explodes the list with all the variables with which xweb is configured to record.



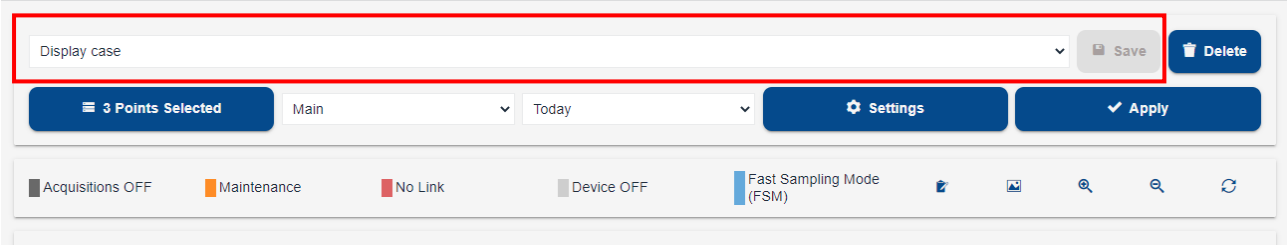
the list of variables in the window can be filtered using the fulltext search of the “Search” field;
the configuration of the variables selected on a tool can be cloned on another compatible, by clicking 
it is possible to select only the variables configured in
DEVICES→SETTINGS→DEVICES→DEVICE→VARIABLES→CHART DEFAULT by pressing 

charting is carried out by clicking on “Apply”; the window is updated as per the following image:

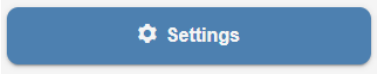


The mouse cursor position on the chart area shows, in the key at the bottom, the values with their tool and time references

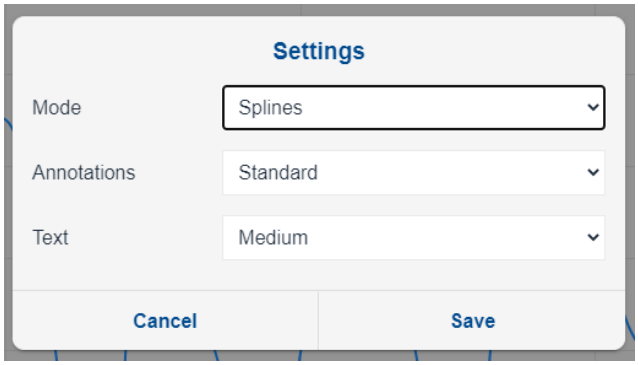
Once charting has been carried out, you can save its configuration for future retrieval; press “Save” to save the configuration in the XWEB memory. To retrieve a previously saved configuration, simply select it from the drop-down menu at the top (in red in the image below).



Some general characteristics of the graph can be changed via the Settings button:

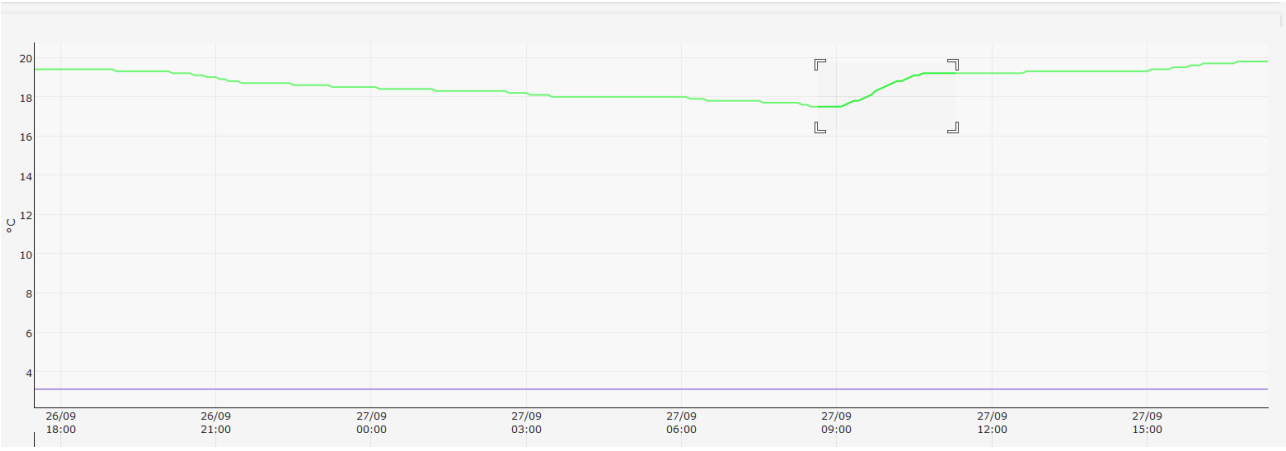


Mode: allows the recorded points (Markers) and the curves themselves with softer variations (Splines) to be highlighted in the curves
Annotations and Text: for colour and size formatting of texts on graphs



Once charting has been carried out, the following actions can be performed:

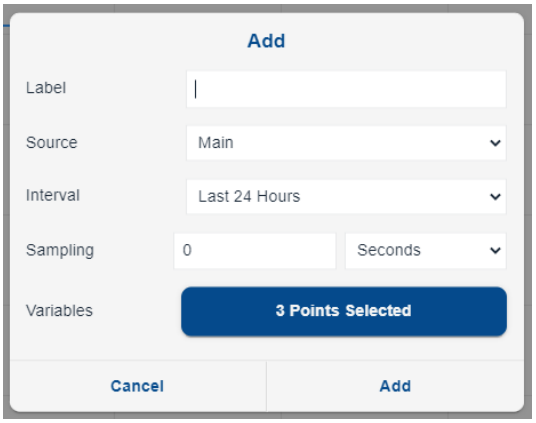
- Zoom on selected area

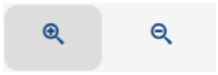


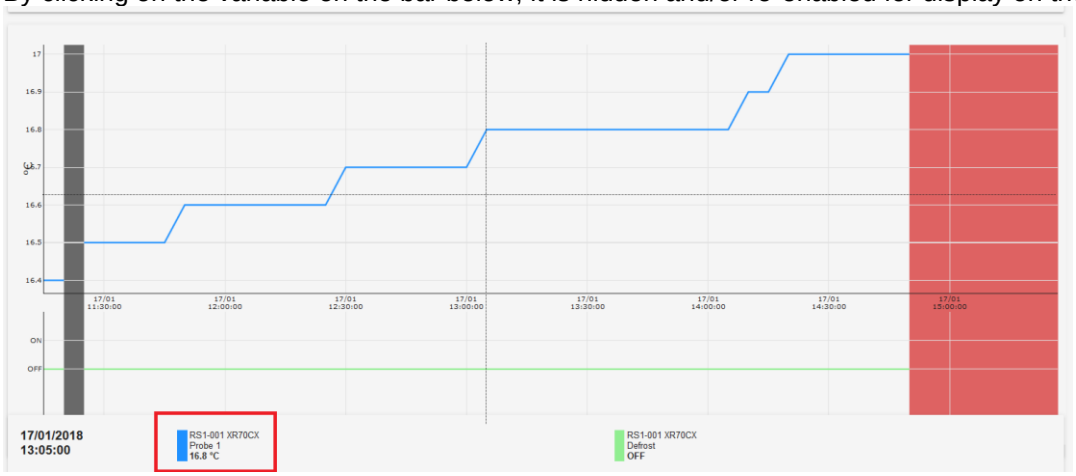
click the mouse to select the first point of the area, move the cursor to enlarge the area, release when the whole area of interest has been selected (image above).

the charge immediately updates, rendering the selected area full-screen.

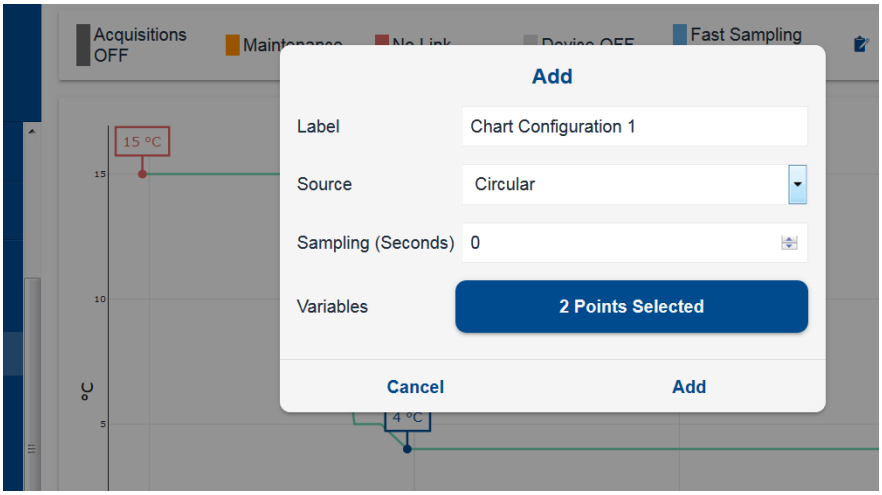
Export - Saves the graph configuration as a selection for a Data Report available later in ANALYSIS → Reports → Data Reports
Assign a name to the selection (Label) and the desired report type.

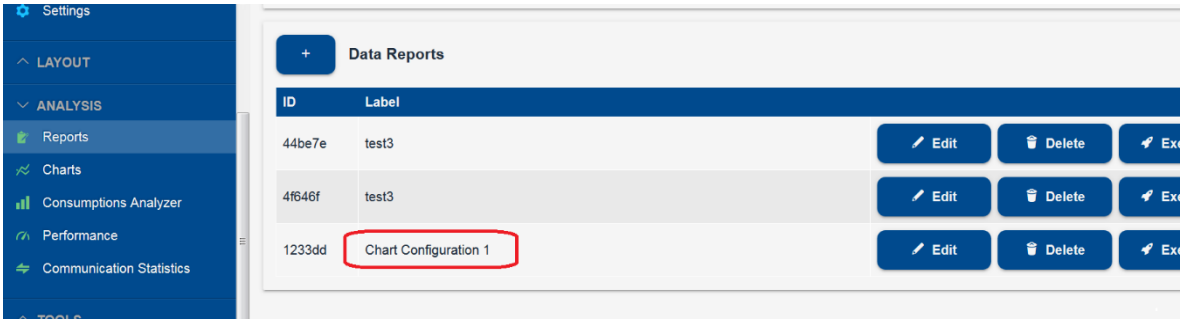


-  Image - Saves an image of the graph in PNG format on the PC.
-  Zoom In / Out zooms the chart
-  Reset - Resets the graph to original size
- Hide / enable display of individual variable
  By clicking on the variable on the bar below, it is hidden and/or re-enabled for display on the chart.



- Hide / enable Min/Max display (icon)
- Save Cfg on Data Reports (icon )
  Add the configuration of the chart currently viewed to the list of configurations where it is possible to generate the “data report” (Analysis→Reports→Data Reports).





3.3.4.3 CONSUMPTION ANALYZER

By configuring one of the supported devices in the product, it becomes possible to access the "Consumptions Analyzer" menu

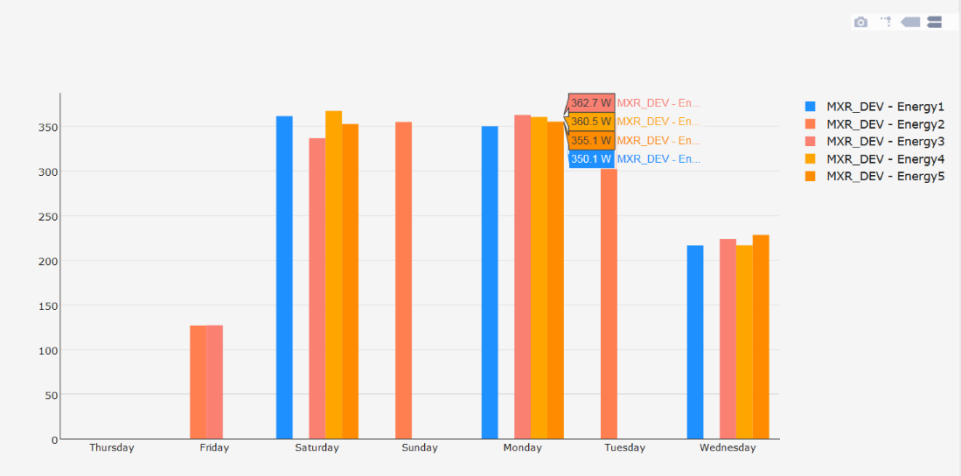
The following are supported:

Trade name	Library name
Carlo Gavazzi EM21	EM21
Carlo Gavazzi EM23	EM23
Carlo Gavazzi EM24	EM24
Carlo Gavazzi EM26	EM26
Carlo Gavazzi EM100	EM100
Carlo Gavazzi EM210	EM210
Carlo Gavazzi EM271	EM271
Carlo Gavazzi VM14	WM14
Carlo Gavazzi VM22	WM22
ERVATECH E-93	E93
Emerson Energy Meter	EEM

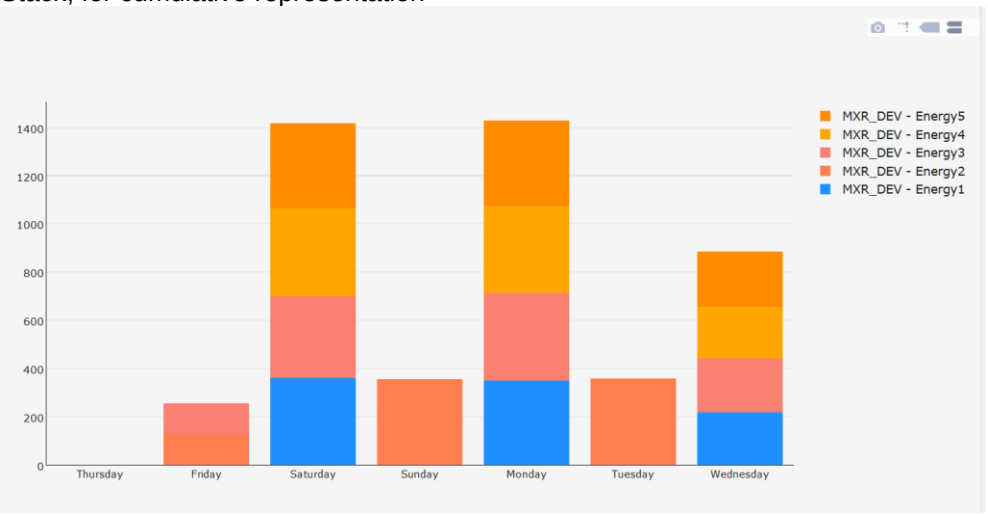
The consumption data can be displayed once all page parameters have been configured:

- ***display period***; the following options are available:
  a. Last 24 hours
  b. Last 7 days
  c. Last 4 weeks
  d. Last 12 months
  e. Last 3 years
  f. Custom; to set a period from/to

- ***Grouping*** (for multiple variables); the following options are available:
  a. Group; for the side-by-side representation of each variable

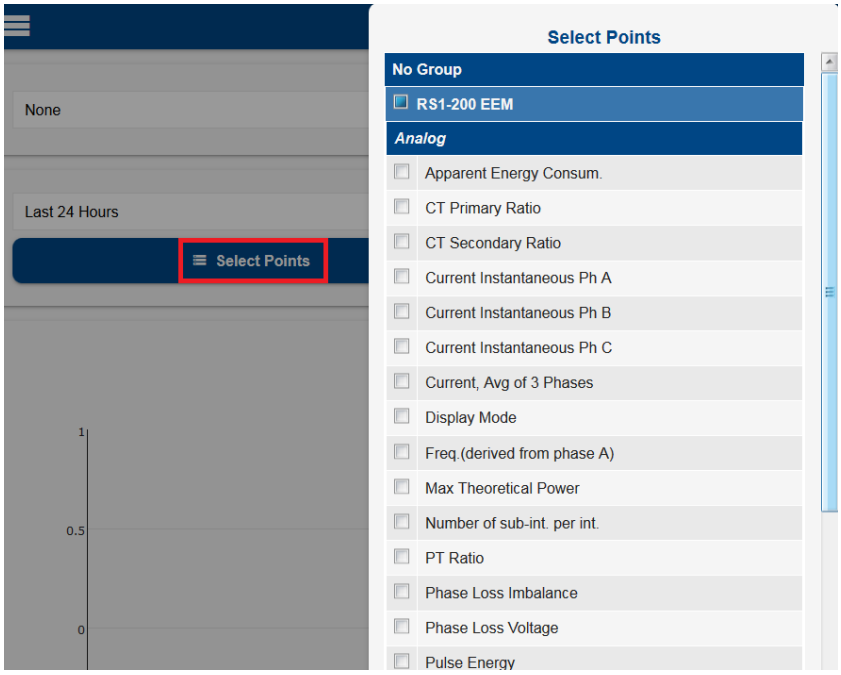


  b. Stack; for cumulative representation



- ***colour style***; the following options are available:
  a. Random Colors; to display the bars with random colours
  b. Chart defaults; to display the bars with the same colours set in DeviceSetup→Advanced→Chart default color

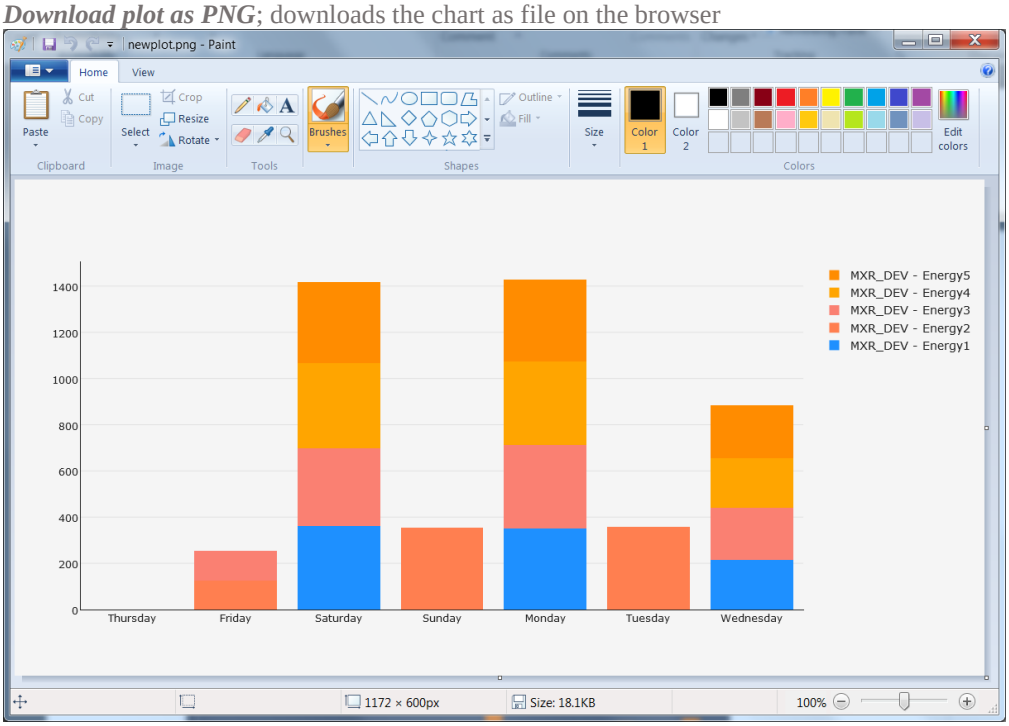
- ***variables***; the following options are available:
  a. manual variable selection; by pressing “Select Points” the user can choose from the variables available for the supported devices.



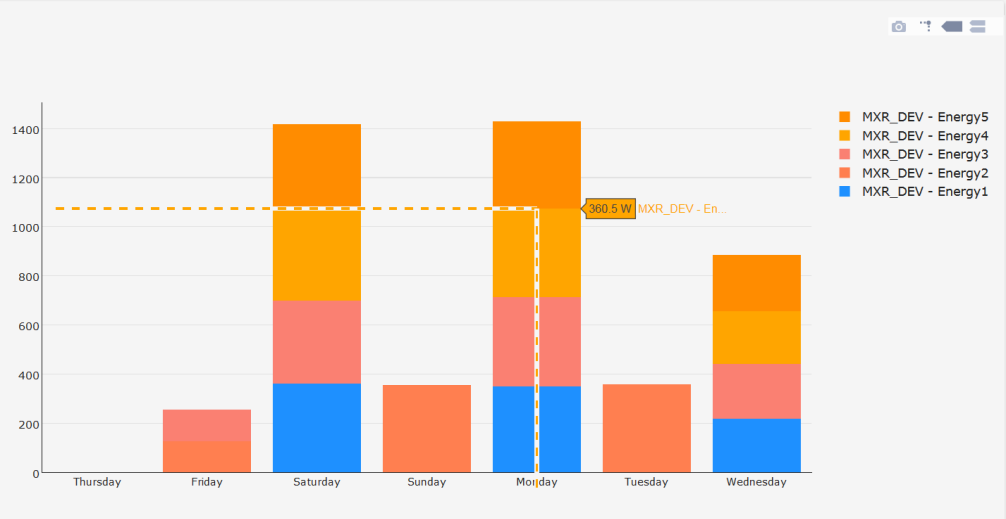
b. automatic variable selection; by pressing “Automatic Configuration” all variables involving accumulation are selected for the supported consumption analysers.

Once the chart is displayed, the user can perform the following actions on the chart bar:

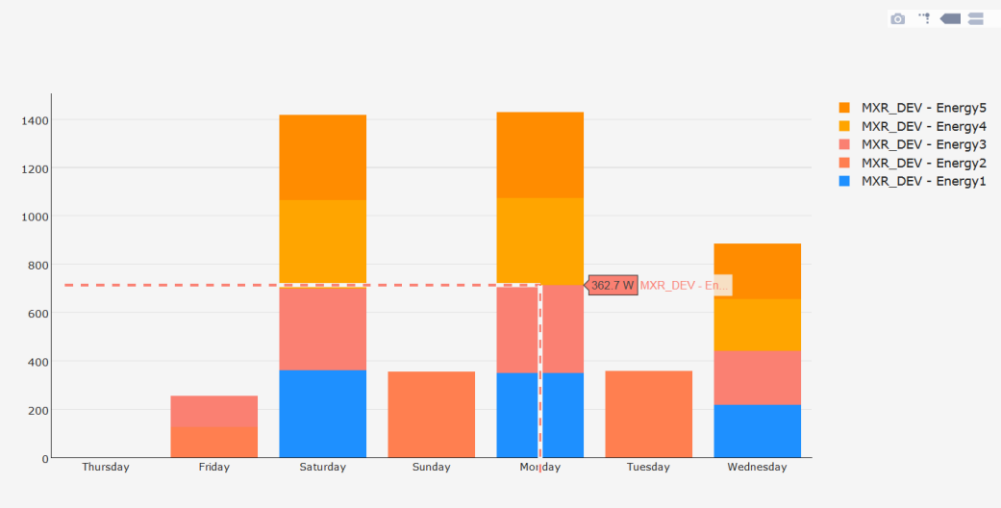
1. ***Download plot as PNG***; downloads the chart as file on the browser



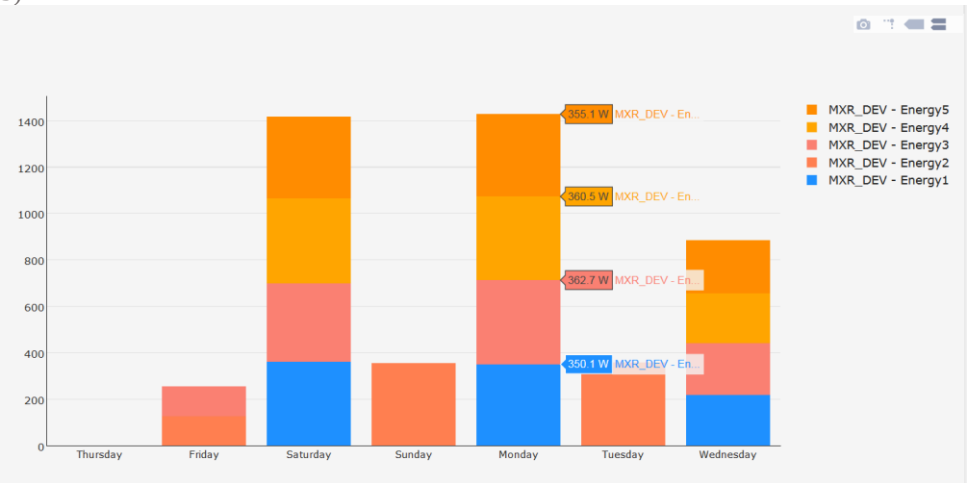
2. ***Toggle Spike Lines***; adds/removes the display of the reference line with the Y axis



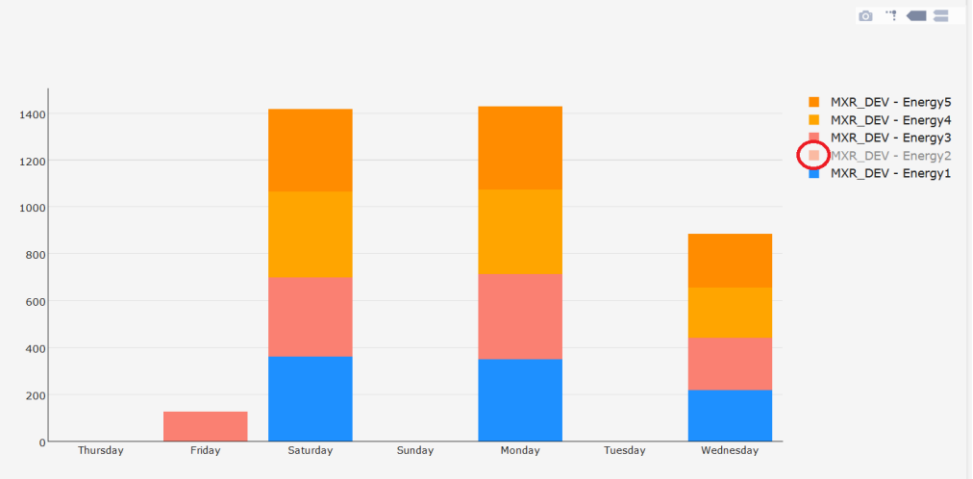
3. ***Show closest data on hover***; displays only the data of the bar selected by the mouse; (mutually exclusive with option 4);



4. ***Compare data on hover***; displays all data in the period selected by the mouse (mutually exclusive with option 3)



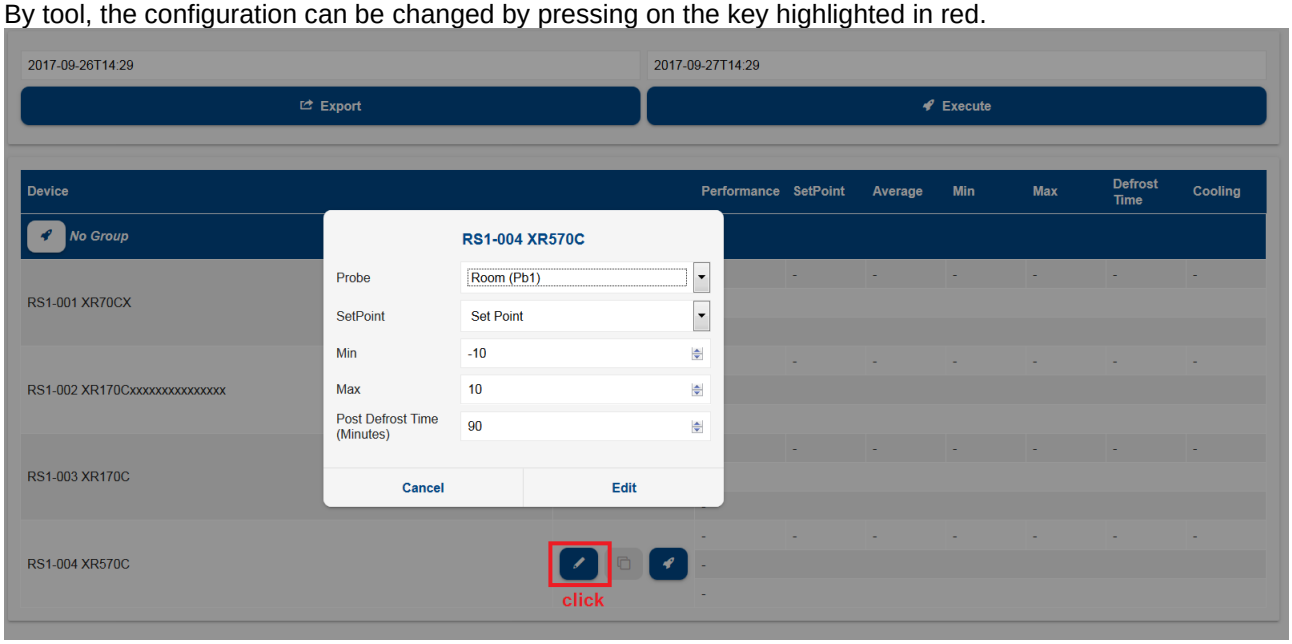
5. Add/Remove variables to chart. Variables are added/removed from the chart by clicking on the variable in the key (see image below, red circle). Multiple selection is allowed with the SHIFT/CONTROL keys



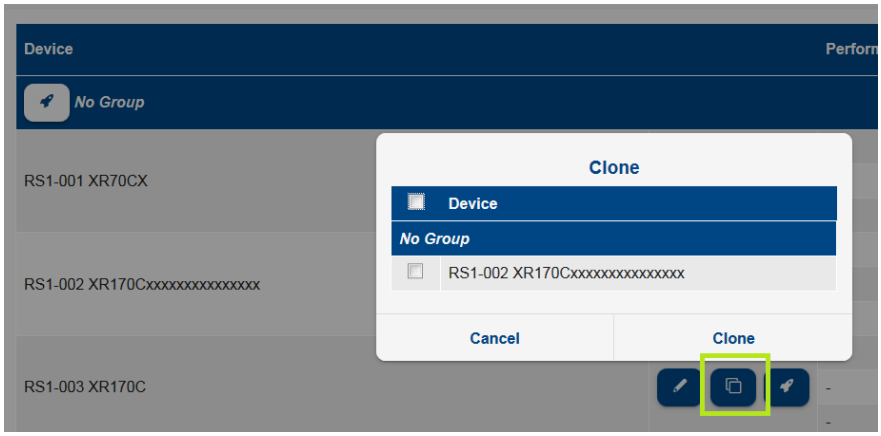
3.3.4.4 PERFORMANCE

The configuration of the default Performance Meter is automatic: it identifies the Probe and Setpoint variables and sets the Min = (setpoint value -10) and Max = (setpoint value +10) parameters.

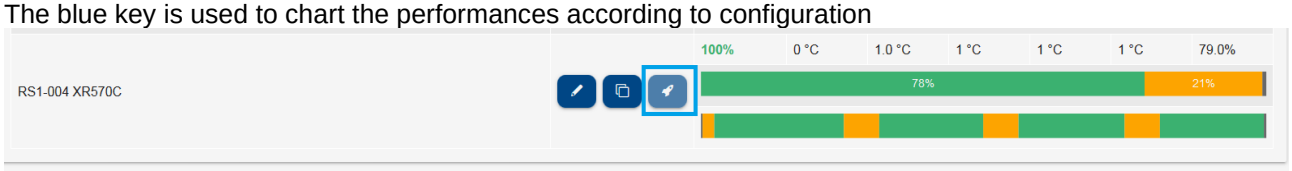
By tool, the configuration can be changed by pressing on the key highlighted in red.



the green key is used to clone the configuration on other tools.



The blue key is used to chart the performances according to configuration



results on charted period:

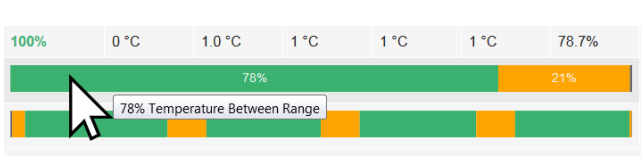
- **Performance**: percentage on the displayed period of the adjustment status within the limits
- **Setpoint**: device setpoint value
- **Average**: average temperature
- **Min**: minimum temperature value
- **Max**: maximum temperature value
- **Defrost Temp**: maximum temperature after defrosting
- **Cooling:** represents the period of time (expressed in percentage) during which the utility has gone to cold call. The calculation formula is: $\%Cool = \frac{T_{COOL}}{T - T_{DEFROST}} \cdot 100$

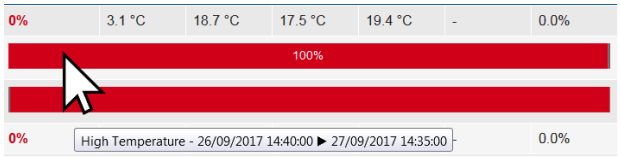
T_{COOL} = total cold call time

T = observation period

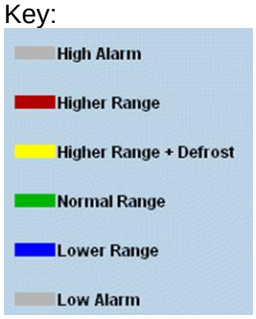
$T_{DEFROST}$ = total defrost time during the observation period

To complete the numerical values, this tool also provides a horizontal bar with relative key. The purpose is to provide the user with a general overview of the plant operation. In fact, moving the pointer over this area, shows the temperature values corresponding to the date in question.





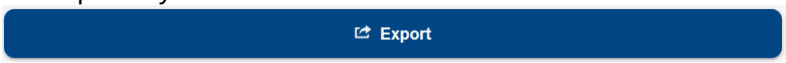
Key:



From a point of view that contemplates the ideal situation, the greater the %COOL percentage, the better has the compressor station been sized. If many utilities work with values close to 100%, most probably not all devices will receive the correct amount of “cold” when the worst case scenario occurs. Use the data

provided by the resource meter based on your experience of the application. Moreover, if an individual utility belonging to a homogenous set shows higher values than the others, this utility is likely to actually have operating problems

After charting, it is possible to export the resulting data to the browser, in HTML or CSV format, by pressing the Export key.



3.3.4.5 COMMUNICATION STATUS

The page shows the statistics table on the communication with the configured tools.
The page is divided into two sections: General and Advanced
On page General, for each device they are represented in columns:

- Status: a colour indicates the quality of communication:
  - Green: Ok
  - Yellow: poor
  - Red: extremely problematic with unreliable transmitted values
- Success(%): successful communication total percentage
- Address: serial address and port used
- Name: device name
- Description: possible cause of the malfunction

The Advanced section also provides details on communication errors

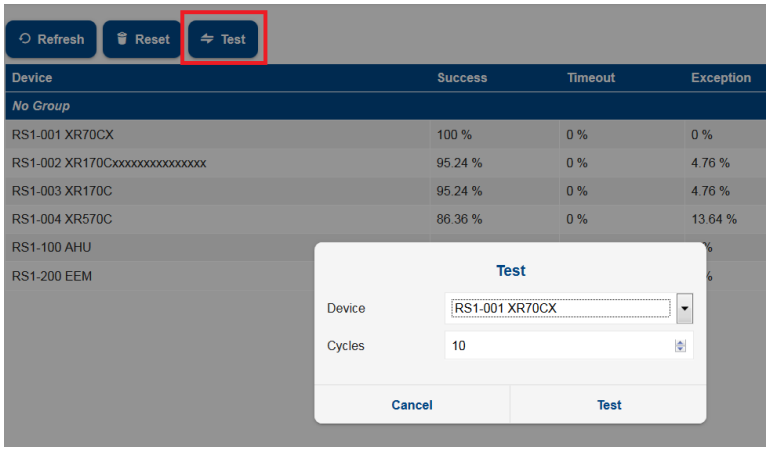
- Time Out(%): errors for Time Out percentage. This type of error occurs in cases in which the device is switched off or not reachable
- Exception(%): errors for exception percentage. This type of error occurs when the device is reachable, but there are inconsistencies between the configuration of its parameters and that shown on the XWEB
- Crc-Error(%): CRC error percentage. This type of error occurs when the device can be reached, but there are problems on the line such as interferences.
- Overrun(%): percentage errors for packages in transit but not expected. This type of error occurs when the device can be reached, but there are problems on the line such as interferences.
- Unknown(%): percentage of others detected, different from those reported in previous rows. Example: equality or other errors.

The table enables sorting by column. It is advisable to press "Success(%)" to easily identify the addresses of the most problematic devices. The table does not automatically refresh.

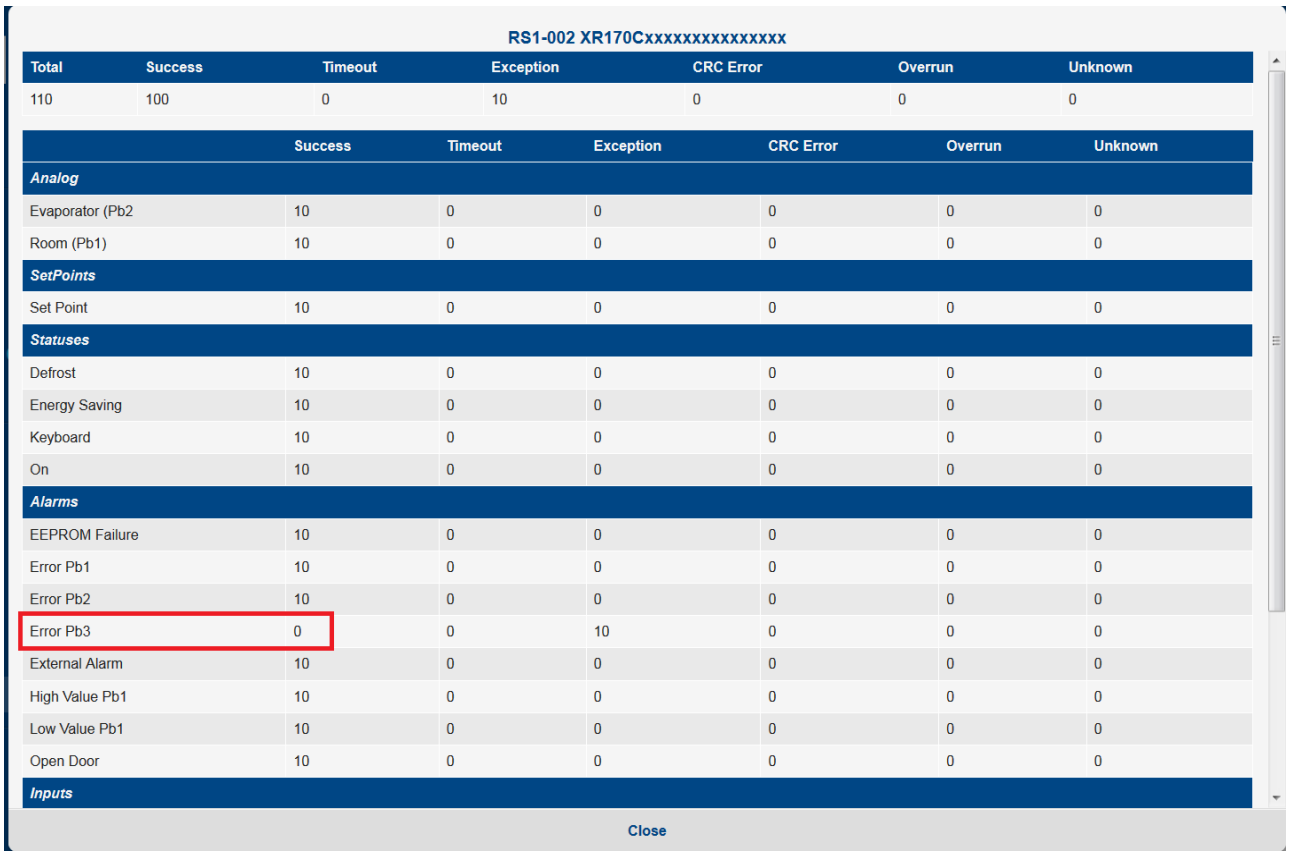
Identification of device configuration errors: should a device show exception errors, it is possible to ask the system to run a new specific test for the device, so that it detects the most problematic sizes. The following example demonstrates the identification of a device with a certain percentage of exceptions, but no other type of communication error:

Device	Success	Timeout	Exception	CRC Error	Overrun	Unknown
No Group						
RS1-001 XR70CX	100 %	0 %	0 %	0 %	0 %	0 %
RS1-002 XR170Cxxxxxxxxxxxxxxx	95.24 %	0 %	4.76 %	0 %	0 %	0 %
RS1-003 XR170C	95.24 %	0 %	4.76 %	0 %	0 %	0 %
RS1-004 XR570C	86.36 %	0 %	13.64 %	0 %	0 %	0 %
RS1-100 AHU	0 %	100 %	0 %	0 %	0 %	0 %
RS1-200 EEM	0 %	100 %	0 %	0 %	0 %	0 %

It is selected to execute the test. The "test cycle" value identifies the number of readings that will be carried out for each device resource.



After having pressed "Start test", the configured variable that does not respond is displayed, i.e. Pb3 which is not enabled by the device parameters.



RS1-002 XR170Cxxxxxxxxxxxxxxx

Total	Success	Timeout	Exception	CRC Error	Overrun	Unknown
110	100	0	10	0	0	0

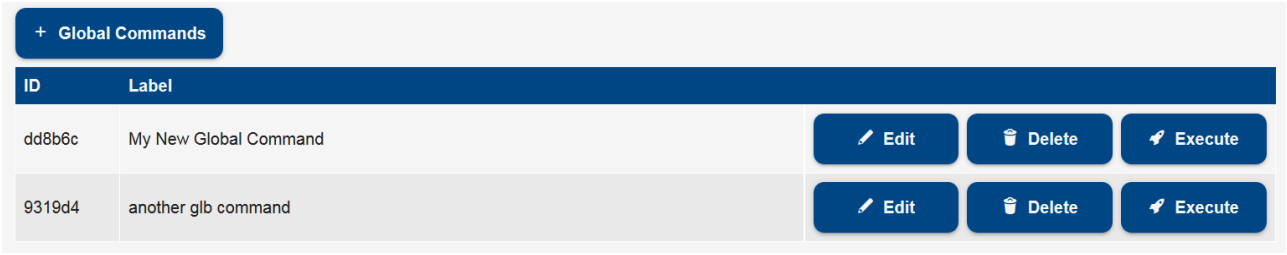
	Success	Timeout	Exception	CRC Error	Overrun	Unknown
Analog						
Evaporator (Pb2	10	0	0	0	0	0
Room (Pb1)	10	0	0	0	0	0
SetPoints						
Set Point	10	0	0	0	0	0
Statuses						
Defrost	10	0	0	0	0	0
Energy Saving	10	0	0	0	0	0
Keyboard	10	0	0	0	0	0
On	10	0	0	0	0	0
Alarms						
EEPROM Failure	10	0	0	0	0	0
Error Pb1	10	0	0	0	0	0
Error Pb2	10	0	0	0	0	0
Error Pb3	0	0	10	0	0	0
External Alarm	10	0	0	0	0	0
High Value Pb1	10	0	0	0	0	0
Low Value Pb1	10	0	0	0	0	0
Open Door	10	0	0	0	0	0
Inputs						

Close

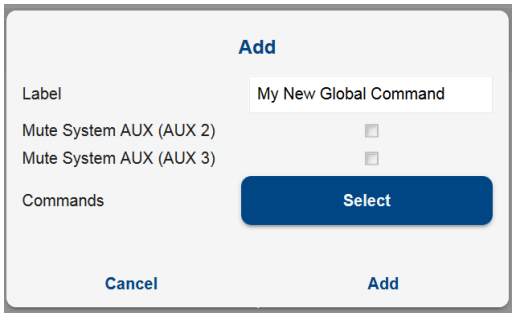
3.3.5 TOOLS

3.3.5.1 GLOBAL COMMANDS

This page is used to configure the global commands that can be run from the user interface (if provided), from scheduler and from digital input command.

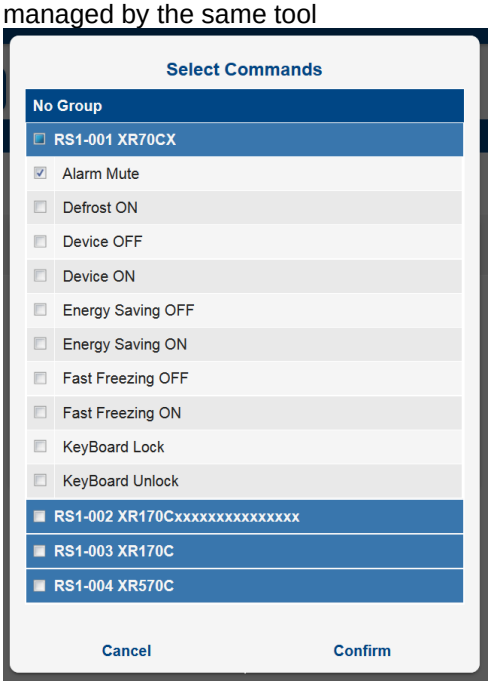


"+" Global commands
for adding a new command to the configuration.



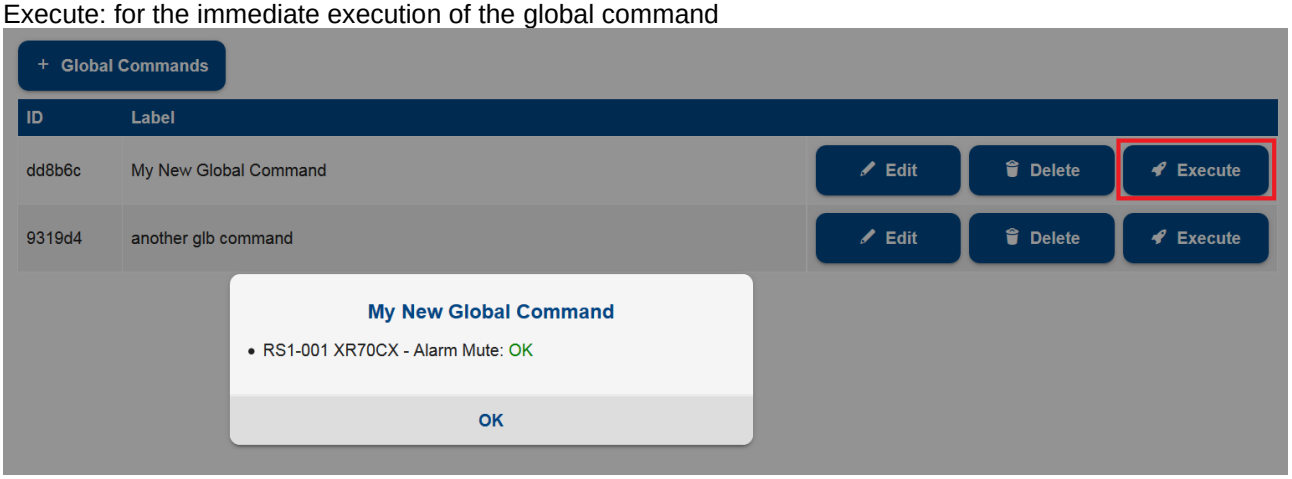
The user is asked to indicate a name (label field) and the list of commands that must be executed together with the request to execute this global command.

- Mute System AUX (AUX 2): to silence the AUX2 relay, if necessary
- Mute System AUX (AUX 3): to silence the AUX3 relay, if necessary
- Commands
  press the "select" key to explode the command list on the devices; the checkbox is enabled for all those commands that will be executed together with the global command;
  by clicking on the tool name, the window will explode with the name of the individual variables managed by the same tool



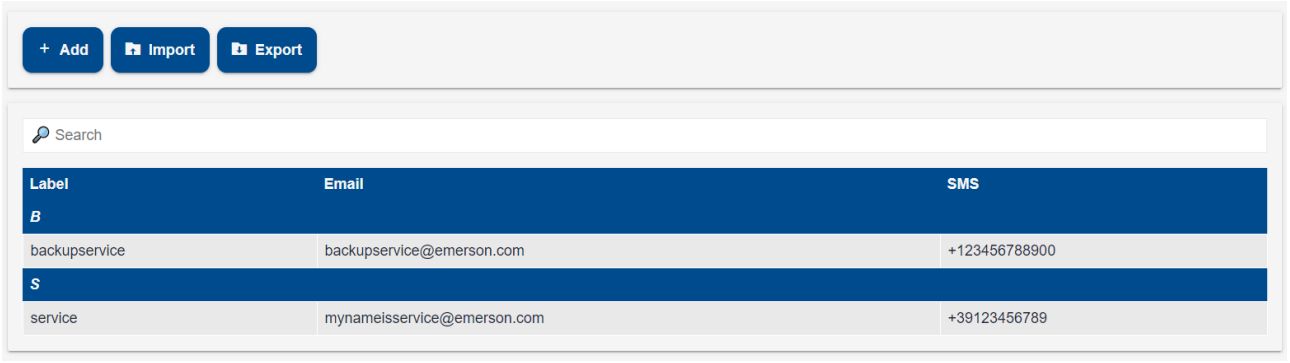
for the list of already configured global commands, you can invoke the actions of

- Edit: to edit the global command
- Delete: to delete the global command from the list. caution: command removal is not a reversible operation
- Execute: for the immediate execution of the global command

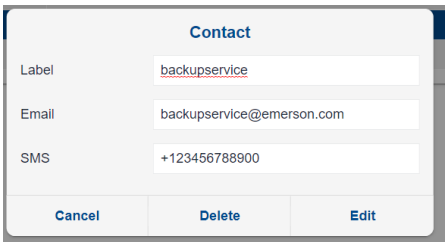


3.3.5.2 CONTACTS

The contacts that can receive notifications from xweb are configured on this page; such as alarm notifications or notifications from scheduler.



Contacts can be added manually from the web interface by pressing “Add”. Each contact defines an email address and/or a telephone number for SMS.



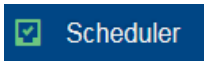
The contacts can also be imported using VCF files or VCARD normally used in contact applications such as MS OUTLOOK. Exported in VCF formats.
If the contacts to be imported are already in the xweb database, the “Mode” parameter determines how to continue the operation.

- Add: the contact is added but the Label is edited to make it unique. The same contact added to the system several times is displayed below

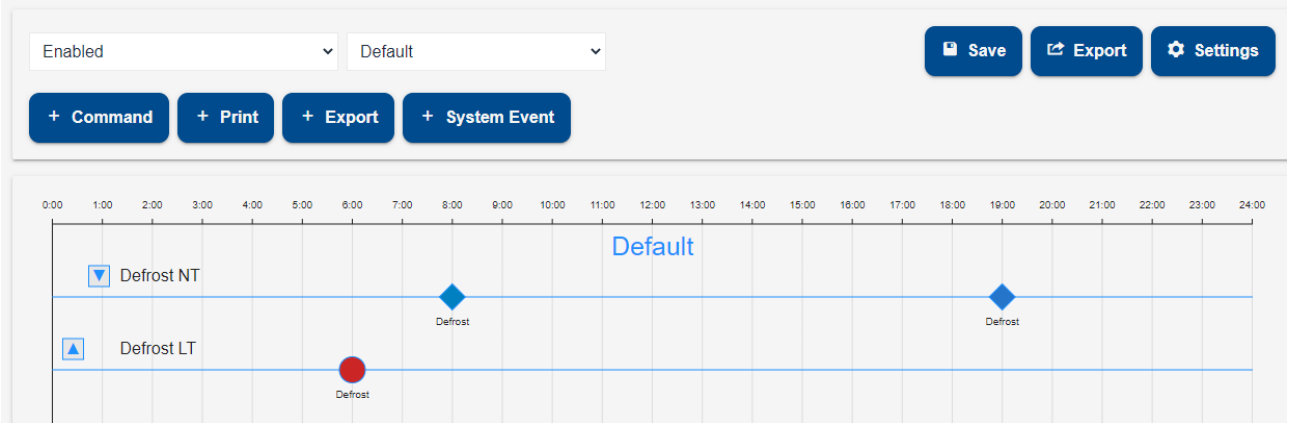
E		
Example Contact	example@emerson.com	+123456778990
Example Contact (1)	example@emerson.com	+123456778990
Example Contact (2)	example@emerson.com	+123456778990

- Replace: the contact database is deleted before importing the contact
- Merge: the updated contact with the email and/or sms data as per file

3.3.5.3 SCHEDULER



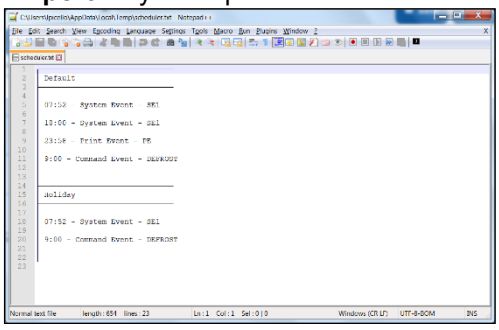
With this tool it is possible to program XWEB to send repetitive commands to the tools. For example, the sending of commands to switch on or to switch off lights or to schedule periodical defrosting.



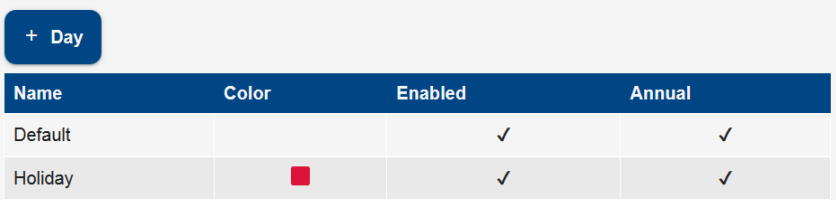
The entire daily interval (from 00:00 to 24:00) is present at the bottom of the window; each hour is marked with a vertical placeholder. The events are placed on the horizontal placeholders.

- "**Save**" key: to save the configuration. Attention, once you save it is no longer possible to recover a previous version;

- "**Export**" key: to export the Scheduler configuration in a TXT or SVG file.



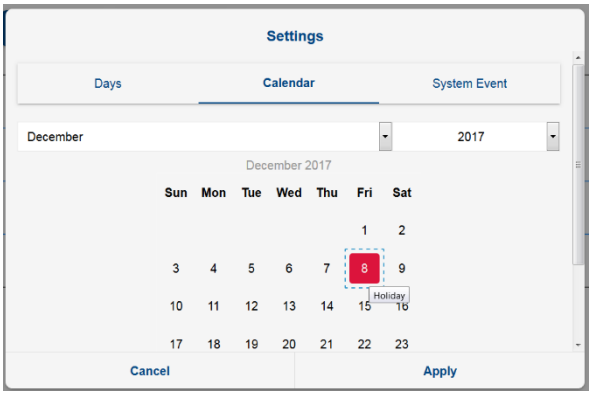
- "**Settings**" key: the following are configured in this window
  - ***Days***: to configure the types of day, each of which defines its specific events with times.



The colour will be important for visual recognition on the calendar. The "Enabled" parameter indicates whether the events configured on the day are active. The "Yearly" parameter indicates

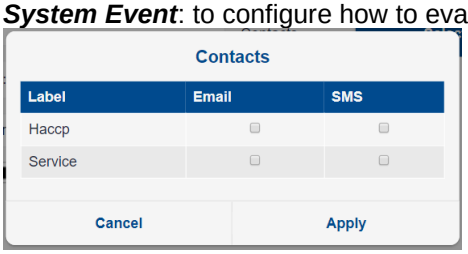
whether the day is to be associated - to all years - for operations of association to calendar. Attention: once the day has been created, the "Yearly" parameter can no longer be modified.

- ***Calendar***:

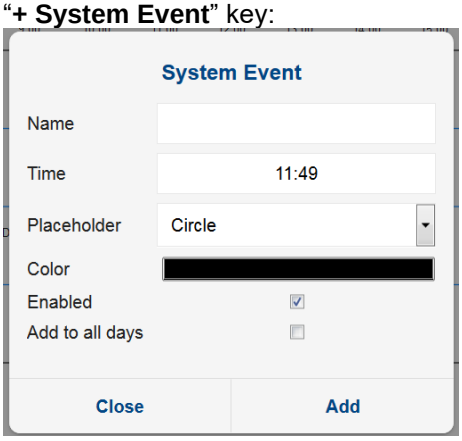


To associate the days, click on the day and select the (type of) day desired. It is also possible to associate the (type of) day on week days by clicking the name in the red band, e.g. apply the day "weekend" to all Sundays.

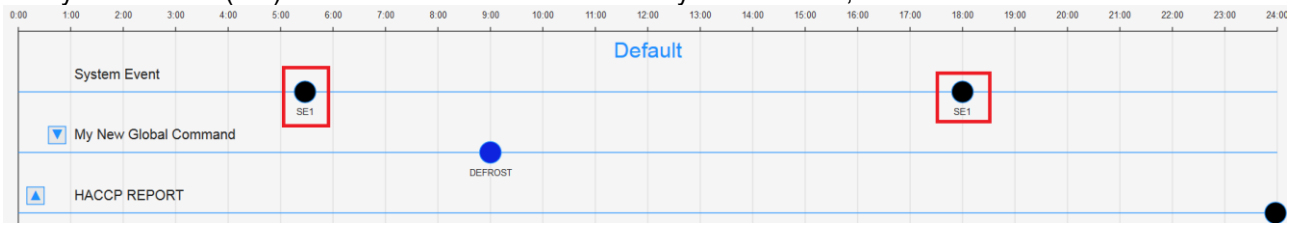
- ***System Event***: to configure how to evade the system events



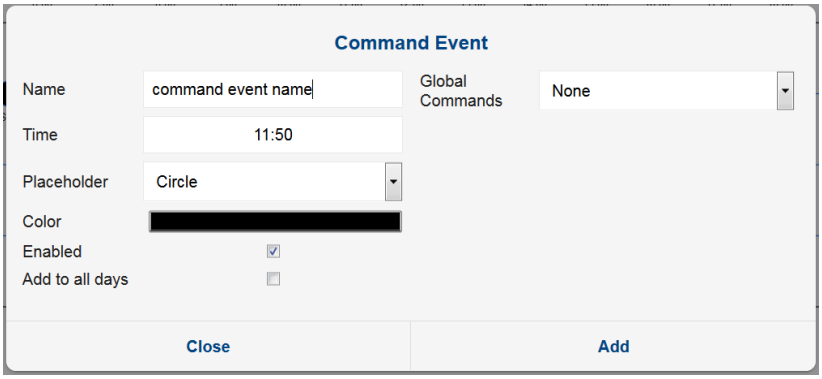
- "**+ System Event**" key:



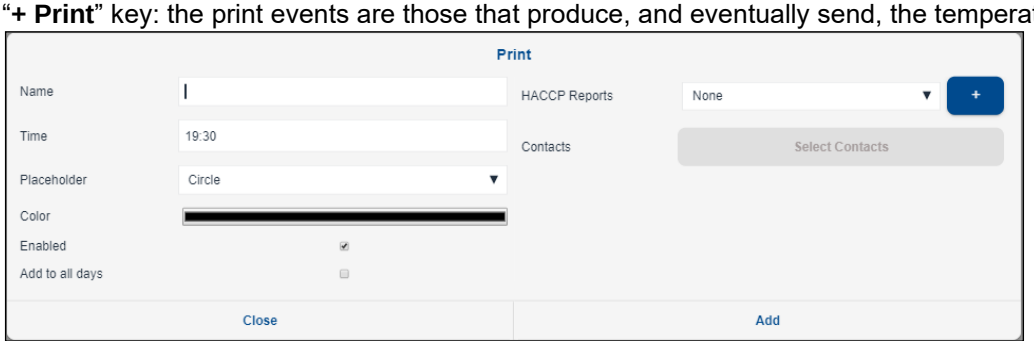
the system events (red) live connected to class "XWEB System Events", which cannot be removed.



- "**+ Command**" key: command events are described on the scheduler with the name, and the marker. The commands to be sent will be selected from a list of "global commands". The list may include commands to any device and can be of different commands between devices.

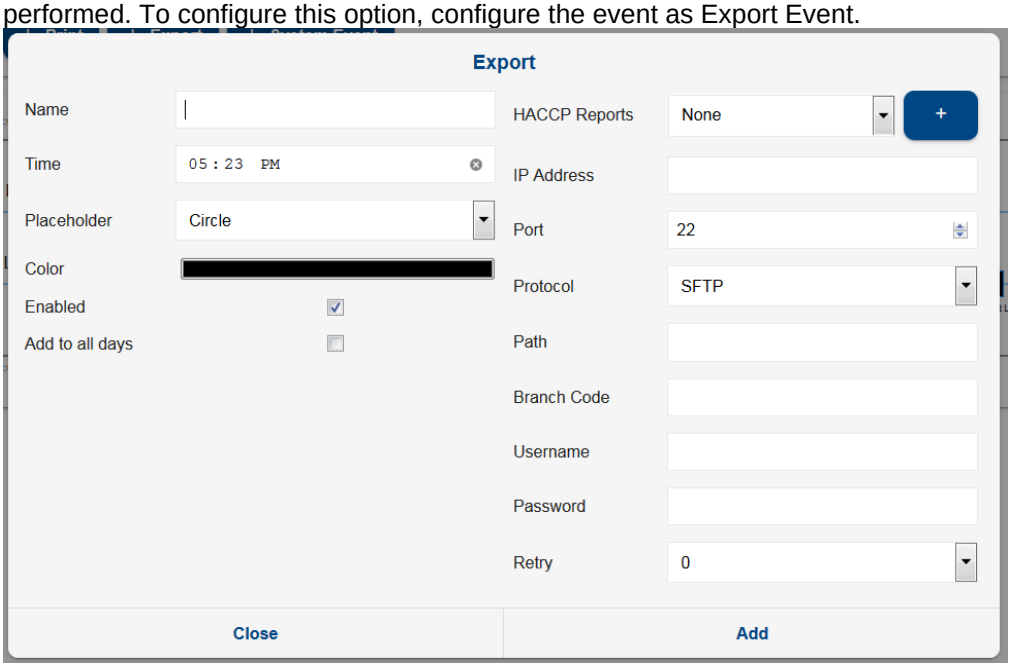


- "**+ Print**" key: the print events are those that produce, and eventually send, the temperature reports.



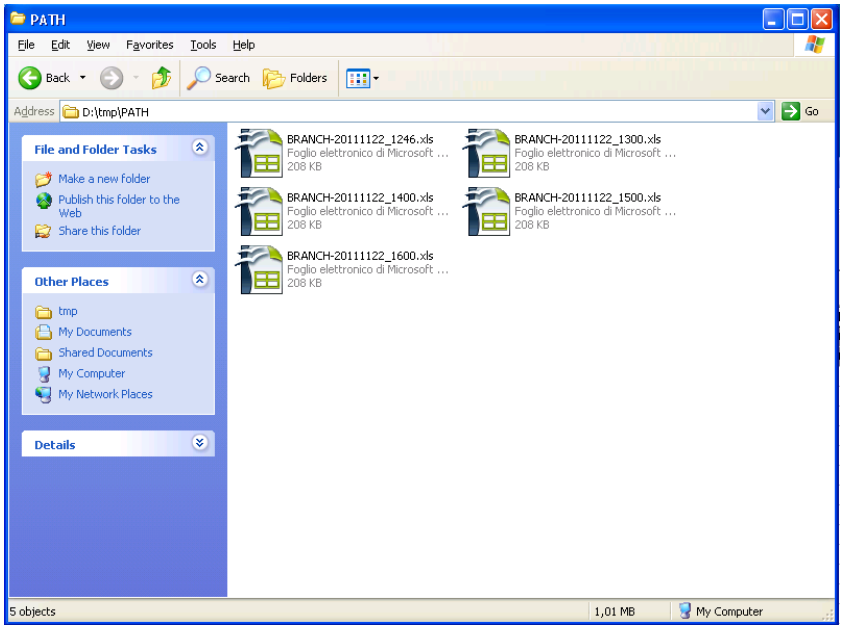
the reports can be generated for the type models that are configured from the Tools→Reports menu.

- "**+ Export**" key: the system is able to create excel files from historical data, since the time the event was performed. To configure this option, configure the event as Export Event.



Set the server parameters on which to create the Excel file containing the report data: The protocols available are: FTP/SFTP/SCP. A password is required to connect to the server receiving the Excel files. For the correct "server", "port" settings, etc., we recommend seeking support from your network administrator. The Server-Address must be a valid IP. The Server-Path must be a valid path, alphanumeric, delimited with "/" (e.g.: "myPath/mySubPath"). The path on which to create the file must exist. If the path does not exist, XWEB will attempt to create it, but the directory creation command must be enabled on the receiving Server-Address for the selected protocol. The Branch-Code must be an alphanumeric string.

Once configured, the Excel files will be created as: <PATH>/<BRANCH>-<datetime>.XLS as per screenshot below.

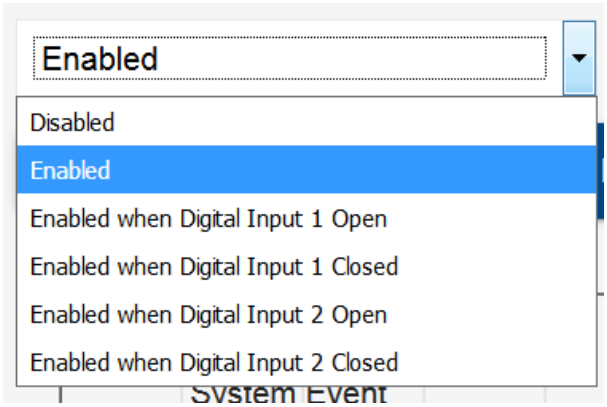


The format of the files is as demonstrated below, where each Excel worksheet is dedicated to a single device.

	A	B	C	D	E	F	G	H	I	K	R	S	V	W	X
1	Date-Time	Room (Pb1)	Evaporator (Pb2	Set Point	On	Defrost	Keyboard	Energy Saving	Low Value Pb1	Error Pb1	No Link	Defrost	Cooling	Door Switch	Generic Alarm
2	28/11/2011 10:44	-6,70	-25,50	2,00	ACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	ACTIVE	DEACTIVE
3	28/11/2011 10:59	-6,70	-25,50	2,00	ACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	ACTIVE	DEACTIVE
4	28/11/2011 11:15	-6,70	-25,50	2,00	ACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	ACTIVE	DEACTIVE
5	28/11/2011 11:30	-6,70	-25,50	2,00	ACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	ACTIVE	DEACTIVE
6	28/11/2011 11:45	-6,70	-25,50	2,00	ACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	ACTIVE	DEACTIVE
7	28/11/2011 12:00	-6,70	-25,50	2,00	ACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	ACTIVE	DEACTIVE
8	28/11/2011 12:15	-6,70	-25,50	2,00	ACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	ACTIVE	DEACTIVE
9	28/11/2011 12:30	-6,70	-25,50	2,00	ACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	ACTIVE	DEACTIVE
10	28/11/2011 12:45	-6,70	-25,50	2,00	ACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	ACTIVE	DEACTIVE
11	28/11/2011 13:00	-6,70	-25,50	2,00	ACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	ACTIVE	DEACTIVE
12	28/11/2011 13:15	-6,70	-25,50	2,00	ACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	ACTIVE	DEACTIVE
13	28/11/2011 13:30	-6,70	-25,50	2,00	ACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	ACTIVE	DEACTIVE
14	28/11/2011 13:45	-6,70	-25,50	2,00	ACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE	ACTIVE	DEACTIVE
15															

001 fakeDeviceName | 002 New_XR570C | 004 New_XR70CX | 005 New_XR170C | 007 New_XR170C

- "**Enabling**" combobox: the scheduler can be enabled according to certain conditions:
  - unconditional enabling / disabling
  - enabling / disabling if Digital Input Open / Closed

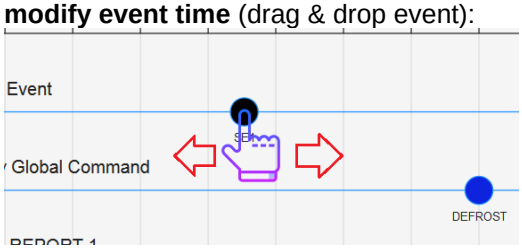


- "**Day**" combobox:

- **up/down** keys: to move the existing event classes up/down

the change of position on the page does not affect the execution of the commands, but it is only a way to change the graphic representation.

- **modify event time** (drag & drop event):

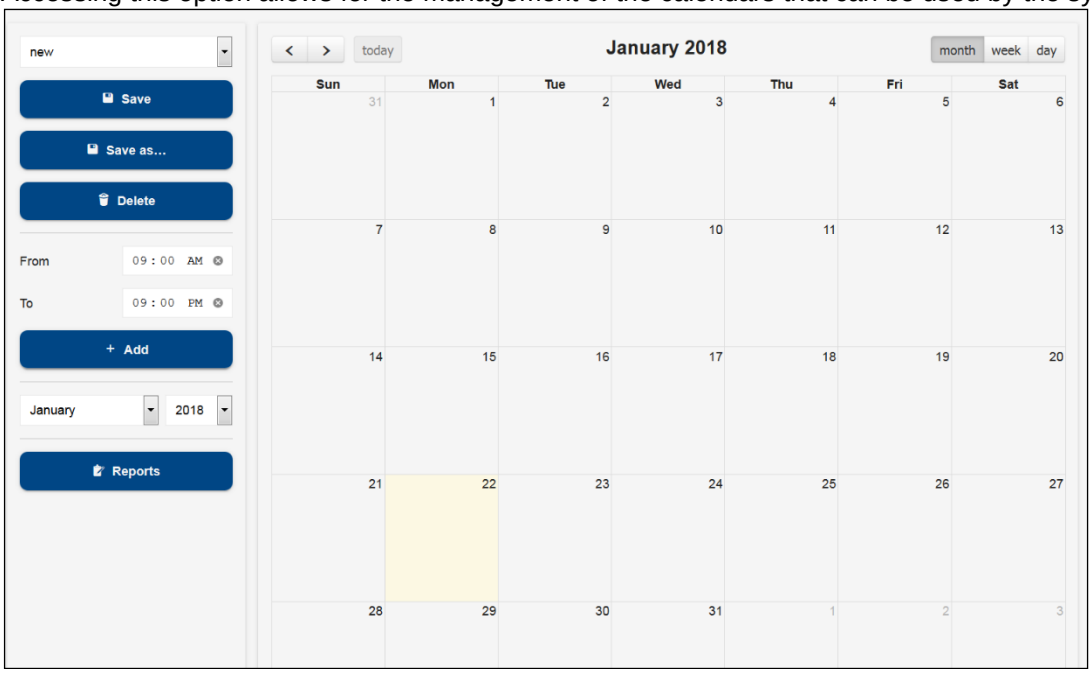


by moving the mouse over the event, the marker develops to indicate the selection. The event can be moved to the right/left, by updating the time of execution of the event.

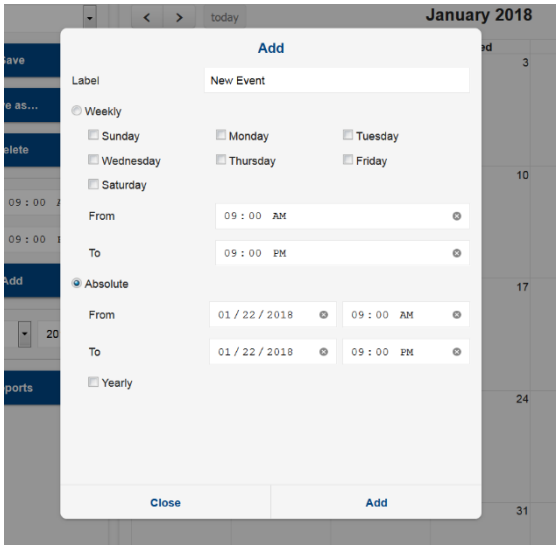
- **edit or delete event** (click on event): by clicking on an event, the window for editing and/or deleting it opens.

3.3.5.4 CALENDAR

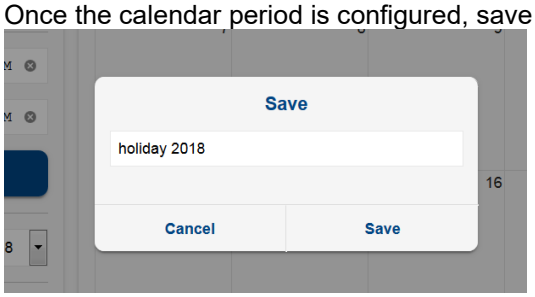
Accessing this option allows for the management of the calendars that can be used by the system.



For the selected calendar, the user adds event periods by clicking on the same calendar or on the "Add" key.



The user must set the period name and interval as well as the period.
Once the calendar period is configured, save the calender itself by naming it, pressing the “Save” button.



3.3.5.5 AUTOMATIC EXPORT

This procedure allows for the configuring of the XWEB so that it creates a new datalog file on a daily basis that can always be recovered from an external server with an http call and/or saved on USB.

The user must:
a. **enable the service,** by setting **the time** when this must be performed daily; in the event that a USB stick is left inserted in XWEB on the same time, its data is updated

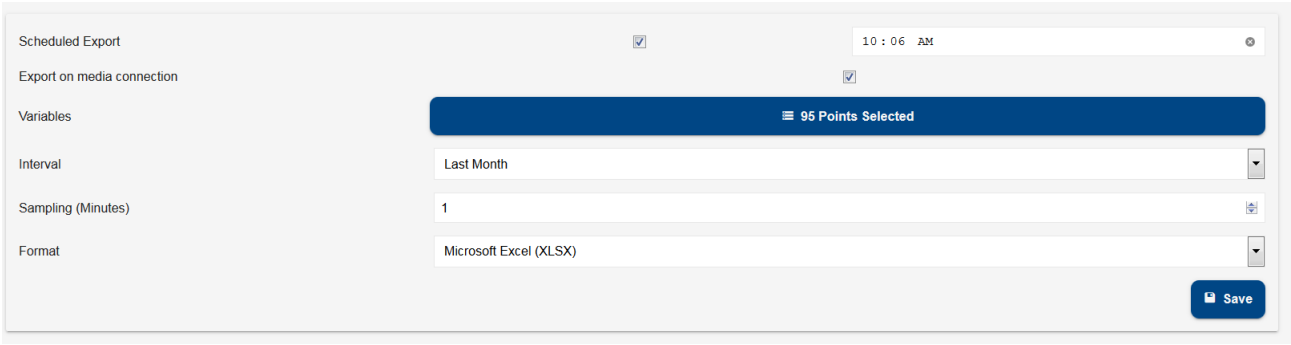
b. configure the “**Export to USB connection**” option, the enabling of which allows copying data when the USB stick is inserted

c. configure **the variables for which the history is desired;**

d. configure **the interval** that identifies the minimum period between the samples that will be exported from the system (data from last 24/48 hours, from last week or last month) and the **sampling time** between data (minimum 1 minute)

e. configure the **format** with which data is exported; the possible options are CVS and EXCEL

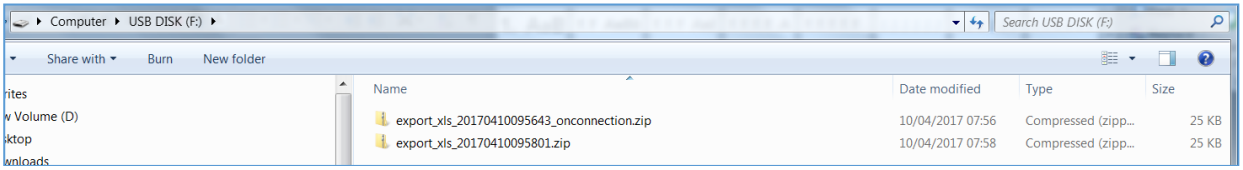
Once configured, the user must confirm by pressing SAVE.

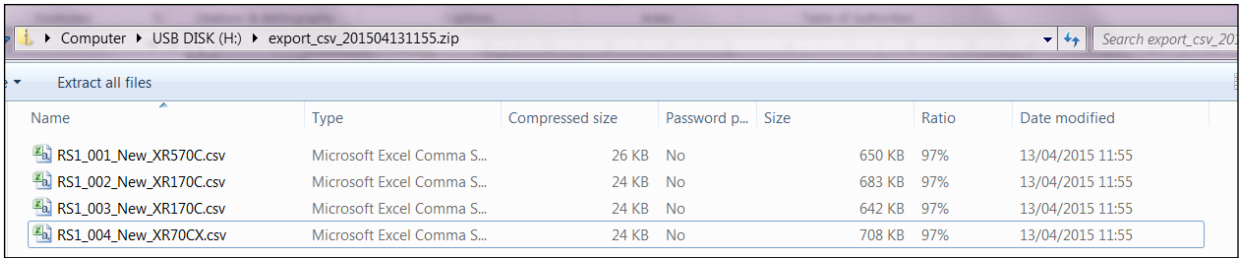


To retrieve data from remote connect to url: http://IP_XWEB/getdailydata?g=1&u=<username>&p=<md5 password>

XWEB transmits a zip file with the name "export_xls_YYYYMMGGhhmm.zip" or "export_csv_YYYYMMGGhhmm.zip".
For example:
export_xls_201311271234.zip (for xls export)
export_csv_201311271234.zip (for csv export)

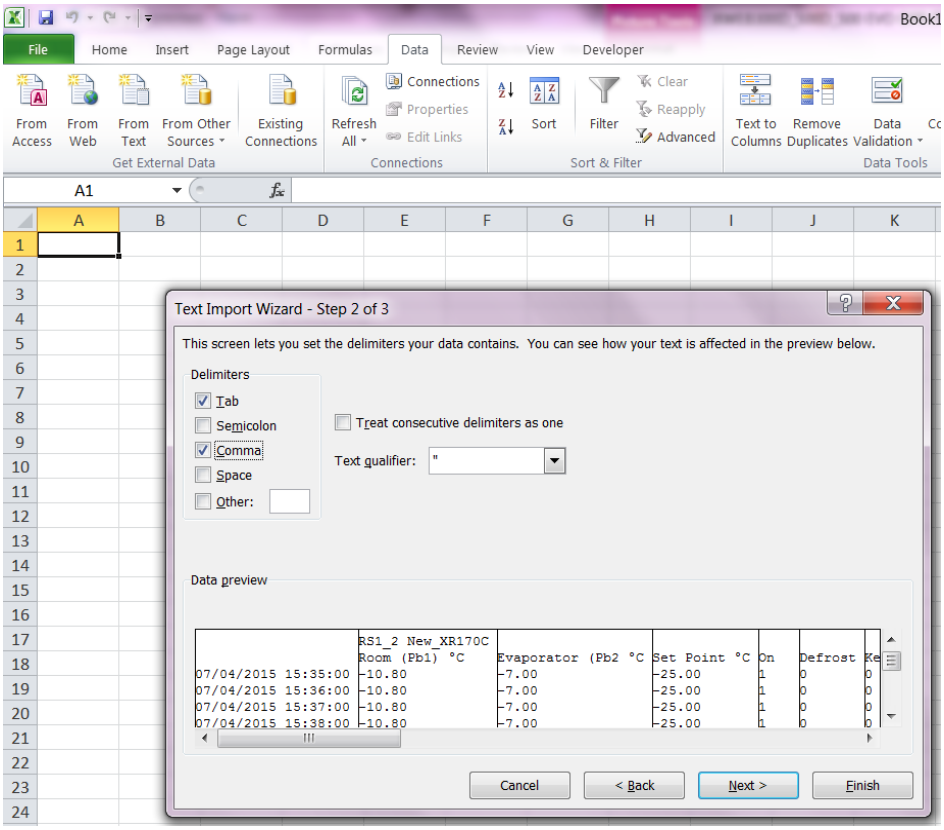
In case of export on USB stick, the files will be copied to it as per picture below



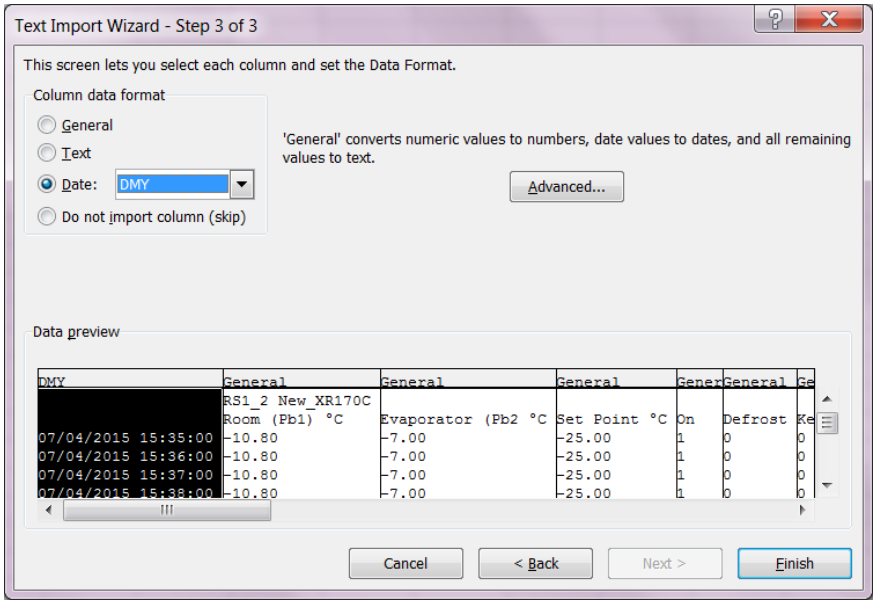


If the data is exported as CSV, note the conventions applied are:

8. Comma as column separator
9. Dot, as decimal separator

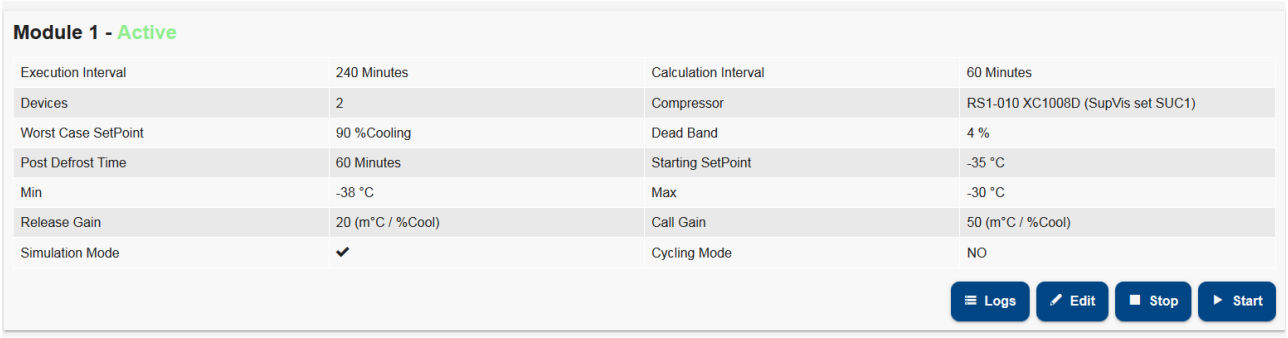


10. Day/Month/Year



3.3.5.6 COMPRESSOR RACK OPTIMIZER

C.R.O. works with a proprietary algorithm developed by Dixell that combines the complexity of the cooling system with the simplicity of the parameters that the user must set at a program level. It works on two basic parameters to guarantee the best possible adjustment of the refrigerator: the suction pressure of the compressor plant (detected by a series XC1000D ver.1.1 or higher controller) and the more critical utility from a "consumption of cold" point of view.
Depending on the model of your XWEB, the function may have a different number of CRO engines. The following types of parameters are common for all. A window such as that illustrated below appears when the CRO menu is opened for the first time.



3.3.5.6.1 CONFIGURATION PARAMETERS

Execution interval: indicates how often a new set-point is sent to the plant (in minutes).

Analysis interval: indicates for how many minutes, in reverse, the data is to be analysed (operation of class utilities; in minutes).

Reference class: is the set of controllers affected by the calculation of the worst possible case.

Device: is the plant controller affected by the modification of the set-point.

Compressor Set-Point: lets you select which set-point to use: typically, that of the plant suction section.

Worst case threshold (setpoint): lets you define the trigger threshold for the C.R.O. algorithm (in %)

Neutral zone (dead band): specifies an oscillation band (centred on the percentage of the worst possible case) inside which the algorithm does not intervene.

Initial value: initial set-point value. The value can be an estimate: in time, the set-point value sent to the plant will change -according to the algorithm (typically in °C).

Min. and Max. Set-points: safety limit values associated with the minimum and maximum suction pressure: to prevent C.R.O. from excessively increasing or lowering the pressure to avoid the safety devices from triggering (typically in °C). It is good for the minimum value to be as high as possible in order to optimise energy consumption.

Release and Call Gain: the call and release gain are two parameters that decide by how much the current set-point must be increased/decreased. The call-gain parameter is used should the set-point need to be decreased. It is useful to set a higher call-gain value than the release-gain in order to quickly decrease the temperature (typically in m°C/%).

Post Defrost Time out: the duration after a defrosting event that is ignored in calculating the percentage (in minutes).

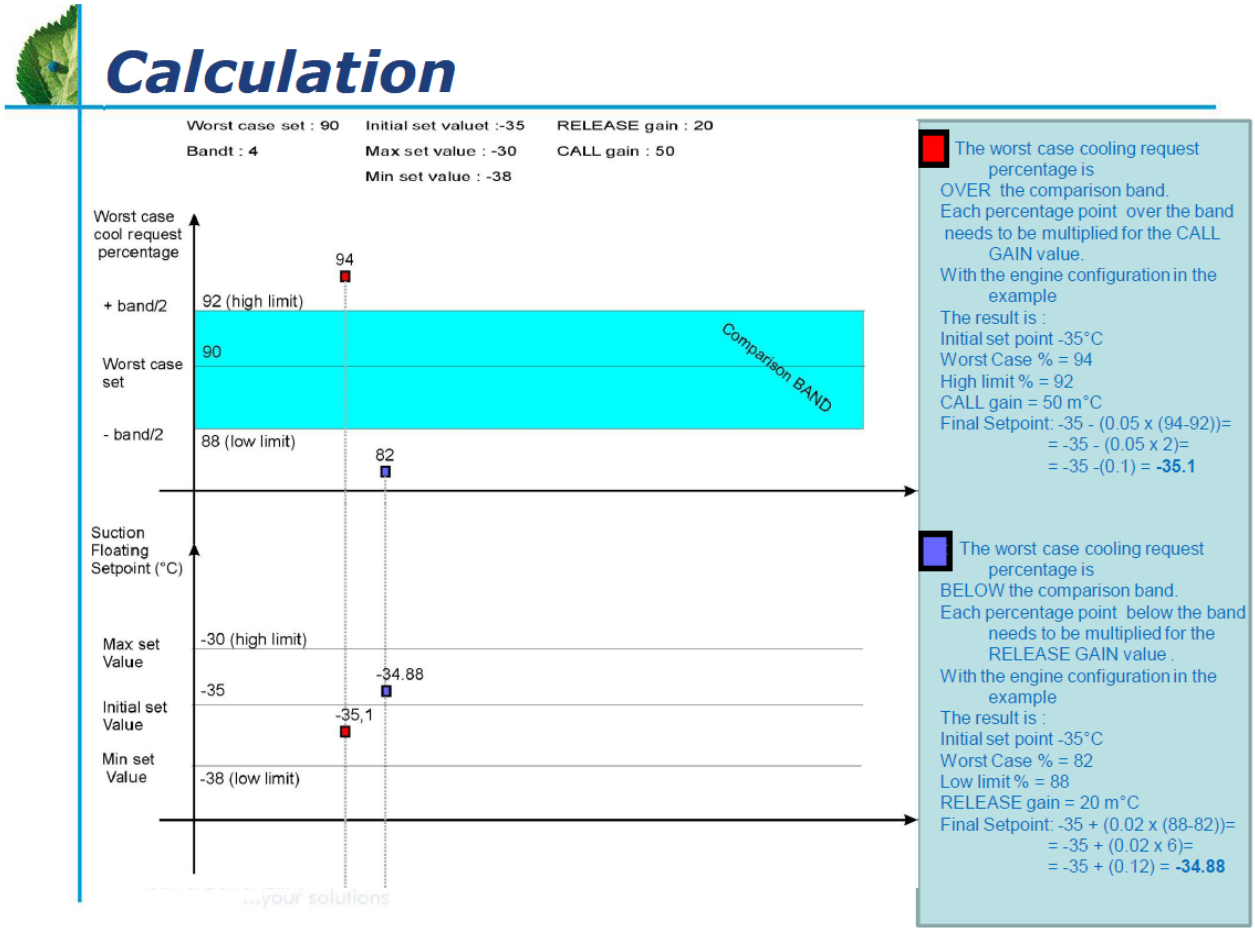
Simulation Mode: The enabling of simulation mode does not send the set-point values calculated by the algorithm

Cycling Mode: The enabling of cycling mode, combined with cycle time (in hours) continuously enables and disables the algorithm. This mode is useful for checking the quality, when applied to the system. Usually, cycle

times of no more than three days are set. When the algorithm is disabled, a reset command is sent to the plant for its repositioning to its initial state.

Typically, the units of measure of the plant are expressed in °C, however, C.R.O. adapts to the plant's unit of measure. However, should the unit of measure be modified in the next phase, it will be necessary to re-configure the CRO starting with the disabling of the set-point variable from the algorithm parameters, subsequently re-configuring the unit of measure in "Devices Setup" and re-configuring the CRO parameters.

3.3.5.6.2 HOW IT WORKS



Should the real percentage of the worst possible case be below that set (except the neutral zone), the formula used for the new set-point is:

$$Set_{new} = Set_{old} + \Delta\% \cdot \left(\frac{RLS_{gain}}{1000} \right)$$

$\Delta\% =$ (calculated percentage value) - (percentage set for the worst possible case)

$RLS_{gain} =$ release-gain parameter value

And vice-versa, should it be above the set percentage (except the neutral zone), the formula used for the new set-point is:

$$Set_{new} = Set_{old} - \Delta\% \cdot \left(\frac{CALL_{gain}}{1000} \right)$$

$\Delta\% =$ (calculated percentage value) - (percentage set for the worst possible case)

$CALL_{gain} =$ call-gain parameter value

The calculated percentage refers to the analysis range and it changes from time to time based on the real system conditions.

Each engine must be activated by pressing enable system. To deactivate it, press disable system.
The engine status is displayed at the top of the window.

3.3.5.6.3 RESULTS FROM CRO

To display the status of the three worst utilities, from the cold call point of view, open the menu LOGS. Select the class and then the devices for which the report is to be issued. The three devices considered to be the worst in the latest period, will be shown on the screen (as illustrated by the image below). The worst device is that indicated in the red column.

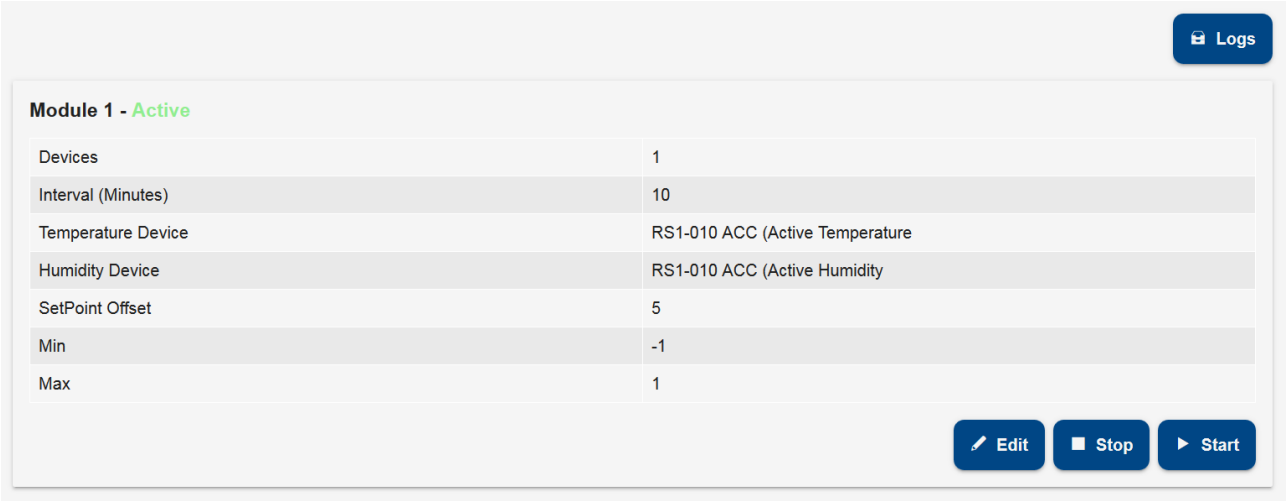
For each device, in addition to its name, the amount of cold call is also indicated. "Ch." corresponds to the compressor start-ups, while "On/Off" corresponds to the call of the eventual electronic expansion valve. These values are used to calculate the cold call percentage of the algorithm.
Each line corresponds to a different moment in which the C.R.O. algorithm has sent a new set-point to the plant: this set-point is shown on the right, below the "Set" column.

From the previously described window, press "Graph Results" for a graph displaying the same information. The user is asked to indicate the graphic tools with which to display the graph.

The graph shows the collected data for the selected period; together with the plant set-point as a dotted line. With C.R.O. deactivated, the central set-point would be a horizontal line: the areas above this fixed set-point and floating set-point are energy saving.
The plant set-point is illustrated in the first graph of the following image, whilst in the graph below, the energy consumptions relating to the same period are shown.

3.3.5.7 DEW POINT

The Dew-Point managing concept enables the XWEB to act on the adjustment of the anti-sweat heaters in order to reduce their electricity consumption.
The XWEB acts on the XM600 and/or ACC controllers, to which the Dew-point temperature set-point is sent.
Condensation builds up on the controlled bench window surrounding the system.
Each engine may relate to different zones of the system where work is to be carried out with different settings and parameters. All of the following configurations are part of the dew-point project that will be run by the system if at least one of the dew-point engines is activated.



3.3.5.7.1 CONFIGURATION PARAMETERS

Devices: variables of devices receiving the set dew point value;For XWEB configuration device, define:
- Check enabled: defines whether or not the device is part of the class
- Set Dew Variable: defines the variable towards which the dew-point value will be sent. Attention: if the Set Dew Point variable is not visible in the list, it has probably been disabled by the tool advances. Access Device-Setup□Advanced and enable it.
- Offset: value added to the Set Dew value. Reflects the difference between the temperature read by the XM600 probe that is not normally fitted on the glass and the real glass temperature.

Interval: cycle time for sending the dew-point set (in minutes)

Device (or Temperature/Humidity Device): device for calculating the dew-point set value. Should the XH50/55P box be selected, the calculation is performed by the same device that must be specified with field “XH50/55P Device”. This controller is connected to a temperature and humidity probe in the room. Should this device not be available, it is possible for the XWEB to calculate the Dew-point Set value, by specifying the variables from which the room temperature and humidity values are to be read. They are indicated with parameters Temperature/Humidity controller and Temperature/Humidity Input.

Set Offset: offset to the Dew-point set value added

Min./Max. Set: limit values of Dew-point set. Should these values be higher or lower, they are sent to the controllers configured as addressees for this engine

3.3.5.7.2 ERRORS

From LOG, you can read the events created by the Dewpoint engine; in case of errors, the system can put in the “Result” column

"Valid" => in the value column, the value calculated and sent to the central device is shown.
"Syntax error" => There is an error in the formula defined by the user. The mathematics is not developed.
"No device data" => There is no data from the device and the mathematics cannot be developed.
"No link device" => As above, since the device is a NoLink
"Device OFF" => As above, since the device is in Off mode.
"Math div by 0" => The mathematics development is stopped due to a division by "0"
"Value not allowed" => The values for the formula variables are not permitted (out of range)
"Mathematic" appears in the "Device" column

The possible errors that may occur when sending the set to the central device include:
"Timeout" => No response from device.
"Exception" => Value not accepted by device.
"Unknown" => Unknown error.
"Success" => Value sent with success.
The device name/address is shown in the "device" column.

3.3.5.8 SUPERVISION

The supervision concept significantly expands the possibility of intervention by the XWEB5000 on system management. Supervision is intended as the ability of independent intervention by the monitoring unit on the monitored devices. To simplify the concept, it may help to think of a functional block with all the variables detected on the controller field (temperatures, pressures, operating status, alarms, etc...) as an input, and as an output, the possibility of sending specific commands to the same controllers. The basic link between input and output lies in the supervision, that is to say, in a special algorithm that the user has programmed and that the system implements each time the input variables meet the set criteria. Pay due attention to the fact that the sending of certain commands verified, following the establishing of certain input conditions, is not accompanied by the sending of additional commands when the input conditions fail. In other words, when the user considers and realises the direct action, the reverse action must then be realised. Otherwise, the system is unable to restore the initial conditions when required.
Given the evident importance of this new work tool, Dixell has tried to make its usage as simple as possible for the end-user. This is why the event is programmed through the graphic user interface, therefore, no programming knowledge is required (in contrast with what occurs with normal programming languages for PLC).

THE PROJECT

From a practical point of view, the user must be familiar with the supervision project to be realised in advance, this is why, for educational purposes, the project considered throughout this chapter will be the following:
the installation in question, demonstrates the need to monitor the operating state of an emergency generator that is only activated should there be no electric energy supply. Upon the occurrence of this condition, the supervisor must send a series of commands to the utilities in order to manage, at the highest possible level, the energy saving function during a power-cut. In the example in question, the generator is monitored through means of a Dixell XJA50D controller (alarm/status acquisition module): when the generator is activated, the module signals this through the variation of the corresponding digital input. During operation with an emergency generator, the XWEB must send the "energy saving" command (variation of work set-point) and, only for the compatible utilities as well as the "save cold" curtain lowering command.

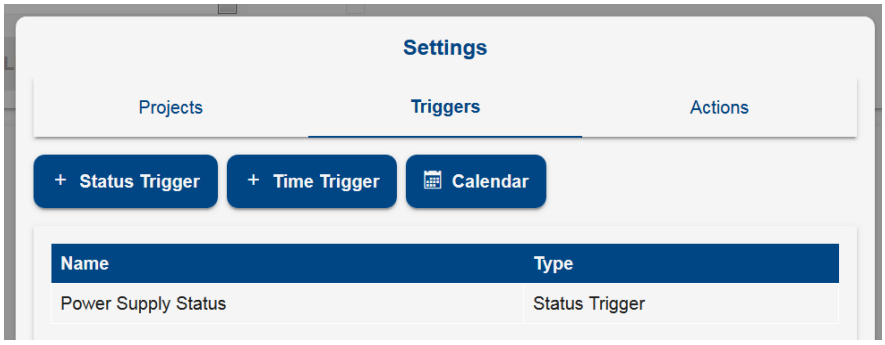
SDC, ELS and ODC

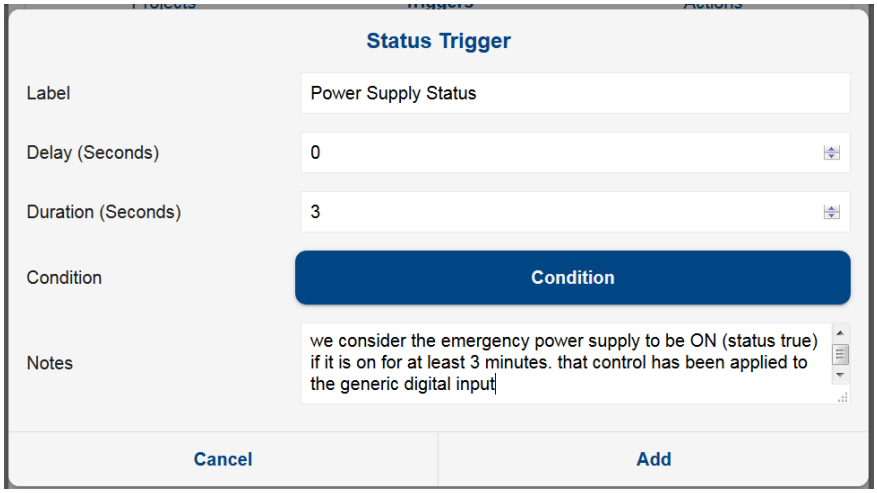
Each project consists of at least 3 distinct blocks:

- SDC (source device class) is the set of controllers whose variables (probe values, operating state, etc...) constitute the inputs for the supervision project.
- ELS (event logic supervisor) is the functional block that combines the input performed by the SDC with the output, that is to say, the sending of the commands to the supervision project controllers.
- ODC (object device class) is the class of tools involved by the sending of commands

Other blocks can be associated with these functional blocks, e.g. STE (system time event) as well as others that will be added by Dixell during the development of the XWEB5000 project.

SDC BLOCK (SDC -> Trigger - Device Status Trigger)





We will create a SDC that verifies the state of the XJP30D module digital input. When this input is active for at least 3 seconds, the generator is to be considered active.

From the device type filter, select the tool to be monitored. Go to "activation" and in our example select “Generic digital input”.

If multiple variables and devices are configured for this block, the logic rule constructed by the above parameters corresponds to:

OUTPUT = ((RL ‘Var**A**’-Addr***1***) ACT (RL ‘Var**B**’-Addr***1***)) DL
((RL ‘Var**A**’-Addr***2***) ACT (RL ‘Var**B**’-Addr***2***)) DL
((RL ‘Var**A**’-Addr***3***) ACT (RL ‘Var**B**’-Addr***3***)))

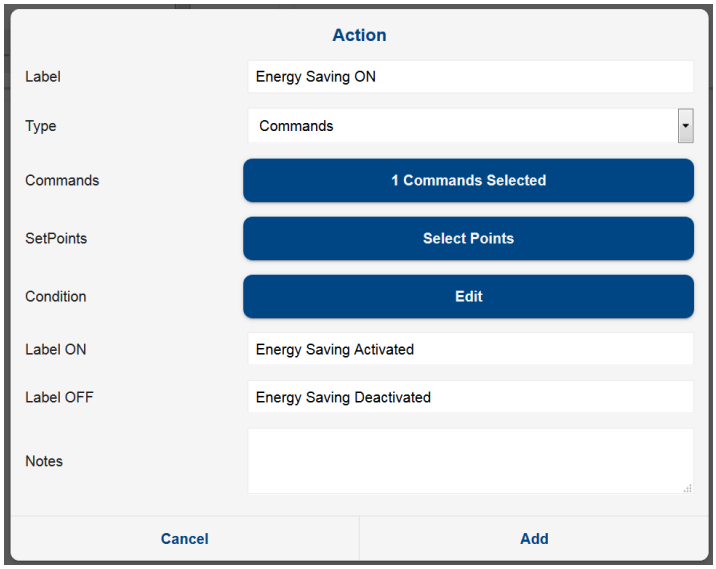
Where
RL = Rever logic (box selected = not)
ACT = Activation logic. AND OR
DL = Device Logic. AND OR.
‘Var**A**’-Addr***1*** = Variable**A** of address device ***1.***

If the control must be executed on numeric values, set the condition (greater, less, equal) and the corresponding threshold value.
The block output results from the above calculation. Value 0 corresponds to status DIS (disable). Value 1 corresponds to status ENA (enabled). These front changes are sent to the next block (ELS), which will then carry out further processing and act by sending commands to the successive blocks.

The ENA status can be activated with a delay, set with parameter DELAY. The above assumed logic continues to always be met and returns the TRUE value. The block status, from the moment in which the logic is met at the end of the delay time, assumes the DLY value.
The ENA status can be maintained with a maximum time set with parameter DURATION. After this time, the block status switches from ENA to DUR.

ODC BLOCK (Action – Commands Action)

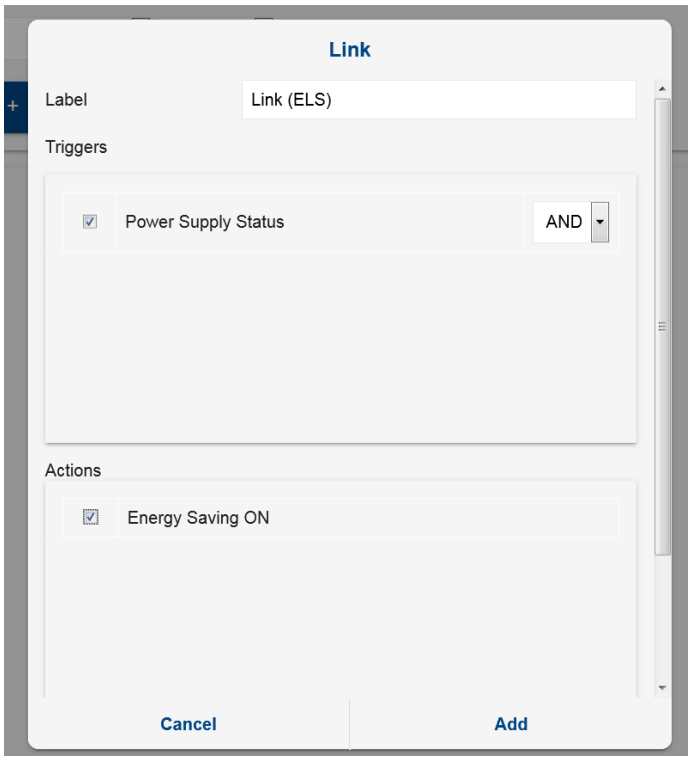
We will create an ODC that sends the reduced set-point command. The normal work set is increased by a few degrees by this command and is sent to 2 walls.
Enter an appropriate name under "ODC name". From the device type filter, select the category to be monitored. Select the tools and go to "available commands". In our example we have activated the “energy saving ON” command.
Fill-in the fields “Conditions” and “Labels”. These labels are used to recognise the actual sending of the command.



The possibility of entering notes that can be subsequently used to understand the meaning of the logic block being created can be very useful.

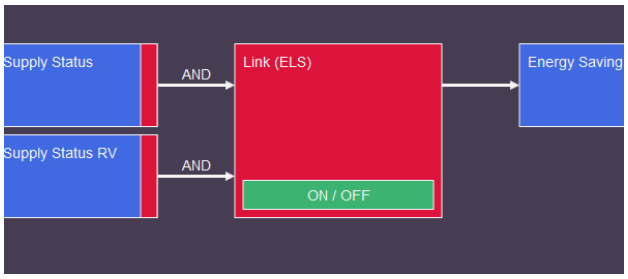
ELS BLOCK (Link)

Choose the "Create" menu. We will create an ELS that ties the two blocks so far realised. The ELS acts as a filter combining the input (generator status) and the output (command sending to utilities).
Enter an appropriate name under "ELS name". This block allows for the linking of the SDCs to the ODSs.
The user can create multiple functional blocks, linking only those used for the project in question. The other blocks can be used in other projects.



This block can be configured with multiple inputs, such as SDC and/or STE blocks. A logic group can be associated with each of these: AND/OR/DIS. The rule that is executed is (∑And | ∑Or) & ∑!Dis where
And=AND logic of all parameters in AND;
Or=OR logic of all parameters in OR;
Dis=NOT logic of all parameters in DIS.
Example with C=Condition of Input (SDC/STE):
C1 AND
C2 OR

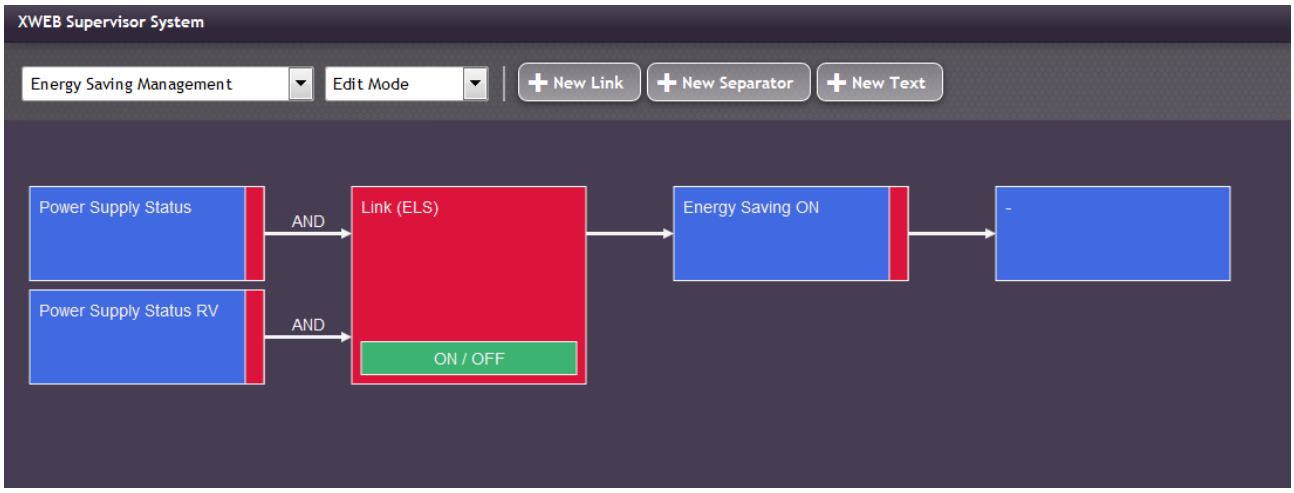
C3 AND
C4 OR
C5 AND
C6 DIS
C7 DIS
The resulting logic is: ((C1&C3&C5) | C2 | C4) & !C7 & !C6



The logic configured for each input is shown on the project screen as a label on the same inputs. As illustrated in the above image.

Complete project

The complete project is displayed by means of the macroblocks:



STE BLOCK (Trigger – Time Trigger)

This logic block allows for the management of the timed events. It is a programmable filter, the status of which can be added to the project and linked to the ELS block. It is useful to set night/day filters or hourly filters. When the input conditions (from the SDC block) occur, the system also checks the STE status. In view of this verification, ELS is activated. Should this occur in vice-versa the event in ODC will not run.
The STE blocks correspond to the "classes" configured in "Supervision Time Event".

EMM BLOCK (Action – Message Action)

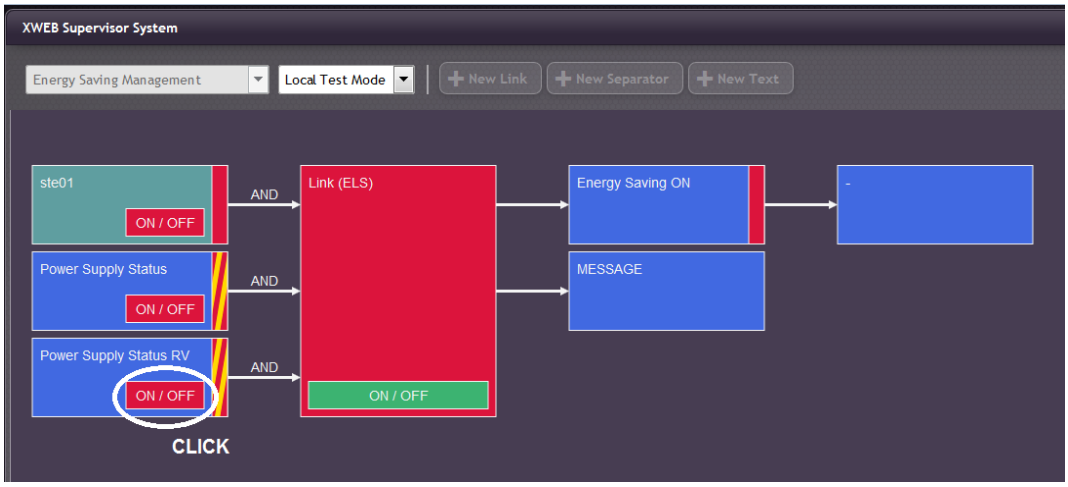
The EMM block can receive alarms or notifications
With the EMM block you can receive alarms or notifications regarding the status of the active supervising programs.
The list of receivers depends on the receiver book filled in the ALARM configuration. The message text is the content of the fax/mail that you intend to send. The EMM also report information regarding the status of the controller that will usually correspond to the controller modified by the ODC action or the SDC enabling condition. The EMM block will be added after the ELS. This means that once the SDC is enabled and the ELS activates, the ODC and the EMM will send a message according to the setting selected.

PROJECT SIMULATION

Once the project is realised, it can be partially or totally simulated before being considered definitive. There are 3 types of simulation: Local test, on-field Simulation and Runtime mode.

LOCAL TEST

This mode is useful when a rough idea of what happens when varying the status of the inputs is necessary. Access the menu "Tools" and then "Local test".
The status of the SDCs can be forced by clicking their status. A block which in turn activates the ELS. The chain interrupts on block ODC, which simulates the command sending but does not in fact realise it.



In the above image, we clicked on the SDC block when in status DIS: block enabling activates block ELS which then turns red. And the ODC block sends a false command.
Select "Modification mode" from the "Tools" menu to return to modification mode.

ON-FIELD SIMULATION

The input statuses can be forced through means of this test in order to produce and verify the sending of the commands to the utilities. Pay attention to the fact that this test sends commands to the utilities, it is not a simulation, however the results are real and reflect the system response. To force the inputs statuses, place the mouse pointer on block SDC or STE and right-click to activate the "Disconnected inputs" mode. The user can now force the status of an input by left-clicking the mouse on the corresponding item "ENA" (enabled) or "DIS" (disabled). Based on the programming performed, the ELS block will pass the command sending the request to the next ODC. Be careful when exiting the on-field test mode, the system returns to the previous project conditions and sends commands to utilities, if necessary. Therefore, consider the potential sending of additional commands before abandoning the project.

RUNTIME MODE

This mode allows the user to verify, in real time, the status of the system operation following the execution of a supervision project. The user cannot, in any way, interact with the project. ATTENTION: each time runtime mode is engaged, the system is put into its working position which is, at that moment, decided by the SDC status. When runtime mode is deactivated, the system is reset. This may entail the sending of an additional command.

ACTIVATION OF PROJECTS

The system allows for the simultaneous execution of multiple projects, the user must then decide which to activate. From the menu "Projects", "Project activation", select the project to be activated via the appropriate check box.

VISUAL FEEDBACK

Once the supervision program is running, it provides the user with important information in graphic form. The following table summarises the possible work situations.

value/colour	description
Red	Not Active
Green	Active
Yellow	Trigger on duration
Orange	Trigger on delay
Yellow+Red	Status Unknown or Error

3.3.5.9 LANGUAGES

The user manages the languages available in the system by accessing the language management panel. By default, the system presents the user with the following languages:

- English
- Italian
- Spanish
- German
- Portuguese (Brasil)
- Russian
- Turkish
- French
- Polish
- Greek

Other languages can be added/removed and translations are handled with Excel files.
The system handles a maximum total of 10 languages. Additional installed languages can reduce the temperature data storage time to less than 1 year.

Add New Language
For adding a new language you must specify

1. A language already present in the system from which to inherit the translations
2. Language name in acronym format. The left box indicates the language and the right side shows the country for management of dialect
3. Language name in extended format

Export Language
Export is the preliminary step to the translation. Select

1. The source language of translation (for example, English)
2. The language that you want to translate (for example, Japanese)

XWEB exports an Excel file containing all the strings in English and Chinese. Already translated strings in Chinese are unlikely but will be editable by the translator.

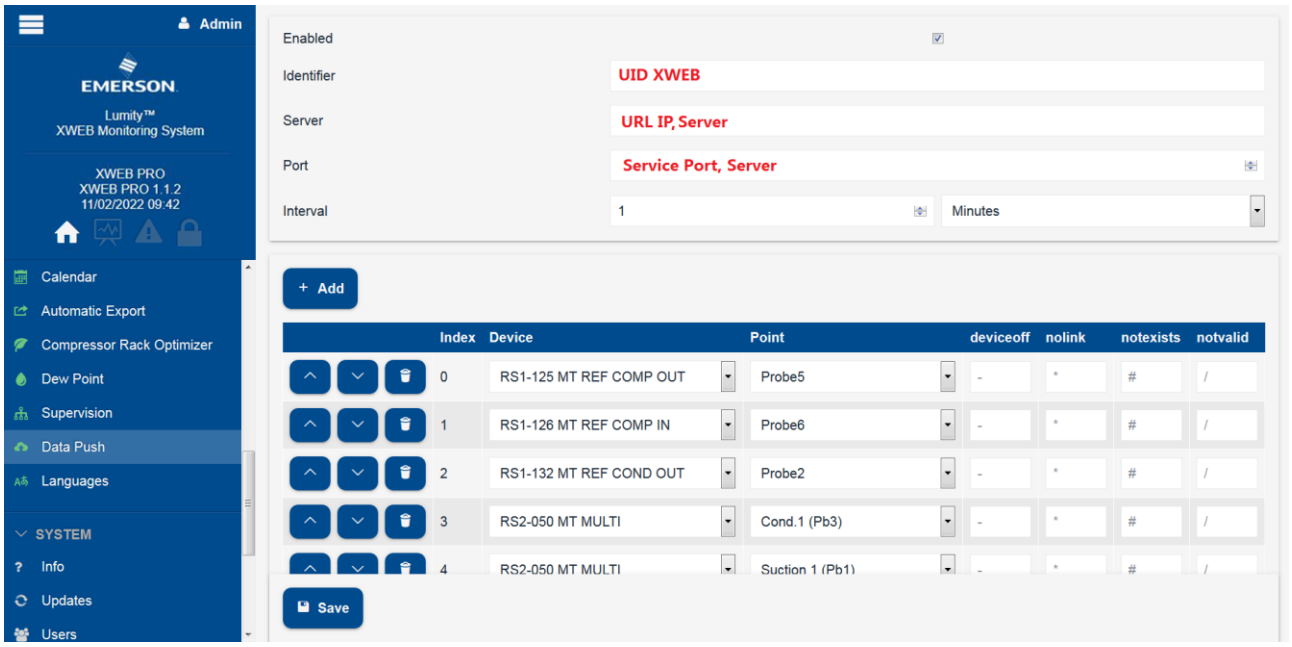
Import Language
To import a translation in the system. The format should be the that of the Excel sheet.

Clone Language
To copy translations from one language to another.

Remove language
To remove a language not needed by the system.

3.3.5.10 DATA PUSH

Panel access makes it possible to set up XWEB to send the collected data to a server according to the “Data Push” protocol.



Configuration parameters:

- Identifier: unique XWEB identifier in the enterprise server
- Server: IP address of the enterprise server
- Port: port on the enterprise server, which XWEB will send information to
- Interval: time to update the information to the server

The information sent is the data available for the list of configured variables (Index+Device+Point); the parameters i. deviceoff. ii. nolink, iii. notexists iv. notvalid are the strings that are sent to the server in case of i. instrument in standby ii. instrument in nolink alarm iii. e iv. instrument not configured correctly: the device cfg is inconsistent with the cfg of this service (it might be necessary to review it completely).

3.3.5.10.1 PROTOCOL

This is a UDP protocol; xweb sends telegrams to the server it dooes not get a feedback from. The telegram data consist in a string of characters. The string contains field separated by a comma. Mapping of each field for the correct variable is performed in the server configuration. Float values must be expressed with a point as decimal separator.

Field No	Description	Data format	Example
1	Unique ID for this plant / xweb	6 Alphanumeric characters	999999
2	No of value fields	Numeric integer	26
3	Time stamp	ISO date format	2010-08-08 23:58:00
4	Value field	Numeric float	78.8
..	..	..	..
n-1	Value field	Numeric float	238.1
n	Value field	Numeric float	238.0
n+1	CRC16 Check sum	Hexadecimal	1C4E

The maximum number of value fields is 99.

Example string:

999999,26,2010-08-08
23:58:00,78.8,12.8,28.0,152.7,1.1,13.7,152.6,26.0,1367.2,183.3,30.09,0.71,48679.6,
60.90,58.32,57.66,0.00,-99.00,-99.0,51.0,80.8,3383.5,238.8,0.0,238.1,238.0,1C4E

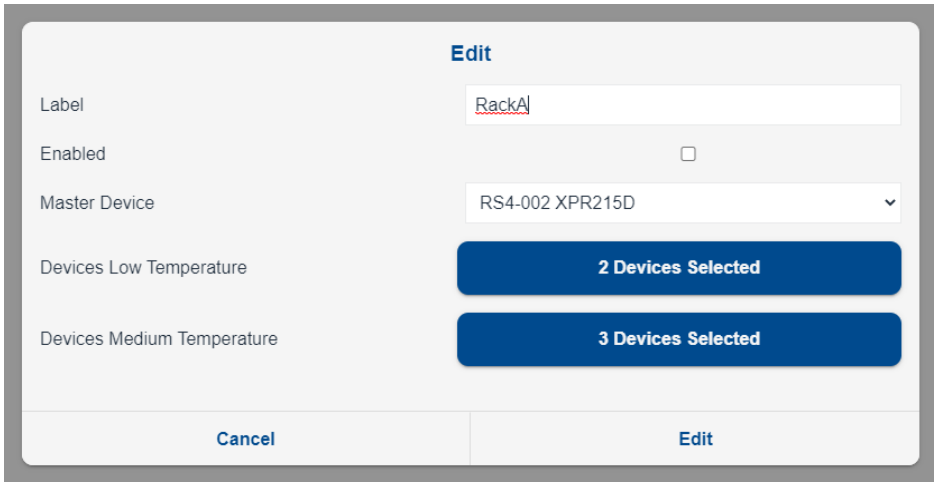
How to calculate CRC16: the bold part must be considered
999999,26,2010-08-08
23:58:00,78.8,12.8,28.0,152.7,1.1,13.7,152.6,26.0,1367.2,183.3,30.09,0.71,4
8679.6,60.90,58.32,57.66,0.00,-99.00,-
99.0,51.0,80.8,3383.5,238.8,0.0,238.1,238.0,1C4E

3.3.5.11 COMPRESSOR GUARD

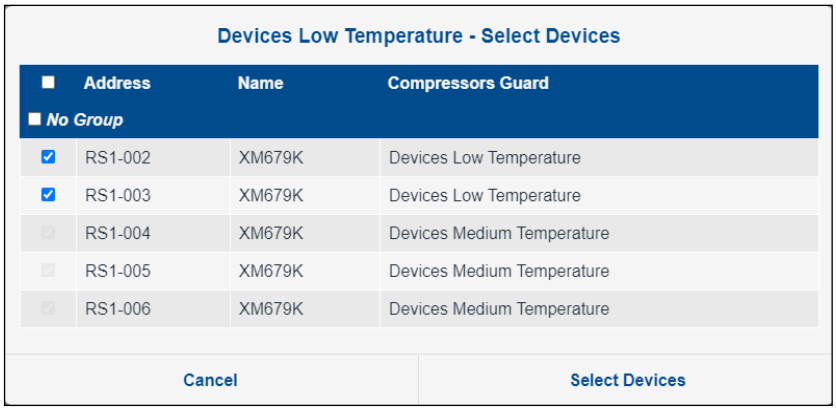
In centralised systems, as in normal condensing units, the formation of liquid in suction may lead to compressor breakdowns. The “Compressor Guard” function prevents undesirable liquid backflows and ensures safety. If the compressors cannot be started up, due to protection times or alarms, the system temporarily inhibits the injection of refrigerant into the evaporators until the compressors are available again

The feature is compatible with IPRORACK 6.2 or higher and XM600 5.4 or higher.

Access to this panel makes it possible, when the system is configured and operating, to monitor the algorithm in real time. The configuration parameters can be set up in the same panel, such as specifying the electronics that manages compressors as well as cabinets.



master selection main window (compressor management), low and high temperature (cabinet management)



LT tool selection

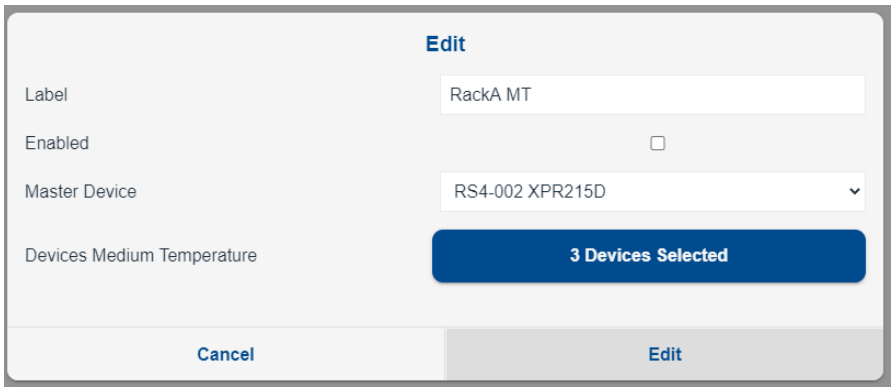
3.3.5.12 XECO2

Natural gas applications, such as CO2, require increasingly better performance from technologies in energy terms. One of the most efficient solutions is using flooded evaporators, which makes it possible:
• to obtain satisfactory results in all seasons, even in hot climates;
• to exploit the entire exchange surface of the evaporator, increasing the cooling capacity of the fixture;
• to increase the evaporation pressure, reducing the compression ratio, hence the energy consumption of the compressors.

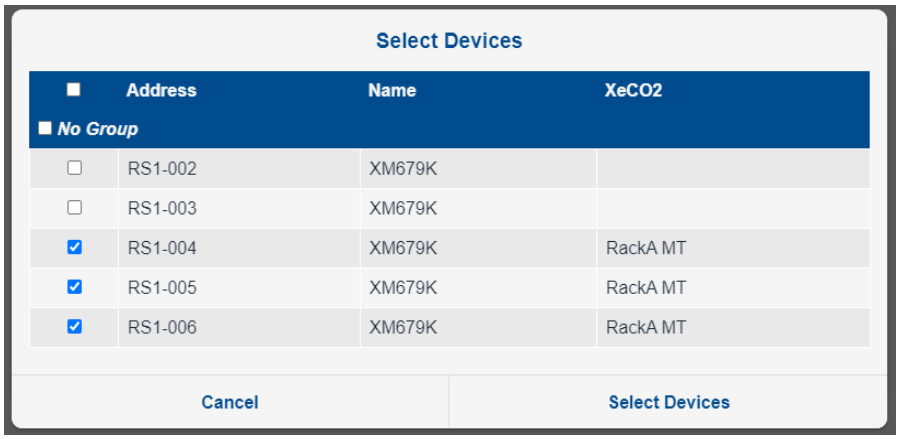
XeCO2 is the innovative and complete system that makes it possible to work in complete safety with flooded evaporators, thereby optimising the operation of CO2 systems. It consists of regulators for refrigerated cabinets and cells (XM600 ver 5.4 or higher), controllers for compressor racks and condensing units (iProRACK ver 6.2 or higher) and the monitoring and control system (XWEB PRO).

Access to this panel makes it possible to monitor the algorithm status in real time, over time or to configure it.

Configuration consists of a simple step where one sets the central controller and the MT cell/cabinet controllers.



rack cfg and algorithm enabling

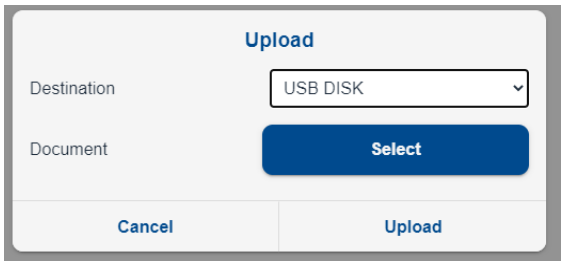


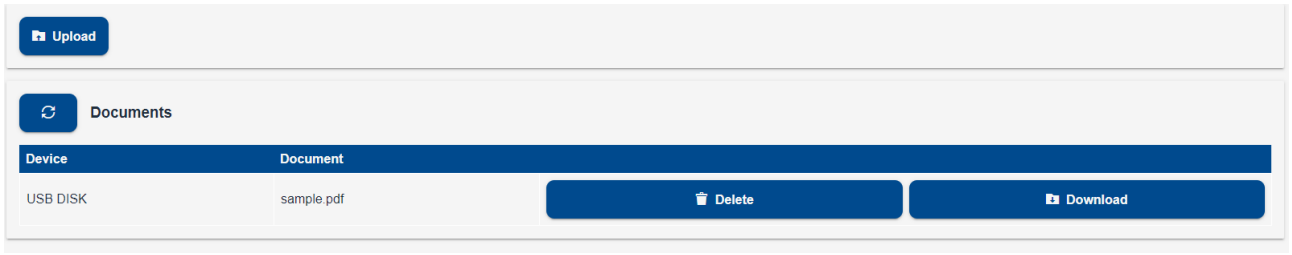
MT tool cfg

According to control station status, XeCO2 is able to lower the overheating setpoint of medium temperature fixtures, thereby flooding the evaporators and increasing the systems' cooling capacity.

3.3.5.13 DOCUMENTS

Panel access makes it possible to manage the XWEB memory upgrades for PDF files, typically used for the documents of wiring diagrams or manuals.





The PDF files cannot be read on PC but only on other XWEBs.

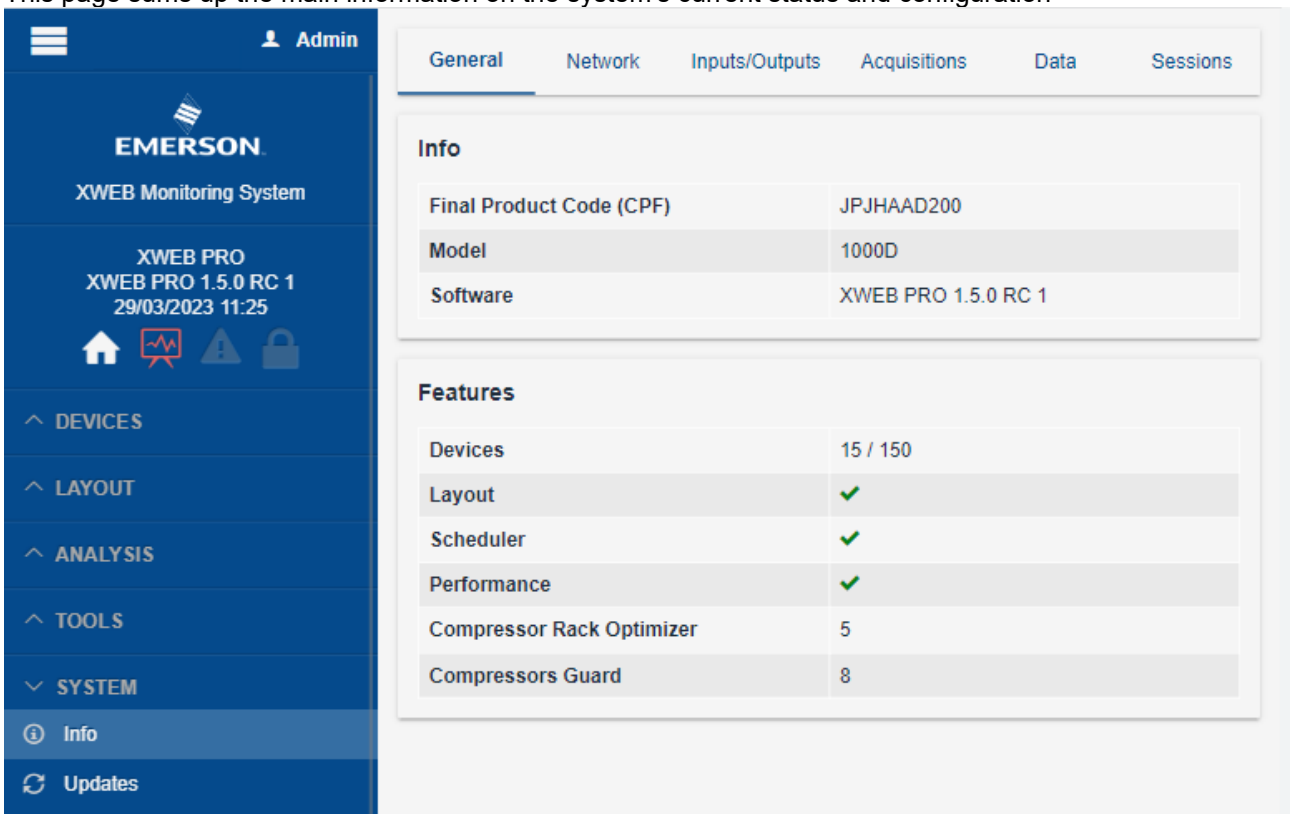
The Acrobat Reader app or equivalent must be installed on your computer to read the PDFs.

3.3.6 SYSTEM

3.3.6.1 INFO

Info

This page sums up the main information on the system's current status and configuration



General tab

- **Info**
  - **CPF**: Product code as per label
  - **Model**: XWEB model
  - **Software**: Installed software version

- **Features**
  - **Devices**: number of addresses used in configuration (devices) and maximum number of available addresses
  - **Layout, Scheduler, Performance meter, Scheduler**: enabled available features
  - **Compressor Rack Optimizer, Compressor Guard**: Enabled features and number of supported circuits

Network

- **ETH0**: configuration of the main Ethernet port
- **ETH0:0**: configuration of the second IP address for the same Ethernet port
- **ETH1**: configuration of the second Ethernet port (in models that have it)
- **WLAN0**: configuration of the wireless network if the Wi-Fi stick has been inserted and recognised
- **MAC Address**: MAC address of the highlighted port
- **Speed & Duplex**: connection mode and speed of the highlighted port
- **IPv4 Address and Subnet Mask**: IP address and netmask of the highlighted port
- **Mode**: WiFi configuration either as Access Point or connected to a wireless LAN
- **SSID**: name of the WiFi connection network

Inputs/Outputs

- Shows the status of relays and digital inputs, updated in real time
- **Media**: shows the name of the USB stick when inserted and recognised

Acquisitions

- Shows the status in real time of the Modbus communication interfaces, serial as well as TCP/IP.
- **General / Acquisitions uptime**: Active time from the start of acquisitions
- **COM n / TCP**: reference to the serial or TCP/IP port in use
    - **Total Polling Time**: Modbus cycle time to obtain a data refresh
    - **Normal Polling Time**: time devoted to regular acquisitions net of variables configured in “High Frequency”
    - **High Frequency Polling Time**: polling time devoted to the variables configured in “High Frequency”
    - **Transactions**: Communication quality with percentage indication of lost or error packets.
- showing i. the total time of a polling frame; ii. Indication of line quality with the success/error data of the Modbus commands

Data

- **Usage**: percentage of data memory used
- **ETA**: estimate of the time duration of the memory in the current configuration, before overwriting the oldest data
- **First Record**: date and time of the first historical data recorded
- **Last Record**: date and time of the last historical data recorded
-

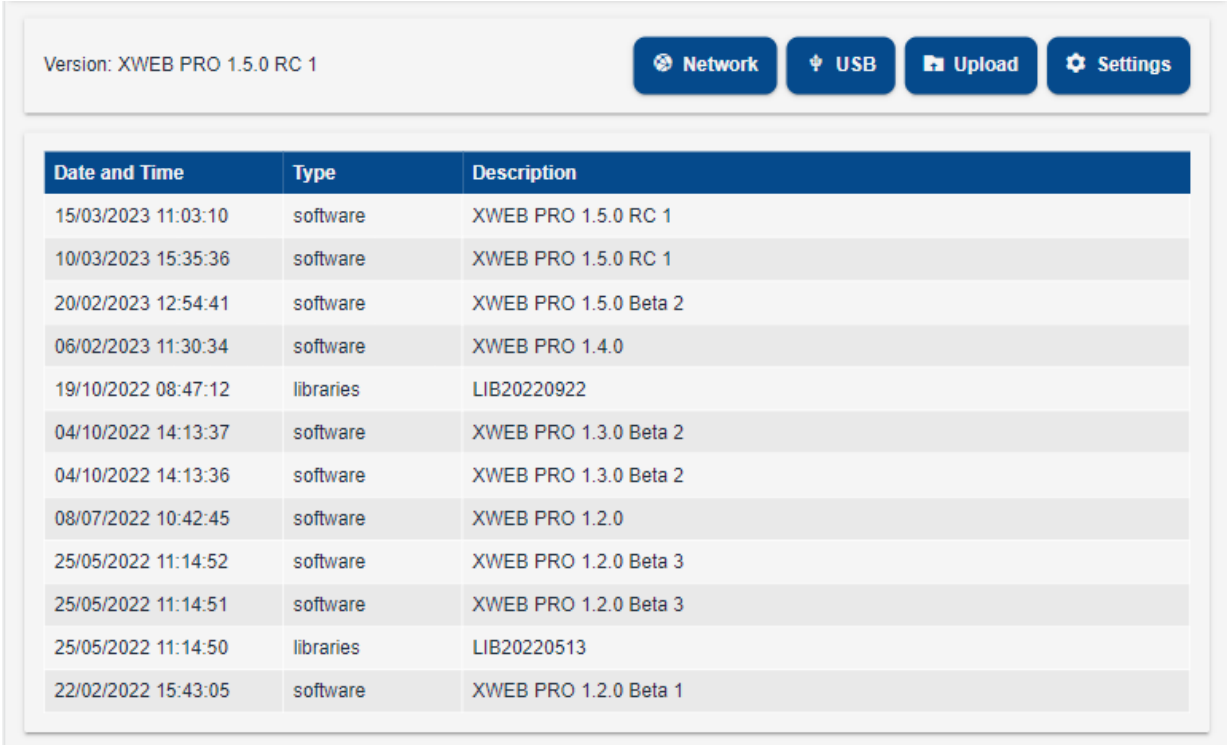
Sessions

- **User/Profile/IP Address**: shows active user sessions with relevant username, access profile and IP address of the connected user(s)

3.3.6.2 UPDATES

Updates

This page displays the XWEB software version in use and the list of all updates made on the machine. The list also shows all uploads for integrating device libraries.



Date and Time	Type	Description
15/03/2023 11:03:10	software	XWEB PRO 1.5.0 RC 1
10/03/2023 15:35:36	software	XWEB PRO 1.5.0 RC 1
20/02/2023 12:54:41	software	XWEB PRO 1.5.0 Beta 2
06/02/2023 11:30:34	software	XWEB PRO 1.4.0
19/10/2022 08:47:12	libraries	LIB20220922
04/10/2022 14:13:37	software	XWEB PRO 1.3.0 Beta 2
04/10/2022 14:13:36	software	XWEB PRO 1.3.0 Beta 2
08/07/2022 10:42:45	software	XWEB PRO 1.2.0
25/05/2022 11:14:52	software	XWEB PRO 1.2.0 Beta 3
25/05/2022 11:14:51	software	XWEB PRO 1.2.0 Beta 3
25/05/2022 11:14:50	libraries	LIB20220513
22/02/2022 15:43:05	software	XWEB PRO 1.2.0 Beta 1

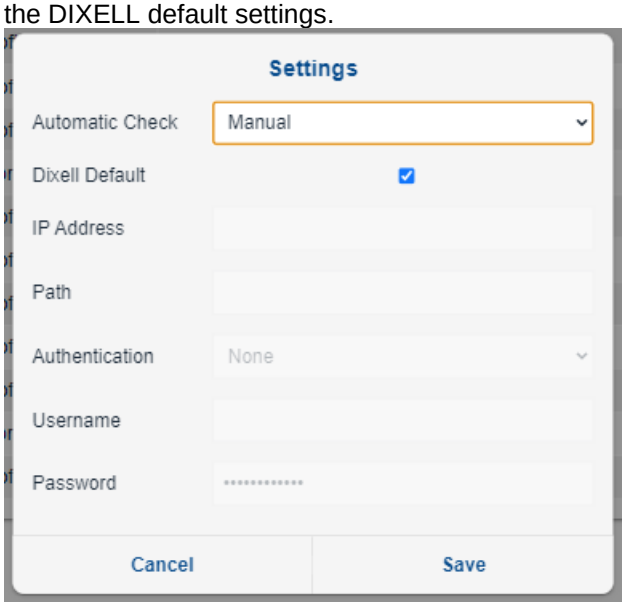
Use keys 

too lad the new software version or a library

- **Network**: it can be used if XWEB is properly configured to access the internet. It lets you download the update from the Dixell servers
- **USB**: when the update or library files are in the USB stick already inserted and recognised by XWEB
- **Upload**: when the update is available on the PC used to access XWEB via web-browser.

Note: an update file usually has a .ZIP extension and should not be unpacked before being uploaded on the system.

The **Settings** button is used to configure the access parameters to Dixell updating servers. Do not modify the DIXELL default settings.



If set up otherwise than “Manual”, the **Automatic Check** instructs XWEB to check for updates in the Dixell servers (Daily/Weekly/Monthly). If an update is available, it is only shown in the menu bar

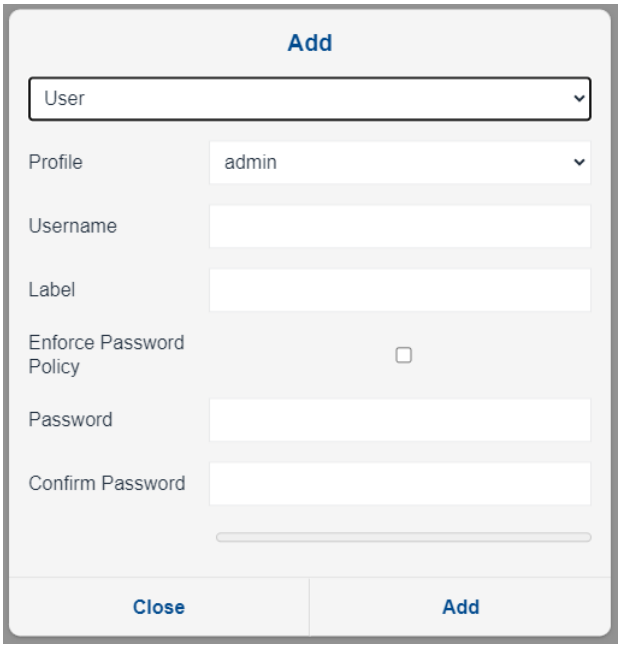
XWEB does not make any updates automatically.

3.3.6.3 USERS

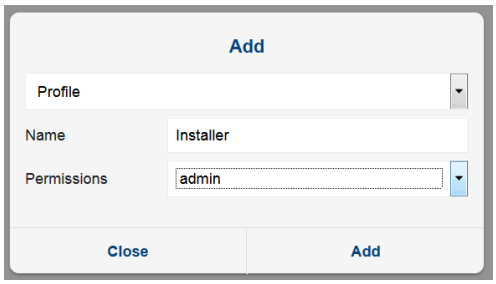
This page configures users and system access and use profiles.
The profile defines access rules and use for a group of users. When creating a new user, you must associate it with an existing profile.

With the “+ Add” key, you can create and add users or user profiles to the system:

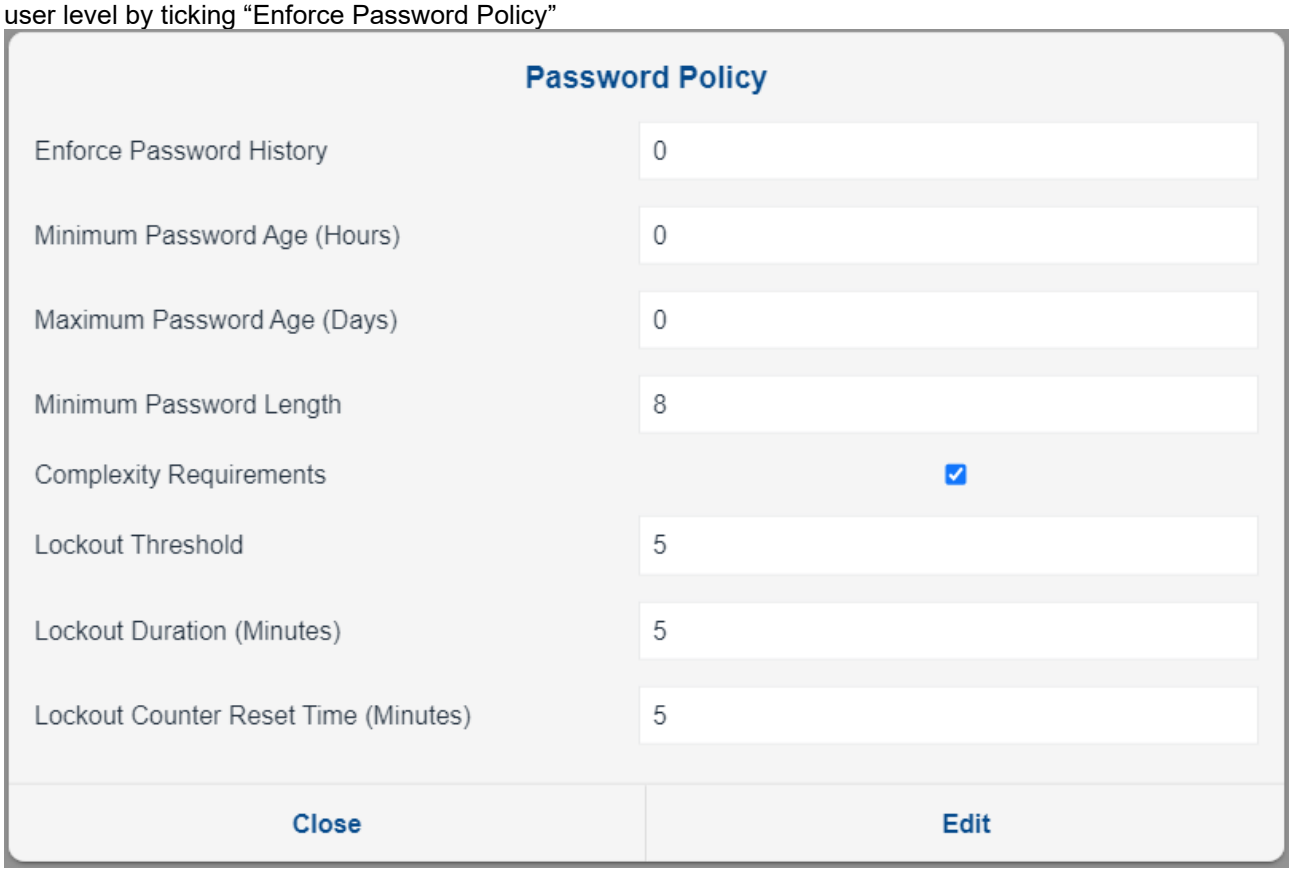
Users



Profiles



Use the “Password Policy” button to access the configuration area of the password security level, enable user level by ticking “Enforce Password Policy”



Enforce Password History
min: 0 - max: 30 - preset: 0
This setting specifies the minimum number of unique passwords that users must use before reusing an old password. It is recommended to maintain the preset value to reduce the risk of users having compromised passwords. If "Enforce Password History" is set at 0, the password chronology will not be stored and only the current password is stored.

Minimum Password Age

min: 0 days - max: 7 days - preset: 0 days
This setting specifies how long a password must last before the user is authorised to change it. Setting up a minimum age prevents users from repeatedly changing their password to override the "Enforce Password History" setting and immediately reuse their favourite password. by setting “Minimum password age” to 0, the user can change the password immediately.

Maximum Password Age
min: 0 days - max: 365 days - preset: 0 days
This setting establishes the maximum duration time of a password before the system obliges the user to change it. If "Maximum Password Age" is set to 0, the passwords never expire.

Minimum Password Length
min: 1 - max: 30 (maximum length 128) - preset: 8
This setting establishes the minimum number of characters that a password must use.

Complexity Requirements
Preset: yes
This setting specifies the types of characters that a user must include in a password. If " Complexity Requirements" are enabled, the password must include at least one character from each of the following sets:

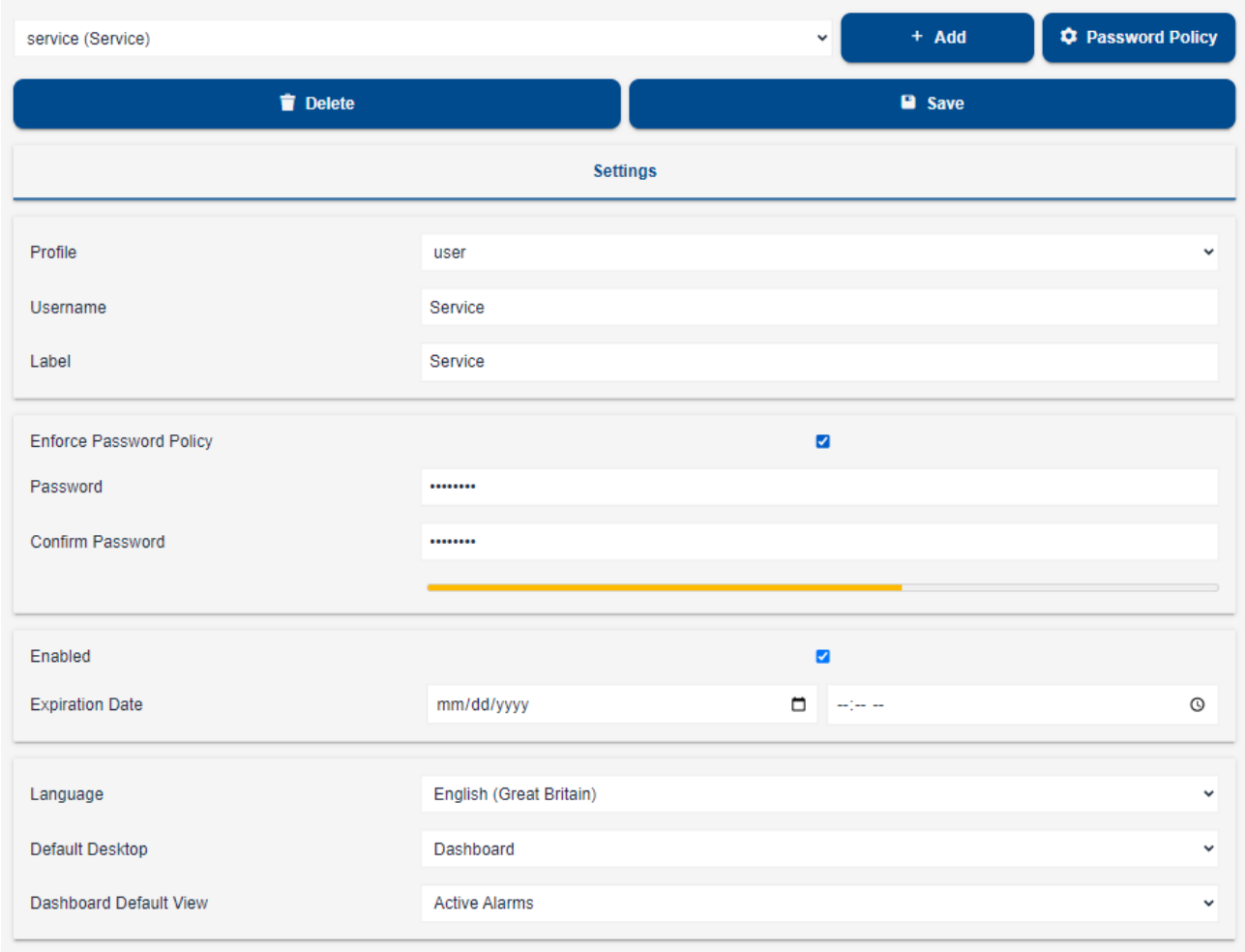
- Uppercase Latin letters (A-Z)
- Lowercase Latin letters (a-z)
- Numbers (0-9)
- Symbols (! @ # $ % ^ & * < > ?)

Lockout Threshold
min: 1 - max: 100 - preset: 5
Number of failed attempts (with an incorrect password) that the user can make before their account is blocked.

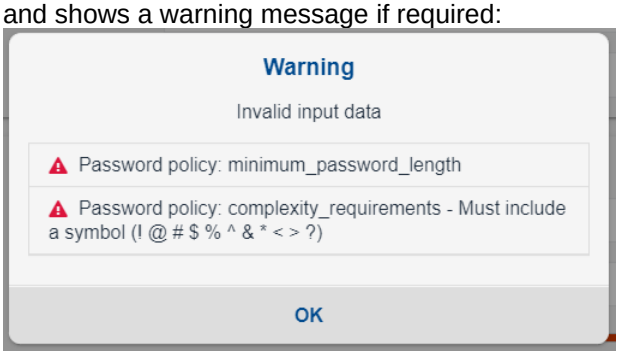
Lockout Duration
min: 1 minute - max: 1440 minutes - preset: 5 minutes
Duration of the account lockout if the user has entered an incorrect password more than once.

Lockout Counter Reset Time
min: 1 minute - max: 1440 minutes - preset: 5 minutes
The number of minutes after which the “Lockout Threshold” counter is reset.

From the list of already configured ***Users***, you can choose one to access the details and all options for editing or deleting.



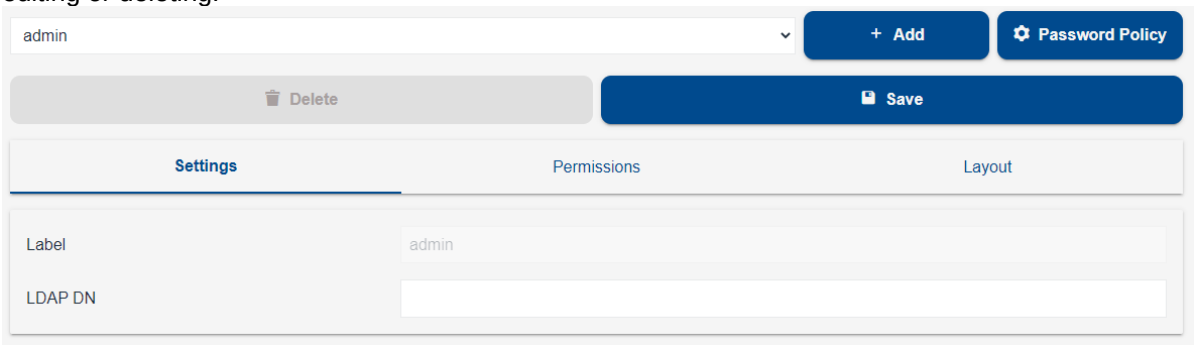
The “Save” key consolidates the changes in the XWEB memory, while “Delete” removes the selected user or profile.
At the time of saving the user information, XWEB checks the password against the selected security settings and shows a warning message if required:



The user configuration parameters are (**Settings** section):

- **Username**: used in combination with the password too access the system
- **Label**: symbolical name of the user
- **Enforce Password Policy**: enable the password security criteria
- **Password**: password used to access the user interface
- **Confirm Password**: enter the chosen password again
- **Colour bar**: length and colour of the bar visually indicating password strength. Red: weak; Yellow: fairly strong; Green: sufficiently strong.
- **Enabled**: enabling user access to the system via user interface
- **Expiration date**: limit date and time beyond which the user is not allowed to access the system; beyond this date the Enabled parameter is automatically overridden to disabled.
- **Language**: user interface language
- **Default Desktop**: the access desktop immediately after logging in.
  The possible "Default Desktop" choices are:
  - Dashboard (default)
  - Devices
  - Alarms
  - Reports
  - Charts
  - Consumption Analyzer
  - Performance
  - Communication Statistics
  - Global Commands
  - Layout Pages (only for models 500, 3000 and 5000)
- **Dashboard Default View**: which view to present when accessing the Dashboard.
- The possible "Dashboard Default View" choices are
  - Active Alarms (default)
  - Blocks
  - Bricks
  - List

From the list of already configured ***Profiles***, you can choose one to access the details and all options for editing or deleting.



Settings
In this section it is possible to configure the LDAP DN (distinguished name) of the selected profile.
The LDAP DN configuration must be done or instructed by the network administrator.

Permissions

Devices	
Edit Devices	enabling allows you to edit the parameters in Devices→Settings→Devices
Export Device Preconfiguration	enabling this executes the command Devices→Settings→Preconfigurations→Download
Edit Alarms	enabling allows you to edit the parameters in Devices→Settings→Alarms
Delete Alarms	enabling allows you to delete the Devices→Alarms Log

Send Commands	enabling allows you to edit the parameters in Devices→Settings→Devices→Commands
Edit Fast Sampling Mode (FSM)	enabling allows you to execute the command Devices→Devices→<device>→Commands→FSM
Edit Maintenance Mode	enabling allows you to execute the command Devices→Devices→<device>→Commands→Maintenance Mode
Read Parameters	enabling allows you to execute the command Devices→Devices→<device>→Parameters→Read
Parameters Visibility Level	this is the parameter visibility level for the user; the same level is used as the editability limit for the tools that manage it
Edit Parameters Value	enabling allows you to set a new value for the values of the parameters read by the device
Edit Parameters Visibility	enabling allows you to edit the visibility value of the parameters read by the device, where managed
Edit Parameters Editability	enabling allows you to edit the editability value of the parameters read by the device, where managed
Import Parameters	enabling allows you to execute the Devices→Devices→<device>→Parameters→Import
Export Parameters	enabling allows you to execute the command Devices→Devices→<device>→Parameters→Export

Layout	
Edit Layout	enabling allows you to execute the command Layout→Add and Layout→<layout>→Edit

Analysis	
Read Data Reports	Allows you to execute the command Analysis→Reports→Data→Run
Edit Data Reports	Allows you to execute the command Analysis→Reports→Data→Edit
Read HACCP Reports	Allows you to execute the command Analysis→Reports→HACCP→Run
Edit HACCP Reports	Lets you execute the command Analysis→Reports→HACCP→Edit
Read Food Quality Reports	Allows you to execute the command Analysis→Reports→Food Quality→Run
Edit Food Quality Reports	Lets you execute the command Analysis→Reports→Food Quality→Edit
Edit Charts	enabling allows you to make changes on the desktop Analysis→Charts
Edit Consumptions Analyzer	enabling allows you to make changes on the desktop Analysis→Consumptions Analyzer
Edit Performance	enabling allows you to make changes on the desktop Analysis→Performance

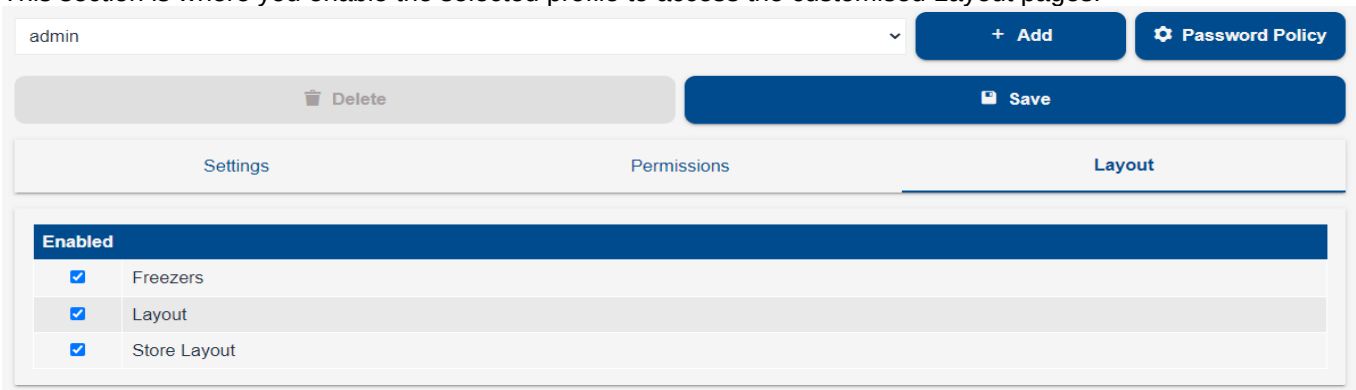
Tools	
Edit Global Commands	enabling allows you to make changes on the desktop Tools→Global Commands
Edit contacts	enabling allows you to make changes on the desktop Tools→Contacts
Edit Scheduler	enabling allows you to make changes on the desktop Tools→Scheduler
Edit Calendar	enabling allows you to make changes on the desktop Tools→Calendar
Edit Automatic Export	enabling allows you to make changes on the desktop Tools→Automatic Export
Edit Compressor Guard	enabling allows you to make changes on the desktop Tools→Compressor Guard
Edit Compressor Rack Optimizer	enabling allows you to make changes on the desktop Tools→ Compressor Rack Optimizer

Edit Dew Point	enabling allows you to make changes on the desktop Tools→Dewpoint
Edit XeCO2	enabling allows you to make changes on the desktop Tools→XeCO2
Read Documents	enable to download and view PDF documents from the desktop Tools→Documents
Edit Documents	enable to upload and view PDF documents from the desktop Tools→Documents
Edit Data Push	enable to make changes on the desktop Tools→Data Push
Edit Supervision	enabling allows you to make changes on the desktop Tools→Supervision
Edit Languages	enabling allows you to make changes on the desktop Tools→Languages

System	
Update	enabling allows you to execute commands on the desktop System→Updates
Edit Users	enabling allows you to execute commands on the desktop System→Users
Edit System Settings	enabling allows you to execute commands on the desktop System→Settings
Backup	enabling allows you to execute commands on the desktop System→Backup
Restore	enabling allows you to execute a restore on the desktop System→Backup
Reboot	enabling allows you to execute commands on the desktop System→Reboot
Factory Reset	enabling this executes the Factory Reset command
Edit Acquisitions Status	enabling allows you to execute acquisitions start/stop commands
Edit Lock Status	enabling allows you to execute access lock/unlock commands for non admin users

Layout

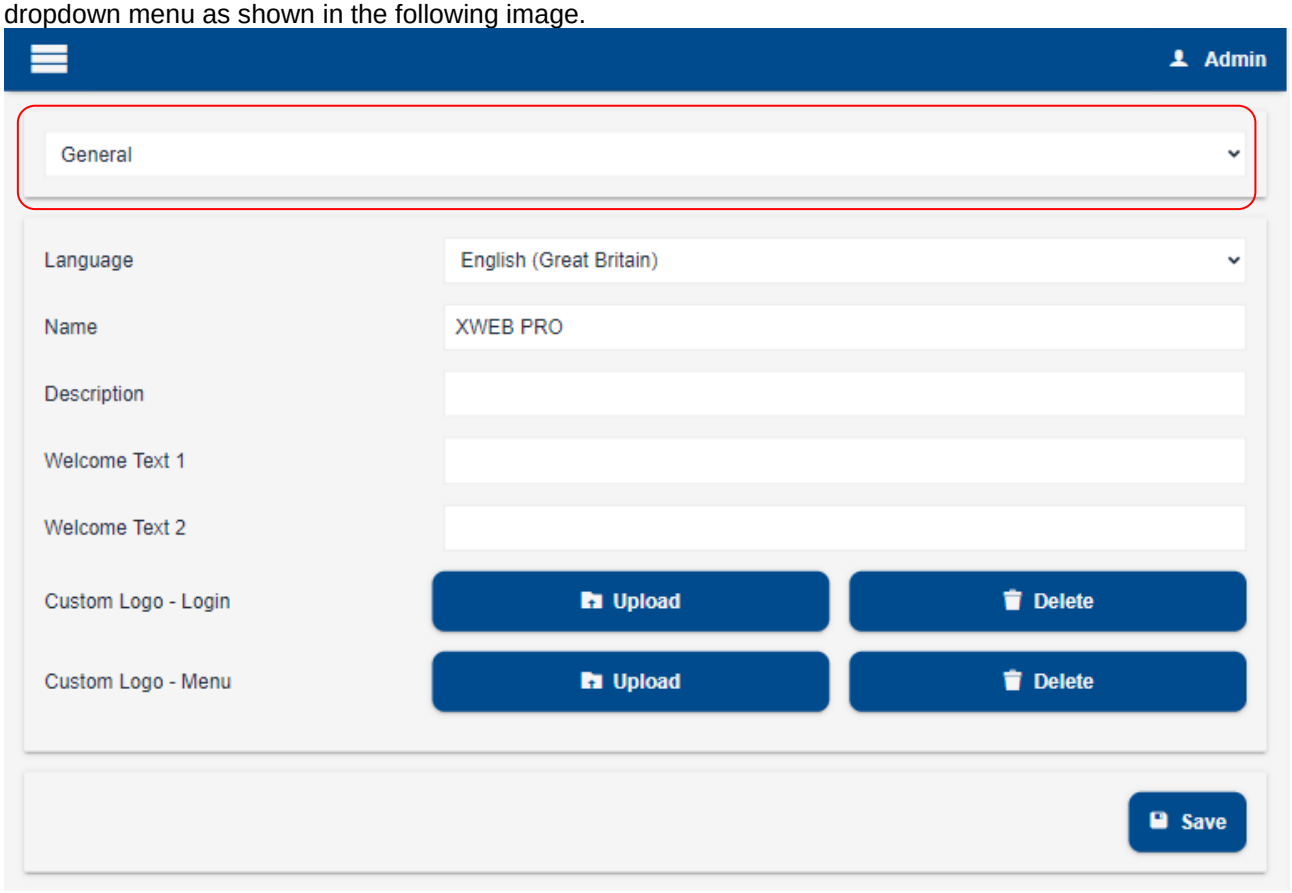
This section is where you enable the selected profile to access the customised Layout pages.



3.3.6.4 SETTINGS

Settings

This page configures the system parameters. the page is divided into multiple sections, accessible from the dropdown menu as shown in the following image.

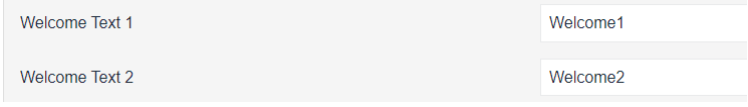


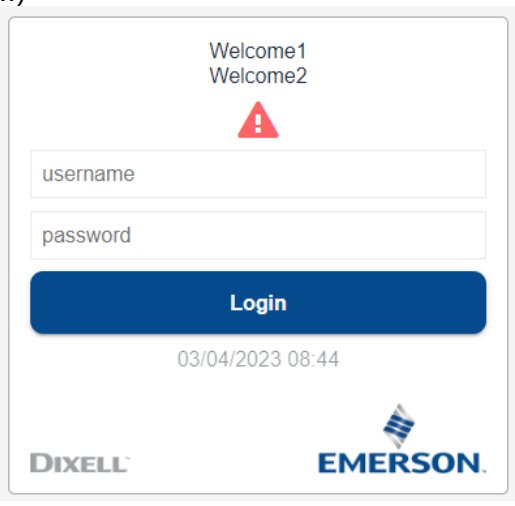
- **GENERAL**

Language: System language. It represents the language that the system uses for the parts that do not refer to a user, thus to its language. For example for system notifications.

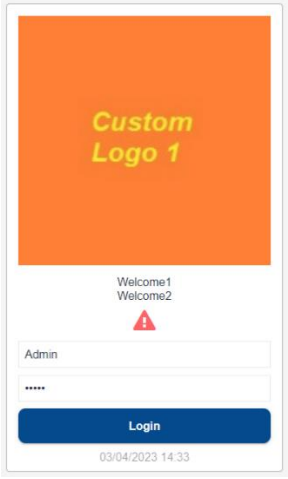
Name: name of this XWEB. We recommend using an easily recognisable name that distinguishes it from other XWEB, especially if you receive alarm notifications.

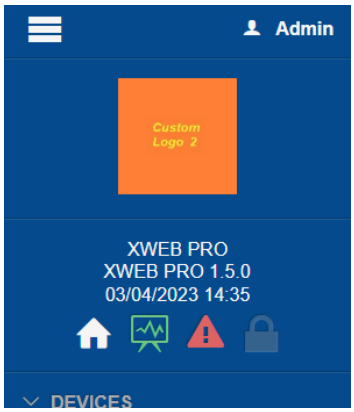
Description: description of this XWEB
Welcome Text 1/2: texts for the login homepage (see image below)





Custom Logo Login/menu: to upload images for the login homepage and the navigation bar. The images must be PNG files; the images are resized by xweb for better viewing.

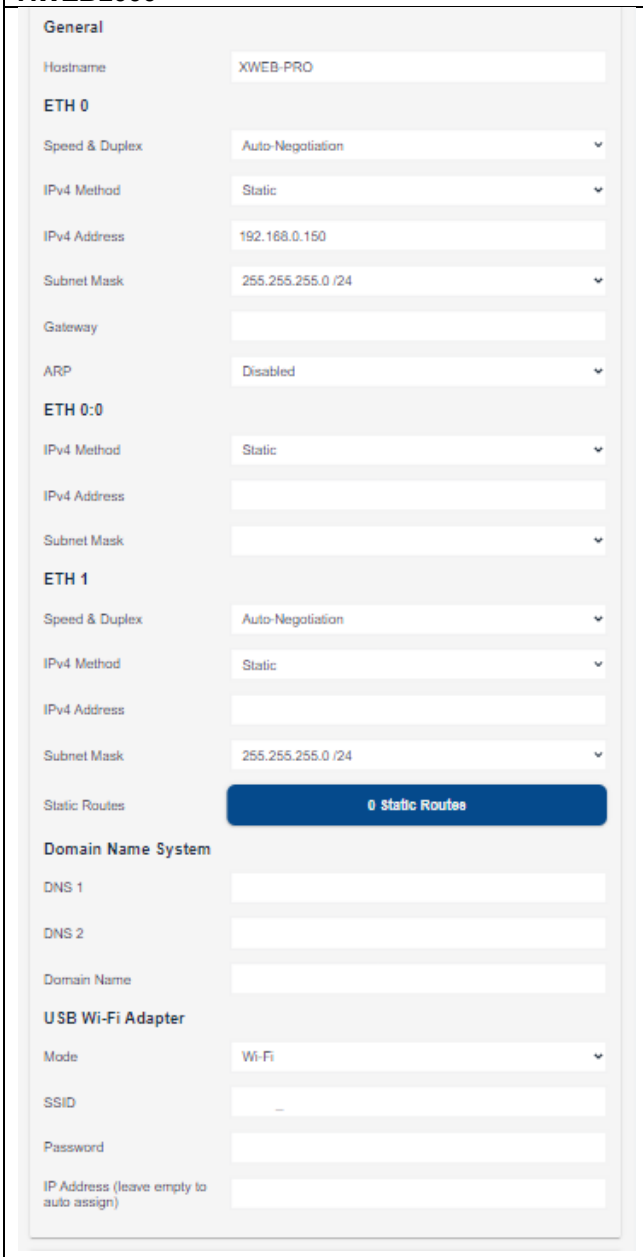
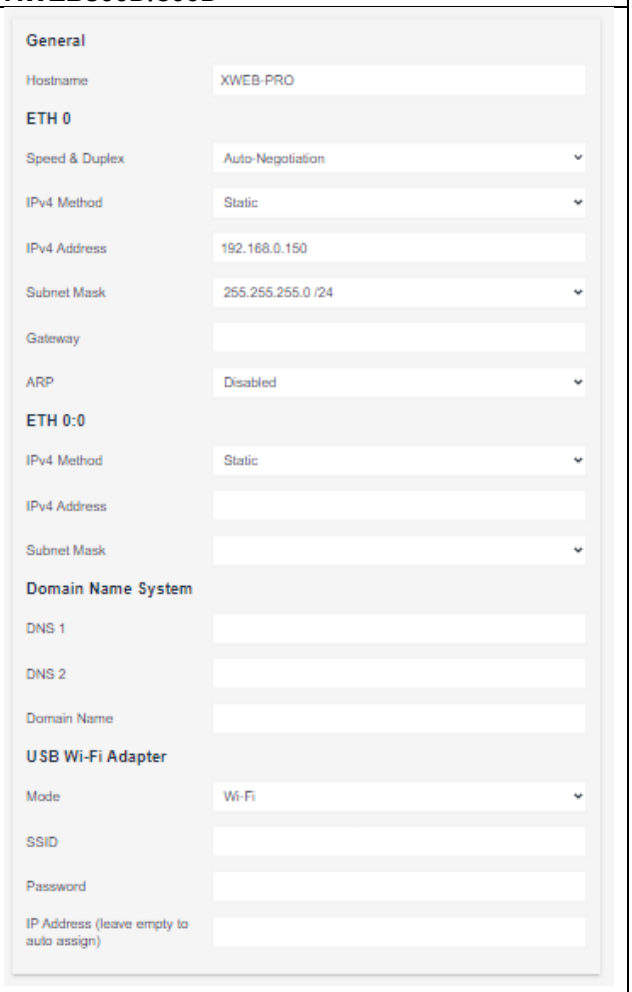


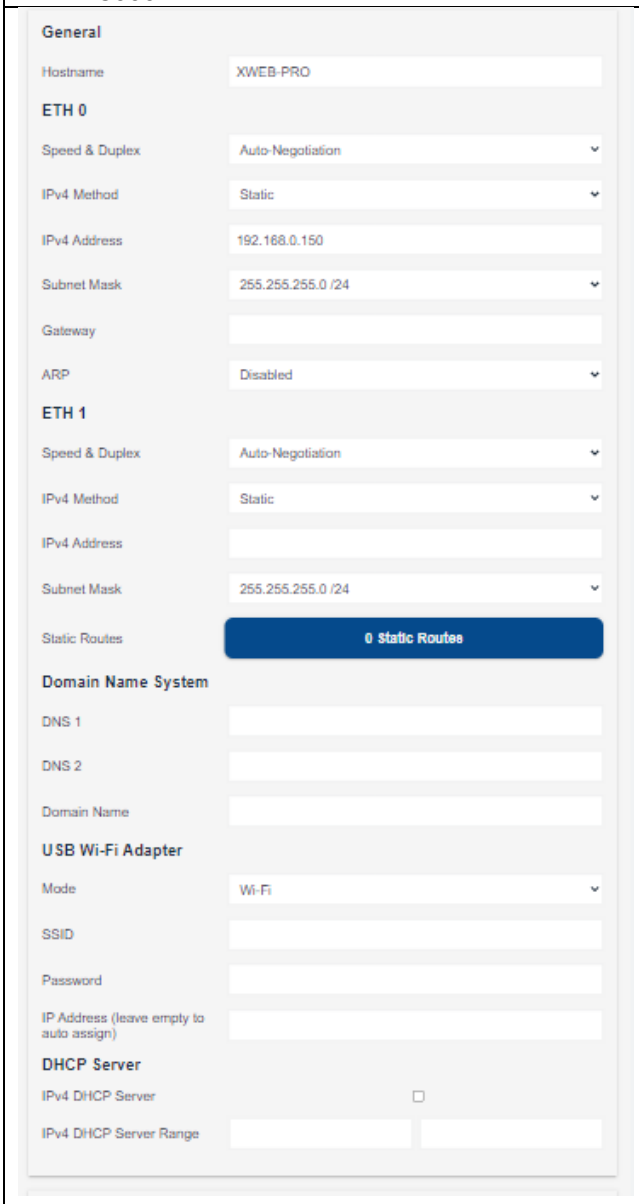


- **Date and Time**

Configuration parameters of the XWEB time.
Timezone: Appropriate time zone. Appropriately selecting the time zone manages the summer/winter time change automatically
NTP Server: Time management server for automatic or manual time synchronisation. When it is set up to access the Internet, XWEB can connect to the specified server and synchronise the system time as specified. Manual: by the user, by clicking Sync, or automatic, daily, weekly or monthly. We recommend using an NTP server that is geographically in your vicinity, for example your own router, if supported, or in your own country. We recommend asking your network administrator for the name of the NTP server that will be used, otherwise leave the preset server *pool.ntp.org*

- **Network**

XWEB1000	XWEB300D/500D
	

XWEB5000	
	

For the XWEB network interface configuration. Normally, these parameters are to be agreed with the network administrator, so it is advisable to contact him/her for guidance and support.

General

- **Hostname**: Name identifying the machine within the network. Example XWEB0001

ETH0: Configuration of the main Ethernet port

ETH0:0: Configuration of the second IP address (where available) of the main Ethernet port

ETH1: Configuration of the secondary Ethernet port (where available)

- **Speed and Duplex**: Selection of the connection speed. If uncertain of the selection leave default *Auto Negotiation*. Info su: https://en.wikipedia.org/wiki/Autonegotiation)
- **IPv4 Method:**
    - **Static**: to manually set the IP parameters required for your network, such as: Hostname, IP Address, Subnet Mask, Gateway, DNS
    - **DHCP:** if your network provides a DHCP server and you want it to assign to XWEB the IP address and the other parameters.

- **IPv4 Address:** the TCP/IP address used to reach XWEB. Attention: the ETH0, ETH0:0 and ETH1 IP addresses must belong to different networks
- ***Subnet Mask*:** Subnet mask setting. If uncertain of the selection leave default 255.255.255.0/24
- **Gateway:** IP address of the gateway to be set up to reach the internet service. It usually matches the IP address of the router that XWEB is connected to.
- **ARP, ARP Interval, Arp Count:** When enabled, it overrides the ARP protocol and forces it to update the routing tables, associating the MAC address of the XWEB device to its IP address. Interval and Count indicate respectively the resending cycle time of the ARP packages and how many packages are sent. These parameters are only valid for ETH0. If uncertain of the selection leave default Disabled
- **Static Routes:** for ETH1 it is possible to configure up to 5 “Static Routes”.

Domain Name System

- **DNS1 / DNS2:** IP address of the DNS servers to be set up to reach the internet service. It usually matches the IP address of the router that XWEB is connected to.
- **Domain name:** for example MYCOMPANY.COM. If uncertain of the selection leave empty.

USB Wi-Fi Adapter

Setting up the Wi-Fi adapter stick connected to the XWEB USB port.

- **Mode:** operating mode
    - **Access-Point:** to connect directly a device such as a tablet/pc/smartphone to xweb;
    - **Wi-Fi:** it lets XWEB access an existing Wi-Fi hotspot
- **SSID:** name of the WiFi network
    - **Mode Access-Point:** name of the Wi-Fi network created by XWEB for access via PC, tablet ro smartphone. After connecting their device to the XWEB network, the user must enter in their browser the fixed address **172.21.0.1**
    - **Mode Wi-Fi:** name of an existing Wi-Fi network to be accessed by XWEB
- **Password:** network access password
- **IP Address:** (only for **Mode=Wi-Fi**) : IP address to be used for the connection; if the field is left empty, the IP address is assigned automatically by the Wi-Fi router

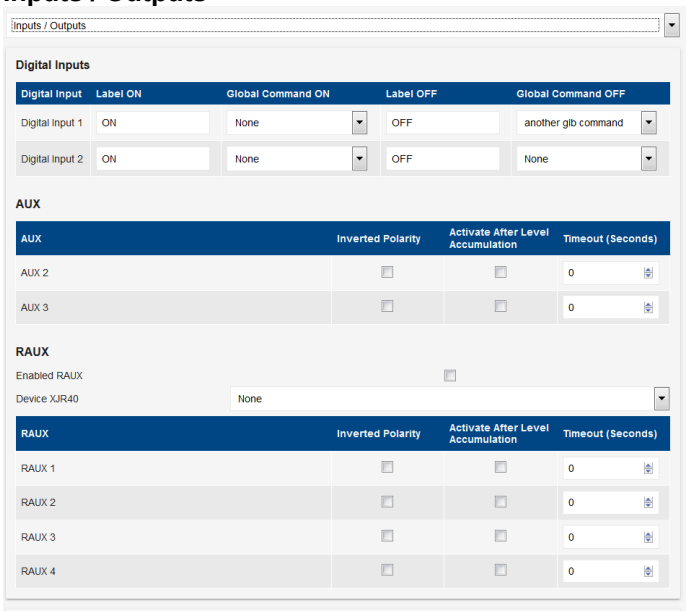
Access via wireless to port 22, SSH service, is blocked.

The connection status of the Wi-Fi USB adapter can be seen on the page SYSTEM/Info/Network/WLAN 0

DHCP Server (where available)

- **IPv4 DHCP Server:** enabling the XWEB DHCP server to allow XWEB to assign an IP configuration to the devices connected to the ETH0 network, with DHCP client enabled. If in doubt, keep this box disabled to avoid network conflicts.
- **IPv4 DHCP Server Range:** range of IP addresses that the DHCP server can assign to the networked devices that require the service.

- **Inputs / Outputs**



- **Digital Inputs** (only for XWEB500D / 1000 / 5000)

This section is where the Global Commands are configured, to be sent to the instruments set up on the modbus/485 network as the status of the digital input(s) changes on opening (ON) or closing (OFF).

- **AUX**

Page to configure the alarm and system relays

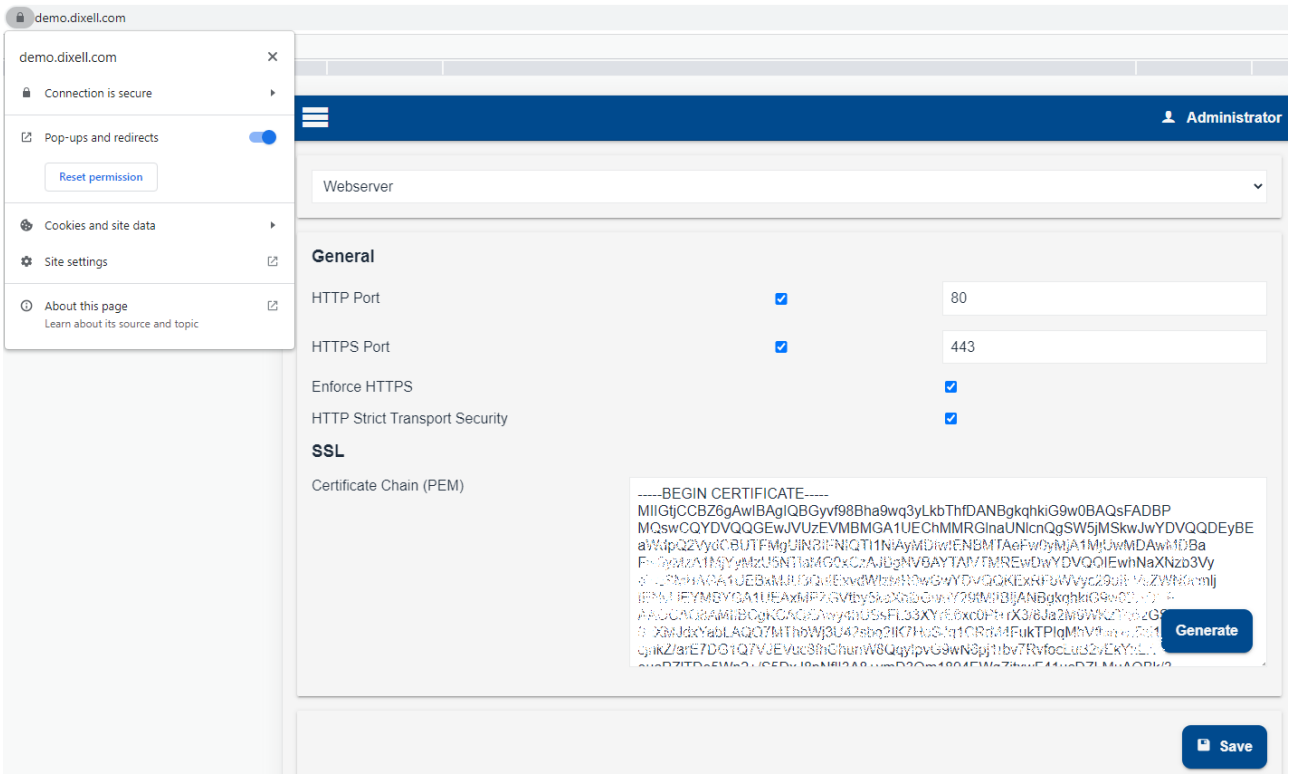
- **Inverted Polarity:** when selected, immediately after switching on, XWEB inverts the standby position of the relay
- **Activate After Level Accumulation:** the relay is activated respecting the accumulation time of the associated *Alarm Level*.
- **Timeout (seconds):** the relay goes back to the standby position even if the associated alarm level is still active.

(only for XWEB500D) the parameter “Enable SYS ALARM Relay to be normally de-energised” If the instrument is on and there are no alarms, when this setting is enabled (default), the relay closes between terminals 30 and 31. Otherwise, between terminals 30 and 32.

- **RAUX**

This section is used to configure a possible XJR40D to use it as extension of the XWEB alarm relays.

- **Webserver**



- **HTTP Port**: enabling and defining the port on which the webserver is configured (default 80).
- **HTTPS Port**: enabling and defining the port on which the webserver is configured in secure connection (default 443).
- **Enforce HTTPS**: enable the browser redirect service on the secure connection.
- **HTTP Strict Transport Security**: (HSTS) informs the browser that its connections to XWEB must always use SSL
- **Certificate Chain (PEM)**: SSL key of the certifying body in text form (PEM). The maximum size of the SSL Certificate key is 2048 bits. Paste the text into the specific window and click “Save”
- ***Generate***: XWEBPRO is able to generate a self-signed certificate by clicking on *Generate*

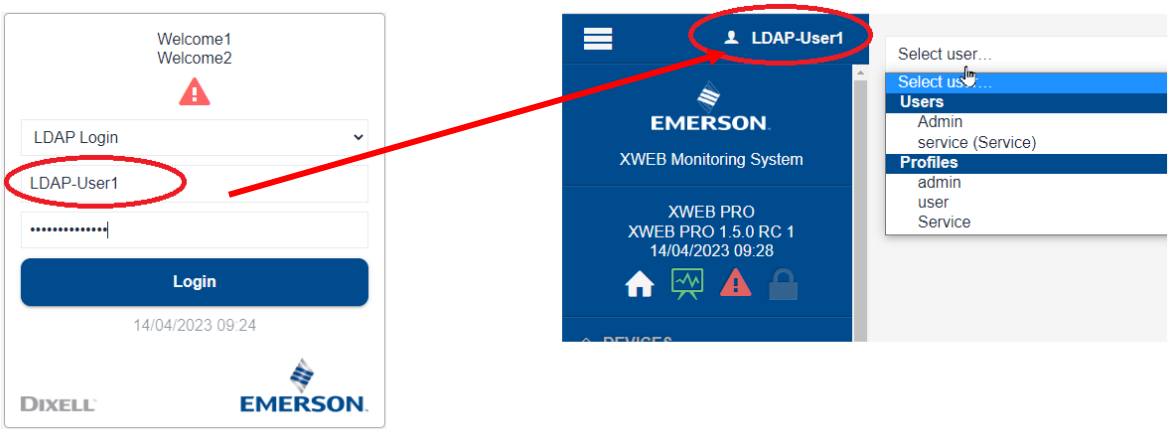
- **Acquisitions**

XWEB can be configured so that it automatically starts acquisitions after a given time from when the acquisitions are stopped.

- **LDAP**

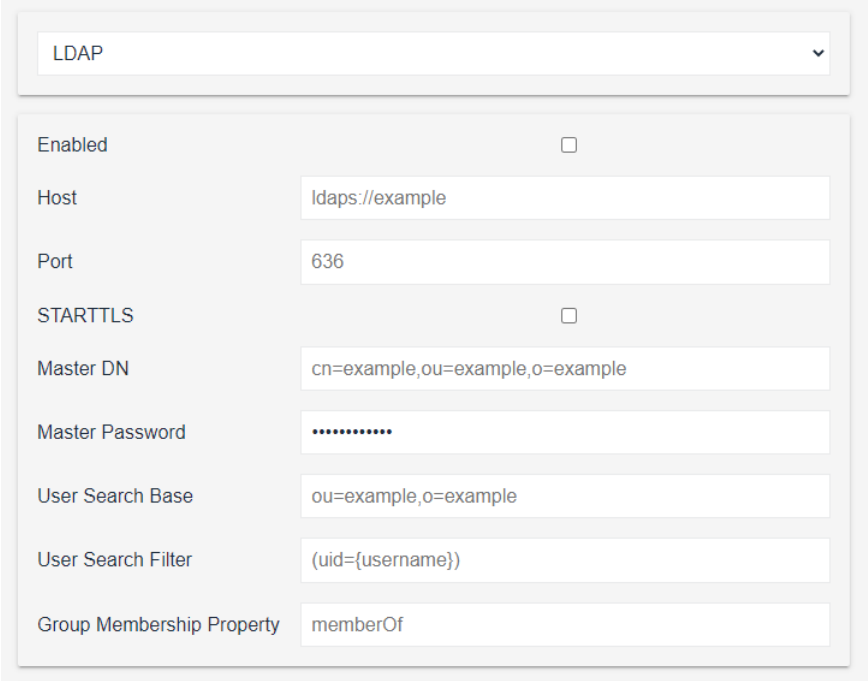
Use the LDAP button to access the configuration of the remote user authentication service; the service uses the LDAP (Lightweight Directory Access Protocol) standard.

With this service enabled, it is possible to access the XWEBPRO with a user defined on a remote server, without this having been defined locally, i.e. in the XWEBPRO – see image example below.



<u>The LDAP configuration parameters must be agreed with the users' server administrator</u>, who must also associate the user with one of the profile names available in XWEBPRO.

In fact, when a user accesses XWEBPRO as an LDAP user, the request is forwarded to the server which, once username and password credentials have been verified, forwards the user's profile to XWEBPRO; the profile defined locally in XWEBPRO defines the permissions to access and use XWEBPRO.



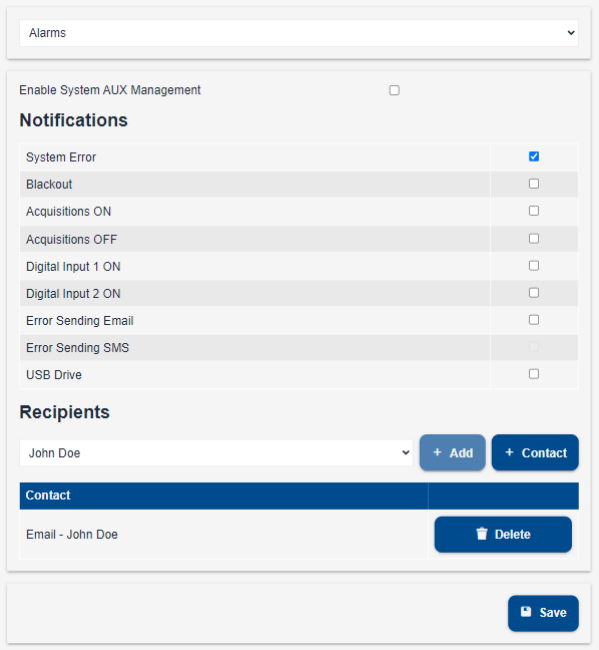
- **Alarms**

The system alarms, unlike those from instruments in the field, are generated by XWEB for functional or environmental causes.

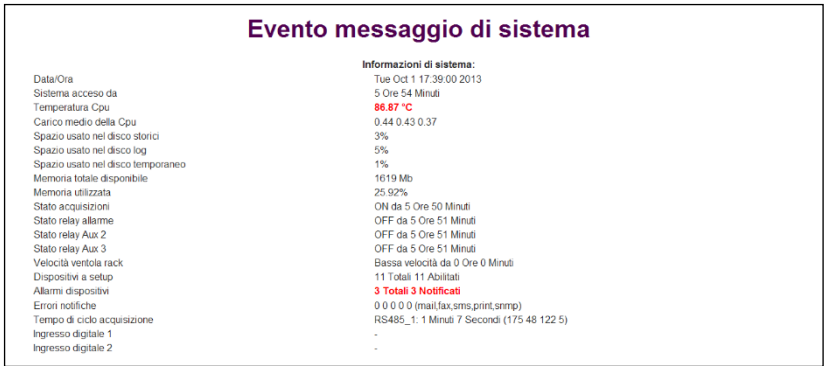
- **Enable System AUX Management**: enables use of the System relay in the event of system alarm.

Notifications
Lets you select for which of the listed events an alarm notification must be sent via email or via SMS.

Recipients
Lets you select the recipients of email or SMS notifications from the list of *Contacts* or by creating a new Contact. Click “+ Add” to include the contact in the list of recipients
Click on “+ Add” to include the contact in the list of recipients
Click on “+ Contact” to create a new contact with email address or SMS number



The system alarm notification emails are the same type as those managed by the *Scheduler*’s ‘system messages’.



The same email, in text format, contains other relevant information, highlighted in yellow, that can be extracted by a parsing software:

```
Date: Tue, 1 Oct 2013 15:38:58 +0000
To: <xyz>
From: Xweb system name <example@domain.com>
Subject: Caution: Cpu HT / Stp
MIME-Version: 1.0
Content-Type: multipart/alternative; boundary="--------40DFF36D5A44ECBC"
Return-Path: example@domain.com
X-OriginalArrivalTime: 01 Oct 2013 15:38:57.0073 (UTC) FILETIME=[5774E210:01CEBEBC]
```

```
----------40DFF36D5A44ECBC
Content-Type: text/plain; charset="utf8"
Content-Transfer-Encoding: 8bit

IP:10.100.81.208
GATEWAY:10.100.81.1
EXTERNAL-IP:10.100.81.208
DNS1:10.100.80.20
DNS2:

----------40DFF36D5A44ECBC
```

Error abbreviations in the subject line of the email

Acq OFF	The acquisitions are stopped.
Cpu HT	High temperature of CPU
Ist LS	History disc space almost exhausted
Log LS	Log disc space almost exhausted.
Tmp LS	Temporary disc space almost exhausted.
Eml	Email sending errors
Fax	Fax sending errors
Sms	SMS sending errors.
Prn	Print errors
Di1	Error from digital input 1
Di2	Error from digital input 2
BlackOut	Return from blackout error
Stp	XWEB configuration error.

Other information

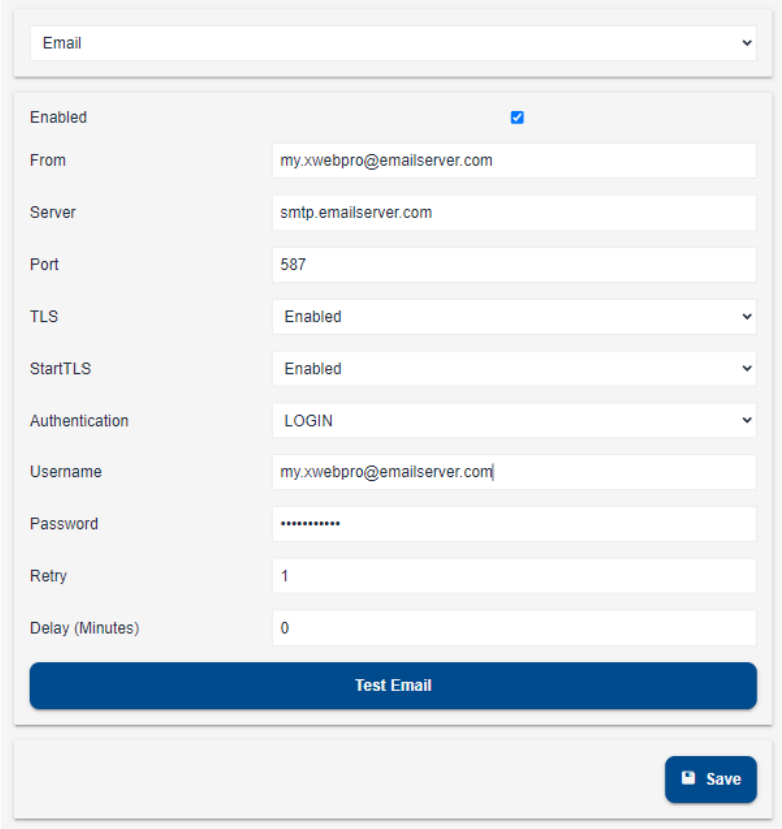
```
IP:              => IP Address.
GATEWAY:         => Network gateway address.
EXTERNAL-IP:     => (coincides with the XWEB Ip)
DNS1:            => First dns
DNS2:            => Second dns
```

- **Email**

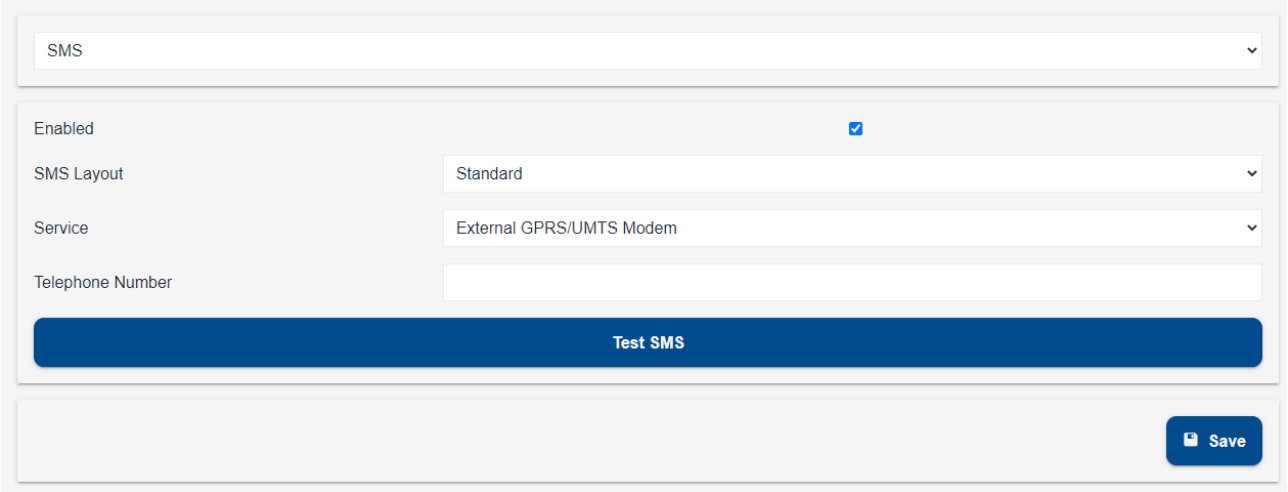
XWEB can send alarm notification emails and scheduler reports.
To enable the service by ticking "*Enabled*"and complete the configuration. The configuration parameters can be supplied by your internet provider or by your network administrator.

- ***From***: email address of XWEB to be used as sender
- ***Server*** : IP address or name of the email server
- ***Port*** : port used by the email server
- ***TLS*** : enabling the cryptography protocol
- ***StartTLS***: enabling the cryptography control protocol
- ***Authentication***: select method between:
  - ***Disabled***
  - ***On***
  - ***Plain***
  - ***Login*** (most common)
- ***Username***: for authenticated access to the email server
- ***Password***: for authenticated access to the email server
- ***Retry***: number of subsequent attempts to access the email server in case of error
- ***Delay (Minutes)***: interval between attempts in minutes

The TLS protocol is an evolution of the obsolete and less secure SSL.
The most common configurations are as follows:
TLS enabled | StartTLS enabled | Port 587
TLS enabled | StartTLS not enabled | Port 465 (ex SSL)

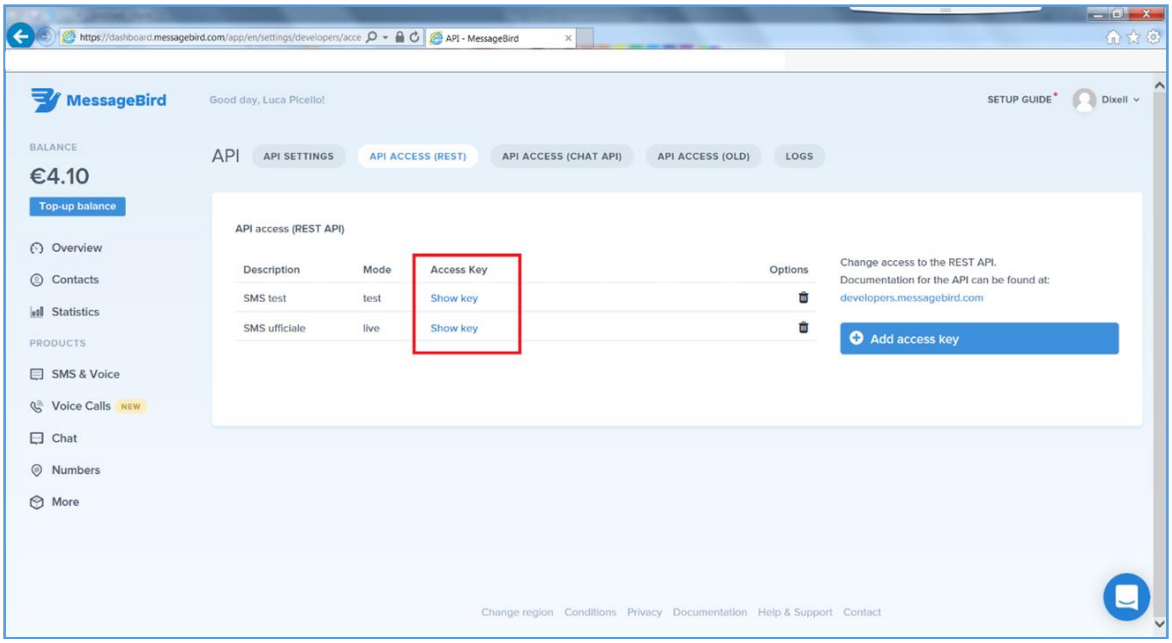


- **SMS**

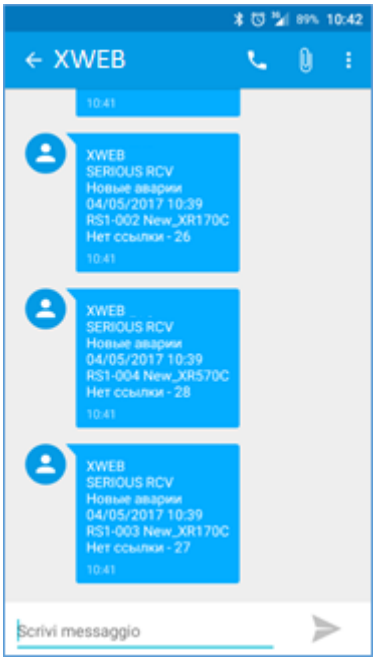


The XWEB is able to send short text messages via SMS. Various types of services can be used:

- Sierra Wireless™ AirLink® IP Protocol. If you have connected the Raven modem to the XWEB, you will be able to use it to send messages using your phone credit.
- Teltonika Networks TRB255 (Ethernet)
- External GPRS/UMTS modem. Attention: only Dixell-approved modems can be used. Non per XWEB1000D
- MESSAGEBIRD: Once registered to the website www.messagebird.com, create the access key to be used in the XWEB configuration. The access key relates to your credit line, from which the cost of each SMS to be sent from XWEB will be downloaded.



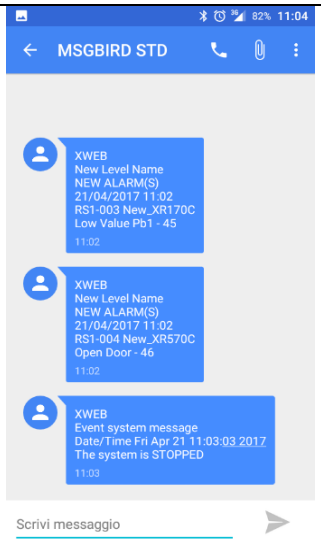
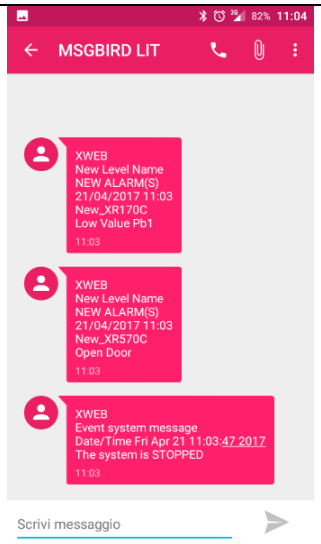
Messagebird supports the sending of text in non-Latin characters



Caution: in order to use the service, always make sure to have sufficient credit for sending sms; from XWEB the credit check is available in the system configuration page: press on “Check current balance”.

Alarm SMS sending in LIGHT format

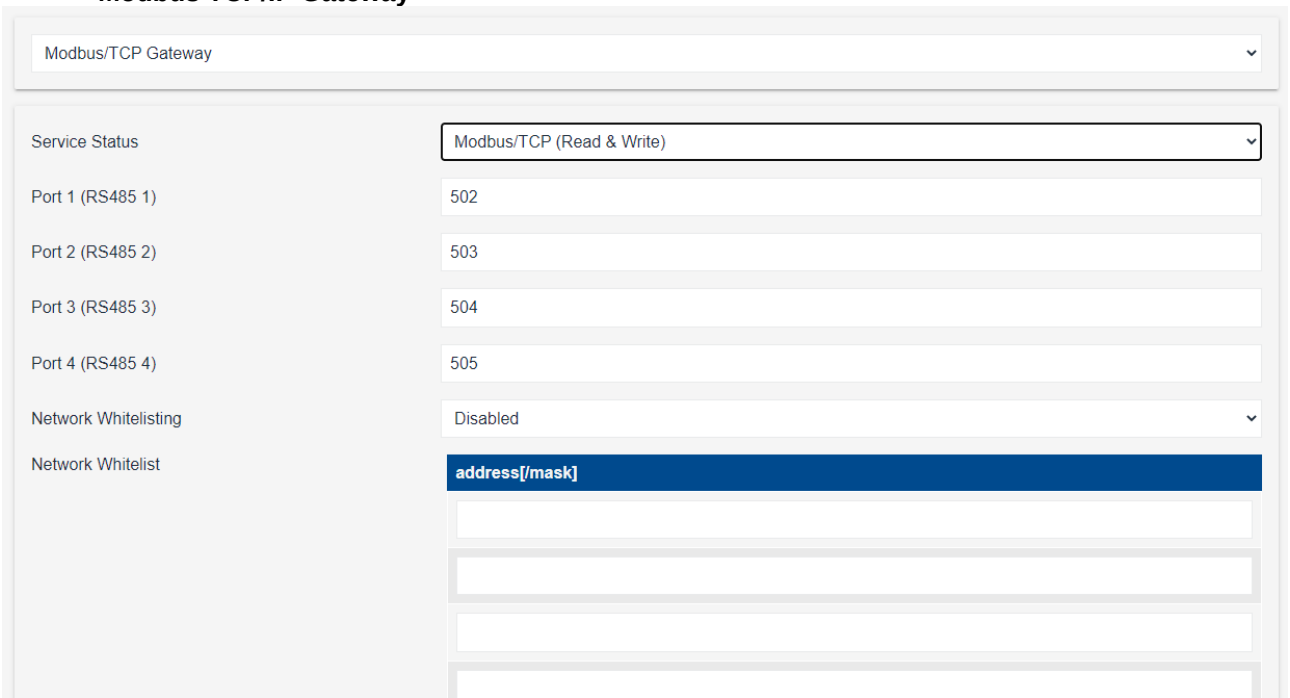
In order to make the SMS messages more readable, the SMS format has been extended to the LIGHT option. Thanks to this function, the ModBUS address and the alarm code have been removed to increase the characters available to describe the device.

	STANDARD	LIGHT
MESSAGEBIRD		

- **Local Interface**

the page allows forcing the resolution for the monitor connected directly to XWEB. The option is only available for XWEB5000.
*Keyboard Model**: physical format of keyboard connected to XWEB.
*Keyboard Layout**: keyboard language with key format

- **Modbus TCP/IP Gateway**



Enabling the Modbus tcp/ip Gateway service allows another device to query devices connected to XWEB. Depending on the selection of Service Status, direct communication in Modbus TCP with tools connected to XWEB can be:

- Disabled

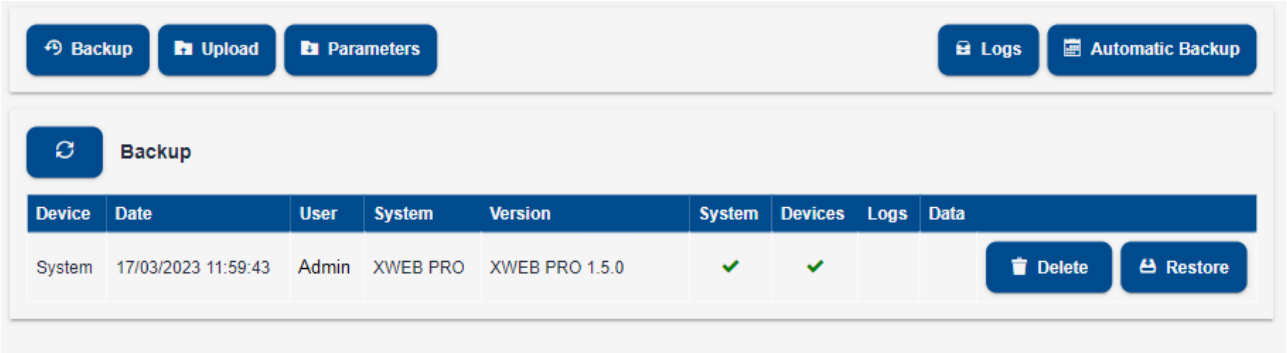
- Enabled for reading only
- Read-write enabled.

The Modbus variables that can be read and possibly written are those specified in the reference documentation of the routed instrument.

If enabled, the Network Whitelist function provides a list of only those IP addresses enabled for communication in Gateway mode.

3.3.6.5 BACKUP

This procedure allows the user to save the system data and/or restore it if required. It is possible to create a backup on the XWEB memory or on the hard disc of the client's PC as well as on storage devices connected via USB. Attention: the USB devices used for restore-backup, must only be inserted before starting such procedures and disconnected when these have been completed. The restore procedure overwrites data memorised on the XWEB. This means that restoring a backup returns the XWEB status to that present on the date when the backup was performed. When clicking on the icon, the user must select which type of operation is to be completed:



- ***Backup***

The procedure allows for the saving of data selected on the device selected in "Destination". The most thorough backup is run by selecting all items. Press "Start backup" to complete the operation.

- ***Upload***

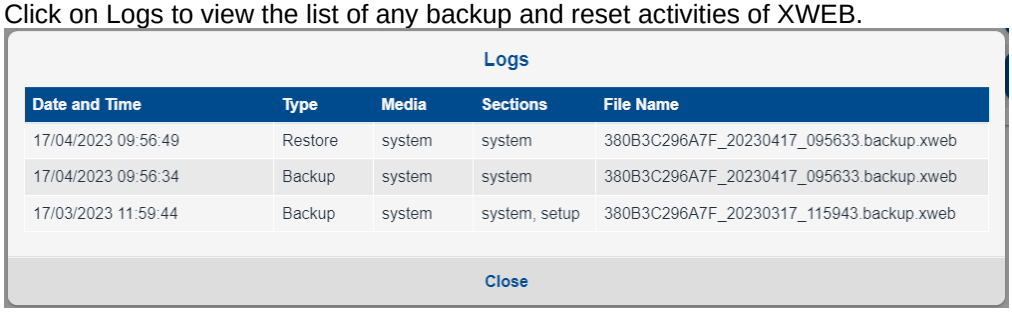
The procedure allows for the recovering of data in the XWEB memory. The user must select the backup data source to be restored: The “XWEB system backup disk” allows for the uploading of a backup previously run in the XWEB memory; The “Usb connected to XWEB” enables the recovery of data from the USB device and “Upload backup” allows for the remote uploading of a backup with the browser. Once the data source has been selected, select the data to be recovered from "Section". Press "Start restore" to complete the operation.

- ***Parameters***

The procedure makes it possible to download in compressed form all the BIN files of the parameters for each instrument online. The BIN file can be reused in XWEBPRO to upload the parameters into a compatible device. As an alternative, it is possible to download from XWEBPRO a compressed CSV text file, containing the list of the settings of an online device.

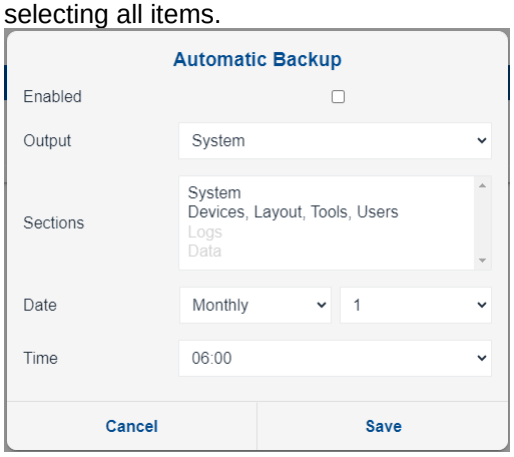
- ***Logs***

Click on Logs to view the list of any backup and reset activities of XWEB.



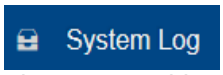
- ***Automatic Backup***

The procedure saves the selected data on the selected device. The most thorough backup is run by selecting all items.

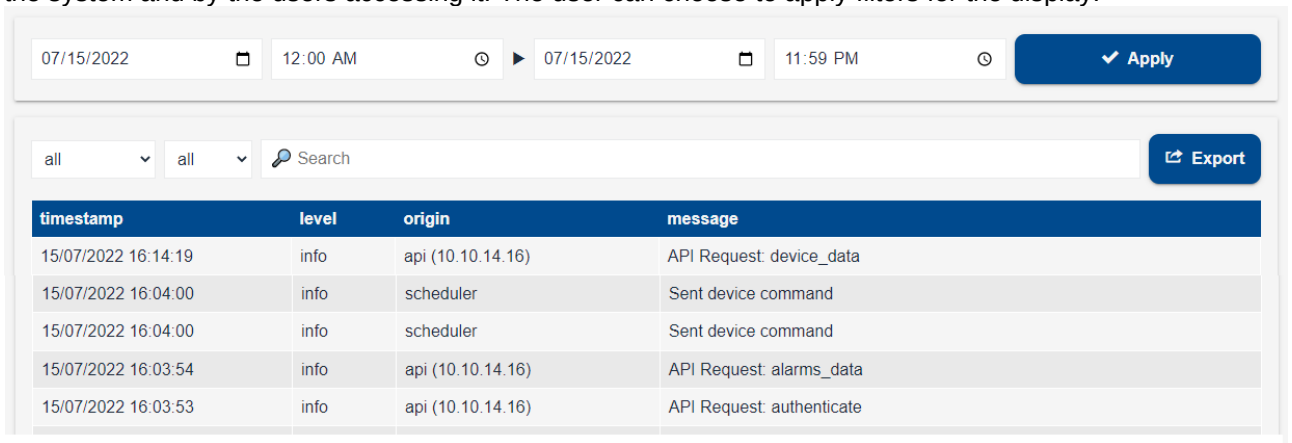


This configuration allows the periodic saving of data according to the calendar.

3.3.6.6 SYSTEM LOG

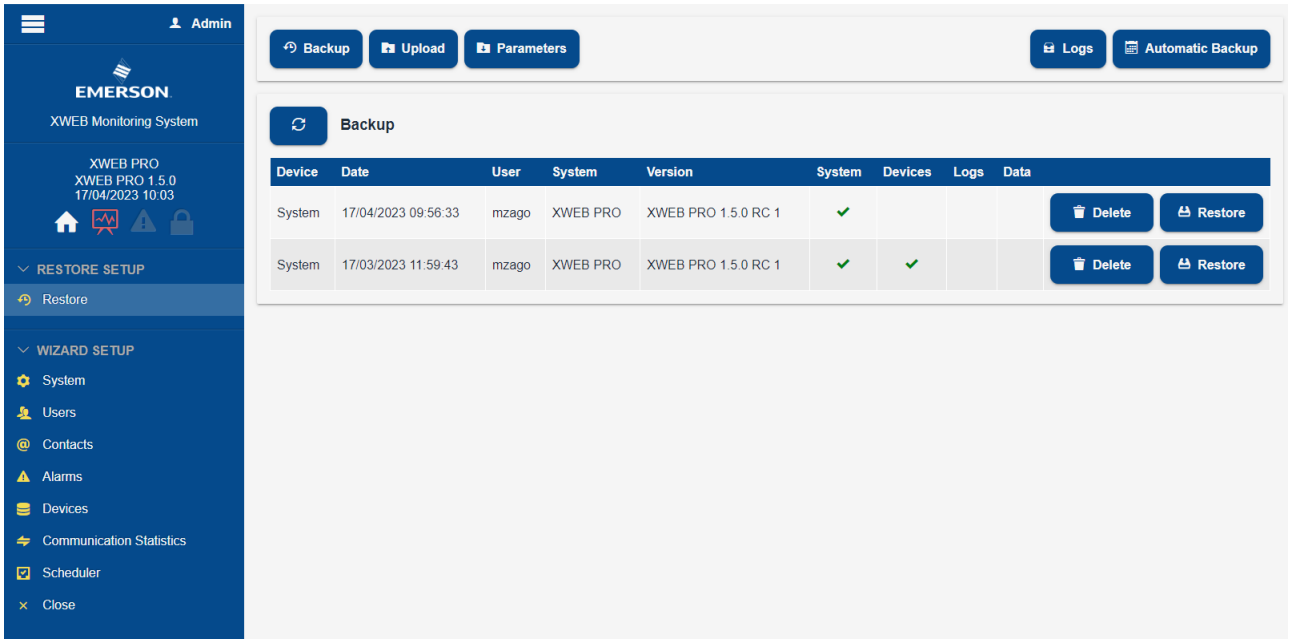


The page enables the user to visualise a list of events describing the most significant actions executed by the system and by the users accessing it. The user can choose to apply filters for the display.



3.3.6.7 WIZARD SETUP

When XWEBPRO is first switched on, the system shows a simplified menu (setup Wizard). The wizard is always available from the main menu.
To clse the Setup Wizard and switch to the main menu, click on “Close” in the menu



3.3.6.8 RESTORE SETUP

The user can configure XWEBPRO from a backup file previously executed by XWEB or one with compatible version.
The backup files are compatible across all XWEBPRO models. Restoring a backup file in an XWEBPRO model with additional or updated features requires checking and possibly editing the system configurations. XWEBPRO is also compatible with the latest versions of XWEB EVO. Update XWEB EVO to the latest available version before downloading the backup file to be used with XWEBPRO.

Restore can be carried out from a file previously saved in XWEBPRO or in other media accessible to the browser (typically a USB stick inserted in XWEB, PC folder or network server).

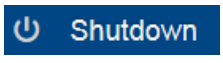
3.3.6.9 SETUP WIZARD

The user can configure XWEBPRO starting from the default configuration. The main configuration parameters can be viewed and edited by scrolling through the "*Setup Wizard*" menu sections. After editing you must click "Save".

3.3.6.10 REBOOT

Click "*Reboot*" to restart the machine's software. Only reboot XWEBPRO if directed or supervised by qualified personnel. The "Reboot" operation requires confirmation by entering the currently logged in user's password.

3.3.6.11 SHUTDOWN



Shutdown is only available for XWEB5000PRO
Click "*Shutdown*" to completely turn off XWEBPRO. Only turn off XWEBPRO if directed or supervised by qualified personnel.**!!Warning!!** This operation is irreversible, therefore **after shutting down XWEBPRO does not automatically switch back on and cannot be reached via the network.** Too restart XWEBPRO, power cycle or press the power button. We recommend disabling this operation for users accessing the system remotely. The "Shutdown" operation requires confirmation by entering the currently logged in user's password.

4. TRADEMARKS

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Firefox is a registered trademark of the Mozilla Foundation.
Linux is a trademark registered to Linus Torvalds.
AirLink Raven modem is a registered trademark of Sierra Wireless
Other names may be trademarks of their respective owners.

5. FAQS

5.1 MAINTENANCE PROCEDURE FOR XWEB300D/500D

In the event that it is necessary to disconnect XWEB in order to move it or for cleaning purposes, please note that it must not be opened for any reason whatsoever, or the warranty will be terminated immediately. Please follow the procedure below, observing the rear panel form as per the installation manual. It is provided in hard copy in the box and electronically on Dixell's website under “manual”.
Disconnect external modem, if present;
Disconnect the telephone line and / or LAN cable;
Disconnect terminals RS485, relay and digital input;
Now you can unplug the power cord and move XWEB;

5.2 MAINTENANCE PROCEDURE FOR XWEB5000

Should it be necessary to disconnect the XWEB to move it or for cleaning purposes, remember that it should not be opened for any reason, or the warranty will be deemed invalid. Follow the procedure below, observing the rear panel figure as per the installation manual. The same is provided in paper form in the package and in electronic form on the Dixell website, under section "Manuals".
Press and quickly release the on/off power button (2);
Wait for all LEDs on the front to go off, including the PWR;
Disconnect external modem, if present (7);
Disconnect parallel printer or USB (6);
Disconnect monitor, keyboard and mouse (5);
Disconnect the telephone line and/or LAN network cable(4);
Disconnect RS485 terminals, relay and digital input (3)
Now disconnect the power supply cable (1) and move the XWEB;

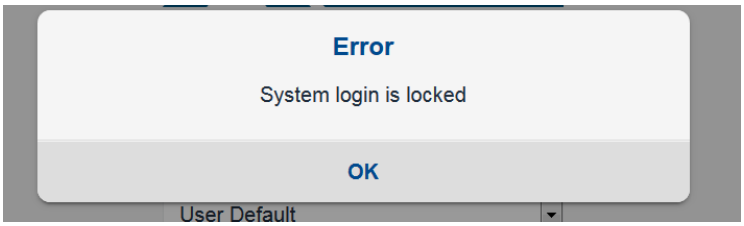
Press and hold button (2) to force the instant switch-off of the system. When switch-off occurs in this way, the XWEB records the event, but cannot guarantee the correct data maintenance. The same applies for "forced" switch-offs which occur when the power supply cable is disconnected before the system is switched off

5.3 HOW TO CHANGE DATE/TIME

Check the user and password first and then change date/time from the system settings..

5.4 I CANNOT ACCESS THE SYSTEM WITH MY PASSWORD

Check upper and lower case. The XWEB system is sensitive to the letter case.
Caution: Temporary blocking of user access
Each user is temporarily blocked for 5 minutes if they failed to enter the login password 5 times in the previous 5 minutes. During the account lockout period the login page displays login error.



5.5 IS IT POSSIBLE TO USE XWEB EVO LIBRARIES TO INTEGRATE DEVICES?

Yes, XWEB PRO is compatible with XWEB EVO files.

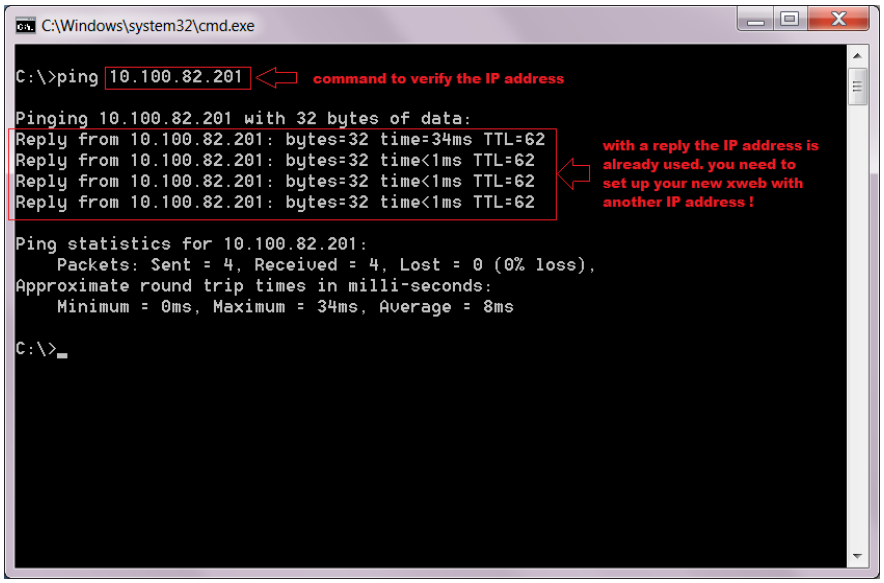
5.6 WHAT IS THE DEFAULT IP

Standard-IP ist 192.168.0.150 for XWEB300D/500D/1000D
Standard-IP ist 192.168.0.200 for XWEB5000

5.7 MY BROWSER CANNOT REACH THE XWEB

Check the cables in use starting from that connected to your PC's network. Once the cables have been checked, check that the XWEB IP address can be reached: run the PING command from the command line to verify the correct routing of the packs on the network.

Example:

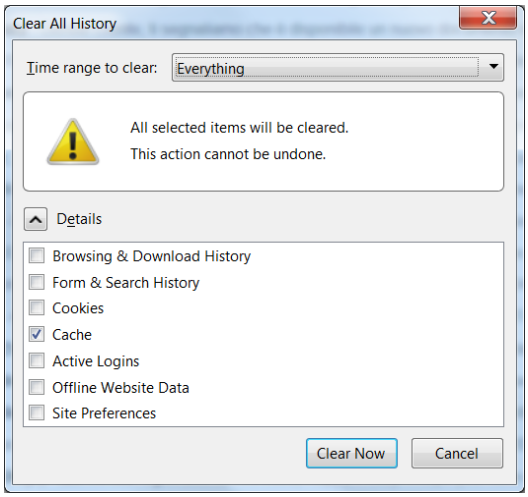


If no reply is received, your PC is unable to communicate with the XWEB. Check the cables once again or contact your network administrator. Attention, if a reply is received, it may not come from the XWEB: it may come from another device on the network. Also in this case, should you continue to have difficulties accessing via your browser, contact your network administrator for advice.

5.8 DISPLAYING OF INCOMPLETE OR INCORRECT PAGES FROM PC

The temporary browser files, also known by the name cache-files, may sometimes prevent proper use of the XWEB. This happens when, for example, an XWEB is replaced and is accessed remotely using the same web address.
To solve this problem, delete these temporary files from your computer. Their deletion may vary depending on your operating system and its settings. Refer to your PC/tablet documentation and/or obtain the support of a computer expert or your network administrator.

- To clear the MOZILLA FIREFOX Cache press CTRL + SHIFT + CANC, select Cache and CLEAR NOW



5.9 SOMEONE HAS RECEIVED A CONFLICTING MESSAGE ON THE IP ADDRESS

This may mean that the XWEB is using an IP address that is also being engaged by another network resource. We recommend changing the XWEB IP with a new, free address. If in doubt on which address to use, contact your network administrator.

5.10 HOW MANY CONTROLLERS CAN THE XWEB MANAGE

The XWEB300D can manage only one RS485 serial line, which can route up to a maximum of 247 controllers. The maximum number of devices that can used, however, depends on the model purchased; for example, XWEB300D models can handle up to 18 addresses.
XWEB500D can manage two serial RS485 lines; the maximum Modbus address value is 247 per line, but it can manage 75 addresses in total.
The XWEB5000 can manage two separate RS485 serial lines simultaneously, for each of which it can route up to a maximum of 247 controllers. It can route up to 494 controllers on serial 485 in a Modbus-RTU network.

5.11 HOW THE ALARMS ARE MANAGED

The XWEB monitors the alarm statuses and notifies any variations according to a configuration that must be set by the user. The person configuring the XWEB must perform the following steps in order to obtain a complete configuration:
System. The XWEB system anticipates that all notifications to an external media source (e.g. an email server) are configured in the system settings.
Book. All recipients of the alarm notifications must be recorded in the system and must have their Email/fax contact details, or other, configured.
Controllers. It is necessary to define the controller network from which the XWEB will detect the alarm status of the same controllers.
Alarms. It is necessary to define the rules according to which the detected alarms must be notified. The alarms are grouped into alarm-categories that define how the alarm must be treated and to whom and how they must be notified. This information is defined on levels (aka. delivery settings).

5.12 HOW ARE THE ALARM EMAILS RE-SENT

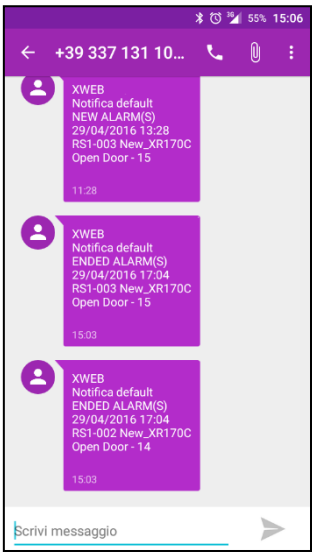
The XWEB is often installed to notify alarms via email. This service can be configured in various ways to re-send emails, should the alarm conditions persist over time:

1. The first type of re-send is carried out during the lifespan of the level, where the emails are always re-sent to the same recipients. The parameters affecting this type of re-send are "Resend Time" and "Resend life time", in the level settings.
2. the second type of re-send is carried out through means of an increasing notification level and the consequent notification being sent to a new group of recipients. The parameters affecting this type of re-send are the entry order in the levels in the category parameters (see image below) and the "Resend life time" in level settings
3. the third type of re-send is carried out through means of an increasing notification interface and the consequent routing of email notifications on its media. This means that should the emails via the LAN interface fail to send, it is possible to manage their re-sending via a DIAL-UP (modem). The parameters affecting this type of notification are illustrated in the following image taken from the System configuration parameter email section.

5.13 TABLETS / PDA COMPATIBILITY

The XWEB user interface is normally accessible via 10” tablet web browser. The HTML pages are re-sized according to the size of the screen. However, on smaller screens with low resolution, the pages are usable.

5.14 HOW SMS ALARM NOTIFICATIONS APPEAR



When XWEB detects an alarm from the tools network, if configured for SMS notifications it sends them with the following text (example):

which lists information about:

- XWEB name
- Notification level name
- Alarm START/END type
- Event DATE/HOUR
- Device name
- Alarm name
- Unique ID of the alarm as in the xweb Alarm Log

5.15 MODEM ERROR MESSAGES

In the “system log” associated with the message “Error sending SMS” there is an error code that you can see keeping the mouse still over the message.

+Send message using physical device GSM connected to the physical serial device
+----------
+1 => (GSM) Unable to get XWEB model from xwebconfig.json
+2 => (GSM) No gsm support configured
+3 => (GSM) Unknown modem specified (internal/external)
+4 => (GSM) Waiting registration to the network: Error write command to device modem.
+5 => (GSM) Timeout network registration.
+6 => (GSM) Error exec fork() to run xwgsmsms module.
+7 => (GSM) Timeout waiting end xwgsmsms module (20 Seconds).
+8 => (GSM) Child xwgsmsms module dead itself.
+9 => (GSM) nu.
+10=> (GSM) [xwgsmsms] => Invalid parameters passed

+11=> (GSM) [xwgsmsms] => No destination number or device specified.
+12=> (GSM) [xwgsmsms] => No SMS text provided.
+13=> (GSM) [xwgsmsms] => Unable to open device modem.
+14=> (GSM) [xwgsmsms] => Error on read modem received messages.
+15=> (GSM) [xwgsmsms] => [send parth message] => Error init modem.
+16=> (GSM) [xwgsmsms] => [send parth message] => Error reinit modem after try send message.
+17=> (GSM) [xwgsmsms] => [send parth message] => Error send sms rich last retry.

+Send message using physical device RAVEN connected to the network
+----------
+30=> (RAVEN) Generic error.
+31=> (RAVEN) Port selected out of range.
+32=> (RAVEN) Timeout waiting socket raven respons.
+33=> (RAVEN) Error send socket data to raven.
+34=> (RAVEN) Connect error to raved network device.
+35=> (RAVEN) Error on set socket options.
+36=> (RAVEN) Error create socket.
+37...=> (RAVEN) Error received from raven (trught socket). Raven result = THIS_VALUE - 37

+Send message using network gateway soap
+----------
+70=> (SOAP) Error encoding message (EncodeKr).
+71=> (SOAP) Send message to the gateway.
+75...=> (SOAP) Error reported by SOAP gateway. Soap result = THIS_VALUE – 75

5.16 LIMITS IN FILES UPLOADS

Devices > Devices > Parameters	**Devices > Settings > Preconfigurations**	**Layout > *images***	**Tools > Languages**
- XWEB300/500: 1 MB - XWEB1000: 1 MB - XWEB5000: 1 MB	- XWEB300/500: 1 MB - XWEB1000: 1 MB - XWEB5000: 1 MB	- XWEB300/500: 1 MB - XWEB1000: 1 MB - XWEB5000: 1 MB	- XWEB300/500: 5 MB - XWEB1000: 5 MB - XWEB5000: 5 MB
System > Updates	**System > Settings > General**	**System > Backup**	**System > Terminal**
- XWEB300/500: 21 MB - XWEB1000: 70 MB - XWEB5000: no limit	- XWEB300/500: 1 MB - XWEB1000: 1 MB - XWEB5000: 1 MB	- XWEB300/500: 20 MB - XWEB1000: 20 MB - XWEB5000: 20 MB	- XWEB300/500: no limit - XWEB1000: no limit - XWEB5000: no limit

NOTES

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