
Vimar end-user license contract

VIMAR SPA located in Marostica (VI), Viale Vicenza n. 14 (<http://www.vimar.com>), sole owner of the software named "Software WebServer", through this contract grants the license of use of the aforementioned program.

VIMAR SPA shall not be held liable for any damage caused by improper use of the aforementioned software, in particular for direct or indirect damage to persons, property, and/or animals due to economic loss that may occur as a result of the use of the software.

VIMAR SPA reserves the right to make any changes to improve the function of the aforementioned software without advance notice. It is prohibited to modify, translate, adapt, or create applications based on the aforementioned software, without previous written consent from VIMAR.

The user must verify the suitability of the program to his needs, and interpret the results to verify the consequences of the choices of design made.

All risks concerning the results and performance of the program are assumed by the user.

VIMAR SPA holds the exclusive property right of the software.

Unauthorized duplication of the program is prohibited.

It is expressly forbidden to modify, translate, fit, change, disassembly in any way or to create by-products from the software.

The user is to be held responsible not to eliminate any information of the software relevant to the Copyright.

The software are protected under the Copyright laws in force in Italy and foreseen by the International treaties, therefore, any activity realized in contrast with what is stated above, will be prosecuted at the right place.

Microsoft, Windows, Vista, Xp, Seven, Media Center, Internet Explorer are registered trademarks of the Microsoft Corporation in the United States and/or other countries.

Apple, Mac, Mac OS, iMac, MacBook, iPhone, iPod Touch, iPad, Safari are trademarks of Apple Inc., registered in the U.S. and other countries.

Mozilla, Firefox are registered trademarks of Mozilla.

Google Chrome is a trademark of Google Inc.

Linux is a registered trademark of Linus Torvalds in the United States and/or other countries.

VIMAR SPA
Viale Vicenza, 14
36063 Marostica VI - Italy
<http://www.vimar.com>

INDEX

Introduction	6
Prerequisites	6
P.1 Web browser compatibility	6
P.2 compatibility with Konnex ETS versions	6
P.3 Multimedia Video touch screen 10in compatibility	6
P.4 Requirements for remote access	6
1. Installation	8
1.1. Connection	8
1.2 Connecting via Network	9
1.3 Reset to Factory Settings.....	11
1.4 Cache	12
1.5 Web Server default users.....	12
2. Configuration - The Administration section	14
2.1. Overview	14
2.1.1 General Layout	14
2.1.2 Side Menu.....	15
2.1.3 Search engine	16
2.1.4 Open page list	17
2.1.5 Workspace	19
2.1.6 Context Menu	20
2.3. Administration Menu: Setup	21
2.3.1 Language	21
2.3.2 Network	21
2.3.2.1 Remote access to the Web Server: public IP address	22
2.3.2.2 Example of router configuration for remote access to the Web Server	23
2.3.2.3 Network configuration for remote viewing of the IP video cameras of the system	26
2.3.2.3 SSL certificates for HTTPS connection to Web Server 01545.....	27
Windows - Google Chrome	27
Apple MAC - Safari.....	29
Apple iPhone	29
Apple iPad	31
Android Mobile	32
2.3.3 Navigation menu	33
2.3.4 Update	33
2.3.5 Backup/Restore	33
2.3.5.1 Database	33
2.3.5.2 Background pictures	34
2.3.6 Date/Time	34
2.3.7 Mail	34
2.3.8 Advanced	34
2.3.9 Maintenance	35
2.3.10 ByWeb Tools	35
2.3.10.1 Introduction	35
2.3.10.2 Prerequisiti	35
2.3.10.3 Installation	35
2.4. Administration Menu: KNX	36
2.4.1 ETS import rules	36
2.4.2 ETS import	37
2.4.3 Configuring the communication	40
2.4.4 KNX objects.....	40
2.4.4.1 Object properties	40

INDEX

2.4.4.2 KNX group addresses	41
2.4.4.3 Rooms the object belongs to	43
2.4.4.4 Scenarios the object belongs to	43
2.4.4.5 Passive and active events	43
2.4.4.6 KNX scenarios	44
2.4.5 Physical devices	44
2.4.6 ETS project	44
2.5. Administration Menu: ENVIRONMENTS	45
2.5.1 New Environment	45
2.5.2 Environment tab	46
2.5.3 Environments contents	48
2.5.4 Deleting an environment.....	48
2.5.5 Edit background	48
2.6. Functions	49
2.7 Complex Objects	50
2.7.1 New complex objects	50
2.7.2 Assignment of the sub-objects	51
2.7.3 Dimmer complex object	52
2.7.4 Dimmer RGB complex object	52
2.7.5 Blinds (shutters) up/down/stop complex object	53
2.7.6 Blinds (shutters) up/down/percentage complex object	53
2.7.7 Shutters lamellae up/down/slats complex object	54
2.7.8 Thermostat complex object	55
2.7.9 Generic complex object	56
2.8. Scenarios	57
2.8.1 New scenario	57
2.8.2 Actions	58
2.9. Logics	59
2.10. Conditions	61
2.11. Notifications	62
2.11.1 On-screen notifications	62
2.11.2 Email notifications	63
2.11.3 Notifications log	63
2.12. Video surveillance	64
2.12.1 New camera	64
2.12.2 Display on Local Area Network (LAN).....	65
2.12.3 Remote viewing	65
2.13. Energy	66
2.13.1 Introduction.....	66
2.13.2 Consumption	66
2.13.2.1 New analyzer	66
2.13.2.1 Power calculation	68
2.13.2.3 Visualisation	69
2.13 Load control	71
2.13.1 General settings.....	71
2.13.2 Associating an analyzer	72
2.13.3 Association of one or more loads	72
2.13.4 Viewing in the visualisation	74
2.14. Users and permissions	77
2.14.1 Users	77
2.14.2 User groups	78
2.14.3 Access log	79

INDEX

3. Use - The Visualisation section	82
3.1. Access to the Web Server	82
3.2. Overview	84
3.2.1 General Layout.....	84
3.2.2 Side Menu	85
3.2.3 Context Menu	85
3.2.4 "Home" button.....	86
3.2.5 Device widgets	86
3.2.5.1 Keyboard entry of values in individual widgets	87
3.2.5.2 Keyboard entry of values in complex widgets	87
3.3 The Favourites page	88
3.4 Environments	89
3.4.1 Introduction	89
3.4.2 Navigation between environment and sub-environments.....	89
3.4.3 Environments grid view	90
3.4.4 Environments map view	91
3.4.4.1 Customizing the map view of an environment	92
3.5 Functions	93
3.5.1 Introduction	93
3.5.2 Illumination	93
3.5.2.1 Light ON/OFF	93
3.5.2.2 Dimmer light	93
3.5.2.3 RGB dimmer light	94
3.5.3 Climate	94
3.5.3.1 Individual KNX objects Widgets	94
3.5.3.2 Thermostat complex object	95
3.5.3.3 Fancoil speed complex object management	95
3.5.4 Shading	96
3.5.5 Multimedia	96
3.6 Scenarios	97
3.6.1 Introduction	97
3.6.2 Running and stopping a scenario.....	97
3.7 Object scheduling	98
3.8 Video surveillance	102
3.9 Energy.....	103
3.9.1 Introduction	103
3.9.2 Consumption	103
3.9.3 Loads	105
3.10 Notifications	107
4. Appendix	110
4.1 Management of the Vimar KNX thermostat with Complex Objects	110
4.1.1 Overview	110
4.1.2 Thermostat complex object	110
4.1.2.2 Creating the thermostat complex object	111
4.1.3 The complex object for managing the speed of the fancoil fans	113
4.1.3.1 Management of the fancoil speed through the Generic complex object.....	114
4.1.3.2 Creating the generic complex object	114
4.2 Multimedia video touch screen 10in (cod. 21553.2, cod. 21553.1)	117
4.2.1 Configuration	117
4.2.2 Use	117

Introduction

The Web Server KNX (01545) is a monitoring device for home & building automation systems based on the KNX standard.

The configuration and use of the Web Server KNX (hereinafter referred to as Web Server) take place entirely through web pages, through a common browser (refer to the list of compatible browsers) from any type of device or operating system.

Vimar makes apps available for Apple iOS and Google Android operating system-based mobile devices (see the Vimar's website for more information).

Prerequisites

P.1 Web browser compatibility

To access the Web Server you can use the following web browsers:

- Apple Safari (vers. 5.1 or above)
- Google Chrome (vers. 14 or above)

P.2 compatibility with Konnex ETS versions

To configure the Web Server, you can use the .esf files (and .phd) imported from versions 3, 4 and 5 of the ETS software by Konnex.

P.3 Multimedia Video touch screen 10in compatibility

The Web Server is compatible with version 1.4.01 or later of the home automation app of the Multimedia Video touch screen 10in (21553).

Web Server KNX	ETS	The Web Server is compatible with Vimar Multimedia video touch screen 10in IP (21553.2, 21553.1):
vers. 2.0	vers. 3 - vers. 5	- 21553.2 with domotic app version 5.0.xx or later - 21553.1 with domotic app version 4.0.05 or later

P.4 Requirements for remote access

To access the Web Server remotely:

- The IP address (static or dynamic) must be public.
- There has to be the possibility to change some parameters of the router.

ATTENTION: Before performing any Web Server configuration, download the updated software from the Product Software section on website www.vimar.com.

1. INSTALLATION

1. Installation

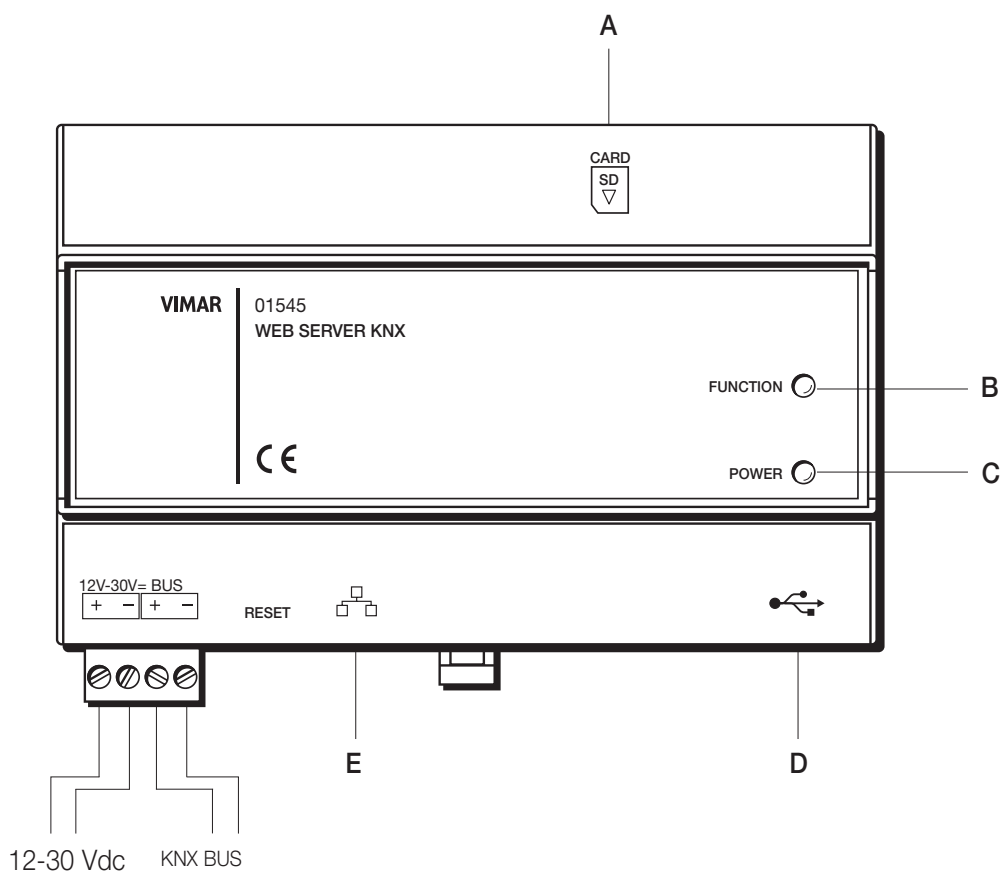
1.1. Connection

Prepare the following links to Web Server:

- Power 12V / 30V DC (max consumption 370 mA at 12V) via the supplied special terminal (PIN 1 and 2 from the left – see instructions on the product).
- KNX bus via the supplied special terminal (PIN 3 and 4 from the left – see instructions on the product).
- LAN network via cable via cat. 5 or higher and standard RJ45 connector

The front LED marked as "POWER" indicates the presence of power, while the "FUNCTION" LED is normally off, except to point out special operations in progress.

The Web Server also provides a SDHC port for future expansion.



A: SD card slot

B: Turned on only in case of special operations

C: Presence of voltage

D: USB plug

E: LAN plug

1.2 Connecting via Network

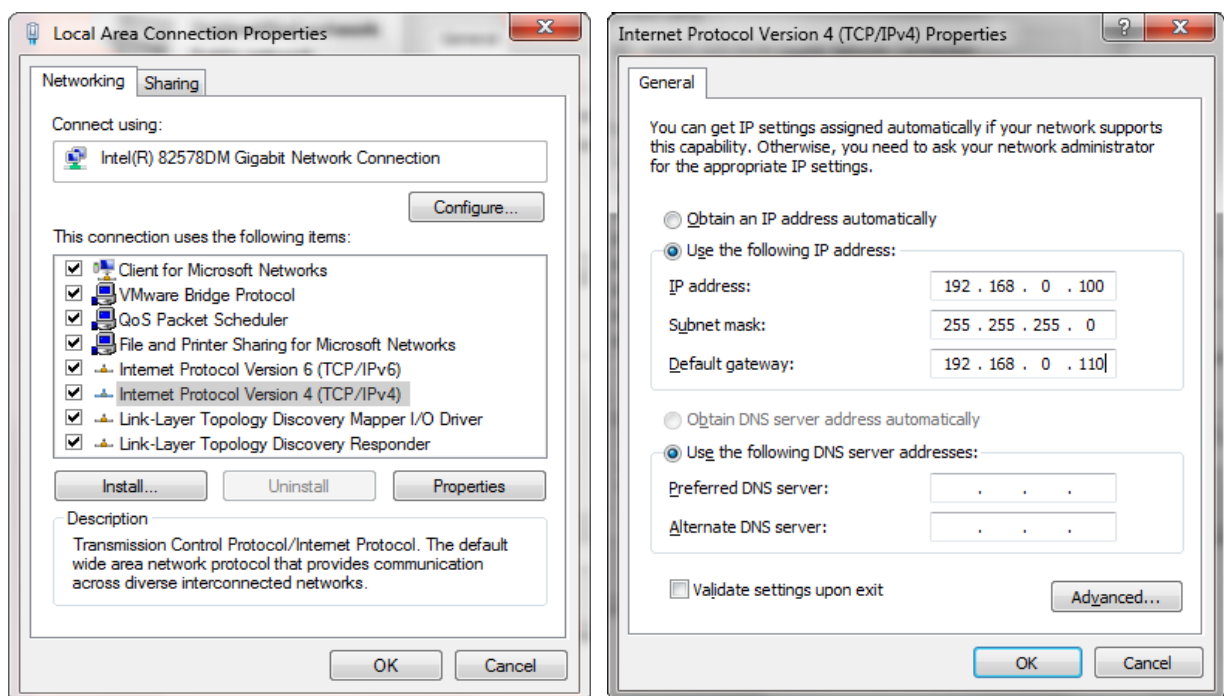
The Web Server responds by default to the following IP address:

192.168.0.110

If your LAN is not compatible with this address, proceed as follows:

- Connect the Web Server to the PC through a "cross-over" Ethernet cable
- Access the network configurations of the PC, as shown in the documentation for your operating system
- Change the settings of the TCP/IP (version 4) communication protocol relating to the LAN port that is connected to the Web Server, and manually set the following parameters:
 - IP Address: 192.168.0.100
 - Netmask: 255.255.255.0
 - Default gateway: 192.168.0.110
- Save and wait for the new settings to take effect. If required, restart the system.

The following figures show, for example, the network configuration windows for a PC with Windows 7 operating system.



Open a web browser and type the following address:

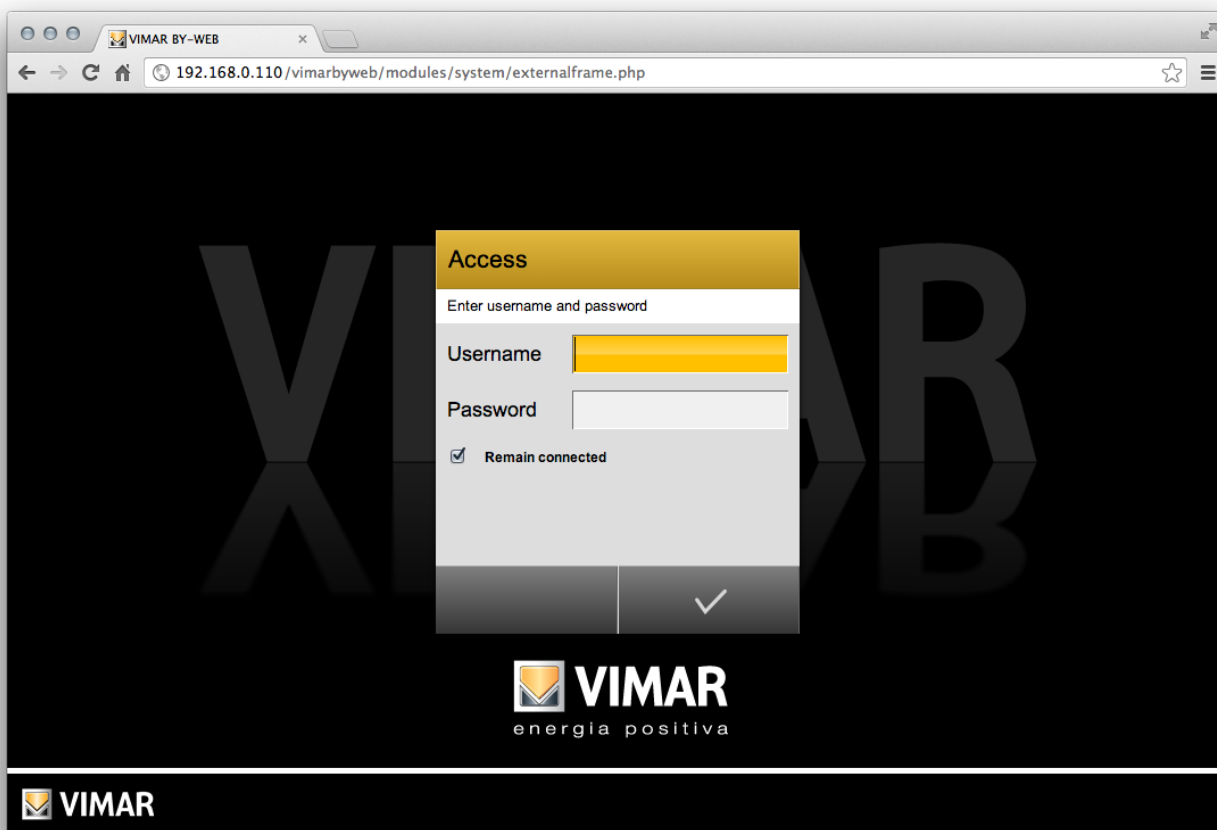
http://192.168.0.110

For better user experience, we recommend using the following browsers:

- **GOOGLE CHROME**
- **APPLE SAFARI 6**

The functionality of the Web Server may not be compatible with different browsers.

By accessing the Web server for the first time, the browser downloads a set of information necessary for browsing; wait for the completion of this operation (the progress of which is indicated at the bottom right of the screen) until you see the following window.



Enter the following credentials:

USERNAME	admin
PASSWORD	admin

It is possible to change the admin user's password and create additional login accounts at a later time. At the bottom of the window for entering the login credentials is the "Remain connected" checkbox.

Ticking the checkbox enables to store data, which allows faster subsequent access to the Web Server, if the following conditions are met:

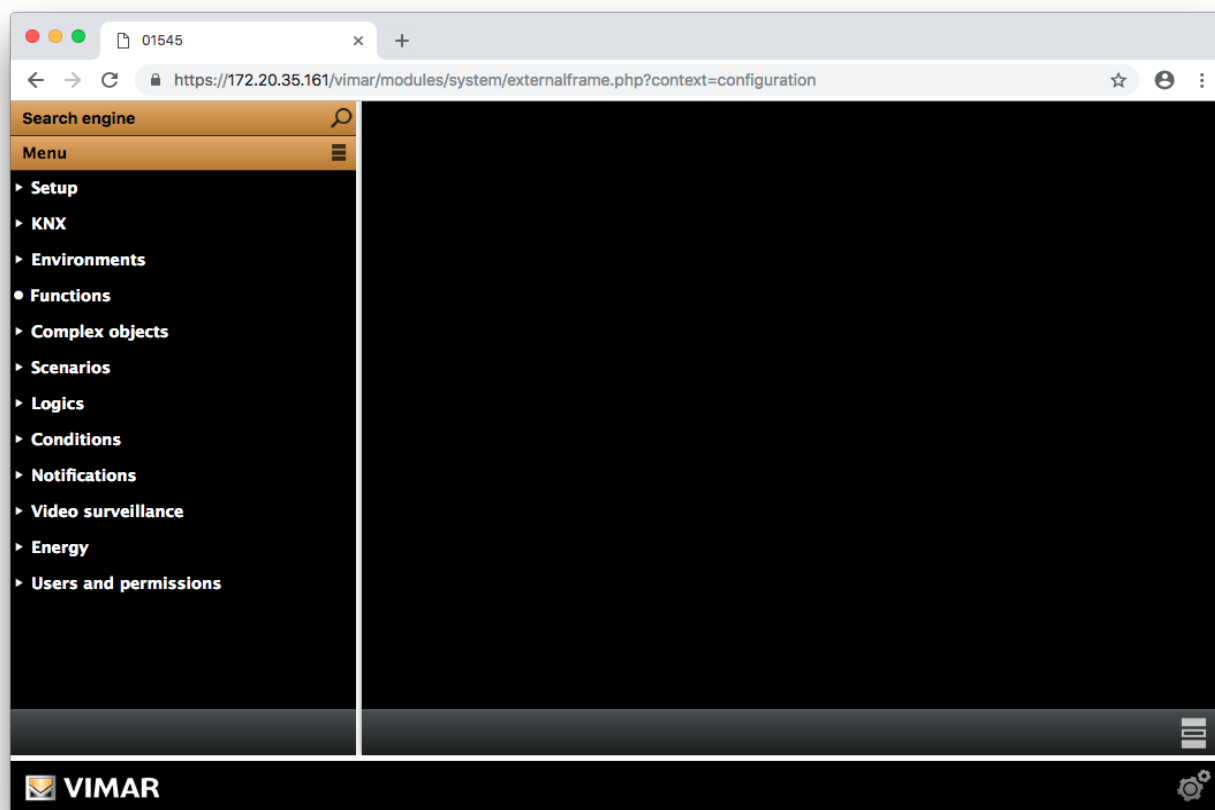
- The IP address of the client where the access is taking place has not changed.
- The credentials of the user who logs in have not changed.
- At the end of the previous connection to the Web Server, the web browser has been shut down without quitting the Web Server session via the "LOGOUT" button.

The first access to the Web Server after enabling this checkbox, provides additional time for storing the requested data.

If the above conditions are met, the login window for entering the login credentials to the Web Server is not displayed at the next access, and access to the Web Server functionality is faster.

If you exit the Web Server using the "LOGOUT" button, the window for entering the login credentials will appear at the next login, and the user data will be stored again.

Once the page is loaded, press the button on the bottom right and select "ADMINISTRATION" from the context menu; a screen similar to the following figure is shown.



Through this section you can set all the operation parameters of the Web Server, as shown in the following chapters. The configuration capabilities a user can access depend on the permissions associated with the user. The pictures shown in the following manual refer to a login as "Administrator".

1.3 Reset to Factory Settings

If necessary, you can restore the factory configuration of the Web Server through the "RESET" button on the side on product (near the network connector).

If you only want to reset the Web Server network address and preserve its configuration, proceed as follows:

- Locate the "RESET" button and get a screwdriver or another tool of sufficient diameter to be able to press the button through the hole of the case.
- Press the button for at least 10 seconds, until the "FUNCTION" LED on the front of the device begins to flash, then release the button.
- Within 5 seconds, press the button for 1 second and release; within two seconds, the front LED turns on and stays on for a few seconds.
- When the LED is off, disconnect and reconnect the power supply to the Web Server.
- Once the reboot is complete (about 1 minute), the Web server is reachable at the factory IP address (192.168.0.110). If the LED turns off after pressing the button for 10 seconds before the short press, repeat the entire procedure.

If you want to reset the Web Server configuration as well as network address, proceed as follows:

- Locate the "RESET" button and get a screwdriver or another tool of sufficient diameter to be able to press the button through the hole of the case.
- Press the button for at least 10 seconds, until the "FUNCTION" LED on the front of the device begins to flash, then release the button.
- Within the next 5 seconds, press and hold the button until the red LED lights up continuously.
- Release the button and wait until the red LED turns off.
- When the LED is off, disconnect and reconnect the power supply to the Web Server.
- Once the reboot is complete (about 1 minute), the Web server is reachable at the factory IP address (192.168.0.110) with a new supervision project.

Again, if the LED turns off after the first long pressure (10 seconds), repeat the entire procedure.

1.4 Cache

For faster browsing inside the supervision, Web Server uses 3 different caching mechanisms:

CACHE HTML CLIENT Initial synchronization (on the first login with a new browser) of HTML content inside the browser that speed up subsequent accesses, even after the browser is closed.

CACHE HTML SERVER Storage on the server of the most frequently used pages for faster access from other browsers or from PC/mobile devices.

CACHE DB CLIENT storage on the browser, while browsing, of page content for faster access in the future

These mechanisms can slow down the first access, especially if remote; in addition, some browsers may request authorization to store information on the PC/device; in that case, you need to give consent for proper functioning.

If you encounter incompatibility with certain browsers or mobile devices, you can disable these caching mechanisms, as described in section "3.7 Expert" of this manual.

1.5 Web Server default users

The Web Server has the following default users:

User	Password	Description
admin	admin	Home automation system administrator user. Has the right to create users and manage their rights, as well as to configure the supervision.
manager	manager	User dedicated to installing and configuring the supervision. Has the rights to set up the project, but not to intervene on the system configurations.
User	User	Basic user for connections from the PC. Has the rights to view the status of the system, browse the pages of the Web Server, and perform basic commands on the home automation system.

2. CONFIGURATION THE ADMINISTRATION SECTION

2. Configuration - The Administration section

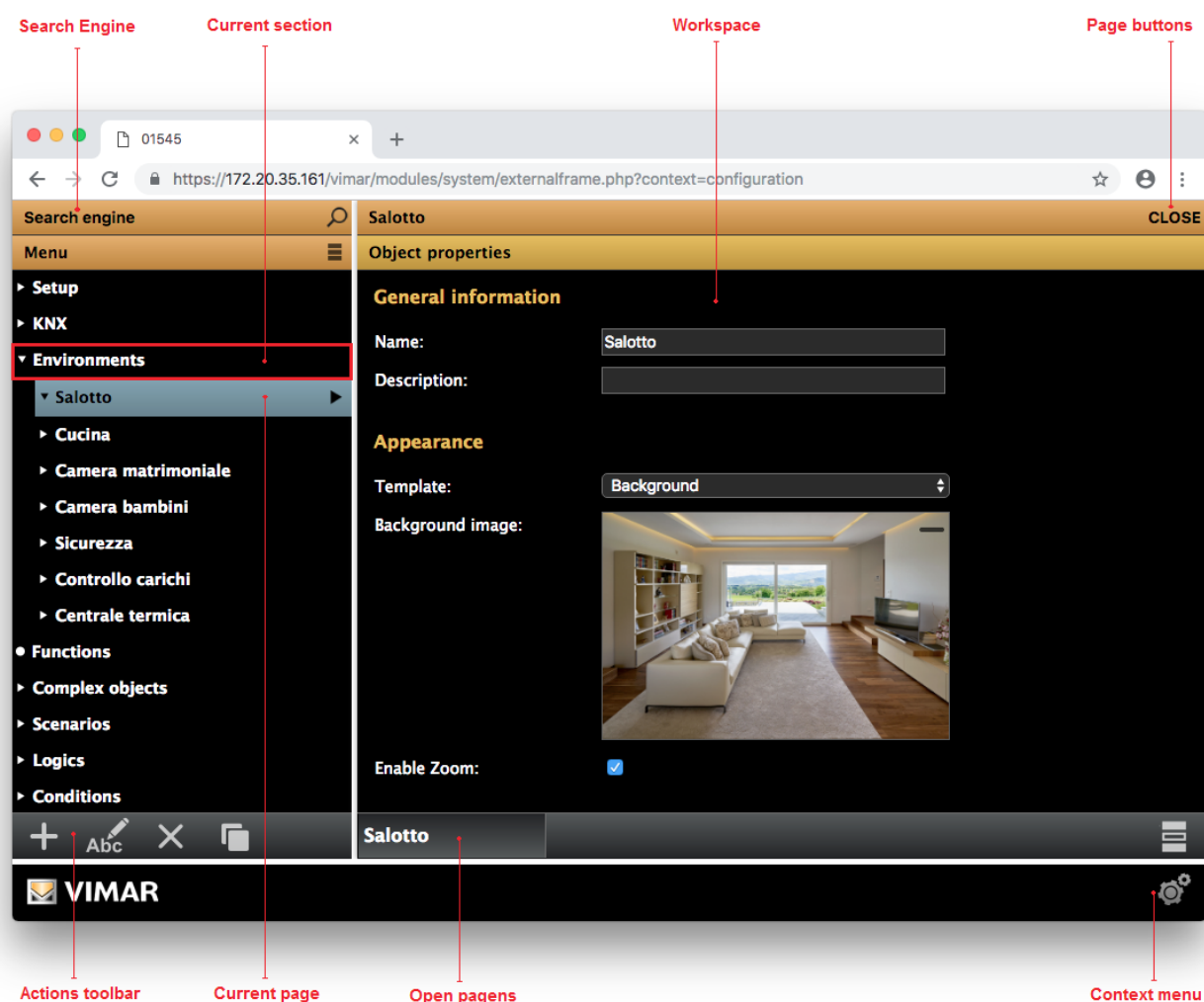
The Web server is configured within the Administration section.

Important: the access to the Administration section and the type of settings granted depend on the permissions associated with the user. If a user does not have the sufficient permission to perform a desired setting, contact the administrator of the Web Server for testing and possible modification of the privileges assigned to your account to access the Web Server.

2.1. Overview

2.1.1 General Layout

The following figure shows an example of the administration environment of the Web Server:



On the left side there are two areas:

SEARCH ENGINE: Allows to search at any time one or more objects that are configured in the project on the basis of one or more keywords.

MENU: Allows access to the different configuration sections of the Web Server.

2.1.2 Side Menu

From the version 2.0 of the Web Server software, the menu of the administration section has a tree structure.

This menu consists of items of different types, which may have a different behavior when selected (blue highlighting); there are two types of entries:

DIRECT LINK: this type of menu entry corresponds to a single configuration page, which is immediately opened when the item is selected. The state opening of the corresponding page is marked by an arrow until the page is closed.

Backup/Restore



SECTION: this type of entry contains a list (possibly empty) of sub-entries or sub-sections. Selecting an entry of this type does not change the contents of the workspace (current page) and provides for the opening of the relevant branch of the tree. The next selection of the menu item closes the previously opened branch.



OPEN SECTION: allows you to open the desired section and view the selected entry, all the sub-sections, and the items provided for that entry, in the area below.



EDIT: if required by the single menu entry, you can use this button to display the properties of the content of the section itself on the current page.

In addition, selecting a menu item enables the action buttons in the toolbar at the bottom, these buttons allow you to perform the operations provided for the selected item, as shown below:



NEW: allows the creation of a new item inside the section, the type depending on the specific section.



EDIT: allows you to change the names and properties of the items included in the section by opening of the editing tab of the selected item. Selecting a menu item that provides the editing action, in the right part of the item appears the symbol "...", selecting which you can directly access the page of the object.



DELETE: irrevocably deletes the selected object from the project; this operation requires confirmation from the user.



CLONE: it creates a duplicate of the selected item, which inherits all the attributes and relationships with other items of the initial item.

Some sections are initially empty (such as, for example, the list of environments – as shown below) and they allow the creation of sub-items, through the "+" button (CLONE). Depending on the section, the created items can be of various types – environments, scenarios, logics, etc... - and the available actions in the TOOLBAR may depend on the type.

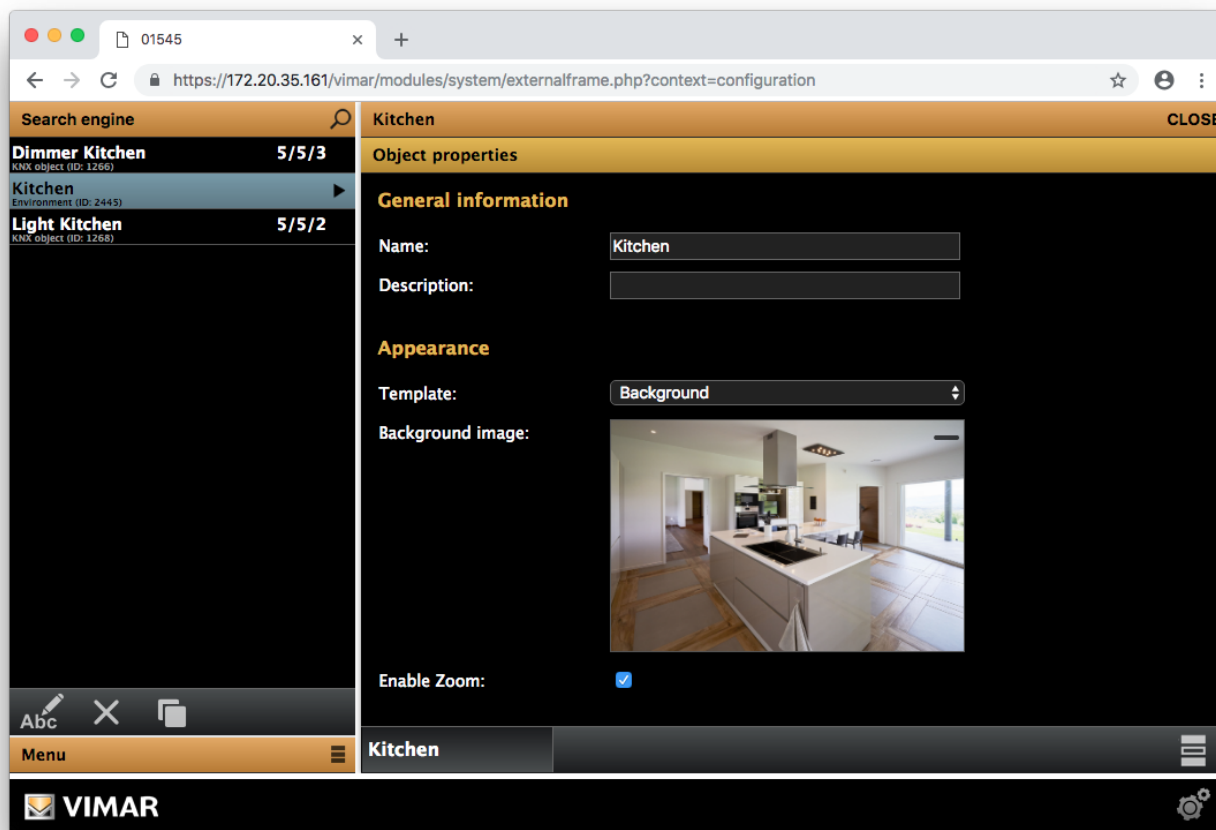
Furthermore, some of these items - such as the environments - can, in turn, be opened as sections of the menu, and include sub-items.

The individual items in the side menu will be described in detail in the next few paragraphs.

2.1.3 Search engine

The field for the quick Search engine of objects within the supervision project is always available on top left.

Clicking the "SEARCH ENGINE" box makes it possible to enter one or more keywords to be used as search criteria; pressing the ENTER key on the keyboard displays a list of results. After pressing the enter key to activate the search, the time required for displaying the search results depends on the size of the project and it may take a few seconds.



The search results hide the MENU temporarily; to view it again, simply click the entire menu entry.

Each item in the list of results, shows information on the type of the item (e.g. environment) the name of the item (e.g. Kitchen) and the unique ID code (e.g. ID:622).

Click an item to select it; to view its details, simply click the shortcut to the side ("three dots"), as previously seen for the MENU.

In addition, selecting an item from the search results, one or more buttons are made available in the specific TOOLBAR that, in a similar way to the MENU, allow to perform operations on the selected item.

It is possible to select more than one item by holding down the CTRL key on the keyboard. In this case, the actions performed by the buttons on the Toolbar are reflected on all the selected items.

The commands available in the TOOLBAR are:

EDIT: Opens the tab of the selected items.

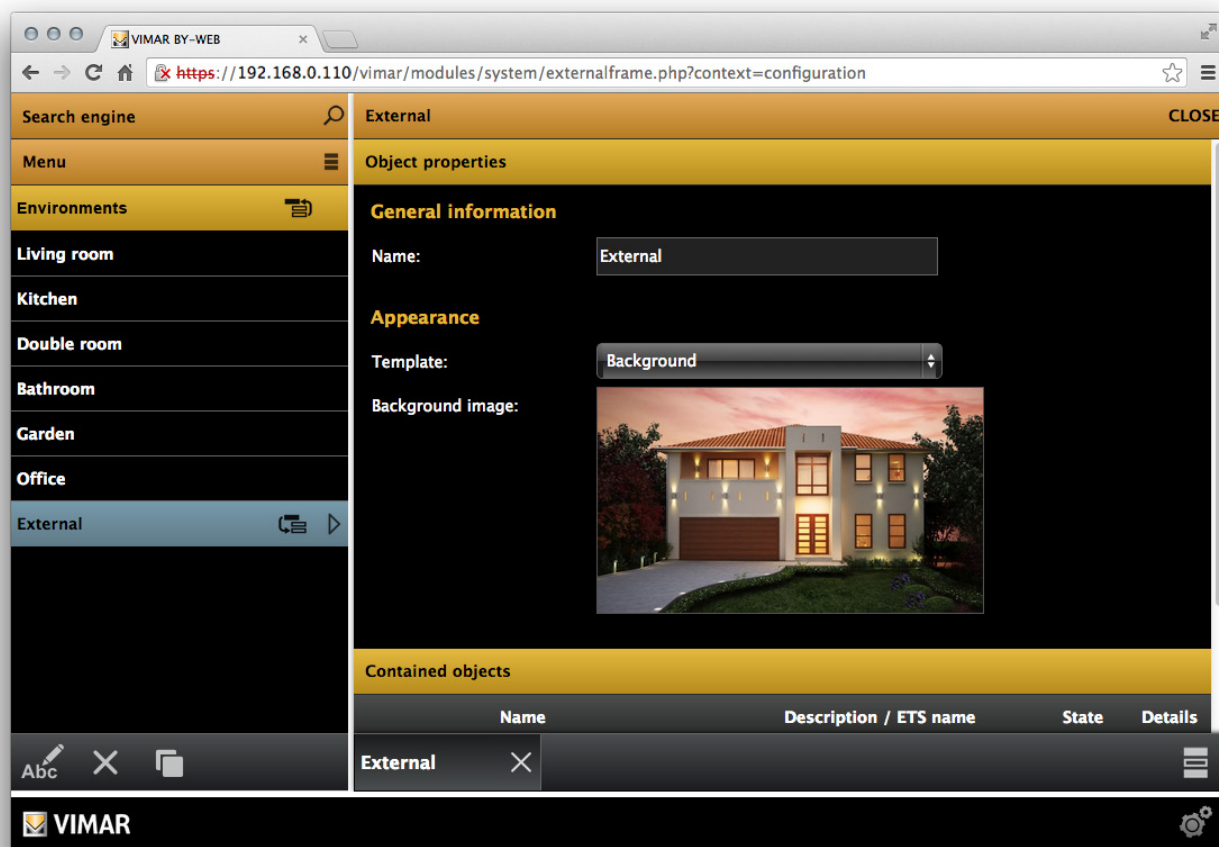
DELETE: Irrevocably deletes the selected items.

CLONE: Creates a duplicate of the selected objects.

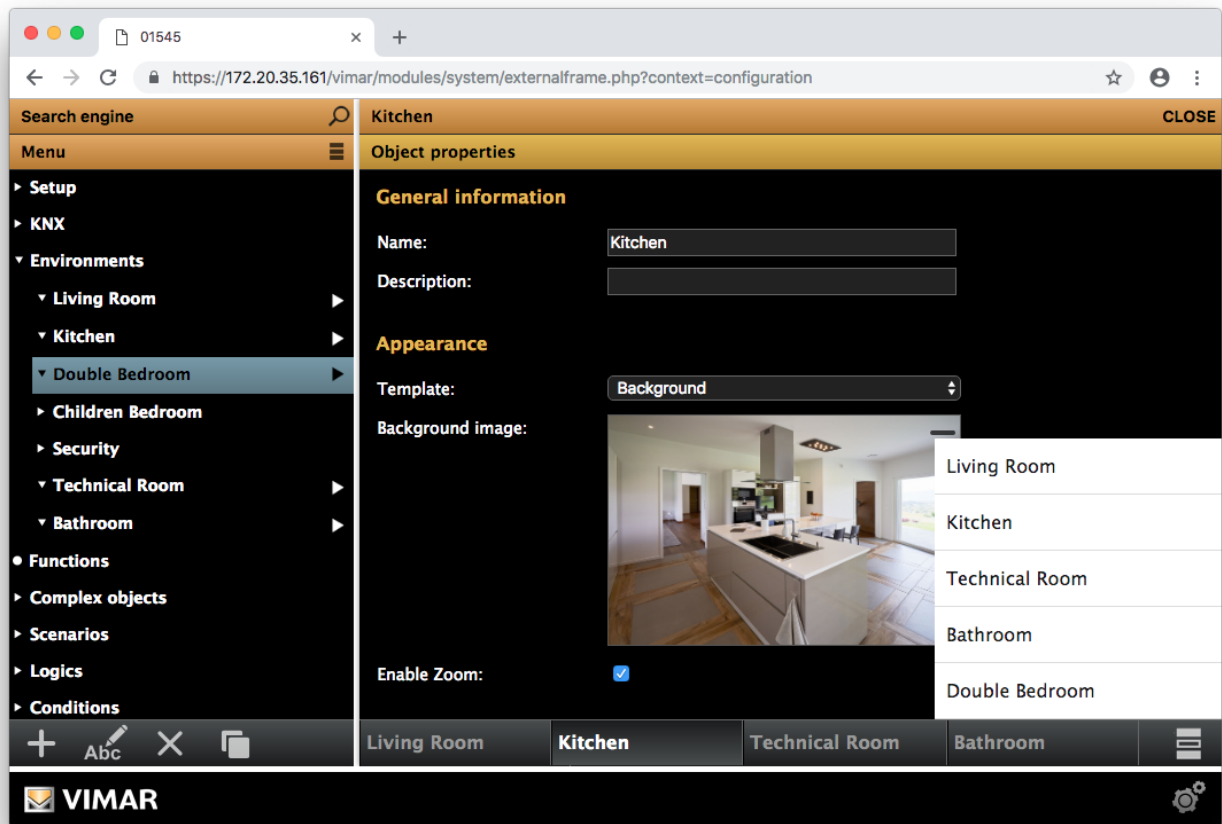
Important: For the configuration of some elements of the project (e.g. ENVIRONMENTS) one or more sections are provided to place the items by "dragging" them from a list. This list to drag the objects from must be created using the SEARCH ENGINE function (as will be described in detail later). This way, for example, you can insert objects in an environment, or determine the actions of a scenario, etc...

2.1.4 Open page list

The list of the open pages is displayed at the bottom of the main screen, in the form of "tab". It is possible to switch from one page to another by simply clicking it; to close a page, you can press the corresponding "X" button or, alternatively, you can press "CLOSE" in the upper right side of the title.



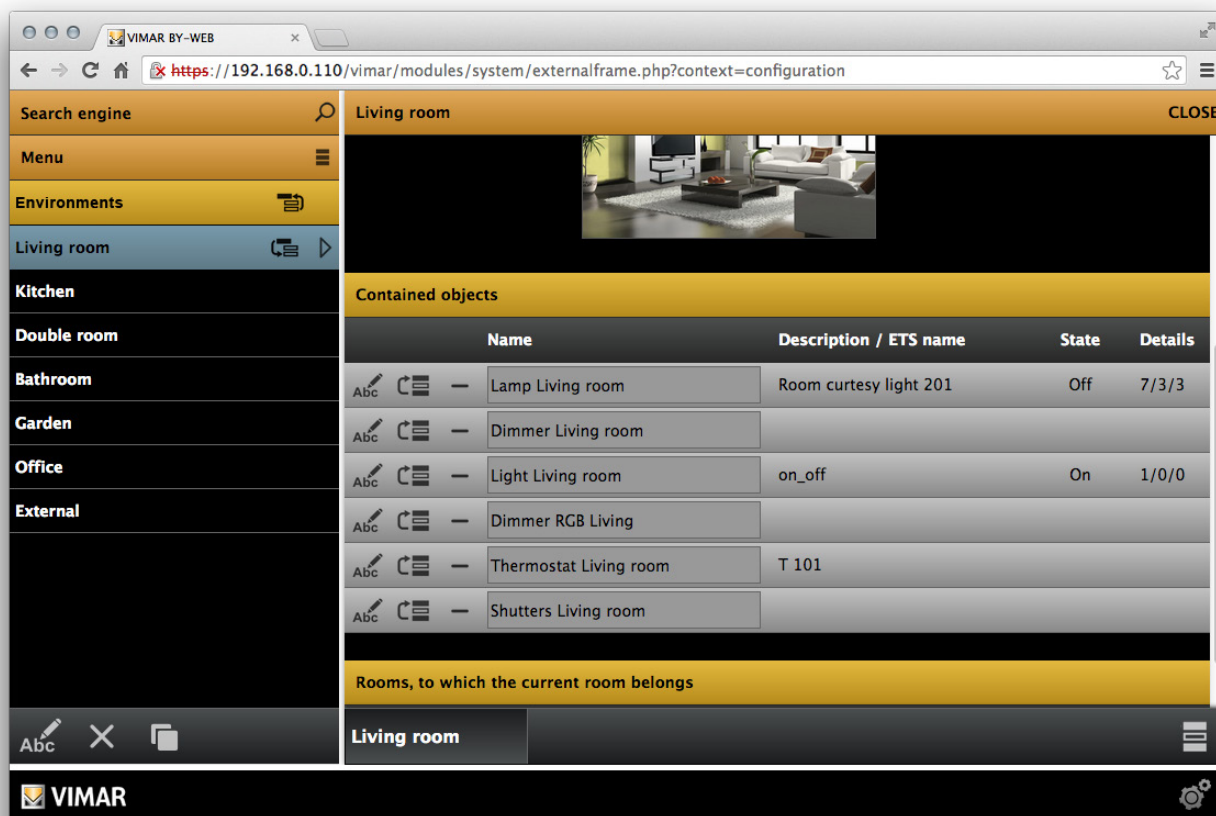
If the list of the open pages contains a number of items exceeding the maximum number of the items displayed in the tab of the open pages, you can still select all the items from the dropdown menu of all the open pages, which can be displayed by selecting "show all" on the right side of the tab of the open pages (as shown in the figure below).



2.1.5 Workspace

The workspace includes the content of the open pages/tabs using the MENU or the SEARCH ENGINE. All pages have a top bar with the TITLE and one or more BUTTONS; all of them include the "CLOSE" button to close the page, and any additional buttons based on the page-specific content.

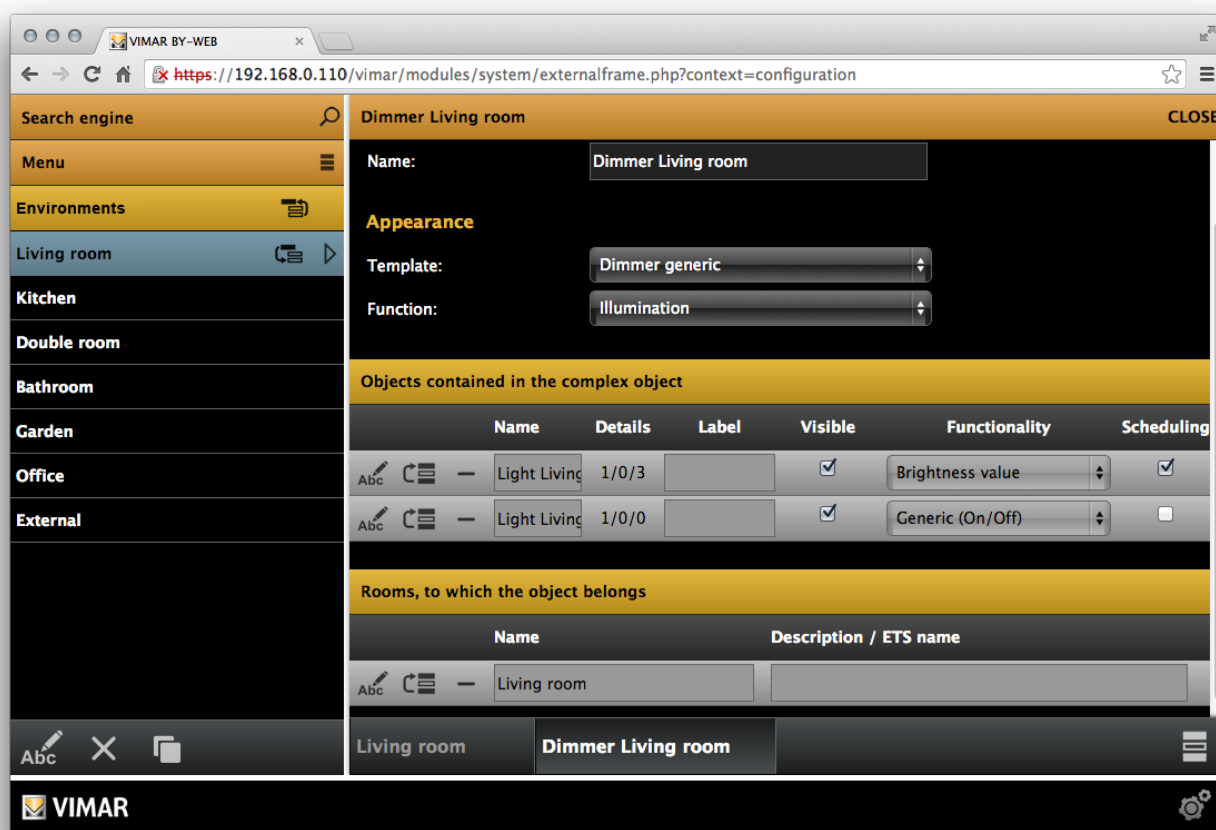
The content of the pages can be organized by AREAS, characterized by a light orange sub-title. Some of the pages can hold a list of items - for example, to link the current item with other items, as in the case of items in an environment - that can be dragged directly from the SEARCH ENGINE. In this case, the items are represented in the form of rows of a table whose columns show, from time to time, the necessary information, as shown in the following figures.



The screenshot displays the VIMAR BY-WEB interface. The browser address bar shows the URL: <https://192.168.0.110/vimar/modules/system/externalframe.php?context=configuration>. The sidebar menu on the left lists various areas: Search engine, Menu, Environments, Living room (selected), Kitchen, Double room, Bathroom, Garden, Office, and External. The main content area is titled 'Living room' and includes a 'CLOSE' button. Below the title is a room image. A section titled 'Contained objects' contains a table with the following data:

	Name	Description / ETS name	State	Details
Abc [edit] [delete] [refresh]	Lamp Living room	Room curtesy light 201	Off	7/3/3
Abc [edit] [delete] [refresh]	Dimmer Living room			
Abc [edit] [delete] [refresh]	Light Living room	on_off	On	1/0/0
Abc [edit] [delete] [refresh]	Dimmer RGB Living			
Abc [edit] [delete] [refresh]	Thermostat Living room	T 101		
Abc [edit] [delete] [refresh]	Shutters Living room			

Below the table is a section titled 'Rooms, to which the current room belongs' with a sub-header 'Living room' and a list of rooms.



The rows representing the items, include some buttons, whose functions are described below:



EDIT: allows you to quickly access the tab of the project and make changes or view its properties.



CHANGE ORDER: changes the position of the row associated with an item compared to the rows corresponding to other items in that list.



REMOVE FROM LIST: removes an item from the list. Unless otherwise indicated, this does not delete the items, but simply removes its relationship with the primary item on the page.

2.1.6 Context Menu

On the bottom right there is always a button (shown below) to open a CONTEXT MENU, from some options are always available, while others depend on the content of the current page.



OPEN CONTEXT MENU

The options available from the Administration section are as follows:

VISUALISATION: Switches to the graphics display for the end user.

LOGOUT: Logs off the current user and opens the login window again.

EXPERT/BASE: Shows or hides the options for Expert users. The "EXPERT" mode allows you to find also objects marked as "NOT VISIBLE" with the SEARCH ENGINE. Some operations can be carried out only in the "EXPERT" mode as will be described in detail below.

CLEAR CACHE: Forces deletion of all temporary files on the Web Server, and reloads the page. This operation is necessary only if the contents of the pages are not updated with the latest settings.

2.3. Administration Menu: Setup

Below is a description of the individual entries of the Setup menu.

2.3.1 Language

This page allows you to set the language used by the Web Server independently, for the Administration (admin) and (Visualisation) sections. Select a language from those available, then press the "SAVE" button to confirm the changes; after saving the page will be reloaded with the new language settings.

Note: the language setting does not apply to user-customizable items text descriptions.

2.3.2 Network

This page allows you to set the network parameters of the Web Server. After modifying the network parameters, press "SAVE" to apply the changes; if you have changed the IP address, you will have to input it in the address bar of the browser to open a new session with the new address.

Before describing the procedure for entering the parameters, let's make a small summary of how a network works.

- Remote access to the Web Server is via the Internet.
- Each Internet node (host) is uniquely identified by a number (32-bit IPv4, 128-bit IPv6), commonly called IP address. Example of IPv4 address: 190.230.140.122
- To make the identification of Internet nodes more easy, it was created a system for associating an alphanumeric string to the IP addresses: DNS (Domain Name System)

For example:

IP Address: 213.178.196.136

DNS name: www.vimar.com

- Obviously, for access to an IP node, you must know the address or DNS name associated with it
- Assigning an IP address to a host can be:
 - static: the address is assigned permanently
 - dynamic: the address assigned is not always the same.

A typical example is provided by Internet Service Providers addressing referenced by private users for internet access. The address is typically assigned with each connection (in some cases can also be edited within the same session)

- To enable access to Internet nodes whose address is dynamically assigned, services have been developed to help you create a dynamic association between the DNS name (assigned to a user) and the IP address.
- Many of the ADSL routers on the market today have native DDNS services support for one or more providers.

The router sends the updated IP address to the DDNS after it's been assigned or after the Internet Service Provider has changed the IP address.
- Typically, configuring a dynamic DNS on a router that supports this technology involves the following steps:
 - 1) Creating an account on the dynamic DNS provider chosen (e.g. DynDNS.org)
 - 2) From the Internet configuration menu of the router select the option for Dynamic DNS (Dynamic DNS, DDNS)
 - 3) Select the Dynamic DNS provider among those managed by the router (typically via a drop down menu)
 - 4) Type the configuration details provided by dynamic DNS providers in the appropriate fields.

- Remote access to the Web Server requires the following settings:

- Configuring the Web Server IP address in the LAN
- Configuring the NAT on the router for Internet access: route the external interface port 443 to the IP address of the Web Server (and to port 443). If port 443 on the router external interface is already used for other devices, it is possible to set a new one that is not in use, however paying attention that, within the LAN, it must be associated to the IP address of the Web Server and to port 443 (which is the one used by the Web Server)
- Verification of https port opening on the ADSL router (port 443)
- If you use dynamic DNS systems, carry out the corresponding configurations

- The Web Server has a default configuration of that address.

If you need to change that address, access the Web Server using the default address and change it from the configuration pages.

This configuration, to be performed on the router, is need to tell the router that the remote requests on the https port should be addressed to the same LAN address identifying the Web Server. For this setting, refer to the instruction manual of your router.

- The Web Server uses the HTTPS protocol to increase security of the remote connection between the user and the Web Server.

The protocol uses a specific port (443) to be opened on the router
- The Web Server can be used even if the ISP assigns a dynamic IP address.

If you use a router that manages the dynamic DNS service chosen by the user natively, set the necessary configurations on the router.

Enter the following information in the appropriate fields:

IP ADDRESS	Address assigned to the Web Server , characterized by 4 numbers separated by dots. The address must be valid and unique within the LAN, otherwise unable to communicate with the Web Server . The default address of the Web Server is 192.168.0.110.
NETWORK MASK	Enter the network mask used by your LAN; unless special requirements, indicate "255.255.255.0".
DEFAULT GATEWAY	In the presence of a router or other device that puts the LAN into communication with other networks or the Internet, enter its address in this field. Otherwise, indicate the same address assigned to the Web Server . NOTE: To use the Web Server remotely, in the "Default Gateway" field you must input the IP address of the Internet router through which you want to access the Web Server remotely.
PRIMARY DNS SECONDARY DNS	Specify the address of the primary and secondary DNS servers, which are necessary for the functions of Web Server that require internet access. Enter the addresses provided by your ISP; if you these fields blank, the Web Server will use values valid for most configurations.
DOMAIN OR PUBLIC IP	If remote access to the Web Server is required, it is necessary to fill this field with the public IP address (if you have a static public IP address) or the Domain name provided by your dynamic DNS service provider.

2.3.2.1 Remote access to the Web Server: public IP address

To access the Web Server remotely you need a public IP address (static or dynamic).

If you have a static public IP address, configure your router using the data provided by your service provider.

If you do not have a static public IP address, contact your local Dynamic DNS service provider and configure your router with the supplied data. There are free or paid Dynamic DNS service providers offering different levels of services.

For example, see the following procedure for managing the remote connection using the dynamic DNS service provided by www.dyndns.org.

The described procedure is similar to the one required for the dynamic DNS service offered by other providers.

The preliminary steps are the following:

1. From a PC connected to the Internet to access the site www.dyndns.org.
2. Create a new account by following the instructions on the site
3. Log in to your account.
4. From the main panel of your account, select "ADD HOST SERVICES"
5. Enter a name for the system and choose one of the available extensions; then select "HOST WITH IP ADDRESS" as a type.
6. Add the new service to the cart and finalize the creation of your dynamic domain.

Example: "domainname" (as desired) as the name, "dyndns.org" as the extension.

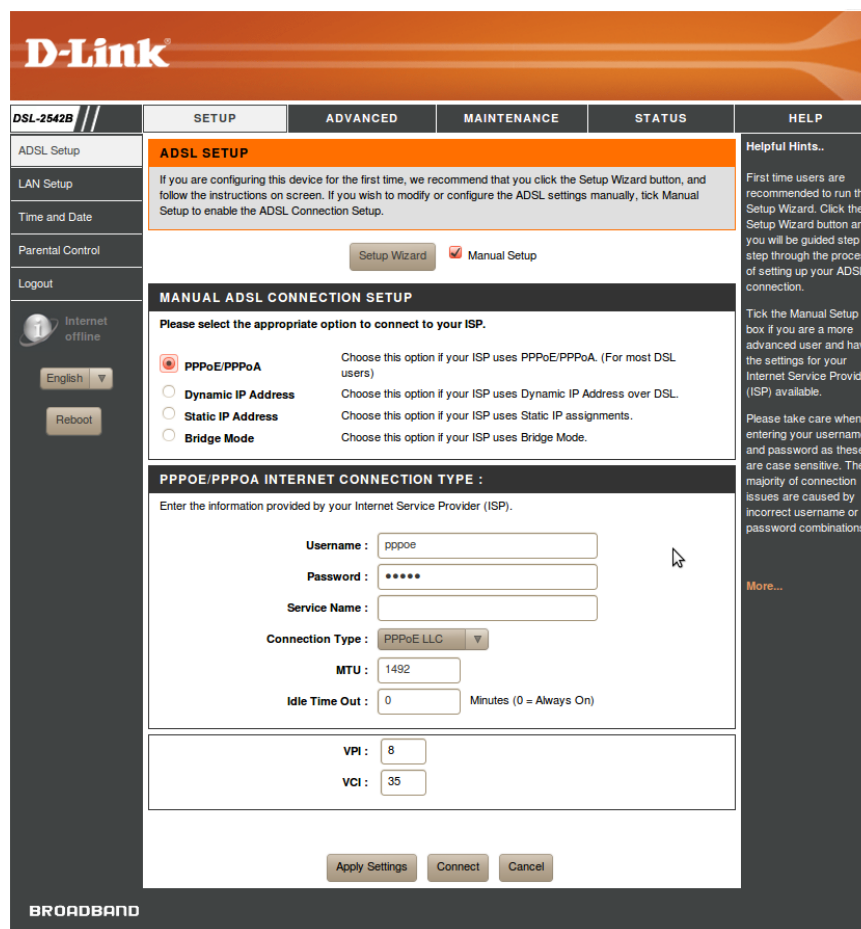
Configure your router with the data obtained during the procedure.

For example, in the following paragraph is shown the configuration of a router for remote access (opening doors, setting up port forwarding, etc.), showing the main configuration pages of the router, with the details that **SHOULD NOT** be changed and those that need to be entered.

The screens will be different depending on the router, but the options and parameters used are typically the same or very similar.

2.3.2.2 Example of router configuration for remote access to the Web Server

- WAN CONFIGURATION



D-Link

DSL-2542B

SETUP ADVANCED MAINTENANCE STATUS HELP

ADSL Setup

LAN Setup

Time and Date

Parental Control

Logout

Internet offline

English

Reboot

ADSL SETUP

If you are configuring this device for the first time, we recommend that you click the Setup Wizard button, and follow the instructions on screen. If you wish to modify or configure the ADSL settings manually, tick Manual Setup to enable the ADSL Connection Setup.

Setup Wizard ☒ Manual Setup

MANUAL ADSL CONNECTION SETUP

Please select the appropriate option to connect to your ISP.

☒ **PPPoE/PPPoA** Choose this option if your ISP uses PPPoE/PPPoA. (For most DSL users)

☐ **Dynamic IP Address** Choose this option if your ISP uses Dynamic IP Address over DSL.

☐ **Static IP Address** Choose this option if your ISP uses Static IP assignments.

☐ **Bridge Mode** Choose this option if your ISP uses Bridge Mode.

PPPOE/PPPOA INTERNET CONNECTION TYPE :

Enter the information provided by your Internet Service Provider (ISP).

Username : pppoe

Password : *****

Service Name :

Connection Type : PPPoE LLC

MTU : 1492

Idle Time Out : 0 Minutes (0 = Always On)

VPI : 8

VCI : 35

Apply Settings Connect Cancel

BROADBAND

Helpful Hints..

First time users are recommended to run the Setup Wizard. Click the Setup Wizard button and you will be guided step by step through the process of setting up your ADSL connection.

Tick the Manual Setup box if you are a more advanced user and have the settings for your Internet Service Provider (ISP) available.

Please take care when entering your username and password as these are case sensitive. The majority of connection issues are caused by incorrect username or password combinations.

More...

The routers screen above is the one with the WAN settings ("external" network interface of the router towards the Internet world); these settings depend on the Internet Service Provider of the user and **MUST NOT BE CHANGED!!**

- LAN CONFIGURATION

Product: DSL-2542B
Firmware Version: EU_1.00
Hardware Version: D1

D-Link

DSL-2542B

SETUP
ADVANCED
MAINTENANCE
STATUS
HELP

ADSL Setup
LAN Setup
Time and Date
Parental Control
Logout
Internet offline
English
Reboot

LAN SETUP

This section allows you to configure the local network settings of your router. Please note that this section is optional and you should not need to change any of the settings here to get your network up and running.

ROUTER SETTINGS

Use this section to configure the local network settings of your router. The IP Address that is configured here is the IP Address that you use to access the Web-based management interface. If you change the IP Address here, you may need to adjust your PC's network settings to access the network again.

Router IP Address : 192.168.0.1

Subnet Mask : 255.255.255.0

DHCP SERVER SETTINGS (OPTIONAL)

Use this section to configure the built-in DHCP Server to assign IP addresses to the computers on your network.

Enable DHCP Server : ☐

DHCP IP Address Range : to

DHCP Lease Time : (hours)

ADD STATIC DHCP (OPTIONAL)

Enable : ☐

Computer Name : << Computer Name

IP Address :

MAC Address :

Copy Your PC's MAC Address

Save Clear

STATIC DHCP LIST

State	Computer Name	MAC Address	IP Address	Remove	Edit
-------	---------------	-------------	------------	--------	------

NUMBER OF DYNAMIC DHCP CLIENTS : 0

Computer Name	MAC Address	IP Address	Expire Time	Reserve
---------------	-------------	------------	-------------	---------

Apply Settings Cancel

Helpful Hints..

If you already have a DHCP server on your network or are using static IP addresses on all the devices on your network, uncheck Enable DHCP Server to disable this feature.

If you have devices on your network that should always have fixed IP addresses, add a Static DHCP for each such device.


More...

This image shows the router screen with the LAN settings ("internal" network interface of the router, the one of the user's local network); these settings depend on the structure of the LAN of the user and **MUST NOT BE CHANGED!!**

In this example, the router has the (LAN) IP address: **192.168.0.1**.

IMPORTANT: in order to connect remotely to the Web Server, it is necessary that the router and the Web Server are on the same subnet.

- DYNDNS



D-Link

DSL-2542B

SETUP **ADVANCED** **MAINTENANCE** **STATUS** **HELP**

DNS SETUP

Domain Name Server (DNS) is a server that translates URL/domain names to the corresponding IP address. Most users will not need to change the DNS servers from default unless instructed by your ISP.

The DDNS feature allows you to host a server (Web, FTP, Game Server, etc...) using a domain name that you have purchased (www.whateveryournameis.com) with your dynamically assigned IP address. Most broadband Internet Service Providers assign dynamic (changing) IP addresses. Using a DDNS service provider, your friends can enter your host name to connect to your game server no matter what your IP address is.

DNS SERVER CONFIGURATION

☐ Obtain DNS server address automatically

☒ Use the following DNS server addresses

Preferred DNS Server : 8.8.8.8

Alternate DNS Server : 8.8.8.8

DDNS CONFIGURATION

Enable Dynamic DNS : ☒

Server Address : DynDNS.org (free) << DynDNS.org (free) (e.g.: myhost.mydomain.net)

Host Name : my.byweb.org

Username : my_username

Password :

Verify Password :

Apply Settings Cancel

BROADBAND

Port Forwarding

Application Rules

QoS Setup

Outbound Filter

Inbound Filter

DNS Setup

Firewall & DMZ

Advanced ADSL

Advanced LAN

SNMP Setup

Remote Management

Logout

Internet offline

English

Reboot

Helpful Hints...

If "Obtain DNS server address automatically" is selected, this router will accept the first received DNS assignment from one of the PPPoA, PPPoE or DHCP enabled PVC(s) during the connection establishment.

If the checkbox is not selected, enter the primary and secondary DNS server IP addresses.

More...

This image shows the screen of the router on the DNS settings and the possible use of dynamic DNS services (e.g. DynDNS).

NOTE: The values entered in the DNS and Alternate DNS fields are purely indicative and not binding.
The data for the management of DynDNS are indicative only and represent the data provided by the user when registering on DynDNS.

With reference to the screen above, the data that must be entered for the configuration of the dynamic DNS service "DynDNS" (in the "DDNS CONFIGURATION" section in the figure) are the following:

- **Server Address:** choice of the dynamic DNS service (the routers used in the example has a drop down menu from which you can make the choice)
- **Host Name:** is the url used to locate the user on the Internet.
It is the data entered by the user during registration on the site of the dynamic DNS service provider and which is dynamically associated with the IP address of the external interface (WAN) of the user's router.
- **Username:** username entered by the user during registration on the site of the dynamic DNS service provider
- **Password:** password entered by the user during registration on the site of the dynamic DNS service provider

- PORT FORWARDING



This image shows the screen of the router with the port forwarding settings, where a rule for remote access to Vimar Web Server has been created (the name of the "By-Web" rule is indicative and not binding):

- address of the Web Server (here the default address is used): 192.168.0.110
- opening of port 443 (required for access to the Web Server)

2.3.2.3 Network configuration for remote viewing of the IP video cameras of the system

In order to remotely view an IP video camera connected to the LAN the Web Server is connected to, through the Video Surveillance section, do the following:

1. Create a port forwarding rule for remote access to the video camera in the router by entering the following parameters:
 - Name of the rule.
 - Local IP address of the video camera.
 - Video camera port on the external network interface.
 - Video camera port on the internal network interface.

Important: the video camera port on the internal network interface MUST be the same as the one on external network interface.
2. Access the network settings of the video camera and set the port assigned during the creation of the port forwarding rule described in the preceding paragraph, and then associate it with the HTTP communication mode.
3. Proceed with the video camera configuration on the Web Server as described later in this manual.

2.3.2.3 SSL certificates for HTTPS connection to Web Server 01545

In the version 1.4 of the Web Server 01545 were introduced improvements in the management of SSL certificates for access to the Web Server. These enhancements are available completely only after you complete the steps which will be described below:

1. Creation of a unique SSL certificate on your Web Server. This operation is performed automatically by the Web Server upon confirmation of the Web Server's network configuration data, IF DURING THIS STEP THE WEB SERVER HAS A CONNECTION TO INTERNET WORKING PROPERLY.
2. Installation of Vimar CA certificate on devices that are used to access the Web Server. This procedure is described in Chapter "Installation of Vimar CA certificate on devices that are used to access the Web Server".

If these operations are not carried out, might occur faults or malfunctions, due to the security mechanisms of the browser or the plugin used for specific functions.

E.g. if this procedure is not carried out, some browsers produce errors on management of SSL certificate, during the connection phase to the Web Server, and the first page of the Web Server is continuously recharged.

Creation of a unique SSL certificate on your Web Server

The creation of a unique SSL certificate is performed automatically by the Web Server during the saving procedure of the network configuration data of the Web Server IF DURING THIS STEP THE WEB SERVER HAS A CONNECTION TO INTERNET WORKING PROPERLY.

If during the saving procedure of the network configuration data is not available an internet connection for the Web Server, is possible to create the SSL certificate in a second time, when an Internet connection became available.

If during the saving procedure of the network configuration data, the Web Server is not properly connected to Internet, it is possible to create the SSL certificate in a second time, when an Internet connection will become available. To do this, is necessary to confirm the network configuration parameters of the Web Server, pressing SAVE on the "Network configuration" page of the Web Server (Administration/Setup/Network).

Installation of Vimar CA certificate on devices that are used to access the Web Server

The operation consists in indicating Vimar as a reliable source of SSL certificates.

This operation must be done on each device that is used to access the Web Server.

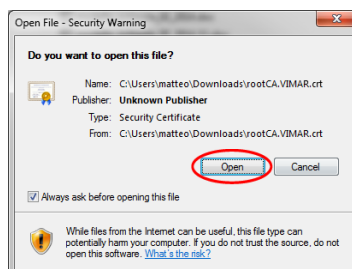
This procedure, which is the same for any type of client from the functional point of view, differs slightly from the practical point of view, depending on the operating system used by the client and its version.

Note: if you access the Web server through a client and the required is not carried out, access to the Web Server will take place as with previous versions of the Web Server 01545 software.

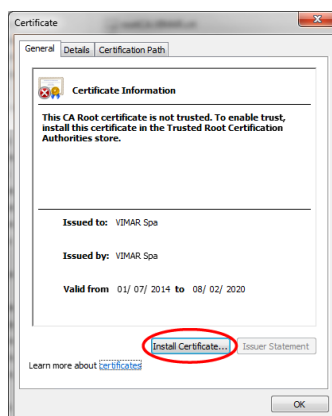
By way of example, the specific procedures for some of the most common operating systems of the client used to access the Web Server, are described below.

Windows - Google Chrome

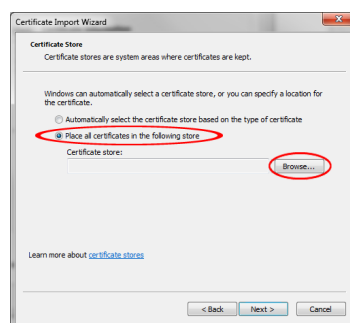
- Log in to Windows as administrator.
- Download the Vimar CA (Certification Authority) from the following link (via the Chrome browser):
[https:// <IP address>/vimar/products/Vimar-Webserver/files/rootCA.VIMAR.crt](https://<IP address>/vimar/products/Vimar-Webserver/files/rootCA.VIMAR.crt)
 where <IP address > is the IP address of the Web Server 01545 you want to access.
- Execute the certificate by double-clicking the downloaded file.
- In the event that a safety warning message appears, confirm opening the file by pressing the "Open" button.



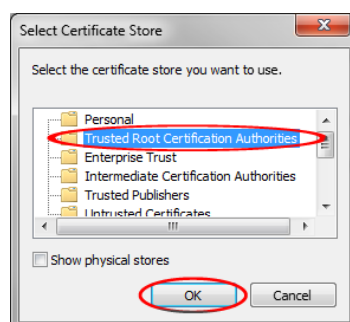
- Press the "Install Certificate" button.



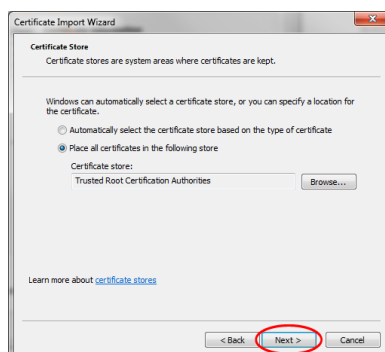
- Select "Place all certificates in the following archive" and press "Browse..."



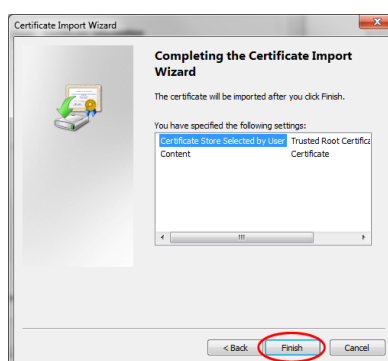
- Select the archive "Trusted Root Certification Authority" and then press "OK"



- Press the "Next" button.



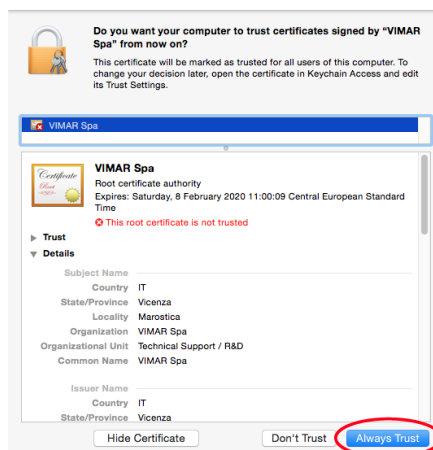
- Press the "Finish" button



- If a window should appear to confirm the installation of the Vimar certificate, press "Yes" to complete the certificate import.
- The effect of the imported certificate will be visible at the next startup (presence of a green padlock and the word "https" with no bar).

Apple MAC - Safari

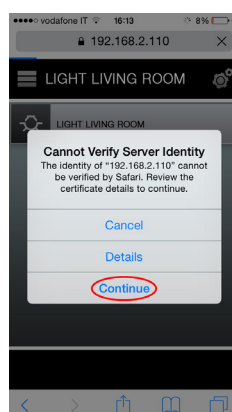
- Download the Vimar CA (Certification Authority) from the following link (via the Safari browser):
[https:// <IP address>/vimar/products/Vimar-Webserver/files/rootCA.VIMAR.crt](https://<IP address>/vimar/products/Vimar-Webserver/files/rootCA.VIMAR.crt)
 where <IP address> is the IP address of the Web Server 01545 you want to access.
- Run the certificate by double-clicking the downloaded file.
- In the event that a safety warning message appears, confirm opening the file by pressing the "Continue" button.
- Add the certificate to the "System" keychain (nothing prevents the installation of the certificate only to the "login" keychain; however, logging in as a different user, the operating system will no longer consider Vimar as a reliable source of certificates).



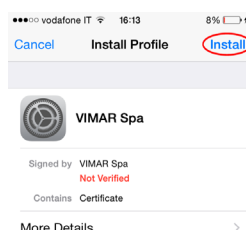
Apple iPhone

Note: the following procedure may differ slightly depending on the iOS version installed.

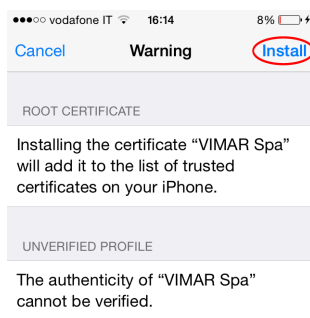
- Download the Vimar CA (Certification Authority) from the following link (via the Safari browser):
[https:// <IP address>/vimar/products/Vimar-Webserver/files/rootCA.VIMAR.crt](https://<IP address>/vimar/products/Vimar-Webserver/files/rootCA.VIMAR.crt)
 where <IP address> is the IP address of the Web Server 01545 you want to access.
- The following system message appears. Press "Continue".



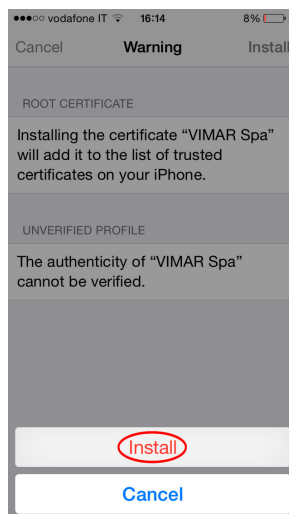
- The window for installing the profile appears. Press "Install".



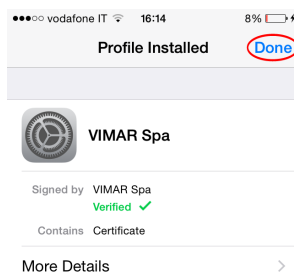
- The following window appears. Press “Install”.



- The following window appears. Press “Install”.



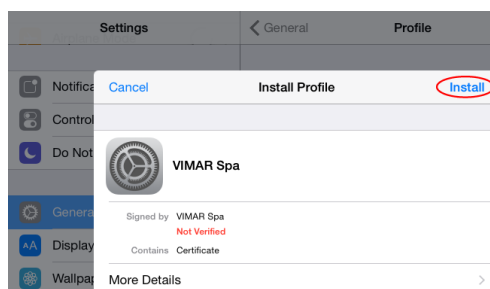
- After the successful installation of the certificate, the following window appears. Press “Done”.



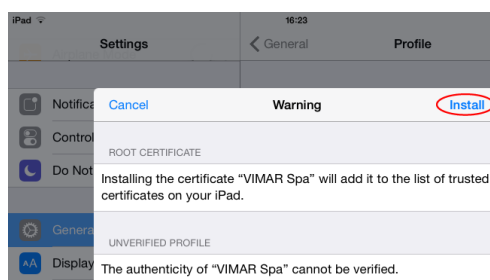
Apple iPad

Note: the following procedure may differ slightly depending on the iOS version installed.

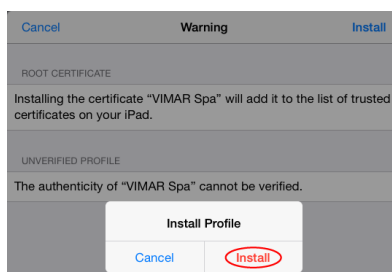
- Download the Vimar CA (Certification Authority) from the following link (via the Safari browser):
[https:// <IP address>/vimar/products/Vimar-Webserver/files/rootCA.VIMAR.crt](https://<IP address>/vimar/products/Vimar-Webserver/files/rootCA.VIMAR.crt)
 where <IP address> is the IP address of the Web Server 01545 you want to access.
- Press “Install”.
- The window for installing the profile appears. Press “Install”.



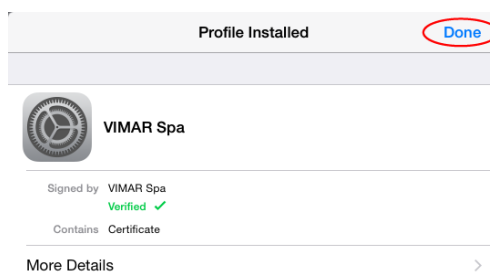
- The following window appears. Press “Install”.



- The following window appears. Press “Install”.



- After the successful installation of the certificate, the following window appears. Press “Done”.

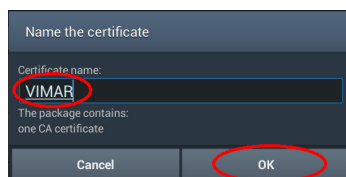


Android Mobile

Note: the following procedure is NOT necessary if you access the Web Server by Vimar By-web app for Android OS.

Important: If no security has been configured (PIN, password or sign) the Android device will prompt you to configure it before proceeding with the installation of the certificate.

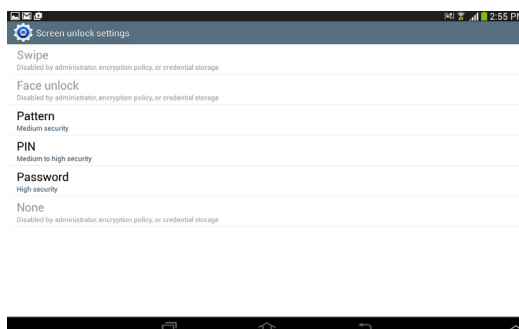
- Download the Vimar CA (Certification Authority) from the following link (via the browser):
[https:// <IP address>/vimar/products/Vimar-Webserver/files/rootCA.VIMAR.crt](https://<IP address>/vimar/products/Vimar-Webserver/files/rootCA.VIMAR.crt)
 where <IP address> is the IP address of the Web Server 01545 you want to access.
- Enter a name for the certificate (can be any text string, e.g. "VIMAR").
 Depending on the version of Android, below the field for entering the name, you may see a drop down menu to choose the scope of the certificate: select "VPN and app."



- If not configured, a window appears prompting for the configuration of the required protection.

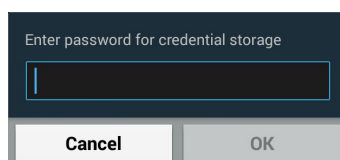


- Configure at least one protection for the device, if it is not already configured.



- The confirmation of the installation of the certificate follows.

Note: In some versions of Android (typically versions later than 4.3.x), also depending on the specific phone and configuration, after the certificate installation request, you may see an additional request for password entry, as shown, by way for example, in the following image.





Set this password to proceed with the procedure. If a password has never been set, or if the password is unknown, you should do the following:

1. Enable a screen protection (PIN, password, or sign), if not done already, and follow the import procedure of the certificate again from the beginning.
2. Refer to the phone documentation or to the information on the manufacturer's website.
3. If you are not aware of the specific configuration of the phone and the above procedures do not solve the problem, typically the problem is solved by resetting the phone to factory settings.

Important: If no security has been configured (PIN, password or sign) the Android device will prompt you to configure it before proceeding with the installation of the certificate.

2.3.3 Navigation menu

In this page it is possible to customize the items of the first level of the menu of the FRONTEND section. The available operations are explained below.

- **Displaying menu items:** in the work area is displayed the list of menu items. The name of the menu item that appears in the FRONTEND section is displayed in the "Name" column. The vertical row ordering reflects the order in which the menu items are displayed in the FRONTEND section.
- **Changing the visualization order of menu items:** it is possible to change the order in which the menu items are displayed in the frontend section, by pressing the icon  of the row you want to move and dragging it to the desired position.
- **Deleting the menu item:** it is possible to delete a menu item by pressing the icon  of the corresponding line.
- **Changing the name of the menu item:** it is possible to change the name of a menu item by editing the text in the "Name" field of the corresponding line.
- **Visibility of the menu item:** it is possible to enable or disable the visualization of a menu item by setting the "Visible" checkbox of the corresponding line (this feature is available by enabling the "Expert" mode of the context menu).
- **Adding a menu item:** it is possible to add a menu item by dragging an object (of Environment type) from the side menu or from search results.

2.3.4 Update

This page allows you to update the software inside the Web Server; only use the official installation packages to avoid malfunction. To update the Web Server, proceed as follows:

- Save the update package on your PC. The updated packages with the dpadU extension can be downloaded from the Vimar website (www.vimar.com).
- Open the update page in the Administration section of the Web Server
- Select the update package using the "BROWSE" button (or similar, depending on your browser)
- Make sure you do not already have the same software version (shown at the beginning of the page)
- Click the "UPDATE" button

This procedure usually takes between 10 and 20 minutes, depending on the software version and the size of your project. During this time, neither turn off the Web Server, nor close the browser window, to avoid system malfunction.

At the end a brief summary of the operation is shown, with the new software version; to complete the procedure, press "RESTART".

After pressing "RESTART", the Web Server will reboot, which typically takes about 1 minute. Wait for the reboot, and then reconnect to the Web Server. If you try to connect to the Web Server before the reboot procedure is finished, the browser will report a connection error: wait a few seconds and then try to connect to the Web Server again.

Note: after a software update clear all the cache of your browser (used to access the Web Server), as it may contain outdated resources versions that may prevent the proper functioning of the web pages.

2.3.5 Backup/Restore

This page allows you to make a backup copy of your supervision project or, conversely, to import a backup made previously.

On the Backup/Restore page, there are two groups of items: Databases and Plans. They serve respectively for the management of the Web Server database as well as of the images used in the configuration of the Web Server.

The selection of the items is mutually exclusive (radio button).

Once you choose the operation you want to perform (and select the backup file in case of import), press "RUN" and wait for the end of operations, marked by a special video message.

Important: Do not interrupt the process performing other tasks in the browser or closing it, to prevent malfunction.

Below are described the items on the page:

2.3.5.1 Database

Export	Saves a copy of the Web Server database on the PC. Note: This procedure does not affect any images imported for the personalization of the graphic pages of environment (Background pictures), which can still be exported through the procedure described in the Background pictures section.
Import	Loads a copy of the Web Server database saved on the PC.
Reset	Restores the Web Server database to the factory settings. Important: The network address is not changed

2.3.5.2 Background pictures

Export	Saves a copy of the Background pictures images on the PC.
Import	Loads a copy of the Background pictures images saved on the PC.

2.3.6 Date/Time

This page allows you to set the a series of options for the system clock:

CONFIGURATION OF DATE AND TIME:	manually set the time and date.
TIMEZONE CONFIGURATION:	select the area and the timezone relative to the location where the Web Server is installed.
SYNCHRONIZE DATE/TIME FROM:	specify the time server to request the updated time (in the presence of an internet connection) and how often to update.
SYNCHRONIZE DATE/TIME TO KNX:	enable and configure the periodic sending of date and time on KNX bus, on two communication objects of appropriate type (11.001 DPT_Date for the date and 10.001 DPT_TimeOfDay for the hour).

2.3.7 Mail

This page allows you to set parameters for sending e-mail messages from the Web Server for event notification via email.

The following information is required:

SMTP SERVER:	specify the IP address or the domain name of the SMTP server to direct the messages to.
PORT:	specify the port to log on to the SMTP server.
USE SSL PROTOCOL:	indicate whether the server should use the SSL protocol for data protection.
ACTIVATE AUTORIZATION:	indicate whether or not the server provides authentication for sending messages (typically requested). Specify (if required) the user to connect to the SMTP server with (typically the email address used for the account). NOTE: if problems occur sending email using a connection on port 25 without authentication, enable authentication and enter e-mail account data given by the provider.
USERNAME:	specify (if required) the user to connect to the SMTP server with (typically the email address used for the account).
FORWARDER (MAIL ADDRESS):	If your SMTP server so provides, indicate where appropriate, an electronic mail address the recipients will see the messages sent from (typically only available within corporate networks).
PASSWORD:	specify the password to access the SMTP server.

2.3.8 Advanced

This page allows you to set some options for advanced users; change these parameters only in the face of access problems and at the request of Vimar's technical assistance.

INACTIVITY TIMEOUT FOR ENTERING IDLE MODE [s]:	downtime (in seconds) of the client, after which the client goes into IDLE status, to reduce the load on the network and on the client resources. The default value is "-1" (transition in IDLE mode disabled).
AUTO-REFRESH INTERVAL IN IDLE [s]:	time interval (in seconds) between two consecutive refresh operations on the client page when the IDLE mode is active. The value "-1" means: "no update when the IDLE mode is active".
ENABLE "TAP" (FAST "CLICK" ON MOBILE DEVICES):	By default it is enabled and improves the feedback in the selection of the Web Server graphic objects on devices with touch screen. It may be necessary to disable this functionality on some older mobile devices (due to the lack of management of technologies available on the latest generation of mobile devices).

2.3.9 Maintenance

The page shows the following sections:

PANEL INFORMATION: in this section are provided some characteristic data of the Web Server: Serial code, Hardware code and Chipset.

ACTIONS: in this section are provided some characteristic data of the Web Server: Serial code, Hardware code and Chipset.

2.3.10 ByWeb Tools

This page provides the description of Vimar ByWeb Tools and its installation procedure. The same page is presented by the Web Server, if necessary and automatically, when viewing Elvox IP cameras and RTSP video streams.

2.3.10.1 Introduction

ByWeb Tools is a Vimar software that allows, by accessing the Web Server from a PC browser, to display the RTSP video streams of IP cameras configured in the Web Server.

ByWeb Tools must be installed on all computers from which the web server is accessed and where one or both of the features described are going to be used.

ByWeb Tools must be installed on all computers from which the web server is accessed and from which are going to be used the feature above-mentioned. ByWeb Tools is available for the following operating systems: Microsoft Windows and Apple MAC OS X.

The installation package ByWeb Tools by Vimar can be downloaded directly from the Web Server and, therefore, an internet connection is not required.

2.3.10.2 Prerequisites

Before proceeding with the installation of Vimar ByWeb Tools, make sure has been previously installed VLC by VideoLAN. If ByWeb Tools is installed without installing the above software, if the above software is installed later, ByWeb Tools must be reinstalled.

IMPORTANT: Administrator privileges are required on the computer where ByWeb Tools will be installed.

For proper functioning of ByWeb Tools the Web Server must include the correct SSL certificates. If not already done so, save the Web Server network parameters again, making sure that it is connected to the Internet.

2.3.10.3 Installation

Follow the instructions described on the ByWeb Tools page of the Web Server.

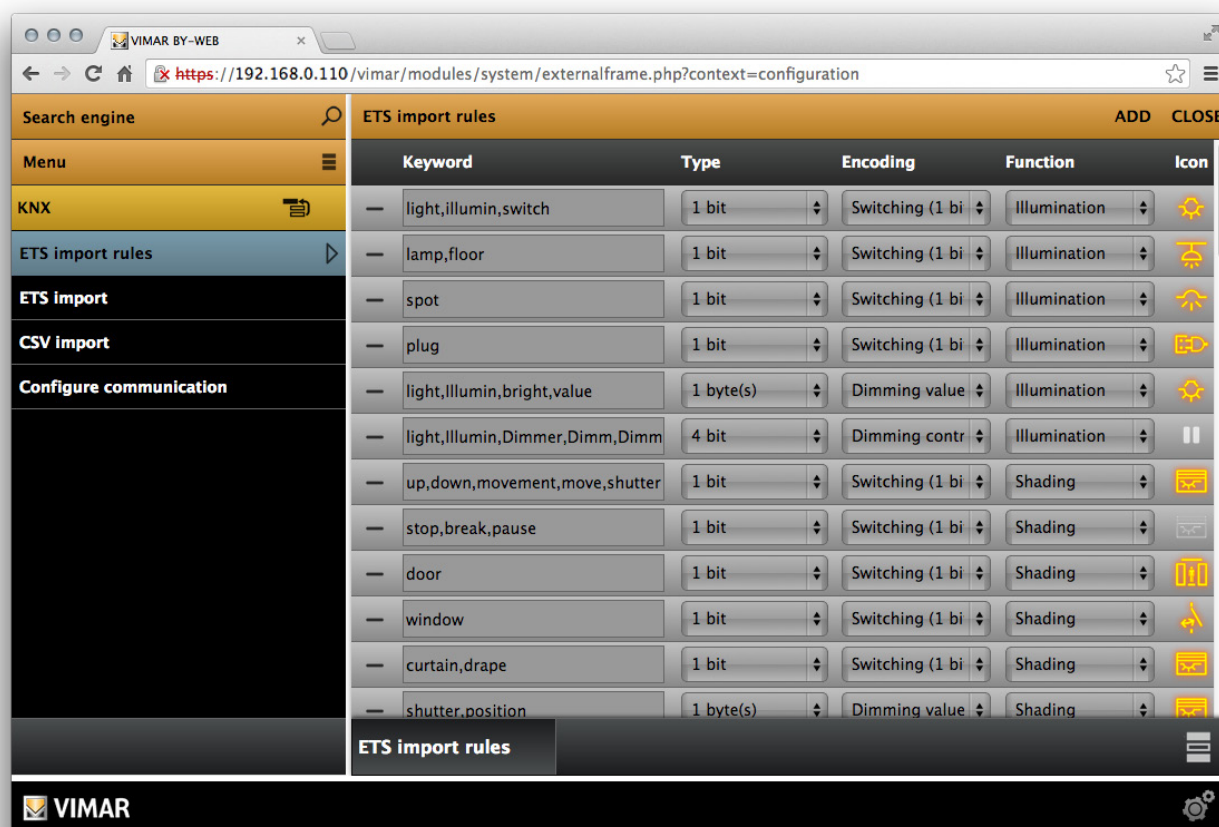
2.4. Administration Menu: KNX

This chapter describes how to provide the Web Server with the information on the devices of the system to be managed via the Web Server. You will need a project made with the KNX ETS software version 3 or 4.

2.4.1 ETS import rules

The ETS rules are the criteria used by the Web Server when importing the ETS project to automatically assign the correct data coding and the graphic look to the created objects starting from the group addresses in the project and the corresponding types and descriptions.

The configuration page of the ETS rules is presented as a list of items, similar to that shown in the following figure as an example.



The Web Server has default rules based on the most common used descriptions in the construction of an ETS project for different types of KNX objects. These rules can be changed and you can create additional rules to make sure that the procedure for importing the Web server automatically recognizes all or most of the objects contained in the KNX project you want to import in the Web Server.

The rule must be interpreted in the following way: whenever Web Server, while scanning the KNX addresses in the ETS project, finds a group address that contains in its name at least one of the KEYWORDS specified in the rule, and that exchanges information with telegrams of length equal to the amount specified as TYPE, it adopts the ENCODING specified in the rule for writing/reading information on the KNX bus and creates a graphic object automatically entered in the selected FUNCTION (and then, which can later, be found on the navigation menu page with the same name) using the ICON chosen for its graphical representation.

In case the import procedure of the Web Server detects KNX objects that are not covered in the rules for import, you will be able to add appropriate rules for import or manually enter the information for the proper management of the object by the Web Server.

Each rule consists of the following information:

KEYWORDS:	One or more words to search within the names assigned to group addresses in the ETS. To specify more than one word, separate them by a comma; the space is searched within the ETS project, thus allowing greater granularity in the composition of the TYPE rules Length (in bits/bytes) used in the KNX addresses to search within the ETS project.
ENCODING:	Type of encoding to be used in the Web Server to correctly interpret the data in transit on the KNX bus (depends on the length of the data specified in the "TYPE" field).
FUNCTION:	Category in which to place the objects created by the Web server during the import of KNX addresses that meet the search criteria of the ETS rule.
ICON:	Set of icons to be used for the graphical representation of the objects that meet the search criteria of the rule.

Note: You can customize the ETS rules even while importing the ETS project, as shown below.

2.4.2 ETS import

This page allows you to import an ETS project into the Web Server. Before proceeding, you must export the project from ETS in OPC format using the function "SAVE IN CSV/XML" of the ETS and then "EXPORT TO OPC SERVER".

The ETS export procedure produces two files:

- File ESF: it contains the group addresses, their labels and relationships with other group addresses.
- File PHD: it contains the physical addresses of devices in the project.

Since version 1.4 of the Web Server 01545, when you select the file ESF in the import procedure from ETS, you are automatically prompted to also load the appropriate PHD file.

Non è necessario importare il file PHD, ma importando il file PHD il Web Server fornisce una funzionalità aggiuntiva di verifica dello stato di funzionamento dei dispositivi fisici presenti nell'impianto.

DELETE EXISTING KNX OBJECTS:

This option forces removal of all the KNX objects that may be in the project (on the Web Server). Objects of other type (environments, scenarios, etc...) do not change.

RESEARCH STATUS FEEDBACK:

Activating this entry automatically creates relationships between the KNX objects relating to ETS addresses with communication objects in common (e.g., multiple commands, status feedback, etc...)

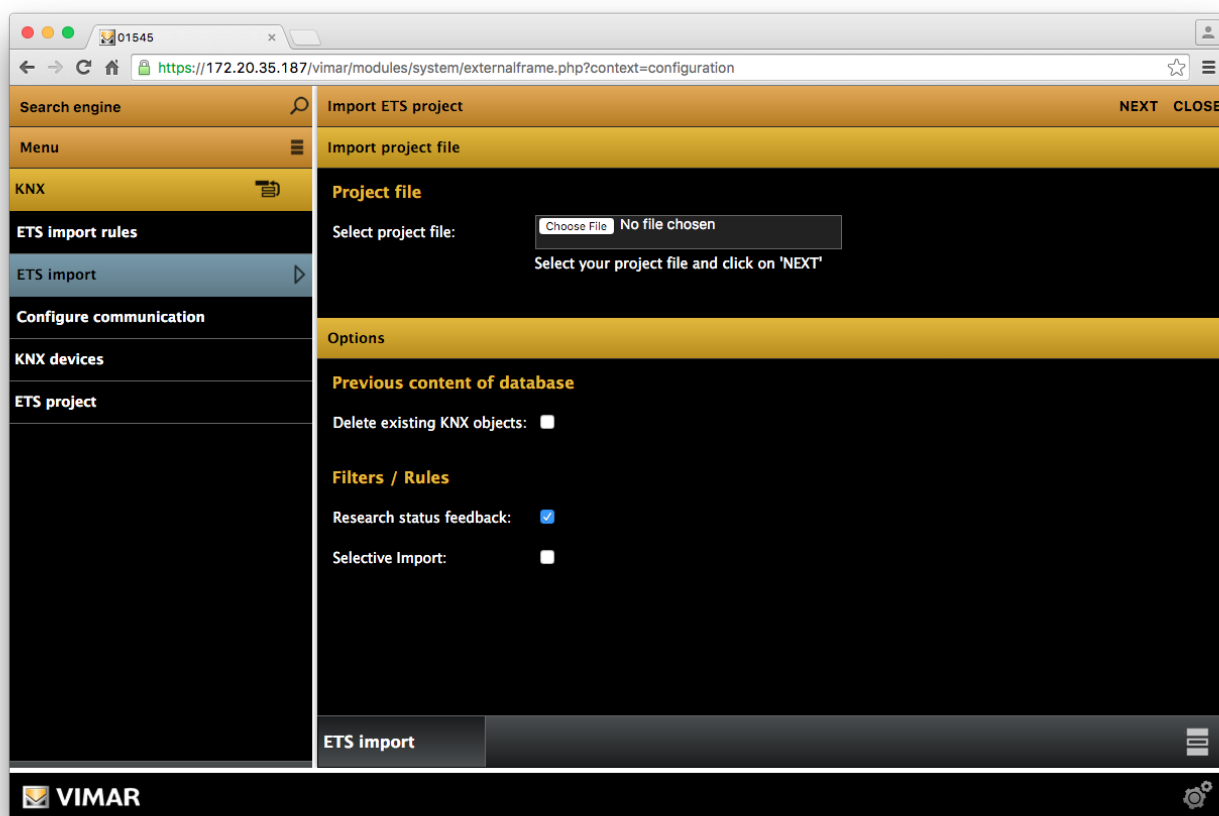
Disable this option if you have manually managed the relationships between KNX objects and group addresses in the Web Server after a previous import, to avoid that manual changes are overwritten.

SELECTIVE IMPORT:

Enabling this item (disabled by default) opens a page where you can select the address of the KNX project you want to import. This option can be useful in the following cases:

- The project has already been imported and changes have been made (from ETS) only to a subset of the addresses and you do not want to lose any customizations on the other addresses within the supervision.
- Some addresses in the ETS project should not be handled by the Web Server.
- The number of addresses in the ETS project is greater than the maximum number of addresses managed by the Web Server.

Note: This option is activated automatically in the event that the ETS project contains a greater number of addresses than the maximum number of addresses managed by the Web Server.



Activating the "EXPERT" access level (via the context menu), you can also specify the following:

REMOVE NONEXISTING KNX OBJECTS: Selecting this entry the pre-existing objects that no longer have a match in the imported ETS project are automatically deleted. When upgrading a previously imported project, these two options allow you to determine whether the names and the read/write flags should or should not be aligned to the new project.

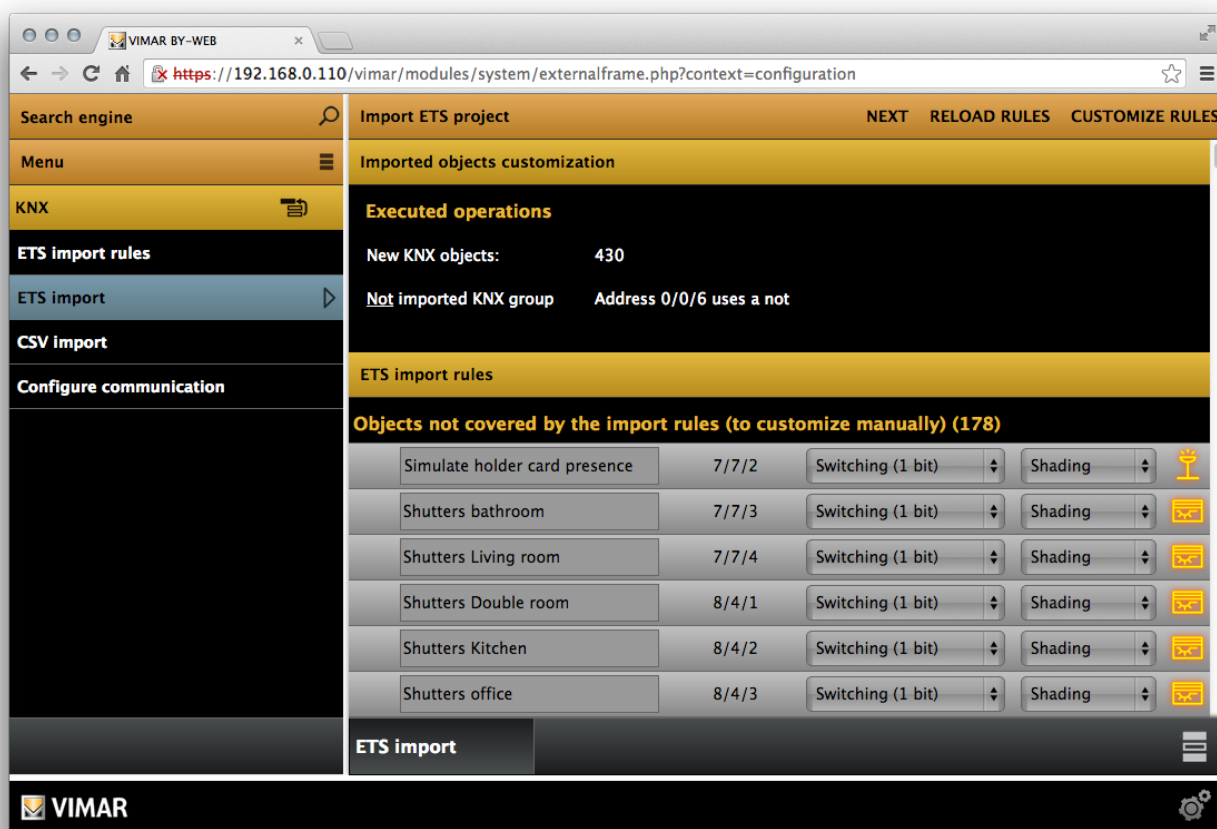
REFRESH NAMES: Uncheck these options if, in the meantime, after the previous import of the project,

REFRESH ETS FLAGS: customizations have been made that have not been reported also in the ETS project.

Pressing "NEXT" starts the import process, that automatically creates the objects to be used later to build the graphics supervision in just a few minutes (depending on the size of the project).

After the import, a summary of the operations carried out is displayed:

If all addresses in the ETS project meet the criteria set by the ETS rules, at the end of the procedure simply press the button "NEXT" to end the operation. Otherwise, you are presented with a list of objects that do not satisfy any rule.



If you are presented with a list of objects that do not satisfy any rules, you must specify, for each, the same information seen previously for the ETS rules. At this stage it is still possible to change the ETS rules, if you realize that a significant number of objects associated with one or more keywords, require the same settings, creating an appropriate ETS rule; to do this you must do the following:

- Press "CUSTOMIZE RULES"; the ETS rules page is opened in another TAB.
- Modify the ETS rules as required by the Web Server KNX.
- Return to the ETS import TAB and press the "RELOAD RULES" button.
- Repeat the procedure if necessary.

After customizing all the objects, press "NEXT" to finish the import.

2.4.3 Configuring the communication

This page allows you to configure the physical address used by the Web Server to communicate on the bus.

The address must be specified in the X.Y.Z. form.

When you open the page, wait a few seconds for the address to be read and displayed on the screen, then edit it to suit your needs complying with the following restrictions:

- First number between 0 and 15
- Second number between 0 and 15
- Third number between 0 and 255

Note: Unlike the majority of KNX devices, which must necessarily have a physical address congruent with the one of the bus line where they are installed, the Web Server is able to communicate with all the devices in the system regardless of its own address. Changing the Web Server address is, therefore, primarily intended to avoid any conflicts with other devices and/or "sorting" conflicts within the KNX.

2.4.4 KNX objects

By specifying the name or address of a KNX group (or part of them) in the "SEARCH ENGINE" field or via the "KNX-> ETS Project" menu item in the administration section, you can access the detailed tab of the objects created by the import. After locating the object in question, simply press the edit "shortcut" directly in the results list ("..." symbol that appears on the right side of the item associated with the object) or, alternatively, select it and press the "EDIT" button in the TOOLBAR.

This page is divided into several sections (which will be described in later chapters) and it allows you to set the properties for the selected object and its relationships with other supervision objects.

2.4.4.1 Object properties

When the BASE mode is set from the context menu, the initial part of the tab of a KNX object shows the following information:

NAME:	Identifying name of the object within the supervision. Initially set to the corresponding KNX group address name in the ETS project, it can be customized depending on graphics needs
GROUP ADDRESS:	Main KNX group address used by this object to communicate with the home automation bus (not editable at this point of the tab). The address (or part of it) can be used as a keyword in the search engine.
FUNCTION:	Category in which to include the item; this choice also determines the filter for the subsequent choice of the icon. You can also choose "none" if you don't want the object to appear in any function.
ICON:	Allows you to choose – through a popup window – the icon to be used for the graphical representation of the object in the supervision pages (VISUALISATION). The set of icons to choose depends on this type of KNX object and the chosen FUNCTION (specify "none" as a function to display all possible icons).

Activating the "EXPERT" access level (context menu) the tab also shows the following properties:

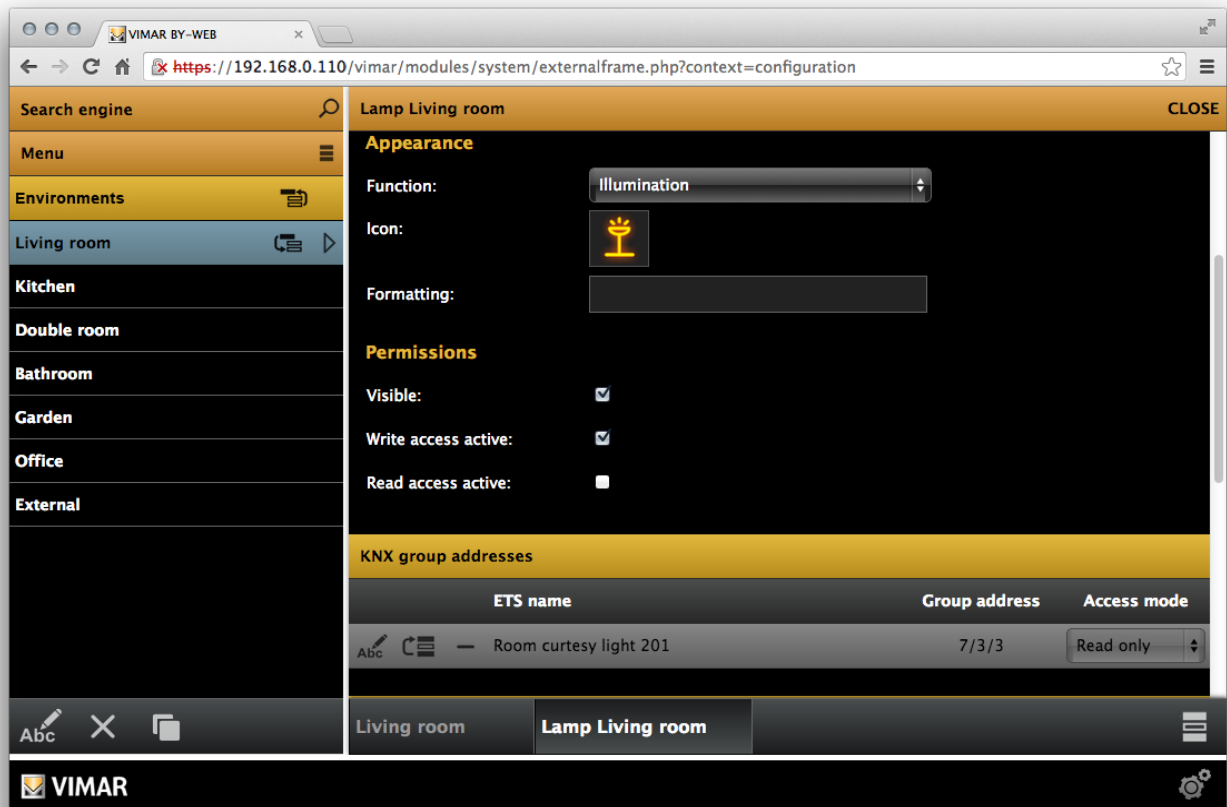
ETS NAME	Name of the group address of the reference in the ETS project. The content of this field can be used as a keyword in the search engine.
ETS ENCODING	It allows you to determine which encoding should be used by the Web Server to communicate with this group address on the KNX bus. Note: Be careful when editing this field, or you may cause malfunction of supervision if the choice does not match what is set in the KNX devices.
FORMATTING	It allows to set a custom formatting of the numerical value, using the format specifiers provided by the ANSI C standard for the "sprintf" function. Following are some examples: %0.2f → floating point at least 0 wide and 2 number after decimal: 1.23 %0.1f°C → floating point at least 0 wide and 2 number after decimal followed by the text "°C": 1.2°C
VISIBLE	Allows you to determine whether or not the object should be visible in the supervision pages.
WRITE ACCESS ACTIVE	Allows you to control the object through the supervision pages. Normally this is set automatically by the ETS import; turn it off to turn the object to view-only although potentially controllable. Note: to activate the command on initially read-only objects, also change the type of communication with the corresponding KNX address (see below); this operation can lead to malfunctions in the KNX system.
READ ACCESS ACTIVE	Allows you to read the updated status from the KNX bus. Usually this flag is always enabled.
ENABLE SCHEDULE	Allows you to enable the possibility to set a scheduling (from the frontend section) for the specific object.

2.4.4.2 KNX group addresses

This section is only visible on the "EXPERT" access level and it allows you to manage the KNX group addresses the graphics object communicates with. Depending on the structure of the ETS project, this section may show one or more entries, depending on whether the status of this object is affected by other addresses (e.g. status feedback, multiple commands etc...), as well as by the "main" group address it originated from.

For different group addresses associated with the graphics object, it can be established what type of communication to allow, choosing between "READ ONLY", "WRITE ONLY", or "READ/WRITE"; change these settings paying attention to maintain consistency with the ETS project.

Note: The Web Server can only send commands to a KNX group address among those in this list; pay attention to the fact that only one of them has the writing option enabled.

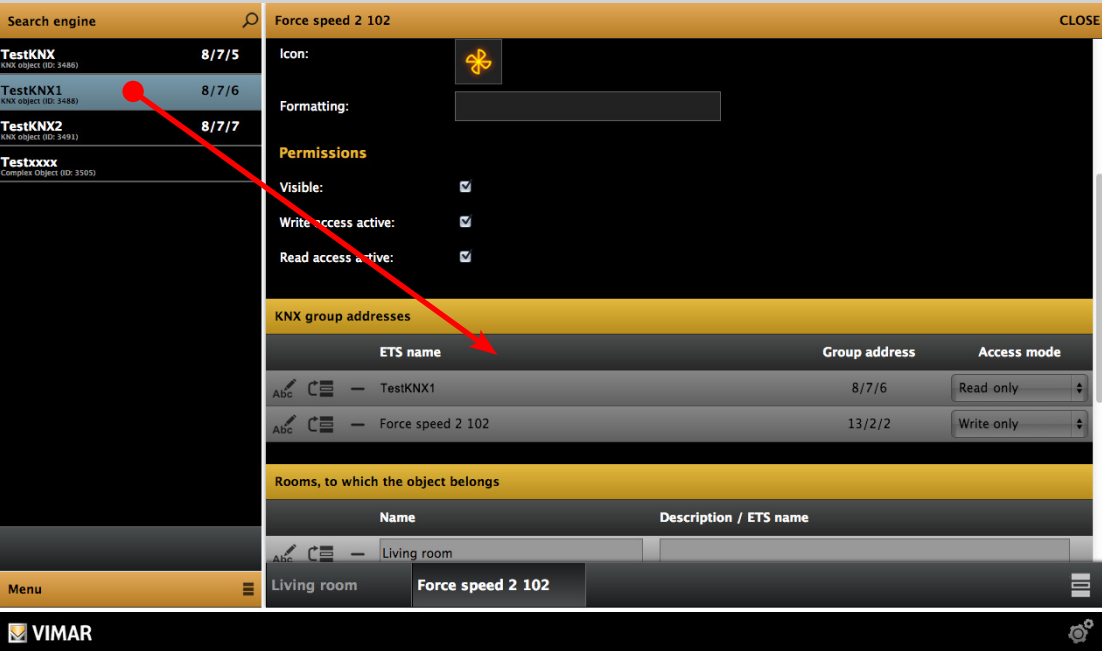


The screenshot shows the VIMAR BY-WEB interface in a web browser. The URL is <https://192.168.0.110/vimar/modules/system/externalframe.php?context=configuration>. The interface has a sidebar on the left with a search engine, menu, and environments list. The main area is titled 'Lamp Living room' and shows configuration options for 'Appearance' and 'Permissions'. The 'Appearance' section includes 'Function' (set to 'Illumination'), 'Icon' (a lamp icon), and 'Formatting'. The 'Permissions' section includes 'Visible' (checked), 'Write access active' (checked), and 'Read access active' (unchecked). Below these is a section for 'KNX group addresses' with a table showing the 'ETS name', 'Group address', and 'Access mode' for 'Room courtesy light 201' (7/3/3, Read only). The bottom of the interface has a VIMAR logo and a settings icon.

You may add KNX group addresses to update the status of the graphics object, if they were not automatically included by the ETS import procedure. To do this you must do the following:

- Look for the KNX group address by typing the address into the search engine.
- Identify the selected address from among the search results, or via the "KNX-> ETS Project" menu item in the administration section.
- Drag it to the list of "KNX group addresses" in the tab.

Important: as for all other configurations sections that require dragging objects from the search list, for the drag operation to be successful it is REQUIRED that the object is released in the dark grey horizontal bar below the desired section's bar. If the dark grey bar is not visible click the bar of the desired section to make the grey bar visible.



The screenshot shows the 'Force speed 2 102' configuration window. On the left is a 'Search engine' panel with a list of objects: 'TestKNX' (ID: 3486), 'TestKNX1' (ID: 3488), 'TestKNX2' (ID: 3491), and 'Testxxxx' (ID: 3505). The 'TestKNX1' entry is highlighted. A red arrow points from this entry to the 'KNX group addresses' table in the main configuration area. The table has columns for 'ETS name', 'Group address', and 'Access mode'. It contains two entries: 'TestKNX1' with group address '8/7/6' and 'Read only' access, and 'Force speed 2 102' with group address '13/2/2' and 'Write only' access. Below this is a section for 'Rooms, to which the object belongs' with a table containing 'Living room'.

- Determine the type of authorization (typically, "READ ONLY" if you want to add a KNX address that affects the state of an object already associated to other addresses).

2.4.4.3 Rooms the object belongs to

The "ROOMS, TO WHICH THE OBJECT BELONGS" section provides an overview of the environments where the current object is; the same object can be simultaneously in multiple environment, as well as in any environment (which happens when you configure the supervision for the first time).

If you have already configured any environment in the project, you can search them with the search engine and drag them to this list to associate them with the current object; alternatively, as will be explained in the next chapter, you can drag the object in question to the tab of the environments that should contain it.

Similarly the "CONNECTED SCENARIOS" section shows the list of scenarios that contain the current object in addition to any other ones; for more details see the chapter on the scenarios.

2.4.4.4 Scenarios the object belongs to

The "CONNECTED SCENARIOS" section shows the list of scenarios that contain the current object in addition to any other ones; for more details see the chapter on the scenarios.

2.4.4.5 Passive and active events

The last two sections of the KNX object tab allow you to create functional relationships, called "EVENTS", which allow you to perform the following tasks:




- Changing the status of the current object at the change of status of another object (PASSIVE events).
- Changing the status of another object at the change of status of the current object (ACTIVE events).

In both cases, to configure a new event, you must:

- Search for other objects the current one must interact with, through the search engine.
- Drag them to the appropriate section based on the type of event you want to configure.

For each of the created events you can specify:

- CONDITION:** Filter on the status of the object that generates the event, it can be a specific status (among those available) - in which case the event is executed only when the object takes on the selected value - or the generic "at each change of value" running the event in whatever status you bring the object in question.
- ACTION:** Depending on the type of event target object, this field can take on different values. For KNX objects you can specify "WRITE" (and send a command to the bus) or "READ" (and send a query command on the status of the bus); for other objects, refer to the respective sections of the manual.
- VALUE:** If the object target of the event so provides, this field allows you to determine what value to set, choosing from those available for the object itself. You can also choose to automatically set the value of the object that determines the execution of the event, or its negation.

Passive events					
	ID	Name	Condition	Action	Value
  	2678	Scenario Button	Alway	Write	Off

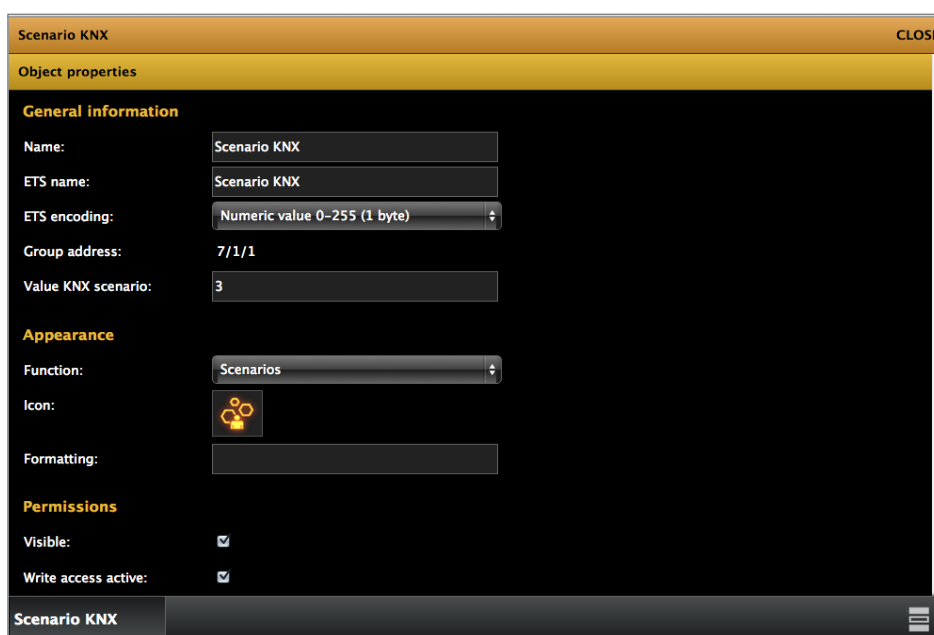
In the case of ACTIVE EVENTS, the object that determines the execution of the event is the object itself whose tab you are looking up; in the case of PASSIVE EVENTS, on the other hand, it is the object dragged to this list (and, consequently, the target object of the event).

2.4.4.6 KNX scenarios

The 1 byte KNX objects can be configured to operate within the ETS project as scenarios; in this case, the value sent on the bus is not a status but a number - typically between 1 and 64 - that identifies, within the KNX devices associated with the scenario, the configuration (previously stored) they must take.

To configure a KNX object as scenario within the supervision, it is necessary to:

- Go to its tab within the CONFIGURATION environment.
- Enable the EXPERT access level.
- Make sure the ETS ENCODING is "a numerical value (1 byte)".
- Select "SCENARIOS" as the "FUNCTION" (if not available, temporarily switch the ETS ENCODING to a different option and select "numerical value (1 byte)" again).
- Select an ICON among those available for the KNX scenarios through the appropriate pop-up window, as explained above.
- Set the value to be sent to the KNX bus when pressing the scenario button in the "VALUE KNX SCENARIO" field, which is available only by choosing the "SCENARIOS" function.



2.4.5 Physical devices

The Web Server 01545 is able to provide information on the operating status of the physical devices installed in the system and it is able to notify any communication problems.

Note: This feature is available only if it has been imported the .phd file, which contains the physical addresses of the devices.

The Web Server performs automatically and periodically a communication test with the physical devices.

In the Administration/KNX/KNX devices page there is the list of physical devices installed in the system.

In addition to the devices description, in this page are given the information on the operating status of devices:

N.A.	The device has not yet been tested by the Web Server, or the device has not responded to the server. The device may not be installed in the system.
OK	The device communicates properly with the Web Server.
TEST RUNNING	The Web Server is performing the communication test with the device.
NO ANSWER	The device is not responding to Web Server requests, but in the past it already answered at least once. The device may not work properly or it may have been removed from the system.

Using the edit icon of each row, you can access to the page of the physical device, where is possible:

- Display descriptive data.
- Disable the periodic test of communication with the Web Server.
- Edit or delete the Web Server notifications concerning the communication status of the physical devices.

2.4.6 ETS project

This section is accessible by selecting Administration/KNX/ETS project. Through a tree structure this section replicates the hierarchy of the ETS project. Through a tree structure this section replicates the hierarchy of the ETS project and you can use it to access, in a selective mode, to the KNX objects created during the import procedure.

2.5. Administration Menu: ENVIRONMENTS

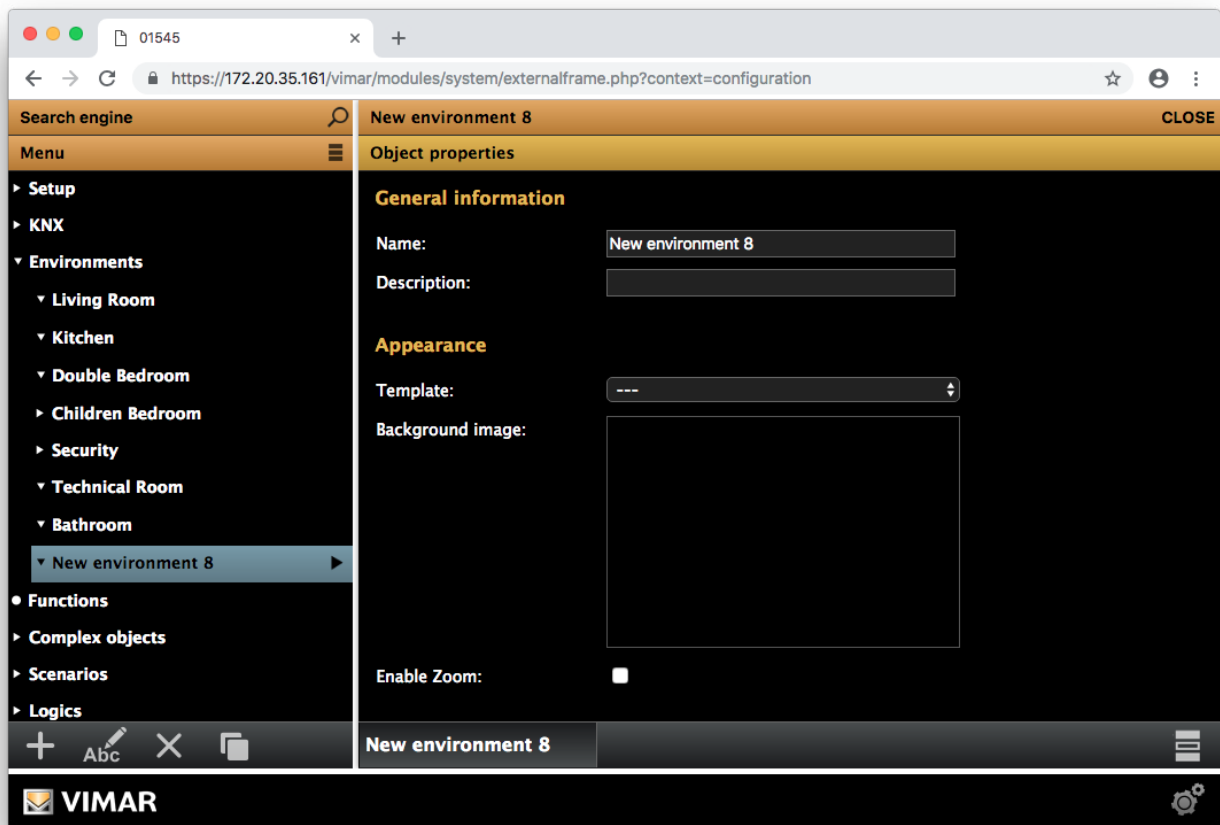
This chapter describes how to create and customize the environment where to articulate the end-user navigation in the supervision of the home automation system. Typically, the aim is to provide the user with an overview of the home automation functions, as faithful as possible to their actual arrangement within the building, so that it is intuitive to go to search for them in the supervision software. The Web Server also allows you to configure free groupings of objects, not necessarily associated with an environment or part of the building, as ENVIRONMENTS.

2.5.1 New Environment

To create a new environment, proceed as follows:

- Select the "ENVIRONMENTS" section of the MENU and open it.
- Press the "+" button in the TOOLBAR.

The new setting becomes available after a few seconds within the section; to access its tab just select it and press the edit "shortcut" besides its name, or alternatively, press the "EDIT" button in the TOOLBAR.



It is possible to create environments within other environments, contrary to the steps in the "ENVIRONMENTS" section; in this case, it is sufficient to enter into the desired environment and create the new object in a similar way.

2.5.2 Environment tab

The configuration page of an environment shows the following fields:

GENERAL INFORMATION

- NOME:** name of the environment that is displayed in the frontend section.
- DESCRIPTION *:** optional descriptive field, displayed only in the Administration section.

APPEARANCE

- TEMPLATE:** graphic appearance used to display the environment in the frontend section. The following graphic templates are available:
- **GRID – IMAGE ON LEFT:** objects are displayed as a list, and you can view an image on the left side of the page.
 - **BACKGROUND:** objects can be arranged manually on the page and a background image can be displayed.
 - **---** (no graphic template) this item is intended to represent a group of environments with a lower hierarchical level. Selecting this item presents, in the left menu, the list of menu sub-items. In this case the "Open in navigation menu" field, which will be explained later, is enabled by default. e.g.: you want to create a "First floor" item from which you can select the environments "Bedroom" and "Bathroom".
- BACKGROUND IMAGE:** by clicking on this field it is possible to select the image to be displayed next to the object list ("GRID" template) or as background ("MAP" template), among available images. You can upload images from your PC using the UPLOAD button.
- ENABLE ZOOM:** if selected, it enables automatic resizing of the background image (for the Background template) based on client resolution. Resizing is done based on the width of the image.

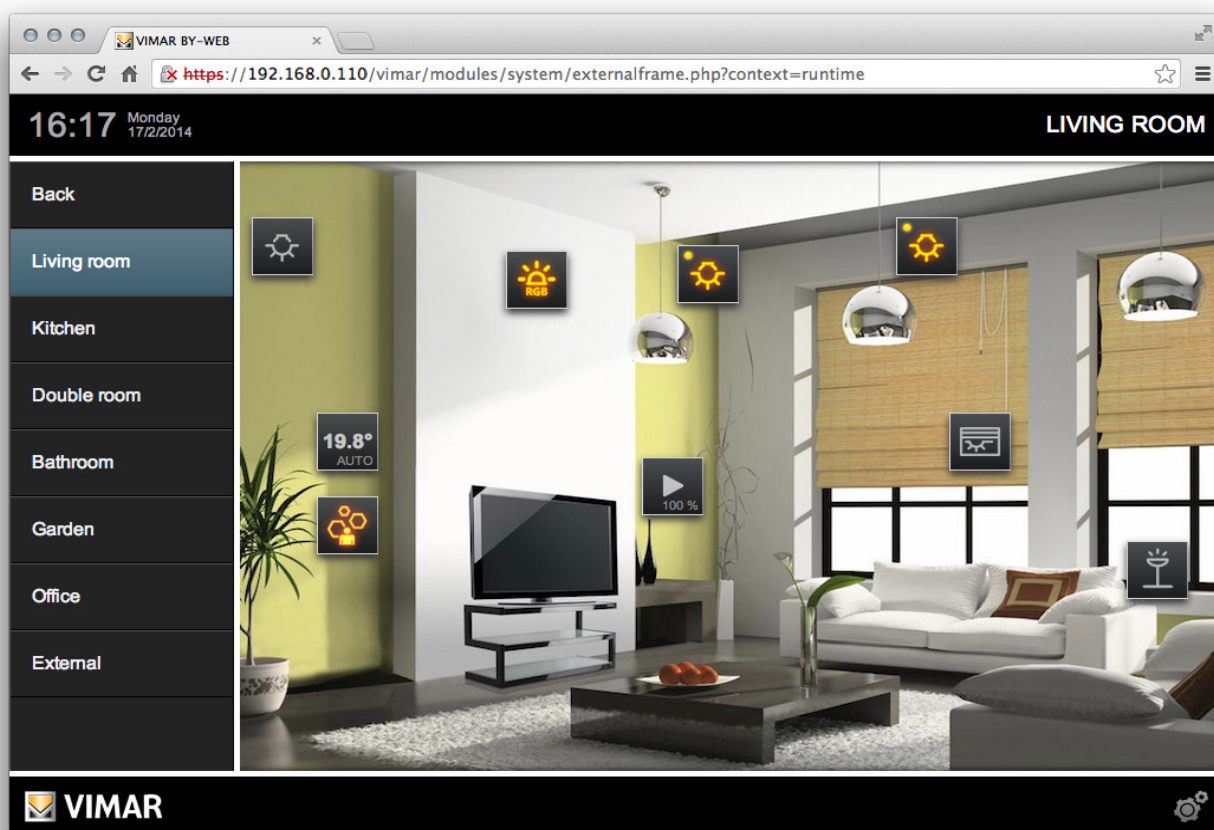
PERMISSIONS *

- VISIBLE:** it allows you to view (or not) the environment menu item in the menu of the frontend section.
- OPEN IN NAVIGATION MENU:** if it is enabled, when you click on the menu item of the frontend section, the associated entries with a lower hierarchical level are displayed. This setting is intended to manage a hierarchical structure of environments.

*: it is displayed only by selecting EXPERT mode from the context menu.

The template types "background", "grid" and "no graphic template" are displayed in the images below.

BACKGROUND TEMPLATE



GRID TEMPLATE



2.5.3 Environments contents

You may insert one or more objects within an environment (e.g., the objects created during the ETS import) in the following way:

- Open the environment tab.
- Identify the "CONTAINED OBJECTS" area (initially empty).
- Search for other objects to be placed in the environment, through the search engine.
- Drag the objects to the list (above the header row, in the case of an empty list).
- If necessary, rearrange the objects so that they end up in the desired order.

2.5.4 Deleting an environment

To delete a previously created environment simply select it in the "ENVIRONMENTS" section or look it up in the SEARCH ENGINE, then select it and press the "x" ("DELETE") button in the TOOLBAR.

Note: deleting an environment does not automatically delete the objects in it: they remain in the supervision, until they are explicitly deleted.

2.5.5 Edit background

Environments that use the "MAP" template require the placement of objects on the background graphics, once they have been assigned to the same environment. To do this, proceed as follows:

- Navigate to the user view ("VISUALISATION")
- Navigate through the menu until the desired environment (ENVIRONMENTS)
- Press the CONTEXT MENU button
- Select "EDIT BACKGROUND"

At this point, select the objects one by one (initially placed in the upper left on the graphics) and drag them to the desired location; you can drag more than one object by holding down the CTRL key and selecting them.

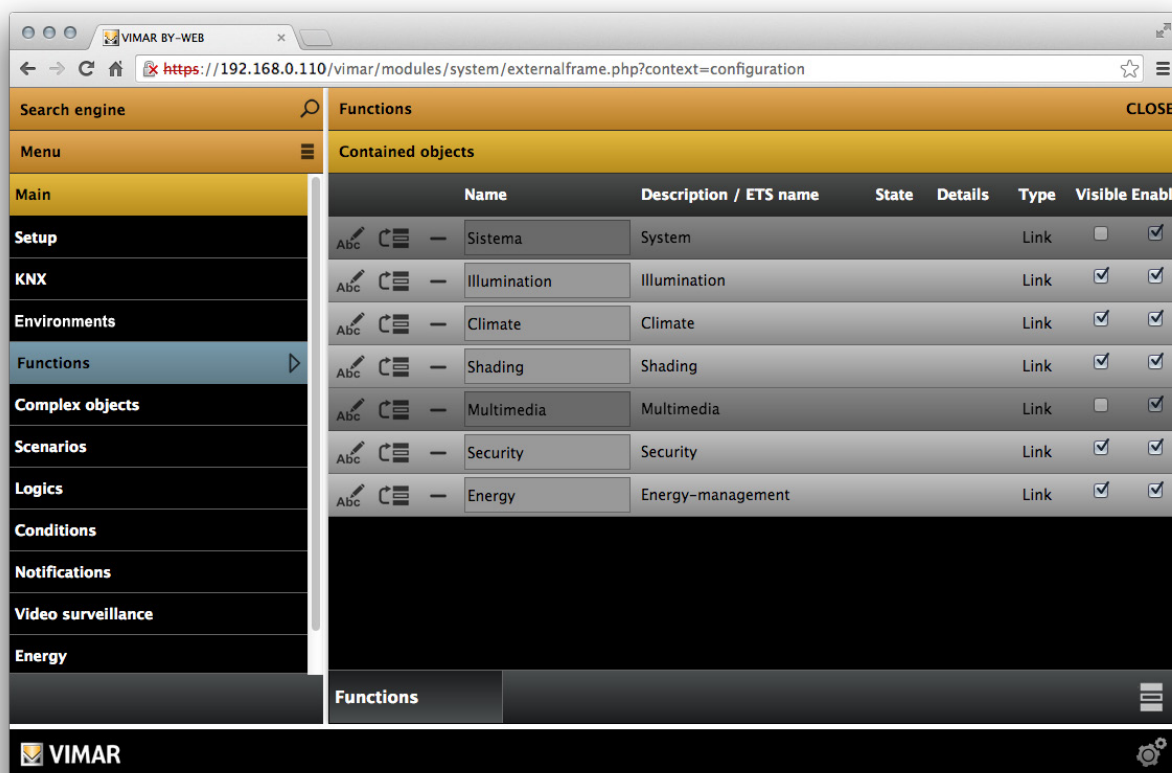
You can always show on the screen the name of one or more objects by selecting the "SHOW LABEL" option in the side menu (the change is applied to the selected objects).

Once you have finished customizing the page, confirm through the appropriate button at the bottom of the side menu; otherwise, the changes will not be saved

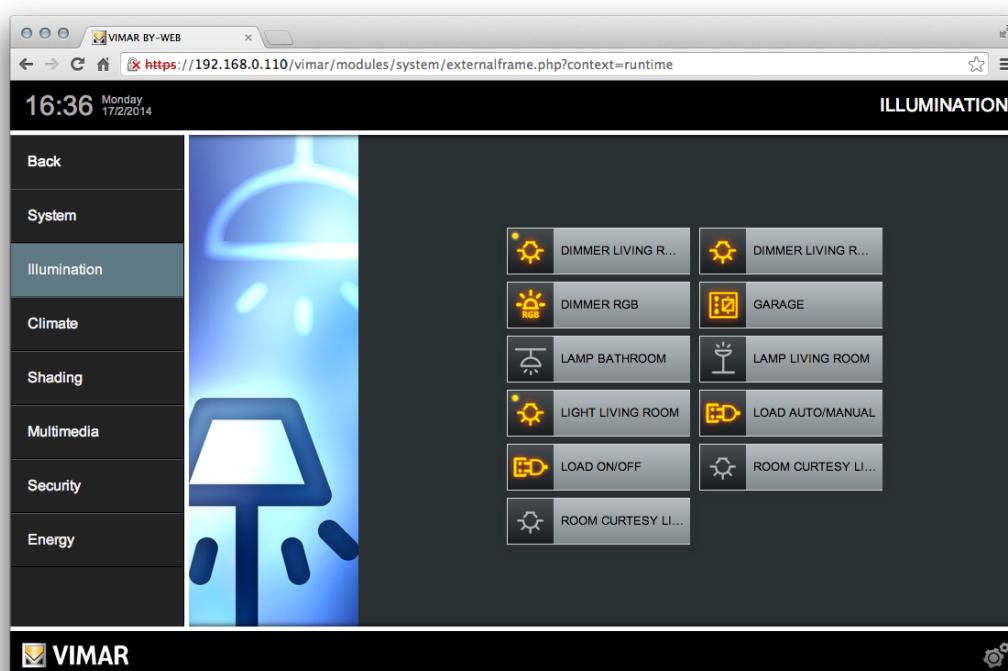
2.6. Functions

The Web Server provides the user with the ability to manage the supervision of the devices of the system by dividing the graphical objects that represent them according to the type of device. The user can then search engine for a desired device, not only based on its location (supervision by Environment), but also on the basis of its functionality (supervision by Function).

The "FUNCTION" entry of the MENU allows you to customize the labels of the functions available in the VISUALISATION and their order.



In addition, by selecting the "EXPERT" access level, you can determine which items should or should not be visible in the display, through the appropriate "VISIBLE box". Example of a functions page in the VISUALISATION:



2.7 Complex Objects

This chapter describes the COMPLEX OBJECTS, a powerful tool for the aggregation of sub-items (typically, the various KNX objects to manage a "complex" device, such as blinds, dimmers, thermostats, RGB, weather stations, etc...) within the supervision pages for easy navigation and for quick and graphically pleasing access, consistent with them.

A physical device (e.g. a thermostat) is typically represented by a large number of KNX objects (measured temperature, seasonal mode,...) which are not "grouped" automatically according to the physical device they represent. This involves a considerable effort for the user to supervise the system.

The Web Server allows you to create graphical representations, called "COMPLEX OBJECTS", which allow you to "group" the individual KNX objects desired. There are some types of complex Objects, which allow to group the most commonly used KNX objects in the KNX devices of that category, in addition to a "generic" complex object.

Note: The relevant section of this manual provides information for the creation of complex Objects to manage the KNX thermostat by Vimar.

2.7.1 New complex objects

The COMPLEX OBJECTS allow you to group multiple KNX objects relating to the same device or function (e.g. dimmers, blinds, thermostats, etc...).

To create a new COMPLEX OBJECTS, proceed as follows:

- Open the "COMPLEX OBJECTS" section in the MENU.
- Press the "+" button in the TOOLBAR.
- Select the new object and access to its tab by using the "shortcut" besides the name or, alternatively, by pressing the "EDIT" button in the TOOLBAR.

When the BASE display mode is set from the context menu, the tab of a complex object shows the following properties:

NAME: Identifying name of the complex object.

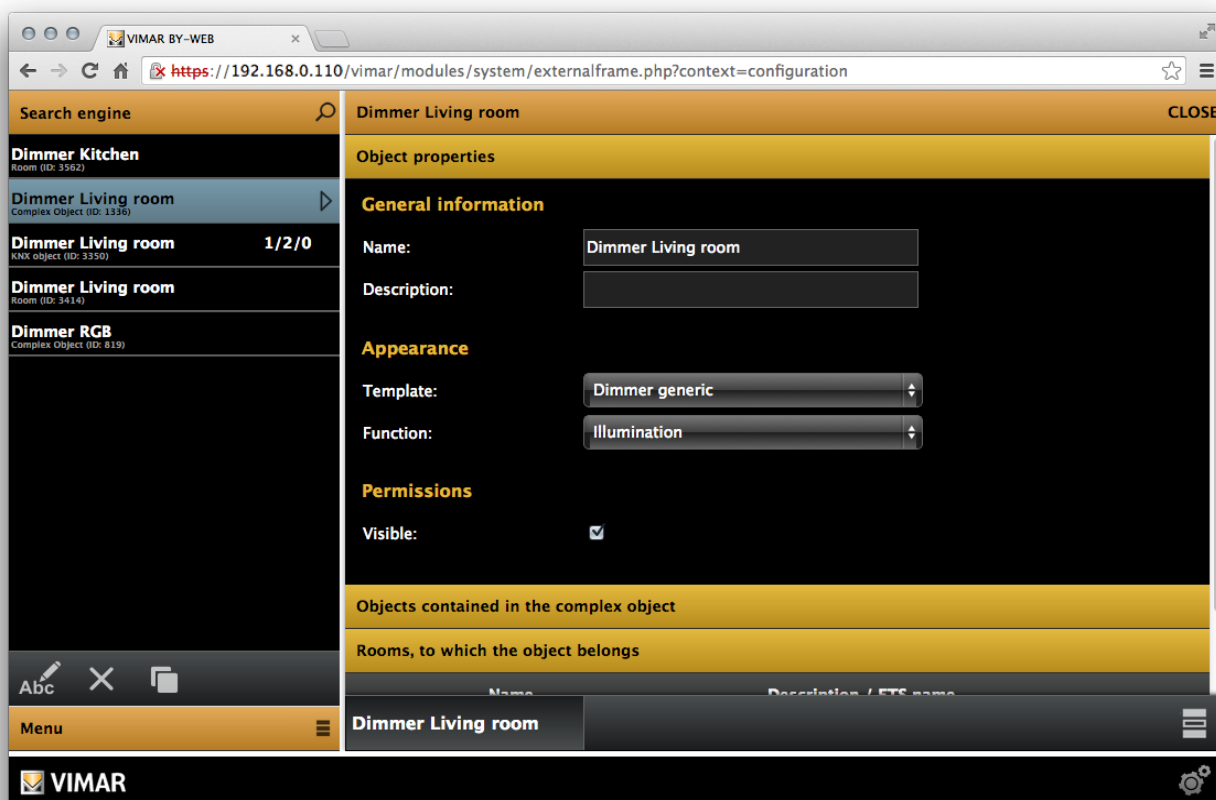
TEMPLATE: Graphic layout used to represent the aggregation of sub-objects in the pages of the software.

FUNCTION: Function the complex object should belong to (optional).

When the EXPERT display mode is selected from the context menu the following two items are also displayed:

DESCRIPTION: Optional description, visible only in this tab and useful to enter descriptive text for the complex object.

VISIBLE: If enabled, the complex object becomes visible in the VISUALISATION; if disabled the complex object is invisible in the VISUALISATION.



The TEMPLATE is a fundamental choice for the next configuration of the composite, as it affects not only the final graphical look, but also the criteria for the allocation of sub-objects. The following templates are available:

DIMMER GENERIC	It allows you to combine into a single object the ON/OFF and PERCENTAGE VALUE controls of a KNX dimmer actuator.
SHUTTERS UP/DOWN/STOP	It allows you to combine into a single object the UP/DOWN and STOP controls of a KNX blinds/ motor actuator.
SHUTTERS UP/DOWN/PERCENTAGE	Similar to the above control, it provides the percentage of the motor instead of STOP.
SHUTTERS UP/DOWN/LAMELLAE	It allows you to manage the shutters blinds actuators by sending UP/DOWN and OPEN/CLOSE commands of the SLATS.
THERMOSTAT WITH OPERATING MODE	It allows you to group all the controls and the statuses of a KNX thermostat in a single popup. (see details in the next chapter "Thermostat Composite Object")
RGB	It allows you to manage the controls of an RGB controller (single color controls and possible ignition and intensity adjustment.
GENERIC	It allows you to configure a free aggregation of objects within a single popup (see details in the next chapter "Generic complex object").

2.7.2 Assignment of the sub-objects

To create the sub-objects to a complex object, proceed as follows:

- Identify objects among the SEARCH ENGINE results
- Drag and drop them in the "OBJECTS CONTAINED IN THE COMPLEX OBJECT" section
- For each of the objects, select the "role" to play in the template by selecting it from those available in the "FUNCTIONALITY" drop down menu.
- In the case of the "GENERIC" template, assign a possible LABEL to the objects that allows the user to identify their functions
- Determine whether the objects, once associated to the COMPLEX OBJECTS, must be hidden from the other display pages, possibly unchecking the "VISIBLE" option. Typically, this function is used to make sure that such KNX object, after being inserted into a complex object, it is visible only as such, in the VISUALISATION section, and does not continue to be visible as a single KNX object (to make the supervision of the system easier).
- Determine which of the sub-objects must be able to be scheduled by the end user (you can not select any sub-object to disable the scheduling on the complex object). Only one sub-object can be selected for scheduling (in fact, it represents a link to the scheduling function of the sub-object (KNX object), also accessible from the detail page of the sub-object (KNX object) itself).

The choice of the FUNCTIONALITY is critical as it determines the graphic placement of the sub-objects within the graphic "widget" of the complex object.

The drop down menu is filtered based on the type of KNX object; if you do not find the item you want, check that the KNX object has the right data encoding (accessing its tab and enabling the "EXPERT" access level).

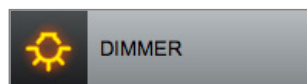
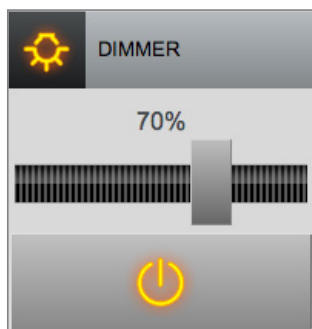
2.7.3 Dimmer complex object

Here are some notes on the configuration of the Dimmer complex object.

The objects managed by this template, with the corresponding data types (size), are the following:

- On/Off: 1bit
- Percentage value: Percentage value of 1 byte

As an example we report the images of the opened and closed Dimmer complex object.



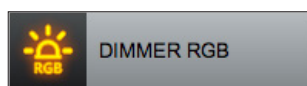
2.7.4 Dimmer RGB complex object

Here are some notes on the configuration of the Dimmer RGB complex object.

The objects managed by this template, with the corresponding data types (size), are the following:

- On/Off: 1bit
- Red color intensity: Percentage value of 1 byte
- Green color intensity: Percentage value of 1 byte
- Blue color intensity: Percentage value of 1 byte

As an example we report the images of the opened and closed Dimmer RGB complex object.



2.7.5 Blinds (shutters) up/down/stop complex object

Here are some notes on the configuration of the blinds (shutters) up/down/stop complex object.

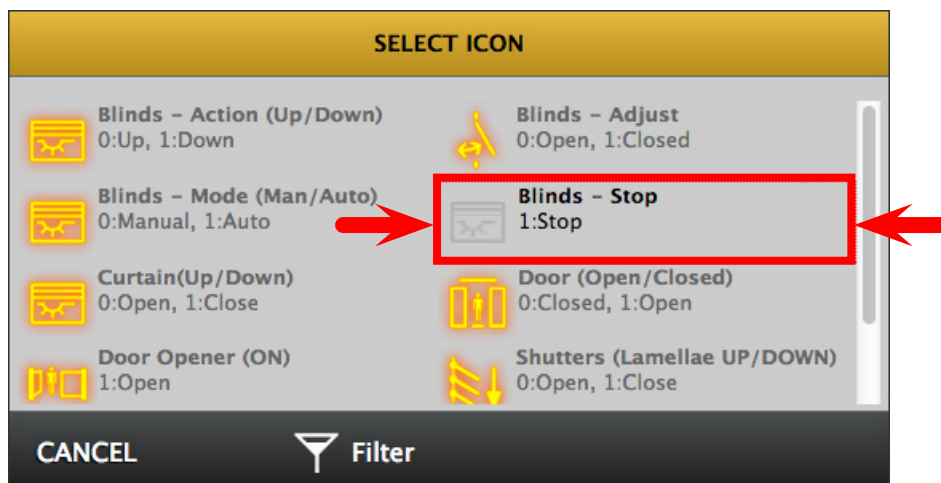
The objects managed by this template, with the corresponding data types (size), are the following:

- Stop: 1bit
- Up/down movement: 1bit

As an example we report the images of the opened and closed blinds up/down/stop complex object.



Note: to view the 1bit KNX object for the stop function of the shutter as "stop" in the "expanded" widget, it must be associated with the "Shading" function, as well as with the "blinds - stop 1: Stop" icon shown in the following figure. This association must be made on the KNX object properties edit page.



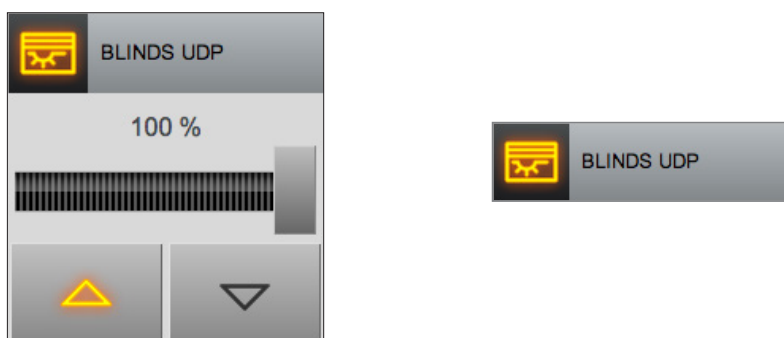
2.7.6 Blinds (shutters) up/down/percentage complex object

Here are some notes on the configuration of the Blinds up/down/percentage complex object.

The objects managed by this template, with the corresponding data types (size), are the following:

- Up/down movement: 1bit
- Percentage position: Percentage value of 1 byte

As an example we report the images of the opened and closed Shutters up/down/percentage complex object.



2.7.7 Shutters lamellae up/down/slats complex object

Here are some notes on the configuration of the Shutters lamellae blinds up/down/slats complex object.

The objects managed by this template, with the corresponding data types (size), are the following:

- Up/down movement: 1bit
- Open/close slats: 1bit

As an example we report the images of the opened and closed Shutters lamellae up/down/slats complex object.



Note: to view the 1bit KNX object for the movement of the slats with the appropriate icon in the "expanded" widget, it (KNX object) must be associated with the "Shading" function, as well as with the "Shutters lamellae (Slats UP/DOWN)" icon shown in the following figure. This association must be made on the KNX object properties edit page.



2.7.8 Thermostat complex object

Here are some notes on the configuration of the Thermostat complex object.

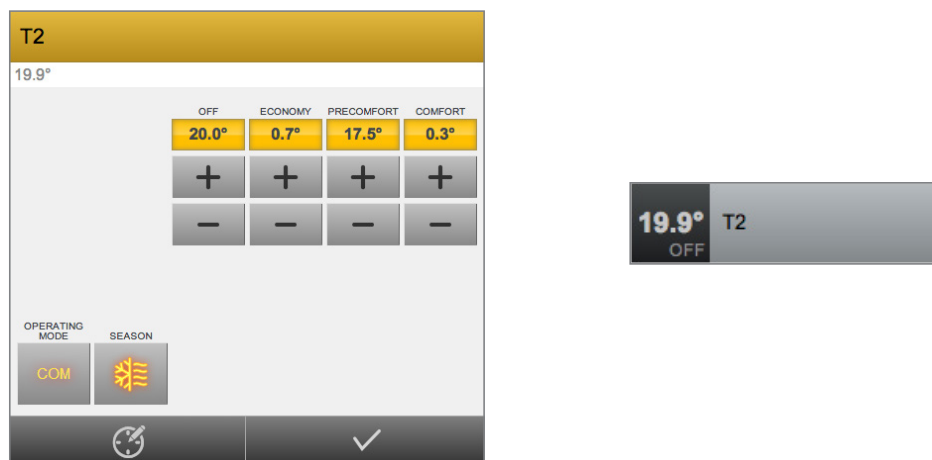
The objects managed by this template are the following:

- Measured temperature: 2byte
- Mode of operation (Confort, Standby, Economy, Off): 1byte
- Setpoint Heating - Comfort: 2 bytes
- Setpoint Heating - Standby: 2bytes
- Setpoint Heating - Economy: 2bytes
- Setpoint Heating - Off: 2bytes
- Setpoint Cooling - Comfort: 2bytes
- Setpoint Cooling - Standby: 2bytes
- Setpoint Cooling - Economy: 2bytes
- Setpoint Cooling - Off: 2bytes
- Seasonal mode (Cooling): 1bit
- Proportional Fancoil Speed: 1byte
- Setpoint - current
- Shift setpoint
- Heating (ON/OFF)
- Cooling (ON/OFF)

The graphical object that groups individual KNX objects are displayed the setpoints of the seasonal mode selected at that time.

The relative and predetermined position of the KNX objects cannot be changed by changing the order of items in the configuration section of the complex object.

As an example we report the images of the opened and closed thermostat complex object.



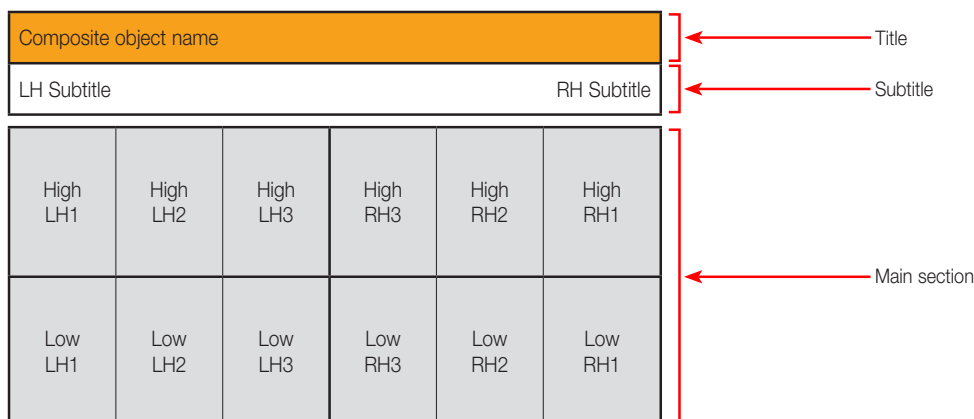
Note: The icon of this complex object that is shown in the VISUALISATION is constituted by a grey square that contains the numeric representation of the measured temperature. If during the construction of a thermostat graphical object the KNX object that provides the measured temperature is not entered, the icon in the VISUALISATION will appear as a grey square, and apparently without an icon. In the chapter "Managing the KNX Vimar thermostat using the COMPLEX OBJECTS" we will give advice on how to configure the Web Server to manage the KNX Vimar thermostats.

2.7.9 Generic complex object

Among the TEMPLATE made available for the creation of COMPLEX OBJECTS there is also the "GENERIC" option, which allows you to create free and flexible combinations of objects within as many popup windows.
Depending on the type of sub-object entered in the graphical representation of the complex object the relative graphic object will be displayed.

For each sub-object entered, you can specify the following parameters:

- **Name:** is the name of the KNX object. Changing this field changes the name of the KNX object (similarly to what happens going in EDIT KNX object, after finding it through the Search engine function, and changing its name).
- **Label:** is the description that you want to view in the widget.
- **Visible:** Disabling this parameter, the object will be visible only within the complex object that you are creating.
- **Functionality:** with this parameter you define how the sub-object must be placed in the graphical representation of the generic complex object. Below is a diagram of the possible choices and the relative positioning of the generic complex object within the widget.



The graphic area of the complex object widget is divided into the following three areas: Title, Subtitle, Main Section.
The Title shows the text entered in the Name field of the complex object.

The Subtitle displays the two sub-objects associated with the LH Subtitle or RH Subtitle identifier. In the subtitle, you can view the description and status of the sub-object, but you cannot control it (the sub-objects can only be controlled from the main section).

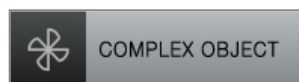
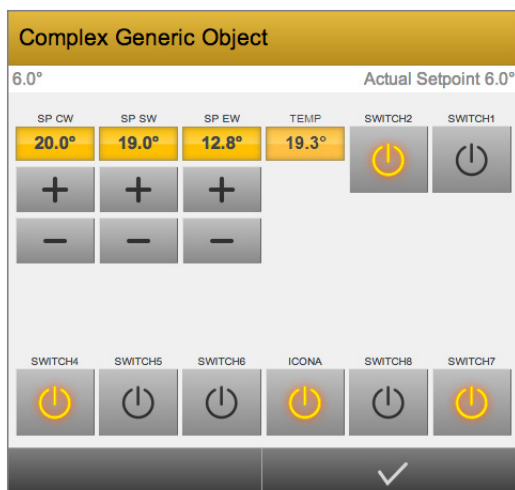
In the Main section, you can enter the sub-objects, in the positions summarized in the table above. For each sub-object, you can enter a description that will appear above the sub-object widget (which will be command and/or reading based on how you have configured the sub-object (Command and/or Reading)).

In addition to the Identifier (Functionality) parameter values as described in the above diagram, there is one called "Icon". The icon for the sub-object allocated to the identifier is used as the Generic complex object icon.

Note: Be careful not to associate more than one object with the same FUNCTIONALITY (Identifier); otherwise, not all items may be displayed in the popup. Conversely, the same object can be associated with the complex object several times, to make it appear in different sections of the generic complex object widget (e.g. in the subtitle as status information and in the sections below in order to be controlled).

- **Schedule:** See the description of this parameter in the "Allocating the sub-objects".

Here are the images of an example of a generic complex object: widget open and closed widget.



2.8. Scenarios

2.8.1 New scenario

The Scenarios are sequences of operations that are performed by the Web server by following a certain order, possibly interspersed with wait time, due to a command from the user or to EVENTS triggered by the change of status of other objects.

Note: In spite of the similar name, the scenarios of the Web Server are not the same as the so-called "KNX scenarios" configurable via the ETS; in fact, the Web Server scenarios do not have a correspondence in the ETS project, since it is an entirely software functionality. The scenarios of the Web Server are also much more flexible than the ETS, being able to incorporate different types of commands and expected time between the different commands.

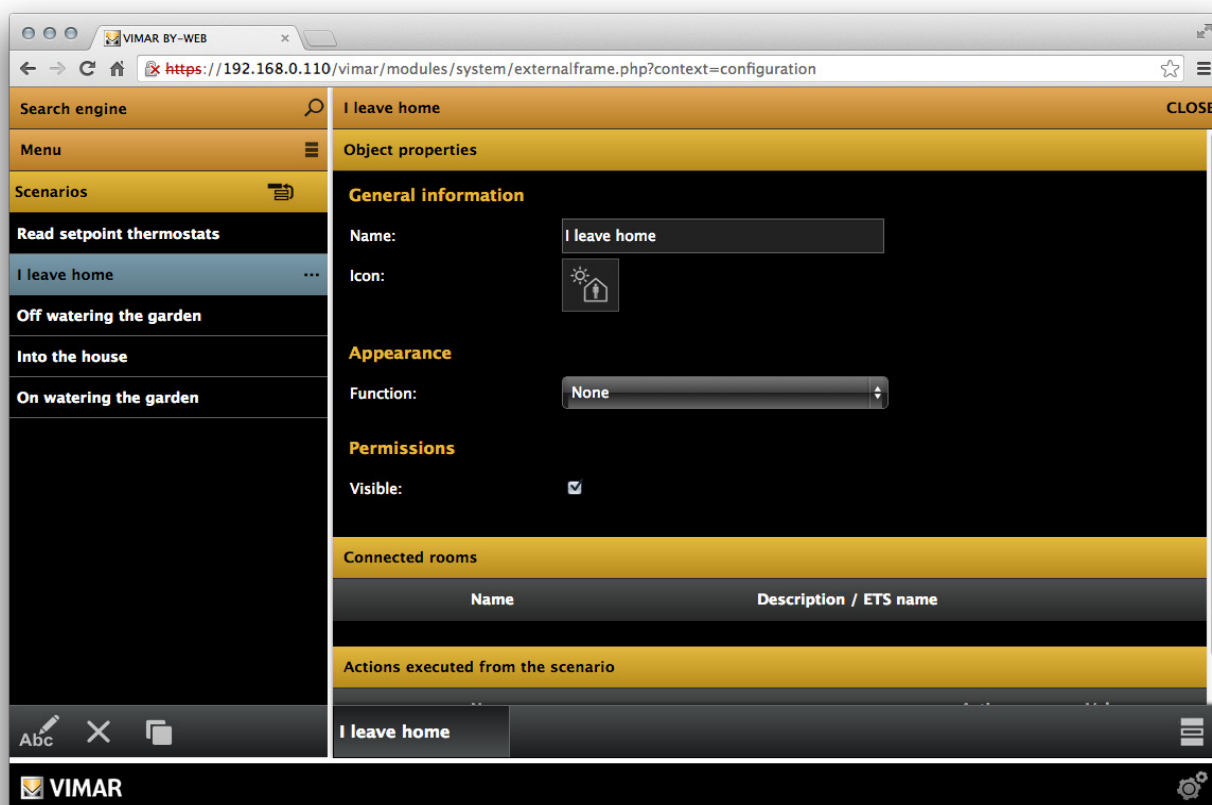
To create a new scenario, proceed as follows:

- Go to the SCENARIOS section of the MENU
- Press the "+" button in the TOOLBAR.
- Select the new object and access to its tab by using the "shortcut" besides the name or, alternatively, by pressing the "EDIT" button in the TOOLBAR.

The tab of a SCENARIO allows you to customize the following properties:

- NAME:** Identifying name of the scenario.
- DESCRIPTION:** Descriptive text for the object (not displayed in the frontend section and displayed only by selecting EXPERT mode from the context menu).
- ICON:** Graphical icon used for the graphical representation of the scenario in the supervision pages.
- FUNCTION:** Category in which to include the item; this choice also determines the filter for the subsequent choice of the icon. You can also choose "none" if you want the object not to appear in any function, but it will still be visible in the "Scenarios" pages, which can be accessed from the VISUALISATION section selecting "Scenarios" in the main menu (if the "Visible" property, described below is enabled).
- VISIBLE:** Determines whether the SCENARIO should be visible in the VISUALISATION (on the pages provided by the configuration of the scenario).
- ENABLE**
- SCHEDULE:** Through this item it is possible to enable or disable the possibility to create schedules for the scenario, from the frontend section.

In addition to viewing it on a page of the functions and on the scenarios page, you can also make the scenario visible in any environments; to do this, drag the name of the environment you want (from the list of environments under the item "Environments" of the side menu, or after searching it through the SEARCH ENGINE function), in the grey horizontal bar under the "Rooms it belongs to" bar. Multiple environments to view the scenario can be inserted.

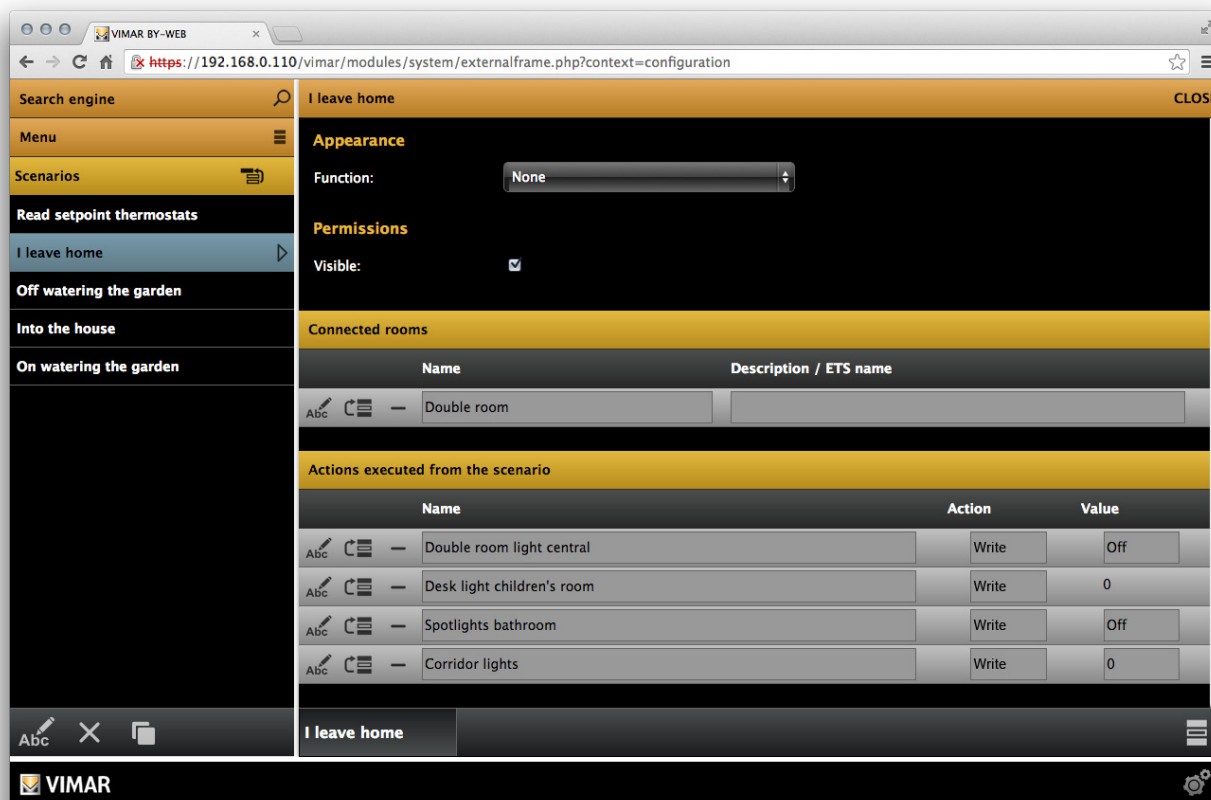


2.8.2 Actions

After creating a scenario it is necessary to associate it to one or more actions; to do this:

- Identify objects you want to control among the SEARCH ENGINE results
- Drag the objects within the list "ACTIONS EXECUTED FROM THE SCENARIO" list, taking care to place them in the same order as you want the command sequence to happen (possibly by acting on the "CHANGE ORDER" button as appropriate).
- For each object specify the ACTION to be taken and - if required - the VALUE to be sent. In the case of KNX objects, select "WRITE" as the action and value - among those proposed, based on the type of object - to be sent to the bus when you run the scenario.

Note: Selecting the "READ" action in the "Value" field may display a value, which has no influence on the execution of the command and should not be changed.



The screenshot shows the VIMAR BY-WEB interface in a browser window. The left sidebar contains a menu with options: Search engine, Menu, Scenarios, Read setpoint thermostats, I leave home (selected), Off watering the garden, Into the house, and On watering the garden. The main content area is titled 'I leave home' and includes a 'CLOSE' button. It features sections for 'Appearance' (Function: None), 'Permissions' (Visible: checked), and 'Connected rooms' (Double room). The 'Actions executed from the scenario' section contains a table with the following data:

Name	Action	Value
Double room light central	Write	Off
Desk light children's room	Write	0
Spotlights bathroom	Write	Off
Corridor lights	Write	0

The bottom of the interface shows the VIMAR logo and a settings icon.

It is possible to insert delays between one action and the next, as follows:

- Type the "wait" keyword in the SEARCH ENGINE field and press ENTER.
- Select, among the results, the desired time of waiting, among the default ones.
- Drag it to the list of actions of the SCENARIO, to the desired position within the sequence.

It is possible to insert more delays to achieve the desired timing; during these delays the scenario remains "paused" and continues with the execution of subsequent actions at the end of the delay.

It is possible to stop the execution of a scenario with delays from the VISUALISATION by clicking its icon during its execution (icon status "active"); in this case, the actions not yet implemented are no longer taken, and at the next execution of the scenario, the sequence starts again from the beginning.

The icon of the scenario lights up to give feedback on the activation of the scenario; the display "active" status scenario of the stays on for the entire duration of the scenario.

2.9. Logics

It is possible to create one or more logics to perform AND/OR operations at the change of status of one or more objects associated with the logic as INPUTS.

The management of the Logics is carried out from the ADMINISTRATION Section and the created Logic are not visible in the VISUALISATION section.

To create a new logic, proceed as follows:

- Go to the LOGICS section of the MENU
- Press the "+" button in the TOOLBAR.
- Select the new object and access to its tab by using the "shortcut" besides the name or, alternatively, by pressing the "EDIT" button in the TOOLBAR.

After assigning a name to the new logic, associate at least one input in the following way:

- Identify the affected objects among the SEARCH ENGINE results or via the "KNX-> ETS Project" menu item in the administration section.

NOTE: in addition to the 1 bit KNX objects it is possible to associate inputs of the following types: Conditions (previously created on the web server), Logics (previously created on the web server).

- Drag them to the "INCOMING CONNECTIONS" section (the order does not matter).

Important: The value of the ID field is the one that should be used for the creation of the logical expression.

Through the CONDITION field it is possible to insert a filter on the evaluation of the logic, according to the variation of the values of the input objects.

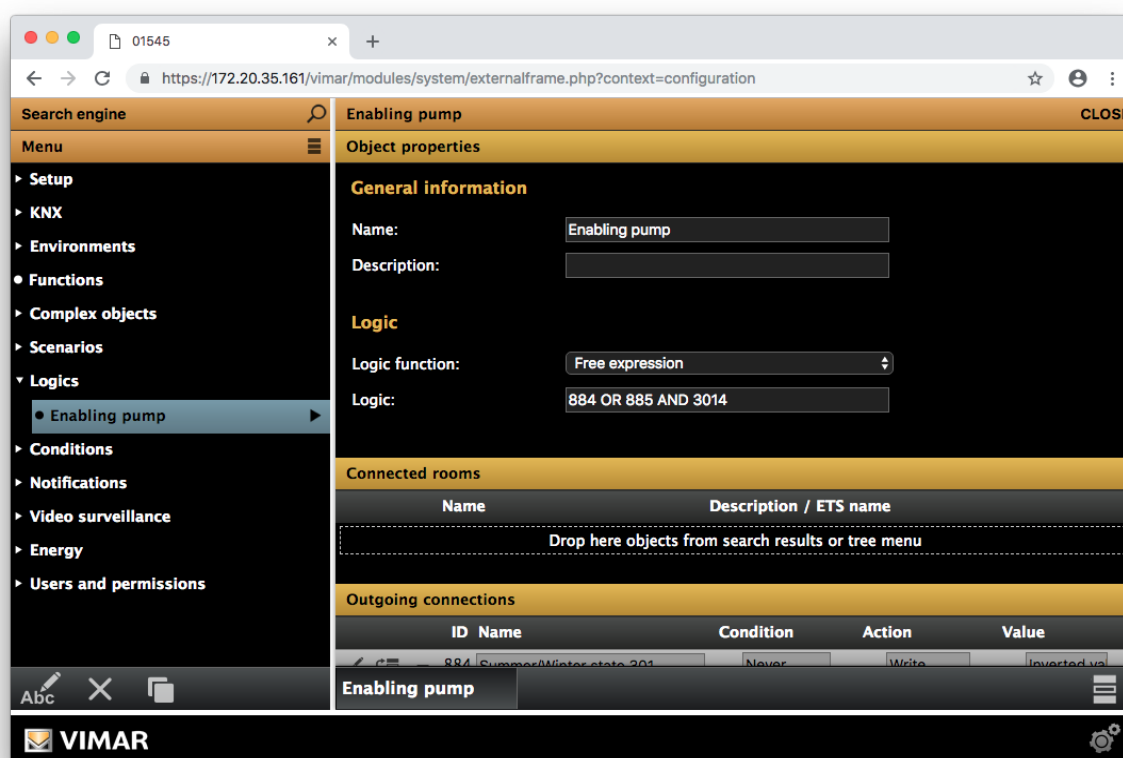
It is possible to define if at the variation of an input (and also by the specific value assumed) the logic must be executed or not.

The CONDITION field of the incoming connections, for each input, can assume the following values:

- Always:** it is the default value. The logic is evaluated for any change of the input status, regardless of the specific value assumed.
- If UP:** The logic is evaluated only if the input assumes the value UP (ON).
- If Down:** The logic is evaluated only if the input assumes the value Down (OFF).
- Never:** Even if there are changes of the input value, the logic is never evaluated. This input therefore behaves in a "passive" way to establish the moment in which the logic must be evaluated, but it is nevertheless considered in the evaluation of logic when the logic is executed.

At this point it is necessary to set the "Logic function" field to define the logic, choosing among the possible options:

- AND:** the logical operator AND is applied to the input objects.
- OR:** the logical operator OR is applied to the input objects.
- NOT:** the logical operator NOT is applied to the input object (only one input object is allowed).
- Free expression:** the logical expression must be written by concatenating the ID of the inputs with the "AND", "OR" and "NOT" keywords (written in capital letters) separated by a space. The logical expression is calculated on the "two by two" inputs, which means the result of the expression between the first two inputs is put in AND/OR with the third, and so on. To deny an input precede its ID by the "NOT" keyword.



The screenshot shows the VIMAR web interface for configuring a logic. The left sidebar contains a menu with options like Setup, KNX, Environments, Functions, Complex objects, Scenarios, Logics, Conditions, Notifications, Video surveillance, Energy, and Users and permissions. The 'Logics' section is expanded, and 'Enabling pump' is selected. The main area displays the configuration for 'Enabling pump'.

Enabling pump CLOSE

Object properties

General information

Name:

Description:

Logic

Logic function:

Logic:

Connected rooms

Name	Description / ETS name
Drop here objects from search results or tree menu	

Outgoing connections

ID	Name	Condition	Action	Value
884	SummerWater.state.201	Never	Write	Inverted up

Enabling pump

VIMAR

After setting the expression, you must enter at least one "output" so that the LOGIC object plays an active role in the system; in fact, the LOGIC object status changes automatically whenever the status of one of its inputs changes, but you must create an EVENT that pilots other objects to get tangible feedback of this change of status.

Whenever the logical expression is recalculated, based on the result is possible to control one or more OUTPUTS.

For any logic you need to enter at least one "output" so that the LOGIC object plays an active role in the system.

To do this:

- Identify the objects you want the logic to control among the SEARCH ENGINE results or via the "KNX-> ETS Project" menu item in the administration section.
- Drag them to the "LOGIC-OUTPUTS" section (the order does not matter). Even the scenarios (previously created), can be entered as output objects, to command the execution or arrest.
- Proceed by entering the output parameters, as described below.

The configuration of the OUTPUTS is quite similar to that of the ACTIVE EVENTS previously seen, depending on the type of objects, you must specify:

CONDITION	Value at which you must bring the LOGIC to determine the execution of the EVENT - Specify "ALWAYS" to switch the status of the logic to the object whenever it changes, or filter the execution status only "IF LOGIC = TRUE" or "IF LOGIC = FALSE" by the logic. By selecting "NEVER", regardless of the evaluation result of the logic, no action will be performed on the specific output. By selecting "NEVER", regardless of the evaluation result of the logic, no action will be performed on the specific output.
ACTION	Action to be performed on the object - depends on the type of object.
VALUE	Value to be passed onto the object during the action (if any). You can choose a specific value (among those available depending on the type of object selected) or the "special" values "VALUE <CURRENT VALUE>" and "INVERTED VALUE" which refer, dynamically, to the evaluation result of the logic (the presence of these choices depends on the type of object).

2.10. Conditions

CONDITIONS allow to compare the values of one or more objects and to execute events according to the comparison result.

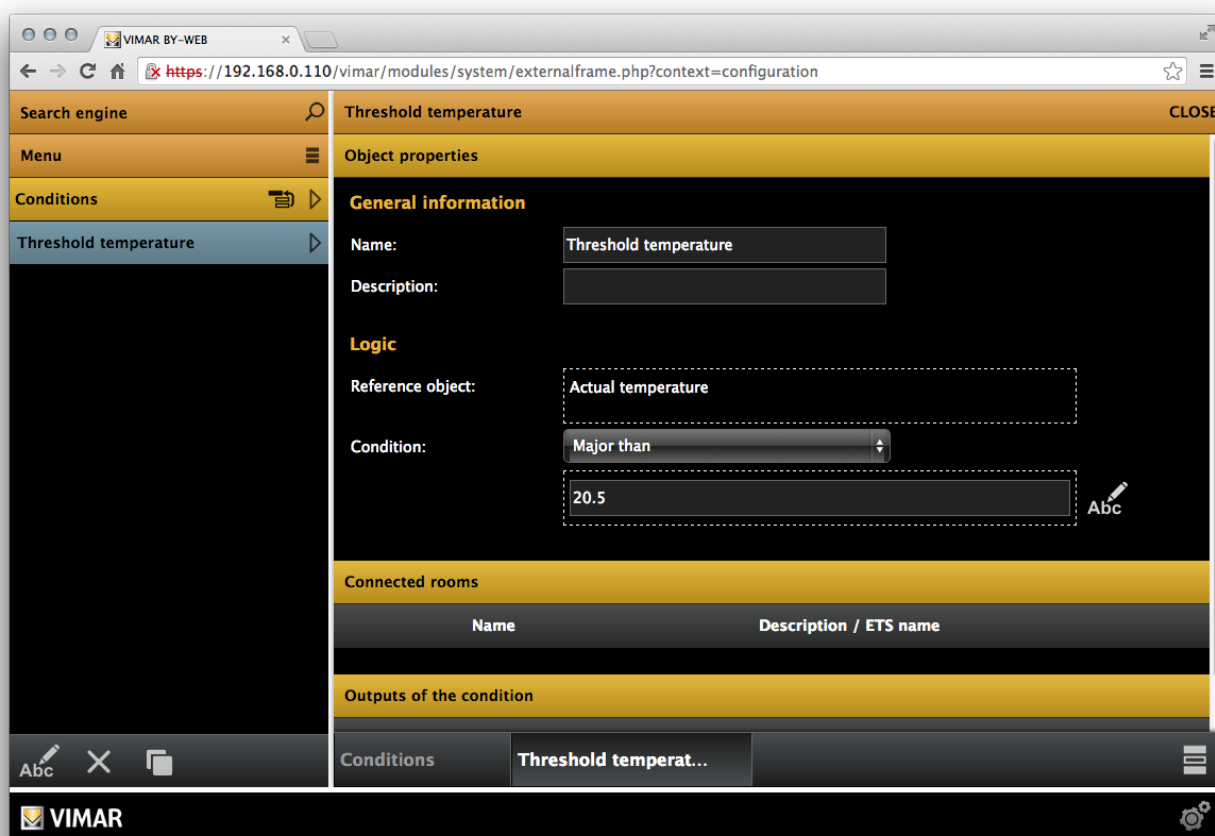
To create a new condition, you must first:

- Open the "CONDITIONS" section in the MENU.
- Press the "+" button in the TOOLBAR.
- Select the new object and access to its tab by using the "shortcut" besides the name or, alternatively, by pressing the "EDIT" button in the TOOLBAR.

After entering a name for the condition, it is necessary to associate an object as a reference, dragging it from the SEARCH ENGINE box in the corresponding area, then select the operator to use in the appropriate drop-down menu and set the standard of comparison in the following way:

- Enter the value (using the "dot" as the decimal separator) in the box, or press the button on the side of the text box to activate the drag mode, then drag another object from the SEARCH ENGINE (press the button again to return to text mode).

In the case of operators providing two terms of comparison, repeat the procedure twice, for the top and bottom extreme respectively.



The screenshot shows the VIMAR BY-WEB interface in a web browser. The address bar displays the URL: <https://192.168.0.110/vimar/modules/system/externalframe.php?context=configuration>. The interface has a sidebar on the left with a menu containing 'Search engine', 'Menu', 'Conditions', and 'Threshold temperature'. The main area is titled 'Threshold temperature' and has a 'CLOSE' button. It is divided into sections: 'Object properties', 'General information', 'Logic', 'Connected rooms', and 'Outputs of the condition'. In the 'General information' section, the 'Name' field is 'Threshold temperature' and the 'Description' field is empty. In the 'Logic' section, the 'Reference object' is 'Actual temperature' and the 'Condition' is 'Major than' with a value of '20.5'. There is a 'Connected rooms' table with columns 'Name' and 'Description / ETS name', and an 'Outputs of the condition' section. The bottom of the interface has a toolbar with icons for 'Abc', a close button, and a save button, and a status bar with the VIMAR logo and a settings icon.

Upon variation of the reference object and, if provided, of the objects used as a terms of comparison, the condition is recalculated, and based on the result, the objects associated as OUTPUTS of the condition, to be configured in a similar way to what was seen for the LOGICS, are commanded.

2.11. Notifications

2.11.1 On-screen notifications

Video notifications are messages on the screen that the Web Server can notify users in the face of events. After creating the new notification, in a similar way to the one seen previously for other types of object, enter the text to display to users in the homonymous field of its tab, and select the type from the drop-down menu.

The Web Server handles three types of notifications, whose characteristics are highlighted below:

Type of notification	Display in the "Message Center - Notifications"	Automatic opening of the Message Center
Info	Black text	NO
Warning	Orange text	NO
Alarm	Red text	YES

After creating the notification, you must associate at least one object, so that, when its status changes, the Web Server generates the notification. To do this, drag one or more objects from the SEARCH ENGINE results or via the "KNX-> ETS Project" menu item in the administration section, to the "INCOMING CONNECTIONS" area, specifying the conditions under which the message is to be displayed (depending on the status of the objects themselves).

Notifications are displayed in the "Message Center - Notifications" page of the VISUALISATION, by selecting the Notifications item in the main menu.

Upon the occurrence of the event that triggers the notification, a yellow indicator is activated via the "Notifications menu item", and if the notification is of the "Alarm" type, "Message Central - Notifications" is automatically opened.

Message central - Notifications		
11 unread messages		✕
Today at 11:18	Notification type information	✓
Today at 11:18	Notification type Warning	✓
Today at 11:18	Notification type alarm	✓
Today at 11:18	Notification type information	✓
Today at 11:18	Notification type Warning	✓
Today at 11:18	Notification type alarm	✓
		✓

It is possible to handle one message at a time (by marking it as "read" and therefore no longer displayed) or all at once using the appropriate button at the top right.

2.11.2 Email notifications

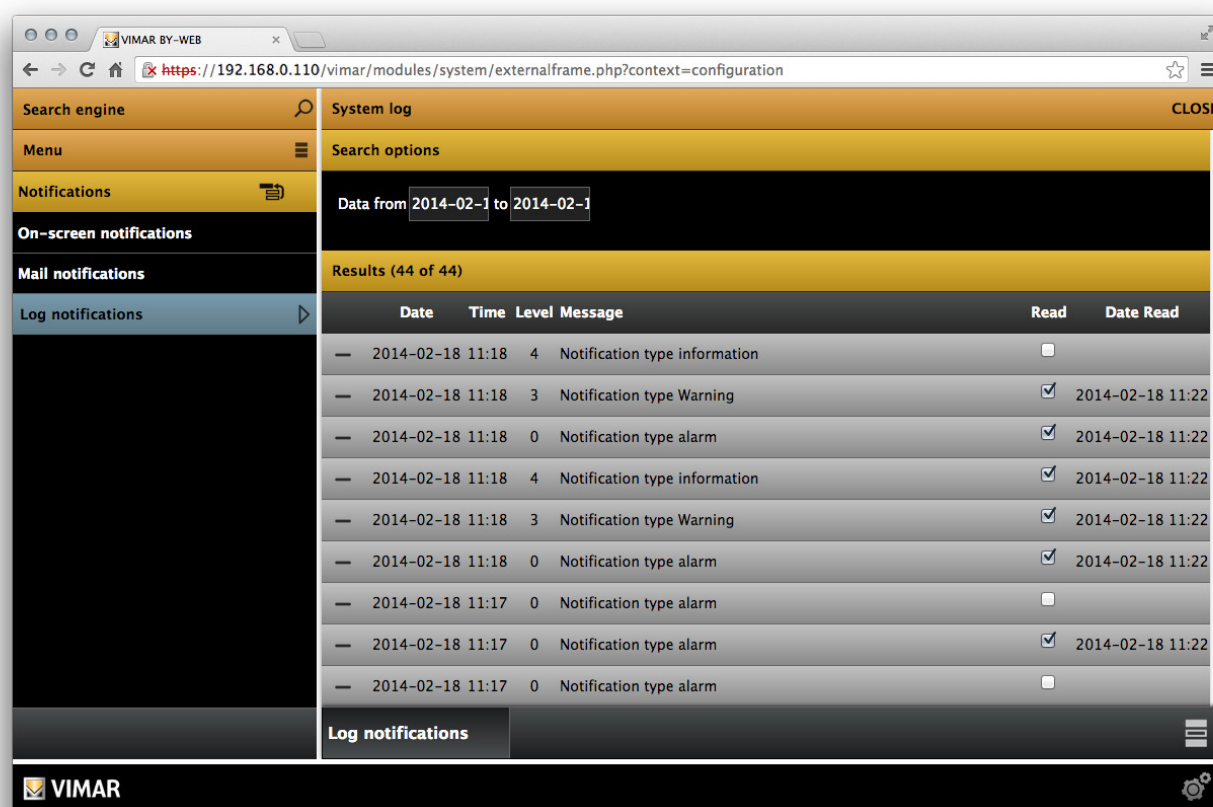
In a similar way to what we saw earlier, the email notifications are messages sent via e-mail in the face of events. The information required in the tab for creating a notification e-mail are:

RECIPIENTS, CC, CCN	One or more email addresses, separated by ";;"
MAIL SUBJECT	Text to display in the subject line
MESSAGE	Body of the email message

Email messages are sent using the account specified in the SETUP -> MAIL section as seen above.

2.11.3 Notifications log

This page allows you to browse the history of the notifications on the screen shown to users - even those operated in the VISUALISATION. It is possible to mark the messages as "read" or delete them using the special "-" button; you can also search for messages by specifying a date range.

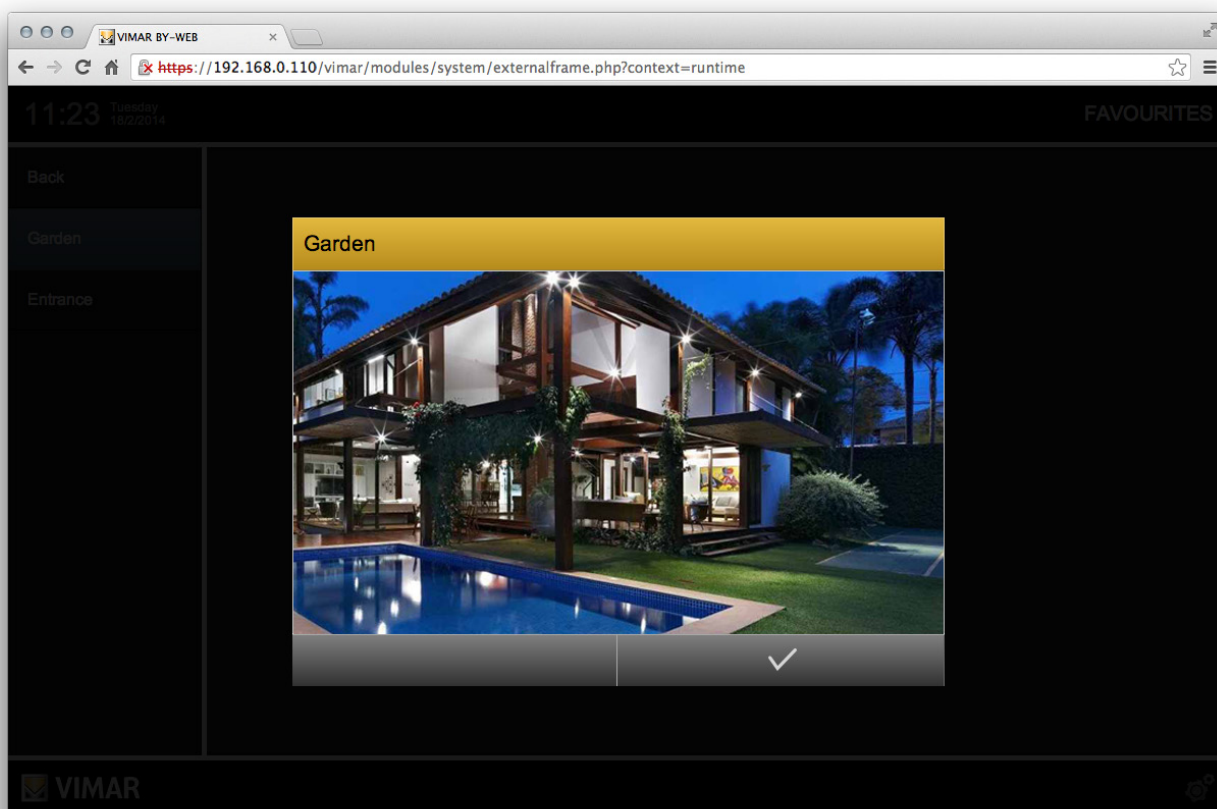


The screenshot shows the VIMAR BY-WEB interface. The sidebar on the left contains the following menu items: Search engine, Menu, Notifications, On-screen notifications, Mail notifications, and Log notifications. The main content area is titled 'System log' and shows search options for the date range '2014-02-1' to '2014-02-1'. Below this, it displays 'Results (44 of 44)' in a table.

Date	Time	Level	Message	Read	Date Read
2014-02-18	11:18	4	Notification type information	<input type="checkbox"/>	
2014-02-18	11:18	3	Notification type Warning	<input checked="" type="checkbox"/>	2014-02-18 11:22
2014-02-18	11:18	0	Notification type alarm	<input checked="" type="checkbox"/>	2014-02-18 11:22
2014-02-18	11:18	4	Notification type information	<input checked="" type="checkbox"/>	2014-02-18 11:22
2014-02-18	11:18	3	Notification type Warning	<input checked="" type="checkbox"/>	2014-02-18 11:22
2014-02-18	11:18	0	Notification type alarm	<input checked="" type="checkbox"/>	2014-02-18 11:22
2014-02-18	11:17	0	Notification type alarm	<input type="checkbox"/>	
2014-02-18	11:17	0	Notification type alarm	<input checked="" type="checkbox"/>	2014-02-18 11:22
2014-02-18	11:17	0	Notification type alarm	<input type="checkbox"/>	

At the bottom of the table, there is a 'Log notifications' button and a settings icon.

Depending on the type of camera, not all properties may be available.



The resolution of the video stream requested by the Web Server is set automatically by the Web Server.

2.12.2 Display on Local Area Network (LAN)

The display of cameras on the local network provides a direct connection between the client and the IP camera: the Web Server enters a reference to the address (and port) of the local network of the camera within the supervision pages so that the browser, independently, requires the video stream of the camera itself.

2.12.3 Remote viewing

In the case of remote access, since the cameras are not being directly accessed by the client, you will need an intervention from the internet router and the Web Server so that the browser is able to display the video streams.

Also in this case the direct access between the remote PC and the cameras is carried out, and the steps for the configuration, also described in the "Configuring the network for remote viewing of system IP cameras" section (in this manual), are the following:

- Configure each camera/video server to operate in the local network to a different IP port (e.g. port 81, 82, etc...) through its web interface or configuration software
- Consequently configure each camera on the Web Server, using the port set in the camera (as required by the preceding paragraph); verify that the corresponding video streams are displayed in the local network
- Create a "port forwarding" rule in the Internet router for each of the cameras/video servers you want to remotely view, indicating for each of these rules the same public port assigned for display in the local network, and the local IP address of the camera/video server.

Note: Do not use the HTTPS protocol.

2.13. Energy

2.13.1 Introduction

The Web Server is able to handle one or more energy analyzers installed on the KNX system historicizing and showing the trend of electricity consumption (or of any production, e.g. with photovoltaic system) and automatically managing the detachment of the current in case of excessive consumption.

2.13.2 Consumption

2.13.2.1 New analyzer

By accessing the CONSUMPTION section, you can create one or more ANALYZER objects, which allow you to gather the information available on the KNX bus from as many measuring devices and to display them in the VISUALISATION. In addition, as more fully explained below, an ANALYZER can also be used as a basis for calculating the LOAD CONTROL function.

To create a new analyzer, press the "+" button in the TOOLBAR, then navigate to the profile to configure it.

The required information is divided into the following areas:

POWER

ENABLE POWER CALCULATION	Selecting this item enables the calculation of the electric power starting from the current and voltage data. In this case, an appropriate "SUB-OBJECTS FOR POWER CALCULATION" section appears at the bottom of the page as detailed below.
MINIMUM POWER MAXIMUM POWER	Minimum and maximum values used for display in the VISUALISATION of the absorption value (power).
POWER - MIN. LIMIT POWER - MAX. LIMIT	Values used as threshold for both display in the VISUALISATION of the absorption data, and for the control of the loads (if the ANALYZER object is used as a reference for load control, as described in detail below).

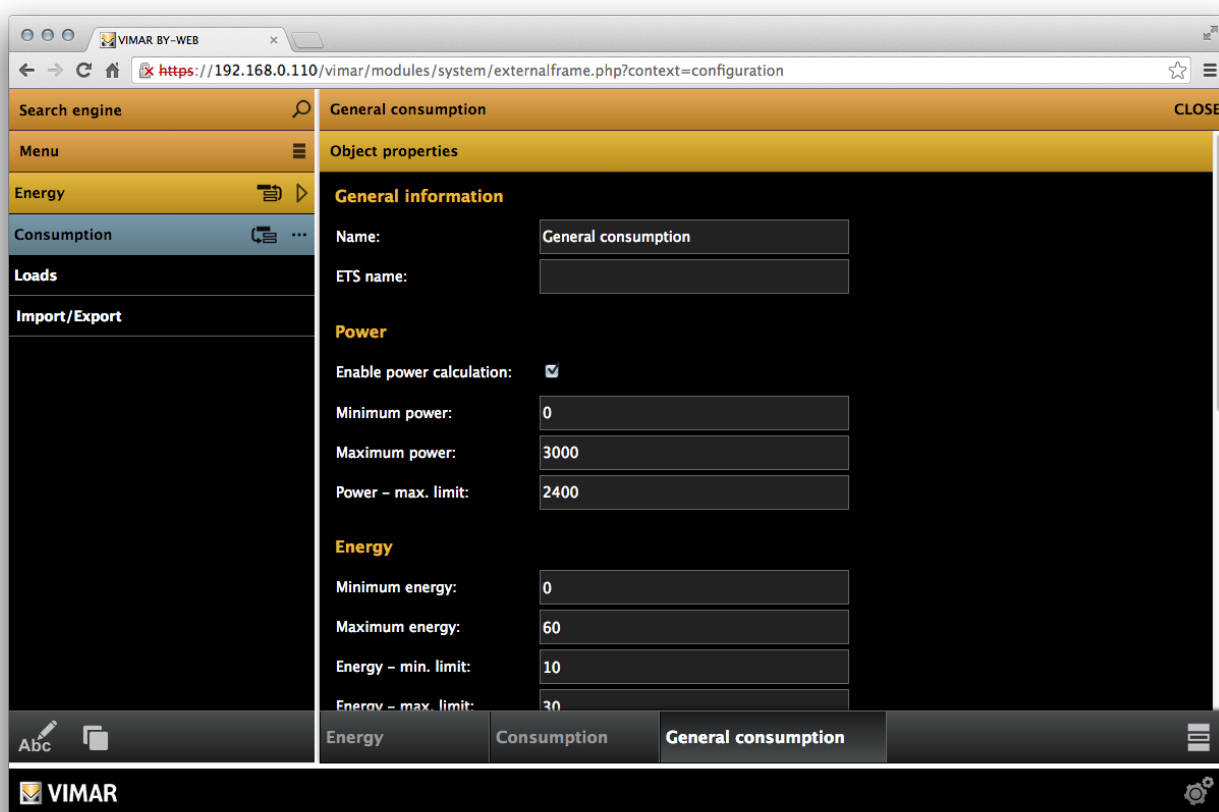
ENERGY

MINIMUM ENERGY MAXIMUM ENERGY	Minimum and maximum values used for display in the VISUALISATION of the power value.
ENERGY - MIN. LIMIT ENERGY - MAX. LIMIT	Values used as threshold for the display of the energy value in the VISUALISATION.

GRAPHS

SCALE FACTOR	Allows you to specify a multiplication factor for the visualization of the power data in graphs Default: 1
UNIT	Allows you to specify a label to be used as a unit of measurement for power data shown in the graphs.
SHOW DATA IN GRAPHS	By selecting this option, the power data related to this analyzer is shown in the graphs, based on the display period selected by the user (see below for details)
SHOW COMPARISON IN GRAPHS	If you select this option, also the data calculated as an average based on the period of display chosen by the user, is superimposed on the graphs for this analyzer.

Note: the "GRAPHS" section is only available if the analyzer is associated with a sub-object on the power supply, as shown below.



In addition to this information entered "statically", you can associate one or more objects to the ANALYZER, in a similar way to what we saw earlier for the COMPLEX OBJECTS. Also in this case you can:

- Create a new sub-object directly from this tab via the "+" button. This way you create helpful items to make many properties of the ANALYZER manageable in the VISUALISATION; these objects do not interact with any technology, without prejudice to any active/passive events configured in their tab.
- Drag an object (e.g. KNX) from the search engine

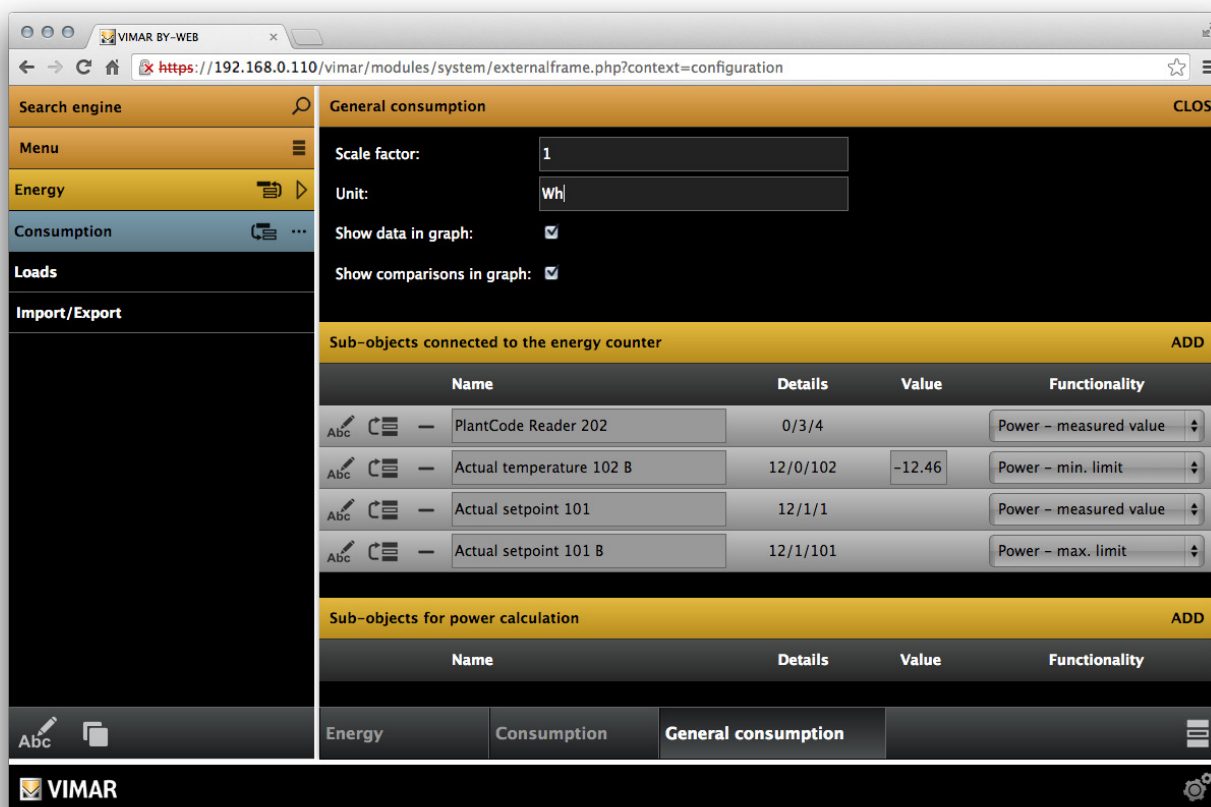
In both cases, you must select the correct FUNCTIONALITY to assign the sub-object to the correct functionality, the available identifiers are:

Identifier	Description	Type of data
POWER - CURRENT VALUE	Value of the power absorption measured in real time (typically made available on a KNX object by an electrical network analyzer).	Numeric value 2 bytes Numeric value 4 bytes 16 bit counter 32 bit counter
POWER - MIN. LIMIT POWER - MAX. LIMIT	Values to be used as a threshold for the visualization of electric power and the calculation of load control (if the ANALYZER is used as a reference). Note: when choosing these identifiers, the corresponding threshold values present as "static" attributes (seen above) are ignored, and hidden at the top of the tab.	Numeric value 2 bytes Numeric value 2 bytes
POWER - MEASURED VALUE	Value of the consumed/produced power measured in real time (typically made available on a KNX object by an electrical network analyzer or pulse-counter).	Numeric value 2 bytes Numeric value 4 bytes 16 bit counter 32 bit counter
ENERGY - MIN. LIMIT ENERGY - MAX. LIMIT	Value to be used as a threshold for the display of the electrical energy. Note: when choosing these identifiers, the corresponding threshold values present as "static" attributes (seen above) are ignored, and hidden at the top of the tab.	Numeric value 2 bytes Numeric value 2 bytes
OVER LIMIT	Object ON/OFF automatically set according to whether or not the threshold is exceeded, if the ANALYZER is used as a load control reference (see next section).	1 bit

PRIORITY	Current priority of the load control, if the ANALYZER is used as a load control reference (see next section).	Numeric value 1 bytes
ON/OFF AUTO/MANUAL	Do not use these identifiers, reserved for the use of the ANALYZERS as loads (see. next section).	1 bit

Some FUNCTIONALITY provide the ability to specify the value of the object directly from this tab; it is the case, for example, of both of power and energy maximum/minimum thresholds.

This makes it even faster to configure the ANALYZER, without the need to switch to the VISUALISATION to set these values: the end user can modify the thresholds starting from the values entered in this tab.



The screenshot shows the VIMAR BY-WEB configuration interface. The browser address bar displays <https://192.168.0.110/vimar/modules/system/externalframe.php?context=configuration>. The left sidebar contains a menu with options: Search engine, Menu, Energy, Consumption, Loads, and Import/Export. The main content area is titled 'General consumption' and includes a 'CLOSE' button. It features input fields for 'Scale factor' (set to 1) and 'Unit' (set to Wh), and checkboxes for 'Show data in graph' and 'Show comparisons in graph'. Below these are two tables for sub-objects. The first table, 'Sub-objects connected to the energy counter', has columns for Name, Details, Value, and Functionality, and lists four objects: PlantCode Reader 202, Actual temperature 102 B, Actual setpoint 101, and Actual setpoint 101 B. The second table, 'Sub-objects for power calculation', has the same columns but is currently empty. At the bottom, there are tabs for Energy, Consumption, and General consumption, with the latter being the active tab.

2.13.2.1 Power calculation

If the data relating to the electric power is not available as KNX object, it is possible to calculate it from a "voltage" object and one or more "electric current" objects in fully automatic mode.

To do this, you must first enable the "ENABLE POWER CALCULATION" flag to enable the "SUB-OBJECTS FOR POWER CALCULATION", at which point you will need to:

- Insert a "static" object in the "SUB-OBJECTS CONNECTED TO THE ENERGY COUNTER" list ("+" button) specifying "POWER - MEASURED VALUE" as FUNCTIONALITY; the value of this object will be calculated from the Web Server whenever the voltage and/or current change.
- Drag the objects containing the information on the voltage or current from the search engine within the "SUB-OBJECTS FOR CALCULATING POWER CALCULATION" section, or enter them as "static" objects via the "+" button, and specify whether they are CURRENT or VOLTAGE value.

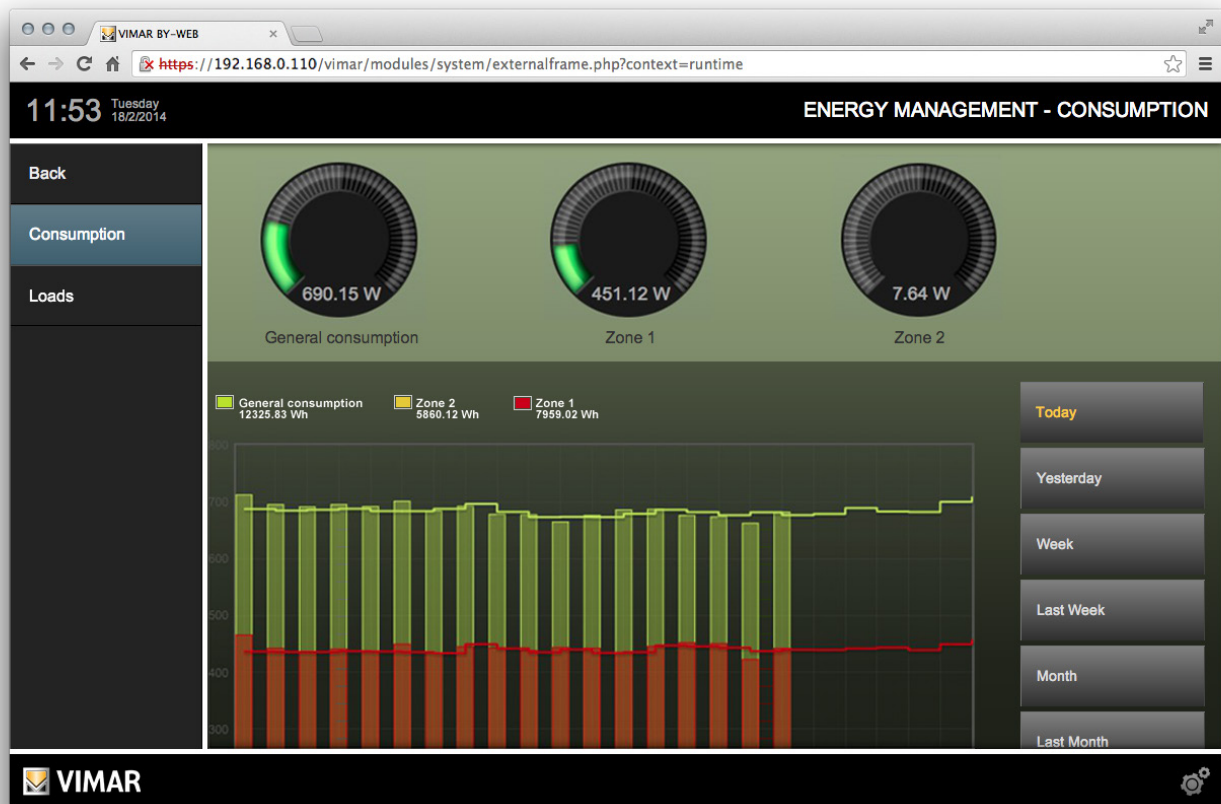
The calculation can be made only if:

- One and only one object labeled "VOLTAGE" is been associated.
- One and only one object labeled "CURRENT" is been associated.

Once you have completed this configuration, the Web Server will automatically update the power data, as if it were read by the KNX bus, and display it in the VISUALISATION or use it as the basis for control loads logic, if the ANALYZER is used as its reference.

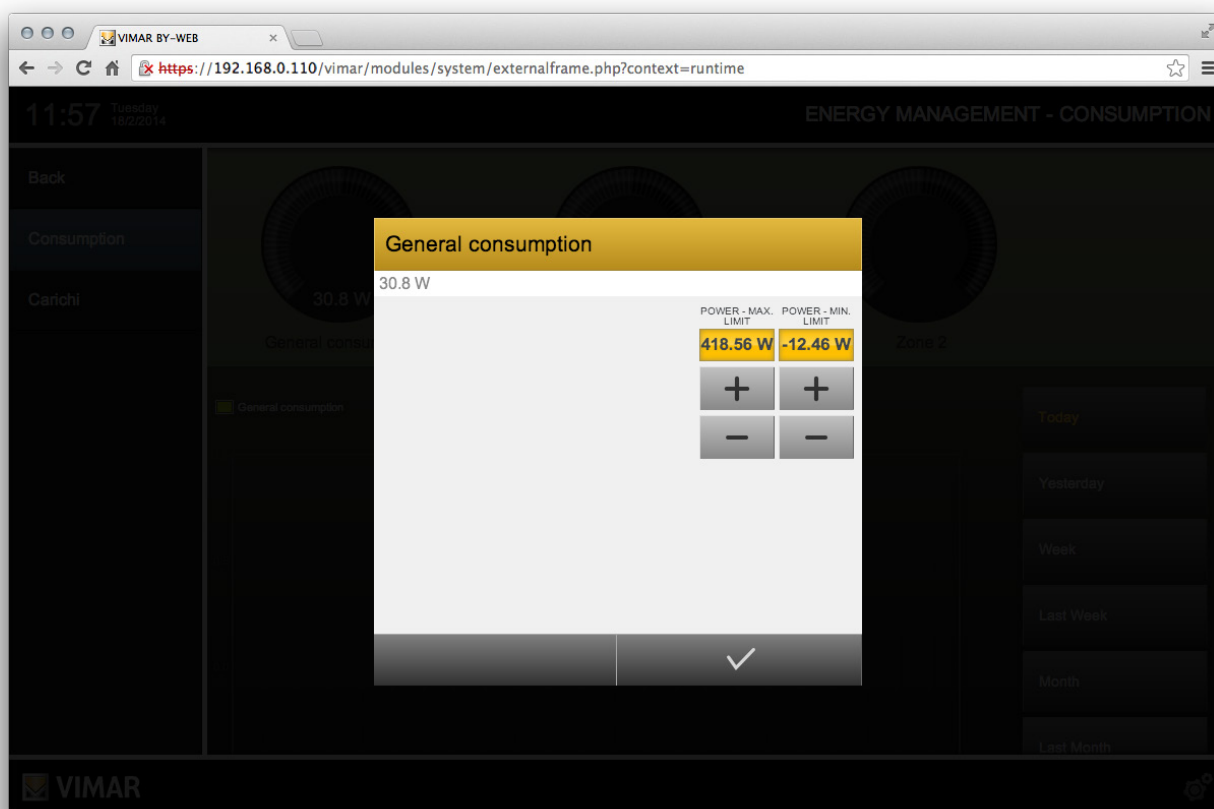
2.13.2.3 Visualisation

By accessing the VISUALISATION and selecting "ENERGY" from the NAVIGATION MENU, then "CONSUMPTION", you are shown a page similar to the following:



At the top of the page are displayed in the form of "tachometers", the ANALYZER previously configured. It is possible to parameterize the thresholds of different ANALYZER, if configured in administration as sub-objects.

Clicking on the "tachometers" opens the pop-up shown in the picture.



The lower part of the page contains the graphs of consumption (or production) of energy relative to the ANALYZERS listed at the top; the data shown in the graphs refer to a period of time that the user can select, using the buttons on the side of graph, choosing between:

TODAY	Data since midnight of the current day compared (if the comparison is enabled) with the daily average.
YESTERDAY	Data related to the previous day compared (if the comparison is enabled) with the daily average.
WEEK	Data since midnight of the Monday of the current week compared (if the comparison is enabled) with the weekly average.
LAST WEEK	Data since midnight of the Monday of the current week compared (if the comparison is enabled) with the weekly average.
MONTH	Data since midnight of the first day of the current month compared (if the comparison is enabled) with the weekly average.
LAST MONTH	Data related to the previous month compared (if the comparison is enabled) with the monthly average.
YEAR	Data since midnight of the first day of the current year compared (if the comparison is enabled) with the yearly average.
LAST YEAR	Data related to the previous year compared (if the comparison is enabled) with the yearly average.

The values for the selected period are displayed in the form of bars, while the average (always relative to the selected period) is displayed as a line.

To change the order (and, consequently, the color used for the graphs) by which the ANALYZERS are displayed (if more than one) on the CONSUMPTION page, proceed as follows:

- Select "ENERGY > CONSUMPTION" from the ADMINISTRATION menu.
- Press the "EDIT" button (or the "shortcut" besides the name).
- Change the order of the ANALYZERS dragging them to the list, as seen previously for other object types.

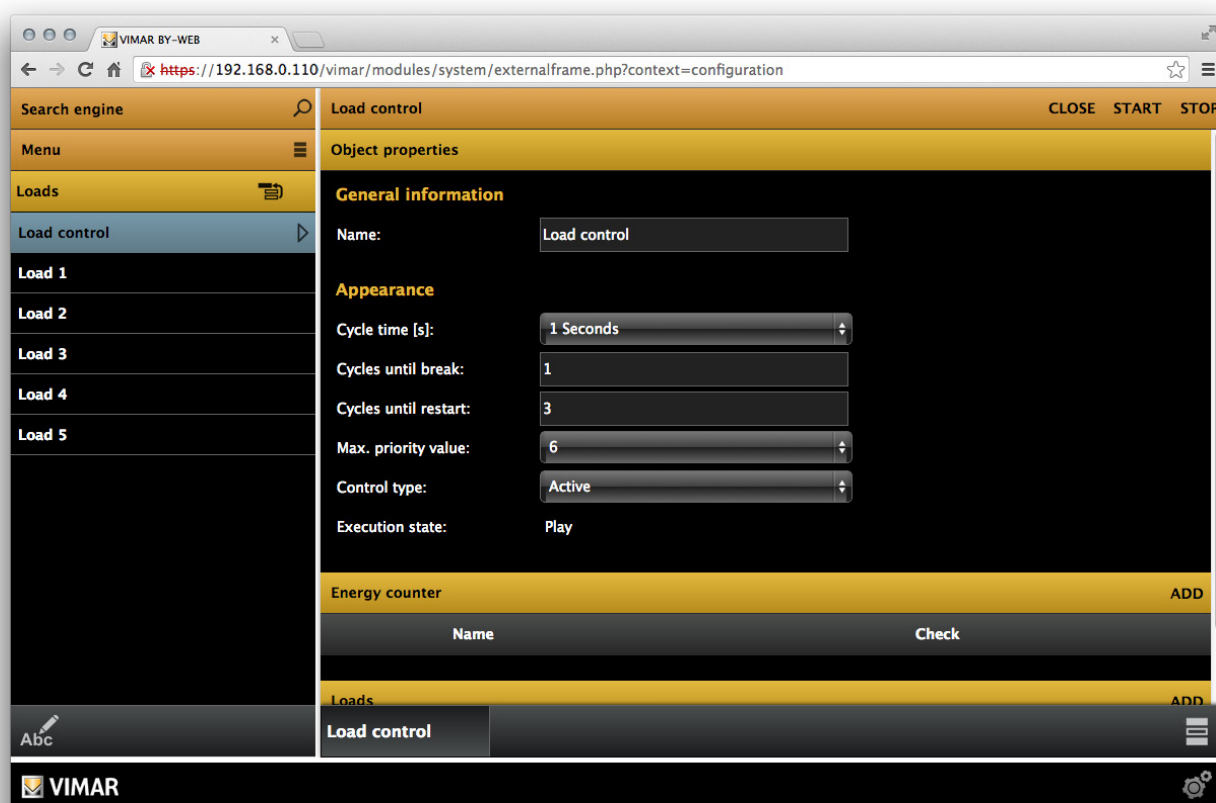
2.13 Load control

2.13.1 General settings

By accessing the "LOADS" section within the "ENERGY" section in administration, it is possible to modify the operating parameters of the CONTROL LOAD, by selecting the namesake item and accessing its tab.

Under OBJECT PROPERTIES it is required to specify the following operating parameters:

CYCLE TIME	Time (in seconds) of the "basic cycle" of the loads control logic, at the end of this timing the absorption value is controlled and compared with the thresholds, to determine what action to take.
CYCLES UNTIL BREAK CYCLES UNTIL RESTART	Number of basic cycles (whose duration depends on the parameters above) that the system waits for, before increasing the priority (thus releasing the next priority loads) if the condition of absorption above threshold, or - vice versa - the number of cycles that the system waits for before reducing the priority persist, by restoring the corresponding loads. Usually a reduced number of cycles is entered for the release, and a high number for the reset, in order to reduce the risk of stress on the utilities, and of creation of a sort of "loop" that does not solve the problem of excessive absorption.
MAX. PRIORITY VALUE	Maximum number of priorities managed by the loads control logic, the system does not rise beyond this number, thus not managing loads with subsequent priority.
CONTROL TYPE	Specify whether the Web Server should actually handle the loads control logic in active mode (default) or passive, in which case, we assume the presence of an external load control device, and the Web Server is limited to displaying the information made available (e.g. on the KNX bus) from the latter.
EXECUTION STATE	Displays the of logic execution status; normally it must always be on "PLAY", but it can be stopped (by pressing the "STOP" button) during configuration, or to properly implement substantial changes to the configuration (e.g., addition of new loads).



The screenshot shows the VIMAR BY-WEB interface for configuring the Load control. The browser address bar shows the URL: <https://192.168.0.110/vimar/modules/system/externalframe.php?context=configuration>. The interface has a sidebar with a search engine, menu, and loads section. The main content area is titled 'Load control' and has tabs for 'Object properties', 'General information', 'Appearance', 'Energy counter', and 'Loads'. The 'Object properties' tab is active, showing the following fields:

- Name: Load control
- Cycle time [s]: 1 Seconds
- Cycles until break: 1
- Cycles until restart: 3
- Max. priority value: 6
- Control type: Active
- Execution state: Play

The 'General information' tab shows the same fields. The 'Appearance' tab shows the same fields. The 'Energy counter' tab shows a table with columns Name and Check. The 'Loads' tab shows a table with columns Name and Check.

2.13.2 Associating an analyzer

To function properly, each load control logic must have an associated ANALYZER (ENERGY COUNTER); to do this:

- Drag a previously configured ANALYZER to the "ENERGY COUNTER" section of the loads control tab (see section above on CONSUMPTION).
- Create the new ANALYZER through the "+" button.

In both cases, the ANALYZER is shown in the list, which contains - in addition to the name of the object - the result of an automatic "check", which occurs if the ANALYZER has all the properties and/or sub-items needed for the proper functioning, as a reference for the loads control logic.

In order to be used as a reference, the ANALYZER must have at least the following properties set correctly:

- Power value (available directly or calculated, as seen above)
- Minimum/maximum power threshold, specified as "static" value or (preferably) as sub-objects
- "Priority" sub-object

It is also preferable that also the "threshold exceeded" sub-object is available, which is automatically set to 1 when the logic is involved to release the utilities, and reset to 0 when all the loads have been reset when the alarm condition is stopped.

During the operation of the logic, the value associated as "POWER - MEASURED VALUE" with the analyzer is used as a reference and compared with the power thresholds; if the measured value exceeds the maximum threshold, the logic is involved (after the number of release cycles set as seen above) and it brings the work priority (which "at rest" is 0) to 1, releasing all the loads associated with that priority.

The alarm condition continues until the value of the measured power falls below the lower threshold; during all this time, the system continues to increase the priority - and to release the corresponding loads - based on the cycle time and on the number of release cycles.

At the end of the alarm condition, the logic proceeds in the opposite way, reducing the priority gradually up to 0 on the basis of the cycle time and of the number of reset cycles, activating the utilities previously deactivated in reverse order.

Note: the loads control logic is based on a double threshold to avoid phenomena of "hysteresis", i.e. the continuous insertion and removal of loads due to the fact that, as soon as a load is released, the absorption falls below the alarm threshold.

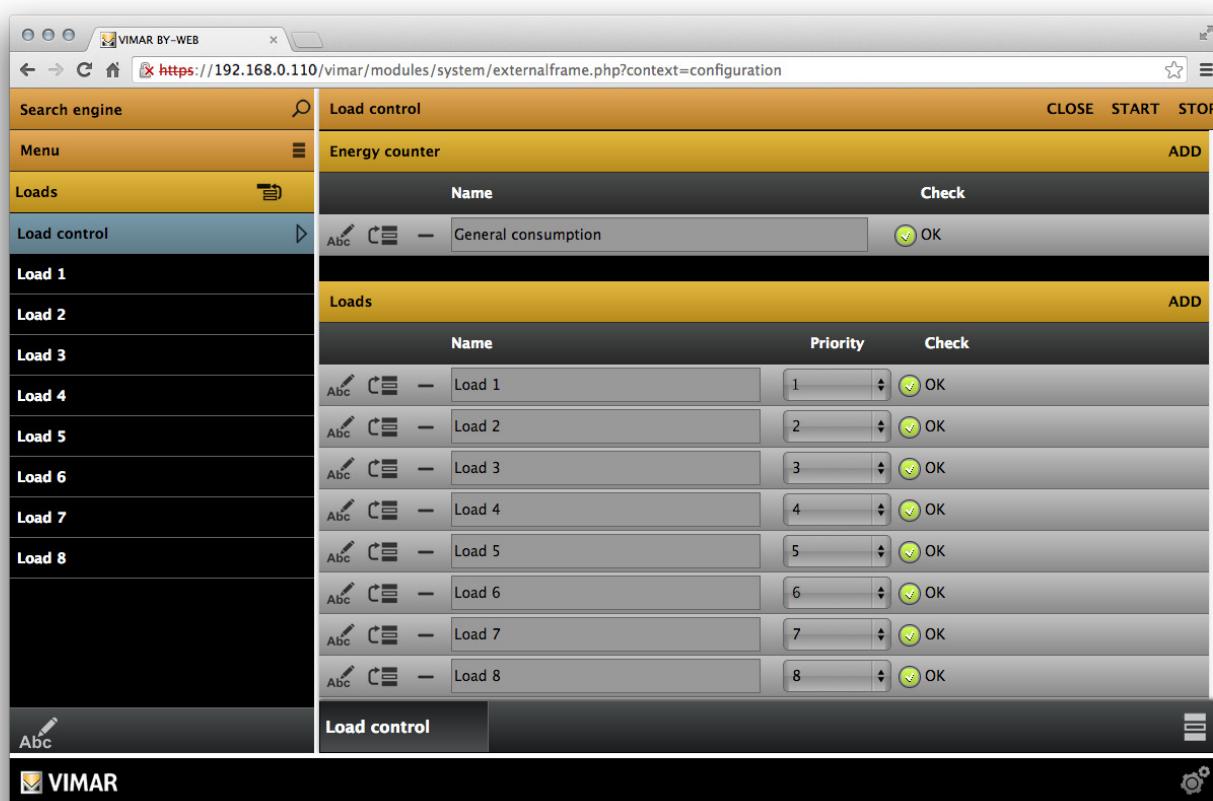
2.13.3 Association of one or more loads

Through the "LOADS" section of the load control tab you can associate one or more ANALYZERS that are treated as utilities (loads) to be released/reset based on the comparison between the power consumption and the thresholds, as described above.

Also in this case you can:

- Drag a previously configured ANALYZER here
- Create the new ANALYZER through the "+" button.

Even in this case, the system checks that the loads have all the properties set correctly; otherwise (as typically happens by creating a new object from scratch) you need to enter the tab and complete the set of information provided.



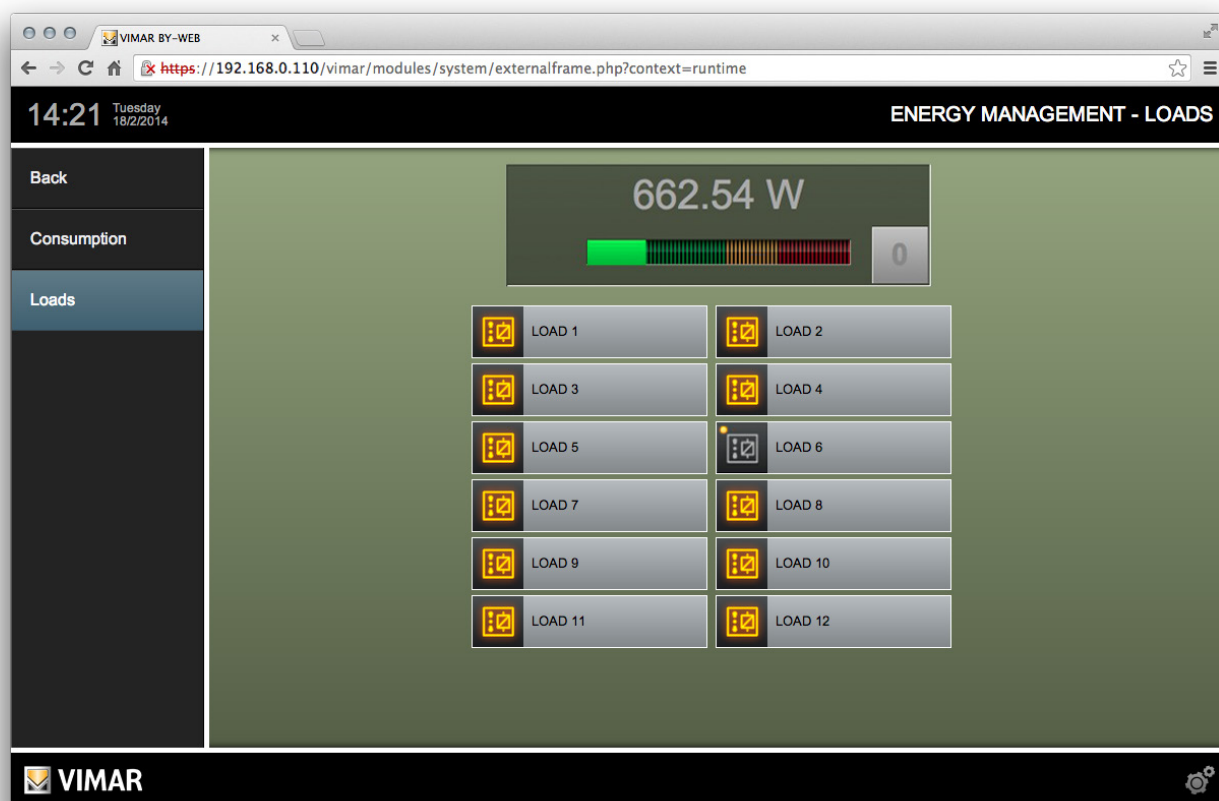
The requested information is absolutely similar to the one previously seen for the ANALYZER; the only difference is the fact that you need to associate (in the form of KNX objects or variables created ad-hoc) the following sub-objects:

ON/OFF	<p>Actual object that is controlled by the loads control logic to enable or disable the load. it can be a 1bit or 2bit KNX object; in the first case the corresponding actuator is simply turned on or off by the Web Server (with the risk that a subsequent external intervention can reactivate it), in the second it is forced to OFF, with a twofold advantage:</p> <ul style="list-style-type: none"> • The utility cannot be activated by normal means such as through commands or actions in the field of the VISUALISATION of the Web Server. • The utility keeps the memory of his status before the intervention of the loads control logic.
AUTO/MANUAL	<p>If present, it allows the user - directly from the VISUALISATION - to determine whether a load must be handled by the load control (AUTO) or manually, in which case the loads control logic ignores this utility, both during the release and the reset.</p>

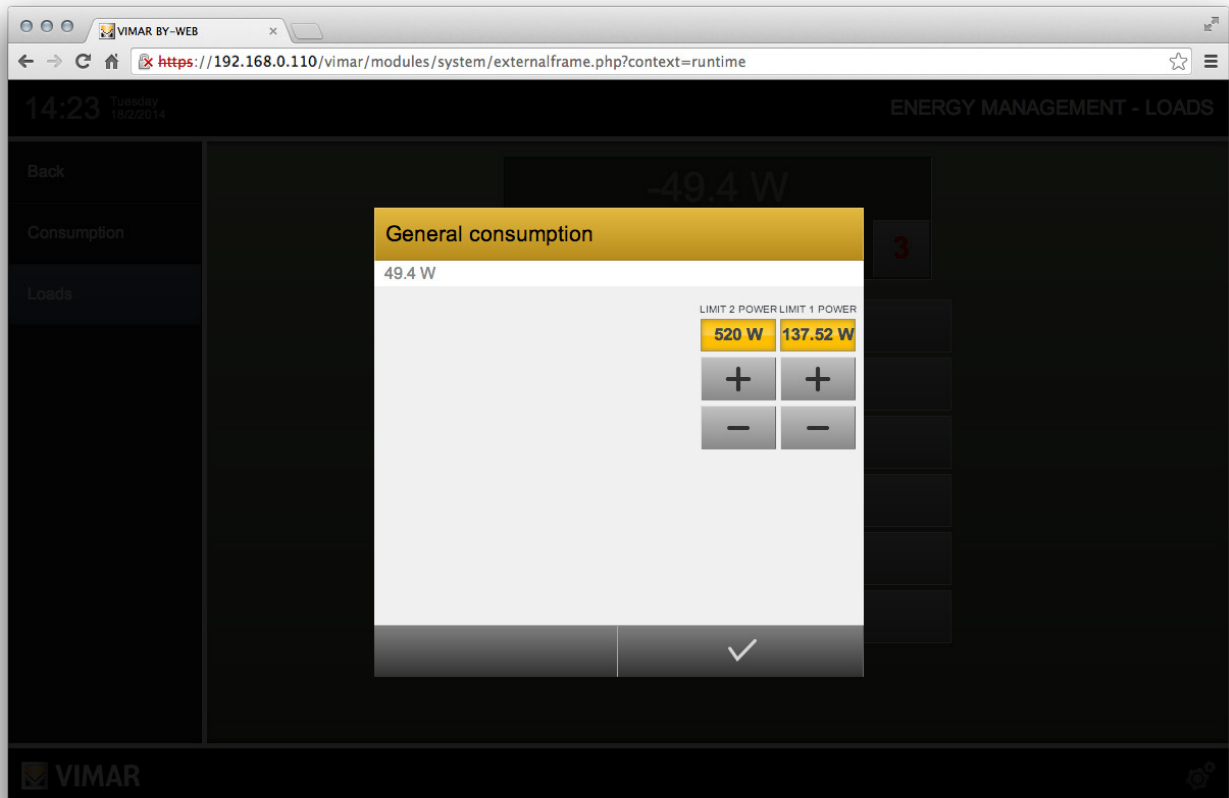
Note: after modifying the set of loads associated with a load control, you must stop and start it again using the appropriate buttons on the tab, so that it correctly receives the new configuration.

2.13.4 Viewing in the visualisation

After configuring the loads control logic, the user can monitor and manage it through the "LOADS" within the "ENERGY" section of the NAVIGATION MENU, which looks like the following example figure:



By clicking on the bar that indicates the absorption in real time, the user can change the reference thresholds on which the loads control logic is based through a pop-up similar to the following:

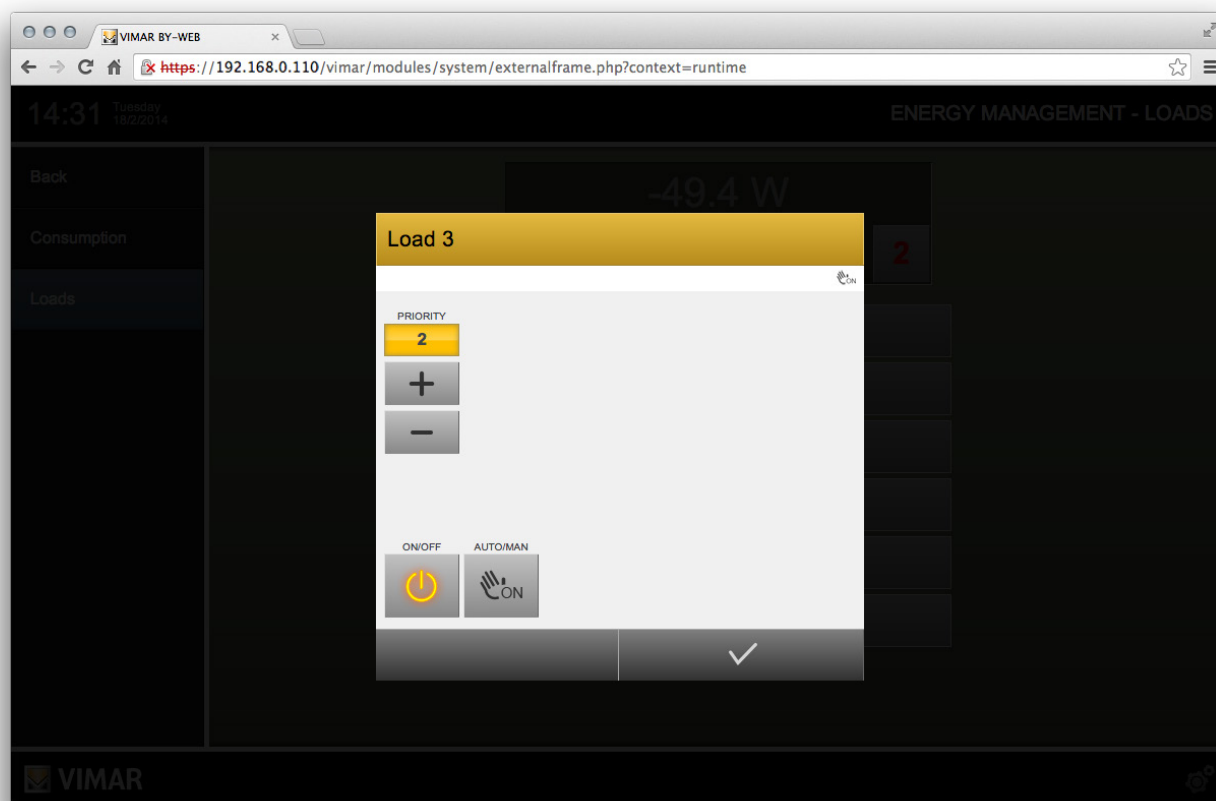


The number next to the bar of absorption indicates the priority of the current LOAD CONTROL: If the value is "0", the system is at rest, vice versa, the logic is turning off loads with priority equal to or less than the number shown in this box. The priority increases (up to the maximum value specified in administration) until the consumption of energy does not falls below the lower threshold.

Clicking on a load, conversely, you can set the following parameters:

PRIORITY	Specifies the priority of the load, loads with lower priority are removed first.
ON/OFF	Allows manual control of the utility.
AUTO/MAN	Allows you to specify if the load is to be handled by the LOAD CONTROL (AUTO) or in MANUAL mode.

The MANUAL status of a load is shown by an indicator next to its status icon.



2.14. Users and permissions

2.14.1 Users

The USERS are the login accounts to the supervision, identified by a "username" and a "password". Users are not keepers of permissions and privileges, but they can belong to one or more USER GROUPS determining the level of access to the software.

The Web Server provides preset Users listed in section 1.5 "Web Server Default Users" at the beginning of this manual.

To create a new user, proceed as follows:

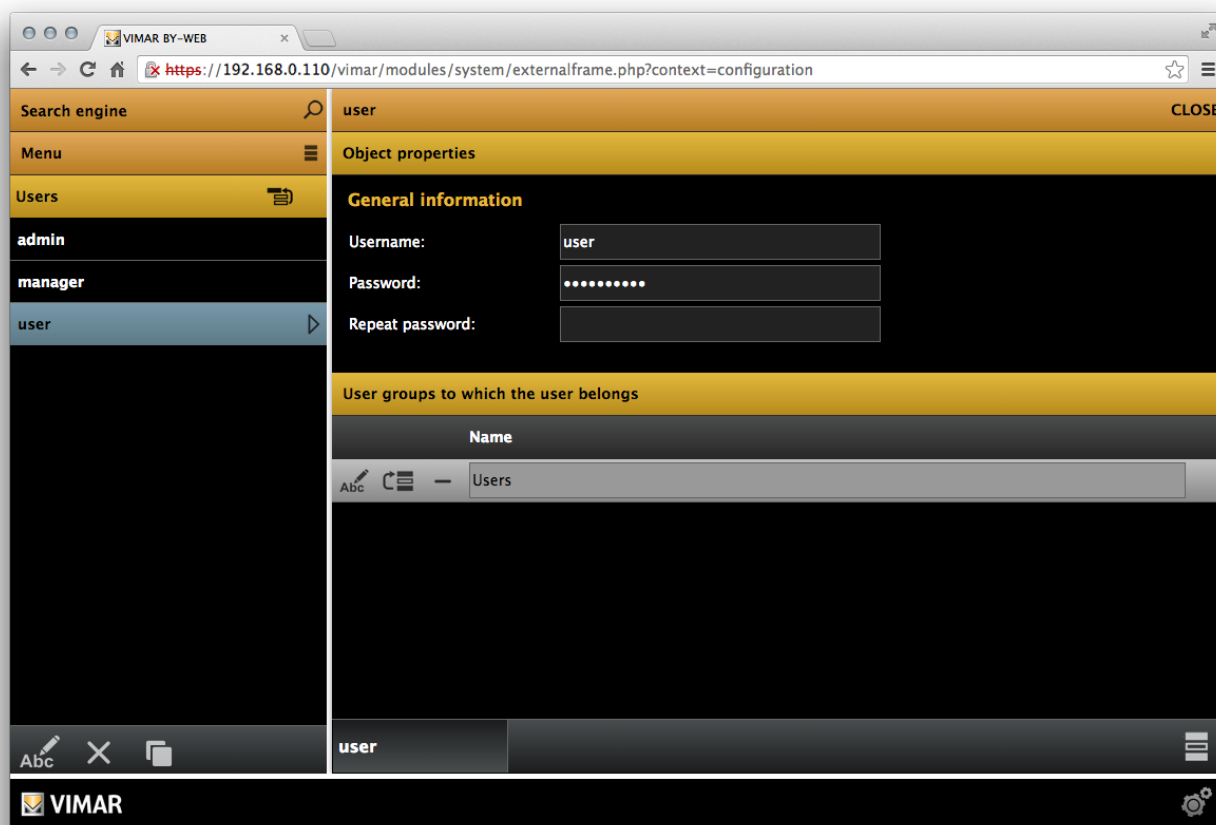
- Navigate to the "USERS AND PERMISSIONS" section of the ADMINISTRATION section.
- Navigate to the "USER" sub-section.
- Press the "+" button in the TOOLBAR.
- Select the new object and access to its tab by using the "shortcut" besides the name or, alternatively, by pressing the "EDIT" button in the TOOLBAR.

The required details are:

USERNAME: The name used to access the system - must be composed of alphanumeric characters with no spaces or special characters.

DESCRIPTION: Descriptive text for the user (not used for logging in and displayed only if by selecting the EXPERT mode from the context menu).

PASSWORD: Password to access the system - must be composed of alphanumeric characters with no spaces. The REPEAT PASSWORD field below serves to confirm the password in the PASSWORD field (since the alphanumeric characters of the password are not displayed for security reasons)



On the user page there is the "User Groups the current user belongs to" section, under which the user associated with the user groups appear, which determine access permissions.

If you do not see the area below the "User Groups the current user belongs to" bar, click on the toolbar to display the underside.

The association of users to user groups should be carried out starting from the user groups pages, as will be described in the following chapter.

2.14.2 User groups

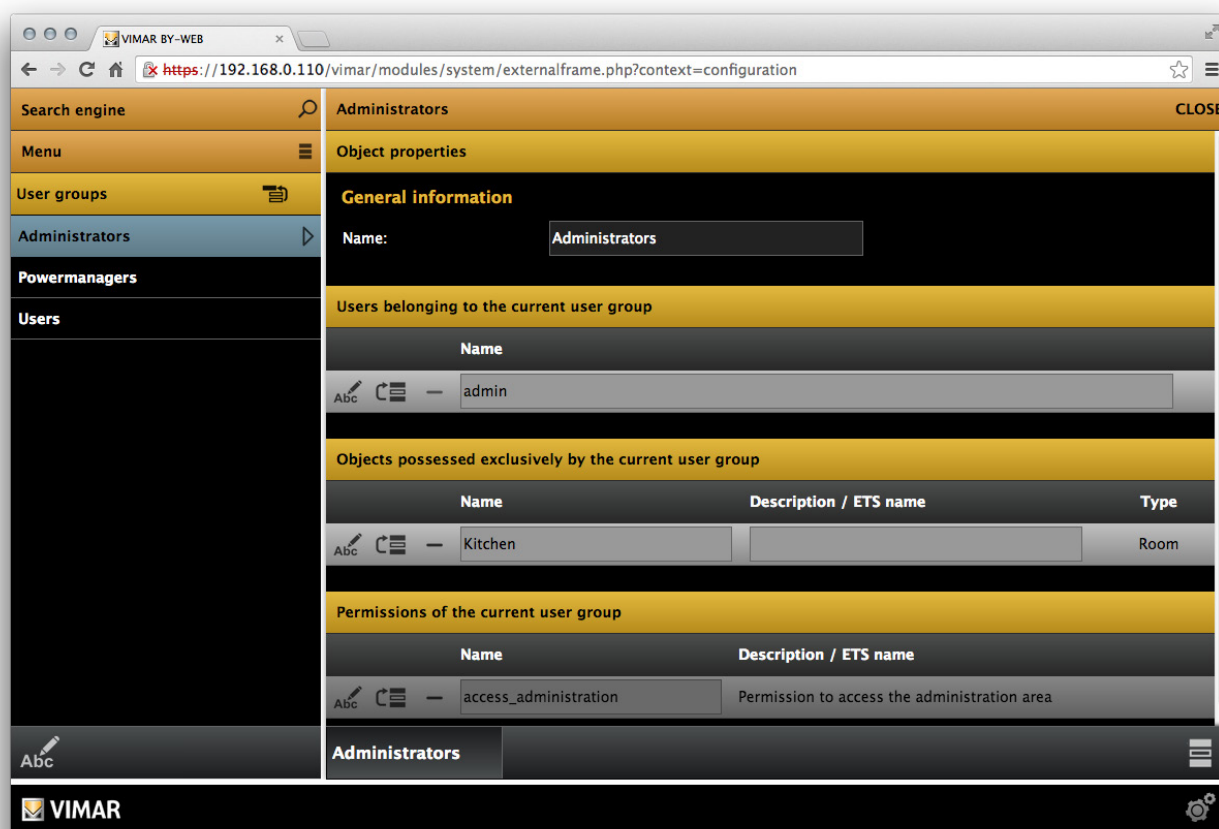
The management of the "User Groups" is done from the USER GROUPS menu item in the USERS AND PERMISSIONS menu of the ADMINISTRATION section.

By accessing the tab of a USER GROUP - either default or manually created - (in addition to specifying the name and a description if the EXPERT mode is set in the context menu) it is possible to determine which users are part of it, dragging them from the search engine in the "USER GROUPS TO WHICH THE USER BELONGS" special section.

To associate a user group to a user, proceed as follows:

- Navigate to the "USERS AND PERMISSIONS" section of the ADMINISTRATION section.
- Navigate to the "USER GROUPS" sub-section.
- Select the user group to which you want to associate the user (or users) and access to its tab by using the "shortcut" besides the name or, alternatively, by pressing the "EDIT" button in the TOOLBAR.
- Use the SEARCH ENGINE function to display the name of the user you want to associate with or open the menu item USERS of the side menu. Drag the name of the user to the grey bar of the "USER GROUPS TO WHICH THE USER BELONGS" section.
- Repeat the process for all users that need to be associated with the current user group.

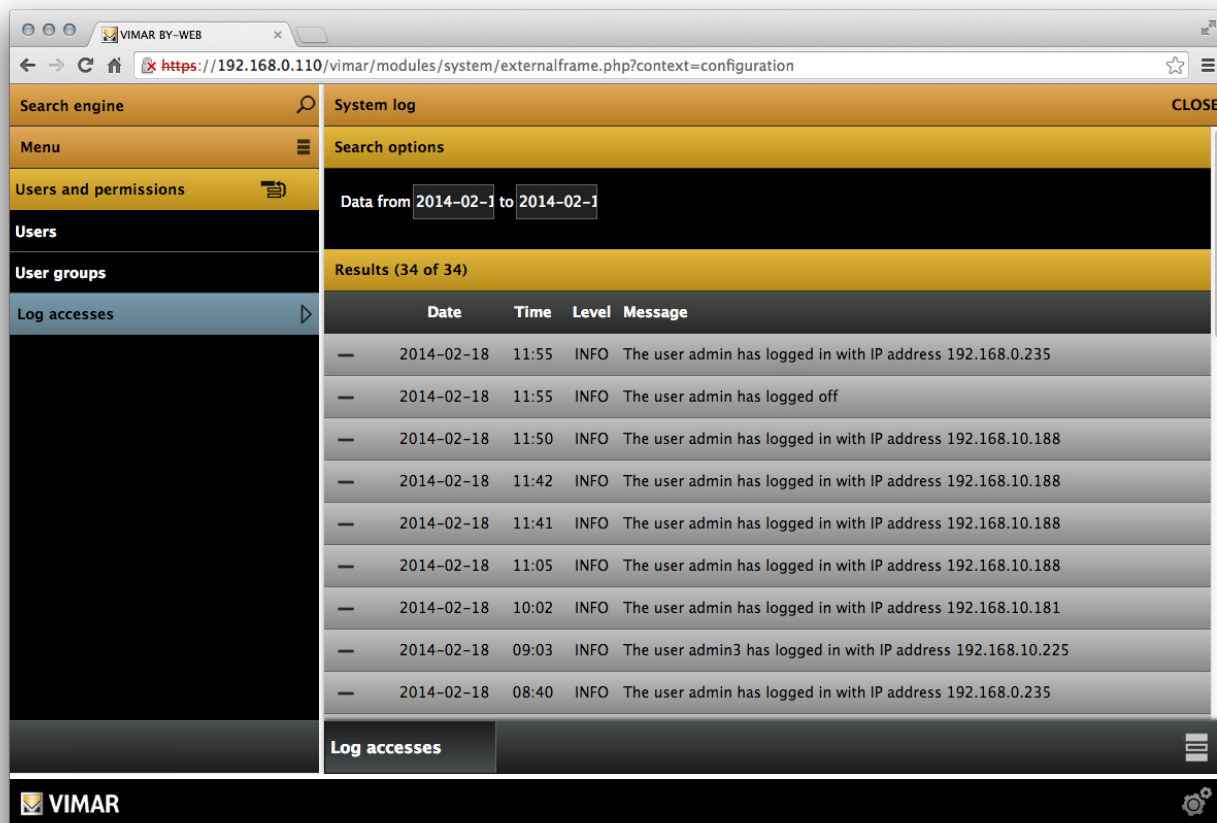
You can also assign to the USER GROUP one or more supervision objects, making them "private" and only accessible to USERS of the USERS GROUP: to do this, simply drag the desired objects (after they have been identified by the SEARCH ENGINE function) in the section "OBJECTS POSSESSED EXCLUSIVELY BY THE CURRENT USER GROUP".



Note: once an object has been assigned to a user group, it is no longer possible to use it by users outside the group itself, so it is important to pay attention to these operations, to avoid situations in which you are no longer able to use objects or modify these settings. For this purpose, it is advisable to always associate the "private" objects to the user group of the ADMINISTRATORS (so that "admin" can always work on them), and eventually - in addition - to the other user groups you want to control those objects.

2.14.3 Access log

This page is available by selecting the LOG ACCESSES item of the USERS AND PERMISSIONS menu of the ADMINISTRATION section, and it allows to consult the accesses to the Web server by different users; you can filter your results by entering a range of dates. The format of the date to be included in the fields of the definition of the range of dates is as follows: YYYY-MM-DD (year-month-day).



System log CLOSE

Search options

Data from to

Results (34 of 34)

Date	Time	Level	Message
2014-02-18	11:55	INFO	The user admin has logged in with IP address 192.168.0.235
2014-02-18	11:55	INFO	The user admin has logged off
2014-02-18	11:50	INFO	The user admin has logged in with IP address 192.168.10.188
2014-02-18	11:42	INFO	The user admin has logged in with IP address 192.168.10.188
2014-02-18	11:41	INFO	The user admin has logged in with IP address 192.168.10.188
2014-02-18	11:05	INFO	The user admin has logged in with IP address 192.168.10.188
2014-02-18	10:02	INFO	The user admin has logged in with IP address 192.168.10.181
2014-02-18	09:03	INFO	The user admin3 has logged in with IP address 192.168.10.225
2014-02-18	08:40	INFO	The user admin has logged in with IP address 192.168.0.235

Log accesses

VIMAR

3. USE THE VISUALISATION SECTION

3. Use - The Visualisation section

The use of the Web Server by the user is done through the interface named VISUALISATION, from which it is possible to carry out the supervision of the home automation system. The VISUALISATION section is the one that appears after the user access to the Web Server.

Note: From the ADMINISTRATION section you can go to the VISUALISATION section by selecting the appropriate item in the context menu.

3.1. Access to the Web Server

To access the Web Server, open a web browser and type the URL that identifies the Web Server (data provided by your network administrator, who carried out the configuration of the Web Server, the Internet router and any dynamic DNS services):

The default IP address of the Web Server is:

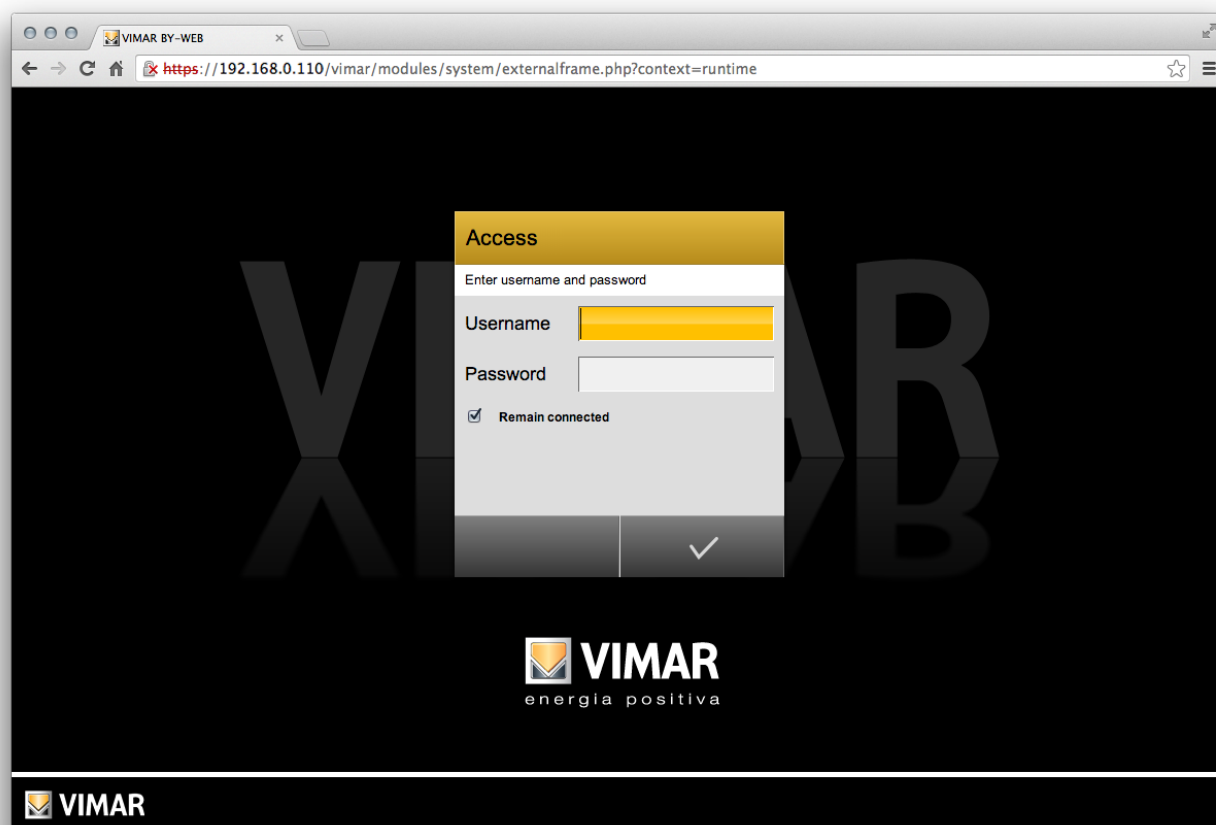
<https://192.168.0.110>

For better user experience, we recommend using the following browsers:

- **GOOGLE CHROME**
- **APPLE SAFARI 6**

The functionality of the Web Server may not be compatible with different browsers.

By accessing the Web server for the first time, the browser downloads a set of information necessary for browsing; wait for the completion of this operation (the progress of which is indicated at the bottom right of the screen) until you see the following window.



Enter your login credentials by filling out the following fields.

USERNAME
PASSWORD

At the bottom of the window for entering the login credentials is the "Remain connected" checkbox.

Ticking the checkbox enables to store data, which allows faster subsequent access to the Web Server, if the following conditions are met:

- The IP address of the client where the access is taking place has not changed.
- The credentials of the user who logs in have not changed.
- At the end of the previous connection to the Web Server, the web browser has been shut down without quitting the Web Server session via the "LOGOUT" button.

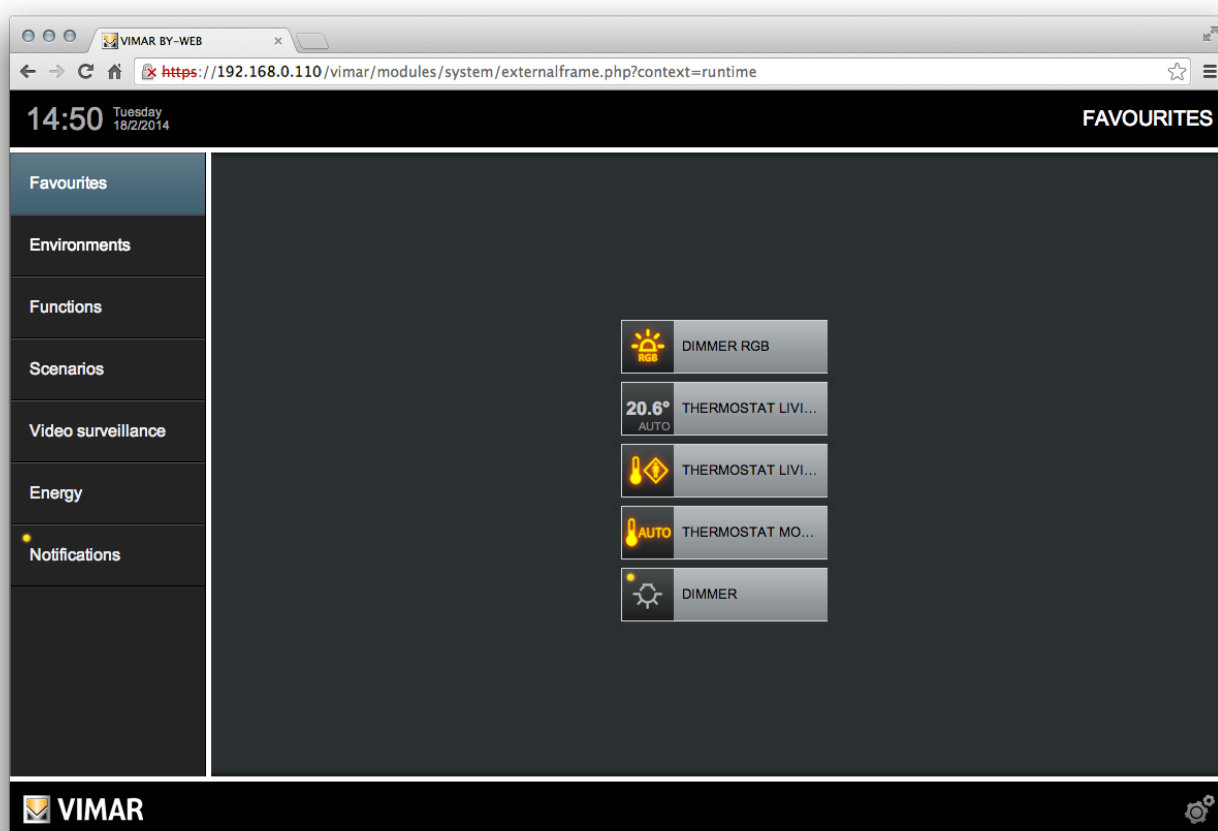
The first access to the Web Server after enabling this checkbox, provides additional time for storing the requested data.

If the above conditions are met, the login window for entering the login credentials to the Web Server is not displayed at the next access, and access to the Web Server functionality is faster.

If you exit the Web Server using the "LOGOUT" button, the window for entering the login credentials will appear at the next login, and the user data will be stored again.

Important: access to different parts of the user interface of the Web Server depends on the permissions associated with the user. If a user does not have the sufficient permission to perform a desired management, contact the administrator of the Web server for testing and possible modification of the privileges assigned to your account to access the Web Server.

After completion of the loading phase of the data the following screen appears (the devices shown in the pictures in this manual depend on the specific configuration of the system and must therefore be regarded as an example).

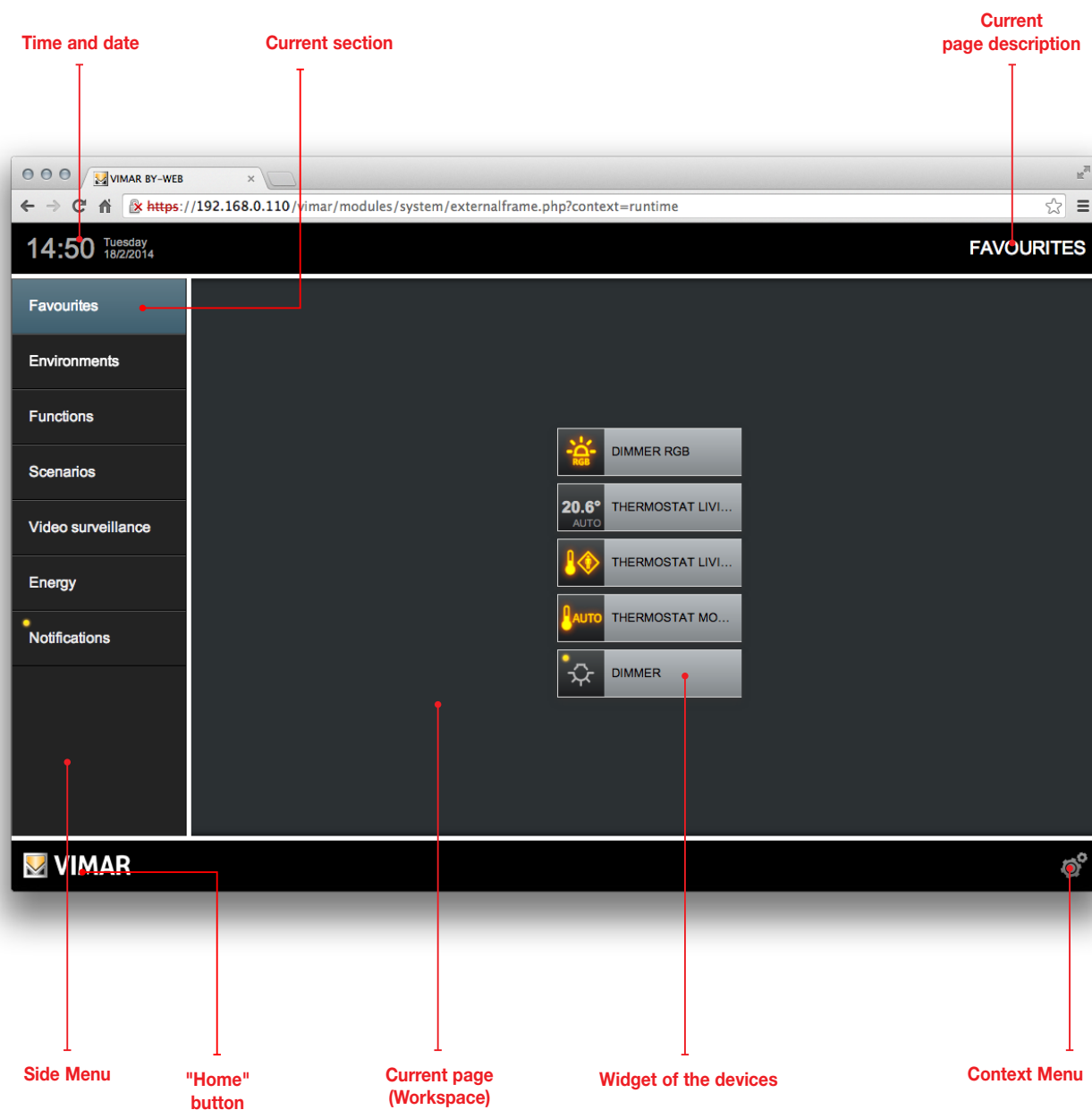


3.2. Overview

3.2.1 General Layout

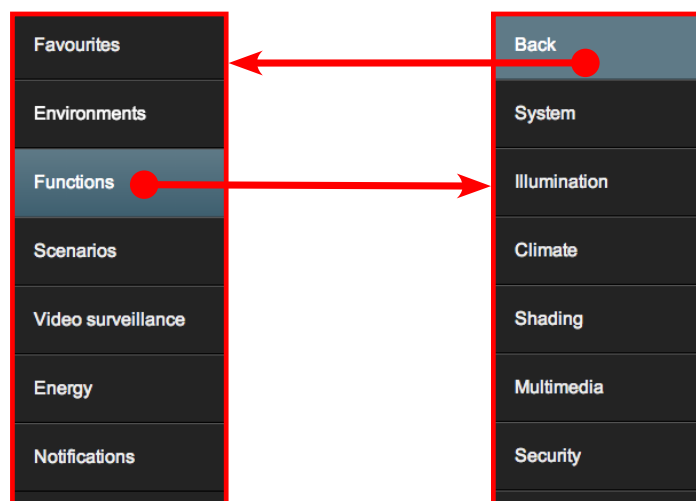
The following figure shows an example of the VISUALISATION environment of the Web Server::

Note: after logging on to the Web Server, the FAVOURITES page is always displayed.



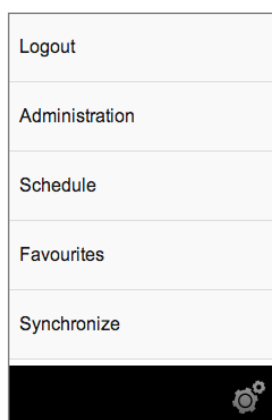
3.2.2 Side Menu

Through the side menu, you can access all pages of the Web Server for monitoring the system. The menu is structured with hierarchical levels. Selecting a menu item that has no further sub-menus, the Web server displays in the work area, the corresponding page (whose description is displayed in the right part of the top horizontal bar). Selecting a menu item that has a sub-menu, in the menu area the corresponding submenu is displayed (while in the work area remains the last page displayed). When you see a sub-menu, the first menu item is always "BACK": pressing the BACK menu item displays the top-level menu. The following figures illustrate the above..



3.2.3 Context Menu

The context menu is displayed by selecting the corresponding icon always visible on the right side of the lower horizontal bar. The items displayed in the context menu are different depending on the current page and the permissions associated with the user. By way of example here is the context menu of a Visualisation page that represents an Environment that appears to an Admin user.



Described below are the various items that can appear in the context menu:

Logout	Try closing the current user session (logout). After exiting the login page is shown.
Administration	This item appears navigating the visualisation section of the Web Server Select this item to access the Administration section (if the user has the necessary permissions).
Edit background	This item appears only if the current page is the map view of an environment. This function allows you to change the position of the widget of the devices on the page and to enable/disable the display of its descriptive label.
Schedule	With this item you can schedule the actions/commands on the widget on the page, which have been previously enabled with the ability to be scheduled (using the appropriate Administration section).
Favourites	This item allows you to populate the page FAVOURITES page with the widgets on the current page.
Synchronize	This function deletes the data in the cache of the browser and reloads the initial page.

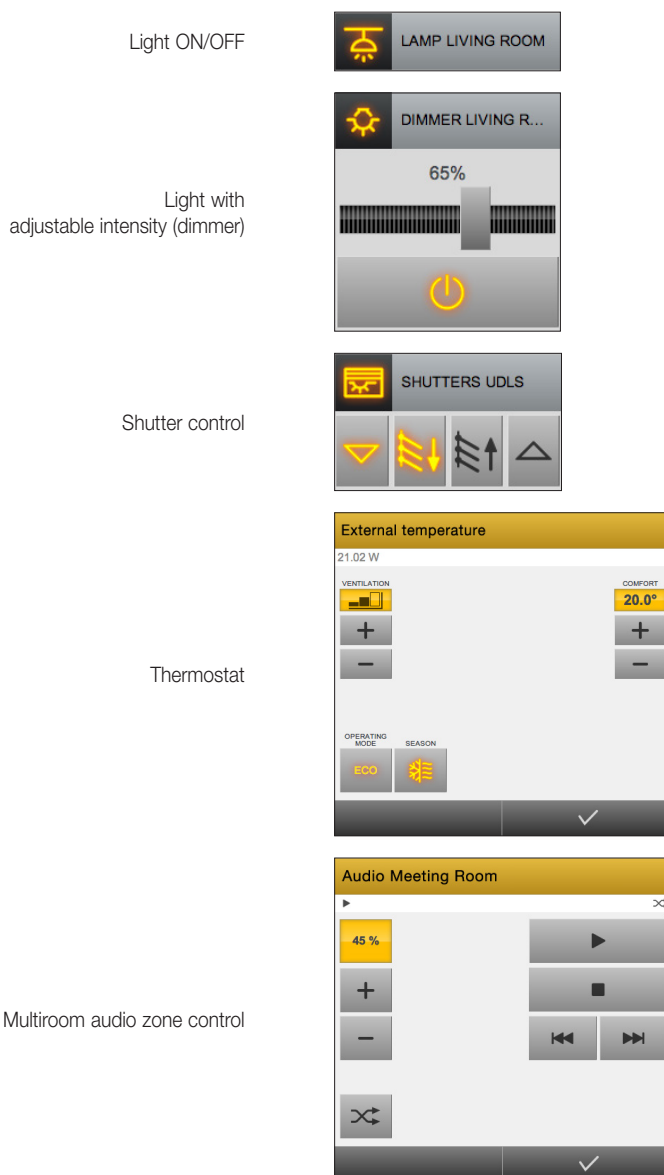
3.2.4 "Home" button

The Home button (Vimar logo) loads the initial page of the Web Server.

3.2.5 Device widgets

Objects placed within an environment (or Function) are presented to the user in the form of "widgets" that allow to see the updated status of the home automation function and interact with it.

Depending on the type of function, the widgets can be simple (such as commands for the lights ON/OFF, which provide for the direct click on the icon) or articulated (in which case the widget expands to offer more command options), or they can open a pop-up containing all the data necessary for a complete interaction; the following figures exemplify the types of widgets more commonly used:

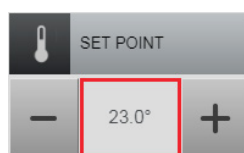


All widgets provide for the "compact" display within the pages. The widgets of simple objects (ON/OFF) provide only this type of display, while the widgets of more complex objects also provide an "expanded" widget, which appears when you select (click) the "compact" widget.

3.2.5.1 Keyboard entry of values in individual widgets

From the version 2.0 of the Web Server software, it is also possible to set data on individual numerical objects using the keyboard. This makes it possible to speed up the insertion of values very different from the current value, with respect to the use of the "+" and "-" buttons.

e.g. Consider the following single object for setting a temperature setpoint:



To enter a numerical value using the keyboard:

1. Click with the left mouse button (or touch the screen in devices equipped with a touch screen) in the area highlighted by the red rectangle: a window appears for entering the numeric data.
2. Enter the numerical value in the keyboard and press the confirmation button to enter the data, otherwise press the cancel button to cancel the data entry action.

NOTE: The numeric format must fit within the set of values allowed for the specific object.

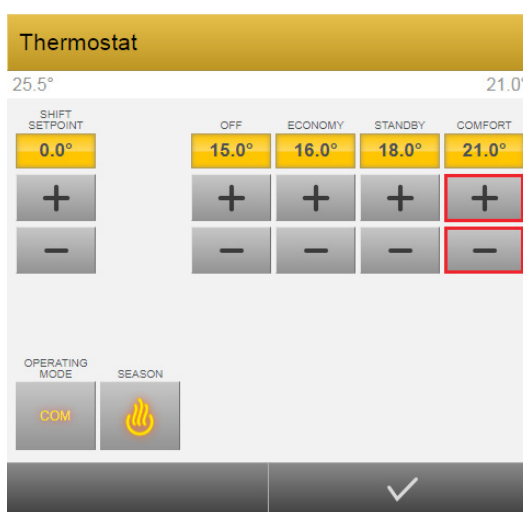
3.2.5.2 Keyboard entry of values in complex widgets

From the version 2.0 of the Web Server software, it is also possible to set data on individual numerical objects, inserted in complex objects, using the keyboard.

This makes it possible to speed up the insertion of values very different from the current value, with respect to the use of the "+" and "-" buttons.

IMPORTANT: this feature is available by accessing to the Web Server from a PC browser, from the By-web app for Android and from 21553.2; it is not available by accessing to the web server from the By-web app for iOS or 21553.1.

Consider, for example, the following complex object (thermostat), in which there is also the single object for setting the temperature setpoint of comfort mode for heating: graphically this object is represented by the two "+" and "-" buttons highlighted by the red rectangles.



To enter a numerical value using the keyboard:

- By accessing to the Web Server from a PC browser:
 1. Click with the right mouse button on one of the "+" or "-" buttons corresponding to the data to be set: a window appears for entering the data from the keyboard.
 2. Enter the numerical value in the keyboard and press the confirmation button to enter the data, otherwise press the cancel button to cancel the data entry action.

NOTE: The numeric format must fit within the set of values allowed for the specific object.
- By accessing to the Web Server from a Vimar 21553.2 or from the By-web app for Android (on mobile device):
 1. Press and hold in the area of one of the "+" or "-" buttons corresponding to the data to be set: a window appears for entering the data using the keyboard.
 2. Enter the numerical value in the keyboard and press the confirmation button to enter the data, otherwise press the cancel button to cancel the data entry action.

NOTE: The numeric format must fit within the set of values allowed for the specific object.

3.3 The Favourites page

The FAVOURITES page is the page that is loaded after you log on to the Web Server, and it is designed to be able to quickly access the most frequent settings.

To place the widget (object) of a device in a page of the Visualisation section on the FAVOURITES page, proceed as follows:

- Open the page with the widget.
- Select "FAVOURITES" from the context menu.
- Click the desired widget (as described in the help text at the bottom of the page). After the click the current page is displayed and the selected widget has been inserted into the FAVOURITES page. Any objects already present in the FAVOURITES are not selectable.
- Repeat this procedure for all the widgets that you want to insert on the FAVOURITES page.

To remove an object from the FAVOURITES just go to the favourites page and maintain a procedure similar to the one just described:

- Open the FAVOURITES page.
- Select "FAVOURITES" from the context menu.
- Click the widget you want to remove from the FAVOURITES page.
- Repeat this procedure for all the widgets that you want to remove from the FAVOURITES page.

3.4 Environments

3.4.1 Introduction

The Web Server allows access to the devices of your home automation system according to two distinct criteria: the "view" by ENVIRONMENTS allows you to manage the functions according to their location in the building, while the "view" and by FUNCTIONS and allows direct access to all functions of the same type, regardless of where they are located in the building.

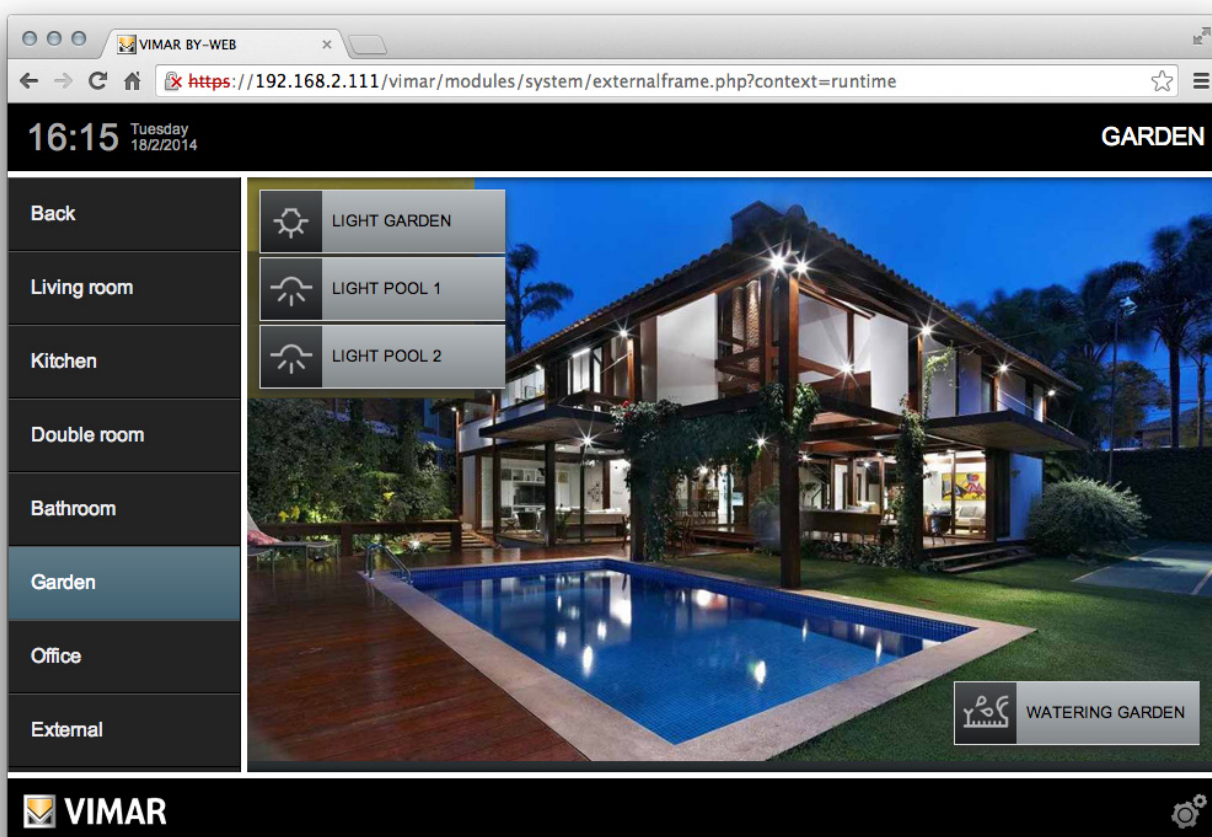
The list of ENVIRONMENTS is customized by the installer according to the structure of the building and home automation system; it may also contain pages consisting of sets of functions not necessarily connected to an environment of the building, (virtual environments) and it can contain environments itself. The list of FUNCTIONS provides a fixed number of types. No new types can be added, the expected ones cannot be deleted, but you can customize the name; you can then customize the Functions menu items according to the specific needs of the system.

In the chapters that follow we will describe the view by ENVIRONMENTS.

3.4.2 Navigation between environment and sub-environments

Based on the number and type of environments in the building, the supervision can be arranged on one or more "levels".

In the case of navigation to a single level, all environments are readily available by selecting "ENVIRONMENTS" in the side menu. In this case, selecting an item from that list will show the corresponding page:



By clicking "BACK" you can return to the list of environments, and from there you can select another item or return to the main level.

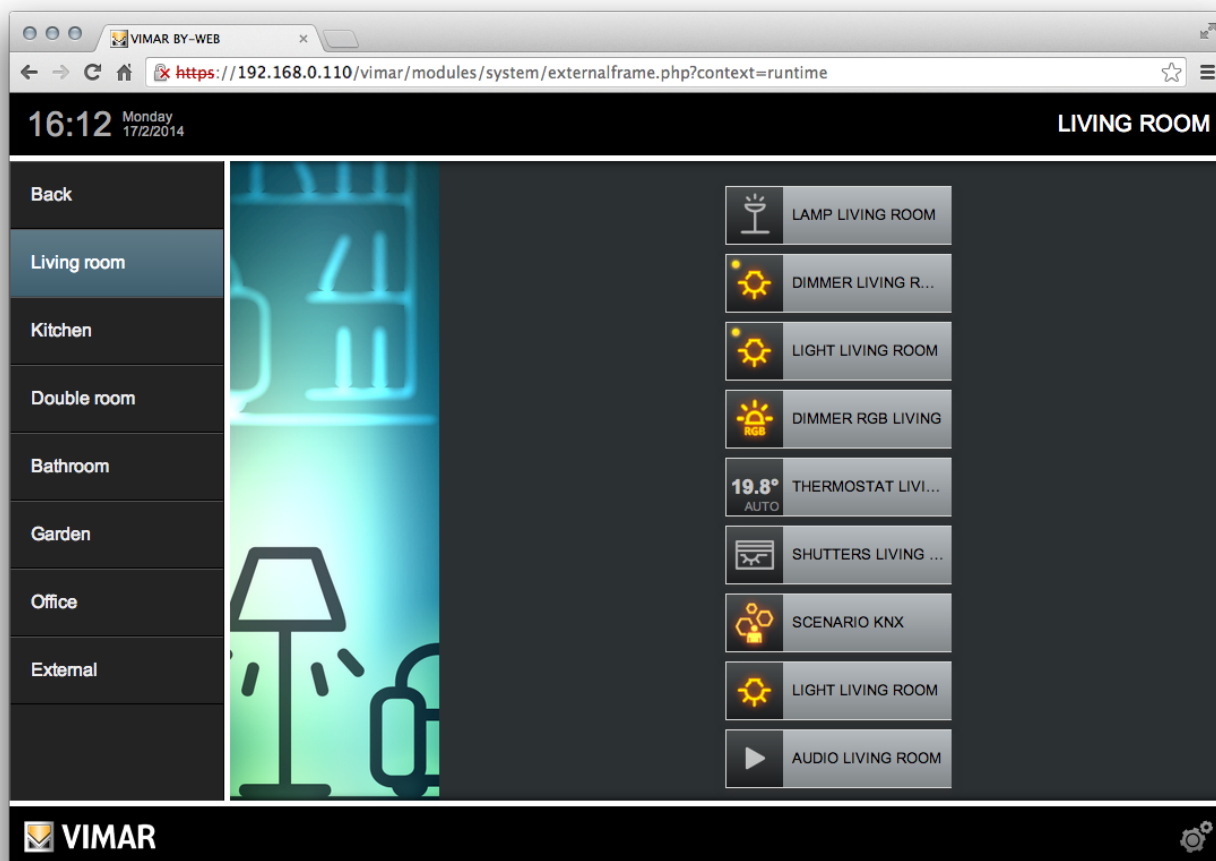
Conversely, organizing the navigation on multiple levels, accessing a first level environment the menu shows a list of sub-environments; if the top-level environment has been configured to display information on the main page, it is loaded and you can manage its content. Otherwise, the menu shows the list of sub-environments without changing the content in the main area of the page. The "BACK" button can in all cases be traced back through menu items to the main one.

The Environments page has two modes of display of the objects it contains: the grid mode and the map mode. These display modes are described in the following chapters.

3.4.3 Environments grid view

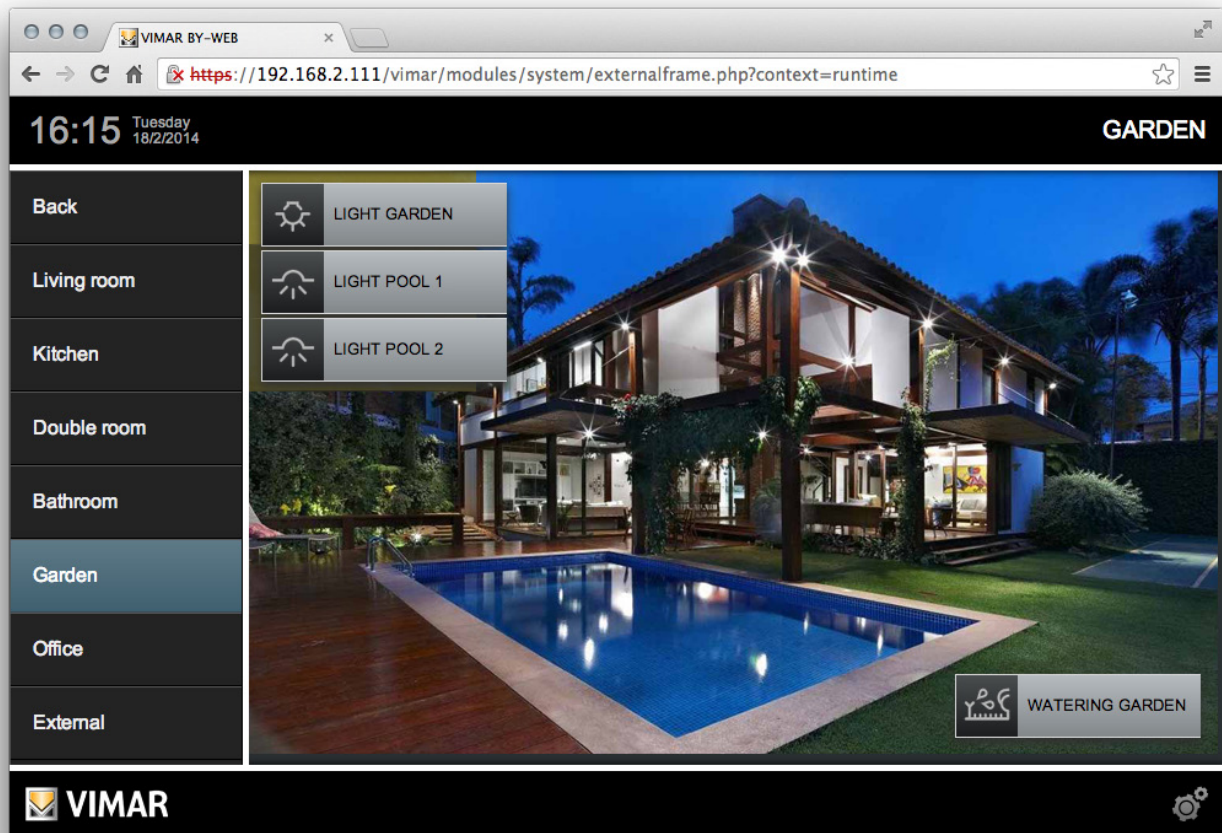
The environments grid view provides a tabular arrangement of the objects on the page. If the number of objects exceeds those than can be displayed on a single page you can scroll through the page. On the left side of the page is an area to display an image (The presence and the choice of the image must be made in the Administration section).

The arrangement of objects is performed automatically by the Web Server depending on the width of the browser window.



3.4.4 Environments map view

The environments can be configured as an alternative to the GRID view presented above, to present their content in the form of MAP, in this case the objects are positioned directly above a background image, as illustrated in the following figure.



Under normal conditions, this view shows only the icon (and, in some cases, the value reported under it) pressing on it will expand the widget, which contains the same information in the GRID view. Pressing on the title of the widget or going out of the page, the widget is closed again, the widget also closes automatically after a few seconds.

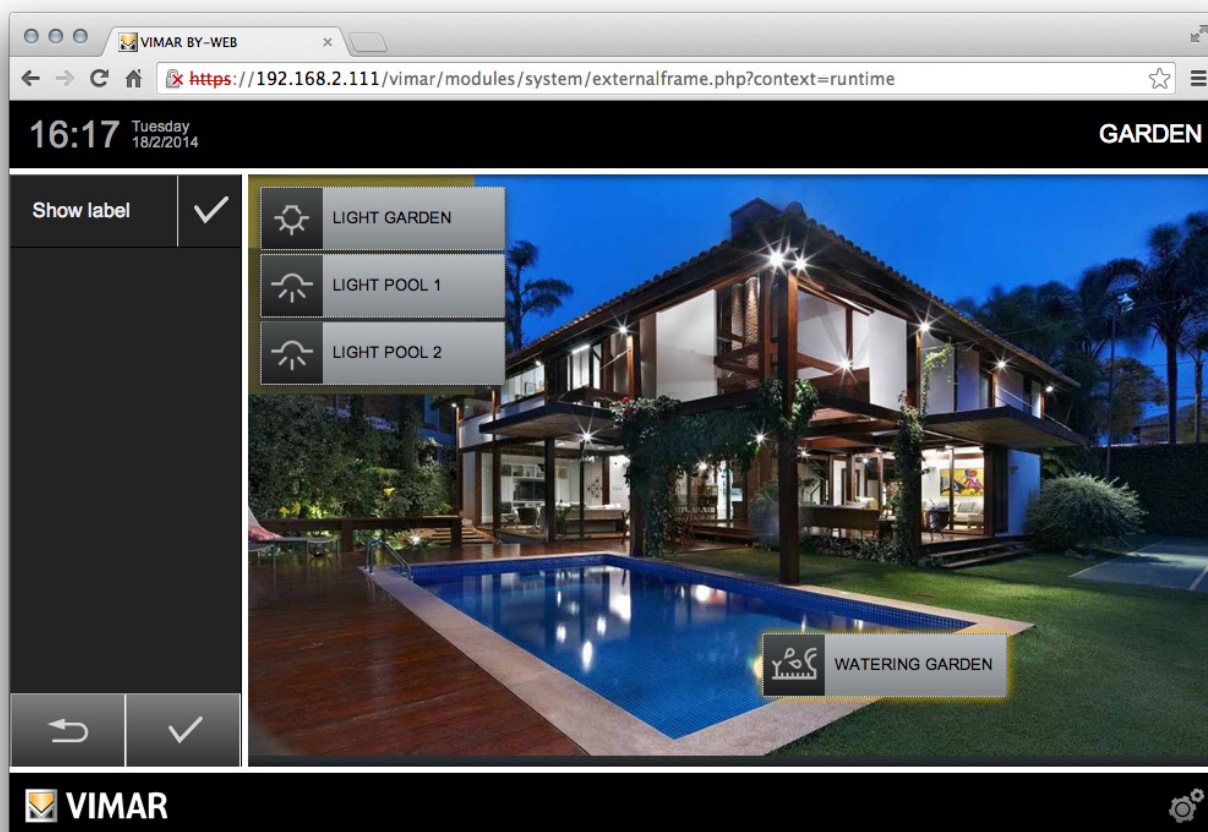
Some objects (e.g. light ON/OFF) have a slightly different behavior when displayed in a graphical map: when clicking the icon, the on / off command is directly sent according to the current status (if the light is on it is turned off, and vice versa), this allows a more rapid management of the objects that are most frequently used, and which have only two possible statuses. The ON/OFF status is highlighted by the color of the icon of the widget (if a correct configuration has been made).

3.4.4.1 Customizing the map view of an environment

If the user has the necessary permissions, he can access the page for customizing the map view of the current environment. It is possible to change the position of the widgets on the page and enable or disable the display of the descriptive text label for each widget of the current page.

To customize the map view of the current environment, proceed as follows:

- Select "EDIT BACKGROUND" from the context menu.



Initially, all objects are placed in the upper left of the page, select the first object by clicking its icon and drag it to the desired location within the page, and then repeat the operation for all objects. The currently selected object is highlighted with a yellow border, and you can select - and drag - more than one item at the same time by holding down the CTRL key while selecting.

When one or more objects are selected, you can also enable or disable the display of the descriptive text label in the "collapsed" view of the widget. To do this, select the widget you want and press the "check" symbol of the "SHOW LABEL" item that is present at the top of the menu (the display status of the label is indicated by the color of the check mark).

To confirm the changes made, you MUST give confirmation by pressing the confirmation button ("check") located at the bottom of the menu.

To cancel the changes introduced in the last editing session, press the "Cancel" button located at the bottom of the menu.

3.5 Functions

3.5.1 Introduction

The Web Server allows you to access objects configured in supervision according to their type, by selecting the corresponding entry in the "FUNCTIONS" section in the main menu: the provided functions are:

- System
- Illumination
- Climate
- Shading
- Multimedia
- Security
- Energy

Note: the function names and the reciprocal positions of the items can be customized by the Administration section and may therefore appear differently than those reported. In the Administration section, you can also disable and not display certain types of functions.

Selecting a function from the menu, you are shown a grid containing all the objects in the project marked as belonging to that function, the management of this page is in all respects similar to that of an environment in grid view without image.

The following paragraphs will describe the main types of supervision objects on the pages of the Web Server.

3.5.2 Illumination

3.5.2.1 Light ON/OFF



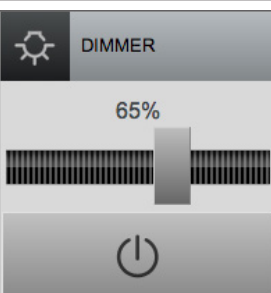
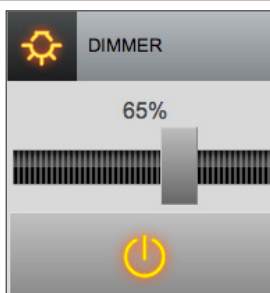
The Lights On/Off widget look like the following.

On status	 LIGHT
Off status	 LIGHT

The icon indicates the current status of the light. To change the status of the light click the icon (not the descriptive label).

3.5.2.2 Dimmer light

The dimmer lights widget look like the following.

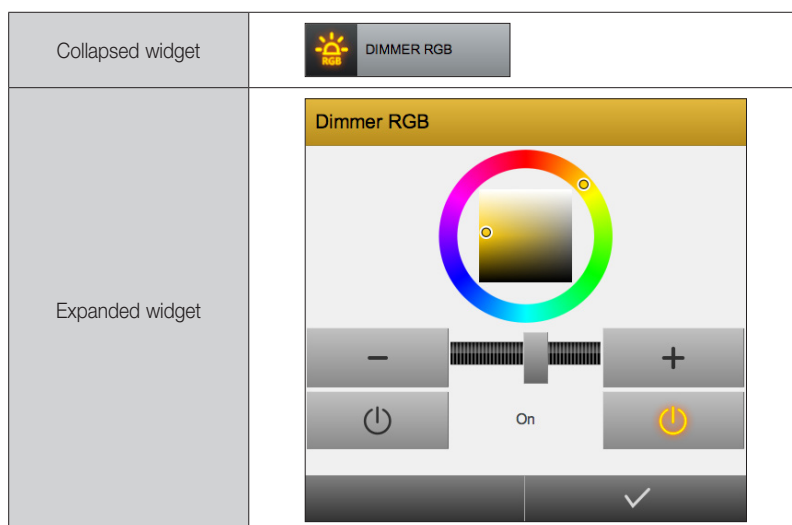
	Off status	On status
Collapsed widget	 DIMMER	 DIMMER
Expanded widget		

When the widget is collapsed, clicking it displays the corresponding expanded widget.

To turn on/off the dimmer press the On/Off button. To change the light intensity of the dimmer drag the slider to the desired value.

3.5.2.3 RGB dimmer light

The RGB dimmer lights widget look like the following.



When the widget is collapsed, clicking it displays the corresponding expanded widget.

To turn on the dimmer press the ON button.

To turn off the dimmer press the Off button.



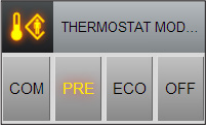

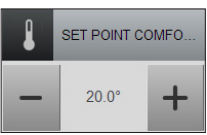

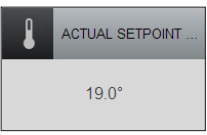

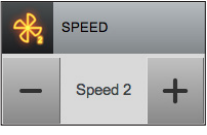
To change the light intensity of the dimmer drag the slider to the desired value.

To change the color of the dimmer light select the desired values in the color picker.

3.5.3 Climate

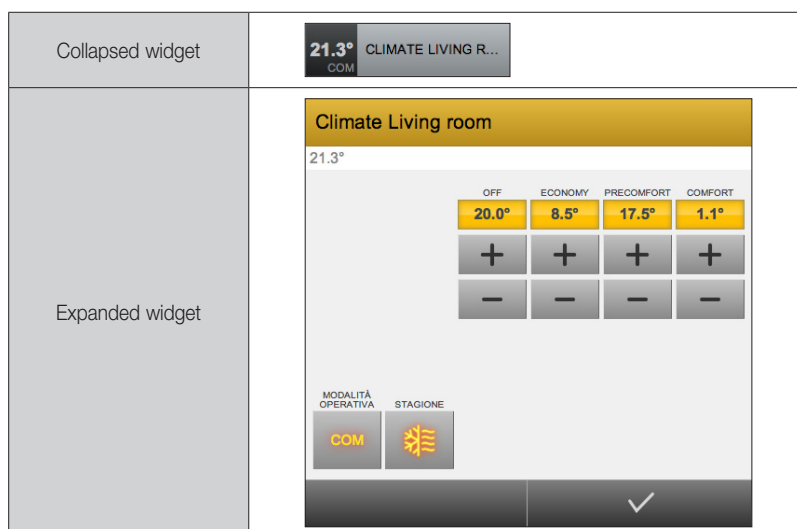
3.5.3.1 Individual KNX objects Widgets

The KNX objects most commonly used in the climate management devices are the following:

	Collapsed widget	Expanded widget	
Seasonal mode (Air Conditioning/ Heating)	 SUMMER/WINTER ...		Object with two statuses (air conditioning/heating). By clicking the icon the status changes (updates the icon with an image of the current mode).
Thermostat Operating Mode	 THERMOSTAT MOD...		By clicking the collapsed widget the expanded widget with buttons for operating modes appears. Press the button for the desired operating mode. The widget icon displays the current operating mode.
Setpoint	 SET POINT COMFO...		By clicking on the collapsed widget the expanded widget appears with the "+" and "-" buttons for increasing and decreasing (in steps of 0.1 °C) the setpoint of the thermostat. The Vimar thermostat provides a setpoint for each mode of operation for each of the seasonal modes.
Reading Current setpoint	 ACTUAL SETPOINT ...		By clicking the collapsed widget the expanded widget with the value of the setpoint appears.
Measured temperature	20.9° ACTUAL TEMPERA...		The temperature is displayed on the icon of the widget
Proportional Fancoil Speed Configuration	 SPEED		By clicking on the collapsed widget the expanded widget appears with the "+" and "-" buttons for increasing and decreasing the speed steps (from 0 to 3). The increase of one step is equivalent to the percentage increase of 33%. The widget icon displays the current speed.

3.5.3.2 Thermostat complex object

The Web Server provides a widget that "aggregates" the main functions of a thermostat.



On the left side of the bottom bar of the expanded widget, if enabled in the configuration phase, the symbol for the management of the schedule appears (see Schedules chapter).

3.5.3.3 Fancoil speed complex object management

The Web Server allows you to create a widget that "aggregates" the functions related to the management of the three fancoil speeds of the Vimar KNX thermostats.

As an example, we propose a recommended widget (see "The management of the Vimar KNX thermostat via complex objects" section for the configuration of the widget).



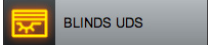
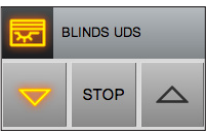
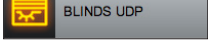
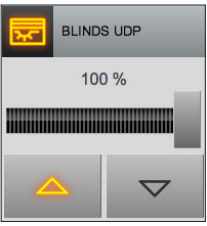
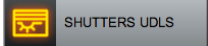

In the bar below the title are displayed: the current measured temperature and current Setpoint.

From the top row of buttons you can manually "force" the speed of the fancoil of the thermostat.

In the bottom row of buttons are the two buttons to enable the automatic mode to control the fancoil speed and the display icon of the manual "forcing" of the fan speed.

3.5.4 Shading

The objects most commonly used in the shading category are the following:

	Collapsed widget	Expanded widget	
SHUTTER UP/DOWN/STOP			By clicking the collapsed widget the expanded widget with buttons to raise, lower and stop the movement of the blinds appears. The icon of the widget shows the direction of the latest movement (Complete opening or closing if the movement of the blinds has not been stopped).
SHUTTER UP/DOWN/ PERCENTAGE			By clicking the collapsed widget the expanded widget appears with buttons to raise and lower the blinds as well as a slider to set the opening percentage of the blinds.
SHUTTERS LAMELLAE			By clicking the collapsed widget the expanded widget appears with buttons to raise and lower the Shutters lamellae as well as a slider to set the opening percentage of the Shutters lamellae. The icon of the widget shows the direction of the latest movements made.

3.5.5 Multimedia

Below is shown the widget with the main features of a device for the sound management of the audio zone:

Collapsed widget	
Expanded widget	

By clicking the collapsed widget the expanded widget with the following functions appears:

- Setting the volume (the "+" and "-", with the percentage indicator)
- Play/Pause button
- Stop button.
- Next/Previous buttons.
- Playback mode button.

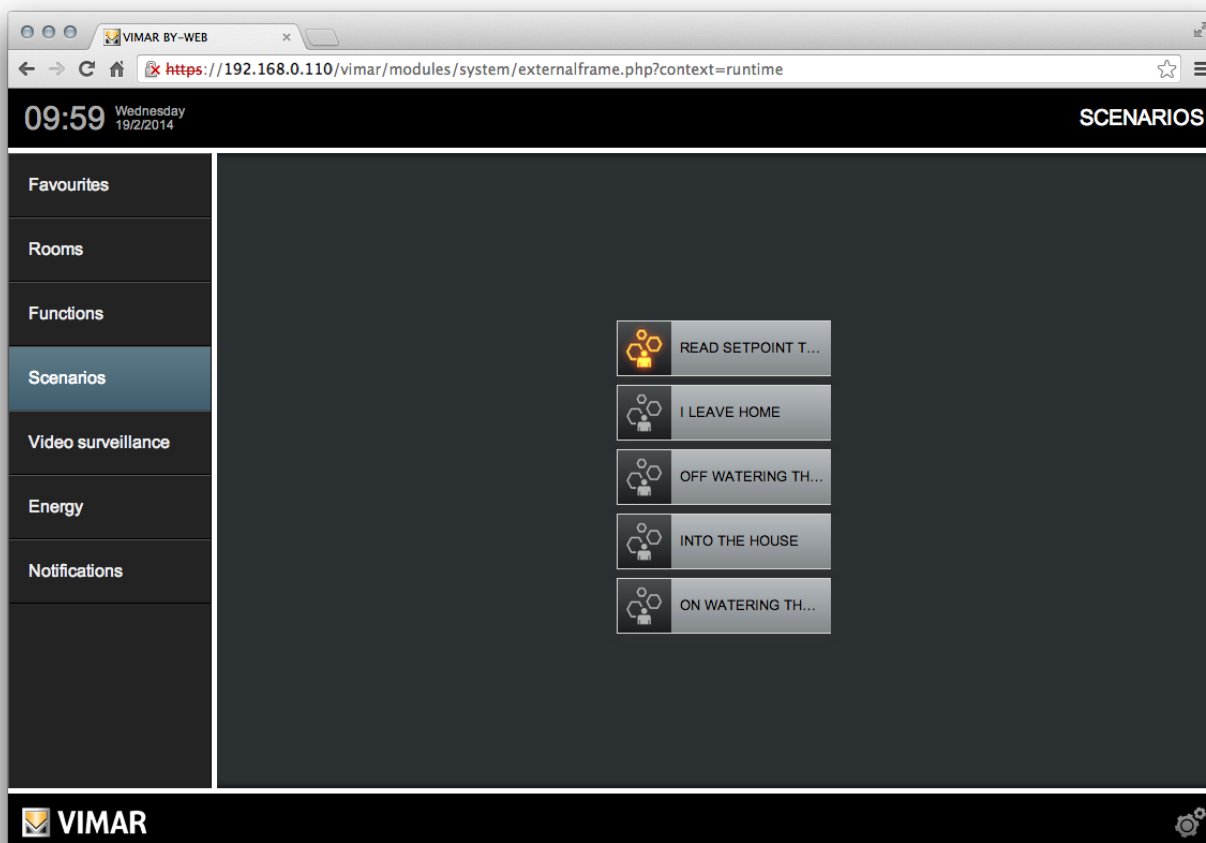
Note: The presence of the features described above depend only on the widget configuration.

3.6 Scenarios

3.6.1 Introduction

The Web Server allows you to manage custom command sequences, and these sequences are indicated as "SCENARIOS".

The "SCENARIOS" entry in the navigation menu allows you to view all the scenarios that the installer provided in the design of the home automation system. The following figure shows an example of the scenarios management page.



3.6.2 Running and stopping a scenario

The controls provided for the management of a scenario are the following:

Scenario execution	Clicking the disabled icon of a scenario starts the execution of the scenario. During the scenario execution (execution of the sequence of the commands provided by the scenario itself) the icon appears in the on (active) status and it is turned off at the conclusion of the operations provided by the scenario.
Stopping the scenario execution	Clicking the enabled icon of a scenario (during the execution of the scenario) stops the execution of the scenario. Note: The interruption of a scenario does NOT restore the initial conditions of the system when the scenario was performed: the commands executed by the activation of a scenario are not affected and will not execute the commands that would be executed after the stop the scenario.

The scenarios can be placed on the FAVOURITES page following the same procedure as described for the other objects in the Web Server (select the item from the FAVOURITES context menu).

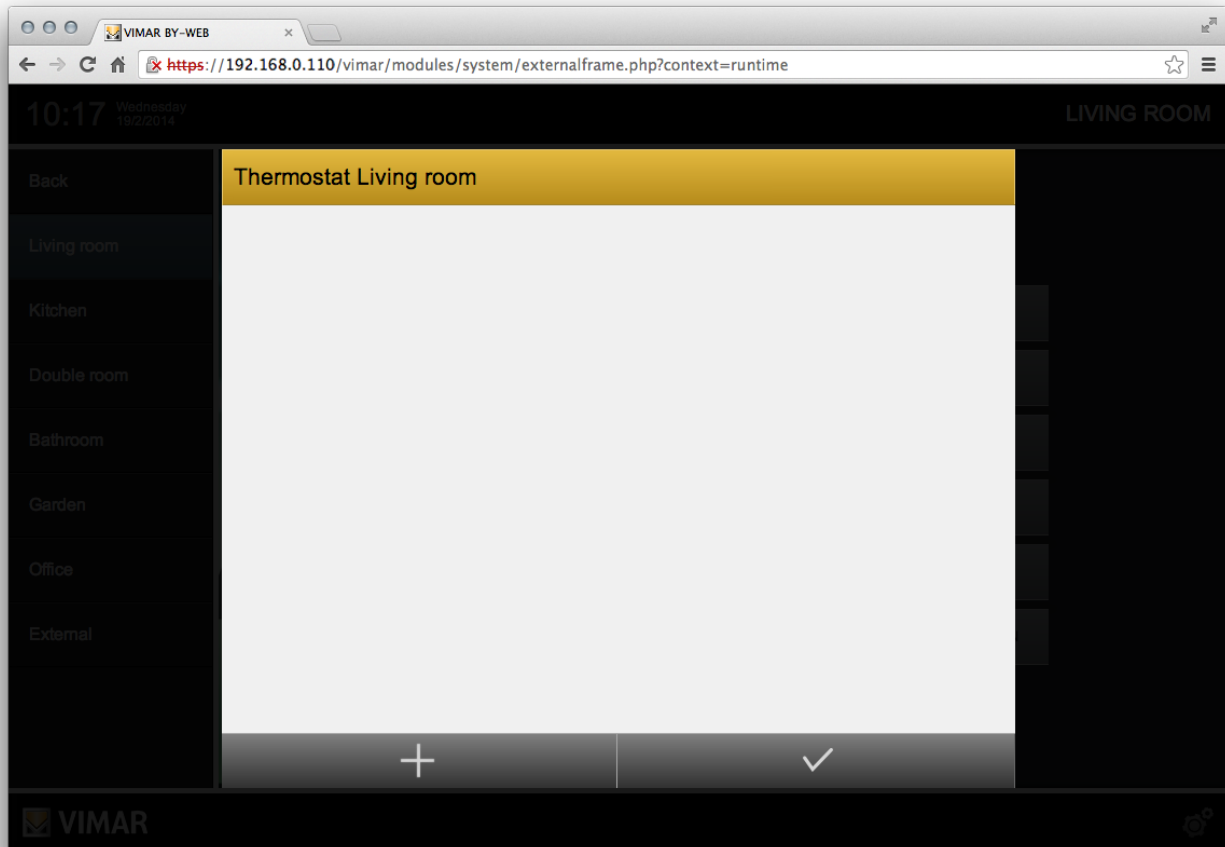
The scenarios can be included in schedules as the other objects in the Web Server (select the SCHEDULE item from the context menu).

3.7 Object scheduling

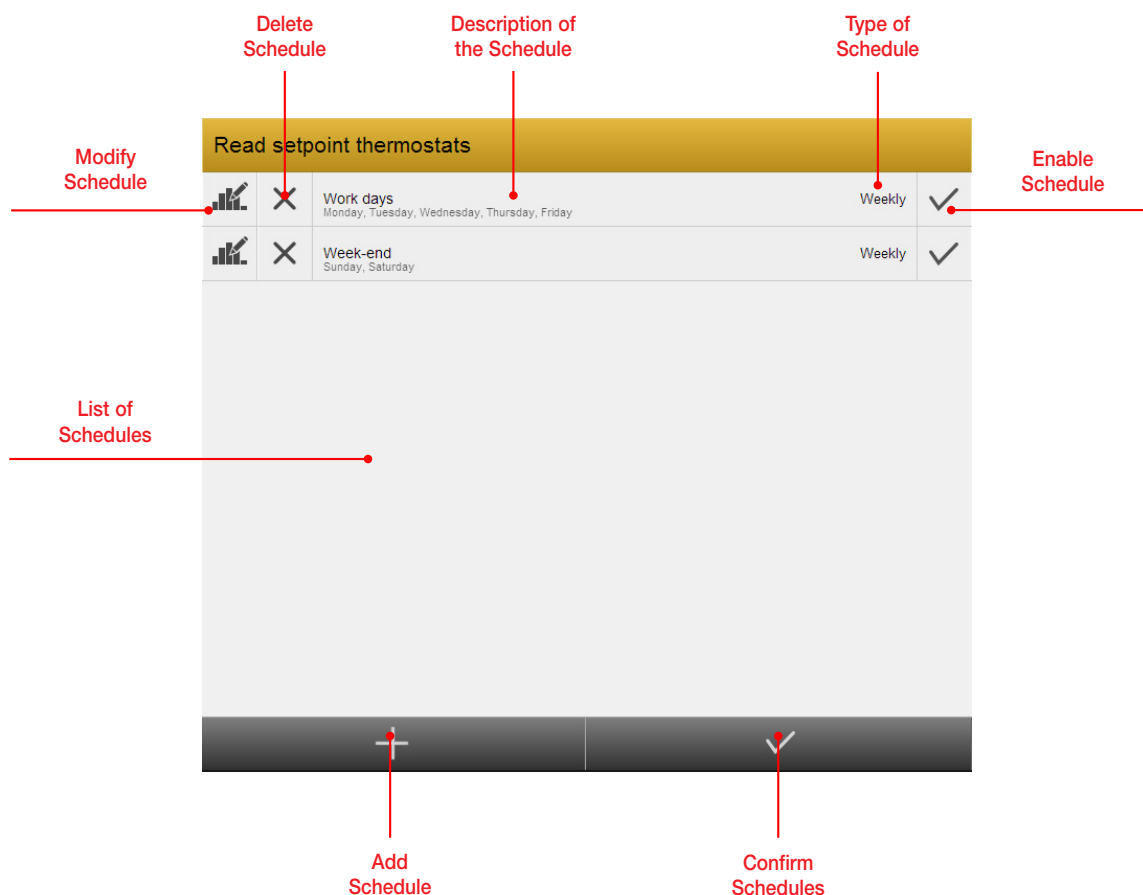
It is possible to schedule actions to the calendar for any object in the environment pages, directly from the user, as follows:

- Access the environment that contains the object you want to schedule.
- Open the context menu (button at bottom right) and select "SCHEDULE".
- Select the object you wish to schedule.

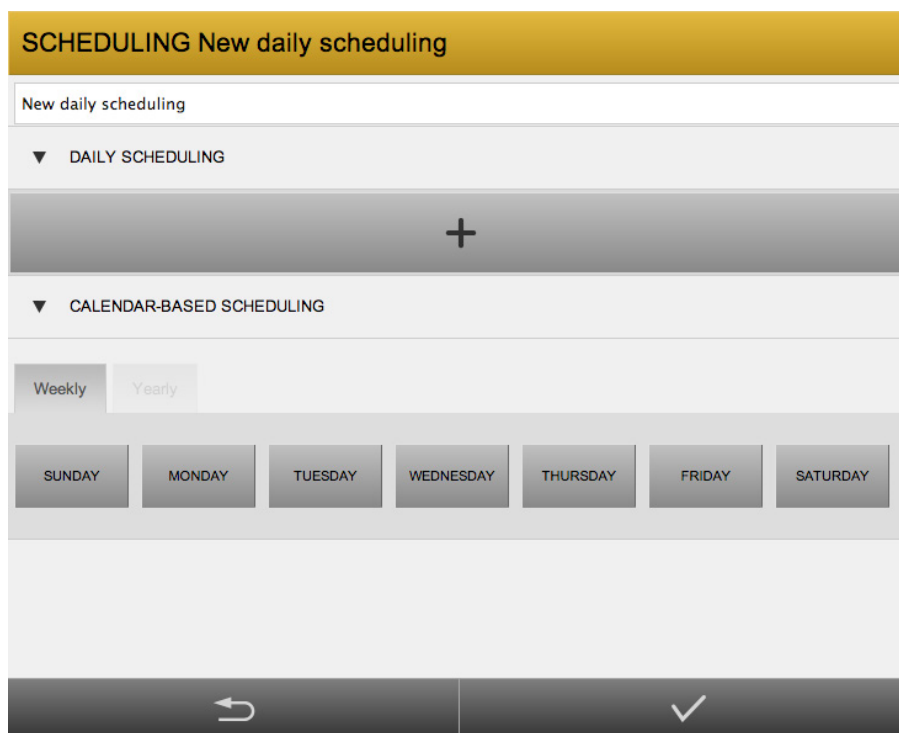
The following popup appears, initially empty:



Pressing the "+" button at the bottom left in the toolbar of the popup adds a new empty schedule.



It is possible to delete a schedule by pressing the "X" (delete schedule) using the button located to the left of the name. Change the schedule using the "edit schedule" button.



The screenshot shows a mobile application interface for creating a new daily scheduling. The title bar is yellow and contains the text 'SCHEDULING New daily scheduling'. Below the title bar, there is a text input field with the placeholder text 'New daily scheduling'. Underneath the input field, there is a section titled 'DAILY SCHEDULING' with a dropdown arrow. Below this section, there is a large grey button with a plus sign. Underneath the plus button, there is a section titled 'CALENDAR-BASED SCHEDULING' with a dropdown arrow. Below this section, there are two tabs: 'Weekly' and 'Yearly'. Below the tabs, there are seven buttons labeled 'SUNDAY', 'MONDAY', 'TUESDAY', 'WEDNESDAY', 'THURSDAY', 'FRIDAY', and 'SATURDAY'. At the bottom of the screen, there is a dark grey bar with a back arrow on the left and a checkmark on the right.

You can assign a name to the schedule (e.g. "weekdays") and set one or more actions that should be carried out, within 24 hours, on the selected object, to add actions simply press the "+" button, then set hour/minute and the action to be performed, with the possible value (if applicable).

SCHEDULING New daily scheduling

New daily scheduling

▼ DAILY SCHEDULING

✕	◀	Hours 00	▶	◀	Minutes 00	▶	◀	Action WRITE	▶	◀	Value AUTO	▶
✕	◀	Hours 00	▶	◀	Minutes 01	▶	◀	Action WRITE	▶	◀	Value AUTO	▶
✕	◀	Hours 00	▶	◀	Minutes 02	▶	◀	Action WRITE	▶	◀	Value AUTO	▶
✕	◀	Hours 00	▶	◀	Minutes 03	▶	◀	Action WRITE	▶	◀	Value AUTO	▶
✕	◀	Hours 00	▶	◀	Minutes 04	▶	◀	Action WRITE	▶	◀	Value AUTO	▶
✕	◀	Hours 00	▶	◀	Minutes 05	▶	◀	Action WRITE	▶	◀	Value AUTO	▶
✕	◀	Hours 00	▶	◀	Minutes 06	▶	◀	Action WRITE	▶	◀	Value AUTO	▶
✕	◀	Hours 00	▶	◀	Minutes 07	▶	◀	Action WRITE	▶	◀	Value AUTO	▶

+

↶
✓

At the bottom of the popup you can determine on which days the schedule is to be performed: in "Weekly" mode, as shown in the figure, you must select one or more days of the week.

SCHEDULING New daily scheduling

✕	◀	00	▶	◀	03	▶	◀	WRITE	▶	◀	AUTO	▶
✕	◀	Hours 00	▶	◀	Minutes 04	▶	◀	Action WRITE	▶	◀	Value AUTO	▶
✕	◀	Hours 00	▶	◀	Minutes 05	▶	◀	Action WRITE	▶	◀	Value AUTO	▶
✕	◀	Hours 00	▶	◀	Minutes 06	▶	◀	Action WRITE	▶	◀	Value AUTO	▶
✕	◀	Hours 00	▶	◀	Minutes 07	▶	◀	Action WRITE	▶	◀	Value AUTO	▶

+

▼ CALENDAR-BASED SCHEDULING

Weekly
Yearly

SUNDAY

MONDAY

TUESDAY

WEDNESDAY

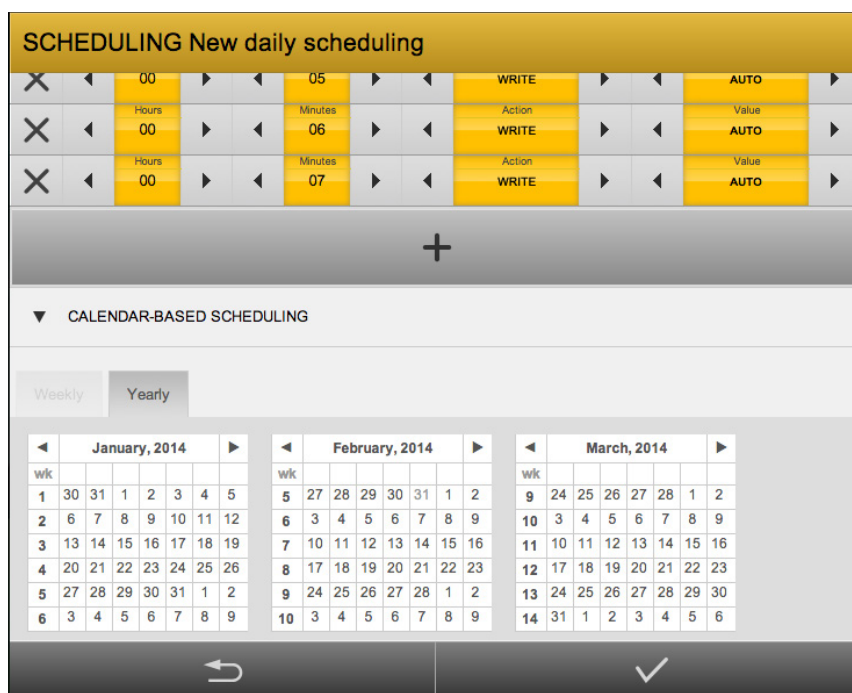
THURSDAY

FRIDAY

SATURDAY

↶
✓

In "annual" mode, you can select one or more days in the calendar as shown in the image.



Any annual schedules "prevail" on the weekly schedules, they can then be used for rules for particular periods (e.g. holidays) without having to deactivate the normal weekly schedules.

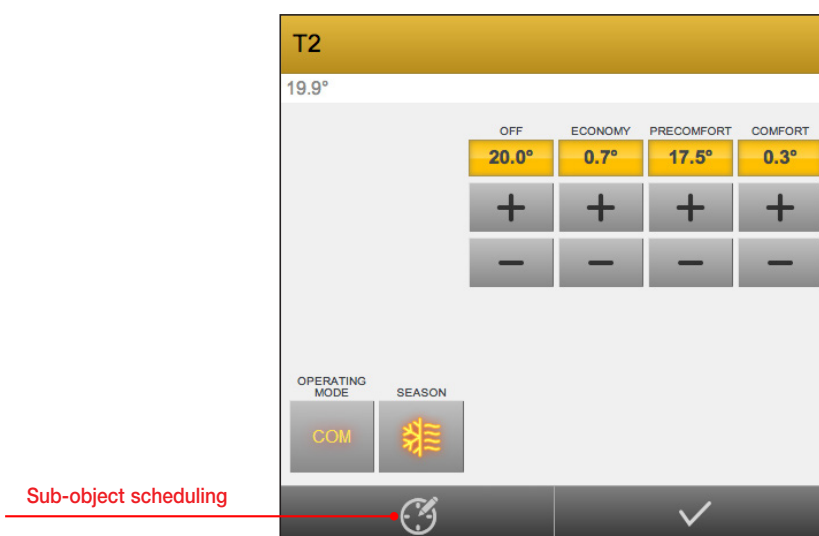
Once you have confirmed the schedule (using the confirmation button in the toolbar) the summary of schedules is shown, as in the following example:

It is possible to temporarily disable a schedule via the corresponding button to the right; an off schedule is no longer performed, but it keeps stored timetables and actions for future use. This way, for example, you can manage seasonal schedules.

Note: If specified during the creation/configuration of a complex object, the complex object bottom bar shows the symbol of the schedule (clock symbol).

Press this symbol to access directly the management of the schedule of the sub-object that has been enabled for scheduling by the complex object (up to one sub-object). Such access is a kind of "shortcut" to access the sub-object scheduling.

By way of example is shown the widget of a complex object of the thermostat type, for whose scheduling the "Operation Mode" sub-object has been enabled.



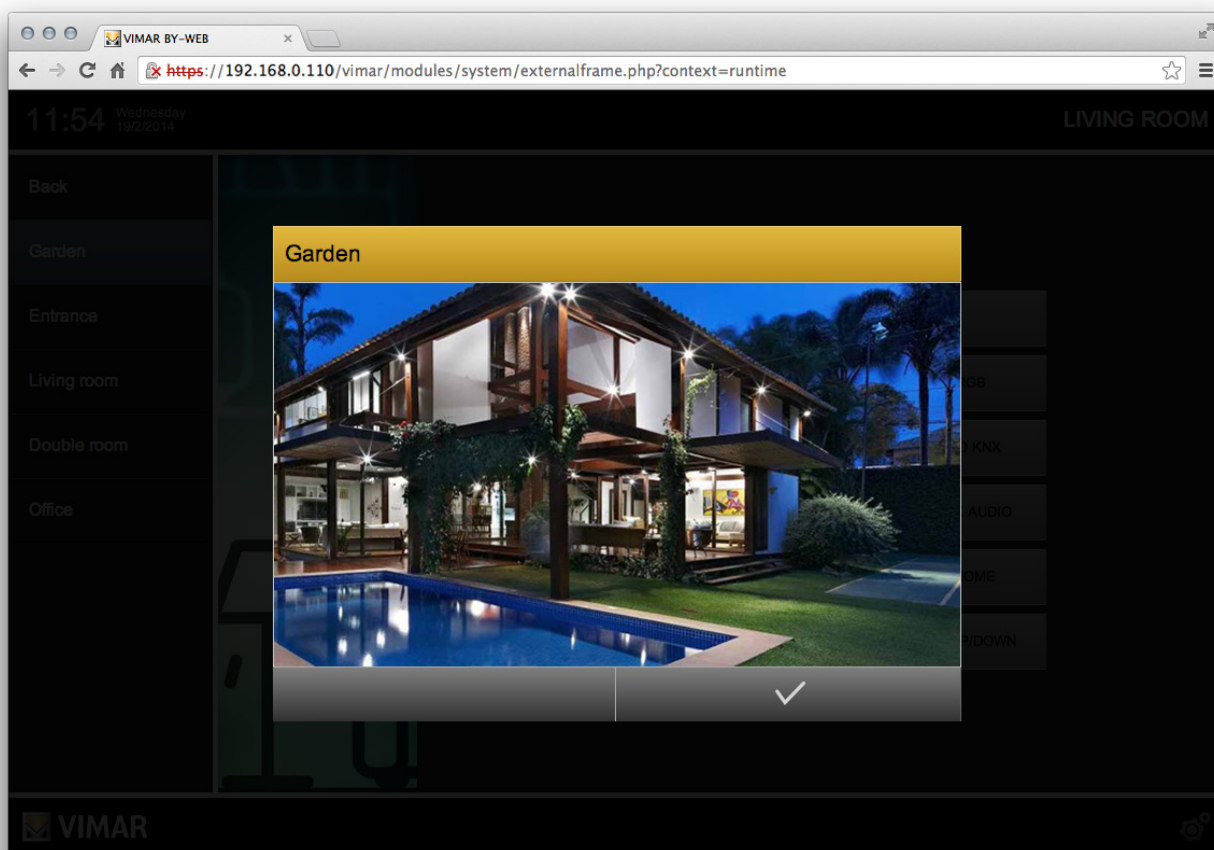
Sub-object scheduling

When an object is associated with a schedule, an orange indicator appears at the top left of the icon that represents it (you may need an operation to "synchronize" it, activated from the context menu to update the status of this indicator).

3.8 Video surveillance

Selecting the VIDEO SURVEILLANCE menu item displays, as sub-menu, the list of the configured IP cameras. Select the entry of the desired camera: the work area will display the image.

Note: The time required for the display of the video stream, after selecting the corresponding item, depends on the resolution of the camera and the connection speed. It may also take a few seconds.



To close the window with the image of the camera, press the button on the bottom bar of the window.

3.9 Energy

3.9.1 Introduction

The "ENERGY" section of the Web Server provides a complete and detailed overview of energy consumption and possible productions (e.g. PV) of your building; this feature requires the installation of special devices that measure and make available in real time the information on the performance of their electrical equipment.

This section is heavily dependent on the characteristics of your system and how it has been configured by the installer.

The following chapter describes the two ENERGY menu items: CONSUMPTION and LOADS.

3.9.2 Consumption

Selecting "ENERGY" from the menu, then "CONSUMPTION", shows a page similar to the following, which shows a summary of consumption (and eventual production) of energy the building.



At the top of the page are displayed in the form of "tachometers", the ANALYZER configured in the Administration section.

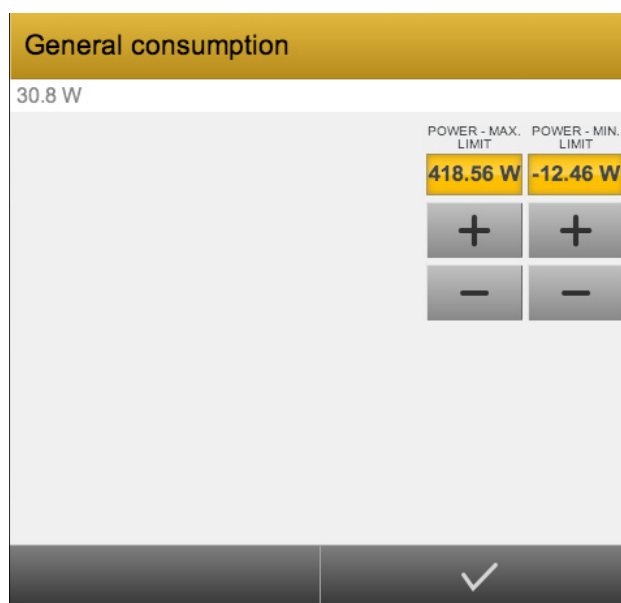
It is possible to parameterize the thresholds of different ANALYZER, if configured in administration as sub-objects.

The lower part of the page contains the graphs of consumption (or production) of energy relative to the ANALYZERS listed at the top; the data shown in the graphs refer to a period of time that the user can select, using the buttons on the side of graph, choosing between:

TODAY	Data since midnight of the current day compared (if the comparison is enabled) with the daily average.
YESTERDAY	Data related to the previous day compared (if the comparison is enabled) with the daily average.
WEEK	Data since midnight of the Monday of the current week compared (if the comparison is enabled) with the weekly average.
LAST WEEK	Data related to the previous week compared (if the comparison is enabled) with the weekly average.
MONTH	Data since midnight of the first day of the current month compared (if the comparison is enabled) with the weekly average.
LAST MONTH	Data related to the previous month compared (if the comparison is enabled) with the monthly average.
YEAR	Data since midnight of the first day of the current year compared (if the comparison is enabled) with the yearly average.
LAST YEAR	Data related to the previous year compared (if the comparison is enabled) with the yearly average.

The values for the selected period are displayed in the form of bars, while the average (always relative to the selected period) is displayed as a broken line.

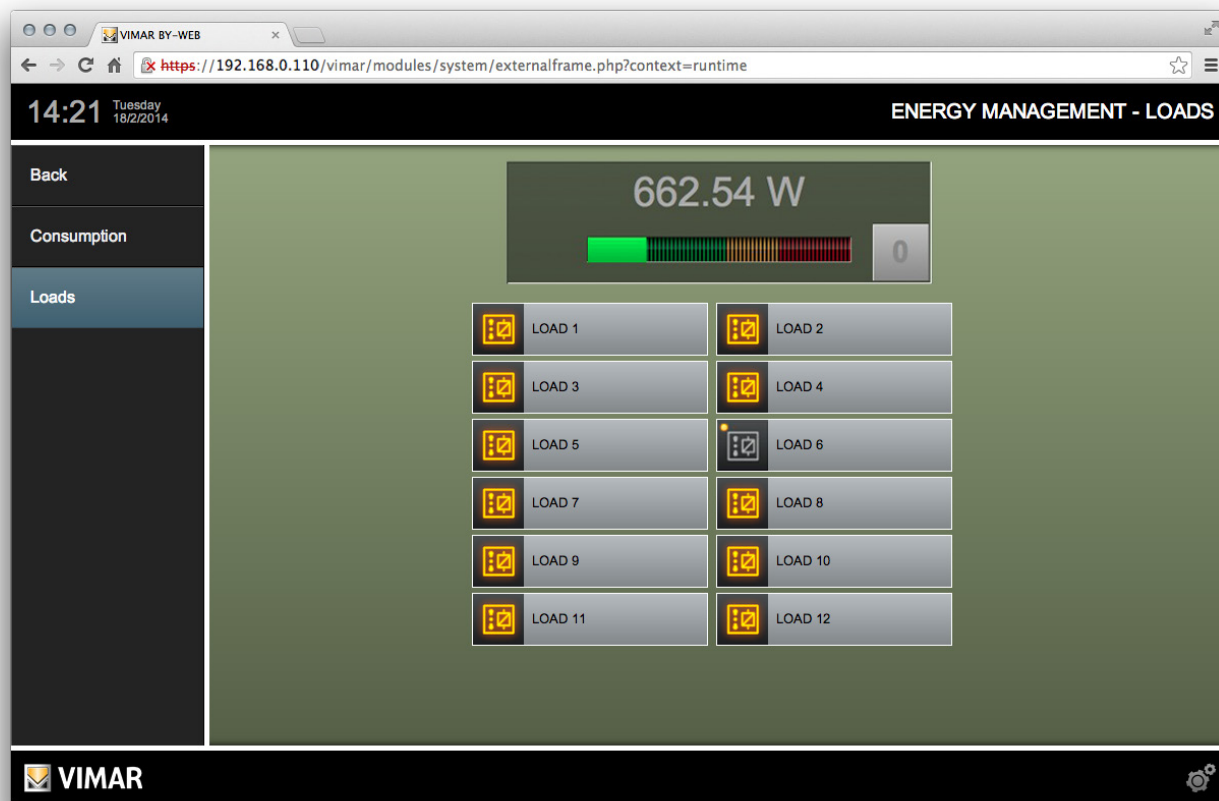
Clicking the "tachometers" opens a pop-up pictured below, in which, in addition to the current power value you can change the values of the thresholds corresponding to the analyzer.



3.9.3 Loads

This section allows you to monitor in real time the status of electricity consumption and the main utilities, and to establish by what criteria the Web Server turns them off in case of excessive absorption.

Selecting "ENERGY" from the menu, then "LOADS", shows a page similar to the following, which shows a summary of consumption (and eventual production) of energy the building.



By clicking on the bar that indicates the absorption in real time, the user can change the reference thresholds on which the loads control logic is based through a pop-up similar to the following:

General consumption

49.4 W

PRIORITY

2

+

-

LIMIT 2 POWER

520 W

+

-

LIMIT 1 POWER

137.52 W

+

-

✓

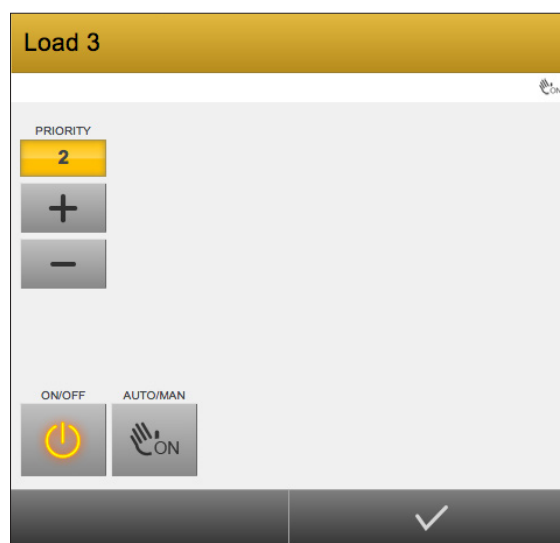
The number on the site indicates the priority of the current LOAD CONTROL: If the value is "0", the system is at rest, vice versa, the logic is turning

off loads with priority equal to or less than the number shown in this box. The priority increases (up to the maximum value specified in administration) until the consumption of energy does not falls below the lower threshold.

Clicking on a load, conversely, you can set the following parameters:

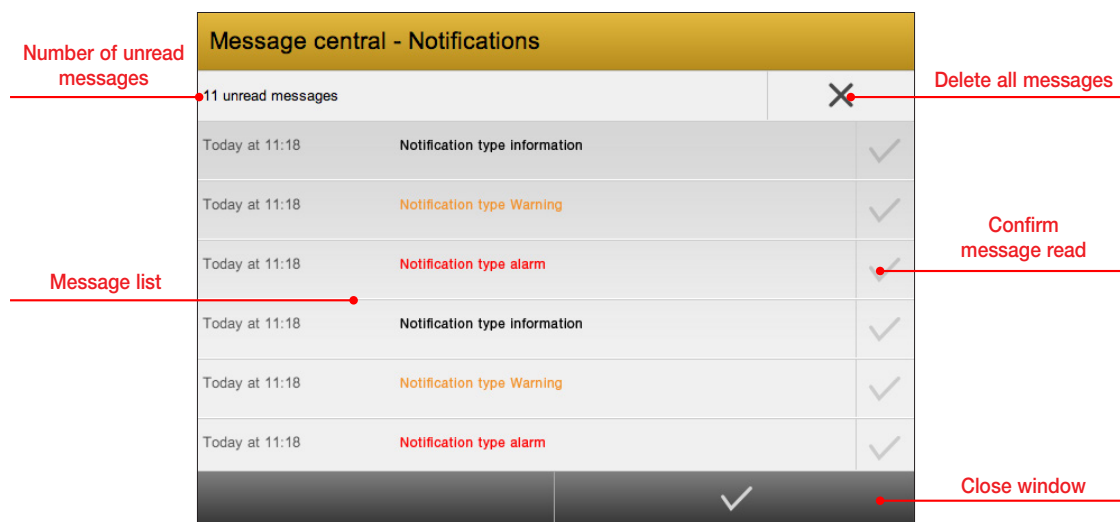
PRIORITY	Specifies the priority of the load, loads with lower priority are removed first.
ON/OFF	Allows manual control of the utility.
AUTO/MAN	Allows you to specify if the load is to be handled by the LOAD CONTROL (AUTO) or in MANUAL mode.

The MANUAL status of a load is shown by an indicator next to its status icon.



3.10 Notifications

By selecting NOTIFICATIONS from the main menu, "Message Center - Notifications" is displayed in the Web Server, which contains the list of all messages generated automatically by the Web Server in the face of events, alarms or faults that have occurred in the home automation system, according to the settings configured by the installer.



The screenshot shows a window titled "Message central - Notifications". At the top left, it says "11 unread messages". Below this is a list of notifications, each with a timestamp "Today at 11:18" and a "Notification type" (Information, Warning, or alarm). To the right of each notification is a checkmark icon. At the top right of the window is a close button (X). At the bottom right is a checkmark icon. Annotations with red lines point to these elements:

- Number of unread messages**: Points to "11 unread messages".
- Delete all messages**: Points to the close button (X) at the top right.
- Message list**: Points to the list of notifications.
- Confirm message read**: Points to the checkmark icon next to a notification.
- Close window**: Points to the checkmark icon at the bottom right.

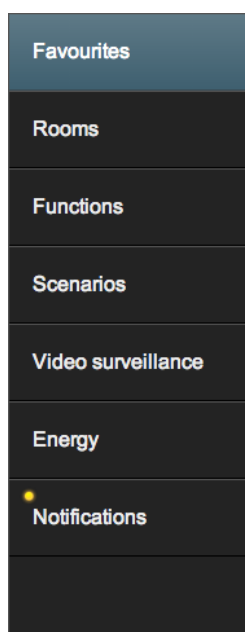
Press the "Confirm message reading" button to delete the message from the list of unread messages.

Press "Delete all messages" to delete all the messages in the list.

To close the window press the "Close window" button on the bottom bar of the window.

The Web Server handles three types of levels of messages: Information (white text), Warning (orange text), Alarm (red text).

Upon the occurrence of an event that triggers a notification, its message is put the Message center and at the top left of the NOTIFICATIONS menu item an orange indicator appears.



Upon the occurrence of an event associated with an alarm notification, in addition to the actions described, the Web Server opens automatically the message center page.

4. APPENDIX

4. Appendix

4.1 Management of the Vimar KNX thermostat with Complex Objects

4.1.1 Overview

A physical device (e.g. a thermostat, dimmer, etc.), is managed by a set of KNX objects. Each KNX object fulfills a specific function of the device (e.g. measured temperature, conditioning/heating mode, etc.).

Typically the requirement is to group, from the point of view of the user interface, the KNX objects related to a physical device, to facilitate their management via the supervision software.

As described in the "New complex object" section, the Web Server allows you to build "aggregations" of KNX objects to make the supervision more functional, through structures called "complex objects".

In the following chapters will be provided the information to manage the main functions of the Vimar KNX thermostat (item 14430, 14451, 16915, 16921, 20430, 20451) by means of complex objects with the template provided by the Web Server.

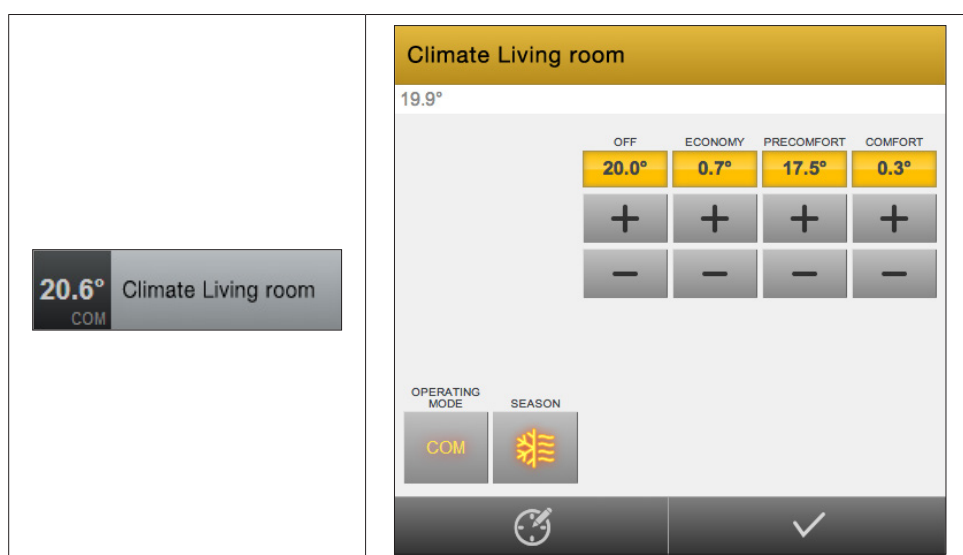
You are supposed to have to handle a Vimar KNX thermostat with the management of the three fancoil speeds that control the Vimar 01523 actuator first three outputs (with active interlock on the three outputs A, B, C).

For each thermostat have been created two complex objects: thermostat complex object (management of the most common features of the thermostat), generic complex object (management of the 3 fancoil speeds).

4.1.2 Thermostat complex object

Through the thermostat complex object, whose template is preset from the Web Server, you can manage the main functions of the Vimar KNX thermostats.

After proper configuration, the widgets (respectively collapsed and expanded) of the Vimar KNX thermostats complex object, appear as in the following figure.



Description	Datapoint	Type of action	Type of data	Identifier
Measured temperature	Actual Temperature	value reading	2 byte	Measured temperature
Operating mode (Confort, Standby, Economy, Off)	Thermostat Mode Set	setting, status reading	1 byte	Operating Mode
Seasonal mode (Conditioning/Heating)	Summer/Winter	setting, status reading	1 bit	Heating/Conditioning
Heating Comfort Setpoint	Winter Comfort Setpoint	setting, status reading	2 byte	Heating Comfort Setpoint
Heating Standby Setpoint	Winter Standby Setpoint	setting, status reading	2 byte	Heating precomfort Setpoint
Heating Economy Setpoint	Winter Economy Setpoint	setting, status reading	2 byte	Heating Economy Setpoint
Heating Off Setpoint	Antifreeze Setpoint	setting, status reading	2 byte	Heating Off Setpoint
Conditioning Comfort Setpoint	Summer Comfort Setpoint	setting, status reading	2 byte	Conditioning Comfort Setpoint
Conditioning standby Setpoint	Summer Standby Setpoint	Setting, status reading	2 byte	Conditioning precomfort Setpoint
Conditioning Economy Setpoint	Summer Economy Setpoint	setting, status reading	2 byte	Conditioning Economy Setpoint
Conditioning Off Setpoint	"Too Hot" Setpoint	setting, status reading	2 byte	Conditioning Off Setpoint

The measured temperature is displayed in the icon of the "collapsed" widget and in the subtitle bar of the widget in the "expanded" form. If this sub-object is not inserted in the complex object, the icon of the collapsed widget will appear as a blank grey square without any symbol.

Note: the standby mode of the thermostat is represented by the acronym PRE (Precomfort) in the icon of the operating modes.

4.1.2.2 Creating the thermostat complex object

For each Vimar KNX thermostat you want to manage, follow these steps:

- Create a complex object, as described in the "New complex object" section of this manual. Assign the desired name for the new object.
- Assign the type of template: "Thermostat with operating mode".
- If you want the complex object to be displayed in the "Climate" category in the function menu, select "Climate" from the context menu of the "Function" field.
- At this point it is necessary to combine all the sub-items of the complex object.

They will be associated with all sub-items listed in the table of the previous chapter.












To do this:

- Search engine for the KNX object corresponding to the desired datapoint
- From the list of search results, drag it to the grey bar below the horizontal bar "Sub-objects associated with the complex object"
- Select the identifier for the datapoint (see table above). (See figure below)

Thermostat Living room

CLOSE

Objects contained in the complex object

	Name	Details	Label	Visible	Functionality	Scheduling
	Actual tempera	12/0/1	t mis	<input checked="" type="checkbox"/>	Measured temperature	<input type="checkbox"/>
	Plant Summer/	0/0/5	Season	<input checked="" type="checkbox"/>	Heating/Cooling	<input type="checkbox"/>
	Thermostat mo	10/3/1	Operation mode	<input checked="" type="checkbox"/>	Operating mode	<input type="checkbox"/>
	Set point prote	11/3/1	SP OFF C	<input checked="" type="checkbox"/>	Setpoint Cooling - Off	<input type="checkbox"/>
	Set point econc	11/2/1	SP E C	<input checked="" type="checkbox"/>	Setpoint Cooling - Economy	<input type="checkbox"/>
	Set point comfo	11/0/1	SP C C	<input checked="" type="checkbox"/>	Setpoint Cooling - Comfort	<input type="checkbox"/>
	Set point stand	11/1/1	SP PC C	<input checked="" type="checkbox"/>	Setpoint Cooling - Precomfort	<input type="checkbox"/>
	Set point comfo	11/4/1	SP C R	<input checked="" type="checkbox"/>	Setpoint Cooling - Precomfort	<input type="checkbox"/>
	Set point econc	11/6/1	SP E R	<input checked="" type="checkbox"/>	Setpoint Cooling - Precomfort	<input type="checkbox"/>
	Set point prote	11/7/1	SP OFF R	<input checked="" type="checkbox"/>	Setpoint Cooling - Precomfort	<input type="checkbox"/>
	Set point stand	11/5/1	SP PC R	<input checked="" type="checkbox"/>	Setpoint Cooling - Precomfort	<input type="checkbox"/>

Thermostat Living r...

- d. For each KNX object that is to be associated, repeat steps a. b. c.
- In order for the icon to display the 4 modes of operation of the thermostat, you must associate the "Operation mode (no AUTO)" icon with the KNX object relative to the "Thermostat Mode Set" datapoint.
- To do this, proceed as follows:
- Access the configuration page of the KNX object relative to the datapoint (by searching the KNX object or simply by clicking the "Edit" icon in the KNX object row present in the list of sub-objects of the complex object) .
 - Select the "Icon" field and choose the "Operating Mode (no AUTO)" icon from the list of icons that appears. (See the following two images). After completing the operation close the KNX object editing page and return to the configuration page of the complex object.

Thermostat Living room

CLOSE

Object properties

General information

Name:

Thermostat Living room

Group address:


10/3/2

Appearance

Function:

Climate

Icon:



Rooms, to which the object belongs

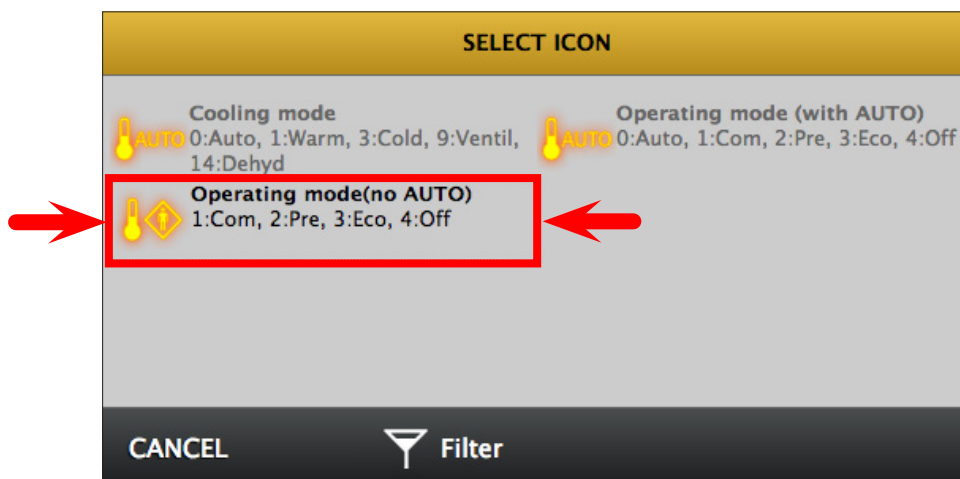
Name	Description / ETS name

Connected scenarios

Name	Action	Value	Order

Thermostat Living r...

Thermostat Living r...

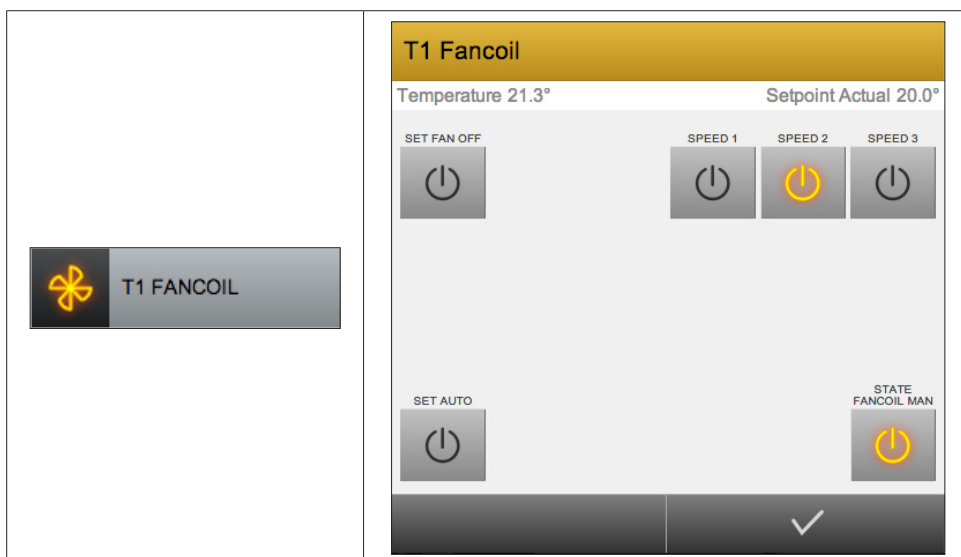


- If you want the "scheduling management" of one of the sub-objects (only one) of the composite thermostat to be accessed directly by the widget of the thermostat, click the Schedule field of the sub-object you want (in the bottom bar of the widget of the complex object the scheduling symbol will appear, selecting which opens directly into the setting page of that KNX object schedules. It is a kind of "shortcut").
Example: A typical use of this feature provides for the scheduling of the operation mode of the thermostat. The scheduling of the thermostat operating mode changes allows you to create a "programmable thermostat", since for each operating mode can be set a different setpoint. The behavior is similar to that of a programmable thermostat with four temperature levels.
- This procedure must be repeated for all the thermostats.

4.1.3 The complex object for managing the speed of the fancoil fans

Through the Generic complex object, whose template is preset from the Web Server, you can manage the main functions of the Vimar KNX thermostats fancoil speeds.

After proper configuration, the widgets (respectively collapsed and expanded) of the generic complex object for managing the Vimar KNX thermostats fancoil speeds, appear as in the following figure. The descriptions of the icons can be customized.



The "SET AUTO" button (only the command without status information) enables the automatic control of the fancoil speed.

The icon "MAN FANCOIL STATUS" (only in the status, "not clickable") is enabled if it has been forced into manual mode, the speed of the fancoil (SPEED1, SPEED2, SPEED3 or FAN OFF.)

The SPEED1, SPEED2, SPEED3 buttons (control and status), are used to manually force the speed of the fancoil and their status indicates the current speed of the fancoil (either if the management of the fancoil is set as automatic, or if a speed is manually overridden)

The "FAN OFF" button (only the command without status information) disables the fancoil fan manually.

4.1.3.1 Management of the fancoil speed through the Generic complex object

Following is the table with the functionality of the Vimar thermostat (fancoil speed) that can be managed via the Generic complex object.

Label	Datapoint	Type of action	Type of data	Identifier
Icon	Force Fancoil Speed V1	Type of icon	1 bit	Icon
Measured temperature	Actual Temperature	Reading	2 byte	LH subtitle
Current setpoint	Actual Set Point	Reading	2 byte	RH subtitle
Fan OFF	Force Fancoil Speed 0 (PropID26)	Writing	1 bit	RH subtitle
Sp 1	Force Fancoil Speed 1 (PropID27)	Write/(read on different datapoints)	1 bit	High RH3
Sp 2	Force Fancoil Speed 2 (PropID28)	Write/(read on different datapoints)	1 bit	High RH2
Sp 3	Force Fancoil Speed 3 (PropID29)	Write/(read on different datapoints)	1 bit	High RH1
SET AUTO	Automatic-Fan Input (PropID30)	Writing	1 bit	Low LH1
MAN Fancoil STATUS	Fancoil Automatic/Manual	reading	1 bit	Low RH1

Note: PropIDXX refer to the thermostats that control one zone or to zone 1 of the zone thermostats. For Zone 2 of the zone thermostats enter the corresponding datapoints.

4.1.3.2 Creating the generic complex object

For each Vimar KNX thermostat you want to manage, follow these steps:

- Create a complex object, as described in the "New complex object" section of this manual. Assign the desired name for the new object (e.g. T1 Fancoil).
- Assign the type of template: "Generic".
- If you want the complex object to be displayed in the "Climate" category in the function menu, select "Climate" from the context menu of the "Functionality" field.
- At this point it is necessary to combine all the sub-objects of the complex object.

They will be associated with all the sub-objects listed in the table in the previous chapter, paying attention to drag the correct KNX objects and matching the identifier in the table.

To do this:

- Search for the KNX object corresponding to the desired datapoint
- From the list of search results, drag it to the grey bar below the horizontal bar "Objects contained in the complex object"
- Select the functionality for the datapoint (see table above). In the template of the generic complex object, the functionality indicates the location where the sub-object will be displayed in the collapsed widget of the complex object itself. (See figure below).

T1 Fancoil
CLOSE

Objects contained in the complex object

	Name	Details	Label	Visible	Functionality	Scheduling
	Force speed 1	13/1/2	Icon	<input checked="" type="checkbox"/>		<input type="checkbox"/>
	Internal sensor	12/7/3	Temperature	<input checked="" type="checkbox"/>		<input type="checkbox"/>
	Actual setpoint	12/1/2	Setpoint Actual	<input checked="" type="checkbox"/>		<input type="checkbox"/>
	Force speed 0	13/0/2	SET Fan Off	<input checked="" type="checkbox"/>		<input type="checkbox"/>
	Force speed 1	13/1/2	Speed 1	<input checked="" type="checkbox"/>		<input type="checkbox"/>
	Force speed 2	13/2/2	Speed 2	<input checked="" type="checkbox"/>		<input type="checkbox"/>
	Force speed 3	13/3/2	Speed 3	<input checked="" type="checkbox"/>		<input type="checkbox"/>
	Force speed au	13/4/2	SET AUTO	<input checked="" type="checkbox"/>		<input type="checkbox"/>
	Fancoil speed a	12/4/2	STATE Fancoil MAN	<input checked="" type="checkbox"/>	Bottom right 1	<input type="checkbox"/>

Rooms, to which the object belongs

Name	Description / ETS name
------	------------------------

- d. For each KNX object that is to be associated, repeat steps a. b. c.
- The icon for the setting of the automatic management of the fancoil speed only serves as a control (not to display the status) and it will only turn on for a moment, after selection, to give the feedback of the command. To do this, you must enable "Write-only" in the configuration page of the associated KNX object (Automatic-Fan Input (PropID30)).

Note: before performing the following procedure, make sure that the automatic control of the fancoil is NOT ENABLED.

To do this, proceed as follows:

- Access the configuration page of the KNX object relative to the datapoint (by searching the KNX object or simply by clicking the "Edit" icon in the KNX object row present in the list of sub-objects of the complex object).
- Enable Expert mode from the context menu.
- Select the "Write-only" field of the "Permissions" parameter of the group address in the "KNX group Addresses" section. (See figure below) After completing the operation close the KNX object editing page and return to the configuration page of the complex object.


Force speed automatic 102
CLOSE

ETS encoding: Switching (1 bit)

Group address: 13/4/2

Appearance

Function: Climate

Icon: 

Formatting:

Permissions

Visible: ☒

Write access active: ☒

Read access active: ☒

KNX group addresses

ETS name	Group address	Read/Write Read only <input checked="" type="checkbox"/> Write only
Force speed automatic 102	13/4/2	

- The icon to display the status of the "manual override" of the speed of the fancoil only serves as a status display (it does not have a control function). To do this, you must enable "Read-only" in the configuration page of the associated KNX object (Fancoil Automatic/Manual).

To do this, proceed as follows:

- Access the configuration page of the KNX object relative to the "Fancoil Automatic/Manual" datapoint (by searching the KNX object or simply by clicking the "Edit" icon in the KNX object row present in the list of sub-objects of the complex object) .
 - Enable Expert mode from the context menu.
 - Select the "Read-only" field of the "Permissions" parameter of the group address in the "KNX group Addresses" section. (In a similar way to what was seen in the previous image). After completing the operation close the KNX object editing page and return to the configuration page of the complex object.
- To ensure that the display of the status of activation of the fans is updated correctly (management with interlock of the first three 4-output actuator outputs), you must associate the KNX objects of the forcing of the speed of the fancoil with corresponding actuator output statuses.

To do this, proceed as follows:


- Access the configuration page of the KNX object relative to the Force Fancoil Speed 1 (PropID27) datapoint (by searching the KNX object or simply by clicking the "Edit" icon in the KNX object row present in the list of sub-objects of the complex object) .
- Enable Expert mode from the context menu.
- Associate the "Write-only" permission with the group address for forcing the speed V1.
- Once you have located it via the search function, drag the address of the actuator output datapoint associated with speed V1 of the fancoil in the KNX group addresses section. Associate the "Read Only" permission.

Force speed 1 102
CLOSE

Group address: 13/1/2

Appearance

Function: None

Icon: 

Formatting:





Permissions

Visible: ☒

Write access active: ☒

Read access active: ☒

KNX group addresses

ETS name	Group address	Access mode
  — TestKNX	8/7/5	Read only
  — Force speed 1 102	13/1/2	Write only

- Repeat steps a. b. c. d. even for KNX objects related to the datapoint Force Fancoil Speed 2 (PropID28) and Force Fancoil Speed 3 (PropID29)
- The icon for setting the OFF speed of the fans (all actuator outputs to OFF) only serves as a control (not to display the status) and it will only turn on for a moment, after selection, to give the feedback of the command. To do this, you must enable "Write-only" in the configuration page of the associated KNX object (Force Fancoil Speed 0 (PropID26)).

Note: before performing the following procedure, make sure that the "Force Fancoil Speed 0" datapoint is set to 1.

To do this, proceed as follows:

- Access the configuration page of the KNX object relative to the Force Fancoil Speed 0 (PropID26) datapoint (by searching the KNX object or simply by clicking the "Edit" icon in the KNX object row present in the list of sub-objects of the complex object) .
- Enable Expert mode from the context menu.
- Select the "Write-only" field of the "Permissions" parameter of the group address in the "KNX group Addresses" section. (See figure below) After completing the operation close the KNX object editing page and return to the configuration page of the complex object.

4.2 Multimedia video touch screen 10in (cod. 21553.2, cod. 21553.1)

4.2.1 Configuration

For associating 21553.2 (or 21553.1) with the Web Server (code 01545), see the installer manual of 21553.2 (or 21553.1) (Same procedure for the association of 21553.2 (or 21553.1) to the 01545 Web Server).

Upon the association between Web Server and 21553.2 (or 21553.1) a specific user is created for the 21553.2 (or 21553.1), whose name can be defined by the user, allowing the 21553.2 (or 21553.1) to log in automatically each time the home automation application is launched.

This user can ONLY be used by 21553.2 (or 21553.1).

In addition, this user cannot be removed from the Web Server, but only from the 21553.2 (or 21553.1) through a Restore to Factory configuration of the Vimar Web Server.

From 21553.2 (or 21553.1) it is not possible to access the ADMINISTRATION section of the Web Server.

From 21553.2 (or 21553.1) you can create schedules but it is recommended to do that from your PC.

From software version 1.4.08 Multimedia Video Touch Screen 10in has a section devoted to the management of the cameras: from 21553.2 (or 21553.1) do not use the Video Surveillance section of the Web Server.

4.2.2 Use

To use the Web Server from 21553.2 (or 21553.1) just run the home automation. application

The login will be performed automatically (if you have made the correct pairing).

From the 21553.2 (or 21553.1) you can still login with a user other than the default one; upon logout, the classic screen appears with the all users on the Web Server and if none of these users are logged in within ten seconds, the 21553.2 (or 21553.1) will automatically log in with the default user.

From 21553.2 (or 21553.1) it is not possible to access the Administration section of the Web Server.

From 21553.2 (or 21553.1) you can create schedules but it is recommended to do that from your PC.

From software version 1.4.08 Multimedia Video Touch Screen 10in has a section devoted to the management of the cameras: from 21553.2 (or 21553.1) do not use the Video Surveillance section of the Web Server.



01545 IEN 05 1811



VIMAR

Viale Vicenza, 14
36063 Marostica VI - Italy
www.vimar.com