



DELEGO MINI by EKINEX

INSTALLATION MANUAL

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| Product: | EKINEX DELEGO MINI |
| Description: | DELEGO MINI - Installation Manual |
| Data: | 27/04/2023 |
| Software version: | 1.0 |
| DOC version: | 001 |

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INTRODUCTION

1.1 CONVENTIONS

The following conventions are adopted in this document:

| | |
|---------|--|
| [KEY] | The keyboard keys that the user must press are shown in square brackets (e.g.: [CTRL]) |
| Courier | Video messages or other software messages are shown in the "courier" font |
| "..." | Names of buttons or other elements of the graphical interface are shown in double quotes |



Important note



Especially important notice

1.2 SECURITY INFORMATION

This manual contains the information necessary to operate the device safely. Anyone who interacts with the device must first read this documentation, especially this safety information. This document integrates and does not replace any regulation or directive of the Law on safety.

The device was developed in compliance with current safety regulations; however, possible damage or interactions with other devices during its operation cannot be ruled out with certainty. The device complies with the EMC guidelines and harmonized European standards; any changes to the device may affect the EMC compatibility.

The power supply voltage must be strictly within the range indicated in this manual and on the device; danger of fire or explosion in case of power supply outside this range. The CE declaration of conformity of the device can be requested from EKINEX, using the references given on the website www.ekinex.com.



In accordance with directive 2002/96/EC, electronic devices must be disposed of in the appropriate structures and not in the collection of solid urban waste.

1.3 COPYRIGHT

This application manual, the DELEGO MINI server software and the DELEGO MINI iOS and Android apps are subject to copyright; all rights reserved. Copying, reproduction, translation and/or modification, even partial, are expressly prohibited unless approved in writing by EKINEX

1.4 OPEN SOURCE

DELEGO MINI contains open source software, such as the Linux operating system and its kernel. These software components are subject to various open-source licenses, including:

GNU General Public License (GPL)

<https://www.gnu.org/licenses/gpl-2.0.html>

GNU Lesser General Public License (LGPL)

<https://www.gnu.org/licenses/lgpl-2.0.en.html>



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2 FIRST INSTALLATION

2.1 INTRODUCTION

DELEGO MINI is a supervision webserver for home automation based apartments and offices based on KNX technology.

DELEGO MINI must be configured and used via a common web browser (from PC/MAC), or via a dedicated app for IOS and Android (from smartphones and tablets).

2.2 ASSEMBLY AND CONNECTIONS

DELEGO MINI it is designed to be mounted on a DIN rail.

For the correct functioning of DELEGO MINI it is necessary to provide the following connections:

- 12V /24V DC power supply (absorption 240 mA at 12V) using the special terminal supplied.
- KNX bus using the specific terminal supplied
- LAN network via cat. 5 or higher and standard RJ45 connector



The connection to the KNX bus is not essential for the configuration of DELEGO MINI, however it is preferable as in its absence it is not possible to verify its correct functioning.

The front LED identified as "POWER" signals the presence of power supply, while the "SERVICE" LED normally remains off, except to signal particular operations in progress.

2.3 NETWORK CONNECTION

The configuration and use of DELEGO MINI require a connection to the home or company network. For the initial setup of DELEGO MINI, as well as in case of absence of a network during the installation phase, it is necessary to proceed as follows:

- Connect DELEGO MINI to your PC through a network cable
- Access your PC's network settings, as explained in your operating system documentation
- Change the TCP/IP (version 4) communication protocol settings for the LAN port to which it is connected DELEGO MINI, 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 prompted, restart the system.

At the end of these operations, open an internet browser and type the following in the address bar:

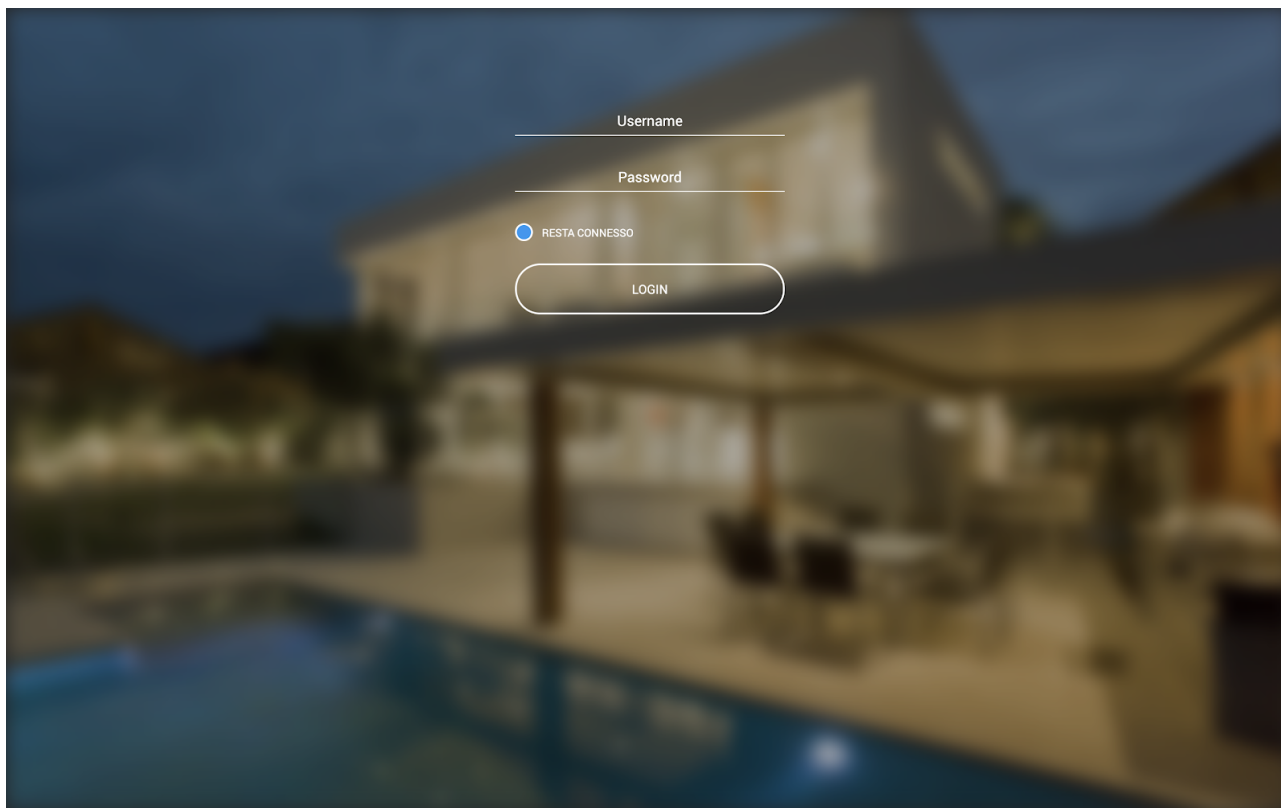
<http://192.168.0.110>



For an optimal experience and maximum compatibility, we recommend using the GOOGLE CHROME browser.

2.4 FIRST ACCESS

By opening the browser to the default address, the following login screen is displayed:



DELEGO MINI comes with the following preset users by default:

| USER | PASSWORD | DESCRIPTION |
|-------|----------|---|
| admin | admin | Administrator user of the home automation system. Has the rights to create users and manage their rights, and to configure supervision |
| user | user | Basic user. Has the rights to be able to view the status of the system, navigate the WEBSERVER pages and carry out the basic commands on the home automation system |

Enter the “admin” user credentials and confirm to access the main screen of the administration environment DELEGO MINI.

2.5 SPACES

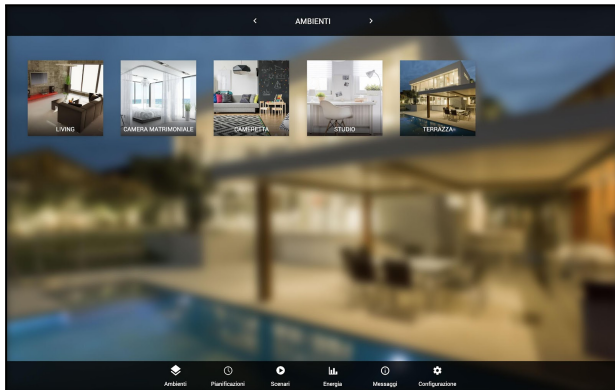
DELEGO MINI is divided into two SPACES distinct for its configuration and use by the end user:

- **ADMINISTRATION:** work environment with which it is possible (based on the rights of the user with whom you access) to configure every aspect of the WEBSERVER and home

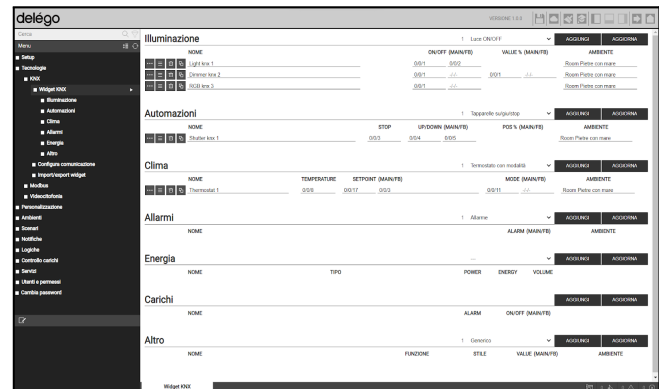
automation supervision

- **VISUALIZATION:** graphic environment designed for the daily use of supervision by the end user, with which it is possible to navigate within the pages provided through the **CONFIGURATION** section, send commands to the home automation devices and view their status in real time

Both environments are based on web technology, therefore fully manageable through a web browser; however, the graphic setting is different:



VISUALIZATION



ADMINISTRATION

To switch from one section to another, proceed as follows:

- From ADMINISTRATION you pass to VISUALIZATION with the button of the same name at the top right
- From the DISPLAY you go to the configuration (if you have the necessary rights) using the "CONFIGURATION" button available on the toolbar at the bottom

2.6 RESTORE FACTORY IP ADDRESS

If necessary, you can restore the factory IP address of DELEGO MINI using the "RESET" button available on the side of the WEBSERVER. For this purpose:

- Open the front panel of DELEGO MINI using a small slotted screwdriver, and exerting a slight lever effect in one of the side slots
- Locate the "RESET" button on the back of the vertical circuit board
- Press the button for at least 10 seconds, until the "SERVICE" LED on the front of the device starts flashing, then release the pressure on the button
- Within the next 5 seconds, press the button for 1 second and release; within a couple of seconds the front LED turns on steady for a couple of seconds
- When the LED turns off, the WEBSERVER can be reached at the factory IP address (192.168.0.110)

If the LED turns off after a long press (10 seconds) before a short press, repeat the entire procedure.

2.7 RESTORE FACTORY CONFIGURATION

If the configuration made makes it impossible to access the DELEGO MINI or its correct use, it is possible to restore the factory conditions, resetting the IP address and emptying the supervision project using the "RESET" button available on the side of the WEBSERVER.

In this case, compared to what was seen previously for restoring the IP address, the procedure to follow is as follows:

- Press the RESET button for at least 10 seconds, until the "SERVICE" LED on the front of the device starts flashing, then release the pressure on the button
- Within the next 5 seconds, press and hold the button for at least 10 seconds
- When the LED lights up steadily, release the button and wait for it to go out
- When the LED turns off, remove and restore power
- Wait about a minute and sign in DELEGO MINI with the factory IP address (192.168.0.110)

3 OVERVIEW

3.1 INTRODUCTION

This chapter presents an overview of the configuration environment of DELEGO MINI, describing in detail the different tools made available and allowing you to familiarize yourself with the webserver working environment.

3.2 GRAPHIC ADMINISTRATION INTERFACE

The ADMINISTRATION environment is divided into the following sections:

| | |
|-----------|---|
| RESEARCH | Always available at the top left, it allows you to quickly search for objects based on one or more keywords |
| MENU | Tree menu that offers access to each page or section of the software, as well as to create, modify or delete objects |
| TOOLBAR | Always available at the top, it provides a series of buttons for performing the most commonly used operations |
| WORKSPACE | Main section of the page; initially empty, it houses the object tabs or the software configuration pages. It is possible to use several tabs at the same time, switching between them through the "TABS" available at the top once at least one page has been opened. |

Research

Toolbar

The screenshot shows the DELEGO MINI web interface. At the top is a toolbar with icons for search, menu, and other functions. On the left is a vertical menu with categories like Setup, Tecnologie, and KNX. The main workspace displays configuration pages for Illuminazione, Automazioni, Clima, Allarmi, Energia, Carichi, and Altro. Each page has a table of objects with columns for name, status, and environment. Red lines connect the labels Research, Menu, Tab bar, Workspace, and Message center to their respective parts in the screenshot.

Menu








Tab bar

Workspace

Message center

3.3 TOOLBAR

The toolbar makes the following buttons available at any time:

| | | |
|---|---|---|
| SAVE YOUR FLASH |  | Allows you to force saving the database to persistent flash memory of DELEGO MINI, ensuring data persistence even in the event of a system shutdown. The button turns red to indicate that there are unsaved changes; the persistent save happens automatically every 5 minutes, so there is no need to force save unless you need to shut down the system before this happens. |
| CLOUD MANAGER |  | Allows access to cloud services integrated with DELEGO MINI upon registration (free). In particular, it allows you to synchronize supervision objects, to then be controlled via remote services, such as voice assistants for example |
| CLEAN CACHE |  | Force clearing of all cache mechanisms. Use this button only if necessary, if the video contents do not reflect the configuration made. |
| BASIC / ADVANCED |  | Allows you to set the level of visibility of the functions and properties of the objects within the pages; the BASIC level offers access to the most commonly used items and only to those set as "VISIBLE", the ADVANCED level allows you to manage all the parameters and access the hidden objects |
| OPEN / CLOSE SIDE PANELS E INFERIOR |  | They allow you to expand or hide the left (MENU), right (PROPERTIES) and bottom (MESSAGE CENTER) side panels respectively |
| LOGOUT |  | Allows you to close the work session and authenticate with a different user |
| VISUALIZATION |  | It allows you to switch to the supervision environment for end users and see the result of the configuration performed |

3.4 NAVIGATION MENU

The menu navigation allows you to access all the administrative sections of the WEBSERVER and to carry out the main operations on the objects. The menu is divided into the following main sections:

| | |
|--------------|--|
| SETUP | Contains the WEBSERVER configuration and general management pages |
| TECHNOLOGIES | It allows you to configure the technologies that the WEBSERVER is able to manage: KNX, video surveillance, VoIP, multimedia and security systems, etc... |
| ENVIRONMENTS | Allows you to configure the ENVIRONMENTS section of the supervision |

| | |
|-----------------------|--|
| SCENARIOS | It allows you to manage the scenarios DELEGO MINI |
| NOTIFICATIONS | Set up messages sent from DELEGO MINI against alarms and events |
| LOGICS | Allows the creation of logics between different supervision objects |
| ADVANCED FEATURES | It offers advanced tools for supervision |
| DATA LOG | Allows the creation of graphs for displaying the historic values of certain supervision objects |
| SERVICES | Allows you to extend the functionality of DELEGO MINI through internet services |
| USERS AND PERMISSIONS | It allows you to configure the system access accounts and establish what rights they have on the different functions and sections of the supervision |
| CHANGE PASSWORD | Page that allows any user, even with basic rights, to change their password |

The menu has the typical structure of menu tree; when loading the administration environment it makes the first level sections available, while the higher level ones are accessible by "expanding" the sections that contain them. All navigation operations within the menu can be done with the mouse.

By clicking on an entry in the menu, it is highlighted in blue; if the item includes sub-items, they are loaded and shown below, effectively expanding the selected item. To close the section, click on it again (once it is selected).

If the selected item of the menu provides for one or more operations, they are made available in the "TOOLBAR" at the bottom through appropriate buttons; operations can be:

| | |
|------------|--|
| CREATE NEW | Allows you to create a new object within the selected section. Based on the specific section, the creation of specific types of objects is allowed; in the case of more than one typology available, a is shown menu context of choice |
| EDIT | Allows you to change the properties of the selected object by opening the relevant tab in the "WORKSPACE" |
| REMOVE | Allows you to delete the selected item from the project |

If the item selected allows modification, when it is selected three "dots" are available on the right, which represent a shortcut with respect to pressing the appropriate modification button in the TOOLBAR.

When an entry is open in the WORKSPACE, there is an arrow on the right side; when the corresponding TAB is closed, the arrow is hidden and the item menu presents again, if selected, the three dots for modification.

Some sections of the menu provide for the possibility of creating new objects within them; for this purpose, the "ADD" button is available on the toolbar at the bottom: when you press it, a new

object is created (the type of which depends on the point in the tree where you are) and automatically selected; at this point, pressing the "EDIT" button (or the "three dots" next to the item in the menu) you access its tab to edit its properties.

3.5 RESEARCH

By typing one or more keywords in the appropriate field at the top left, all the objects within the project are searched, which contain these words in the name or in one of the main properties; the results are shown on the left side of the interface, which temporarily occupies the space normally allocated for menu of navigation.

By clicking on an item in the results, it is highlighted in light gray; as already seen in the case of menu main, if it allows you to carry out operations they are available in the TOOLBAR available at the bottom. Also in this case, if the object permits it, three dots are shown on the right as a shortcut for opening the modification form within the WORKSPACE.

In a similar way to what was seen for the MENU, the following operations can also be performed on the search results:

| | |
|--------|---|
| EDIT | Opens the Selected Objects tab |
| REMOVE | Removes the selected objects from the project |

The search engine also allows the **multiple selection** pressing the CTRL key during the selection with the click; in this case, the operations will be performed on all the selected objects.

3.6 WORKSPACE

The WORKSPACE represents the main work area of the administration. It provides the possibility of operating on more than one TAB at the same time, or rather on several configuration pages; these pages are opened when a MODIFY operation is carried out on an object starting from the MAIN MENU or from SEARCH.

The open TABS are displayed in the TAB-BAR at the bottom; if there is a large number of TABs open, it is possible to access the hidden ones using the appropriate button.

To close an open TAB, simply move the mouse over it and click the close button (shown only when the mouse is over it). The corresponding window is closed; if there are unsaved changes, confirmation is requested before closing, with consequent loss of data.

3.7 MESSAGE CENTER

At the bottom right is a summary of the number of notifications generated by the system, broken down by their severity level. Pressing on it opens a panel containing the details of the most recent notifications, as shown in this example:

Each notification is accompanied by the date and time it occurred. It is possible to empty the list of notifications with the basket at the bottom right, or download the log in CSV format.

4 SETUP

4.1 INTRODUCTION

This chapter delves into the administration tools offered by DELEGO MINI for its correct installation and maintenance. All the pages described in this chapter can be accessed via the "SETUP" section of the menu navigation; some of them may not be available based on the rights of the logged in user.

4.2 LANGUAGE

This page allows you to set the language to be used in the various graphic themes; themes are used in the CONFIGURATION environment or in VIEW to generate the graphical user interface. Select a language from those available for the various themes, then press the "SAVE" button to confirm the changes; at the end of the saving the page will be reloaded, using the new language settings.

4.3 NET

This page allows you to set the network parameters of DELEGO MINI, for different network interfaces (if you have a model of DELEGO MINI with WIFI connection, in addition to LAN).

The screenshot shows the 'delégo' web interface. On the left is a dark sidebar menu with options like 'Menu', 'Setup', 'Dati impianto', 'Lingua', 'Rete', 'Accesso con codice QR', 'Backup/Restore', 'Aggiornamento software', 'Data/ora', 'Home', 'Display e visualizzazione', 'Manutenzione', 'Remotizzazione ETS', 'Tecnologie', 'Personalizzazione', 'Ambienti', 'Scenari', 'Notifiche', 'Logiche', 'Controllo carichi', 'Servizi', 'Utenti e permessi', and 'Cambia password'. The main area is titled 'Informazioni' and shows configuration for the 'LAN' interface. Fields include: 'Indirizzo remoto dispositivo' (213.144.78.210), 'Indirizzo MAC' (54:10:ec:a0:f3:3d), 'Indirizzamento' (Statico), 'IP' (192.168.160.14), 'Maschera di rete' (255.255.255.0), 'Gateway predefinito' (192.168.160.1), 'DNS primario' (8.8.8.8), and 'DNS secondario'. There is also an 'IP ALIAS' section and an 'Accesso remoto' section with a 'COPIA' button. At the bottom are buttons for 'SALVA', 'CHIUDI', 'AGGIORNA', and 'RIAVVIA'.

For the LAN network the required parameters are:

| | |
|------------|---|
| IP ADDRESS | Address to be assigned to DELEGO MINI; must be unique in the network, and have the first three numbers the same as those of the other network devices (unless otherwise indicated by the administrators of the LAN network) |
| NET MASK | Set to "255.255.255.0" unless otherwise instructed by LAN administrators |

| | |
|------------------------------|---|
| DEFAULT GATEWAY | <p>Indicate the IP address of the internet router (where present) or of the reference server of the network, unless otherwise indicated by the administrators of the LAN network.</p> <p>NOTE: To allow remote access to DELEGO MINI it is essential that this parameter is set exactly to the network address of the internet router (eg: ADSL) with which you want to manage access from outside the LAN. For further information, refer to the appropriate section of this manual.</p> |
| PRIMARY DNS SECONDARY DNS | DNS addresses to allow to DELEGO MINI to access the internet (if there is a network connection). Ask your network administrators for guidance or leave the factory settings if in doubt. |

Finally, in the SSL CERTIFICATES – REMOTE ACCESS section, it is required:

| | |
|---------------------------|--|
| DOMAIN O PUBLIC IP | <p>Enter here the public IP (if static) or the DYNDNS domain name used to remotely access ad DELEGO MINI.</p> <p>Be your DELEGO MINI the door remote control service via cloud is active, this field is non-editable, and the public address established by the cloud, which can be accessed remotely, is displayed.</p> |
| PORT FOR REMOTE ACCESS | If you need to use a port other than 443 to access remotely (for specific settings on the router), indicate it in this field |

Once the network parameters have been modified, press the "SAVE" button to make them effective; the save operation takes a few seconds, during which a progress window is shown.

If you have changed the IP address, the page will reload at the new address when finished. If in the meantime you also need to change your PC's network connection, manually reload the page.



Pay particular attention to the accuracy of the data before saving, as it may no longer be possible to reach DELEGO MINI correctly through your network.

In this case, reset the factory IP address using the reset button following the instructions at the beginning of the manual (section 2.6).

Se DELEGO MINI is connected to the Internet, when saving the network parameters, a new SSL certificate is automatically generated, containing the local IP address and - if it has been specified in the "domain or public IP" field - the one for access from remote.

Once the network connections have been configured, a colored indicator is available next to each one, indicating the connection status.

4.4 ACCESS WITH QR CODE

It is possible to speed up access from the IOS and ANDROID apps, by generating a QR code - specific for each user - which contains all the access information, thus making it no longer necessary to configure the app itself.

The first time, or if you change the network configuration of DELEGO MINI, you must first fill in the information requested in the section

SETUP > ACCESS WITH QR CODE

in particular:

DPLANT DETAILS

| | |
|---------------|--|
| DEFAULT LABEL | Name that will be assigned to the plant within the app |
|---------------|--|

LOCAL SETTINGS

| | |
|-----------------------|--|
| IP ADDRESS | IP address of DELEGO MINI on the local network |
| BRINGS | IP port for accessing DELEGO MINI If nothing is specified, port 80 will be used for HTTP access, 443 for HTTPS |
| USE SECURE CONNECTION | Defines whether the secure HTTPS protocol or (default) HTTP access should be used in the local network |
| HOME NETWORKS | Enter one or more WIFI network names (SSID) which must be considered as local networks, i.e. in which DELEGO MINI can be reached via local address. The networks must be entered in the format suggested on the screen, i.e. for example: ["rate1"] ["rate1","rate2"] |

REMOTE SETTINGS

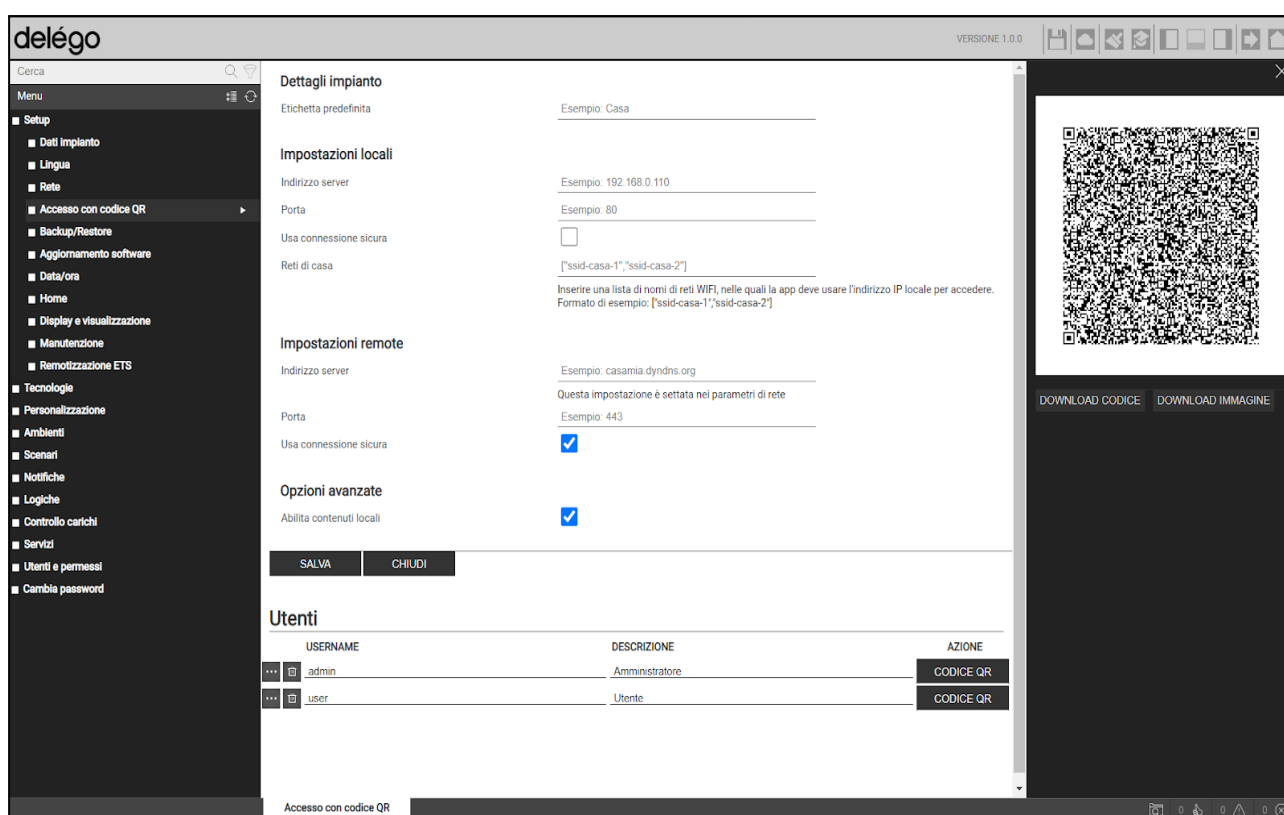
| | |
|----------------|--|
| SERVER ADDRESS | Specify the public IP address or domain name (without "https://" and without port number) for remote access Be your DELEGO MINI the cloud remote control service is active, this field cannot be written, and the public address assigned by the cloud service is displayed |
| BRINGS | Specify the IP port for remote access, if other than 443 |

| | |
|-----------------------|---|
| USE SECURE CONNECTION | <p>Normally this field must remain active, because DELEGO MINI does not support insecure connections (HTTP) remotely.</p> <p><i>In particular network conditions, however, it may be necessary to remove this flag; in this case, the IP port must be 80 or another HTTP port (not SSL) possibly customized at the network / router level</i></p> |
|-----------------------|---|

ADVANCED OPTIONS

| | |
|----------------------|---|
| ENABLE LOCAL CONTENT | <p>Specifies whether or not the suite of content first downloaded from the server in apps should be used DELEGO MINI, to optimize navigation.</p> |
|----------------------|---|

Once all the fields have been filled in, press SAVE and wait a few seconds, after which the page can be edited again.



The screenshot shows the DELEGO MINI web interface. The left sidebar contains a menu with options like 'Setup', 'Impianto', 'Lingua', 'Rete', 'Accesso con codice QR', 'Backup/Restore', 'Aggiornamento software', 'Data/ora', 'Home', 'Display e visualizzazione', 'Manutenzione', 'Remotizzazione ETS', 'Tecnologie', 'Personalizzazione', 'Ambienti', 'Scenari', 'Notifiche', 'Logiche', 'Controllo carichi', 'Servizi', 'Utenti e permessi', and 'Cambia password'. The main content area is titled 'Dettagli impianto' and includes sections for 'Impostazioni locali', 'Impostazioni remote', 'Opzioni avanzate', and 'Utenti'. The 'Impostazioni locali' section includes fields for 'Etichetta predefinita', 'Indirizzo server', 'Porta', 'Usa connessione sicura', and 'Reti di casa'. The 'Impostazioni remote' section includes fields for 'Indirizzo server', 'Porta', and 'Usa connessione sicura'. The 'Opzioni avanzate' section includes a checkbox for 'Abilita contenuti locali'. The 'Utenti' section displays a table of users with columns for 'USERNAME', 'DESCRIZIONE', and 'AZIONE'. A QR code is displayed on the right side of the page, with buttons for 'DOWNLOAD CODICE' and 'DOWNLOAD IMMAGINE'.

At this point, in the section below, the list of all users is available DELEGO MINI.

For each of them, it is possible to generate a unique QR code, containing all the data and access credentials, to be shared with the user in question, to allow him quick and secure access (since the content of the code is encrypted) through the apps DELEGO MINI. For this purpose:

- Identify the user for whom you want to generate the code
- Press the QR CODE button
- Wait a few seconds for the code to appear in the side panel
- Print or scan the QR code directly on screen, if you have the app at the same time it was generated

- Download the code using the DOWNLOAD button and send it via email / WhatsApp or other similar app, which allows file sharing

On the IOS or ANDROID mobile device, once the app is installed DELEGO, press the [+] button on the toolbar, choose the item "VIA QR CODE" and scan the code.



If you change your DELEGO MINI access data or user credentials, you need to create a new QR code and repeat the procedure, as the previous code is no longer valid.

In any case, from within the DELEGO apps, it is always possible to manually modify the automatically generated project parameters via QR.

4.5 UPDATE

This item allows you to update the software present inside DELEGO MINI; use only official installation packages otherwise possible malfunctions.

By accessing the update page, a possible more recent version is automatically searched on the cloud. If a new version is detected, pressing the UPDATE button will install.

In case an internet connection is not available, you can proceed manually as follows:

- Access the upgrade page
- Press the MANUAL button
- Contact Technical Support EKINEX the latest version of the package, and save it on your PC without unpacking it
- Select the update package using the "BROWSE" button (or similar, depending on your browser)
- Click on the "UPDATE" button

The update procedure takes place completely automatically; wait for the procedure to complete without carrying out any other operation on the browser and without closing it (otherwise possible malfunction of the webserver). The procedure can also take several minutes, depending on your software version and configuration.

At the end, a synthetic summary of the operation is proposed, with the new software version; to complete the procedure, press the "RESTART" button which restarts the operating system DELEGO MINI.

If the update procedure should be interrupted due to accidental causes (e.g. power outage, drop in the network connection with your PC), try to carry out the following operations:

- Turn the webserver off and on again
- Wait a minute, then open your browser to the IP address of DELEGO MINI
- Wait for the automatic restore procedure to complete and the webserver to restart again



The automatic reset procedure is also started by performing a full reset from the reset button.

If the auto reset does not unlock (wait at least 15 minutes to be sure), contact our technical support.

4.6 BACKUP / RESTORE

This page allows you to make a backup copy of your supervision project or, conversely, to import a previously made backup (even on a different DELEGO MINI or in DELEGO MINI PDK). It is also possible to report DELEGO MINI to the factory settings by choosing the appropriate item (the network address is not changed).

Once you have chosen the operation you wish to carry out (and selected the backup file in the case of import) press the "EXECUTE" button and wait for the operations to finish, signaled by a specific message on the screen. Do not interrupt the procedure by carrying out other operations in the browser or by closing it, on pain of possible malfunctions.

4.7 DATE HOUR

This page allows you to set a series of options relating to the system clock.

4.7.1 DATE AND TIME

This section allows you to manually set the system time. Enter the time and date and press the "SAVE" button; while saving the time, and consequent restarting of all communication services, a page with a warning message is shown.



In some conditions, saving a different time from the one previously set in the webserver can lead to the display of a "gateway timeout" error page.

In this case, simply reload the page; if the problem persists, switch the webserver off and on, wait about a minute and reconnect.

4.7.2 JET LAG

Allows you to establish the working time zone of DELEGO MINI, if different from the default.

4.7.3 SYNC DATE FROM

This section allows you to automatically update the time DELEGO MINI, through an internet service; you need to specify a *time server* (if different from the default) and every how many minutes to synchronize.

4.8 HOME

Allows you to set the following options for the main screen:

| | |
|----------------------------------|--|
| WALLPAPER \ BACKGROUND IMAGE | Photograph to be used as a general background of the supervision, on all pages not equipped with their own graphics |
| AUTOMATIC RETURN TO HOMEPAGE [s] | If a value other than zero is entered, the display automatically returns to the main page after this time (in seconds) of inactivity |

4.9 MAINTENANCE

This page allows you to monitor the operating status of the webserver, and carry out some recovery operations.

The following information is displayed in the "SYSTEM STATUS" section:

| | |
|------------------------------------|--------------------------------------|
| TIME SINCE LAST START | Webserver startup time |
| FREE RAM MEMORY RAM MEMORY USED | RAM memory respectively free or used |

It is also possible to download the communication services log file onto your PC / MAC; this file can provide our customer support service with useful information to solve any problems.

In the "OPERATIONS" section, vice versa, it is possible to carry out the following activities:

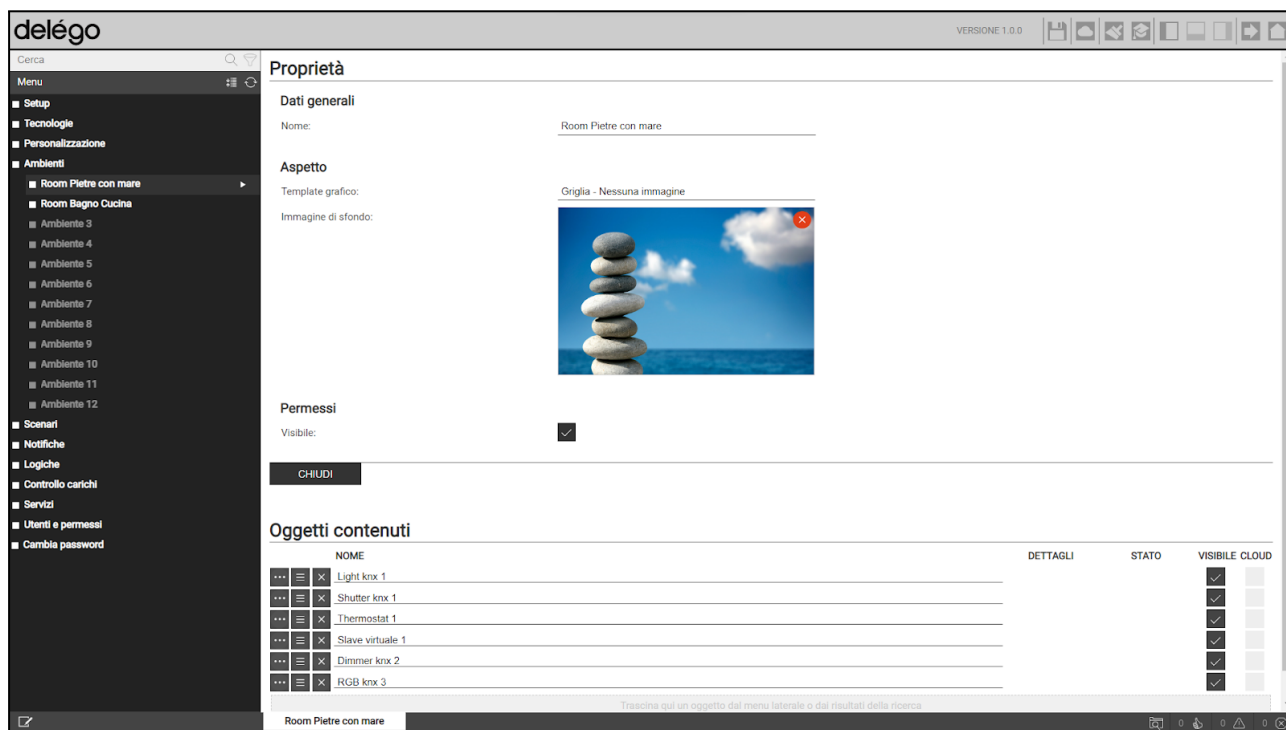
| | |
|--------------------------------|---|
| RESTART COMMUNICATION SERVICES | <p>It forces the restart of the communication services, which manage the dialogue with the technologies and carry out the logical operations.</p> <p>Try this operation if there are problems communicating with the technologies, or any changes to the configuration have not been automatically implemented.</p> |
| REBOOT THE SYSTEM | Force restart your device without having to manually adjust the power |
| RESTART WEB SERVICES | <p>Force restart the web interface and related services.</p> <p>Try this if there are GUI issues, possibly from a specific client device.</p> |
| REGENERATE WEB CERTIFICATES | It allows you to generate a new customized SSL certificate, an operation necessary to secure communication and eliminate browser security warnings. |

| | |
|---|--|
| | <i>Note: Requires internet access. Operation NOT necessary if you use the cloud for remote access to.</i> |
| REGENERATE LOCAL CONTENT FOR MOBILE DEVICES | <p>Allows you to regenerate the suite <i>software</i> which is downloaded by the IOS and Android apps at the first connection, in order to reduce subsequent data transfers, and therefore make access and navigation much faster.</p> <p>Under normal conditions, this suite is generated with each software update. In particular situations, however, it may be necessary to regenerate this archive; inThis specific case, once the operation is done, they must also be deleted caches within the app,by pressing the REFRESH button in the DELEGO app.</p> |

5 ENVIRONMENTS

5.1 EDITING AN ENVIRONMENT

DELEGO MINI provides 12 pre-set environments, in which it is possible to insert the widgets corresponding to the home automation functions to be managed.



Pre-set environments are hidden; to customize them and make them visible, select one from the corresponding item of menu administration, and press the edit button. You access its detail card, where you can set the following:

| | |
|----------------------------|--|
| NAME | Identification name of the environment, used in all points of the software that require navigation within it |
| GRAPHIC TEMPLATE | <p>Allows you to choose the graphic layout with which the content of the environment will be displayed in the VISUALIZATION. The following templates are provided:</p> <ul style="list-style-type: none">• GRID – FULL SCREEN PICTURE The image appears as the background of the page• GRID – NO IMAGE The image is only used in the menu main, but not as the background of the page |
| WALLPAPER BACKGROUND IMAGE | If the chosen template provides for the display of a background image, by clicking on this item it is possible to choose one of those available. |

| | |
|---------|---|
| | <p>It is possible to upload new images by pressing the "UPLOAD" button and selecting a file on your PC; after a few seconds (in which the file is transferred to the webserver) it will be available in the list.</p> <p>By clicking on a preview, the corresponding image is chosen as background for the environment.</p> |
| VISIBLE | Determines whether or not the environment should be visible in the VIEW |

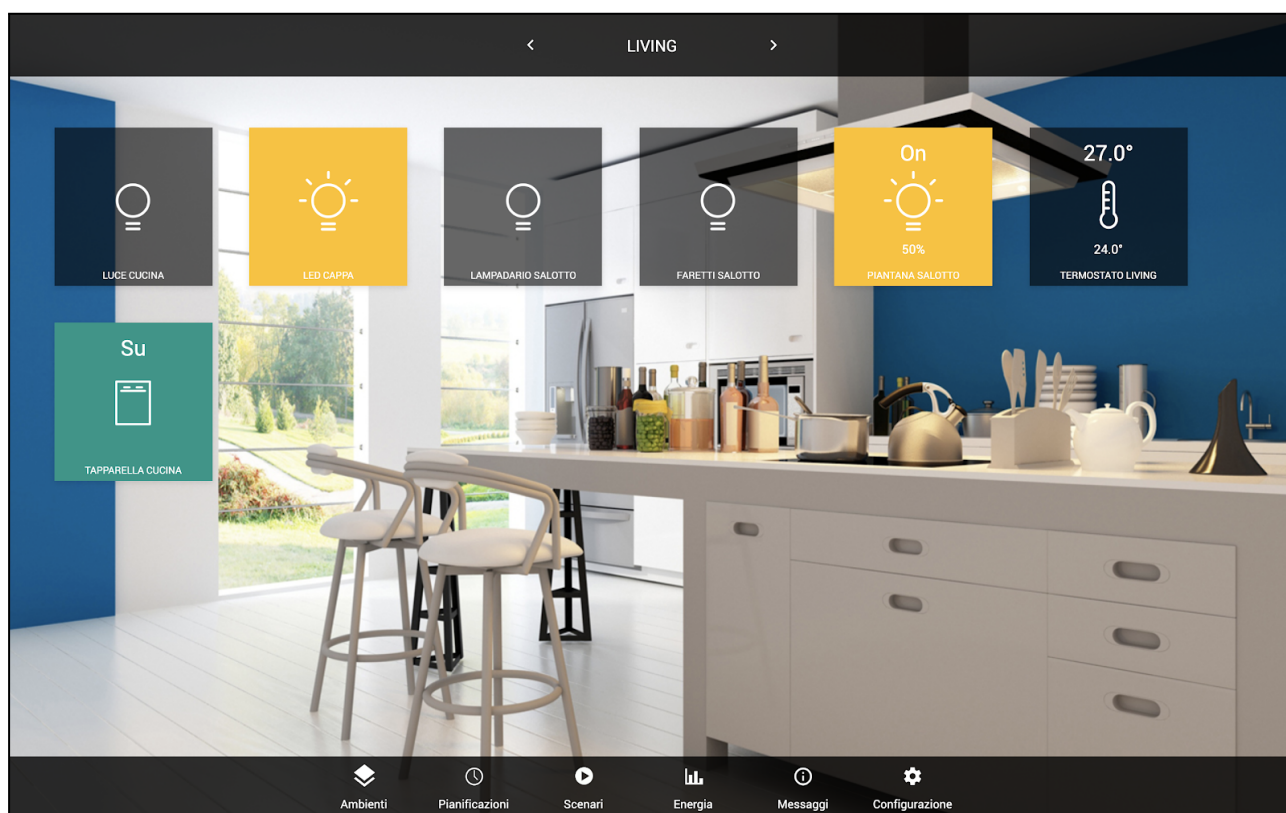
5.2 WIDGET ASSOCIATION

It is possible to associate a technological widget to an environment in two ways:

- In the widget configuration page, select the relevant environment using the appropriate menu dropdown
- Once the environment page opens, look for the widget in the menu side or with the search engine, and drag it to the CONTENT OBJECTS section

It is possible to change the order of the widgets using the appropriate drag button; this determines the order in which elements are drawn in the visualization.

Once the association of the widgets has been completed, the environments appear as in this example figure:



6 KNX

6.1 PREMISE

DELEGO MINI it can manage a KNX system, connected directly to its integrated port, supervising up to a maximum of 200 group addresses at the same time.

6.2 NEW KNX WIDGET

To supervise a KNX functionality, one or more must be created widget through the appropriate page

TECHNOLOGIES > KNX > KNX WIDGETS

Inside there is a list of categories, initially empty, in which the widgets will be organized. Corresponding to each, at the top right, there is a text field, in which to enter the number of widgets to be created, and a selector containing a list of template (which represent the type of widget, in terms of both sub-objects and graphic appearance).

By pressing the ADD button, the widgets of the chosen type are created and added to the list in the corresponding category:

Categories

Number of new widgets

Template selector

Add button

delégo

VERSIONE 1.0.0

Cerca

Menu

- Setup
- Tecnologie
- KNX
 - Widget KNX
 - Illuminazione
 - Automazioni
 - Clima
 - Allarmi
 - Energia
 - Altro
 - Configura comunicazione
 - Import/export widget
 - Modbus
 - Videocitofonia
 - Personalizzazione
 - Ambienti
 - Scenari
 - Notifiche
 - Logiche
 - Controllo carichi
 - Servizi
 - Utenti e permessi
 - Cambia password

Illuminazione 1 Luce ON/OFF

| NOME | ON/OFF (MAIN/FB) | VALUE % (MAIN/FB) | CLOUD | AMBIENTE |
|--------------|------------------|-------------------|-------|----------------------|
| Light knx 1 | 0/0/1 0/0/2 | 0/0/1 | | Room Pietre con mare |
| Dimmer knx 2 | 0/0/1 | 0/0/1 | | Room Pietre con mare |
| RGB knx 3 | 0/0/1 | 0/0/1 | | Room Pietre con mare |

Automazioni 1 Tapparelle su/giù/stop

| NOME | STOP | UP/DOWN (MAIN/FB) | POS % (MAIN/FB) | CLOUD | AMBIENTE |
|---------------|-------|-------------------|-----------------|-------|----------------------|
| Shutter knx 1 | 0/0/3 | 0/0/4 0/0/5 | | | Room Pietre con mare |

Clima 1 Termostato con modalità

| NOME | TEMPERATURE | SETPOINT (MAIN/FB) | MODE (MAIN/FB) | CLOUD | AMBIENTE |
|--------------|-------------|--------------------|----------------|-------|----------------------|
| Thermostat 1 | 0/0/8 | 0/0/17 0/0/3 | 0/0/11 | | Room Pietre con mare |

Allarmi 1 Allarme

| NOME | ALARM (MAIN/FB) | CLOUD | AMBIENTE |
|------|-----------------|-------|----------|
|------|-----------------|-------|----------|

Energia ---

| NOME | TIPO | POWER | ENERGY | VOLUME | CLOUD |
|------|------|-------|--------|--------|-------|
|------|------|-------|--------|--------|-------|

Carichi

| NOME | ALARM | ON/OFF (MAIN/FB) | CLOUD |
|------|-------|------------------|-------|
|------|-------|------------------|-------|

Altro 1 Generico

| NOME | FUNZIONE | STILE | VALUE (MAIN/FB) | CLOUD | AMBIENTE |
|------|----------|-------|-----------------|-------|----------|
|------|----------|-------|-----------------|-------|----------|

Room Pietre con mare Widget KNX



It is advisable to initially create only one widget of a certain type, and then duplicate it, as better highlighted below.

In the case of simpler widgets, such as ON/OFF lights or dimmer lights, it is possible to enter the KNX addresses directly in the list; where required, it is possible to enter both the main address (MAIN) and any status feedback address (FB), all in the X/Y/Z format.



DELEGO MINI does not carry out a duplication check of manually entered KNX addresses, because it could be useful to recall the same address in several sub-graphs. Pay particular attention to the correctness of the addresses entered.

It is possible to associate the widgets to a previously configured environment, using the menu drop down at the bottom of the row (only the environments marked as visible are shown).

To configure the widget in more detail, access its tab using the EDIT button at the beginning of the line ("three dots" symbol):

Widget general properties
Action buttons
KNX address details

The initial section contains general information about the widget:

| | |
|-------------|--|
| NAME | Label used to identify the widget |
| ENVIRONMENT | Selector of the environment in which to display the widget |

By enabling the ADVANCED mode, with the appropriate button in the toolbar above, you can also specify the following:

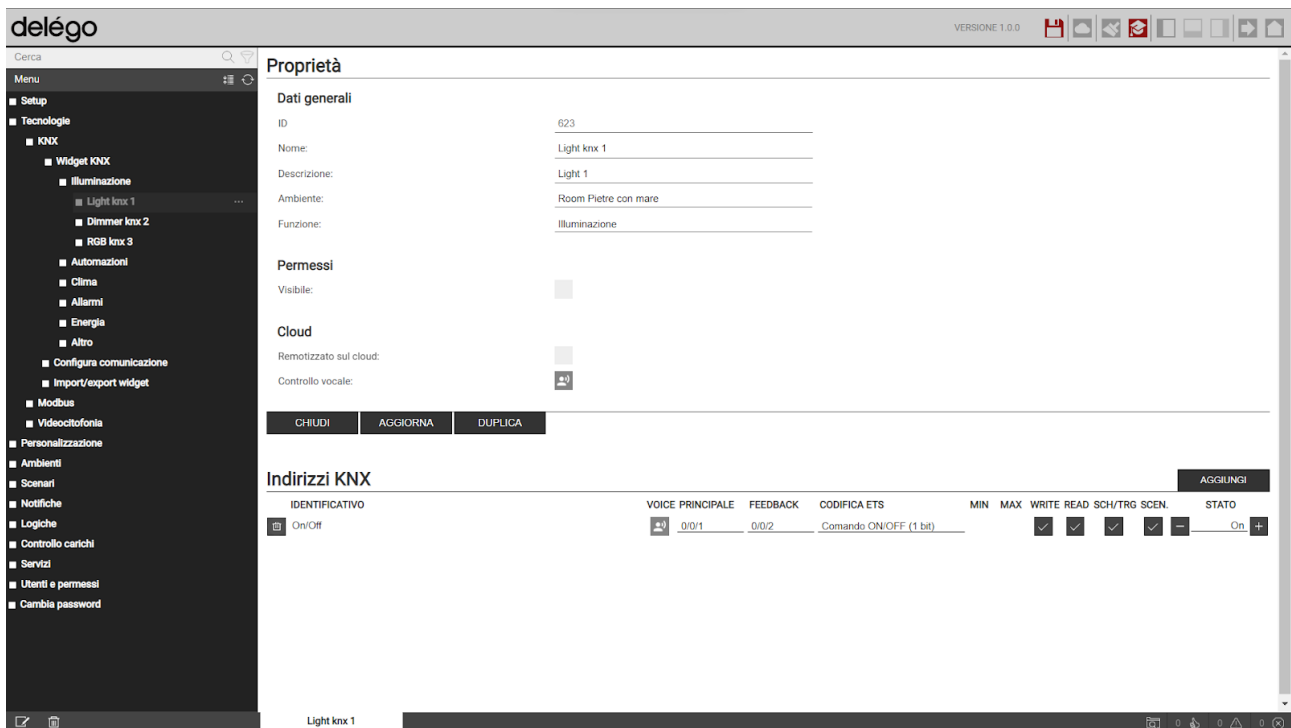
| | |
|---------|--|
| VISIBLE | Establishes whether or not the widget should be visible in the supervision |
|---------|--|

| | |
|-----------------------|--|
| REMOTELY ON THE CLOUD | It allows you to synchronize the widget on the cloud, and enable it for external services, such as command through voice assistants. |
| VOICE CONTROL | <p>The VOICE CONTROL indicator indicates whether or not the widget can be controlled by voice.</p> <p>For further details, please refer to the specific section of this manual, dedicated to the SERVICES.</p> |

Conversely, the complete list of KNX addresses that can be associated with the widget is shown in the lower section, based on the type selected during creation.

For each of them, you can specify the following:

| | |
|------------|---|
| IDENTIFIER | <p>Represents the "role" of the KNX address within the widget.</p> <p>It is not editable, except for generic widgets.</p> |
| VOICE | Highlight which addresses can be managed with voice assistants; uneditable. For further details, please refer to the appropriate section of the manual relating to the service <i>voice bridge</i> . |
| COMMAND | Primary KNX address, to which commands are sent (if writable) |
| STATE | <p>Possible status KNX address, to be monitored to stay aligned with the status of the actuators.</p> <p>In the case of read-only objects, indicate here the KNX address on which DELEGO MINI expects to receive telegrams.</p> |
| WRITE | Determines whether or not the address should be writable by the user interface of DELEGO MINI |
| STATE | Shows the real-time status of the address and allows, if writable, to send test commands on the KNX bus |



If you activate the ADVANCED mode, using the appropriate button at the top right of the toolbar, you can additionally specify How much he follows:

| | |
|----------------------|---|
| ENCODE ETS | Type of data exchanged on the KNX bus on this address. It is recommended not to change the encoding from the suggested settings. |
| MIN MAX | In the case of addresses with numeric value, it allows you to force a minimum and maximum limit, different from the pre-established ones. In this way, for example, it is possible to restrict or widen the selection limits of a temperature setpoint in a thermostat widget. |
| READ | Defines whether the KNX address can be queried via read telegram. To send KNX read telegrams, use a scene. |
| SCHEDULE SCENARIO | They allow you to establish, within the list of addresses, which should be used for a possible planning (SCH) or within scenarios (SCEN), when the current widget is selected |



Once the KNX addresses have been assigned to the widgets, it is necessary to restart the communication services for them to take effect. This operation can be done with the UPDATE button, available both in the list of widgets and in the detail tab.

It is not necessary to restart the services for each change, but it is necessary to do it at the end of a series of changes, or the insertion of new widgets.

6.3 DUPLICATION OF A WIDGET

Once a widget is fully configured, it can be duplicated; this mode represents the fastest way to quickly implement the supervision project, thanks to the possibility – during duplication – of automatically increasing the group addresses.

To duplicate a widget, you need to do this:

- Press the corresponding DUPLICATE button in the widget list
- Press the DUPLICATE button in its detail card

In both cases this window opens:



You can specify the following:

| | |
|------------------|--|
| NUMBER OF COPIES | Allows you to specify the number of widgets you want to create, starting from the chosen one |
| GROUP ADDRESSES | <p>If you select "keep originals", identical copies of the original widget will be created.</p> <p>Conversely, selecting "apply offset" it is possible to indicate an increase (offset), for each of the 3 numbers that make up the KNX addresses (main, intermediate and group address), to be applied for each of the duplicates. It is also possible to indicate negative values.</p> <p>For example, by inserting "1" or "+1" as an offset on the group address, each KNX address present in the starting widget will be increased by 1 on the last number, as many times as the number of copies requested:</p> <p>3/0/1 3/0/2 3/0/3 ...</p> |

Pressing the EXECUTE button the duplication is started; after a few seconds, the widgets are available in the corresponding section of the KNX WIDGET page.

At this point, it is sufficient:

- Change the label for new widgets
- Assign them to target environments (duplicates are all placed in the source widget environment, if available)



Even after a duplication operation, it is necessary to press the UPDATE button so that the new addresses are correctly managed by DELEGO MINI in supervision



It is not recommended to change the ETS coding for the sub-objects of a widget, other than the one proposed at creation. By changing the encoding, the widget may not work properly.

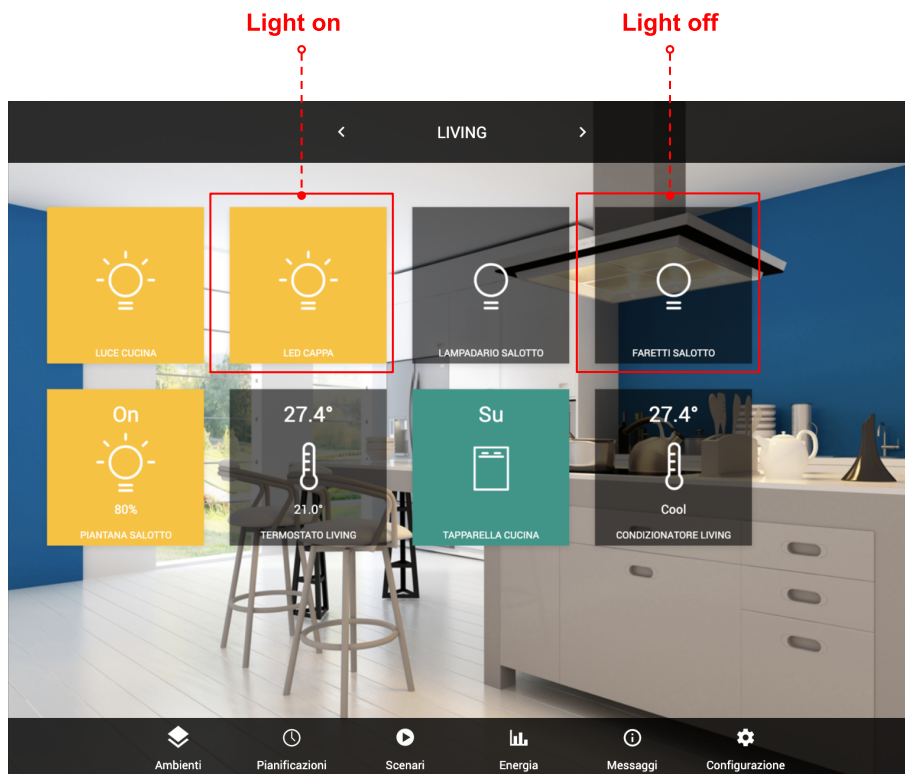
6.4 LIGHTING

6.4.1 LIGHTS ON/OFF

ON/OFF lights are one of the simplest KNX widgets; they contain only one sub-object, to which it is possible to associate a 1-bit command address, and any status feedback:

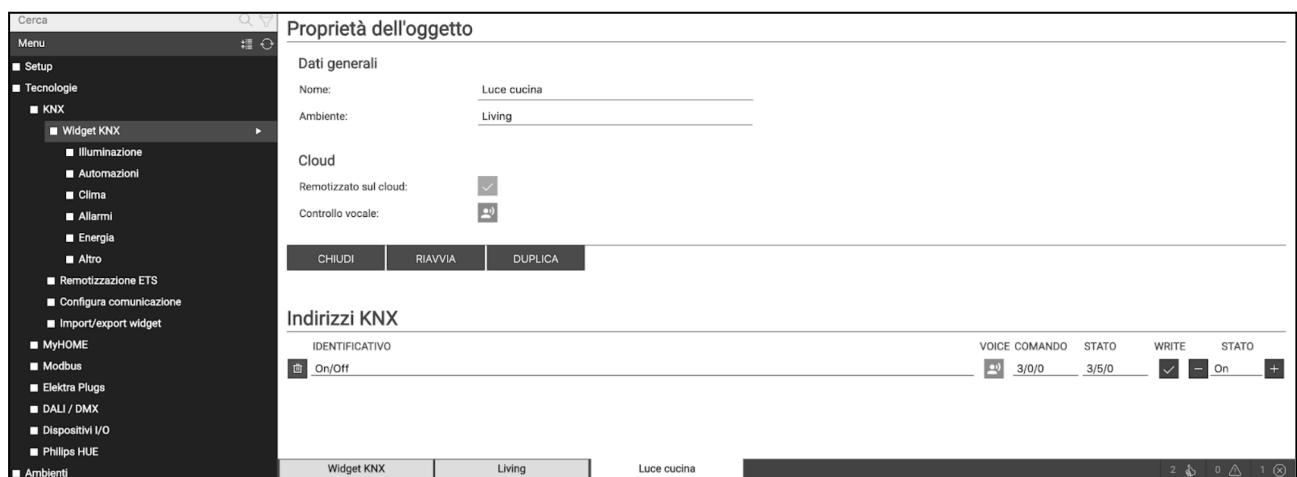
The screenshot displays the 'Proprietà dell'oggetto' (Object Properties) window for a 'Widget KNX'. The left sidebar shows a navigation menu with categories like 'Setup', 'Tecnologie', 'KNX', 'Widget KNX', 'Illuminazione', 'Automazioni', 'Clima', 'Allarmi', 'Energia', 'Altro', 'Remotizzazione ETS', 'Configura comunicazione', 'Import/export widget', 'MyHOME', 'Modbus', 'Elektra Plugs', 'DALI / DMX', 'Dispositivi I/O', 'Philips HUE', and 'Ambienti'. The main area is divided into sections: 'Dati generali' (General Data) with fields for 'Nome' (Name) set to 'Luce cucina' and 'Ambiente' (Environment) set to 'Living'; 'Cloud' section with 'Remotizzato sul cloud' (Cloud Sync) checked and 'Controllo vocale' (Voice Control) set to 'On'; and 'Indirizzi KNX' (KNX Addresses) table. The table has columns for 'IDENTIFICATIVO' (Identifier), 'VOICE COMANDO' (Voice Command), 'STATO' (Status), 'WRITE', and 'STATO' (Status). The first row shows 'On/Off' with address '3/0/0' for the command and '3/5/0' for the status, with a 'WRITE' checkbox checked and a 'STATO' dropdown set to 'On'. At the bottom, there are buttons for 'CHIUDI' (Close), 'RIAVVIA' (Refresh), and 'DUPLICA' (Duplicate). The bottom status bar shows 'Widget KNX', 'Living', 'Luce cucina', and a set of icons including a refresh, a warning, and a close button.

The ON/OFF lights appear in supervision as boxes that can be controlled directly with a touch; at each action, the status is inverted between on and off:

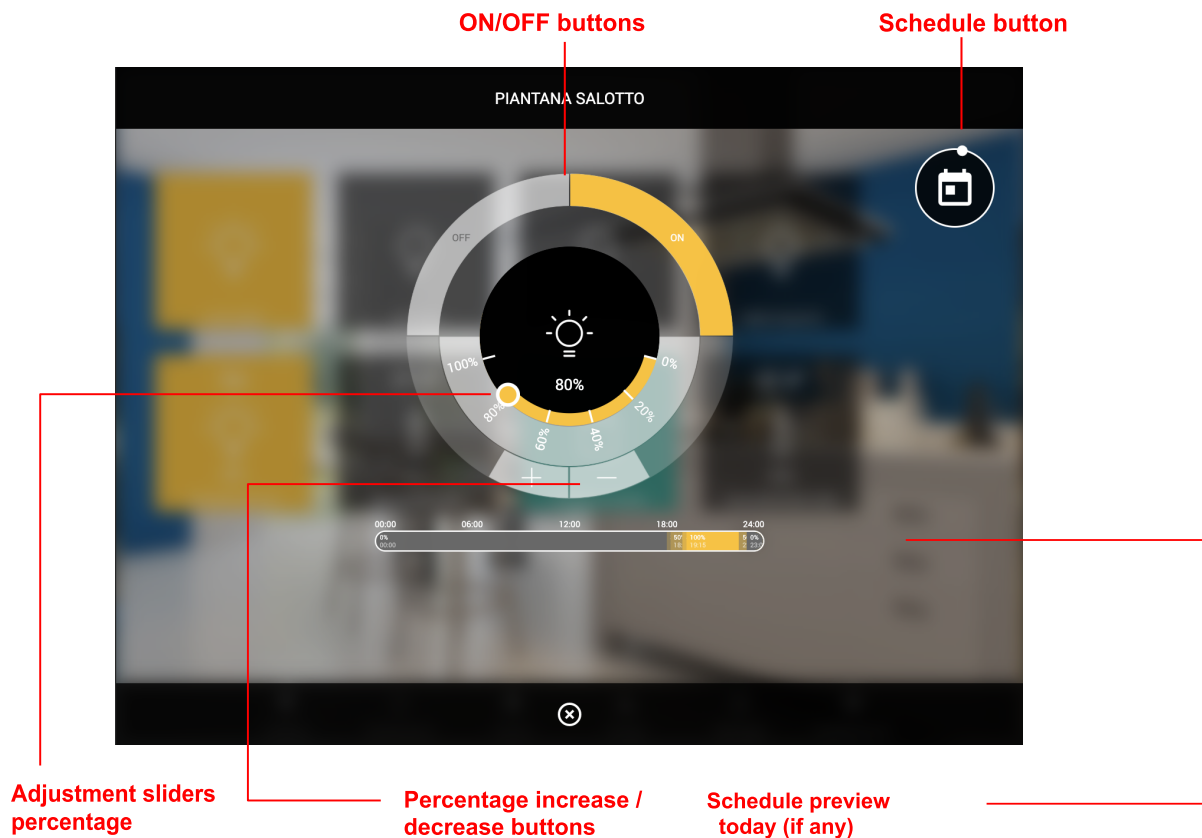


6.4.2 DIMMER

The dimmer-type widget provides two sub-objects, for switching the light ON/OFF and for its percentage adjustment:



In supervision, by pressing a dimmer light, the following control pop-up is displayed:



At the top right, the widget schedule quick access button is available; it is possible to plan the sub-object marked as “SCHED” during the configuration phase.

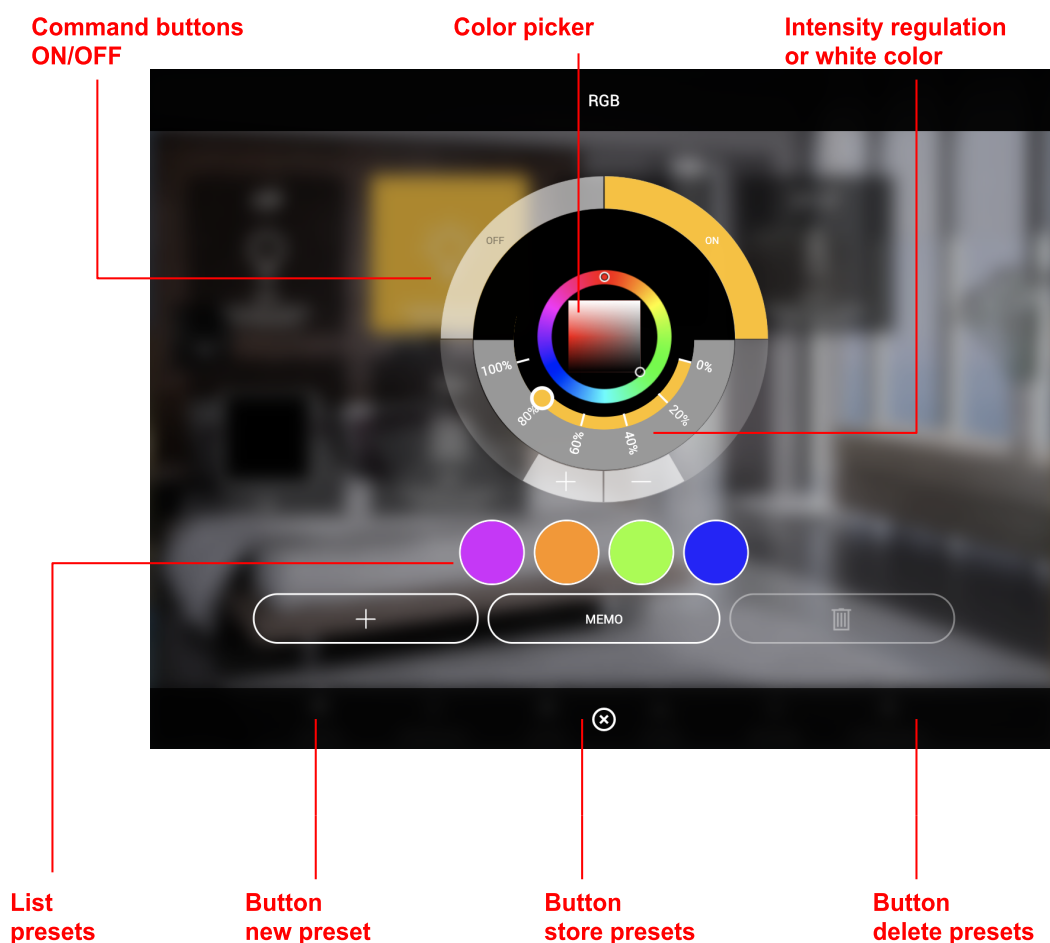
If there is an active schedule, the button presents an animation, and at the bottom of the popup, the schedule for the current day is summarized. Pressing on it, it can be modified directly.

6.4.3 RGB

It is possible to command an RGB controller by creating the appropriate widget, which provides the following sub-objects:

| IDENTIFIER | ENCODE ETS | NOTE |
|----------------------------------|---------------------------|---|
| Dimmer intensity | Percentage (1 byte DPT 5) | If present, adjusts the overall intensity of the light, regardless of color |
| Red Green color Blue color | Percentage (1 byte DPT 5) | Dimmer components for adjusting the 3 colors |
| White color | Percentage (1 byte DPT 5) | White component for RGBW controllers |
| ON/OFF | Switch (1 bit DPT 1) | If present, turns the light on or off |

In supervision, this detail popup is shown when you press on an RGB control:



Acting on the color selector, it is possible to control the color of the controller in real time. The chosen color is broken down into R/G/B components and sent to the corresponding KNX addresses.

By pressing the preset addition button, a new color memory is created, initially black; selecting a color, a preset and pressing the MEMO button, the color is stored in the corresponding memory. A preset can be removed by selecting it and then pressing the delete button.

6.5 AUTOMATIONS

6.5.1 SHUTTER UP/DOWN/STOP

This type of widget allows the command of simple motorizations, using two sub-objects, typically made available by KNX actuators for rolling shutters and similar:

| IDENTIFIER | ENCODE ETS | NOTE |
|-----------------------|----------------------|--|
| Handling (on/down) | ON/OFF (1 bit DPT 1) | Typical convention: 1 → lower / close 0 → raise / open |

| | | |
|------|----------------------|--|
| Stop | ON/OFF (1 bit DPT 1) | Typically accepts a 1 to stop movement |
|------|----------------------|--|

Cerca
Menu
Setup
Tecnologie
KNX
Widget KNX
Illuminazione
Automazioni
Clima
Allarmi
Energia
Altro
Remotizzazione ETS
Configura comunicazione
Import/export widget
MyHOME
Modbus
Elektra Plugs
DALI / DMX
Dispositivi I/O
Philips HUE
Ambienti
Living
Camera matrimoniale
Camera bambini

Proprietà dell'oggetto

Dati generali
ID: 611
Nome: Tapparella cucina
Descrizione:
Ambiente: Living

Permessi
Visibile: ☒

Cloud
Remotizzato sul cloud: ☒
Controllo vocale: ☐

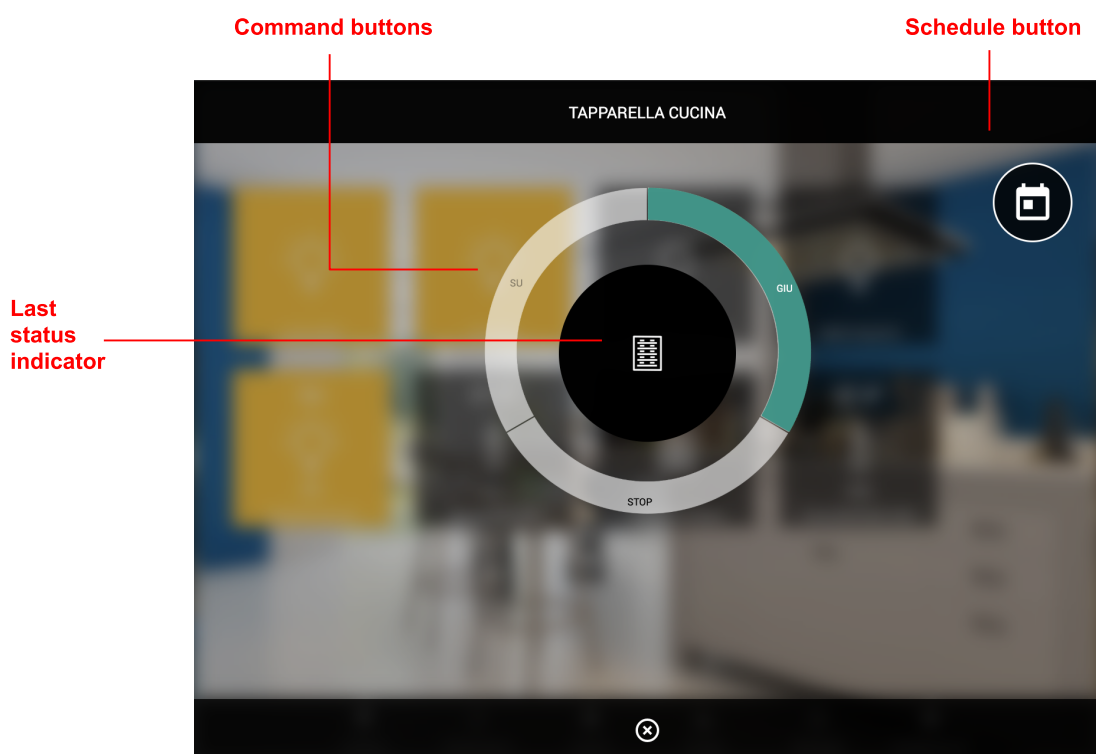
CHIUDI
RIAVVIA
DUPLICA

Indirizzi KNX

| IDENTIFICATIVO | VOICE COMANDO | STATO | CODIFICA ETS | MIN | MAX | WRITE | READ | SCHED. | SCEN. | STATO |
|-------------------------|---------------|-------|------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------|
| Movimentazione (su/giu) | 4/0/2 | 4/5/2 | Comando ON/OFF (1 bit) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Su |
| Arresto | 4/0/1 | -/-/- | Comando ON/OFF (1 bit) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Stop |

Widget KNX
Tapparella cucina

In visualization, by pressing on this widget, the following popup is shown:



6.5.2 SHUTTER UP/DOWN/PERCENTAGE

This widget allows you to control the percentage position of the movement, through two sub-objects:

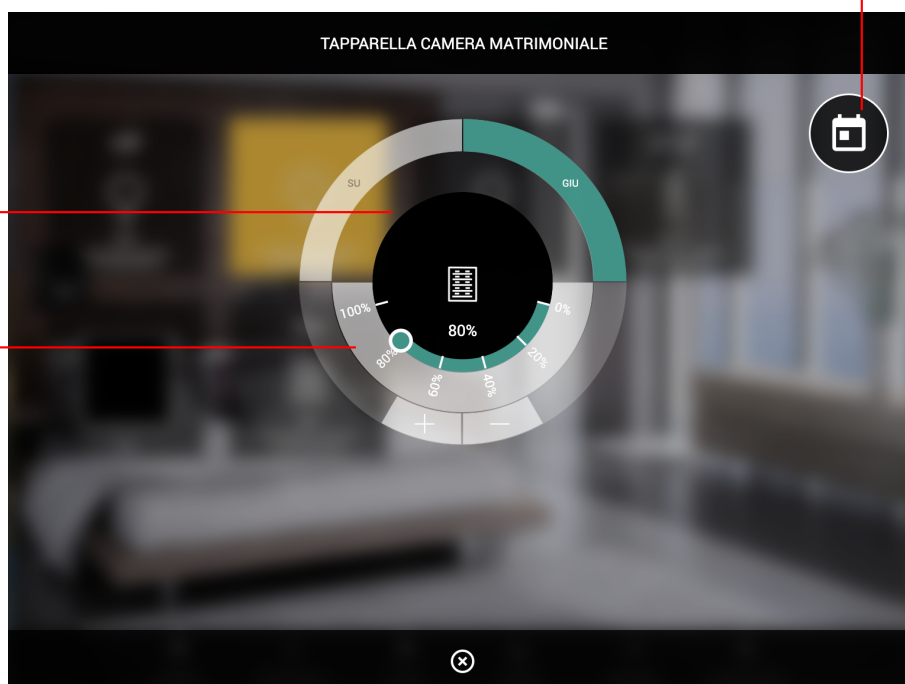
| IDENTIFIER | ENCODE ETS | NOTE |
|------------|------------|------|
|------------|------------|------|

| | | |
|-----------------------|---------------------------|---|
| Handling (up down) | ON/OFF (1 bit DPT 1) | Typical convention: 1 → lower / close 0 → raise / open |
| Percentage value | Percentage (1 byte DPT 5) | Typical convention: 0% → fully raised / open 100% → fully down / closed |

In visualization, by pressing on this type of widget, the following popup is proposed:

Command buttons
Up down

Schedule button



Position adjustment
percentage

6.5.3 VENETIAN BLINDS UP/DOWN/SLATS

This widget allows you to manage a shutter actuator with slat control, through two sub-objects:

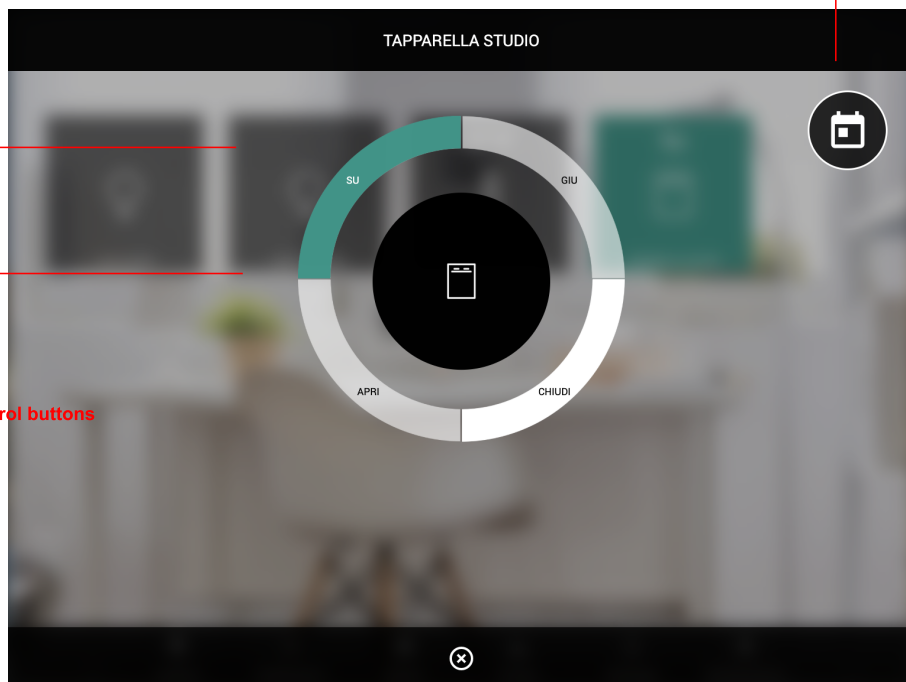
| IDENTIFIER | ENCODE ETS | NOTE |
|-----------------------|----------------------|--|
| Handling (up down) | ON/OFF (1 bit DPT 1) | Typical convention: 1 → lower / close 0 → raise / open |
| Slats (open/close) | ON/OFF (1 bit DPT 1) | Typical convention: 1 → lower / close 0 → raise / open |

In visualization, the widget shows the following popup:

Command buttons
Up down

Schedule button

Slat control buttons



6.6 CLIMATE

6.6.1 THERMOSTAT WITH MODE

This type of widget allows you to manage a controllable thermostat with operating mode; the template provides for different variants, based on the number and type of sub-objects that are associated with a KNX address. Objects without a group address are not displayed in the graphics.

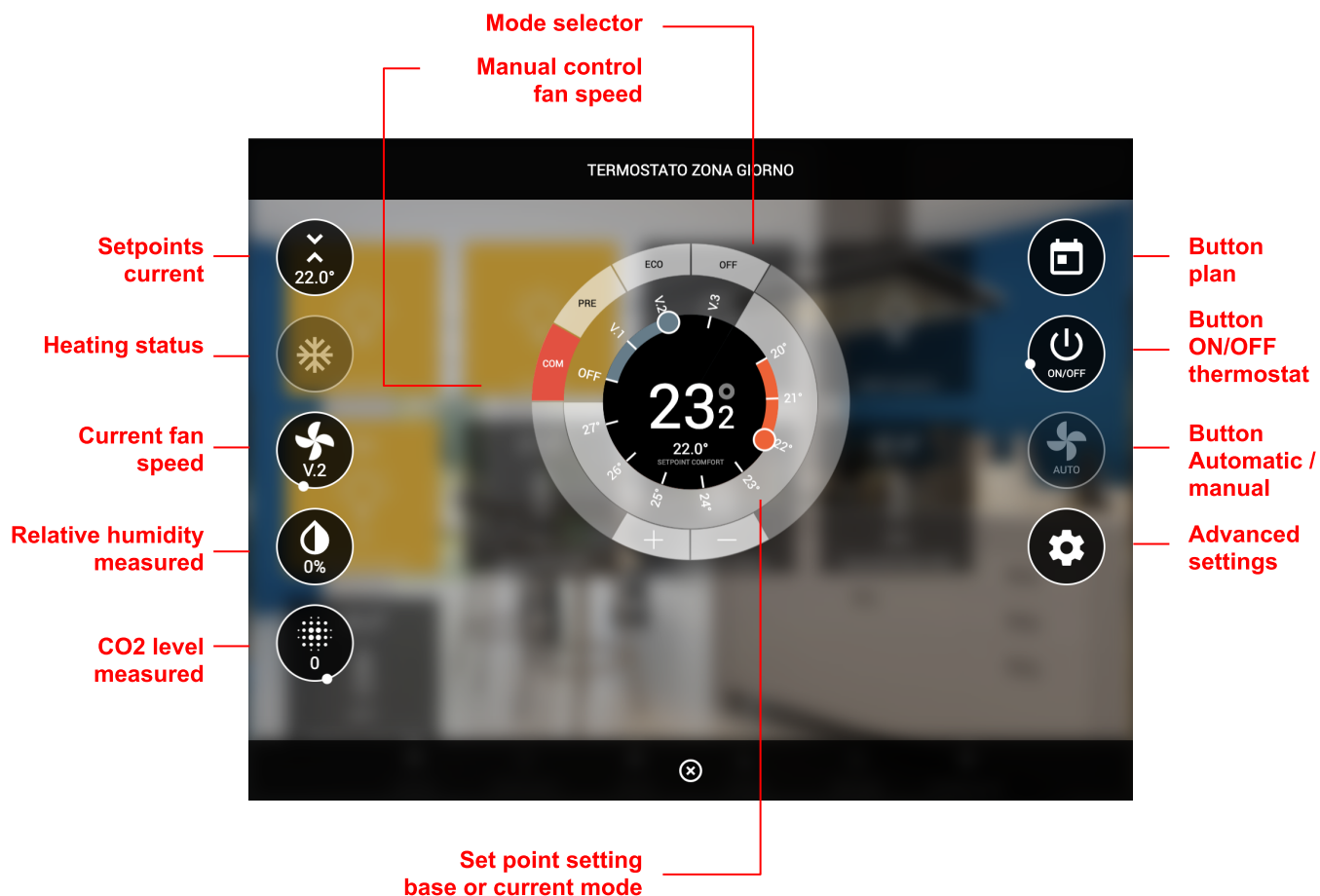
| Indirizzi KNX | | AGGIUNGI | | | |
|----------------------------------|------------------|----------|-------|---------|---|
| IDENTIFICATIVO | VOICE PRINCIPALE | FEEDBACK | WRITE | STATO | |
| Temperatura misurata | 0/0/3 | 0/0/3 | ✓ | Off | + |
| ON/OFF Termostato | 0/0/9 | 0/0/10 | ✓ | Off | + |
| Modo operativo HVAC - Manuale | 0/0/11 | -/-/- | ✓ | Off | + |
| Modo operativo HVAC - Crono | 0/0/13 | -/-/- | ✓ | Off | + |
| Modo crono attivato | 0/0/15 | -/-/- | ✓ | Off | + |
| Setpoint - Attuale | 0/0/3 | 0/0/3 | ✓ | 0.0° | + |
| Setpoint - Manuale | 0/0/17 | -/-/- | ✓ | 0 | + |
| Abilita setpoint manuale | 0/0/19 | -/-/- | ✓ | Off | + |
| Offset | 0/0/21 | -/-/- | ✓ | 0 | + |
| Setpoint comfort riscaldamento | 0/0/23 | -/-/- | ✓ | 0 | + |
| Setpoint standby riscaldamento | 0/0/25 | -/-/- | ✓ | 0 | + |
| Setpoint economy riscaldamento | 0/0/27 | -/-/- | ✓ | 0 | + |
| Setpoint off riscaldamento | 0/0/29 | -/-/- | ✓ | 0 | + |
| Setpoint comfort condizionamento | 0/0/31 | -/-/- | ✓ | 0 | + |
| Setpoint standby condizionamento | 0/0/33 | -/-/- | ✓ | 0 | + |
| Setpoint economy condizionamento | 0/0/35 | -/-/- | ✓ | 0 | + |
| Setpoint off condizionamento | 0/0/3 | -/-/- | ✓ | 0 | + |
| Riscaldamento/condizionamento | 0/0/3 | -/-/- | ✓ | Estate | + |
| Riscaldamento (ON/OFF) | 0/0/3 | -/-/- | ✓ | Off | + |
| Condizionamento (ON/OFF) | 0/0/3 | -/-/- | ✓ | Off | + |
| Modalità automatico/manuale | 0/0/3 | -/-/- | ✓ | Manuale | + |
| Velocità ventole | 0/0/3 | -/-/- | ✓ | Off | + |
| Velocità ventole percentuale | 0/0/3 | -/-/- | ✓ | 0% | + |
| Velocità 1 ventole | 0/0/3 | -/-/- | ✓ | Off | + |
| Velocità 2 ventole | 0/0/3 | -/-/- | ✓ | Off | + |
| Velocità 3 ventole | 0/0/3 | -/-/- | ✓ | Off | + |

The addresses that can be managed within this widget are:

| IDENTIFIER | ENCODE ETS | NOTE |
|-------------------------------------|-------------------------------|--|
| Measured temperature | Floating point (2 byte DPT 9) | |
| Thermostat ON/OFF | ON/OFF (1 bit DPT 1) | If present, it activates or deactivates thermostat management and the related graphics |
| Operative mode | Inter0 (1 byte DPT 6) | <p>Typical convention:</p> <p>1 → Comfort</p> <p>2 → Precomfort / Standby</p> <p>3 → Economy</p> <p>4 → Off / Protection</p> <p><i>Note: this sub-object is the one associated by default with scenarios and schedules</i></p> |
| current setpoint | Floating point (2 byte DPT 9) | Setpoint used by the thermostat according to the current mode. Read only. |
| Setpoint base | Floating point (2 byte DPT 9) | If the thermostat is adjustable with a single setpoint, or if the current setpoint can also be written (for example, to temporarily bypass the current mode setpoint), associate a KNX address (also equal to the current one) to be able to adjust it from the graphics |
| Offset | Floating point (2 byte DPT 9) | If the thermostat provides +/- 3° adjustment with respect to the basic setpoint, associate a KNX address to adjust it in the graphics, instead of the setpoint |
| Setpoint XXX heating / conditioning | Floating point (2 byte DPT 9) | Setpoints associated with the different modes for the winter (heating) and summer (air conditioning) seasons |
| Heating / conditioning | ON/OFF (1 bit DPT 1) | <p>Convention:</p> <p>0 → conditioning (summer)</p> <p>1 → heating (winter)</p> <p> Note: in the absence of this address, the thermostat is considered in heating only mode</p> |
| Heating Conditioning (ON/OFF) | ON/OFF (1 bit DPT 1) | Heating or conditioning request status; read only. |

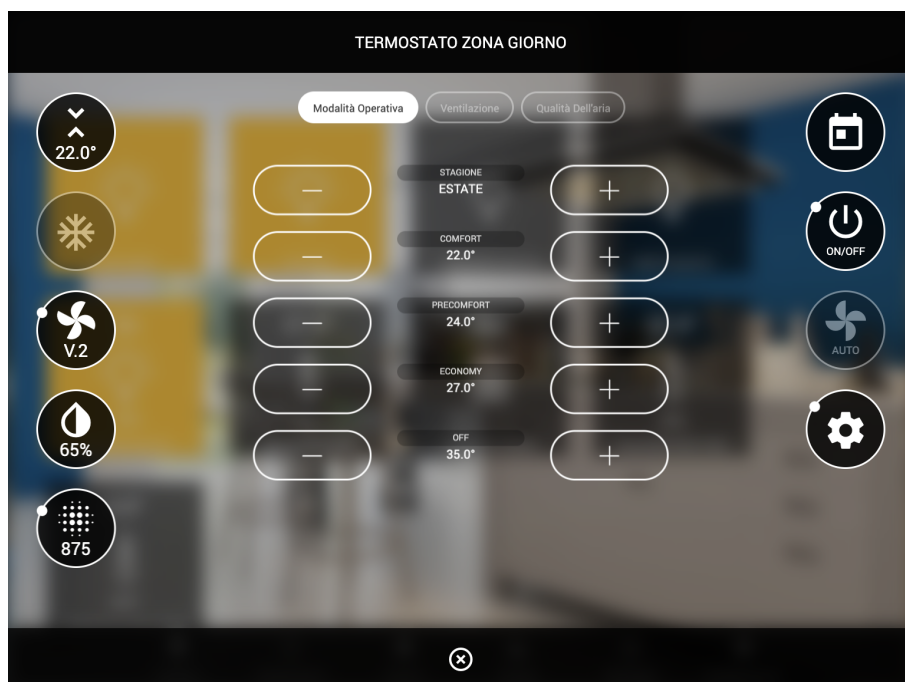
| | | |
|--|-------------------------------|--|
| | | If the thermostat controls a single output in both seasons, enter the same KNX address in both lines |
| Mode automatic / manual | ON/OFF (1 bit DPT 1) | Convention: 0 → manual 1 → auto |
| Fan speed | Percentage (1 byte DPT 5) | Typical convention: 0% → fans stopped 33% → speed 1 66% → speed 2 100% → speed 3 |
| Speed 1 fans Speed 2 fans Speed 3 fans | ON/OFF (1 bit DPT 1) | Fan control in the form of mutually exclusive single objects. To be used as an alternative to the 1 byte speed, or for the command (keeping the 1 byte object as a status indicator only) |
| Moisture % View and Setpoint | Percentage (1 byte DPT 5) | If available, they allow you to view the relative humidity measurement, and to specify a desired setpoint, based on which to automatically control the ventilation |
| CO level and threshold ₂ | Floating point (2 byte DPT 9) | If available, they allow you to view the CO measurement ₂ and a threshold, beyond which the alarm is activated |
| CO alarm ₂ | ON/OFF (1 bit DPT 1) | Alarm active if the level of CO ₂ is higher than the set threshold |
| Window (open / closed) | ON/OFF (1 bit DPT 1) | Allows you to view the status of any window sensor |

Pressing the widget of a thermostat of this type, a popup similar to the following is shown:



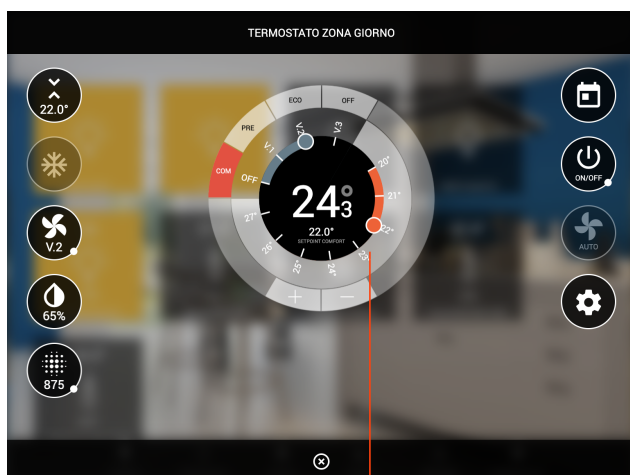
Not all elements are always present in all configurations; objects without a KNX address, in fact, are not visible in the graphics.

By pressing the advanced settings button, all the detailed options are shown, divided by category; also in this case, the effective list depends on the configuration, and on the number of sub-objects associated with a KNX address:

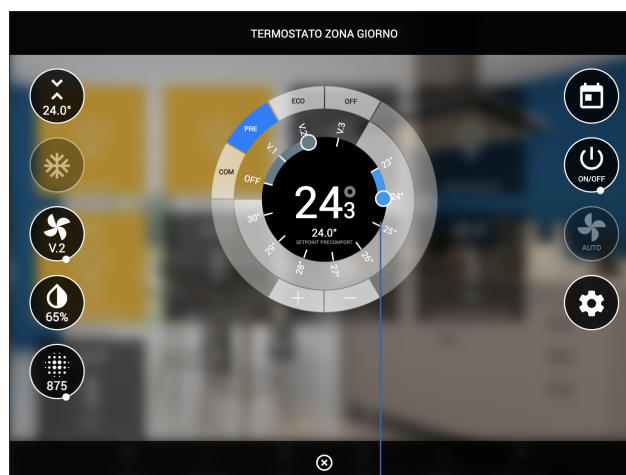


If the base setpoint is entered, the main slider allows you to control this setpoint; in this configuration, any setpoints associated with the various modes can only be changed using the advanced settings.

Otherwise, the slider allows you to interact with the slider of the currently selected mode and season:

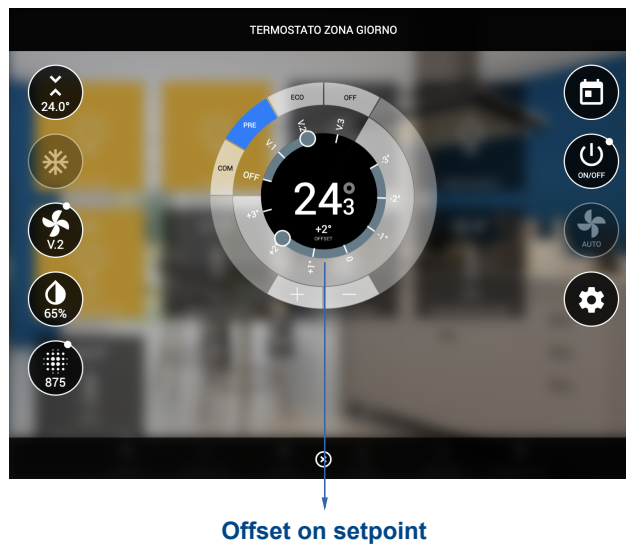


Air conditioning comfort setpoint



Air conditioning precomfort setpoint

Conversely, if a KNX address is entered for the offset, the slider allows adjustment +/- 3°:



6.6.2 THERMOSTAT WITH SINGLE SETPOINT

Unlike the previous one, this thermostat model does not have an operating mode, and consequently an adjustable setpoint for each of the modes. In this case, one operates on a single setpoint, which is possibly increased or decreased by one *offset*, if certain working modes are activated.

The list of sub-objects that can be associated with KNX addresses is similar to the previous one; the operating mode and the setpoints for the different operating modes are not present, on the other hand the following sub-objects are available, not present in the model seen previously:

| IDENTIFIER | ENCODE ETS | NOTE |
|--------------|----------------------|--|
| Economy mode | ON/OFF (1 bit DPT 1) | If active, it reduces the base setpoint by one <i>offset</i> settable in ETS |
| comfort mode | ON/OFF (1 bit DPT 1) | If active, it increases the base setpoint by one <i>offset</i> settable in ETS |

View
current set point

Adjustment
basic setpoints



Mode button
comfort

Mode button
comfort

By activating the ECO and COM modes, based on the ETS settings, the current setpoint (displayed at the top left) can differ from the base setpoint, which can be adjusted using the main slider.

Also in this case, by pressing the advanced settings button, it is possible to configure all the options not present in the main screen, divided by category, based on the programming made in administration.

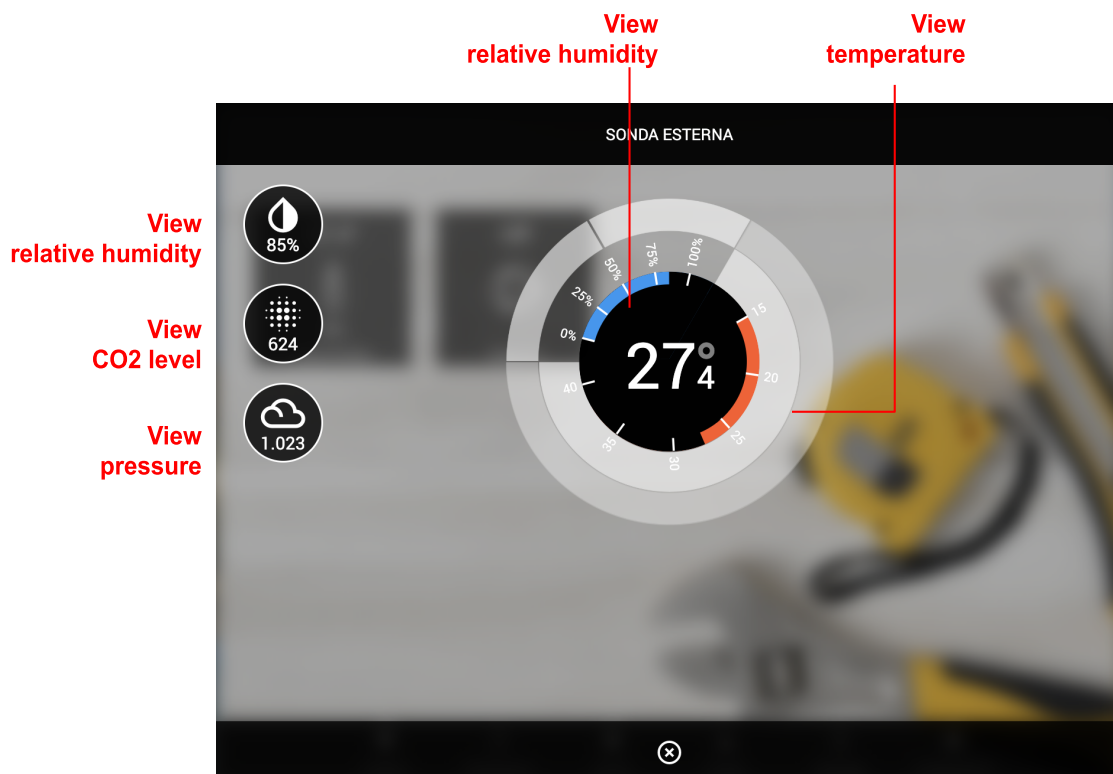
6.6.3 AMBIENT PROBE

The room probe is a display-only widget for a series of measured quantities relating to climatic comfort and air quality:

- temperature
- relative humidity
- CO₂
- pressure

The quantities in question can only be displayed, and not commanded. For this reason, the widget has non-interactive elements, on the left side (status indicators) and in the central part (display of temperature and humidity, with respect to the full scale set in administration).

The following figure shows an example of a room probe:



6.6.4 PUMP

The pump control widget offers the following sub-objects:

| IDENTIFIER | ENCODE ETS | NOTE |
|---------------|-----------------------|--|
| Pump status | ON/OFF (1 bit DPT 1) | Status address of the pump |
| Pump command | ON/OFF (1 bit DPT 1) | Pump command address |
| Pump selector | Forcing (2-bit DPT 2) | Convention: 0 → Auto 2 → Forced OFF 3 → Forced ON |
| Alarm | ON/OFF (1 bit DPT 1) | Possible pump operation alarm |

6.6.5 SPLIT

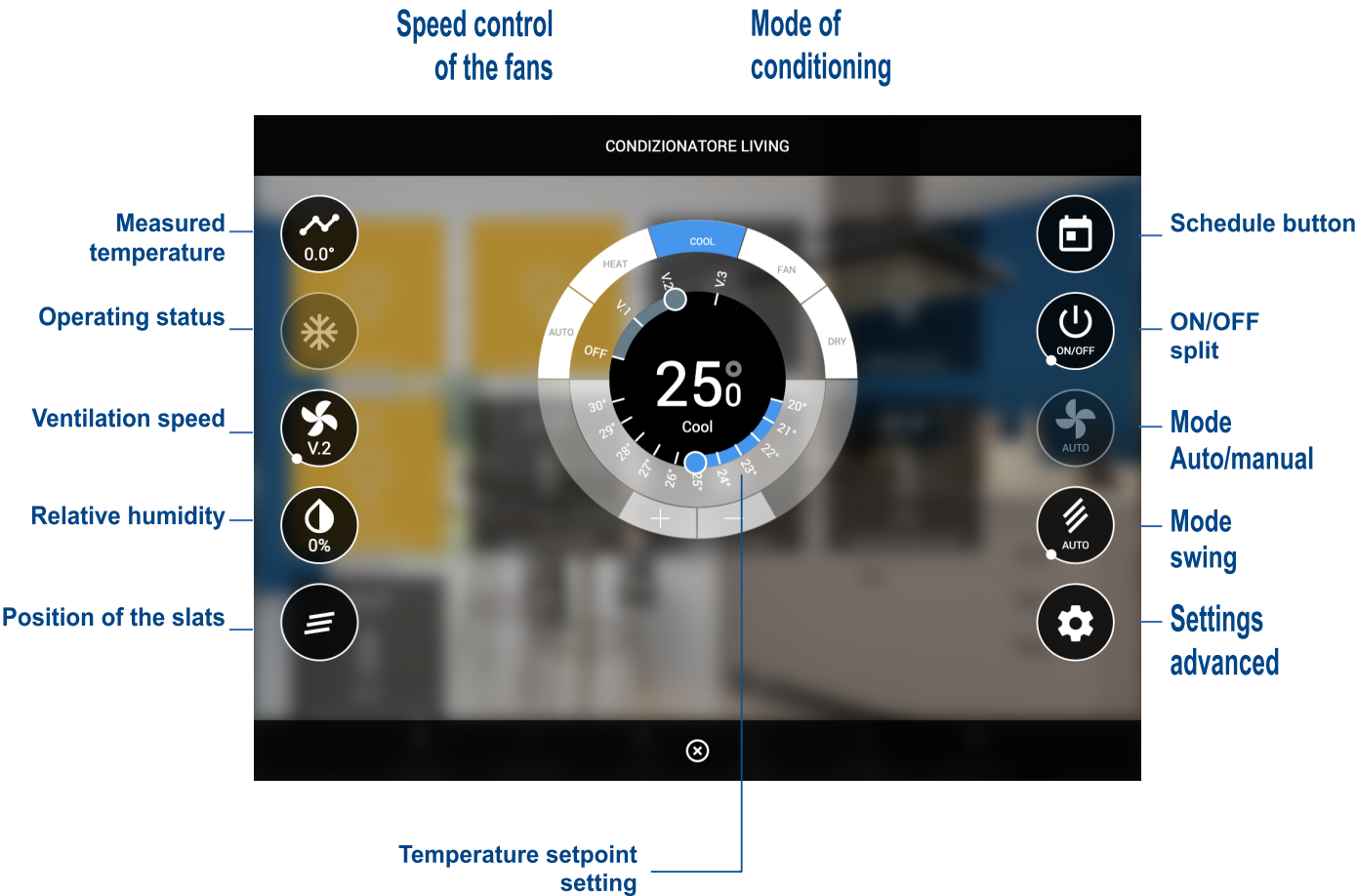
This type of widget allows the control of an air conditioner or VRV / split unit (via KNX interface) through a series of interactive elements, which allow the management of all the main operating elements, replacing the remote control.

The sub-objects made available are:

| IDENTIFIER | ENCODE ETS | NOTE |
|---------------------------|-------------------------------|--|
| Measured temperature | Floating point (2 byte DPT 9) | |
| Thermostat ON/OFF | ON/OFF (1 bit DPT 1) | If present, it activates or deactivates the management of the split thermostat and the related graphics |
| Operating status (ON/OFF) | ON/OFF (1 bit DPT 1) | Indicates whether the split is running or not |
| Conditioning mode | Interco (1 byte DPT 6) | Typical convention: 0 → Auto 1 → Heat (heating) 3 → Cool (conditioning) 9 → Fan (ventilation only) 14 → Dry (dehumidification only) <i>Note: this sub-object is the one associated by default with scenarios and schedules</i> |
| current setpoint | Floating point (2 byte DPT 9) | Setpoint used by the thermostat. Read only. |

| | | |
|------------------------------------|-------------------------------|--|
| Commanded setpoint | Floating point (2 byte DPT 9) | |
| Mode automatic / manual | ON/OFF (1 bit DPT 1) | Convention: 0 → manual 1 → auto |
| Fan speed | Percentage (1 byte DPT 5) | Typical convention: 0% → fans off 33% → speed 1 66% → speed 2 100% → speed 3 |
| Slat position | Inter0 (1 byte DPT 6) | Convention: 0 → Auto (optional) 1 → Horizontal 2 → Position 2 3 → Position 3 4 → Position 4 5 → Vertical 6 → Swing (optional) |
| Swing | ON/OFF (1 bit DPT 1) | If active, it enables the oscillation mode of the fans |
| Moisture % View and Setpoint | Percentage (1 byte DPT 5) | If available, they allow you to view the relative humidity measurement, and to specify a desired setpoint, based on which to automatically control the ventilation |
| Alarm (ON/OFF) | ON/OFF (1 bit DPT 1) | Active if the air conditioner reports an error |
| Alarm code | String (14 bytes DPT 16) | In case of error, brief description of the anomaly |
| Window (open / closed) | ON/OFF (1 bit DPT 1) | Allows you to view the status of any window sensor |

The following figure shows an example of a split control popup:



6.7 ALARMS

This type of widget allows you to monitor a read-only ON/OFF alarm.

| IDENTIFIER | ENCODE ETS | NOTE |
|------------|----------------------|--|
| Alarm | ON/OFF (1 bit DPT 1) | Typical convention: 1 → alarm 0 → ok |

In visualization the alarm is shown as in the following example:



6.8 ENERGY

6.8.1 ENERGY METER

This type of widget allows you to monitor a KNX energy meter, able to offer the reading of the power and (optionally) of the energy.

| IDENTIFIER | ENCODE ETS | NOTE |
|---|--|--|
| Power – Measured value Energy – Measured value | Floating point numeric value (4 byte DPT 14) | Alternatively, use the "32-bit meter" coding in case of meters displaying the value on DPT 13 (unsigned integer) |
| Threshold exceeded | ON/OFF (1 bit DPT 1) | If available, it is set by the load control DELEGO MINI to 1 if the maximum threshold is exceeded |

The following virtual elements are also available, not associated with KNX addresses, but necessary for the management of the meter if associated as a reference to load control:

| IDENTIFIER | NOTE |
|---------------------------|--|
| Power – Minimum Threshold | They allow you to set the lower and upper limits of absorption, on the basis of which the integrated load control works. |
| Power – Maximum threshold | For further details, please refer to the section on energy management. |

The widget of this type cannot be associated with an environment, but rather displayed in the energy section, as described in the chapter dedicated to energy management.

6.9 LOADS

6.9.1 LOAD / APPLIANCE

This type of widget allows you to manage an appliance in the context of energy control.

| IDENTIFIER | ENCODE ETS | NOTE |
|------------|----------------------|--|
| ON/OFF | ON/OFF (1 bit DPT 1) | Command of the actuator associated with the load |

| | | |
|--------------------|----------------------|---|
| Threshold exceeded | ON/OFF (1 bit DPT 1) | If available, it is set by the load control DELEGO MINI to 1 if the maximum threshold is exceeded |
|--------------------|----------------------|---|

The following virtual elements are also available, not associated with KNX addresses, but

The screenshot shows the configuration interface for a 'Misuratore produzione fotovoltaico' widget. The left sidebar lists various setup options under 'Tecnologie' and 'Ambienti'. The main area is divided into 'Dati generali' and 'Indirizzi KNX'.

Dati generali

- ID: 745
- Nome: Misuratore produzione fotovoltaico
- Descrizione:
- Permessi: Visibile (checked)
- Potenza: Potenza minima: 0, Potenza massima: 3000
- Cloud: Remotizzato sul cloud (unchecked), Controllo vocale (unchecked)

Indirizzi KNX

| IDENTIFICATIVO | STATO | CODIFICA ETS | STATO |
|---------------------------|-------|--------------------------|--------|
| Potenza - Valore misurato | 6/0/1 | Valore numerico (4 byte) | 1237 W |
| Energia - Valore corrente | 6/0/2 | Valore numerico (4 byte) | 0 Wh |
| Potenza - Soglia minima | | | 2000 |
| Potenza - Soglia massima | | | 2500 |
| Priorità | | | 0 |
| Superamento soglia | -/-/- | Comando ON/OFF (1 bit) | OK |
| Fattore di autoconsumo | | | 0% |

necessary for the management of the meter if associated as a reference to load control:

| IDENTIFIER | NOTE |
|--------------------|---|
| Automatic / manual | Allows the user to set the load in manual mode, excluding it from the load control logic. |
| Priority | Allows you to set the priority level of the load |

The widget of this type cannot be associated with an environment, but rather displayed in the energy section, as described in the chapter dedicated to energy management.

The screenshot shows the configuration interface for a 'Lavatrice' widget. The left sidebar lists various setup options under 'Tecnologie' and 'Ambienti'. The main area is divided into 'Proprietà dell'oggetto' and 'Indirizzi KNX'.

Proprietà dell'oggetto

- ID: 719
- Nome: Lavatrice
- Descrizione:
- Permessi: Visibile (checked)
- Cloud: Remotizzato sul cloud (unchecked), Controllo vocale (unchecked)

Indirizzi KNX

| IDENTIFICATIVO | COMANDO | STATO | CODIFICA ETS | STATO |
|--------------------|---------|-------|------------------------|---------|
| ON/OFF | 3/0/0 | 3/5/0 | Comando ON/OFF (1 bit) | On |
| Automatico/Manuale | | | | Manuale |
| Priorità | | | | 1 |
| Superamento soglia | | 3/0/6 | Comando ON/OFF (1 bit) | OK |

6.10 OTHER

6.10.1 SINGLE VALUE

It allows to manage a single generic KNX value within an environment.

| IDENTIFIER | ENCODE ETS | NOTE |
|--------------|----------------|--|
| Single value | <configurable> | <p>Depending on the ETS coding, it is possible to choose a set of icons and possible values by pressing the ICON button.</p> <p>This choice determines the display inside the widget</p> |

This widget provides two types of interaction, for the control of the single value:



BUTTONS

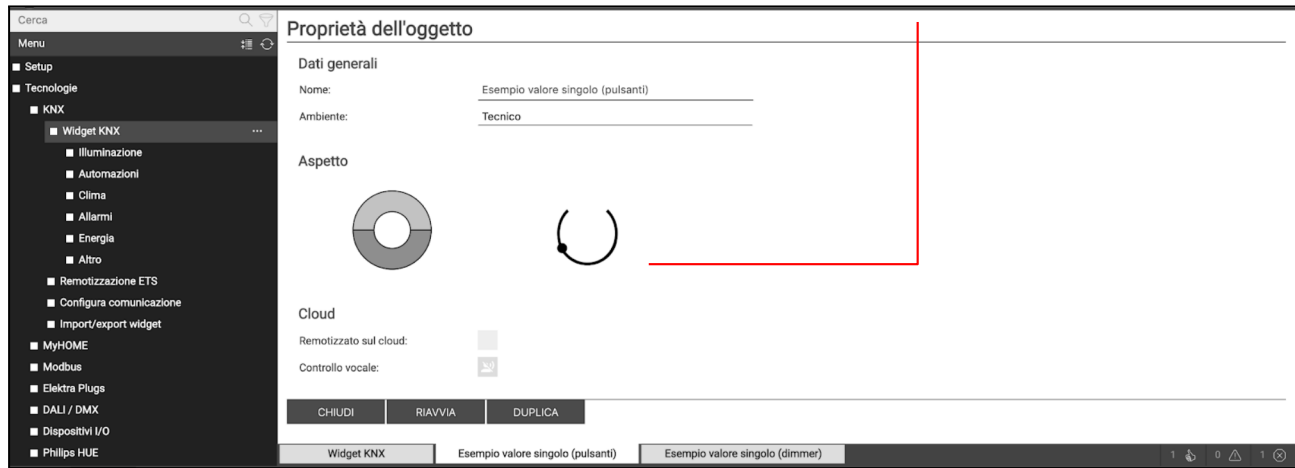


SLIDER

The choice of style can take place in two ways:

- By means of the appropriate menu dropdown in the list of KNX widgets
- Inside the detail card, selecting the preview of the chosen style

Visual style selector



Being a flexible widget, it is necessary to make a consistent choice of settings, between visual style, ETS coding and icon/value set; it is in fact possible that certain combinations do not lead to a plausible graphic result.

6.10.2 ROUTING COUNTER

The generic widget allows you to configure, in an extremely flexible way, a composite element, made up of a series of sub-objects, capable of taking on the appearance of all the specific widgets seen previously.

This template should be used if the pre-established templates are not suitable for representing the desired home automation function; limited use of this template is recommended, not only due to the complexity of its creation, but also because the result is not manageable through the cloud and voice assistants.

Unlike all the widgets seen previously, in this case when the widget is created, all the sub-objects are not automatically prepared, given that the number of possible combinations is too high, and all of them would rarely be used. Conversely, only two sub-objects are initially prepared, essential for displaying the widget:

| IDENTIFIER | ENCODE ETS | NOTE |
|-------------------------|----------------|--|
| General - Icon | <configurable> | It is used as the widget's representative icon, when displayed within an environment |
| General – General state | <configurable> | Represents the primary value, displayed in the widget when viewed in an environment |

As already seen above for the single value widget, for this type of template, in addition to choosing the ETS coding, it is also necessary to select a graphic set to represent each single sub-object, through the popup that opens by pressing the ICON button . To do this, activate the ADVANCED mode with the appropriate button on the toolbar, in order to have access to all the available options.

Proprietà dell'oggetto

Dati generali

Nome: Widget generico

Ambiente: ---

Aspetto

Etichetta tab 1: _____

Etichetta tab 2: _____

Etichetta tab 3: _____

Cloud

Remotizzato sul cloud: ☐

Controllo vocale: ☐

CHIUDI RIAVVIA DUPLICA

Indirizzi KNX

| IDENTIFICATIVO | ETICHETTA | COMANDO | STATO | WRITE | STATO | ICONA |
|---------------------------|-----------|---------|-------|-------------------------------------|-------|-------|
| Generale - Icona | | -/- | -/- | <input checked="" type="checkbox"/> | 0 | |
| Generale - Stato generale | | -/- | -/- | <input checked="" type="checkbox"/> | 0 | |

Widget KNX Widget generico

At this point it is possible to choose which visual style to attribute to the widget, by pressing the most suitable preview in the "appearance" section:



Single push button

Single circular element divided into 2 or more buttons, based on the number of options provided by the icon set of the object selected as



Double push button

Two semi-circular elements, top and bottom, with buttons according to the respective options of the following sub-objects:

“General – Central Button”

“General – Upper Button Pad”

“General – Lower Button Pad”

Example standard widgets:
shutters up/down/stop

Example standard widgets:
roller shutters with slats



Push button and 180° slider

Upper element with buttons, and lower slider with 180° amplitude.

Associated sub-objects:

“General – Upper Button Pad”

“General – Bottom Slider”



Push button and 210° slider

Upper element with buttons, and lower slider with amplitude of 210°.

Associated sub-objects:

“General – Upper Button Pad”

“General – Main Slider”

Example standard widgets:

luce dimmer

Example standard widgets:

thermostat

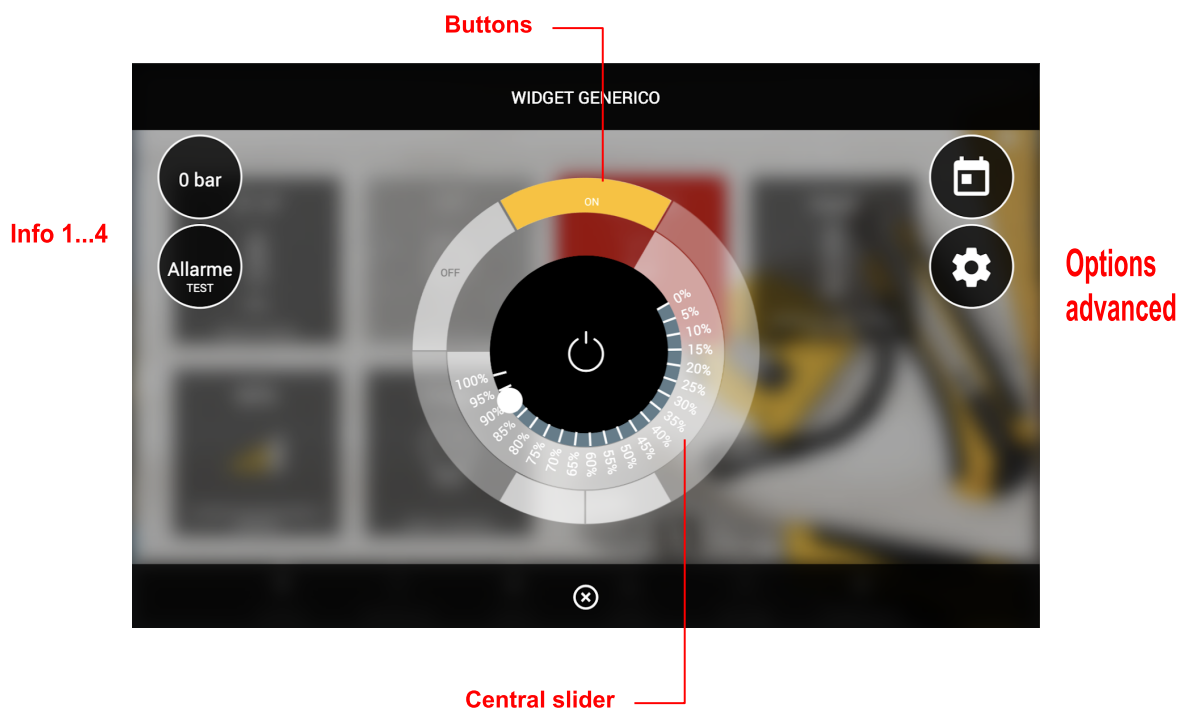
Every time the aspect is changed, any sub-objects previously configured for these main elements are disassociated from the previous role, because it is not compatible between one aspect and another; a special message asks for confirmation before proceeding. For this reason, it is recommended to choose the appearance before proceeding to create sub-elements.

To add a new sub-object, press the ADD button, and fill in the required fields, similar to what has already been seen previously. In addition, compared to the standard templates, it is possible for each sub-object to also associate a label, which will be shown as a descriptive item in the widget popup.

In addition to those already commented, the following sub-objects are available:

| IDENTIFIER | ENCODE ETS | NOTE |
|--|----------------|---|
| General - Info 1 General - Info 2 General - Info 3 General - Info 4 | <configurable> | They are placed in the left area of the popup, in the form of status indicators, with value and icon based on the configuration of each object |
| Tab 1 – Object 1...10 Tab 2 – Object 1...10 Tab 3 – Object 1...10 | <configurable> | They allow you to divide up to 30 objects into 3 sections in the "advanced settings" area. If used, also specify the labels associated with the various tabs in the top section of the page. |

Display example:



6.11 CONFIGURE COMMUNICATION

It is possible to specify the general operating settings of the KNX communication by accessing the page TECHNOLOGIES → KNX → CONFIGURE COMMUNICATION.

It is possible to set:

| | |
|------------------|--|
| PHYSICAL ADDRESS | Physical address with which DELEGO MINI communicates with the KNX bus, entering it in the appropriate field; the address must be specified in the form X.Y.Z respecting the limits imposed by the KNX protocol: First number between 0 and 15 Second number between 0 and 15 Third number between 0 and 255 |
| ROUTING COUNTER | Routing counter of telegrams sent by DELEGO MINI. Default value: 6 |

6.12 IMPORT / EXPORT WIDGET

Through this page it is possible to export a KNX widget of the project in CSV format, to be able to re-use it in other projects. For this purpose:

- Select "export" as an operation
- Select the widget from menu dropdown
- Press the RUN button

After a few seconds, the CSV file containing the widget information is downloaded from the browser to the PC.

To subsequently import this widget within the same project, or into another project, proceed as follows:

- Choose "import" as an operation
- Upload the CSV file via browse button
- Enter the number of copies of the widget to create
- Establish whether the original KNX addresses should be kept, or if vice versa they should be incremented by one offset
- Press RUN

At the end of the operation, the new widgets are listed on the TECHNOLOGIES > KNX > KNX WIDGETS page in the category they belong to.

7 SCENARIOS

7.1 INTRODUCTION

DELEGO MINI allows you to create personalized command sequences, even interspersed with timings, which can be recalled later from the VISUALIZATION graphics or through logics, schedules, events, etc...

Scenarios can be created in administration or directly in VISUALIZATION. In the first case, the scenarios can be protected to prevent them from being modified or deleted by the end user. This chapter explains how to create a scenario in administration.



Despite the same wording, the DELEGO MINI scenarios are not the same as the so-called "KNX scenarios" that can be configured via ETS; indeed, the DELEGO MINI scenarios have no correspondence in the ETS project, since they are entirely software functions. The DELEGO MINI scenarios are also much more flexible than the ETS ones, being able to incorporate different types of commands and time delays.

7.2 NEW SCENARIO

To create a new scenario in ADMINISTRATION it is necessary to proceed as follows:

- Enter the CONFIGURATION environment of DELEGO MINI
- Select SCENARIOS from menu of navigation
- Press the "ADD" button to create a new scenario

The new scenario is available in the (initially empty) list of scenarios; subsequently accessing its profile, a page similar to the following is shown:

The screenshot shows the DELEGO MINI administration interface. On the left is a dark sidebar menu with options like Setup, Tecnologie, Personalizzazione, Ambienti, Scenari, and New Scenario 1. The main area is titled 'Proprietà' and contains several sections: 'Dati generali' with fields for 'Nome' (New Scenario 1) and 'Ambiente'; 'Aspetto' with a background image; 'Permessi' with checkboxes for 'Visibile' and 'Consenti modifica nel frontend'; and 'Cloud' with checkboxes for 'Remotizzato sul cloud' and 'Controllo vocale'. At the bottom are 'CHIUDI', 'PLAY', and 'STOP' buttons. Below these is a table titled 'Azioni eseguite dallo scenario' with columns for 'NOME', 'DETTAGLI', 'AZIONE', and 'VALORE'. A footer bar at the very bottom shows 'New Scenario 1' and some status icons.

When the "BASIC" access level is selected, the following scenario properties can be set:

| | |
|------------------------------|---|
| NAME | Scenario identification name |
| WALLPAPER \ BACKGROUND IMAGE | Photograph used in visualization to identify the scenario |
| VISIBLE | Establishes whether or not the scenario should be visible in the VIEW |
| RUN AT STARTUP | If selected, the scenario runs when the system starts |
| ALLOW CHANGE IN VIEW | Establishes whether or not the scenario can be modified (or deleted) by the end user in the VISUALIZATION |
| REMOTELY ON THE CLOUD | Determines whether or not to sync the cloud object. For further details, please refer to the appropriate chapter. |
| ENABLE SCHEDULE | Determines whether the object should be able to be scheduled or not. |

7.3 SHARES

Once a scenario has been created, it is necessary to associate it with one or more actions; for this purpose:

- Expand the "ASSOCIATED ACTIONS" section in the scenario tab
- Search for the objects you want to control with the scenario through the SEARCH ENGINE.
In the case of KNX objects:
 - Activate the ADVANCED mode (toolbar at the top right)
 - Enter keywords (KNX address or tag)
 - Select objects with group address from the results (not widgets)
- Drag the objects inside the "ASSOCIATED ACTIONS" list, taking care to position them in the same order in which you want the sequence of commands to occur
- For each dragged object, specify the action to be completed and – if requested – the VALUE to be sent. In the case of KNX objects, select "WRITE" as the action and the value - among those proposed, based on the type of object - to be sent on the bus when the scenario is followed

7.4 DELAY

It is possible to interpose one or more wait commands between the command actions of a scenario, which delay the execution of the subsequent actions (based on the point of the sequence in which the delay is placed) and therefore allow the creation of sequences articulated over time.

The wait commands are objects in all respects, and as such they can be inserted within the command sequence of a scenario by dragging them within the "ASSOCIATED ACTIONS" list after having been searched for with the search engine. DELEGO MINI presents a series of "standard" delays that can be chained to obtain the desired timing:

- 1 second
- 2 seconds
- 5 seconds

- 10 seconds
- 15 seconds
- 20 seconds
- 30 seconds
- 1 minute
- 2 minutes
- 5 minutes
- 10 minutes
- 15 minutes
- 20 minutes
- 30 minutes
- 1 no
- 2 ore
- 3 ore
- 6 ore
- 12 ore
- 24 ore

All the wait commands have the name "Wait (...)" where the relative wait time is indicated in brackets; they can therefore be searched for by indicating "wait" as a keyword.



Since the wait commands, being system objects, are stored within the database with wording in English, they cannot be searched by specifying exactly the Italian wording that appears on the screen; if you want to search for a particular wait command, type in addition to "wait" also the number corresponding to the wait time possibly followed by the suffixes "sec", "min" or "hour".

The scenarios with timing, once sent to run, can be stopped, while they are in a waiting state; for this purpose, the "STOP" button is present in the graphical interface. Stopping a running scenario interrupts its sequence, which is therefore not completed; however, the original state of the system before the execution of the scenario itself is not restored, for this purpose it is necessary to prepare other commands and/or scenarios if necessary.

8 NOTIFICATIONS

Notifications are messages that DELEGO MINI shows in the DISPLAY against events foreseen in the configuration phase.

To create a notification:

- Log in to ADMINISTRATION
- Select NOTIFICATIONS → SCREEN NOTIFICATIONS
- Press the ADD button on the toolbar
- Go to the new object tab

The following information is requested:

| | |
|--------------|---|
| NAME | Identify the notification within the project |
| MESSAGE TEXT | Message that will be displayed in the DISPLAY |
| TYPE | Select the type between "alarm", "warning" or "information" |

Once a notification has been created, it must be associated with at least one other object through an EVENT (PASSIVE for the notification, ACTIVE for the object in question) so that, when the state of the latter changes, the system actually generates the message. Drag the objects from the side menu or from the search engine and select which values should determine the effective sending of the message. Depending on the type chosen, the message center will be opened or not automatically in the VIEW.

Screen notifications can be created with a *dynamic text*, i.e. a message in which DELEGO MINI automatically inserts information regarding the object to which the notification is linked.

To make the text of a notification dynamic, the following parameters must be inserted in the message:

| | |
|-----------------------|---|
| {{obj.name}} | It will be replaced with the name of the object that triggers the notification |
| {{obj.current_value}} | It will be replaced with the current value of the referenced object |
| {{obj.id}} | It will be replaced with the unique id of the object that triggers the notification |

Notifications are also sent in the form of push notifications, as long as the app has been installed on the mobile device DELEGO MINI (available for both IOS and ANDROID).

8.1 LOG

This page allows you to consult a history of all notifications sent by DELEGO MINI, with the relative date/time and the message sent to the users.

9 LOGICS

9.1 PREMISE

DELEGO MINI allows you to create logic between the objects previously created for the different managed technologies. The integrated logic module of DELEGO MINI is based on a LUA script, automatically generated by the graphical interface, running continuously in background.

The script maintains the output objects in the state established by the logics, based on a series of rules that will be described in detail in this chapter.

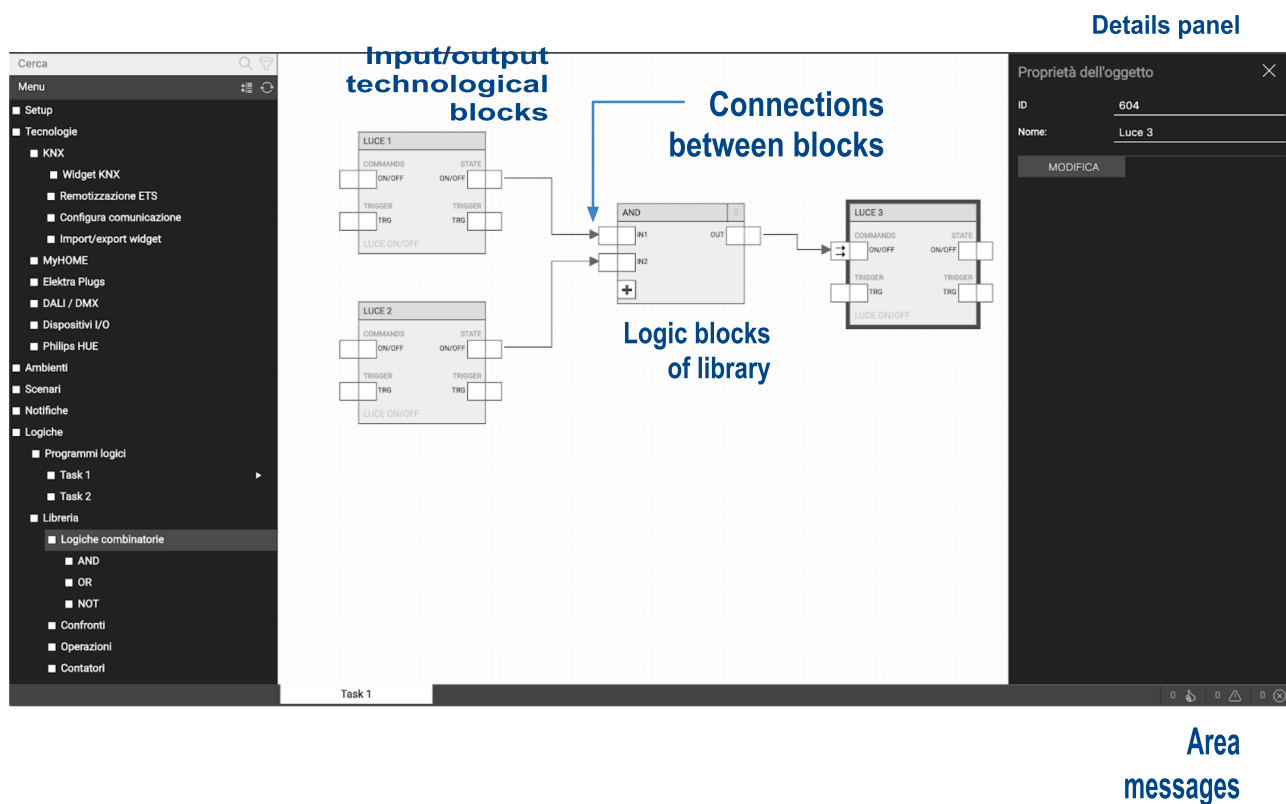
9.2 LOGIC PROGRAMS

It is possible to create one or more programs, also called "tasks", each characterized by a graphic page in which to create a logical network; to create a new task, highlight the entry

LOGICS > LOGIC PROGRAMS

and press the ADD (+) button in the toolbar. Alternatively, open the logic programs page, and press the ADD button in the task list.

Each task is represented by a graphic page, in which it is possible to drag technological objects (from menu side or from the search results), and logic blocks available in the LIBRARY. The figure below shows an example of simple logic between KNX widgets:



9.3 TOOLBAR

When operating on a task, an additional toolbar is displayed, containing the following buttons:

RUN / PAUSE

Start or stop a program

CONTINUOUS SIMULATION

Run the simulation in real-time mode

STEP-BY-STEP SIMULATION

Run the simulation in step-by-step mode

STOP SIMULATION

Stop the simulation in progress

SORTING

Reorder blocks by automatic sorting following the position of the blocks

ZOOM +

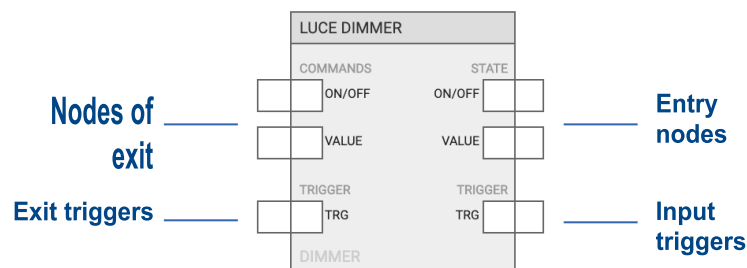
Magnifies the zoom factor of the work area

ZOOM -

Zooms out the work area

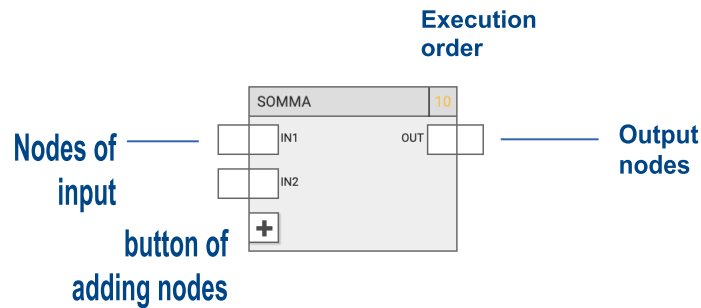
9.4 TECHNOLOGICAL BLOCKS AND LOGICAL BLOCKS

Tech widgets, when dragged into a task, are represented by a block that looks like this:



The input and output nodes, whose number and type depend on the type of widget, respectively allow to use the status and to control that particular technological function. The same input node can be connected to several blocks, while the same output node cannot be connected to several blocks, within the same task. Trigger nodes have a very specific role, which will be explained later.

Logical blocks, on the other hand, must be dragged from the LIBRARY into the menu side, and look like this:



In some cases, as in this example, the block includes a variable number of nodes (input or output); in this case, the "+" button allows you to add nodes to the block, up to the maximum number.

The logical function can only be executed correctly if the nodes are connected to other blocks. Not all nodes are strictly necessary for the correct execution of the logic; if an input node is not connected, its default value is used, which can be modified by selecting the node and opening the corresponding details panel (if it is not possible to set it, it means that the node must necessarily be connected).

The blocks can be moved in the work area, by single selection, or by selecting a rectangular area involving several blocks. To remove a block from the workspace, select it and press the DELETE key. Connections can also be removed in the same way.

9.5 EXECUTION ORDER

During the simulation and compilation phases, the editor generates a LUA script which is executed in a cyclical way.

The tasks are concatenated in the script according to their ordering in the summary page of the LOGICAL PROGRAMS; within each task, even the logical blocks have their own execution order, indicated at the top right for each block.

Under normal conditions, blocks are sorted in ascending order based on the order in which they are inserted into the program; however, it is possible to force a different execution order as follows:

- Select the affected block
- Open the details panel
- Choose "MANUAL" as sorting
- Enter an order number, taking care to enter a number that has not yet been used

Manually sorted blocks are highlighted in yellow.

Finally, it is possible to reorder the blocks from top/left to bottom/right using the appropriate button on the toolbar.

9.6 TRIGGER

Under normal conditions, the smart relay maintains the state of the output objects according to the state of the logic; as soon as these objects change state (for example, because they receive a command from the bus, external to the logic), their state is immediately restored to that desired by the logic.

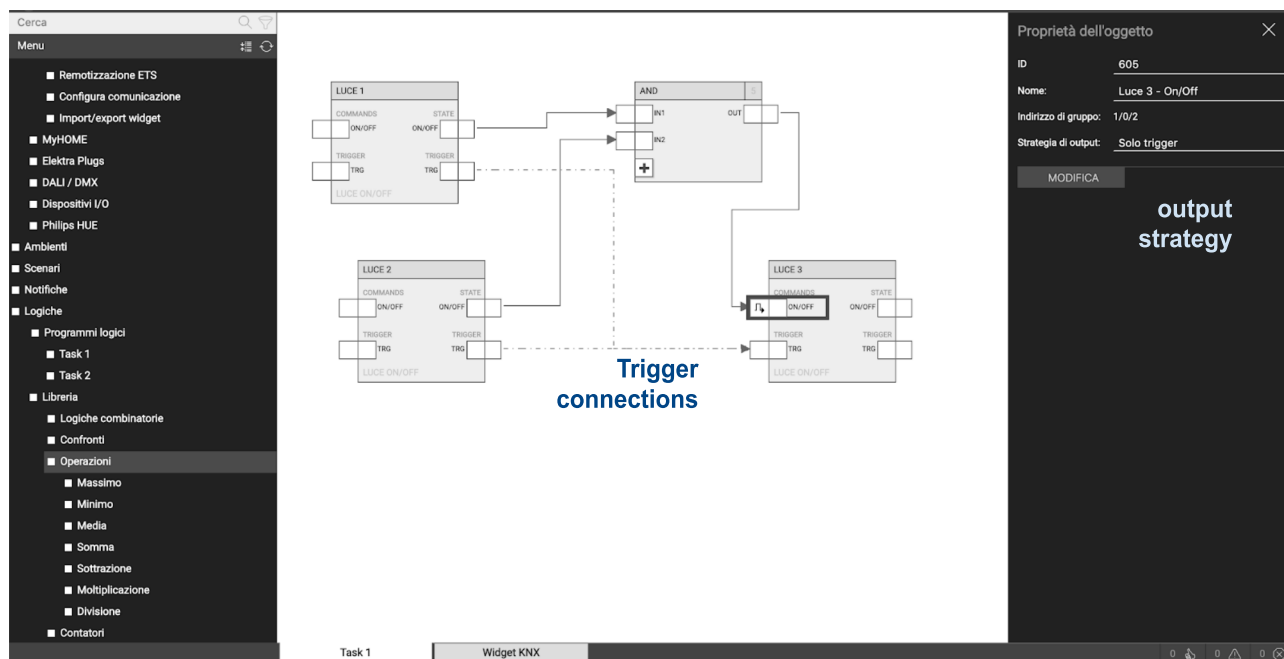
This behavior is not always desirable; in many situations, in fact, you want to command an object based on the change of state of other objects, but if this object is then commanded externally, you want to keep it in this last state. In other words, we want to create a logic that reasons "for events".

In this case, it is necessary to use the input and output TRIGGER nodes. Input triggers fire a pulse (that is, a value of 1 for a single script execution cycle, then reset to 0) whenever a value is received on a given object.

Exit triggers, on the other hand, allow you to establish when to issue a command on an object; whenever a pulse (value 1) is sent on this trigger, the value of the object is sent on the bus, even if it has not changed since the previous execution cycle.

Therefore, wanting to modify the example logic seen above (a simple AND between two KNX widgets, which commands a third one) to ensure that the output object is commanded every time the inputs change, but can then in turn change its state, if commanded externally, it is necessary:

connect the two input TRG nodes of the first objects to the output TRG node of the third
make sure that the command node has "trigger only" as output strategy (thus sending the command only when it receives the state change trigger of one of the inputs)



When you connect the output trigger, the object's output strategy is automatically set to "trigger only" (and the symbol on the output nodes changes accordingly).

However, it is possible to set the strategy manually, to regulate when the command must be sent on the bus; in fact, the trigger can also be used to periodically send the value of an output, in addition to its change of state, by connecting a periodic logic upstream, somewhat as happens with many KNX devices.

In the case of composite widgets, by opening the details (side panel) on the TRG node, it is possible to filter the nodes that determine the impulse (for input triggers) or which are influenced by the trigger (output), through the appropriate multiple selector:



9.7 SIMULATION

Once a logic task has been created, its operation can be simulated within the editor, manually entering the status of the inputs and verifying the processing of the outputs in real time, also by the logic blocks which cause a variation of the outputs over time.

Two types of simulation are available:

- **Continuous simulation:** task execution takes place in the background and is affected by real-time of the state changes of the nodes
- **Step-by-step simulation:** each task execution cycle must be launched manually, between one and the other it is possible to change the status of the nodes

The first typology allows a more realistic evaluation of the logical networks created, the second allows an in-depth and punctual verification of each single passage of values between blocks, and offers a higher level of diagnostics.

By pressing one of the simulation buttons (continue or step-by-step), the editor window undergoes the following changes:

- The menu main is restricted to PROJECT view only, allowing only switching between logic programs. It is not possible to create or delete programs.
- The details panel is closed to provide maximum working space for the simulation
- Any drag&drop, connection, modification or deletion of the contents of the logic programs is blocked
- The nodes take on a color based on their status and allow you to force the value manually (as better detailed below)

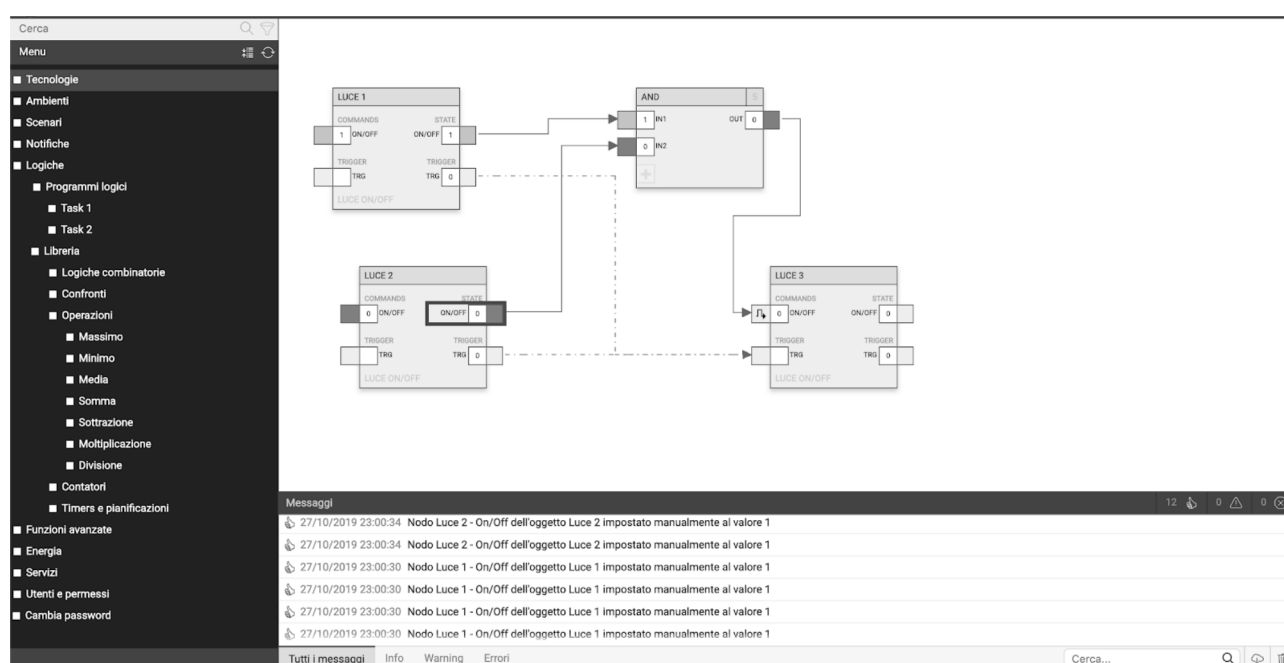
The color of the nodes follows the following convention:

| | | |
|--------------|--------|---------------|
| Binary nodes | Grey | Value 0 (OFF) |
| | Yellow | Value 1 (ON) |
| Number nodes | Blu | Any value |

During the simulation, the editor reports in the messages area a series of information relating to the execution of the programs, to the manual (performed by the user) and automatic (detected by the logic blocks) status changes. Furthermore, during the step-by-step simulation, many "debug" level messages are reported which allow for in-depth analysis of the execution of the programs, especially useful in the event of errors or malfunctions with respect to the intentions.

The message area, normally closed to offer the maximum useful space for the simulation, can be opened to consult these messages, the number of which - based on the type - is summarized in the right part of the message bar, visible even if closed.

The following figure shows an example of the simulation with the message area open:



To manually set the state of a node during simulation:

- Double click on the node value (the label becomes editable)
- Delete the current value and enter the new value
- Press ENTER

The color of the node (if digital) changes according to the new value, and this is passed to the simulator, which instantly propagates it (in the case of continuous simulation) or to the next execution cycle (in step-by-step mode).

It is possible to stop the simulation at any time by pressing the button to stop the simulation in the toolbar (usually not accessible outside the simulation).

9.8 EXECUTION OF LOGIC PROGRAMS

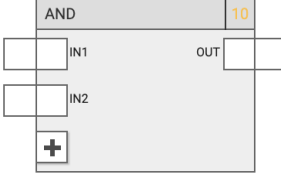
Once the realization of the tasks has been completed, with the help of the simulation, it is necessary to execute the programs, using the appropriate button on the toolbar. While running, tasks cannot be modified.

If a task is not ready to be executed, it is possible to disable it in the LOGICAL PROGRAMS detail page, before executing them.

9.9 BOOKSHELF

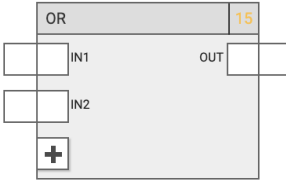
9.9.1 COMBINATORY LOGICS

AND


| | | | | |
|---------------------|---|---|-----------|------------|
| DESCRIPTION: | Performs the logical AND function between two or more binary inputs (up to a maximum of 10) | | | |
| PREVIEW: |  | | | |
| NOTE: | TAG | DESCRIPTION | IN | OUT |
| | IN1 ... IN10 | Input 1 ... 10 Possible values: 0 → OFF 1 → ON | X | |
| | OUT | Exit Possible values: 0 → OFF 1 → ON | | X |
| | + | Add Node | X | |
| OPTIONS: | | | | |

OR


| | |
|---------------------|--|
| DESCRIPTION: | Performs the logical OR function between two or more binary inputs (up to a maximum of 10) |
|---------------------|--|

| | | | | |
|-----------------|---|---|-----------|------------|
| PREVIEW: |  | | | |
| NOTE: | TAG | DESCRIPTION | IN | OUT |
| | IN1 ... IN10 | Input 1 ... 10 Possible values: 0 → OFF 1 → ON | X | |
| | OUT | Exit Possible values: 0 → OFF 1 → ON | | X |
| | + | Add Node | X | |
| OPTIONS: | | | | |

NOT

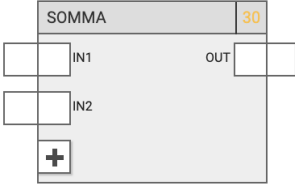
| | | | | |
|---------------------|--|---|-----------|------------|
| DESCRIPTION: | Performs the NOT logic function of the input | | | |
| PREVIEW: |  | | | |
| NOTE: | TAG | DESCRIPTION | IN | OUT |
| | IN | Entrance Possible values: 0 → OFF 1 → ON | X | |
| | OUT | Exit Possible values: 0 → OFF 1 → ON | | X |
| OPTIONS: | | | | |

9.9.2 COMPARISONS

| | | | | |
|---------------------|---|--|-----------|------------|
| DESCRIPTION: | <p>Compares the value of the two inputs, and outputs a TRUE/FALSE value based on the specific operator</p> <p>Available operators:</p> <ul style="list-style-type: none"> Greater Greater equals Minor Equal minor The same Different | | | |
| PREVIEW: |  | | | |
| NOTE: | TAG | DESCRIPTION | IN | OUT |
| | IN1 | Entrance 1, entrance 2 | X | |
| | IN2 | Possible values: any numerical value | | |
| | OUT | Comparison result Possible values: 0 → OFF 1 → ON | | X |

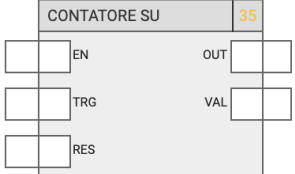
9.9.3 OPERATIONS

| | |
|---------------------|---|
| DESCRIPTION: | <p>Performs a mathematical operation on the inputs, based on the type of operator</p> <p>Available operators:</p> <ul style="list-style-type: none"> Maximum Minimum Media Sum Subtraction Multiplication Division |
|---------------------|---|

| | | | | |
|-----------------|---|---|-----------|------------|
| PREVIEW: |  | | | |
| NOTE: | TAG | DESCRIPTION | IN | OUT |
| | IN1 | Entrance 1, entrance 2 ... | X | |
| | IN2 (*) | Possible values: any numerical value | | |
| | ... | | | |
| | OUT | Value (result of operation) Possible values: any numerical value | | X |

(*) The number of outputs can be limited according to the operation (e.g. division max 2, absolute value max 1)


9.9.4 COUNTERS

| | | | | |
|---------------------|---|---|-----------|------------|
| DESCRIPTION: | Counts the number of pulses received at the input (trigger), increasing or decreasing its value each time (according to the type of counter). Counter Types: Counter Up, Counter Down, Counter Up/Down | | | |
| PREVIEW: |  | | | |
| NOTE: | TAG | DESCRIPTION | IN | OUT |
| | IN | Enabling Possible values: 0 → Not enabled 1 → Enabled | X | |
| | MARKET | Trigger Possible values: 0 → OFF 1 → ON (counter is incremented) | X | |
| | RES | Reset Possible values: 0 → OFF | X | |

| | | | | |
|-----------------|--------|--|--|---|
| | | 1 → ON (reset counter) | | |
| | OUT | Exit Possible values: 0 → OFF 1 → ON | | X |
| | VAL | Present value Possible values: any numerical value | | X |
| OPTIONS: | Preset | Default value, set when reset is done or when logic starts Possible values: any numerical value | | |


9.9.5 TIMER AND PLANS

TIMER

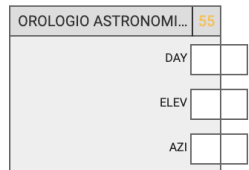
| | | | | |
|---------------------|---|---|-----------|------------|
| DESCRIPTION: | Delays the value received at the input by a preset time When a 1 is received at the IN input (rising edge), an internal counter starts up to the time specified as "rising delay", after which the output is set to 1; conversely, upon receiving an input 0 (falling edge), the block waits for the time specified as "falling delay" before setting the output to 0. | | | |
| PREVIEW: |  | | | |
| NOTE: | TAG | DESCRIPTION | IN | OUT |
| | IN | Input ON/OFF signal Possible values: 0 → OFF 1 → ON | X | |
| | OUT | ON/OFF signal output, delayed by timer Possible values: 0 → OFF 1 → ON | | X |
| OPTIONS: | Uphill delay | Delay in the propagation of the rising edge received at the input Possible values: from 1 second to 24 hours | | |
| | Downhill delay | Delay in the propagation of the falling edge received at the input | | |

| | |
|--|--|
| | Possible values: from 1 second to 24 hours |
|--|--|

TRIGGER / NUMERICAL TRIGGER


| | | | | |
|---------------------|--|--|-----------|------------|
| DESCRIPTION: | <p>Generates a trigger (pulse lasting one cycle) on an edge detected at the input</p> <p>When it receives an input 1, it sets the output to 1 for the duration of a single processing cycle, then the output is set to 0 again. In this way it is possible to generate a "pulse" for logic blocks that require it (eg: scenarios, sequencers etc...) on the rising edge of the input.</p> | | | |
| PREVIEW: |  | | | |
| NOTE: | TAG | DESCRIPTION | IN | OUT |
| | IN | Entrance front | X | |
| | OUT | Pulse lasting one cycle | | X |
| OPTIONS: | Forehead | Rising or falling edge to be detected at the input, in the case of digital trigger | | |
| | Condition | In the case of numerical trigger, it allows you to set the numerical value against which the block generates the impulse | | |

ASTRONOMIC WATCH

| | | | | |
|---------------------|---|-------------------------|-----------|------------|
| DESCRIPTION: | <p>Generates the following information based on time and geographic location:</p> <p>day / night (twilight)</p> <p>height of the sun</p> <p>azimuth</p> | | | |
| PREVIEW: |  | | | |
| NOTE: | TAG | DESCRIPTION | IN | OUT |
| | DAY | Day / night (1 = night) | | X |
| | STUDENT | Elevation of the sun | | X |

| | | | | |
|----------|-----------------------|---|--|---|
| | TODAY | Azimuth | | X |
| OPTIONS: | Latitude Longitude | Coordinates in number format (dot as decimal separator) | | |
| | Threshold | Offset in minutes with respect to day/night time | | |
| | Jet lag | Time zone where the system is installed | | |
| | Change now | Disabled: winter/summer time not active Automatic: automatic summer/winter time Manual: manual daylight saving time setting | | |

OSCILLATOR

| | | | | |
|--------------|--|--|----|-----|
| DESCRIPTION: | Generates a periodic pulse | | | |
| PREVIEW: |  | | | |
| NOTE: | TAG | DESCRIPTION | IN | OUT |
| | MARKET | Exit triggers | | X |
| OPTIONS: | Timer | Time after which the trigger is periodically generated | | |

10 ADVANCED FEATURES

10.1 VIRTUAL OBJECTS

Virtual objects that can be used within supervision to store values and execute events without having to resort to "real" objects.

Once created a new virtual objects (by pressing the "ADD" button after selecting the ADVANCED FUNCTIONS item → VIRTUAL OBJECTS in the menu navigation) you can specify the following properties:

| | |
|---------------|--|
| NAME | Identifies the variable within the supervision |
| DESCRIPTION | Optional description |
| RENDERING | Graphic set with which to identify the variable. The complete list of all the icons available for the objects of the various technologies is proposed; the task of choosing a type of icon suitable for the object is left to the user |
| TYPE OF VALUE | Select the type of value to store in the variable, choosing between: BOOLEAN FLAG: only 1 or 0 INTEGER NUMBER: number without decimal digits RATIONAL NUMERIC: number with decimal digits STRING: text |

In ADVANCED mode it is also possible to set:

| | |
|--------------------|--|
| FORMATTING | Allows you to set a custom format of the numeric value, using the "sprintf" convention. Examples: %s%% → Value followed by the symbol "%" %0.2f → Value rounded to 2 decimal places %0.1f°C → Value rounded to 1 decimal digit followed by "°C" |
| VISIBLE | Used to establish whether or not the object should be visible in the supervision |
| ENABLED IN COMMAND | By removing this option, the object is read-only |
| ENABLE SCHEDULE | Enables scheduling of this object in the FRONTEND |
| ENABLE PIN CHECK | Allows you to protect the command of the object using a PIN code, to be entered in the appropriate fields (twice for security reasons) |

10.2 STRING PILOTS

It is possible to command devices to network by sending strings, thanks to objects of type *String pilot*. These objects can open a TCP, UDP or HTTP connection with a device on the network, and send a command string, following an input event, such as, for example, the change of state of another object, or the outcome of a logic.

Enter the section first

ADVANCED FUNCTIONS > STRING PILOTS

and press the + button in the toolbar below; then select the new object and press the dots on the side (or the modify button on the toolbar) to access its file.

The following can be set:

| | |
|-------------------------|--|
| NAME | Identify the string pilot within the project |
| IP ADDRESS IP PORTER | Specify respectively the IP address and port of the device to be controlled (the port depends on the protocol to be used; indicate 80 in the case of HTTP calls) |
| PROTOCOL | Select the protocol to use from HTTP, TCP or UDP |
| STRING | Enter the string to send to the device |

In the case of HTTP calls, the STRING will be concatenated to the IP address and port; the information entered in the previous example (which allows you to open the lock of a 2N IP video door phone) is concatenated into this call:

<http://192.168.1.123:80/api/switch/ctrl?switch=1&action=on>

11 LOAD CONTROL

11.1 INTRODUCTION

DELEGO MINI allows you to monitor energy consumption through the processing and display of meters on both KNX and USB technology.

DELEGO MINI it also integrates a load control logic, which allows users to be switched on and off automatically, to avoid disconnection of the meter due to excessive consumption.

11.2 ENERGY MANAGER

By accessing the section

ENERGIA > ENERGY MANAGER

you can configure the energy management of DELEGO MINI through this page:

In the GENERAL DATA section it is possible to choose which meter to use as general consumption data, and which one, if available, for photovoltaic production. See below for creating gauges.

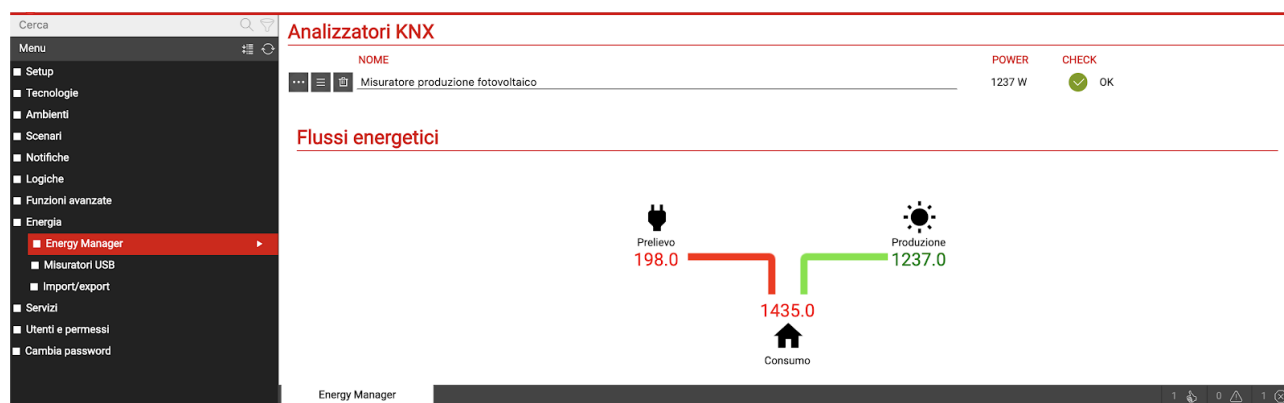
In the LOAD CONTROL section you are asked to specify the following operating parameters:

| | |
|--------------------------------|--|
| CYCLE TIME | Time (in seconds) of the "basic cycle" of the load control logic; at the end of this period, the absorption value is checked and compared with the thresholds, to determine the actions to be taken |
| RELEASE CYCLES RESET CYCLES | Number of basic cycles (the duration of which depends on the previous parameter) that the system waits for before increasing the priority (thereby disconnecting the loads of subsequent priority) if the absorption condition above the threshold persists, or – vice versa – |

| | |
|------------------------------|---|
| | <p>the number of cycles that the system waits before decreasing the priority, restoring the corresponding loads.</p> <p>Usually a reduced number of cycles is inserted for release, and a high number for reset, in order to reduce the risk of stress on the users, and the creation of a sort of "loop" which does not solve the problem of excessive absorption.</p> |
| MAXIMUM NUMBER OF PRIORITIES | Maximum number of priorities managed by the load control logic; the system does not go beyond this number, thus not managing loads with successive priorities |
| TYPE OF CONTROL | Specify if DELEGO MINI must actually manage the load control logic in an active (default) or passive way; in the latter case, the presence of an external load control device is assumed, DELEGO MINI it limits itself to displaying the information made available (eg: on the KNX bus) by the latter |
| EXECUTION STATUS | Displays the execution status of the logic; normally it must always be in "PLAY", but it can be stopped (via the "STOP" button) during the configuration phase, or to correctly implement substantial changes to the configuration (e.g.: addition of new loads) |

The page contains lists of KNX meters and loads.

In case both consumption and production meters are assigned, it is also displayed a preview of with drawal / injection and self-consumption flows, as in this example:



12 CLOUD SERVICES

12.1 REGISTRATION

DELEGO MINIit can be registered on the ekinex cloud to take advantage of exclusive services, which enhance its local operation.

The first step is to create a free cloud account if you don't already have one. By pressing the cloud icon in the top toolbar, or by accessing the menu item in the configuration environment

SERVICES > CLOUD > PRODUCT REGISTRATION

you can enter your cloud credentials, if already available...

... or, by pressing the REGISTER button, create a new account on the fly:

The screenshot shows the DELEGO MINIit configuration interface. On the left is a dark sidebar menu with options like Setup, Tecnologie, Personalizzazione, Ambienti, Scenari, Notifiche, Logiche, Controllo carichi, Servizi, Servizi Meteo, Cloud, Registrazione prodotto, Servizi cloud, Sincronizzazione cloud, IFTTT, Utenti e permessi, and Cambia password. The 'Cloud' option is highlighted. The main area is titled 'Inserisci credenziali' and contains fields for 'Username' and 'Password'. Below these fields are four buttons: LOGIN, REGISTRATI, RECUPERA PASSWORD, and HELP. The top of the interface shows the 'delego' logo, a search bar, and the version 'VERSIONE 1.0.0'.

Once the credentials have been entered, it is possible to associate the current user, with which you have logged in DELEGO MINI, to your cloud account. It is possible to choose two types of association:

| | |
|-----------|---|
| OWNER | <p>You will have full rights to DELEGO MINI, and a complete management of services associated with the cloud.</p> <p>It will also be possible to command the functions of DELEGO MINI through cloud services and voice assistants</p> |
| INSTALLER | <p>You will be associated with DELEGO MINI as an installation and configuration technician.</p> <p>It will not be possible to command objects through voice assistants and the cloud.</p> |

By pressing the corresponding button, the current user of this is matched DELEGO MINI to the entered cloud account; after a few seconds, the following summary screen is shown:



At this point you can access the following sections:

| | |
|----------------|--|
| Cloud services | It allows you to activate cloud-based services on the server, such as remote access without opening ports on the router |
| Cloud sync | Allows you to register supervision widgets in the cloud, so that they can be controlled through external services, such as Alexa and Google voice assistants |

12.2 REMOTE ACCESS

The CLOUD SERVICES page allows you to activate the remote service, which allows you to access DELEGO MINI without opening IP ports on the internet router:



By pressing the service activation button, a request is made to the cloud, which after a few seconds sends a confirmation email to the requesting party (the same email with which you accessed the cloud section) containing:

- The address that can be accessed remotely (to be entered directly in the browser, or in the app DELEGO MINI)
- The expiration date of the service

The remote control service is offered free of charge.

Once the service has been activated (it may take a few minutes before it enters the circulation and is operational), it is possible to see the remote IP address of DELEGO MINI also on the following pages:

- SETUP > RETE
- SETUP > ACCESS WITH QR

In both pages, where in the absence of this service it would be possible to manually enter the references of your public IP or dynamic DNS, in this case it is not possible to make manual changes, and vice versa it is possible to copy the cloud address, to be used in the browser or in apps, or shared to other users.

Since the cloud address consists of random characters, and therefore not easy to remember, it is recommended to share access to DELEGO MINI by QR, as explained above in the SETUP section

Even if multiple users join DELEGO MINI to as many cloud accounts, you only need to activate remote access once; once active, in fact, it makes it available DELEGO MINI for access from the outside, regardless of the user who then physically logs in.

12.3 CLOUD SYNC

Through this section it is possible to synchronize DELEGO MINI on the cloud, identifying a number of widget that can be controlled by external services, such as Alexa and Google voice assistants.

First, it is advisable to identify your own DELEGO MINI with a label and with the coordinates of the place where it is installed:

Cerca

Menu

- Ambiente
- Scenari
- Notifiche
- Logiche
- Funzioni avanzate
- Energia
- Servizi
- Servizi Meteo
- Cloud
- Registrazione prodotto
- Servizi cloud
- Sincronizzazione cloud

Impostazioni generali

Dati generali

Etichetta sul cloud: Casa

Latitudine: 44.5487694

Longitudine: 7.7094778

Cloud

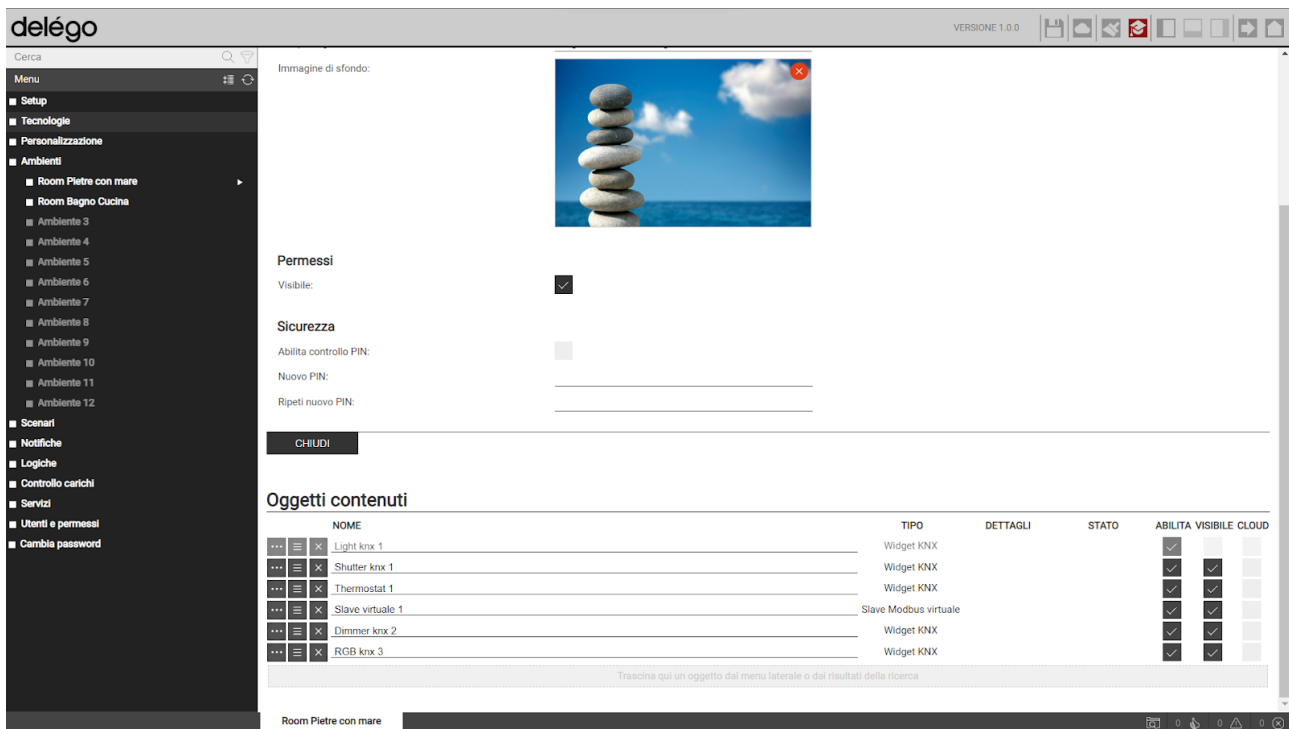
Abilita sincronizzazione: ☒

SINCRONIZZA

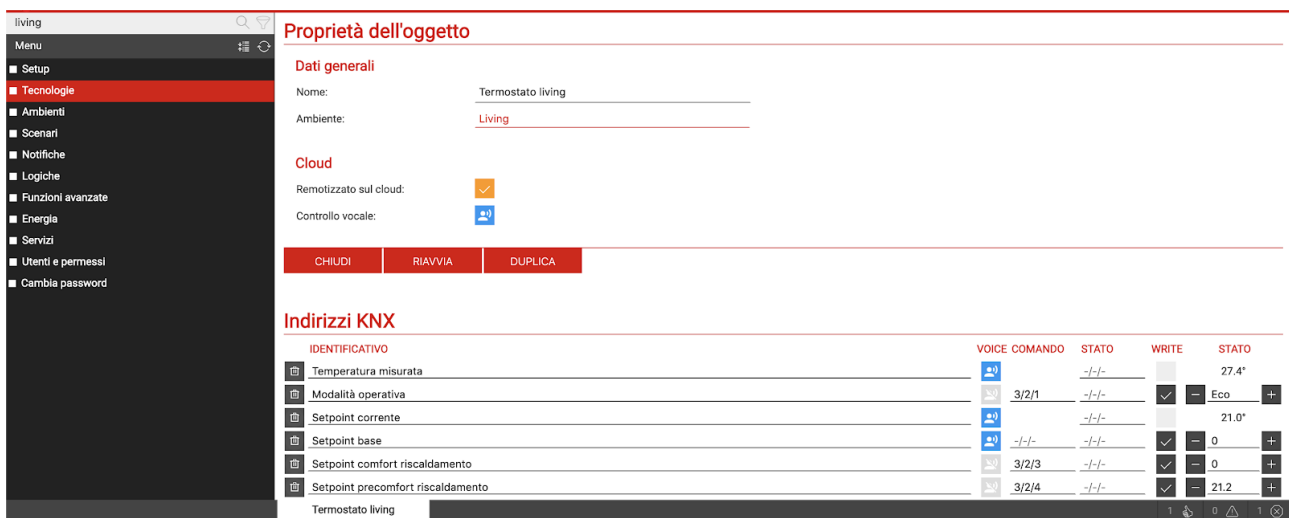
Sincronizzazione cloud

This information is not strictly essential, but allows for easier identification of the cloud server. For any modification, the SYNCHRONIZE button must be pressed.

Within the configuration pages, whether they are an environment, the list of widgets for a specific technology, or the detail file, it is possible to activate cloud synchronization of one or more widgets / supervision objects:



Enable sync
on cloud



Initially the selector is orange, indicating that the sync with the cloud has not occurred yet. Once all the objects to be synchronized have been selected, by pressing the cloud indicator on the toolbar again, it is possible to review the summary of the objects, and start the procedure with the SYNCHRONIZE button.

At the end of the procedure, all the objects are marked in green, until a new modification to their configuration takes place; in the latter case, it will be necessary to perform a synchronization again. The state of the cloud indicator in the toolbar - green or red - indicates the presence or absence of objects to be synchronized.

If an object continues to be orange at the end of a synchronization, it is necessary to check its configuration; in the case of composite widgets, for example, the minimum number of sub-objects essential for its correct management via the cloud may be missing.

12.4 CONTROL THROUGH VOICE ASSISTANTS

Once the widgets are successfully synchronized, you can control them using Alexa and Google Assistant voice assistants, through the management of the smart *home* of the respective systems ("Alexa" app in the case of Amazon, "Home" for Google). In this chapter, the procedure for Alexa will be described as an example.

As a first step it is necessary to activate skill That is within the Alexa and Google Home apps; during the procedure, you will be asked to associate your cloud account Ekinex (with which the procedure described above was carried out).

At this point it is necessary to launch a scan to search for new devices.

Once the procedure has been completed, for each of the devices, it is possible to make an association with a group, to identify it more easily (and to be able to make group commands, or refer verbally with the name of the group).

At this point, it is possible to control the new functions with the voice, or with the graphics of the Alexa / Google Home app:

For a list of specific keywords, see the Alexa and Google Assistant documentation; Here are some examples of the most common requests:

Alexa, turn on the light in the kitchen

Alexa, set the living room light to 70%

Alexa, increase the light in the room by 20%

Alexa, tell me the temperature in the living room

Alexa, set the temperature in the kitchen to 21 degrees

Alexa, turn everything off

Please note that not all features of DELEGO MINI they can be managed with Alexa and Google Assistant, because the models of these systems are extremely simplified and reductive, compared to the functions offered by a KNX system.

For this purpose, it was introduced in DELEGO MINI an indicator, which highlights whether a certain widget / object can be controlled with the voice...

The screenshot shows the DELEGO MINI web interface. On the left is a sidebar menu with options like 'living', 'Menu', 'Setup', 'Tecnologie', 'Ambienti', 'Scenari', 'Notifiche', 'Logiche', 'Funzioni avanzate', 'Energia', 'Servizi', 'Utenti e permessi', and 'Cambia password'. The main area is titled 'Proprietà dell'oggetto' and contains two sections: 'Dati generali' and 'Indirizzi KNX'.

Dati generali

Name: Termostato living
Ambiente: Living
Cloud
Remotizzato sul cloud: ☒
Controllo vocale: ☒

Buttons: CHIUDI, RIAVVIA, DUPLICA

Indirizzi KNX

| IDENTIFICATIVO | VOICE COMANDO | STATO | WRITE | STATO |
|-----------------------------------|---------------|-------|-------|-------|
| Temperatura misurata | | -/-/- | | 27.4° |
| Modalità operativa | | 3/2/1 | | Eco |
| Setpoint corrente | | -/-/- | | 21.0° |
| Setpoint base | | -/-/- | | 0 |
| Setpoint comfort riscaldamento | | 3/2/3 | | 0 |
| Setpoint precomfort riscaldamento | | 3/2/4 | | 21.2 |

Bottom bar: Termostato living, 1, 0, 1, 0

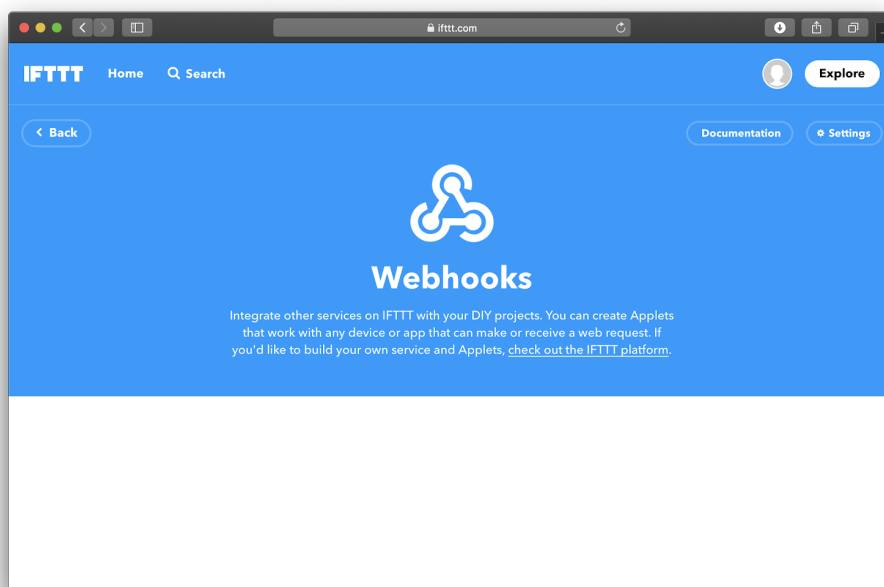
... or which sub-objects are, in the case of composite widgets.

12.5 IFTTT

DELEGO MINI is compatible with the IFTTT cloud platform, which allows you to create free association rules between compatible devices and services (called "applets" or "recipes") according to the

if this happens (if this) then that (then that)

hence the acronym IFTTT. To take advantage of this service, you must first register for free on ifttt.com and then associate the "webhooks" service to your account:

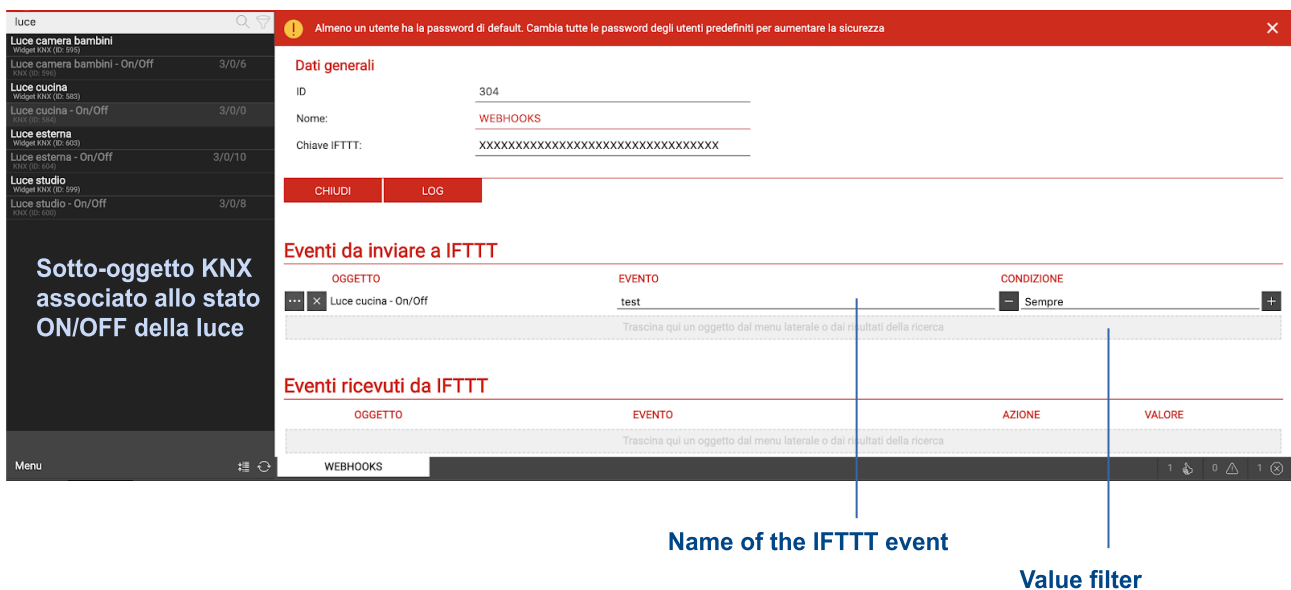


On the "documentation" page, your personal API key is displayed, which must be pasted into the page

SERVICES > IFTTT > WEBHOOKS

Of DELEGO MINI.

To call an applet when the state of an object changes DELEGO MINI, you need to drag it from menu side, or from the search engine, in the "EVENTS TO SEND TO IFTTT" section. In the case of composite widgets (such as KNX widgets) it is necessary to drag the sub-object whose change of state must determine the event, looking for it in the search engine:

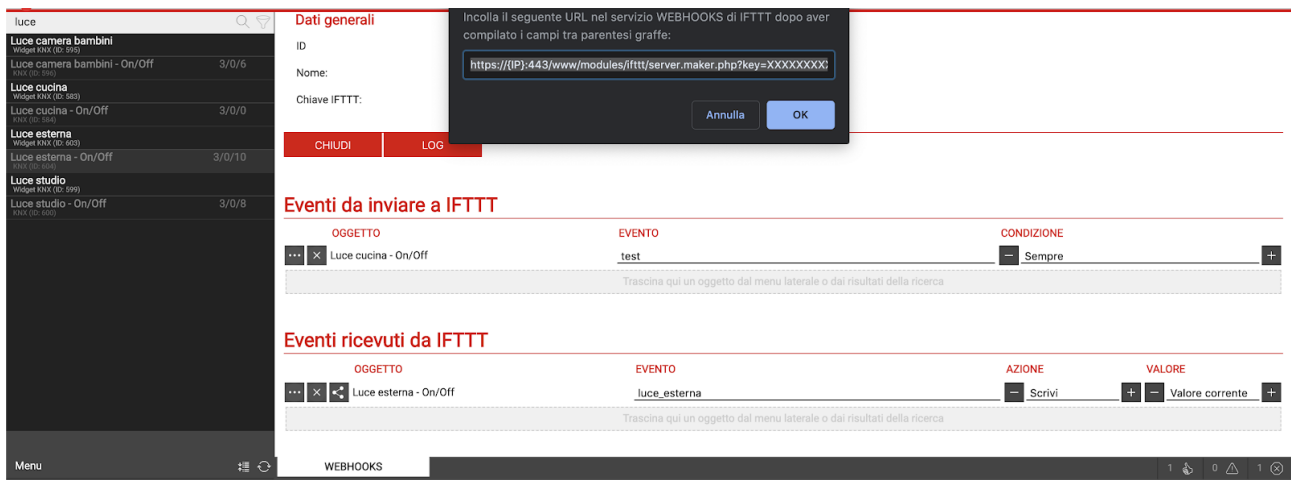


For each object that is dragged, it is necessary to indicate the name of the IFTTT event to be invoked; this information is requested in IFTTT when creating an "applet" that has *webhooks* as a starting point. Finally, it is necessary to specify for which value of the dragged object the IFTTT event should be recalled (in the case of "always", it will be recalled at each change of value).

In IFTTT, an applet is created by choosing "webhooks" as the starting service, pressing on the keyword "this", and inserting the event name specified in DELEGO MINI. As an action ("that") you can choose any other service or device, bearing in mind that DELEGO MINI passes to IFTTT, during the call, the following parameters (usable in the creation of the applet, depending on which service is chosen as destination):

| | |
|---------|--|
| Value1 | ID of the object that invoked the event |
| Value2 | Name of the object that invoked the event |
| Value 3 | Value (in numeric format) of the object at the time it invoked the event |

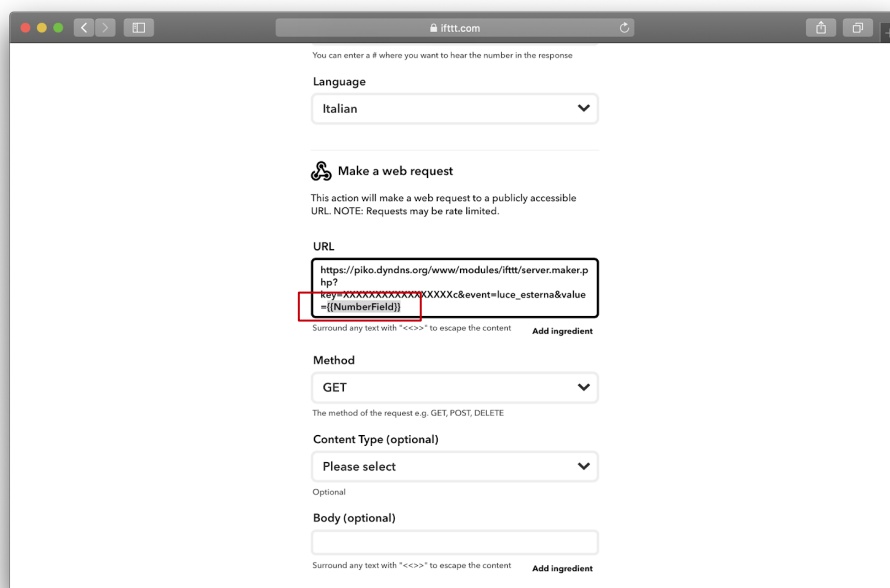
Conversely, you can invoke a `su` command DELEGO MINI as an action performed by an applet, starting from an event that occurred on another service or device. In this case, the objects must be dragged into the section "EVENTS RECEIVED FROM IFTTT"...



... again specifying an event name, and the action + value to send to the object when called by IFTTT. If you choose "current value", the value will be passed in the URL called by IFTTT.

Pressing the link button corresponding to an object, a dialog box is shown, in which it is possible to copy the URL, to be inserted in IFTTT.DELEGO MINI it must first be configured to be accessible remotely, via public IP, dynamic DNS or cloud service.

While creating the *applet* in IFTTT, after choosing the starting service, pressing "that" and choosing "webhooks" as the service, you are asked to paste the previous address; inside it, possibly, it is possible to replace fixed values with "ingredients" that derive from the starting event, to make the call dynamic based on the triggering cause:



To monitor the correct functioning of the rules in both directions, it is possible to take advantage of two tools:

- the LOGIN button DELEGO MINI, which shows a series of messages collected in the server during communication with IFTTT
- the "activity" section in IFTTT, which logs all service events

13 USERS AND PERMISSIONS

13.1 INTRODUCTION

This chapter explains the user management of DELEGO MINI and how to customize it according to your needs, to ensure secure and versatile access to the supervision pages.

13.2 USERS AND USER GROUPS

Authentication into DELEGO MINI is based on two types of objects:

- **USERS:** these are the actual supervision access accounts, identified by a "username" and a "password". Users are not holders of permissions and privileges, but they can belong to one or more USER GROUPS which determine their level of access to the software
- **USER GROUPS:** hold access permissions to the different functions of the software. By changing a permission to a group, you simultaneously affect all users who are part of it.

13.3 CREATING A NEW USER

To create a new user, like the other types of object seen previously:

- Enter the CONFIGURATION environment of DELEGO MINI
- Select USERS AND PERMISSIONS → USERS
- Press the "ADD" button and access the file of the newly created object

The users tab allows you to set the following properties:

| | |
|----------------------|---|
| NAME | Label with which the user is identified (<u>not</u> used to log in) |
| USERNAME | Name used to access the system – <u>It must consist of alphanumeric characters without spaces or special characters</u> |
| PASSWORD | Password to access the system – <u>It must be composed of alphanumeric characters without spaces</u> |
| Homepage Environment | It is possible to drag, from menu side, an environment that is opened immediately upon access to VISUALIZATION by this user |

13.4 USER GROUPS AND ACCESS RIGHTS

By accessing the tab of a USER GROUP – be it predefined or created manually – it is possible (in addition to specifying the name) to establish which users belong to it, by dragging them from menu tree or from the search engine in the appropriate "USERS" section.

It is also possible to assign one or more supervision objects to the USER GROUP, thus making them "private" and accessible only to USERS belonging to the same USER GROUP: for this purpose, simply drag the desired objects to the "OBJECTS" section.

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

13.5 DEFAULT PASSWORDS

It is of paramount importance that the default password for all users pre-installed on DELEGO MINI, is modified, in order to make access secure, especially in the presence of a remote connection.

DELEGO MINI shows an error message when accessing administration, if the password has not been changed for at least one of the predefined users.

13.6 CHANGE PASSWORD

Any user, even with basic rights, can change their access password through the "CHANGE PASSWORD" item of the menu of administration.

On this page, you can change your username, and enter a new password, which (once entered correctly 2 times) will be immediately operational.

14 REMOTE ACCESS

14.1 INTRODUCTION

This chapter explains how to configure your network to allow remote access to DELEGO MINI, to benefit from supervision even when you are not inside the building.

14.2 OPENING PORTS ON THE ROUTER

In order to access DELEGO MINI through the internet, you must:

- Make sure the network configuration of DELEGO MINI has as "DEFAULT GATEWAY" the IP address of the internet router through which you want to make remote access
- Configure the router with which you access the internet (typically, an ADSL router) in order to perform a port forwarding of port 443 and port 22 on the IP address assigned to DELEGO MINI, specifying "TCP" as the packet type

In case the public ports 443 and/or 22 are already occupied by other devices, it is possible to specify different ports in the rules of port *forwarding* as long as those rules direct external requests to ports 443 and 22 (respectively) within the LAN.

For more information, refer to the documentation of your internet router.

14.3 REMOTE ACCESSIBILITY THROUGH THE CLOUD

Alternatively Upon opening of the doors on routers, it is possible to activate a remote service that allows you to access the webserver without opening ports on the router, through the support of our cloud.

After matching DELEGO MINI to your cloud account Ekinex, as explained above, simply access the page

SERVICES > CLOUD > CLOUD SERVICES

and press ACTIVATE corresponding to the REMOTE ACCESSIBILITY service.

Once the service has been enabled from ours customer service, it is active in the list, and requires no further configuration. By accessing the page

SETUP > RETE

in the REMOTE ACCESS section, the public address assigned by the cloud is displayed, to which you can point to access DELEGO MINI.

If you use the ACCESS WITH QR function, the QR code for accessing the web server for the apps automatically contains this public address, so you do not have to type it manually into the app.