Chorus range

KNX DOMOTICS SUPERVISION WITH MASTER ICE AND NAXOS DOMO/COMBI

In-depth technical information

CONTENTS

INTRODUCTION

The purpose of this document is to provide GEWISS sales force with basic technical knowledge about the ICE master supervisors and Naxos Domo/Combi.

The in-depth technical information is structured as follows:

- The first part describes the Master ICE.
- The second part describes the PC software.
- The third part describes the Naxos Domo/Combi.
- The fourth part contains two tables summarising the main characteristics and functions.
- The fifth and last part is dedicated to FAQ

The document is structured so it can be used easily both when read completely, which is recommended at least once in order to understand functions and possibilities of the system, as well as when specific sections are read to quickly clarify doubts or to review specific arguments before going to meet with a customer or before making a presentation.

MASTER ICE

GW12015CB - 15'' Master ICE, white **GW12015CN** - 15'' Master ICE, black **GW12010CB** 10'' Master ICE, white **GW12010CN** 10'' Master ICE, black	

Colour TFT touch screen control panel, with a 4:3 format, backlit with LEDs Used for the supervision, command and control of the KNX system, and includes the basic functions indoor video entryphone position Digital Vision or City Vision (for the City Vision it doesn't support intercom and outdoor station camera view functions). Possibility of remote control of the system via Internet: the access to Master ICE can be performed both from dedicated App (for smartphone and tablet) and from PC with web browser (fees apply). Available in 10'' and 15'' versions with a plate in white or black glass.

TECHNICAL DATA	
Shield	10'' for GW12010 or 15'' for GW12015
Resolution	1024x768
Power supply	18-32Vdc
Draw	30W
RAM	4GB
HDD solid state	32GB
Operating system	Microsoft ® Windows 8 ® Pro Embedded
No. of Ethernet network cards	2 10/100/1000 Mb/s interfaces with RJ45 connectors
No. of USB ports	2 of type 2.0 freely usable
No. of HDMI outputs	1
Audio interface	1 Line-out audio output, 1 input for microphone
Connection to the KNX BUS	direct
Flush-mounting installation	- Masonry walls with box for 10'' : GW24101 - Plasterboard walls with box for 10'' : GW24101PM - Masonry walls with box for 15'' : GW24102 - Plasterboard walls with box for 15'' : GW24102PM
CHARACTERISTICS AND FUNCTIONS	
Supported languages	- Master ICE user interface in 5 languages: ITA - ENG - FRA - GER - SPA - Programming tool in 2 languages: ITA - ENG - GER - SPA
General	- Graphic customisation with different navigation modes - Service functions
KNX	- Direct import of ETS project - Lighting - Motorised systems - Temperature adjustment - Scenes - Timers - Display consumption of electrical energy
Video entryphone	- As for the indoor position for Digital Vision by simply connecting it to a Digital Vision LAN network switch - As for the indoor position for City Vision connecting it to the City Vision LAN network (only for systems with IP/LAN extension with interface GW19356 and server GW19357)
Safety	Central burglar alarm management GW10931 via KNX interface GW10948 and IESS control units supported by interface GW10947
Video control	IP videoserver. Refer to the product's technical documentation for the supported models
Sound transmission	Management of the Denon matrices via LAN connection; no additional interfaces or Gateways are required.
Multimedia	- Reproduction of video and music tracks - Video (Post-it) or audio messages - Email and internet navigation - Voice command
ACCESSORIES	
External power supply	GW90802 (not included)

SUPPORTED LANGUAGES

The Master ICE user interface is available in 5 languages: Italian, English, French, German and Spanish.
The software tool used to program the Master ICE from the PC in offline mode is available in 4 languages: Italian, English, German and Spanish.

KNX FUNCTIONS FOR CREATING AND IMPORTING PROJECTS

The operations about how to create the project and import the ETS file are described briefly below.

PROJECT CREATION
The project can be created offline using a software configuration tool, i.e. directly on the PC and without the Master ICE connected, unlike when creating a project with Internet Gateway and Master Chorus.

IMPORTING A KNX PROJECT
It has become much easier and quicker to associate the communication objects of the KNX devices to the icons and commands available on the supervision pages due to the possibility of directly importing the ETS project:

- for ETS3: the file *.esf is used
- for ETS4: the file *.knxproj is used

NAVIGATION AND GRAPHIC CUSTOMISATION FUNCTIONS

The supervision pages can be customised by inserting personalised images as the background (e.g. photos, 3D rendering, etc.)

There are two modes for navigating the supervision pages:

- by zone: navigation is structured into two levels, e.g.: first level consisting of floor 1, floor 2 and floor 3, the second level consists of the rooms on each floor; this type of navigation is necessary when there are many rooms.
- by room: all the rooms are at the same navigation level; this type of navigation is suited to applications with a few rooms.

SERVICE FUNCTIONS

Some service functions are described below concerning the screen-savers, screen cleaning and the possibility of having a list of the most commonly used functions under “Favourites”.

SHIELD
Specific functions for shield management:

- Screen-Saver: possibility of displaying a sequence of images selected by the user (slide-show).
- Cleaning: temporary deactivation of the screen in order to clean it without accidentally executing commands.

USER ACCESS FUNCTIONS
Functions that make it easier for the user to access the MASTER ICE functions:

- Favourites: this option makes it possible to access the more frequently used commands/functions easier and quicker.

REMOTE CONNECTIVITY FUNCTIONS: App, Windows Live Id account and email sending upon events

The **Apps** are effectively applications, or programs (free or paid) that are installed on the device where they are to be used (smart phone, tablet), therefore they are specific to the device's operating system (Android, IoS, Windows Phone). For example, if I have an Android smart phone, only Apps made specifically for Android can be installed on it. In general, when a manufacturer creates an App to manage the devices it produces (e.g. videocameras), he makes it available in different versions to cover the most common operating systems: Android, IoS and Windows Phone.
From a functional point of view, there is no difference between an APP and other software applications that we use every day, such as WORD and EXCEL, they are all programs and are installed on the machine where they are executed. The only difference lies in the specialisation. In fact whereas applications such as WORD and EXCEL implement countless functions that make it possible to manage and cover all requirements and the cases that can occur, the Apps are specialised only in managing certain functions. It is exactly this specialisation from which the name of App is derived. It stands for APPLICATION, i.e. a program dedicated to only specific use. Therefore, whereas "classic" programs such as WORD and EXCEL are “heavy” to execute, have numerous functions even though you only use a minimal part of them, and they are complex to use, the Apps are “light”, with a few functions and are very simple to use. Apps have overthrown the computer world, no more enormous and complex programs that do "everything", but small and simple programs specialised in a few activities.
It is also very simple to install an App. Simply connect your smart phone (or tablet) to the "store" for your operating system (e.g. Apple Store for IoS, Play Store for Android, etc.), search the App by name and then click on the install button, that is all!
The Apps can also be distributed without going to the "store". In that case, a file is passed (equivalent to the set-up file of "classic" programs), which makes it just as easy to install the App locally.

Cloud computing is a service carried out by providers to store data, run applications or perform any other computing task, thanks to the hardware and software resources available in the network. Such virtual servers don't physically exist on the user's computer, but in on-line mass memories supported by the provider.

Remote access (via LAN or internet) to MASTER ICE via App (both directly or with Windows Live Id account):

- Directly (pointing at the IP address of the Master ICE): from mobile devices such as smartphones or tablets; the relative App specific to the operating system must be installed on the devices.
  Note: the App will be available to be purchased first for Windows Phone and then also for Android and IoS.
- With Windows Live Id account: from mobile devices such as smartphones or tablets; the relative App specific to the operating system must be installed on the devices. In this mode the access is performed via Cloud computing (where it is possible to save the project backup and the customization of Master ICE).
  Note: the App will be available to be purchased (as seen in the previous step), but it is required also to open a Windows Live Id account (by purchasing a subscription to the Easydom Live service).

Local or remote access (via LAN or internet) to MASTER ICE via browser (with Windows Live Id account):

- With Windows Live Id account: with the Easydom Live service it is allowed to access to the Master ICE supervision pages via a browser (HTML5 server).

☞ The video entryphone functions cannot be accessed by remote (neither by App nor by browser)

MASTER ICE makes it possible to send emails following events:

After an event, MASTER ICE can send an information email regarding what happened, for example to report:

- A burglar alarm
- Gas and/or water leak
- Mains failure in the apartment (in this case MASTER ICE must be connected to a UPS)
- Mains voltage return in the apartment
- …….

☞ This function requires a Windows Live Id email account.

KNX FUNCTIONS FOR MOTORISED SYSTEMS

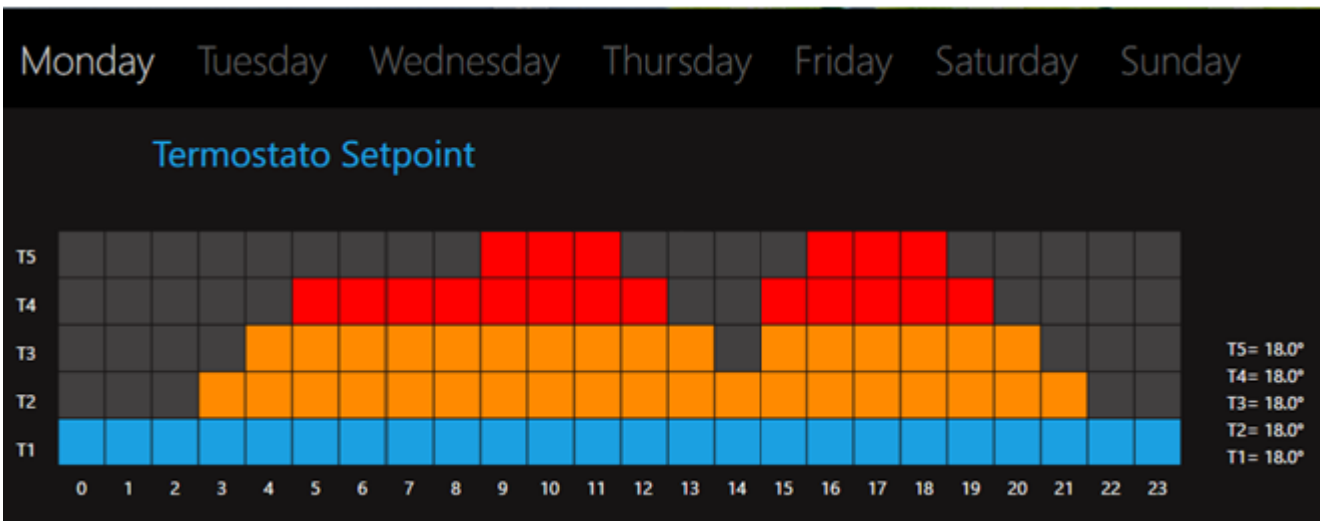
Master ICE makes it possible to control motors for roller shutters, curtains and venetian blinds via KNX actuators.
Unlike Master Chorus, it also makes it possible to control the louvres of the venetian blinds.

KNX LIGHTING FUNCTIONS

Master ICE makes it possible to control lighting devices via KNX, generally for ON/OFF and dimmer commands.
Unlike Master Chorus, Master ICE makes it possible to control devices such as RGB, DALI and DMX via specific gateways.
There is a "colour picker" function (colour wheel) for RGB and DMX devices

KNX TEMPERATURE ADJUSTMENT FUNCTIONS

Master ICE is able to control KNX thermostats and temperature adjustment probes and associate them with daily/weekly profiles, both in NVAC mode and with a temperature set-point.
Depending on the selected mode, Master ICE manages the weekly programming and makes it possible to view/change the main operating parameters (e.g.: set point, mode, type, etc…).
The local control for each area is performed by the KNX thermostat/probe.



KNX TIMER FUNCTIONS

MASTER ICE manages programming (switching on/switching off) according to the daily/weekly/annual planning of KNX circuits; unlike Master Chorus, it is very easy for the user to change the timer.

SCENE FUNCTIONS

The methods with which Master ICE is able to manage the scenes are summarised below.

- KNX scenes: these are managed by KNX devices in the field according to the methods provided by the KNX standard; with these types of scenes, the actions are carried out at the same time.
  KNX scenes can be activated by Master ICE, and also by KNX commands or events, such as a burglar alarm or the detection of a movement sensor.

- Sequence scenes: these are managed directly by MASTER ICE, which performs a sequence of actions, with a programmable delay between them; the actions to be carried out and the relative delays can be changed by the user.
  A sequence scene can also include particular actions, such as:
  - starting the presentation of images
  - starting the display of a video
  - executing a music track
  - web radio streaming

  As for KNX scenes, also sequence scenes can be activated both by Master ICE, as well as by KNX commands or events.

- FOLLOW-ME scenes: these are dedicated to lighting and after a light is turned on in a room, MASTER ICE automatically controls the lights in other rooms to be turned off; this function is particularly useful for people who live alone.

- MASTER ICE scenes and SNAP-SHOT functions: these are equivalent to the KNX scenes, but are managed completely by MASTER ICE. Once the user has created a new scene, the SNAP-SHOT function makes it easy and quick to acquire and associate the status of all the actuators present on the same supervision page with the scene; when recalling the scene, MASTER ICE commands the actuators to the status in which they were at the moment the SNAP-SHOT function was carried out.

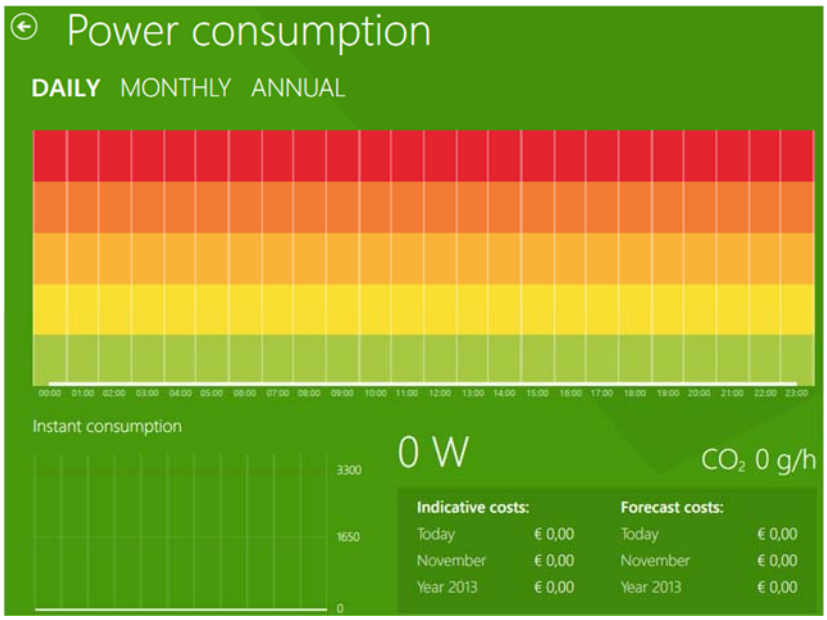
ENERGY MANAGEMENT FUNCTIONS

Basic information is provided below in order to understand how Master ICE can display energy and electricity consumption.

ELECTRICITY

MASTER ICE acquires the measurement of the absorbed power and the energy consumption and displays it. The power consumption is stored and can be displayed on an annual, monthly or daily basis.
The measurements of the absorbed power and energy consumption are acquired via KNX by an external meter (GW90876+GWD6801/GWD6806/GWD6808).
If you do not want to use an external energy meter, MASTER ICE is equally able to estimate the consumed energy based on the consumptions declared during the configuration phase; in this case, the power consumed by each device when "on" must be declared.
Consumptions can be displayed in kWh or in equivalent “Kg of CO2” saved.
MASTER ICE can process a series of use statistics for the user devices (lighting devices and/or general loads) in the system.
In particular:

- count of number of switch-ons
- count of operating hours



BURGLAR ALARM FUNCTION

Master ICE manages the functions of the Gewiss burglar alarm system GW10931 via the interface GW10948, where the keyboard GW10934 is graphically represented for managing the main functions.
Master ICE also makes it possible to manage some IESS burglar alarm systems via interface GW10947.

FUNCTION OF INDOOR VIDEO ENTRYPHONE POSITION

MASTER ICE is able to act as an indoor position for DIGITAL VISION or CITY VISION (for the City Vision it doesn't support intercom and outdoor station camera view functions; it doesn't allow to use the auxiliary commands and the electrolock opening when a call is not in progress).

DIGITAL VISION:
This implements the basic functions of an indoor video entryphone position of the Digital Vision system by simply connecting Master ICE to the video entryphone system switch.

CITY VISION:
This implements the basic functions of an indoor video entryphone position of the City Vision; to integrate MASTER ICE in the City Vision system, the system must have the following devices installed:

- GW19356, LAN network interface
- GW19357, IP Server (one for every 3 MASTER ICE in the system)

VIDEO CONTROL FUNCTION

Master ICE makes it possible to display images from the PAL telecameras connected to the IP Axis video server, with the following functions:

- display of the individual videocamera
- cyclic display of all the videocameras
- instantaneous, with the possibility to capture and image while observing a videocamera; the image is archived and can be viewed again later.

☞ The list of IP videocameras compatible with MASTER ICE is continuously evolving, therefore for the compatibility of commercially available IP videocameras other than the AXIS video servers, contact SAT-DOMO.

SOUND TRANSMISSION FUNCTION

Master ICE directly manages the DENON sound transmission system directly via LAN network (without the need for external interfaces and/or gateways).
It can also manage via the KNX network all systems with an available KNX protocol gateway.

MULTIMEDIA FUNCTIONS by Microsoft ® Windows 8

REPRODUCTION OF VIDEO AND MUSIC TRACKS

Reproduction of streaming audio and video:

- Web radio: listening to radio channels in web streaming, with the possibility of controlling reproduction via SCENES and/or TIMERS
- Media player: reproduction of music and/or video files

MESSAGES

Message reproduction:

- Video messages (post-it function)
- Audio messages

WEB FUNCTIONS

Management of the following web functions:

- Internet navigation and display of web pages
- Email
- RSS Feed

VOICE COMMAND FUNCTION

The automation functions accessible via MASTER ICE can also be activated via a voice command, e.g.: command for activating lights and loads, scene execution, etc.
The voice commands are managed via a speech synthesis application called LUCY, which is integrated in Windows 8.

SOFTWARE

GW12691 - Easydom Next Home software (Base version) **GW12692** - Easydom Next Home Elite software (Plus version) **GW12693** - Software upgrade from Easydom Next Home to Easydom Next Home Elite (from Base to Plus)	

The MASTER ICE software is available in two versions, BASIC GW12691 and PLUS GW12692, which can be installed on PCs with the following minimum requirements.

MINIMUM HW FEATURES REQUIRED FOR SUPPORTING THE DOMOTICS SUPERVISION FUNCTIONS	
Microprocessor	CPU Intel Core i3
RAM	4GB
Hard disk	32GB (15Gb free space)
Display	Minimum resolution 1024x768, a touch display is recommended (e.g. all in one PC) to maximise the simplicity of the user interface
LAN network card	Yes
Audio card	Yes
Operating system	Microsoft ® Windows 8
Connection to the KNX BUS via	- GW90767 KNX/IP interface - GW90767AP KNX/IP interface - GW90707 KNX/IP router - GW90706B KNX/USB interface - GW90706S KNX/USB STICK interface Notes: devices from other manufacturers are not compatible.

ATTENTION: THE FOLLOWING ADDITIONAL REQUIREMENTS ARE INDICATED BELOW IF YOU WANT TO INSTALL THE SW IN FLUSH-MOUNTING MACHINES (IN ORDER TO AVOID MALFUNCTION DUE TO OVERHEATING)**:**	
Microprocessor	Recommended CPU Fanless type AMD G series T40E or Intel ATOM series E3800
Motherboard	Suitable for 24h operation

FUNCTIONS OF THE BASE AND PLUS SOFTWARE VERSIONS

The software essentially implements the domotics functions supported by Master ICE (with the exception of the function of indoor video entryphone position).
In comparison to the PLUS version, the BASE version implements a reduced set, as shown in the following table.
For a description of the functions, refer to the previous Master ICE paragraphs.

Functions	BASE	PLUS
System management		
KNX system management	•	•
Hourly programming	•	•
Graphic customisation	•	•
Timed temperature management by a Pc	•	•
Scenes		
Unlimited scenes	•	•
Multimedia catalogue management	•	•
Live Music streaming		•
Web radio		•
Presentation of scene images		•
Reproduction of scene videos		•
Activation from a user push-button	•	•
"Follow-me" system scene	•	•
Multi zones for single user	•	•
Instantaneous storing of the system status	•	•
Safety system management		
Management of the Gewiss burglar alarm system	•	•
Burglar alarm management in scenes		•
Activation of outputs, telecameras and scenes by a sensor		•
Video control management		
Display of some IP telecameras and video servers	Max 4 telecameras	•
Cyclic display		•
Instantaneous photo creation	•	•
Possibility for the user to add new telecameras		•
Energy consumption management		
Display of consumption and CO_2	•	•
Consumption analysis tool		•
System use statistics		•
Advanced functions		
Lucy voice commands		•
Remove management from mobile devices		•
Pre-arrangement for plug-in in X-BOX		•

SOFTWARE UPGRADE FROM THE BASE VERSION TO PLUS GW12693

The upgrade code makes it possible to upgrade a Base version to Plus.

NAXOS DOMO/COMBI

GW10961WH - Naxos Domo, white **GW12961BK** - Naxos Domo, black **GW10962WH** - Naxos Combi, white **GW12962BK** - Naxos Combi, black	

KNX or KNX Easy system command and visualisation panels with 4.3" colour touchscreen LED display.
Available in black or white.
In the COMBI version, the panels also combine the function of a City Vision indoor video entryphone position.

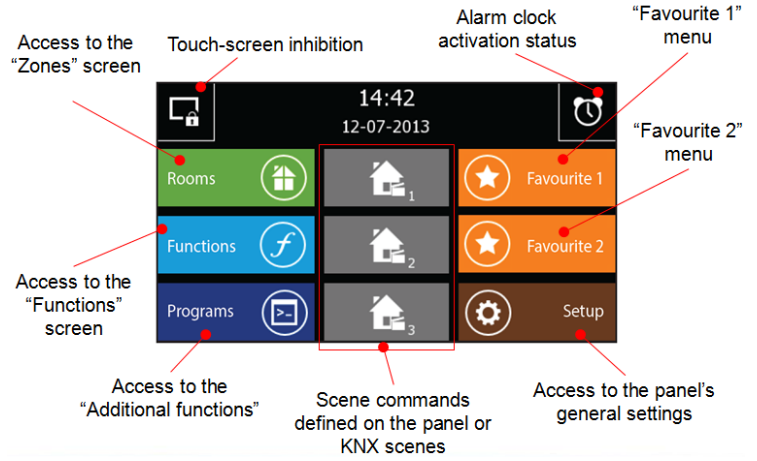
TECHNICAL DATA	
Shield	4.3'' both for GW1X961 as well as for GW1X962
Resolution	480x272 pixel
Power supply	14-24Vdc or 12-16Vac
Draw	max. 500mA
External memory	SD card
Connection to the City Vision BUS (only available for the Naxos Combi version)	Direct
Connection to the KNX BUS	Direct
Surface-mounting	- Directly on the wall with the aid of wall plugs - With round flush-mounting boxes ø 60mm: example GW24232 - With square flush-mounting boxes: example GW24231 - With rectangular flush-mounting boxes: example GW24403
CHARACTERISTICS AND FUNCTIONS	
General	- Non-customisable graphic, but with navigation by room or function - Service functions
KNX	- Lighting - Motorised systems - Temperature adjustment - Scenes - Timers - Energy management - Load control - Logics
Video entryphone (only available for the Naxos Combi version)	Functions as a City Vision Naxos indoor position
Safety	Central burglar alarm management GW10931 via KNX interface GW10948 and IESS control units supported by interface GW10947
Video control (only available for the Naxos Combi version)	Functions as a City Vision Naxos indoor position
ACCESSORIES	
External power supply	GW19305 (not included)
Free-standing kit	Not available

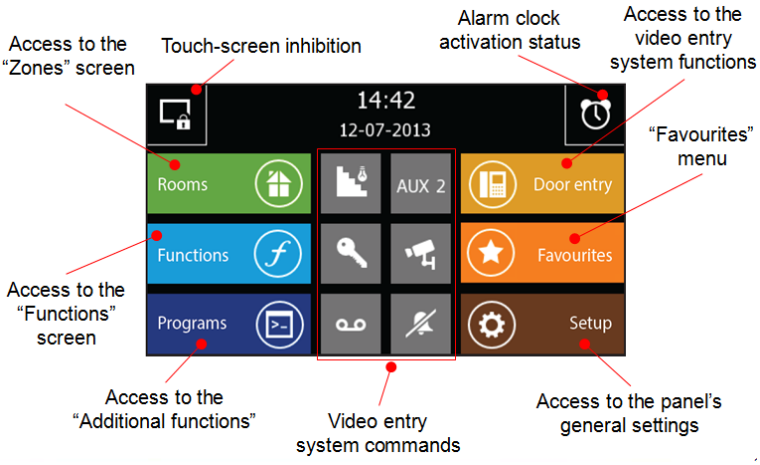
SUPPORTED LANGUAGES

The NAXOS DOMO/COMBI user interface is available in 5 languages: Italian, English, French, German and Spanish.

GRAPHIC VISUALISATION - DOMO/COMBI version

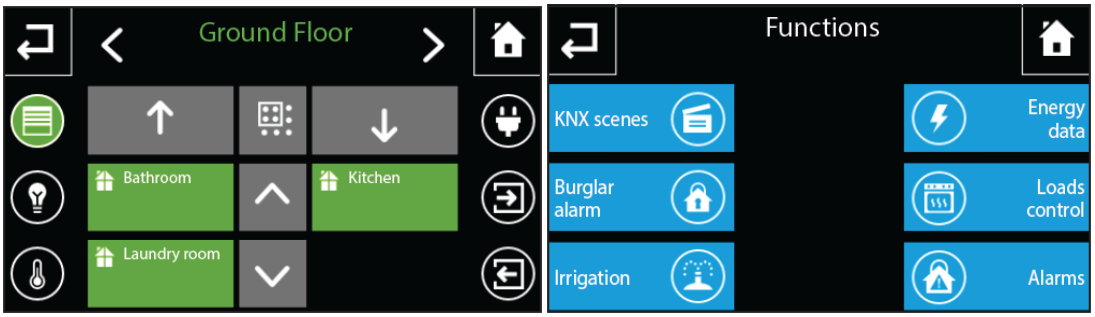
The graphic is not customisable, but very easy and intuitive to use, making it easy to navigate the functions of the NAXOS DOMO and NAXOS COMBI panels.
The following screens show, respectively, the main page for NAXOS DOMO and NAXOS COMBI.





NAVIGATION BY ROOM or FUNCTION - DOMO/COMBI version

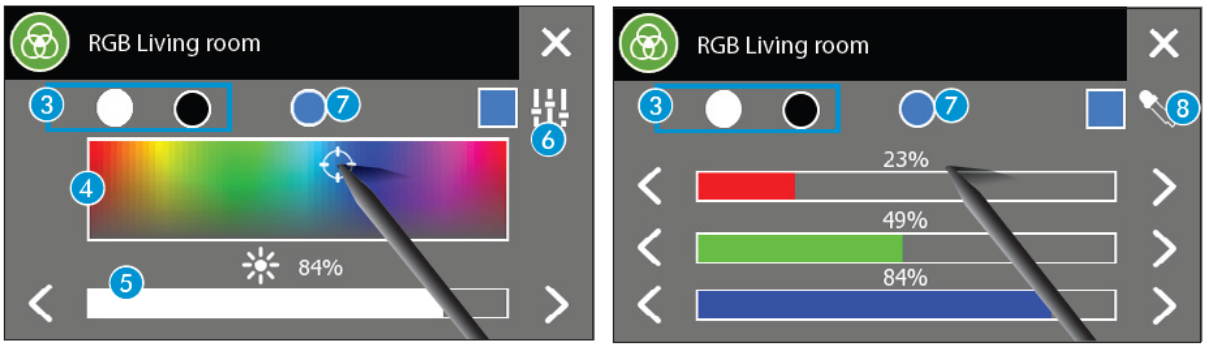
NAXOS DOMO/COMBI makes it possible to navigate by room or function; below, the screens that can be accessed via the password defined by the user.



KNX LIGHTING - DOMO/COMBI version

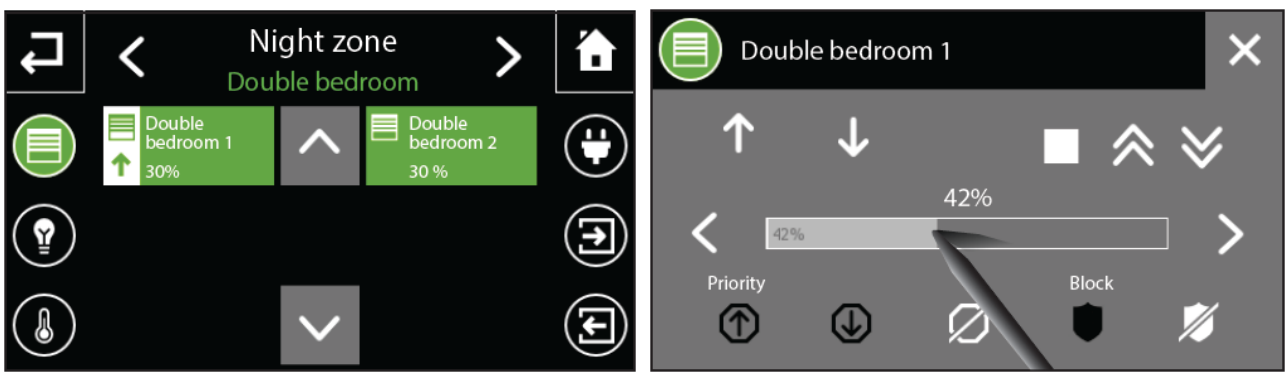
NAXOS DOMO/COMBI makes it possible to control lighting devices via KNX, mainly for ON/OFF and dimmer commands, but also RGB, DALI and DMX devices using specific gateways.

There is a "colour picker" function (colour wheel) for RGB and DMX devices



KNX MOTORISED SYSTEMS - DOMO/COMBI version

NAXOS DOMO/COMBI makes it possible to control motors for roller shutters, curtains and venetian blinds via KNX actuators.
The following screens show how the commands are displayed and, if permitted by system configuration, it is possible to read on the push-button the opening percentage of the “roller shutter”/”venetian blind”.
Pressing down long on the device you want to control opens a pop-up containing all the available options.



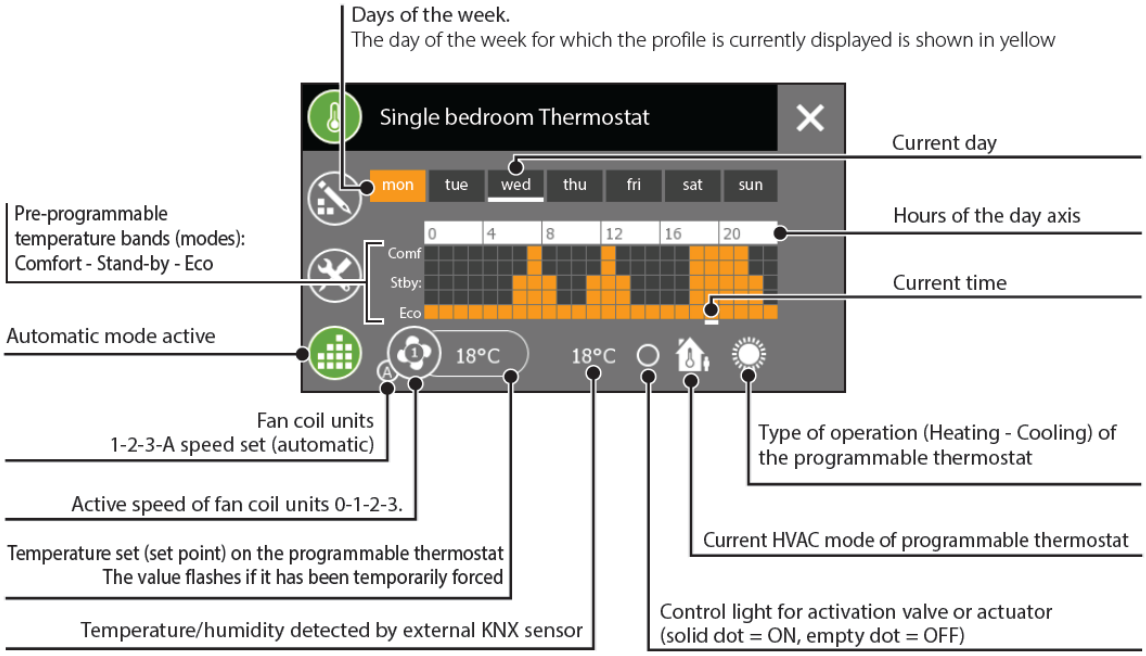
KNX TEMPERATURE ADJUSTMENT - DOMO/COMBI version

Climate control for specific zones (Master/Slave control):
NAXOS DOMO/COMBI is able to act as a master and control the KNX thermostats and temperature adjustment probe as slaves, according to daily or weekly profiles, with the possibility to send the HVAC mode as well as temperature set-up to the slaves.
The panel can manage multiple weekly/daily profiles independently, each associated to different slaves.
Example: in a single family home or a small in the small-scale commercial sector (offices) with multiple floors, each floor can be controlled by zone, with a different profile for each floor; each floor has different KNX slaves, thermostats or probes that are part of a zone, and each are controlled (mode or setpoint) simultaneously, according to a weekly/daily profile.

The panel also makes it possible to view/change the main operating parameters (for example: mode, type, etc…).

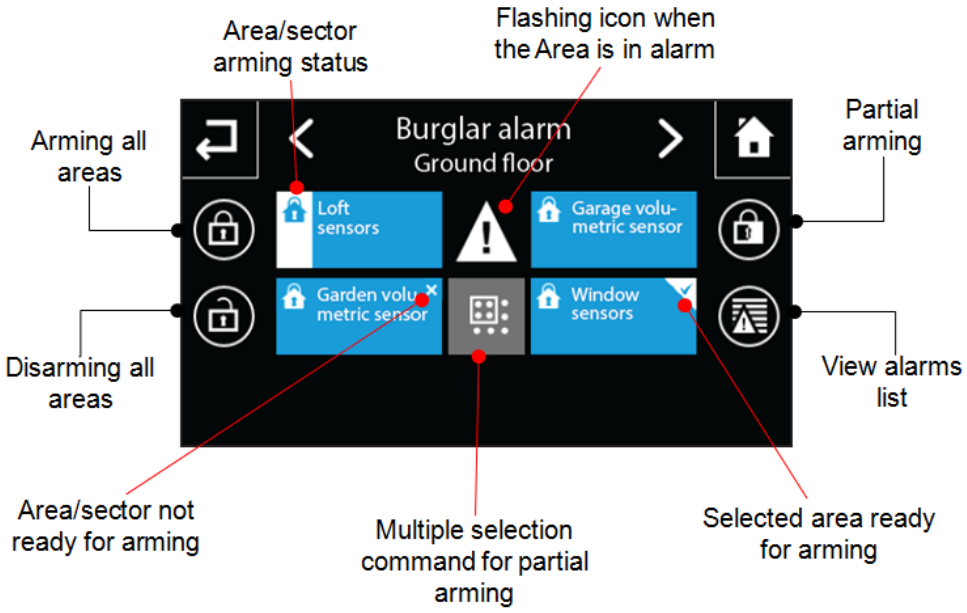
Timed thermostat function :
In addition to the zone specific control defined above, NAXOS DOMO/COMBI can also act as a timed thermostat with 4 command algorithms: 2 points ON-OFF, PWM proportional integral, fancoil with ON-OFF speed control. In this case, it acts like a simple timed thermostat, acquiring via KNX the measurement of the temperature in the controlled room (e.g. using a KNX probe or push-button panel) and, based on the control algorithm executed locally, sends the control command via KNX to the boiler (or to a solenoid valve or fancoil, etc.).
A weekly profile is associated with the timed thermostat.
Up to 4 independent timed thermostat functions can be implemented.

The following screen shows the management of the weekly profile for zone specific climate control in HVAC mode (the mode command is sent to the slaves).



KNX BURGLAR ALARM - DOMO/COMBI version

NAXOS DOMO/COMBI manages the functions of the Gewiss burglar alarm system GW10931 via the interface GW10948 and also makes it possible to manage some IESS burglar alarm systems via the interface GW10947.
The following screen shows how a wired Gewiss burglar alarm is managed:



KNX ENERGY MANAGEMENT - DOMO/COMBI version

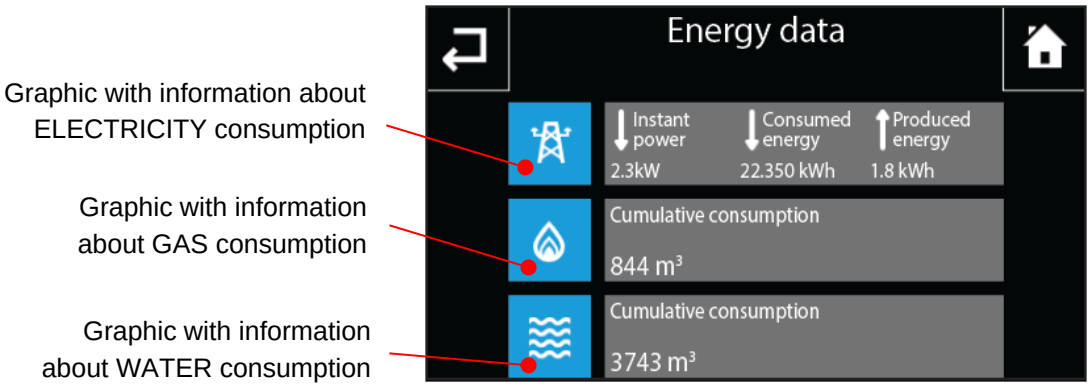
NAXOS DOMO/COMBI is able to display the electricity, water and gas consumption.

ELECTRICITY
NAXOS DOMO/COMBI acquires the measurement of the absorbed power and the energy consumption and displays it. The power consumption is stored and can be displayed on an annual or weekly basis.
The measurements of the absorbed power and energy consumption are acquired via KNX by an external meter (GW90876+GWD6801).

GAS AND WATER CONSUMPTION
NAXOS DOMO/COMBI acquires and displays the water and gas consumption on a yearly or weekly basis.
The consumptions are measured using commercially available meters and then sent on the KNX BUS by suitable interfaces. Some examples are provided below:

- If you have an M-BUS meter, a KNX/M-BUS gateway is used.
- If you have a meter with a pulse output on a clean contact, a KNX pulse meter is used, which is a function available in Gewiss devices GW90721, GW90721A, GW90727.

The following screen shows the access page to the consumption log and their graphical representation, for electricity, gas and water.



KNX LOAD CONTROL - DOMO/COMBI version

The NAXOS DOMO/COMBI load control function makes it possible to automatically disconnect the circuits from the power supply, typically before disconnecting the electricity meter due to excessive consumption.
The measurement of the absorbed power is acquired via KNX by an external meter (GW90876+GWD6801), the same mentioned above in the "Energy Management" paragraph.
This control is carried out on a set of loads identified by the user, and the user must assign a priority to each, together with the consumption (maximum absorption taken from the tag data of the controlled device).
When consumption exceeds the maximum threshold that was defined (also by the user), the panel will progressively start to disconnect the loads until consumption goes down below the threshold.

The load disconnection strategy can take place in two different ways:

- By priority: disconnection can take place by increasing priority (first the loads with a lower priority are disconnected) or decreasing priority (first the loads with highest priority are disconnected); Generally, disconnection is done based on increasing priority.
- By absorption: disconnection can take place by increasing absorption (loads that consume the most are disconnected first) or decreasing absorption (the loads that consume the least are disconnected first)

The load reconnection strategy can take place as follows:

- Manually: the user controls the reconnection of each load.
- Automatic: the loads are reconnected automatically by the panel, and reconnection can take place according to the same order in which they were disconnected, or in the reverse order.

☞ The Energy Meter GW90876+GWD6801 has a limit of 32A, for higher currents contact SAT-DOMO to find a suitable energy meter.

Definition of the max power threshold that activates load disconnection:

5 different values can be defined, and one of these values can be associated to each hour of each day of the week. In this way, the disconnection threshold can be defined variably according to a weekly profile, which can be very useful to take maximum advantage of time band contracts offered by energy suppliers.

Definition of the loads on which load control is active:

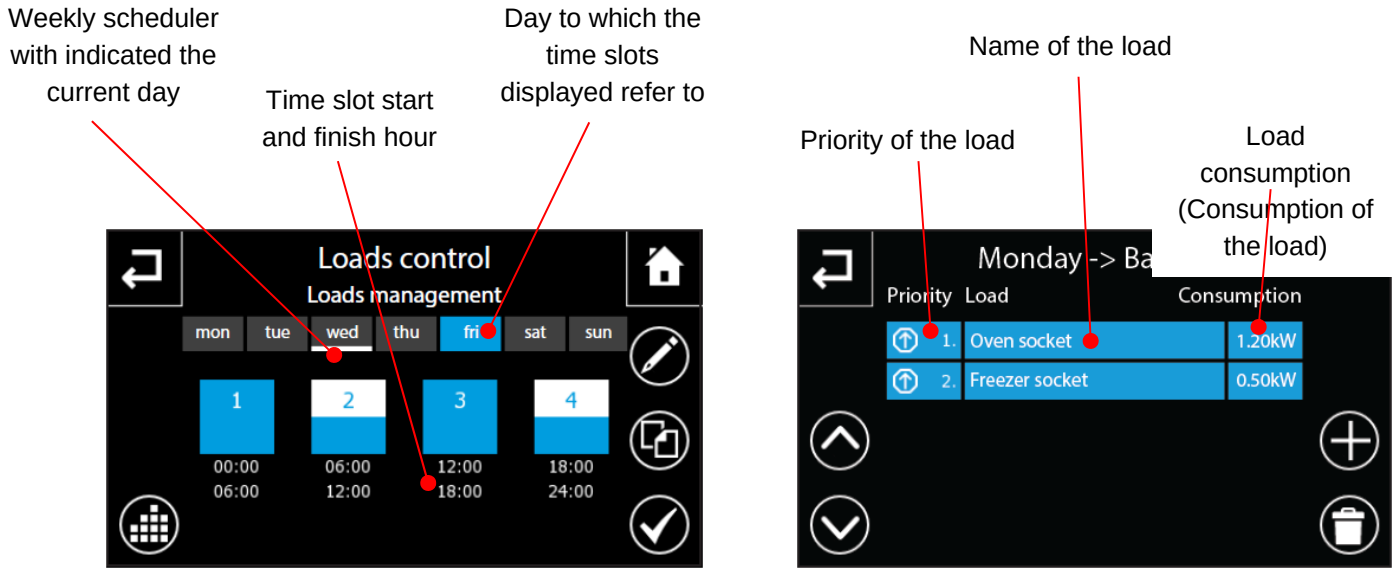
for each day of the week, 4 time bands can be defined (start and end time defined by the user), for each of which the user defines the list of the loads for which load control is applied.

An example is shown below:

- Monday: first time band, from 00:00 to 07:00
  controlled loads: dishwasher, washing machine, garden lights
- Monday: second time band, from 10:00 to 18:00
  controlled loads: oven, washing machine, dishwasher
- ……

This makes it possible to control only the loads that can be disconnected.

The following screens show the pages for managing the time bands and the list of loads to be associated with each of them, for which the priority and maximum absorption must be defined.

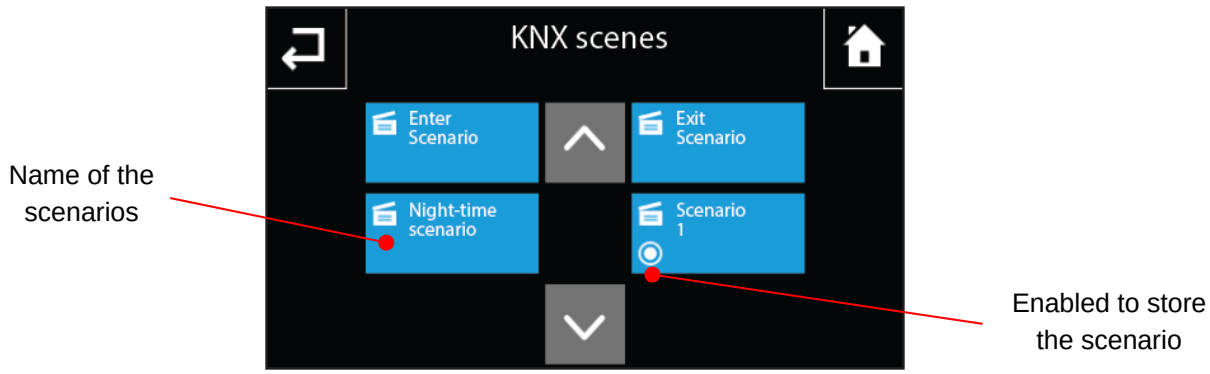


☞ Load control: the user can autonomously and simply define the loads that are involved and how they should be disconnected and reconnected

KNX SCENES and SEQUENCE SCENES - DOMO/COMBI version

KNX scenes:
these are managed by KNX devices in the field according to the methods provided by the KNX standard; with these types of scenes, the actions are carried out at the same time. KNX scenes can be activated by NAXOS DOMO/COMBI, and also by KNX commands or events, such as a burglar alarm or the detection of a movement sensor.

The methods with which the NAXOS DOMO/COMBI panel is able to manage the KNX scenes are the same that KNX provides for the push-buttons in the field: briefly pushing the command executes the KNX scene, and for scenes for which storage is permitted (see following scene), the long pressing of the command (>4sec) stores the scene.



Sequence scenes:
these are managed directly by NAXOS DOMO/COMBI, which performs a sequence of actions, with a programmable delay between them; the actions to be carried out and the relative delays can be changed by the user.
A sequence scene can also include all the actions that are related to commands activated by KNX, for example:

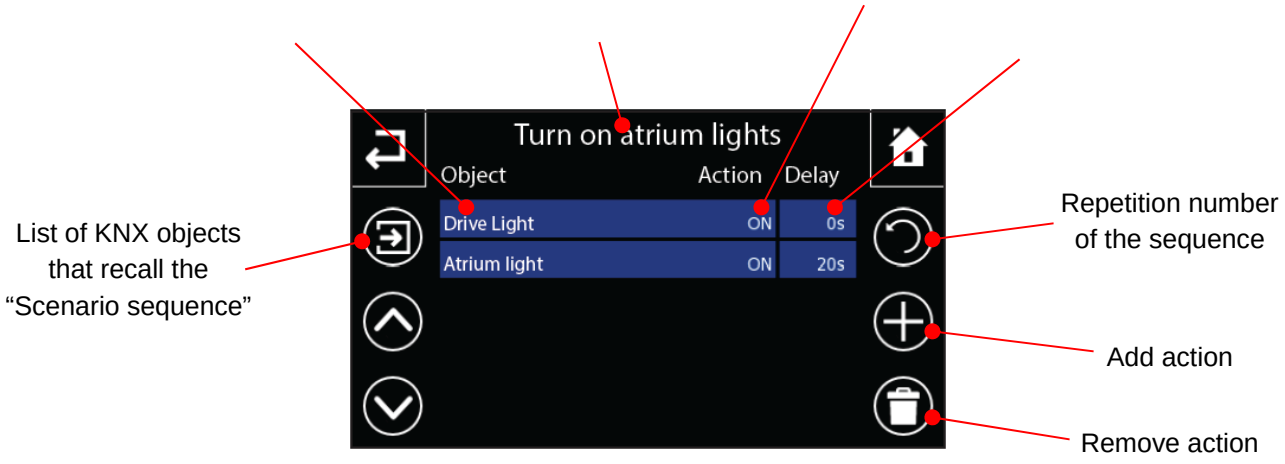
- lighting command
- roller shutters command
- temperature adjustment command
- …….

The sequence scenes can be activated by:

- A manual NAXOS DOMO/COMBI command (specific button)
- Command sent from a KNX push-button in the system
- A burglar alarm
- Video entryphone event (e.g. call from an outdoor position)
- Timer
- …….

The following screen shows the NAXOS DOMO/COMBI page the user can use to define the list of the commands for a sequence scene.

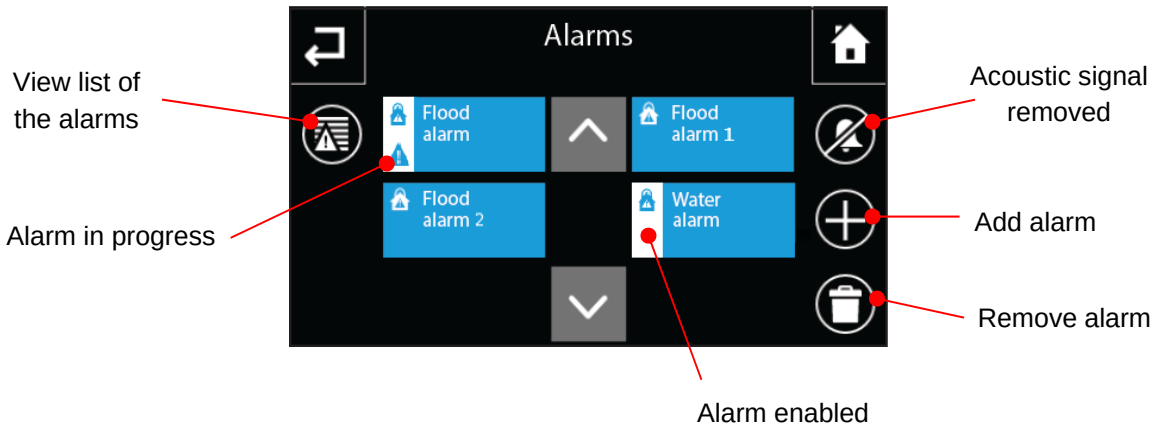
Name of the object
Name of the scenario
Action to execute
Delay from the previous action



☞ Sequence scenes: the user can autonomously define new scenes in an easy manner.

KNX ALARMS - DOMO/COMBI version

The NAXOS DOMO/COMBI panel is able to receive and display some alarms from the KNX BUS and the following screen shows how they can be displayed.

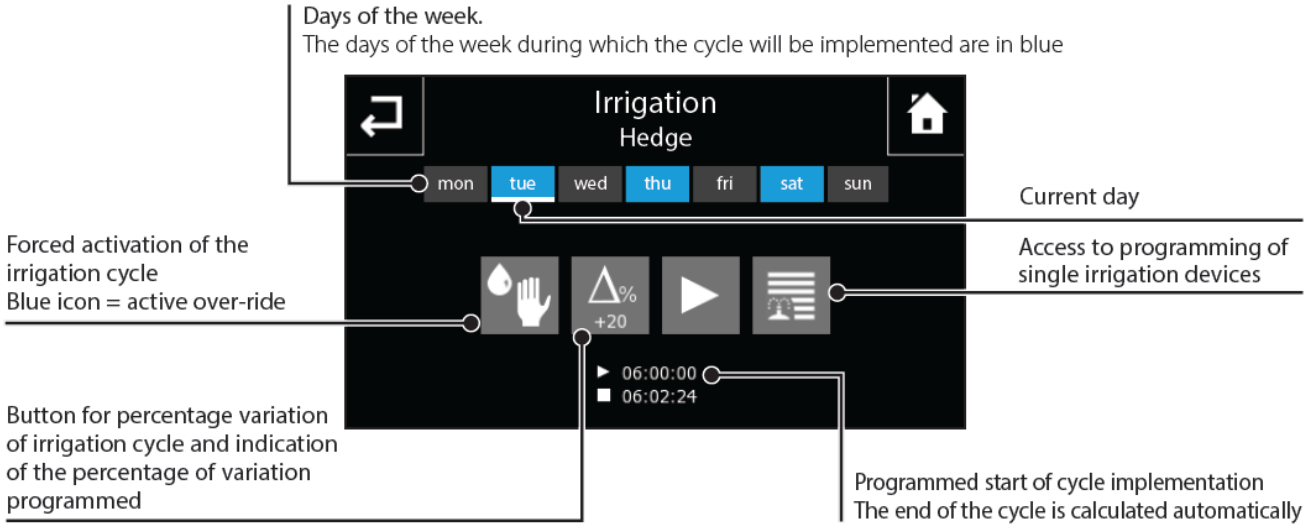


The malfunction and alarm signals are exclusively associated with the results of the logic functions and can only be configured from the panel.

KNX IRRIGATION FUNCTION - DOMO/COMBI version

The irrigation function makes it possible to manage the automatic irrigation of different areas (e.g. east lawn, west lawn, path, etc.). Each area is associated with an irrigation cycle, which is a timed activation sequence of the individual sprinklers.

For each irrigation cycle, the user can define the start time, the list of sprinklers it includes, and defining the ON time for each. Therefore the cycle will start at the set time (e.g. at 21:30) and the sprinklers will be activated in sequence, each for their assigned amount of time.



☞ Irrigation control: the user can autonomously define the irrigation cycles

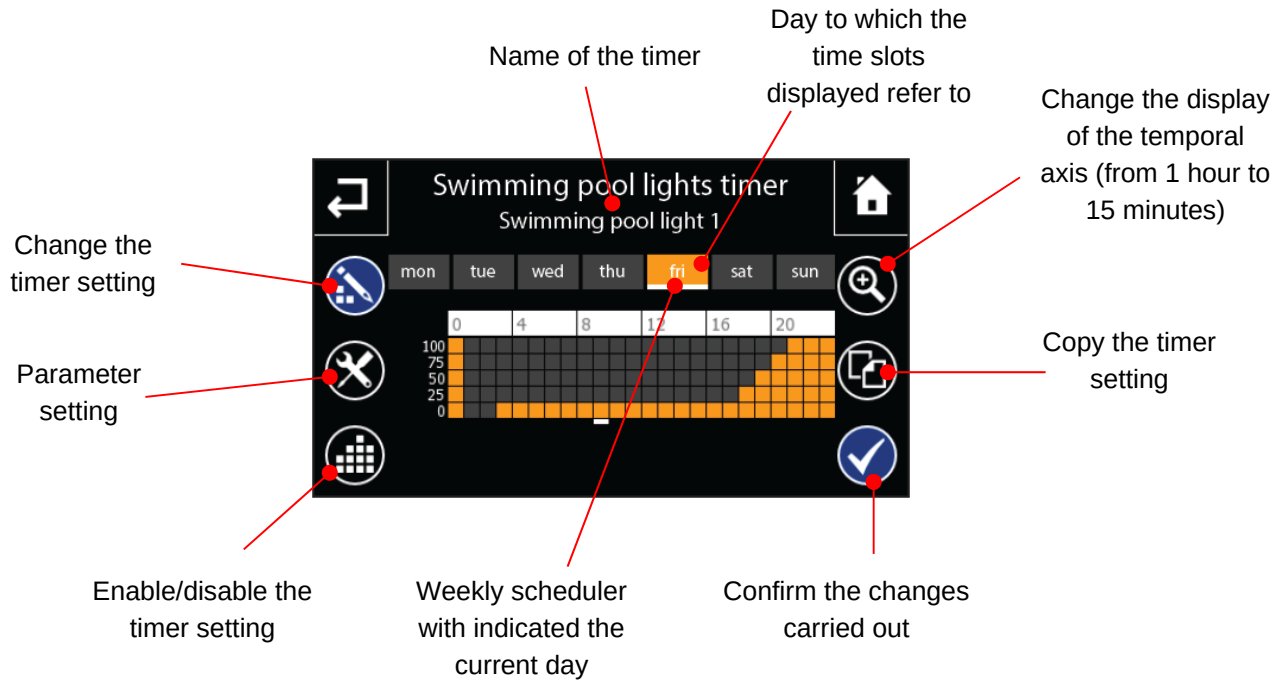
KNX TIMER FUNCTION - DOMO/COMBI version

The NAXOS DOMO/COMBI panel makes it possible, with TIMERS, to control the status of any device controlled by KNX actuators according to a weekly profile. This control can be defined to a precision of a quarter of an hour.

It is possible to define the control of the lights in a glass cabinet, pool lights, fan lights, etc. An example is shown below of weekly TIMER profiles that could be used to control the lights in a glass cabinet:

- Monday: ON from 18 to 24
- Tuesday: ON from 18:15 to 22
- …..
- Sunday: ON from 5:45 to 8:00 and from 18:45 to 22

The weekly profile of a TIMER can be defined graphically, in a simple and intuitive manner. The following figure shows the page that can be used for this operation.



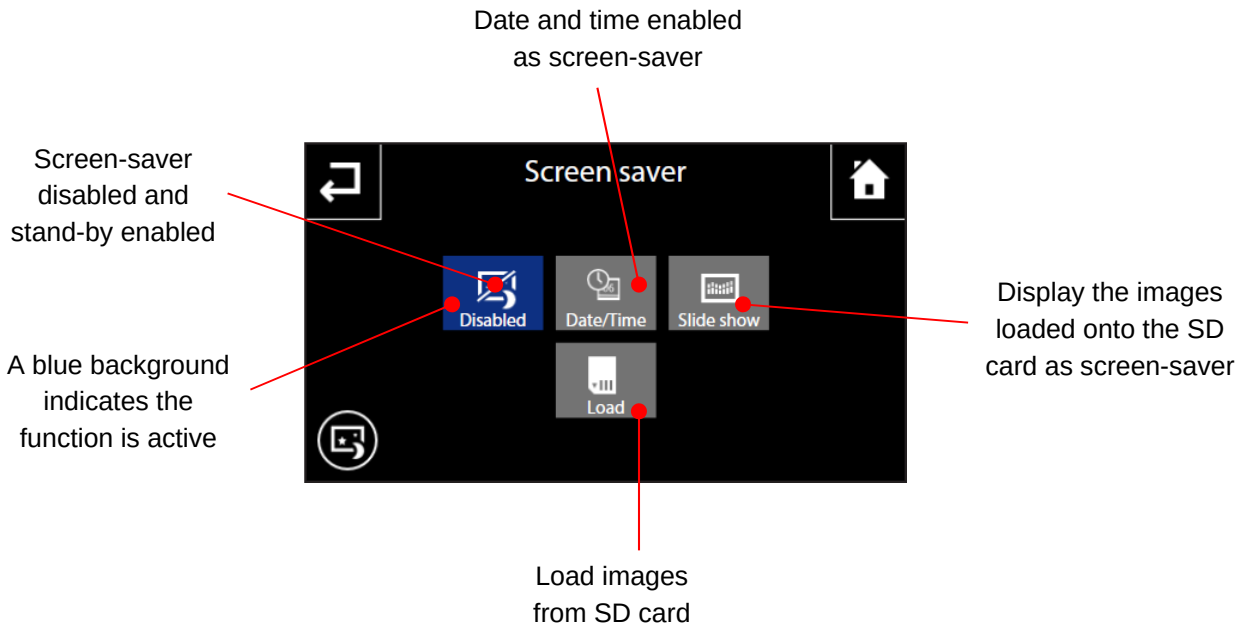
☞ Timer: the user can autonomously define new timers.

AUDIO MESSAGE FUNCTION - DOMO/COMBI version

The panel makes it possible to leave 6 audio messages, max. duration of 10 seconds each, which can be listened to again using the command on the panel.
The audio messages do not interact with the KNX BUS or the video entryphone BUS.
The following screen shows an example of this function.

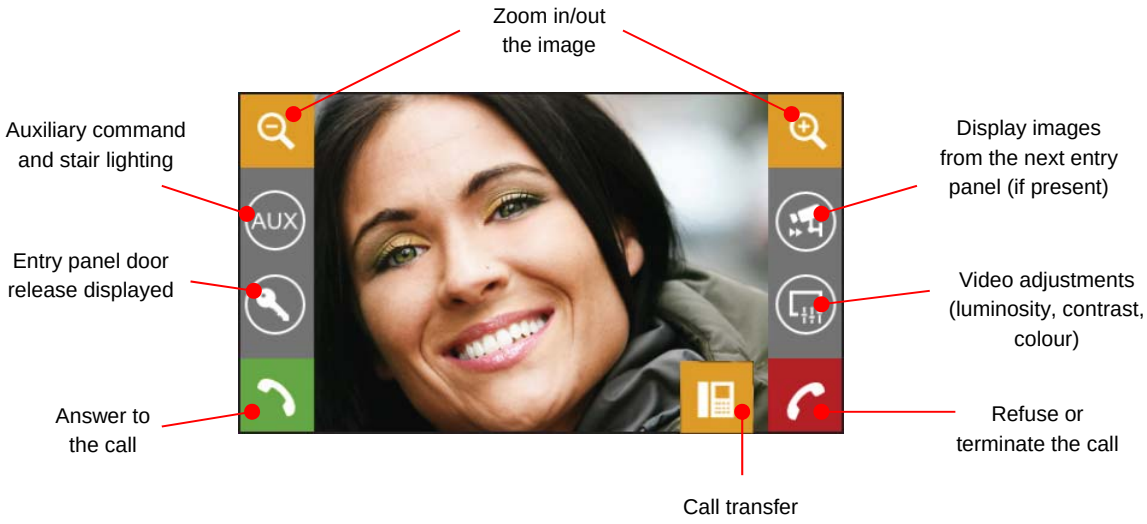
SCREEN-SAVER FUNCTION - DOMO/COMBI version

The SD memory of the panel can be used to load images (.jpg and .png) with a resolution of 480x272 pixels.
The following screen is used to manage the screen-saver function.



VIDEO ENTRYPHONE FUNCTIONS - COMBI version

The NAXOS COMBI panels also implement the functions of an indoor video entryphone position for a CITY VISION system, and the main ones are summarised graphically in the following figures.



INTEGRATION OF KNX FUNCTIONS AND CITY VISION FUNCTIONS - COMBI version

The NAXOS COMBI panels implement a REAL integration between the KNX domotics system and the CITY VISION video entryphone system. Thanks to NAXOS COMBI, the two systems can operate together.
Particular actions or events in the domotics system can activate actions in the CITY VISION system, and vice versa.
Here are some examples:

- A call from an outdoor position can automatically activate (on the KNX domotics system): the timed switching on of lights near the outdoor position (to have a better image)
- The command for opening the door can automatically activate (on the KNX domotics system): the timed switching on of the garden path light and/or stair raiser light (switches on only if there is not enough natural light)

- The domotics scene “I'M GOING OUT” can also activate the switching on of the video entryphone answering machine (in the CITY VISION system); similarly, the “I'M COMING HOME” scene can deactivate it.

Video entryphone events that can activate actions in KNX:
The following video entryphone events can trigger the execution of KNX commands (e.g switching lights on/off, opening/closing roller shutters, activating sequence scenes, etc.:

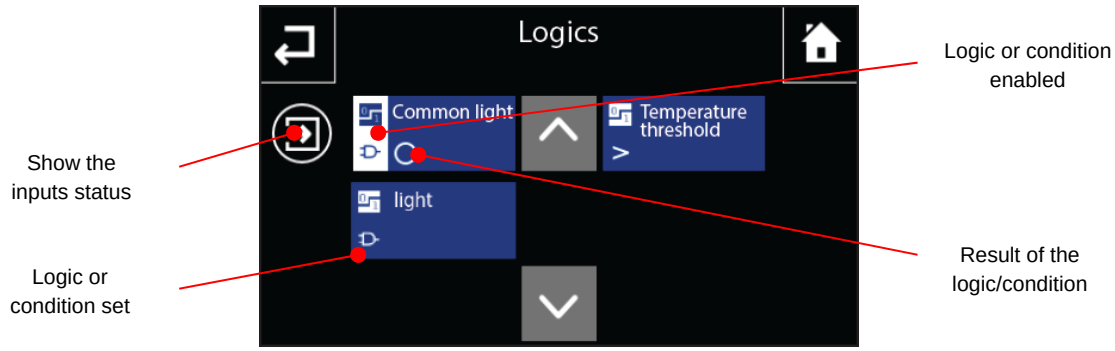
- call from an outdoor position
- call from porter
- intercom call
- missed call from an outdoor position
- missed intercom call
- auto-insertion command from the panel
- door opener command from the panel
- auxiliary command 1 from the panel
- auxiliary command 2 from the panel
- intercom call from the panel
- response from the panel to a call

Video entryphone events that can be activated by KNX events and actions:
The following video entryphone commands can be activated by KNX events (e.g. push-button commands, sequence scenes, etc.):

- auto-insertion active
- door opener command
- auxiliary command 1
- auxiliary command 2
- enable/disable video mail
- enable/disable privacy
- activate landing call ringer

LOGIC FUNCTIONS AND KNX - DOMO/COMBI version

The logic functions supported by the panel are AND-OR-NAND-NOR-XOR-XNOR- NOT (the latter only in the System version and not Easy).
The logic and panel condition section consists of 16 logic blocks, each of which is able to perform a 6 input operation or a comparison.
The logic functions are defined directly on the panel, and not in ETS or with the Easy Controller.
The screen shows how some logic functions can be displayed and enabled/disabled by the user.



☞ Logic functions: the user can enable/disable the execution of logic functions, which can only be defined with the ETC SW or the Easy Controller SW.

CHECK OF KNX DEVICE LIMITS THAT CAN BE MANAGED in ETS - DOMO/COMBI version

This paragraph provides the indications for determining if a NAXOS DOMO/COMBI panel, configured with the ETS SW, can manage the control of all devices installed in the system. A NAXOS DOMO/COMBI panel has **42 functional blocks** (each with 6 communication objects) available for controlling the necessary functions. If used, each function occupies a certain number of FB and the functions can be used until all FB are occupied.
The following box shows, for each function, the FB necessary to implement it, whereas the table shows the mapping of all FB.

The number of Functional Blocks (FB) necessary for the implementation of each function is shown below:

- 1 complete dimmer (all functions): 1 FB
- 2 dimmers (with only some functions): 1 FB
- 3 dimmers (with only some functions): 1 FB
- 1 DALI dimmer (one group with all functions): 1 FB
- 1 RGB dimmer (with separate RGB commands/statuses): 1 FB
- 3 RGB dimmers (with united and non separate commands/statuses): 1 FB
- 1 relay output (with all functions): 1 FB
- 2 relay outputs (with almost all the functions): 1 FB
- 3 relay outputs (with only ON/OFF commands): 1 FB
- 1 roller shutter/venetian blind (complete with all functions): 1 FB
- 2 roller shutters (with a few less functions): 1 FB
- 3 roller shutters (with few functions): 1 FB
- HVAC master/slave (mode or setpoint): 1 FB
- Irrigation (relay with all functions): 1 FB
- 6 independent inputs (1 bit and 1,2,3,4 bytes): 1 FB
- 6 independent outputs (1,2,4 bits and 1,2,3,4 bytes): 1 FB
- 3 KNX scenes (with all functions): 1 FB
- 6 video entryphone events (from and to City Vision): 1 FB

Any of the 42 available FBs can be used for the functions listed above.

The functions listed below, if used, use specific FBs:

- Date and time: FB #15
- Timed thermostat 1: FB #16 to #19
- Timed thermostat 2: FB #20 to #23
- Timed thermostat 3: FB #24 to #27
- Timed thermostat 4: FB #28 to #31
- Burglar alarm control area #1: FB #32 to #33
- Burglar alarm control area #2: FB #34 to #35
- Burglar alarm control area #3: FB #36 to #37
- Burglar alarm control area #4: FB #38 to #39
- Total burglar alarm command: FB #40 to #41
- Load control and energy management FB #42

Functional block	Functions
From 1 to 14	
15	Date and time
16	Timed thermostat zone 1
17	
18	Heating fancoil zone 1
19	Air conditioning fancoil zone 1
20	Timed thermostat zone 2
21	
22	Heating fancoil zone 2
23	Air conditioning fancoil zone 2
24	Timed thermostat zone 3
25	
26	Heating fancoil zone 3
27	Air conditioning fancoil zone 3
28	Timed thermostat zone 4
29	
30	Heating fancoil zone 4
31	Air conditioning fancoil zone 4
32	Burglar alarm control area 4
33	
34	Burglar alarm control area 3
35	
36	Burglar alarm control area 2
37	
38	Burglar alarm control area 1
39	
40	Total burglar alarm command and alarm feedback
41	
42	Load control/Energy management

> ☞ The above tables can be used to check the limits of the functions that can be managed by NAXOS DOMO/COMBI panels only if the ETW SW if used.
> If Easy Controller SW is used, contact SAT-DOMO.

We will now provide a few examples for calculating how many FBs are used and if 42 available ones are sufficient.

Example 1:

- 10 dimmers complete with all functions (10 occupied FB)
- 10 roller shutters complete with all functions (10 occupied FB)
- 10 relay outputs complete with all functions (10 occupied FB)
- 36 independent inputs (6 occupied FB)
- 8 KNX scenes (3 occupied FB)
- 1 zone specific climate control HVAC (Master/Slave) (1 occupied FB)

The above functions occupy a total of 40 FB, therefore they can be managed by NAXOS DOMO/COMBI

Example 2:

- 5 dimmers complete with all functions (5 occupied FB)
- 8 roller shutters complete with all functions (8 occupied FB)
- 30 relay outputs with only ON/OFF functions (10 occupied FB)
- 36 independent inputs (6 occupied FB)
- 8 KNX scenes (3 occupied FB)
- 1 zone specific climate control HVAC (Master/Slave) (1 occupied FB)
- Load control (1 occupied FB, FB #42)
- Total burglar alarm and alarm signalling control (2 occupied FB, FB #40 and #41)

The above functions occupy a total of 36 FB, therefore they can be managed by NAXOS DOMO/COMBI

Example 3:

- 10 dimmers complete with all functions (10 occupied FB)
- 10 roller shutters complete with all functions (10 occupied FB)
- 30 relay outputs with only ON/OFF functions (10 occupied FB)
- 60 independent inputs (10 occupied FB)
- 8 KNX scenes (3 occupied FB)
- 1 zone specific climate control HVAC (Master/Slave) (1 occupied FB)

The above functions occupy a total of 44 FB, therefore they cannot be managed by NAXOS DOMO/COMBI.

SUMMARY TABLE - CHARACTERISTICS AND FUNCTIONS

Two tables are provided below - the first summarises the technical characteristics and functions of the following products: MASTER ICE, SOFTWARE for PC, NAXOS DOMO and NAXOS COMBI; the second table shows the differences for the NAXOS DOMO and COMBI panels if used in Easy mode (programmed with Easy-Controller SW) or in System mode (programmed with ETS).

Table key:

• : available

-: not available

**: advanced scenes are not permitted, see the paragraph “FUNCTIONS OF THE BASIC AND PLUS SOFTWARE VERSIONS” for information about the differences.

*: no predefined limit is understood as the maximum limit the panel can support, typically based on the number of free, and therefore usable, blocks.

Technical details		MASTER ICE		SOFTWARE		NAXOS DOMO	NAXOS COMBI
		10''	15''	BASE	PLUS		
Hardware characteristics	*Colour finish type - white or black*	Glass plate	Glass plate			Plastic case	
	Display format	10''	15''			4,3''	
	Resolution	1024x768				480x272	
	Number of network cards	2					
	Number of USB type 2.0 ports	2					
	Number of HDMI ports	1					
	Direct connection to the KNX BUS	•				•	
	Connection to the KNX BUS via KNX/IP interface	•					
	Connection to VCT Digital Vision	•					
	Connection to VCT City Vision	•				•	
	External power supply	GW90802				GW19305	
	Flush-mounting box	GW24101 GW24101PM	GW24102 GW24102PM				
	Surface-mounting box					GW24231, GW24232, GW24403	
General functions	*Import ETS project*	•		•	•	Import not necessary. They are directly configured by ETS or Easy Controller	
	KNX Easy/System device					•	
	Personalised graphic	•		•	•		
	Import images for screen-saver	•		•	•	•	
Specific KNX functions	*Lighting (including RGB)*	•		•	•	•	
	Roller shutter/venetian blind motorised systems	•		•	•	•	
	Temperature adjustment	•		•	•	•	
	Scenes	•		**	•	•	
	Timer	•		•	•	•	
	Load control					•	
	Central management of burglar alarm GW10931 and other IESS control units	•		•	•	•	
	Values measured from 1- 4 Bytes	•		•	•	•	
	Logics and conditions					•	
	Execution from voice commands	•		•	•		
	Management of video entryphone events						•
Remote management	*Web app*						
	Native App	•			•		
Video entryphone and video control	*Similar to 2-wire or IP extension system City Vision indoor position*						•
	Similar to IP/LAN extension system City Vision indoor position	•					•
	Digital Vision indoor position	•					
	PAL/IP video server support	•		Max 1 AXIS video server.	•		
	Video entryphone telecamera support	•					•
Sound transmission management	*Via LAN*	*DENON*			*DENON / TUTONDO*		
	Via KNX (for systems with gateway vs KNX)	•		•	•	•	
Multimedia functions	*Reproduction of video and music tracks*	•			•		
	Video messages (Post-it)	•		•	•		
	Audio messages	•		•	•	•	
	Internet navigation and e-mail	•		•	•		

Function	*NAXOS DOMO/COMBI* System	*NAXOS DOMO/COMBI* Easy	Notes
Password protection	•	•	
Structure type	Hierarchical and non hierarchical	Hierarchical and non hierarchical	
No. of protection levels	3	3	
Navigation by zone	•	•	
No. of zones	8	4	
Navigation by room	•	•	
No. of rooms	32	16	
Date/time management	•		
Sending to BUS	•		
Receiving from BUS	•		
Logics	•	•	
No. of logic blocks	16	6	
Number of logic inputs per single logic	6	4	
Logic operations	NOT, AND, OR, NAND, NOR, XOR, XNOR	AND, OR, NAND, NOR, XOR, XNOR	
Acoustic signal	•		
Conditions	•		
No. of inputs per single condition	2		
Type of supported conditions	equal to, different than, greater than, greater than or equal to, less than, less than or equal to		
Sending panel tamper status	•		
Timed thermostat	•		Management of heating and air conditioning, with independent control algorithms; for this function, the temperature value must be received by the KNX BUS.
No. of timed thermostats	4		
Control logic	2-way and 4-way		
Control algorithms	ON/OFF, PWM, FAN-COIL on/off		
HVAC master	•	•	With mode operation (comfort, pre-comfort, economy, off), the setpoints relative to the mode cannot be changed on the same graphics page; the panel must be programmed in ETS in order to send the setpoints from the same environment, but from a graphically different page, using 2 byte outputs.
Type of slave control	Mode or setpoint	Mode or setpoint	
Max. no of manageable independent profiles	No predefined limit (*)	4	
Burglar alarm	•	•	Supports the ON/OFF commands, the status for single sectors/areas/totals, alarm feedback and enabling to add sectors/areas.
No. of areas	4	1	
No. of sectors per area	4	4	
Alarm log	•	•	
Energy management	•	•	For water and gas, check how the meter interfaces with the KNX BUS; for more details, refer to the paragraph KNX ENERGY MANAGEMENT for the NAXOS DOMO/COMBI panel.
Displayed utilities	Electricity, water and gas	Electricity, water and gas	
Consumption log	Yearly and weekly	Yearly and weekly	
Load control	•	•	The load reconnection function takes place automatically depending on the disconnection, that is with the same sequence, with the inverse sequence, or manually.
Max no. of loads	No predefined limit (*)	No predefined limit (*)	
Max no. of daily time bands	4	4	
Management of load disconnection	Priority or absorption	Priority or absorption	
Management of load reconnection	Manual or automatic	Manual or automatic	
Lighting	•	•	Only via ETS: each functional block can manage one luminaire body with all functions, or it can manage 2 to 3 luminaire bodies with reduced functionality.
ON/OFF	•	•	
Dimmers	•	•	
RGB dimmer	•	•	
DALI dimmer	•	-	
Generic load ON/OFF	•	•	Only via ETS: each functional block can manage a relay with all functions, or it can manage 2 to 3 relays with reduced functionality.
Roller shutters/Venetian blinds	•	•	Only via ETS: each functional block can manage a motorised system with all functions, or it can manage 2 to 3 motorised systems with reduced functionality.
Irrigation	•	•	The settings for the sprinkler functionality is configured directly on the panel.
Max no. of sprinklers	No predefined limit (*)	No predefined limit (*)	
Manual cycle forcing	•	•	
Variation in the cycle duration time	•	•	
Inputs	•	•	Only via ETS: for each functional block, 6 inputs can be managed independently.
Object dimensions	1 bit and 1,2,3,4 bytes	1 bit	
Outputs	•		Only via ETS: for each functional block, 6 outputs can be managed independently.
Object dimensions	1,2,4 bits and 1,2,3,4 bytes		
KNX scenes	•	•	Only via ETS: for each functional block, up to 3 KNX scenes can be managed.
Scene storing	•	•	
Sequence scenes	•	•	The sequence scene is configured directly on the panel
Max no. of sequence scenes	No predefined limit (*)	No predefined limit (*)	
Max no. of actions per sequence scene	No predefined limit (*)	No predefined limit (*)	
Scene recall from BUS	•	•	
Alarms	•	•	The alarms are the result of logic operations.
Acoustic signal	Disabled	Disabled	
Alarm log	•	•	
Enabling/disabling	•	•	
Time bands	•	•	The time bands are configured directly on the panel.
Max no. of time bands	No predefined limit (*)	No predefined limit (*)	
Enabling/disabling	•	•	
Video entryphone events	•	•	*Only via ETS for NAXOS COMBI version:* *for each functional block, up to a max. of 6 events can be managed*
From VCT --> KNX	•	•	
From KNX --> VCT	•	•	

FAQ

Frequently asked questions, divided by category.

MASTER ICE

- *How can I activate the license without an internet connection?*
  - by telephone, following the instructions in the manual
- *Is a UPS required?*
  - it is preferable to have the Master ICE power supply protected by a UPS, as is the case for the KNX power supply.
- *Can any program be installed?*
  - No, it is not recommended to install programs.
- *Is the 10" box the same for Master Chorus?*
  - Yes, the fixing brackets are sold together with Master ICE.
- *Is the fixing system the same for the 10" and the 15"?*
  - No, the system is different, the brackets are different.
- *Is the use of the power supply GW90802 mandatory?*
  - Yes, or at least it is strongly recommended to avoid disturbance problems.
- *What are the features of the audio output for acoustic boxes?*
  - The audio output for the panel is a standard PC desktop and laptop jack, acoustic boxes with impedance of 50 ohm can be used.
- *What is the resolution of the plans and the formats of consolidated images?*
  - The monitor has a resolution of 1024x768 pixels. If plans with this resolution are imported, Master ICE automatically adjusts the plans.
  - The recommended extensions for the images are jpg and png.
- *What is the maximum number of communication objects/group addresses that can be imported?*
  - There is no limit
- *After a KNX event, can I generate the sending of an e-mail?*
  - Only if the event is configured as an alarm and only if using a Microsoft account
- *Can audio and post-it messages can be sent based on KNX events?*
  - No
- *Which languages does the graphic interface support?*
  - Italian, English, German, Spanish, French
- *Can a back-up be created to export customer customisations?*
  - Yes
- *How does the user import backgrounds to be added to an environment if the USB ports are built-in and cannot be accessed?*
  - Via USB connections activated by domestic range connectors (GW1X459) or via LAN using shared cards or Teamviewer software
- *If Master Chorus is replaced with Master ICE, which points must be considered and checked before proceeding?*

  - Check that the functions used by Master Chorus are also available with Master ICE, in particular, remember that the logic functions and conditions are not available in Master ICE.
  - Assess the reprogramming costs, as the project (supervision pages) created for Master Chorus cannot be imported directly in Master ICE, which means that the supervision pages must be remade completely.

SOFTWARE FOR PC

- *Can other programs be installed on the PC?*
  - No, it is not recommended to install other programs.
- *Is a license required for each machine?*
  - Yes

NAXOS DOMO/COMBI

- *Are there specific codes for Easy and System devices?*
  - No, both NAXOS DOMO and COMBI have a single code that can be used in Easy mode (programmed with Easy Controller SW) as well as in System mode (programmed with ETS)
- *How many cables must be connected to the panels?*
  - For the 2-cable Naxos Domo version: power supply and KNX BUS
  - For the 3-cable Naxos Combi version: power supply, KNX BUS and video entryphone BUS
- *Are free-standing kits supported?*
  - No, the free-standing kit is exclusively for Naxos video entryphone positions only

Ai sensi dell'articolo 9 comma 2 della Direttiva Europea 2004/108/CE si informa che responsabile dell'immissione del prodotto sul mercato Comunitario è:
According to article 9 paragraph 2 of the European Directive 2004/108/EC, the responsible for placing the apparatus on the Community market is:
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