



# DIVUS VISION

DIVUS VISION – User Manual

Version 4.27

REV02-20250717

---

## GENERAL INFORMATION

---

DIVUS GmbH  
 Pillhof 51  
 I-39057  
 Eppan (BZ) - Italy

Operating instructions, manuals and software are protected by copyright. All rights reserved. Copying, duplicating, translating, translating in whole or in part is not permitted. An exception applies to the creation of a backup copy of the software for personal use.

The manual is subject to change without notice. We cannot guarantee that the data contained in this document and on the storage media supplied are free of errors and correct. Suggestions for improvements as well as hints on errors are always welcome. The agreements also apply to the specific annexes to this manual.

The designations in this document may be trademarks whose use by third parties for their own purposes may infringe the rights of their owners.

User instructions: Please read this manual before using it for the first time and keep it in a safe place for future reference.

Target group: The manual is written for users with previous knowledge of PC and automation technology.

---

## PRESENTATION CONVENTIONS

---

[KEY]	Keystrokes of the user are shown in square brackets, e.g. [CTRL] or [DEL].
COURIER	Screen output is described in the Courier font, e.g. c:\>
COURIER FAT	Keyboard input by the user is described in Courier font bold, e.g. <b>C:\&gt; DIR</b>
"..."	Names of buttons, menus or other screen elements to be selected are displayed in "inverted commas".
PICTOGRAMS	The following pictograms are used in the manual to identify certain sections of text:
	<i>Watch your step!</i> Possibly dangerous situation. Damage to property can be the result.
	<i>Notes Tips</i> and supplementary information
	<i>New Marks</i> changes and new features

---

**TABLE OF CONTENTS**


---

GENERAL INFORMATION	2
PRESENTATION CONVENTIONS	2
TABLE OF CONTENTS	3
1 INTRODUCTORY REMARKS	10
1.1 INTRODUCTION	10
1.1.1 INFO POINT	10
1.1.2 PREREQUISITES	10
1.1.2.1 CLIENT SOFTWARE	11
1.1.3 CONNECTION MODES	11
1.1.4 MODELS AND WORKING MODES	11
1.2 INSTALLATION	12
1.3 VISUALIZATION - NAVIGATION	12
1.4 GRAPHICAL USER INTERFACE - GENERAL	13
1.4.1 TOP BAR	13
1.4.2 CONNECTION STATUS ICON	14
1.4.3 VISUALIZATION AREA	14
1.4.4 MENU	14
1.4.5 ROOMS AND LEVELS	15
1.4.5.1 CENTRAL FUNCTIONS	16
1.4.6 DETAIL VIEW OF THE ROOM / LEVEL	16
1.4.7 DETAIL VIEW OF ELEMENTS	17
1.4.8 TREE VIEW	17
1.4.9 INTERACTIONS	18
1.4.9.1 PUSHING / TAPPING	18
1.4.9.2 LONG PRESS	18

1.4.9.3	SWIPING / DRAGGING	18
1.4.9.4	DRAG AND DROP	19
2	CREATING A NEW VISUALISATION	20
2.1	FREE MODE VS. ETS MODE	20
2.2	KNX VISUALISATION IN FREE MODE	21
2.3	KNX VISUALISATION IN ETS MODE	22
2.3.1	SPECIAL STEPS IN ETS MODE	23
2.3.1.1	EXPORT OF THE VISION PROJECT	23
2.3.1.2	PREPARATION STEPS IN THE ETS	24
2.3.1.3	IMPORTING THE VISION PROJECT	24
2.3.1.4	CREATING THE GROUP ADDRESSES AND ASSIGNING THE FUNCTIONS	24
2.3.1.5	TRANSFERING ASSIGNED ADDRESSES TO THE KNX IO	24
2.3.2	SPECIAL STEPS IN FREE MODE	24
2.3.2.1	PREPARING THE PROJECT	24
2.3.2.2	CREATE AND CONFIGURE A DEFAULT KNX DRIVER	25
2.3.2.3	EXPORT THE ESF FILE FROM THE ETS SOFTWARE	25
2.3.2.4	ETS IMPORT	25
	<i>DEFINE A NEW IMPORT RULE</i>	26
	<i>EXECUTE THE IMPORT</i>	27
2.4	CREATING A NEW ROOM / LEVEL (FM AND EM)	27
2.5	EDITING A ROOM (FM AND EM)	27
2.6	MOVING A ROOM OR ELEMENT - CHANGING THE ORDER (FM AND EM)	28
2.7	ADD A NEW ELEMENT TO A ROOM (FM AND EM)	28
2.7.1	ELEMENT TYPES	29
2.7.1.1	ON/OFF	29
2.7.1.2	FORCED GUIDANCE	31
2.7.1.3	DIMMER	32

2.7.1.4	SHUTTER UP/DOWN	33
2.7.1.5	SHUTTER PERCENT	34
2.7.1.6	VENETIAN BLINDS	36
2.7.1.7	RGB(W) – FOR HSV(+W) ALSO	37
2.7.1.8	TUNABLE WHITE	40
2.7.1.9	AC (AIR CONDITIONER)	42
2.7.1.10	THERMOSTAT	44
2.7.1.11	THERMOSTAT LOGIC	48
2.7.1.12	SEQUENCE	49
2.7.1.13	KNX SCENE	49
2.7.1.14	CUSTOM SLIDER	50
2.7.1.15	MUSIC	53
2.7.1.16	COMMAND BUTTON	54
2.7.1.17	PLACEHOLDER	54
2.8	EDIT AN ELEMENT	55
2.8.1	OPEN THE ELEMENT'S FORM	55
2.8.1.1	PARAMETERS SUBMENU	55
2.8.1.2	FUNCTIONS SUBMENU	56
2.8.1.3	GENERIC SUBMENU	56
2.8.1.4	LOCK SUBMENU	56
2.8.2	LINKING DATA POINTS OF AN ELEMENT (FM) – MENU ENTRY FUNCTIONS	56
2.8.3	COPY OR MOVE AN ELEMENT	57
2.8.4	DELETE AN ELEMENT	57
2.9	SEQUENCES	58
2.9.1	CREATE A SEQUENCE AS ELEMENT	58
2.9.2	CREATE A SEQUENCE FROM ANOTHER ELEMENT	58
2.9.3	EDIT A SEQUENCE	60

2.9.4	DELETE A SEQUENCE	60
2.10	TIME SCHEDULES	60
2.10.1	CREATE A NEW SCHEDULE	60
2.10.2	EDIT A SCHEDULE	63
2.10.3	DISABLE/ENABLE SCHEDULE	63
2.10.4	DELETE SCHEDULE	64
3	VISION - SETTINGS	65
3.1	LOGIN	65
3.1.1	LOG OUT	65
3.2	CONFIGURATION	66
3.2.1	RESOURCES	66
3.2.1.1	RESOURCES IN ETS MODE	67
3.2.2	VISUALISATION	67
3.2.2.1	DESIGN	67
3.2.2.2	UNITS OF MEASUREMENT	68
3.2.2.3	SWITCH BUTTON TEMPLATES	68
3.2.3	DRIVERS (FREE MODE)	68
3.2.3.1	KNX	68
3.2.3.2	DIVUS DEVICE DRIVER	69
3.2.4	DATA POINTS	69
3.2.4.1	DTP (DATA POINT TYPE) - TABLE WITH EXAMPLES	69
3.2.4.2	CREATE A NEW DATA POINT (FREE MODE)	71
3.2.4.3	EDIT / DELETE A DATA POINT (FREE MODE)	72
3.2.4.4	SEARCH FUNCTION	72
3.2.5	RULES	72
3.2.5.2	CREATE A NEW RULE	72
3.2.5.3	FORWARDINGS	73

3.2.6	NOTIFICATIONS	73
3.2.6.1	CREATE A NEW NOTIFICATION	75
3.2.6.2	PUSH NOTIFICATIONS - MANAGEMENT ON CLIENT DEVICE	75
3.2.6.3	DELETE A NOTIFICATION	76
3.2.7	USER/API ACCESS MANAGEMENT	76
3.2.7.1	INTRODUCTION	76
3.2.7.2	ADDING NEW USERS	80
3.2.7.3	EDITING OR DELETING A USER	81
3.2.7.4	CONFIGURING THE DEFAULT ACCESS RIGHTS	81
3.2.7.5	DEFAULT USER SELECTION	83
3.2.7.6	THE API USER – API ACCESS	84
3.2.8	PLUGINS	84
3.2.8.1	THE ASTRONOMICAL CLOCK	84
3.2.8.2	DATE/TIME SYNCHRONIZATION	84
3.2.8.3	PRESENCE SIMULATION	85
3.2.8.4	SEQUENCE BUTTON	88
3.2.8.5	SCHEDULES PANORAMA	90
3.2.8.6	KNX IP REMOTE	90
3.2.8.7	ENERGIE	90
3.2.9	CLOUD (MENU ENTRY ONLY ON KNX IQ ITSELF)	91
3.2.10	IMPORT/EXPORT	92
3.2.10.1	EXPORT	92
3.2.10.2	IMPORT	92
3.2.10.3	RESET	92
3.2.11	SYSTEM – UPDATE	92
3.2.11.1	SETTINGS	92
3.2.11.2	KNX IQ SYSTEM UPDATE	93

3.3	PAIRING - KNX IQ SIDE	93
3.3.1	PAIRING PROCEDURE – KNX IQ SIDE	94
3.3.2	PAIRING PROCEDURE - CLIENT SIDE	95
3.3.3	DEVICES (CLIENT SIDE ONLY)	96
3.3.3.1	ADDING A NEW DEVICE TO A CLIENT SYSTEM	96
3.3.4	LEGEND OF DEVICE LABELS	97
3.4	LOCAL APP PREFERENCES	97
3.4.1	LANGUAGE	97
3.4.2	DESIGN	98
3.4.3	COLOUR	98
3.4.4	COLOUR STYLE	98
3.4.5	GRID LAYOUT	98
3.4.6	ORIENTATION	98
3.4.7	REMEMBER WINDOW SIZE AND POSITION	98
3.4.8	LOG	98
3.4.9	DEMO MODE	99
3.4.9.1	FREE MODE	99
3.4.9.2	ETS MODE	99
3.4.10	SOFTWARE UPDATE HINT	99
3.5	ABOUT VISION	99
4	THE SWITCH BUTTON DESIGNER	101
4.1	INTRODUCTION	101
4.2	THE DESIGNER WINDOW	102
4.2.1	COLOURS	103
4.2.2	LAYOUT	104
4.2.3	ELEMENTS	104
4.3	PAGES	104

4.3.1	HOMEPAGE	105
5	TROUBLESHOOTING	106
5.1	CHANGING THE PHYSICAL ADDRESS OF A TP-KNX DRIVER (FM)	106
5.2	CHANGE KNX DRIVER (CHANGE FROM TP TO IP OR VICE VERSA) (FM)	106
5.3	TRANSFER EDITED PROJECT BETWEEN CLIENT DEVICE AND KNX IQ	106
6	APPENDIX	108
1.2	RELEASE NOTES	108
	VERSION 4.27	108
	VERSION 4.25	108
6.1	NOTES	109

# 1 Introductory Remarks

---

## 1.1 INTRODUCTION

---

This manual describes the DIVUS VISION application, a new KNX visualisation software for DIVUS KNX IQ devices. DIVUS VISION is pre-installed on KNX IQ touch panels. There is also a version of DIVUS VISION that can be run from a PC with a Windows operating system, as well as on Android and iOS mobile devices.

The DIVUS KNX IQ is a stand-alone system for KNX visualisation. So, it plays the client and server roles at the same time. The client role consists of controlling the KNX system via graphical elements. The server role is to manage the communication between KNX (or other technologies) and the graphical user interface of the client app in both directions.

### 1.1.1 INFO POINT

What can I find where? How should this manual be read?

Of course, there are several approaches and several possibilities and reading it from beginning to end is a good one for sure; here we mention some of them to quickly get to the point depending on what you are looking for:

**Chapter 1 Introductory Remarks** contains general information about the Graphical User Interface - General and the Prerequisites to work with VISION.

**Chapter 2 Creating a new visualisation** answers the question "how do I create a visualisation with VISION?" and describes the different possibilities. Furthermore, the individual **Element Types** are described there, i.e. what I have available in VISION to control and display a KNX device. **Sequences and Time schedules** that can be created and managed both as a system integrator and as a user complete this chapter.

**Chapter 3 Vision - Settings** describes the settings menu in the same order as it is found in VISION.

**Chapter 4** shows and explains the new **switch button designer** which is a graphical tool to design templates to use in conjunction with the DIVUS CTP04 devices.

Finally, **Chapter 5 Troubleshooting** answers typical questions that may arise in practice.

### 1.1.2 PREREQUISITES

Prerequisites for DIVUS VISION are:

- **1 DIVUS KNX IQ touch panel**
- 1 Windows PC with corresponding DIVUS VISION software [optional or alternative to KNX IQ]
- 1 mobile device with iOS or Android operating system and corresponding DIVUS VISION application [optional]
- OPC export file of an ETS project (KNX) [optional]
- ETS with DIVUS KNX IQ DCA app [optional]
- Network with active Internet connection [optional]

Strictly speaking, therefore, only a KNX IQ is needed to get started with DIVUS VISION, since you can implement or edit a visualisation from the panel itself, as well as display and control a KNX system via an existing visualisation. In addition, a project can also be implemented in offline mode (see 1.1.3) by the PC application (and transferred to a paired device in a second moment).

#### 1.1.2.1 CLIENT SOFTWARE

<b>DIVUS VISION for Windows:</b>	Windows 10.1809 or newer
<b>DIVUS VISION for iOS:</b>	iOS14 or newer
<b>DIVUS VISION for Android:</b>	Android 6 or newer

Please note that the client software version must always correspond to the one running on the KNX IQ. If they are not the same, a warning will be shown and the connection will be interrupted. You will be offered the option to update the older of the two sides. That means that when such a case happens, the user can update the client app or also the server app making the according choice when alerted by VISION.

#### 1.1.3 CONNECTION MODES

In general, there are several different connection modes:

- **Local connection**  
This is only available from the local area network (LAN) where the KNX IQ is located.
- **Cloud connection**  
This is available to the end user in order to connect mobile devices to the KNX IQ and thus operate the visualisation. It is also available for the Windows version of VISION. It allows you to connect from anywhere there is an internet connection for the device you are using as a client (mobile or PC that is). Prerequisite is the internet connection for the KNX IQ itself.
- **Offline programming mode**  
This mode allows you to work on the visualisation on the PC independently of the available network and to transfer the project to the KNX IQ at a second moment. Furthermore, it plays an important role in ETS mode, as before editing a project you must switch to this mode.

#### 1.1.4 MODELS AND WORKING MODES

There are different **models** of the KNX IQ:

Up to mid of 2022 there were:

- KNX IQ 08 TP
- KNX IQ 08 IP

The difference being the type of connection to the KNX bus: the TP model has a direct KNX bus connector while the IP model uses KNX over IP (tunnelling) and requires a KNX/IP router to forward its communication with a KNX system.

Starting from mid of 2022, the KNX IQ 08 TP is replaced by the new

- KNX IQ 08 TPS

which, while maintaining the same features as the TP model, also introduces the support for KNX Data Secure and for a new working mode.

The working mode, which was available since the beginning, and still is, is now referred to as **FREE MODE** to distinguish it from the new **ETS MODE**. The ETS MODE, which also gives the possibility to implement KNX SECURE, is available for the KNX IQ 08 TPS only. The KNX IQ 08 IP remains unchanged i.e. does not support KNX Secure.

More details about FREE MODE and ETS MODE can be found in chapter 2.1.

---

## 1.2 INSTALLATION

---

The desktop version of DIVUS VISION can be found in the download area of our website [www.divus.eu](http://www.divus.eu). You can also find the mobile versions on our homepage or in the respective app stores for Android or iOS.

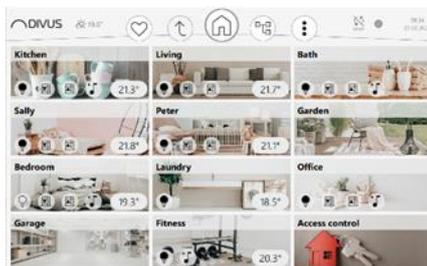
NEW

## 1.3 VISUALIZATION - NAVIGATION

---

The entire navigation concept has been revised in version 4.27 and now offers the option of creating any number of levels, each of which can contain further levels or elements. In addition, a second navigation concept has been added to the 'relative' navigation (I go down or up one level from the current level by finger or mouse click - depending on where I am): the tree view navigation, which offers a quick and efficient way of moving from room to room (or element) in the project, especially for more complex structures. More on this later (section 1.4.8) - we will first focus on the classic navigation, where we distinguish between the following:

### 1) Homepage



This is the upper-most level. Thus the back button is disabled/greyed-out here. Up to a maximum of 6 rooms are displayed here in a grid (or 12 in slim design).

Vertical scrolling allows you to reach other rooms, if available.

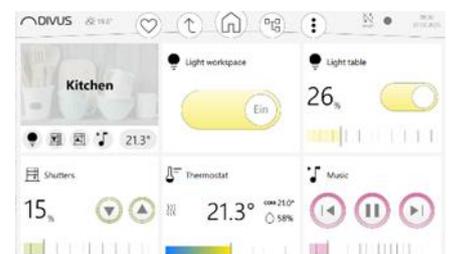
Clicking on one of the rooms allows you to reach it directly.

Clicking on an icon in the lower left area of a room box allows you to directly access these central functions. More detailed information about them can be found in chapter 1.4.5.1.

### 2) Room / Level

The room/level view shows up to 5 (or 11) of the first elements of its content. The first tile shows the room/level itself with name and central functions.

The vertical scrolling allows to reach further elements of the room, if available.



Clicking on one of the elements allows you to reach its detail view directly. The main functions of each element are offered directly for operation.

### 3) Element

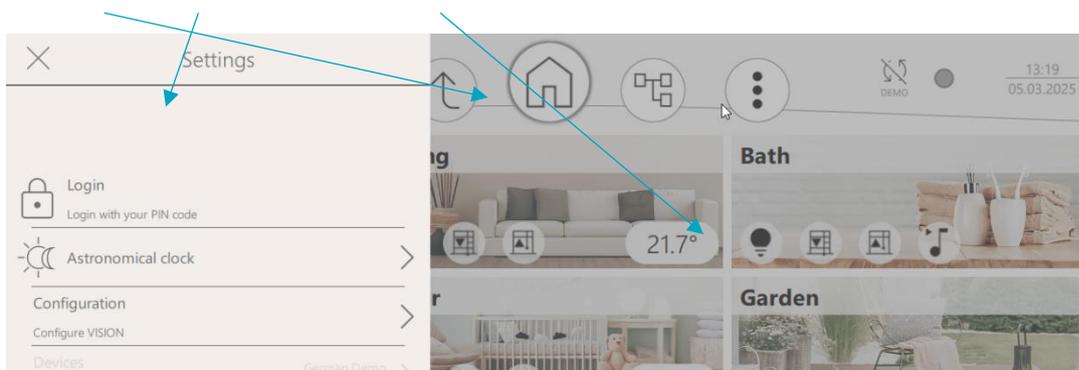
The detail view of an element is the deepest navigation level in the hierarchy. So here you operate the element or read its status or reach its time schedule or its sequences.

You can exit this view again using the buttons in the top bar (Back or Home) or by navigating via the tree view (see section 1.4.8).



## 1.4 GRAPHICAL USER INTERFACE - GENERAL

The user interface is divided into 3 main areas:  
The top bar, the menu and the visualization area.



### 1.4.1 TOP BAR



In the top bar there are 5 central icons for favourites and back (left), homepage (in the middle), tree view and the three-dot icon (right) as well as temperature values for indoors and outdoors (left - optional), the connection status icon (right) and the current date and time (far right in the corner - optional). When clicked, the three-dot icon shows the other main buttons for settings, notifications and plugins. The top bar always remains visible.

### 1.4.2 CONNECTION STATUS ICON

To the right of the 5 buttons is the connection status icon, which shows the current status of the connection. The explanation of the meaning of all possible icons can be accessed by clicking on the icon itself. Here is the overview:

Icon	Meaning
	Connecting
	Locally connected
	Connected via cloud (client only)
	Connected to cloud (KNX IQ only)
	No connection
	Offline programming mode (no connection)
	Demo mode (no connection)
	Connection error occurred
	Waiting for connection to server
	Unknown status

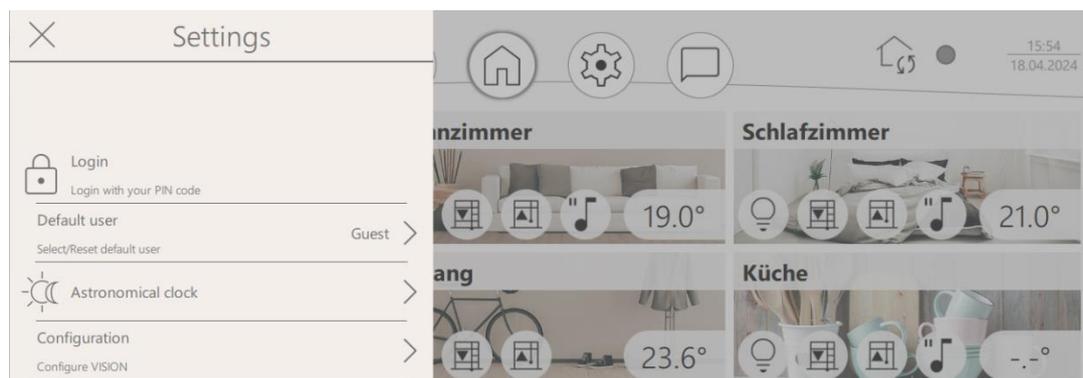
### 1.4.3 VISUALIZATION AREA

The larger part of the window is, of course, for the visualization itself: here you can see the rooms created or the elements of a room or special setting pages, such as when editing a schedule or scenario. A plus icon appears in the lower right corner (if you are logged on as administrator), which allows you to create new objects on the current level.

### 1.4.4 MENU

The settings menu is hidden behind the more icon (3 dots vertically): choose the Settings button there. A menu also appears in the same place in other phases of work, e.g. for configuring a room, an element or its functions. The menu slides into the screen from the left and covers part or all of the visualisation area (depending on the display size and orientation) until it is closed again.

There are two ways to close the menu:

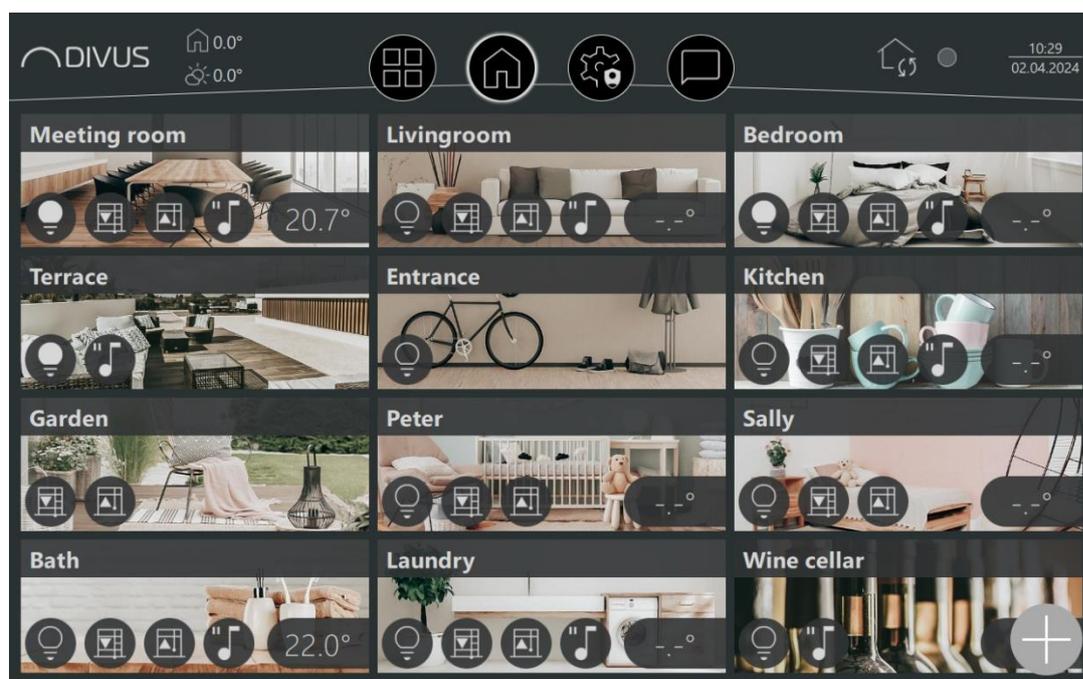


You can close the menu either with the X symbol on the far left or clicking on the visible part of the visualisation area.

NEW

### 1.4.5 ROOMS AND LEVELS

Rooms and levels are represented in corresponding tiles by name, background and central functions. Conceptually, both are containers for other objects, which is why rooms and levels are created in exactly the same way. The meaning of the container for the user is then illustrated by the name and possibly the background.



When you click on one of the rooms or levels, you will be taken to its detailed view.



### 1.4.5.1 CENTRAL FUNCTIONS

Depending on the content, central functions are automatically created for rooms and levels and can also be operated from this view. There is a central switch for lights, blinds and music as well as the display of the temperature. These functions become available as soon as at least one element is added to the room or level that matches the corresponding device type (i.e. a light, blinds, a music element to control an audio system or a thermostat/ac). The central functions switch as follows:

- Lights: all on/all off (toggle)
- Blinds down: all down
- Blinds up: all up
- Music play/pause (toggle)
- Temperature displays the room's temperature or an average of all its temperatures

NEW

This concept has been extended to levels and thus the central switch on one level affects everything below it, e.g. the light switch on the ground floor level switches all the lights on the ground floor on or off. Similarly, the displayed temperature of a level is the average of all the thermostats/thermo logic/air conditioning systems it contains.

### 1.4.6 DETAIL VIEW OF THE ROOM / LEVEL

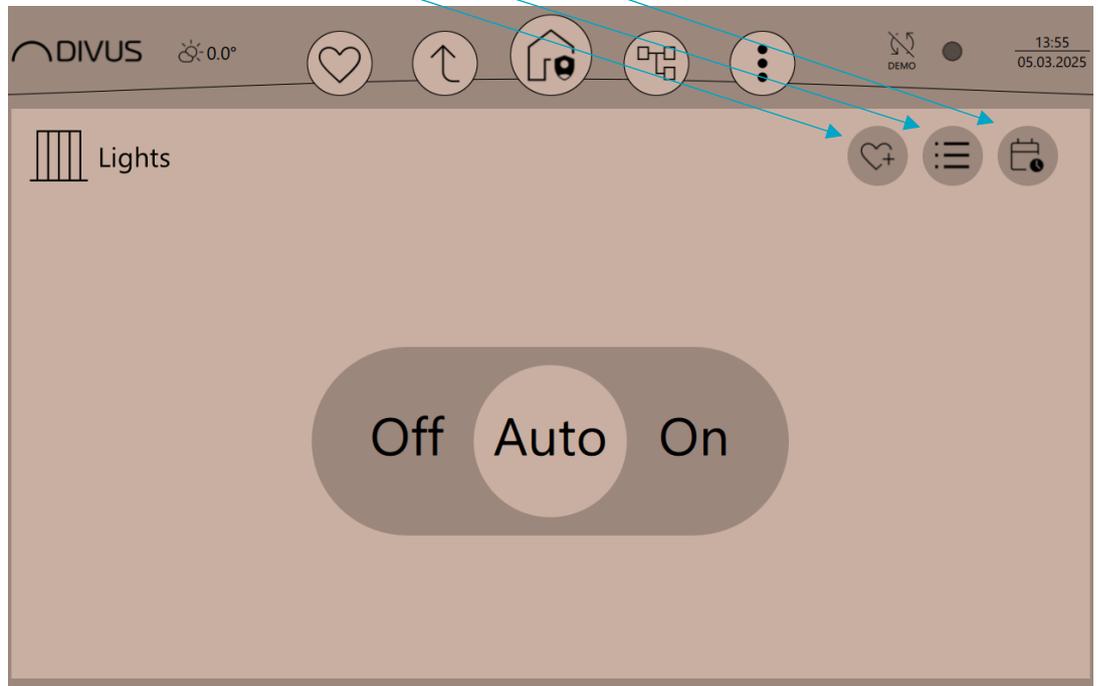
In the room's/level's detail view, the content of the room/level is displayed by default according to the same schema as for rooms in a 6-grid (or 12 – this can be customized independently for each one). The first position always shows the tile of the room or level itself. This serves both for better orientation and to be able to operate the central functions. Further elements can also on this level be reached by scrolling down or up, if present.



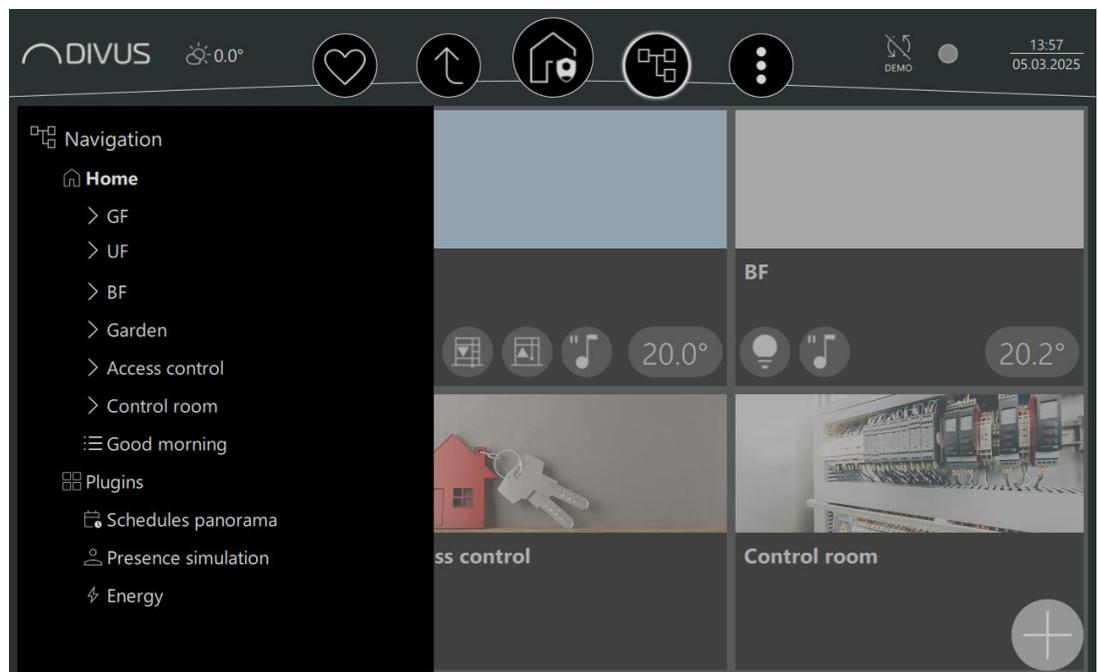
### 1.4.7 DETAIL VIEW OF ELEMENTS

Here each element with all its functions is offered for operation. All elements have some icons in common, i.e. the buttons for ...

...favourites, sequences, schedules (unless they are explicitly disabled)



### 1.4.8 TREE VIEW



The tree view icon in the top bar can be used to display the tree view at any time, which shows the entire hierarchy of the project and the enabled plugins in a tree structure. Levels are shown with a > symbol in front of the name. Touching or clicking on the arrow shows the content of the level - similar to how folders and their files are shown.

The current level or element is highlighted in bold and the tree structure is opened so that you can see its complete "path".

Clicking or touching an element or level opens it in the background.

The quickest way to close the tree view again is to click/tap on the visible (greyed out) visualisation area. Alternatively, you can click on the tree view symbol again or on the back arrow.

#### 1.4.9 INTERACTIONS

Most interactions are meant to be operated using your fingers on the touch panel. Some work exclusively when using a mouse. Here to the details:

##### 1.4.9.1 PUSHING / TAPPING

Most interactions between the user and the visualisation are done by pushing / tapping on graphical buttons with a finger. Using the left mouse button is equivalent when using VISION on a Windows PC or when using a mouse in conjunction with an iOS or Android device.

##### 1.4.9.2 LONG PRESS

Some graphical elements offer additional interactions when long-pressed e.g.:

- Most listed elements in the VISION menu show the editing buttons
- Rooms and elements show the context menu

The equivalent for mouse users is the right mouse button click.

##### 1.4.9.3 SWIPING / DRAGGING

Some interactions are by swiping or dragging: the pushed finger is moved on the touch surface in a given direction and then released. Examples of this type of interaction are e.g.:

- Moving down or up to reach other elements (when inside a room with more elements than a page can show)
- Toggle an On/Off button (Note: On/Off buttons offer both single touch switching and swiping to toggle from one value to the other)
- Swipe left on a menu entry (e.g. a data point) to make its editing buttons (edit and delete usually) appear

All these actions can be mimicked with the mouse as well, where the left click emulates the finger touch.

#### 1.4.9.4 DRAG AND DROP

A few interactions use the drag and drop technique: while similar to swiping, it's still different in a way. Here you drag something which graphically will follow the position of your finger to then drop it onto a certain target. Examples are:

- Reorder rooms or elements (first long-press, then press and hold → a coloured border appears, drag it to the desired position, drop it)
- Reorder functions in a schedule or a sequence
- Choose elements to assign to pages in a switch button design template
- Reorder elements in a switch button design layout / page.
- Reorder pages of a switch button design template

## 2 Creating a new visualisation

### 2.1 FREE MODE VS. ETS MODE

The so-called **Free mode** was the usual way to realise a visualisation with VISION up to version 4.22. It involves the import of the KNX project via OPC export from ETS (more exactly: its ESF file) and/or the manual addition of individual data points. After the import, any changes to the project are perfectly possible from the device itself or from any client device: the only requirement for this is administrator access with the corresponding PIN code. **KNX SECURE** is not supported in Free Mode for technical reasons.

The so-called **ETS mode** was introduced in version 4.22 (along the introduction of the KNX IQ.08 TPS) and brings a new editing concept of a KNX visualisation for VISION. Here, project editing is carried out in different subsequent steps, whereby the Windows client for VISION is used to prepare the project for the work in the ETS and also the reworking of a project must necessarily be carried out via the same path. **KNX DATA SECURE** is supported in **ETS mode**, which makes this path the only possible choice should this technology be necessary.

For a better overview, the following comparison table is shown, which compares the advantages and disadvantages of the 2 modes: if **KNX SECURE** is not required for a project, one can freely choose between the 2 options using this table.

Function	Free Mode	ETS Mode
KNX DATA SECURE support	No	Yes
Import of KNX group addresses	Via OPC export, then import under Configuration - Data points	Here it is the other way round: Import the VISION project into the ETS.
Add/change/delete group addresses	Free, possible from any client, requires administrator PIN.	First in VISION for Windows, necessarily in offline mode, then in the ETS after re-importing the project
Add/change/delete other objects (rooms, elements, sequences, etc.)	Free, possible from any client, may require administrator PIN.	First in VISION for Windows, necessarily in offline mode, then in the ETS after re-importing the project



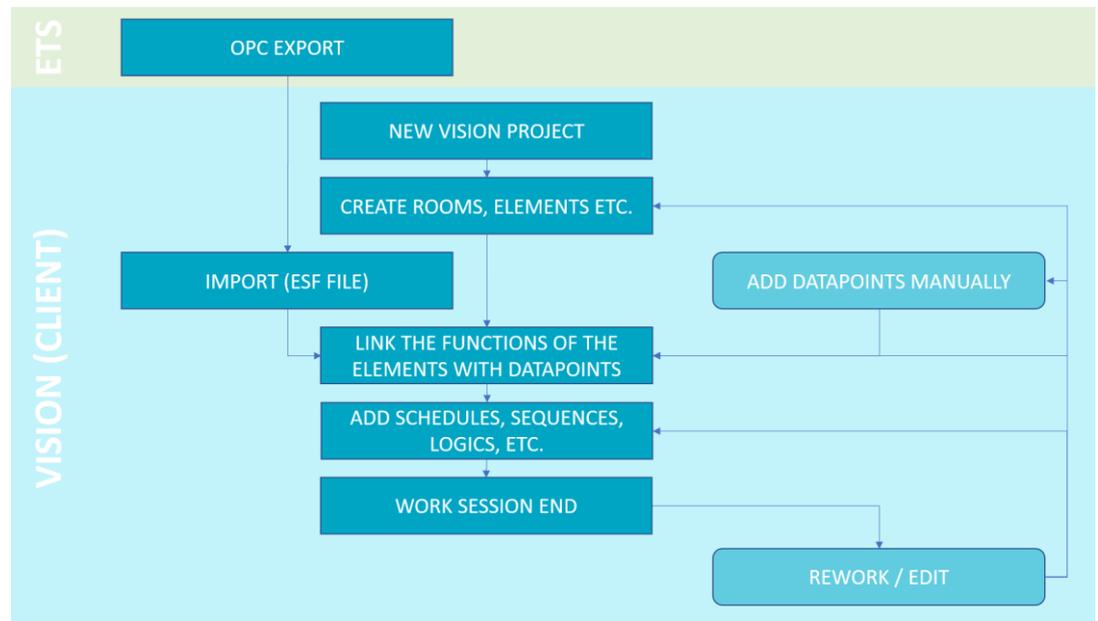
**Attention:** When switching between Free Mode and ETS Mode (or vice versa), data is lost. An existing project cannot be switched to the other mode; therefore, the project is reset!



**Note:** In the following, FM (Free Mode) and EM (ETS Mode) are used abbreviated in the text.

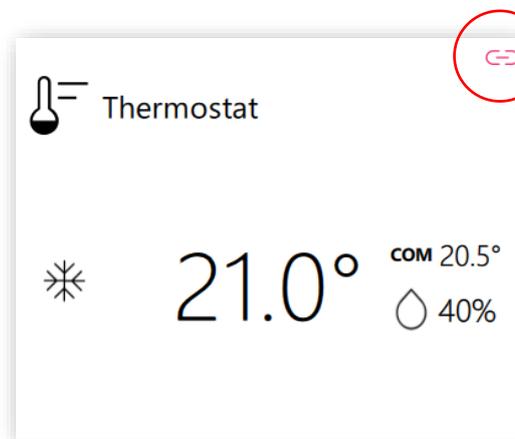
## 2.2 KNX VISUALISATION IN FREE MODE

The following flow chart shows the typical workflow in Free Mode:



Notes:

- The project is prepared graphically (Rooms and Elements are created and named)
- The ETS project's export is then used to link the elements' functions to the matching data points



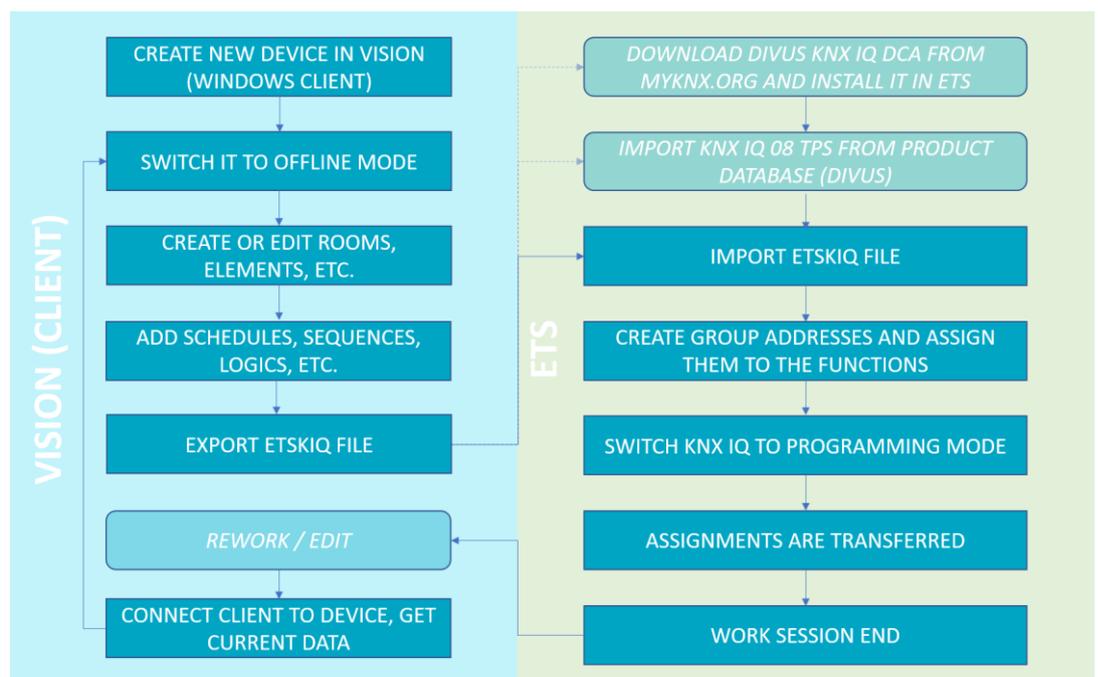
This symbol, which is only visible to the administrator (i.e. when he is logged in), indicates that there are still missing function links. It is intended to provide a quick overview of which elements have been completely configured and which ones have not.

- Once functions are linked, they can be used in advanced features like schedules, sequences etc. But the reverse is also true: element functions that are not (yet) linked are not listed for use in schedules, sequences, etc.
- Editing is available anytime from any client – only the administrator PIN is needed

- Manually editing data points is available anytime also
- There is great flexibility and freedom. Making ends meet is up to the system integrator
- KNX Secure is not supported

### 2.3 KNX VISUALISATION IN ETS MODE

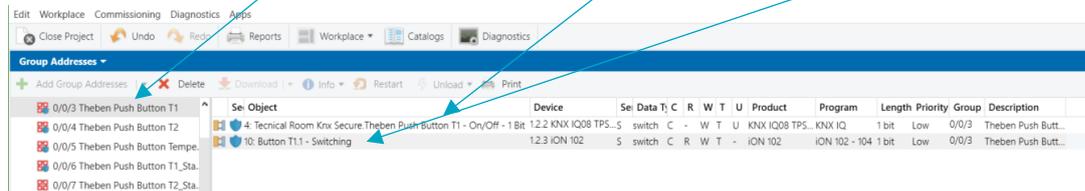
The following flow chart shows the typical workflow in ETS mode:



Notes:

- You prepare the project graphically (Rooms and Elements are created and named). You need to do this in offline mode i.e. disconnected from the KNX IQ.
- You can also add advanced features like schedules, sequences etc.
- You then export the VISION project and import it in the ETS.
- On the ETS side, the DIVUS product catalogue and the corresponding DCA (ETS app) are required for the import. Both are (also) available on our homepage (download page). As soon as the device has been added to an ETS project, the VISION project exported previously can be imported via the DCA (click on device, DCA tab right of group objects and parameters).

- The KNX IQ is then managed like any other KNX device: you create group addresses and assign them to the device's group objects. In this case each **KNX group address** will have a **VISION function** paired with a **KNX device's function**.



- The KNX IQ is prepared for the transfer of changes:
  1. log in to the device as administrator (Settings - Login - 74269)
  2. set KNX mode to ETS MODE (only the first time)
  3. activate ETS programming mode (only the first time)
- The KNX IQ receives all the group address assignments and other settings through the ETS *download* function.
- To edit something, you need to repeat all these steps
  1. Set the device to offline programming mode (usually on Windows). Save and select to load the current project.
  2. make changes
  3. export project
  4. import into ETS
  5. etc...
- Less freedom in this mode is compensated by increased control over the correctness: you automatically have all the needed functions defined and named in the ETS, along with their correct data point types and subtypes. You can't assign wrong types.

### 2.3.1 SPECIAL STEPS IN ETS MODE

The editing of a project is largely the same - regardless of the choice between Free and ETS Mode. In the following, the steps that only occur in ETS Mode are shown, while the steps that are mode-independent are explained later.

#### 2.3.1.1 EXPORT OF THE VISION PROJECT

After rooms, elements, schedules, etc. have been created as desired, go as administrator to Configuration - Export/Import and execute the export: an ETSKIQ file is saved on your PC.



**Attention:** ETSKIQ is the extension of project files created in ETS mode. KIQ files exported from Free Mode are fundamentally different, i.e. you cannot use project files from one mode for the other - they are not compatible!

### 2.3.1.2 PREPARATION STEPS IN THE ETS

1. import (just once) the app *DIVUS KNX IQ DCA* from myknx.org or our download page.
2. Import the *KNX IQ08* (manufacturer DIVUS) from the ETS online product catalogue.



Compared to a usual KNX device, the device from the catalogue is initially without group objects. These are then assigned by importing the project via the DIVUS KNX IQ DCA. See next point.

### 2.3.1.3 IMPORTING THE VISION PROJECT

Select the KNX IQ 08 TPS under *Devices* and then the *DCA* tab in the main window and import the ETSKIQ file exported previously. The device will thus receive its functions (group objects).

### 2.3.1.4 CREATING THE GROUP ADDRESSES AND ASSIGNING THE FUNCTIONS

This is the typical workflow of a KNX project, as every KNX programmer knows it. Using your preferred scheme for KNX projects, you create the same number of group addresses as the functions received by the KNX IQ through the import, and then assign them. Or, if you previously already assigned group addresses to all the KNX devices, the missing step will be to add the corresponding VISION functions to each one of them.



Please make sure not to leave unassigned functions – especially if it's important functions. (Some feedback functions may remain unassigned because they are indeed not available on the KNX device level).

### 2.3.1.5 TRANSFERING ASSIGNED ADDRESSES TO THE KNX IQ

As with usual KNX devices, the 2nd phase then follows, where the created group addresses are programmed. To do this, the KNX IQ is set to programming mode.

1. in the main menu, as administrator, you will find the Programming Mode checkbox (this is only visible if the device or project is in ETS Mode - the option for this is found in the same menu). In recent versions of the ETS this is no longer necessary after the first time – a device can be put into programming mode through its serial number – directly from the ETS.
2. Right-click on the KNX IQ in the ETS: Program
3. After the data transfer has been completed, the programming mode is automatically deactivated.
4. the project is now complete and operational.

## 2.3.2 SPECIAL STEPS IN FREE MODE

### 2.3.2.1 PREPARING THE PROJECT

There are some mandatory preliminary tasks to complete before we can concentrate on the graphical part. These are:

1. Create and configure a default KNX driver
2. Export the ESF file from the ETS software
3. Do the ETS import to build the project's set of data points

You need to complete them in the above order. Let's have a look at the single steps in detail now.

### 2.3.2.2 CREATE AND CONFIGURE A DEFAULT KNX DRIVER

1. Go to *Settings – Configuration – Drivers – KNX* as administrator.
  - The list will be empty the first time, so push the round plus button at the bottom to create a new driver.
  - If there is one which you want to edit instead, keep it pushed until the edit button appears.
  - **Never delete a driver which has data points associated to it** or you'll have to change each data point singularly. Also see chapter 5.2.
2. Enable driver: If you have multiple KNX drivers, you need to enable one of them. Only one driver at a time can be enabled, so you'll need to disable the currently enabled one before you can enable another one.
3. Interface type: Choose according to your KNX connection and your KNX IQ model.
4. **Scan for TP/IP Interface:** choose the physical address of the device or the IP address of the KNX/IP router to connect to.
5. Enable startup read: reads the values of all the involved data points of the project on start-up.
6. Read status interval: defines the time between subsequent reads during startup
7. Save and make sure the desired driver shows as *enabled* in the list now.

### 2.3.2.3 EXPORT THE ESF FILE FROM THE ETS SOFTWARE

Depending on your ETS version, the option called OPC export may be in the menu or in the export options where you also export the *knxproj*-file (change the exported file type there).

If you are working on the KNX IQ device through the DIVUS Synchronizer app or directly, you need to upload the esf file to the device: go to the UPLOAD page and push the VISION icon there. For more details, please refer to the [DIVUS Synchronizer Manual](#).

### 2.3.2.4 ETS IMPORT

Go to Configuration – Data points – ETS Import. You'll be presented with 4 submenu points:

- Select ETS OPC Export file
 

Choose the file previously exported from the ETS. If you used the Synchronizer to load it onto the device's storage, you will find it in the folder called VISION. The choice will then be kept until you explicitly change it – also after the import procedure is completed.
- KNX driver (Choose driver)
 

Choose the previously configured KNX driver. All the imported data points will be managed by this driver.
- Options
 

Go here to set some flags depending on whether you're importing into an empty project or not and some other general options.

- Import rules

Here you manage the import rules. Using naming logics (using specific keywords in the names assigned in ETS) you can automate the matching of group addresses and merge them into a single data point during the import process. Usually at least one rule will be defined. Adding more rules means that all rules will be applied.

**Example:**

In ETS writing 1 BIT group addresses have the keyword **On/Off** in the name. The corresponding status group addresses have the keyword **Status** instead of *On/Off* - the rest of the name is the same.

Kitchen Light On/Off	1/2/3
Kitchen Light Status	1/3/3

The logic will look for group addresses that have a part of the name **in common** and differ only for the keywords indicated in the rule: **On/Off** marks the command/write address while the status/reading address contains the word **Status**. As a result, VISION will create a data point consisting of the two group addresses identified by the rule. In this mode the current status of the light in the kitchen will always be shown correctly - whether you use VISION or a physical switch will make no difference.

Note that a keyword can also consist of several words.

**Example 2:**

You can also use only one of the two keywords. If, for example, the way to assign names and functions was not the one in the first example but this one:

Kitchen Light On/Off	1/2/3
Kitchen Light On/Off Status	1/3/3

As the colouring already indicates, you can see that the part of the name **in common** in this case also includes *On/Off* and what differentiates the two addresses is only the keyword **Status**. In the rule that makes this type of pairings, you will leave the keyword field for the command address empty and only value the second field with the keyword *Status*.

#### DEFINE A NEW IMPORT RULE

1. Go to Settings – Configuration – Data points – ETS Import – Import rules
2. Push the round plus button
3. Choose a name for the rule (e.g. "R1")
4. As command keyword, choose the keyword you use in the ETS to identify commanding/switching addresses (e.g. "Kitchen light on/off" → "on/off")
5. As feedback keyword, choose the keyword you use in the ETS to identify feedback/status addresses (e.g. "Kitchen light status" → "status")
6. Save pushing the check symbol on the top right of the menu.
7. Make sure "Apply import rules" is enabled under *Options*.
8. (The import will then merge "Kitchen light **on/off**" and "Kitchen light **status**" into a single data point, as well as all other pairs using that same naming convention)

### EXECUTE THE IMPORT

When all the four points of the menu are set as desired, hit the NEXT above to start the import. After a few steps the procedure will be complete and you can go back to the data point list to find all the newly imported data points.

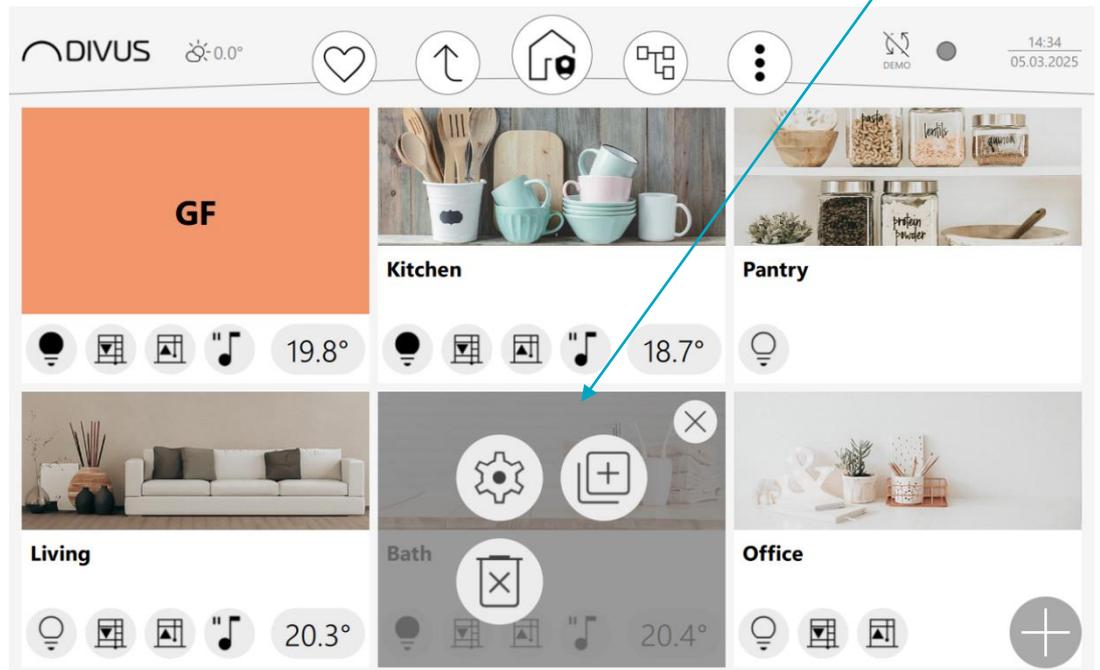
## 2.4 CREATING A NEW ROOM / LEVEL (FM AND EM)

How to create a new room / level:

1. Log on as an administrator (see chapter 3.1) if you haven't already.
2. Go to the level where the new object is to be created
3. Press the plus button in the lower right corner.
4. Enter the required data (name, description, background).
5. The new room / level is shown as the last tile in the current page's grid.

## 2.5 EDITING A ROOM (FM AND EM)

To edit a room, press and hold the finger or mouse pointer (or right click) on its tile. Several icons appear on the tile:

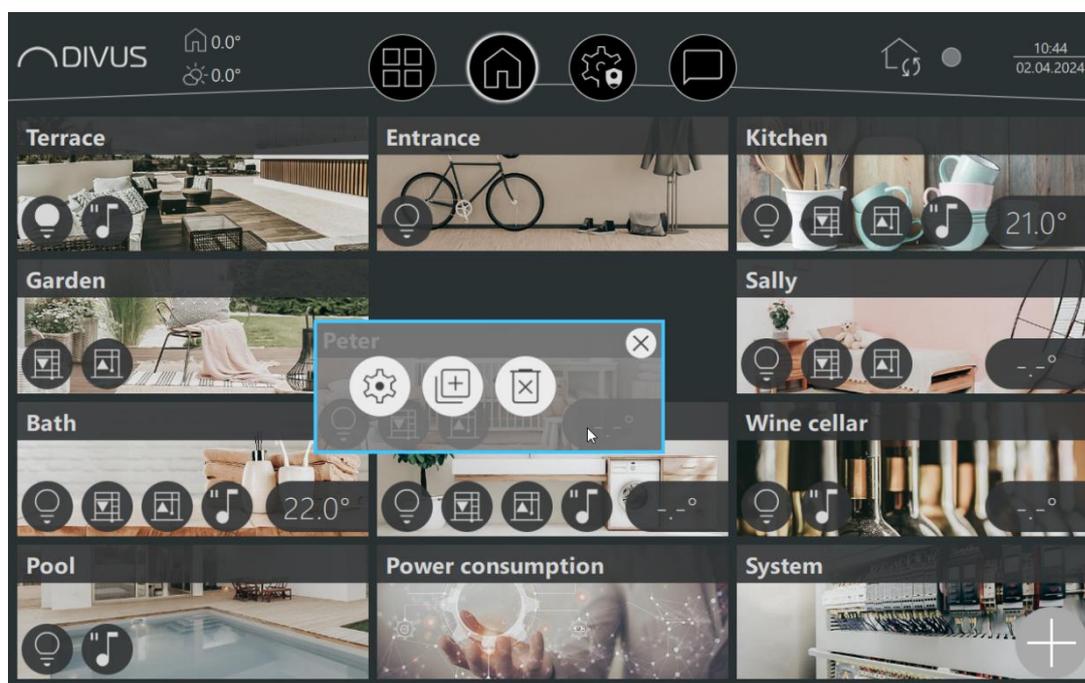


- The gear icon leads back to the input form, where name, description, image etc. can be changed.

- The *copy icon* allows you to copy or move the room (with its content). The copied room, like a new room, is added last to the destination level. Also see [chapt. 2.8.3](#).
- The *trash can icon* is used to delete the room. Its content will also be completely deleted.
- The *X* closes this editing menu and the tile is displayed normally again.

## 2.6 MOVING A ROOM OR ELEMENT - CHANGING THE ORDER (FM AND EM)

1. Press and hold your finger or mouse pointer (or right click) on a tile until the Edit menu appears.
2. Then drag it to the desired position.
3. Then close the editing menu with the X symbol. The tiles are rearranged.



## 2.7 ADD A NEW ELEMENT TO A ROOM (FM AND EM)

1. As administrator, go to the desired room.
2. Then press the plus symbol at the bottom right and choose the desired element type from the list.
3. Enter the element's name, description etc. in the form that appears.
4. Most elements will also have a further menu item named *Parameters*, where the details of the element can be further configured.
5. The available element types are described below.

## 2.7.1 ELEMENT TYPES

### 2.7.1.1 ON/OFF

This type is used for all devices that have two possible states: on/off, up/down, play/pause, etc.

After selecting this type, the selection of a suitable icon and corresponding labelling of the two states appears as parameter. There is a choice to be made:

		Generic On/Off
		Light On/Off (default choice)
		Presence in/out
		Door Closed/Open
		Padlock Locked/Unlocked
		Alarm Alarm/Normal
		Window Closed/Open
		Door lock Closed/Open
		Garage Closed/Open
		Ventilation On/Off
		Load On/Off
		Heating On/Off
		AC On/Off
		Socket On/Off
		Sprinkler On/Off

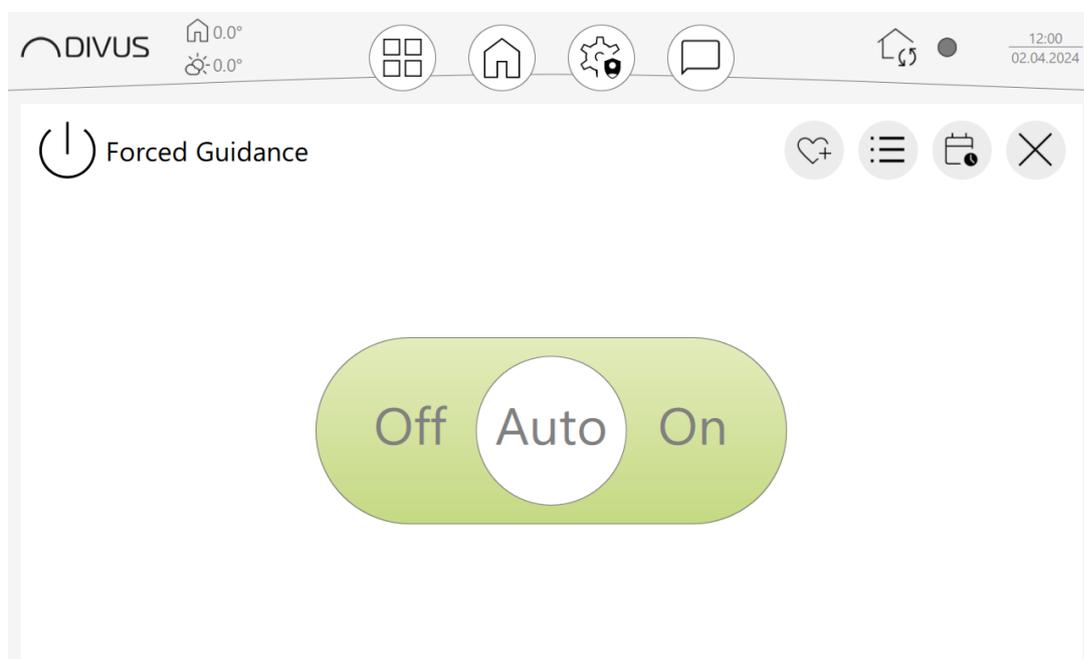
		Roof window Closed/Open
		Day/Night
		Shutters closed/open
		Rain/no rain
		Wind/no wind
		Awning retracted/extended
		Curtains closed/open
		Heating/Cooling
		Heat pump on/off
		Pump on/off
		Summer/Winter
		Valve close/open
		Alarm system armed/disarmed
		Ceiling lamp on/off
		Desk lamp on/off
		Floor lamp on/off
		Led on/off
		Wall lamp on/off

		Generic lamp on/off
		Heating rod on/off
		Shading closed/open
		Vertical shading closed/open

An On/Off element will change its icon to reflect the current state.

An on/off element has a single data point to link. More detailed information can be found in chapter 2.8.2.

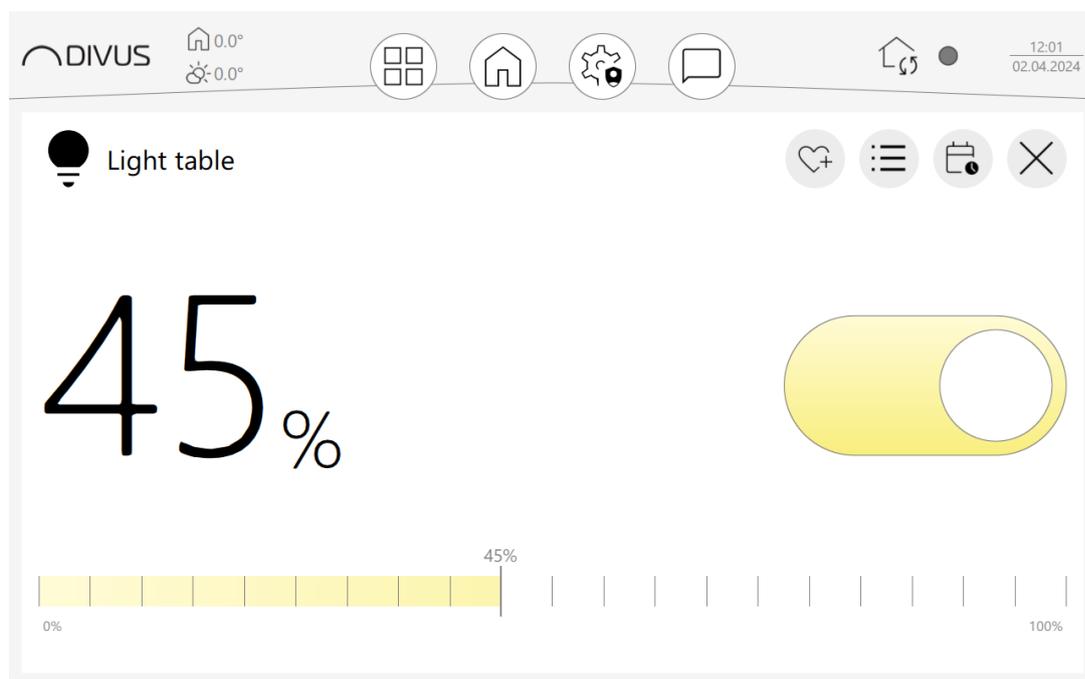
#### 2.7.1.2 FORCED GUIDANCE



This element supports KNX DPT 2.xxx, i.e. 2 BIT group addresses, which allow switching between automatic and manual control. It is a pure control element and does not give any feedback about the active on or off status in the automatic status. The data point to be linked is therefore one:

- Off/Auto/On (DPT 2)

2.7.1.3 DIMMER



This element type has these parameters:

- The control type parameter allows to choose between:

		Light On/Off (default choice)
		Ceiling lamp on/off
		Desk lamp on/off
		Floor lamp on/off
		Led on/off
		Wall lamp on/off

- Show status label (enable/disable) – Shows the percentage value as label
- Enable relative dimming (enable/disable) – Allows to have the 4Bit-driven dimming with minus and plus buttons

- o Enable slider (enable/disable)
- o Enable +/- buttons

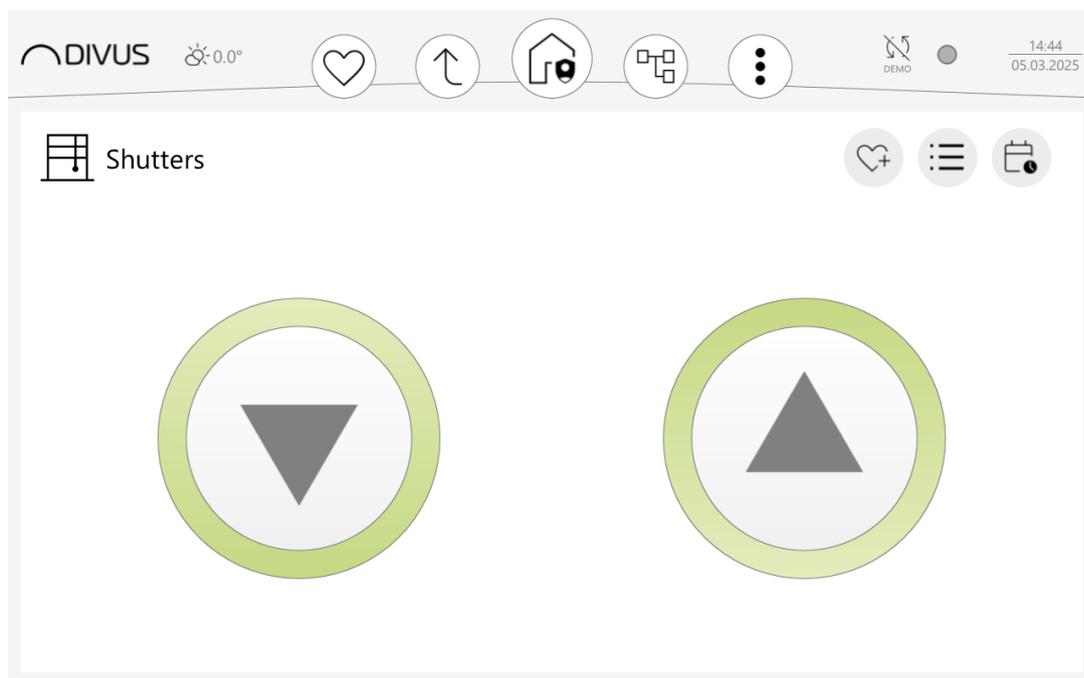
It is then linked with max. 3 data points:

- On/Off (DPT 1)
- Dimming absolute (DPT 5)
- Dimming relative (DPT 3 – 4 Bits)

More detailed information on linking data points can be found in Chapter 2.8.2.

#### 2.7.1.4 SHUTTER UP/DOWN

Shutter elements (all types) can be operated in exactly the same way as physical buttons: pressing and holding starts the movement in the desired direction, a brief touch stops it. For functions set differently for short-term and/or long-term operation on the ETS level, the same operating mode will also be possible in VISION.



This element has the control type parameter which allows to choose an icon:

		Shutters (default choice)
		Door
		Window

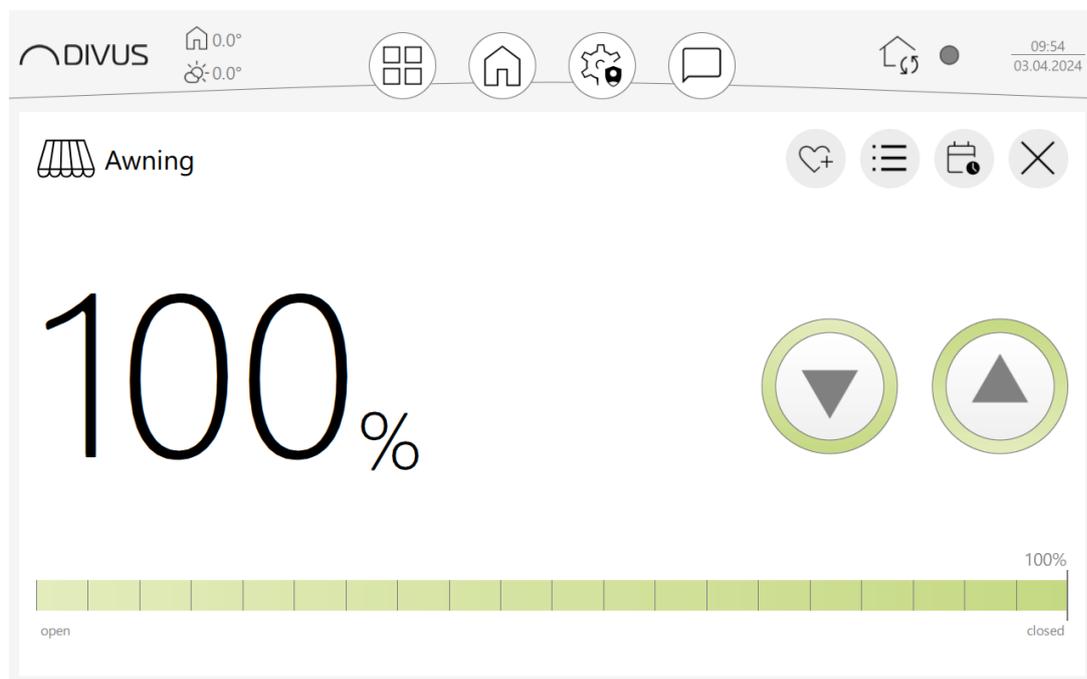
		Garage
		Roof window
		Awning
		Curtains
		Shading
		Vertical shading

It is then linked with 2 data points:

- Shutter up/down (move) (DPT 1)
- Shutter up/down step (stop) (DPT 1)

More detailed information on linking data points can be found in chapter 2.8.2.

### 2.7.1.5 SHUTTER PERCENT



This element has the control type parameter which allows to choose an icon:

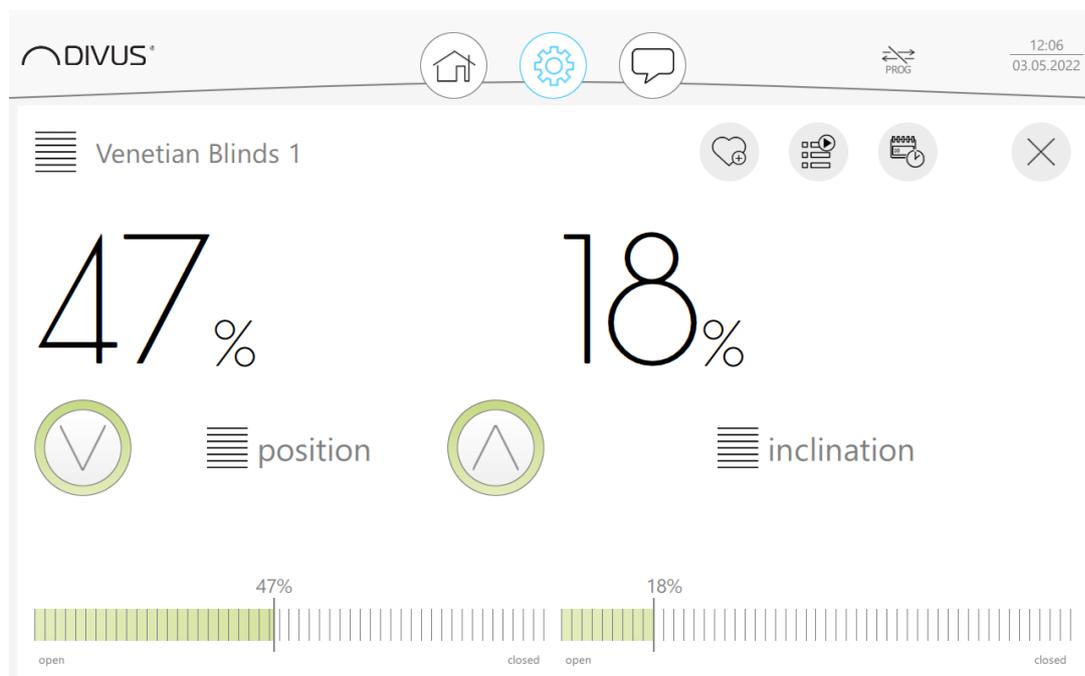
		Shutters (default choice)
		Door
		Window
		Garage
		Roof window
		Awning
		Curtains
		Shading
		Vertical shading

It is then linked to 3 data points; the first two are the same as for element type Shutter up/down. In addition, there is a 3rd data point for

- Shutter position (DPT 5)

More detailed information on linking data points can be found in Chapter [2.8.2](#).

2.7.1.6 VENETIAN BLINDS



This element type has four parameters:

- The control type parameter which allows to choose an icon:

		Shutters (default choice)
		Door
		Window
		Garage
		Roof window
		Awning
		Curtains
		Shading



Vertical shading

- Venetian blinds up/down slider control (enable/disable)
- Lamellae slider control (enable/disable)
- Lamellae step control (enable/disable)

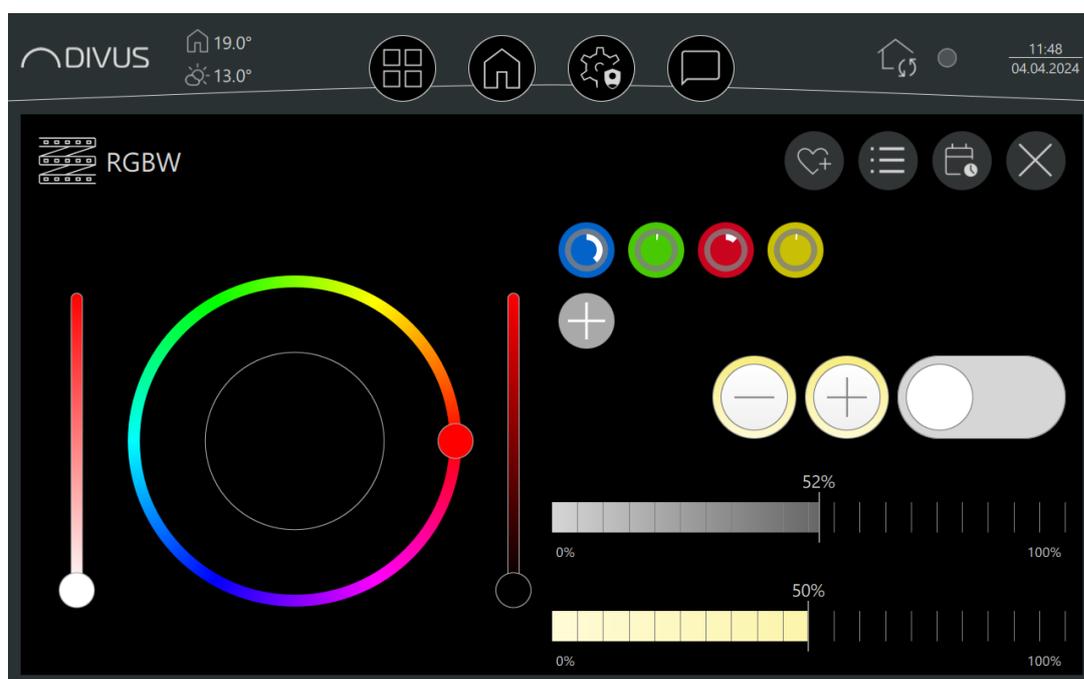
It offers up to 6 functions which need to be linked to a matching data point:

- Shutter up/down (DPT 1)
- Shutter up/down step (DPT 1)
- Shutter position (DPT 5)
- Inclination up/down (DPT 1)
- Inclination up/down step (DPT 1)
- Inclination (DPT 5)

This is the most complete type of element for blinds actuators.

More detailed information on linking data points can be found in chapter [2.8.2](#).

#### 2.7.1.7 RGB(W) – FOR HSV(+W) ALSO



This element type has 4 main parameters:

The control type parameter allows to choose between:

		Light On/Off (default choice)
		Ceiling lamp on/off
		Desk lamp on/off
		Floor lamp on/off
		Led on/off
		Wall lamp on/off

The colour white (for RGBW devices) and the dimmer can be enabled or disabled. The data points for red, green and blue as well as for switching on and off are fixed. The default setup will be:

- On/Off (DPT 1)
- RGB Colour Red (DPT 5)
- RGB Colour for Green (DPT 5)
- RGB Colour Blue (DPT 5)
- RGB Colour White (DPT 5) - optional
- Dimming absolute (DPT 5) – optional
- Dimming relative (DPT 3) - optional

If as 4<sup>th</sup> parameter *RGB data point* you choose *Single data point*, instead of the 3 separate colour values you will need a data point of type DTP232 (3 Bytes):

- RGB Colour (DPT 232)

For RGBW or HSV+W, there is the 3rd possible combination that provides a single data point for all 4 channels:

- RGBW Colour (DPT 251.600)

If you have configured a unit for HSV colour representation, the available data points are:

- H (Hue) (DPT 5.003 - Rotation in degrees)
- S (Saturation) (DPT 5.001)

- V (Value) (DPT 5.001)

More detailed information on linking data points can be found in Chapter 2.8.2.

The RGB(W) element also offers up to 10 presets - i.e. stored colours that can be recalled as needed by simply touching them.



The active preset is marked with a thin grey outer ring. The internal rings each represent the following:

- Grey ring: percentage value of the dimmer (full circle = 100%)
- White ring: percentage value of white (full circle = 100%).

If neither dimmer nor white are activated, the internal rings are also not visible. If not all saved presets are visible, you can slide them to the left or right to reach the others.



The grey buttons (above), which are displayed depending on the situation, allow the following respectively: Add a preset (max. 10), delete selected preset, edit selected preset, save or discard the current changes.

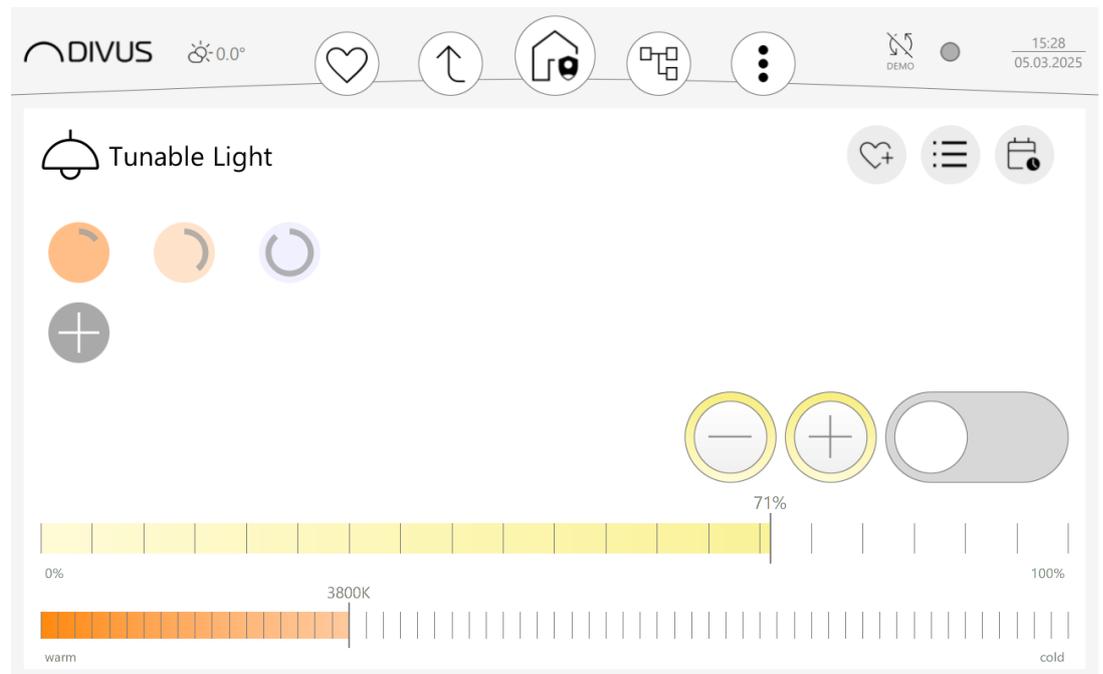


**Note:** Colours that already exist as presets cannot be saved a second time!



**Attention:** if parameters of an RGB(W) element with stored presets are changed afterwards, data may be lost (dimmer values and/or white values) or presets may be totally deleted (data point type changes). Such changes cannot be undone.

2.7.1.8 TUNABLE WHITE



The Tunable White element is used to control white light sources whose colour temperature can be changed (hence "tunable"). The available parameters are:

- The control type parameter, which allows to choose between:

		Light On/Off (default choice)
		Ceiling lamp on/off
		Desk lamp on/off
		Floor lamp on/off
		Led on/off
		Wall lamp on/off

- Enable dimming (shows/hides DPT 5 function and its slider).
- Enable relative dimming (enable/disable) DPT 3 – only available if dimming is enabled
  - Enable slider

- o Enable +/- buttons
- Colour temperature min. value (differs depending on the illuminant. In Kelvin degrees)
- Colour temperature max. value (see above)
- Colour temperature tick step (value distance between 2 ticks)
- Colour temperature value step (size of smallest possible change in value)

The linkable functions are then:

- On/Off (DPT 1)
- Dimming absolute (DPT 5)
- Dimming relative
- Colour temperature (DPT 7)

More detailed information on linking data points can be found in Chapter 2.8.2.

The Tunable White element offers up to 10 presets - i.e. stored colour temperature and dimmer value combinations that can be recalled as needed with a simple touch.



The active preset is marked with a thin grey outer ring. The internal ring represents the dimming value (full ring 100%).

If the dimmer is not activated, the internal rings are not visible. If not all saved presets are visible, you can "slide" them to the left or right to reach the others.



The grey buttons (above), which are displayed depending on the situation, allow the following respectively: Add a preset (max. 10), delete the marked preset, edit the marked preset, save or discard the current changes.

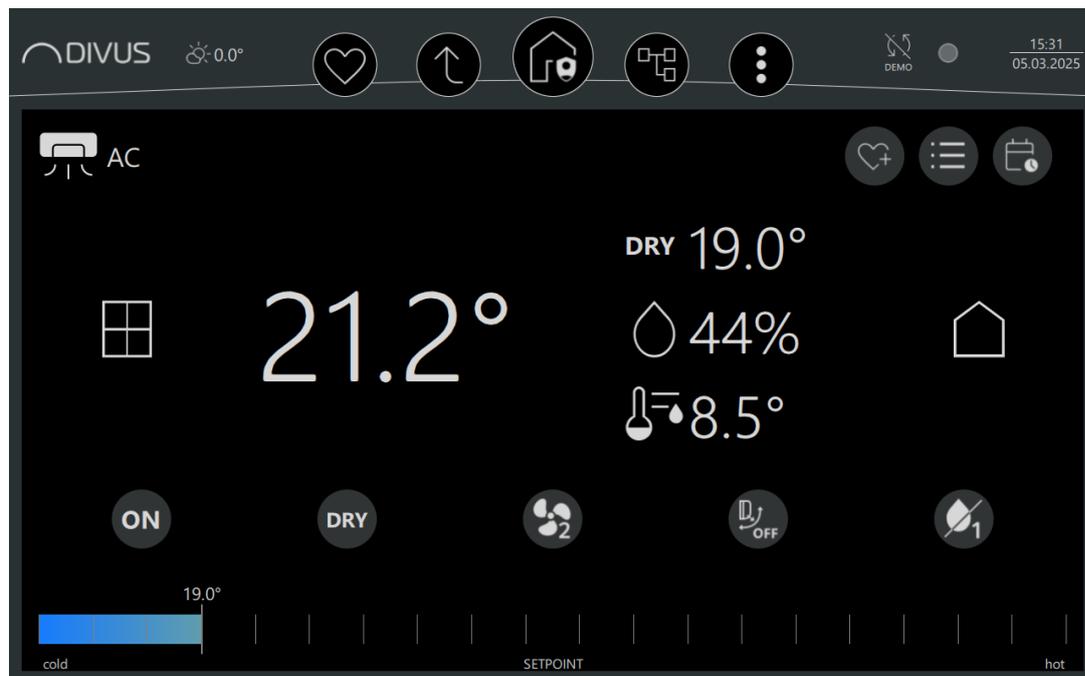


**Note:** Values that already exist as presets cannot be saved a second time!



**Caution:** if parameters of a Tunable White element with stored presets are changed afterwards, data may be lost (dimmer values) or presets may be totally deleted (data point type changes). Such changes cannot be undone.

## 2.7.1.9 AC (AIR CONDITIONER)



The AC element has a few things in common with the thermostat (see 2.7.1.10): in the detail view, the upper area is used for the status display (as shown in the example above): Window contact=closed, Measured temperature=21.2°, current control mode=dry with setpoint 19.0°, Humidity 44%, Dew point=8.5°, Presence=not present). In the lower area, on the other hand, there are control elements (buttons and a slider bar) that simultaneously show the current value and offer the option of changing settings. The buttons are used to control:

- ON/OFF -> switches the air conditioning system on or off directly
- Control mode -> can be switched via a subpage

The available modes are

- (a) AUTO
- (b) Heating (HEAT)
- (c) Cooling (COOL)
- (d) Fan (VENT)
- (e) Dehumidification (DRY)
- (f) OFF

Each control mode can be enabled or disabled individually.

- Ventilation speed -> can be switched via a subpage

5 speeds and automatic speed are available. Each speed can be enabled or disabled individually. In addition, each corresponding value can be changed if required.

- Vanes inclination -> can be switched via a subpage

If the air conditioning system in use supports it, you can switch the inclination of the vanes i.e. of the air flow in stages or activate/deactivate the swing function (where the vanes automatically swing/rotate up and down).

Up to 6 inclination steps are available. These can also be individually enabled or disabled and their value adjusted. The swing function is supported as a separate value or command (swing on/off), as well as in models that offer it as value 0 of the inclination.

- Heating/cooling -> can be switched via a subpage

If required, this function can be used to switch between the 2 basic functions heating and cooling, basically setting the current season (winter=heating, summer=cooling). This is superfluous if this function is the same as switching the corresponding control modes.

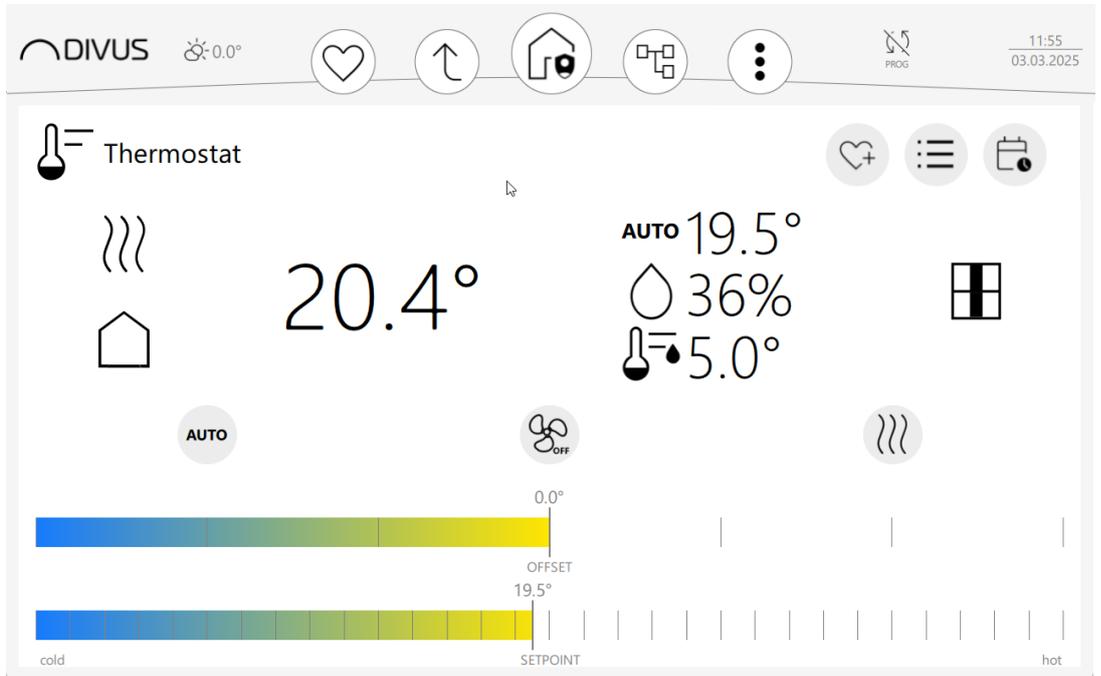
- Dehumidification mode -> can be switched via a subpage

Dehumidification can be controlled in up to 5 levels (0=Off, 1=Low, 2=Medium, 3=High, 4=Maximum or Continuous). Here, too, you can select which of the available values should be displayed for control and which value each of them should send.



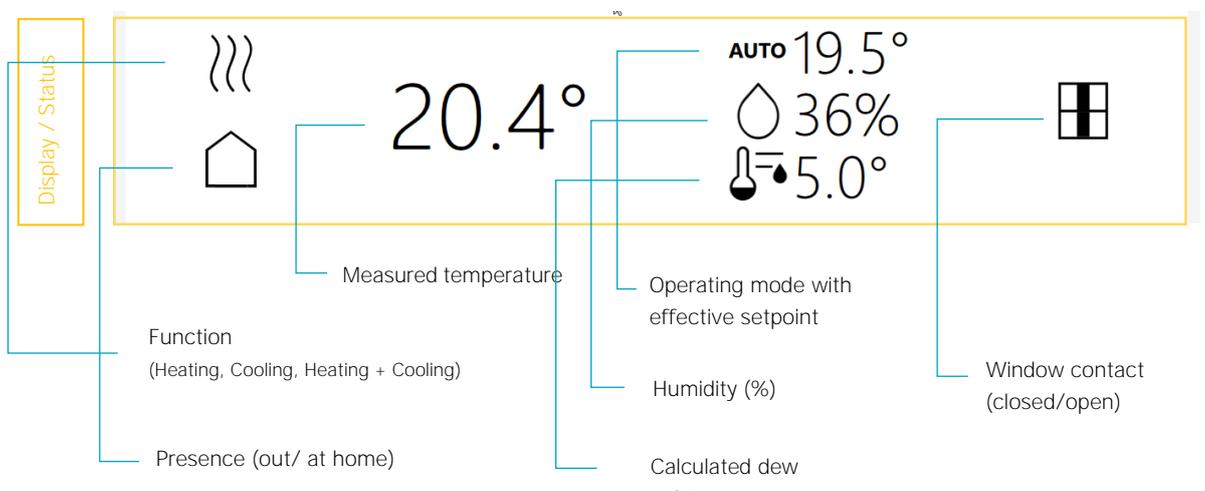
**Note:** All the switchable functions mentioned above can be disabled if they are not needed or not supported. If they are only available as a status, they can also be disabled through the "Activate control" function. The number of grey buttons for switching in the detail view is then reduced accordingly.

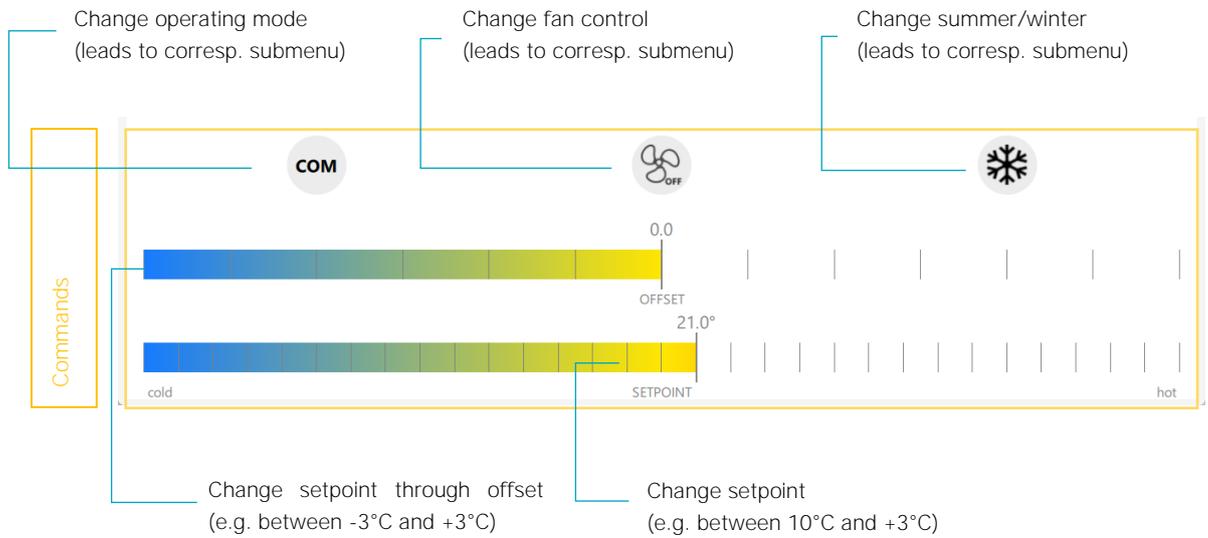
2.7.1.10 THERMOSTAT



The screenshot above shows a representation that has all possible options activated. In reality, this will very rarely be the case and in general icons and values will be rearranged depending on the number of enabled functions, but we use this representation for further explanation.

In the detail view, the window is divided into two areas: the upper area for display/status, the lower area for the commands:





This element type has the widest range of functions, as does the physical device. Its parameters require a table with explanations:

Parameter	Choices	Explanation
<b>Operating mode control</b> (DPT 5)		Choose one of the following:
	<b>Disabled</b>	Disable the operating mode control(s)
	<b>AUTO-COM-PRE-ECO-OFF</b>	Choose one of these options. In general, note that: <ul style="list-style-type: none"> <li>• <i>PRECOMFORT (PRE)</i> might be called <i>STANDBY/STBY</i></li> <li>• <i>ECONOMY (ECO)</i> might be called <i>NIGHT</i></li> <li>• <i>OFF</i> is most of the times the same as <i>FROST</i> or <i>BUILDING PROTECTION/PROT</i> (although there might indeed be an <i>ON/OFF</i> function of the device)</li> <li>• The official KNX data type specification uses:  0 = Auto, 1 = Comfort, 2 = Standby, 3 = Economy, 4 = Bldg. Prot. All numbers &gt; 4 are usually not used (although this is a 1 Byte data type)</li> </ul>
	<b>COM-PRE-ECO-OFF</b>	
	<b>COM-STBY-NIGHT-FROST</b>	
	<b>ON-OFF</b>	
	<b>AUTO-COM-STBY-ECO-PROT</b>	
	<b>COM-STBY-ECO-PROT</b>	
<b>Enable 1 Bit operating modes</b>		Switches mode by sending 0 to all operating modes except the chosen one (sending 1). Each single operating mode has its own 1 BIT data point and its respective function. Note that the 1 BIT operating point functions, if enabled, will replace the 1 Byte Operating mode function (see above)
Fan control		Choose one of the following:
	<b>Disabled</b>	Disable the fan control
	<b>On/Off (status only)</b> (DPT 1)	Choose one of these options depending on your physical device's options and the customer's preferences.
	<b>Off/Speed 1-3 (Status only)</b> (DPT 1 + DPT 5)	
	<b>Auto/[Man Off/On]</b> (DPT 1 + DPT 1)	
	<b>Auto/[Man Off/Speed 1-3]</b> (DPT 1 + DPT 5)	

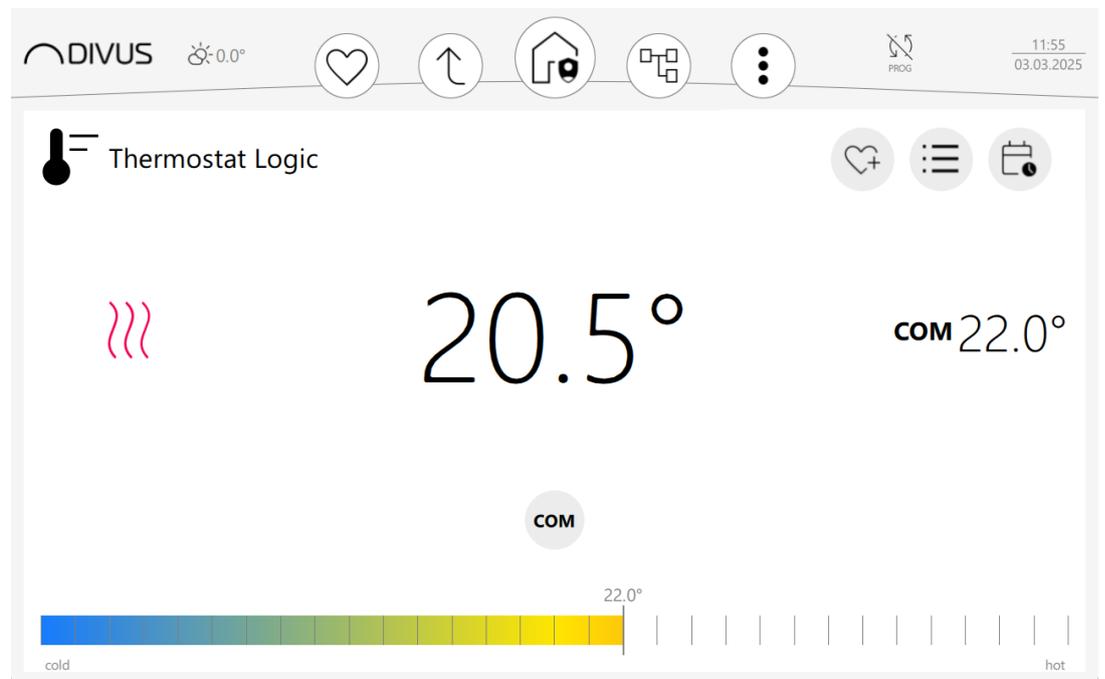
**Auto/Man**

(DPT 1)

	<b>Invert fan Auto/Man</b> (0/1 or 1/0)	<i>Invert the value interpretation if needed.</i>
<b>Heating/cooling function</b>		<i>Select one of these functions according to which the thermostat operates:</i>
	Heating and cooling	<i>Thermostat controls both at the same time</i>
	Heating	<i>Thermostat is used for heating</i>
	Cooling	<i>Thermostat is used for cooling</i>
<b>Enable window status icon</b>	Disabled/enabled	
<b>Enable presence status icon</b>	Disabled/enabled	
<b>Enable setpoint</b>	Disabled/enabled	<i>Enable or disable the setpoint control in general</i>
<b>Setpoint min. value</b>		<i>Lower boundary of the setpoint value range</i>
<b>Setpoint max. value</b>		<i>Upper boundary of the setpoint value range</i>
<b>Shared setpoint</b>	Disabled/enabled	<i>Use one setpoint for both heating and cooling. Only visible if Heating and cooling is chosen as function</i>
<b>Enable humidity</b>	Disabled/enabled	<i>Enable / disable the humidity sensor reading as percentage value</i>
<b>Enable calculated dew point</b>	Disabled/enabled	<i>Only visible if humidity is enabled. Calculated using current humidity and temperature values.</i>
<b>Enable effective setpoint</b>	Disabled/enabled	<i>Shows the setpoint actually applied by the thermostat (calculated including offsets). Status only</i>
<b>Enable heating/cooling status icon</b>	Disabled/enabled	<i>Shows the heating/cooling status icon</i>
<b>Enable heating/cooling switch</b>	Disabled/enabled	<i>Enables manual switching between heating and cooling (or winter and summer)</i>
	<b>Invert</b> cooling/heating (0/1 or 1/0)	

<b>Enable setpoint offset</b>	<i>Allows the setpoint to be adjusted as an offset (i.e. as a relative value) in a specified range (e.g. between -3°C and +3°C)</i>
<b>Offset step</b>	<i>Determines the size of the smallest step (e.g. 1 for one degree or 0.5 for 0.5°C minimum displacement)</i>
<b>Offset min. value</b>	<i>Lower limit of the offset range (e.g. -5)</i>
<b>Offset max. Value</b>	<i>Upper limit of the offset range (e.g. 5)</i>

2.7.1.11 THERMOSTAT LOGIC



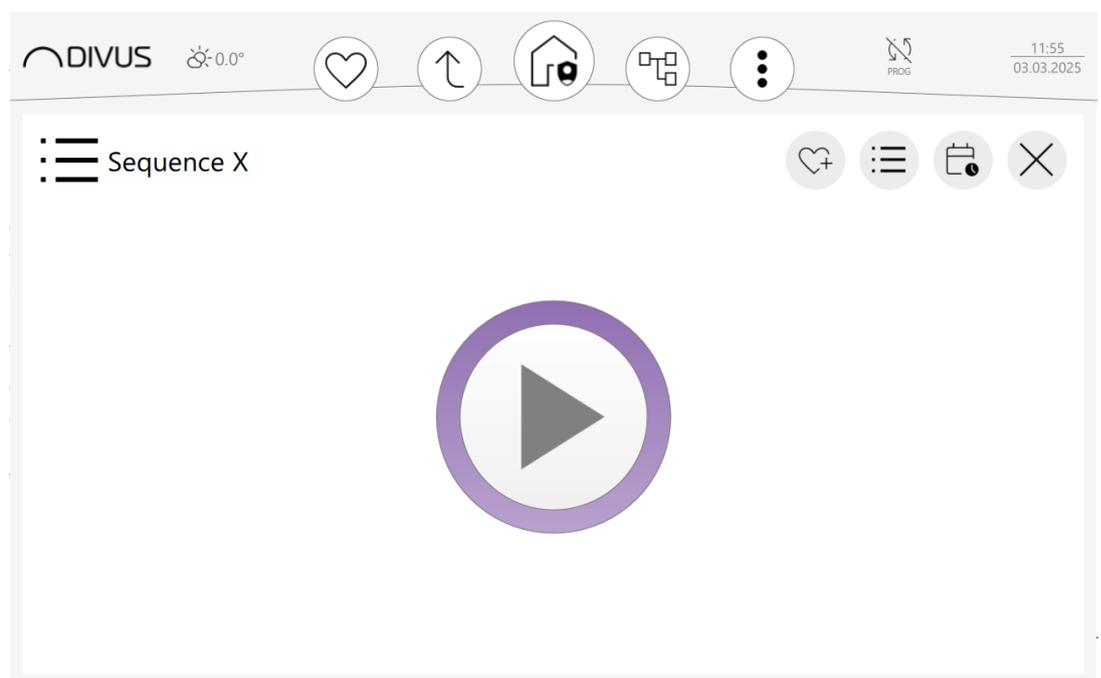
The Thermostat Logic element looks very similar to the Thermostat element, but has a significant difference in comparison: here, the element itself takes over the switching logic. In the minimal setup, it therefore only requires one temperature value data point as input and one switching data point as output. Optionally, it is also possible to link further data points for setpoint and operating mode so that these functionalities are also available from or for other devices.

The following parameters are provided by the Thermostat Logic element:

- Operating mode (COM-PRE-ECO-OFF or COM-STBY-NIGHT-FROST)
- Hysteresis (e.g. at 0.5 the temperature goes half a degree above or below the setpoint before switching over)
- Setpoint min. value (lower limit for the setpoint range)
- Setpoint max. value (upper limit for the setpoint range)

- Setpoint offset PRE (e.g. for 2, PRE is 2° below the COM setpoint for heating, 2° above for cooling)
- Setpoint offset ECO (e.g. at 4, ECO is 4° below the COM setpoint for heating, 4° above it for cooling)
- Enable eff. setpoint (effective setpoint - see Thermostat element). Here it is the value calculated by the thermostat logic itself - as a status.
- Enable status icon (shows the heating/cooling status - see Thermostat element).
- Enable heating/cooling switch (see Thermostat element)
- Frost protection (enter limit value in degrees for operating mode OFF or FROST during heating)
- Overheating protection (enter limit value in degrees for operating mode OFF or FROST for cooling)

#### 2.7.1.12 SEQUENCE



#### 2.7.1.13 KNX SCENE

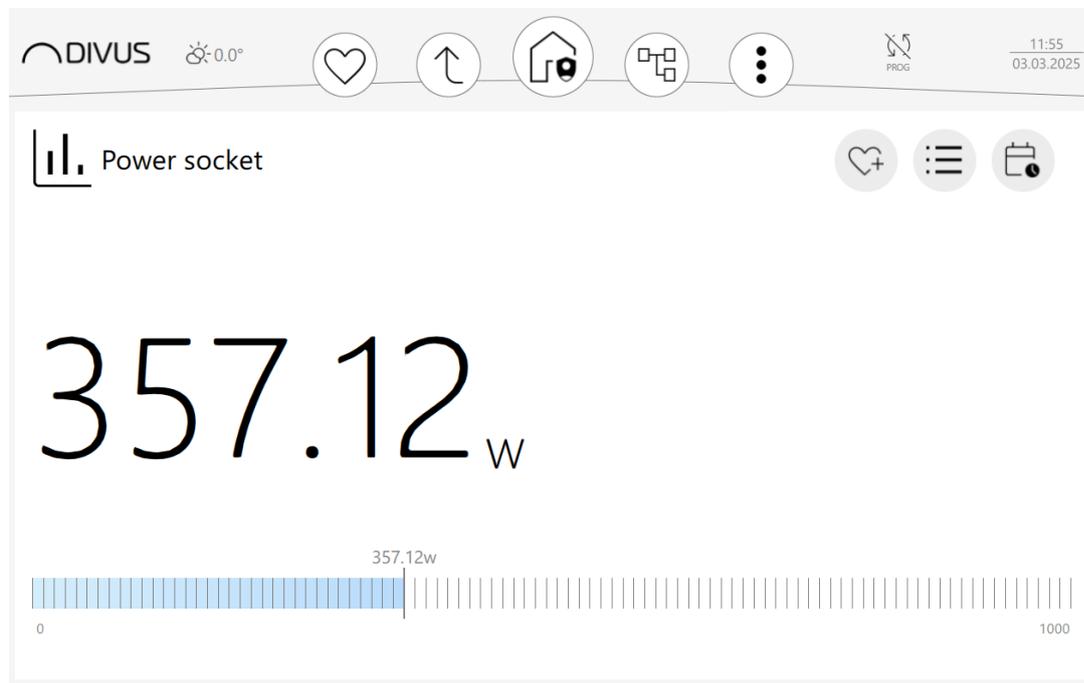
The KNX scene is similar in functionality to the sequence, but more limited. The configuration of the KNX scene must be done in ETS. Through this element it is possible to recall a certain scene, corresponding to a number (from 1 to 64) also defined at the ETS programming level.

The parameters are:

- *Enable learning* (saves the current values of the involved group addresses and from then on sets using the new values)
- *Scene number* (scene number to be recalled from 1 to 64)

As a connectable function, there is a single data point that will match that of the *KNX scene* (DPT 5, 0-255).

#### 2.7.1.14 CUSTOM SLIDER



The custom slider can be used for many purposes. These icons are available:

None (element remains without icon)

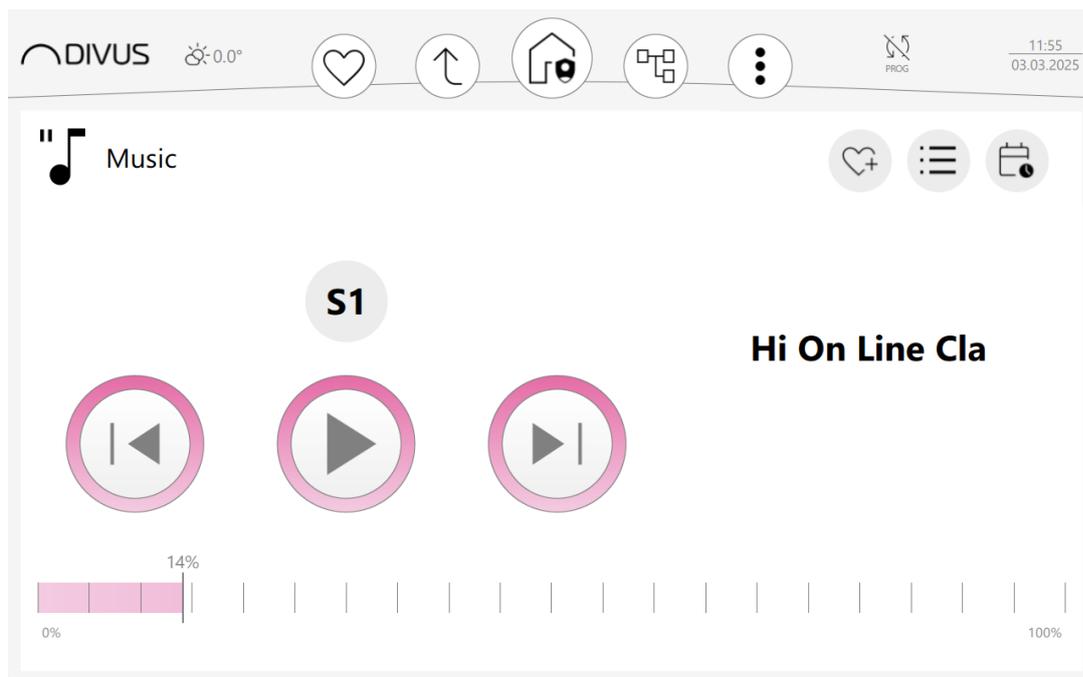
	General information
	Counter
	Datalog
	Humidity
	Heating
	Light
	Cooling
	Temperature
	Weather
	Ventilation
	Energy
	General measured value
	CO <sub>2</sub>
	Wind speed
	Brightness
	Battery
	Electrical load
	Energy production

	Heating rod
	Power grid
	Generic meter
	Socket off
	Socket on
	Music
	Text

Apart from the icon, you will find the following options under PARAMETERS:

Controls	<i>All, only slider, only value can be selected</i>
Unit	Shown after the value (e.g. °K)
Decimals	Number of decimal places
Label min.	Displayed to the left of the slider.
Label max.	Displayed to the right of the slider
Value min.	Minimum value (smallest value of the possible value range)
Max. value	Maximum value (largest value of the possible value range)
Tick step	Value between 2 ticks
Value step	Smallest possible value shift of the slider

2.7.1.15 MUSIC

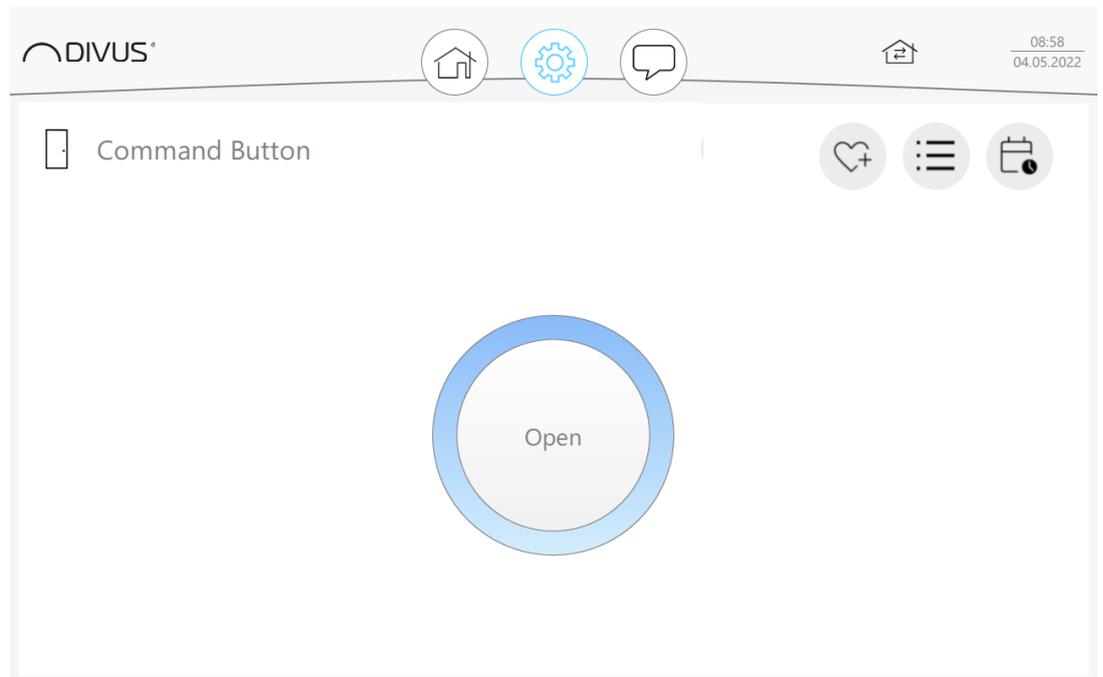


The parameters for the music element are:

Invert Play/Pause	Disabled: 0 Pause, 1 Play - Enabled: 1 Pause, 0 Play
Enable volume control	Enables/disables the <i>volume control</i> .
Enable mute	Enables/disables the <i>mute/unmute control</i>
Enable source selection	Enables the selection function of up to 99 sources through a 1 Byte object
Number of sources	Visible only if source selection is enabled, value between 1 and 99
Enable previous/next	Activate/deactivate <i>Next/previous title</i>
Value for Previous	Enabled: transmits 1, Disabled: transmits 0
Value for Next	Enabled: transmits 1, Disabled: transmits 0
Enable track information	Activates/deactivates track title and artist

The functions that can be linked are, of course, those that were activated under PARAMETERS.

## 2.7.1.16 COMMAND BUTTON



This element acts like a physical button: you can associate a command both to the pushing and to the releasing action.

The parameters are

Icon	Choose one of the available icons (or none).
Value when pressed	Set the value to be sent when the button is pressed
Value when released	Set the value to be sent when the button is released
Label	The text to show inside the button

The command button element connects one single function: that of the value (which may be of any DPT)

## 2.7.1.17 PLACEHOLDER

A placeholder element serves to graphically/visually separate the other elements. It is a non-element, so to speak, and accordingly leaves a free tile between the surrounding elements.

Optionally, the background can be made visible and the assigned element name can be displayed so that the placeholder element resembles the other elements - except for the content: placeholders have neither icons nor graphic content and do not react to clicks or finger touches. Like all elements, placeholders can be moved (see 3.4).

The available parameters are:

- Background (shows the element with the same background as the other elements).
- Title (also shows a title)
- Show only on KNXIQ (on mobile devices, elements are arranged differently, which is why placeholders could have undesired effects)

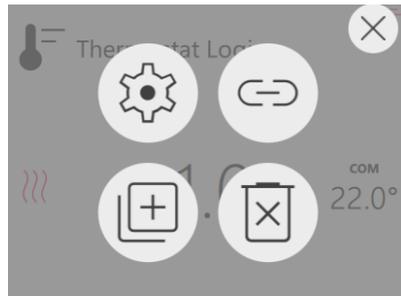
**Note:** while working on the project, logged in as administrator, the tile is shown with a light grey background to make it easier to handle it. Log out to see the effect of the placeholder element from the end user point of view.

---

## 2.8 EDIT AN ELEMENT

---

Similar to rooms (see chapter 2.5), you bring an element into edit mode by holding down its tile (or right clicking it if you're using a pc) until the edit icons appear.



 The X button closes the editing menu again.

### 2.8.1 OPEN THE ELEMENT'S FORM



If you want to edit the name or other essential properties of the element, press the gear icon. In addition to the fields Name and Description, you have access to the submenus *Type* (see Chapter 2.7.1), *Parameters*, *Functions*, *General* and *Lock*.

#### 2.8.1.1 PARAMETERS SUBMENU

Depending on the element type, you will find different configuration options that allow you to define the properties of the element in detail.

### 2.8.1.2 FUNCTIONS SUBMENU

Depending on the element type, there may be one or more functions to be linked to data points. For more details see chapter [2.8.2](#).

### 2.8.1.3 GENERIC SUBMENU

Here you can define general settings that influence the functionality of the control element:

- *Authorization level* By the explicit assignment of an element to a certain user level, this level is determined for the access (possession) of the element. At the same time, this means that lower access levels no longer have access to the functionality of the element. Locked elements remain visible, but when you click/press a button, the PIN entry window appears. The correct entry of an authorized PIN code remains active for 10 seconds. During this time you can switch several elements that are assigned to the corresponding level. After the 10 seconds you jump back to the previous authorization level.
- *Visible* Makes the element visible/hidden
- *Enable scheduling* The element can be controlled in schedules
- *Enable scenarios* The element can be integrated into scenarios
- *Status only mode* The element is used for operation (deactivated, default) or only to display its value (activated).

### 2.8.1.4 LOCK SUBMENU

Here it is possible to lock an element via a 1 BIT data point. A locked element can then not be operated. The sub-items here are:

- *Activate lock* Activates/deactivates the additional function.
- *Invert value lock* Allows the value received to be inverted if required.
- *Behaviour on lock* Can leave the element in a desired state, or unchanged

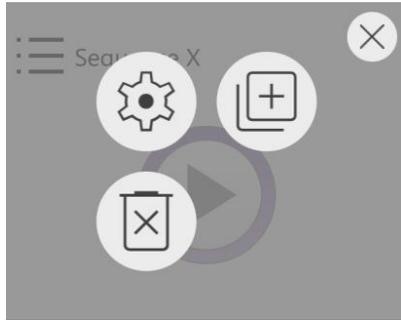
## 2.8.2 LINKING DATA POINTS OF AN ELEMENT (FM) – MENU ENTRY FUNCTIONS



This function links the visual element with the desired function(s) in the background. Depending on the element type, there can be a single function or a multitude of functions that you can be linked here. There are two possibilities:

- You can select an existing data point for the link.
- You can create a new data point. In this case, the appropriate name is entered automatically and you only need to enter the group address(es).

-  This function is only visible in Free Mode, as the data points in ETS Mode are linked via a different path. As a result, the context menu in ETS mode is this one:



NEW

### 2.8.3 COPY OR MOVE AN ELEMENT



Press and hold the mouse pointer or finger on the item or right click it until the Edit menu appears. Then press the copy icon.

You can now select the target in the pop-up window (the current level is the default). You can also select whether the copy should also retain the same linked functions. In ETS mode, this parameter ("Retain functions") only applies to virtual data points - as far as KNX data points are concerned, everything is managed exclusively in the ETS in that case.

The copied/moved element inherits all settings, rights and - depending on the parameter set - possibly also the function links.

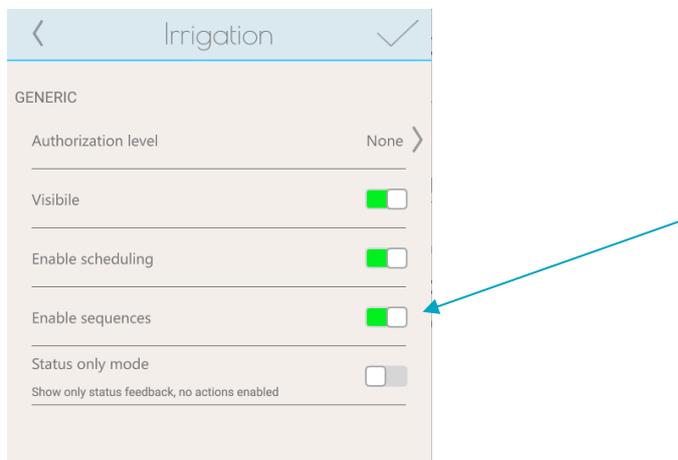
### 2.8.4 DELETE AN ELEMENT



Press and hold the mouse pointer or finger on the item or right click it until the Edit menu appears. Then press the delete icon (Trash).

## 2.9 SEQUENCES

In general, only elements that have been enabled for this purpose can be included in sequences. You can find this setting under the generic settings of the element:



Moreover, sequences can be generated in different ways: directly as element or indirectly when you create one starting from the sequence icon inside another element's detail view. In the latter case a sequence element will automatically be added to the same room as the generating element.



As default, starting from version 4.22 sequences and schedules are enabled for new elements and you can disable single ones if needed.

### 2.9.1 CREATE A SEQUENCE AS ELEMENT

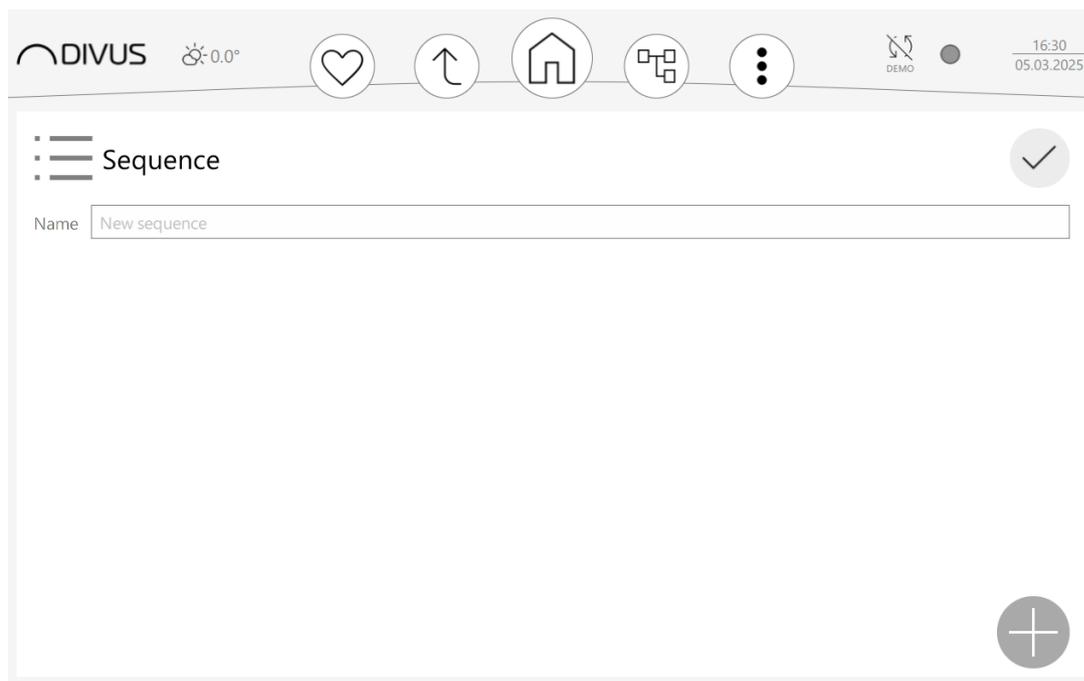
1. Go to the desired room as administrator
2. Use the plus button to add a new element of type *sequence*
3. This creates a new, empty sequence and displays it in the room.

### 2.9.2 CREATE A SEQUENCE FROM ANOTHER ELEMENT

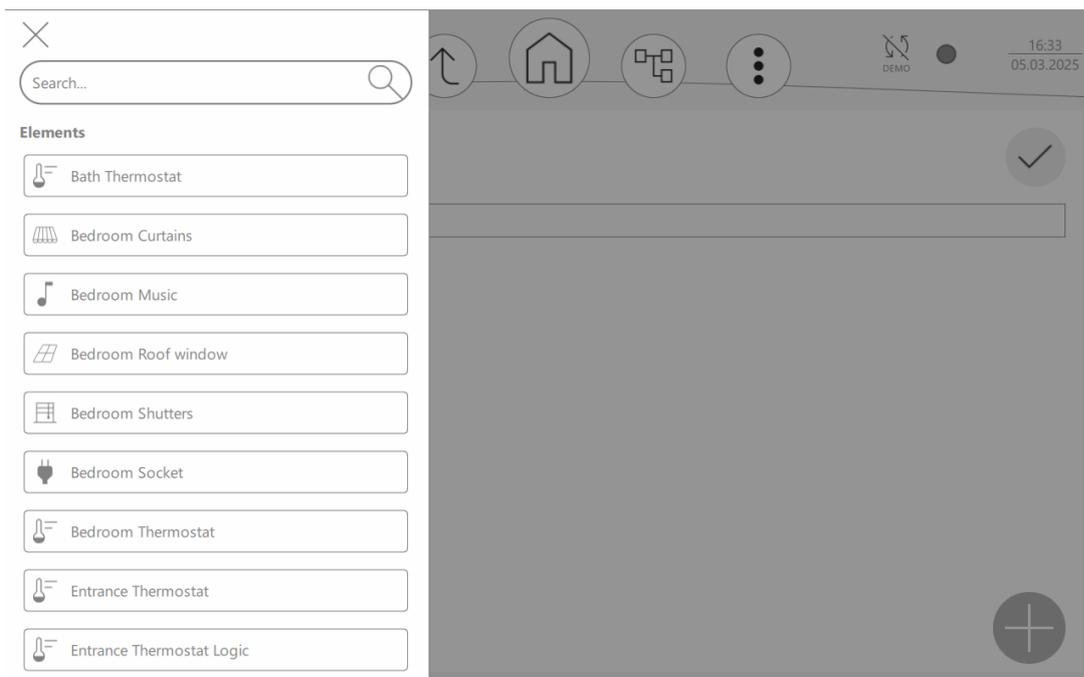
1. Go to an element enabled for sequences
2. Press the sequence icon



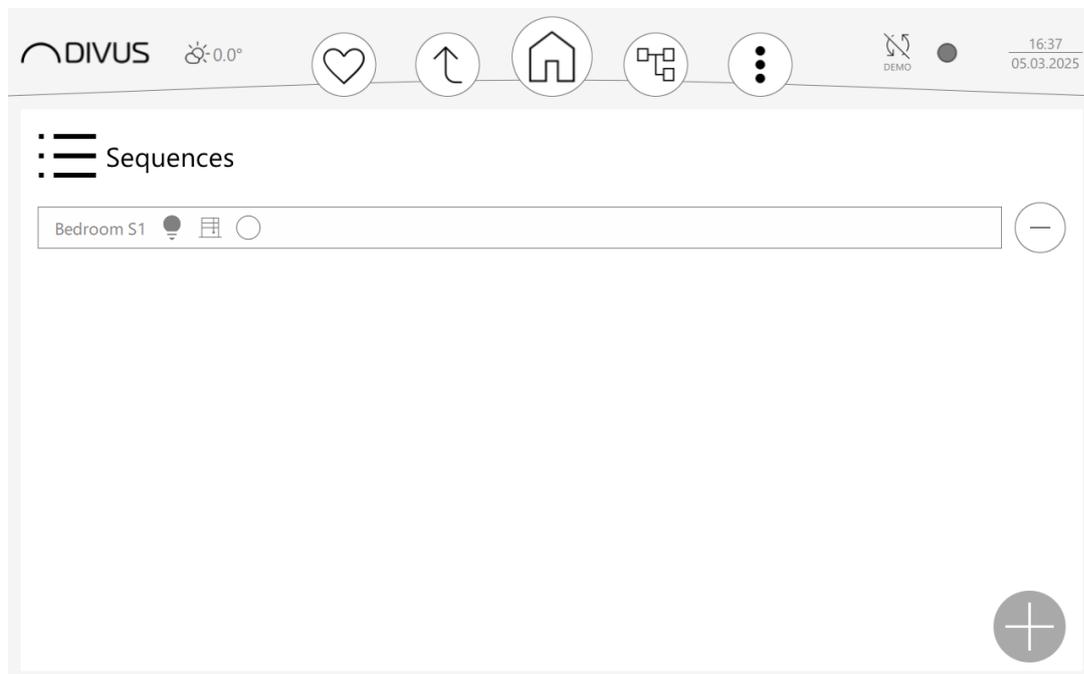
3. The configuration window for sequences opens: choose an existing sequence or create a new one.



4. Enter a name (for a new one) and then add the desired elements and set their values.



5. Finally save by clicking the ✓ icon. The list now shows the new sequence:



### 2.9.3 EDIT A SEQUENCE

To access the list of available sequences, proceed as for creating and click on the sequence that you want to edit. Save your changes with the ✓ icon at the end.

### 2.9.4 DELETE A SEQUENCE

To access the list of available sequences, proceed as for creating. Then click the minus symbol at the right end of the line of the sequence to be deleted. Confirm the deletion in the message that appears.

---

## 2.10 TIME SCHEDULES

---

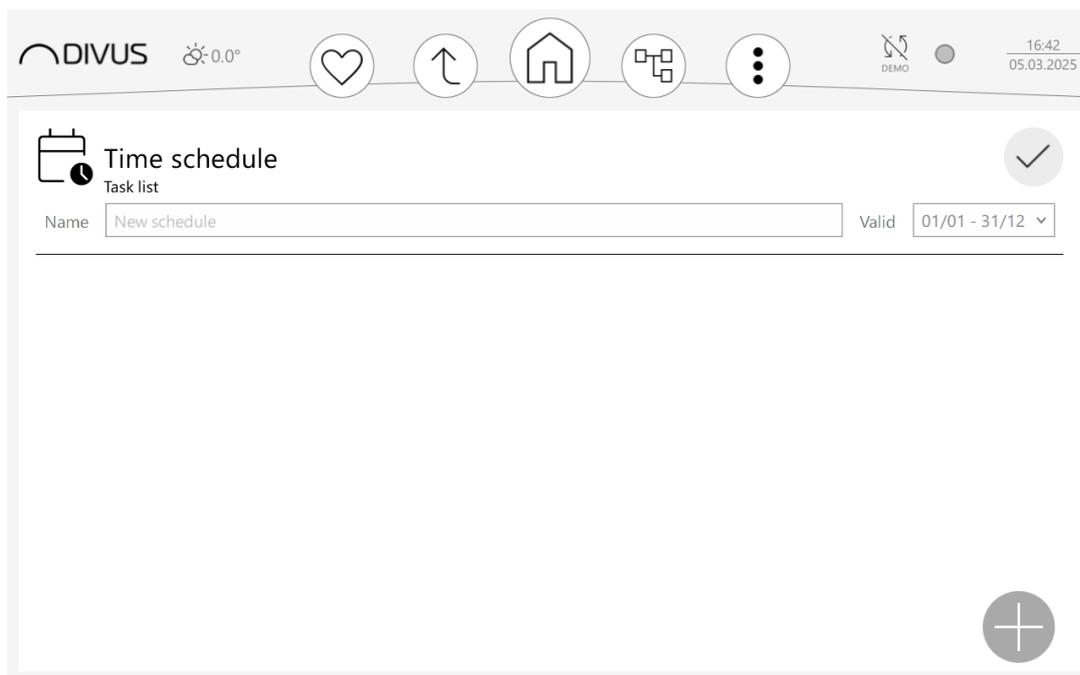
### 2.10.1 CREATE A NEW SCHEDULE

1. Go to the detail view of the item for which you want to create a schedule.

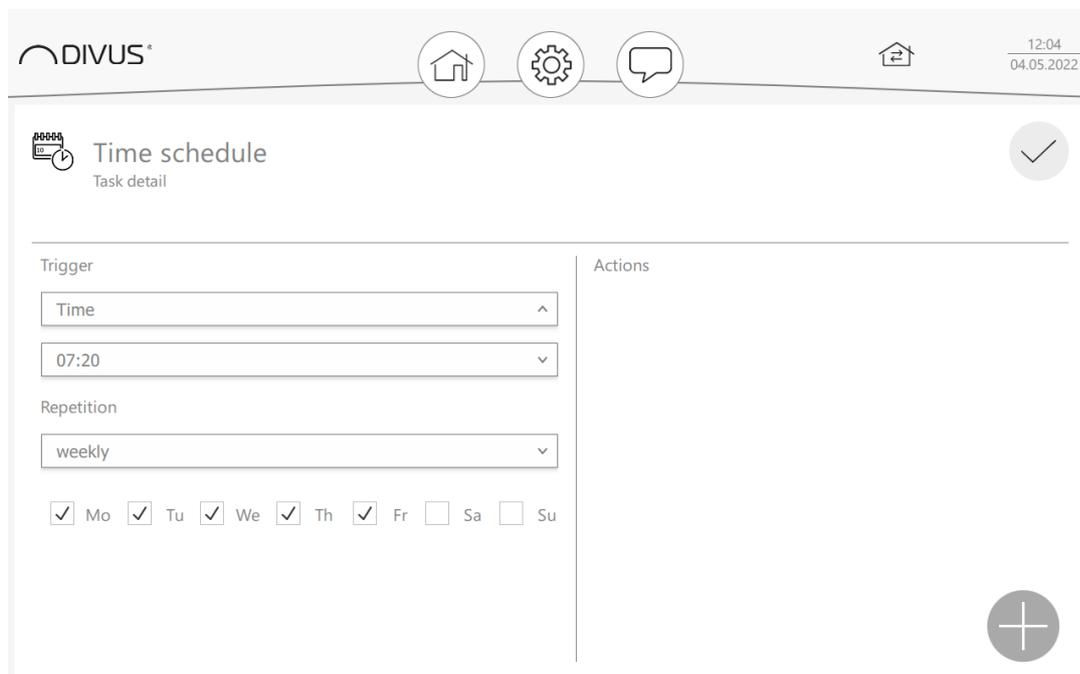
2. Press the schedule icon.



3. The scheduling configuration window opens. Press the plus symbol to create a new schedule.

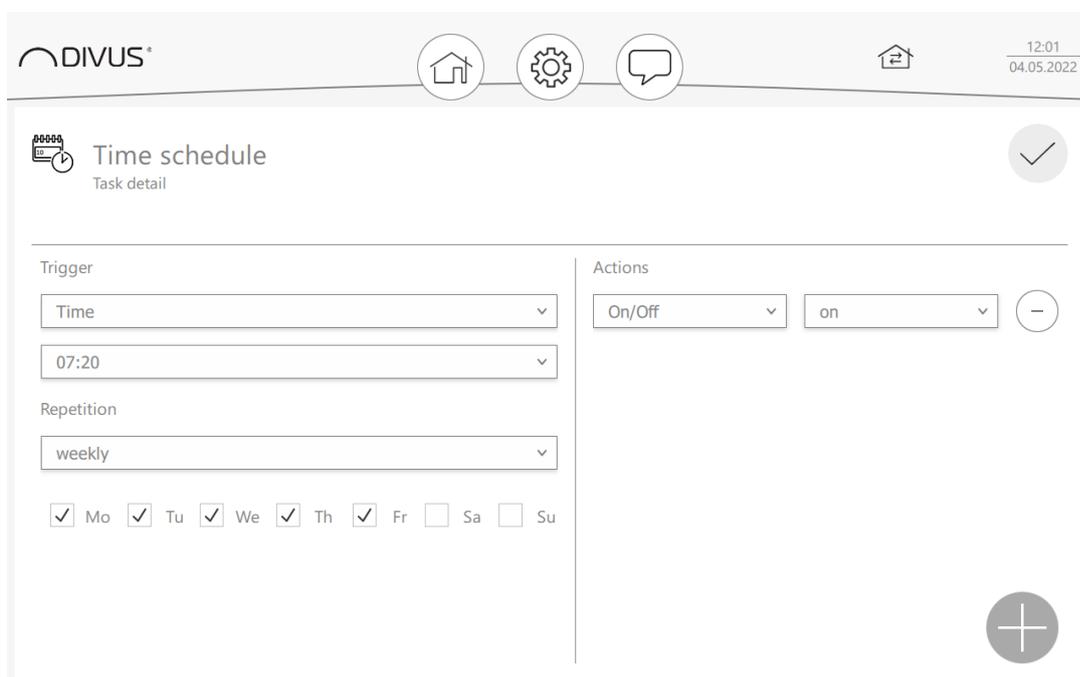


4. Give a name to the schedule.
5. Hit the plus button to create a first scheduled command.
6. Enter the desired settings:



- Trigger (options Time or Astro. Schedule using a fixed time or using sunrise/sunset through the astronomical clock functionality)
- Repetition (options are daily/weekly/monthly/yearly or none) and depending on the choice, the date(s) etc.

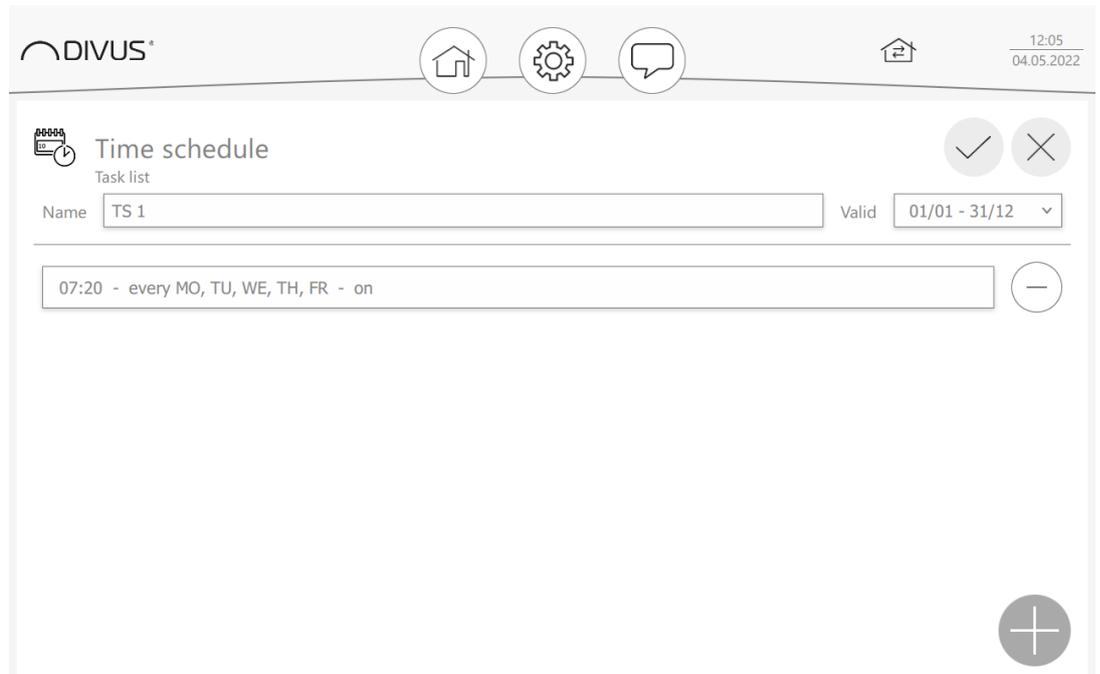
7. Push the plus button to add a first action.



8. Select the function of the element to be scheduled and its value here.

9. Add additional actions if desired.

- Go back to the task list and repeat steps 5-8 for more scheduled commands if needed.



- Save at the end by clicking the ✓ icon.

### 2.10.2 EDIT A SCHEDULE

- Go to the detail view of the desired element.
- Click/press the schedule icon.
- Select the desired schedule and then edit its desired tasks.

### 2.10.3 DISABLE/ENABLE SCHEDULE

- Go to the detail view of the desired element.
- Click/press the Schedule icon.
- You can disable (switch to the left) or enable (switch to the right) the time schedule using the switch on the right (before the minus symbol). Newly created schedules are enabled as default.



#### 2.10.4 DELETE SCHEDULE

1. Go to the detail view of the desired element.
2. Click/press the *schedule icon*.
3. You can delete the schedule by clicking the minus symbol.



## 3 Vision - Settings

---

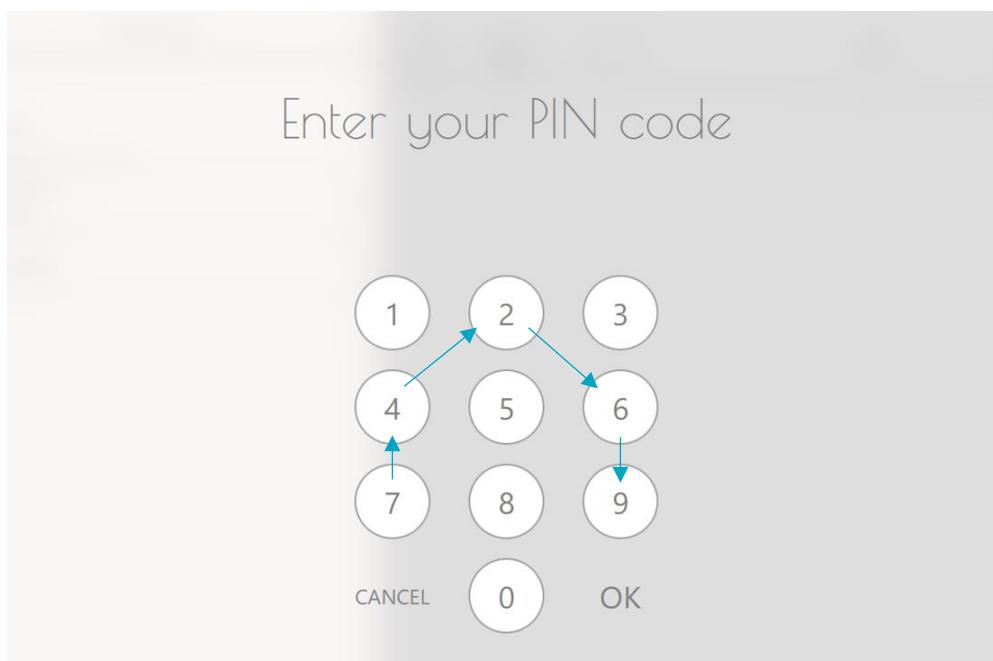
### 3.1 LOGIN

---

By logging in with a PIN code, certain functions and menu items become accessible. Without login you have access to the visualization, but you can't change anything and for certain functions the PIN code window will appear.

To login, open the menu and select the first item *LOGIN*.

The administrator PIN code is 74269.



To configure the authentication of the different users, go to Configuration - Authentication in the menu after the first login. More detailed information can be found in chapter 3.2.7.

#### 3.1.1 LOG OUT

As soon as you have logged on, you will find the function for logging out at the same place as for logging on. After editing, a user should always log out. Whether a user is currently logged in can be seen at first glance through the gearwheel icon: if it has a coloured background, then a user is logged in; if the background is white, then no user is currently logged in.

After 15 minutes of inactivity, the logged-in user is automatically logged out.

---

## 3.2 CONFIGURATION

---

The third menu item gives access to various sub-items for configuring DIVUS VISION:

- Resources
- Visualisation
- Drivers
- Data points
- Rules
- Notifications
- User / API access management
- Plugins
- Cloud
- Import/Export
- System

### 3.2.1 RESOURCES

This page gives an overview of the currently used and still free resources such as data points, schedules etc. with a bar chart.

The shown resources are:

- Data points
-  • Elements (max **500**)
- Rules (logical expressions, 100)
- Users (max. 10 users with different access rights)
- Schedules (125 with max. 10 commands each)
- Sequences
-  • Thermostat logics (max. **50**)

They are shown in green – orange – red colours depending on the usage/remaining availability.

### 3.2.1.1 RESOURCES IN ETS MODE

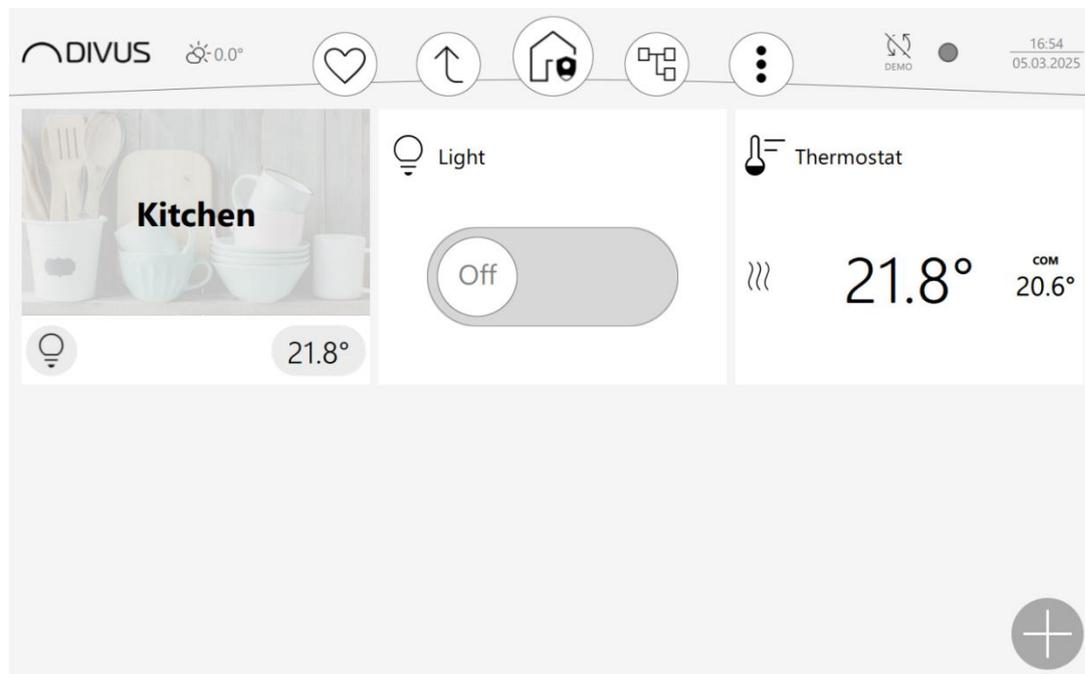
If the device/project is programmed in ETS mode, the page of the resources changes, because the special way of data transfer via ETS brings certain size restrictions with it, which cannot be defined as a fixed number of functions or objects, but as memory available for them in bytes. A sequence with 10 functions, for example, needs more memory than another one with only 3 functions. For this reason, in ETS mode, the used/available resources are indicated on the resources page, either as a memory percentage or as a fixed number. When approaching the upper limit, both the remaining memory and the maximum fixed number are to be monitored - the limit reached first of the two is then the decisive one.

## 3.2.2 VISUALISATION

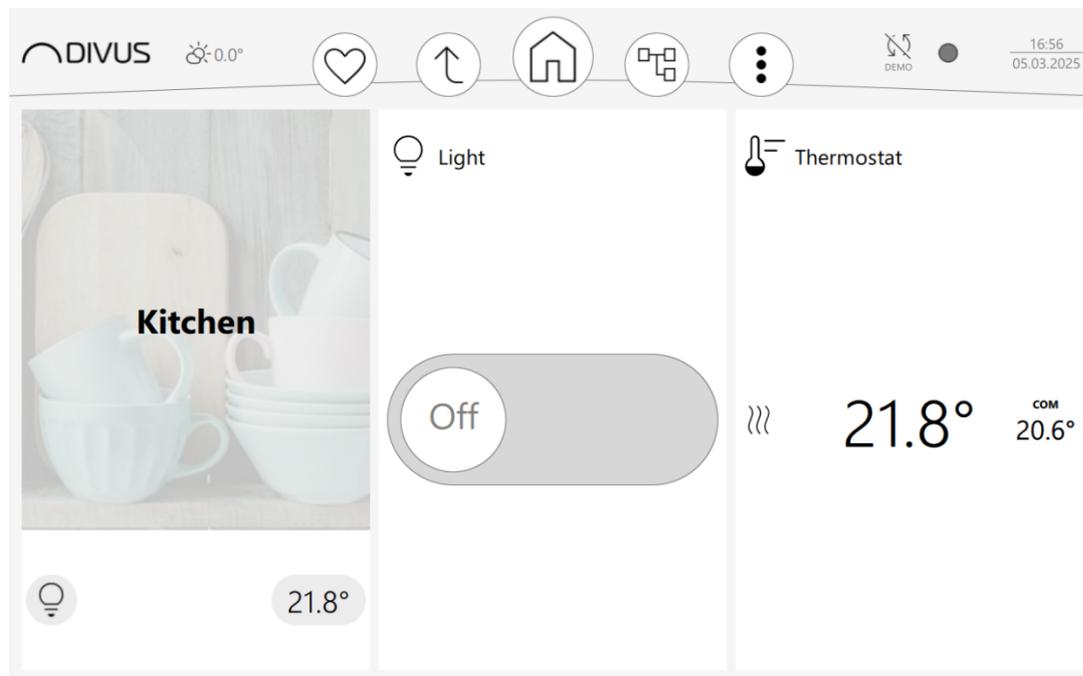
### 3.2.2.1 DESIGN

Here the visualisation can be customized. The raster mode can be *fixed* or *dynamic*. *Fixed* means that the grid has a fixed division into 6 tiles - unoccupied tiles remain free. *Dynamic* means that the tiles, depending on the number, fill as much of the surface as possible.

**Example** of fixed raster mode with 3 elements:



**Example** of dynamic grid mode with 3 elements:



The time with date displayed by default in the upper bar can be hidden if desired.

The temperature values for inside and outside, which are not shown by default, can also be activated here and linked to a data point. They then appear on the left of the upper bar.

The Single room mode allows to remove the rooms' layer: all elements will be placed in a single list when enabled.

Under *Elements Design*, default settings can be configured for new rooms, the homepage and other special rooms, regarding the choice between Classic and Slim Design. See also Chap. [3.4.2](#)

#### 3.2.2.2 UNITS OF MEASUREMENT

Here you can switch between metric and imperial units if needed.

#### 3.2.2.3 SWITCH BUTTON TEMPLATES

This takes you to the list of available switch button templates that are used on DIVUS CTP04 devices. When editing an existing template or creating a new one, the switch button designer appears. Its detailed description can be found in chapter [4](#).

### 3.2.3 DRIVERS (FREE MODE)

This is where you configure the drivers that are used to support different technologies.

#### 3.2.3.1 KNX

Depending on the KNX IQ model, select the desired setting here:

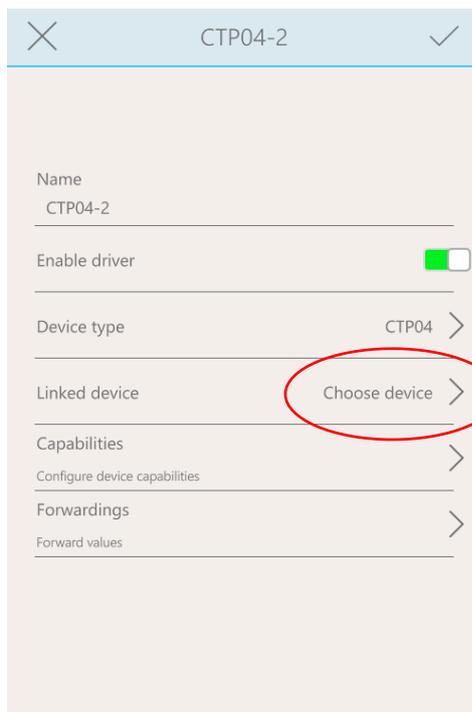
- Direct KNX bus cable connection (TP model)

- IP tunnelling via network interface (TP and IP model)

Also see chapter [2.3.2.2](#)

### 3.2.3.2 DIVUS DEVICE DRIVER

The driver that enables the integration of sensors from CTP04 devices is managed here. For proper communication with a CTP04 device, the first step is to pair it with the KNX IQ. A corresponding entry is thus created in this list and corresponding data points are also created, which then enable their values to be displayed and used within elements.



Alternatively (e.g. if you are working in offline mode), you can create devices manually here. In that case, the corresponding data points are also created automatically and can be used in elements. Afterwards - i.e. after successful pairing with the corresponding device - the real device must be linked to the created device in order to establish communication with it and give value to the data points.

The automatically created data points of a device are called, in the case of a CTP04:

temperature CTP04-serialnumber

and

humidity CTP04-serialnumber

They can neither be edited nor deleted. When renaming a device created here, the names of the associated data points also change - always according to the above scheme.

Forwardings are dealt with in chapter [3.2.5.3](#).

## 3.2.4 DATA POINTS

The data points of a project are managed here. There is a search function, an area for the list of available data points and the plus icon to create new data points.

In the case of KNX, a *data point* corresponds to a single group address or a pair of group addresses consisting of the command address and the corresponding status address.

Apart from the name, the DPT (data point type) is a necessary information.

For the import of data points from the ETS, see chapter [2.3.2.4](#)

### 3.2.4.1 DTP (DATA POINT TYPE) - TABLE WITH EXAMPLES

This table shows all data point types supported by VISION:

DPT 1	1 BIT	Switches (on/off or up/down etc.)
DPT 2	2 BITS	(1 control bit 0/1 and 1 switching bit 0/1)
DPT 3	1/4/8 BITS controlled	Dimmers/shutters (0...0 to 1...7)
DPT 4	1 byte (CHAR)	Single letter or symbol
DPT 5	1 byte (%)	(0...100%, 0...255 or 0...360°)
DPT 6	1 byte (%)	(-128...127)
DPT 7	2 bytes	(lux, mm, ms etc. 0...65535)
DPT 8	2 bytes	(time difference, rotation etc. -32768...32767)
DPT 9	2 bytes	Floating point values (-671088.64...670760.96)
DPT 10	3 bytes	time
DPT 11	3 bytes	date
DPT 12	4 bytes	0...4294967295
DPT 13	4 bytes	-2147483648...2147483647
DPT 14	4 bytes	4-octet float value IEEE 754
DPT 15	4 bytes	Access control (status/feedback)
DPT 16	14 bytes	Character string (max. 14 letters/symbols)
DPT 18	1 Byte	Scene control
DPT 19	8 Bytes	Time and date
DPT 20	1 Byte	8-Bit Enumeration
DPT 24	Variable length	ISO8859-1 (Latin1) encoded string which can be longer than 14 characters (only in Free Mode!)
DPT 28	Variable length	UTF8 encoded string which can be longer than 14 characters (only in Free Mode!)
DPT 232	3 bytes	RGB / HSV
DPT 251	6 bytes	RGBW / HSV+W

### 3.2.4.2 CREATE A NEW DATA POINT (FREE MODE)

As an administrator, go to *Configuration - Data points - Data point List* in the menu. First press the *plus* icon at the bottom right of the menu area.



Attention: A data point needs an appropriate driver. If you have not yet defined the desired driver, do so before you create the associated data points. It is not possible to save a data point without a driver.

The "Add data point" window for entering the properties of the new data point then appears in the menu area. So enter the following: name, description, driver and maybe also data point type, command, status.

For a new KNX data point this would be, for example

- Name: *Kitchen blinds up/down*
- Driver: *KNX (...)*
- Data point type: *DPT 1 (1 BIT)*
- Command: *2/2/1*
- Status: *2/4/1*



For a new virtual data point, this would be, for example

- Name: *VDP On-Off*
- Driver: *Virtual driver*

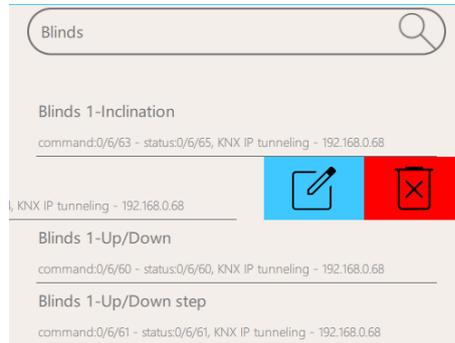
In this case, the data type is automatically derived from VISION - depending on where the data point is used - and no further information is required.

Last confirm the entry with the checkmark icon in the upper right corner. The new data point is saved.

Data points can also be created directly using the "Link" function of an element. The only difference is that in this case, certain settings are predefined and cannot be changed. More detailed information can be found in chapter [2.8.2](#).

### 3.2.4.3 EDIT / DELETE A DATA POINT (FREE MODE)

To edit or delete an existing data point, open and hold it pressed (or right click it) in the list of data points:



Then the two buttons for editing and deleting the data point appear. Choose Edit to open the same form you used to create the data point. For already linked data points you cannot edit the values for driver and DPT. Press the red button to delete. The data point is then deleted directly.

### 3.2.4.4 SEARCH FUNCTION

If the number of data points increases and they can no longer all be seen directly in the window, the search function appears at the top of the list. When you enter a search word, the data points that do not correspond are automatically filtered out. As soon as the desired data point becomes visible, you can interrupt the entry and select it (also see 3.2.4.3).

The search is possible by name as well as by group address.

### 3.2.5 RULES

Rules are logics following the simple “if-then-else” principle. This function initially only shows the search function and the plus button at the bottom right.



Logics in VISION work according to this principle: AND has priority over OR i.e. first AND connections are calculated and then OR connections e.g.:

*LIGHT1 OR LIGHT2 OR LIGHT3 AND LIGHT4 calculation:*

1. *LIGHT3 AND LIGHT4 => RESULT LIGHT3ANDLIGHT4*
2. *LIGHT1 OR LIGHT2 OR LIGHT3ANDLIGHT4*

#### 3.2.5.2 CREATE A NEW RULE

After pressing the *plus* button, the form for the new rule appears. First enter a name and select the type: there are 3 types available, which are described in the following table:

Rule type	Description
<i>On demand</i>	Is controlled, for example, by a time schedule.
<i>Trigger</i>	With each new telegram that refers to one of the data points inserted below (even if the value remains the same), the rule’s logic is evaluated.

**On value change** Is only evaluated if one of the data points in use has an effective change in value.

Then enter when the logic should be triggered in the "If" area of the form:

4. The element (e.g. a thermostat)
5. The function of the element (e.g. the measured temperature)
6. The comparison operator (smaller, larger, equal, etc.)
7. The value of the function of the element (e.g. 5 for 5°)

Then repeat the same procedure for any additional triggers (by adding the small (+)) or for the function(s) to be commanded.



**Note:** To execute multiple commands when certain conditions occur, you can use a sequence containing the desired commands and then insert it into the THEN section.

### 3.2.5.3 FORWARDINGS

Forwarding allows values to be sent from one data point to another data point. For incoming values (i.e. regardless of the value) or for value changes (i.e. only if the new value is different from the last one), it can be defined that incoming changes to a source are forwarded to a desired recipient. This receiver therefore receives the same value of the source.

In the current release, this is mainly useful to pass values between different driver / data types e.g. from a DIVUS device driver to KNX.

### 3.2.6 NOTIFICATIONS

Here you will be offered an option to **enable** or disable notifications, as well as access to the list of existing notifications.

The **notification sound duration** can now be adjusted. The options are: endless, short (about 4 sec), middle (about 8 sec), long (about 16 sec).

Initially the list of **notifications** shows the search function and the "+" button in the lower right corner. See [3.2.6.1](#) for the creation of new notifications.

**E-mail recipients** can be edited via the subitem. In addition to the e-mail address, a description field is offered as well as the option to be set as default recipient. Then new messages will already have the recipient (or recipients) in the e-mail recipient list by default.

If system notifications (see below) are also to be sent to the recipient as an e-mail, this function can also be activated.

The submenu SMTP server contains all settings for the correct connection to an SMTP server with which the e-mail can be sent.

Here is an example of the settings for a Gmail account:

The screenshot shows a configuration window titled "SMTP server". It contains the following fields and options:

- Description:** (empty text field)
- SMTP server address:** smtp.gmail.com
- Connection type:** SSL/TLS (dropdown menu)
- Port:** 465
- Authentication mode:** Login (dropdown menu)
- Username:** [redacted]@gmail.com
- Password:** [masked with 12 dots]
- Test:** A button at the bottom of the form.



[In May 2022, Google removed the "access by less secure apps" setting which VISION previously used.] You now need to enable the "Two-step verification" which then gives the possibility to create "App Passwords". **Create such a password and use it in the form above instead of the account's password!** Further details about the procedure are shown in [this document](#).

Then the configuration can be tested via the *Test* button.

The notifications page can be called up via the icon in the top bar if the notifications are activated.

In general, there are 2 types of notifications:

- *System-wide notifications*, with which the system provides warnings or suggestions. These notifications are generated independently by the system and are also generated when the notifications in the menu are disabled.
- *User-level notifications* that appear for user-defined events. This type of notification can be enabled or disabled from the menu. As a result, the icon in the top bar is also displayed or hidden.

## 3.2.6.1 CREATE A NEW NOTIFICATION

After pressing the plus button, the form for the new notification appears. First you enter a name and select the type: *Info*, *Warning* and *Alarm* stand for corresponding importance levels in increasing order, as well as for different acoustic signals.

A user level notification can be combined with an acoustic signal and you can choose to have the automatic popup or just print in the notification panel. Moreover, single notifications can be disabled – they're enabled ad default, obviously. The push function allows the message to be received as a corresponding push notification on mobile devices.

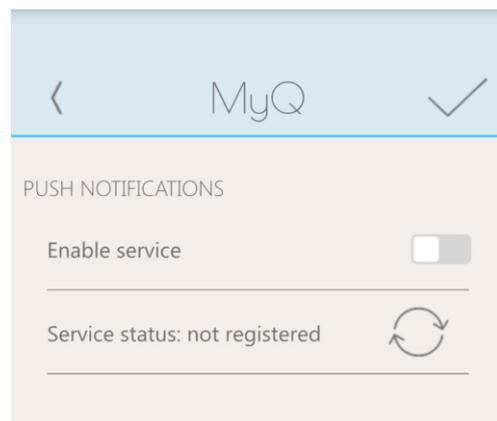
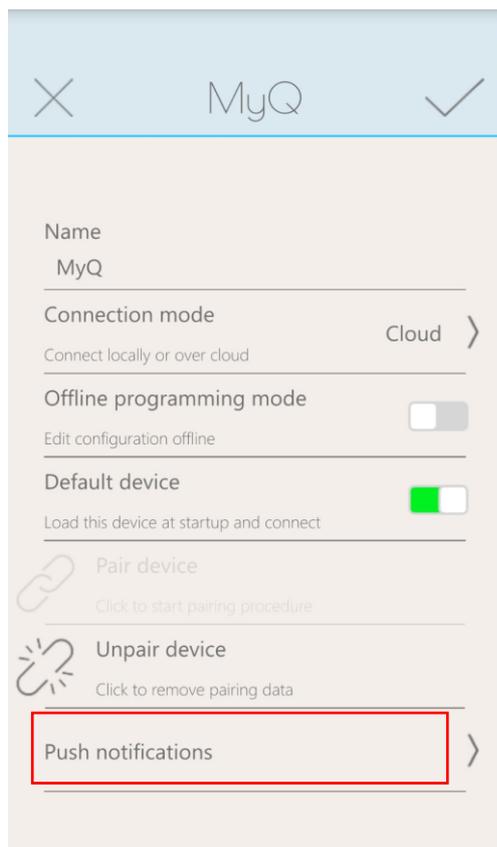
The field for e-mail recipients contains the e-mail recipients set as default, if any are set. In general, you can select one or more or no e-mail recipients from here.

In order to display a message for a certain event, you need a rule where the relationship between trigger and notification can be defined in detail (see chapter 3.2.5).

## 3.2.6.2 PUSH NOTIFICATIONS - MANAGEMENT ON CLIENT DEVICE

Push notifications can be managed independently on different client devices: here you will find the corresponding settings:

- Go to the list of configured devices as an administrator (default PIN 74269) or as a user with the User Settings right and press and hold the desired device (or right-click from PC).
- Select Edit
- The configuration form of the device appears: at the end you will find Push Notifications
- Select, as desired, whether the service for receiving push notifications is to be enabled or not. If the service is enabled, the current status will be displayed underneath.



### 3.2.6.3 DELETE A NOTIFICATION

Press and hold the notification or right click it in the list until the delete button appears, then press it.

**NEW** **3.2.7 USER/API ACCESS MANAGEMENT**

### 3.2.7.1 INTRODUCTION

There are two default access levels, namely the *administrator* level which comes with the default PIN code 74269 and the *guest* level which operates the visualization without the need for authentication.

Any authenticated access (**login**) has a default timeout followed by an automated log off. After 15 minutes of inactivity (i.e. without user interaction), the authenticated session will run out, the gear icon will return neutral and VISION will apply the default user access rights.



Authenticated session



Default user session (*guest* user as default)

Even temporary access rights behave like this: a user may gain different permissions inserting a correct PIN code e.g. to view a protected room's content or to operate a protected element. These rights will be lost after 10 seconds of inactivity.

The role and the permissions of the administrator can't be changed or deleted. Only the PIN code can – and should – be customized.

The administrator can create and manage additional users defining their name, PIN code and access rights. Access rights are set through a permission matrix where a set of basic permissions is offered for configuration. These are:

VIEW ROOMS	Permission to see rooms/levels. Rooms/levels without this permission are hidden.
VIEW ELEMENTS	Permission to see Elements with their values. Rooms without this permission remain visible but are pin protected.
CONTROL	Permission to operate elements (i.e. change values)
SCHEDULES	Permission to manage (add, edit, delete) schedules for elements
SEQUENCES	Permission to manage (add, edit, delete) sequences with the available elements
PRESENCE SIM.	Permission to control the presence simulation functions PLAY and RECORD.
USER PREFS.	Permission to change the order of tiles (on the homepage and inside rooms) and to access some device dependent settings. These are: <ul style="list-style-type: none"> <li>• Access to submenu <i>App</i></li> <li>• Access to submenu <i>Devices</i> (on client devices only)</li> <li>• Access to submenu <i>Pairing</i> (on KNX IQ only)</li> </ul>
SWITCH BTN. DESIGNER	Permission to use the Switch Button Designer to create templates used in conjunction with DIVUS CTP04 devices

Single rooms or elements may get a custom set of rights which will override the default ones. This means that authentication settings done on a room or an element will prevail over the default settings configured in the *User management* menu.

There is no fixed hierarchy of users in this structure: each user can be managed independently from all others.

As example let's say we have

- 2 rooms: *Room A* and *Locked room B*.
- Inside Room A we have 3 elements: *Light 1*, *Secret switch* and *Hidden alarm*. There is an additional user *Parents* added to the default users *Admin* and *User*

What we want to achieve:

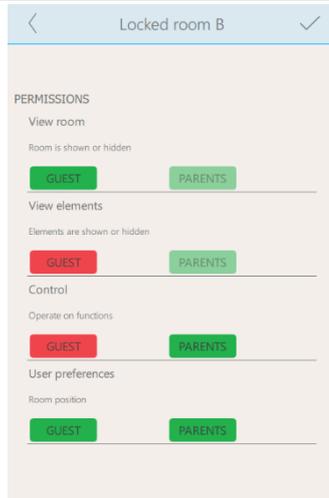
- Usually, the visualisation will use the default *Guest* rights. Therefore, also children will use that.
- Parents will have a PIN code assigned to protect access to rooms and elements
- Locked room B shall be PIN protected. Only user *Parents* will have access
- *Light 1* has default access rights. Therefore, everybody can see and switch it.
- *Secret switch* shall be PIN protected. Everybody will see it, but only *Parents* may control it

- Hidden alarm is meant to be hidden. Only user Parents will see it inside Room A.

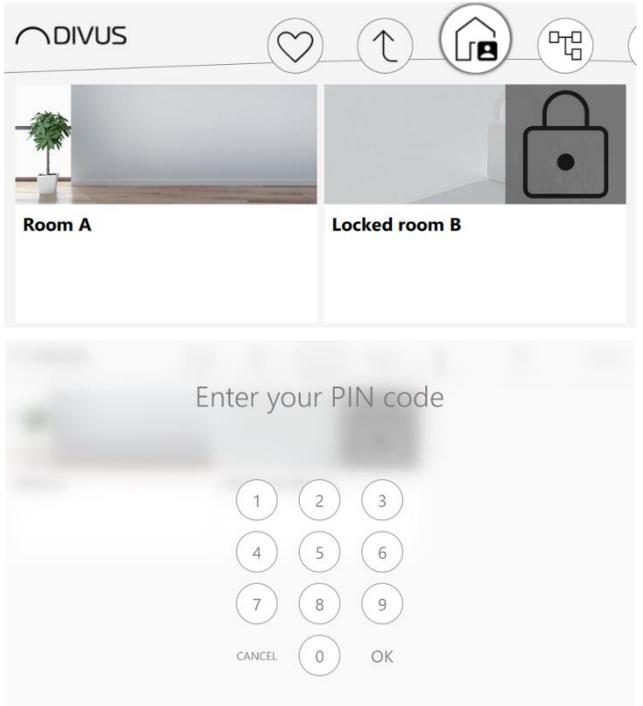
Permissions

View

Rooms view

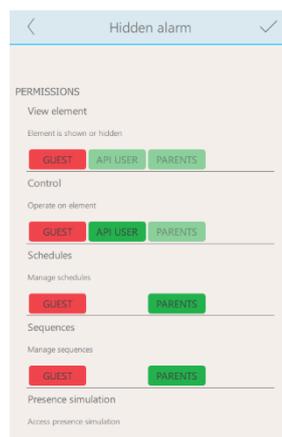


(notice the lock on the room on the right)

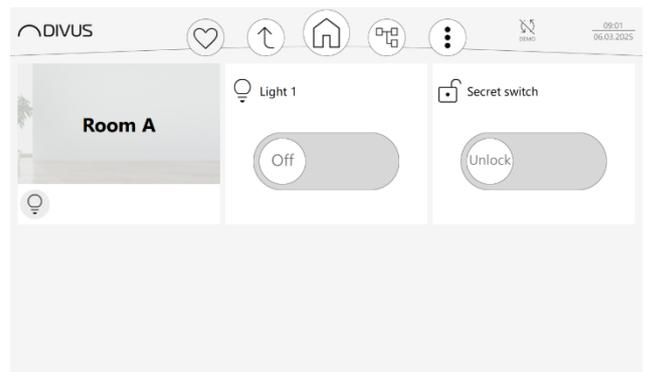


*GUEST* can't access: a PIN code is required

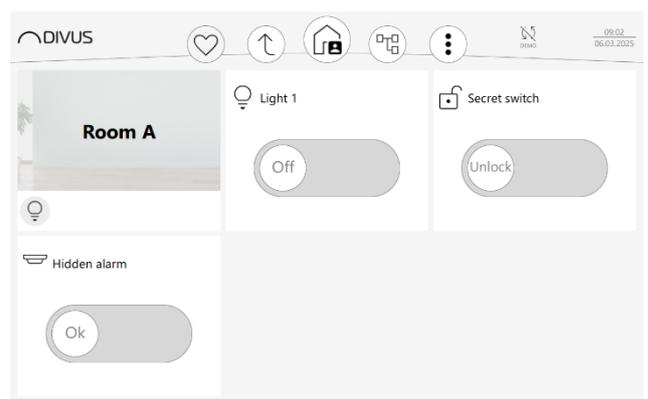
**Room A view**



**For Guest:**



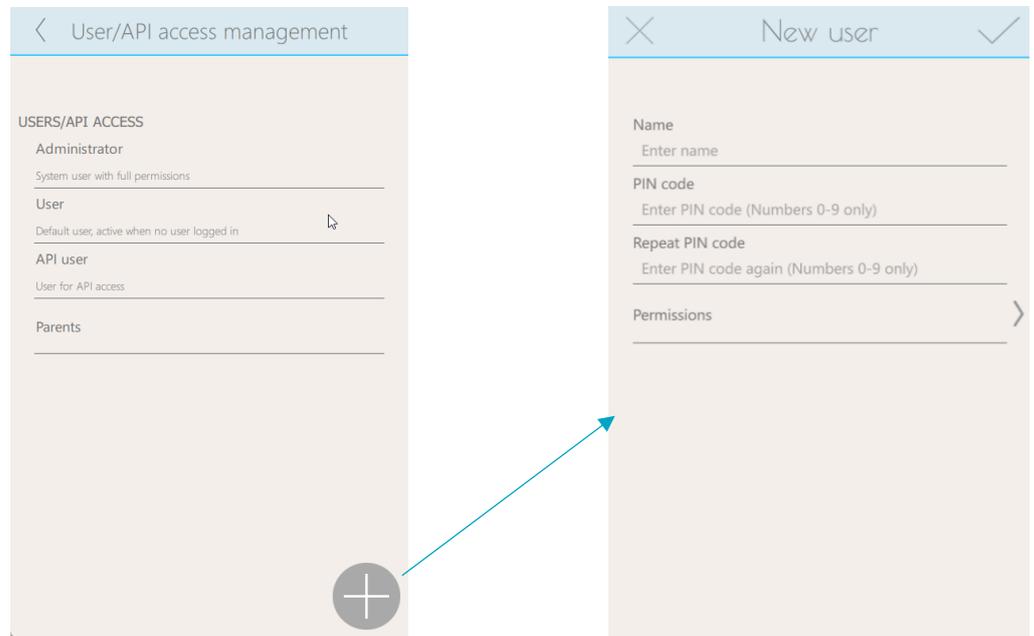
**For Parents:**



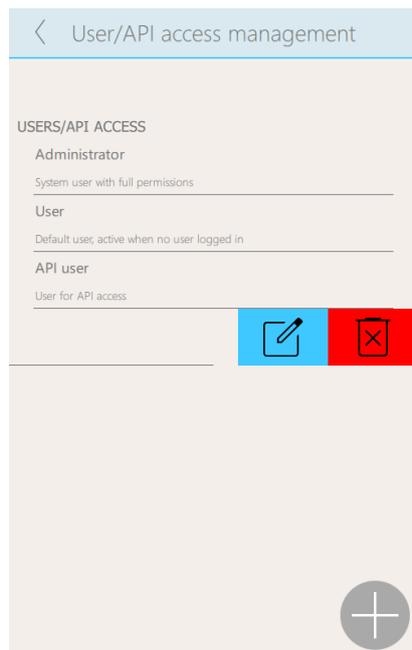
**3.2.7.2 ADDING NEW USERS**

- Go to *Configuration – User/API access management – Users/API access* as administrator and hit the plus icon in the lower right corner of the menu.

- Insert the name and the PIN code of the new user. The PIN code must be a numeric code of min. 4 and max. 8 digits. The permissions can be set from here also, but you may prefer to set (or change) them later going to *Configuration - User management - Permission matrix*.



### 3.2.7.3 EDITING OR DELETING A USER

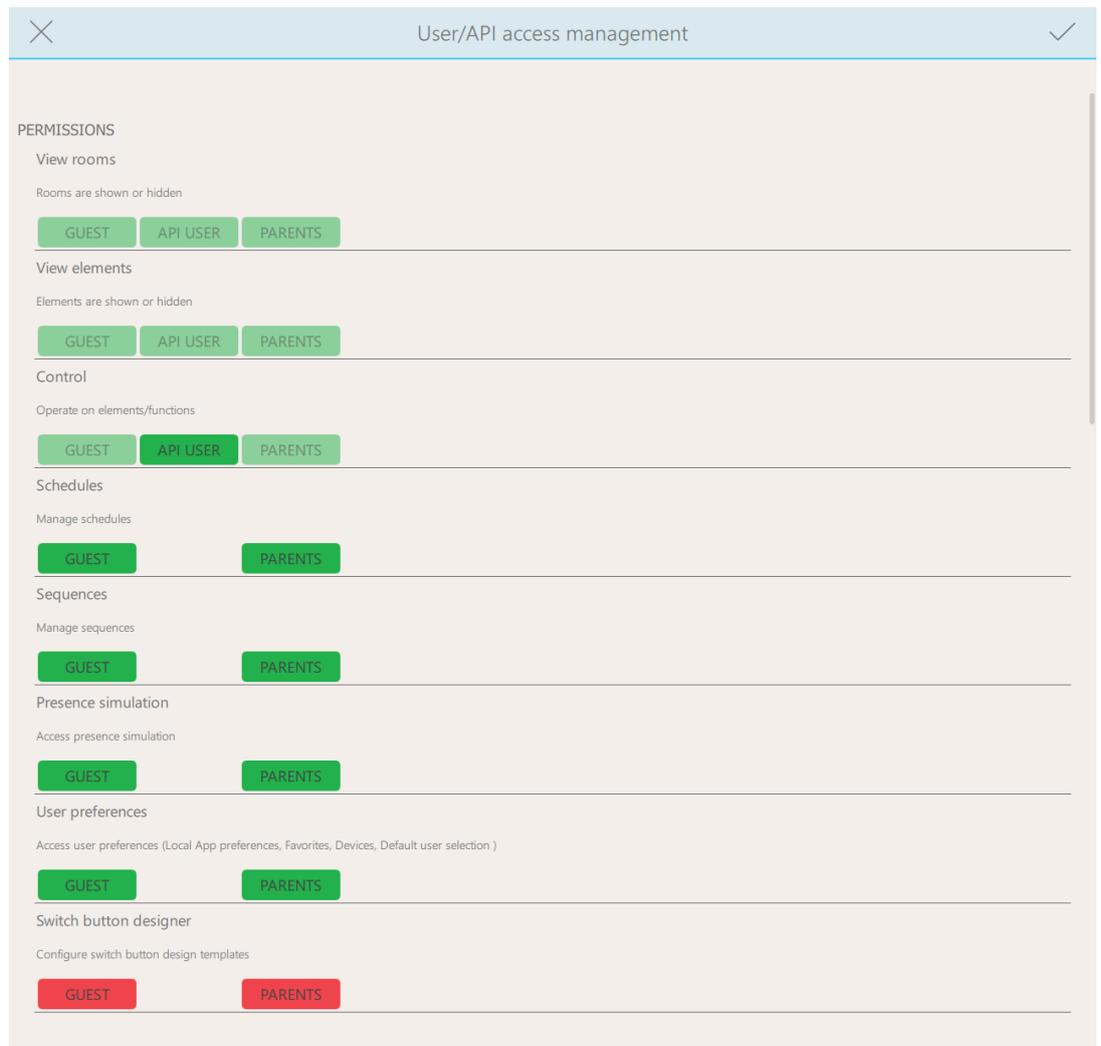


Go to *Configuration – User/API access management – Users/API access* as administrator and long click (or swipe left) the desired user. Choose the appearing button *EDIT* (to recall the same form shown to add a new user and edit its values) or *DELETE* to delete the user and remove any references to his rights throughout the project.

### 3.2.7.4 CONFIGURING THE DEFAULT ACCESS RIGHTS

Go to *Configuration - User/API access management - Permission matrix* as administrator.

A double click / tap on the title "Permission matrix" will expand the view to Fullscreen.



For each of the permissions, choose the desired right: granted rights will be green, denied rights will be red. Semi-transparent rights mean that they cannot be changed currently.

**Note:** if you applied a colour theme other than the classic light or dark themes, the buttons' colours will also be different. You might prefer first switching to the default light theme to better understand enabled and disabled rights and later switch back to the desired colour theme.

Whether a right may be changed or not, results from a set of dependencies. Some of the base permissions have obvious dependencies e.g. to operate something (*control* right) you need to see it (*view* right). Therefore, in this example, the view permission will be semi-transparent and you will not be able to disable it without first disabling the control right.

Check out this dependencies overview scheme:

1	VIEW ROOMS		USER PREFERENCES
2	VIEW ELEMENTS		
3	CONTROL		PRESENCE SIMULATION
4	SCHEDULES	SEQUENCES	SWITCH BUTTON DESIGNER

As you can see:

- *View rooms* and *User preferences* permissions have no dependencies
- *Control* and *Presence simulation* depend on the *View Elements* permission. This means they can only be enabled if the *View Elements* right is enabled first.
- *Schedules*, *Sequences* and *Switch Button Designer* permissions depend on the control permission. This means they can only be enabled if *Control* and *View Elements* rights are enabled already. At the same time, it means that a user with *Schedules*, *Sequences* or *Switch Button Designer* enabled can't be denied the *Control* or the *View* rights.

### 3.2.7.5 DEFAULT USER SELECTION

The default user is the one which:

- does not need to login because he is automatically logged in when you start VISION
- is not logged out after any timeout

The *Guest* user with his set of rights is playing the default user unless the latter has been changed otherwise..

**This role can now be applied to any other user and this choice can be different on every client device.** The steps to change the default user are:

1. go to *Configuration – User/API access management – Enable default user selection* and enable it (it will be enabled already if you are on a new project)
2. you need the target user created already to move on: if it isn't yet, create it going to *Configuration – User/API access management – Users/API access* (see [3.2.7.2](#) above)
3. Now in the main menu you will see the *Default user* entry: open it, choose the desired user and insert the corresponding PIN code. If there is another user assigned to this role already, first reset the assignment with its PIN code, then proceed as above.



**Note:** it's important to understand the difference between logged in users and the default user. A logged in user starts a temporary session which lasts 15 minutes. The default user is the one which will be active when no temporary session is running or to which VISION will jump back after such a session. Thus the default user's rights will be the ones usually applied to the visualisation and its elements. While this has always been this way, the possibility of selecting a custom default user makes it more important now to grasp this difference.

### 3.2.7.6 THE API USER – API ACCESS

VISION now provides an API which exposes its functions through MQTT. A new, fixed user named *API user* was added for this purpose. To enable it, go to Configuration – User/API access management – User/API access, edit it (long press, left swipe or right click as usual) and toggle the enable button. It will be disabled as default on new projects. For further details, please consult the dedicated [VISION API Manual](#).

## 3.2.8 PLUGINS

Some special, modular functions also using or related to the KNX bus can be found here.

### 3.2.8.1 THE ASTRONOMICAL CLOCK

This optional function allows to use geographical data combined with date and time data to calculate sun position and angle, sunset and sunrise. Then you can create logics which are triggered at the chosen time of the day e.g. “turn on the external lights 30 minutes after sunset”.

Set up the astronomical clock:

1. Go to Configuration – Plugins – Astronomical clock – Settings
2. Enable the astronomical clock
3. Input the desired coordinates using decimal degrees.
4. during programming, you can use sunrise and sunset as alternative to a fixed time.

### 3.2.8.2 DATE/TIME SYNCHRONIZATION

This function is useful if you need a reliable date and time data source on KNX and have it on your LAN, or the opposite.

Set up the astronomical clock:

1. Go to Configuration – Plugins – Date/time synchronization
2. Enable the date/time synchronization
3. Choose the desired direction (KNX IQ => bus or Bus => KNX IQ)
4. Choose the desired data points to involve in the synchronization
5. Choose the desired time interval. 0 means do not send.

### 3.2.8.3 PRESENCE SIMULATION

The presence simulation is based on a simple principle: record the commands sent over the KNX bus along with a time stamp. Then, when required, switch to playback mode and the last week will be replayed to simulate your presence (while nobody is there).

- On/Off elements
- Dimmers
- Shutters
- RGB
- Custom sliders

To set up the presence simulation:

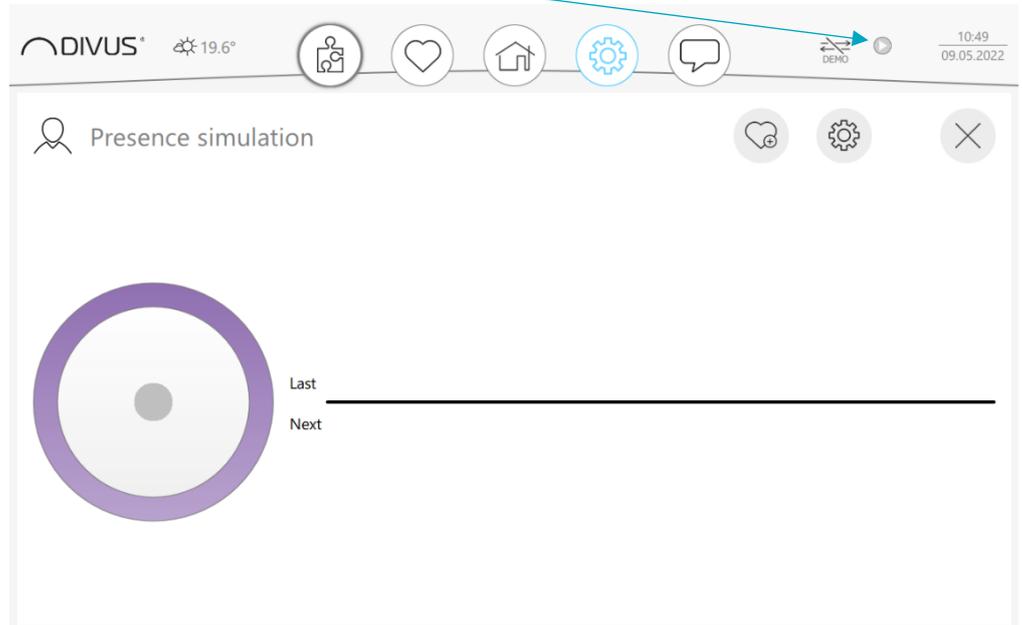
1. Go to Configuration – Plugins – Presence simulation
2. Enable the presence simulation
3. The Plugins icon will appear (if it was previously hidden) on the upper bar (under the More icon) as well as in the tree view



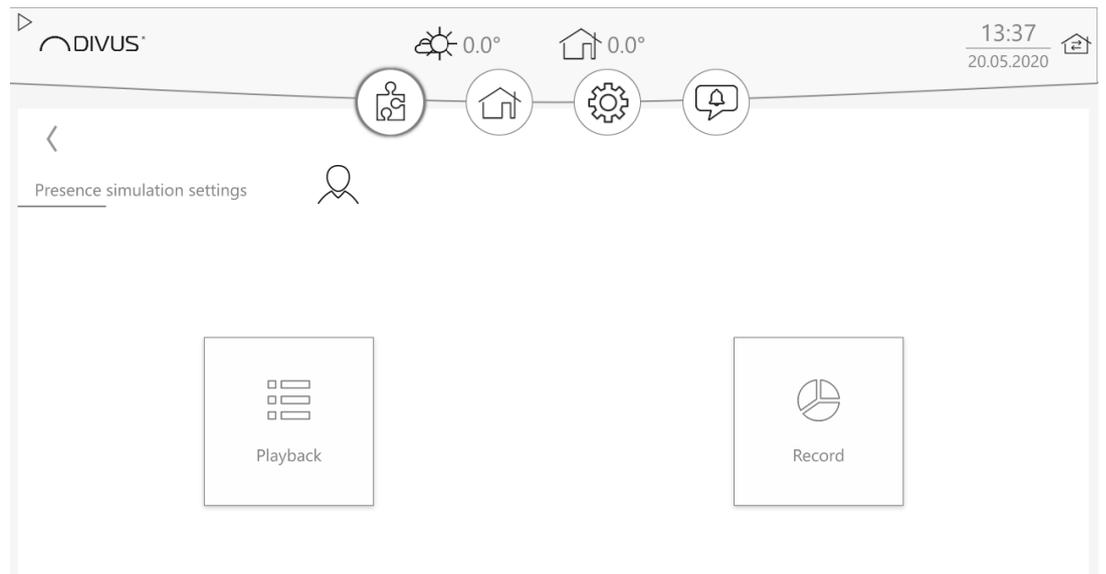
4. On the plugins page you will find the presence simulation function. It shows one simple button. When recording, a pulsating dot will appear in the top left corner of the page.



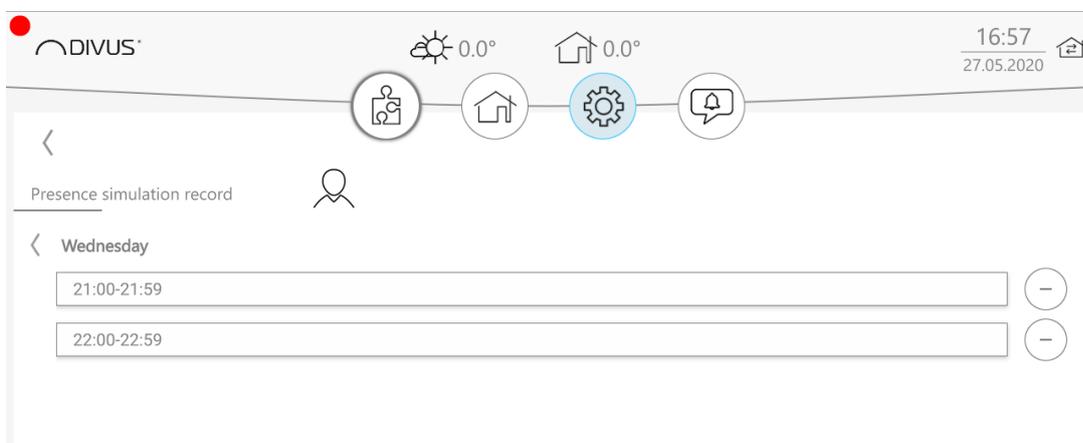
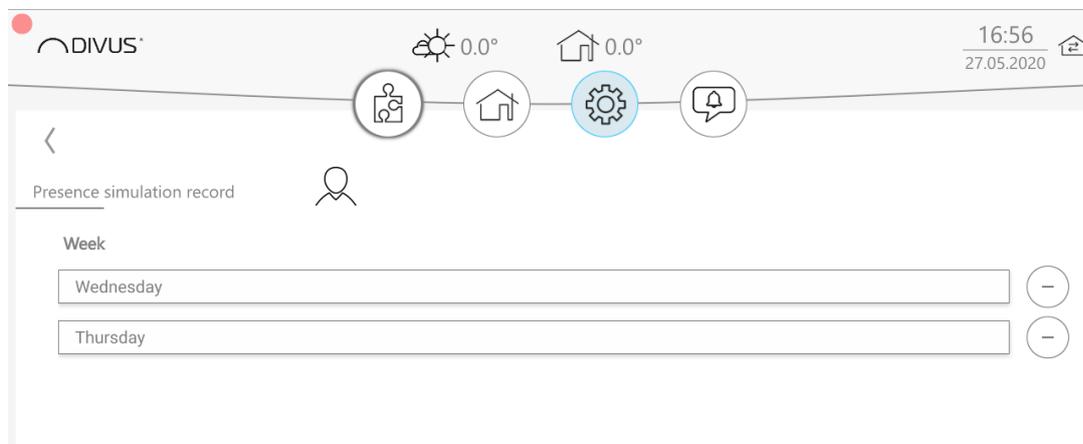
- If you push the button again, it will switch to playback mode. The icon in the corner will show a play symbol and the presence simulation button will also change:



There are of course also tools to configure what to record and what to play back. To reach them go to the detail view of the Presence simulation where you will see a gear wheel icon on the right. From there you reach the presence simulation settings page.



Under *Playback* you can define which items should be excluded/included during recording. In *Recording* you can view recordings and add, edit or remove individual commands or e.g. particular hours or days that you do not want to be played back.

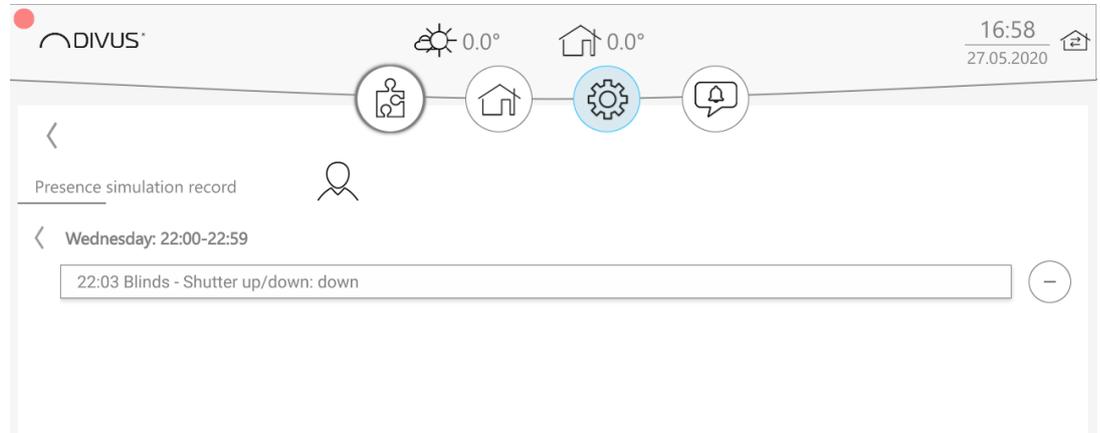


During Playback, if available, the last week of recorded commands is played back. If a day is not found, the system jumps to the previous day until it finds one actually containing commands. This means you could also use the recording of one single day and let it would be played back every day.

A function can be connected to the presence simulation (see chapter 2.8.2 *connection*). The function is called "Status synchronization" and, as the name suggests, allows you to have e.g. a light signal corresponding to the simulator status, or to control its status via an actuator, switching from recording to playback or vice versa.



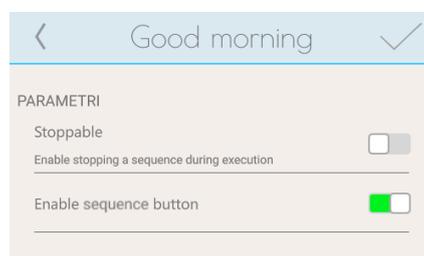
Attention: After each change on the data point level (changes in ETS, new import or individual additions) it is **the responsibility of the system integrator** to delete the current recording, if the presence simulator is active and recording, in order to prevent any playback from sending commands that have e.g. changed their effect in the meantime because they have been assigned to another KNX device.



### 3.2.8.4 SEQUENCE BUTTON

This function creates a connection between physical buttons on the KNX bus and sequences created in VISION in such a way that by pressing a button, the sequence matched to that button will be executed. This function requires:

- A 1 Byte (0-255) group address of the so-called *listener*, similar to the one for KNX scenes
- One or more KNX buttons that, when pressed, send a numerical value to the above address
- Enabling the function in the sequence parameters.



- Optionally, for keys equipped with RGB LEDs, a group address (which can also group several LEDs at ETS level) of type DPT 232 (3 bytes).

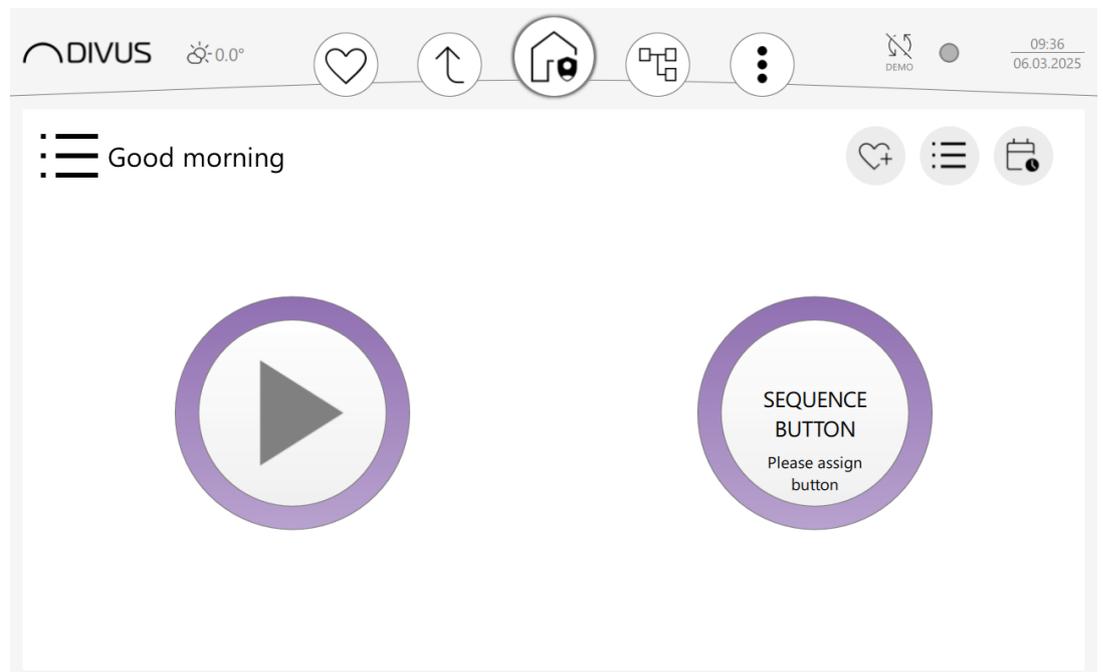
These are the settings available under *Configuration – Plugins – Sequence button*:

Setting	Description
<b>Enable sequence button</b>	To enable or disable the function (in general). Once this is enabled, every single sequence will show the option in its own settings.

<b>Timeout</b>	Time available to complete the pairing with a KNX button (default 120 s)
<b>Data point "listener"</b>	To be connected to the 1 Byte address, subtype 0-255
<b>Data point "LED RGB"</b>	To be connected optionally for keys equipped with RGB LEDs (DPT 232).
<b>LED RGB colour</b>	Hexadecimal value of the colour (default white #FFFFFF) in the web format i.e. the symbol "#" followed by 3 values between 00 and FF for the colours red, green and blue respectively. See e.g. <a href="#">this website</a> for help.

Once these general settings are in place and the feature is enabled, the procedure for matching a button to a VISION sequence is as follows:

1. Open the detail view of the sequence



2. Press the *sequence button* on the right
3. (timer starts)
4. If the function is available, one or more LEDs of the buttons that can be matched light up in the configured colour. The LEDs have only an orientation function for the user and do not distinguish between already assigned keys and "free" keys.
5. Within the time set with the timeout parameter (default 120 seconds), press one of the preconfigured keys for this function. At ETS level a separate value will have been programmed to be sent to the "listener" address when each key is pressed.

6. The "listener" that now receives a value by pressing the key, records the combination between the *received value* and the *currently open sequence* and saves it.
7. From now on, each press of the button will execute the matched sequence.

#### 3.2.8.5 SCHEDULES PANORAMA

This plugin creates a panoramic overview of all schedules. It can be accessed directly on the plugins page or from individual schedules via an additional *ALL* button, which is displayed next to the usual plus button in the bottom right-hand corner.

NEW

#### 3.2.8.6 KNX IP REMOTE

This new functionality enables remote access to the KNX bus from the ETS. The prerequisites are:

- Enabled cloud access
- A KNX/IP interface or router on the KNX bus
- The VISION application for Windows - paired with the KNX IQ (see chap. 3.3.2)
- The so-called IP tunnelling is used (KNX/IP router must be configured in this sense). The plugin can only be enabled and disabled from the device itself (KNX IQ).
- The VISION application on the Windows PC, where the ETS is also running, must be running while accessing the bus and the KNX IP remote plug-in must of course also be enabled here (under plugins).

Once these requirements have been met, the device (interface or router) is listed in the ETS and - if you select it - you can work normally on the KNX bus.



**Attention:** In ETS mode, there is a special case if you want to program the KNX IQ itself via remote access. In this situation, the following steps must be carried out:

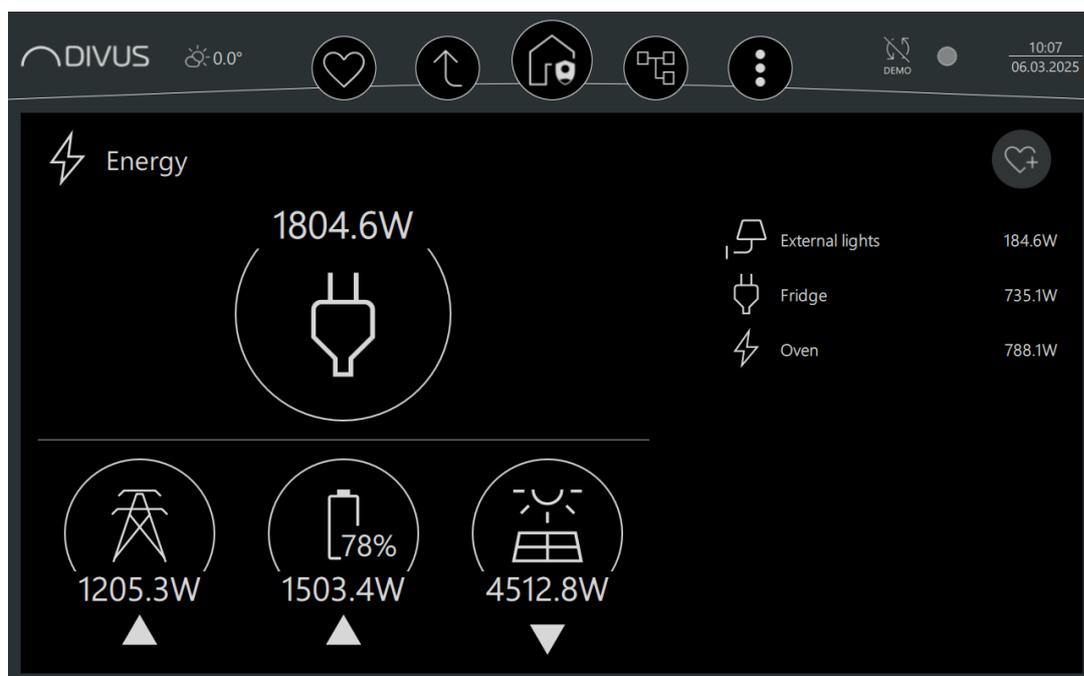
1. disconnect the VISION application for Windows from the KNX IQ by setting the device to *offline programming mode* and make the needed changes to the project.
2. save / export the project as an ETSKIQ file
3. change the device again by deactivating the *offline programming mode* ("going online"). The local project is temporarily overwritten with the old version available on the KNX IQ.
4. enable the KNX IP Remote plugin and select the interface of the system for the corresponding bus access in the ETS
5. import the just exported project into the ETS (via DCA), add the missing links with group addresses and/or make other changes.
6. transfer the changes from the ETS back to the KNX IQ.
7. finally, you receive the new, revised version of the VISION project also on the PC.

#### 3.2.8.7 ENERGY

The energy plugin is used to control the electrical energy flows of a project, namely:

- Total consumption
- Power grid
- Photovoltaic / energy production
- Battery (optionally with battery level)

In addition, individual loads that have their own energy meter can (optionally) be added.



The arrows below the circles for power grid, battery and PV show the direction of the respective flow. Arrow up means feeding in (grid, battery), arrow down means energy is supplied to the system.

If you do not receive the values with the correct sign, you can use the scaling factor -1 under the corresponding parameters. You can also use this to recalculate values between W and kW in order to obtain a standardised display.

Individual loads can be configured with a suitable symbol and name.

### 3.2.9 CLOUD (MENU ENTRY ONLY ON KNX IQ ITSELF)

The cloud is, simply put, a way to access your KNX IQ's visualisation from wherever you are, using a client device.

To use this access type, there is a procedure involving several steps:

1. Go to **cloud.divus.eu** and create a new account if you haven't yet.
2. Check the confirmation email you'll receive and click the confirmation link to activate your account.
3. Then go to your DIVUS KNX IQ and under Configuration - Cloud, insert your cloud username and password.

4. Now, when you set up a connection between a mobile device (or your PC) and the KNX IQ, you can choose cloud as connection mode. See chapter 3.3 for further details about pairing.

The *Installation ID* will be assigned automatically to your device. As *device identification*, you may assign a label to the KNX IQ to recognize it from the client apps.

### 3.2.10 IMPORT/EXPORT

This is where the project itself is managed. Exporting corresponds to saving the project in a file. Importing corresponds to reading a saved project, whereby the current project is replaced. Resetting returns the project configuration to its initial status, i.e. all changes are deleted and a new project can be created.

#### 3.2.10.1 EXPORT

This function enables you to select the storage location for the project using a file browser and then execute the saving.

#### 3.2.10.2 IMPORT

This function allows to select and read an existing project backup in form of a file with *.kiq* extension. This replaces/overwrites the current project.

In newer versions, there is a distinction between *.freekiq* and *.etskiq* files according to the different mode chosen (Free mode or ETS mode). The backups generated by one mode can't be switched to the other mode.

#### 3.2.10.3 RESET

If you want to start with a new project, use this function to reset the current project to the factory settings or delete it completely.

### 3.2.11 SYSTEM – UPDATE

Version 4.23 introduces the possibility to trigger the update of the KNX IQ from a client device. This may be needed sometimes, when:

- The client device's VISION version was manually or automatically updated while the KNX IQ was not
- The customer is not at home and can't access his home automation anymore because of the version differences which make client and server software incompatible.



**Note:** While on client devices the client app is made available on its own (through app stores or as downloadable file), on the KNX IQ the client software is bound to the server software and to the whole system and thus the device gets a firmware update which may contain changes on several levels: operating system and features, VISION app, VISION server software, the other apps available on the KNX IQ.

#### 3.2.11.1 SETTINGS

The setting *Enable in-app system update* allows to disable/enable the feature to update the KNX IQ from the current client device.

### 3.2.11.2 KNX IQ SYSTEM UPDATE

This menu point will only be available if the corresponding setting (see above) will be enabled.



Pushing / tapping *Update* will obviously start the update procedure if the pre-requisites are met and if a newer KNX IQ firmware version is found online.

---

## 3.3 Pairing - KNX IQ SIDE

---

Here you can manage client devices and configure the corresponding settings. On external devices (other than the KNX IQ) you will find Devices in this position. For details see chapter [3.3.3](#)

Before being able to access the display from a device other than the KNX IQ itself - either to program it or to control it - it is necessary to proceed with the pairing, during which the external device is authorised to access the KNX IQ. From a mobile device or from a PC I can configure access to one or more KNX IQ by performing the pairing for each of them. I can then choose which device (and its project) to connect with from the menu. See chap. [3.3.3](#) for more on that.



Up to a maximum of 20 client devices may be paired with one single DIVUS KNX IQ. More precisely, this is the distinction for counting client devices:

Device type	Maximal number of devices
DIVUS KNX IQ	50 devices (any combination)
DIVUS CTP08	

DIVUS CTP04  
DIVUS TOUCHZONE

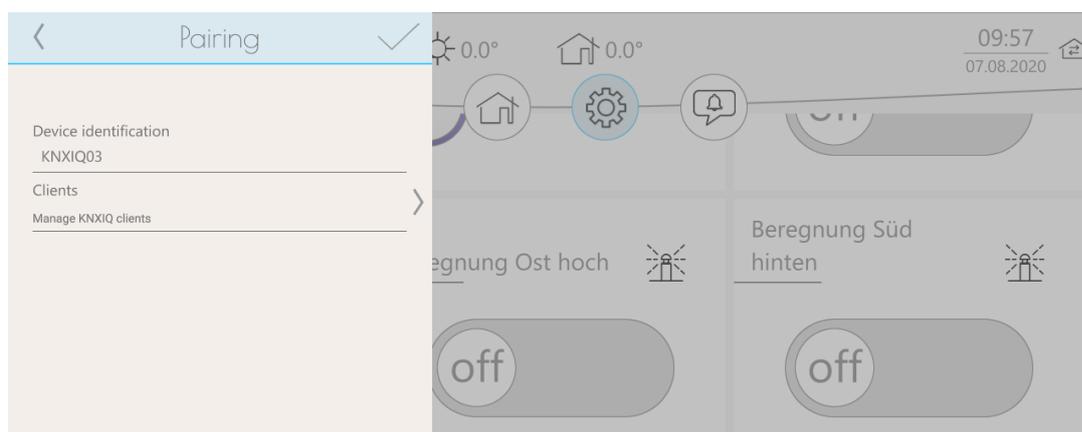
---

Mobile devices (iOS, Android)	10 devices (any combination)
PC (Windows 64Bit)	

### 3.3.1 PAIRING PROCEDURE – KNX IQ SIDE

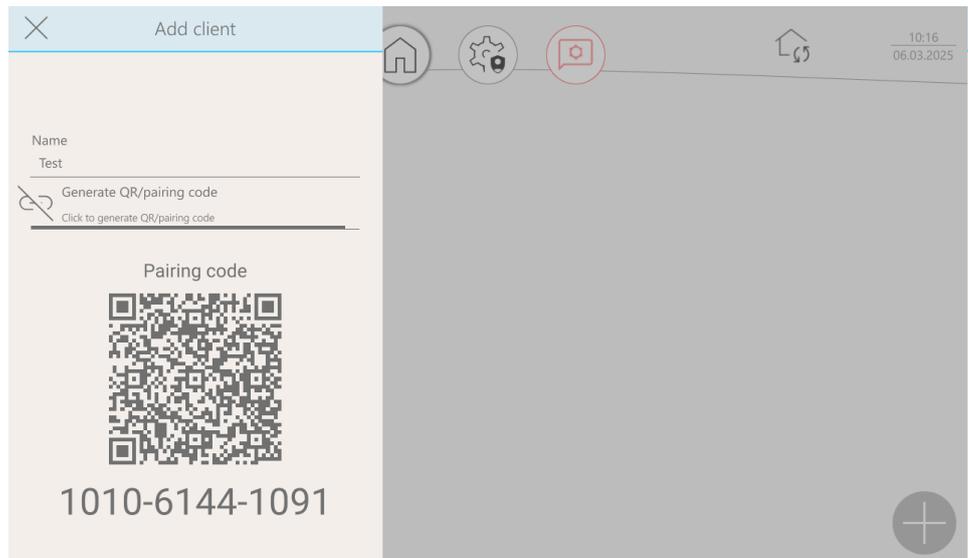
The clients are managed on the device that plays the server from this point of view. The procedure is this:

1. As administrator, press PAIRING in the menu.
2. Enter an identification name for the device (for the clients to identify it, if not done already).



3. Open the list of client devices. It'll be empty at first.
4. Create a new device by pressing the lower plus button.

5. Type in a name and then generate a QR/pairing code.



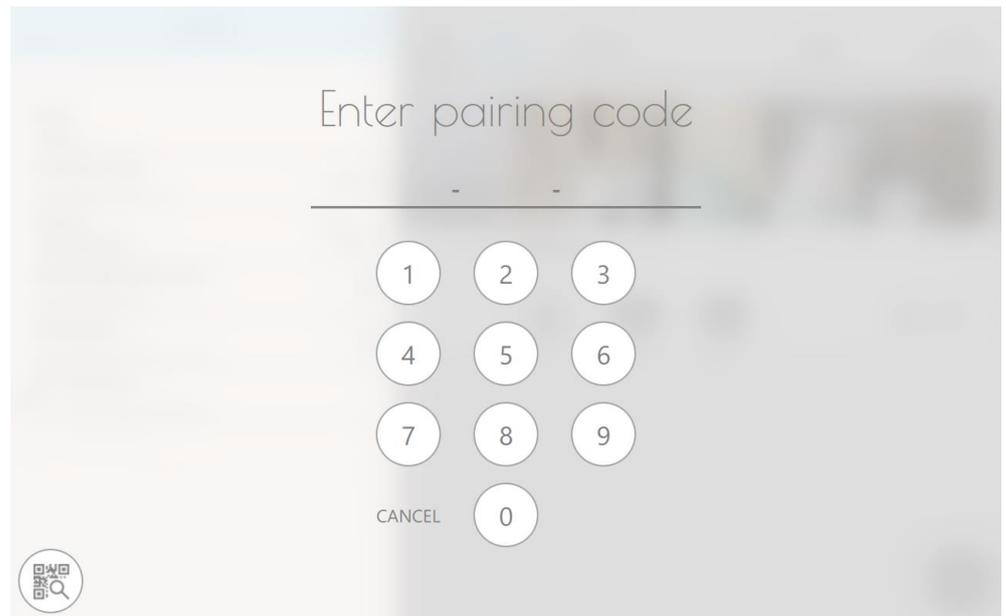
6. By default, the QR code that can be read by a mobile device via camera is displayed. If you do not have a camera, you can write down the numerical code and enter it directly on the target device. Both the QR code and the numerical code have a temporary validity shown through a bar which shrinks. If they are not used within 2 minutes from generation, the procedure is interrupted.

### 3.3.2 PAIRING PROCEDURE - CLIENT SIDE

You can configure access to one or more devices from a client. Clients include PCs through the VISION application for Windows as well as mobile devices through their respective DIVUS VISION application for iOS or Android.

How to connect a client device to the DIVUS KNX IQ:

1. As administrator (or as user with *user preferences* rights), click/press on Devices in the menu
2. Choose the device you want to pair to by keeping it clicked/pushed, then click/push the EDIT button which appears. If the desired device must be created yet, go to chapter [3.3.3](#)
3. Finally, click on "**Start pairing**" and enter the code that you first generated on the device (see [3.3.1](#), item 6). Wait for the confirmation of the successful pairing.



Alternatively, pairing can also be done via QR code: if your client device has a camera, press the QR code button in the lower left corner and read it in.

If the pairing is successful, you will receive a corresponding message. After this one-time procedure, the client device is authorised to access the visualisation of the KNX IQ - unless the client is explicitly deleted from the list of client devices.

Starting from version 0.17.x (KNX IQ FW 4.23), VISION can also be paired over the cloud connection. The prerequisite for this is that the device itself has been connected to the DIVUS cloud in advance. See chap. 3.2.9 for that.

### 3.3.3 DEVICES (CLIENT SIDE ONLY)

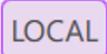
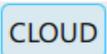
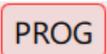
In place of *Pairing*, you will find *Devices* in the menu on client devices. Here you create, configure and select the KNX IQ(s) to which you can then connect.

#### 3.3.3.1 ADDING A NEW DEVICE TO A CLIENT SYSTEM

1. as *administrator* click/press on Devices in the menu
2. click/press the "+" button at the bottom right of the menu
3. enter the (IP) **Address** of the device via the search function or manually
4. if configured manually, also give the device a **name** - otherwise the name will be transmitted automatically via the search function.
5. the **serial number** is transmitted by the search function and cannot be entered manually.
6. **Offline programming mode**: Activate this field if you intend to work on the project without connection to the device at the beginning. This field can be switched over later. See also chapter 1.1.3.

7. **Default device:** Activate this field if you want your client application to start directly with this device / configuration.
8. **Connection mode:** Choose between "Cloud" and "Local" here. See also chapter 1.1.3.
9. finally click on "**Start pairing**" and enter the code generated on the device (see 3.3.1, point 6). Wait for the confirmation of successful pairing.
10. When at least one device has been created, you can select it in the client application to work on it or control the automation system.

### 3.3.4 LEGEND OF DEVICE LABELS

Device label	Meaning
	Changes are transferred directly to the device, operation of the visualization is also possible.
	Device selected automatically at startup.
	Local network connection (LAN)
	Connected over the cloud
	Offline programming mode: not connected. Changes remain stored on the client device and can be transferred afterwards. Commands are not routed via the client device to the KNX IQ in this mode. This mode plays a particularly important role for the ETS mode: it is necessary to switch the client device to this mode in order to make any changes to the project.
	ETS Mode chosen for the project. See chapter 2.1
	Free Mode chosen for the project. See chapter 2.1

## 3.4 LOCAL APP PREFERENCES

Application settings such as language, logging and demo mode can be configured here.

### 3.4.1 LANGUAGE

The languages available are English, German and Italian, Spanish and Greek. "Auto" tries to select the language used by the client's operating system. If that is not available, English will be used.

On the KNX IQ itself this option is not shown: the language is automatically the one set in the operating system via the general settings of the DIVUS Launcher.

### 3.4.2 DESIGN

Here you can choose between the dark, the light and the new colour scheme. If you choose Colour, another menu point appears below to choose the desired colour.

### 3.4.3 COLOUR

Only visible if "Colour" has been selected under Design (see previous point). Shows the palette of available colours that can be selected as the background colour. The same palette is also available in the switch button designer (see chapter 4) to prepare the templates for CTP04 devices.

The design colour can therefore be personalised as required on individual client devices.

### 3.4.4 COLOUR STYLE

The colour style refers to effects placed on top of the rooms' background pictures. The options are:

- Normal (no effects on pictures)
- Black&White
- Black&White extreme (high contrast)
- Green (adds a green overlay)
- Blue (adds a blue overlay)
- Yellow (adds a yellow overlay)

### 3.4.5 GRID LAYOUT

You can choose between the classic design (with 6 tiles per side) and the slim design (12 tiles). This configuration applies to the entire project and is applied to all rooms. The option "Auto" enables a mixed configuration: this design choice can be made in the settings of the individual rooms. The default layout choice for new rooms can also be set under *Configuration - Visualisation - Design – Grid Layout*.

### 3.4.6 ORIENTATION

Choose between landscape and portrait orientation.

### 3.4.7 REMEMBER WINDOW SIZE AND POSITION

Option for Windows devices (e.g. DIVUS SUPERIO) to always have the window opened with the same position and size.

### 3.4.8 LOG

Application-specific logging can be activated here. The log file can then be deleted if necessary or sent to DIVUS support.



**Attention:** The log function should only be activated if necessary and preferably in consultation with our support department and should be deactivated after a problem has been solved, as otherwise it loads the storage medium of the KNX IQ with write operations which may impair its functionality in the long term.

### 3.4.9 DEMO MODE

For demonstration purposes, the corresponding mode can be activated (/deactivated), which shows prefabricated rooms including elements. The selection has been extended to several projects (home, company, medical practice, restaurant, school, villa) and modes and is therefore particularly suitable for demonstrating the use of KNX IQ in a corresponding environment.

Your current project is retained when you switch to demo mode, i.e. as soon as you exit demo mode, you are taken back to the current project.

#### 3.4.9.1 FREE MODE

This demo mode shows a realistic visualisation, as can be realised in Free Mode. Also see chapter [2.1](#)

#### 3.4.9.2 ETS MODE

This demo mode shows a realistic visualisation as it can be realised in ETS mode - including the corresponding limitations of the programming method. Also see chapter [2.1](#)

### 3.4.10 SOFTWARE UPDATE HINT

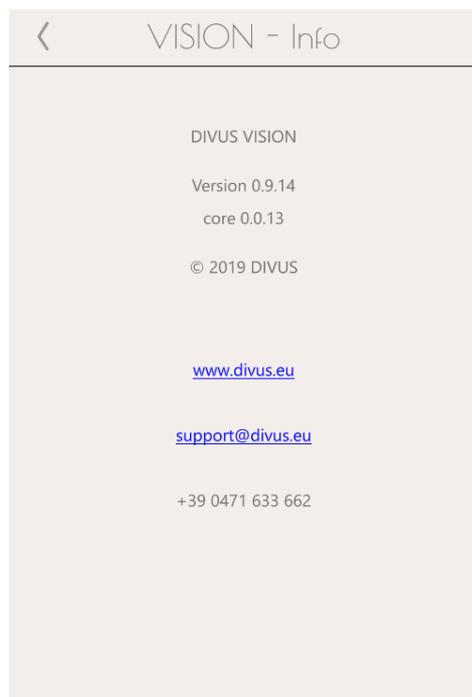
This setting enables or disables the notification about updating the device. If enabled, it will appear on every application start.

---

## 3.5 ABOUT VISION

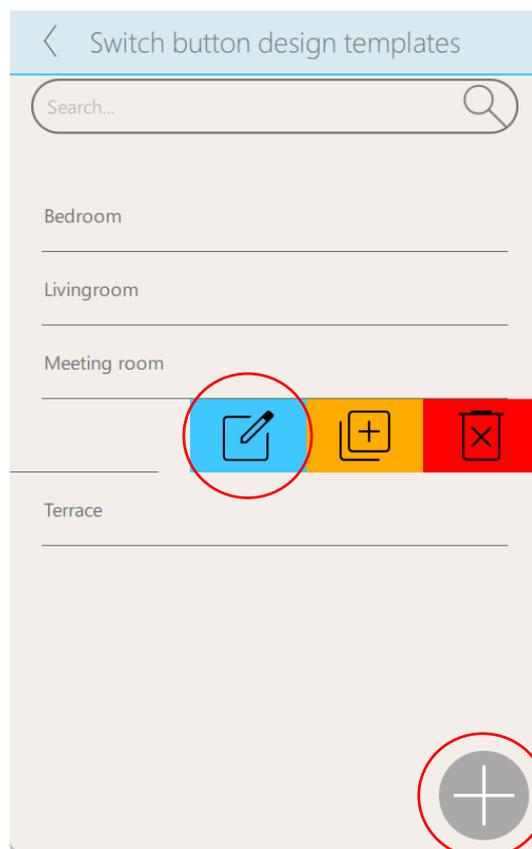
---

The current version number of the DIVUS VISION application can be read out here. Moreover, you will also find the contact details to get in touch with us.



# 4 The switch button designer

## 4.1 INTRODUCTION



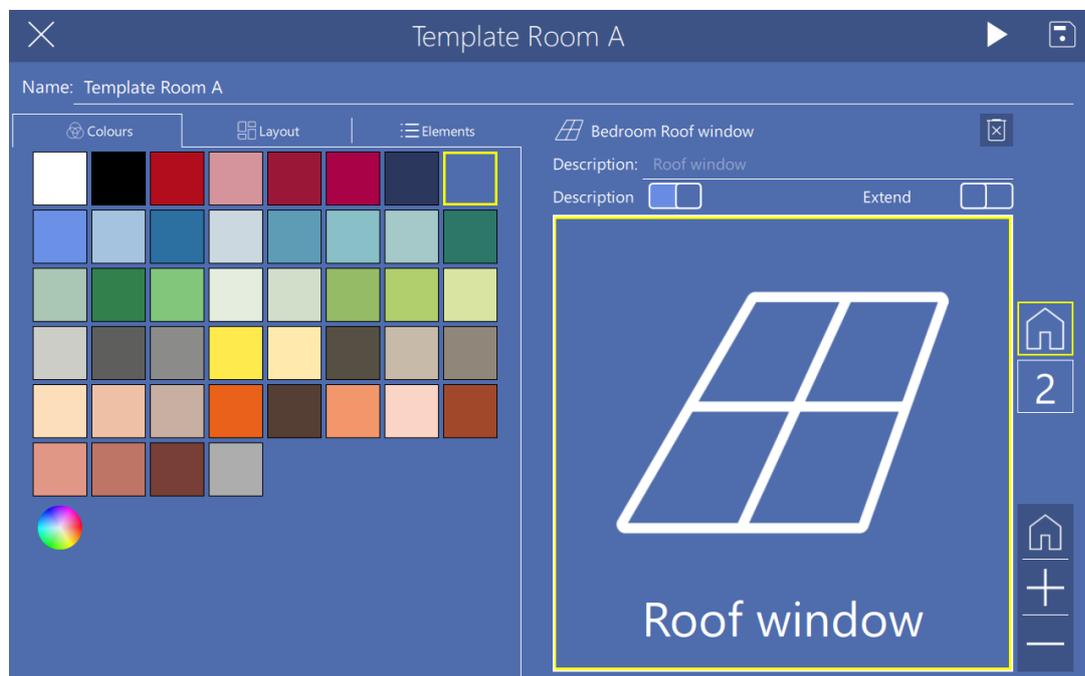
The configurator is used to create or edit a so-called switch button template for DIVUS CTP04 devices. It can be accessed via the configuration menu (Configuration - Visualisation - Switch button templates) by editing an existing template (right-click from the PC, otherwise hold down or swipe to the left and then select the edit icon) or creating a new one (plus button at the bottom right of the menu window).

A **switch button template** is basically the entire graphical user interface, which can then be adopted by one or more DIVUS CTP04 devices, which must be linked as clients, and which can then be used to quickly operate one or more on/off switches using a simplified design.

In practical terms, this means that the templates are created on the KNX IQ, which I will then distribute to the CTP04 devices, which as room controllers need quick access to a small subset of the elements that are available in VISION. Precisely those that enable control of the room in which they are used. It also means that a switch button template is a special VISION design which, like all other client devices, first sends the commands to the VISION server software of the KNX IQ, where they are then converted into KNX commands that reach the respective target device.

Up to 10 switch button templates with a maximum of 6 pages each (with a maximum of 9 elements each) can be created on a KNX IQ, which then also corresponds to the maximum number of 10 CTP04 client devices to which I can distribute the templates.

Several CTP04s can use different templates or all use the same template, depending on requirements.



## 4.2 THE DESIGNER WINDOW

The window is divided horizontally into 2 main areas. On the left-hand area we find:

- The input field for the name of the template
- The 3 tabs for selecting the colours, the layout and the elements

In the right-hand area we find:

- The input field for the **Description** (this can replace the current name of the element if desired)
- The toggle buttons for **Description** and **Advanced** (do not show/hide). The **Advanced** button is only enabled for certain element types. More details in the [CTP04 manual](#).
- The **trash bin icon** to remove the currently selected element from the page (top right)
- In the centre area is the preview of the currently edited page. To the right of this, as soon as more than one page has been created, there is a navigation menu with the house symbol and other square boxes with numbers from 2 to a maximum of 6, as a maximum of 6 pages can be created per template.

- There are 3 further buttons in the bottom right-hand corner:
  - Set homepage (sets the current page as homepage)
  - Add a new page (enabled as long as there are less than 6 pages)
  - Delete the current page

Finally, there are 2 buttons in the top right-hand corner:

- the **play** icon for switching between normal preview and simulation mode, where the entire template appears exactly as it will look and behave on the CTP04. When simulation mode is active, the play icon becomes a stop icon to end the test.
- the **floppy disk** icon for saving the template. If the template that is currently being edited has already been assigned to one or more devices, any changes will be immediately visible on their screens when saving.

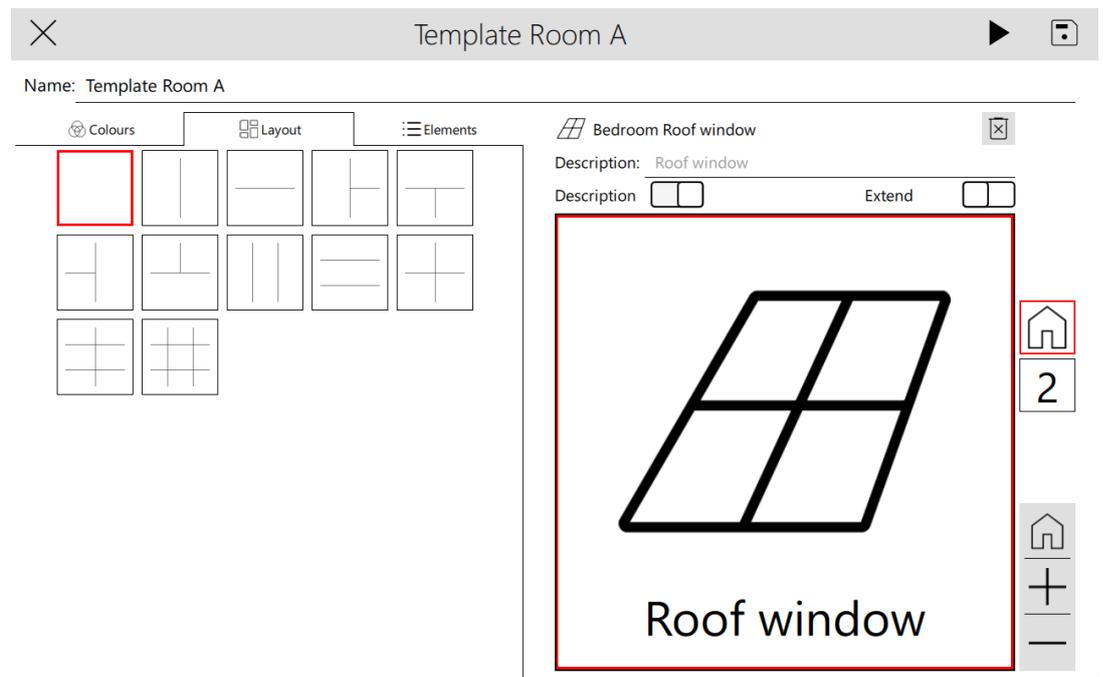
#### 4.2.1 COLOURS

The Colours tab contains many predefined colours that can be selected as background colours for the template. If you cannot find a satisfactory colour there, you can CHOOSE THE SMALL COLOUR WHEEL BELOW AND enter the hex code of the desired colour directly, according to the RGB colour principle (a 2-digit hexadecimal value between 0 and 255 or 00 and FF for the colours red, green and blue respectively) OR SET IT USING THE SLIDERS and confirm by clicking the OK button.

The foreground colour (black or white) and the shaded version of the CHOSEN colour (e.g. when the switches are pressed) are calculated automatically and cannot be changed manually.

The variety of colours introduced by the configurator or the CTP04 can also be transferred to the "normal" VISION designs. See chapter 3.4.2.

### 4.2.2 LAYOUT



The second tab shows all available layouts for switches, where both the number and the alignment of the elements can be selected. For more details, see the [CTP04 manual](#).

If you select a different layout, the new layout is shown directly in the preview on the right.

If required, existing elements can be moved from one button to another using drag and drop.

### 4.2.3 ELEMENTS

The third tab contains a list of all available elements with their icons and names, as well as a search field to find the desired element more quickly.

As soon as you have found the desired element, drag it from the list and drop it on the button to which you want to assign it.

Depending on the selected button layout, 1 to 9 elements can be placed on one page.

---

## 4.3 PAGES

---

Use the plus button at the bottom right to create new pages.

As long as there is only one page...

- ...this is automatically the homepage

- ...no page menu is displayed in the centre right

As soon as there are 2 or more pages...

- ...one of them is predefined as the homepage. To change the homepage, select the desired page and press the round HOUSE button at the bottom right. The page menu on the right will change accordingly.
- ...the individual pages are shown in the preview with numbers in square boxes and one of these with the little house symbol. When transferring THE TEMPLATE to a CTP04, only small circles in place of the numbered boxes and the little house for the homepage remain.
- ...pages can be rearranged vertically as required using drag and drop. To do this, drag one of the square boxes (with a number or THE HOUSE ICON) to the desired position and drop it there.
- ...you can delete pages you no longer want by clicking on the MINUS BUTTON at the bottom right.
- ...you scroll (i.e. swipe with your finger) vertically up or down on the CTP04 to move from one page to the ones before or after.
- The current page is shown with a filled circle or the filled house icon on the CTP04.

#### 4.3.1 HOMEPAGE

The homepage or default page is the page that you should normally find when you stand in front of the device and want to operate it. Of course, only one of the max. 6 pages can be defined as the homepage. The homepage is shown on the CTP04, unlike the other pages marked by small circles, by a house symbol in the page menu on the right if there are several pages.

If you leave the visualisation on one of the other pages, it returns to the homepage after a timeout of 60 seconds with a pleasant animation.

To reach all pages by the shortest possible route, the homepage should be placed in the centre of the other pages - this halves the maximum distance to reach the furthest page from there.

# 5 Troubleshooting

---

## 5.1 Changing the physical address of a TP-KNX driver (FM)

---

To change the predefined physical address of a KNX driver, proceed as follows:

1. Logged on as administrator, go to *Configuration - Driver - KNX* to reach the driver list.
2. Select the desired driver and keep it pushed
3. Push EDIT
4. Repeat the address scan
5. Edit the address which results from the scan by keeping it pressed and then pushing *EDIT*.
6. Enter the desired physical address
7. Save with the "✓" icon

## 5.2 CHANGE KNX DRIVER (CHANGE FROM TP TO IP OR VICE VERSA) (FM)

---

If you transfer a project from a KNX IQ TP to a KNX IQ IP (or vice versa), you must change the driver configuration. It is important **not to delete the current driver and create a new one, but to edit the existing one!** This updates all data points that were previously configured for the other, no longer existing driver and you do not have to change them individually.

## 5.3 TRANSFER EDITED PROJECT BETWEEN CLIENT DEVICE AND KNX IQ

---

If you have finished editing in offline mode and want to transfer the project to the KNX IQ, proceed as follows:

1. Log on to the client device as administrator.
2. To be safe, export the current project to a file.
3. Go to *Devices* in the menu and select the device for which you want to transfer the project.
4. Press and hold the row of the device, then press EDIT.
5. Deactivate the offline mode in the device form and check that the other entries are (still) correct.

6. Save.
7. Now the 2 devices will try to connect.
8. If the connection is successful, an automatic control of the respective projects follows. The possible cases are these:
  - A. Client device has local project data. In this case, a message appears indicating the direction in which synchronization is to be performed. In our case we choose to transfer the project from the client device to the KNX IQ device. It would still be possible to overwrite the local project with that of the KNX IQ.
  - B. Client device has no project data. In this case, the project is transferred from KNX IQ to the client device.

# 6 Appendix

---

## 1.2 RELEASE NOTES

---

### VERSION 4.27

#### NEWS:

- New concept of levels/rooms and tree view-based navigation
- New air conditioning (AC) element
- New energy management plugin
- Remote access to KNX bus (KNX IP remote plugin)
- Function for copying or moving elements to a chosen room
- New data point (virtual driver)

### VERSION 4.25

#### NEWS:

- added support for relative dimming (4 bits)
- added support for DPT 16, 24\*, 28\*
- new colour themes / designs
- new switch button designer with templates
- new customizable default user
- new API access for external systems

(\* only in FM)



