Ref. no.: SV-SERVER-01
SV-SERVER-INT

Product Documentation

Product Documentation

Smart Visu Server

SV-SERVER-01
SV-SERVER-INT

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Version: 08.09.2021

1. Commissioning the Smart Visu Server

Safety instructions

WARNING
Failure to comply with these instructions may result in damage to the device, fire or other hazards. These instructions are a component part of the product and must remain with the end customer. Electrical equipment must only be installed and mounted by qualified electricians. This product is only intended for use in dry rooms.

1.1. Correct use

- Visualisation and operation of KNX systems via terminals with HTML5-compatible browsers (Firefox, Chrome, Safari, Opera) or app (iOS, Android), e.g. Smart Control (Ref.-No.: SC 5 SW, SC 7.1 .., SC 10.1, SC 15.1, SC 19.1),smartphone, tablet, laptop, PC etc.
- Visualisation and operation of Philips Hue systems
- Operation in local IP networks, which support DHCP (Dynamic Host Configuration Protocol), or with fixed IP address (IPv4)
- Interior operation

1.2. Product characteristics

- Web visualisation of the KNX system for status display and operation (SV-Home)
- Access to the SV-Home web visualisation with max. 10 different clients (recommended)
- Integrated web-based start-up tool (SV-Control)
- Simple creation of a preconfigured operating desktop, optimised for applications at home and in small commercial buildings
- Graphical operating elements, selection of icons from supplied libraries
- Import of group addresses (three-level) via OPC import (ETS3, ETS4, ETS5)
- Manual input of group addresses possible
- 24 areas
- 240 dynamic functions (max. 1200 data points)
    - Switch
    - Dimming
    - Tunable White
    - Coloured light
    - Stairway function
    - Threshold
    - Value transmitter
    - Multimedia
    - Motor
    - Climate
    - Status / Value
    - Website
    - Webcam
    - State logic
    - Email notification
    - Weather
    - Diagramms
- 25 actions groups
- 250 configurable actions (max. 16 functions per action)
    - User-defined
    - Point in time
    - Event
    - Astro
- Connection to the KNX-BUS via KNX-IP router or KNX-IP interface (Ref.-No. IPR 200 REG, IPR 300 SREG) (Ref.-No. IPS 200 REG, IPS 300 SREG)
- Integration of Philips Hue systems in the KNX system
- Connection to Philips Hue via the Philips Hue Bridge
- Integration of SONOS speakers in the KNX installation
- Integration of Amazon Alexa service via a MyJUNG account
- Integration of Google Home service via a MyJUNG account
- Secure remote access via a MyJUNG account
- Updateable and upgradeable

1.3. Scope of delivery

- Smart Visu Server including software
- Retaining bracket for wall or support rail mounting
- Operating instructions
- Power supply unit with plug
    - SV-SERVER: EU power supply unit (Euro plug)
    - SV-SERVER-01: Power supply unit, including adapter for BS (United Kingdom), EU (Euro plug) and CN (China)
    - SV-SERVER-INT: Power supply unit, including adapter for BS (United Kingdom), EU (Euro plug) and CN (China)

Legal information

Philips and Hue are registered trademarks of Koninklijke Philips Electronics NV.

This product contains Open Source software components, which are subject to the conditions of Copyright and/or the licence agreements of third parties. The licence information is located on the Smart Visu Server.

1.4. Technical data

Rated voltage:	DC 12 V SELV
Power consumption:	Typ. 3 W, max. 7 W
Ambient temperature:	–5 ... +45 °C
Storage/transport temperature:	–25 ... +70 °C
LAN:	RJ45 socket (10/100 Mbit/s Fast Ethernet) CAT5
USB:	USB 2.0 Host
Dimensions:	124 x 72 x 31 mm (without retaining unit)
	124 x 92 x 40 mm (with retaining unit)
Power supply unit with plug:	
Primary voltage:	AC 100 ... 240 V ~
Mains frequency:	50 / 60 Hz
Rated current:	Max. 1 A
Secondary voltage:	DC 12 V SELV
Protection class:	II
Length of connecting cable:	1.5 m
Plug contact:	SV-SERVER: EU
	SV-SERVER-INT: BS,EU,CN

CAUTION
This device contains a battery (CR1632, 0.4 Wh) to back up the saved data. Do not dispose of discharged batteries with domestic waste. During transport, comply with the special regulations of the ADR and IATA.

1.5. Structure of the device, function

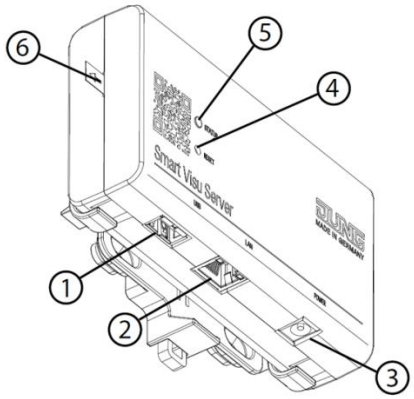


Figure 1: Structure of the Smart Visu Server

(1) USB interface	For software updates and data backup
(2) Ethernet interface	For connection to the local network
(3) Power supply	Only the power supply unit from the scope of delivery
(4) Reset button	Reset and update
(5) Status LED	Displays the current status of the server
(6) Discharge protection	Remove for operation

The status LED (5) displays the various operating states.

Colour of the status LED	Function
Flashing yellow	Server booting
Flashing red	Error pending, server stopping
Continuous dim yellow	Server and network booting
Continuous bright yellow	Server gets IP address
Continuous blue	Server ready, DHCP active
Continuous green	Server ready, static network address
Flashing blue/magenta	Update operation, DHCP active
Flashing green/magenta	Update operation, static network address

The reset button (4) triggers a reset or an update.

Reset network settings, DHCP operation active	Press the button ≥ 5 seconds, LED flashes yellow, press the button again briefly
Factory reset	Press the button for 20 seconds, LED flashes red, press the button again briefly
Initialise update operation	Press the button briefly 5x - LED turns magenta: No update available - LED flashes magenta: Update operation
Set rescue IP setting	Press the button for 10 seconds, LED flashes yellow with fast frequency, press the button again briefly

1.6. System information

The Smart Visu Server is used to visualise and operate a KNX system connected to the same network via a smartphone, tablet, laptop or PC and to control SONOS and Philips Hue systems (SV-Home). A local network is required for it to function.

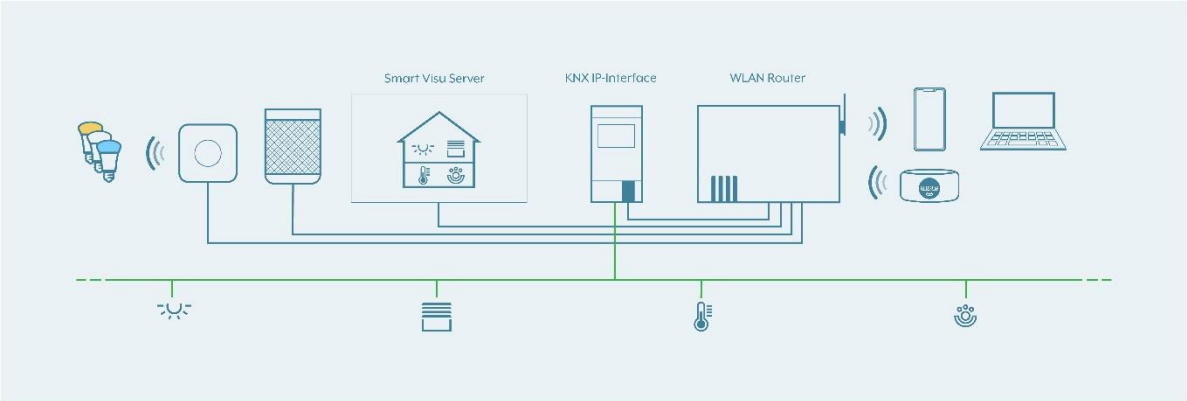
The connection to the KNX is made via the KNX IP interface. The connection to the Philips Hue system is made via the Philips Hue Bridge. The connection to the SONOS system is carried out via the local network.

Start-up takes place via the web-based interface (SV-Control). The technical documentation is also available here.

The server organises KNX functions, SONOS and Philips Hue operation into areas, functions and actions.

Areas:	An area indicates an assignment, e.g. to a room. Up to 24 areas are possible.
Function:	A function corresponds to, for example, a KNX function, thus possibly comprising multiple group addresses, e.g. switching channel with feedback. A function could also be the link to a Philips Hue lamp. Up to 240 functions can be created with up to 1200 data points. Each function can be assigned to one or more areas.
Action:	An action is a grouping of one or more functions. Actions can be triggered by events, by time or via user-defined controls. Up to 250 actions are possible.
Action group:	An action group is used to group individual actions. Up to 25 action groups can be activated or deactivated as required.
Usermanagement:	The usermanagement allows users to be created with different roles and rights. Depending on the role of the user, rights can be determined in SV-Home and SV-Control.

KNX projects can be imported from the OPC export (3-level group address) of ETS3, ETS4 or ETS5 or be created manually (see chapter 2.2.2)



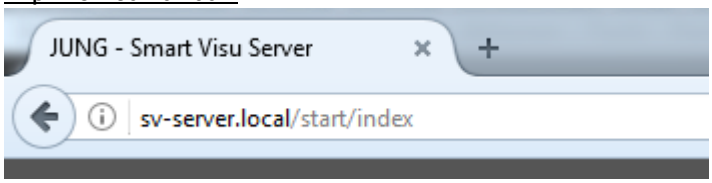
1.7. Installation, commissioning

Mounting takes place using the supplied retaining unit on the wall or on a support rail according to DIN EN 60715. The server is snapped onto the retaining unit.

A current HTML5-capable browser (input device) or the corresponding iOS / Android app is required for access to SV-Home and SV-Control. The Smart Visu Server, KNX-IP Gateway, network router (DHCP active) and input device must all be a part of the same network. During start-up, the Smart Visu Server expects the assignment of an IP address via DHCP.

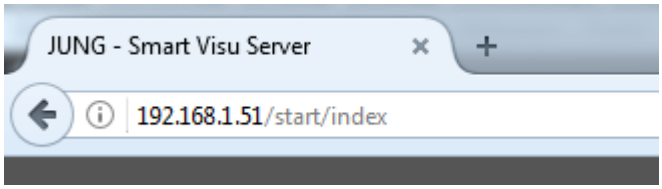
Remove the discharge protection from the server. Connect the server to the network and the power supply unit to the server. After the mains plug has been connected, the server will boot. As soon as the status LED turns blue, the server is ready for operation. In the address line of the Internet browser, enter:

http://sv-server.local



This opens the homepage of the server.

If your network doesn't support it, then determine the IP address of the server in the router manually. Enter the determined address, e.g. 192.168.1.51, in the address line of your Internet browser, e.g.:



This opens the homepage of the server. On the homepage, for further actions, the web-based software tool "SV-Home" (1) can be used for the visualisation and operation of the Smart Visu Server, as can "SV-Control" (2) for the configuration and commissioning of the same.

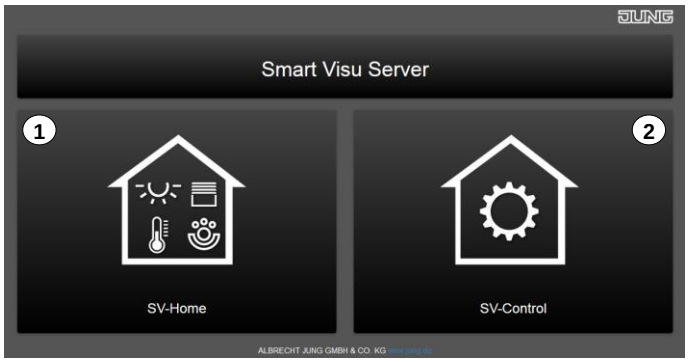


Figure 2: Homepage of the Smart Visu Server

1.7.1. SV-Home – User interface

The SV-Home is the integrated web interface of the Smart Visu Server for the visualisation, status display and operation of the KNX system, SONOS and the Philips Hue system. The SV-Home is generated automatically from the configuration set up in SV-Control.

A current HTML5-compatible (Firefox, Chrome, Safari, Opera) browser (input device) is required for access to SV-Home. The concurrent access of max. 10 different clients on the SV-Home web interface is recommended. When the server is opened, the SV-Home visualisation can be started by selecting the left button or http://IP-address/SV-Home/ (1).

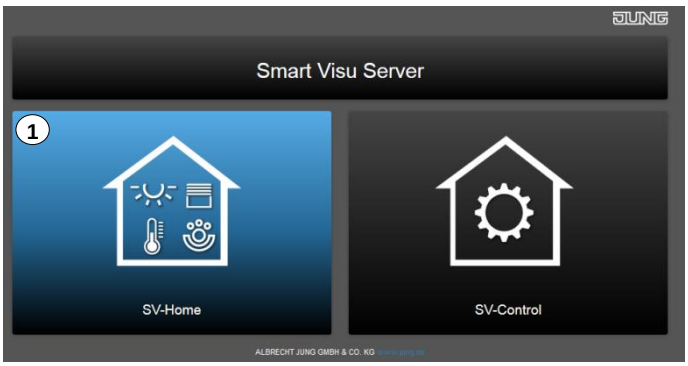


Figure 3: Opening SV-Home

The top pane (1) displays the areas created in SV-Control with the selected icon and name. It is also possible to display the defined area of the actions. Selecting an area displays the assigned functions and actions (2) beneath.

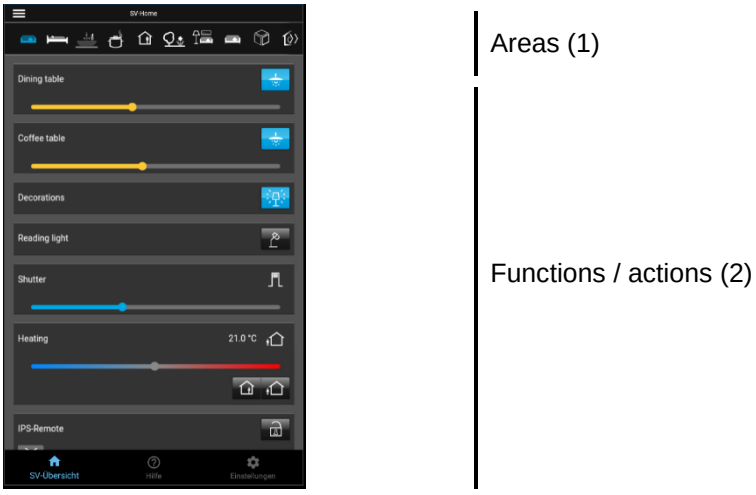


Figure 4: Structure of the SV-Home visualisation

Depending on the created function type, these functions visualise their status (e.g. the current room temperature) or offer a chance to influence it (e.g. move a venetian blind or dim a Philips Hue lamp).

1.7.2. SV-Control – Project Design interface

This subchapter is intended to help you get to know the structure of the project design interface. The following chapter describes the functions and exact procedure for project design in more detail.

SV-Control is the integrated web-based commissioning tool of the Smart Visu Server. In addition, the system configuration can be performed here.

A current HTML5-compatible browser (input device) or the corresponding iOS / Android app is required for access to SV-Control.

After calling up the SV start page, SV-Control can be started by selecting the right-hand button (1).

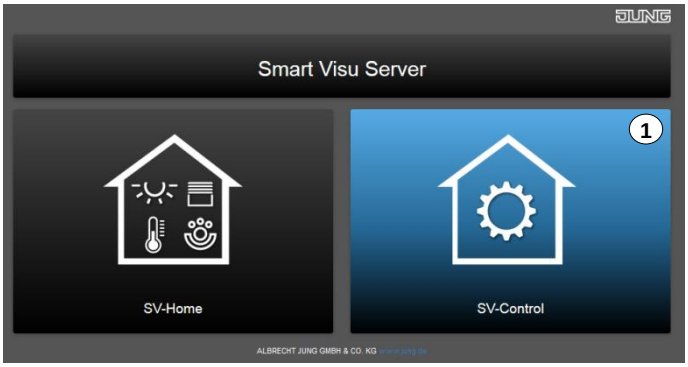


Figure 5: Opening SV-Control

The homepage of SV-Control then opens.

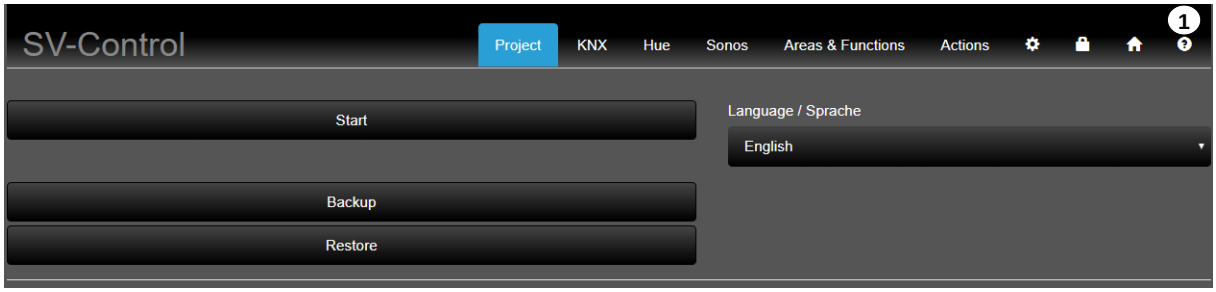


Figure 6: Start page of SV-Control

The product documentation can be opened using the "?" (1) button.

1.8. Warranty

- Warranty is offered according to the statutory provisions via specialist dealers.

- The CE symbol is a free trade symbol, intended solely for the authorities and does not carry any guarantee of properties.

2. SV-Control

This chapter describes the configuration and commissioning of the Smart Visu Server using SV-Control in detail.

2.1. Project tab

The "Project" tab serves as the homepage of SV-Control. Here, it is possible to set the required language (1), start project design (2), back up the overall project (3) or restore a previously backed up project (4).
After project design has been completed, access to the project design functions can be protected by the usermanagement (5).
In addition, the product documentation (6) is stored in SV-Control in German and English.

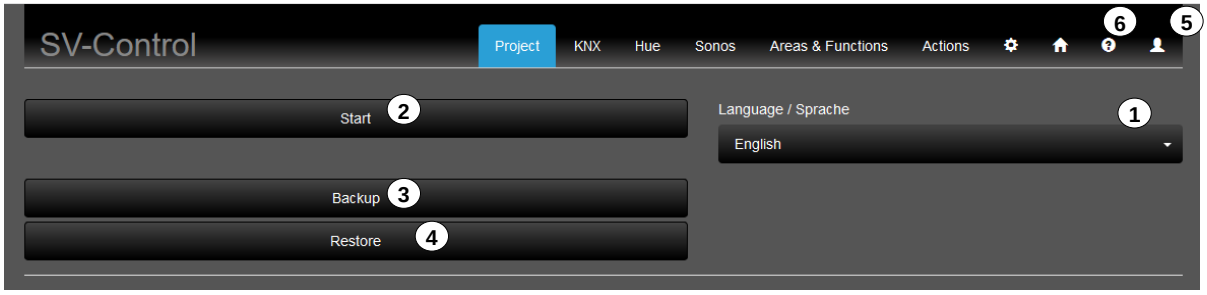


Figure 7: SV-Control, Project tab

2.1.1. Manage language

The desired project design language at SV-Control (1) can be specified in the "Project" tab. It is possible to change over the language settings during commissioning or at a later time. This setting only applies in SV-Control and is identical for each client.

The following languages are available in the selection menu (1):

- German
- Italian
- Estonia
- Ukrainian
- English
- Spanish
- Lithuanian
- Korean
- French
- Portuguese
- Latvian
- Chinese
- Dutch
- Russian
- Polish

2.1.2. Start

Begin project design of the Smart Visu Server using the "Start" button (2).

2.1.3. Backing up a project

The backup of the current project design can be triggered using the "Backup" button (3). This operation can take a moment to complete. The project design can then be downloaded using the "Download" button (3).

2.1.4. Restoring a project

A previous project state can be restored using the "Restore" button (4). This operation can take a couple of minutes to complete.

INFORMATION
The Smart Visu Server can only manage **one** project. If a project is downloaded using the "Restore" button, any existing project will be deleted.
The version levels between the exported project (backup) and the imported project (restore) must be identical.

2.1.5. Usermanagement

The Smart Visu Server allows the creation of up to 24 different users. A user can be assigned one of the following roles:

- Administrator
- Configurator
- User

The password must contain at least eight characters and two character types.

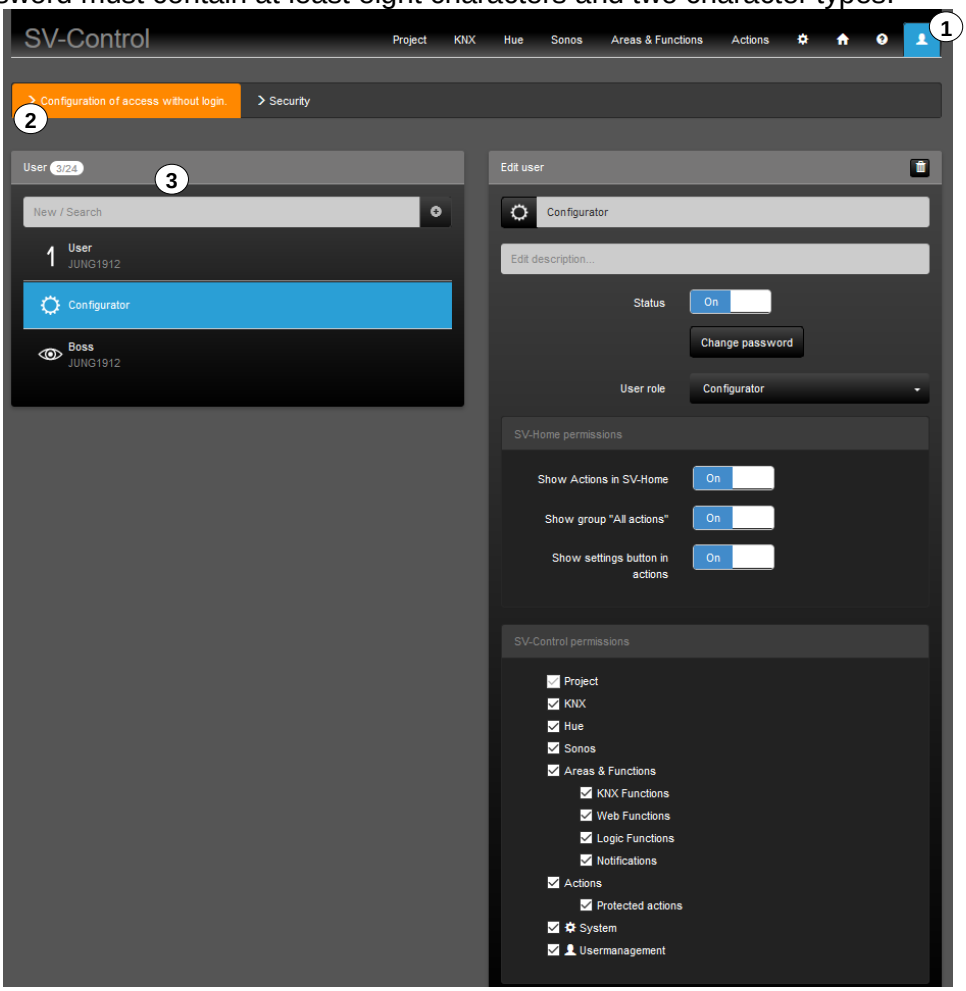


Figure 8: SV-Control, User administration tab

The SV-Control differentiates between complete / restricted access with "Administrator" and "User".

The configured role can give the user different authorizations:

Access	User	Configurator	Administrator
SV-Home			
All Areas	(✔)	✔	✔
Sub-Areas		-	
Actions		(✔)	
Settings button	-	(✔)	
SV-Control	-	(✔)	✔
Tab „KNX“			
Tab „Hue“			
Tab „SONOS“			
Tab „Areas and functions“			
KNX functions			
Web functions			
Logic functions			
Notification			
Tab „Actions“			
protected actions			
Tab System			
Tab „”Usermanagement“			
Setting access without user login	-	-	✔

Figure 9: Usermanagement

Content:

- - : Authorization not given
- (✔) : Rights adjustable via the usermanagement
- ✔ : Authorization given

The SV-Control is divided into an "Administrator" / restricted access "Configurator".

Administrator rights:

- Complete access to all tabs

Configurator rights:

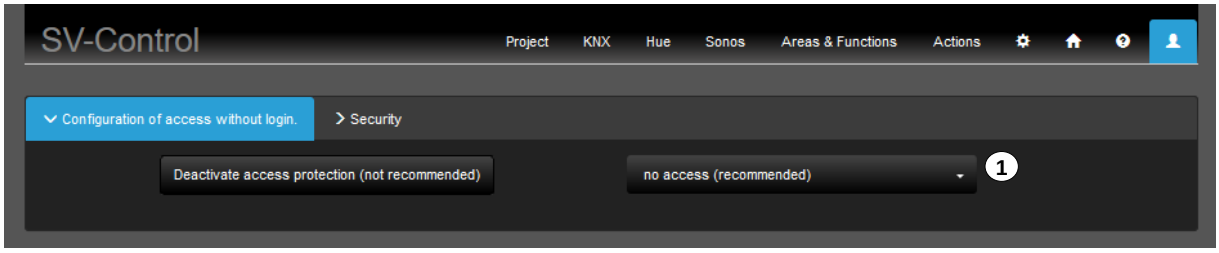
Configurator access rights are determined by the check boxes of the respective tab / category. If a configurator is created, it will not have access to Backup & Restore.

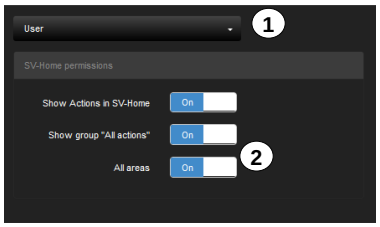
Additional check boxes:

KNX	- Access within “KNX” tab
Hue	- Access within “Hue” tab
SONOS	- Access within the “SONOS” tab
Areas & Functions	- Access within “Areas & Functions” tab - Right to (de)activate functions for voice control - Right to save data and create / delete diagrams
KNX functions	- Right to delete “KNX functions” or to edit group addresses of KNX functions. - Only names and icons of KNX functions can be edited and they can be assigned to additional areas or deleted from assigned areas without authorization.
Web functions	- Right to delete “Web functions” or to edit the URL of Web functions - Only names and icons of web functions can be edited and they can be assigned to additional areas or deleted from assigned areas without authorization.
Logic functions	- Right to delete or edit “Logic functions” - Only names and icons of logic functions can be edited and they can be assigned to additional areas or deleted from assigned areas without authorization.
Notifications	- Right to delete or edit “Email functions” - Only names and icons of email functions can only be edited and they can be assigned to additional areas or deleted from assigned areas without authorization.
Actions	- Access within “Actions” tab
Protected actions	- Access to protected actions
System	- Access within “System” tab
Usermanagement	- Limited access within “Usermanagement” tab

Access without username and password:

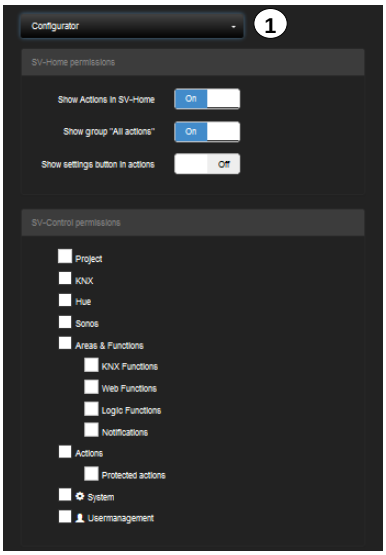
As a logged in administrator, access can be set without login data. It is recommended for the access without login(1) to be disabled





User:
As a user, access to the following properties (Figure 9) can be set in SV-Home:

- Show "Actions" area
- Show action group "All actions*
- Show all areas / only certain areas



Configurator:
As a configurator, access to the following properties (Figure 9) can be set in SV-Home an SV-Control:

- Show "Actions" area
- Show action group "All actions
- Show settingsbuton in actions

- Tab KNX
- Tab Hue
- Tab SONOS
- Tab Areas & Functions
- Tab Actions
- Tab System
- Tab User Management

* only available if previous is set to true

Security:

Encrypted communication can be created in the local network under the “Security” tab. Thus, sensitive data such as username and password are encrypted and protected from unauthorized persons. Local HTTPS certificates cannot be classified as trusted by the browser by default. For more information, see the browser's support pages, for example. On activation a message (4) appears in the browser with further information.

On activation, a message (4) with further information appears in the browser. On further calls, the security certificate is displayed when the connection to the device is established. The certificate can either be added via "Add exception" or the SV server web page can be displayed "at your own risk".

The certificate is already stored within the app (iOS / Android).

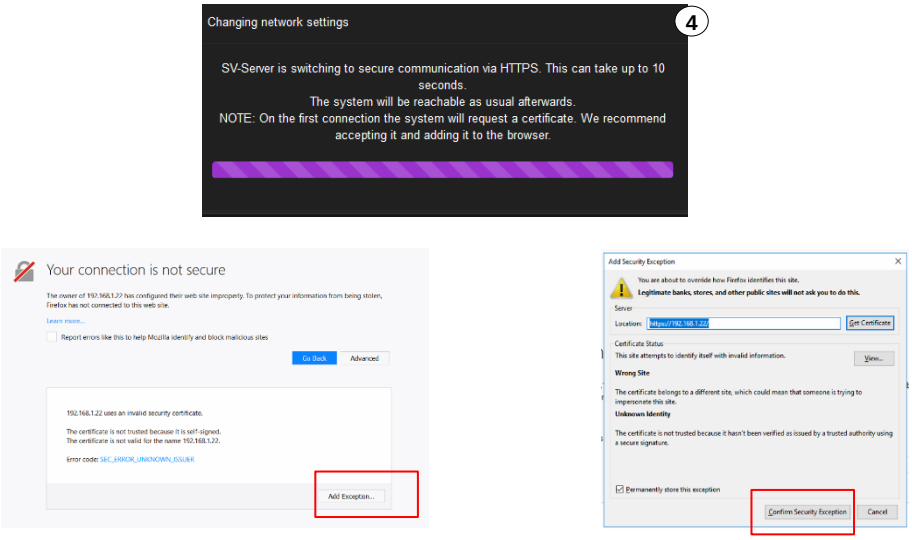


Figure 10: SV-Control – User administration tab – HTTPS configuration

2.1.6. SV-Home

SV Home can be called up using the "  " button (1) in Figure 11.

2.1.7. Product Documentation

The product documentation can be called up using the "  " button (2) in Figure 11.

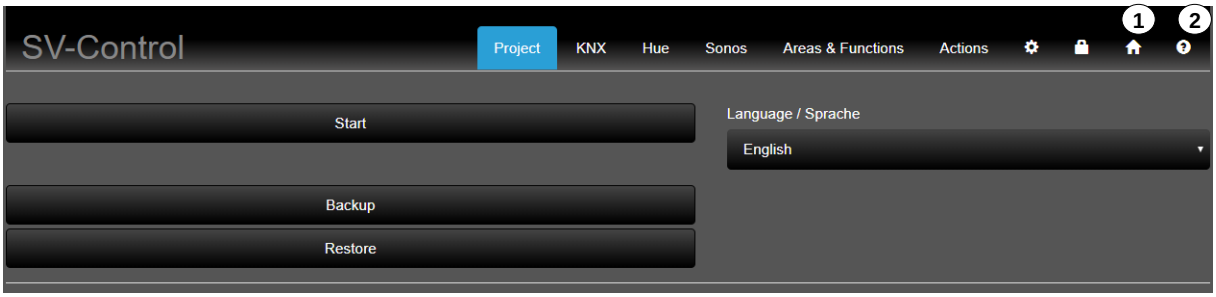


Figure 11: SV-Control Access Protection

2.2. KNX

The "KNX" tab is used to define the KNX-IP Gateway and to import the KNX group addresses using the OPC project file.

2.2.1. Defining the KNX-IP Gateway

To be able to use the KNX functionality of the Smart Visu Server, a connection to the KNX system via a KNX-IP data interface is required, which can be reached from the Smart Visu Server via the IP network.

We recommend using one of the following KNX-IP data interfaces:

- Jung: KNX IP Interface Ref.No.: IPS 300 SREG
- Jung: KNX Power supply with IP Interface Ref.No.: 20320 1S IPSR
- Jung: KNX IP Router Ref.No.: IPR 300 SREG

The KNX-IP data interface must be communicated to the Smart Visu Server. The required interface is selected via the menu (2). The IP address is then displayed in the address field. The IP address can then be edited if required. If the IP address of the data interface changes during the course of the project, the Smart Visu Server automatically re-establishes the connection (assuming identical IP address space).

Immediately on selection, the connection to the KNX-IP data interface is checked. If the connection is successful, the test is visualised by a green tick (✓) or, if it is unsuccessful, by an orange triangle (⚠) at the end of the input line (3).

The button (ⓘ) provides more information about your KNX-IP data interface and the connection (4).

The "KNX" tab can be operated fully for both profiles (Administrator/User).

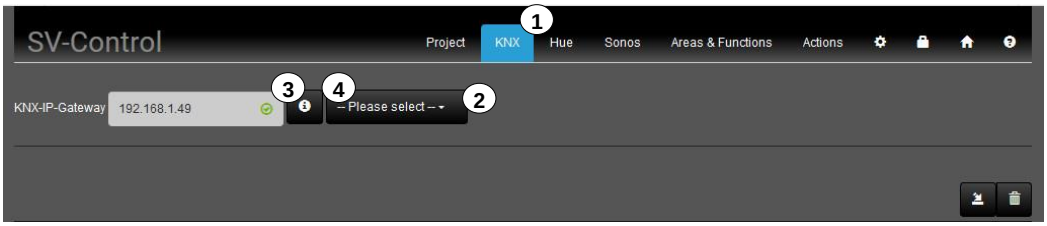


Figure 12: Defining the KNX-IP Gateway

If the connection is faulty, please check the following settings:

- The KNX-IP data interface is switched on and connected to the IP network
- The KNX-IP data interface has a valid IP address assignment for your system
  - IP address
  - Subnet mask
  - Routing Multicast address
- The KNX-IP data interface is set to Port 3671
- The KNX-IP data interface has at least one free physical tunnel connection
- The KNX-IP data interface communicates according to KNXnet-IP tunnelling (no KNX IP-Secure)

2.2.2. Importing the KNX-OPC project file

SV-Control only offers the possibility of importing ETS projects with a 3-level group address structure in the form of OPC project files. OPC project files can be generated from the ETS3 (File → Data Exchange), ETS4 (Tools → Export OPC) and ETS5 (Export project → file type - OPC) and contain all the group addresses, group names, group descriptions and data types created in your project.

The OPC project file helps you to connect the KNX functions of your Smart Visu Server to the appropriate group addresses of the ETS project quickly and simply.

To import the OPC project file, click the "  " button (1). You will then be asked to select the file and upload it to the Smart Visu Server. After uploading, all the imported group addresses are listed below the Import function, together with the group name, the group description and the data type length.

You can delete the entire OPC project file using the "  " button (2).

You now have the option of actively filtering in the input field (3) (e.g. by name or group addresses) or to display the sorted list by clicking the appropriate column header (group address, status, etc.).

Individual group addresses which are not required can be deleted from the list by clicking the "  " (4) button in the appropriate line.

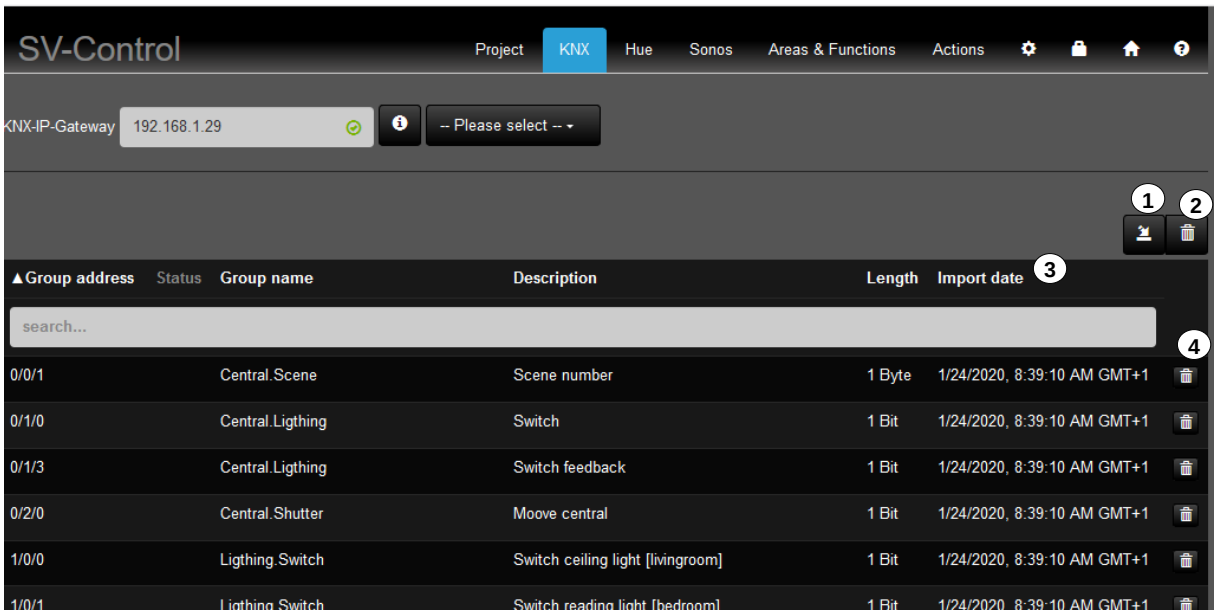


Figure 13: Importing KNX group addresses

2.3. Hue

The "Hue" tab is used for the definition of the Philips Hue Bridge /Phoscon Gateways (hereafter gateway) and to import previously integrated Hue devices and other ZigBee Light Link components. Compatibility is only guaranteed with the Philips Hue Bridge V2.

The "Hue" tab can be operated fully for both profiles (Administrator/User).

2.3.1. Defining the Hue-IP Gateway

The Smart Visu Server supports the integration, visualisation and operation of the Philips Hue Systems / Phoscon Gateways.

To be able to use the hue functionality of the Smart Visu Server, a Philips Hue Bridge is required, which can be reached from the Smart Visu Server via the IP network. In addition, the gateway must have been commissioned. Please refer to the manufacturer's documentation for the appropriate steps.

The IP address of the gateway is automatically detected by the Smart Visu Server and displayed in the “Hue-IP-Gateway" (1) text box.

To couple the bridge with the Smart Visu Server, press the Pairing button of the bridge for authentication (2).

Successful pairing is visualised by a green tick (✓) at the end of the input line (3). A faulty connection or unsuccessful pairing is visualised by an orange triangle (⚠) in the same location.

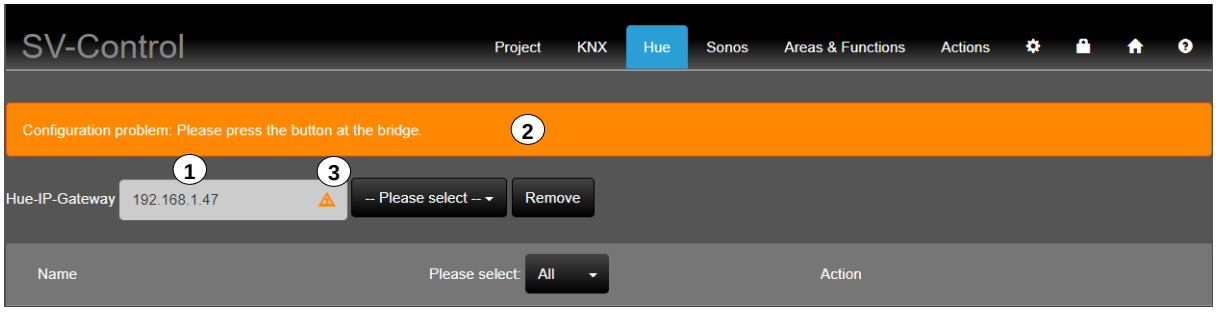


Figure 14: Defining the Philips Hue Bridge

2.3.2. Importing Hue lamps

The lamps and scenes configured in the gateway are then listed below with their name and current status. Only lamps and scenes which are configured in the bridge are listed.

By pressing the “ ” button (1), selected lamps and scenes can be added as a hue function. Lamps or scenes that have already been added can be removed again with the same “ ” button (2). If you would like to add further lamps that are not listed, they must first be configured in the gateway.

In the dropdown menu, all the lamps and scenes can be displayed with “All” or you can choose between “Lights” , “Plugs” and “Scenes” (3).

Furthermore, the " " button (4) makes it possible to identify the lights in the form of a flash.

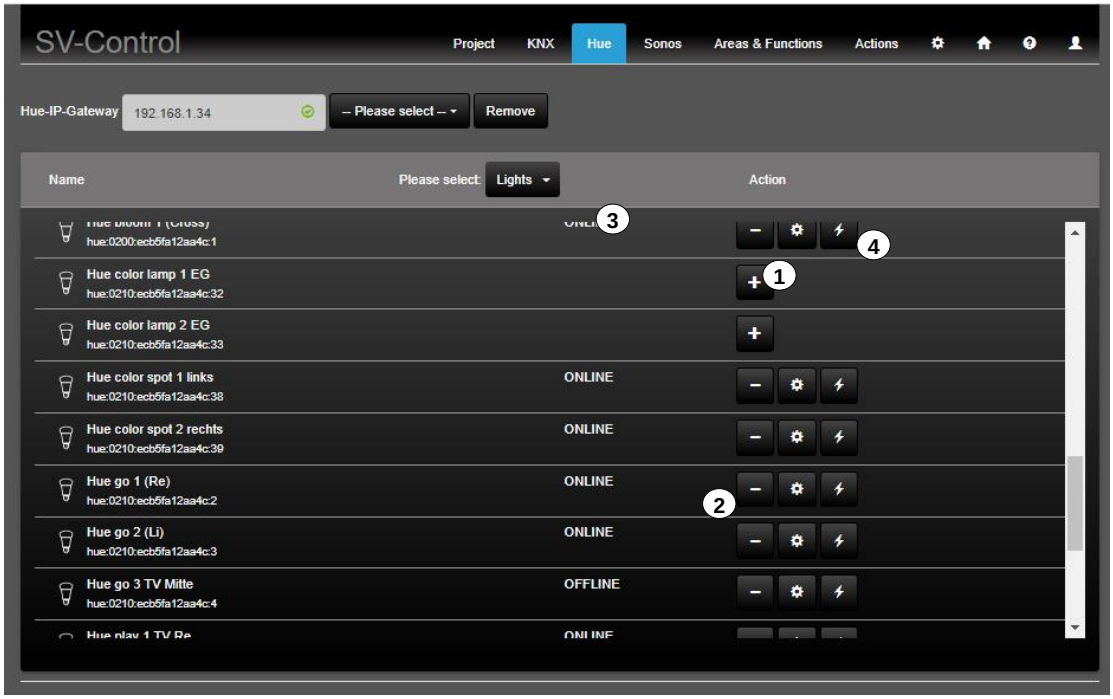


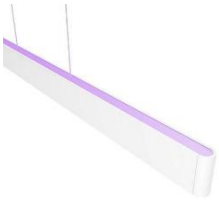
Figure 15: Integrating Philips Hue lamps

2.3.2.1. ZigBee – tested devices

Group	Figure	Name	Compatibility
WHITE		Hue White WW Truar	✔
TUNEABLE WHITE		Hue GU10 TW Adore	✔
		Hue White Ambience E14 TW	✔
		Hue White Ambience E27 TW	✔
		Hue White Ambience Flexstrip TW	✔
		Hue White Ambience Being TW	✔
		Hue White Ambience Flexstrip TW	✔
		Hue White Ambience Cher	✔
		Hue White Ambience Wellness TW	✔

TUNEABLE WHITE		Hue White Ambience Wellness TW	✔
		Hue White Ambience Flexstrip TW	✔
		Hue White Ambience Spot Pillar TW	✔
		Hue White Ambience – Spot Runner GU10 TW	✔
		Hue Beyond TW	✔
		Adore bathroom mirror	✔
		Adore mirror light	✔
		Hue Phoenix TW	✔

RGBW		Hue E27 RGBW	✔
		Hue GU10 RGBW	✔
		Hue White and Colour Ambience RGBW	✔
		Hue LightStrip RGBW	✔
RGBW		Hue LightStrip Plus RGBW	✔
		Hue Go RGBW	✔
		Hue Play	✔
		Hue Outdoor Stripe	✔
		Hue Signe	✔

		Hue Ensis	✔
		Hue Calla	✔
		Turaco	✔
		Lily	✔
		Hue Iris RGBW	(✔) Attention! Must be Friends of Hue certified!
		Hue Bloom RGBW	(✔) Attention! Must be Friends of Hue certified!
Plugs		Hue Plug	✔

Tested devices between Hue API and Smart Visu Server

Date: 03/2021

2.4. SONOS

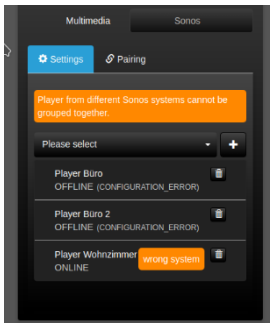
The “SONOS” tab is used for the native import of SONOS speakers in the Smart Visu Server. They must be configured beforehand in a SONOS account. **Pairing between Sonos S1 and Sonos S2 via a SV server is not possible!**

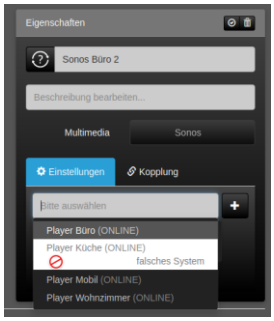
INFORMATION
It is recommended to include a maximum of 10 SONOS speakers / separately controllable groups in a SV server installation.

Wireless:
The router must send WLAN in the 2.4 GHz frequency band to connect Sonos devices.
Sonos cannot connect to guest networks or networks that use a portal page to log in.
Networks that use wireless repeaters will cause problems with Sonos systems configured in a wireless setup.
By Wire:
A wired configuration requires that one of the Sonos products remain connected to the router via an Ethernet cable at all times.
If Sonos is used in a mesh wireless router with multiple wireless network nodes, the products must connect directly to the master wired mesh node.

2.4.1. SONOS household (S1 / S2)

As of version 1.2.1770, S1 and S2 households can be added independently of each other. A coupling of both systems is not possible.





2.4.2. Inserting SONOS devices

The Smart Visu Server supports the integration, visualisation and operation of the SONOS system.

To be able to use the SONOS functionality of the Smart Visu Server, it is first necessary to set up the SONOS speakers which can be carried out by the Smart Visu Server via the IP network. The SONOS speakers must be fully set up beforehand in a SONOS account. This includes the storing of playlists, radio stations and local music so that they can be selected in the Smart Visu Server. Parallel operation via UPnP is not possible.

The SONOS speakers are automatically detected (1) and displayed directly (2) by the Smart Visu Server by pressing the "  " button.

By pressing the "  " button (3), selected speakers can be added as a SONOS function. Speakers that have already been added can be removed again with the same "  " button (4). If you would like to add further speakers which are not listed, they must first be configured in the identical SONOS account.

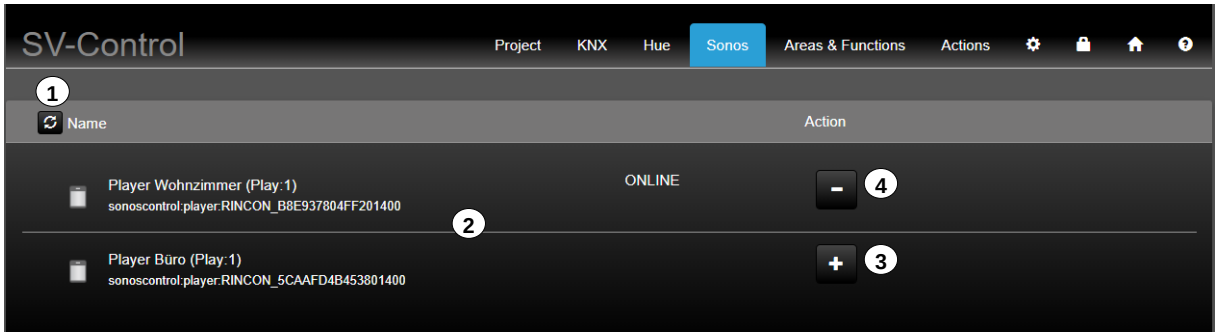


Figure 16: Integrating the SONOS speakers

2.4.2.1. SONOS – supported devices

Figure	Name	Compatible
	SONOS One	✔*
	SONOS Play:1	✔*
	SONOS Play:3	✔*
	SONOS Play:5	✔*
	SONOS BEAM	✔
	SONOS Playbar	✔*
	SONOS Arc	✔

	SONOS Amp	✔
	SONOS Outdoor-Speaker	✔
	SONOS In-Wall Speaker	✔
	SONOS Move	✔*
	SONOS Roam	✔

* tested speakers between SONOS API and Smart Visu Server

Date: 09/2021

2.5. Area & Functions

An area is a group of functions and actions for visualisation in SV-Home under an individual area name. To improve recognition, an icon can be added to each of the up to 24 areas.

Areas allow you to group a maximum of 240 functions and 250 actions as you require, e.g. spatially and/or by unit. Functions can be assigned to multiple areas simultaneously.

The access rights within the “Area & Functions” tab can be restricted for the "Configurator" profile.

Access	User	Configurator	Administrator
SV-Control	-	(✔)	✔
Tab „KNX“			
Tab „Hue“			
Tab „SONOS“			
Tab „Areas and functions“			
KNX functions			
Web functions			
Logic functions			
Notification			
Tab „Actions“			
protected actions			
Tab System			
Tab „”Usermanagement“			

Table 1: Access rights of user roles

Content:

- \- : Authorization not given
- (✔) : Rights adjustable via the usermanagement
- ✔ : Authorization given

2.5.1. Creating a new area

The maximum of 24 areas must be provided individual names. In addition icons from the SV-Server library or additional descriptions can be added. The “Configurator" and the "Administrator" have identical access rights within the “Areas" column.

To create a new area, enter the name of the new area in the "Areas" column (1) and then press the “" button (2). The new area is added to the area list with its name and is selected automatically.

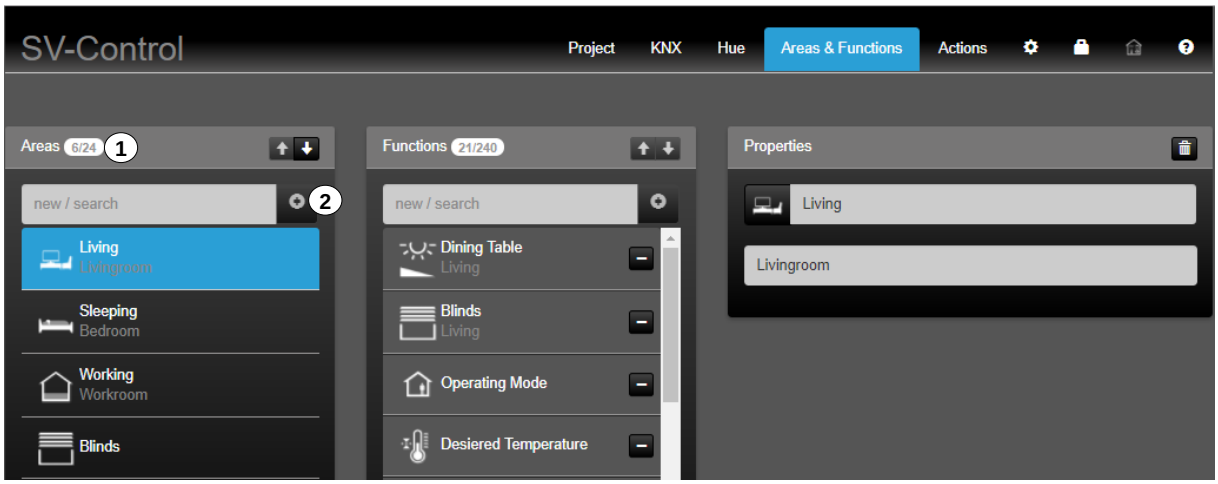


Figure 17: Creating new areas

The arrow buttons “" (3) allow you to change the order of an area, after selecting it, and thus to move the position in SV-Home. The top area in the SV-Control (from top to bottom) is displayed as the first area in SV-Home (from left to right).

In the "Properties" column, it is possible to assign an icon to the selected area by pressing the currently selected icon "" (4), edit the name of the area (5) and, beneath that, add a description (6). In addition, the selection menu (7) allows you to specify the individual number of columns for an area. This allows diagrams or web pages to always be displayed in their entirety, while other areas are displayed in multiple columns.

The changes are saved automatically and briefly displayed by a green display (8) "Save successful".

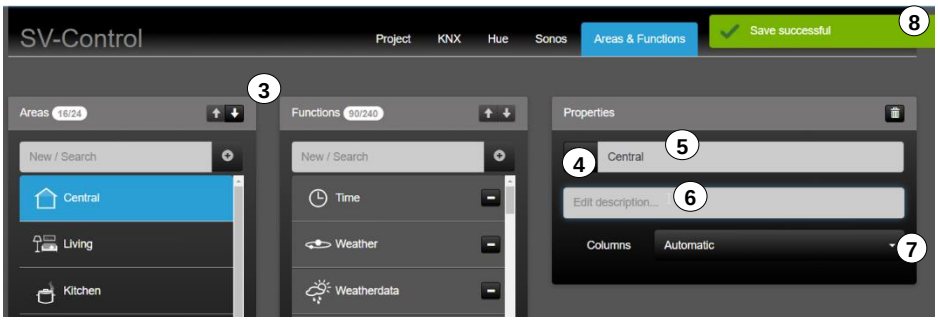


Figure 18: Individualisation of created areas

2.5.2. Editing or deleting areas

Select an area to edit or delete it. The “Areas" column lists all the existing areas.

In the “Properties" column, it is possible to assign an alternative icon to the selected area by pressing the currently selected icon "" (3), edit the name of the area (4) and, beneath that, add a description (5).

The changes are saved automatically and briefly displayed by a green display "Save successful".

To fully delete the selected area, press the “" button (7).

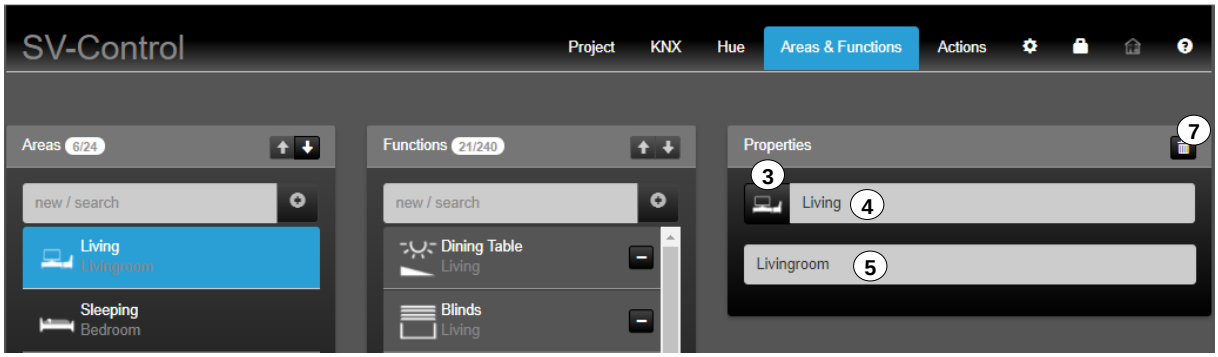


Figure 19: Editing or deleting areas

The area has favourites within the symbol library (5). Additional icons are available via the “" button.

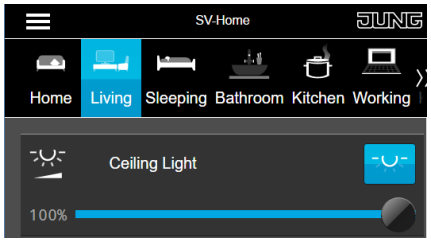
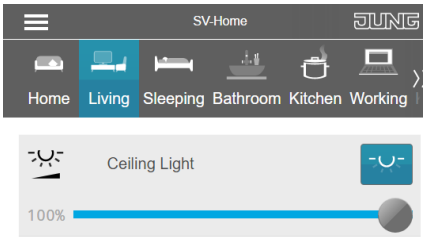
Area	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Area		 

Table 1: individualisation of areas

2.5.3. Creating a new function

A function corresponds to, for example, a KNX function, which possibly comprises multiple group addresses. Up to 240 functions can be given individual names, icons from the SV-Server library or additional descriptions. Each function can be assigned to one or more areas or to none.

Access as Administrator

To create a new function, enter the name of the new function in the “Functions” column (1) and then press the “ ” button (2).

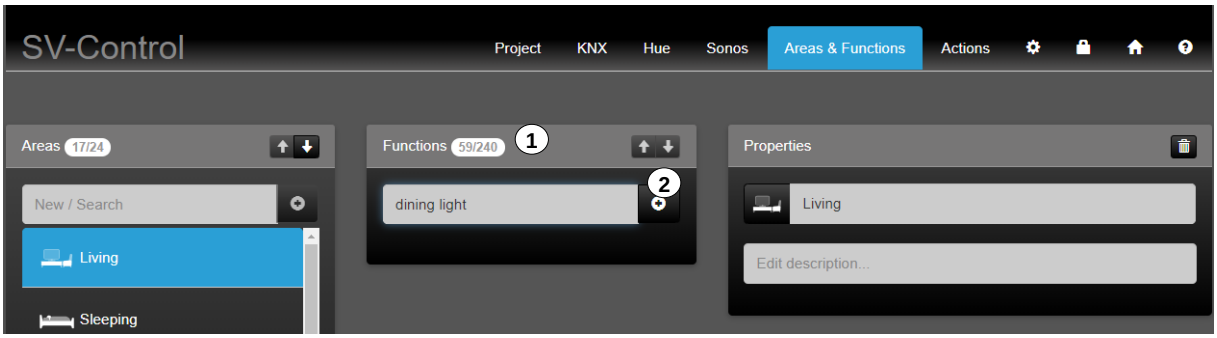


Figure 20: Create new function

A suitable function must be selected in the pop-up window from the available types (3).

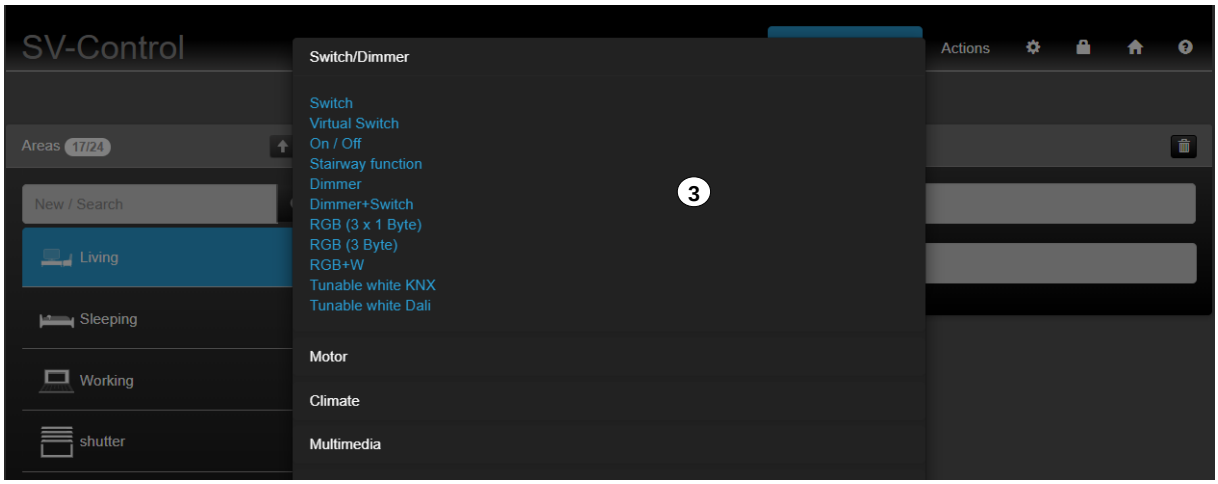


Figure 21: Selection of the appropriate function from the function type

The new function is added in the list of functions with its name, automatically selected and assigned to a selected area if required (4).

A symbol can be assigned to the selected function by pressing the current symbol (5). The name of the function can be edited (6) and a description (7) can be added.

The changes are stored automatically and represented by a green display.

In addition, the button “ ” (8) indicates whether the entries of the group addresses are stored.

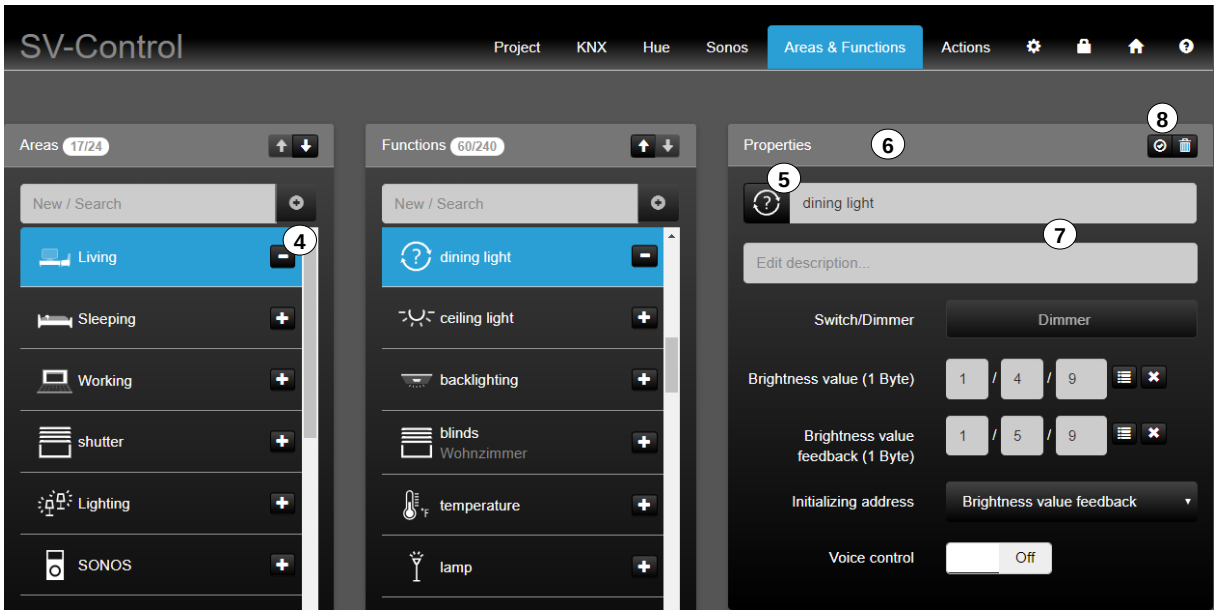


Figure 22: Structure of the "Areas and Functions" tab

Access as Configurator

You require rights to be able to create new KNX functions (see chapter Usermanagement).

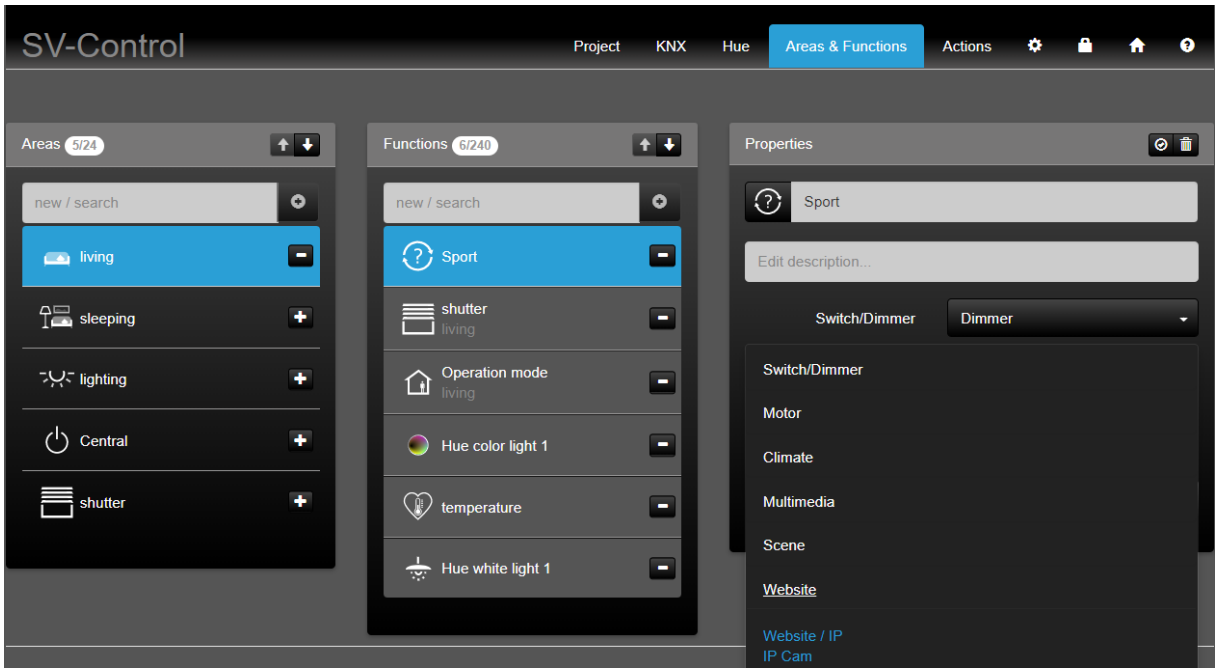


Figure 23: Access rights of the configurator with access to web functions

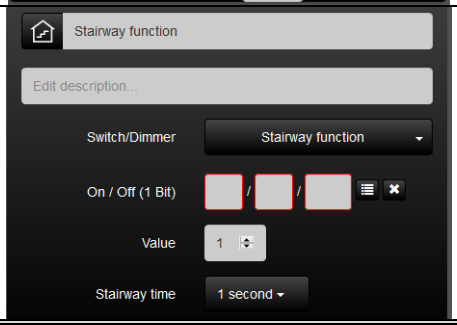
2.5.4. Configuring KNX functions

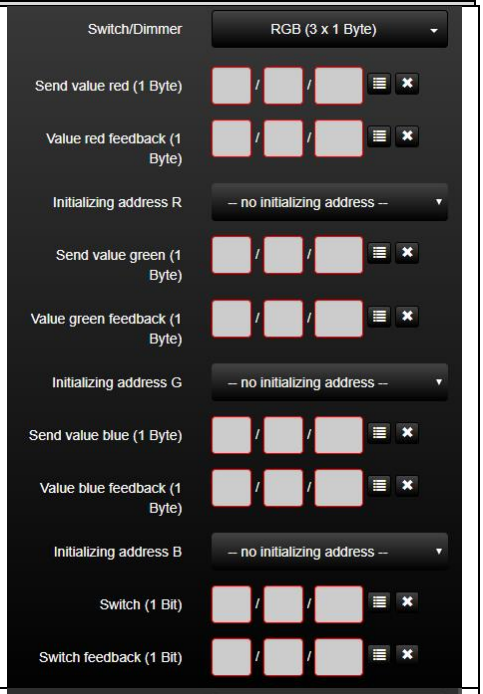
Successful commissioning of the KNX system and definition of the KNX-IP Gateway in SV-Control are required to be able to use KNX functions.

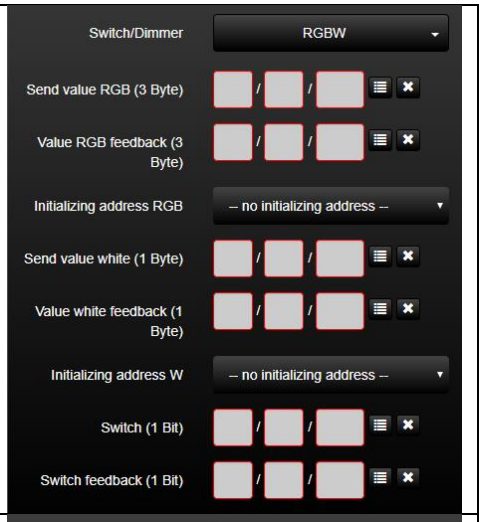
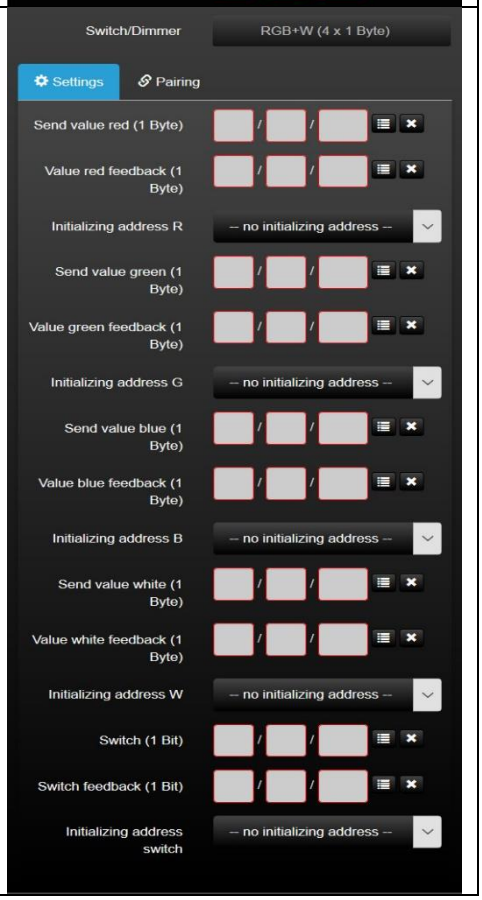
Access as Administrator or Configurator

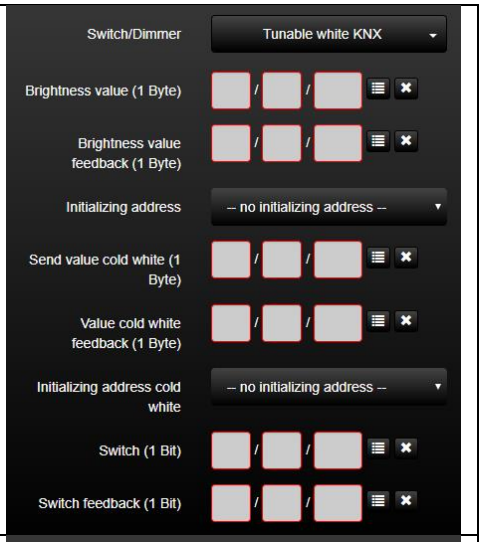
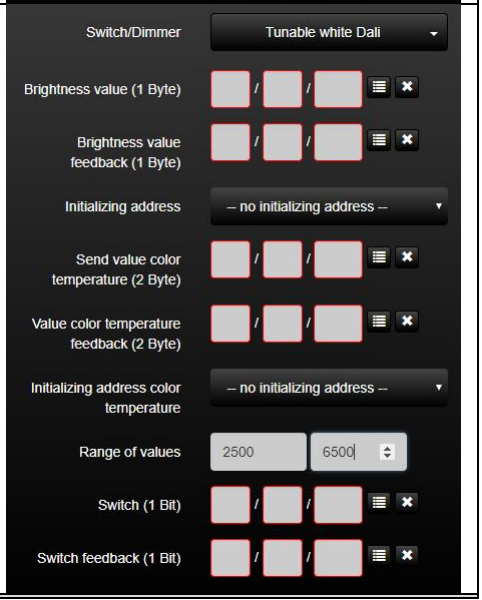
The "Configurator" and the "Administrator" can have different access rights to KNX functions within the "Functions" column. The different access rights can be taken from Usermanagement.

The following KNX functions can be described by a specific function type and summarises suitable ETS group addresses.

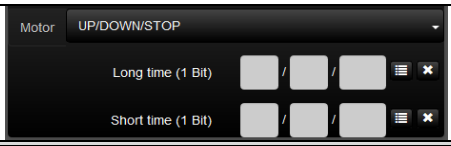
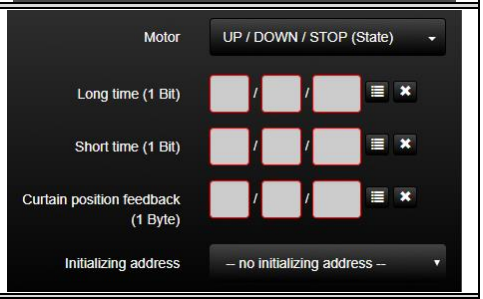
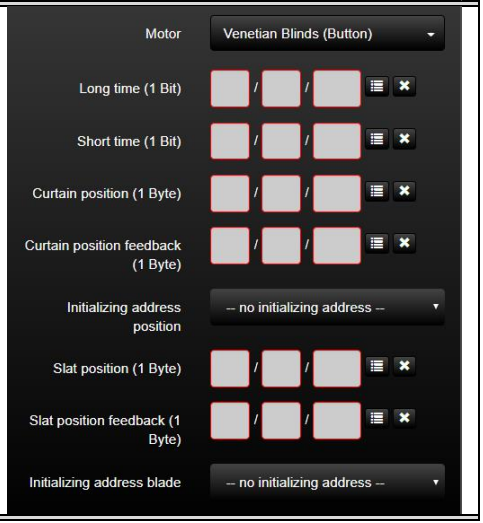
Function type	KNX function	KNX group addresses				Depiction in SV-Control
		Write addresses	Size DPT	Read addresses	Size [DPT]	
Switch / Dimmer	Switch	Switch (1 Bit)	1 Bit 1.001	Switch feedback	1 Bit 1.001	
	On / Off	On / Off (1 Bit)	1 Bit 1.001	---	---	
	Stairway function	Switch [0 or 1] 1 = ON delay 0 = OFF delay	1 Bit 1.001	---	---	
	Dimmer	Brightness value	8 Bit 5.001	Brightness value feedback	8 Bit 5.001	
	Dimmer/Switch	Brightness value	8 Bit 5.001	Brightness value feedback	8 Bit 5.001	
		Switch	Switch (1 Bit)	1 Bit 1.001	Switch feedback	

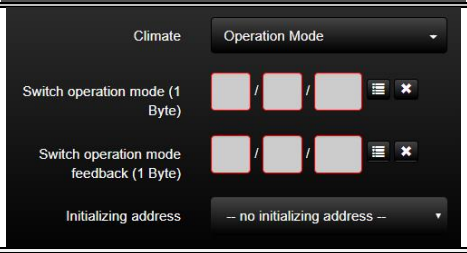
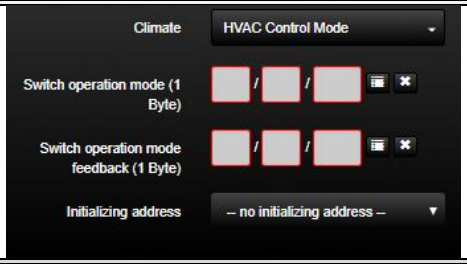
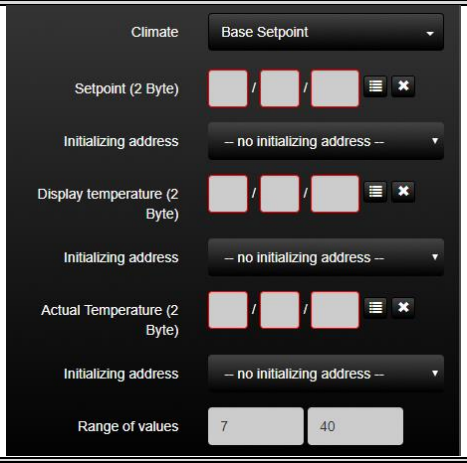
	Virtual Dimmer	Relative value	4 Bit 3.007	--	--	
	RGB (3 x 1 Byte)	Send value red	8 Bit 5.001	Value red feedback	8 Bit 5.001	
		Send value green	8 Bit 5.001	Value green feedback	8 Bit 5.001	
		Send value blue	8 Bit 5.001	Value blue feedback	8 Bit 5.001	
		Switch	1 Bit 1.001	Switch feedback	1 Bit 1.001	
	RGB (3 Byte)	Send value RGB	24 Bit 232.600	Value RGB feedback	24 Bit 232.600	
		Switch	1 Bit 1.001	Switch feedback	1 Bit 1.001	

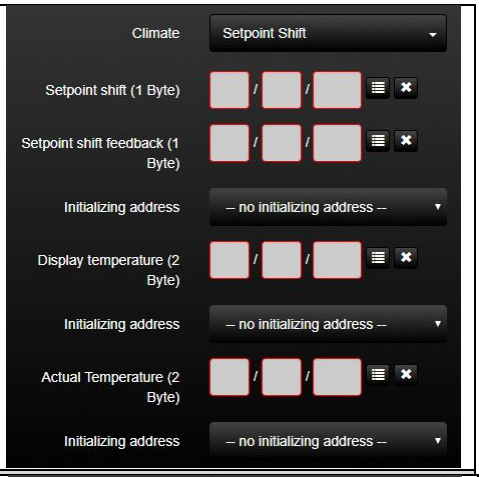
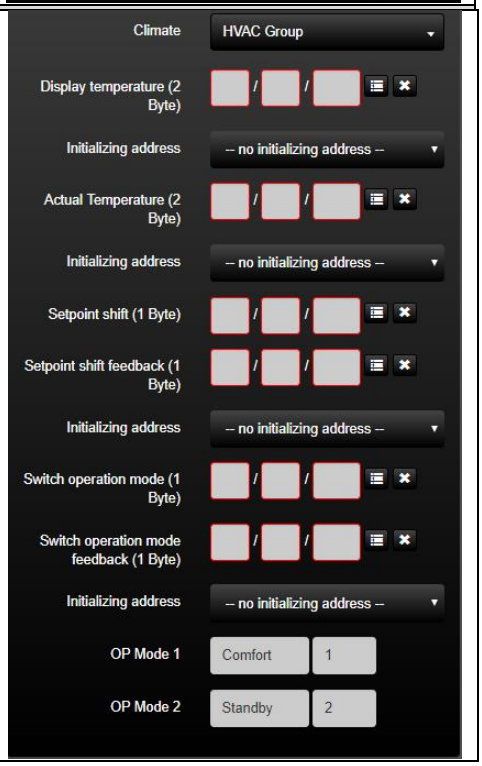
	RGB+W (3 Byte + 1 Byte)	Send value RGB	24 Bit 232.600	Value RGB feedback	24 Bit 232.600	
		Send value white	8 Bit 5.001	Value white feedback	8 Bit 5.001	
		Switch	1 Bit 1.001	Switch feedback	1 Bit 1.001	
	RGB+W (4 x 1 Byte)	Send value R	8 Bit 5.001	Value red feedback	8 Bit 5.001	
		Send value G	8 Bit 5.001	Value green feedback	8 Bit 5.001	
		Send value B	8 Bit 5.001	Value blue feedback	8 Bit 5.001	
		Send value W	8 Bit 5.001	Value white feedback	8 Bit 5.001	
		Switch	1 Bit 1.001	Switch Feedback	1 Bit 1.001	

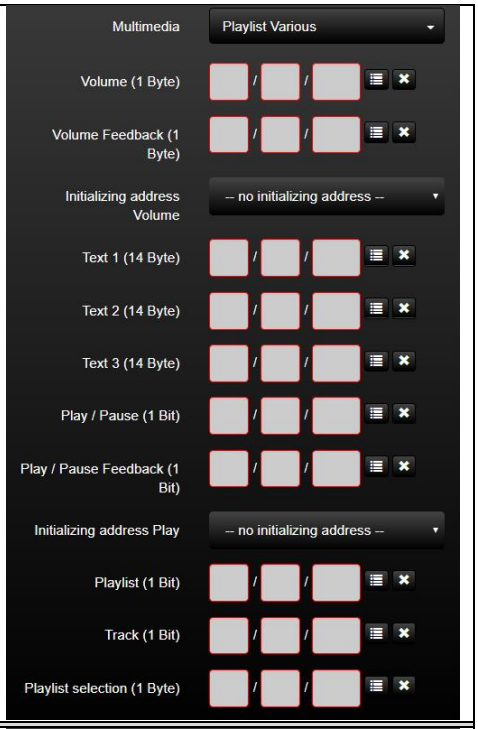
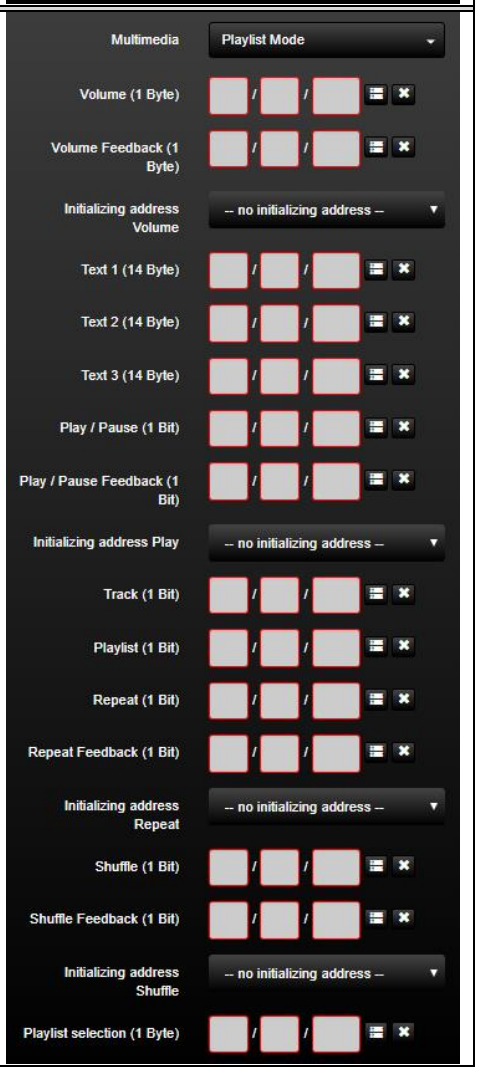
	Tunable white KNX	Send value	8 Bit 5.001	Value feedback	8 Bit 5.001	
		Absolute color temperature	16 Bit 7.600	Absolute color temperature feedback	16 Bit 7.600	
		Switch	1 Bit 1.001	Switch feedback	1 Bit 1.001	
	Tunable white Dali	Send value	8 Bit 5.001	Value feedback	8 Bit 5.001	
		Absolute color temperature	16 Bit 7.600	Absolute color temperature feedback	16 Bit 7.600	
		Value range	0 - 65535	---	---	
		Switch	1 Bit 1.001	Switch feedback	1 Bit 1.001	

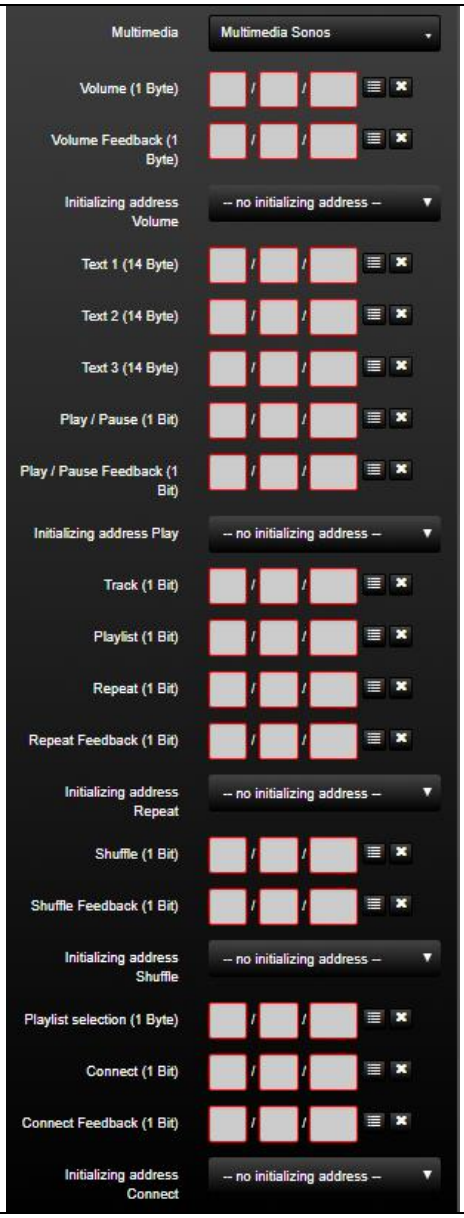
	Remote maintenance Standard	Enable remote maintenance	1 Bit 1.003	Server connection feedback	1 Bit 1.001	
		---	---	Programming via remote maintenance feedback	1 Bit 1.001	
	Remote maintenance Universal	Enable remote maintenance	1 Bit 1.003	Server connection feedback	1 Bit 1.001	
		---	---	Programming via remote maintenance feedback	1 Bit 1.001	
		---	---	Activationcode valid feedback	1 Bit 1.001	
		---	---	Secure Tunnelling valid feedback	1 Bit 1.001	

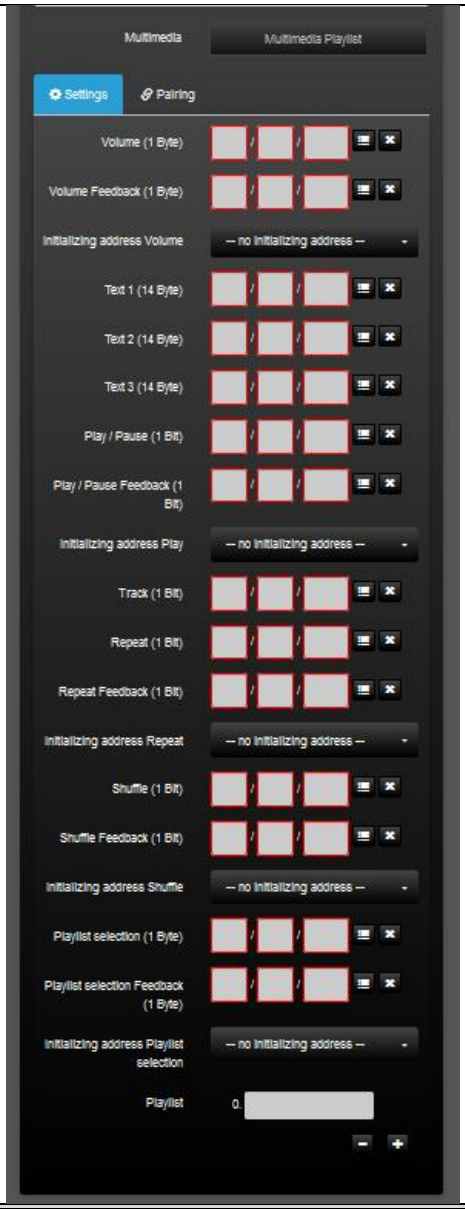
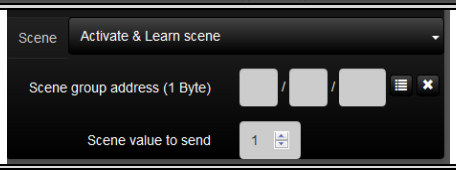
Motor	UP / DOWN / STOP	Long time	1 Bit 1.008	---	---	
		Short time	1 Bit 1.008	---	---	
	UP / DOWN / STOP (State)	Long time	1 Bit 1.008	---	---	
		Short time	1 Bit 1.008	---	---	
		---	---	Curtain position feedback	8 Bit 5.001	
	Rollershutter/ Awning	Curtain position	8 Bit 5.001	Curtain position feedback	8 Bit 5.001	
	Venetian Blinds (Slider)	Curtain position	8 Bit 5.001	Curtain position feedback	8 Bit 5.001	
		Slat position	8 Bit 5.001	Slat position feedback	8 Bit 5.001	
	Venetian Blinds (Button)	Long time	1 Bit 1.008	---	---	
		Short time	1 Bit 1.008	---	---	
		Curtain position	8 Bit 5.001	Curtain position feedback	8 Bit 5.001	
		Slat position	8 Bit 5.001	Slat position feedback	8 Bit 5.001	

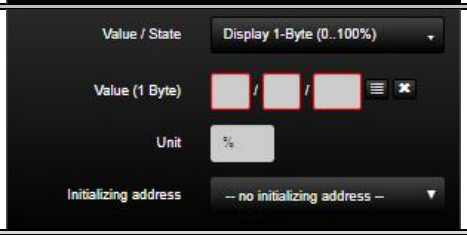
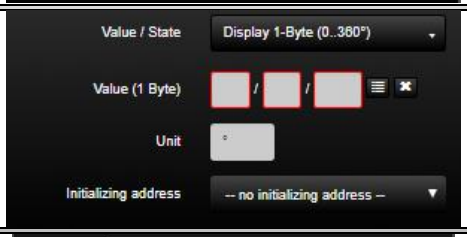
Climate	Ventilate	Fan Mode	1 Bit 1.001	Fan level feedback	8 Bit 5.010	
	Operation mode	Switch operation mode	8 Bit 20.102	Switch operation mode feedback	8 Bit 20.102	
	HVAC Control Mode	Switch operation mode	8 Bit 20.102	Switch operation mode feedback	8 Bit 20.102	
	Base Setpoint	Setpoint	16 Bit 9.001	Display temperature	16 Bit 9.001	
		---	---	Actual temperature	16 Bit 9.001	

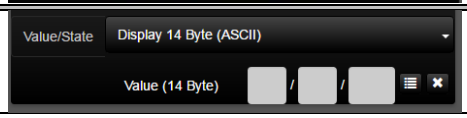
	Setpoint shift	Setpoint shift	8 Bit 6.010	Setpoint shift feedback	8 Bit 6.010	
		---	---	Display temperature	16 Bit 9.001	
		---	---	Actual temperature	16 Bit 9.001	
	HVAC Group	---	---	Display temperature	16 Bit 9.001	
		---	---	Actual temperature	16 Bit 9.001	
		Setpoint shift	8 Bit 6.010	Setpoint shift feedback	8 Bit 6.010	
		Switch operation mode	8 Bit 5.010	Switch operation mode feedback	8 Bit 5.010	

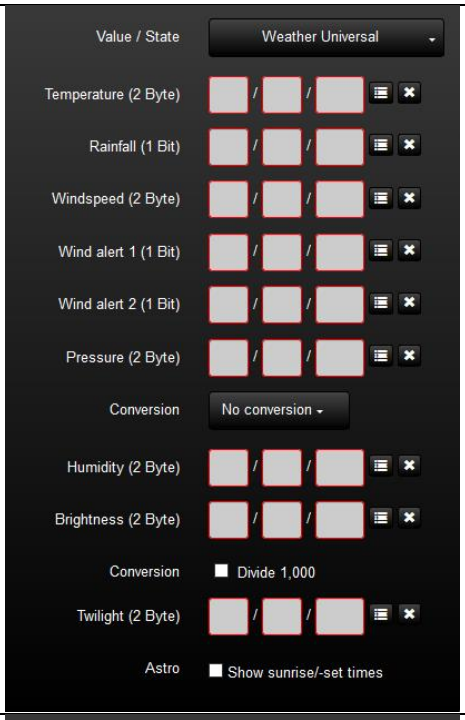
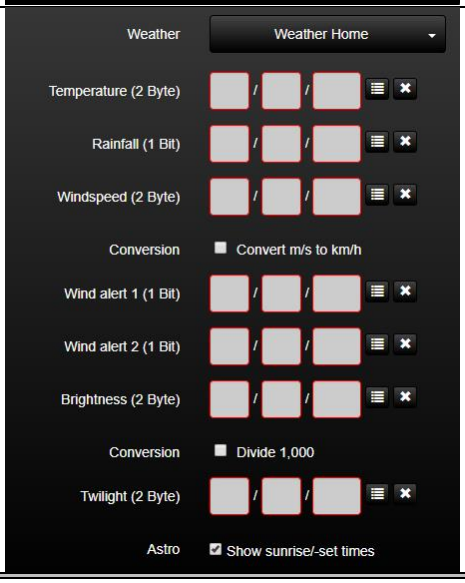
Multi-media	Playlist Various	Volume	8 Bit 5.001	Volume feedback	8 Bit 5.001	
		Text 1/2/3	14 Byte 16.001	---	---	
		Play/Pause	1 Bit 1.010	Play/Pause feedback	1 Bit 1.010	
		Playlist	1 Bit 1.007	---	---	
		Track	1 Bit 1.007	---	---	
		Playlist selection	8 Bit 5.010	---	---	
Multi-media	Playlist Mode	Volume	8 Bit 5.001	Volume feedback	8 Bit 5.001	
		Text 1/2/3	14 Byte 16.001	---	---	
		Play/Pause	1 Bit 1.010	Play/Pause feedback	1 Bit 1.010	
		Track	1 Bit 1.007	---	---	
		Playlist	1 Bit 1.007	---	---	
		Repeat	1 Bit	Repeat feedback	1 Bit	
		Shuffle	1 Bit 1.003	Shuffle feedback	1 Bit 1.003	
		Playlist selection	8 Bit 5.010	---	---	

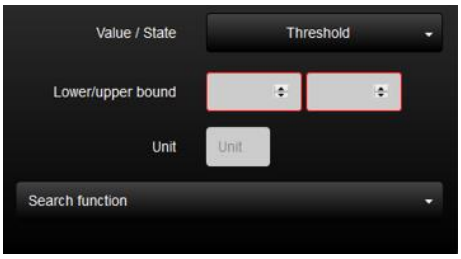
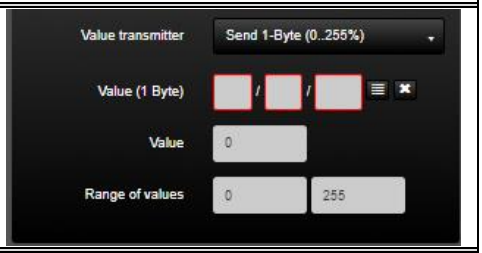
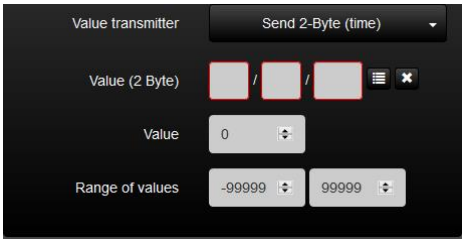
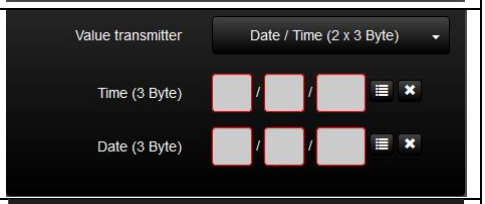
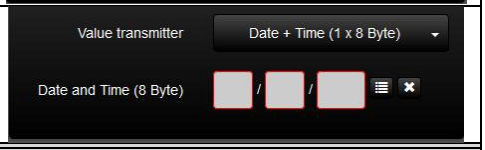
Multi-media	Playlist Sonos	Volume	8 Bit 5.001	Volume feedback	8 Bit 5.001	
				Text 1/2/3	14 Byte 16.001	
		Play/Pause	1 Bit 1.010	Play/Pause feedback	1 Bit 1.010	
		Track	1 Bit 1.007	---	---	
		Playlist	1 Bit 1.007	---	---	
		Repeat	1 Bit 1.003	Repeat feedback	1 Bit 1.003	
		Shuffle	1 Bit 1.003	Shuffle feedback	1 Bit 1.003	
		Playlist selection	8 Bit 5.010			
		Connect	1 Bit 1.017	Connect feedback	1 Bit 1.017	

	Multimedia Playlist	Volume	8 Bit 5.001	Volume feedback	8 Bit 5.001	
		---	---	Text 1/2/3	14 Byte 16.001	
		Play/Pause	1 Bit 1.010	Play/Pause feedback	1 Bit 1.010	
		Track	1 Bit 1.007	---	---	
		Repeat	1 Bit 1.003	Repeat feedback	1 Bit 1.003	
		Shuffle	1 Bit 1.003	Shuffle feedback	1 Bit 1.003	
		Playlist selection	8 Bit 5.010	Playlist selection Feedback	8 Bit 5.010	
Scene	Activate scene	Scene group address	8 Bit 18.001	---	---	
	Activate & learn scene	Scene group address	8 Bit 18.001	---	---	

Value / State	Display 1 Bit (boolean)	----	---	Status	1 Bit e.g. 1.001	
	Display 1 Byte (0...100%)	----	---	Value	8 Bit e.g. 5.010	
	Display 1 Byte (0…255%)	----	---	Value	8 Bit e.g. 5.004	
	Display 1 Byte (0…360°)	----	---	Value	8 Bit e.g. 14.007	
	Display 2 Byte (float)	----	---	Value	16 Bit e.g. 9.001	
	Display 2 Byte (lux)	----	---	Value	16 Bit e.g. 7.013	
	Display 2 Byte (time)	----	---	Value	16 Bit e.g. 7.005	

Value / State	Display 4 Byte (GPS)	----	---	Value	32 Bit e.g. 14.007	
	Display 4 Byte value (float)	----	---	Value	32 Bit e.g. 14.056	
	Display 4 Byte value (unsigned integer)	----	---	Value	32 Bit e.g. 12.001	
	Display 4 Byte value (signed integer)	----	---	Value	32 Bit e.g. 13.013	
	Display 14 Byte ASCII	----	---	Value	112 Bit e.g. 16.001	

Weather	Weather station Universal	----	---	Temperature	16 Bit 9.001	
		---	---	Rainfall	1 Bit 1.011	
		----	---	Wind speed	16 Bit 9.005	
		----	---	Wind alert 1	1 Bit 1.005	
		----	---	Wind alert 2	1 Bit 1.005	
		---	---	Pressure	16 Bit 9.006	
		----	---	Humidity	16 Bit 9.007	
		----	---	Brightness	16 Bit 7.013	
		----	---	Twilight	16 Bit 7.013	
	Weather station Home	----	---	Temperature	16 Bit 9.001	
		---	---	Rainfall	1 Bit 1.011	
		----	---	Wind speed	16 Bit 9.005	
		----	---	Wind alert 1	1 Bit 1.005	
		----	---	Wind alert 2	1 Bit 1.005	
		----	---	Brightness	16 Bit 7.013	
		----	---	Twilight	16 Bit 7.013	

	Threshold	---	---	Operation mode Base setpoint Setpoint adjustment Function group HVAC Display 1 Byte Display 2 Byte Display 4 Byte	5.010 9.001 9.001 9.001 5.001 9.001 14.056	
Value transmitter	Send 1 Byte (0…255%)	Value	8 Bit 5.004	----	---	
		Value	0 -255	----	---	
		Range of values	0 - 255	----	---	
	Send 2 Byte (lux)	Value	16 Bit 7.013	----	---	
		Value send	0 - 99999	----	---	
		Range of values	0 - 99999	----	---	
	Value transmitter 2 Byte (time)	Value	2 Byte 7.005	---	---	
		Value send	*-99999 - 99999*	---	---	
		Range of values	*-99999 - 99999*	---	---	
	Date / Time (2 x 3 Byte)	Time	3 Byte 10.001	---	---	
		Date	3 Byte 11.001	---	---	
	Date + time (1 x 8 Byte)	Date and time	8 Byte 19.001	---	---	

2.5.4.1. Switch / Dimmer

2.5.4.1.1. Switch:

The "Switch" function (1) is the standard KNX function for the simple switching on and off of switch actuators. In the "Switch" function, a group address can be defined for writing "Switch" status changes (2) as can a group address for reading "Switch feedback" feedback (3).

In addition, the current status of a group address can be polled by defining an initialisation address (4) on starting the system.

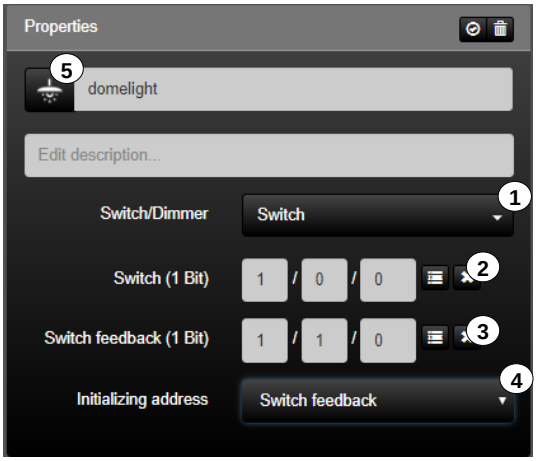


Figure 24: Parameters of the "Switch" function

The function has favourites within the symbol library (5). Additional icons are available via the "⌄" button.

KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Switch		 

Table 2: Display of the "Switch" function

2.5.4.1.2. On / Off:

The "On / Off" (1) function is stateless (without feedback) for targeted triggering of a switching signal (e.g. only switch-off). A group address "On / Off" (2) can be configured for writing the value specified in the input field "Value" (3).

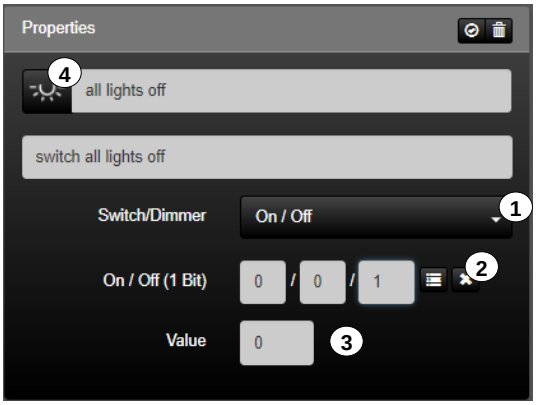


Figure 25: Parameters of the "On / Off" function

The function has favourites within the symbol library (4). Additional icons are available via the "▼" button.

KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
On / Off		 

Table 3: Display of the "On / Off" function

2.5.4.1.3. Stairway function:

The “Stairway function” (1) can be used for switching on/off loads with a time delay. A restart of the stairway function fully retriggers the stairway time. A group address “On / Off” (2) can be configured to write the value defined in the “Value” input field (ON delay = 0, OFF delay = 1). Once the period has elapsed, the value entered under (3) is inverted and sent. The following staircase times (4) are available:

- 1 Seconds
- 5 Seconds
- 30 Seconds
- 1 Minte
- 5 Mintes
- 10 Mintes
- 15 Mintes
- 20 Mintes
- 25 Mintes
- 30 Mintes
- 1 Hour
- 2 Hours
- 3 Hours
- 4 Hours

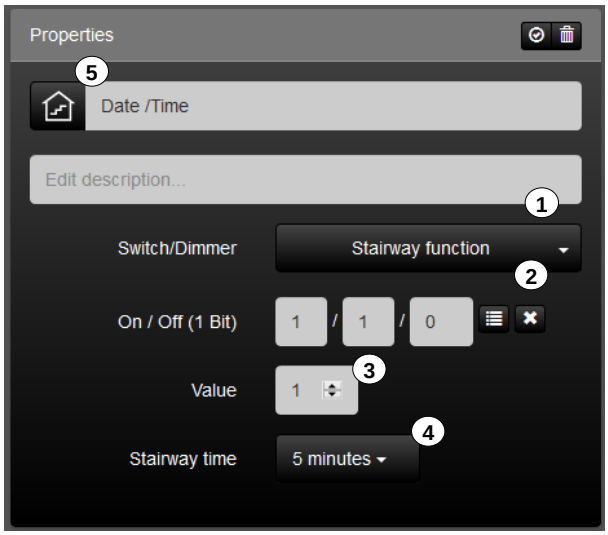


Figure 26: Parameters of the function “Stairway function”

Attention: The inverted state of the staircase function is sent to the bus at every restart. The function must not be used in safety-relevant systems.

The function has favourites within the symbol library (5). Further icons are available via the “ ” button.

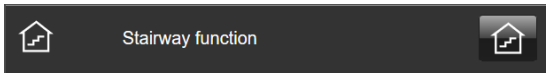
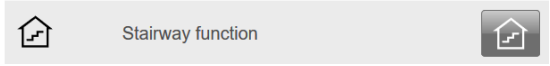
KNX function	Selection of the symbol library in SV-Control	Operating and display element in SV-Home
Stairway function		 

Table 4: Display of the “Stairway function”

2.5.4.1.4. Dimmer/Switch:

The "Dimmer + Switch" function (1) is used for the simple dimming of dimmer actuators. A "Switching" (2) and / or "Brightness value" (4) group address can be configured for switching or writing a new brightness value. In the same way, it is possible to configure the group addresses "Switch feedback" (3) and "Brightness value feedback" (5) in order to read the feedback.

In addition, the current status of a selectable group address can be polled by defining an initialisation address (6) on starting the system.

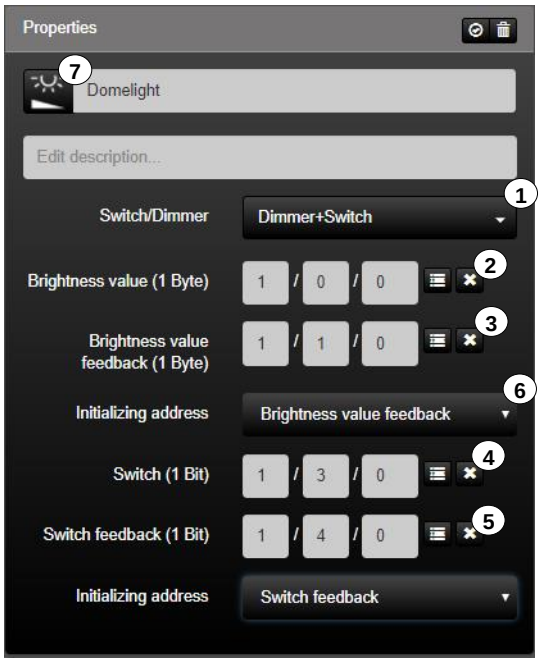


Figure 27: Parameters of the "Dimmer/Switch" function

The function has favourites within the symbol library (7). Additional icons are available via the "⌄" button.

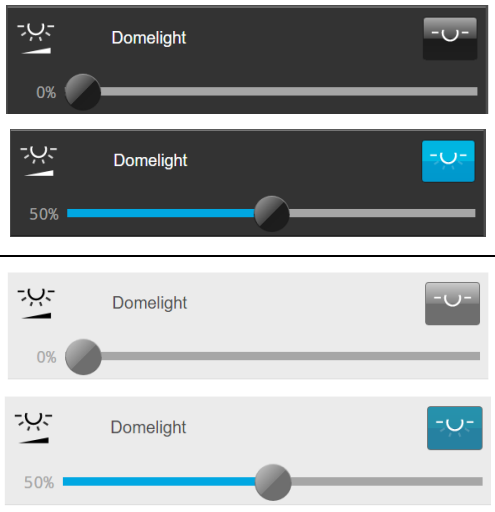
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Dimmer + Switch		

Table 5: Display of the "Dimmer" function

2.5.4.1.5. Dimmer:

The "Dimmer" function (1) is used for the simple dimming of dimmer actuators. A "Brightness value" (2) group address can be configured for switching or writing a new brightness value. In the same way, it is possible to configure the group addresses "Brightness value feedback" (3) in order to read the feedback.

In addition, the current status of a selectable group address can be polled by defining an initialisation address (5) on starting the system.

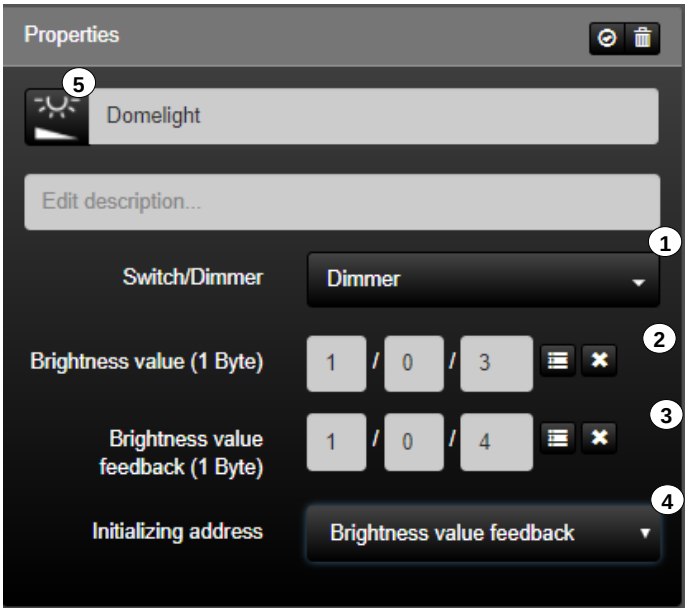


Figure 28: Parameters of the "Dimmer" function

The function has favourites within the symbol library (5). Additional icons are available via the "▾" button.

KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Dimmer		 

Table 6: Display of the “Dimmer” function

2.5.4.1.6. RGB (3 x 1 Byte):

The function “RGB (3 x 1 Byte)” (1) is the KNX function for controlling RGB dimming actuators.
With the group address e.g. “Send value red” (2), the current brightness value of the red colour channel can be written on the bus.
The group address “Value red feedback” (3) can be defined to read the current brightness of the red colour channel.

In addition, it is possible to query the current status of the selected group address of the colour channel by declaring one of the group addresses “Initializing address red” (4) at system start.
The same applies to the green (5 - 7) and blue (8 - 10) colour channels.
The “Switch” group address (11) can be defined for central switching of the function.

The switching state of the function can also be read via the group address “Switch feedback” (12).

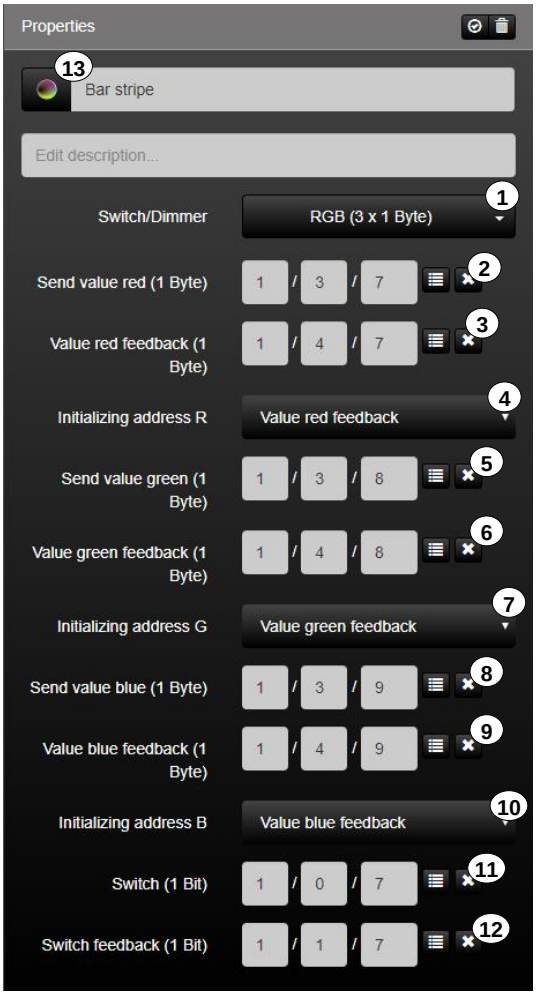


Figure 29: Parameters of the function “RGB (3 x 1 Byte)”

The function has favourites within the symbol library (5). Additional icons are available via the "⌄" button.

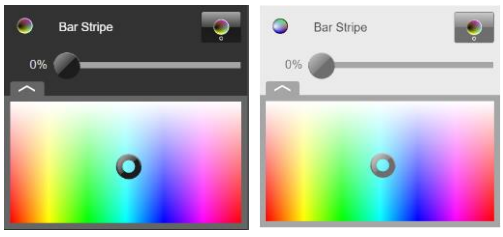
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
RGB (3 x 1 Byte)		

Table 7: Display of the "Dimmer" function

2.5.4.1.7. RGB (3 Byte):

The function “RGB (3 Byte)” (1) is the KNX function for controlling RGB dimming actuators.
With the group address “Send value RGB” (2), all the brightness values of the red, green and blue colour channels can be written on the bus.
The group address “Value RGB feedback” (3) can be defined for reading the current brightness of the colour channels.

In addition, the current status of the selected group address of the colour channel can be queried by declaring one of the group addresses “Initializing RGB feedback” (4) on system start.
The group address “Switch” (5) can be defined for the central switching of the function.
The switching state of the function can likewise be read via the group address “Switch feedback” (6).

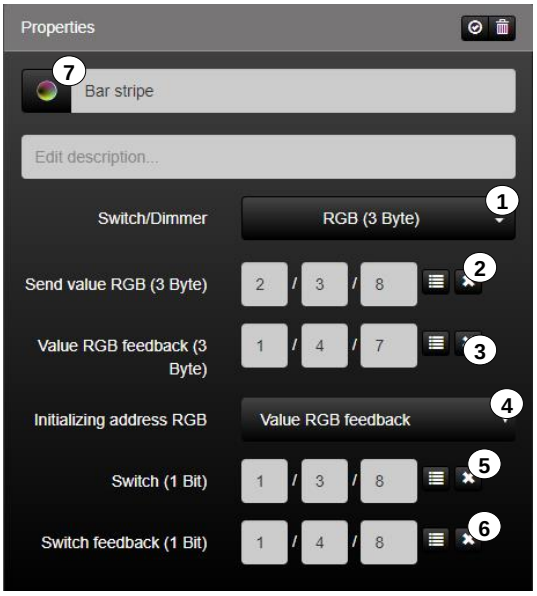


Figure 30: Parameters of the “RGB (3 Byte)” function

The function has favourites within the symbol library (5). Additional icons are available via the "▼" button.

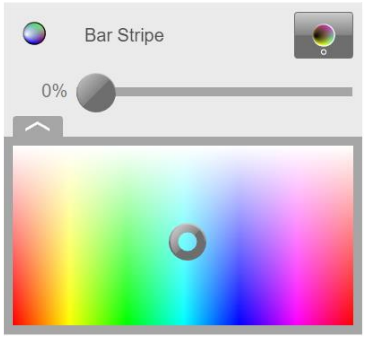
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
RGB (3 Byte)		 

Table 8: Display of the “RGB (3 Byte)” function

2.5.4.1.8. RGB+W KNX:

The function “RGB+W KNX” (1) is the KNX function for controlling RGBW dimming actuators.
With the group address “Send value RGB” (2), all the brightness values of the red, green and blue colour channels can be written on the bus.
The group address “Value RGB feedback” (3) can be defined for reading the current brightness of the colour channel.
The “Send value white” (5) is defined separately and has its own feedback address (6).

In addition, the current status of the selected group address of the colour channel can be queried by declaring the “Initializing address RGB” (4), “Initializing address white” (7) and “Initializing address switch” (10) on system start.
The group address “Switch” (8) can be defined for the central switching of the function.
The switching state of the function can also be read via the “Switch feedback” (9) group address.

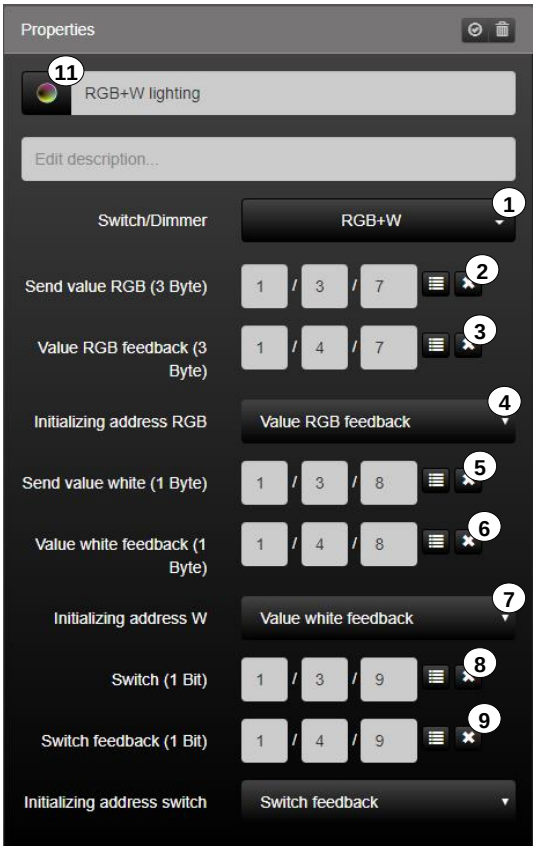


Figure 31: Parameters of the “RGB+W KNX” function

The function has favourites within the symbol library (11). Additional icons are available via the "▼" button.

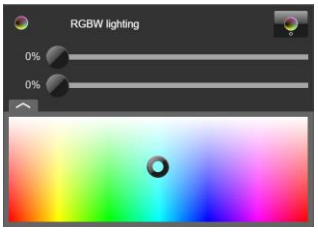
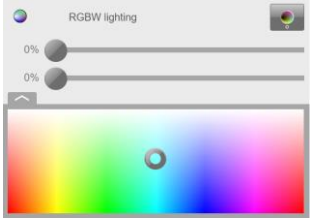
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
RGBW KNX		 

Table 9: Display of the “RGB+W KNX” function

2.5.4.1.9. RGB+W (4 x 1 Byte):

The function “RGB+W (4 x 1 Byte)” (1) is the function for controlling RGBW dimming actuators.

With the group address e.g. “Brightness value red” (2), the current brightness value of the red colour channel can be written on the bus. The group address “Brightness value red feedback” (3) can be defined for reading the current brightness value of the colour channel.

The current status of the selected colour channel can also be queried by declaring an “Initialisation address red” (4) at system start-up.

The same applies to the green (5 - 7), blue (8 - 10) and white (11-13) colour channel. The group address “Switch” (14) can be defined for central switching of the function or for a 1 bit scene.

The state can likewise be read via the group address “Switch feedback” (15).

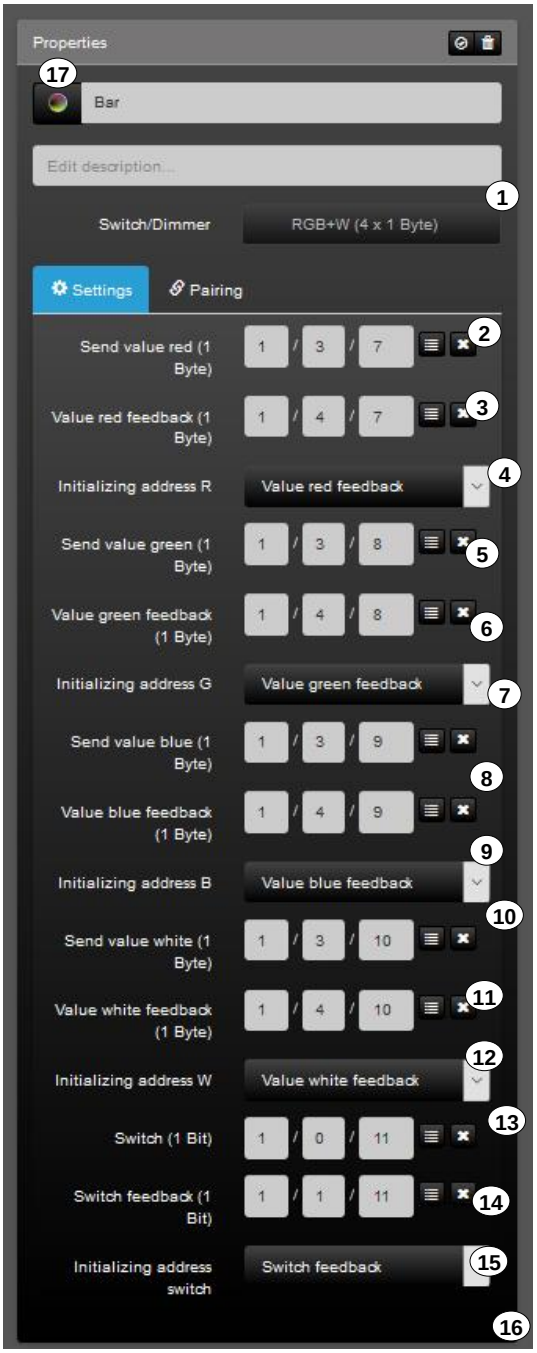


Figure 32: Parameters of the “RGB+W (4 x 1 Byte)” function

The function has favourites within the symbol library (17). Additional icons are available via the "⌄" button.

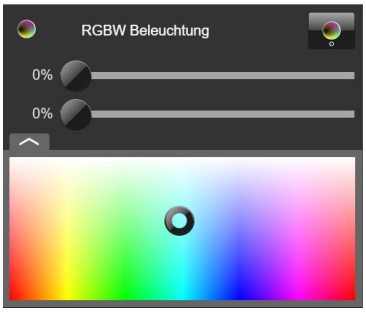
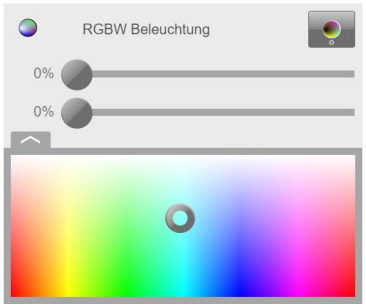
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
RGB+W (4 x 1 Byte)		 

Table 10: Display of the “RGB+W (4 x 1 Byte)” function

2.5.4.1.10. Tunable **white** KNX**:**

The function “Tunable white KNX” (1) is the KNX function for controlling Tunable white luminaires. With the group address “Brightness value” (2), the brightness value can be written on the bus. The group address “Brightness value feedback” (3) can be defined for reading the current brightness. The group address “Send value cold white” (5) is used for setting the colour temperature and has its own feedback address (6).

In addition, the current status of the selected group address of the respective channel can be queried by declaring the “Initializing address” (4) and “Initializing address cold white” (7) on system start. The group address “Switch” (8) can be defined for central switching of the function. The switching state of the function can be likewise be read via the group address “Switch feedback” (9).

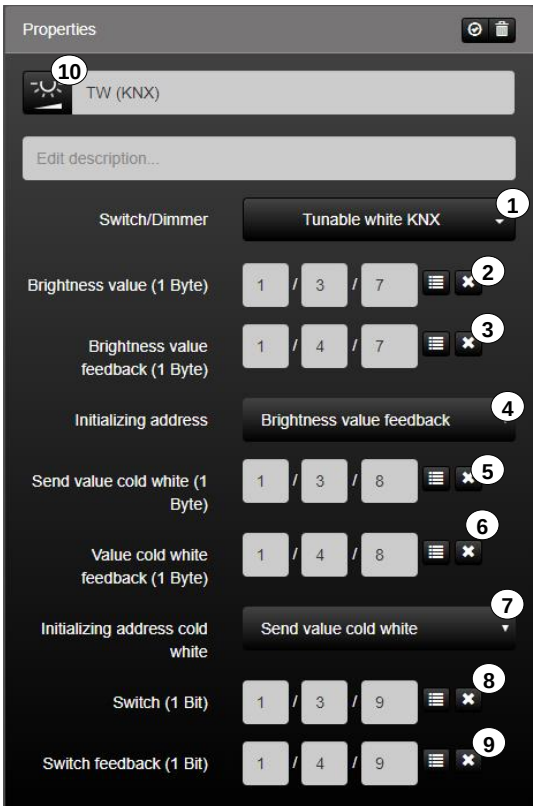


Figure 33: Parameters of the “Tunable white KNX” function

The function has favourites within the symbol library (5). Additional icons are available via the "⌄" button.

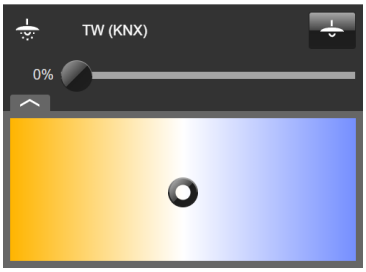
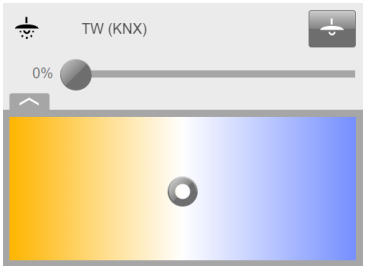
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Tunable white KNX		 

Table 11: Display of the “Tunable white KNX” function

2.5.4.1.11. Tunable white Dali:

The function “Tunable white Dali” (1) is the KNX function for controlling Tunable white luminaires. With the group address “Brightness value” (2), the brightness value can be written on the bus. The group address “Brightness value feedback” (3) can be defined for reading the current brightness. The group address “Send value color temperature” (5) is used to set the colour temperature and has its own feedback address (6).

In addition, the current status of the selected group address of the respective channel can be queried by declaring the “Initializing address” (4) and “Initializing address color temperature” (7) on system start. The colour range can further be selected between 0 and 65535 K. The range is set by default between 2500 and 6500 K. The group address “Switch” (8) can be defined for central switching of the function. The switching state of the function can likewise be read via the group address “Switch feedback” (9).

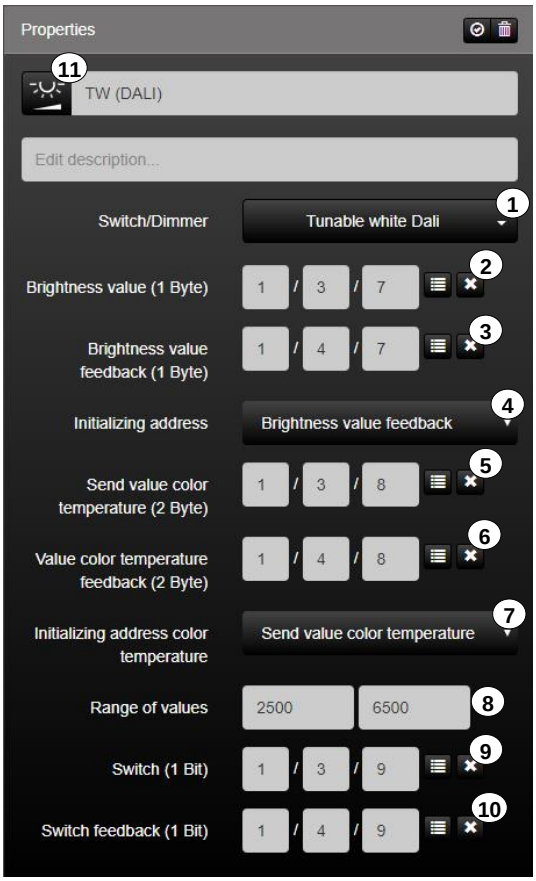


Figure 34: Parameters of the “Tunable white Dali” function

The function has favourites within the symbol library (5). Additional icons are available via the "⌄" button.

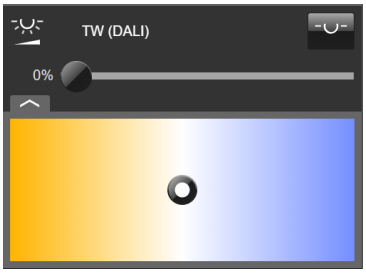
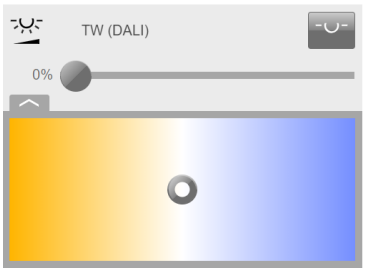
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Tunable white Dali		 

Table 12: Display of the “Tunable white Dali” function

2.5.4.1.12. Remote maintenance standard / universal

The functions "Remote maintenance standard" or "Remote maintenance universal" (1) are the KNX functions for simple control for remote maintenance of the KNX system via the JUNG KNX-IP-Secure interfaces. With the group address "Enable remote maintenance" (2) the remote maintenance can be enabled after successful setup.

The functions also contain further status objects for a more detailed display of the connection status.

- Serverconnection (3)
- Programming via remote maintenance (4)

Additional statuses for the Universal function:

- Activationcode valid (5)
- Secure Tunnelling valid (6)

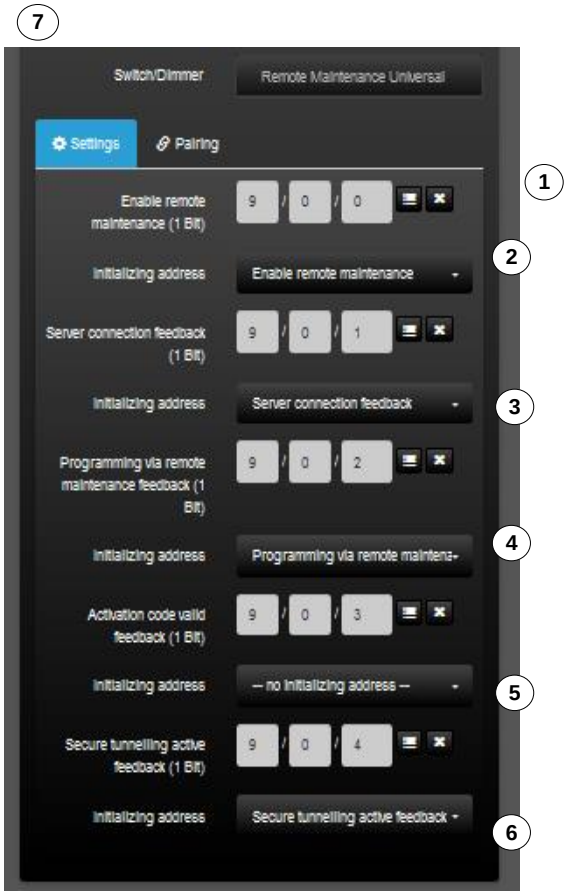


Figure 35: Parameters of the "Remote Maintenance Universal" function

The function has favourites within the symbol library. Additional icons are available via the " ⌄ " button.

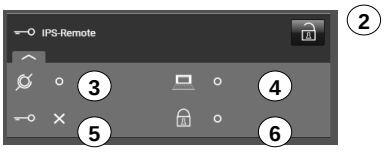
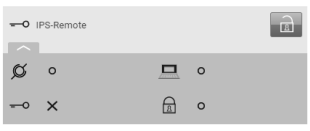
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Remote maintenance universal		 

Table 13: Display of the "Remote maintenance universal" function

2.5.4.2. Motor

If required, the function type "Motor" can be depicted by one of three KNX functions.

2.5.4.2.1. Up/**Down**/Stop:

The "UP/DOWN/STOP" function (1) is the KNX function for the simple control of motorised drives without feedback objects. The motorised drive can be activated by the group addresses "Long time" (2) and "Short time" (3).

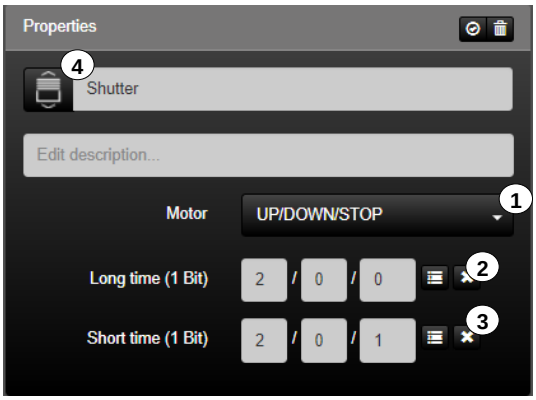


Figure 36: Parameters of the "Up/Down/Stop" function

The function has favourites within the symbol library (4). Additional icons are available via the "⌄" button.

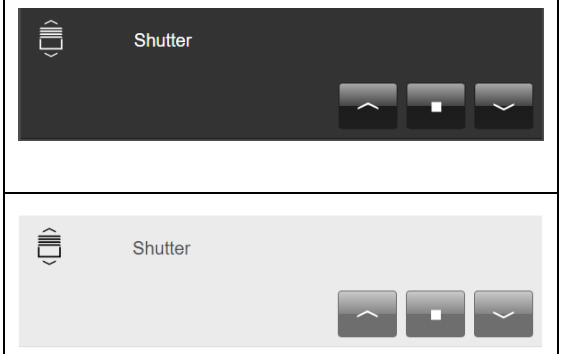
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Up / Down / Stop		

Table 14: Display of the "Up/Down/Stop" function

2.5.4.2.2. Up / Down / Stop (State):

The "UP / DOWN / STOP (State)" function (1) is the KNX function for the simple control of motorised drives with feedback objects. The motorised drive can be activated by the group addresses "Long time" (2) and "Short time" (3).

The "Curtain position feedback" (4) group address must be configured for reading the position. In addition, the current status of a selectable group address can be polled by defining an initialisation address (5) on starting the system.

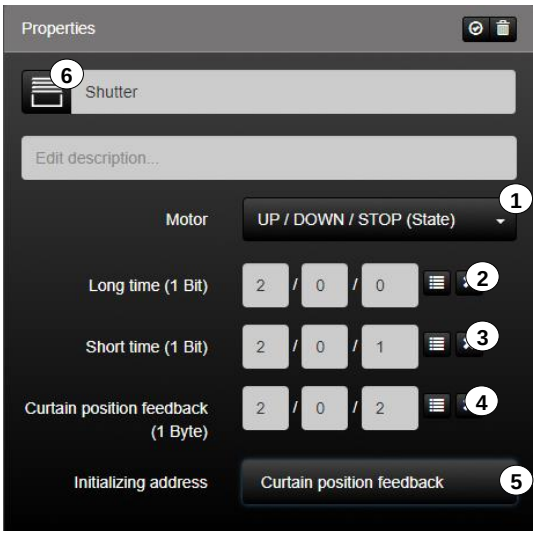


Figure 37: Parameters of the "Up / Down / Stop (State)" function

The function has favourites within the symbol library (6). Additional icons are available via the "⌄" button.

KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Up / Down / Stop (State)		 

Table 15: Display of the "Up / Down / Stop (State)" function

2.5.4.2.3. Rollershutter/Awning:

The “Rollershutter/Awning” function (1) is the KNX function for the control of motorised roller shutters/awnings with position specification. The motorised drive can be activated by the group address "Curtain position" (2).

The "Curtain position feedback" (3) group address must be configured for reading the position. In addition, the current status of a selectable group address can be polled by defining an initialisation address (4) on starting the system.

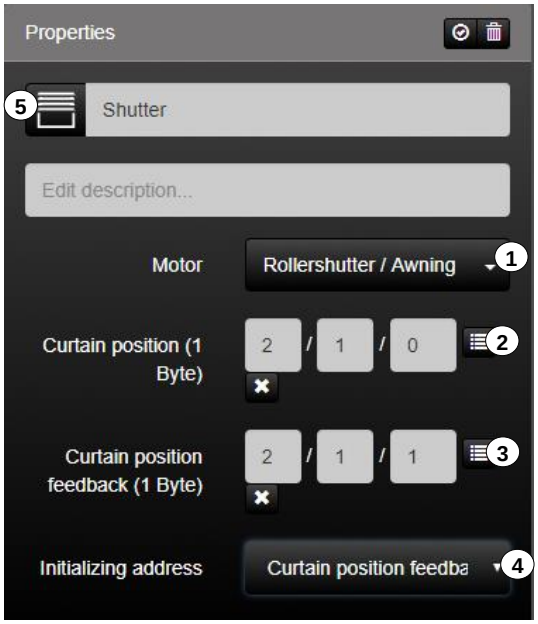


Figure 38: Parameters of the "Rollershutter/Awning" function

The function has favourites within the symbol library (5). Additional icons are available via the "⌄" button.

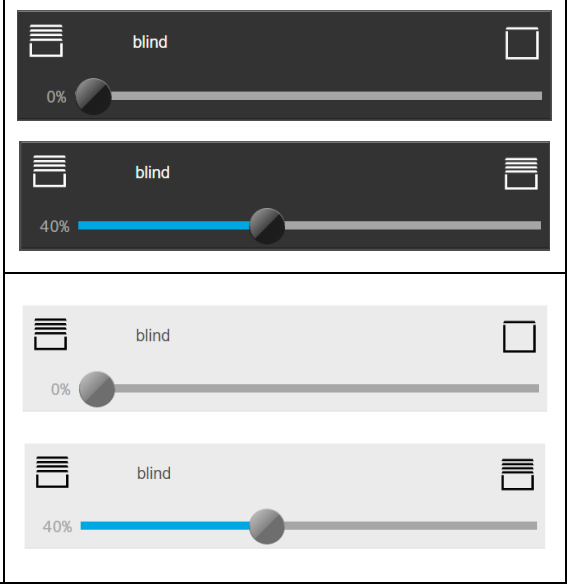
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Rollershutter/Awning		

Table 16: Display of the "Rollershutter/Awning" function

2.5.4.2.4. Venetian Blinds (Slider):

The "Venetian Blinds (Slider)" function (1) is the KNX function for controlling motorised venetian blinds with position and slat specification. The motorised drive can be activated by the group addresses "Curtain position" (2) and "Slat position" (4).
To read the positions, it is possible to configure the group addresses "Curtain position feedback" (3) and "Slat position feedback" (5). In addition, the current status of the function can be polled by defining two initialisation addresses (6 - 7) on starting the system.

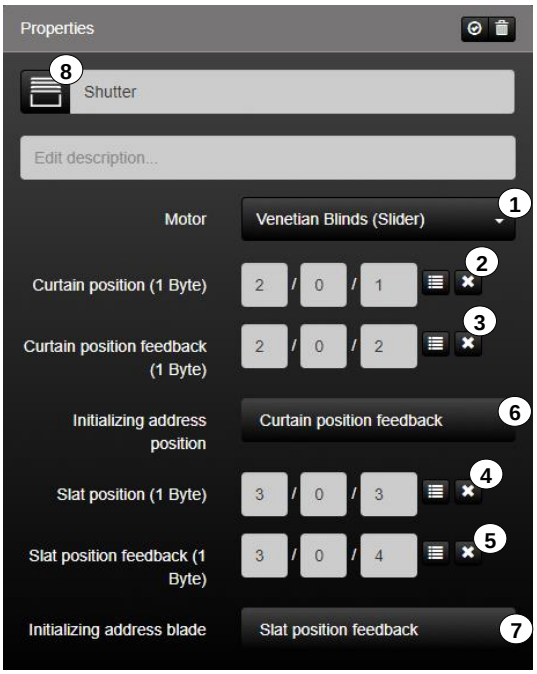


Figure 39: Parameters of the "Venetian Blinds (Slider)" function

The function has favourites within the symbol library (8). Additional icons are available via the "▾" button.

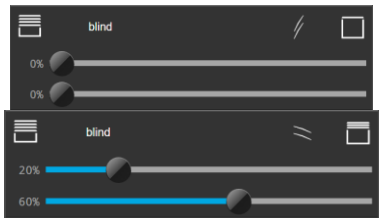
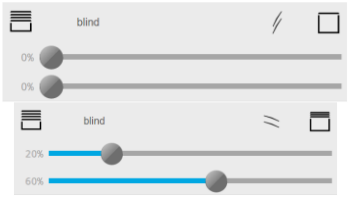
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Venetian Blinds (Slider)		 

Table 17: Display of the "Venetian Blinds (Slider)" function

2.5.4.2.5. Venetian Blinds (Button):

The "Venetian Blinds (Button)" function (1) is the KNX function for controlling motorised venetian blinds with position and slat specification. The motorised drive can be activated by the group addresses "Long time" (2), "Short time" (3), "Position specification" (4) and "Slat specification" (5). To read the positions, it is possible to configure the group addresses "Curtain position feedback" (6) and "Slat position feedback" (7). In addition, the current status of the function can be polled by defining two initialisation addresses (8 - 9) on starting the system.

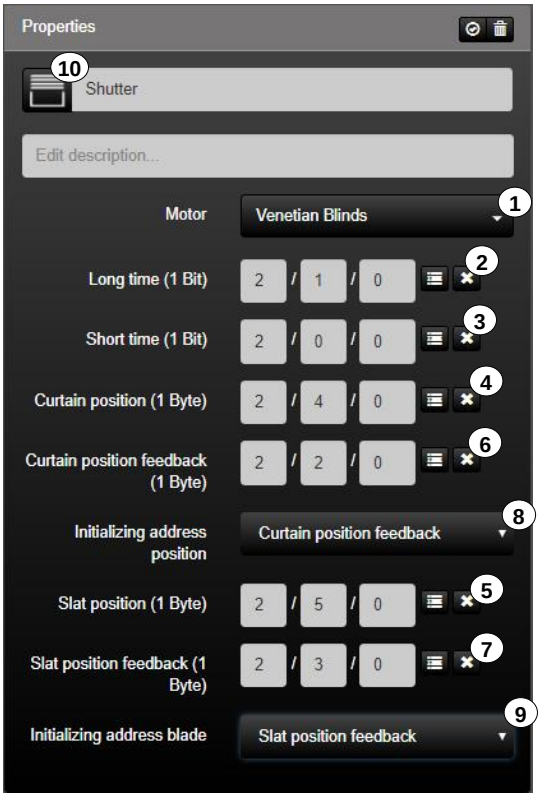


Figure 40: Parameters of the "Venetian Blinds (Button)" function

The function has favourites within the symbol library (10). Additional icons are available via the "⌄" button.

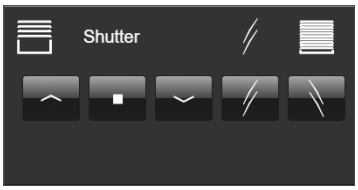
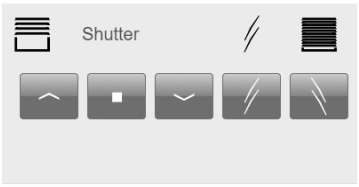
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Venetian Blinds (Button)		 

Table 18: Display of the "Venetian Blinds (Button)" function

2.5.4.3. Climate

If required, the function group "Climate" can be depicted by various KNX functions.

2.5.4.3.1. Ventilate:

The "Ventilate" function (1) allows the display and control of the status of a KNX ventilation controller.

In the input field (2), it is possible to specify the group address for controlling the fan and, in the input field (3), it is possible to enter the group address for the feedback of the currently set fan level.

One of the two group addresses can be selected for the initialisation (4) of the Smart Visu Server on its system start.

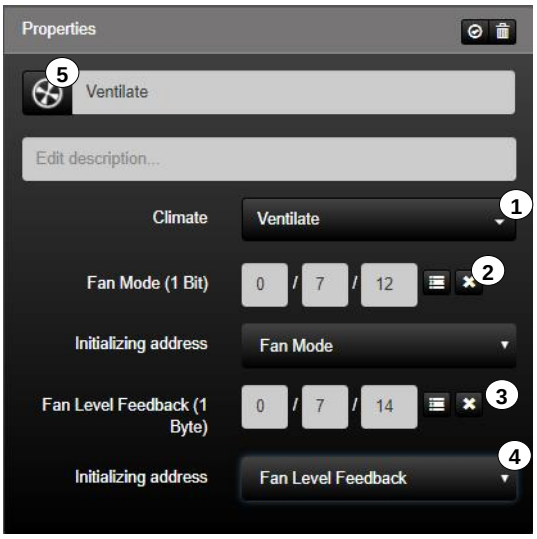


Figure 41: Parameters of the "Ventilate" function

The function has favourites within the symbol library (5). Additional icons are available via the "⌄" button.

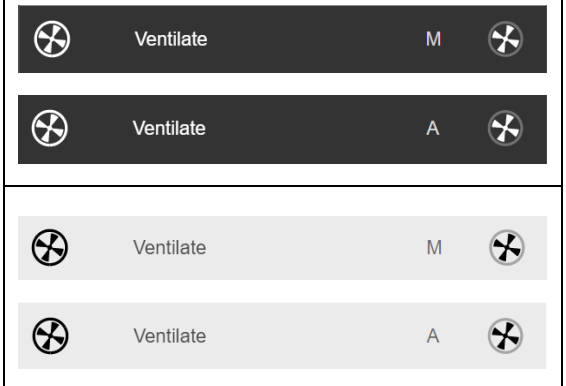
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Ventilate		

Table 19: Display of the "Ventilate" function

2.5.4.3.2. Operation Mode:

The function “Operation Mode" (1) is the function for switching the different operating modes in accordance with KNX. This can be initiated by the group address "Switch operation mode" (2).

The current operating mode can be read by the group address "Switch operation mode feedback" (3).

In addition, by declaring an initialisation address (4) at system start-up, the current status of the function can be queried.

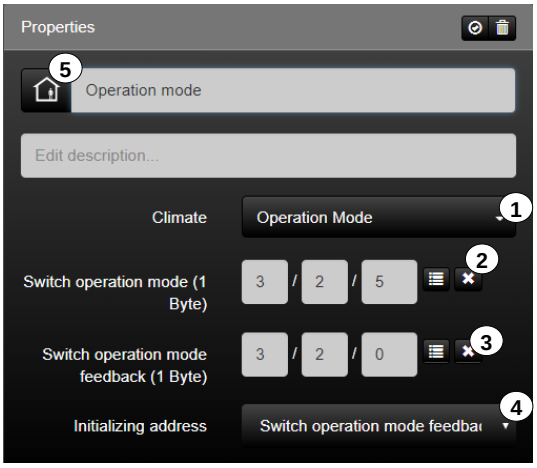


Figure 42: Parameters of the "Operation Mode" function

The function has favourites within the symbol library (5). Additional icons are available via the "⌄" button.

KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Operation Mode		 

Table 20: Display of the "Operation Mode" function

2.5.4.3.3. HVAC Control Mode:

With the function "HVAC Control Mode" (1), you can switch between heating / cooling and ventilation manual / auto. Switched by the group address "HVAC mode" (2).

The current operating mode can be read by the group address "HVAC mode feedback" (3).

In addition, by defining two initialisation addresses (4) during system start-up, the current status of the function can be queried.

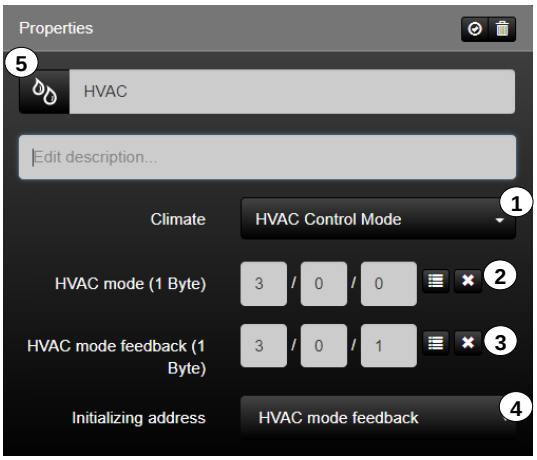


Figure 43: Parameters of the "HVAC Control Mode" function

The function has favourites within the symbol library (5). Additional icons are available via the "▼" button.

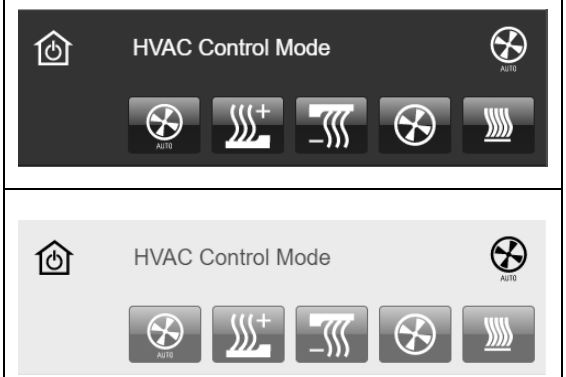
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
HVAC Control Mode		

Table 21: Display of the "HVAC Control Mode" function

2.5.4.3.4. Base Setpoint:

The Smart Visu Server supports KNX climate control by specifying a base setpoint (1). The temperature control can be influenced by the group address "Setpoint" (2).

The reading of the current setpoint and the current actual value can be configured by the group addresses "Display temperature" (3) and "Actual temperature" (4).

In addition, by defining three initialisation addresses (5 - 7) at system start-up, the current status of the function can be queried.
Moreover, the “Range of values” (8) can be set individually.

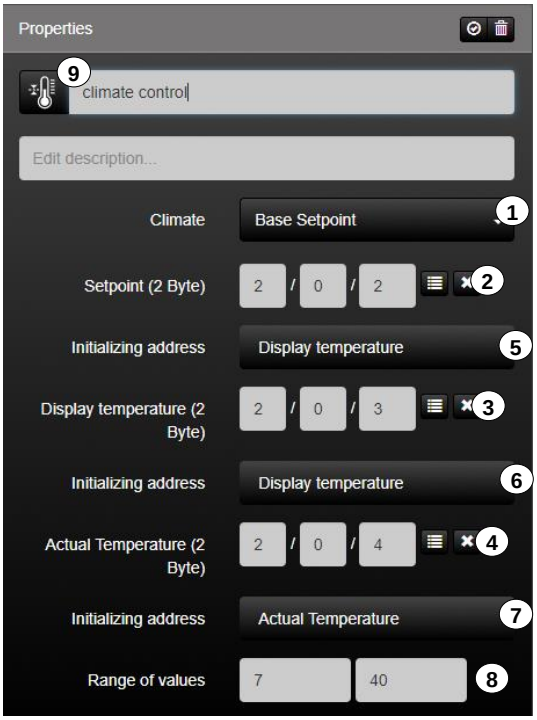


Figure 44: Parameters of the "Base Setpoint" function

The function has favourites within the symbol library (9). Additional icons are available via the "⌄" button.

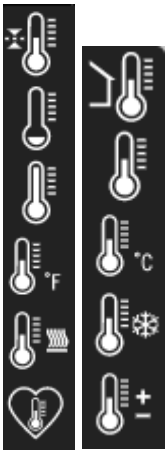
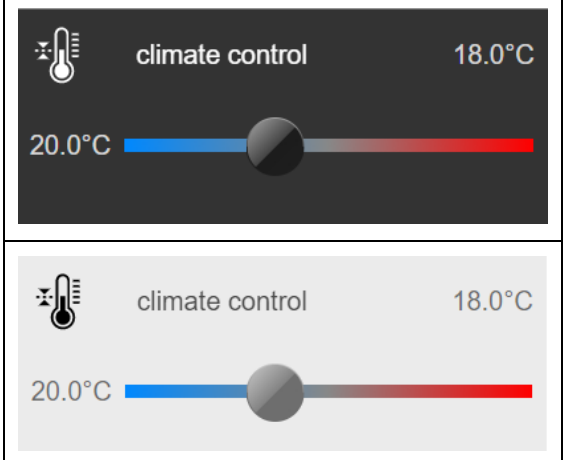
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Base Setpoint		

Table 22: Display of the "Base Setpoint" function

2.5.4.3.5. Setpoint Shift:

With the function "Setpoint Shift" (1), a KNX climate control can be influenced via the setpoint adjustment. The group address "Setpoint shift" (2) can be used to influence the temperature control.

Reading the current setpoint shift can be configured by the corresponding feedback addresses (3).

Furthermore, the current values can be displayed via the setpoint temperature display (4) and the actual temperature display (8).

In addition, by declaring two initialisation addresses (5-7) at system start-up, the current status of the function can be queried.

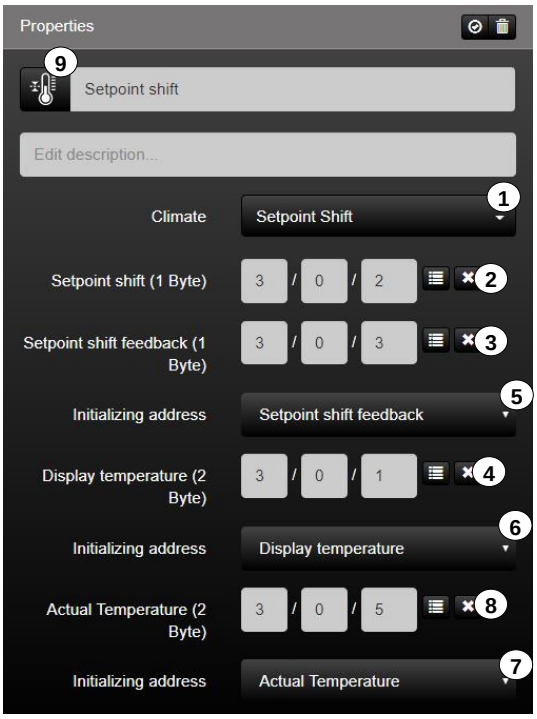


Figure 45: Parameters of the "Setpoint Shift" function

The function has favourites within the symbol library (9). Additional icons are available via the "▼" button.

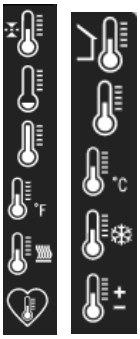
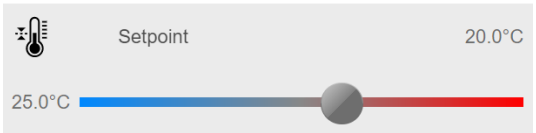
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Setpoint Shift		 

Table 23: Display of the "Setpoint Shift" function

2.5.4.3.6. HVAC Group:

With the function "HVAC Group" (1), an all-embracing KNX climate control can be initiated.
The current setpoint temperature is indicated by the group address "Display temperature" (2) depending on the set operating mode.
The group address "Actual temperature" (3) shows the values rounded to one decimal place.
The sending and reading of the current setpoint shift (4) can be configured by the corresponding addresses.
The current operating mode can be changed and read out by the group addresses "Switch operation mode" or "Switch operation mode feedback" (5).

In addition, by declaring four initialisation addresses (6) during system start-up, the current status of the function can be queried.

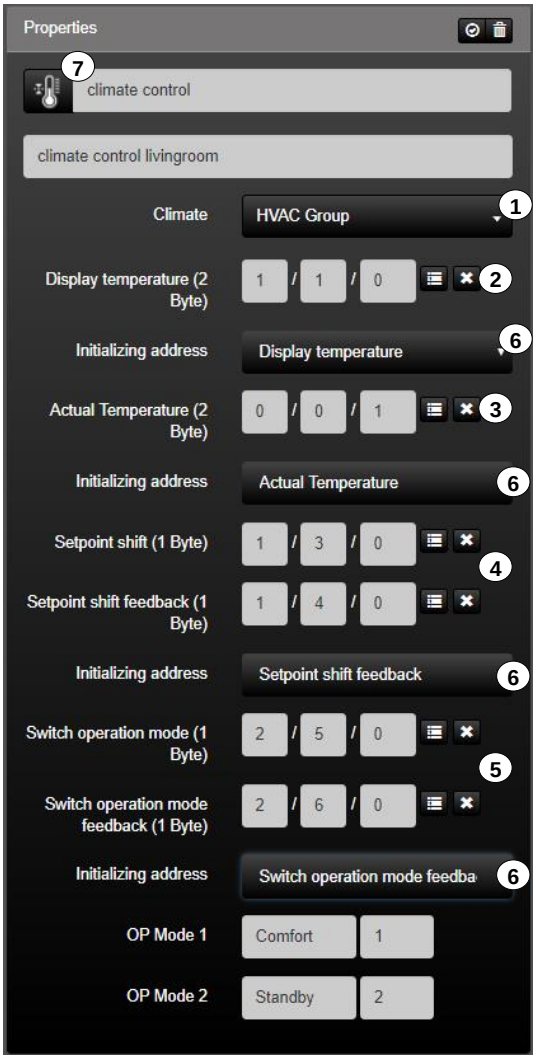


Figure 46: Display of the "HVAC Group" function

The function has favourites within the symbol library (7). Additional icons are available via the "⌄" button.

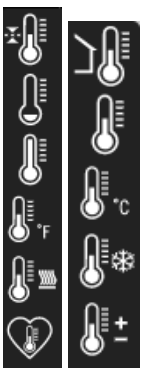
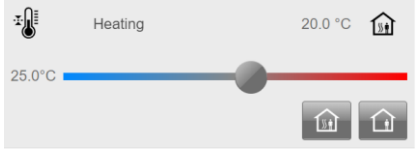
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
HVAC Group		 

Table 24: Display of the "HVAC Group" function

2.5.4.4. Multimedia

2.5.4.4.1. Playlist Various:

The "Playlist Various (1)" function is the KNX function for controlling simple multimedia applications.

The volume can be influenced and confirmed by the group addresses "Volume" or "Volume Feedback" (2).

In the input fields (3), the function can read ASCII characters of the registered group addresses (for example, playlist, artist, title). If a text is written to these group addresses, these are visible in the SV-Home.

Furthermore, another playlist (5) or title (6) can be jumped to and another playlist (7) can be selected.

In addition, by declaring two initialisation addresses (8-9) during system start-up, the current status of the function can be queried.

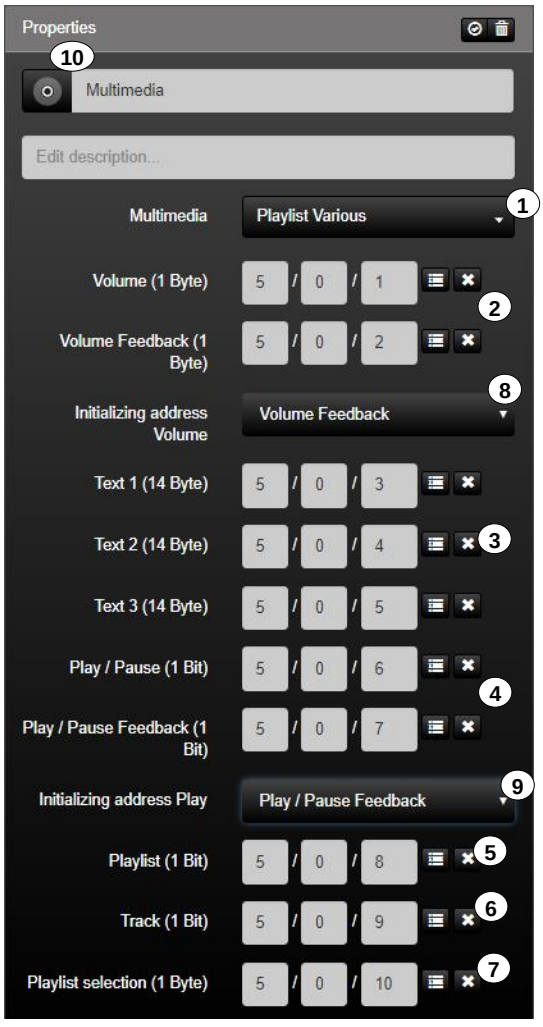


Figure 47: Function “Playlist Various”

The function has favourites within the symbol library (8). Additional icons are available via the "▼" button.

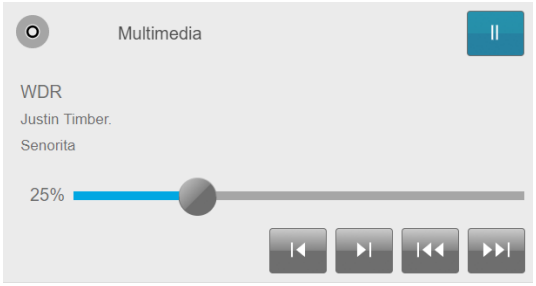
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Playlist Various		 

Table 25: Display of the “Playlist Various” function

2.5.4.4.2. Playlist Mode:

The "Playlist Mode (1)" function is the KNX function for the comprehensive control of multimedia applications.

The volume can be influenced and confirmed by the group addresses "Volume" or "Volume Feedback" (2).

In the input fields (3), the function can read ASCII characters of the registered group addresses (for example, playlist, artist, title). If a text is written to these group addresses in the KNX system, these are visible in the SV-Home.

Playback can be influenced and confirmed by the group addresses "Play / Pause" or "Play / Pause Feedback" (4). Furthermore, a further playlist (5) or title (6) can be started.

The function has the possibility to play the current playlist in a loop (7) or randomly (8).

The function "Playlist selection" (10) can be used to select another playlist.

In addition, by declaring two initialisation addresses (9) during system start-up, the current status of the function can be queried.
.

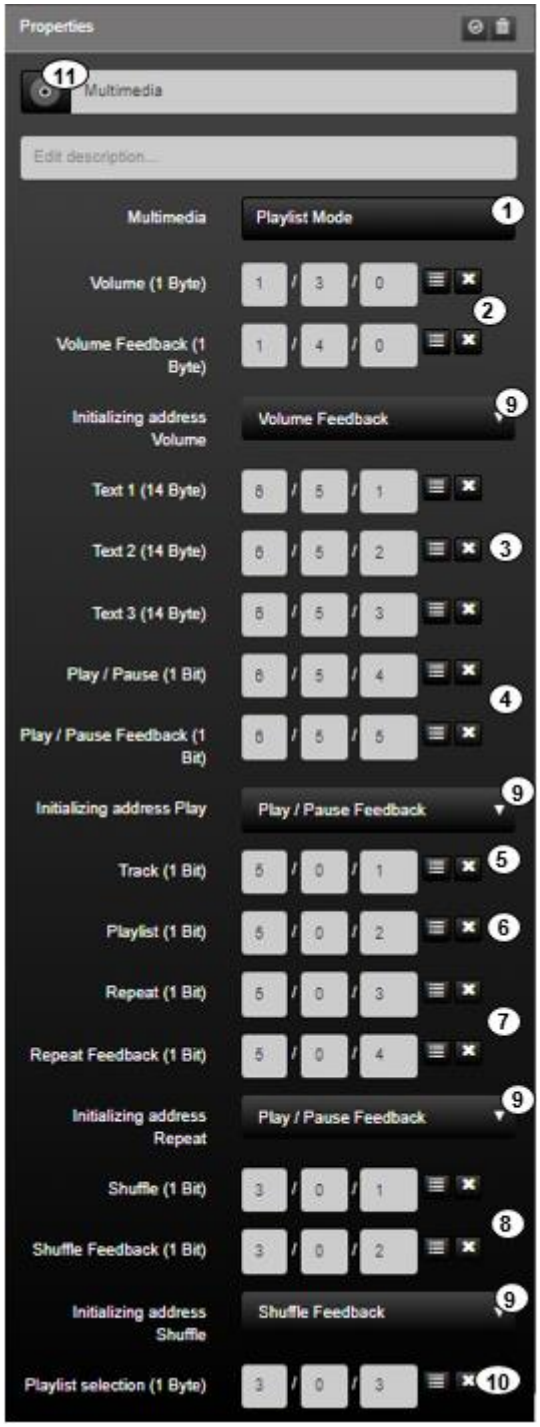


Figure 48: Function “Playlist Mode”

The function has favourites within the symbol library (11). Additional icons are available via the "▼" button.

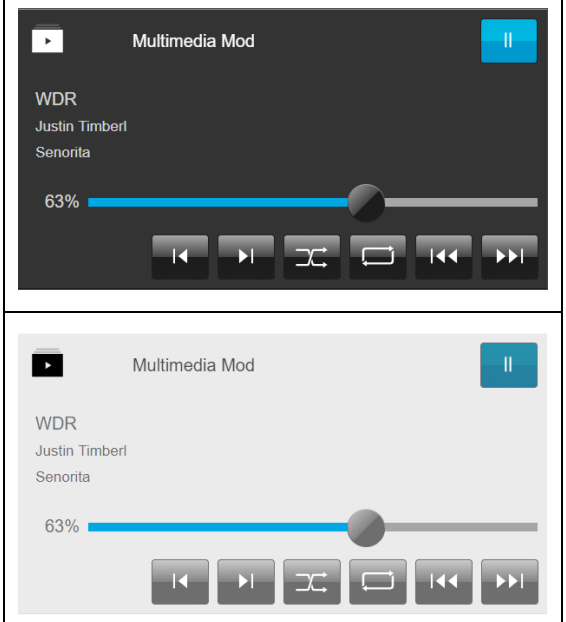
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Playlist Mode		

Table 26: Display of the "Playlist Mode" function

2.5.4.4.3. **Multimedia** Sonos:

The "Multimedia Sonos (1)" function is the KNX function for the comprehensive control of multimedia applications.

The volume can be influenced and confirmed by the group addresses "Volume" or "Volume Feedback" (2).

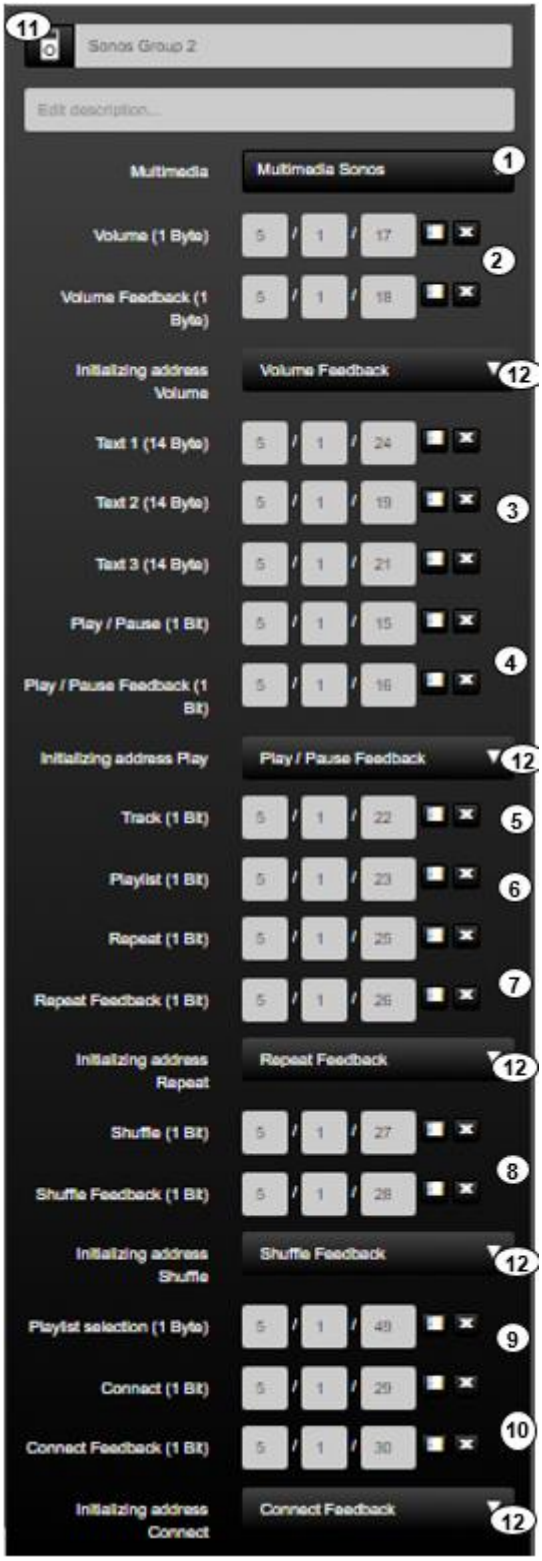
In the input fields (3), the function can read ASCII characters of the registered group addresses (for example, playlist, artist, title). If a text is written to these group addresses in the KNX system, these are visible in the SV-Home.

Playback can be influenced and confirmed by the group addresses "Play / Pause" or "Play / Pause Feedback" (4). Furthermore, a further playlist (5) or title (6) can be started.

The function has the possibility to play the current playlist in a loop (7) or randomly (8).
In addition, by declaring two initialisation addresses (9) during system start-up, the current status of the function can be queried.

You can play different playlists via the "Playlist" group address (9). For this purpose, sonos loudspeakers can be connected and decoupled by means of the group addresses "Connect" or "Connect Feedback" (10).

In addition, by declaring two initialisation addresses (12) during system start-up, the current status of the function can be queried.



The function has favourites within the symbol library (11). Additional icons are available via the "▼" button.

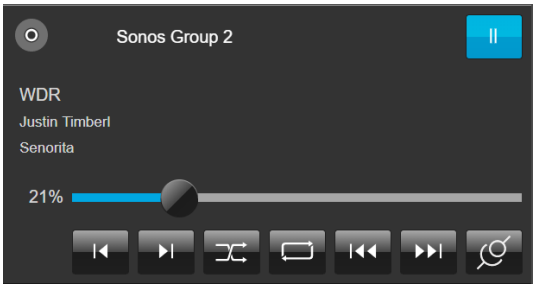
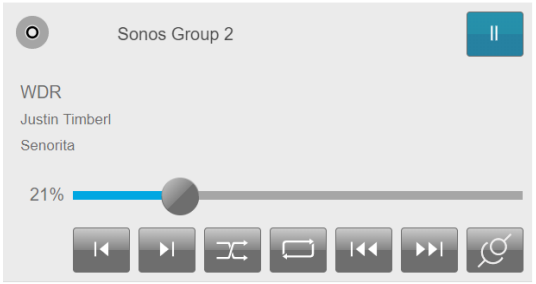
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Multimedia Sonos		 

Table 27: Display of the "Multimedia Sonos" function

2.5.4.4.4. Multimedia **Playlist**:

The "Playlist Playlist (1)" function is the KNX function for the comprehensive control of multimedia applications.

The volume can be influenced and confirmed by the group addresses "Volume" or "Volume Feedback" (2).

In the input fields (3), the function can read ASCII characters of the registered group addresses (for example, playlist, artist, title). If a text is written to these group addresses in the KNX system, these are visible in the SV-Home.

The playback can be influenced and feedbacked by the group addresses "Play/Pause" or "Play/Pause Feedback" (4).

Furthermore, another title (5) can be selected. The function has the possibility to play the playlist in a loop (6) or randomly (7).

Furthermore, another playlist (8) can be jumped to. The matching playlist titles must be entered manually (9).

In addition, by declaring initialisation addresses (10) during system start-up, the current status of the function can be queried.

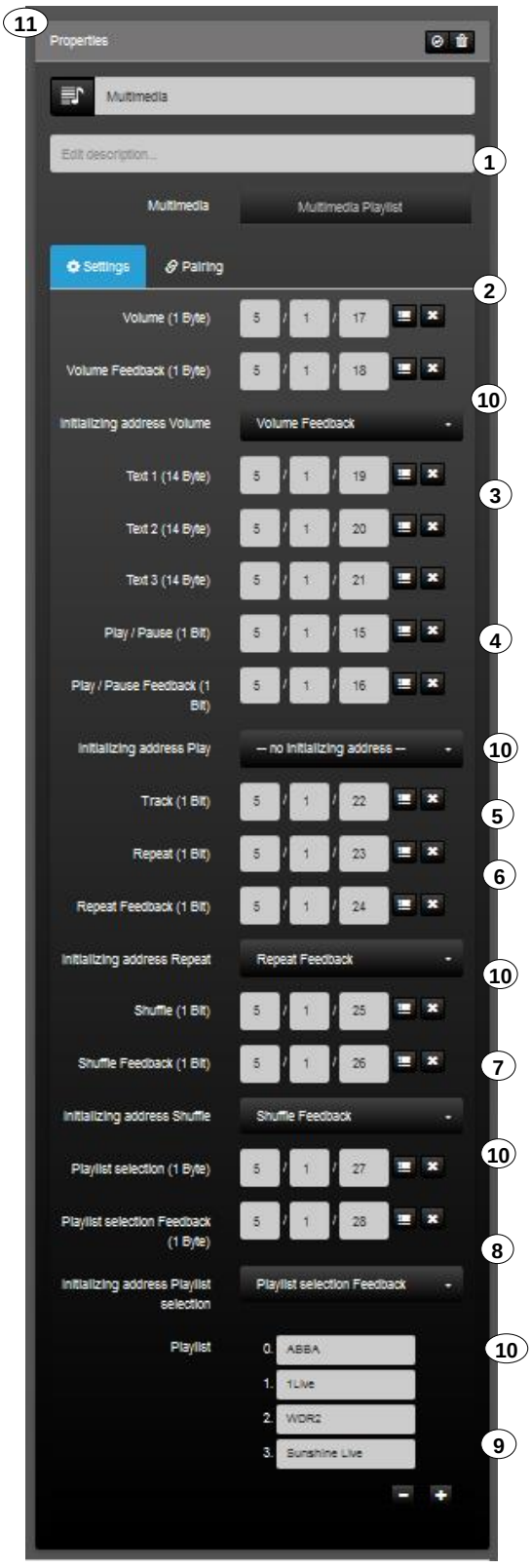


Figure 49: Function “Multimedia Playlist”

The function has favourites within the symbol library (11). Additional icons are available via the "▼" button.

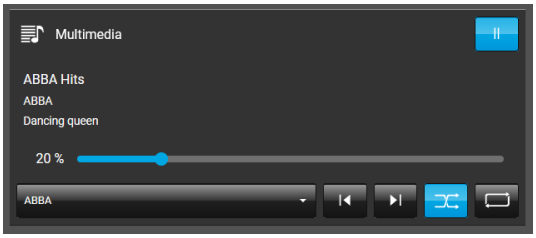
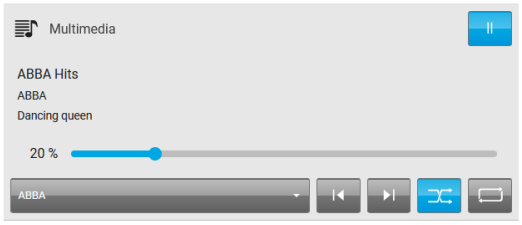
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Multimedia Playlist		 

Tabelle 28: Display of the "Multimedia playlist" function

2.5.4.5. Scene

The Smart Visu Server supports the execution and learning of KNX function values. If required, the function type "Scene" can be depicted by two differentiated KNX functions.

2.5.4.5.1. Activate Scene:

The "Activate Scene" function (1) is a Smart Visu Server function for executing KNX scenes.

The function transmits a scene value (2) to the KNX group address entered in the input field "Scene group address (1 Byte)" (3). With each KNX scene group address, up to 64 scene values (or scene numbers) (2) can be recalled. The scene value (2) which the Smart Visu Server should transmit when a scene is triggered can be set in the input field (2).

Figure 50: Parameters of the "Activate Scene" function

The function has favourites within the symbol library (4). Additional icons are available via the "⌄" button.

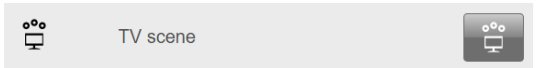
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Activate Scene		 

Table 29: Display of the "Activate Scene" function

2.5.4.5.2. Activate & Learn scene (KNX):

The "Activate and Learn scene (KNX)" function (1) is a Smart Visu Server function for executing KNX scenes. This is currently only with a terminal (PC or similar) including mouse usable.

The function transmits a scene value (2) to the KNX group address entered in the input field "Scene group address (1 Byte)" (3). With each KNX scene group address, up to 64 scene values (or scene numbers) (2) can be recalled. The scene value (2) which the Smart Visu Server should transmit when a scene is triggered can be set in the input field (2).

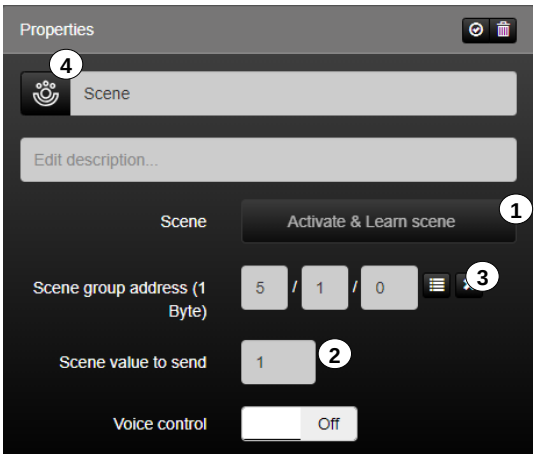


Figure 51: Parameters of the "Activate & Learn scene" function

The function has favourites within the symbol library (4). Additional icons are available via the "⌄" button.

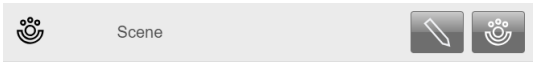
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Activate & Learn scene		 

Table 30: Display of the "Activate & Learn scene" function

2.5.4.6. Value / State

The function type "Value / State" can optionally be mapped by 12 differentiated KNX functions.

2.5.4.6.1. Display 1-bit (boolean):

The function "Display 1-bit (Boolean)" (1) is the KNX function for displaying 1-bit status values of the KNX system.

The function reads the KNX group address entered in the input field "Status (1 Bit)" (2). In addition, the current status of the function can be polled by defining two initialisation addresses (3) on starting the system.
The value conversion (4) can be used to invert the result by ticking the box.

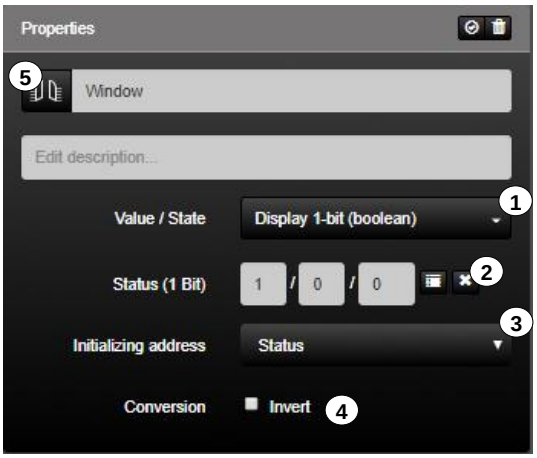


Figure 52: Parameters of the "Display 1-bit (boolean)" function

The function has favourites within the symbol library (5). Additional icons are available via the "⌄" button.

KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Display 1-bit (boolean)		

Table 31: Display of the "Display 1-bit (boolean)" function

2.5.4.6.2. Display 1-Byte (0 ..100%):

The function "Display 1-Byte (0…100%)" (1) is the KNX function for displaying 1-byte integer values (0...100%) in SV-Home.

The function reads the KNX group address entered in the input field "Value (1 Byte)" (2). As values can be sent without a unit in the KNX system, the input field "Unit" (3) can be used to enter an individual unit, which is added to the numerical value in the visualisation.

In addition, the current status of the function can be polled by defining two initialisation addresses (4) on starting the system.

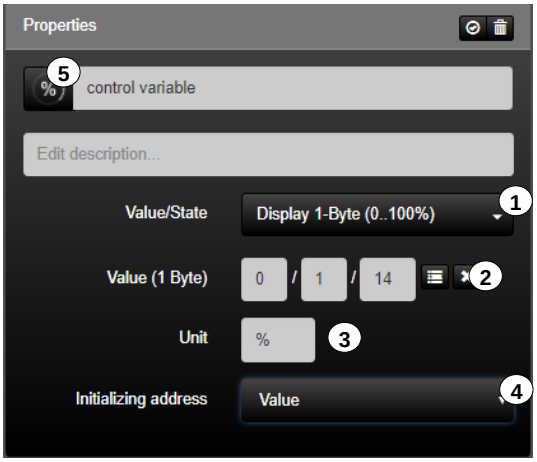


Figure 53: Parameters of the "Display 1-Byte (0…100%)" function

The function has favourites within the symbol library (5). Additional icons are available via the "⌄" button.

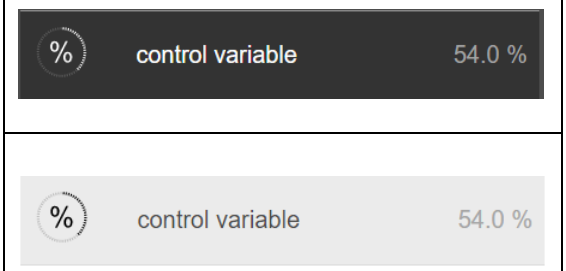
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Display 1-Byte (0 ..100%)		

Table 32: Display of the "Display 1-Byte (0…100%)" function

2.5.4.6.3. Display 1-Byte (0 ..255%):

The function "Display 1-Byte (0…255%)" (1) is the KNX function for displaying 1-byte integer values (0...255%) in SV-Home.

The function reads the KNX group address entered in the input field "Value (1 Byte)" (2). As values can be sent without a unit in the KNX system, the input field "Unit" (3) can be used to enter an individual unit, which is added to the numerical value in the visualisation.

In addition, the current status of the function can be polled by defining two initialisation addresses (4) on starting the system.

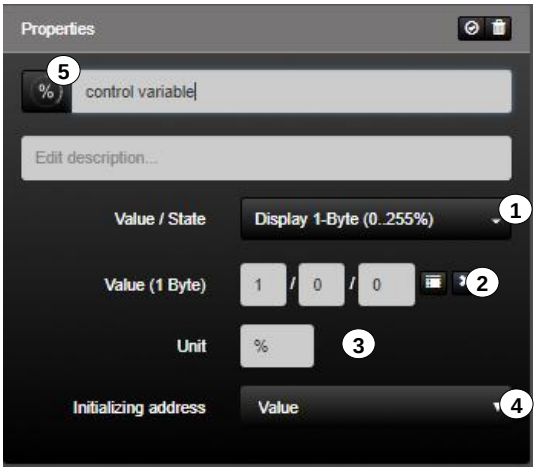


Figure 54: Parameters of the "Display 1-Byte (0..255%)" function

The function has favourites within the symbol library (5). Additional icons are available via the "⌄" button.

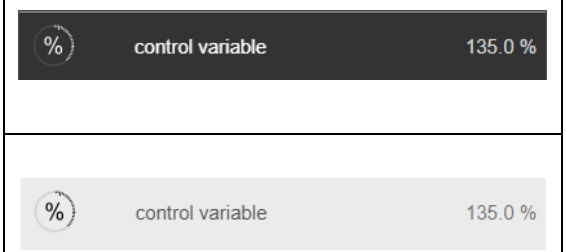
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Display 1-Byte (0 ..255%)		

Table 33: Display of the "Display 1-Byte (0..255%)" function

2.5.4.6.4. Display 1-Byte (0...360°):

The function "Display 1-Byte (0...360°)" (1) is the KNX function for displaying 1-byte integer values (0...306°) in SV-Home.

The function reads the KNX group address entered in the input field "Value (1 Byte)" (2). As values can be sent without a unit in the KNX system, the input field "Unit" (3) can be used to enter an individual unit, which is added to the numerical value in the visualisation.

In addition, the current status of the function can be polled by defining two initialisation addresses (4) on starting the system.

Figure 55: Parameters of the "Display 1-Byte (0...360°)" function

The function has favourites within the symbol library (5). Additional icons are available via the "⌄" button.

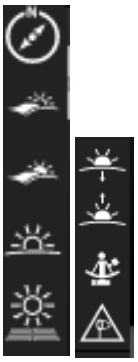
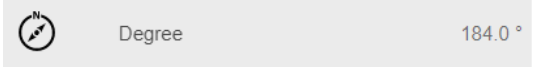
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Display 1-Byte (0 ..360°)		 

Table 34: Display of the "Display 1-Byte (0...360°)" function

2.5.4.6.5. Display 2-Byte (float):

The function "Display 2-Byte (float)" (1) is the KNX function for displaying KNX 2-byte floating point values in SV-Home. The displayed values are rounded down to the first decimal place.

The function reads the KNX group address entered in the input field "Value (2 Byte)" (2). As only values can be sent without a unit in the KNX system, the input field "Unit" (3) can be used to enter an individual unit, which is added to the numerical value in the visualisation.

In addition, the current status of the function can be polled by defining two initialisation addresses (4) on starting the system.

With the value conversion (5), predefined units can be internally converted to another unit.

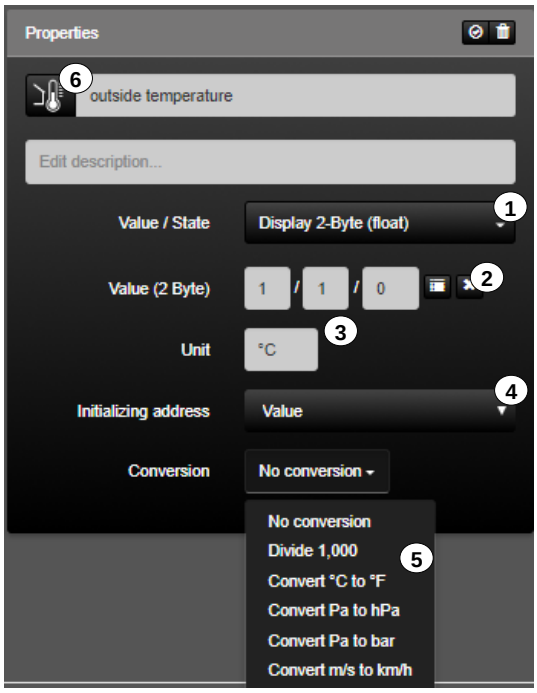


Figure 56: Parameters of the "Display 2-Byte (float)" function

The function has favourites within the symbol library (6). Additional icons are available via the "⌄" button.

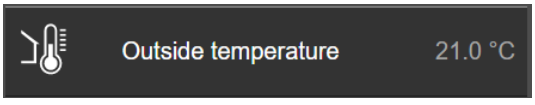
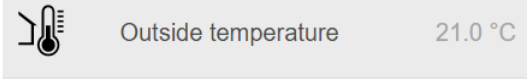
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Display 2-Byte (float)		 

Table 35: Display of the "Display 2-Byte (float)" function

2.5.4.6.6. Display 2-Byte (lux):

The function "Display 2-Byte (lux)" (1) is the KNX function for displaying KNX 2-byte lux values in SV-Home. The displayed values are rounded down to the first decimal place.

The function reads the KNX group address entered in the input field "Value (2 Byte)" (2). As only values can be sent without a unit in the KNX system, the input field "Unit" (3) can be used to enter an individual unit, which is added to the numerical value in the visualisation.

In addition, the current status of the function can be polled by defining two initialisation addresses (4) on starting the system.

The value conversion (5) can be used to invert the result by ticking the box.

Figure 57: Parameters of the "Display 2-Byte (lux)" function

The function has favourites within the symbol library (6). Additional icons are available via the "⌄" button.

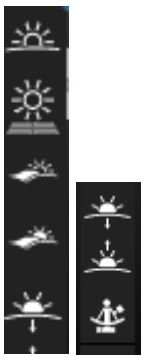
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Display 2-Byte (lux)		 

Table 36: Display of the "Display 2-Byte (lux)" function

2.5.4.6.7. Display 2-Byte (time):

The function "Display 2-Byte (time)" (1) is the KNX function for displaying KNX 2-byte time values in SV-Home. The displayed values are rounded down to the first decimal place.

The function reads the KNX group address entered in the input field "Value (2 Byte)" (2). As only values can be sent without a unit in the KNX system, the input field "Unit" (3) can be used to enter an individual unit, which is added to the numerical value in the visualisation.

In addition, the current status of the function can be polled by defining two initialisation addresses (4) on starting the system.

The value conversion (5) can be used to convert the time of seconds into minutes or hours.

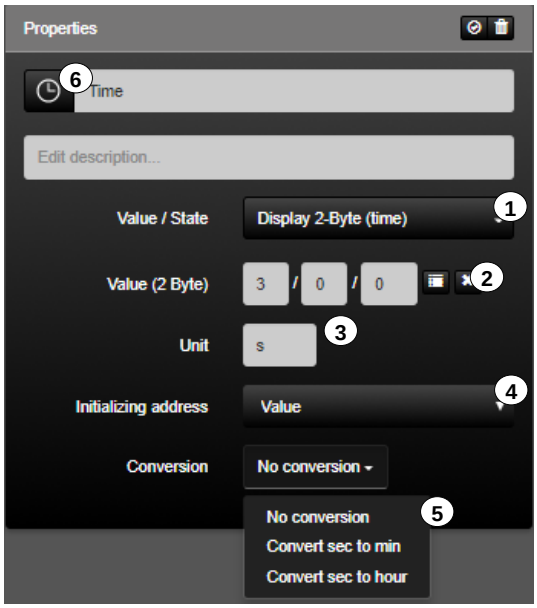


Figure 58: Parameters of the "Display 2-Byte (time)" function

The function has favourites within the symbol library (6). Additional icons are available via the "▾" button.

KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Display 2-Byte (time)		 

Table 37: Display of the "Display 2-Byte (time)" function

2.5.4.6.8. Display 4-Byte (GPS):

The function "Display 4-Byte (GPS)" (1) is the KNX function for displaying KNX 4-byte values (GPS) in SV-Home. The displayed values are rounded down to the first decimal place.

The function reads the KNX group address entered in the input field "Value (4 Byte)" (2). As only values can be sent without a unit in the KNX system, the input field "Unit" (3) can be used to enter an individual unit, which is added to the numerical value in the visualisation.

In addition, the current status of the function can be polled by defining two initialisation addresses (4) on starting the system.

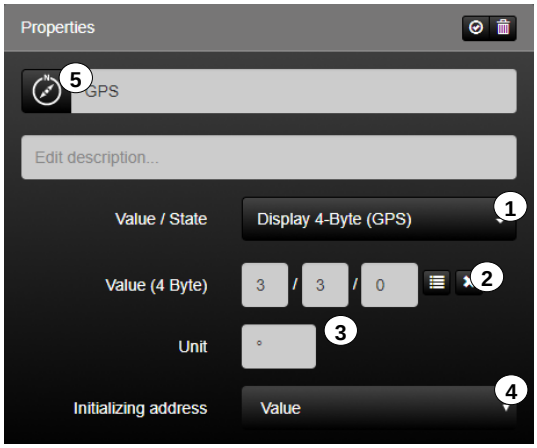


Figure 59: Parameters of the "Display 4-Byte (GPS)" function

The function has favourites within the symbol library (5). Additional icons are available via the "▼" button.

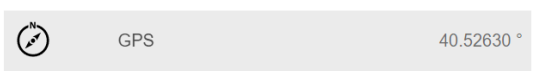
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Display 4-Byte (GPS)		 

Table 38: Display of the "Display 4-Byte (GPS)" function

2.5.4.6.9. Display 4-Byte (float):

The function "Display 4-Byte (float)" (1) is the KNX function for displaying positive or negative floating point values of the KNX system in SV-Home. The displayed values are rounded down to the first decimal place.

The function reads the KNX group address entered in the input field "Value (4 Byte)" (2). As values can be sent without a unit in the KNX system, the input field "Unit" (3) can be used to enter an individual unit, which is added to the numerical value in the visualisation.

In addition, the current status of the function can be polled by defining two initialisation addresses (4) on starting the system.
The value conversion (5) can be used to invert the result by ticking the box.

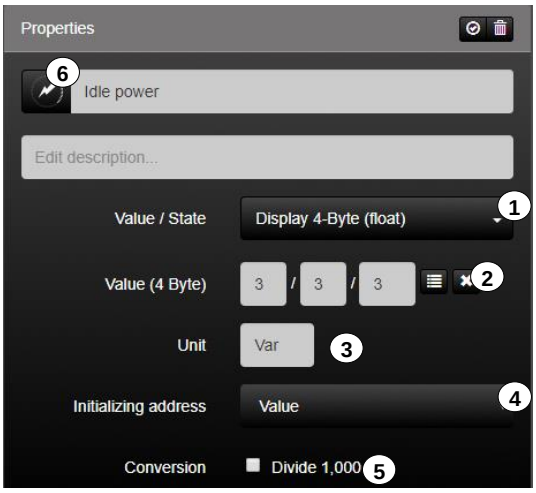


Figure 60: Parameters of the "Display 4-Byte (float)" function

The function has favourites within the symbol library (6). Additional icons are available via the "▼" button.

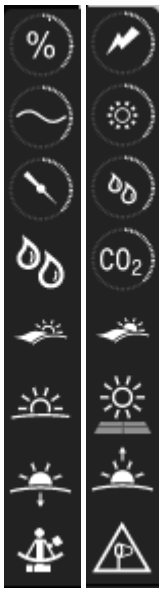
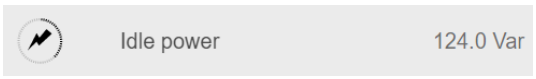
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Display 4-Byte (float)		 

Table 39: Display of the "Display 4-Byte (float)" function

2.5.4.6.10. Display 4-Byte (unsigned integer):

The function "Display 4-Byte (unsigned integer)" (1) is the KNX function for displaying positive or negative integer values of the KNX system in SV-Home.

The function reads the KNX group address entered in the input field "Value (4 Byte)" (2). As values can be sent without a unit in the KNX system, the input field "Unit" (3) can be used to enter an individual unit, which is added to the numerical value in the visualisation.

In addition, the current status of the function can be polled by defining two initialisation addresses (4) on starting the system.

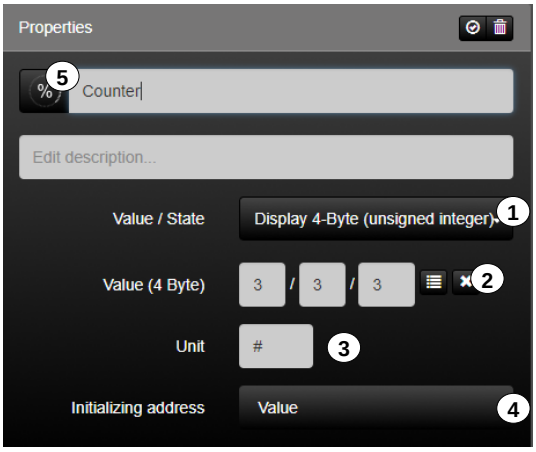


Figure 61: Parameters of the "Display 4-Byte (unsigned integer)" function

The function has favourites within the symbol library (5). Additional icons are available via the "⌄" button.

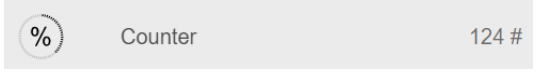
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Display 4-Byte (unsigned integer)		 

Table 40: Display of the "Display 4-Byte (unsigned integer)" function

2.5.4.6.11. Display 4-Byte (integer):

The function "Display 4-Byte (integer)" (1) is the KNX function for displaying positive or negative integer values of the KNX system in SV-Home.

The function reads the KNX group address entered in the input field "Value (4 Byte)" (2). As values can be sent without a unit in the KNX system, the input field "Unit" (3) can be used to enter an individual unit, which is added to the numerical value in the visualisation.

In addition, the current status of the function can be polled by defining two initialisation addresses (4) on starting the system.

The value conversion (5) can be used to invert the result by ticking the box.

Figure 62: Parameters of the "Display 4-Byte (integer)" function

The function has favourites within the symbol library (6). Additional icons are available via the "▼" button.

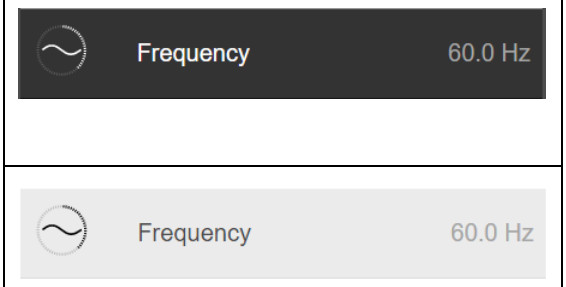
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Display 4-Byte (integer)		

Table 41: Display of the "Display 4-Byte (integer)" function

2.5.4.6.12. Display 14 Byte (ASCII):

The function "Display 14 Byte (ASCII)" (1) is the KNX function for displaying texts of a maximum of 14 characters of the KNX system in SV-Home.

The function can read the ASCII characters in the group address entered in the input field "Value (14 Byte)" (2). If a text is written to this group address in the KNX system, then this can be displayed in SV-Home with this function.

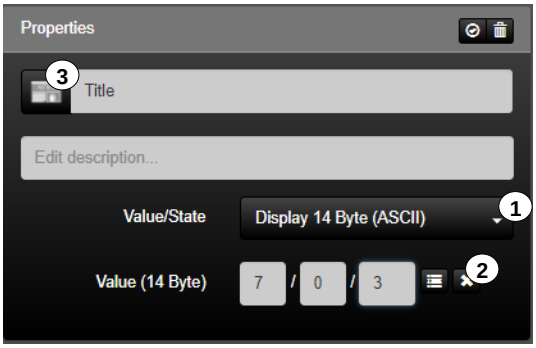


Figure 63: Parameters of the "Display 14 Byte (ASCII)" function

The function has favourites within the symbol library (3). Additional icons are available via the "⌄" button.

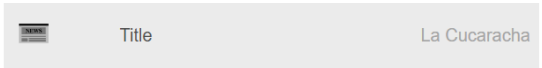
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Display 14 Byte (ASCII)		 

Table 42: Display of the "Display 14 Byte (ASCII)" function

2.5.4.6.13. Threshold:

The “Threshold” function (1) is the KNX function for converting analogue values into binary values.

The function references existing functions (3) and compares them continuously to an upper/lower limit (2). If the lower limit (2) is exceeded, this corresponds to a result = 0. If the upper limit (2) is exceeded, the result changes to 1. The result can be used to trigger further actions.

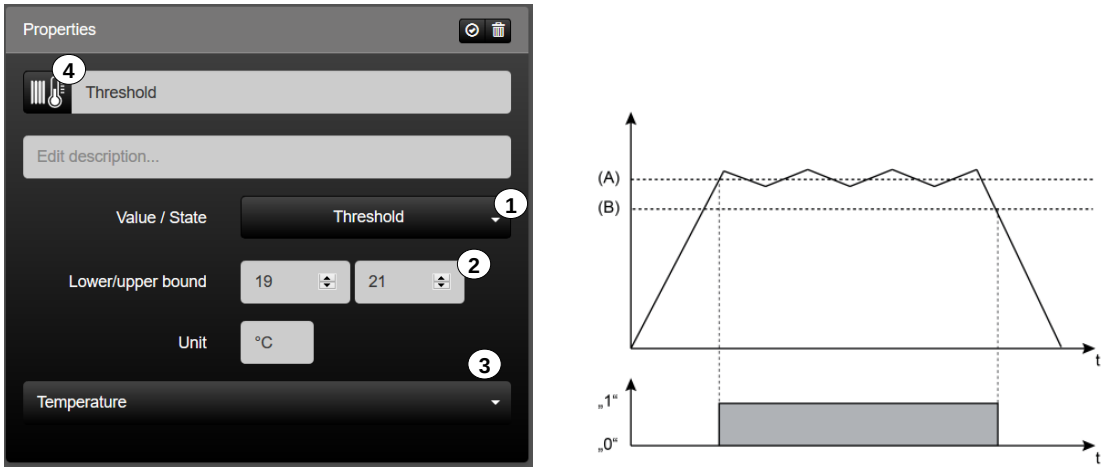


Figure 64: Parameters of the “Threshold” function

The function has favourites within the symbol library (3). Additional icons are available via the "⌄" button.

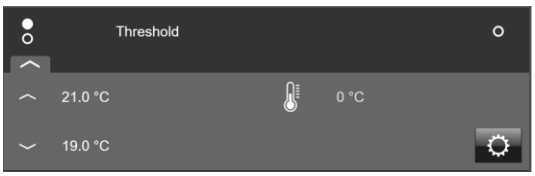
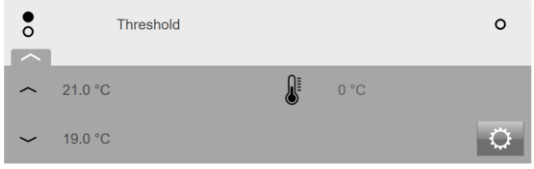
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Threshold		 

Table 43: Display of the “Threshold” function

2.5.4.7. Value transmitter

The function type "Value transmitter" can optionally be represented by three differentiated KNX functions.

2.5.4.7.1. Send 1-Byte (0…255%):

The function "Send 1-Byte" (1) is the KNX function with which 1-byte percentage values can be set. This is passed on via the group address "Value" (2).
In addition, a predefined value can be set via "Value" and the range can be defined via "Range of values" (3).

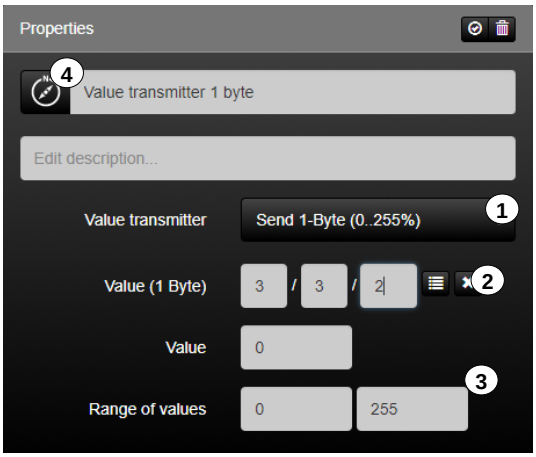


Figure 65: Parameters of the “Send 1-Byte (0...255%)” function

The function has favourites within the symbol library (4). Additional icons are available via the "▼" button.

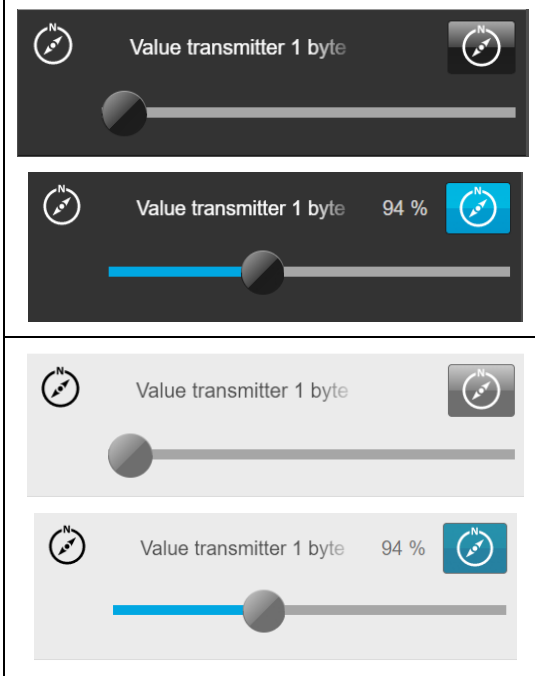
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Send 1-Byte (0…255%)		

Table 44: Display of the “Send 1-Byte (0...255%)” function

2.5.4.7.2. Send 2-Byte (lux):

The function "Send 2-Byte (lux)" (1) is the KNX function with which 2-byte lux values can be set. This is passed on via the group address "Value" (2).
In addition, a predefined value can be set via "Value" and the range can be defined via "Range of values" (3).

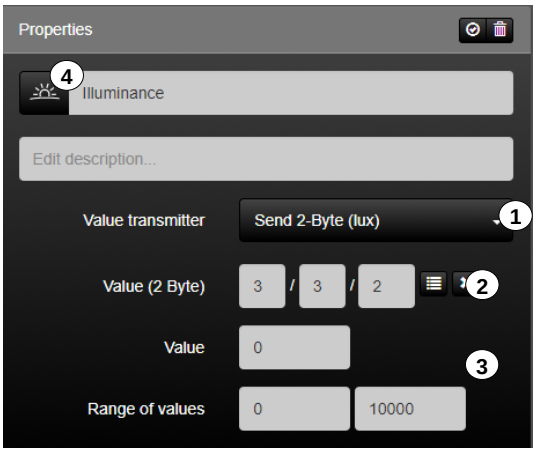


Figure 66: Parameters of the "Send 2-Byte (lux)" function

The function has favourites within the symbol library (4). Additional icons are available via the "▾" button.

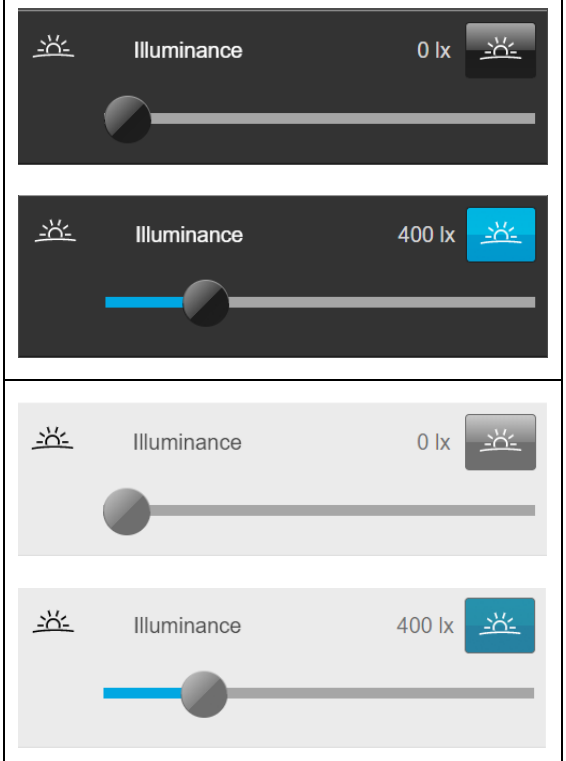
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Send 2-Byte (lux)		

Table 45: Display of the "Send 2-Byte (lux)" function

2.5.4.7.3. Send 2-Byte (time):

The function "Send 2-Byte (time)" (1) is the KNX function with which 2-byte time values can be set. This is passed on via the group address "Value" (2).
In addition, a predefined value can be set via "Value" and the range can be defined via "Range of values" (3).

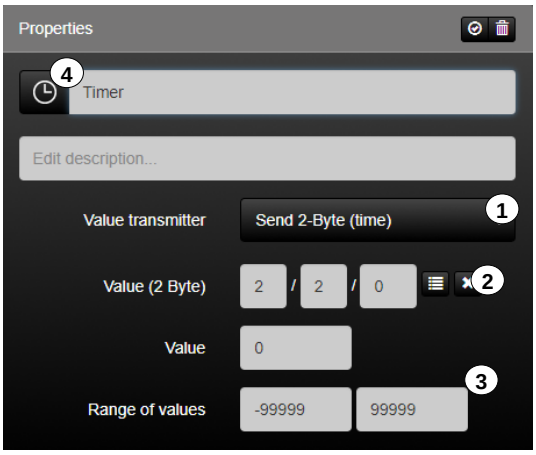


Figure 67: Parameters of the "Send 2-Byte (time)" function

The function has favourites within the symbol library (4). Additional icons are available via the "⌄" button.

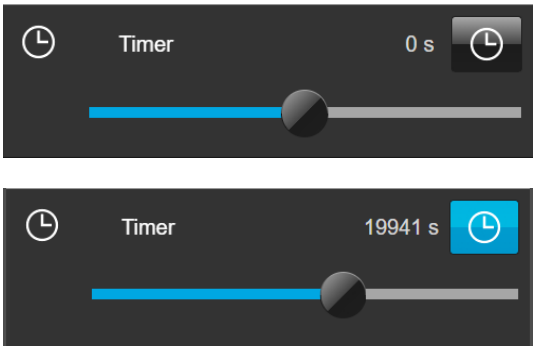
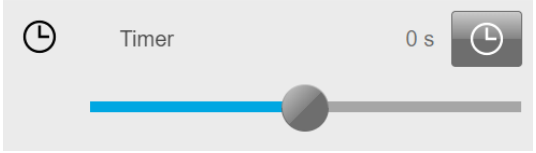
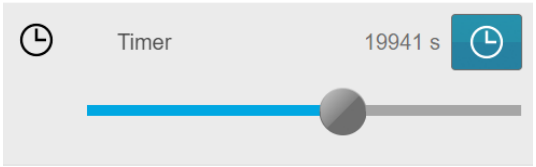
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Send 2-Byte (time)		  

Table 46: Display of the "Send 2-Byte (time)" function

2.5.4.7.4. Date / Time (2 x 3 Byte):

The function “Date / Time (2 x 3 Byte)” (1) is the KNX function which enables the current time (2) and date (3), each with a 3-byte time value.

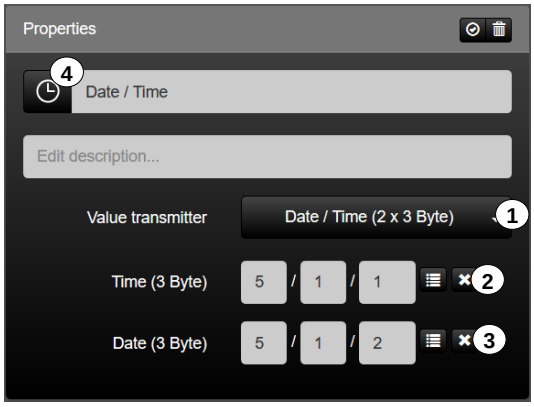


Figure 68: Parameters of the function “Date / Time (2 x 3 Byte)”

The function sends the current server time / current server date on the KNX bus cyclically every hour and after each restart. It is therefore imperative to set the server time in the correct time zone.

The function has favourites within the symbol library (4). Additional icons are available via the "▼" button.

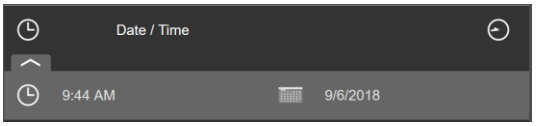
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Date / Time (2 x 3 Byte)		 

Table 47: Display of the “Date / Time (2 x 3 Byte)” function

2.5.4.7.5. Date + Time (1 x 8 Byte):

The function “Date + Time (1 x 8 Byte)” (1) is the KNX function which enables the current time and date (2) to be set with an 8-byte time value.

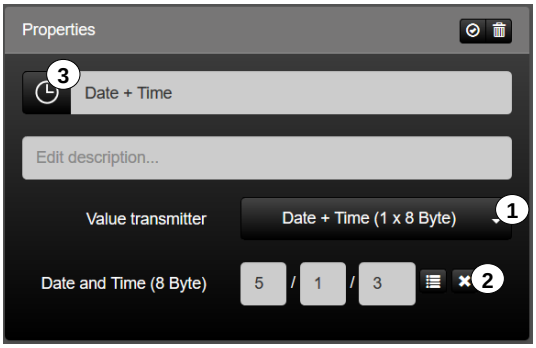


Figure 69: Parameters of the function “Date + Time (1 x 8 Byte)”

The function sends the current server time / current server date on the KNX bus cyclically every hour and after each restart. It is therefore imperative to set the server time in the correct time zone.

The function has favourites within the symbol library (4). Additional icons are available via the "⌄" button.

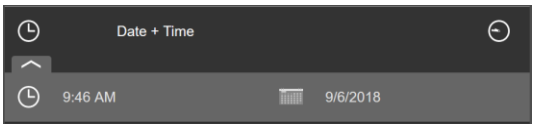
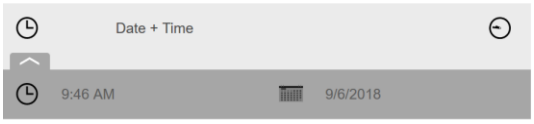
KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Date + Time (1 x 8 Byte)		 

Table 48: Display of the “Date + Time (1 x 8 Byte)” function

Application example – Send date and time if required:

The functions “Date / Time (2 x 3 Byte)” and “Date + Time (1 x 8 Byte)” are used to visualise the time and date. The current server time / server date are sent cyclically every hour and after each restart on the KNX bus.

If an update on demand is required, the sending of the current values can be triggered via an action. This can be carried out as user-defined or event-dependent through a group address or a virtual switch. The following example shows event-dependent sending via a virtual switch.

At the start, a new function “Virtual Switch” is created with any name or symbol.

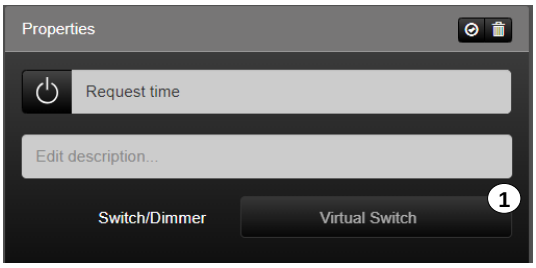


Figure 70: Creating a “Virtual Switch” function

An action is then created with the action type “Event” (2). The action trigger is the previously created “Virtual Switch” (3). Following a change in the status (4), the function “Date / Time (2 x 3 Byte)” or “Date + Time (1 x 8 Byte)“ is triggered (5). The action can in addition be assigned to an area (6). By pressing the virtual switch, the current server values are sent on the KNX bus.

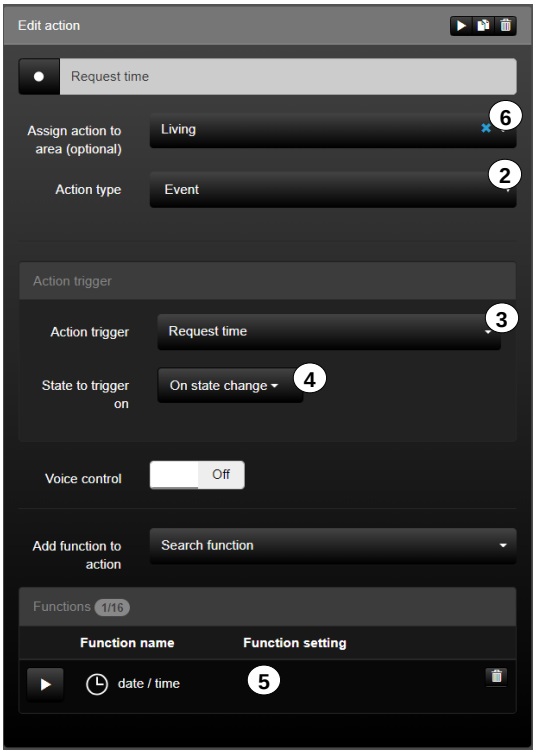


Figure 71: Creating an event-dependent action

2.5.5. SONOS

The “SONOS” function (1) is the function for the comprehensive control of SONOS speakers.

A SONOS speaker can be added under the dropdown menu (2). If a group of SONOS speakers should be controlled with a function, the required speakers must be selected.

It is possible via the function to switch on and off, adjust the volume, select playlists as well as couple and decouple the speakers.

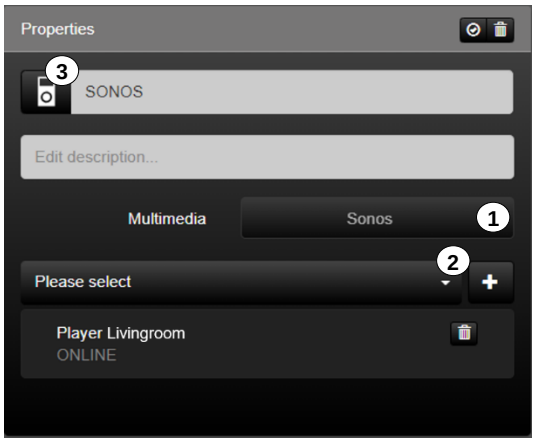


Figure 72: Parameters of the function “SONOS”

The function has favourites within the icon library (2). Further icons are available via the “ ” button.

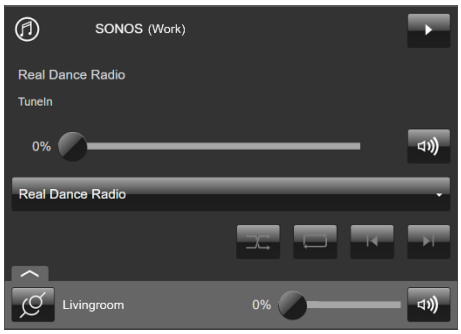
function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
SONOS		 

Table 49: Display of the “SONOS” function

Pairing:

The function “pairing” (1) can be used to control IoT devices such as Philips Hue lamps or SONOS speakers.

The function can control different functionalities of IoT devices with an identical data type such as the brightness value / volume or the switching on/off of lamps or speakers. It is possible to search for appropriate functions (2).

The controller station (3) can be used to differentiate whether the change of values is to be triggered exclusively by certain devices (controller / peripheral) or by all integrated devices (synchronization).

A value change of a controller is transmitted to the coupled functions. A changed value of an peripheral is not transmitted to the coupled functions.
If the controller button is activated for several devices, a value change of each controller is transmitted to the coupled functions.

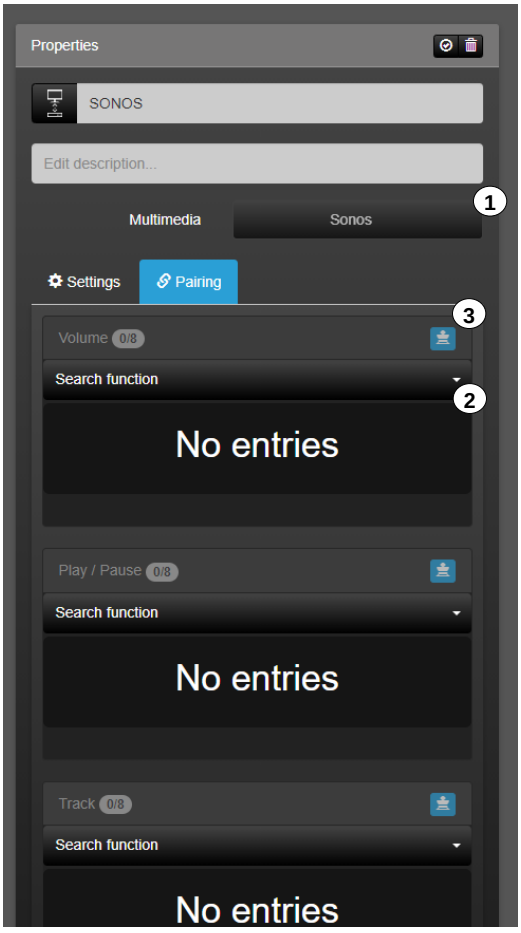


Figure 73: Parameters of the “IoT controller” function

Application example: Controlling SONOS loudspeakers with KNX rotation sensor

The subcategory "Pairing" uses KNX devices to control IoT devices. In this application example, a KNX rotary sensor is used to control the volume and the playback/pause from a SONOS loudspeaker.

1) Create function "Switch + Dim" for the KNX rotary sensor (1)
2) Create the "SONOS" function for the SONOS speaker
3) Establish a link between the two functions for the "Play/Pause" and "Volume" application (2)
    a. Activate Masterbutton on all devices (a)

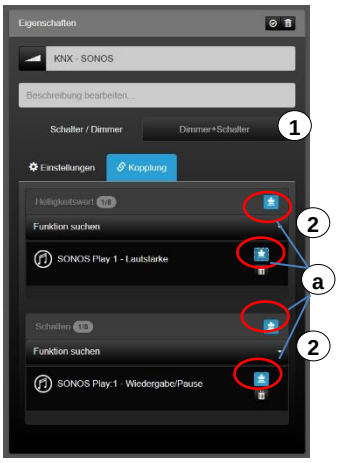


Figure 74: Coupling for playback/pause and volume control via the SONOS speaker

Application example: Controlling SONOS loudspeakers with KNX touch sensor

In this application example the volume and the playback/pause are controlled by a SONOS loudspeaker via a KNX push button sensor.

a) Creating the "Switching" function for the KNX push button sensor (1)
b) Create the "Virtual Dimmer" function for the KNX push-button (2)
c) Creating the "SONOS" function for the SONOS speaker
d) Establish a link between the 'play/pause' and 'volume' functions (3)
    a. Activate Masterbutton on all devices

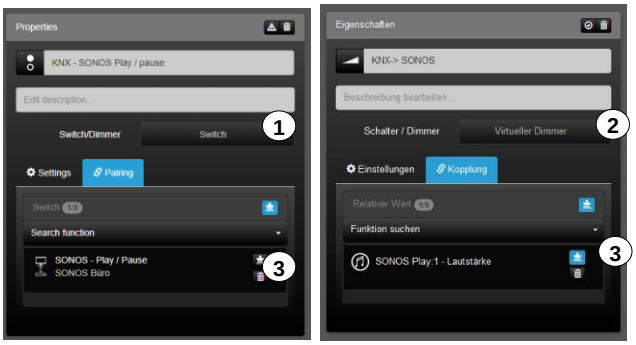


Figure 75: Pairing for playback/pause and volume control via the SONOS speaker

2.5.6. Weather

The function type "weather" can optionally be mapped by five differentiated functions.
These function requires location coordinates (latitude and longitude) and will stored under SV-Control configuration management " " (chapter 2.7).
You can research the location coordinates using various services on the World Wide Web (e.g. www.gps-coordinates.net)

The Astro function can be used both with a local and NTP time.

2.5.6.1. Astro times:

The function “Astro times" (1) displays the times for today's sunrise, sunset, moonrise and moonset.

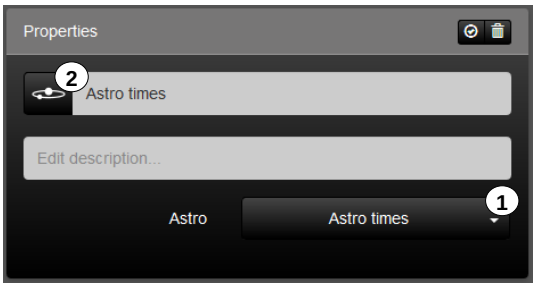


Figure 76: Parameter of the “Astro times” function

The function has favourites within the symbol library (2). Additional icons are available via the "" button.

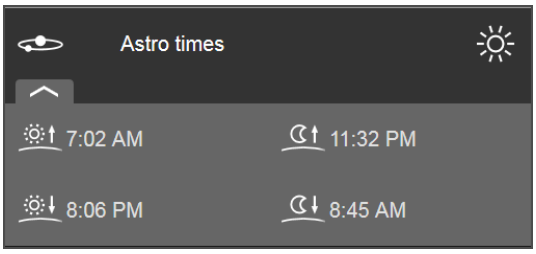
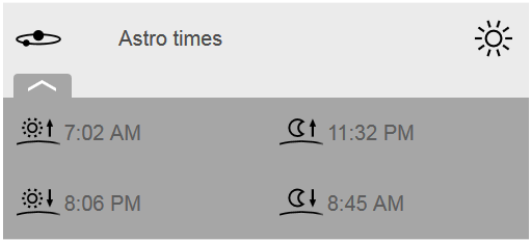
Function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Astro times		 

Table 50: Display of the “Astro times” function

2.5.6.2. Moonphase:

The function “Moonphase” (1) displays the different phases of the moon with the date and time for the current month.

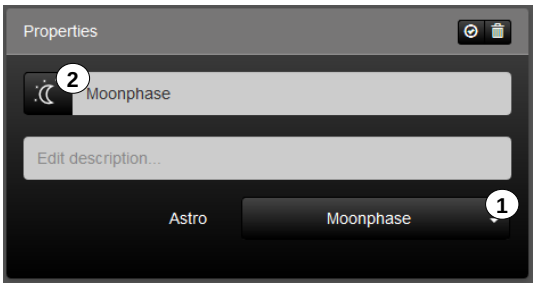


Figure 77: Parameter of the “Moonphase” function

The function has favourites within the symbol library (2). Additional icons are available via the "⌄" button.

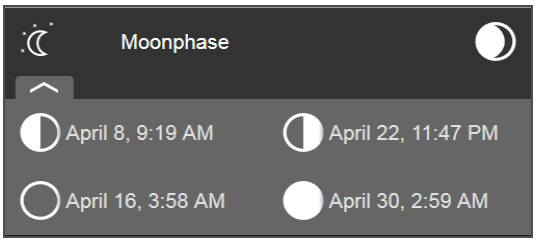
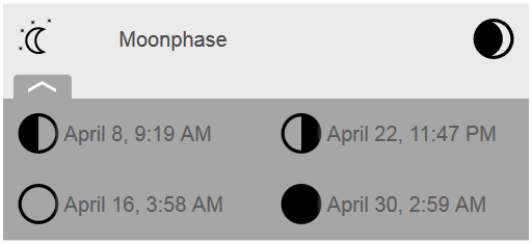
Function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Moonphase		 

Table 51: Display of the “Moonphase” function

2.5.6.3. Elevation / Azimuth:

The function "Elevation / Azimuth" (1) displays the current position of the sun (horizontal and vertical) starting from the observation location.

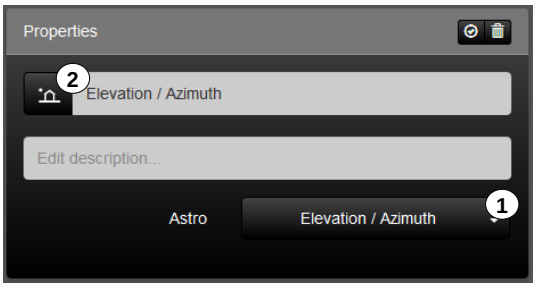


Figure 78: Parameter of the “Elevation / Azimuth” function

The function has favourites within the symbol library (2). Additional icons are available via the "⌄" button.

Function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Elevation / Azimuth		 

Table 52: Display of the “Elevation / Azimuth” function

2.5.6.4. Weather Universal:

The function “Weather Universal” (1) is the KNX function for displaying weather data.

The function displays the current temperature (2), rainfall (3), wind speed (4), pressure (8), humidity (10), brightness (11) and twilight (13). Both wind alerts (6) and (7) are linked via an OR connection and the result is indicated in the SV-Home. Additionally the wind speed can be converted to km/h (5), the pressure to hPa or bar (9) and the brightness to kLux (12). The sunset/sunrise times (14) can also be displayed.

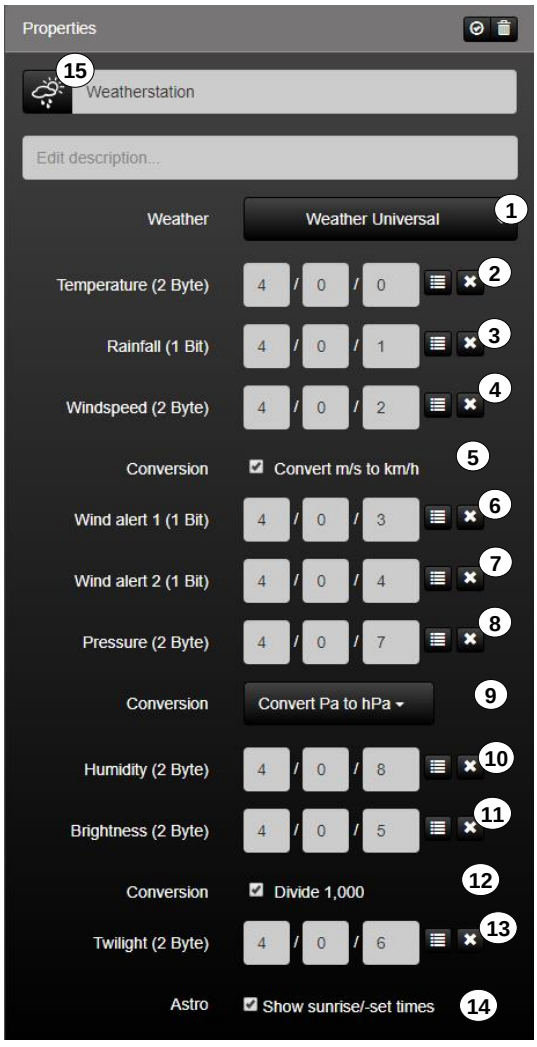


Figure 79: Parameters of the “Weather Universal” function

The function has favourites within the symbol library (15). Additional icons are available via the "▼" button.

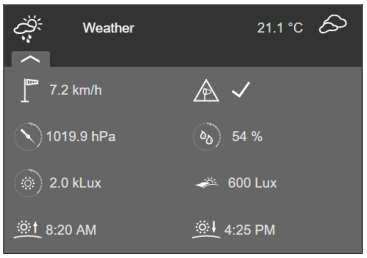
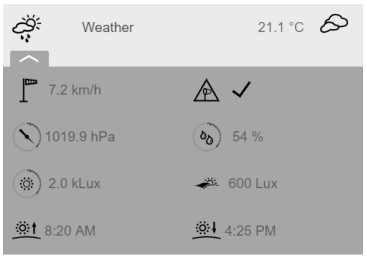
Function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Weather Universal		 

Tabelle 53: Display of the “Weather Universal” function

2.5.6.5. Weather Home:

The function “Weather Home” (1) is the KNX function for displaying weather data.

The function displays the current temperature (2), rainfall (3), wind speed (4), brightness (8) and twilight (10). Both wind alerts (6) and (7) are linked via an OR connection and the result is indicated in the SV-Home. Additionally the wind speed can be converted to km/h (5) and the brightness to kLux (9). The sunset/sunrise times (11) can also be displayed.

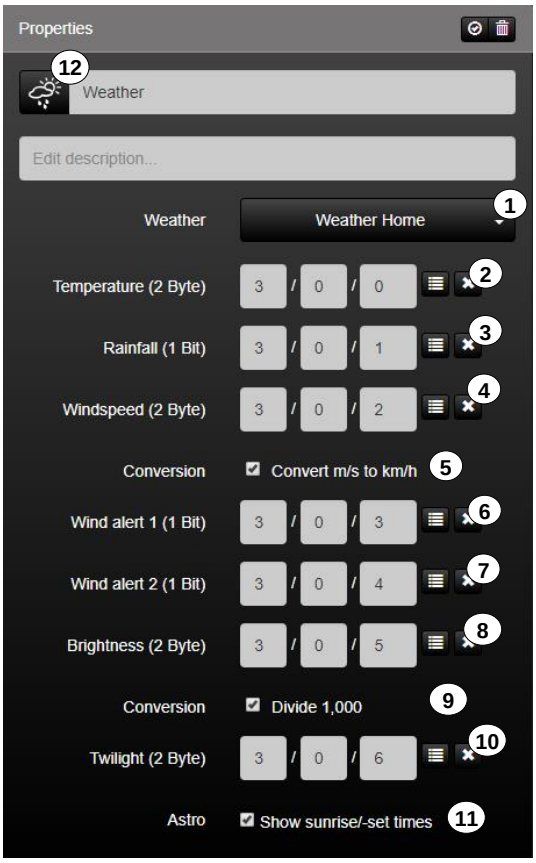


Figure 80: Display of the “Weather Home” function

The function has favourites within the symbol library (12). Additional icons are available via the "▼" button.

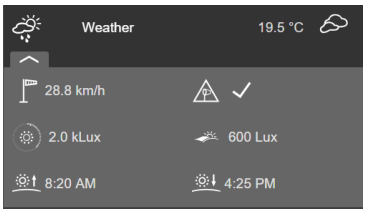
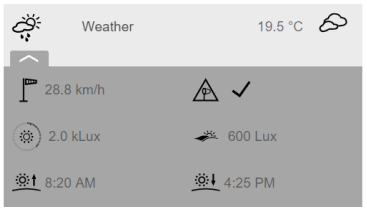
Function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Weather Home		 

Table 54: Display of the “Weather Home” function

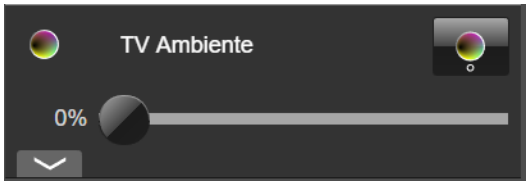
2.5.7. Configuring Philips Hue functions

Successful commissioning and authentication of the Philips Hue system is required to be able to use Hue functions. The " Configurator " and the "Administrator" have identical access rights to Hue functions within the "Functions" column.

The Hue luminaires added to the SV-Server in the "Hue" tab are automatically supplemented with their name in the function list (for information on Hue setup, please consult Chapter 2.3 ”Hue").

Figure 81: Parameters of the "RGB (Hue)" function

In the "Areas & Functions" tab, no further function parameters of the Hue lamps can be edited, with the exception of the icon, the function name and the function description.

Hue lamps	Selection of the icon library in SV-Control	Operating and display element in SV-Home
RGB (Hue)		 

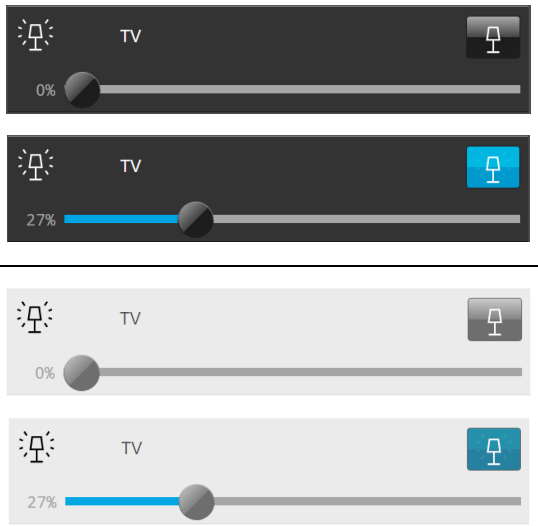
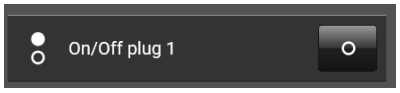
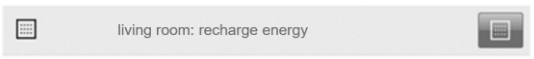
Dimming (Hue white)		
Plug		
Scene (Hue)		 

Table 55: Display of the "RGB (Hue)" and “Dimming (Hue white)” function

Pairing:

The subcategory “Pairing” (1) can be used to control IoT devices such as Philips Hue luminaires or SONOS loudspeakers.

The category can control different functionalities of IoT devices with identical data types such as e.g. the brightness value/volume or the switching of luminaires or loudspeakers on/off. Appropriate functions can be found (2).

Using the controller button (3), it is possible to distinguish whether the change of the values should only be triggered by certain devices (controller / peripheral) or by all the integrated devices (synchronisation).

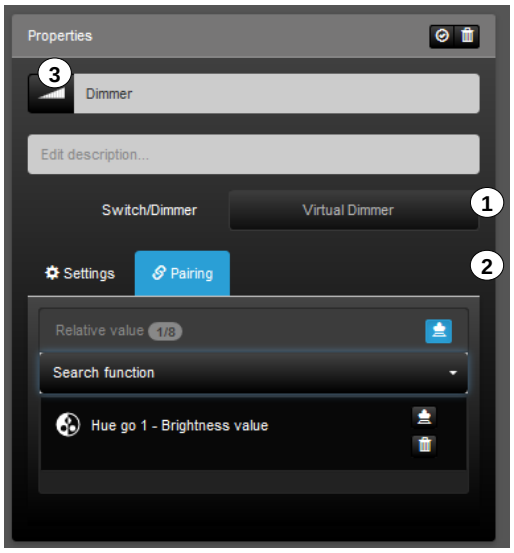


Figure 82: Parameters of the subcategory “Coupling”

Application example: Controlling Hue luminaires with KNX rotary sensor

The subcategory “Pairing” uses KNX devices to control IoT devices. In this application example, the brightness of a Hue luminare is controlled via a KNX rotary sensor.

a) Select the “Switch + Dimmer” function for the KNX rotary sensor (1)
b) Add the Hue luminaire from the Hue tab
c) Establish the coupling between the two functions for the “Brightness value” application (2)
    a. Only activate the controler button for the “Switch + Dimmer” function
d) Create an event-dependent action via Actions and set the required light mood

Figure 83: Coupling to define the brightness for Hue luminaires

Application example: Controlling Hue luminaires with KNX switch sensor

In this application example, the brightness of a Hue luminaire is controlled via a KNX switch sensor.

a) Select the “Switch” function for the KNX switch sensor
b) Select the “Virtual Dimmer” function for the KNX switch sensor (1)
c) Add the Hue luminaire from the Hue tab
d) Establish the coupling between the two functions for the “Brightness value” application (2)
    a. Only activate the master button for the “Switch” function
e) Create an event-dependent action via Actions and set the required light mood

Figure 84: Coupling for defining the brightness value of Hue luminaires

2.5.8. Configuring websites / IP functions

For web functions to be used, an Internet connection is required (except local IP cameras).

Access as Administrator or Configurator

The "Configurator" and the "Administrator" can have different access rights for the web functions within the "Functions" column. The differentiated access rights when the check mark is not set can be seen in "Table 48: Access rights".

Access	Configurator	
	Areas & Function	Web
Create web functions	-	-
Edit names of web functions	-	✔
Edit icons of web functions	-	✔
Assign existing web functions to new areas	-	✔
Delete existing web functions from areas	-	✔
Change web address, web page size or update interval	-	-
Delete existing web functions completely	-	-

Table 48: Access rights to the "Website / IP" function group

The following two function types are available to the Administrator in SV-Control:

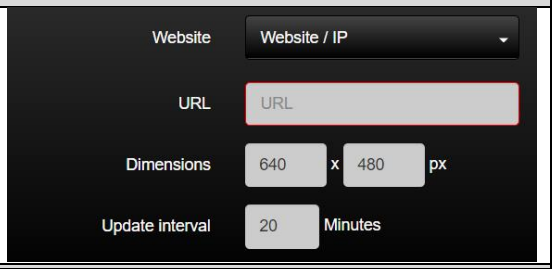
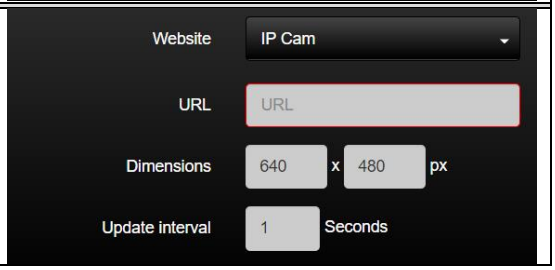
Function type	KNX function	Settable options	Depiction in SV-Control
Website	Website / IP	URL	
		Dimensions	
		Update interval [in min]	
	IP Cam	URL	
		Dimensions	
		Update interval [in sec]	

Table 56: Overview of the "Website / IP" function group

2.5.8.1. Websites

The "Website" function (1) can be used to integrate a website in SV-Home into selectable areas. This function can be used, for example, to add your favourite weather forecasting service to your building automation. In the same way, any other websites can be added to the user interface of the SV-Home of your building automation.

The web address to be displayed can be entered in the "URL" input field (2). When making an entry, ensure that your entry begins with http:// or https://. Besides Internet addresses, it is also possible to enter local websites using the IP address, e.g. http://192.168.180.1 of a local device.

Using the two "Dimensions" input fields (3), you can define the depiction size of the website within SV-Home in pixels. As website content can change on a regular basis, you can define a reload time in minutes using the "Update interval" input field (4). After the set time has elapsed, the website is reloaded for display in SV-Home.

Figure 85: Parameters of the "Website" function

The "Website" function possesses the following individualisation options within the icon library (5).

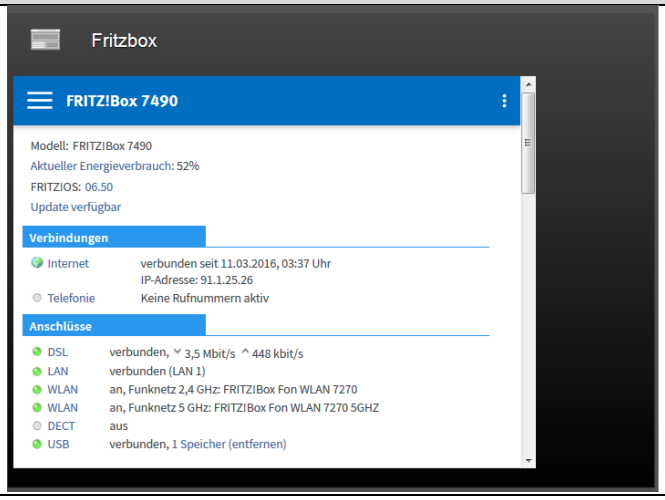
Website / IP	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Website		

Table 57: Display of the "Website" function

2.5.8.2. IP camera

The "IP Cam" function (1) can be used to integrate an IP camera in the Smart Visu Server into selectable areas. This means that it is possible within the user interface of your SV-Home to, for example, display a live image of your entrance area from an IP camera. Local IP cameras cannot be displayed when using the remote access.

The web / IP address to be displayed can be entered in the "URL" input field (2).

Using the two "Dimensions" input fields (3), you can define the depiction size of the website within SV-Home in pixels. You can define a reload time in seconds using the "Update interval" input field (4).

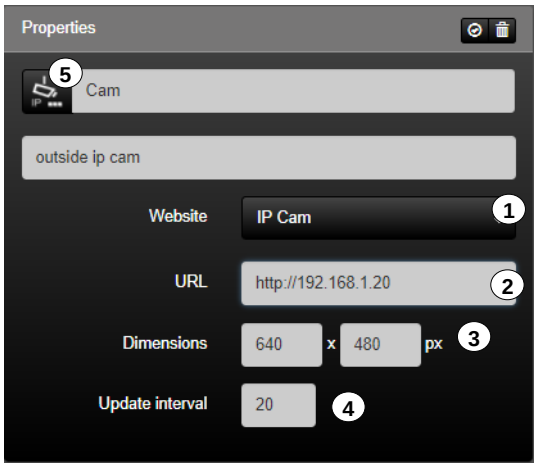


Figure 86: Parameters of the "IP Cam" function

The "Website" function possesses the following individualisation options within the icon library (5).

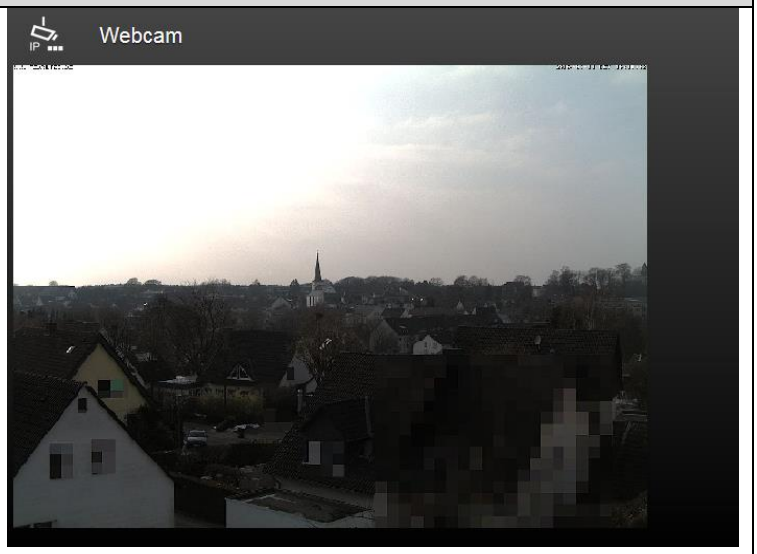
Website / IP	Selection of the icon library in SV-Control	Operating and display element in SV-Home
IP Cam		

Table 58: Display of the "IP Cam" function

IP camera : tested Devices

INFORMATION
It´s recommended to integrate a maximum of **4 IP cameras** in one SV-Server installation.

Please note:

Some devices cannot be integrated via the function “IP Cam”. Alternatively the camera can be integrated by using the “Website” function. Furthermore, local IP cameras are not displayable when using the remote access.

An IP camera can be integrated into the SV-Server in two different ways.

If the camera has an MJPEG stream, it can be inserted in the function "IP Cam". The correct URL can be found on the websites of the manufacturers.

If there is no MJPEG stream available for the IP camera, the “Website / IP” function can call the manufacturer's page with the stream.
A communication of username and password via the URL is prohibited by the operating system via Android-based clients.

2.5.9. Configuring status logic functions

With the “State Logic" (1) function, the Smart Visu Server can logically link up to 10 functional states. Thus, with status logic, you can, for example, interlink the status of window contacts, so that you can see at a glance in SV-Home whether all the windows are closed.

Access as Administrator or Configurator

The “Configurator” and the “Administrator” have different access rights for the web functions within the “Functions” column. The different access rights can be taken 2.5.

Using the "Logic link" drop-down menu (2), you can set these three logical linking operations:
- AND
- OR
- XOR

Using the drop-down menu (4), you can select previously created functions as input variables for the status logic. Only functions containing at least one 1-bit data point can be selected.

The maximum of 10 functions added to the status logic are shown in a list (4). The functions can be deleted individually as input functions from the status logic with the "" button (5).

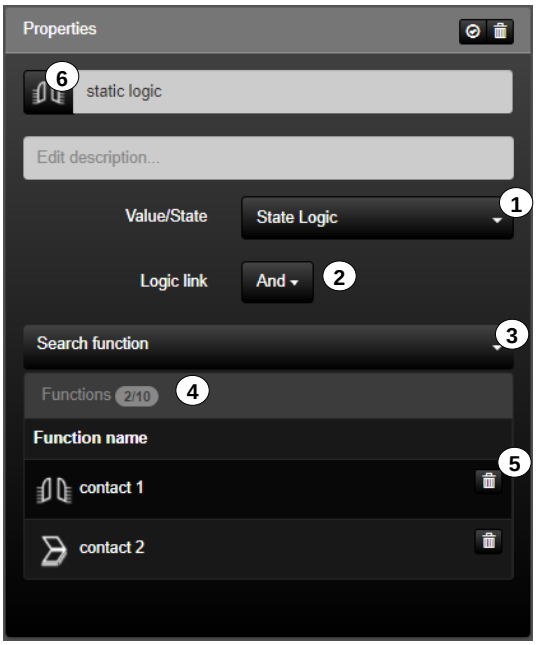


Figure 87: Parameters of “State Logic”

The "State Logic" function (1) has the following individualisation options within the icon library (4).

Status logic	Selection of the icon library in SV-Control	Operating and display element in SV-Home
State Logic		 

Table 59: Display of status logic

2.5.10. Configure virtual functions

2.5.10.1. Virtual Switch

The “Virtual Switch” function (1) can be used to activate and deactivate action groups and to carry out actions from the SV-Home.

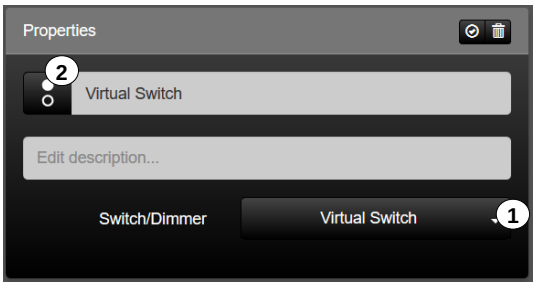


Figure 88: Virtual Switch

The function has favourites within the symbol library (2). Further icons are available via the “ ” button.

Switch	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Virtual Switch		 

Table 60: Display of the "Virtual Switch" function

2.5.10.2. Virtueller Dimmer:

The “Virtual Dimmer” (1) function is used for coupling between KNX and Hue or SONOS with a relative value transmitter (4 Bit) via the separate “Coupling” tab. A group address “Relative value t” (2) can be configured to write a new brightness value.

The category can control different functionalities of IoT devices with identical data type, such as the brightness value / volume or the switching on and off of illuminants or speakers. Suitable functions can be searched for here (2).

The controller button (3) can be used to differentiate whether the change in values is to be triggered exclusively by certain devices (controller- peripheral) or by all integrated devices (synchronization).

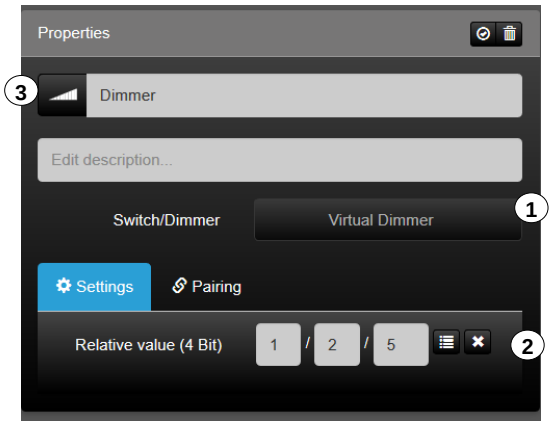


Figure 89: Parameters of the “Dimmer” function

The function has favourites within the symbol library (2). Further icons are available via the “ ” button.

KNX function	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Dimmer		

Table 61: Display of the “Virtual Dimmer” function

2.5.11. Email

The “Email” function (1) is used to send predefined texts as “Event mail” (e.g. the triggering of a leakage sensor). The recipient must be entered in the “To” field (2). In addition, recipients can be inserted in “Cc” (3) or “Bcc” (4). The subject and the message are entered in fields (5) and (6). So that the device can send emails, a valid SMTP mail server must be entered in the device configuration (see 2.7.6).

Access as Administrator or Configurator

The " Configurator " and the "Administrator" can have different access rights to KNX functions within the "Functions" column. The different access rights can be taken from *2.5 Area & Functions*

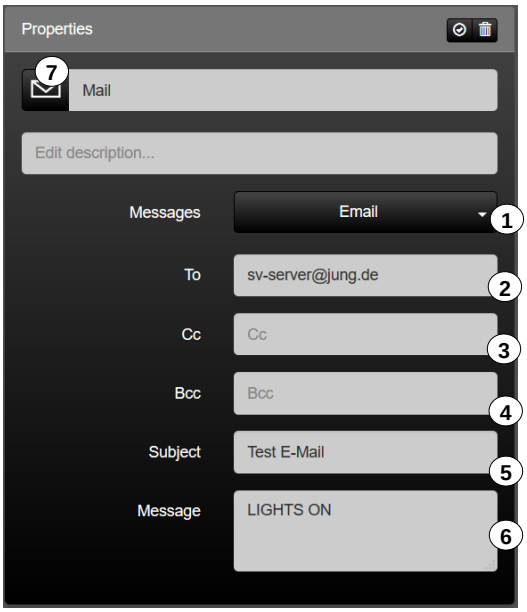


Figure 90: Parameters of the “Email” function

The “Email” function can be used as a trigger function in actions. The functional versatility is hereby clearly increased.

The function has favourites within the symbol library (7). Further icons are available via the “ ” button.

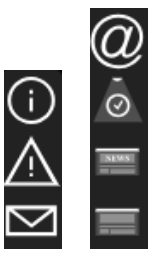
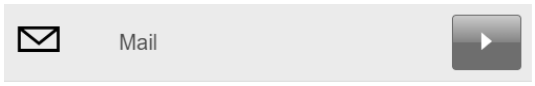
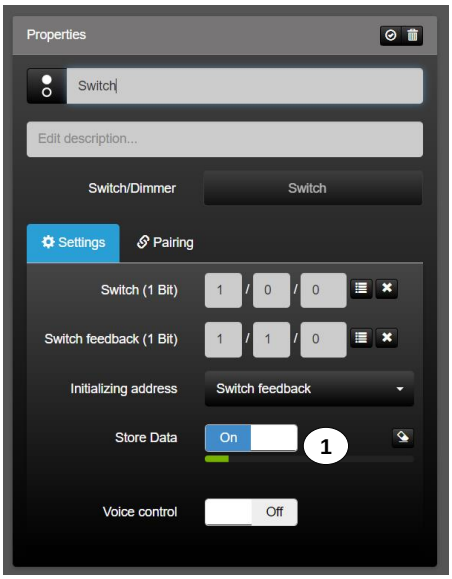
Messages	Selection of the icon library in SV-Control	Operating and display element in SV-Home
Email		 

Table 62: Display of the "Email" function

2.5.12. Store Data

In order to be able to display functions in a diagram, the storage of data (1) must be switched on. At this moment, changes of states are stored. The SV server can store the values of up to 100 function data points (e.g. brightness value, temperature value) over a period of 5 years.

INFORMATION
The server stores the data on the memory card of the device every 24 hours or at every normal shutdown. In case of an improper shutdown (e.g. power failure) the data since the last storage are unrecoverable lost.
The server uses a rolling database (rrd) in which the oldest entries are summarized as an average value. Furthermore, the minimum and maximum values are recorded separately.
The recording of the data is not suitable for billing purposes.



To delete the stored data of the function, press the " " button. Alternatively, an overview of the saved data can be made via the settings tab.

Overview of the data resolution per period after reaching the maximum data point limit:

	Day	Week	Month	Year
Period	last 8 days	last 6 weeks	last 13 month	last 5 years
Resolution	60 seconds (avg, Min / Max)	7 minutes (avg, Min / Max)	30 minutes (avg, Min / Max)	5 hours (avg, Min / Max)

The following data is stored per function when data storage is activated and can be used for a diagram:

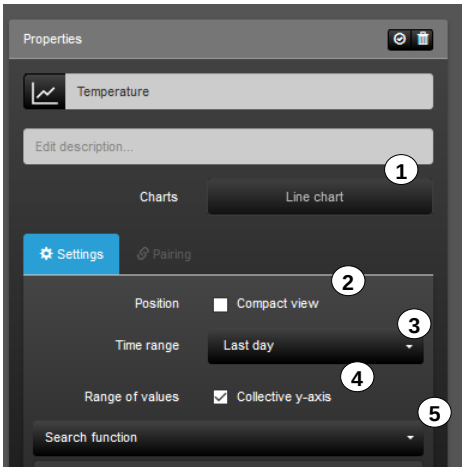
Typ	functiontype	UseCase	stored data
Switch / Dimmer	Switch	Switchable sockets	Switch feedback
	virtual switch	Start absence	Value
	On / Off	Central Off	Switch
	Staircase function	have better than need	
	Dimmer	Lighting	Value feedback
	Dimmer + switch		
	virtual Dimmer		internal Value feedback
	RGB(W)		Switch feedback
	Tuneable White		Color temperature feedback , brightness value feedback
	Remote maintenance	analysis	Enable remote maintenance , programming via remote maintenance
Motor	Blinds	Curtain position	Curtain position feedback, slat position feedback
	Rollershutter		Curtain position feedbac
Climate	Lüftung	Luftregelung	Switch Auto / Manual , Fan level feedback
	Operation mode	Energy cost optimization	Operation mode feedback
	Base setpoint		Actual Temperature, Display temperature
	HVAC group		
Value / State	1 Bit	Window position Circulation pump Domestic hot water circulation pump	Value feedback
	1 Byte	valve drive	
	2 Byte	Temperature, brightness	
	4 Byte	Energy data	
Value transmitter	1 Byte	Standard values	Value
	2 Byte		
Weather	weather station Standard	Weather station	Temperature , Rain , Wind speed , Wind alarm 1 Wind alarm 2 , Brightness value
	weather station Universal		Temperature , Rain , Wind speed , Wind alarm 1 Wind alarm 2 , Brightness value , Air pressure , Humidity

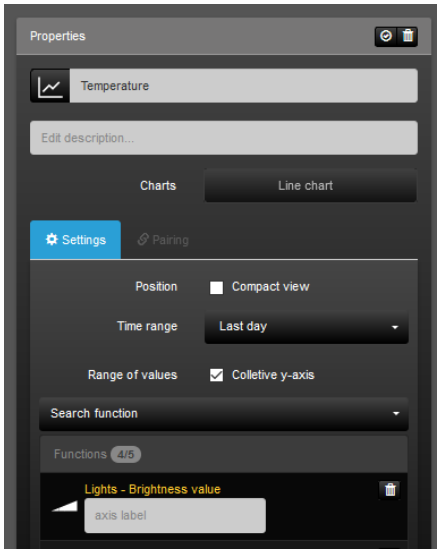
2.5.13. Creating Charts

The "Line chart" function (1) can be used to display previously saved values (see 2.5.12) of functions (e.g. room temperatures) in a chart. 5 functions can be added and displayed. The diagram can display analog as well as binary functions simultaneously.

INFORMATION
Charts cannot be displayed on the JUNG Smart Control 5 (SC5)

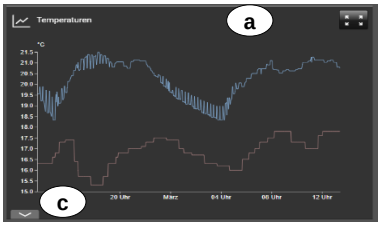
The following diagram properties can be changed:





Compact view (2):

Depending on the selection of the compact view (2), the diagram (a) or the current values (b) of the inserted functions are permanently displayed in the SV-Home. The further information is displayed via the drop-down menu (c).



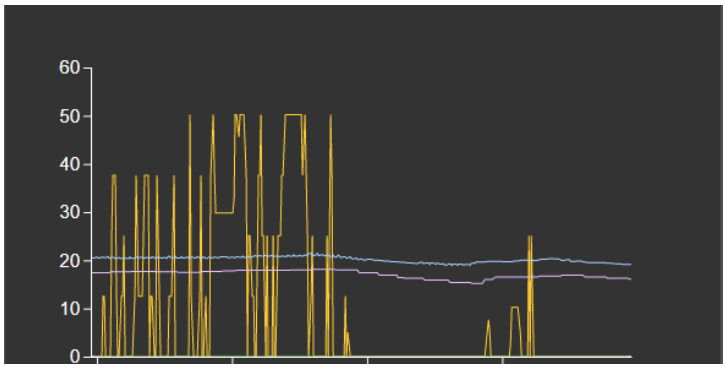
Time range (X-axis) (3):

The time range (3) can be used to change the default view in SV-Home. A daily, weekly, monthly or yearly view can be displayed. In SV-Home, you can switch to the detailed view via 

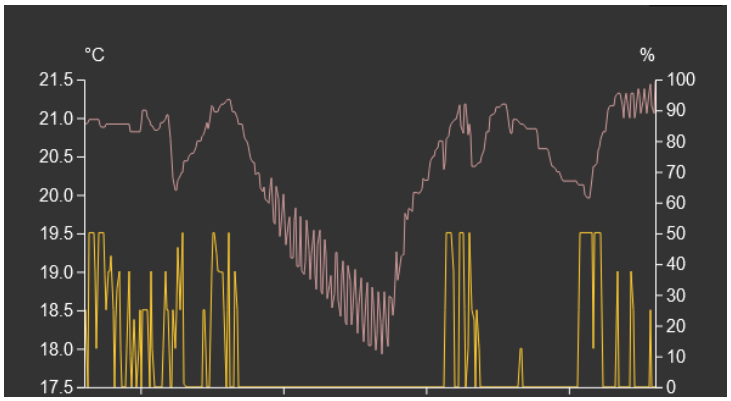
Range of values (collective Y axis) (4):

The limits (Min. / Max.) are automatically set by the inserted functions in SV-Home. Identical function types are displayed on a same Y-axis.

In addition, a unified display in SV-Home can be used via "collective Y-axis" (4). This dynamically shifts the limits of the single Y-axis in the chart.



Without "collective Y-axis", a maximum of two different y axes (primary / secondary) can be displayed. (e.g. temperature curve for the control value of the valve).



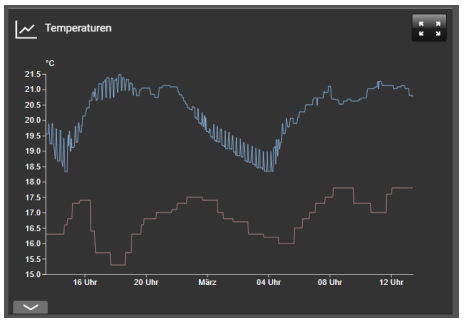
Add function (5)

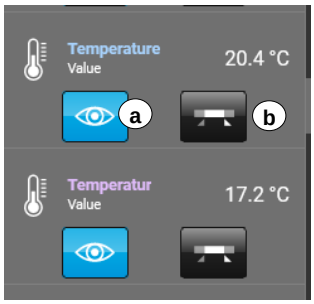
Previously selected functions for data storage can be added to the diagram. Based on the sequence when adding, the colors for the chart are automatically specified. To remove the selected function from the chart, press the button „  “.

2.5.14. Line chart at SV-Home

If a line chart is assigned in an area, this will be displayed depending on the chart properties and SV-Home settings (language, design). The chart offers the possibility to display historical values in different time ranges (day / week / month / year).

This allows values of up to 5 years to be displayed. In addition, it is possible via the drop-down menu to show/hide displayed values (a) and to display the minimum and maximum values (b). This is an additional information especially for summarized historical data.





2.5.15. Editing or deleting a function

Access as Administrator or Configurator

The "Configurator" and the "Administrator" have different access rights to KNX functions within the "Functions" column.

Select an existing function (1) to edit or delete it. The "Functions" column lists all the existing functions.
The arrow buttons "" (2) enable you to change the order of an area, after selecting it, and thus to move the position in SV-Home. The top most function in SV-Control (from top to bottom) is also displayed as the first function in SV-Home (from top to bottom).

It is possible to change the effect of the selected function (3), assign an alternative icon by pressing the currently selected icon "" (4), edit the name of the function (5) and, beneath that, add a description (6).

The changes are automatically saved and briefly displayed by a green "Save successful" screen.
In addition, the button "/ " (8) indicates whether the entries of the group addresses are complete. To fully delete the selected area (assuming Administrator rights), press the "" button (8).

Deletion of an area does not delete the functions assigned to it.

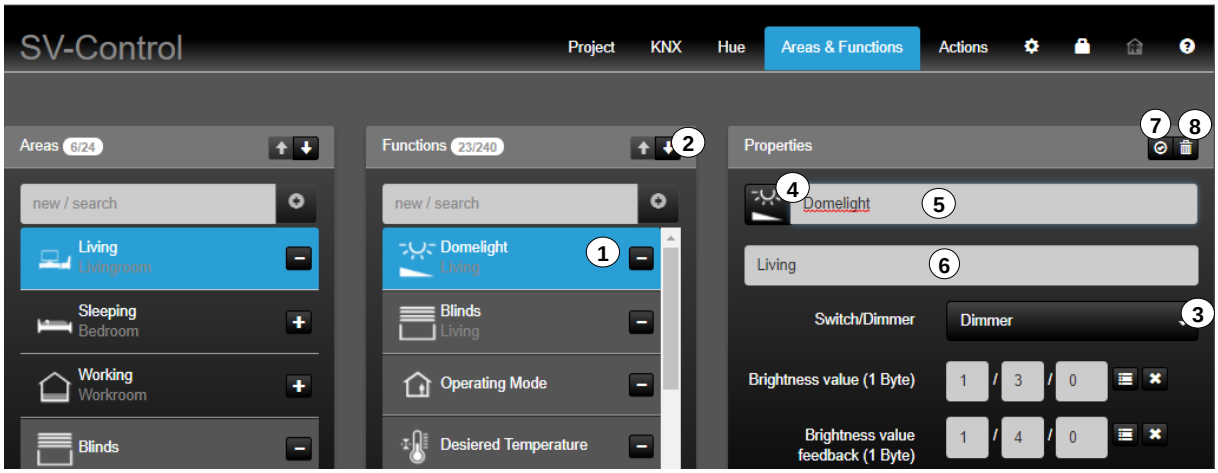


Figure 91: Organisation of the "Areas & Functions" tab

2.6. Action

An action is a grouping of one or more functions. Actions can be triggered by time, events, or via user-defined controls in SV-Home.

An action group can contain several actions.

In SV-Control, action groups and actions can be created, edited and deleted in the “Actions” tab (1). Both profiles (Administrator / Configurator) can be assigned full access rights for this tab. The Smart Visu Server supports up to 25 action groups and 250 actions.

2.6.1. Creating action groups

To create a new action group, enter the name of your new group in the input field (1) and then press the “” button. It will be added to the action group list (4) and is selected automatically.

The action group selected in the list (3) is displayed for editing in the column “Edit group” (4). Pressing the currently selected icon "" (5) allows an alternative icon from the library to be assigned to the action group and the action name can be edited in the input field (6).

Optionally you can activate or deactivate (7) the action group.

With “Activation” (8), you can define how the action group should be triggered.

The following options are available:
- Points in time
    - Activation and deactivation by date and time
    - Repetitions: annually or none
- Event
    - Trigger by 1-bit object (e. g. Push-Button (Welcome / Goodbye))
- Manually
    - Trigger via SV- Home

If an action group is required again, it can be duplicated including all actions.

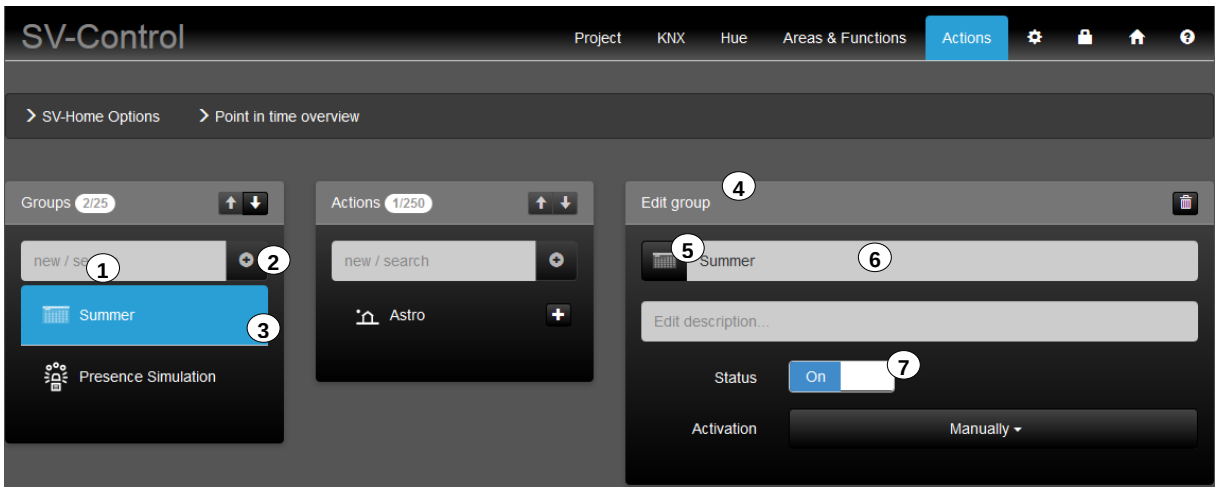


Figure 92: SV-Control “Action” tab

2.6.1.1. Points in time

Activation type “Points in time” can be used to activate and deactivate action groups based on date and time. Use the calendar to set the date and then the time for activation (8a) and deactivation (8b). Furthermore, an annual repetition (8c) can be set.

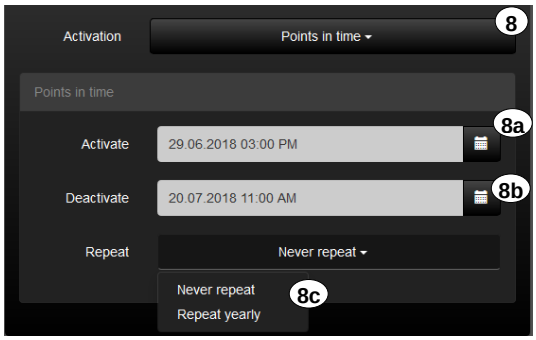


Figure 93: Parameters for activation type “Points in time”

2.6.1.2. Event

With the activation type (8) “Event”, the group can be triggered by a 1-bit object (8a). It can be selected whether the group is activated with “while trigger is ON” or “while trigger is OFF” (8b).

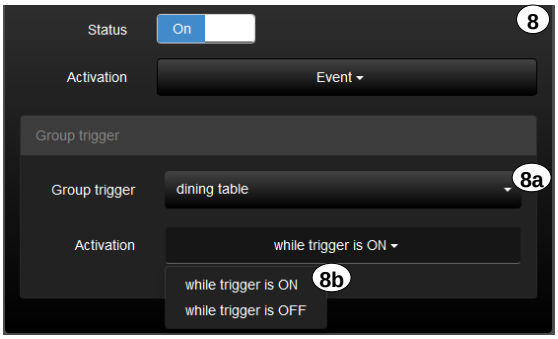


Figure 94: Parameters for activation type “Event”

2.6.1.3. Astro

The "Astro" action type (9) automatically triggers functions depending on the position of the sun. Sunrise or sunset can be selected as the trigger (9a).

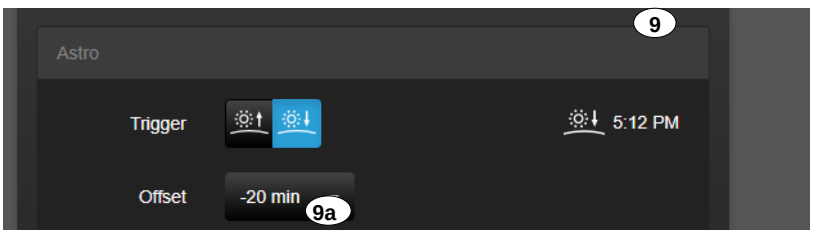


Abbildung 95: Parameter für den Aktivierungstyp „Astro“

2.6.1.4. Manually

With the activation type "Manually" (8), the group can be activated manually in the SV-Home.

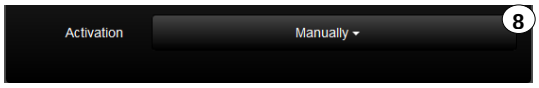


Figure 96: Parameters for activation type “Manually”

IMPORTANT: Actions assigned only in inactive action groups will not be executed.

2.6.2. Creating an action

To create a new action, enter the name of your new action in the input field (2) and then press the "" button (3). This is added to the action list (4) with its name and is selected automatically.

The action selected in the list (4) is displayed for editing in the column "Edit action" (5). Pressing the currently selected icon "" (6) allows an alternative icon from the library to be assigned to the action and then the action name can be edited in the input field (7).

Optionally, and independently of the action time, you can carry out an area assignment (8), in order to trigger the action in SV-Home for an additional area.

A distinction must be made between three action types using the trigger criteria. The following types are available in the drop-down menu (9):

- Point in time:
  - Trigger via SV-Home
  - Trigger via time and day
- Event:
  - Trigger via SV-Home
  - Trigger via function event
- Astro:
  - Trigger via SV-Home
  - Trigger via sunrise or sunset
- User-defined:
  - Trigger via SV-Home

In the drop-down menu (10), you can specify up to 16 functions with editable function values for each action, which are to be executed when a trigger event occurs. In so doing, a function can also be a higher-level group address (e.g. central function of the KNX system).

By means of the voice control switch (11), the selected action can be activated by voice.

In the selection menu (12) you can define up to 16 functions with editable function value per action one after the other, which are to be executed in case of a trigger event. A function can also be a higher-level group address (e.g. central function of the KNX system).

The actions are automatically saved and briefly displayed by a green "Save successful" indicator. With the control „  “ (13) the action can be tested directly from the SV-Control, duplicated with the control „  “ (14) or deleted with „  “ (15).

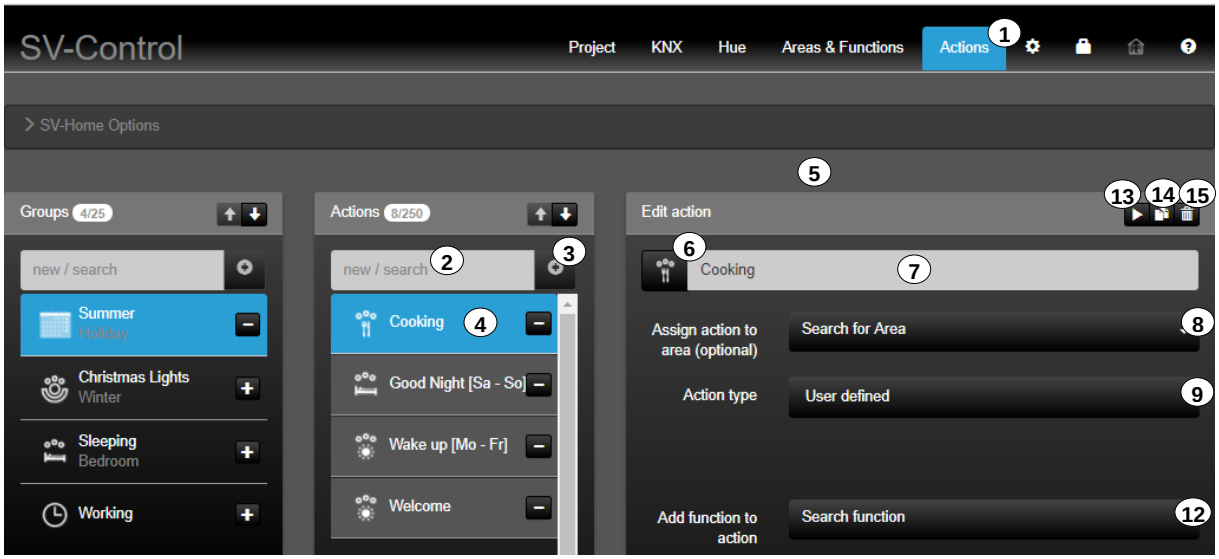


Figure 97: "Actions" tab

Each function assigned to the selected action is listed beneath the drop-down menu (10) in a function list (10a). The parameters (10b) of each function can be set separately. Various operating elements are available, depending on the function type. These correspond to the elementary operating elements of the appropriate function in SV-Home.

Using the "  " icon (10c), you can execute the set function value (10b). The representation of the function may differ between SV-Home and SV-Control (e.g. shutter button). If a function is to be deleted from the action list, you can trigger this with the "  " icon (10d).

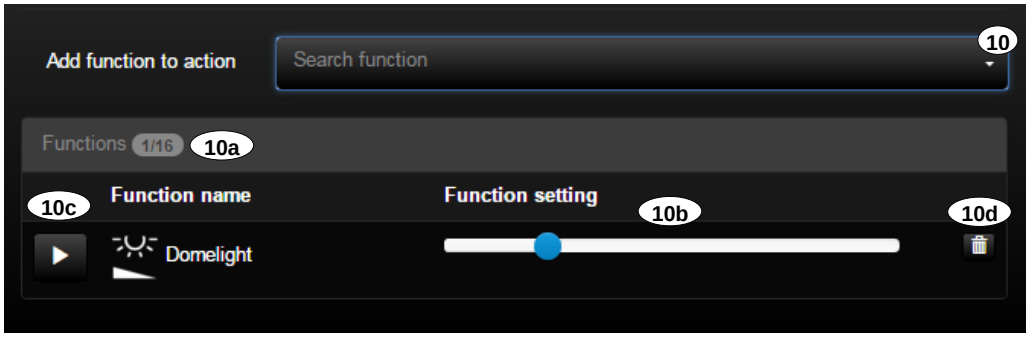


Figure 98: Parameters of the function to be executed

The changes are automatically saved and briefly displayed by a green "Save successful" screen. It can be tested directly from SV-Control with the "  " icon (11).

2.6.2.1. Point in time

"Point in time" action types (9) trigger automatically, depending on the weekday and the set time. In addition, you can trigger this action type individually via SV-Home.

The button (9a) opens the window to set the time. Set the trigger time using the arrows "^" (9b).

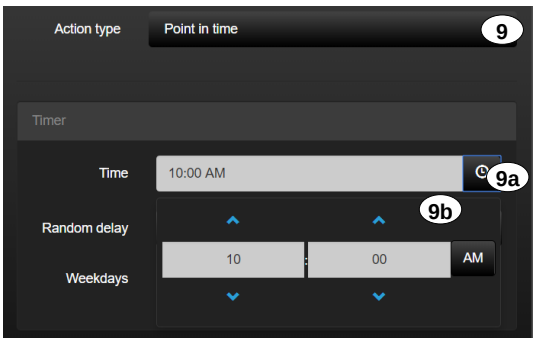


Figure 99: Parameters of the "Point in Time" action type

Alongside that, you can specify the weekdays (9c) on which the action is executed. Active days have a blue background.

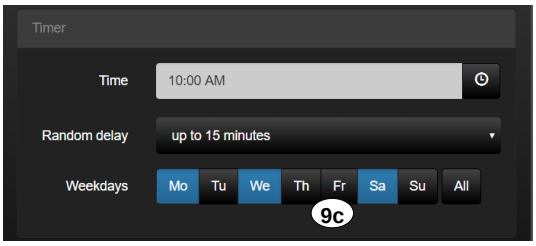


Figure 100: Parameters of the "Point in Time" action type

In addition to the set time and the day of the week, a random delay can be activated. The action triggers randomly within the selected period (9d).

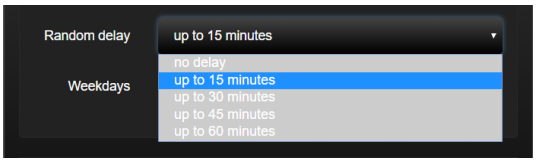


Figure 101: Random delay of the “Point in Time” action type

2.6.2.2. Event

Actions of type "Event" (9) can be triggered by a function event (e.g. pressing a KNX pushbutton sensor) selectable in the menu (9a). The function state leading to the triggering of the action can be selected using the selection menu (9b). You can only select functions that contain at least one 1-bit data point (for example, results of the "State Logic" function). After selecting the trigger, the significance of the condition must be determined. The following options are available:

- At state On (state change necessary to re-initiate action, e.g. wind alarm)
- At state Off (change of state necessary to trigger action again)
- At state change (state change between on and off)
- At each On (no state change required to re-trigger action, e.g. button)
- On each Off (no state change needed to re-trigger action)

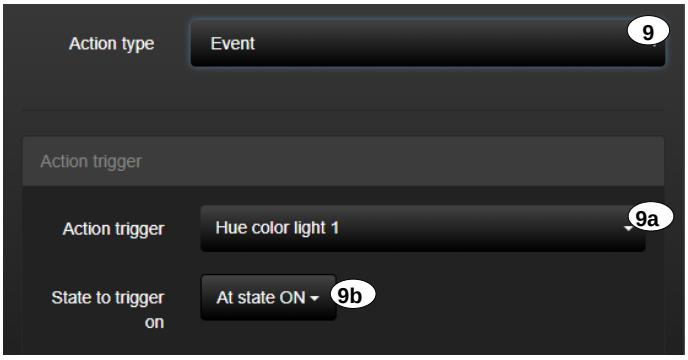


Figure 102: Parameters of the "Event" action type

2.6.2.3. Astro

The action type "Astro" (9) automatically triggers functions depending on the position of the sun. As a trigger (9a), the sunrise or sunset can be selected. The time (9b) for today's sunrise or sunset is shown on the right. With the offset (9c), the triggering period can be adjusted in time. You can set the days of the week (9d) on which the action will be performed. Active days are highlighted in blue. In addition, an earliest or latest time can be defined (9e).

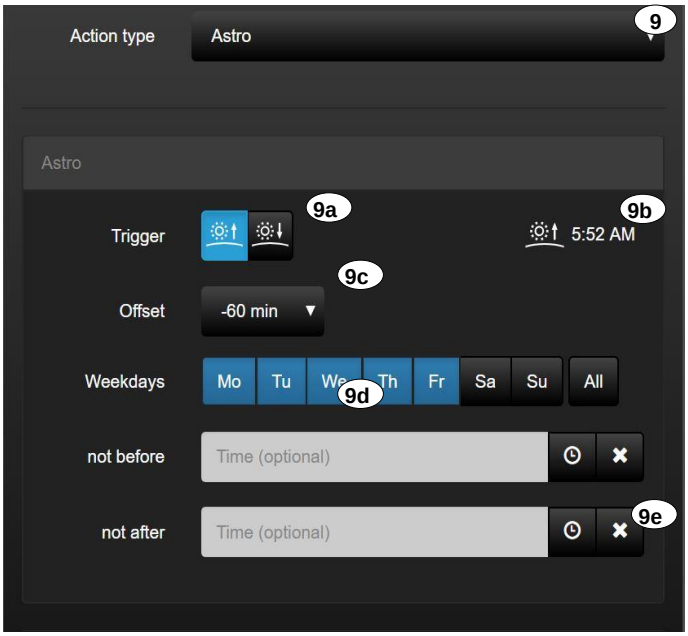


Figure 103: Parameters for the "Astro" action type

The Astro function can be used both with a local and NTP time.

2.6.2.4. User defined

Actions of type "User defined" (9) are actions, which can only be triggered manually via SV-Home. For this reason, this action type does not require any additional configuration.

Figure 104: Parameters of the "User defined" action type

2.6.3. Editing or deleting an action

To be able to edit or delete an action, you must first select it in the "Actions" list (1). The action selected in the list (1) is displayed for editing in the column "Edit action" (2).

A selected action can be deleted with the "🗑" icon (3). You can execute the action conveniently directly from SV-Control using the "▶" icon (4).

An action can be copied with the "📄" icon (5). The copy function causes the creation of a new additional action with the same configuration.
The changes are automatically saved and briefly displayed by a green "Save successful" screen.

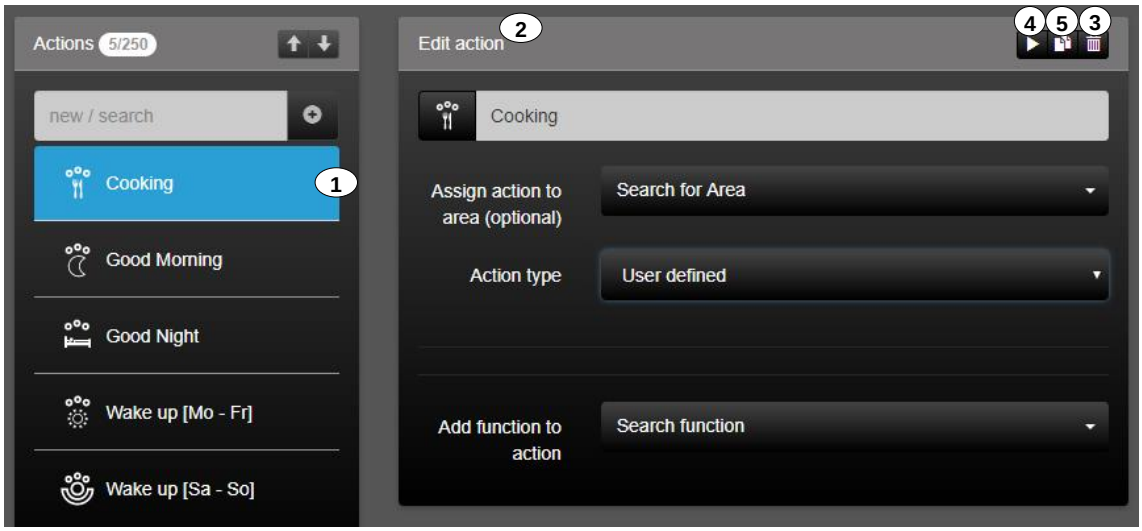


Figure 105: "Actions" tab

2.6.4. Point in time overview of the actions

In the area “Point in time overview” (2) - a list of the actions with the respective time switching points - can be displayed. The currently selected action is highlighted in blue (2) in this overview.

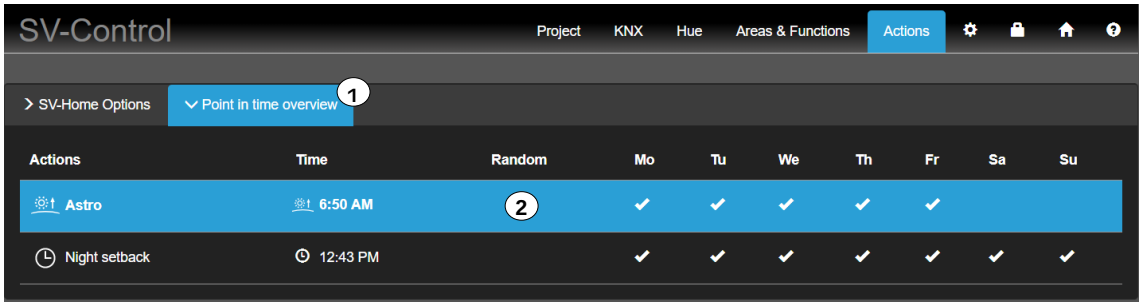


Figure 106: Point in time overview

2.7. Configuration management

Configuration management (1) is used to set elementary system parameters of the Smart Visu Server. You can change the network settings (2), the time and the current date (3). When using the Astro function (4), the latitude and longitude of the location can be entered. Furthermore, the langueage (5), a MyJUNG remote access (6), an email SMTP-Server (7) can be set up and online system updates can be carried out (8) and the update progress can be displayed. In addition, system settings (9) and the overview of stored data (10) can be found.

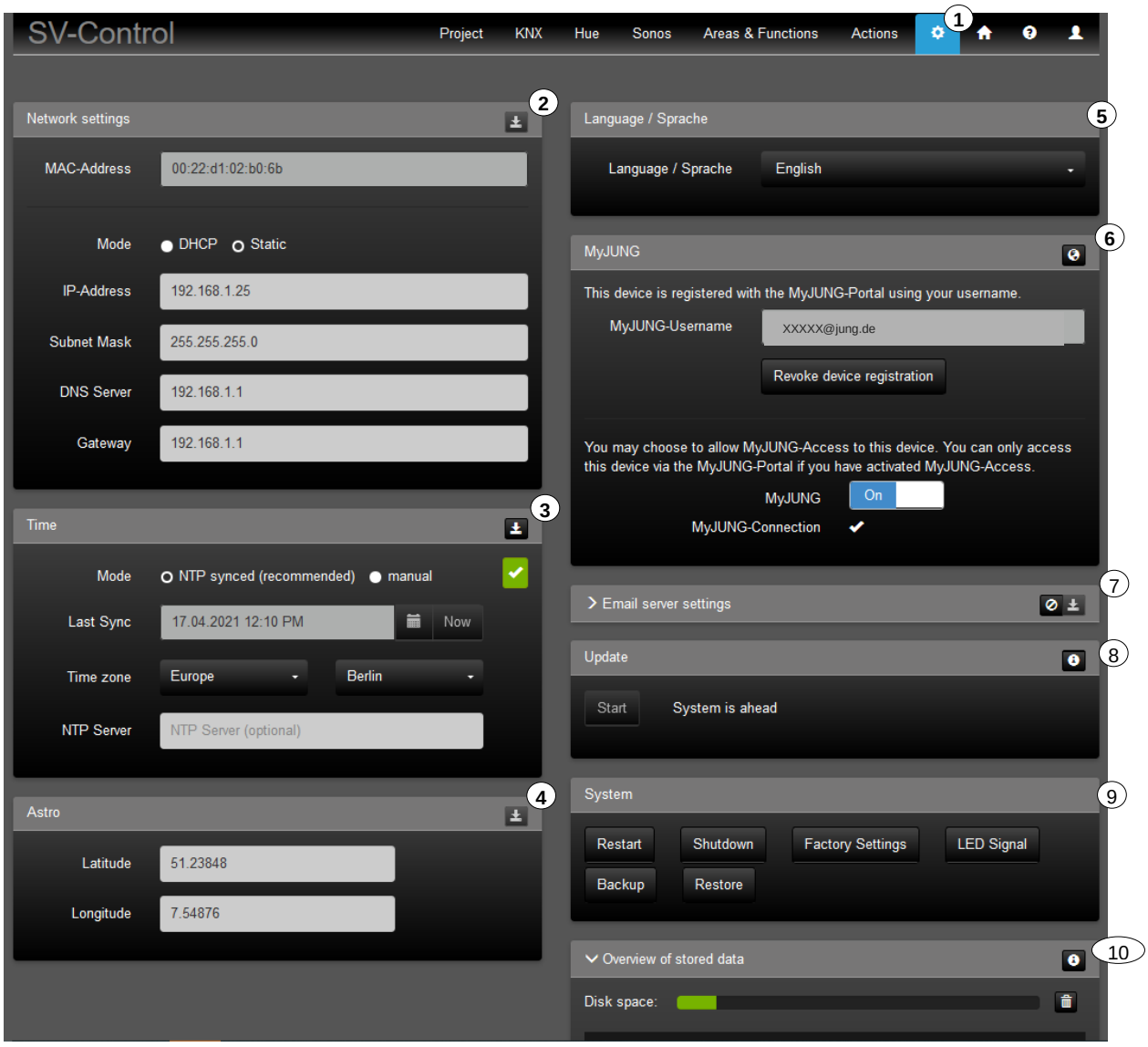


Figure 107: Tab of the Smart Visu Server configuration

2.7.1. Network settings

The network settings can be edited in the "Network Settings" field (2) for the local network (IPv4) in the configuration management of SV-Control. The network settings of the Smart Visu Server can be entered automatically via DHCP address assignment (2a) or manually ("statically") (2b).
The Smart Visu Server operates in the following private IP address areas:

- 10.x.x.x – Class A
- 172.16.x.x …. 172.31.x.x – Class B
- 192.168.x.x – Class C

2.7.1.1. Configuring **the IP address for DHCP**

The DHCP address assignment is set as default when the device is delivered.

For the Smart Visu Server to obtain its IP address automatically via DHCP address assignment, the "DHCP" option (2a) must be selected. In this case, the fields 2c to 2f cannot be edited, but are only used to visualise the current, automatically obtained network settings.

To apply the selected setting, the "" button (2g) must then be pressed.

The DHCP setting can be restored at any time through an "IP Reset" using the device Reset button. You can find more information on this in Chapter 1.5 "Structure of the device, function"

2.7.1.2. Setting a static IP address

To manually assign a static address to the Smart Visu Server after commissioning, the item "Static" (2b) must be activated. The input fields (2c to 2f) can then be edited.

To apply the selected setting, the "" button (2g) must then be pressed.

The static IPv4 address can be entered in the input field (2c). The subnet mask of the network can be specified in the input field (2d). You can specify a DNS server in the input field (2e) and an IP Gateway in the input field (2f).

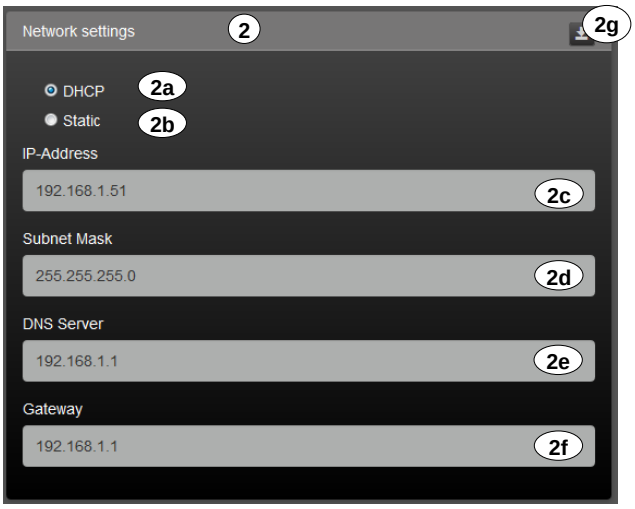


Figure 108: Parameters of the IP interface

2.7.2. Setting the system time and date

The system time and the current date can be edited in the "Time" field (3) in the configuration management of SV-Control. The time synchronization can be performed both by NTP time server and manually. It is very important to enter the time zone correctly. After successful editing, the button must be pressed. Afterwards the data will be accepted and the server will restart.

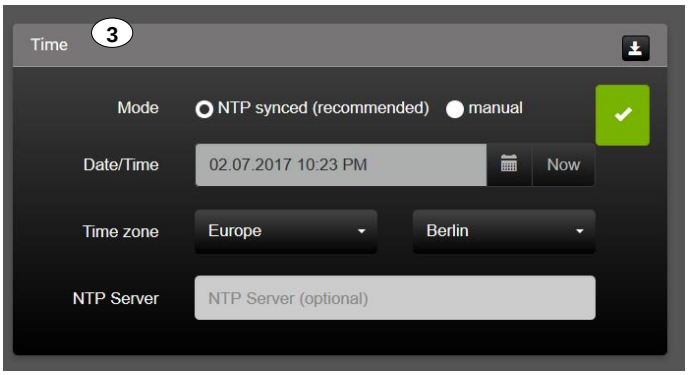


Figure 109: Time server

If the NTP query is made with the standard NTP server, the SV server must have an Internet connection. Otherwise, no time synchronization will take place.

If the NTP query is made to an alternative NTP server (b), this NTP server must provide a valid response. Otherwise, no time synchronization will take place.

In the input field (3a), it is possible to enter the current date in the format "dd.mm.yyyy". Alternatively, you can use the "" button (3b) at the end of the input field, in order to show a calendar field, to be able to select the current date.

Set the current system time using the arrows "" (3c).

To apply the time settings permanently in the Smart Visu Server, you must then press the " " button (3d).

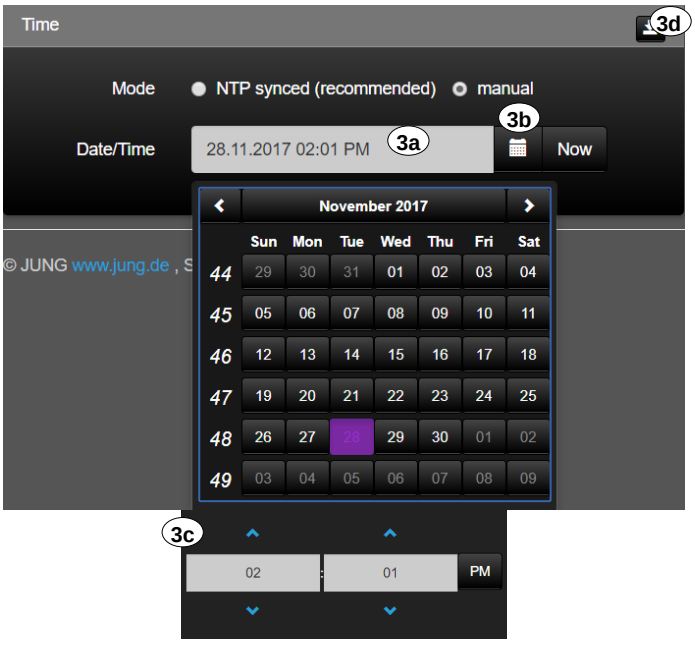


Figure 110: Parameters for setting the time

2.7.3. Astro

When using the astro function (4), the latitude and longitude of the location must be entered with at least 5 decimal places.

You can research the location coordinates using various services on the Internet (e.g. www.gpskoordinaten.de).

When using HTTPS, the current position can be determined by the "crosshairs".

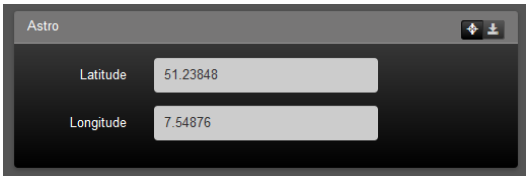


Figure 111: Astro

2.7.4. MyJUNG Account

With a MyJUNG account, there are further functions available. Firstly, a fee-based remote access facility (2.7.5) can be set up. Secondly, the Amazon Alexa and Google Assistant voice service can be used via the MyJUNG account.

Info: *With the creation of a new MyJUNG account, data is not automatically transferred to voice service.*

2.7.5. Remote access

The paid remote access allows secure access to the SV-Server. To do this, the switch (1) must be set to "On" and the email address of the MyJung portal must be entered in the field "Remote Username" (2). MyJUNG remote access must then be authenticated via the portal. If a connection is established, a tick appears after "Remote connection" (3).

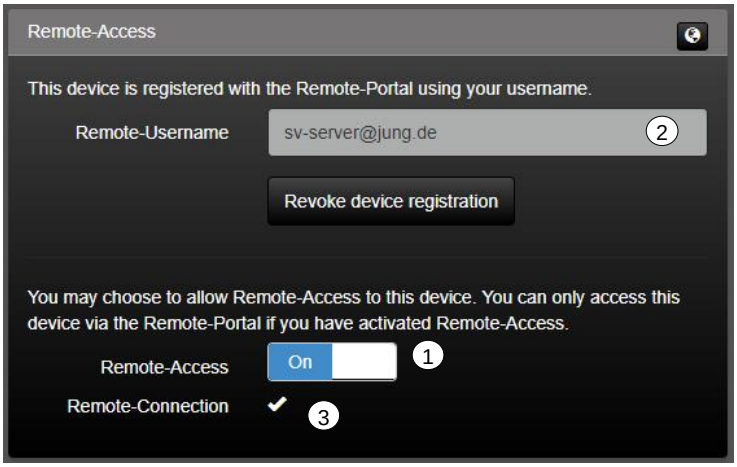


Figure 112: Remote Access

2.7.5.1. Activation of remote access through the MyJung portal

In order to use the secure remote access to the SV-Server, the following steps are necessary:

(1) Application or registration on MyJUNG login

Enter your personal MyJUNG login in the input mask (1). If you do not have a MyJUNG account, follow the input dialog under "Go to registration" (2).

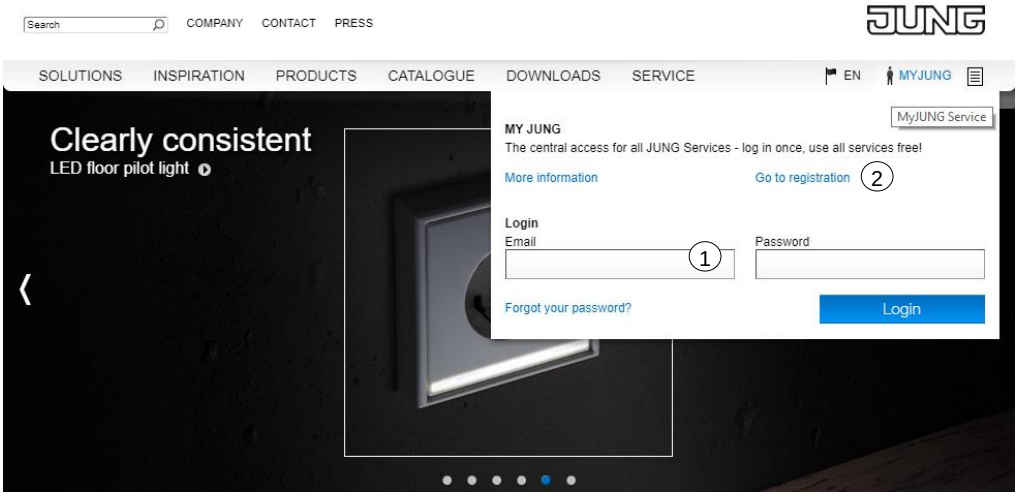


Figure 113: MyJUNG registration dialog

(2) Open Software Licence Sales Dialog

After successful registration in the MyJUNG portal, you will get to the overview page of MyJUNG. On this page, please select the tab "Software licence activation".

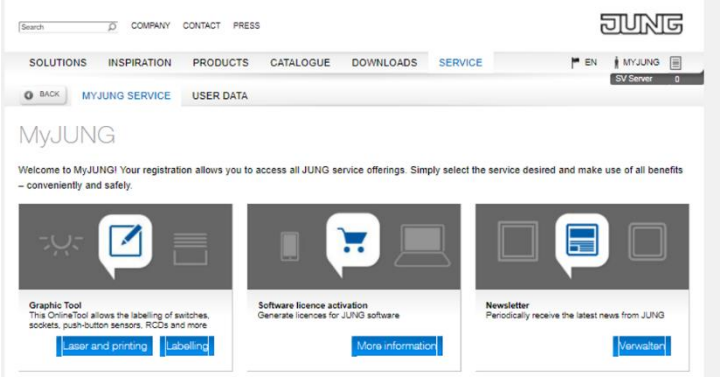


Figure 114: Service overview page of MyJUNG

(3) Selection of the desired product

In this overview you have the opportunity to purchase the desired product. In this case please select from the list on the left-hand side (1) the licence "Smart Visu Server" (2).

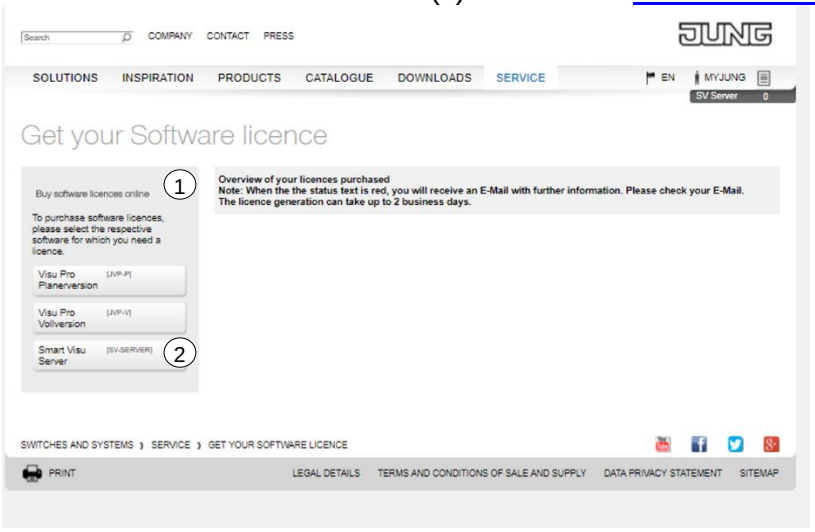


Figure 115: Software licence sales dialogue

(4) Redeem the voucher code or purchase an SV-Server remote subscription

In this view, you have the option to redeem an existing voucher code (over 6 months) or to complete an SV-Server remote subscription (unlimeted). If there is a voucher code, please fill in the field "Voucher code" (1) with your personal voucher code. To complete this action, confirm with "Accept licence data" (2).

Figure 116: Software licence sales dialogue

If you have successfully redeemed the voucher code or have successfully completed a subscription, you will see the following view.

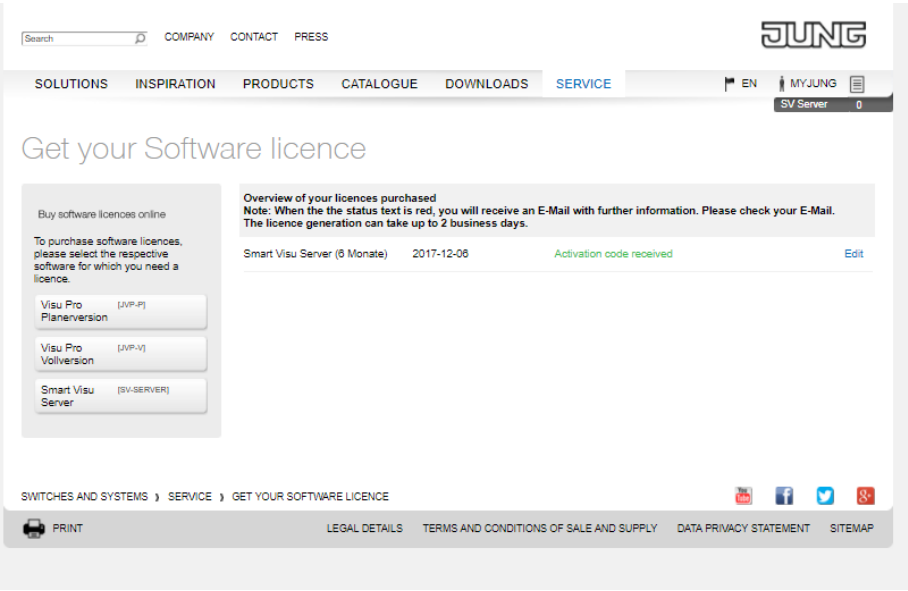


Figure 117: Successful licence purchase

2.7.5.2. Activation of MyJUNG remote access in your SV-Server

To enable secure remote access to your SV-Server, the following final steps are necessary.

(1) Activation of your MyJUNG account in your SV-Server

Switch to the browser of your operating system. In this case, call up the start page of the SV-Server. To do this, use either "**sv-server.local**" or the associated **IP address** of your SV-Server. After the surface is loaded, please select SV-Control (1).

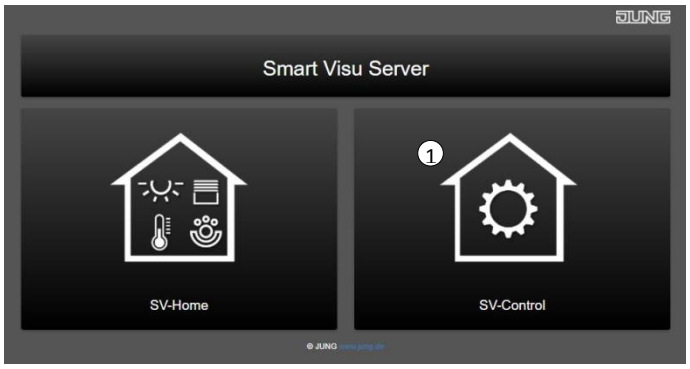


Figure 118: SV-Server start page

Now enter your MyJUNG username (1) and your associated MyJUNG password (2) in the right-hand column, under the heading "MyJUNG access". Then confirm this step with the "Register device" button (3).

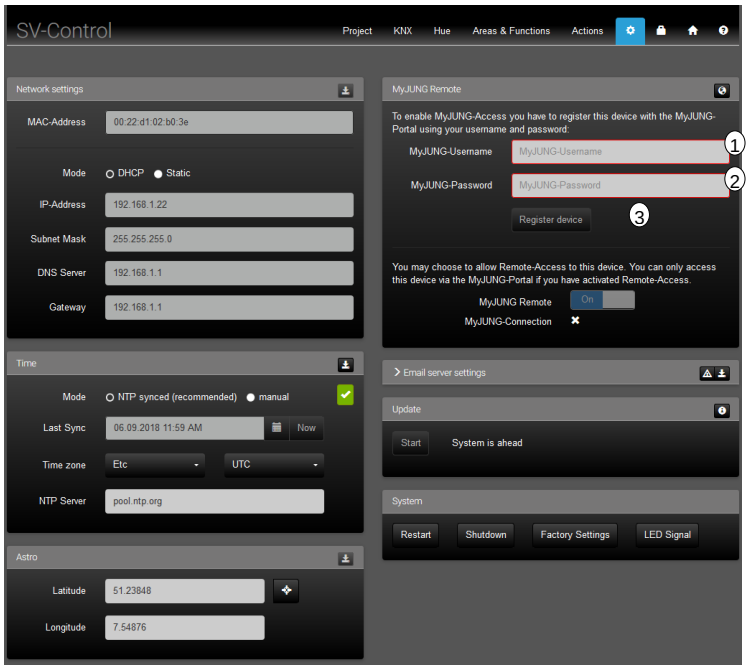


Figure 119: Remote access in the SV-Server

(2) Activation of your SV-Server in your MyJUNG-Portal

At this time, your SV-Server is actively logged into MyJUNG. The remote connection is up-to-date but not usable yet. For final steps, please change to a new browser window or a new browser tab. Log into the MyJUNG portal on the JUNG website. Switch to the Smart Visu Server Remote Access tile via the "Manage" button (1).

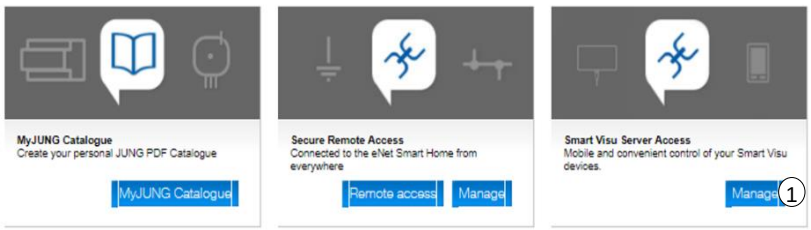


Figure 120: Smart Visu Server remote access

Finally, to activate the remote access, please confirm the process in the displayed view with the button "Activate now" (1). From then on, your configured remote access will work for the specified runtime.

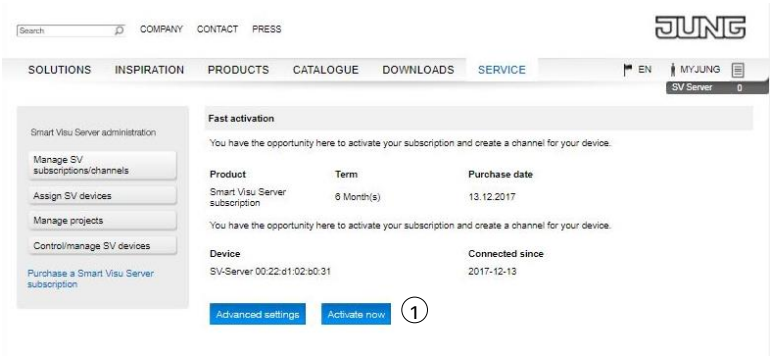


Figure 121: Activation of the remote access

The following overview of the MyJUNG portal provides information about your activated subscriptions. This information includes: item, term, date of purchase, remaining time, project, equipment and channel. This information will help you to manage your SV-Server Remote Access immediately.

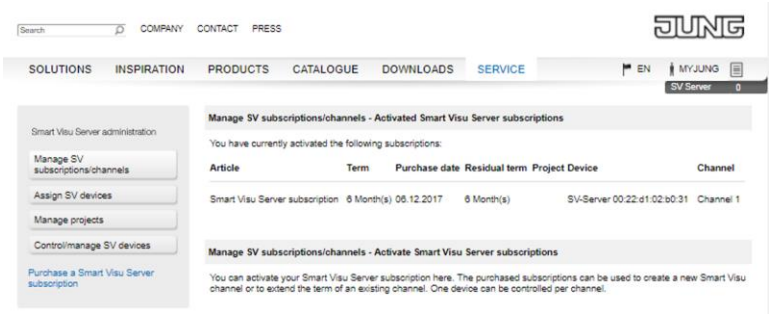


Figure 122: Enabled SV-Server subscriptions

If the connection between your SV-Server and the MyJUNG portal succeeds, the following view will appear in the SV-Control. With the confirmation tick next to “Remote connection” (1), you will see that a successful connection between your SV-Server and the MyJUNG server has been established. To set up the apps, please see the dedicated chapter (Android 3.2 / iOS 3.3).

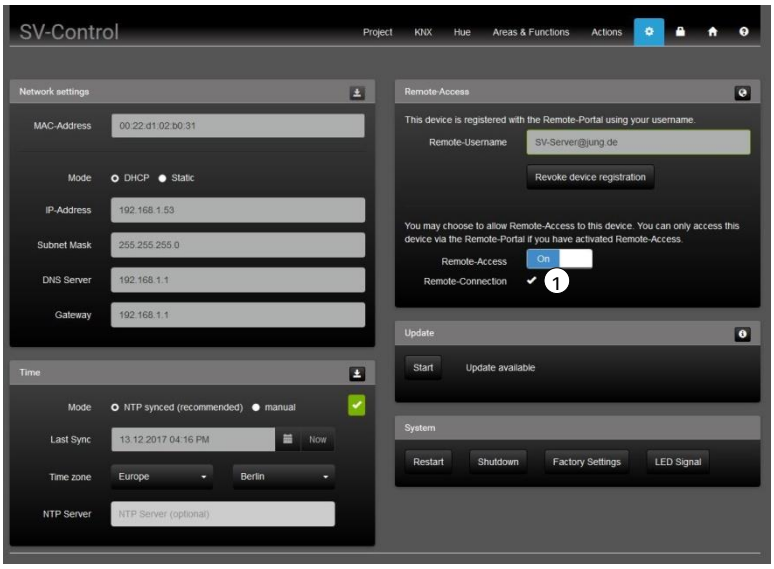


Figure 123: Successfully established remote connection

Alternatively, remote access can also be controlled / managed (1) via a web browser.(2).

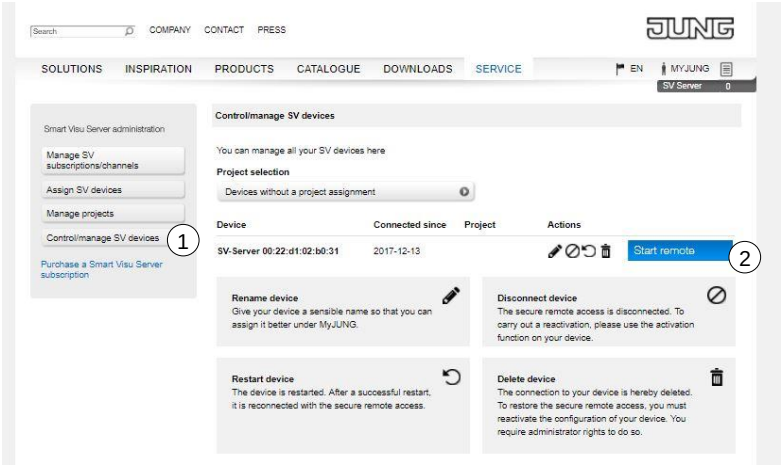


Figure 124: Remote access via web browser

2.7.6. Voice Control Amazon Alexa / Google Home

There is the possibility of using the Amazon Alexa or Google Home voice service through a MyJUNG account. To do so, the MyJUNG account must be activated in the SV-Server as for remote access.

Select the “Settings” tab and enter your MyJUNG user name (1) and your relevant MyJUNG password (2). Then confirm this step with the button “Register device” (3).

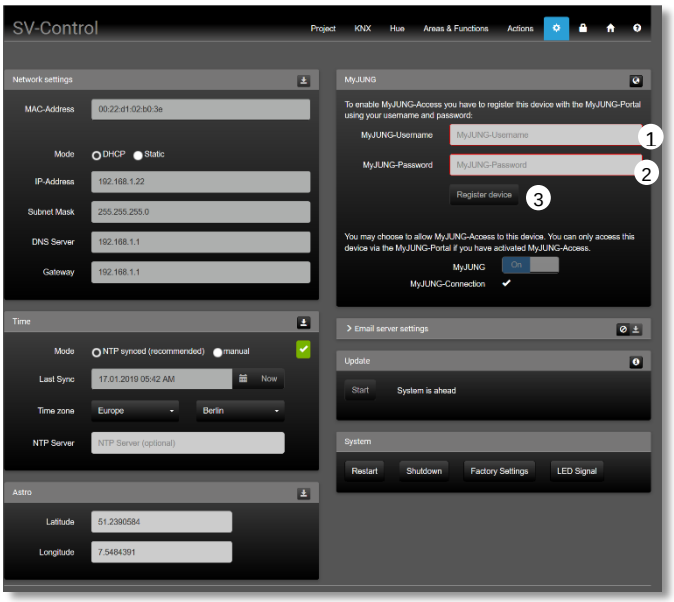


Figure 125: Activation of the MyJUNG account in the SV-Server

The Alexa voice control must in addition be activated (4) under the properties of functions and actions.

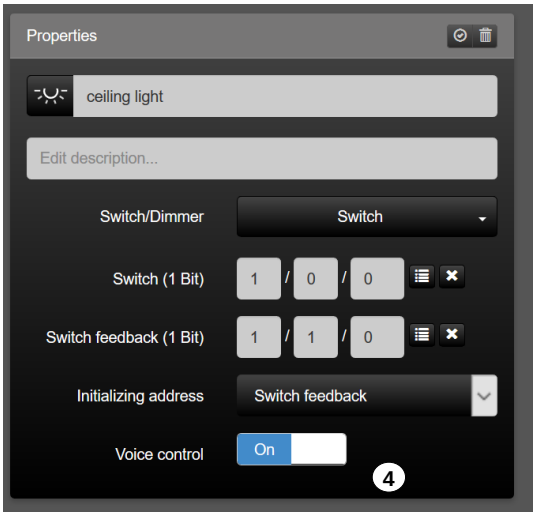


Figure 126: Activation of the voice control in the properties of a function

Please take all further functions from the quick guide.

Info: *With the creation of a new MyJUNG account and the activation of the voice control in the properties of the functions, data is not automatically transferred to the Amazon Alexa voice service.*

The following voice commands are possible when using Amazon Alexa or Google Home:

Type	Function	Syntax	Examples
Switch /Dimmer	Switch	COMMAND FUNCTION NAME VALUE	Switch light on / off
	On / Off		Switch all off
	Dimmer		Dim light to 20% Increase / reduce light by 20 % Dim light brighter / darker
	Dimmer + Switch		Dim light to 20% Increase / reduce light by 20 % Dim light brighter / darker Switch light on / off
	RGB(W)		Set light to red Leave light on blue Switch light on / off
	Tuneable White		Dim light to 20% Increase / reduce light by 20 % Dim light brighter / darker Switch light on / off
Motor drives	Blind / Slat		Set blind to 20 % Move blind to 50%
	Roller shutter		
Air-conditioning	Base setpoint		Set the temperature in the lounge to 22 °C Increase the temperature in the lounge by 2 °C
	Setpoint shift		Increase the temperature in the lounge by 2 °C
	Function group HVAC		
Scene	Scene	COMMAND FUNCTION	Activate TV mood
Actions			

2.7.7. Email message

Basic settings are necessary for the “Email message” function (1) to guarantee the function. The email server (2) must first be selected so that the host address (3) must be entered automatically.

The following email providers are supplied as favourites in the default state:

Mail	DE	EN	FR	NL	IT	ES	PORT	RU	EST	LIT	LET	POL	UKR	KOR	CHN
Google	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔		✔	✔	
Outlook	-	✔	✔	✔	✔	✔	✔						✔		
iCloud		✔		✔	-	✔	✔						✔		
GMX	✔		-					-	-	-	-	-		-	-
Web	✔				-										
Orange			✔												
Libero					✔										
Mail								✔	✔	✔	✔				
Yandex								✔	-	-	-				
Yahoo									✔	✔	✔				
Home		-		-		-	-						-		
Nazwa	-		-									✔			
IDhosting					-							✔			
Naver								-	-	-	-	✔		✔	
Daun												-		✔	
EtaEase														-	✔
Sina															✔
Tencent															✔

Additional providers can be inserted with “More”.

The required port number (4) can be looked up in the settings of the email provider. The email address and the password can be entered in the fields of user name (5) and password (6). The sender (identical to the username in the default case) can be stored under (7).

The settings must finally be stored “  ” (8).

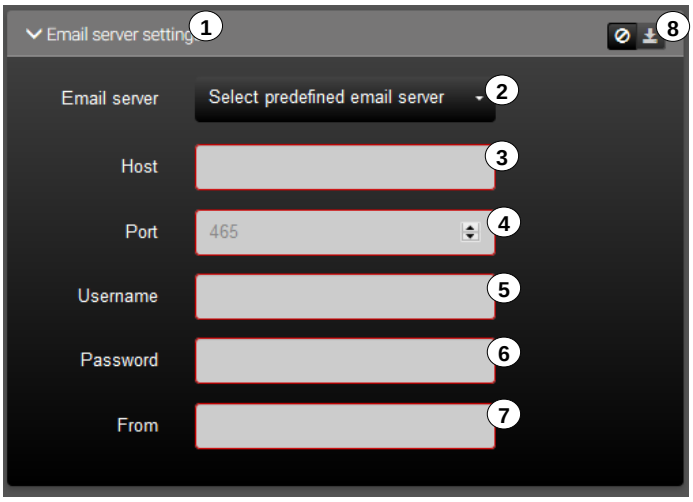


Figure 127: Settings of the function “Email message”

2.7.8. Server update

To perform a system update, the Smart Visu Server requires access to the Internet. Depending on the speed of the available Internet connection, this operation can take several minutes.

We recommend not interrupting the power and network connection for the period of the update. In addition, we do not recommend making any changes in SV-Control during execution.

A system update, if available, can be started in the "Update" field (4) using the "Start" button (4b). Via button (4a) the release notes are recalled.

Figure 128: Update window

The progress bar (4c) shows the overall progress of a running update operation. The LED of the device flashes periodically in magenta whilst the update is being performed.

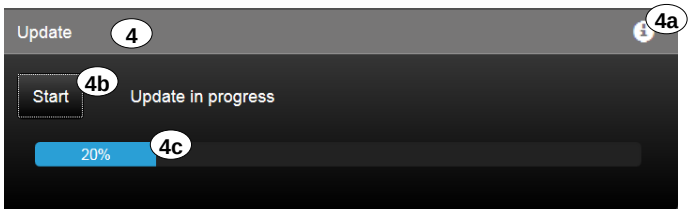


Figure 129: Depiction of an active update

After the update has been downloaded, the system is restarted. During the system restart, a countdown (4d) is displayed. Soon after this reaches 0, you can operate SV-Control as normal. This means that the update operation is complete.

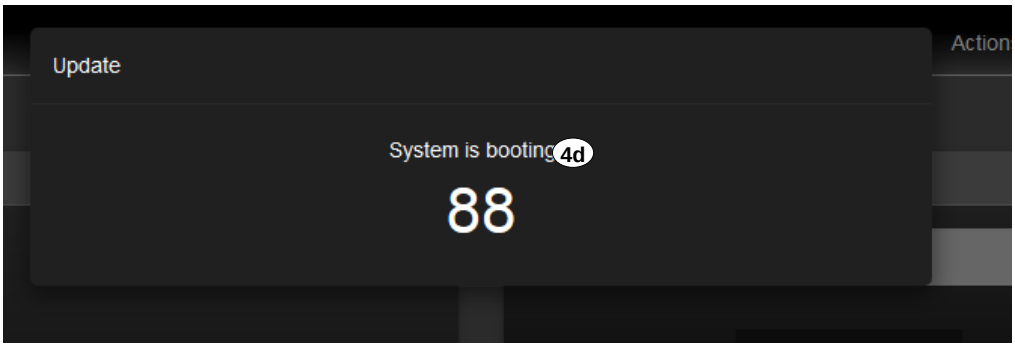


Figure 130: Completing the update

2.7.9. System settings

The device can be restarted and shut down within the system settings. If the system is shut down, reconnecting the power supply causes the system to start up.

Furthermore, the device can be set to factory settings. This deletes all data on the partition.

With the help of the LED signal, the server can be identified more easily.

The backup of the current project engineering can be triggered by the " Backup " button. This process may take a moment. Afterwards the project engineering can be downloaded with the " Download " button.

The " Restore " button can be used to restore a previous project state. This process may take a few minutes.

INFORMATION
The Smart Visu Server can only manage one project. If a project is imported using the "Restore" button, any existing project is deleted.
A project backup can only be imported on devices with the same version or on new devices.

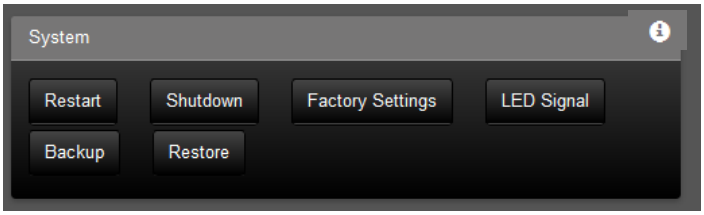


Figure 131: System

2.7.10. Overview of stored data

The data storage overview provides information about the stored data points on the server. The bar (1) provides information about the available free resources of functions.

Cleaning up the entire memory data is initiated by the eraser (2). Isolated, unneeded memory data can be removed from the list by the button (3) in the respective line.

The data recording can be paused via the slide switch (4). This is only possible if the function is not assigned in any diagram (slide switch grayed out).

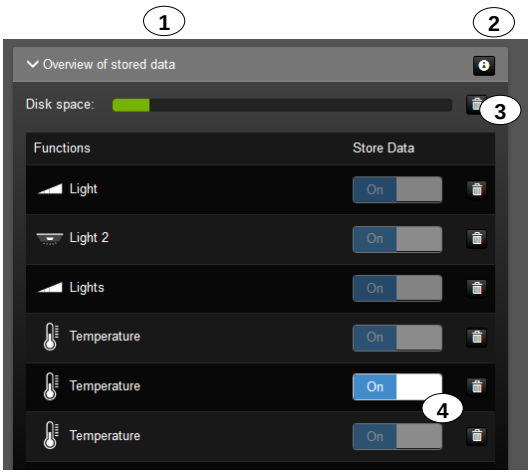


Figure 132: Data storage

3. SV-Home

This chapter describes the operation of the Smart Visu Server using SV-Home in detail.

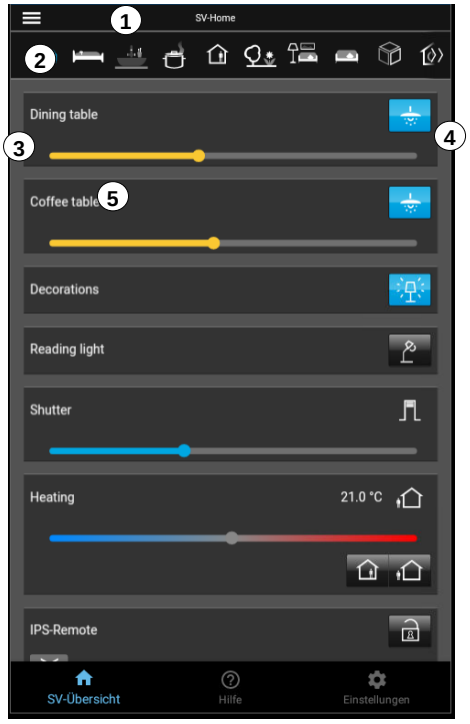
The SV-Home is the integrated web interface of the Smart Visu Server for the visualisation, status display and operation of the KNX system and the Philips Hue system. To access SV-Home, a current HTML5-capable browser (input device) or the corresponding app (see chapter 3.2 SV-Server app) is required for mobile devices. The access of max. 10 different clients on the SV-Home web interface is recommended. The SV-Home is generated automatically from the configuration set up in SV-Control and is divided up into three sections.

The top section is always visible and consists of the Jung logo and the title "SV-Home" (1). Clicking the "SV-Home" header (1) takes you back to the homepage, via which you can switch to SV-Control at any time.

The second section (2) displays the areas created in SV-Control with their assigned icon and name alongside each other. If you have created actions in SV-Control, an additional tile "Actions" "" is added automatically to the right of the areas. The Action tile lists all the actions created in SV-Control and they can be triggered individually here.

Selecting an area displays the assigned functions and actions (3) beneath. Each function is displayed in a separate box with its operating elements. These operating elements may vary, depending on the function type. "Creating a new function" to discover which function type leads to which visualisation in SV-Home.

If the value of a function changes, then the visualisation is adapted automatically in SV-Home. If, for example, the ceiling luminaire (4) is switched on via a KNX wall sensor, then the new dimming value (5) is updated automatically in SV-Home.



Areas and possible Action tile

Functions / actions

Figure 133: SV-Home

3.1. SV-Home settings

In addition to the operation of the SV-Home, there are some settings which can be set in the upper section to the left of the label "SV-Home" (1).

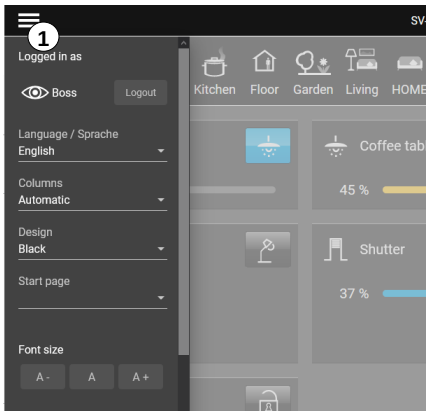


Figure 134: SV-Home settings

3.1.1. Language

In the "Language / Sprache" window (2), 15 different languages can be selected. This changes the language in the SV-Home Settings area. Thus the further settings can be made in the desired language.

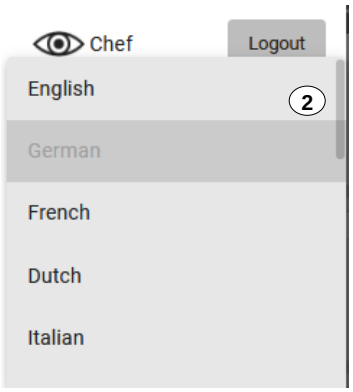


Figure 135: Language

3.1.2. Columns setting

The column settings (1) can be made in the second window. Four setting options are available, which specify the number of columns in the SV-Home (2). The default is the automatic setting of the columns. Depending on the page size, the number of columns is automatically scaled and adjusted.

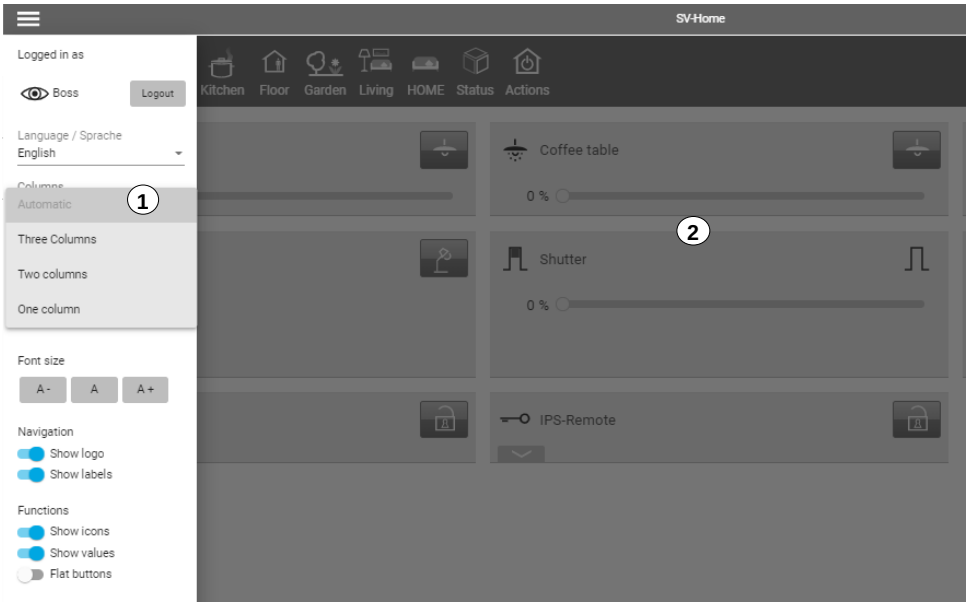


Figure 136: Columns setting

3.1.3. Design

The SV-Home interface can be visualised in two different design variants. The variants can be set under the "Design" window (1). After selecting the desired design, the display is switched directly (2,3).

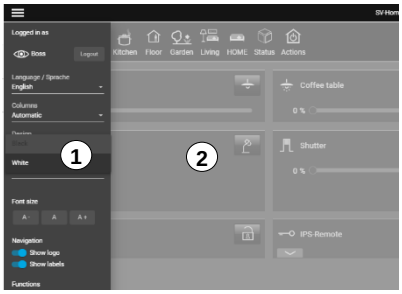


Figure 137: Design “black”

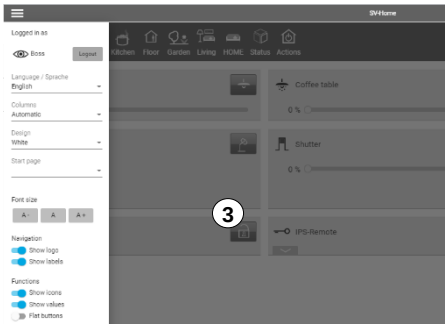


Figure 138: Design “white”

3.1.4. Start page

The setting of the start page, which is displayed if the SV-Home page is opened, can be changed in the "Home" window. All created areas are available.

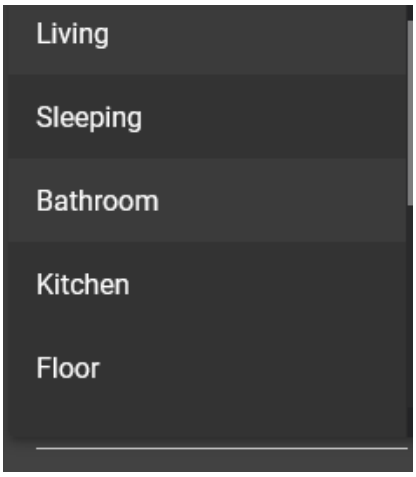


Figure 139: Start page

3.1.5. Font size

The font size is individually adjustable in the SV-Home. Using the button (2), the font size can be reduced and the button (3) can be enlarged. To return to the default font size, the button (4) is provided. The changes are immediately recognisable.

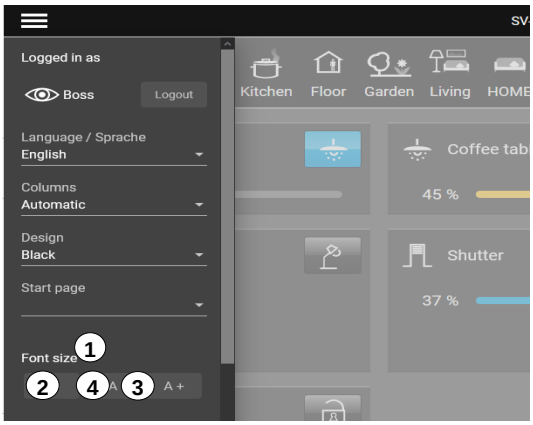


Figure 140: Font size

3.1.6. Presentation labels

In this area "Navigation" (1) it is possible to adjust whether the labels are to be displayed in the area bar (2). By removing the tick, only the symbols (3) without labels are displayed. Additionally the logo can be hidden.

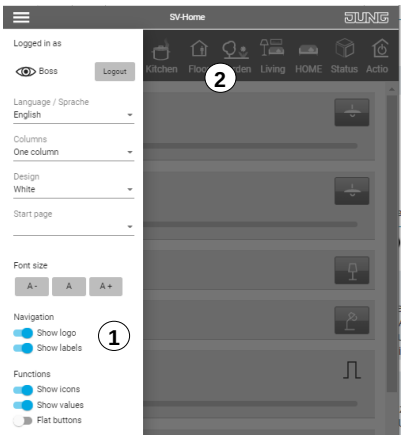


Figure 141: Presentation with labels

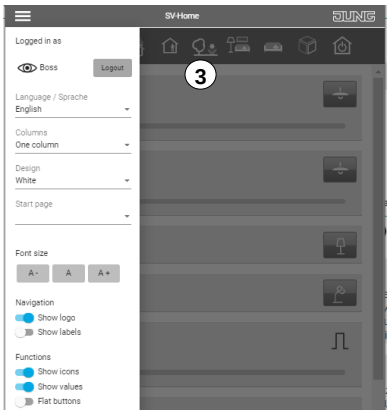


Figure 142: Presentation without labels

3.1.7. Presentation functions

In the area "Functions" (1) you can adjust whether the functions are displayed including function icon and function value. In addition, the functions can be displayed in "Flat Design".

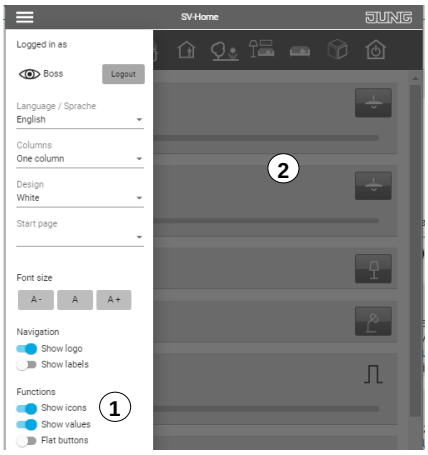


Figure 143: Presentation with Value

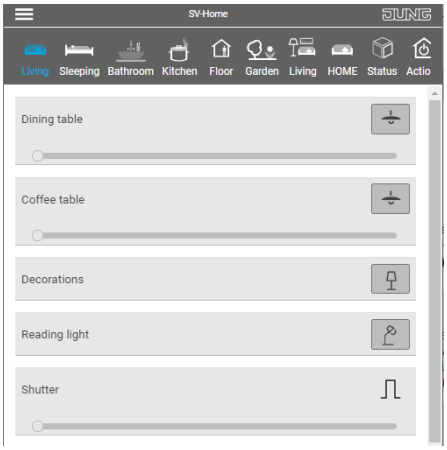


Figure 144: Presentation without Value

3.2. SV-Server app for Android

In addition to the HTML5 surface, you can download the Smart Visu Server app from the Android PlayStore. The Android app is pre-installed on the JUNG Smart Controls (Smart Control 7 .. 19).

Clicking on the gearwheel icon (1) shows the settings for the app. The IP address of the Smart Visu Server with the addition '/SV-Home/' needs to be saved in the settings (2).

Changes of the user interface or limitations of the device may require emptying of the system cache (3). By entering the MyJUNG data (4), the remote access is established. The connection mode (5) can be used to select whether the connection is "Automatic", "Local only" or "Remote only". The app can start automatically after the system start (6) and the screen orientation can be defined (7), which is especially useful for built-in devices.

The navigation bar at the bottom of the JUNG Launcher (Smart Control 7 .. 19) can be hidden and replaced by a control sidebar (8).

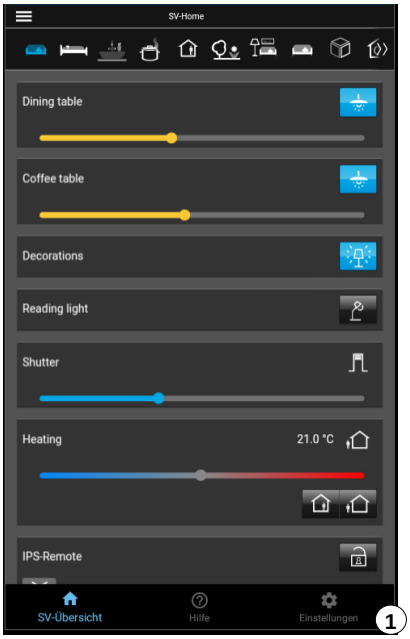


Figure 145: SV-Home

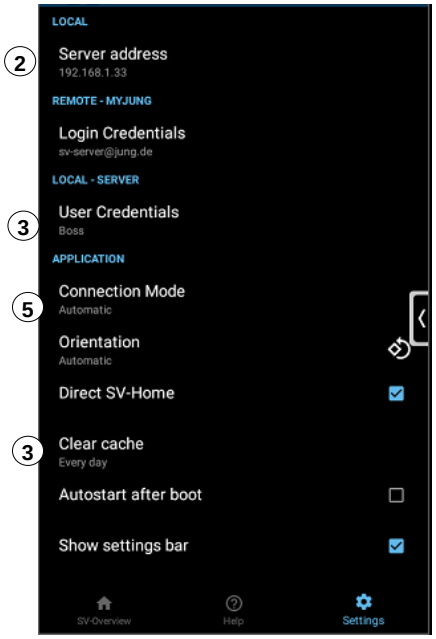


Figure 146: SV-Home

3.3. SV-Server app for iOS

In addition to the HTML5 surface, you can download the Smart Visu Server app from the iTunes Store.

When starting the app for the first time, the connection mode (1) must be selected and the server address (2) must be entered. Finally confirm with OK.

SV-Overview (3) contains the user interface. Further information can be found under Support (4).

By pressing the gearwheel icon (5), app settings are visible. Within these settings, the IP address of your Smart Visu Server can be stored and changed (6).

Changes to the user interface or limitation of the terminal may cause it to empty its system cache (7).

By entering the MyJUNG data (8), the remote access is established. The connection mode (9) can be used to select whether the connection is "Automatic", "Local only" or "Remote only".

In the "Automatic" mode, an attempt is made at the beginning to reach an SV-Server at the entered URL. If it fails, the connection is made remotely.

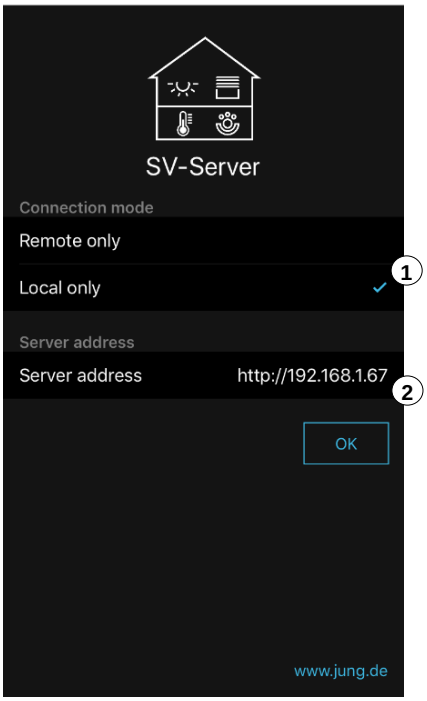


Figure 147: SV-Server app start

Figure 148: SV-Home

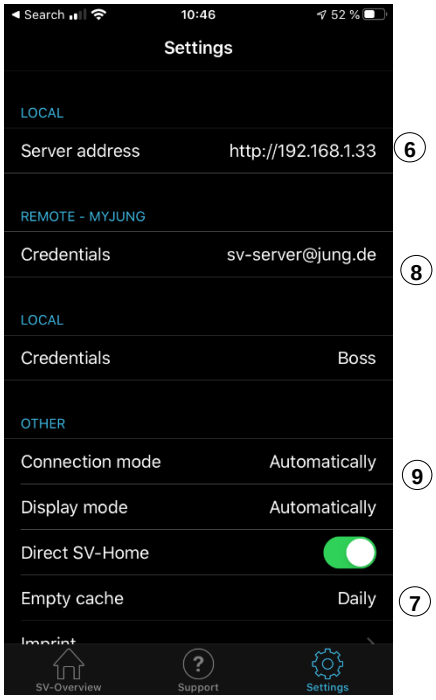


Figure 149: SV settings

4. Update of the Smart Visu Server

JUNG is always working to improve the support and functionality of the SV-Server. In the context of these efforts, we make updates for the system software available.

4.1. Reading out the software version

You can read out the software version currently installed on your Smart Visu Server via SV-Control. This is shown at the bottom of all the tabs of SV-Control behind the text "SW VERSION:" (1).

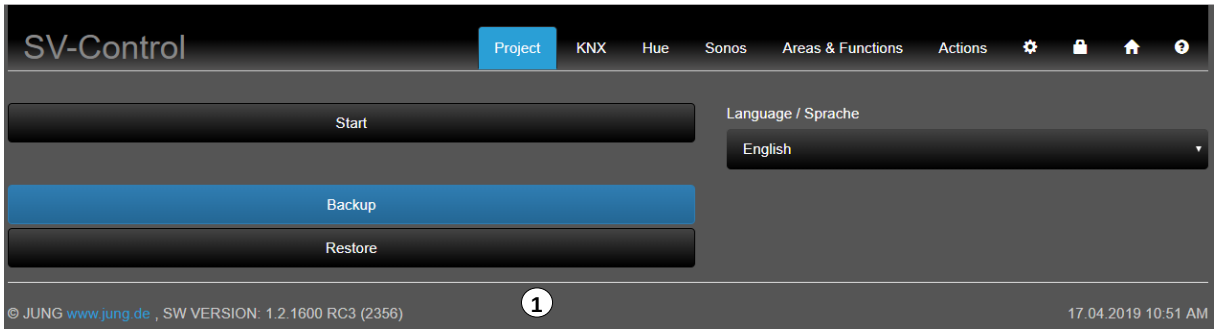


Figure 150: Homepage of SV-Control

4.2. Performing a system update

To perform a system update, the Smart Visu Server requires access to the Internet. Depending on the speed of the available Internet connection, this operation can take several minutes.

We recommend not interrupting the power and network connection for the period of the update. In addition, we do not recommend making any changes in SV-Control during execution. The Status LED (5) of the device flashes periodically in magenta whilst the update is being performed.

A system update can be triggered both via SV-Control (see Chapter 2.7.8 Server update) and via the pushbutton (4) of the Smart Visu Server.

In addition, it is possible to import a server update via a USB stick. For the corresponding manual steps, please refer to the separate instructions on our website.

To perform the system update using the pushbutton (5) on the device, press the button 5 times quickly in succession. If an update is available, this is then downloaded automatically and installed. When the update has been completed, the Smart Visu Server restarts automatically. (https://www.jung.de/en/)

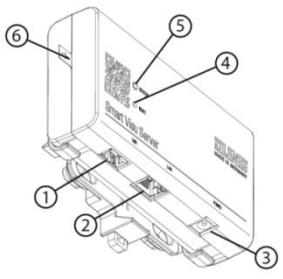
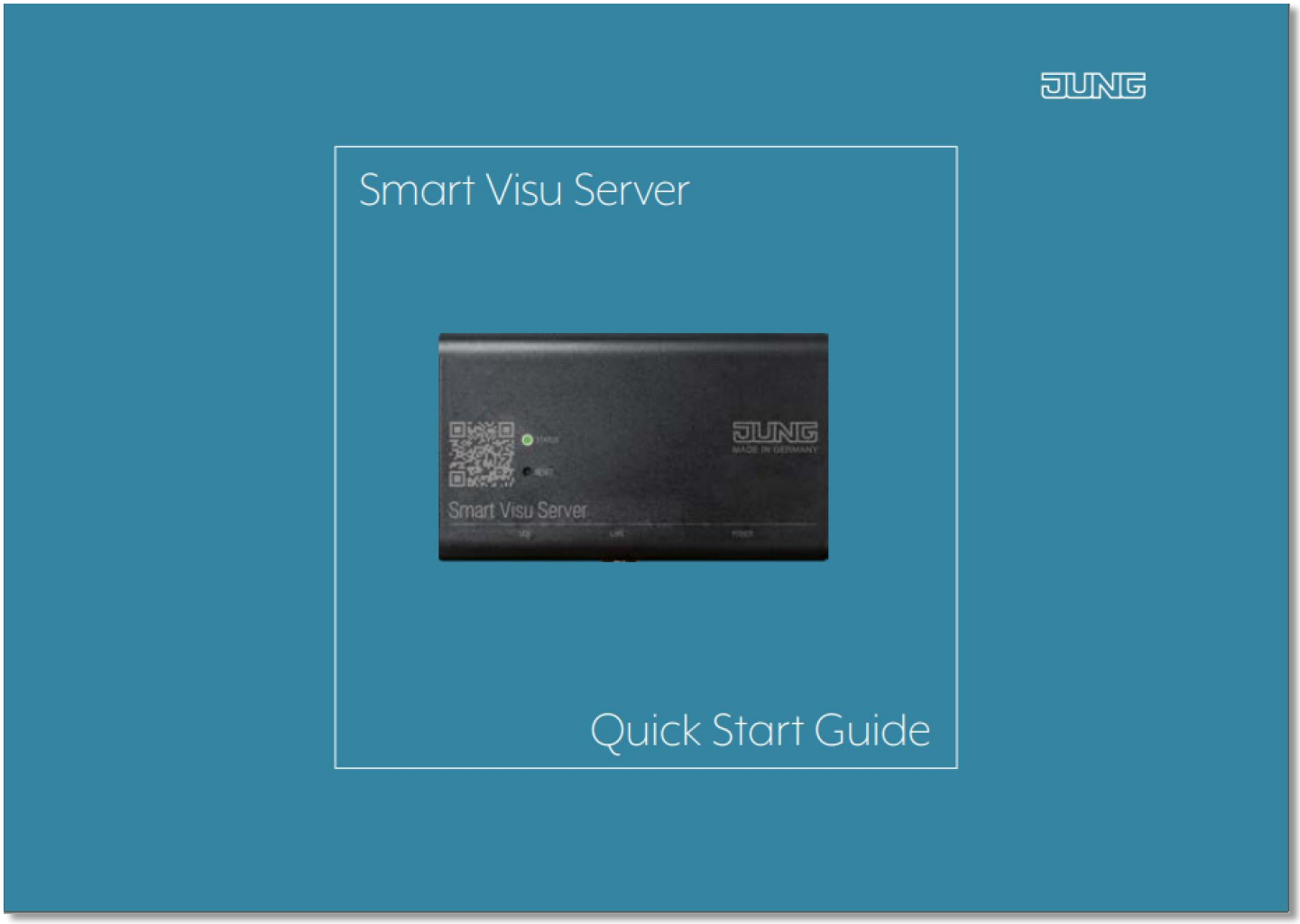


Figure 151: Smart Visu Server

5. Application examples



6. Maintaining the Smart Visu Server

In case you need support, the Smart Visu Server allows remote maintenance access via SSH server. This server is exclusively for fault analysis purposes. It allows trained JUNG personnel to access your server to analyse the device status.

To minimize any possible security risks, the remote maintenance access works only in combination with physical access to the device. You can activate the access by pressing the button (4) 10 times. The SSH access will automatically be deactivated after 2 hours.

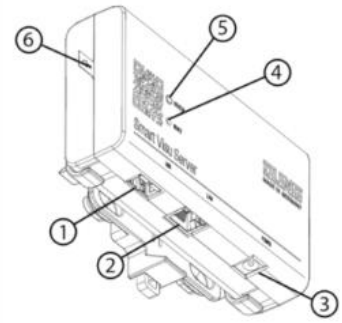


Figure 152: Smart Visu Server

7. Support in case of problems

7.1. Smart Visu Server

Error indication	troubleshooting
The SV-Home visualization appears only as a white screen	Perform an upgrade of your client. The minimum requirements for accessing SV-Home are not met. - Android 5 with at least Webview 63 - iOS 11.4.1 - Current browser - e.g. Google Chrome 86 - Mozilla Firefox 81 - Safari 13
SV-Control cannot be displayed completely by a PC	Perform an upgrade of your client. The minimum requirements for accessing SV-Home are not met. - Android 5 with at least Webview 63 - iOS 11.4.1 - Current browser - e.g. Google Chrome 86 - Mozilla Firefox 81 - Safari 13
Die Verbindung zwischen SV-Control und dem Inbetriebnahme PC kann nicht automatisch hergestellt werden. (Connecting to Server)	The connection between SV-Control and the commissioning PC cannot be established automatically. (Connecting to Server)

7.2. Smart Controls

Fehlerbild	Fehlerbehebung
The SV-Home visualization appears only as a white screen	Please perform an update via the SC update tool. The minimum requirements for accessing SV-Home are not met. - - Android 5 with min. Webview 63

8. Appendix

8.1. Accessories

We recommend using one of the following KNX-IP data interfaces:

- Jung: KNX IP interface, ref. no.: IPS 300 SREG
- Jung: KNX IP router, ref. no.: IPR 300 SREG
- Jung: KNX power supply with ip interface, ref. no.: 203201SIPSR

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GNU Linux 4.9.230 armv7l

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GNU LESSER GENERAL PUBLIC LICENCE Version 3, 29 June 2007

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Eclipse Public License - v 2.0

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