



digitalSTROM installation manual

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1 About the document

1.1 For whom is this document intended?

This document is intended for use by people who are:

- Installing and commissioning digitalSTROM components
- Configuring digitalSTROM systems in the web-based digitalSTROM Configurator
- Using the web-based digitalSTROM Configurator for analysis, monitoring or troubleshooting.

1.2 What are the requirements for use?

It is assumed that the reader of this document already has knowledge of digitalSTROM products.

Electricians must have the necessary technical knowledge and qualifications required for carrying out work to the electrical installations. The prerequisite for this is the digitalSTROM basic training.

Technically interested users may utilise the web-based digitalSTROM Configurator for future configuration tasks. However, these tasks may only be performed with the pertinent product know-how.

1.3 Installation manual as an online help

This installation manual is integrated as online help into the web-based user interface of the digitalSTROM Configurator in the *Help* main section.

As an online help, the electronic format features additional functions such as full text search, index etc. and is constantly updated with the system updates.

You can download the latest version of the installation manual as well as the planning handbook and user manual and also find additional useful support information at <http://www.digitalstrom.com/manuals>.

1.4 Conventions

The following conventions are used in this installation manual:

- **Push buttons/commands**
The names of push buttons/commands are shown in bold and cursive fonts.
e.g. ***Call up***
- **Parameters**
Parameters are shown in inverted commas before and after, cursive and bold.
e.g. "***Date***"
- **Higher-level activities**
The names of system functions are marked by the characters « and » and in bold.
e.g. «**Leaving home**»

1.5 digitalSTROM glossary

Abbreviation	Term	Description
dSF	digitalSTROM filter	Conditions the 230 V grid for digitalSTROM communication.
dSS	digitalSTROM Server	Connects the digitalSTROM installation to a home network and to the Internet if required and extends the functionality of this system.
dSM	digitalSTROM Meter	One digitalSTROM Meter is required for each power circuit. It communicates with the digitalSTROM devices (e.g. digitalSTROM terminal blocks) via 230 V and measures the energy and performance in this power circuit.
dSFD	digitalSTROM device Filter	Makes it possible to filter any interference from non-digitalSTROM-ready consumers in such a way so that these devices can be used without interfering with digitalSTROM communication.
dSN	digitalSTROM power supply unit	24 V power supply for the digitalSTROM Server
dSID	digitalSTROM identification number	Unique identifier of the individual digitalSTROM components.
dS485	digitalSTROM-485 protocol	Interface between digitalSTROM Server and digitalSTROM Meter based on the RS-485 bus system

P44	Plan44-Bridge	Interface to EnOcean sensors and actuators of third party manufacturers that are connected to the digitalSTROM system via wireless radio transmission, e.g. indoor climate controllers. Also see www.plan44.ch .
	EnOcean	Battery-free radio technology. In the digitalSTROM system the EnOcean radio protocol is used for actuators and temperature sensors. Also see www.enocean.com .
	Ethernet	Technology that specifies the software and hardware for local data networks (LAN).

	Downstream communication	Communication from the digitalSTROM meters to the digitalSTROM components (e.g. digitalSTROM terminal block).
	Upstream communication	Communication from the digitalSTROM components (e.g. digitalSTROM terminal block) to the digitalSTROM meters.

	digitalSTROM devices	A device (lamp, push button, room thermostat, etc.) which is connected to the 230 V mains, and which can be controlled via digitalSTROM
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dS-KM	digitalSTROM terminal block	Terminal block with an integrated digitalSTROM chip. Used for switching/dimming.
dS-KL	digitalSTROM relay terminal block	Serves as a relay actuator.
dS-TKM	digitalSTROM push button block	Used to connect a standard wall push button as a control point with 1-way, 2-way or 4-way operation.
dS-SDM	digitalSTROM line dimmer	Used for switching/dimming.
dS-SDS	digitalSTROM line dimmer	Used for switching/dimming.
dS-SSL	digitalSTROM line switch	Used as a pluggable connection for large electrical consumers.
dS-AKM	digitalSTROM automation terminal blocks	Used for monitoring up to four sensor signals (e.g. wind) on the basis of which other digitalSTROM devices can be controlled.
dS-ZWS	digitalSTROM inline adapter	Used as a mobile relay switching contact.
dS-UMR	digitalSTROM SW-UMR	Is used for the potential-free recording of mains and low voltage signals (e.g.: doorbell systems), as well as for the switching of end consumers.
dS-UMVdS-UMV	digitalSTROM-UMV	Is used to activate electrical ballasts of LED- and fluorescent lamps with analogue dim input (1-10 V or 0-10 V).

	digitalSTROM Configurator	Software on the digitalSTROM Server for configuring a digitalSTROM installation. It is accessed via a web browser.
	digitalSTROM Server app	Within digitalSTROM, additional functions are referred to as " Apps " (e.g. Timer, Event Responder, Presence Simulation, Energy Graph etc.).
	digitalSTROM App	This app (iOS/Android/Windows) can access the digitalSTROM installation.

	Zone	Is a largely self-contained functional area. If push buttons are pressed or presets activated within a room, this will affect the devices/actuators belonging to the room.
	Preset	Presets can be configured for one application area each, e.g. lighting preset, shading preset. The "read" preset, for example, dims the reading lamp and switches the ceiling lamp off
	Higher-level Activities	Higher-level activities have general priority. The higher-level activity «Leaving home» then switches all consumers off.

	Power circuit	All energy consumers or socket outlets protected by the same overcurrent protection device (fuse).
	Blinds (Slat blinds)	Used as screens or as weather and sometimes as burglar protection. In addition to their position, you can also control the angle of the blades. In the factory settings of the grey digitalSTROM relay terminal block (shade) the blinds are shut in the Off preset.
	Awning	Shading systems made of fabric. During bad weather or absence they are usually retracted. In the factory settings of the grey digitalSTROM relay terminal block (shade) the awnings are shut in the Off preset.
	Shutters	Used as screens or as weather and sometimes as burglar protection. In the factory settings of the grey digitalSTROM relay terminal block (shade) the shutters are shut in the Off preset.

AHB	digitalSTROM user manual	Contains information (introduction, operation and configuration) for the digitalSTROM users.
PHB	digitalSTROM planning handbook	Contains information for planners of the digitalSTROM electrical installation.
IHB	digitalSTROM installation manual	Contains information for electricians of the digitalSTROM electrical installation.

HP	Horizontal Pitch	Unit according to DIN 43880. 1HP corresponds to 17.5 mm.
lx	Lux	SI unit for the lighting intensity.

Key to symbols of the room plans

Icon	digitalSTROM component
	Device push button (e.g. line dimmer GE-SDM 200)
	Terminal block (e.g. GE-KM 200)
	Push button block (e.g. GE-TKM 210)

1.6 digitalSTROM colour scheme

The application possibilities of digitalSTROM are very varied. To make orientation easier for planners and electricians and to make their work as uncomplicated as possible, the digitalSTROM devices are classified into different colour groups.

Each colour group stands for a specific field of application. This colour scheme is continued through to the housing colours of the digitalSTROM terminal blocks.

Colour			Group	Examples
Yellow	GE		Light	Ceiling, wall and floor standing lamps
Grey	GR		Shade	Blinds, shutters, privacy protection
Blue	BL		Climate	Heating, ventilation, air conditioning
Cyan			Audio	Radio, CD player
Magenta			Video	TV, projector, DVD player
Red	RT		Security	Protection functions, fire and burglar alarms
Green	GN		Access	Doorbell, door opener
Black	SW		Joker	Can be used at will

Comments on joker (black)

The joker (black) area of application is a universal terminal block that allows digitalSTROM devices to be reconfigured to any other digitalSTROM colour (e.g. yellow for Light). To make full use of the many possibilities of the digitalSTROM colour concept, the colour group should always be adapted to the use of the connected consumer.

If a digitalSTROM device is configured for the joker (black) area of application, the digitalSTROM device will only respond to higher-level activities such as «**Leaving home**» or «**Deep Off**».

If a digitalSTROM push button block joker (black) is configured for the joker (black) area of application, it can be used as a direct trigger in a digitalSTROM Server app (e.g. Event Responder). Using the wall push button you can call up a variety of activities and use the same User Defined Actions as on your smartphone. Furthermore the digitalSTROM push button block joker (black) can also be configured as a trigger for higher-level activities such as «**Leaving home**» or «**Ringin**g». For more information on this subject, refer to Chapter 5.3.2.

The joker (black) area of application can be used to integrate consumers in a digitalSTROM system that cannot be covered by the available digitalSTROM colours, although they should respond to higher-level activities. Typically these are devices that require a constant power supply during operation, but are switched off during absence.

2 About the system

2.1 How is a digitalSTROM system constructed?

The components of the digitalSTROM system

The components in the distribution board of the digitalSTROM system include the digitalSTROM Meter, digitalSTROM Server and digitalSTROM Filter (Fig. 1).

To be able to use the existing power lines from the distribution board to the digitalSTROM devices for communication purposes, a digitalSTROM Meter is operated in each power circuit. Multiple digitalSTROM Meters (max. 62 units) communicate via a standardised protocol (dS485 bus interconnection).

The installation of a digitalSTROM Server enables connection to a higher-level system (building automation), the Internet or a local network.

In order to optimise the network conditions for digitalSTROM communication, digitalSTROM Filters have been installed for network conditioning.

digitalSTROM devices are connected by means of digitalSTROM terminal blocks, push button blocks, line dimmers, automation terminal blocks inline adapters.

2.2 Design and functionality

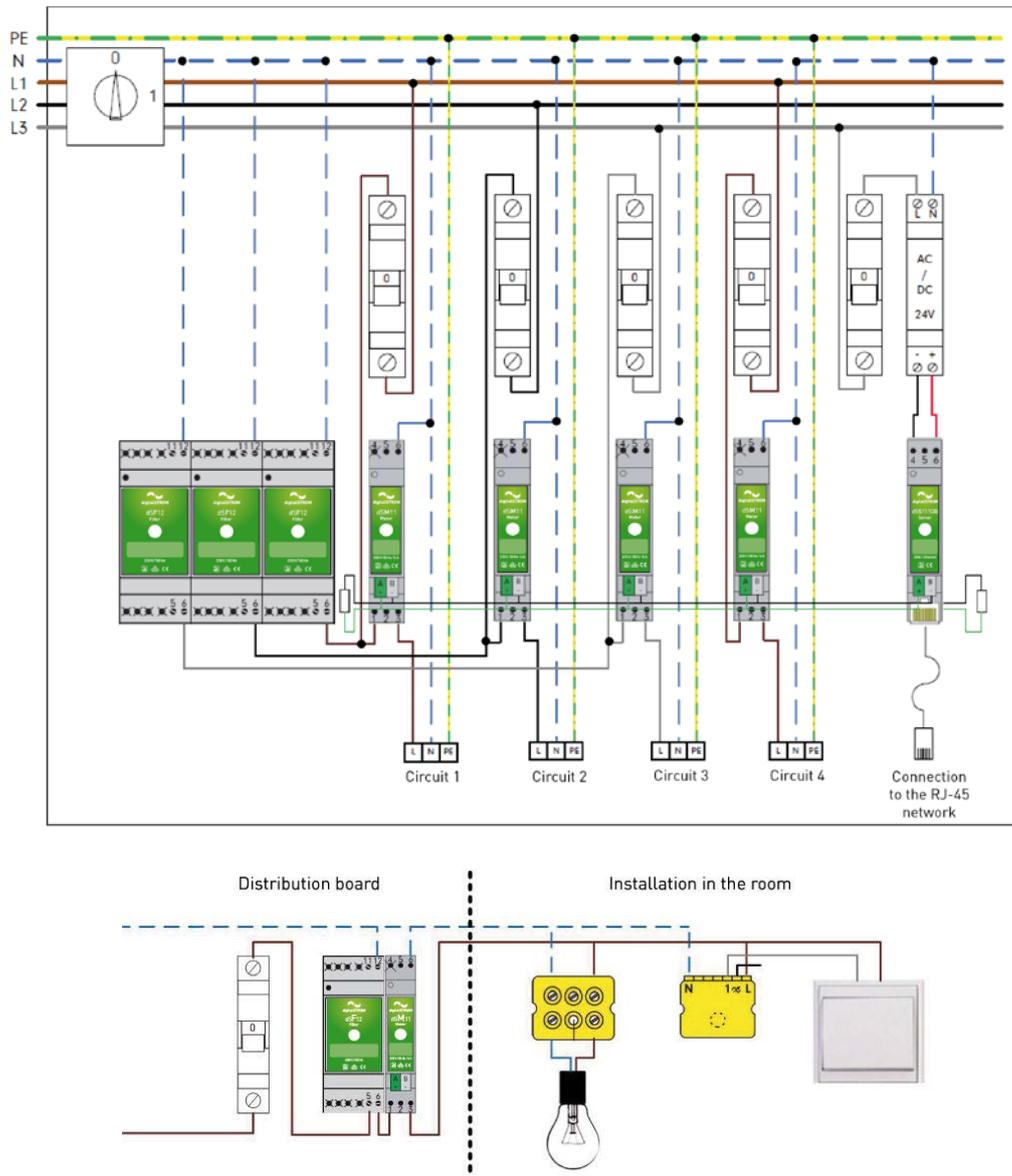


Fig. 1: digitalSTROM system basic diagram of electrical power distribution board

Upgradability

A digitalSTROM installation can be upgraded and extended as required. In addition to the use of additional digitalSTROM Meters and digitalSTROM devices, complex functionalities can also be realised with the help of a digitalSTROM Server. Additional features such as timer functions or power measurement can be implemented by means of a **digitalSTROM App**. Detailed information can be found in the digitalSTROM user manual.

Functionality

During start-up the digitalSTROM Meter automatically registers all digitalSTROM devices installed in the associated power circuit. This allows the immediate use of all components after installation.

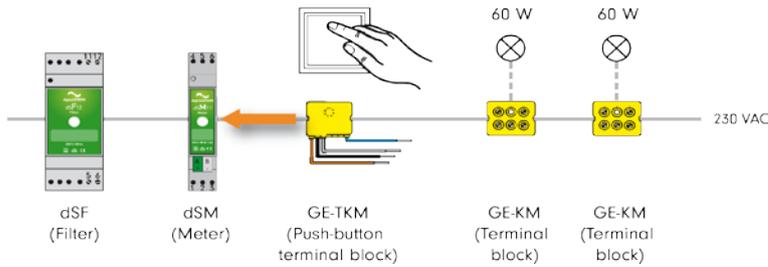


Fig. 2: Example of a simple digitalSTROM installation

If, for example, a push button connected to a digitalSTROM push button block is pushed, the digitalSTROM terminal block sends a telegram on the upstream communication with information about the type of actuation (number of clicks) to the digitalSTROM Meter.

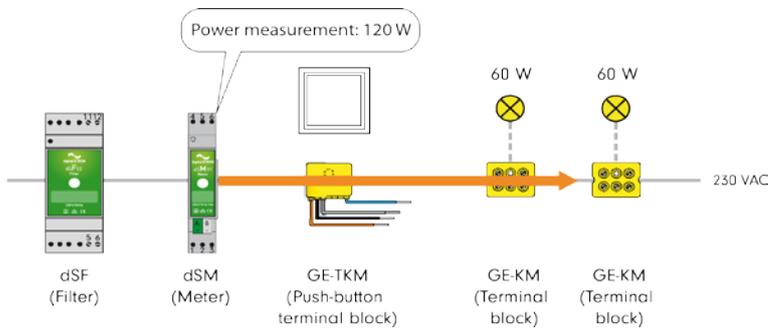


Fig. 3: Example of a simple digitalSTROM installation

The digitalSTROM Meter will then send a telegram on the downstream communication to all digitalSTROM devices registered in the power circuit. The telegram contains the command to output the device values for the called preset in the digitalSTROM devices (e.g. to switch the power output to a predefined dimmer value). It also measures the current performance in the connected power circuit.

3 Installation

Installation is simple and quick.

It requires the installation of digitalSTROM Meters, the digitalSTROM Server and digitalSTROM Filter. These components form, as it were, the collective brain of the digitalSTROM installation.

The existing light switches are replaced with standard push buttons and equipped with digitalSTROM push button blocks.

The required digitalSTROM-devices (e.g. digitalSTROM terminal block in ceiling lights) are installed in the supply lines to the consumers.

And with this the digitalSTROM installation is already operational. Other digitalSTROM devices may be added to the installation at any time.

The configuration of the digitalSTROM installation and the implementation of specific customer demands can be performed conveniently in the web-based digitalSTROM Configurator. The digitalSTROM Configurator is part of the optional digitalSTROM Server.

3.1 Safety informations

230 V AC mains voltage



Working on the electrical installation is only allowed if the system is de-energised.

Components must be installed and commissioned only by qualified personnel. Local regulations must be complied with.



Ensure that the system is de-energised by switching fuses to off before working on a digitalSTROM installation.

Reason: Other than in conventional installations one has to note that in a digitalSTROM installation the digitalSTROM terminal blocks conduct mains voltage on the input side even if the consumers are switched off.

Switching off a consumer (e.g. lamp) with the push button does not de-energise the terminal block!

3.2 Preparatory work

Before you start the actual work:

- Check if all digitalSTROM components required for the assembly are available.
- Visually inspect all devices for damage. Replace damaged components and do not use them in the installation.
- Follow the installation instructions for the individual digitalSTROM components. These instructions are shipped with the digitalSTROM component. They contain the required information and warnings for the correct use of digitalSTROM components.
- Inform owners or occupants of the impending work. Let them know which sections of the domestic installations will be affected by the interruption of power and how long the interruption is expected to last.

Each digitalSTROM component has an 24-digit number.



The digitalSTROM identification number (dSID) is used for unique identification of the digitalSTROM components and is attached to the back of the housing. If necessary, please note the last 8 digits of the dSID and the location of the digitalSTROM components prior to installation.

You can use these notes to name the digitalSTROM devices according to their function and location directly in the digitalSTROM Configurator. To find devices easily even without noted identification numbers, you can make devices with output blink using the blink identification function. Devices with a connected push button or sensor can easily be identified and labelled via the function identify equipment. The digitalSTROM identification numbers as well as the entire configuration of the digitalSTROM system (room structure, device overview, outputs of the digitalSTROM components and push button assignment) can be documented using the **dS Doku** app.

3.3 Electrical installation in the Electrical power distribution board

The following operations are performed in the distribution board:

Work steps:

1. Install digitalSTROM filter (dSF) for L1, L2, L3
2. Install digitalSTROM meter (dSM)
3. Install digitalSTROM server power supply unit (optional)
4. Install digitalSTROM server (dSS) (optional)
5. Connect Ethernet interface (optional)
6. Create dS485 bus interconnection

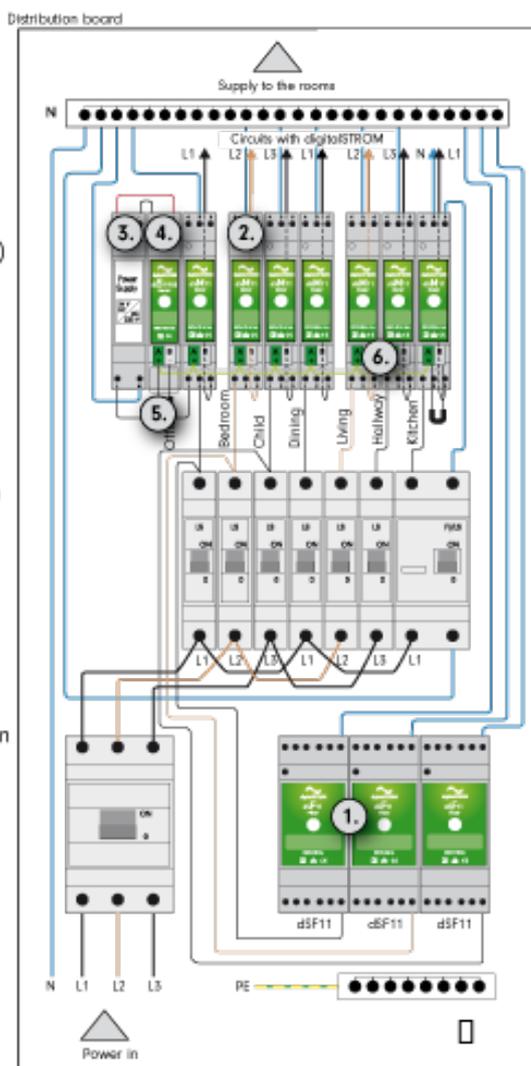


Fig. 4: Installation in the electrical power distribution board

Step 1: Installing and connecting the digitalSTROM filter

- Install the digitalSTROM Filters according to the installation instructions on the top hat rail and connect electrically with the mains supply.
- Position the digitalSTROM Filter correspondingly close to the digitalSTROM Meter. The cable length of the electrical connection between the digitalSTROM Filter and the digitalSTROM Meter must be kept as short as possible.
- If additional digitalSTROM Meters are installed in other sub-distribution units, digitalSTROM Filters must necessarily also be installed.
- Fasten the screws of the unused connection terminals on the digitalSTROM Filter while doing so.
- The digitalSTROM Filter must be installed on the primary side of the digitalSTROM Meter. If the filter is located on the secondary side, communication in the digitalSTROM power circuit will be impaired!

Step 2: Installing and connecting the digitalSTROM Meter

- Install the digitalSTROM Meter (dSM11 or dSM12) according to the installation instructions.
- To ensure better heat dissipation at higher load and increased ambient temperature, **distances** between the digitalSTROM Meters should be maintained. If installed vertically, after every third digitalSTROM Meter 0.5 HP, and if installed horizontally, after every digitalSTROM Meter.

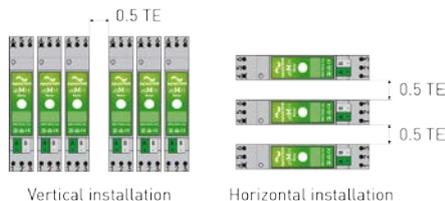


Fig. 5: Installing the digitalSTROM Meter

- Disconnect the connections on the output side from the power circuit breaker.
- Connect the digitalSTROM Meter according to the installation instructions.
- The maximum current for the digitalSTROM Meter is 16 A.
- If you use blue terminal blocks, a dSM12 must be installed.
- The maximum line length between a digitalSTROM Meter and the last digitalSTROM device is 50 m.

Step 3: Installing and connecting digitalSTROM power supply unit

- Install the 24 V DC power supply unit for the digitalSTROM Server according to the installation instructions on the top hat rail and connect the electrical connections.
- The used power supply unit must have a rated voltage of 24 V DC +/- 10 % and a minimum current of 0.4 A. Country-specific regulations must be complied with during assembly and wiring of the power supply unit.

Step4: Installing and connecting the digitalSTROM Server (optional)

- The digitalSTROM Server comes in two variants: dSS11-1GB and dSS11-E. The use of the dSS11-E is recommended only for large-scale installations with more than 100 digitalSTROM terminal blocks.
- Install the dSS11-1GB on the top hat rail in the electrical power distribution board according to the installation instructions and connect it to the electrical connections. Make sure the 24 V DC supply to the digitalSTROM Server has the correct polarity!
- If you use the dSS11-E, you have two possibilities of integrating this into the digitalSTROM electrical installation.
 - **Variant 1:**
Install the dSS11-E according to the installation instructions. We recommend installing the dSS11-E in the multimedia distribution board. The connection to the digitalSTROM Meters takes place directly via the dS485 bus connection.
 - **Variant 2:**
If you want to extend an existing digitalSTROM electrical installation with the dSS11-E and a dSS11-1GB is already installed in the electrical power distribution board, proceed as follows.
 - Install the dSS11-E according to the installation instructions. We recommend installing the dSS11-E in the multimedia distribution board.
 - Connect the dSS11-E to the network using an Ethernet cable via the router or with a switch.

Configure the dSS11-E as an additional digitalSTROM Server. You can adjust this in the digitalSTROM Configurator of the dSS11-1GB (<https://dss.local>). To do this, use the extended view to call up the **System** settings menu in the System tab. Under the **Use Additional digitalSTROM server** menu item you can configure the dSS11-1GB as a gateway. The dSS11-E is now the higher-level digitalSTROM server.



If the dSS11-E is used as an additional digitalSTROM Server, the dSS11-1GB software switches off and in the digitalSTROM Configurator only the **System** and **Help** tab will still be active. Please only use the digitalSTROM Configurator of the dSS11-E (<https://dSSE.local>) from now on.



Fig. 6: digitalSTROM Server dSS11-1Gb (left) and dSS11-E (right).

Step5: Connecting the Ethernet interface (optional)

- Connect the Ethernet interface to a local network (router).

Step 6: Connecting the dS485 bus cable

- Install the dS485 plug connector between the digitalSTROM Meters according to the installation instructions.
Please note here the following procedure:
 - Strip single-wire conductors 5 – 6 mm.
 - To connect, insert the stripped conductors into the existing plug as far as they will go.
- If a digitalSTROM Server was installed, connect the digitalSTROM Server with the bus cable according to the installation instructions.
- Make sure the connection terminals for the bus interconnection have the correct polarity!
- A twisted-pair cable with a wire cross-section of 0.8 mm² is to be used for the dS485® bus interconnection.
- A maximum of one digitalSTROM Server may be connected to the dS485 bus interconnection!
- Make sure that the enclosed terminating resistors are connected at both ends of the bus interconnection!
- To release the dS485 plug connection, proceed as follows:
 - Hold the cable tight.
 - Move the dS485 plug carefully back and forth.
 - Remove the dS485 plug carefully.

The installation instructions and additional information can be downloaded at <http://www.digitalstrom.com/support>.

3.4 Installations in the multimedia distribution board

If you want to use radio-operated devices in your digitalSTROM:

- Install the Plan44-Bridge in the multimedia distribution board.
- Connect this to the local network.
- Install the power supply unit and connect the electrical connections according to the installation instructions.

The country-specific regulations must be complied with during assembly and wiring of the components.

If the dSS11-E is used as a digitalSTROM Server, we recommend installing this in the multimedia distribution board. See also Chapter 3.3.

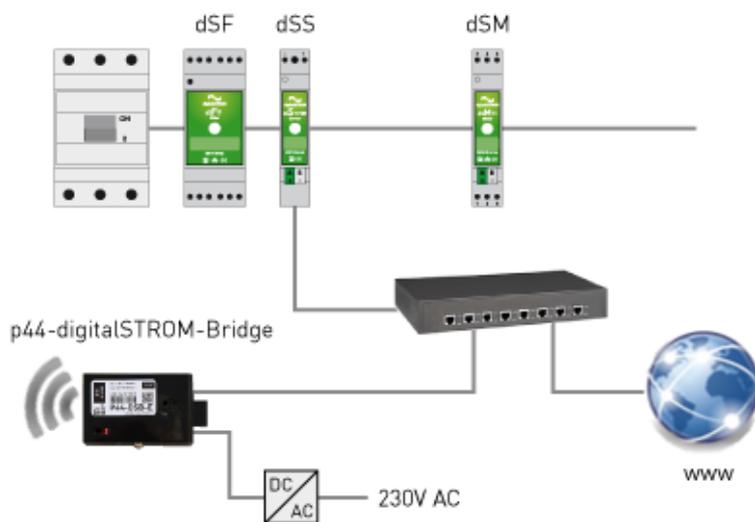


Fig. 7: Installation of radio-operated devices via Plan44-Bridge in the digitalSTROM-System

3.5 Installations in the rooms

Install the digitalSTROM components (digitalSTROM Filter, digitalSTROM Meter, digitalSTROM Server and the necessary interfaces) according to the installation instructions (see chapter 3.3).

The following digitalSTROM components are available for the installation of the different colour groups in the rooms.



Please note that two digitalSTROM terminal blocks must not be connected parallel on one push button, as this interferes with the signal of the upstream communication and can lead to malfunctions.

3.5.1 Light (yellow)

digitalSTROM terminal blocks switching/dimming 150 W

Install the digitalSTROM terminal blocks according to the installation instructions (e.g. GE-KM200 for ceiling lights Fig. 8).

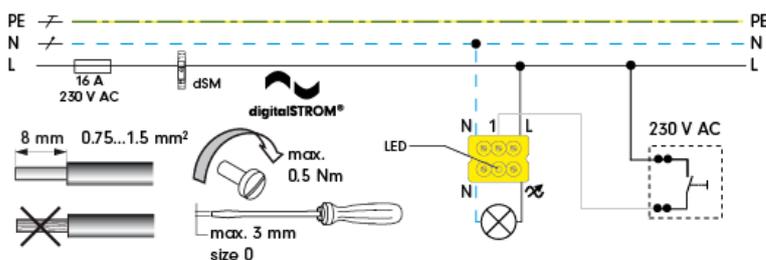


Fig. 8: Installation instructions of the digitalSTROM terminal block GE-KM200

The terminal block is equipped with a local switch input (1) so that one control element in the room can optionally be used to control the light directly. This input is configured as device push button by default which sets the local priority for local operation.

You must use stranded wire only in conjunction with cable end sleeves.

digitalSTROM line dimmer

Install the digitalSTROM line dimmers according to the installation instructions (e.g. digitalSTROM line dimmer GE-SDM200 for standing lamps Fig. 9).

Please note that the GE-SDM is available in a plugged version with cable.

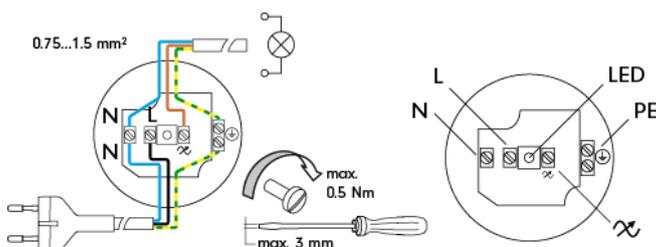


Fig. 9: Installation instructions of the digitalSTROM line dimmer GE-SDM200

digitalSTROM-UMV

THE digitalSTROM-UMV200 (GE-UMV200) is used to activate the electrical ballasts of LED- and fluorescent lamps with analogue dim input (1-10 V or 0 – 10 V). The digitalSTROM-UMV has four output channels and one input for a pushbutton. The connected devices can be completely switched off via a switching relay.

The digitalSTROM-UMV is suitable for installing on walls, in inline adapters and for flush-mounting in electronic boxes and junction boxes (see installation instructions).

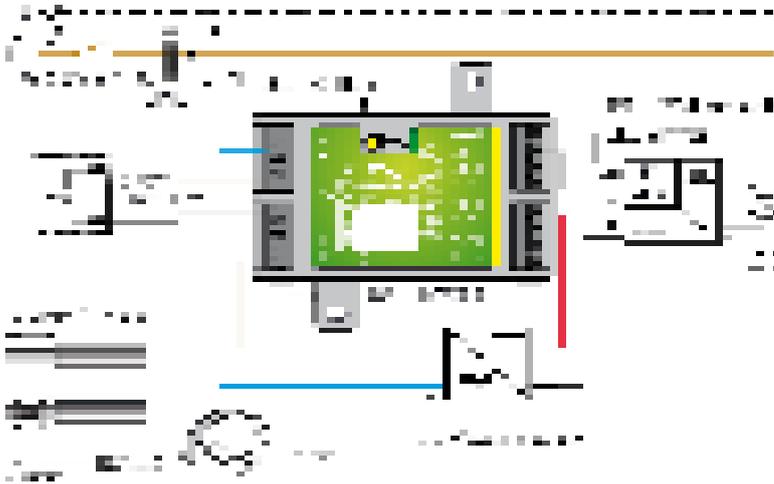


Fig. 10: digitalSTROM UMV

3.5.2 Shade (grey)

digitalSTROM relay terminal blocks

Install the digitalSTROM relay terminal blocks according to the installation instructions (e.g. GR-KL200 for shutters in Fig. 11).

Please note that the limit switches at the drive should be set before connecting the digitalSTROM relay terminal block!

The digitalSTROM relay terminal block GR-KL200 is used to control a standard tubular motor for shutters. If the direction of rotation of the drive system does not match the "Open" and "Closed" direction of travel, it can be changed during calibration of the digitalSTROM relay terminal block by using the web-based digitalSTROM Configurator. (see chapter 5.3.6).



Basically no tubular motors must be switched directly in parallel, as each tubular motor requires a separate contact. If you wish to activate several tubular motors for shutters along with a digitalSTROM relay terminal block GR-KL200, a cut-off relay must always be switched in-between.

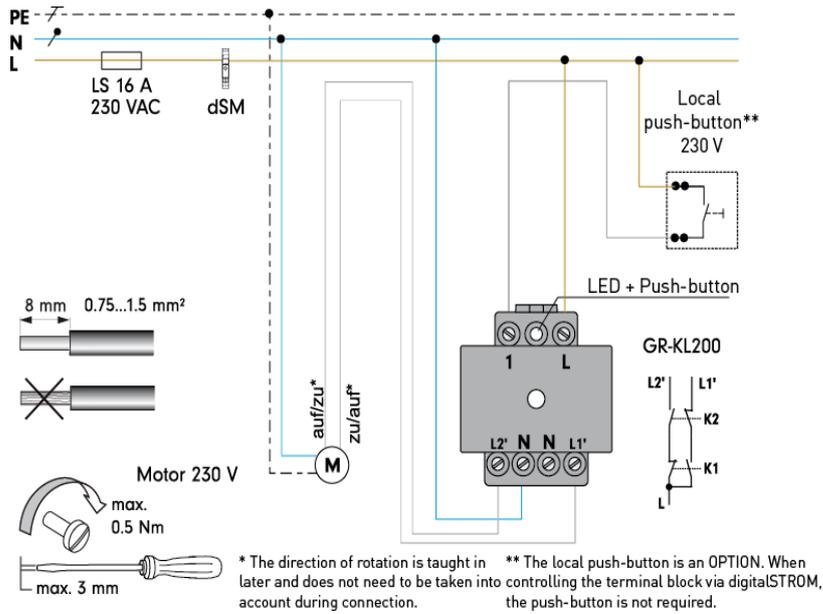


Fig. 11: Installation instructions of the digitalSTROM relay terminal block GR-KL200

digitalSTROM Blind switch actuator

Install the digitalSTROM blind switch actuator with Hirschmann plug according to the installation instructions (GR-HKL230 for blinds in Fig. 12).

The terminal block GR-HKL230 is intended for connecting lamella blind drives with an adjustable slat angle and two mechanical limit switches. Connected consumers can be controlled by digitalSTROM commands sent via the 230 V cable.

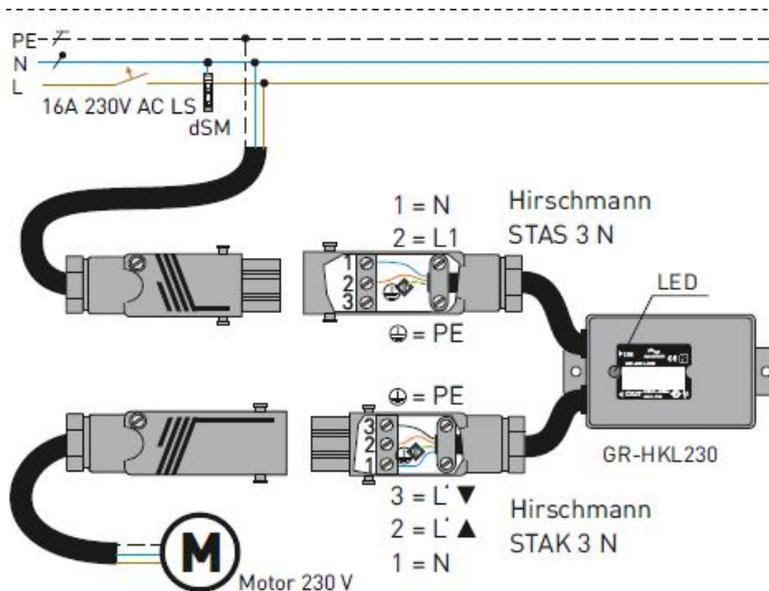


Fig. 12: Installation instructions for the digitalSTROM blind switch actuator GR-HKL230

3.5.3 Joker (black)

digitalSTROM-automation terminal block (joker)

Install the digitalSTROM automation terminal blocks in accordance with the installation instructions (e.g. SW-AKM200 in Fig. 13) for movement, wind or rain sensors.

The digitalSTROM automation terminal block is available with a 4-way input and is conceived for the connection of up to four sensors with 230 V switching output. Ideally you would operate no more than twenty automation terminal block inputs per digitalSTROM Meter.

Thus with the digitalSTROM automation terminal block, the status changes of sensor signals can be monitored and other digitalSTROM Devices or even the entire digitalSTROM installation correspondingly controlled.

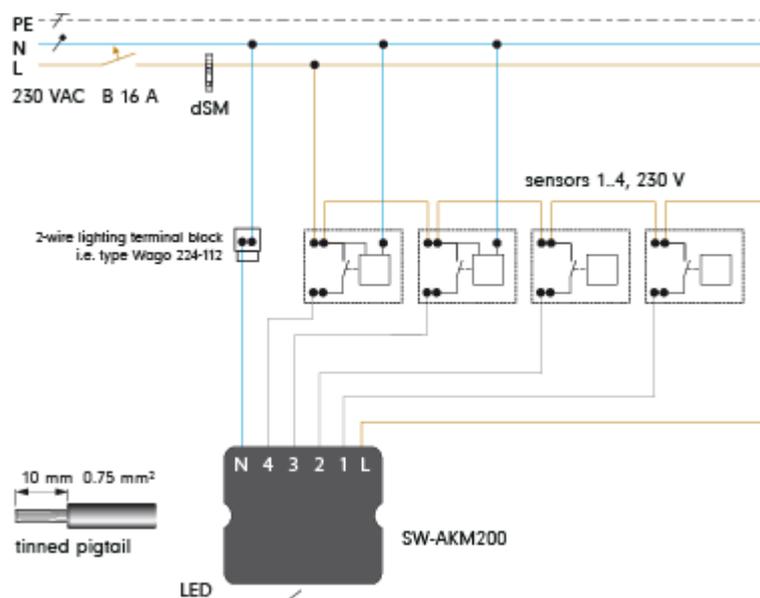


Fig. 13: Installation instructions for the digitalSTROM automation terminal block SW-AKM200

digitalSTROM push button block with 4-way operation (joker)

Install the digitalSTROM push button block for the 4-way operation according to the installation instructions (SW-TKM200 joker with four push button inputs in Fig. 14).

Up to four push buttons can be connected to the independent push button inputs of a joker digitalSTROM push button block and operated independently. Every input is managed by the digitalSTROM system as an independent digitalSTROM push button block.

The dSID specified on the terminal block corresponds to the dSID of the first push button. Push buttons 2-4 automatically receive the three following dSIDs.

The field of application for each connected digitalSTROM push button can be configured separately (e.g. input 1 for light, input 2 for shade).

By combining two inputs each, 2-way push buttons with 4-way operation can also be configured on the digitalSTROM push button block. You can freely specify for the push button inputs 1-4 if the push button connected to the input shall be used for "Open" or "Close".

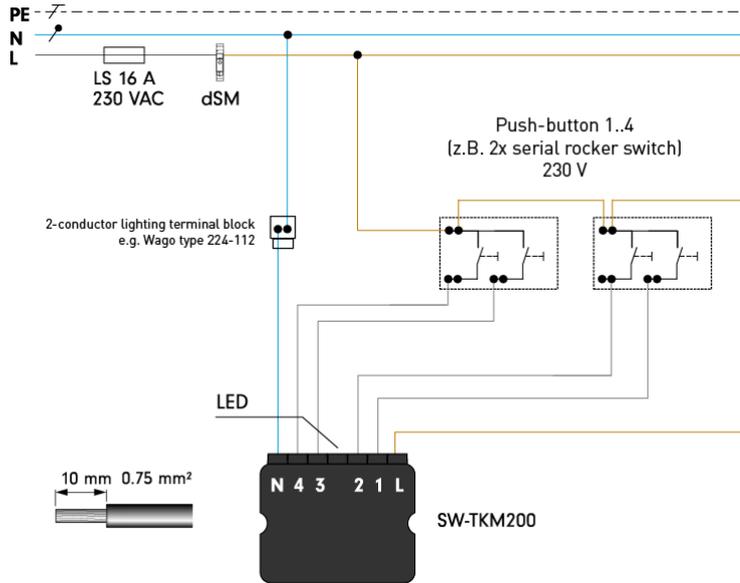


Fig. 14: Installation instructions for the digitalSTROM- push button block SW-TKM200

digitalSTROM-UMR

The digitalSTROM SW-UMR200 is used for the potential-free recording of mains and low voltage signals (e.g. doorbell systems) as well as for the switching of consumers.

It contains two inputs and two potential-free change-over contacts.

The input conditions can be configured both as a push button and a sensor. The digitalSTROM SW-UMR200 thus offers the full scope of functions of the push button blocks (SW-TKM) to connect normal commercial wall push buttons, and of the automation terminal blocks (SW-AKM) to monitor up to two sensor signals.

The switching contacts can be activated via the digitalSTROM system and can be freely configured.

The digitalSTROM SW-UMR is suitable for installing on walls, in inline adapters and for flush-mounting in electronic boxes and junction boxes (see installation instructions).

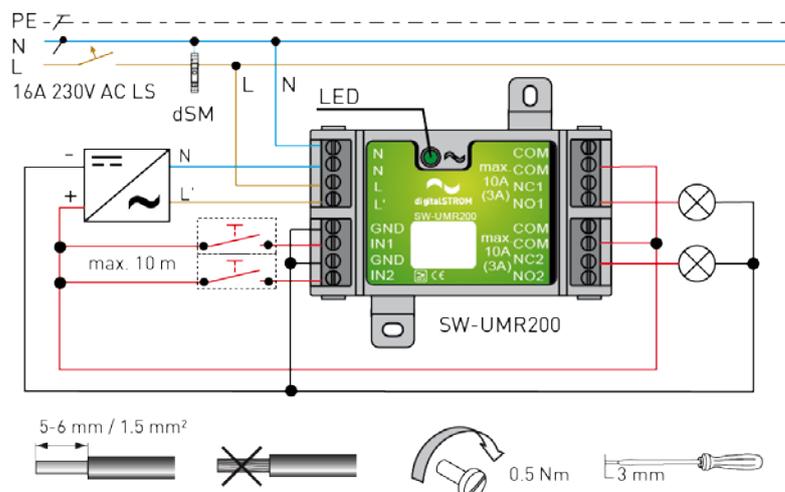


Fig. 15: digitalSTROM-UMR200

3.5.4 Climate (blue)

digitalSTROM climate terminal block

Install the digitalSTROM climate terminal block according to the installation instructions (BL-KM200 for thermoelectric actuators in Fig. 16).

The digitalSTROM climate terminal block should be installed near the respective electrical valve actuator, e.g. in a wall outlet socket on the radiator or in the single-storey heating circuit manifold. No further bus or radio connections are necessary.

Up to two actuators can be connected to the digitalSTROM climate terminal block.



A dSM12 is absolutely essential for operating the BL-KM200.

It is sufficient to use a dSM11 for controlling the heating with a digitalSTROM push button block (TKM) or digitalSTROM automation terminal block (AKM).

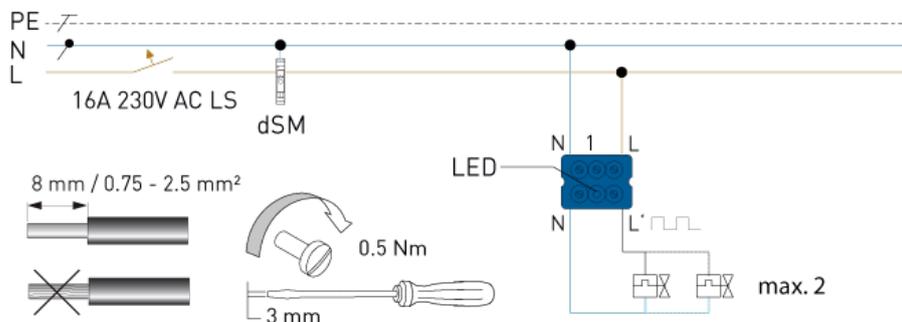


Fig. 16: Installation instructions for the digitalSTROM climate terminal block BL-KM200

digitalSTROM indoor climate sensor

Install the digitalSTROM indoor climate sensor according to the installation instructions (e.g. dS-iSens200 in Fig. 17).

The device should be installed at a place representative for the room temperature, i.e. avoid outer walls, direct sunlight etc.

Please note that it is possible to use a dSM11 and dSM12 for operating the dS-iSens200.

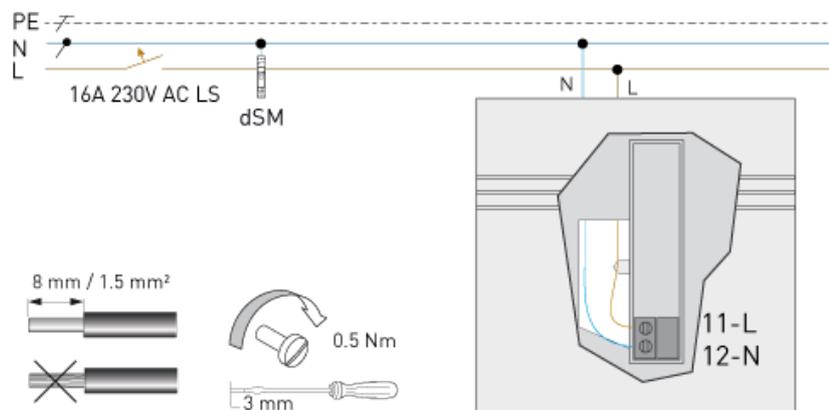


Fig. 17: Installation instructions of the digitalSTROM-indoor climate sensor dS-iSens200

Radio actuator

Install the radio actuator (actuator) according to the installation instructions (e.g. Thermokon actuator SAB05):

- Attach the self-adhesive label provided with the ID address so that it is easily visible on the radio actuator.
- A radio actuator is installed directly on standard radiator valves.
- The radio actuators do not have to be wired since the signals are transmitted wirelessly to the room temperature sensor (sensor).

Please note that the use of a Plan44-Bridge is absolutely essential for operating a radio actuator.

Radio room temperature sensor

Install the radio room sensor (sensor) according to the installation instructions (e.g. Thermokon room temperature sensor SR04):

- Attach the self-adhesive label provided with the ID address so that it is easily visible on the room temperature sensor.
- The radio room sensors do not have to be wired since they work battery-free and transmit their signals wirelessly.
- The device should be installed in a suitable place.
- The device must be taught-in to ensure communication between the actuator and sensor. Please refer to the installation instructions enclosed for more detailed information.



If the room temperature sensor in the digitalSTROM Configurator is marked in red, no sensor data has been read, which means that the device might have to be taught-in again.

Please note that the use of a Plan44-Bridge is absolutely essential for operating the dS-iSens200.

3.5.5 For devices

digitalSTROM line switch (SSL)

The digitalSTROM line switch is used as a mobile relay switching contact and has a maximum switching capacity of 2300 W/700 VA (capacitive/inductive).

The digitalSTROM line switch can be used in any socket outlet within the digitalSTROM installation and thus also temporarily for connected devices (e.g. for a standing lamp).

The digitalSTROM line switch is obtainable for the plug type J (dS-SSL200-JS) and plug type F (dS-SSL200-FS).



Fig. 18: digitalSTROM line switch for plug type J

digitalSTROM-enabled products

The digitalSTROM product range is continually being extended. Install additional digitalSTROM products according to the associated installation instructions.

4 Initial operation

4.1 Starting the system

After all digitalSTROM components have been properly installed, the digitalSTROM system can be energised.

When the digitalSTROM system is switched on for the first time all digitalSTROM devices are registered in the digitalSTROM Meter. Depending on the size of the installation this can take 5-10 minutes.

- During initial operation it is advisable to start the digitalSTROM Meters consecutively and to verify the successful registration of the connected terminal blocks.
- Check the LED status indicator on the digitalSTROM server and digitalSTROM Meter after switching on the power (see Chapter 4.3). Please note that the LED of the dSS11-E does not correspond to the digitalSTROM LED status indicator. The LED of the dSS11-E only indicates the power supply (green LED).
- The registration of all devices is completed when the status indicator light is continuously green for more than 1 minute (see chapter 4.3).

4.2 Configuration by means of digitalSTROM Server

If several digitalSTROM Meters are used in conjunction with a digitalSTROM Server, additional configurations can be made with the web-based digitalSTROM Configurator (see chapter 5):

- digitalSTROM devices can be merged into a room. If, for example, the socket outlets for the office and the lights for the office are connected on a room, these can then be merged into a room (office).
- Additional rooms can be created. This can be useful, for example, if the living room should be subdivided into the areas "Living" and "Dining" in order to control these separately.
- digitalSTROM devices can be allocated freely to rooms. This makes it possible, for example, to assign a floor standing lamp to another room.
- Advanced settings for digitalSTROM devices are e.g. the push button function or changing the power output operating mode.
- Installation of digitalSTROM Server *Apps* and executing system or firmware updates for digitalSTROM components
- Diagnostics and data evaluation

The configuration of the digitalSTROM devices and the presets of a room can be configured using the push button without the need to also have a digitalSTROM Server with a web-based Configurator.

The push button function of the digitalSTROM push button block (for devices, sectors or rooms) can also be configured via inching commands on the local push button (see chapter 5.3.5). Setup options are described in detail in chapter 3 (Setup) of the user manual.

4.3 LED status indicator and restart

The digitalSTROM Meter and the digitalSTROM Server have an LED status indicator on the front of the housing. The colour of the display optically signals the operating condition of the digitalSTROM Meter and digitalSTROM Server.

- Please note that the LED of the dSS11-E does not correspond to the digitalSTROM LED status indicator. The LED of the dSS11-E only indicates the power supply (green LED).

The operating condition of the digitalSTROM Meter can also be checked in the web-based digitalSTROM Configurator. The status of the LED status indicator and hardware errors are shown as icons in the main section *Hardware* in the digitalSTROM Meter selection list (see chapter 5.3.1).

Restarting and resetting via LED push button

An LED button that can be used to restart or reset the digitalSTROM device is located under the LED status indicator.

Restart of the digitalSTROM Meter and digitalSTROM Server dSS11-1GB

To **restart** the digitalSTROM Meter or digitalSTROM Server dSS11-1GB, the LED push button must be pressed continuously for **5 seconds**.



After 5 seconds the colour of the LED status indicator for the digitalSTROM Server changes to blue. Now you can release the LED push button to restart the digitalSTROM Server. On the digitalSTROM Meter a successful restart is indicated after 5 seconds by a changing colour pattern.

Resetting the digitalSTROM Server dSS11-1GB

To reset the digitalSTROM Server, the LED push button must be pressed continuously for 15 seconds. This will reset the administrator password, the system name and the network settings to factory settings.



After 15 seconds the LED status indicator starts to blink in blue. Now you can release the LED push button to set the administrator password and the system name to factory settings and the network setting to DHCP (Dynamic Host Configuration Protocol).

Resetting the digitalSTROM Server dSS11-E

The digitalSTROM Server dSS11-E does not have an LED push button. The dSS11-E is reset offline by means of a USB flash drive.

First create an empty text file in a file explorer with the name **reset_dSS.txt** and copy this to the main directory of the USB flash drive! Insert the USB flash drive into the USB connections of the current dSS11-E. This will reset the administrator password, system name and network settings to factory settings and a restart is performed.



Please note that the file will be deleted automatically from the USB flash drive after a successful restart.

4.3.1 digitalSTROM Meter

LED status indicator

The LED status indicator colour indicates the operating condition of the digitalSTROM Meter:

-  Standard operation (green)
-  Initialising dS485® bus interconnection (grey)
-  Configuration error (Magenta)
-  Hardware error (red)

Additional information during standard operation

Events are indicated by the LED status indicator blinking once and changing colour. Colours are assigned to the different operating conditions:

-  Push button telegram received from a digitalSTROM device (black - LED dark)
-  New digitalSTROM device identified (blue)
-  digitalSTROM device successfully registered (cyan)
-  Unable to register digitalSTROM device (red)
-  Registration cycle of the digitalSTROM device is concluded. (yellow)

Hardware error

A hardware error is always signalled by the colour red. In addition, additional information about the type of hardware error is determined by means of different blink frequencies and colours:

-  **Critical temperature** blinking (red/yellow)
The error message first disappears when the temperature has dropped below the critical value. The digitalSTROM Meter should be switched off to cool down and switched on again later. The connected load should be checked. Check the digitalSTROM Meter assembly if the error recurs (see chapter 3.3).
-  **Hardware error** slow blinking (red/black – LED dark)
Hardware error or CPU error detected. Turn the digitalSTROM Meter off and on again. Replace the digitalSTROM Meter if the error recurs after restart.

Software updates

-  **System update** blinking (red/blue)
Do not switch the digitalSTROM Meter off.

4.3.2 digitalSTROM Server

LED status indicator

The LED status indicator colour indicates the operating condition of the digitalSTROM Server dSS11-1GB.

Please note that the LED indicator of the digitalSTROM Server dSS11-E only indicates the operating condition and thus does not follow the LED status indicator.



Standard operation (green)



Hardware or software error (red)

Turn the digitalSTROM Server dSS11-1GB off and on again. If the error recurs after restart, this digitalSTROM Server dSS11-1GB must be replaced.



Initialising dS485 bus interconnection (grey)

If the LED stays grey after restart, a hardware error has occurred and the digitalSTROM Server dSS11-1GB must be replaced.



System start (yellow)



System update blinking (blue/yellow)

Do not switch off the digitalSTROM Server dSS11-1GB during a system update.

Error messages (blink)

The colour of the LED status indicator is interrupted by a single blink to indicate an error message. The colour of the interruption (blink) indicates the error message in the digitalSTROM Server dSS11-1GB.



No other digitalSTROM Meters were found (magenta)



No physical network connection (LAN) available (cyan)

4.4 Establish network connections

The digitalSTROM Server supports the Universal Plug & Play Standard (UPnP).

Connection of the digitalSTROM system to a network (LAN)

To integrate the digitalSTROM Server (1) in a network (LAN), you have to connect the digitalSTROM Server using a standard RJ45 network cable (2) with a DHCP-capable network router (3).

To access the digitalSTROM Server with your computer/laptop (4), you must also connect your computer/laptop to the router using a standard RJ45 network cable (5). You may also use a wireless network (6) to be able to move freely around the house during configuration and testing of the digitalSTROM installation.

On the digitalSTROM server, the digitalSTROM server app **my.digitalSTROM** has to be connected to your user account for remote access.



Fig. 19: Connecting the digitalSTROM system to the network LAN. digitalSTROM-Server (1), RJ45-network cable (2, 5), DHCP-capable network router (3), laptop (4), wireless network WLAN (6)

For network (LAN) integration you should use a RJ45 network cable without shielding.



The cable shielding might come into contact with an electrical conductor in the distribution board which is connected to mains power and thus could lead to defects or place persons at risk.

Locating the digitalSTROM Server in the network

Please see chapter 3.7.1 "Accessing digitalSTROM with my computer" in the digitalSTROM user manual.

Connecting the Plan44-Bridge to a network (LAN)

Connect the Plan44-Bridge to your network (router), using a standard RJ45 network cable. The Plan44-Bridge is detected automatically by the digitalSTROM server and displayed in the configurator.

- Open the web-based digitalSTROM Configurator in the browser
- Select **Advanced view** and navigate to **Hardware**
- The Plan44-Bridge appears under **Meter**, where you first assign the name
- Open the **configuration interface**
- Log in with your access data
- Update the firmware according to installation instructions

Several dSS in one network with the Plan44-Bridge



If, for example, you should operate a second dSS in the same network for the purpose of testing, this can lead to double activation of the devices.

The connection to the other dSS must be disconnected so that the Plan44-Bridge can communicate with the right dSS. To do this, proceed as follows:

System - Access Authorization - Network devices access

Here, you can disconnect the connection from the wrong dSS to the Plan44-Bridge (disable check mark):

Network devices access

Connect to compatible local networked devices. Normally, these devices are connected automatically. When required, the connection can be activated or deactivated manually.

Name	dSUID	Connection
plan44.ch P44-DSB-DEH #24196483	...62592B00	<input checked="" type="checkbox"/>

4.5 Login to the digitalSTROM Server

Depending on your browser settings, a safety warning appears while a safe connection is being established to the digitalSTROM Server (<https://dss.local> for the dSS11-1GB or <https://dSSE.local> for the dSS11-E). Acknowledge the message with ***Continue loading this website*** to reach the dialogue.



If your router does not support the automatic detection of network services in IP networks (Bonjour), you can access the digitalSTROM Server simply via the IP address.

Login to the digitalSTROM Server requires entering a user name and password in the login dialogue.

In the factory settings the following applies :

<i>"User name"</i>	dssadmin
<i>"Password"</i>	dssadmin

The administrator password should be changed later in the web-based digitalSTROM Configurator (see chapter 5.2.6).

4.6 Remote access to the Internet

The digitalSTROM can also be conveniently operated via the Internet. To do so, the digitalSTROM Server must be connected with the personal my.digitalSTROM user account. This is done with the help of the digitalSTROM Server app **my.digitalSTROM**.

To connect the digitalSTROM Server with the my.digitalSTROM user account, proceed as follows:

- Open the digitalSTROM Server app my.digitalSTROM
- Follow the instruction steps within the digitalSTROM Server app, to open a user account under www.digitalstrom.com and to connect the digitalSTROM Server with the my.digitalSTROM user account.

After the digitalSTROM Server has been connected with the my.digitalSTROM user account, the login information valid for the user account can also be used in the digitalSTROM App for smartphones or tablets. Thus, the digitalSTROM installation can be conveniently and centrally operated from anywhere. Subsequently, the following functions are available to the user registered at digitalstrom.com in the area "my.digitalSTROM":

- Direct access to the digitalSTROM Configurator.
- Issue a time-restricted access authorisation to the digitalSTROM Configurator for third parties (sending of a temporarily active link).
- Access to the weekly data backup automatically generated under the user account. The backup contains the data and configurations in the connected digitalSTROM Server. Please note that if the dSS11-E is additionally used (see chapter 3.3 and 5.2), the data backup of the dSS11-1GB **can no longer be accessed**. We recommend saving the data of the dSS11-1GB externally before installing the additional dSS11-E so that you can reload this after the installation.
- Acquisition/configuration of applications free and at cost such as weather-dependent services.

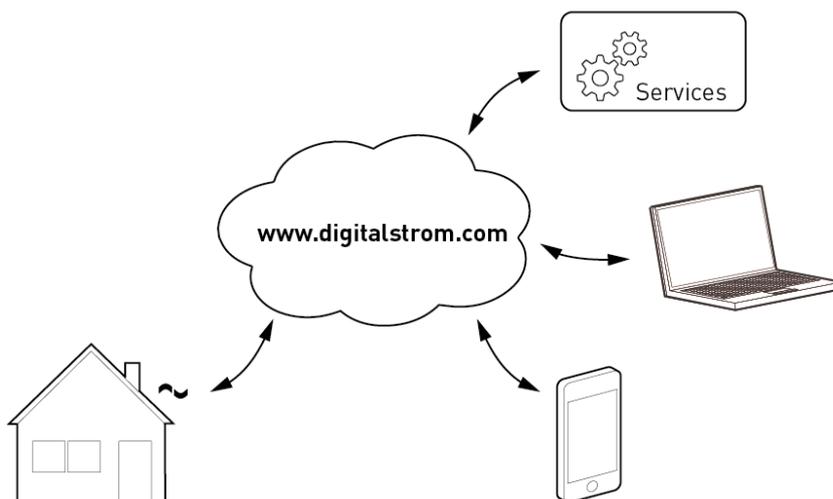


Fig. 20: Remote access to the digitalSTROM-System via the Internet

5 Configuration

5.1 digitalSTROM Configurator user interface

The digitalSTROM system can be quickly, conveniently and intuitively configured and monitored with the web-based user interface of the digitalSTROM Configurator.

General control elements

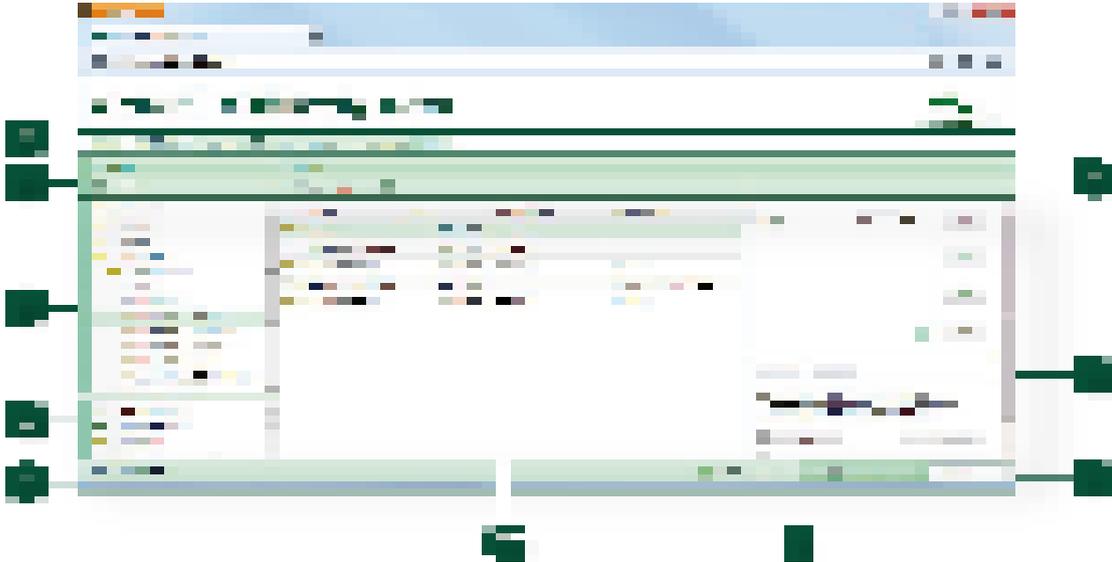
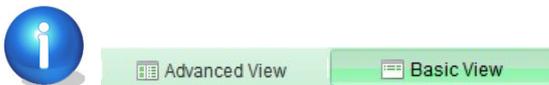


Fig. 21: User interface of the digitalSTROM Configurator with the navigation main section (A); the selection view with the tool bar (B1), tree/list view (B2), and higher-level activities (B3); the data view with the tool bar (C1), tree/list view (C2) and embedded dialogue (C3); the status bar (D); the change/update view (E) and the language settings (D). A - Navigation of main sections

A – Navigation main section

Click on the particular main section to navigate between the main sections.

Use **Advanced view** and **Basic view** in the lower right corner to toggle between the two views.



In the advanced view, additional main sections are shown in the navigation.

Default view



Apps (digitalSTROM Server Apps) For the installation and update of applications (apps) on the digitalSTROM Server

Activities For the configuration of presets and activities

Rooms For the administration of rooms and related digitalSTROM devices

Help For the use of the electronic online help

Advanced view



In the advanced view additional main sections are shown for navigation:

Groups For management of groups and corresponding digitalSTROM devices

System For the configuration of system settings such as network identification, time/date, etc.

Hardware For the monitoring and configuration of digitalSTROM devices in the electrical power circuits

B - Selection view

B1 - Tool bar selection view

In the selection view tool bar you can see the title of the selected main section and the valid commands for the associated items in the form of icons, e.g. add room, rename room

In order to run a command for the list item, you must first select the item. The selected item has a green background.

Frequently used commands are left-aligned in the tool bar. Less frequently used commands are right-aligned.

B2 - Tree/list view

In this view the items available for selection in the main section are presented in tree or list form.



Fig. 22: tree and list form for rooms or presets in the digitalSTROM Configurator

In the selection view, commands for the relevant item (e.g. create new room, delete room) can also be called up in a **context menu** (right mouse click).

B3 - Higher-level activities

In this section of the selection list the higher-level activities (e.g. «Leaving home», «Ringing» etc.) are displayed.

The behaviour of selected higher-level activities of digitalSTROM devices is pre-defined at the factory. In the factory setting, e.g. awnings are retracted during rain, lights switched on in case of fire and shutters opened.

To change the behaviour of the digitalSTROM device for a higher-level activity, open the main section **Activities** and choose the higher-level activity in the selection list.

Use the **Edit device properties** command in the device list to configure the selected device.

You will find additional information to default activities that digitalSTROM devices have for higher-level activities at <http://www.aizo.com/downloads> <http://www.digitalstrom.com/manuals>



Fig. 23: Higher-level activities in the digitalSTROM Configurator

C - Data view

C1 - Data view tool bar

In the data view tool bar you can see the valid commands (e.g. identification blinking of the devices, rename device) for the displayed list items in the form of icons in addition to a title with information on the list content.

In order to run a command for the list item, you must first select the item. The selected item has a green background.

Frequently used commands are left-aligned in the tool bar. Less frequently used commands are right-aligned.

C2 - Data/list view

In this view the applicable devices/data for the selected item are shown in list form.

Devices in grey are inactive and were not recognised physically by the digitalSTROM Meter (e.g. because they were removed from the digitalSTROM installation).

	Name	dSID	Meter Name
	Ceiling light Dini...	000044a7	F1 Living-room K...
	Ceiling light Hall...	000044dd	F2 Bedroom Hall...
	Blinds Living room	00016ba0	F1 Living-room K...
	TV	00015268	F1 Living-room K...
	Button Living room	00017ca0	F1 Living-room K...

Fig. 24: List of all digitalSTROM devices in a room

Column menu of the digitalSTROM Configurator

You can freely configure the representation of the columns (Name, ID, Output, Input mode, Input, Meter Name, Room Name, Comment) in the list as you desire.

The columns can be sorted in ascending or descending alphabetical order and can be shown or hidden as needed.

With *Drag & Drop* you can move the columns shown to the left or right.



Please note that the settings of the user interface will not be saved and are deleted when you close the browser.

C3 - Embedded dialogue

The dialogue for changing device values is embedded in the main section *Activities* in the device list. This allows the user to quickly and conveniently navigate to the device values or to directly select a device without having to open additional dialogues.

Thus the current device values for the desired preset can be saved with just a few clicks.

Tool advice

If you place the mouse pointer over a control element (without clicking it) a tool advice is displayed explaining the function of the control element.

D - Status bar

The status bar shows the current software version of the digitalSTROM Configurator as well as information on executed commands or the operating condition of the digitalSTROM system.

Commands The digitalSTROM system confirms successful implementation of the last user's commands, e.g. moving devices into another room, or the devices were deleted.

Operating condition Information regarding the operating condition of the digitalSTROM systems is displayed in the status bar, e.g. the devices were updated.

E - Change/update view

The control elements *Update view* and *Advanced view/Basic view* are used to update the data view and to show and hide additional main sections.

F - Language settings

Use the drop-down list to select the language for the menu navigation and dialogues in the digitalSTROM Configurator. After changing the language setting the web-based user interface is automatically re-loaded in the selected language.

Available languages

- Danish (Dansk)
- German
- English
- French (Français)
- Italian (Italiano)
- Dutch (Nederlands)
- Norwegian (Norsk)
- Polish (Polski)
- Portuguese (Portugus)
- Swedish (Svenska)
- Turkish (Türkçe)

5.2 Check basic server configuration

After the initial operation of the digitalSTROM Server (dSS11-1GB or dSS11-E), the basic configurations must be checked before you can start configuring the digitalSTROM devices, rooms, presets and activities.

Navigate in the *Advanced view* to the main section *System*. Check the following settings:

5.2.1 Overview

The overview displays the current state of the system, rooms and defined groups. The values can be reloaded via *"Update view"*.

5.2.2 Configuring the network

Select the operating mode of the network settings for the digitalSTROM Server.

"Automatic IP setup with DHCP" According to factory settings, the digitalSTROM Server selects the IP address automatically by dynamic allocation (DHCP).

In addition, other settings such as net mask, gateway, etc. are automatically set up with the connected router or Windows PC.

"Static IP configuration" All settings required for operation must be entered manually in the entry mask.

In case of manual network settings please note that a faulty configuration may render the digitalSTROM Servers inaccessible!

"IP address" Currently valid IP address of the digitalSTROM Server

"Net mask" Address entry mask for the search of devices in a subnet. Must be the same for all devices in a subnet

"Gateway" IP address of the device permitting communication with other networks

"DNS1" IP address of the 1st device for name resolution in the network (Domain Name Server 1)

"DNS2" IP address of the 2nd device for name resolution in the network (Domain Name Server 2)

"MAC" Hardware address of the network adaptor. Used for unique identification of the digitalSTROM Server, cannot be changed.

Resetting the network settings

Hold the LED push button at the housing front of the digitalSTROM Server depressed for 15 seconds to set the network configuration back to factory settings. Please note that this will also reset the administrator password to factory settings (see chapter 5.2.6).

5.2.3 Adjusting system settings

Check the system settings of the digitalSTROM Server and adjust them if necessary.

5.2.3.1 System

In the *System* dialogue the following parameters are available:

"Name"

Network name of the digitalSTROM Server. Sent as identifier during communication set-up to UPnP-enabled devices. In factory settings the system name is set to the value "dSS".

"Enable access via SSH"

The digitalSTROM Server supports the SSH protocol (secure shell) and enables safe login and encrypted data transfer with SSH clients. SSH access is inactive in factory settings and is mainly used by digitalSTROM developers.

User and password for the SSH connection are always identical with the administrator password for the web-based digitalSTROM Configurator (see chapter 5.2.6).

5.2.3.2 Location

In the *Location* dialogue the following parameters are available:

"Country"

Use the drop-down list to select the country where the digitalSTROM installation is used.

"Locality"

Use the drop-down list to select the locality where the digitalSTROM installation is used. The list only provides localities for selection in the chosen country. If your locality is not listed, choose the nearest locality.

"Coordinates"

Coordinates are automatically chosen according to the selected country and locality. If needed they can be accurately defined by choosing *Select location on map*.

"Sunrise/sunset"

The times for sunrise and sunset are automatically determined for the selected coordinates and the current system time (astronomic clock). These times are also available when the digitalSTROM Server is not connected to the Internet.

The specifications for coordinates and sunrise/sunset can be used in digitalSTROM Server *Apps* e.g. to monitor meteorological data or to control shading systems.

Use *Select location on map* to determine the coordinates on a map visually. This allows you to pinpoint the coordinates within the selected locality or to determine the coordinates for a locality not listed in the "Locality" drop-down list. An already selected locality will not be changed hereby.

Enter an address directly into the search box or use the mouse to move the marker on the map.

Selecting the country and locality will automatically adjust the time zone for the system time. Unless country and locality are specified, the time zone has to be specified manually (see chapter 5.2.3.3).

5.2.3.3 Date and time (system time)

Synchronising date and time with the network

In the *Synchronising date and time with the network* dialogue, the following parameters are available:

"Time zone"

Standard time zone according to UTC/GMT. Use the drop-down menu to select the time zone. The time zone is automatically set if a country and a *locality* are chosen in the Location system

setting (see chapter 5.2.3.2). Unless country and locality are specified in the **Location** system setting, the time zone has to be specified manually. If the time zone is set correctly, the changeover from daylight saving to standard time takes place automatically.

"Synchronising date and time with the network synchroniser"

Automatic synchronisation of date and time with the configured NTP server (factory setting). A permanent Internet connection is required for this purpose.

"Additional NTP server"

An additional NTP server can optionally be configured for the automatic synchronisation. Without specification of an additional NTP server, the values in the digitalSTROM Server are synchronised with the NTP sever from digitalSTROM.

If the digitalSTROM Server is disconnected from the power supply the manually specified values for date and time remain stored in the battery-powered clock.

5.2.3.4 Apartment basis address

The apartment basis address defines the first randomly assigned address of the digitalSTROM Server or digitalSTROM Meter in the digitalSTROM installation and assists as additional addressing in preventing overlapping effects between systems installed in very close vicinity.

The Apartment Basis Address which is valid for the digitalSTROM installation must be configured once in the web-based digitalSTROM Configurator on the digitalSTROM Server. The numbering of the digitalSTROM Meters is then automatically transmitted to the connected digitalSTROM Meters.

The freely selectable address is between 0 ... 62. The basis address + the maximum number of connected digitalSTROM Meters must not exceed 62.

This allows a maximum of 62 digitalSTROM power circuits (digitalSTROM Meters) located closely to each other to be operated in a building.

In a multi-family residential building with several independent digitalSTROM installations it is therefore especially important to ensure that the address ranges do not overlap.

The address should only be changed if problems are detected in connection with the neighbouring installation.

5.2.3.5 Using additional digitalSTROM Server

This option is only necessary if you use the dSS11-E in addition to a dSS11-1GB. In order to fully utilise the dSS11-E, you have to configure the dSS11-1GB as a gateway.

To do this, simply enable the option (set a check mark) **Use additional digitalSTROM Server** in the **System Settings** in the **System** tab. Afterwards, the dSS11-1GB software switches off and the connection to the my.digitalSTROM is disconnected. Afterwards, only the **System** and **Help** tabs are still active in the digitalSTROM Configurator. Please only use the digitalSTROM Configurator of the dSS11-E (<https://dSSE.local>) from now on. This must now be set up again or restored from the backup file.



Please note that if the dSS11-E is additionally used (see chapter 3.3 and 5.2) the data backup of the dSS11-1GB **can no longer be accessed**.

We recommend not saving the data of the dSS11-1GB externally **before activating the additional dSS11-E** so that you can restore this after the installation (see chapter 5.2.7.1).

5.2.4 E-mail settings

5.2.4.1 Mail server

To avoid having to store confidential third-party access data on the digitalSTROM system, it is recommended to set up a separate email account for each digitalSTROM installation.

The account can be set up with a free provider (e.g. Gmail) and exclusively used for sending e-mail from the digitalSTROM Server. A **2-way authentication** for logging on to a mail server (as it is offered as an optional setting by e.g. Google) is not supported by the digitalSTROM Server.

Server settings for the sending of e-mails

In the *Mail Server* dialogue the following parameters are available:

"E-mail address"

Sender address used by digitalSTROM Server Apps to send messages, e.g. dss11EGBadenerstrasse3c@gmail.com.

„Mail Server Name“

Name of the mail server (SMTP) used to send outgoing mails, e.g. smtp.gmail.com.

"Outgoing mail server requires authentication"

Please note that authentication via user name and password is usually mandatory on a mail server (SMTP) to send e-mails.

"User"

User for authentication with the mail server (SMTP), e.g. dss11EGBadenerstrasse3c@gmail.com.

"Password"

Password for authentication with mail server (SMTP).

"Use secure SMTP (SSL via port 465)"

The transmission of data is encrypted with SSL (Secure Socket Layer). For this purpose a communication port reserved for encrypted data transfers (port 465, TCP) is used.

"Use secure data transmission (TLS via port 25)"

The transmission of data is encrypted with TLS (Transport Layer Security). For this purpose the default port for outgoing mail (port 25, SMTP) is used.

Please note that secure communication requires corresponding firewall settings. Depending on settings, port 25 or port 465 must be configured. Your e-mail provider can give you information on procedures supported by the mail server.

"Verify server certificate"

Determines whether certificate will be checked during mail server communication. Server certificates confirm the association of a server with a person or company and are used as a basis for encrypted SSL/TLS connections.

Use ***Check connection*** to check the accessibility of the configured mail server. However, no authentication will be performed and no test e-mails sent.

Use ***Send test e-mail*** to verify authentication and encryption. If the test is completed successfully, a test mail will be sent to the configured e-mail address. In case of an error, the mail server error message will be displayed in a dialogue, e.g. sending of e-mail failed: Error in data format.

After successfully testing, the settings must be saved by clicking on ***Apply***.

5.2.5 Access authorisations

5.2.5.1 Release of applications

digitalSTROM allows access to the digitalSTROM system from external applications, e.g. via a Smartphone App. The authentication of the external application on the digitalSTROM Server takes place either by means of the administrator's user name and password or a unique access key (token).

The token is automatically agreed between the external application and the digitalSTROM Server. External applications supporting tokens are granted access to the digitalSTROM Server at any time after token release. No user names or passwords will be saved in the external application as part of this process. However, the external application may ask for the user name and password during the first login to be able to perform the release directly.

Use this list to allow or withdraw access for individual applications. The list is used for central access authorisation management which may allow or prevent access to specific applications or the corresponding device.

5.2.6 Changing the administrator password

To be able to modify the administrator password in the web-based digitalSTROM Configurator user interface you need to enter the current password and the new password (twice).

The password must not contain any spaces!

The administrator "*User name*" is: **dssadmin** and cannot be modified.

The administrator "*Password*" is *dssadmin*

Resetting the administrator password

Hold the push button (LED) on the housing front of the digitalSTROM Server depressed for 15 seconds to set the administrator password back to factory settings. Please note that this will also reset the network settings to factory settings (see chapter 5.2.3).

5.2.7 System maintenance

5.2.7.1 Backing up and restoring system settings

Backing up system settings

To save system settings, names and App configurations in a backup file, the data can be downloaded using the **Save** button. Once the system has created the backup file, a browser dialogue opens allowing you to save the file locally.

Select **Save** and choose the storage location of the backup file in the opening dialogue. The file name must not be changed as part of this process!

Please note that the settings for the individual device values and network settings of the digitalSTROM Server are not included in the backup!

The backup includes only the system settings of the digitalSTROM Server:

- Names of devices, rooms, activities, digitalSTROM Meters
- System settings such as system name, SSH access, location and time zone
- Configuration of digitalSTROM Server *Apps*

The names of the digitalSTROM Meter and associated digitalSTROM terminal blocks (20 characters maximum) are also stored in the digitalSTROM Meter. If a digitalSTROM Server is replaced these names are automatically transferred to the digitalSTROM Meter.

Restoring system settings

Use **Search** to select the backup file on your computer from which you want to restore the system settings.

After that, use **Restore** to start the recovery of the system settings from the selected backup file.

After the recovery is complete, the web-based digitalSTROM Configurator is automatically reloaded in the browser.

5.2.7.2 Restarting the digitalSTROM Server

Select **Restart system** to see from when the digitalSTROM Server is active.

"The dSS application is running since..."

Time of the last digitalSTROM application restart.

"The system is running since..."

Current operating time since the last digitalSTROM Server restart (in days, hours and minutes)

"Medium system utilization"

Displays the average CPU utilization of the digitalSTROM server.

Select **Restart** to restart the digitalSTROM Server.

You cannot send any commands in the web-based digitalSTROM Configurator during digitalSTROM Server restart. After the restart the digitalSTROM Configurator is automatically re-loaded.

5.2.7.3 Formatting the SD card

The digitalSTROM Server with an integrated Micro SD can be used to save the metering and logging data.

For digitalSTROM Servers without additional **SD card** (e.g. dSS11-1GB) the system setting SD card is not available.

"Status of the SD card"

Shows the current state of the SD card. The status of the SD card is automatically checked during each digitalSTROM Server restart.

Use **Format** to format the card after repeated errors or to delete metering and log data irretrievably. System settings remain unchanged.

5.2.8 Check system updates

You can check for and install available system updates and firmware updates in the web-based digitalSTROM Configurator. The digitalSTROM Server must be connected to the Internet to enable the automated search for available updates.

If the digitalSTROM Server is not connected to the Internet, available system updates may also be provided by a USB flash drive (see chapter 5.2.8.2).

Check for and install available updates after commissioning or later installation of additional digitalSTROM Meters. Always make a backup of your settings prior to each system update (see chapter 5.2.7.1).



The installation of updates ensures that the latest version of all digitalSTROM components is in operation.

Please note that when using multiple digitalSTROM servers (e.g. if a dSS11-E was additionally installed), all digitalSTROM servers have to be updated individually.

5.2.8.1 System update in the digitalSTROM Configurator (online)

You can check for and install available system updates and firmware updates in the web-based digitalSTROM Configurator. The digitalSTROM Server must be connected to the Internet (online) for this purpose.

List of all available system updates

Search for updates

Updated list of all system updates made available online by digitalSTROM. At the same time the digitalSTROM Server checks if updates are available for connected digitalSTROM Meters and presents available updates in an information box if needed.

Update system

Installs the available system updates and saves available firmware updates for digitalSTROM Meters in the digitalSTROM Server memory. Afterwards the firmware updates for the connected digitalSTROM Meters are automatically installed.

Depending on the scope of the **system update**, the digitalSTROM Server will restart automatically after the update. The web-based user interface is briefly unavailable during this process. As soon as the system is available again the browser will automatically reload the **System Update** section in the **System** main section.

Automatic firmware updates for digitalSTROM Meters are available from digitalSTROM Server version 1.6.0. For earlier versions the firmware update must be started manually after the system update.

After a system update the default device values in the connected digitalSTROM devices are updated for new activities. During this process, the presets affected by the update can not be saved. Therefore the user is informed of the update progress through messages in the status bar.

Update dSM Firmware

Installs available updates on the digitalSTROM Meter. The implementation of an **Update does not affect the configuration of the installation.**

We always recommend that you check the firmware of connected digitalSTROM Meters after system updates and the installation of additional digitalSTROM components.



Release Information

Opens a dialogue with detailed Release Information on the installed version of the digitalSTROM Server application, such as document number and the digitalSTROM software version. Additionally, software information about the products affected is available, i.e. digitalSTROM Server and digitalSTROM Meter.

5.2.8.2 Provide system update from USB flash drive (offline)

If the digitalSTROM Server is not connected to the Internet, available system updates may also be provided by a USB flash drive (offline).

Download of the digitalSTROM software updates:

Open the download page of the digitalSTROM Software updates in a browser: <http://www.digitalstrom.com/updates> and load the available updates as a compressed files to your computer.

Unpack the file and copy the directory **dss11-usb-upgrade** to the main directory of the USB flash drive! At least one gigabyte free storage space must be available for this.

Installation of the digitalSTROM software update

Insert the USB flash drive into the USB socket on the housing of the running digitalSTROM Server. The system update will start automatically and is indicated by a blinking yellow-blue LED.

It can take up to 2 minutes before the LED starts blinking. Also the LED may briefly remain blue or yellow during the update. If the LED remains green continuously for 2 minutes, the update was completed successfully.

During a system update via USB flash drive, any available firmware updates are automatically installed on the connected digitalSTROM Meters and all server **Apps** are updated.

In addition to the software update, **dss11-usb-upgrade** also includes all new digitalSTROM Server **Apps** available that can be installed directly from the main section **Apps** (see chapter 6.2).

Check for available firmware updates for digitalSTROM Meters in the system settings of the web-based digitalSTROM Configurator after the completed system update or the installation of additional digitalSTROM components (see chapter 5.2.7.1).

5.2.9 Safety messages

Under the Safety messages tab safety-relevant events such as hail, rain, or error messages are recorded in an event log. In this way you get an overview regarding when which event has occurred.

5.2.10 System properties

The system properties (Fig. 25) of the digitalSTROM Server are not described here in detail, but may be useful for problem analysis in the event of a support case. The specifications are for information only and cannot be modified.

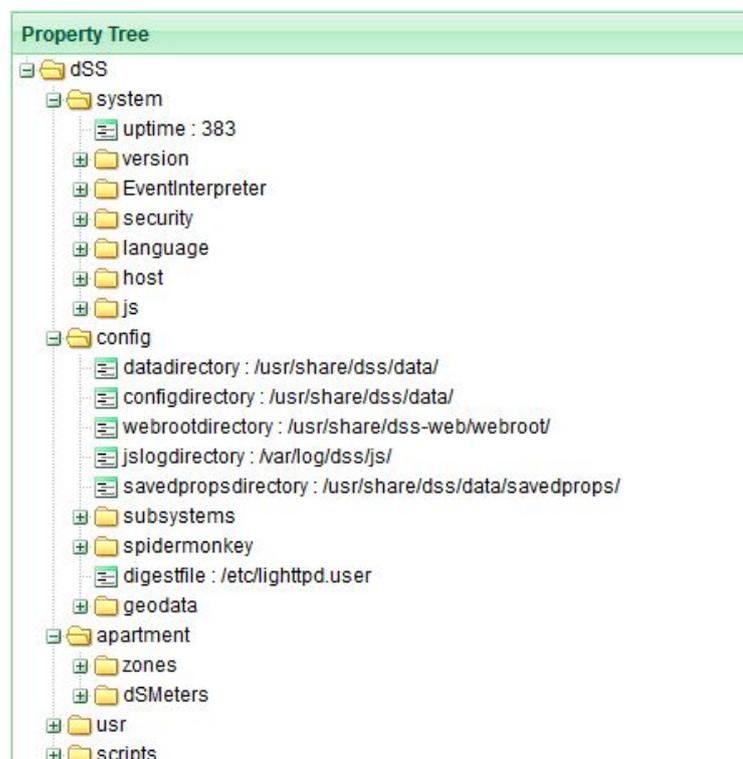


Fig. 25: System properties dialogue of the digitalSTROM Server

5.3 Check and configure installation in power circuit

A digitalSTROM Meter controls the communication between digitalSTROM devices in each power circuit.

Check if the listed digitalSTROM devices correspond with the information on your configuration sheets.

Assign unique names to the digitalSTROM Meters and associate them with previously noted digitalSTROM Meter IDs. This facilitates the later configuration of rooms and digitalSTROM devices.

Add necessary information as comments to the selection list.

Configure the features of individual devices (e.g. push button function).

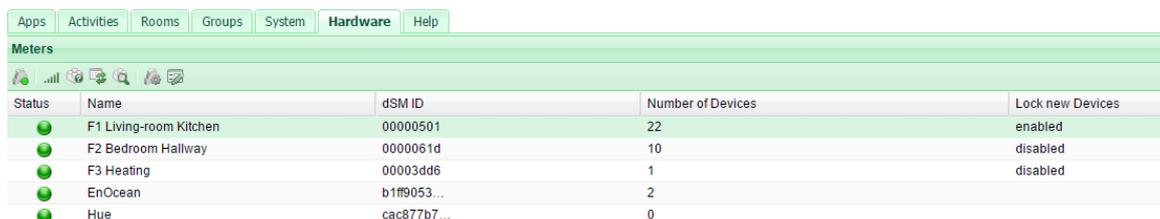
Calibrate individual digitalSTROM devices, e.g. digitalSTROM relay terminal block Shade.

For the presentation in the **Hardware** main section a selection list containing all digitalSTROM Meters is displayed in the upper half of the screen (see chapter 5.3.1).

The lower half of the screen contains the data view with the digitalSTROM devices registered in the selected digitalSTROM Meter. Use the device list to rename, configure and test digitalSTROM devices (see chapter 5.3.3).

5.3.1 Checking and configuring the digitalSTROM Meter functionality

digitalSTROM Configurator



Status	Name	dSM ID	Number of Devices	Lock new Devices
●	F1 Living-room Kitchen	00000501	22	enabled
●	F2 Bedroom Hallway	0000061d	10	disabled
●	F3 Heating	00003dd6	1	disabled
●	EnOcean	b1#9053...	2	
●	Hue	cac877b7...	0	

Fig. 26: Hardware dialogue of the digitalSTROM Meter

In the *Hardware* (Fig. 26) area the following parameters are available:

"Status"

digitalSTROM Meter operating condition. The status corresponds to the LED status indicator on the housing. Additional information on the operating condition is shown as tool advice in case of errors. Additional information is not displayed during standard operation.

"Name"

Name of the digitalSTROM Meter

"dSM ID"

Unique identifier of the digitalSTROM Meter

"Number of Devices"

Number of digitalSTROM devices connected to the digitalSTROM Meter

"Lock new device"

Status of the locking for newly registered devices (activated/deactivated)

"Power (W)"

Total energy consumption of the digitalSTROM devices connected to the digitalSTROM Meter in Watts

"ARM Software Version"

Software version of the digitalSTROM Meter microprocessor

"DSP Software Version"

Software version of the digitalSTROM Meter signal processor

"HW Version"

Hardware version of the digitalSTROM Meter

5.3.2 Configuration commands of the digitalSTROM Meter

 ***Blink Meter LED***

Makes the LED status indicator on the housing front of the selected digitalSTROM Meter blink.

 ***Test Transmission Quality***

Checks the transmission quality of the downstream and upstream communication to all active digitalSTROM devices connected to a digitalSTROM Meter and shows the connection quality in a dialogue after test completion. To test the worst case, all possible consumers (TVs, computers) in the corresponding power circuit should be switched on.

Use this command:

- To check the communication/reliability of newly installed and configured digitalSTROM components
- To analyse problems which you suspect to relate to the transmission quality.

In the *Test transmission quality* dialogue, the following parameters are available:

"dSM Name"

Name of the digitalSTROM Meter whose transmission quality is being tested.

"dSM ID"

Unique identifier of the digitalSTROM Meter whose transmission quality is being tested.

"Number of Devices"

Number of digitalSTROM devices connected to the digitalSTROM Meter.

"Number of queries per device"

Number of test sequences (telegrams) per connected digitalSTROM device.

"Average value"

The progress of the test is displayed in percent.

The communication quality is displayed for the upstream and downstream communication:

"Average value"

Average reception quality for telegrams sent upstream and downstream during the test.

"Min"

Minimum reception quality for telegrams sent upstream and downstream during the test.

"Max"

Maximum reception quality for telegrams sent upstream and downstream during the test.

"Lost queries"

Total number of telegrams for which no responding telegram was received.

The *View report* button displays the test results summarized.

Use the *Download report* button to save the test results in HTML format on your computer.

 **Check device presence**

Checks the presence of digitalSTROM devices registered in the digitalSTROM Meter. This test is used to update the device list. digitalSTROM devices registered with the digitalSTROM-Meter, but which are not physically present, are displayed as inactive (grey). The digitalSTROM Meter automatically tests the device availability every 24 hours.

Use this command:

- If you want to use previously inactive digitalSTROM devices again in the digitalSTROM power circuit and want to update the presentation of inactive digitalSTROM devices in the list.
- If you have physically removed digitalSTROM devices from the digitalSTROM power circuit and want to delete them permanently from the system. Only digitalSTROM devices presented as inactive can be deleted.

 **Reregister all devices**

All digitalSTROM devices physically connected to the digitalSTROM Meter are registered anew in the digitalSTROM Meter.

Use this command:

- If you are restoring previously deleted digitalSTROM devices in the installation
- If correctly connected digitalSTROM devices are not listed in the digitalSTROM Configurator.

 **Identify device**

Shows the properties of the digitalSTROM device on which a push button was last used (push button block or housing push button). The *Identify device* command allows you to easily check the ID of installed digitalSTROM devices and can be used to attribute names to those devices.

In the *identify device* dialogue the following parameters are available for the respective digitalSTROM Meter:

"dSM"

Name of the digitalSTROM Meter to which the digitalSTROM device is connected.

"ID"

Unique identifier of the digitalSTROM device

"HW Info"

Hardware specifications of the digitalSTROM device

"Push button input"

Input number (only for digitalSTROM push button blocks with several inputs)

"Name"

Name of the digitalSTROM device. The name of the digitalSTROM device can be modified directly in the dialogue. Use **Save** to save the specified/modified name. After saving the dialogue is ready to display the next digitalSTROM device.

Edit properties

In the *Edit properties* dialogue, the following parameters are available for the respective digitalSTROM Meter:

"Lock newly registered devices"

The locking of newly registered devices prevents impermissible digitalSTROM devices from being registered in the digitalSTROM power circuit so activities or presets can be called up. With this function, an impermissible manipulation (e.g. by adding a digitalSTROM push button block to an external power socket) can be prevented.

The digitalSTROM installation does not respond to the inputs of locked digitalSTROM devices. The output of a locked digitalSTROM device contains the included function.

Locked digitalSTROM devices are displayed in the device list in red and correspondingly marked. 

The lock can be deactivated in the context menu of the device list.

To open the context menu, click the right mouse button while the locked digitalSTROM device is selected.

Rename dsM

Opens the dialogue to rename the selected digitalSTROM Meter. The name of the digitalSTROM Meter should contain the room designation to ensure a clear allocation to specific rooms (e.g. for energy visualisation).

View communication

Presentation of the communication log files for the communication between the selected digitalSTROM Meter and the digitalSTROM devices registered therein.

View protocol for device update

Opens the protocol for the update of the device, which is automatically executed for digitalSTROM Meters in connection with a firmware update (Fig. 27).

The protocol contains detailed information regarding the status of the devices installed in the digitalSTROM power circuit, their firmware version and the time of the last status change. After the update has ended successfully, all devices should have the status **"Update"**.

The protocol is of considerable benefit in detailed troubleshooting or for support requests. The protocol can be downloaded as an HTML file as necessary.

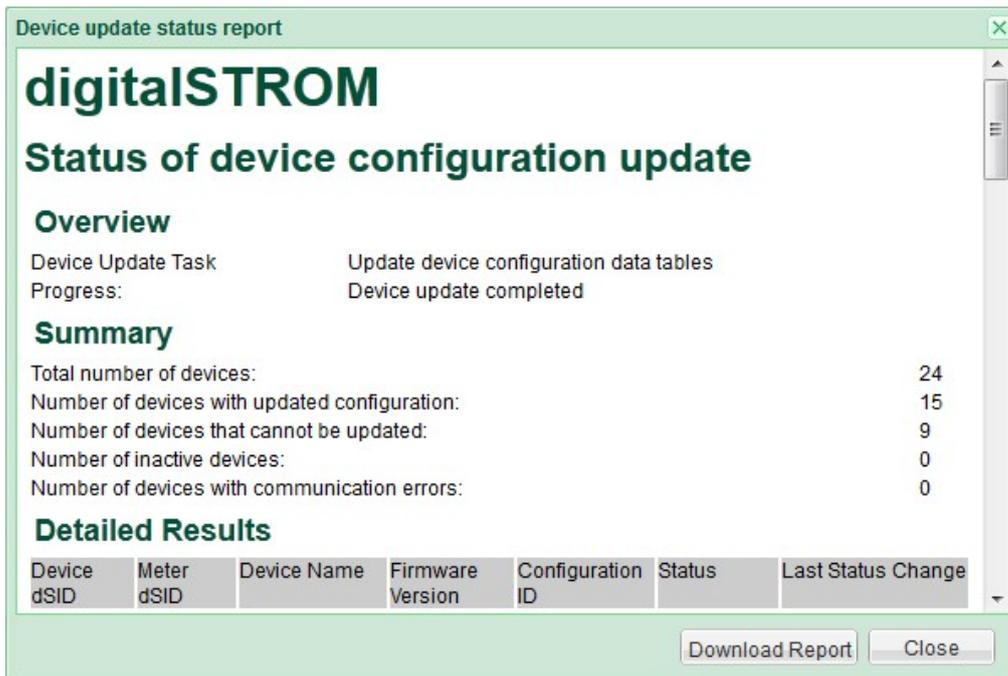


Fig. 27: Protocol for update of the digitalSTROM devices

Delete device

Deletes a selected digitalSTROM device from the device list. This is only possible for inactive digitalSTROM devices (grey).

Inactive digitalSTROM devices and those physically removed from the installation stay registered in the digitalSTROM Meter (e.g. seasonal decorative lighting).

Delete digitalSTROM devices from the system that are no longer used. digitalSTROM devices which were deleted and later re-integrated into the system can be registered again in the **Hardware** main section with **Reregister All digitalSTROM Devices** (see chapter 5.3.1).

5.3.3 Check and configure the digitalSTROM device functionality

Name	dSID	Output Mode	Input mode	Input	Room Name
Wind monitor	00094903		Wind monitor	Line 2, Standard	Kitchen
Motion detector	00094902		Motion detector	Line 1, Standard	Hallway
Bedside table	0000380c	dimmed	Area 2, Presets 2-4		Bedroom
Leave Home	00005852	switched	Leaving / Coming Home		Hallway
Doorbell	0000582c	switched	Door Bell		Bedroom
Ceiling light Bedroom	000043fe	dimmed	Presets 0-4		Bedroom
Button2 Hallway	0000448e	disabled	Presets 0-4		Hallway
Button 1 Hallway	00005812	disabled	Area 1, Presets 2-4		Hallway
Ceiling light Hallway	000044dd	dimmed	Device		Living room

Fig. 28: Devices dialogue of the the digitalSTROM Meters

In the **Devices** dialogue (Fig. 28) the following parameters are available:

"Name"

Name of the digitalSTROM device

"ID"

Unique identifier of the digitalSTROM device

"Output"

Operating mode of the digitalSTROM device power output, e.g. push button switched, light dimmed or preset deactivated. The value is only displayed if the digitalSTROM device is equipped with a power output.

"Input mode"

Device, area or preset operated with the push button.

"Input"

Assignment and function of the push button input on the digitalSTROM push button block. The value is only displayed if the digitalSTROM push button block is equipped with several push button inputs.

"Status"

The status displays the current value of the inputs of sensors. In the case of switch sensors, the status shows whether the input is open or closed. In the case of analogue sensors, the effective value (e.g. in °C) is displayed. This information is only loaded when opening the Hardware tab and can be updated manually via **"Update view"**.

"Room name"

Name of the room to which the digitalSTROM device is assigned.

"Room ID"

Unique identifier of the room to which the digitalSTROM device is assigned.

"HW Info"

Hardware specifications of the digitalSTROM device.

"Firmware version"

Firmware version of the digitalSTROM device.

"Registered on"

Time of registration of the digitalSTROM device in the digitalSTROM Meter.

"Inactive since"

Time when the digitalSTROM device was deactivated (time when it was removed from the digitalSTROM power circuit).

"Comment"

Recorded comment for the digitalSTROM device.

5.3.4 Configuration commands of the digitalSTROM devices

identification blink

Makes the selected digitalSTROM (terminal block) device blink and displays the status of the digitalSTROM device for identification. With certain digitalSTROM devices the output also blinks (e.g. lights, blinds move).

Edit device value

Opens the dialogue to edit the current device value of the selected digitalSTROM device (Fig. 36). The current device value is read from the digitalSTROM device as the dialogue opens and displayed briefly (for about 2 seconds) in the dialogue.

Test transmission quality

Checks the transmission quality of the down- and upstream communication to individual digitalSTROM devices and shows the connection quality in a dialogue after test completion.

Use this command if you have a technical problem with a digitalSTROM device, e.g. if it behaves erratically.

Update device status

Checks the status of the selected digitalSTROM device and updates the device list accordingly. If the selected digitalSTROM device is registered in the digitalSTROM Meter but physically unavailable, it is shown as inactive (grey). If the digitalSTROM device is physically available, it is shown as active (black). This function allows the testing of individual devices.

Use **Check device presence** test if all digitalSTROM devices connected to a digitalSTROM Meter are to be checked. (see chapter 5.3.1).

Editing device properties

The dialogue allows editing the properties of the selected digitalSTROM device. These properties depend on the group (light, shade, climate, audio, video, safety, access and joker).

Rename device

Opens a dialogue to rename a digitalSTROM device. At the same time, the device ID as well as the device name is displayed. With **Select previous device** and **Select next device**, you navigate directly to the next or previous digitalSTROM device in the list.

Edit comment

Opens the dialogue for creating and editing a comment for the digitalSTROM device, e.g. the one illuminant was changed at a specific date.

Delete device

Deletes the selected digitalSTROM device from the device list. This only applies to digitalSTROM devices which are inactive (grey).

Inactive digitalSTROM devices and those physically removed from the installation stay registered in the digitalSTROM Meter (e.g. seasonal decorative lighting).

Delete no longer used digitalSTROM devices from the system.

Deleted digitalSTROM devices have to be registered again if you want to use them later in the system. For this purpose you select the corresponding digitalSTROM Meter in the **Hardware** main section and run the command **Reregister all** devices. For more information on this subject, refer to Chapter 5.3.1.

5.3.5 Configuring the push button function by click command on local push button

The push button can also be configured by click commands on the local push button (Fig. 29). For this purpose, you do not need a digitalSTROM Server or a digitalSTROM Meter and so can also be preconfigured.

The LED integrated in the housing of the digitalSTROM push button block visualises the operating condition during configuration.

For digitalSTROM push button blocks without LED you can connect a dimmable lamp for visualisation. For this purpose the digitalSTROM push button block has to be equipped with a load output.

Refer to the installation instructions for information on the configuration of additional digitalSTROM products.

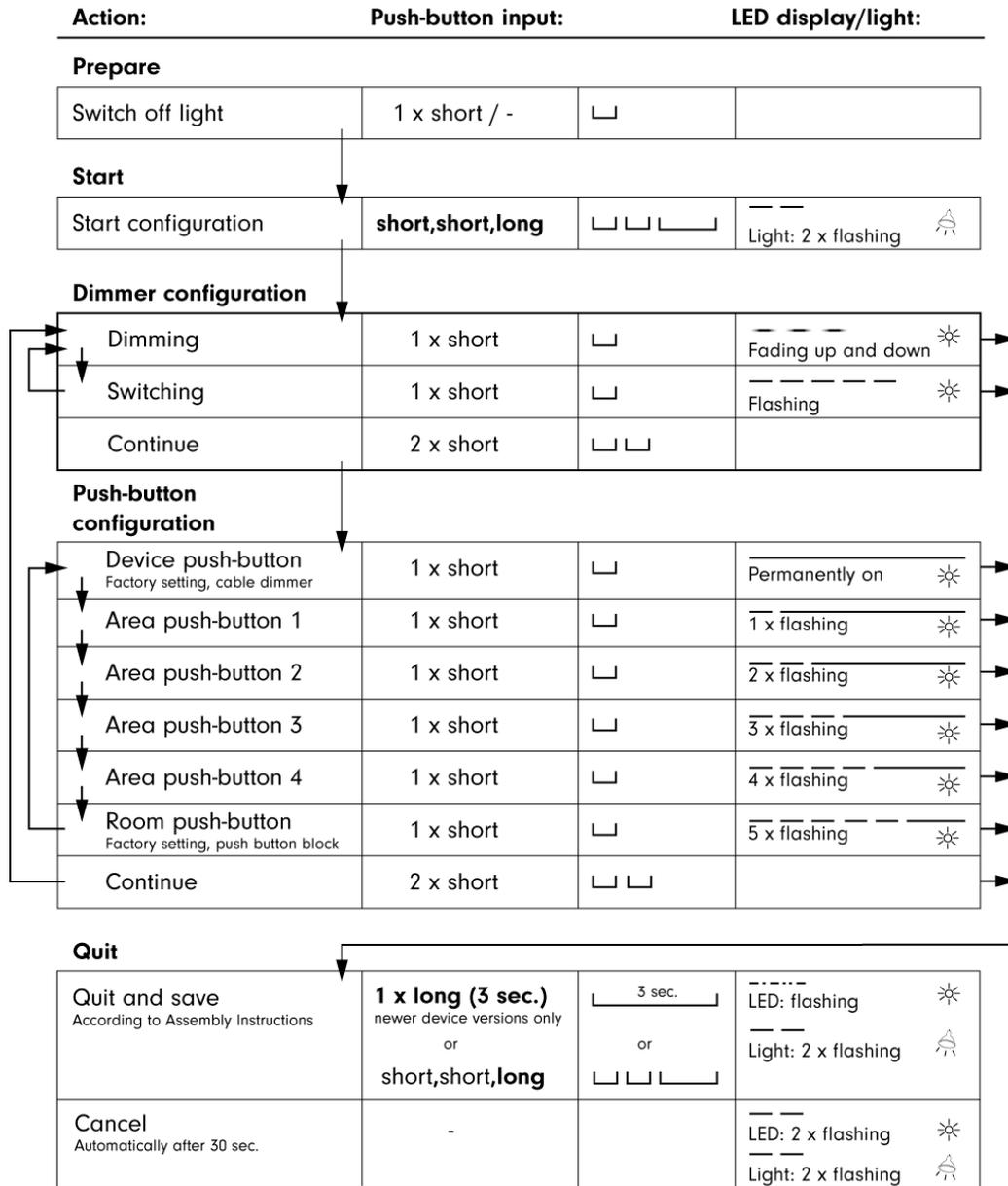


Fig. 29: Overview for the configuration of the push button function with click command on the local push button of a digitalSTROM push button block Light

5.3.6 Calibration of the motion time and direction of the digitalSTROM relay terminal block Shade

The positioning of shading systems cannot be directly controlled through the power output of the terminal block. Instead it is controlled by the corresponding running time of the motor in the shading system. Therefore the shading system has to be calibrated after connection to the digitalSTROM relay terminal block.

During calibration the system moves to the end positions of the shading system whereby the direction of travel and the path/time measurements are parametrised in the terminal block.

It is imperative for the parameters to be determined in order to ensure safe and faultless operation.

The run time can only be calibrated, if per digitalSTROM relay terminal block only one tubular motor is connected for the shading system.



If you activate several tubular motors along with a digitalSTROM relay terminal block GR-KL200 via a cut-off relay, then you must set the run time manually and the **threshold value end switch detection** must be set to 0 mA.

Calibration by digitalSTROM Configurator

To perform the calibration in the web-based digitalSTROM Configurator, use the command *Edit shade device properties* in the *Hardware* main section.

 *Edit shade device properties.*

In the *Shade device properties* use *Start to calibrate motion time and direction* to start a sequence whereby the terminal block determines the required parameters of the driven shading system independently.

Calibration is performed in 3 steps. At each step the user can visually check and confirm the shading system end position.

The individual steps depend on the type of shading system (shutters/blinds/awnings). Follow the corresponding instructions:

The dialogues for the digitalSTROM relay terminal block shutter GR-L200 (grey) are shown below as an example (Fig. 30, Fig. 31, Fig. 32).



Please note that the direction of travel of the connected shading system is not yet known prior to calibration. Therefore the push buttons for the motion commands in the dialogues are shown as left/right arrows (instead of Open/Close). You need to first test the direction of travel using the arrows before you can follow the specified sequences.

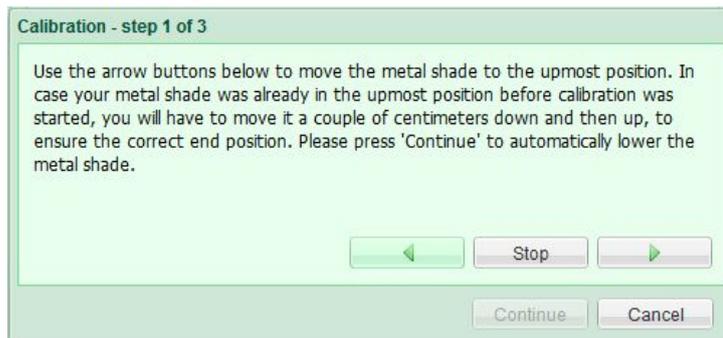
Calibration - step 1 of 3:

Fig. 30: Dialogue Calibration - step 1 of 3

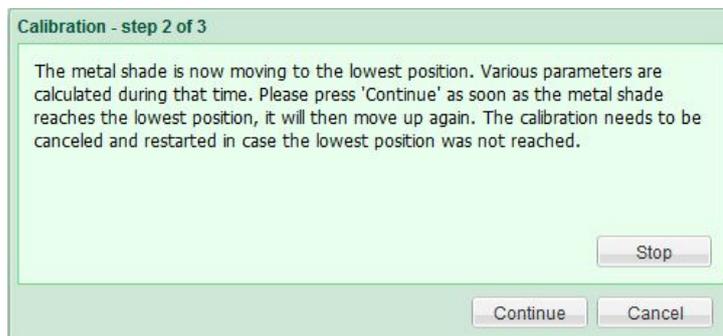
Calibration - step 2 of 3:

Fig. 31: Dialogue Calibration - step 2 of 3

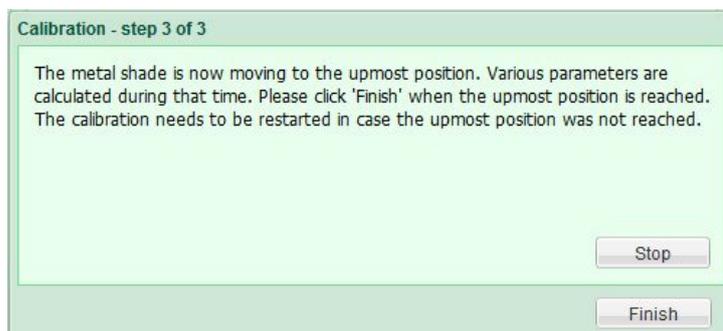
Calibration - step 3 of 3:

Fig. 32: Dialogue Calibration - step 3 of 3

5.3.7 Turn time calibration for the digitalSTROM relay terminal block Shade

Blinds are mechanically constructed to close the blades when they are lowered.

If the blinds are re-opened, the blades are first turned over before the entire blind is raised. Due to this mechanical peculiarity the blades of many blinds can be controlled.

The digitalSTROM relay terminal block grey (Shade) can move the blades into the desired position. Here, the blade angle is not directly controlled by the terminal block power output. Instead, it is calculated on the basis of the turn time (running time of the motor needed to open/close the blades).

Therefore, after connecting a shading system with blades, the turn time must be calibrated. During calibration, the times for the complete opening and closing of the blades will be determined.

It is imperative for the parameters to be determined in order to ensure safe and faultless operation.

Calibration by digitalSTROM Configurator

To perform the calibration in the digitalSTROM Configurator, use the command `Edit shade device properties` (**Fehler! Verweisquelle konnte nicht gefunden werden.**) in the *Hardware* main section.

Start calibrate turn time to determine the turn time of the blades manually.

This calibration takes 2 steps. In the first step, the turn time is roughly measured (Fig. 33) and in the second step the complete opening and closure is checked visually and changed if necessary (Fig. 34). Confirm the settings in each case with *Next* and *Finish*.

Calibration - step 1 of 2:

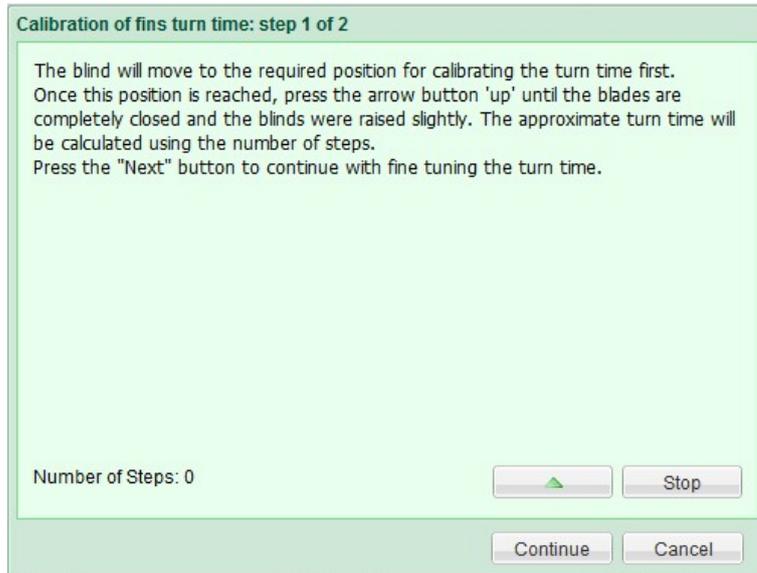


Fig. 33: Calibration turn time dialogue: Rough adjustment - Step 1

Calibration - step 2 of 2:

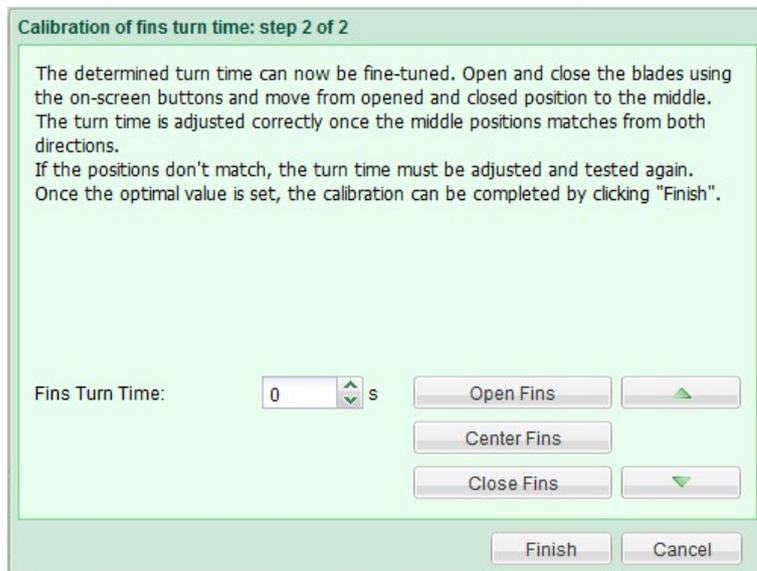


Fig. 34: Calibration turn time dialogue: Fine adjustment - Step 2

You can always use **Reset** to return the turn time to the factory settings of 3 seconds.

To allow full visual concentration on the blade angle, you can open or close the blades by using the arrow keys `↑` and `↓` on your computer keyboard. Use the arrow keys `←` and `→` to approach the middle position.

5.3.8 Teaching-in radio-operated devices

Devices that should be connected to the digitalSTROM system via battery-free radio technology, use the Plan44-Bridge. The Plan44-Bridge is detected automatically after the installation by the digitalSTROM system and displayed in the configurator. Before Plan44-Bridge devices, such as actuators or temperature sensors can be used within the digitalSTROM system, these devices must "learn".

By right-clicking on the corresponding Plan44-Bridge device (**Advanced view - Hardware - List** of the digitalSTROM-**Meter**) you can **open** the configuration interface. The teach-in dialogue of the device takes place in this P44 Web interface.

More detailed information can be found at www.plan44.ch.

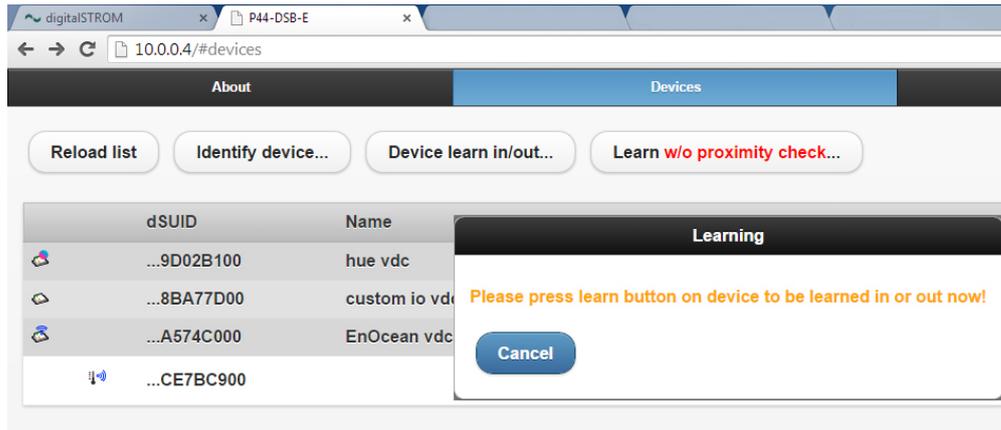


Fig 35: Dialogue of the Plan44-Bridge Web interface for teaching in radio-operated devices



The configuration interface of Plan44-Bridge devices is only available via the local network.

5.3.9 Configuration examples of the digitalSTROM devices

5.3.9.1 Light (yellow)

Configuration for all digitalSTROM terminal blocks Light (TKM, KM, SDS, SDM, UMV)

Change current device value

In the *device setup* dialogue (Fig. 36) for the digitalSTROM light terminal block (yellow), the following parameters are available for the respective digitalSTROM Meter:

"Value"

The current device value (0-100 %) can then be changed by using the slider or by entering the value directly. In addition, the device value can be changed by using *Increase value* and *Decrease value* in 5 % increments. For the digitalSTROM relay terminal block Shade (grey) each actuation of *Increase value/Decrease value* will execute a small motion step.

Changing the device value in the dialogue will lead directly to a changed output value of the digitalSTROM device.

Min will set the current device value to 0 %.

Max will set the current device value to 100 %.

With *Select previous device* and *Select next device*, you navigate directly to the next or previous digitalSTROM device in the list.

Use this dialogue to test the connected digitalSTROM devices or to set the device values of all digitalSTROM devices in a room before saving them in an activity/preset.

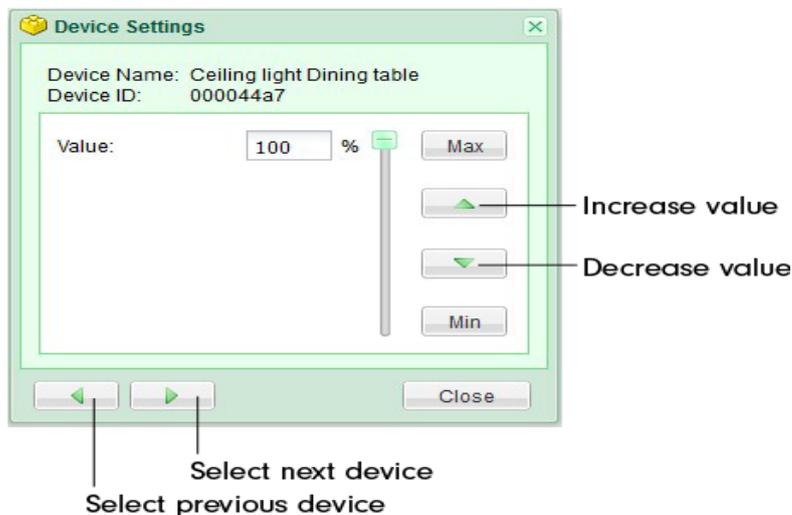


Fig. 36: Dialogue for the device setup of the digitalSTROM terminal block Light

Editing device properties

"Output"

Determines the operating mode of the power output of the digitalSTROM terminal block. The setting is only shown in the *Edit device properties* dialogue if the selected digitalSTROM terminal block is equipped with a power output.

"Switched"

The output is switched to 0 % (off) or 100 % power (on).

"Dimmed"

The output power varies between 0-100 %.
Use only for operation of dimmable loads!

"Deactivated"

The digitalSTROM device is not considered by the digitalSTROM Meter during the setup of presets and activities. Use this setting if no load is connected to the terminal block.

Additional configuration options for the digitalSTROM terminal block (GE-KM), push button block (GE-TKM), line dimmer (GE-SDS), UMV

Editing device properties

"Push button"

"Device push button"

The device push button always switches/dims a device connected to the output 1 with 1x click/hold down (see chapter 5.4.2.1).

"Area push button"

The area push button always switches/dims digitalSTROM devices belonging to the same area in a room with **1x click**. The other devices in the room are not affected (see chapter 5.4.2.2).

"Room push button"

The room push button always switches/dims digitalSTROM devices belonging to a room with **1x click**.

Additional configuration options for the digitalSTROM line dimmer (GE-SDS200)

Editing device properties

"Function"

For the digitalSTROM line dimmer GE-SDS200 with two push buttons, which can be operated together or individually, there are the following functions:

"1-way"

Both push buttons are operated as one (joint) single push button in the application area Light. Here, the line dimmer is listed as a single device in the device list.

"2-way"

Both push buttons are operated as 2-way push button for the application area Light. Here, one push button is used as On push button, the other as Off push button. Thus, dimming functions, for example, can be realised even more easily. Here, the line dimmer is listed as a single device in the device list.

"1-way + joker push button"

One push button is used as 1-way push button in the application area Light. Here, the configuration is performed in the list of devices at the line dimmer GE-SDS200.

The configuration of the joker push button is performed at the line dimmer with the hardware data SW-SDS200 (shown additionally in the device list). The application area of the joker push button can be chosen as needed.

Editing device properties of additional configurations for the digitalSTROM terminal block with push button input and/or output

Advanced settings

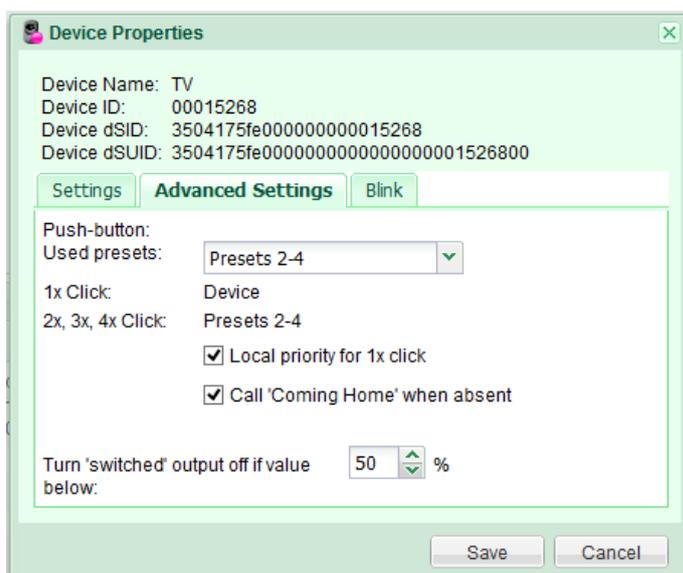


Fig. 37: Advanced settings tab for the device properties of the SW-ZWS200

In the **Advanced settings** tab the following parameters are available:

"Used presets"

Determines which presets are used for the selected digitalSTROM push button block for **1x click/2x, 3x, 4x click**:

- For device push buttons the following presets are fixed.
 - Device/preset 2-4
- For area push buttons, presets can be used as follows:
 - Area 1/Preset 2-4 or Preset 12-14
 - Area 2/Preset 2-4 or Preset 22-24
 - Area 3/Preset 2-4 or Preset 32-34
 - Area 4/Preset 2-4 or Preset 42-44
- For room push buttons, presets can be used as follows:
 - Presets 0-4
 - Presets 10-14
 - Presets 20-24
 - Presets 30-34
 - Presets 40-44
 - The preset 10, 20, 30 and 40 in the factory setting corresponds to **Off**.

For a quick overview of the current configuration, the used presets are displayed in form of a list:

"1x click"

Specifies if ***1x click*** applies to a connected device, the devices in an area or the preset in the room.

"2x, 3x, 4x click"

Visualises the used presets for ***2x, 3x, 4x click***.

"Switch off switched output if device value below"

Specifies from which device value the switched device is switched off. If, for example, a room is dimmed using the room push button or smartphone, the switched light would then go out at a device value of 50% (default). If this value is set to 1%, the light is no longer switched off when dimming.

Configuration of the digitalSTROM-UMV

The digitalSTROM-UMV has four output channels that are all listed individually in the digitalSTROM Configurator as ***output*** in the ***devices***. All outputs can be configured individually.

In the dialogue ***editing device properties***, you can, as described above, configure the push button (device push button, area push button and zone push button). You can also configure the following parameters.

"Output"

The output of LED lamp or fluorescent lamp can be ***switched*** (on or off), ***dimmed 1--10 V***, ***dimmed 0-10 V*** or ***deactivated***.

Please note that the choice of dimming (dimmed 0-10 V or 1-10 V) is dependent on the ballast of the fluorescent lamp connected. You will find more information on this on the ballast/dimming of your connected lamp.

"Load cut-off"

The load cut-off controls the complete switching off of a connected illuminant, converter or ballast by means of a relay. The following options are available:

- ***Never***
Connected illuminants, converters or ballasts are supplied with mains power continuously so that the response times are minimal when switching on the light. Please note that power is consumed continuously for this.
- ***if output 1 off***
Connected illuminants, converters or ballasts are disconnected if output 1 is switched off.
- ***if all outputs off***
Connected illuminants, converters or ballasts are disconnected if all outputs are switched off.
- ***Device off (LED)***
Connected illuminants, converters or ballasts are disconnected if the LED of the digitalSTROM-UMV (GE-UMV200) is switched off, e.g. when activating the presets ***"deep Off"*** or ***"sleeping"***.

Blinking of the digitalSTROM devices in a preset or activity

The blinking behaviour of digitalSTROM devices of the colour group light and joker can be set in the dialogue ***Edit device properties*** in the ***Blinking*** tab. These settings are applied when calling blinking for presets and activities as well as from the digitalSTROM Server apps.

Please note that the identification blinking executed in the configurator is preset and does not follow this setting.

The same function is available for the SW-UMR200 under the name *Impulse*.

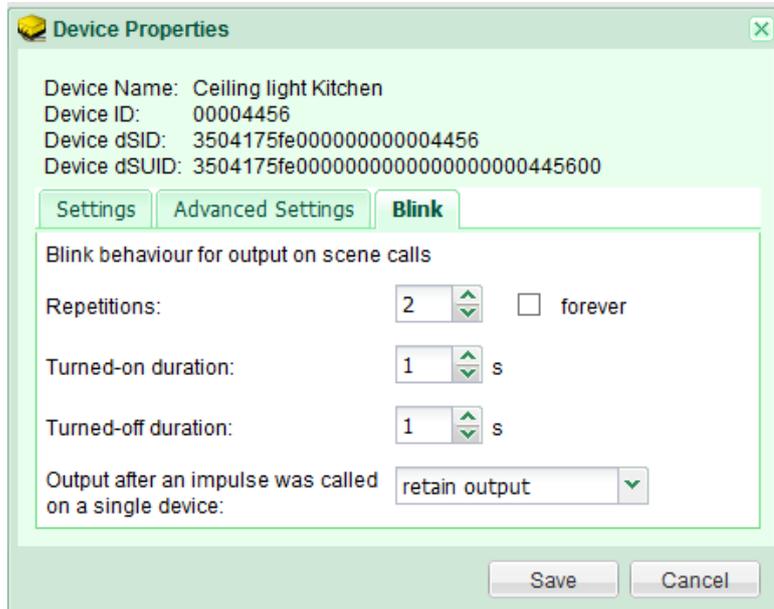


Fig. 38: Blink tab for the device properties

The blinking behaviour for the presets and activities called up can be set here:

- Repetitions: Repetitions as a number (1 to 254) or endless until another preset or activity is called up.
- Switch-on time: 0 to 8.4 seconds
- Switch-off time: 0 to 8.4 seconds

5.3.9.2 Shade (grey)

Change current device value

In the *Device setup* dialogue for the digitalSTROM relay terminal block shade (grey) the following parameters are available:

"Position"

The setting of the device value is interpreted by the digitalSTROM relay terminal block as position. For this purpose, the digitalSTROM relay terminal block must be calibrated appropriately after installation (see chapter 5.3.6).

Use **Stop** to stop the motion of a shading system e.g. if Open or Close was previously used to travel to the end position.

With **Open**, the movement command to fully open the shutters or extend the awning can be started.

With **Close**, the movement command to fully close the shutters or retract the awning can be started.

"Set blade angle"

The blade angle can be set by direct text input (values between 0-100 %) or with a slider. The blade angle must be calibrated appropriately after installation. (see chapter 5.3.7).

Editing device properties

In the *Edit devices* dialogue the following parameters are available to you:

"Push button"

You can selected between device push button, area push button, room push button or group push button (refer to Chapter 5.3.9.1).

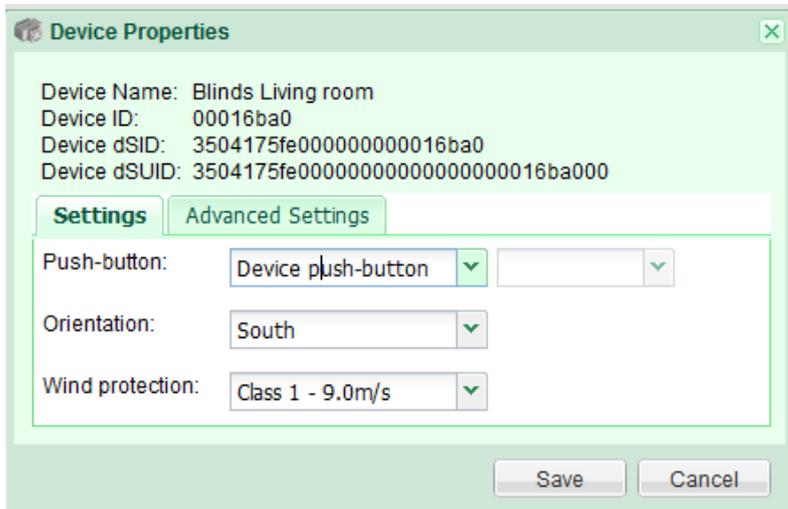


Fig. 39: Editing device properties blinds dialogue

"Orientation"

Here, you can select the wall orientation of your shading system, e.g. South.

"Wind protection class"

Here, you can select the wind protection class (1 to 6) according to EN 13561+A1 (Tab. 1 and Tab. 2) for your shading system. A new group is created automatically for this blind of the south wall, e.g. south - class 1 – 9.0 m/s.

The *orientation* and *wind protection classes* are used mostly in the building automation application where different shading systems are to be controlled by several wind monitors or weather stations.



Please note that blinds, shutters and awnings are subject to specific guidelines for wind protection classes (e.g. EN 13561+A1 Tab. 1 and Tab. 2). You can find this information in the product description of your shading system.

Tab. 1 Wind protection classes for shutters, venetian blinds and folding shutters (according to SN EN 13659+A1)

Wind class	1	2	3	4	5	6
Wind speed gusts (m/s)	9.0	10.7	12.8	16.7	21.0	25.6
Nominal test pressure (N/m ²)	50	70	100	170	270	400

Tab. 2 Wind protection classes for awnings (according to SN EN 13659+A1)

Wind class	0	1	2	3
Wind speed gusts (m/s)	<7.8	7.8	10.6	13.3

Edit Shade Device Properties

Allows adjustment of the properties of digitalSTROM relay terminal blocks used for the control of motorised shutters, blinds or awnings.

The values for *Motion time open-close* and *Motion time close-open* as well as the *Direction of travel* are detected during the calibration. (see chapter 5.3.6).

In the *Shade device properties dialogue* the following parameters are available:

"Motion time open-close"

Time the shading system needs to travel from the opened/extended end position to the closed/retracted end position.

"Motion time close-open"

Time the shading system needs to travel from the closed/retracted end position to the opened/extended end position.

"Turn blades"

Time a blind needs to open or close its blades.
Only active for blinds.

"Direction of travel"

Determines the direction of travel of the connected motor. The direction of travel for the motion commands Open/Close can be reversed depending on the shading system or manufacturer.

"Default"

Default direction of travel open/close

"Reverse"

Reversed direction of travel close/open

"Protect calibration values"

Protects parameters against being overwritten by the calibration. Calibration can only be initiated in the web-based digitalSTROM Configurator or via inching commands if the protection is lifted. This setting prevents the unintentional overwriting of calibration data during the setup of new presets.

"Calibrate motion time and direction"

Determines the motion time and direction of travel for the shading system connected to the digitalSTROM relay terminal block. For more information on this subject, refer to Chapter 5.3.6.

„Calibrate Turn Time"

Determines the turn time for the blades of the blinds connected to the digitalSTROM relay terminal block (see chapter 5.3.7).

Comment on the handling and interpretation of properties for different shading systems:

Shading system	Motion commands/Position in Off preset
Shutters	<p>Usually operated via 2-way push button.</p> <p>Motion time open-close: Motion time to lower shutter Motion time close-open: Motion time to raise shutter</p> <p>Shutters are used as screens or as weather and burglar protection. In the factory settings of the digitalSTROM relay terminal block Shutters (grey) the shutters are closed (shut) in the Off preset.</p>
Blinds	<p>Usually operated via 2-way push button.</p> <p>Motion time open-close: Motion time to lower blind Motion time close-open: Motion time to raise blind</p> <p>Blinds are used as screens or as weather and sometimes as burglar protection. In addition to their position, you can also control the angle of the blades. Blinds are also known as slat blinds. In the factory settings of the digitalSTROM relay terminal block Blinds (grey) the blinds are closed (shut) in the Off preset.</p>
Awning	<p>Usually operated via 1-way push button.</p> <p>Motion time open-close: Motion time to retract awning Motion time close-open: Motion time to extend blinds</p> <p>Typically awnings are shading systems made of fabric. For this reason they are usually retracted during bad weather or absence. In the factory settings of the digitalSTROM relay terminal block Awning (grey) the awnings are retracted in the Off preset.</p>

In the *Advanced settings* tab the following parameters are available:

"Motion time when blinking"

Blinking is indicated by a short motion of the shading system.
 Motion time for the blinking motion.

"Maximum motion time"

Specifies the maximum motion time in one direction. The motor stops after this time (120 seconds by default). If a large shading system that needs a longer motion time is connected, this time can then be increased manually here.

"Reverse time on direction change"

Duration of the motion break caused by a direct reversal of direction.

"Follow-up time at end position"

Maximum period of time after the end of the motion time while the motor is still supplied with power by the digitalSTROM relay terminal block. This ensures that the end position is reached in case of increased motion time (e.g. caused by cold weather or dirty guide rails).

"Threshold of end switch recognition"

The digitalSTROM relay terminal block monitors the load current. If the load current drops below this threshold the reaching of the end position is detected. It drops once the shading system runs up on the integrated limit switch.

During standard operation the threshold must not be set to less than 116 mA (in factory settings the threshold is 232 mA). If the value is set to less than 58 mA, limit switch recognition is deactivated and the digitalSTROM relay terminal block switches off the load after the defined motion time.

"Number of steps for fine tuning adjustment"

Number of motion steps for fine tuning adjustment (Open/Close push button pressed for long) before continuous travel is started. Set the value at 0 if continuous travel is meant to start directly.

"Motion time for fine tuning adjustment"

Duration of motion steps for fine tuning adjustment. Used to determine the distance (or angle for slat blinds) of individual motions for fine tuning adjustment.

Information for digitalSTROM devices with push button inputs in groups

If a digitalSTROM push button block is allocated to a group, the name of the group is automatically allocated in the properties dialogue and displayed with the group name and the addition (Group).

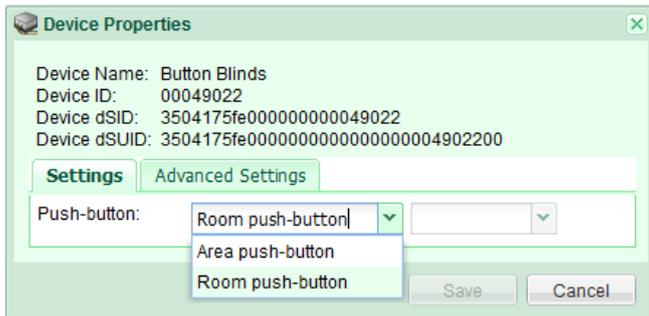


Fig. 40: Device properties dialogue of a digitalSTROM shade push button block (grey)

If a digitalSTROM device with a push button input is assigned to a group (e.g. digitalSTROM shade push button block (grey), the group will also be available in the properties dialogue but will not be automatically assigned. This makes it possible for the push button connected to the digitalSTROM device to be used as a central button for the group as necessary.

5.3.9.3 Climate (blue)

digitalSTROM climate terminal block

Changing current device value

In the *Device settings* dialogue (Fig.41) for the digitalSTROM climate terminal block (blue), the following parameters are available for the respective digitalSTROM meter:

„Value“

The current control value (0-100%) is applied by the PWM and displayed here.

„Forced mode“

The BL-KM200 is normally in operation mode: Control mode. To test the installation, the terminal block can be set to *„Forced operation On“* or *„ Forced mode Off“*. To switch the terminal block back to control operation, *„Normal mode“* can be selected.

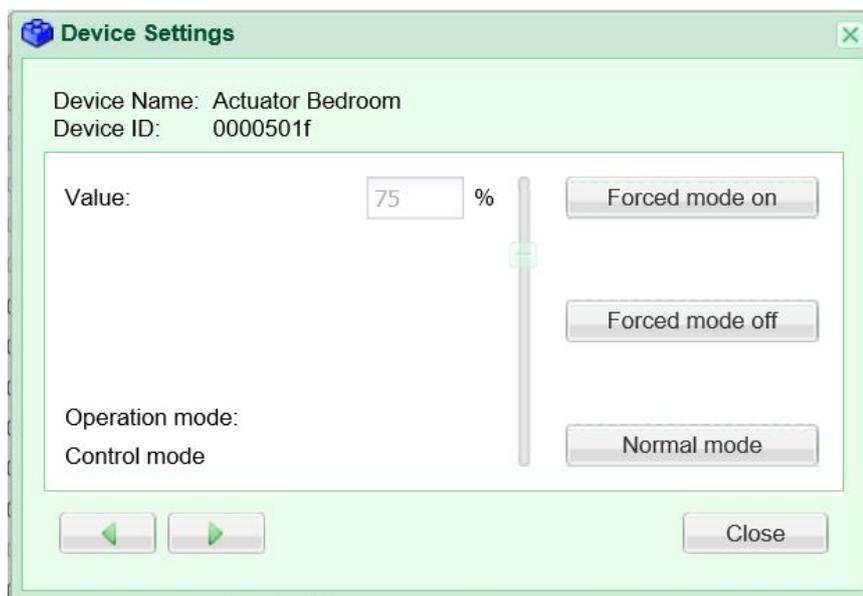


Fig. 41: Device settings dialogue, Forced mode BL-KM200

Editing device properties

In the dialogue *Editing device properties*, the following parameters are available for the digitalSTROM terminal block air conditioning:

“Heating group“

Select whether the heating system should be controlled by a temperature control or by presets.

The *Temperature control* is the standard of the digitalSTROM heating solution. Here, the digitalSTROM air-conditioning terminal block of the actuator is interconnected with a room climate sensor. Hence, the actuator (heating actuator) is either controlled by the room climate sensor or follows a fixed actuating value.

Please note that the output of the actuator must be set to *pulse width modulation*.

The temperature is controlled by the digitalSTROM app *Heating Control*.

If you select the air-conditioning terminal block as *heating*, you can then control the connected end devices by pressing a button or directly via the presets.

Please note that the output of the actuator must be set to *switched*.

"Connected end device"

Select the relevant end device: Unknown, floor heating, wall heating, radiator heating. Please note that this setting is important, when it comes to being able to automatically select the operating mode in the digitalSTROM server app heating control.

"Push button"

For the heating groups heating, cooling and ventilation, you can define the push button as a device push button or as a room push button.

Please note that this option is inactive for the heating group temperature control.

"Output"

The output of the actuator is dependent on the selected heating group:

- switched for the heating group *Heating*
- pulse width modulation (PWM) for the heating group *temperature control*
- deactivated (output is switched off) is possible for both heating groups

**Editing climate device properties**

In the dialogue ***Change climate device properties*** for the digitalSTROM climate terminal block, the following parameters are available for the particular digitalSTROM meter:

"Actuator type"

Select whether the valve used is open or closed if there is a control signal.

"Normally open (NO)"

The valve is opened without control signal. If the control signal is present, the valve closes.

"Normally closed (NC)"

The valve is closed without control signal. If the control signal is present, the valve opens.

"Pulse Width Modulation Cycle Time (PWM)"

The valves are controlled by a pulse width modulation signal (PWM). The cycle time determines how long this signal is.

Example: With a cycle time of 900 seconds (15 minutes) and a set point of 50%, the valve is closed during 7.5 minutes and then opened during 7.5 minutes.

"Cycle time of the valve protection signal"

Time within which the valve first moves from the closed end position and back again (only if valve protection is activated).

"Set point during emergency operation"

The opening of the valve when the valve does not receive any control signals due to a fault. With this entry you ensure that your rooms reach a pleasant temperature even during emergency operation.

"Advanced settings"

In the advanced settings, the output for the pulse width modulation and the switched output can be set. The values for the minimum and maximum PMW value, the minimum and maximum control value as well as the offset of the output are defined and displayed graphically in the dialogue.

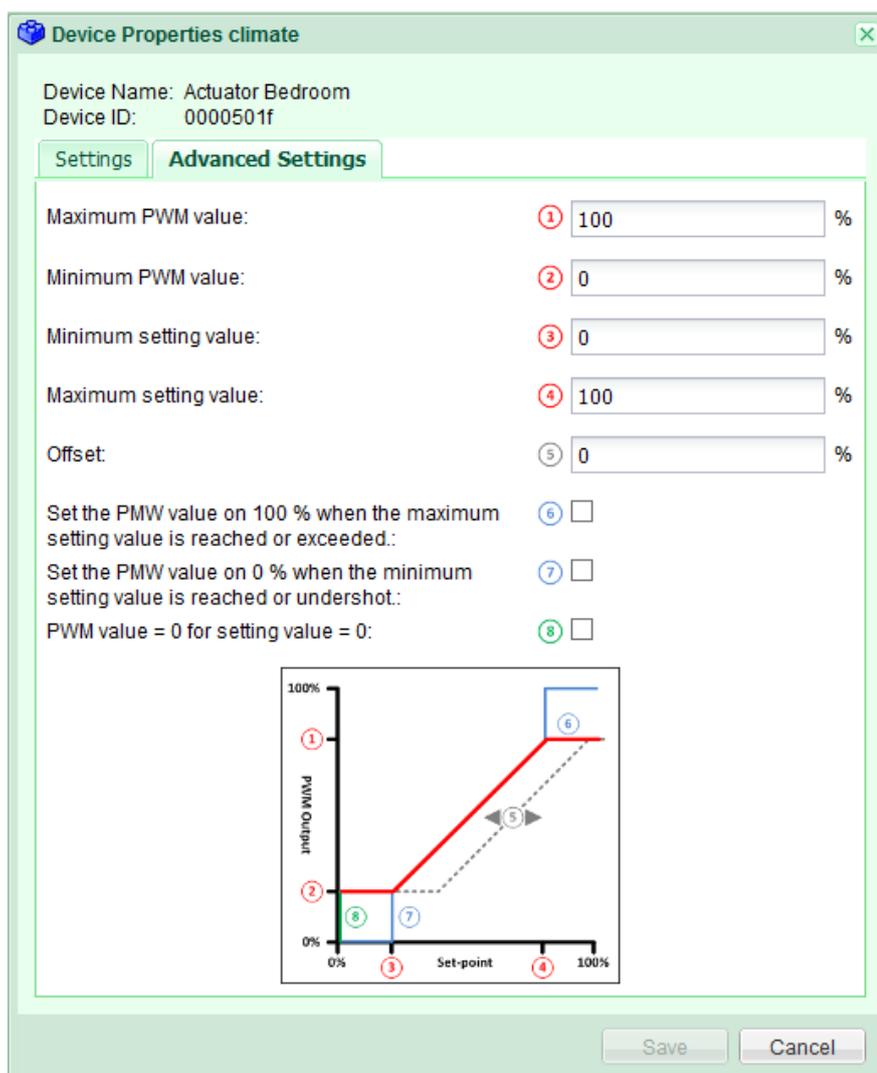


Fig. 42: Editing climate device properties dialogue for pulse width modulation

digitalSTROM indoor climate sensor



Display sensor values

For the digitalSTROM room climate sensor, you can display the current sensor values under **display sensor values**. Thus, a direct and real-time data query is possible.

Please note:

With EnOcean room climate sensors, the sensor values are sent at regular intervals and therefore cannot be called up directly.



Editing device properties

In the **Editing device properties** dialogue it is possible to enter the real or current temperature if necessary (Fig. 4343). This will only be necessary if the measured temperature does not match the actual temperature. The offset is calculated and applied automatically.

Please note:

The temperature offset can only be entered for supported devices.



Fig. 43: dS-iSens200 device properties dialogue

Configuration of heating control

The digitalSTROM heating control is a room-based concept so that each single room can be controlled individually.

The configuration of the heating includes the type of heating control, the settings of the heating per room, as well as the creation of time profiles.

The digitalSTROM heating application provides an infrastructure that intelligently controls individual rooms using connected room temperature sensors and actuators (heating control valves). The temperatures are set for different operating modes as desired and selected depending on requirements.

As a first step, the blue digitalSTROM climate terminal blocks and the temperature sensors (e.g. digitalSTROM room climate sensor dS-iSens200) are fitted. Alternatively, selected radio-based EnOcean devices can also be used.

In a second step, the relevant operating mode (floor heating, wall heating or radiator heating) and the heating group (temperature control) is allocated to the connected end devices (e.g. actuator BL-KM200). These settings can be set for the actuator in the **Hardware** tab under **Edit device properties**.

In a third step in the **Rooms** tab, allocate the digitalSTROM climate terminal blocks and temperature sensors in the digitalSTROM-configurator to the relevant rooms.

In a fourth step install the **heating control** App under the **Apps** tab in the digitalSTROM configurator.

In the **overview** tab select the mode for the normal operation: **comfort** and **eco**. This is always active, unless the night or room reduction is active or you are on holiday.

Under **rooms**, the current temperatures, the target temperatures and the current mode for your rooms are displayed. If required, you can switch the room reduction (mode **cool**) manually for individual rooms on- or off.

Please note that references to faults and configuration errors are displayed under **news and events**.

In the **Heating** tab you can define the standard temperatures in Celsius degrees for all rooms and for the five operating modes (**Comfort**, **Eco**, **Cool**, **Night** and **Holiday**). If the selected room is in the operating mode **use set control value**, then select, instead of the temperature, the desired control value (0% to 100 %) for the valve opening.

You can also easily make these settings in the **climate control** app on your Smartphone under **standard temperatures**.

You can choose under ***behaviour when absent***, whether the rooms, when the activity ***leaving home*** is activated should automatically be shifted into the mode ***cool***, to actively save energy. This option is particularly useful if the rooms are heated with radiators or if the building is poorly insulated. If your home is equipped with floor heating or is very well insulated, this option is not recommended.

You can easily set the time the heating starts via the ***Climate Control*** app on your Smartphone.

The temperature of your apartment is lowered during your holiday. If after your holiday, you would still like to come back to a nice warm home, you can decide using the ***preheat time at the end of the holiday***, how long before you return, the heating should switch to normal operation.

The ***Cooling*** tab is displayed automatically if the ***Heating and Cooling*** setting was selected for the Properties of the Heating System. This option is only available to heating systems that manage the passive cooling, e.g. heat pumps. At the same time, cold water is pumped through the radiator. The settings for the cooling mode in summer can be displayed and configured here.

You can switch between heating and cooling mode either from a building management system via the digitalSTROM-Gateway or from a sensor terminal using the sensor function switchover heating/cooling.

The ***switchover heating/cooling by*** parameter shows whether the last switchover was performed by a building management system or sensor terminal. If a sensor terminal was used, the corresponding terminal is listed under ***sensor switchover heating/cooling***. Additionally, the entire heating system can also be switched off via a sensor terminal. At the same time, the terminal used is displayed with the sensor function ***Heating switched on/off*** in the parameter Sensor heating on/off. Please note that the heating is switched on if the contact is closed.

In the ***room settings*** you can set the minimum temperature for each room. If this temperature is exceeded, the cooling system in this room is switched off automatically. In the ***room cooling*** column, the cooling can also be switched off manually.

In the ***time profiles*** tab, you can set time profiles for the night and room reduction, which reduce the room temperature automatically and thus actively save energy.

Configure night reduction: This option allows you to reduce the temperature of your whole apartment (Mode ***Night***).

Configure room setback: This option allows you to reduce the temperature of individual rooms. If, for example, you only need a room at the weekend, the temperature of the room can be lowered on week days (Mode ***cool***).

If you have set both time profiles for the ***night reduction*** and for the ***room reduction***, the room is always reduced to the lower temperature.

The night and room setbacks can be defined for every day or for the whole week. You can also flexibly adjust these time profiles in the ***Climate Control*** app on your Smartphone.

Your time profiles are displayed with wide bars in the graphical interface.

You can find more information on the configuration of the night and room setback in the on-line help.

In the ***general settings*** tab you have the following setting options:

Heating control switched on or off: if the control is switched on, the rooms are regulated to the temperature desired for the active mode. If the control is switched off, all heating actuators are deactivated and the heating valves are closed (NC valves) or open (NO valves). In this way you save energy. The room temperature is also logged and can be read via the **Climate Control app**. Under **building type**, choose whether it is a single family house or an apartment in an apartment block.

Under **Heating system** select the heating or heating and cooling options.

In the **Room settings** the operating mode of the heating for your rooms, the control value for emergency operation and the associated room sensors and terminal blocks/actors are displayed.

You can choose between the following operation modes (double-click on the selected room):

- Off – no control active
- Radiator
- Floor heating
- Control value follows a reference room
- Use predefined control values
- Automatic (Default)
The operating mode is automatically chosen for the connected end device.

More information on the **room settings** or operating mode of your heating can be found in the online help in the digitalSTROM Server App **Heating Control**.

5.3.9.4 Joker (black)

Configuration of the digitalSTROM-UMR200

Editing device properties (input)

In the **Editing device properties** dialogue for the inputs of the digitalSTROM SW-UMR200, the following parameters are available:

"Colour group"

Choose the desired digitalSTROM colour for the operation of the selected digitalSTROM device (see Chapter 1.6).

If you have chosen the colour group black (Joker) for the SW-UMR200 input, the desired function of a SW-TKM or SW-AKM can be selected under **"Input mode"**.

If you have the colour groups yellow (light), grey (shade) or blue (climate) for the SW-UMR200 input, the same configuration options are available to you as described in the Chapters 5.3.9.

"Input mode"

Choose the desired input for the operation of the selected digitalSTROM device: **«Leaving home»**, **«Ringing»**, **«Panic»**, **«App-push button»** or **«Sensor»**.

If you have defined the input mode as a sensor, the same configuration options are available to you as for the automation terminal block (see Chapter 5.3.9.4).

Editing device properties (Output)

In the **Editing device properties** dialogue for the outputs of the digitalSTROM SW-UMR200, the following parameters are available:

"Colour group"

Choose the desired digitalSTROM colour for the operation of the selected digitalSTROM device (see Chapter 1.6).

If you have chosen the colour groups yellow (light), grey (shade) or blue (climate) for the SW-UMR200 output, the same configuration options are available to you as described in Chapter 5.3.9.

"Output"

Operating mode of the power output for digitalSTROM devices with power output. The output can

- switched individually
Both outputs can be configured and switched individually.
- switched combined
Both outputs are switched together.
- switched combined in 2 stages
Both outputs are switched combined and depending on the output value in 2 stages:
33 % relay 1 on/66 % relay 1 on and relay 2 An
- switched combined in 3 stages
Both outputs are switched combined and depending on the output value in 3 stages,
25 % relay 1 on/50 % relay 2 on & relay 1 off / 75 % relay 1 on & relay 2 on
- or be deactivated.

"Advanced settings"

"Switch off switched output if device value below" specifies from which device value the switched device is switched off. If, for example, a room is dimmed using the room push button or smartphone, the switched light would then go out at a device value of 50% (default).

If this value is set to 1%, the light is no longer switched off when dimming.

"Impulse"

The impulse behaviour for the presets and activities called up can be set here:

- Number of Impulses: Repetitions as a number (1 to 254) or endless until another preset or activity is called up.
- Impulse duration: 0 to 8.4 seconds
- Impulse pause: 0 to 8.4 seconds
- Output after impulse on individual device: switched on, switched off or do not change

Configuration options for digitalSTROM push button blocks

Editing device properties

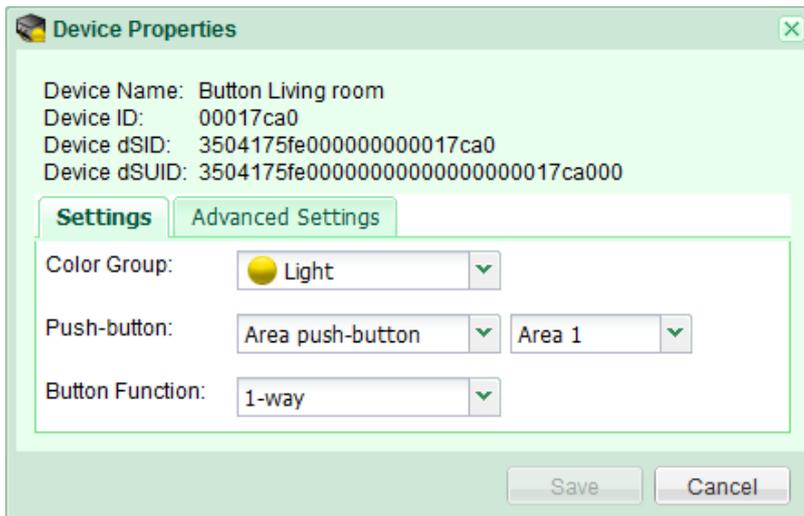


Fig. 44: Editing device properties of the SW-TKM200 dialogue

In the *Editing device properties* dialogue for the digitalSTROM push button block with input (e.g. SW-TKM200), the following parameters are available:

"Colour group"

This dialogue is only available for digitalSTROM devices of the application area Joker (black). Choose the desired digitalSTROM colour for the operation of the selected digitalSTROM device, i.e. yellow – light, grey – shade, blue – climate, cyan – audio, magenta – video, black–joker (see chapter 1.6).

If a push button is intended to switch a light, for example, the colour group is set to yellow. The colour group of digitalSTROM relay terminal blocks is set based on the connected devices.

E.g., set the colour group to Audio (cyan), if an audio system is switched on with it. In this way the digitalSTROM push button block joker can be used as the push button in the different colour areas.

Furthermore in the colour group joker (black), higher-level activities (e.g. «**Ring**ing») or «**Pan**ic») can also be triggered or digitalSTROM Server *Apps* controlled with the connected push button. For this, see the description of "Push button" later in this chapter.

"Push button"

Depending on the function of the digitalSTROM push button block, presets can be called up for a device connected directly to the output (device push button), an area in a room (area push button) or for the whole room (room push button) (see chapter 5.4.2).

"Function"

Determines the functionality of the push button inputs 1 and 3 for the digitalSTROM push button block joker (black) (only for digitalSTROM push button block with 4 universal inputs).

If the push button inputs 1 or 3 are configured as 2-way push buttons, they will also determine the functions of push button inputs 2, or 4 respectively.

"1-way"

The push button inputs 1 and 2 are operated as separate single push button inputs. The push button inputs 3 and 4 are operated as separate single push button inputs. Hereby all push button blocks are shown in the device list.

"2-way Open/Close" for shade/light

The push button inputs 1 and 2 are used for the operation of a 2-way push button. The Open/Close push button is connected to push button input 1.

Push button input 2 is automatically linked to push button input 1. The configuration of the 2-way push button is performed on push button input 1.

The push button inputs 3 and 4 are used for the operation of a 2-way push button. The Open/Close push button is connected to push button input 3.

Push button input 4 is automatically linked to push button input 3.

The configuration of the 2-way push button is performed on push button input 3. Here the linked inputs (2 or 4 respectively) are not listed in the device list.

"2-way Close/Off" for shade/light

The push button inputs 1 and 2 are used for the operation of a 2-way push button. Here, the Close/Off push button is connected to push button input 1.

Push button input 2 is automatically linked to push button input 1. The configuration of the 2-way push button is performed on push button input 1.

The push button inputs 3 and 4 are used for the operation of a 2-way push button. Here, the Close/Off push button is connected to push button input 3.

Push button input 4 is automatically linked to push button input 3. The configuration of the 2-way push button is performed on push button input 3.

Here, the linked inputs (2 or 4) are not listed in the device list.

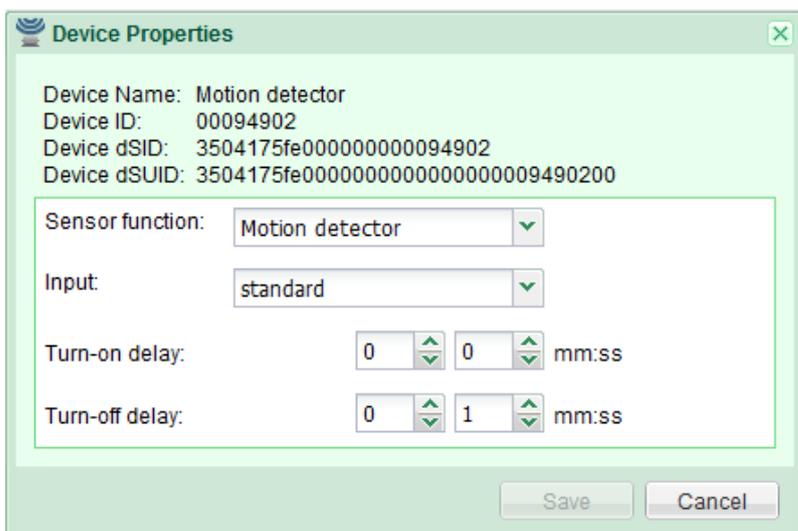
Configuration options for digitalSTROM-Automation terminal block SW-AKM210

Due to the set function of the connected sensor, pre-defined switching sensor messages which can be used e.g. in the digitalSTROM Server app "Event Responder" to trigger other activities are sent off by the digitalSTROM automation terminal block.

The sensor messages for wind, rain and smoke (fire) are processed as higher-level activities within the entire digitalSTROM system.

Delay values can be defined for the sensor signal in order to debounce the quick-acting signals. The switching thresholds for the switching signal itself (e.g. wind strength or amount of rain) are set at the connected sensor. When making these settings, please refer to the product information of the sensor manufacturer.

Editing device properties



Device Properties

Device Name: Motion detector
 Device ID: 00094902
 Device dSID: 3504175fe000000000094902
 Device dSUID: 3504175fe000000000000000009490200

Sensor function: Motion detector ▼
 Input: standard ▼

Turn-on delay: 0 0 mm:ss
 Turn-off delay: 0 1 mm:ss

Save Cancel

Fig. 45: Advanced settings tab for the automation terminal block

In the *Editing device properties* dialogue for the digitalSTROM Automation terminal block, the following parameters are available:

"Sensor function"

Specific function/operating mode of the connected sensor (on/off).

In the *Sensor function* dialogue the following parameters are available:

"App mode" Available application possibility. The switching sensor messages for *contact open* and *contact closed* are sent off.

"Presence" For use with a presence detector. The switching sensor messages for *contact open* and *contact closed* are sent off.

"Dawn/dusk" For use with a dawn/dusk sensor. Switching sensor messages *Light* and *Dark*

"Movement sensor" For use with movement sensors. Switching sensor messages *No movement* and *Movement*. With the digitalSTROM Server app *Movement sensor*, a multitude of application possibilities can be easily realised.

"Smoke detector" For use with smoke detectors. Switching sensor messages *no Smoke* and *Smoke*. Triggers the higher-level activity *«Fire»*.

"Wind monitor" For use with wind monitors. Switching sensor messages *no Wind* and *Wind*. Triggers the higher-level activity *«Wind»*

"Rain monitor" For use with rain monitors. Switching sensor messages *No rain* and *Rain* triggers the higher-level activity *«Rain»*

"Sunlight" For use with a light sensor. Switching sensor messages *Light* and *Dark*

"Sun protection" For use with a light switch that is set for the protection of objects. The switching sensor messages for *contact open* and *contact closed* are sent off.

"Frost monitor" For use with a frost monitor. The switching sensor messages for *contact open* and *contact closed* are sent off. Sets the higher-level state *Frost*.

"Thermostat" For use with a thermostat. Switching sensor messages *Temperature exceeded* and *temperature fallen below*

"Window contact" For use with a window contact. The switching sensor messages for *contact open* and *contact closed* are sent off.

"Door contact" For use with a door contact. The switching sensor messages for *contact open* and *contact closed* are sent off.

"Garage contact" For use with a garage contact. The switching sensor messages for *contact open* and *contact closed* are sent off.

"Heating switched on/off" For switching the heating control on or off automatically. In this way, a heating system can switch off the individual room control, if for example, the heating system is switched off during the warm season. If the contact is closed, the heating control is switched on. If the heating control is on with opened contact, the input can be set to inverted.

"Switchover heating/cooling" For use with heating systems that also manage the passive cooling, in which cold water flows through the radiators (see chapter 5.3.9.3). If the contact is closed, hot water flows through the heating system and the heating control is switched on. If the contact is open, cold water flows, whereby the rooms change to cooling mode and the heating valves are opened permanently. If the heating control is on with opened contact, the input can be set to inverted.

"Input" of the digitalSTROM devices determines the interpretation of the sensor signal.

In the *Input* dialogue the following parameters are available:

"standard"

The rising flank causes a switching sensor message for the On state.
The falling flank causes a switching sensor message for the Off state.

"inverted"

The rising flank causes a switching sensor message for the Off state.
The falling flank causes a switching sensor message for the On state.

"rising flank on"

Only the rising flank causes a switching sensor message for the On state.

"falling flank on"

Only the falling flank causes a switching sensor message for the On state.

"rising flank off"

Only the rising flank causes a switching sensor message for the Off state.

"falling flank off"

Only the falling flank causes a switching sensor message for the Off state.

"rising flank on/off"

The rising flank causes a switching sensor message for the On and Off states in alternation.

"falling flank on/off"

The falling flank causes a switching sensor message for the On and Off states in alternation.

"Switching on delay"

The switching sensor messages for the On state are first sent off when the sensor signal for the minimal specified time duration is steadily present (time entry in minutes and seconds).

"Switching off delay"

The switching sensor messages for the Off state are first sent off when the sensor signal for the minimal specified time duration is steadily absent (time entry in minutes and seconds).

In the factory settings, the switching off delay is 1 minute in order to debounce sensors which switch frequently and thus minimize the amount of switching sensor messages. Therefore it is recommended to leave the switching delay set to at least 1 minute.

Configuration options for digitalSTROM devices with power output

The operating mode is available to digitalSTROM devices with power output of the application area Joker (e.g. SW-ZWS) as an additional configuration option for the *Editing device properties* dialogue.

The operating mode of the digitalSTROM device joker can be selected independent of the colour group. The operating mode of the power output is shown in the device list in the "Output" column. (see chapter 5.3.3).

In the Operating mode dialogue for the digitalSTROM devices the following parameters are available:

"Switching"

The connected device is controlled via a digitalSTROM push button with the same colour group. In Preset 1-4 and for Area on it is switched on; for Preset off, **«Leaving home»**, and **«Deep Off»** the connected device is switched off. This operating mode is used e.g. if you connect a lamp to the digitalSTROM device and operate it with the colour group light (yellow) via a room push button.

"Saving"

The connected device is switched off automatically during absence or at night in order to save energy. In case of **«Leaving home»**, **«Sleeping»** and **«Deep Off»**, the connected device will be switched off, **«Coming home»** or **«Waking up»** will switch it on again.

In addition, the power output switches on if **Presets 1-4** or **Area on** of the same colour group, e.g. for light (yellow) are called up. If the **Off** presets are called up, the output remains unchanged. The power output of the digitalSTROM devices in the colour group joker do not respond to **presets 1-4** or **Area On**.

Saving can therefore be applied to devices with high standby consumption (e.g. TV and audio equipment) or devices in permanent operation (e.g. network routers). During absence these devices will be automatically disconnected from the power supply.

"Wipe"

In the event of a brief power failure, many standard electronic devices switch to their own integrated standby mode (e.g. TV). In the operating mode Wipe the power supply for the connected device is briefly interrupted for the Off-presets or the activity **«Standby»** and the device is put into its own standby mode. In case of **«Leaving home»**, **«Sleeping»** and **«Deep Off»** the device will be completely cut-off from the power supply.

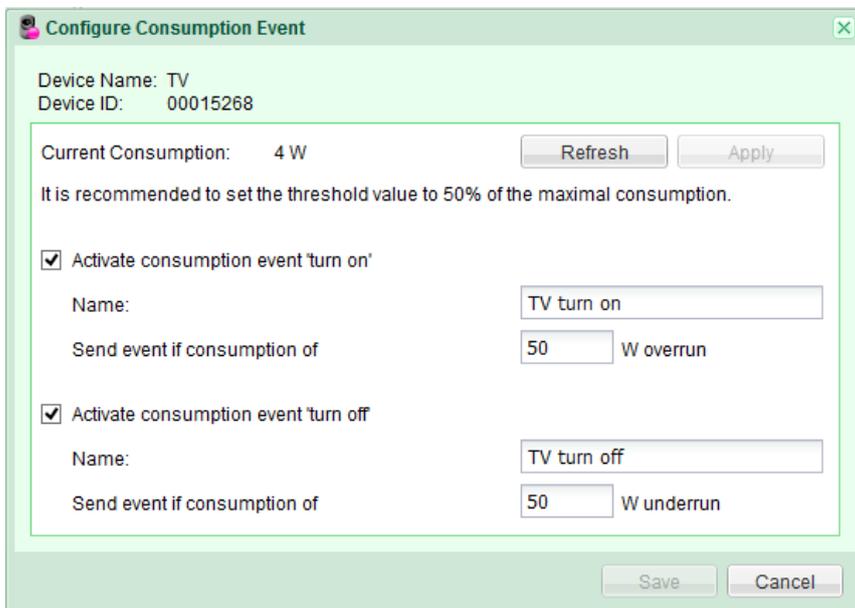
Preset 1-4, Area on as well as **«Coming home»** and **«Waking up»** will switch the device on again. By doing so the connected device will also be set to its own standby mode.

Thanks to the Wipe operating mode you can switch off the devices (e.g. TVs) via digitalSTROM. At the same time, these devices can be left in standby mode.

Configure consumption event message

Open for the dialogue for the configuration of the consumption event message for the selected digitalSTROM device.

This function is only available for the digitalSTROM relay terminal block joker (SW-KL), the digitalSTROM inline adapter (SW-ZWS) and the digitalSTROM line switch (SW-SSL).



Configure Consumption Event

Device Name: TV
Device ID: 00015268

Current Consumption: 4 W Refresh Apply

It is recommended to set the threshold value to 50% of the maximal consumption.

Activate consumption event 'turn on'

Name: TV turn on

Send event if consumption of 50 W overrun

Activate consumption event 'turn off'

Name: TV turn off

Send event if consumption of 50 W underrun

Save Cancel

Fig. 46: Configure consumption event message (joker) dialogue

If the consumption of the connected device exceeds or falls below the defined threshold, corresponding consumption event messages will be sent off.

The threshold should be set to 50 % of the maximum consumption of the connected devices. The minimum threshold value is 20 W. The messages can be used to control further activities (e.g. to trigger an activity in the digitalSTROM server App "Event Responder").

In the **Configure Consumption Event** dialogue the following parameters are available:

"Current Consumption"

Current consumption value of the connected device in Watt.

Use **Update** to update the display of the current consumption value.

Use **Apply** to set the thresholds automatically to 50 % of the current consumption value (recommended threshold).

"Activate consumption event 'on'"

Activates the sending of a consumption event message with the specified name (e.g. **TV on**), if the current consumption value exceeds the configured threshold (e.g. 230 W).

To send a repeat switch-on message, the current consumption must first drop 50 % under the switch-on value, so that if the consumption value is exceeded again, a switch on message is sent.

"Activate consumption event 'off'"

Activates the sending of a consumption event message with the specified name (e.g. **TV off**), if the current consumption value falls below the configured threshold (e.g. 230 W).

To send a repeat switch-off message, the current consumption must first rise 50 % above the switch off value, so that if the consumption value is exceeded again, a switch-off message is sent.



Please note:

An "off" consumption event message will only be sent if the digitalSTROM terminal block or digitalSTROM inline adapter is also switched on. If, for example, the digitalSTROM inline adapter is switched off manually, no consumption event message will be sent.

Information for digitalSTROM devices of the colour group joker (black)

Higher-level activities

If the input of a digitalSTROM device is configured for the joker application area, the connected push button can be used to trigger higher-level activities. To do so, select the higher-level activity («**Leaving home**», «**Ringling**», «**Panic**», or «**Alarm 1**»). Then the push button completely sets up the corresponding digitalSTROM push button block (e.g. as "Panic push button").

If the digitalSTROM device is switched off by activities such as «**Leaving home**» or «**Deep Off**», no consumption event will be notified.

"App push button"

The push button can be used as an App push button to control digitalSTROM Server *Apps*. The App push button has no predefined functionality in factory settings and can be used as needed. (see chapter 3.7.7 'Controlling different devices with the touch of a button' in the user manual).

If the digitalSTROM push button block joker (black) input is configured for the joker (black) application area, the push button is automatically used as App push button.

If one of the push buttons on the line dimmer GE-SD200 is used as joker button and configured for the joker (black) application area, the joker push button will also be automatically operated as App push button.

See the following description for the configuration of the push button function for the digitalSTROM push button block joker (black) and the line dimmer GE-SDS200.

5.4 Create rooms and assign devices

The distribution of power circuits in existing electric installations often does not correspond to the architectural allocation of rooms.

Thanks to digitalSTROM, digitalSTROM devices can be controlled independently of the electrical power circuit and the architectural floor plan and be freely allocated. For each electrical power circuit or respectively per digitalSTROM Meter up to 16 rooms can be covered.

Once the digitalSTROM devices have been configured and allocated to a room (e.g. reading corner or dining table), you can save for this room specific activities/presets (e.g. lighting presets for reading or dining) which can be called up with light push buttons.

Depending on the function of the digitalSTROM push button block presets can be called up for a device connected directly to the output (device push button), an area in a room (area push button) or for the whole room (room push button)

- Unless you have already renamed your digitalSTROM devices in the *Hardware* main section, you should allocate a unique name to each of them based on the previously noted dSID. This facilitates the subsequent configuration of digitalSTROM devices and presets.
- By default one room is created for each digitalSTROM Meter during installation. This room should be renamed first and used as room with most digitalSTROM devices. digitalSTROM devices later added physically to the system and registered are allocated by default to this room.
- Create additional rooms and give them explanatory, unique names.
- Allocate digitalSTROM devices to the created rooms by *Drag & Drop*.
- If all digitalSTROM devices in the room belong to an already existing room of another power circuit, all terminal blocks should be moved together via *Drag & Drop* to the other room.

The digitalSTROM push button block can be configured in the main section *Hardware* of the digitalSTROM Configurator or by an inching command on the local push button (see chapter 5.3.5).

If digitalSTROM devices from different power circuits or digitalSTROM Meters are combined to form one room, this room will take up one of the possible 16 rooms on both digitalSTROM Meters.

5.4.1 Application examples for rooms

Dividing a power circuit up in several rooms and allocating digitalSTROM devices

On the ground floor digitalSTROM-capable ceiling lights in the two bedrooms are all installed in the same power circuit (e.g. Light Sleeping GF). However, the ceiling lights in individual bedrooms are to be controlled differently.

Therefore you are going to rename the default room "parents' room" and create an additional room which you are going to call "children's room". Then you will shift the corresponding digitalSTROM devices from the "parents' room" to the "children's room".

Allocating digitalSTROM devices from different power circuits to one room

The digitalSTROM capable ceiling lights of an open eat-in kitchen are installed in different power circuits (e.g. F1 light living 1st floor, F2 light kitchen 1st floor). The proprietor of the apartment wants to control the ceiling light of the open kitchen and a section of the adjoining living area together (in the same lighting preset).

Therefore you are going to shift the desired ceiling lights from the room "living room" to the room "kitchen" and rename this room "kitchen with dining table". Then you are going to adjust the lighting preset for this room accordingly.

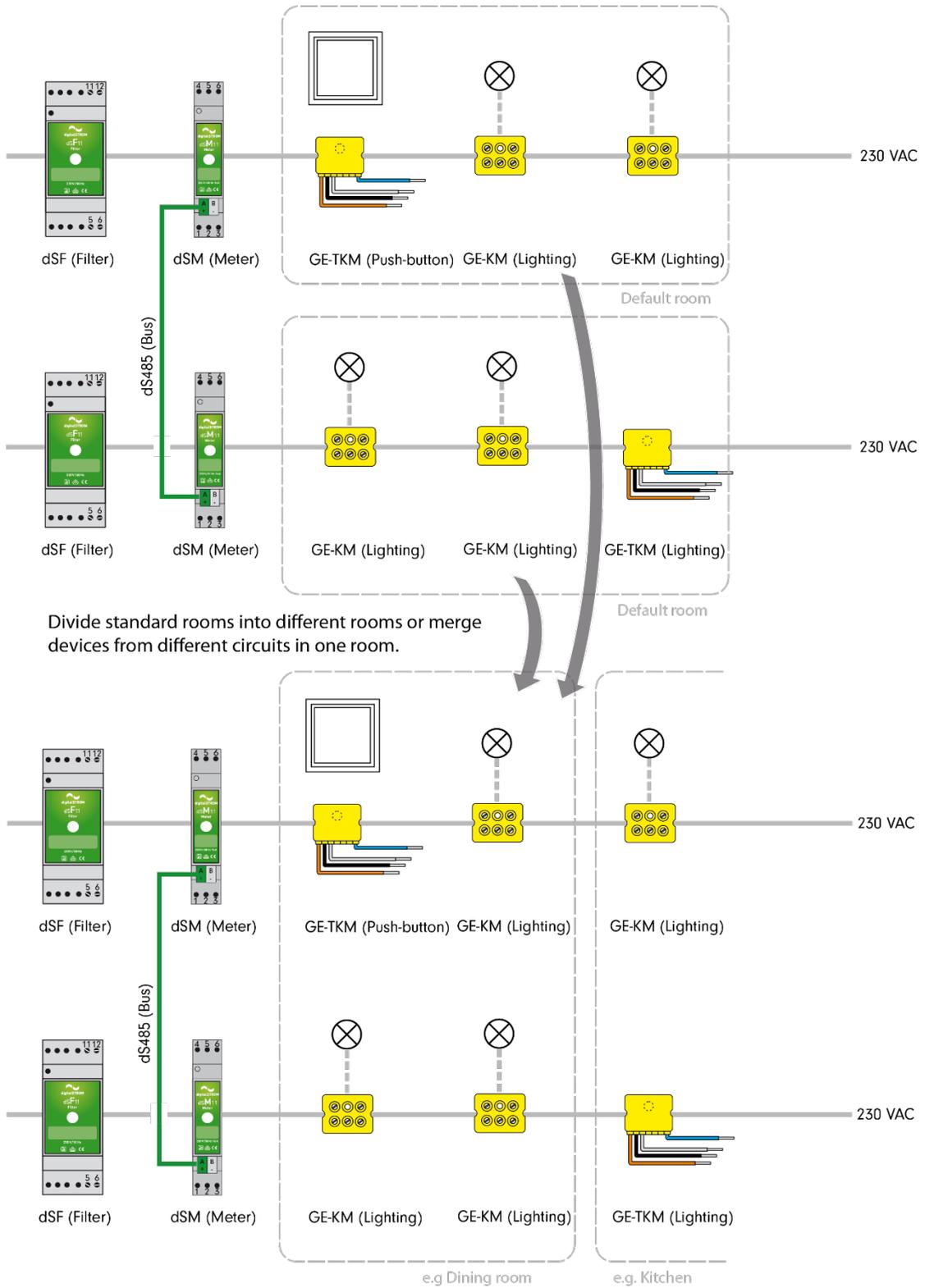


Fig. 47: digitalSTROM Installation with digitalSTROM devices on four digitalSTROM Meters

5.4.2 Push button function

The digitalSTROM push button block can be operated with three different push button functions.

The push button function can be configured in the main section *Hardware* of the digitalSTROM Configurator or by an inching command on the local push button (see chapter 5.3.5).

Push button	Use
Device push button	You can use the device push button to switch/dim a consumer connected directly to the power output of the digitalSTROM push button block (see chapter 5.4.2.1).
Area push button	Use the area push button to directly switch/dim selected digitalSTROM devices (area) with 1x click. The other devices in the room are not affected by this. Presets for the room can also be called up on the area push button with 2x, 3x, 4x click. Configuration examples of the area push button are shown in chapter 5.4.2.2.
Room push button	The room push button is generally used to call up presets for all digitalSTROM devices of the same colour group, e.g. Light (yellow), which are added to the room. Configuration examples of the room push button are shown in chapter 5.4.2.3 .

5.4.2.1 Device push button

The device push button always switches/dims a device connected to the output with 1x click. With **2x, 3x, 4x click** on the device push button additional presets can be called up for the room.

The behaviour concerning local priority can be set for the device push button. The local prioritization prevents a locally switched on light from being changed by a room preset. This light can only be switched off using the room push button when this is pressed for 1 second. If the local prioritization is deactivated, the light reacts to every room preset. To do this, under *Hardware / Editing device properties / Advanced properties*, the parameter 'Local prioritization with 1x click' is defined.

5.4.2.2 Area push button

The area push button always switches/dims digitalSTROM devices belonging to the same area in a room with **1x click**. All other devices in the room are not affected. Use the drop-down menu to select the desired area to be switched on with **1x click**. A maximum of 4 areas are available in each room.

The behaviour concerning local priority can be set for the area push button. The local prioritization prevents a light that was switched on using the area push button from being changed by a room preset. This light can only be switched off using the room push button when this is pressed for 1 second. If the local prioritization is deactivated, the light reacts to every room preset. To do this, under *Hardware / Editing device properties / Advanced properties*, the parameter 'Local prioritization with 1x click' is defined.

If a digitalSTROM push button block is configured as area push button, the main section **Activities** will show the associated preset, e.g. **Area 1 On**. If the preset for an area is saved (e.g. Area 1 On), the digitalSTROM devices switched on at this time (device value → 0 %) will automatically make up the corresponding area.

With **2x, 3x, 4x click** on the area push button additional presets can be called up for the room.

Example 1: Use area push button to switch specific lamps

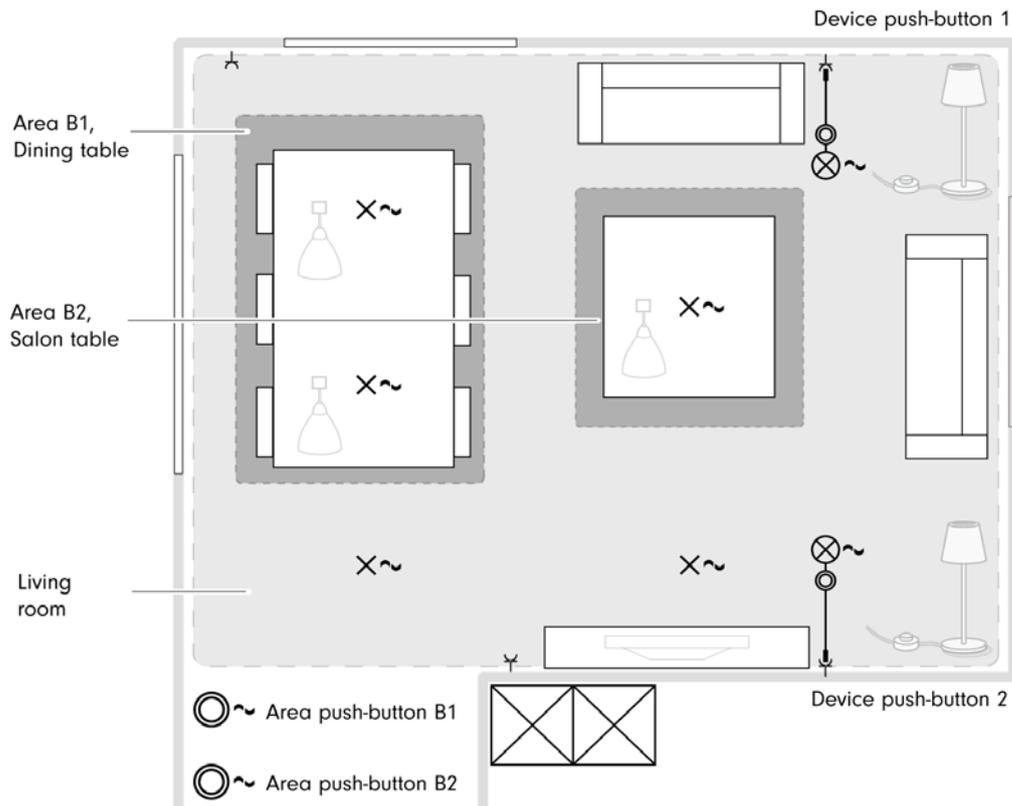


Fig. 48: Example of dividing a room into different areas

The area push button makes it possible to switch on all digitalSTROM devices within an area (e.g. both ceiling light in the area B1) with **1x click**. The other digitalSTROM devices remain unaffected (for the setting of areas also see Chapter 5.6.2).

Configure the two digitalSTROM push button blocks as area push buttons to be able to directly switch selected digitalSTROM devices in a room with only one click (Fig.48). The ceiling light in the dining table area and the lamp above the lounge table can thus be switched directly.

However, the area push buttons can still be used to call up presets for the room.

Local prioritization with 1x click

The device setup **"Local prioritization with 1x click"** allows you to determine how the digitalSTROM devices in an area should respond to the call-up of a preset for the room (see chapter 5.4.2.2).

Additional presets with area push button B2

If the presets available at the area push buttons do not suffice for the room (e.g. 2-4), you can configure the second digitalSTROM area push button to call up additional presets (e.g. 12-14). Thus, for example, the presets for dining can be set on the area push button B1 (dining table), and the presets for reading, relaxing or watching TV can be set on the area push button B2 (lounge table) (see chapter 5.5).

Push button	Click	Preset
Area push button	1x click	Area 1 On - Dining table
	2x click	2 – Reading
	3x click	3 – Relaxing
	4x click	4 – TV
Area push button	1x click	Area 2 on – Lounge table
	2x click	2 – Reading
	3x click	3 – Relaxing
	4x click	4 – TV
Device push buttons 1 & 2	1x click	Associated standing lamp
	2x, 3x,4x click	Presets 2-4

5.4.2.3 Room push button

The room push button is used to call up presets for all digitalSTROM devices of the same colour group within a room. The room push button switches and dims all digitalSTROM devices belonging to a room. With **1x, 2x, 3x and 4x click** you can call up different presets for the room. This corresponds to the factory settings of the digitalSTROM push button block.

Example 2: Combination between area and room push button

You want to be able to switch/dim two consumers connected separately via digitalSTROM line dimmers simultaneously from each line dimmer (e.g. connected standing lamps).

To do this, configure both digitalSTROM line dimmers as an area push button for the same area (B1).

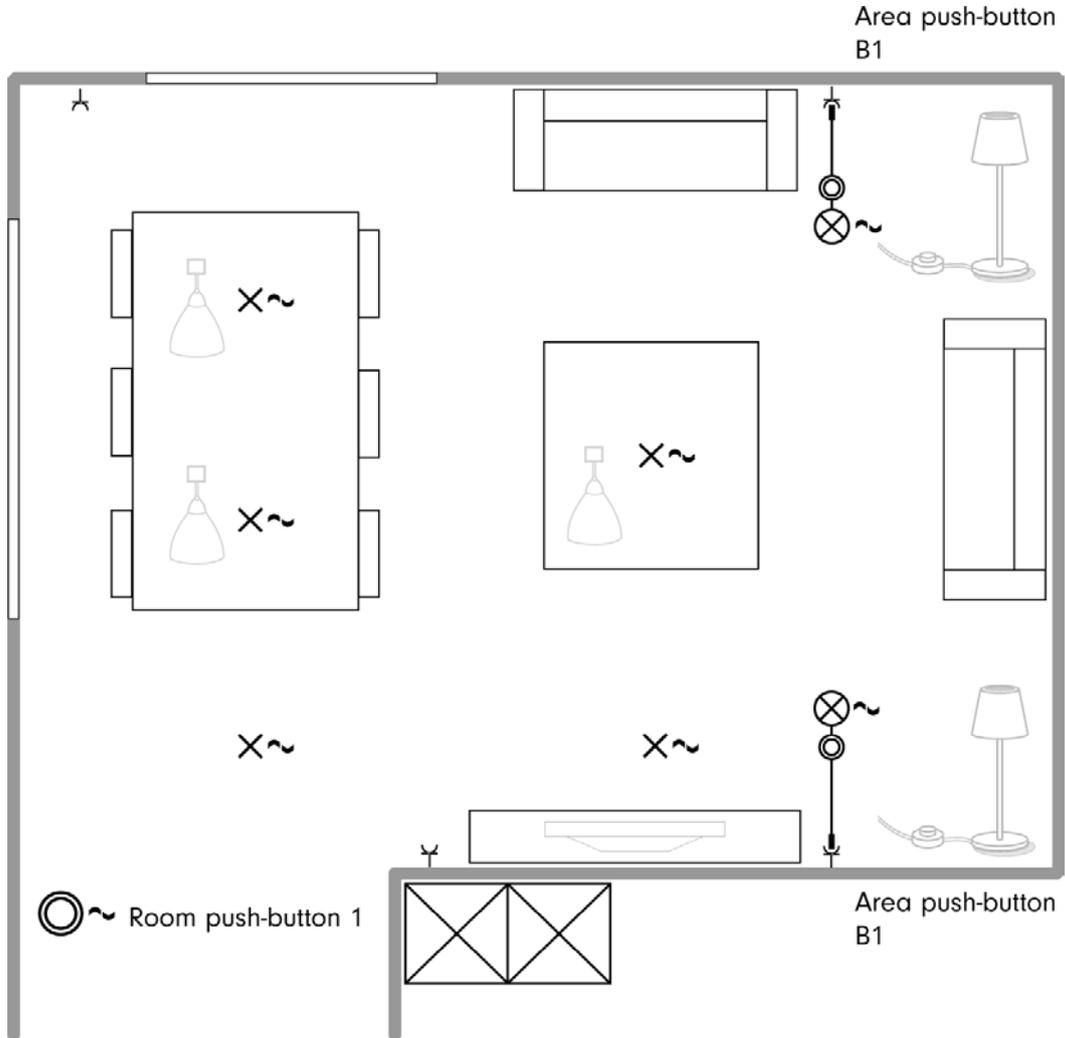


Fig. 49: Room plan of living room with one room push button and two area push buttons

Push button	Click	Preset
Room push	1 x click	1 – Dining
	2 x click	2 – Reading
	3 x click	3 – TV
	4 x click	4 – Whole room light
Area push button	1 x click	Area 1 On – Standing lamps
	2 x click	2 – Reading
	3 x click	3 – TV
	4 x click	4 – Whole room light



Please note

Owing to the decentralised logic of the digitalSTROM devices, it is possible that the state of the respective devices is not represented correctly. In the case of area and room push buttons, this may result in no reaction at the first click. If this happens, the button must be pressed again.

Example 3: Additional presets due to additional room push button

If more than 4 presets are required in a room, an additional room push button can then be installed (see chapter 5.3).

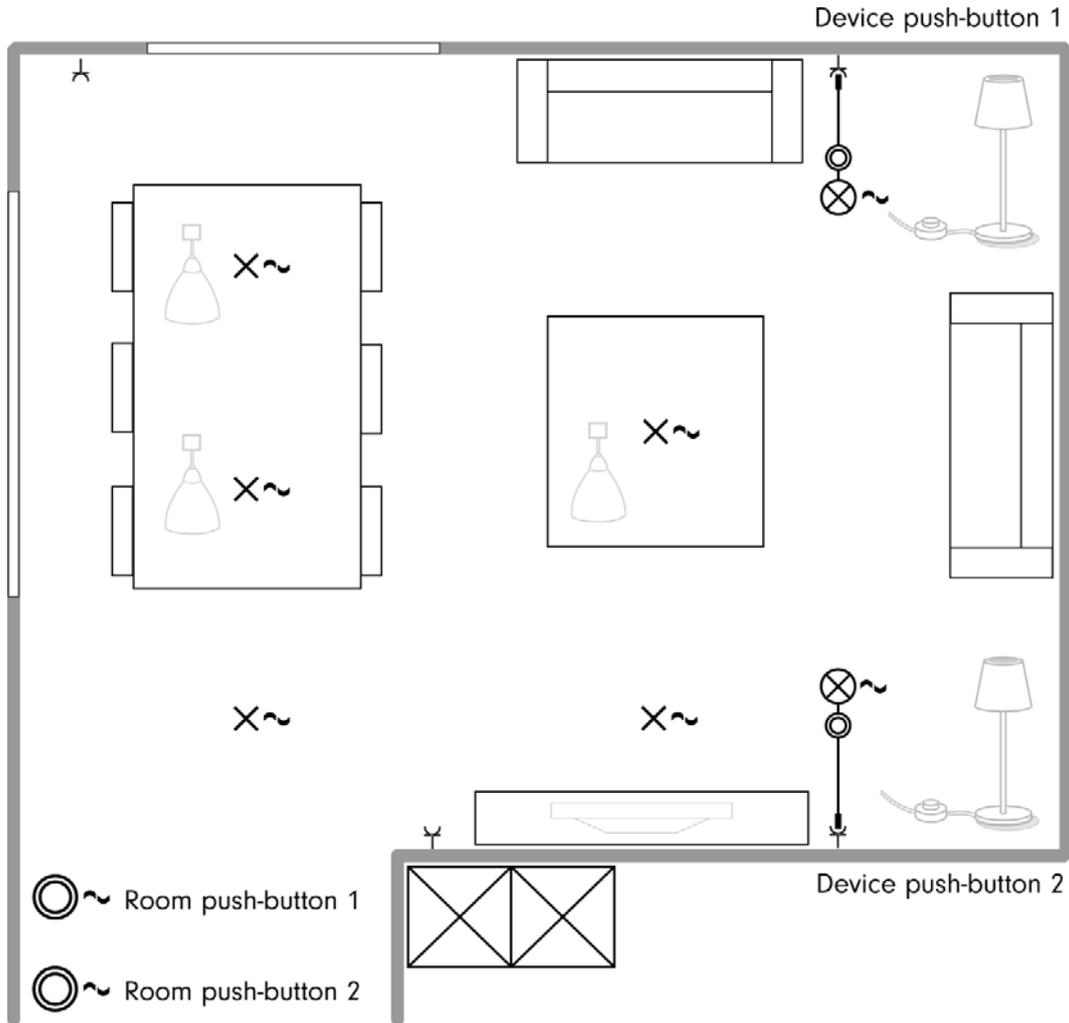


Fig. 50: Room plan of living/dining room with two room push buttons and two device push buttons

Push button	Click	Preset
Room push button 1	1x click	1 – Entire room
	2x click	2 – Reading
	3x click	3 – Relaxing
	4x click	4 – TV
Room push button 2	1x click	11 – Dining romantic
	2x click	12 – Dining light
	3x click	13 – Study
	4x click	14 – Living-room table lighting
Device push buttons	1x click	Associated standing lamp
	2x, 3x, 4x click	Presets 2-4

Example 4: Fewer clicks due to one additional room push button

Although the 4 presets in a room are enough for the residents, they want to be able to call up each preset with a maximum of 2 clicks.

Then install a second room push button as in example 1. The presets 3 & 4 and 13 & 14 remain unused, however.

Example 5: Dimmed preset with one additional room push button

Different lighting presets are called up in a bathroom with a room push button. The residents would like to be able to use dimmed lighting presets in the bathroom at night.

Then install a second room push button as in example 1 and 2 so that a dimmed light preset can be called up with just one click.

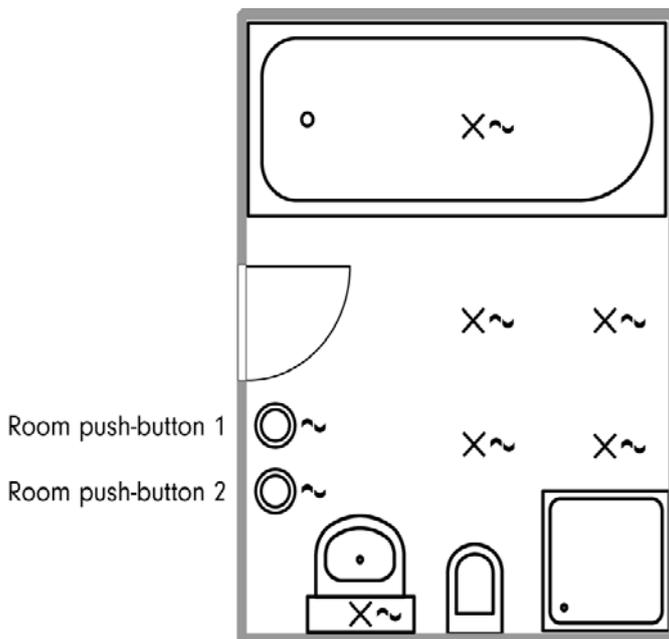


Fig. 51: Room plan of bathroom with two room push buttons

Push button	Click	Preset
Room push button	1x click	1 - Mirror cabinet/WC
	2x click	2 - Bath/shower
	3x click	3 - Whole room light
	4x click	4 - Preset 4
Room push button	1x click	11 - Mirror cabinet dimmed
	2x click	12 - Bath/shower dimmed
	3x click	13 - Whole room dimmed
	4x click	14 - Preset 14 dimmed

5.4.3 Creating and renaming digitalSTROM rooms

digitalSTROM rooms selection list

In the **Rooms** main section of the digitalSTROM Configurator the following parameters are available:

"All devices"

This entry contains all active and inactive digitalSTROM devices available in the installation.

The selected list shows the existing rooms in alphabetical order.



Rooms that contain devices without names, are marked in the list with a * .

Commands for the digitalSTROM rooms

Identification blinking

Makes all digitalSTROM devices allocated to the selected room blink for identification.

Create new room

Opens the dialogue to name the newly created room. We recommend selecting a meaningful name for the room.

Rename room

Opens a dialogue to rename the selected room.

Delete selected room

Opens the dialogue for deleting the selected room.

A room can only be deleted if no more digitalSTROM devices have been assigned to it and it is not the last room configured in the corresponding digitalSTROM Meter.

5.4.4 Allocate digitalSTROM devices to a room

digitalSTROM devices are assigned to another room with **Drag & Drop**. To do this, select a digitalSTROM device in the device list and drag this to the required room in the selection list while holding down the left mouse button (Fig. 52).

In order to move several digitalSTROM devices at the same time, select the digitalSTROM devices with the mouse button while holding down Ctrl or Shift.

If you want to move all digitalSTROM devices in a room to another one, make sure you select all the digitalSTROM devices before dragging them to the new room. This allows the system to address the digitalSTROM devices in the best possible way.

If a room contains a new or as yet unknown digitalSTROM device the symbol "*" appears in the selection list behind the room name.

Apps Aktivitäten Räume Gruppen System Hardware Hilfe																																													
Räume Alle Geräte Korridor Küche Schlafzimmer 1 Gerät ausgewählt Wohnzimmer		Geräte im Raum "Korridor - 1565" <table border="1"> <thead> <tr> <th>Name</th> <th>ID</th> <th>Ausgang</th> <th>Eingangs Modus</th> <th>Eingang</th> </tr> </thead> <tbody> <tr> <td>Bewegungsme...</td> <td>00094902</td> <td></td> <td>Bewegungsmelder</td> <td>Eingang 1, Standard</td> </tr> <tr> <td>Tischleuchte</td> <td>00003352</td> <td>geschaltet</td> <td>Gerät</td> <td>2-Wege</td> </tr> <tr> <td>Deckenleuchte...</td> <td>00004c39</td> <td>gedimmt</td> <td></td> <td></td> </tr> <tr> <td>Taste Gehen</td> <td>00005852</td> <td>geschaltet</td> <td>Gehen / Kommen</td> <td></td> </tr> <tr> <td>Szenario 1 Kor...</td> <td>0000448e</td> <td>deaktiviert</td> <td>Stimmung 0-4</td> <td></td> </tr> <tr> <td>Szenario 2 Kor...</td> <td>00005812</td> <td>deaktiviert</td> <td>Bereich 1, Stimmun...</td> <td></td> </tr> <tr> <td>Taster Küche</td> <td>00004456</td> <td>gedimmt</td> <td>Stimmung 10-14</td> <td></td> </tr> </tbody> </table>				Name	ID	Ausgang	Eingangs Modus	Eingang	Bewegungsme...	00094902		Bewegungsmelder	Eingang 1, Standard	Tischleuchte	00003352	geschaltet	Gerät	2-Wege	Deckenleuchte...	00004c39	gedimmt			Taste Gehen	00005852	geschaltet	Gehen / Kommen		Szenario 1 Kor...	0000448e	deaktiviert	Stimmung 0-4		Szenario 2 Kor...	00005812	deaktiviert	Bereich 1, Stimmun...		Taster Küche	00004456	gedimmt	Stimmung 10-14	
Name	ID	Ausgang	Eingangs Modus	Eingang																																									
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Szenario 1 Kor...	0000448e	deaktiviert	Stimmung 0-4																																										
Szenario 2 Kor...	00005812	deaktiviert	Bereich 1, Stimmun...																																										
Taster Küche	00004456	gedimmt	Stimmung 10-14																																										

Fig. 52: Main section of the digitalSTROM Configurator with the open Rooms tab

The same commands as described in chapter 5.3.9 are available for the digitalSTROM devices within the rooms. Please note the different command options for the various user areas, such as light (5.3.9.1), shade (see chapter 5.3.9.2), climate (see chapter 5.3.9.3) and joker (see chapter 5.3.9.4).

5.5 Creating groups and allocating devices

digitalSTROM devices can be operated within the same colour groups by means of groups.

Therefore sensors and push buttons which are allocated to a group trigger presets for all digitalSTROM devices in the group. Regardless of which room the digitalSTROM devices have been assigned to.

digitalSTROM devices are assigned to a group as follows:

- Create the desired group in the main section *group*
- Assignment of the digitalSTROM devices via *Drag & Drop*
- Allocate at least one sensor to the digitalSTROM group, e.g. a digitalSTROM push button block or a digitalSTROM automation terminal block.
- Then the group can be operated via the allocated push button or sensor. The devices in the rooms can continue to be operated as usual via the room push button.



Up to a maximum of 24 groups can be created and managed.

Application example, central push button for shading systems

Use one group for the colour group Shade (grey) if, for example, you want to operate the blinds not only via the push buttons in the room but also all blinds on the the south side of the building by using an additional digitalSTROM push button (e.g. from a central push button at the entrance).

For this purpose, the digitalSTROM push button (central push button) and the appropriate digitalSTROM relay terminal blocks Shade (grey) must be assigned to the same groups.

Application example, wind monitor for awnings and blinds

The higher-level activity «Wind» in the entire installation is called up by default if a wind monitor is connected to a digitalSTROM Automation terminal block (dS-AKM). Thus, all shading devices (awnings and blinds) are controlled simultaneously.

5.5.1 Creating a group manually

Application example, wind monitor for awnings and blinds

If you want to control all awnings and all blinds separately with one wind monitor, then simply create two groups and assign the wind monitor to both groups.

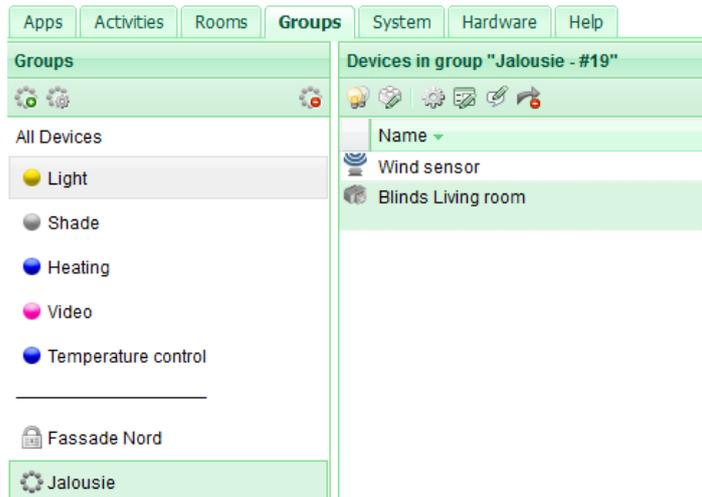


Fig. 53: Groups in the main section of the digitalSTROM Configurator dialogue

You can extend the groups as you wish. If, for example, you want to control your blinds to the south of your apartment independently of the north side, just simply create two groups for the different orientations.

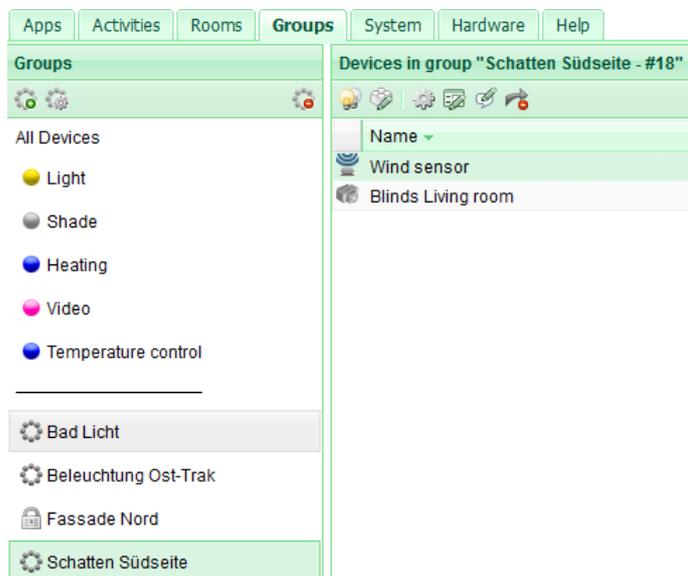


Fig. 54: Groups in the main section of the digitalSTROM Configurator dialogue

5.5.2 Creating groups automatically

Application example, wind monitor for awnings and blinds

However, if you want the wind monitor to protect the awnings for certain wind speeds and for the wall orientation, then assign the corresponding wind class to the awnings (Chapter 5.3.9.2). You can select both the wall orientation and the wind class (1 to 6). A new group is created automatically for these awnings of the south wall, e.g. south - class 1 – 9m/s.

Now, you just need to assign the corresponding wind monitor or wind monitor output of the group.

The automatic creation of the groups takes place mostly in the building automation application in order for the different shading systems to be controlled by several wind monitors or weather stations.



The wind speeds must be set on the wind monitor. We recommend using the standard values of your shading system. You can find this information in the product description of your shading system.

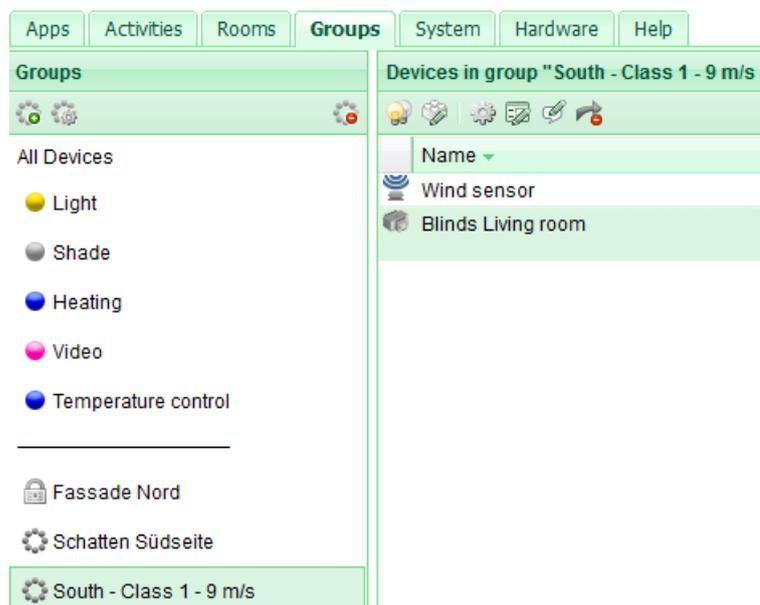


Fig. 55: digitalSTROM Configurator groups



If your wind monitor has different outputs, you can also create groups for various wind classes. For this purpose you need a wind monitor with several outputs (maximum four) and an SW-AKM200 digitalSTROM terminal block (see also chapter 3.5.3). The outputs of the wind monitor can then be set to different wind speeds.

5.5.3 Creating, editing and deleting digitalSTROM groups

Create new group

Opens the dialogue to create a new group. Up to a maximum of 24 groups can be created and managed.

Edit group

Opens the dialogue to edit the selected group. In order to be able to change the colour group of a group, first all digitalSTROM devices must be removed from the group.

Delete group

Deletes the selected group. In order to be able to delete a group, first all digitalSTROM devices must be removed from the group.

5.5.4 Allocating a digitalSTROM device to a group

digitalSTROM devices are assigned to a digitalSTROM group with **Drag & Drop**. To do so, select a digitalSTROM Device from the device list and with the left mouse button pressed, drag it to the selected group in the selection list.

In order to move several digitalSTROM devices at the same time, select the digitalSTROM devices with the mouse button while holding down Ctrl or Shift.

For devices with a power output, only the output is allocated to the group. The push button input retains its previous function. If the push button is to control this group, this must be set in the main section in the device properties of the device

In the case of devices without an input, the push button input is assigned directly to the group.

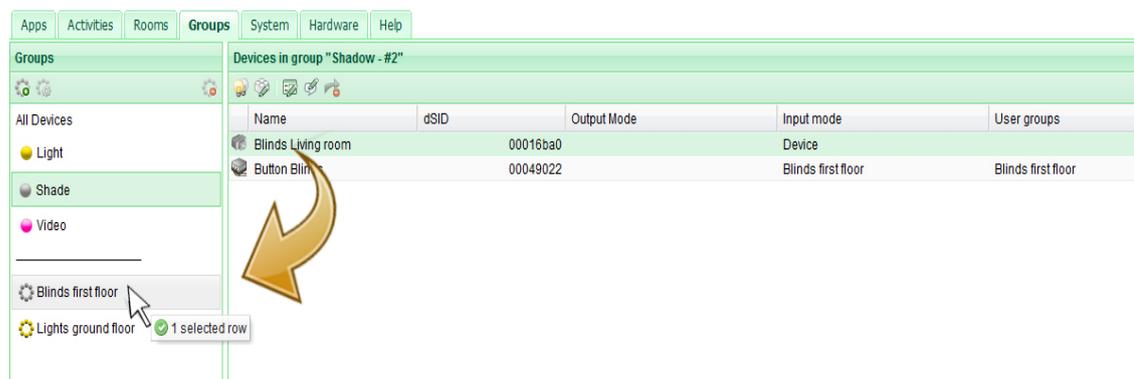


Fig. 56: Main section of the digitalSTROM Configurator with the open Groups tab

Columns and columns

The same commands are available for the digitalSTROM devices within the **Groups** as with the **Rooms** (chapter 5.3). Please note the different command options for the various user areas, such as light (5.3.9.1), shade (see chapter 5.3.9.2), climate (see chapter 5.3.9.3) and joker (see chapter 5.3.9.4).

Additional commands for the digitalSTROM devices are:

Remove devices from group

Removes the selected digitalSTROM device from the group.

5.6 Configuring activities and presets

Presets and activities can be configured by adjusting the device values for each room. Presets are limited to one application area e.g. (lighting preset), while in the case of an activity, several presets can be called up simultaneously (e.g. light and shading presets). Activities, however, can only be called up with special digitalSTROM devices (e.g. leaving home push button for higher-level activity «Leaving home») or in a digitalSTROM Server app.

At the same time, selected digitalSTROM devices can still be switched/dimmed directly with 1x click by means of an area push button.

Hence the functionality of a simple push button is extended to form a control unit for the whole room.

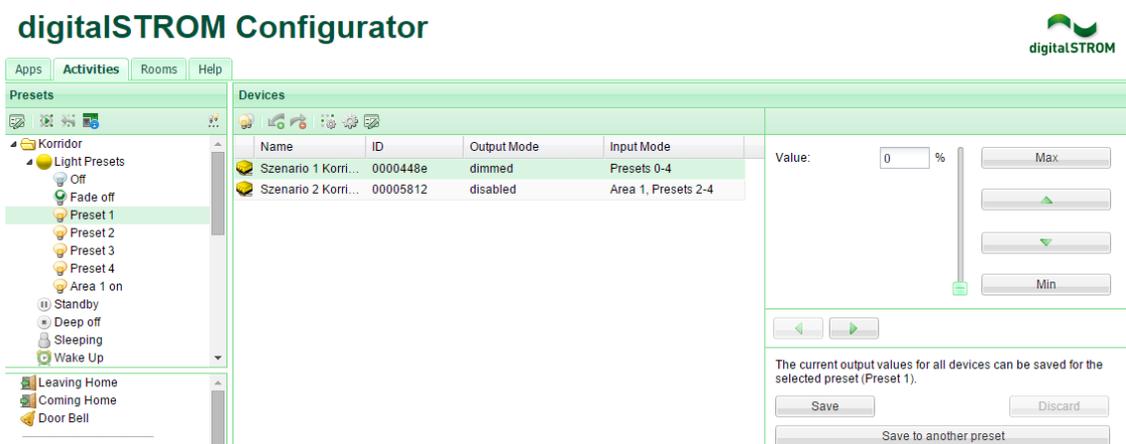
Please refer to chapter 2 'Operation' of the digitalSTROM user manual for the digitalSTROM push button detailed operating concept.

5.6.1 Renaming and calling up digitalSTROM activities and presets

The selection list under the **Activities** tab shows the created rooms and the presets and areas that can be configured therein as well as the activities for the room or for the entire installation.

Presets for areas (e.g. area 1 On) and additional presets (e.g. preset 12-14) are only listed if they were used in the configuration of the push button function accordingly (see chapter 5.5).

The switching states and device values for activities, presets and areas can be set freely as needed. Presets can be configured in the digitalSTROM Configurator.



digitalSTROM Configurator

digitalSTROM

Apps | **Activities** | Rooms | Help

Presets

- Korridor
 - Light Presets
 - Off
 - Fade off
 - Preset 1
 - Preset 2
 - Preset 3
 - Preset 4
 - Area 1 on
 - Standby
 - Deep off
 - Sleeping
 - Wake Up
- Leaving Home
- Coming Home
- Door Bell

Devices

Name	ID	Output Mode	Input Mode
Szenario 1 Korri...	0000448e	dimmed	Presets 0-4
Szenario 2 Korri...	00005812	disabled	Area 1, Presets 2-4

Value: 0 %

Max

Min

The current output values for all devices can be saved for the selected preset (Preset 1).

Save Discard

Save to another preset

Fig. 57: Activities dialogue

Commands for activities and presets:

Rename

Opens a dialogue to rename the selected activity/preset.

Activate

A command is transmitted to all digitalSTROM devices to call up the current device value for the selected activity/preset in the digitalSTROM device.

Reset selected activity

Use this command to reset digitalSTROM devices to the last issued device value unless it was changed retroactively e.g. by actuating a room push button. As a consequence you can e.g. after calling up the activity Panic directly restore the lighting preset without activating presets or resetting dimmer values.

Read in configuration of the areas for the devices in the selected room

With this command you can read out the configured areas for all devices in the selected room and display them in the "**Output**" column. In this case, only devices with active output are considered. Reading out can take some time.

Please note that this display will only remain active until certain changes have been made. The function might have to be repeated if necessary.

Display all available presets

All available presets for the room are displayed.

In the factory settings of the digitalSTROM Configurator only the presets that can also be operated using the push button configuration for the room/area are displayed.

If additional presets are called up e.g. by means of the digitalSTROM Server app Event Responder, these can then be represented with **Display all available presets** and renamed and set up as needed.

Note on motion commands and presets for shading systems

The motion commands and position preset in the **Off** preset are different for the digitalSTROM relay terminal block of the shading systems.

Shading system	Motion commands/Position in Off preset
Shutters	<p>Usually operated via 2-way push button.</p> <p>Shutters are used as screens or as weather and burglar protection. In the factory settings of the digitalSTROM relay terminal block Shutters (grey) the shutters are closed (shut) in the Off preset.</p>
Blinds	<p>Usually operated via 2-way push button.</p> <p>Blinds are used as screens or as weather and sometimes as burglar protection. In addition to their position, you can also control the angle of the blades. Blinds are also known as slat blinds. In the factory settings of the digitalSTROM relay terminal block Blinds (grey) the blinds are closed (shut) in the Off preset.</p>

Awning	<p>Usually operated via 1-way push button.</p> <p>Typically awnings are shading systems made of fabric. For this reason they are usually retracted during bad weather or absence. In the factory settings of the digitalSTROM relay terminal block Awning (grey) the awnings are retracted in the Off preset.</p>
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Higher-level activities for a room

Higher-level activities are **«Standby»**, **«Deep off»**, **«Sleeping»** and **«Waking up»**. These apply to all digitalSTROM devices assigned to the room and are independent of the application area (e.g. light or shade).

«Standby»

The **«Standby»** activity can be triggered for a room when all lamps are in a switched off state (preset, area or devices off) and a light push button is held down for 2s. The activity **«Standby»** can also be triggered at any time by 3 short clicks on the Off push button of the 2-way light push button (e.g. on the 2-way line dimmer).

Therefore even digitalSTROM devices with other colours (e.g. magenta for video) can be switched off with all push buttons independent of the application area. Thus, after switching off the room lighting, for example, the TV can be switched off on the room push button via the *Wipe* operating mode and can be set to its own standby mode (see chapter 5.3.9).

«Deep off»

The **«Deep off»** activity can be triggered for a room when all lamps are in a switched off state i.e. preset, area or devices *Off* and a light push button is held down for 3s. The activity **«Deep off»** can also be triggered at any time by 4 short clicks on the Off push button of the 2-way light push button (e.g. on the 2-way line dimmer).

digitalSTROM devices switched off by the activity **«Deep off»** are switched on again if:

- A push button of the same colour group is actuated in the room. Does not apply to digitalSTROM devices in the joker colour group (black).
- an appropriate event or user-defined action is called up by a digitalSTROM Server app (e.g. by means of a timer), by a digitalSTROM push button (joker) configured as an app push button or responder via Event Responder.

«Sleeping»

The purpose of the activity is to set all digitalSTROM-capable devices in a room to a defined operating state at night. You can use it to switch off a WLAN router connected to a digitalSTROM inline adapter, for example.

This activity can only be triggered via a digitalSTROM Server app (e.g. the Timed Events).

«Waking up»

This activity can only be triggered by a digitalSTROM Server app (e.g. timed events). You can use it to switch the WLAN router on again in the morning, for example.

Higher-level activities for the whole installation

These activities (Fig. 58) apply to all digitalSTROM devices within the digitalSTROM installation and are independent of the application area (e.g. light or shade).

digitalSTROM devices triggering higher-level activities can be installed in any room. Higher-level activities are triggered independent of the room.



Fig. 58: List of higher-level activities

«Leaving home»

Pressing a push button configured as "leaving home push button" for 3 seconds triggers the **«leaving home»** activity. Most digitalSTROM devices will be switched off. The desired behaviour can be configured as necessary.

«Coming home»

The brief actuation of a digitalSTROM push button configured as "Coming home push button" triggers the activity **«Coming home»**. The actuation of any digitalSTROM push button will also trigger **«Coming home»**, unless the "Coming home push button" was actuated upon returning. Any digitalSTROM terminal block can be configured to either react to this activity or to ignore it.

Thus, for example, connected devices can be switched on via a digitalSTROM inline adapter. For this purpose, the digitalSTROM inline adapter must be configured in the *Saving* operating mode (see chapter 5.3.9).

«Ringing»

The brief actuation of a digitalSTROM push button configured as "Ringing push button" triggers the activity **«Ringing»**. Any digitalSTROM terminal block can be configured to either react to this activity or to ignore it.

Normally a digitalSTROM terminal block can be set to blinking to also indicate the ringing visually. This can be set in the Activities tab in the menu Editing activity settings.

«Panic»

The actuation of a digitalSTROM push button configured as "Panic push button" issues the command **«Panic»** to all digitalSTROM devices. In the factory settings of the digitalSTROM terminal block, for the activity **«Panic»** all lamps go on and the shutters/blinds are opened.

Each digitalSTROM terminal block can be configured so that it either responds to the activity or ignores it.

«Wind»

An external wind monitor can protect e.g. a shade system from damage. The wind monitor signals that a defined wind speed has been exceeded. Activities of digitalSTROM devices that can trigger a higher-level activity (e.g. digitalSTROM automation terminal block for wind, rain) are only processed within the group, which was assigned to the digitalSTROM device, however (see chapter 5.3.3).

Please note that activities of the colour group grey (shade), which can be called up using server apps (e.g. timer), are inactive if the wind or fire alarm was activated.

«Rain»

An external rain monitor reports the onset of rain or hail to the digitalSTROM System. This allows, for example, shade systems to be retracted or skylights to be closed.

«Hail»

Based on weather data, external service providers generate weather warnings which prevent potential damage events. Thus online weather services can report e.g. the onset of hail to the digitalSTROM System. This allows shade systems to be retracted or skylights to be closed in time.

«Fire»

An external smoke detector reports the detection of smoke to the digitalSTROM system. With it, the activity **«Fire»** on the Panic or Leaving home push button can be set back 1 click.

Please note that activities of the colour group grey (shade), which can be called up using server apps (e.g. timer), are inactive if the wind or fire alarm was activated.

«Alarm 1 ... 4»

The higher-level activities «Alarm 1 ... 4» are freely available and can be used, for example, to indicate a specific event with a digitalSTROM Server app in terms of an alarm. The alarms can be renamed user-specifically.

You will find information to additional application possibilities of higher-level activities and configuring the digitalSTROM automation terminal block in Chapter 5.3.3.

Higher-level activities for groups

In the factory settings, higher-level activities are processed within the entire digitalSTROM installation.

Activities of digitalSTROM devices that can trigger a higher-level activity (e.g. digitalSTROM automation terminal block for wind, rain) are only processed within the group, to which the digitalSTROM device was assigned, however. Refer to the application examples in Chapter 5.4.1.

digitalSTROM devices have a behaviour for selected higher-level activities that is preset at the factory. Awnings, e.g. during rain, are retracted, lamps are switched on in the case of fire and shutters are opened.

5.6.2 Setting digitalSTROM devices for activities, presets and areas

In the device list, only digitalSTROM devices that are configurable for the activities or presets are displayed in each case (Fig. 59).

Please note that activity/preset-specific device settings may differ from the general device settings in the *Hardware* main section!

Name	dSID	Output Mode	Input mode
TV light	00004c39	dimmed	
Floor lamp Couch	000037b4	dimmed	
Ceiling light Hallway	000044dd	dimmed	Device
Button Living room	00017ca0		Area 1, Presets 2-4
Ceiling light Dining table	000044a7	dimmed	Device

Value: 0 %

Max

Min

The current settings can be saved for the selected preset (Preset 3 - Read).

Save Discard

Save to another preset

Fig. 59: Devices dialogue with embedded dialog for setting the device values

The embedded dialogue allows the device value of the digitalSTROM device to be changed quickly and conveniently in the device list.

The procedure for setting up the device values for the different application areas of the digitalSTROM components is described in detail in chapter 5.3.9 and illustrated with examples for the applications of light (chapter 5.3.9.1), shade (chapter 5.3.9.2), climate (chapter 5.3.9.3) and joker (chapter 5.3.9.4).

Saving presets for the room/area

Save all device values for the selected preset with the command **Save** or use the command **Save in other preset**.

When saving the device value for a preset, the current device value is not changed on the output of the device.



Fig. 60: Dialogue for saving the device values in another preset

With the **Discard** command no values are saved, but instead the selected preset is called up again. Thus the room is in the previous state for the selected preset.

Note on the configuration of areas

To be able to serve a specific area the corresponding digitalSTROM push button must be configured as area push button in the **Hardware** and **Activities** main section. Please also take into account here the note on the local prioritization (see chapter 5.4.2.2).

Further note that in factory settings digitalSTROM devices are assigned to all areas. If selected digitalSTROM devices are not to be operated in one area, they have to be removed from that area.

Two procedures can be used to configure an area:

Procedure 1: Define the area by saving the device value in the embedded dialogue

digitalSTROM devices with a value greater than 0 % are automatically allocated to the corresponding area.

Therefore, use the embedded dialogue to change/save the device values in the selected preset (e.g. Area 1 On).

- To do so, switch on an area of the corresponding digitalSTROM device or open the shading system.
- Switch off a device not corresponding to the area or completely close the shading system.
- Repeat this procedure for all digitalSTROM devices in the selected area which you would like to control and then save the preset for Area n On.

Procedure 2: Directly add/remove devices by command

- Select preset **Area n On**
- Directly add/remove the selected digitalSTROM device to the selected area by using the **Add to Area/Remove from Area** command. The device value is not changed by this.

The configuration of areas can be very easily checked via the **"Read in configuration of the areas for the devices in the selected room"** function (see chapter 5.6.2).

Refer to the commands **Edit Device Value** and **Add/Remove Area** in the following documentation.

Commands of the digitalSTROM devices for the activities, presets and areas



Identification blinking

Makes all digitalSTROM devices allocated to the selected room blink for identification



Add to area

Adds the digitalSTROM device selected in the list of devices to the area selected in the list of activities. This command is only available if the selected digitalSTROM device can be added to the selected area due to its configuration and type.

In particular this command facilitates the configuration of activities for the application area Shade, since the shading systems no longer have to be moved to be added to the area.



Remove from area

Removes the digitalSTROM device selected in the device list from the area selected in the activity list.



Editing activity settings

In the dialogue (Fig. 61) the following options are available:

"Blink when activating preset 2"

The selected digitalSTROM device blinks when the selected activity/preset is activated.

The blinking can be configured via the **Editing device properties** of the digitalSTROM terminal block output.

"Retain output when calling preset 2"

The call for this activity/preset is not responded to by the selected digitalSTROM device. Thereby the output value is not changed, but the blinking is executed when desired.

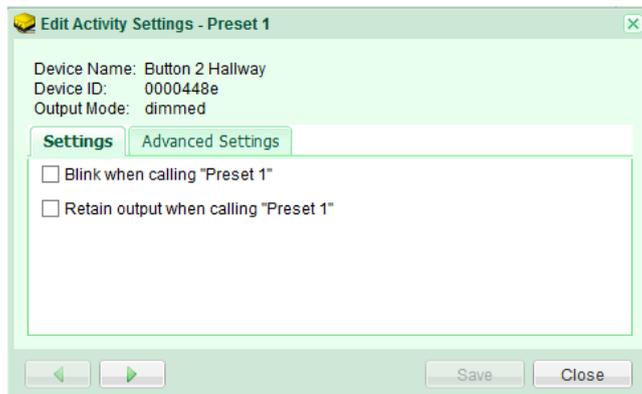


Fig. 61: Edit device properties dialogue for a lighting preset

Advanced device properties

For the **Advanced device properties** (Fig. 62) the following options are available:

"LED mode"

Determines the display mode of the LED in the housing of the digitalSTROM device. This setting is only displayed if the selected digitalSTROM device is equipped with an LED.

"Auto"

The brightness of the LED corresponds to the current device value of the power output and is adjusted during dimming. If the activity «**Deep-Off**» is called up, the LED goes dark. If the output is deactivated, the LED will glow weakly.

"Off"

The LED stays permanently dark.

"Transition time to call up"

Determines for the selected activity/preset the speed of preset transitions for dimmed devices.

"Default"

The device value for the activity/preset will be reached within 400 ms.

"Slow"

The device value for the activity/preset will be reached within 60 ms.



Fig. 63: Advanced settings dialogue of a lighting preset

Rename device

In the **Rename device** dialogue you can very easily rename your digitalSTROM device. With *Select previous device* and *Select next device*, you navigate directly to the next or previous digitalSTROM device in the list.



Fig. 64: Advanced settings dialogue of a lighting preset

Information to configuring the device value for higher-level activities

As set in the factory, digitalSTROM devices have a pre-set device value which is read out at the power output when a higher-level activity is called up.

If a higher-level activity is selected from the selection list of the main section **Activities**, then the device value for this activity can also be changed/saved in the digitalSTROM device in this dialogue.

When the value is set, the output is not directly changed. Yet as necessary, the value can be activated with the command **Preview/reset** at the output.

This way settings for the individual devices can be changed without calling up the activity in the entire installation.

The command **Save** saves all the settings displayed in the dialogue for the selected activity in the corresponding device. The value does not necessarily need to be present at the output when saved, so the **Preview** does not necessarily have to be called up.

If the setting **"Do not change output"** is activated, the setting of the device value for the higher-level activity cannot be carried out.

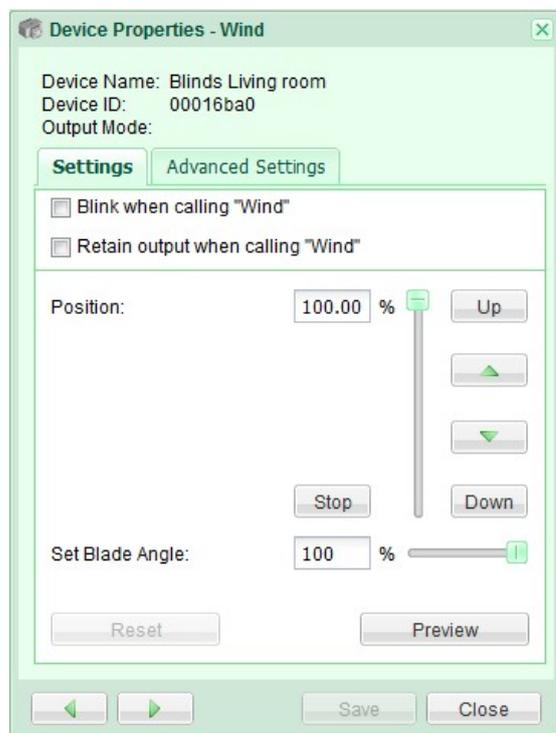


Fig. 65: Device properties dialogue for the higher-level activity Wind

6 digitalSTROM Server Apps

With digitalSTROM you are benefiting from the technology of the future. Manufacturers can easily equip digitalSTROM devices with convenient applications. New applications are continually being developed for digitalSTROM products.

The functionality can be expanded not only by extending additional rooms or new devices, but also by using new digitalSTROM Server *apps* on your digitalSTROM Server. The existing digitalSTROM system can for instance be enlarged by integrating an additional timer or a presence simulator.

The installation and update of *apps* can be done quickly and easily in the *apps* main section of the digitalSTROM Configurator. The *apps* are loaded and installed directly.

- Get an overview of digitalSTROM Server *apps*.
- Check the availability of new digitalSTROM Server apps.
- Check the availability of updates.
- Install or remove digitalSTROM Server Apps at will.

Functional description of available digitalSTROM Server Apps

Under <http://www.digitalstrom.com/system/anwendungen> you will find an overview of the available digitalSTROM server apps.

6.1 Use

The most important digitalSTROM Server *Apps* are already preinstalled for operation in the factory settings of the digitalSTROM Server. These digitalSTROM Server *Apps* cannot be uninstalled and are updated automatically during a system update (see chapter 5.2.8).

In the *menu* of the *apps* in the main section of the digitalSTROM Configurator the following options are available:

Open App

Opens the selected digitalSTROM Server app.

The displayed apps can be directly opened by a double click on the icon.

Uninstall App

Removes the digitalSTROM Server app permanently from the digitalSTROM Server (deinstallation).

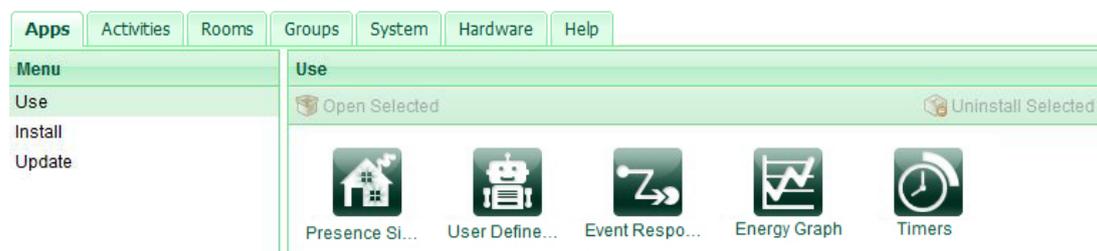


Fig. 66: Dialogue menu in the apps area of the digitalSTROM Configurator

6.2 Installing

During the *installation* of *apps* (Fig. 67) in the main section of the digitalSTROM Configurator, the following options are available:

Update list from server

Refreshes the list of available digitalSTROM Server apps.
For digitalSTROM Servers with web access.

Update list from USB flash drive

Refreshes the list of available digitalSTROM Server Apps from a USB flash drive.
For digitalSTROM Servers without web access.

To install digitalSTROM Server apps from a flash drive, you must first copy the appropriate software update to the drive and wait for the automatically started system update after inserting the flash drive.

The command is only available if a flash drive containing a system update is inserted into the housing of the digitalSTROM Server.

Install App

Installs the selected digitalSTROM App on the digitalSTROM Server.

Terms of use

Before a digitalSTROM-Server App can be installed on a digitalSTROM Server, the user must read and accept the terms of use of the digitalSTROM AG.

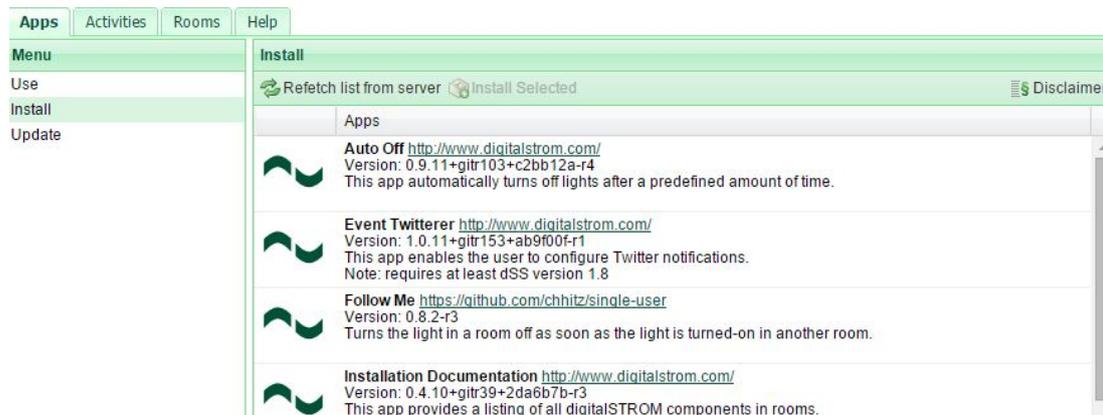


Fig. 67: Install dialogue in the apps area of the digitalSTROM Configurator

6.3 Updating

The following options are available for the *apps* in the *Update* area (Fig. 67):

Search for updates

Searches for updates of digitalSTROM Server apps that have already been installed.

Install update

Installs the selected update on the digitalSTROM Server.

Install all updates

Installs all available updates on the digitalSTROM Server.

During a system update using a flash drive, all installed digitalSTROM Apps are updated automatically (see chapter 5.2.8.2).

7 Installation checklist

- 1. Installing digitalSTROM components in electrical power distribution board**
 - a. Install digitalSTROM Filter (dSF)
 - b. Install digitalSTROM Meter (dSM)
 - c. Install digitalSTROM Server (dSS/option)
 - d. Connect digitalSTROM Server to network
 - e. Connect dS485 bus interconnection

- 2. Installing digitalSTROM devices in rooms**

- 3. Initial operation**
 - a. Initial operation of digitalSTROM Meter (dSM)
 - b. Initial operation of digitalSTROM Server (dSS/option)
 - c. Checking and installing available system updates

- 4. Configuring via digitalSTROM Server**
 - a. Define names of digitalSTROM Meters
 - b. Define names of digitalSTROM devices
 - c. Configure device properties for digitalSTROM devices (e.g. switch/dim digitalSTROM terminal block)
 - d. Define names of rooms
 - e. If required, add rooms
 - f. Assign digitalSTROM devices to the rooms

- 5. Verifying basic configuration**
 - a. Verify function in every room on-site

- 6. Configuring presets**
 - a. Define presets (e.g. lighting presets) by push button or digitalSTROM Server
 - b. Configure activities (e.g. lamp blinks during «Ringing»)

- 7. Additional functions of the digitalSTROM Server**
 - a. Install and configure digitalSTROM Server Apps
 - b. Inform the customer about the digitalSTROM App for Smartphones (iPhone® and Android® Smartphones)

8. Checking

- a. Check presets
- b. Check activities
- c. Check function of apps
- d. Check communication/reliability
(Switch on all consumers in the power circuit for this purpose)

9. Delivery to customer

- a. Use check-list in section "Introduction" of the digitalSTROM user manual

8 Help

In the **Help** dialogue in the main section of the digitalSTROM Configurator (Fig. 68) you can find the digitalSTROM Manuals, as well as frequently asked questions and information about support.

The online help as an electronic format, has additional functions such as full-text search, keyword index etc. and is updated constantly with the system updates.

At <http://www.digitalstrom.com/manuals> you can find the online versions of the manuals (user manual, installation manual and planning manual) in select languages.

At <http://www.digitalstrom.com/products> you can find an overview of the digitalSTROM components including a pricelist.

At <http://www.digitalstrom.com/support> you can find the frequently asked questions and references to the websites of the respective product manufacturers.

digitalSTROM Configurator

digitalSTROM Manual:

- Overview, usage, setup: www.digitalstrom.com/manuals
- Install (local, English): [installation manual](#)
- Install (online version): www.digitalstrom.com/manuals

FAQ and support: www.digitalstrom.com/support

Note: the page will open in a new tab or window

Fig. 68: Help in the main section of the digitalSTROM configurator dialogue

9 Troubleshooting

For troubleshooting information or further information about support, please visit the website <http://www.digitalstrom.com/support> or websites of the respective product manufacturers.

9.1 Faulty operating condition

If you detect a faulty operating condition:

- Check if the power supply of digitalSTROM devices (power circuit breaker) is switched on.
- Check if the electrical connections of digitalSTROM terminal blocks and digitalSTROM push button blocks are realised according to the installation instructions.
- Make sure that connected consumers do not exceed the maximum permissible output.
- Check if the connected consumers are supported by the operating mode of the digitalSTROM terminal block (capacitive, inductive load, dimmable lamp, etc.).
- Check whether the installations of the digitalSTROM components in the distribution board meet the requirements of the installation instructions (maximum length, terminating resistors of the dS485 bus connections etc.).
- Check if digitalSTROM Filters are installed in front of the digitalSTROM Meter input.
- Check the operating condition of the digitalSTROM Server dSS11-1GB and digitalSTROM-Meters (LED status indicator).
- Check the configuration of the digitalSTROM devices in the digitalSTROM Configurator.

9.2 Ensuring reliable operation

The steps described in the following section are meant to ensure the reliable operation of the digitalSTROM system.

- The tests are performed consecutively for every power circuit.
- Avoid any operations in the tested power circuit (e.g. using push buttons) during the following tests.
- If you have removed devices or terminal blocks from the power circuit, first test the device availability.
- At least one digitalSTROM terminal block must be registered in and physically connected with the power circuit.

Switching on all electrical devices

Switch on all consumers in the tested power circuit (worst case) to test the transmission quality with the highest impact from potential sources of interference. This includes, for example:

- Chargers for telephones, MP3 players etc.
- PCs, laptops, monitors, printers, routers
- TV sets, radios, amplifiers
- Fluorescent lights, low-voltage lamps, ESL, dimmers
- Vacuum cleaner

Testing the transmission quality

In the main section **Hardware** of the digitalSTROM Configurator select the respective digitalSTROM Meter and execute the **Test transmission quality** command (Fig. 69).

For a meaningful result you should use the value of 5 for "**Number of queries from device**".

- Start the test

Disturbance sources should be identified and isolated using a digitalSTROM device Filter (dS-FD):

- If over 10 % of queries (number of devices * number of queries is equal to 100 %) are lost
- If the mean value for the transmission quality of the upstream communication is less than 80 %.

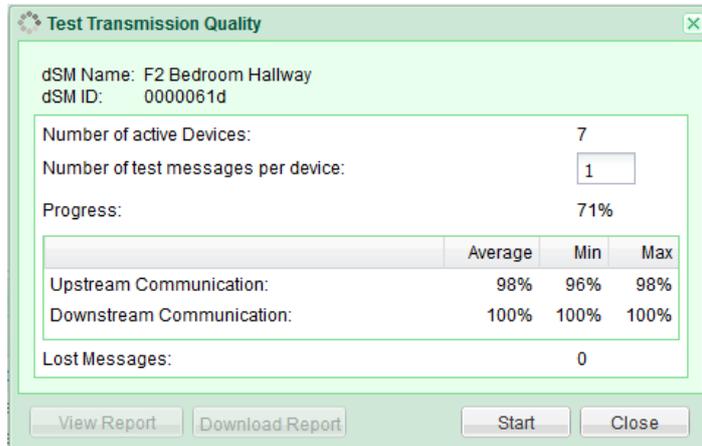


Fig. 69: Test transmission quality dialogue

Checking results

The measurement results of the tests as well as the number of tested devices are summarised in the transmission quality protocol (Fig. 70).

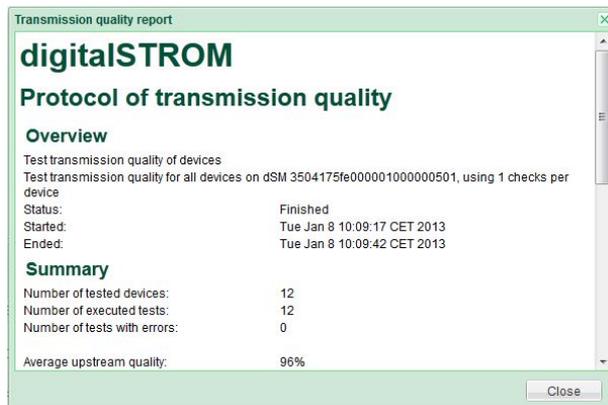


Fig. 70: Transmission quality protocol dialogue

Removing sources of interference

If an inadmissible number of transmission errors were detected, the source of interference must be localised and isolated.

- If you have connected many electronic devices using one or several connector strips you should connect them first with a digitalSTROM device Filter (dS-FD) and repeat the test. If the result improves considerably leave the digitalSTROM device Filter (dS-FD) in this location. Otherwise, continue the search.

- For the identification of individual sources of interference switch them off separately and repeat the transmission quality test. Considerably improves the result; the corresponding consumer should remain connected to the digitalSTROM power circuit by using a digitalSTROM device Filter (dS-FD).
- In the case of devices that are only operated very quickly, so that the temporary impairment can be tolerated, a digitalSTROM device Filter (dS-FD) is also not necessary.

Attention: digitalSTROM devices cannot be operated after a digitalSTROM device Filter (dS-FD)!

If several devices are identified as sources of interference you may connect them together with a connector strip and a digitalSTROM device Filter (dS-FD). In this case you have to make sure that the maximum digitalSTROM device Filter (dS-FD) load is not exceeded.

10 Frequently asked questions

Please visit <http://www.digitalstrom.com/support> or the websites of the respective product manufacturers. There you can find useful support information and also a continuously updated list of Frequently Asked Questions (FAQ).

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