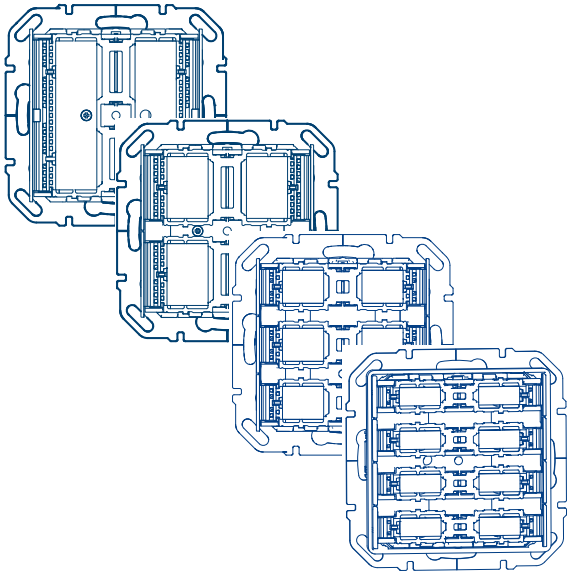
Application description

KNX building management system

KNX push-button module



Push-button technical unit, x-gang,
KNX Secure

WAK1011, WAK1014, WAK1016, WAK1018

systemlink easylink KNX KNX secure CE

:hager

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Product overview

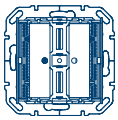
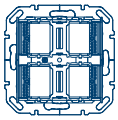
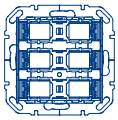
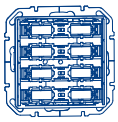
	Order number	Product designation	Application programme	TP product Radio product
	WAK1011	Push-button technical unit, 1-gang, KNX Secure	SWAK101x	TP product
	WAK1014	Push-button technical unit, 4-gang, KNX Secure	SWAK101x	TP product
	WAK1016	Push-button technical unit, 6-gang, KNX Secure	SWAK101x	TP product
	WAK1018	Push-button technical unit, 8-gang, KNX Secure	SWAK101x	TP product

Table 1: Product overview

We reserve the right to make changes of a technical nature.

2 Document Contents

This document describes the configuration and commissioning of the KNX push-buttons listed in the product overview (Chapter , Product overview), as well as tips for using the KNX application software. It does not contain information or instructions on the mounting and installation of the devices or on the general principles of KNX programming.

Information

For mounting and installation of the described devices, refer to the relevant manual enclosed with the product or available for download online.

The illustrations and descriptions in this document are for clarification purposes only and may differ from the actual state of the software due to regular product optimisations.

- For general information on KNX building system technology, see hager.com

3 Information about programming software

3.1 ETS compatibility

The application programmes are compatible with ETS6 or higher and are always available in their latest version on our Internet website.

ETS version	File extension of compatible products	File extension of compatible projects
ETS5	*.knxprod	*.knxproj
ETS6	*.knxprod	*.knxproj

Table 2: ETS compatibility

3.2 Application designation

Application	Order number	Product designation
SWAK101x	WAK1011	Push-button technical unit, 1-gang, KNX Secure
SWAK101x	WAK1014	Push-button technical unit, 4-gang, KNX Secure
SWAK101x	WAK1016	Push-button technical unit, 6-gang, KNX Secure
SWAK101x	WAK1018	Push-button technical unit, 8-gang, KNX Secure

Table 3: Application designations

4 Function and device description

4.1 Device overview

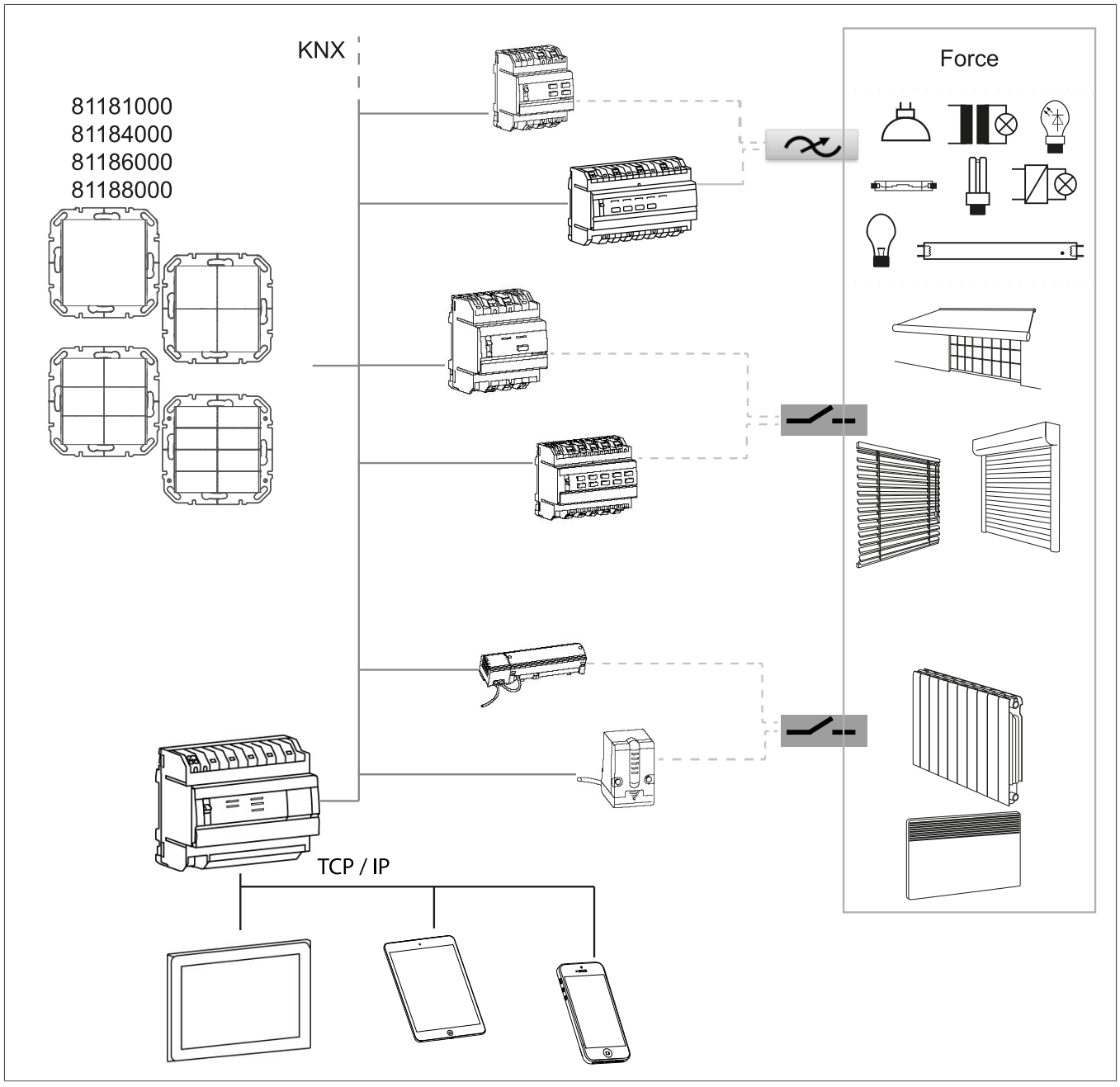


Fig. 1: Device overview

4.2 Functional description

The devices are monoblock modules with an integrated bus coupling unit. The following functions can be assigned to the buttons: Switching/toggling, dimming, roller shutter/blind, timer, value 1 byte, value 2 bytes, colour control, room thermostat extension unit, priority, scene, 2-channel mode, step switch and automatic control deactivation.

The assignment of the individual functions is freely selectable for each button and defined by the setting in the ETS. Depending on the setting functions, telegrams that trigger the corresponding switching, dimming, blind/roller shutter functions, open or save light scenes and set dimming, brightness or temperature values are transmitted to the KNX bus by a touch operation.

4.3 Operating concept

Triggering of functions and operation of electrical loads takes place via push-button operation areas (Fig. 2, dashed) and can be set individually for each device.

Example: Push button 4-gang (WAK1018)

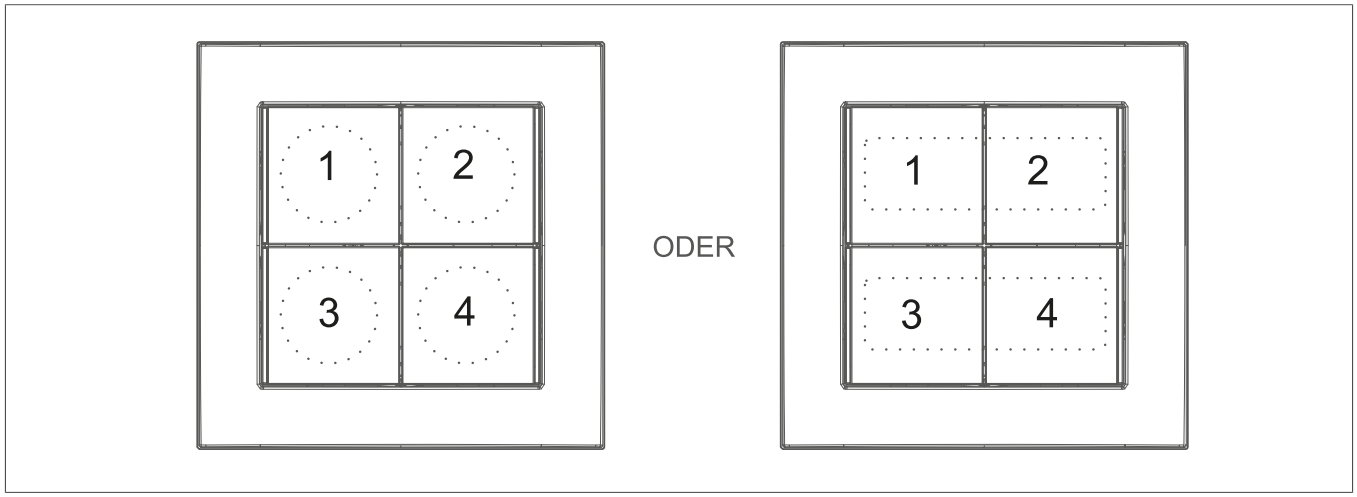


Fig. 2: Push button operation areas

Operation of the single button:

- Switching lighting on/off and dimming brighter/darker is carried out alternately by repeated pressing of a push-button operation area.

Operation as rocker (pair of buttons):

- Two adjacent push-button operation areas form a pair of buttons. For example, touching the left-hand area switches the lighting on/makes it brighter; touching the right-hand area switches it off/makes it darker.

Operation of the single button:

- Switching lighting on/off and dimming brighter/darker is carried out alternately by repeated pressing of a push-button operation area.

Operation as rocker (pair of buttons):

- Two adjacent single buttons form a rocker. For example, touching the left-hand area switches the lighting on/makes it brighter; touching the right-hand area switches it off/makes it darker.

Operating guide

The device differentiates between short and long touches.

Short press operation

- Switching the lighting
- Roller shutter/blind: The device sends the Stop or Slat step command to the bus via the corresponding communication object (slat step). Switching the lighting
- Timer: The ON command is transmitted through the Timer object for the time set at the output.

Long press operation

- Dimming the lighting
- Roller shutter/blind: The device sends an Up/Down move command via the bus through the corresponding communication object (move).
- Timer: The OFF command interrupts active timer operation through the Timer object and switches the output off directly.
- Scene: Keep the scene button pressed. The outputs in question flash briefly to confirm that the configurations have been saved.
- 2-channel mode: This parameter defines how long a button needs to be pressed in 2-channel mode to trigger the function stored for a long button press. Times of 0.5, 1, 2, 3, … 10 s can be set.

Note

The selected time for which a long touch of a button is detected should be twice as long as the time for a short touch of a button.

Each touch of a button that triggers a function is acknowledged by a tactile and slightly audible confirmation.

4.3.1 Physical addressing

The physical address, group address and setting of the parameters is assigned by the ETS. The device is fitted with an integrated bus coupling unit and has a programming button for assigning the physical address and a red programming LED for display. The application software can be loaded directly into the bus coupling unit with the assignment of the physical address. If this has not taken place, it is also possible to program later. The red programming LED lights up by pressing the programming button. After assignment of the physical address by the ETS, the programming LED goes out. To check whether the bus voltage is present, press the programming button briefly; the red LED lights up. Press the button once again to exit the programming mode.

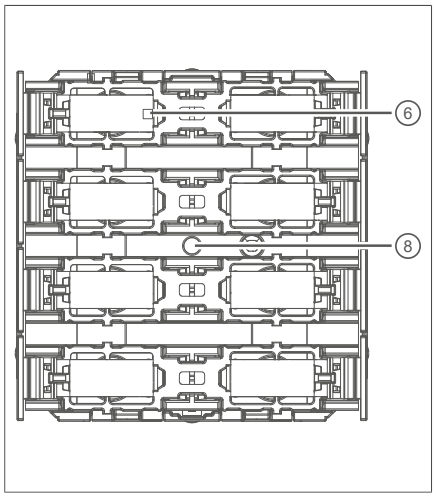


Fig. 3: Front view (WAK1011, WAK1014, WAK1018)

6 Programming LED
8 Programming button

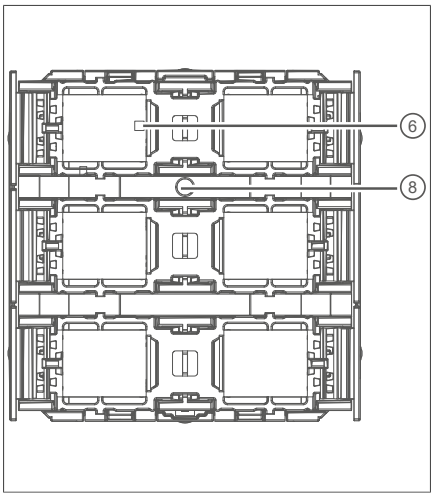


Fig. 4: Front view (WAK1016)

6 Programming LED
8 Programming button

Note

If a device in an existing system is to be programmed, only one device can be in programming mode.

4.3.2 Range of functions

- The operating concept of the X-Y button can be configured as a single button or rocker.
- Each rocker or single button can be used for switching/toggling, dimming, roller shutter/blind, timer, value 1 byte, value 2 bytes, colour control, room thermostat extension unit, priority, scene, 2-channel mode, step switch and automatic control deactivation.
- 2-channel operation: The operation can be set for each button by two independent channels. Thus, a maximum of one to two telegrams can be transmitted to the bus by one operating procedure. The channels can be parametrised independently to the functions switching, roller shutter/blind, value 1 byte, value 2 bytes and scene.
- Buzzer settings: The buzzer in the device can be used for different signalization: physical localisation when the programming mode is getting activated through ETS (for the local physical addressing button no buzzer feedback) and acknowledgement for short and/or long button press and alarm. Furthermore it is possible to change the melody for the buzzer feedbacks.
- Monitoring: periodical emission of a 1-bit telegram on the bus. The telegram could be sent either with the value of 0 (OFF) or 1 (ON). Periodical emission can be created with the following time values: 10min, 30min, 1h; 3h; 6h; 12h; 24h.
- Switching function: The following settings are possible for each button: Reaction when pressing and/or releasing the rocker, switching on, switching off, changing over.
- The following adjustments are possible when dimming: Times for short and long touch operations, dimming value.
- The following adjustments are possible for the blind control: five different operating concepts with times for short and long touch operations and slat adjustment.
- The following settings are possible for the 1-byte and 2-byte value transmitter function: Selection of the value range (0 … 100%, 0 … 255, 0 … 65535, 0 … 1500 Lux, 0 … 40°C), value on pressing, value adjustment after long press of button with different increments, times for optional overflow after reaching the end of the value range.
- The following settings are possible for the scene extension unit: internal storage of eight scenes with eight output channels, opening of internal scenes by means of an adjustable scene number, selection of object types of the output channels, the storage of the individual output values and transmission of the output values can be enabled or disabled, the individual output channels can be delayed when opening the scene, 64 scenes can be opened and saved as scene extension units.
- When using the room temperature measurement function, the device can measure, process and transmit the room temperature to the bus by means of an external temperature sensor.
- When using as a control extension unit the following adjustments are possible: Operating mode change-over with normal and high priority, defined selection of an operating mode, change-over between different operating modes, change-over of the presence state, setpoint adjustment.
- The lock-up function must be carried out in the general parameter settings at the start. Afterwards, the lock-up function must be activated for each button in the operating concept as a single button or as a button pair.

4.4 Functional overview

The functions described in the following section enable the individual configuration of the device inputs or outputs.

Note

The function is only described generally in this section. You can find a detailed description of these individual functions starting in chapter 3 Parameter settings.

Switching/toggling

The switching/toggling function allows the device to control e.g. lighting circuits (e.g. ON, OFF, TOGGLE).

Dimming

The dimming function allows the device to dim or switch lighting circuits brighter (ON) darker (OFF) or brighter/darker (TOGGLE).

Roller shutter/blind

The Roller shutter/blind function allows blinds, roller shutters, awnings or similar hangings to be opened and closed. In addition, the slat alignment in % and the position of the roller shutter/blind can be configured. A total of five operating concepts are available for this purpose.

Timer

This function is only available in the operating concept for single buttons.

Function is triggered on a

Short press of button

- The ON command is transmitted through the Timer object for the time set at the output.

Long press of button

- The OFF command interrupts active timer operation through the Timer object and switches the output off directly.

Value 1 byte/2 bytes

The value (1 byte) function allows values from 0 … 255 or 0 … 100% to be transmitted to a dimming actuator, for example. The value (2 bytes) function allows values from 0 … 65535, brightness values from 0 … 1000 Lux or temperature values from 0 … 40°C to be configured.

Colour control

Press the button to send a colour value via the bus. For example, the luminaires or LED strips with RGB or RGBW colour values or the white light can be individually controlled via the colour temperature. The following options are available:

- Colour temperatures (2700–6500 Kelvin) for transmitting a precisely matched white value (2-byte group object)
- RGB colour value for transmitting a set red-green-blue / HSV colour value (H=colour value, S=colour saturation, V=brightness) (3-byte group object)

- RGBW colour value for transmitting a set red-green-blue / HSV colour value (H=colour value, S=colour saturation, V=brightness) (6-byte group object), including the white value, which is to be set via the W colour value slider
- XY colour value for transmitting a set colour value from the CIE Standard (standard colour system) via XY coordinates and brightness

Room thermostat extension unit

Press the button to control an external KNX room thermostat. The configured button of the push button then acts as an extension unit of the thermostat and can change its basic configurations (setpoint operating mode, switching from mode to cooling mode and vice versa, presence detection).

The following operating modes must first be created and configured in a room thermostat:

Caution

However, the room thermostat extension unit is not actively involved in the actual calculation for the thermostat. It only works properly when all communication objects are linked to the appropriate objects in the associated KNX room thermostat via a group address.

Comfort:

- The Comfort operating mode sets the room temperature to a temperature value pre-defined in the thermostat (Comfort temperature 21°C, for example) for comfort (presence).

Frost/heat protection:

- The frost/heat protection operating mode, depending on the circumstances, reduces the heat supply or activation of cooling appliances in automatic mode in order to protect the building from heating or cooling damage.

Eco:

- The Eco operating mode turns down the room temperature during long absence (e. g. holiday) to a value of 17°C defined in the thermostat.

Auto:

- The Auto operating mode automatically resets the operating mode to the current operating mode (after priority, for example).

Note

With underfloor heating, the change-over from Comfort to Standby is only noticeable after a certain period of time due to the sluggishness of the underfloor heating system.

Priority

This function uses a 2-bit telegram format that takes precedence over a standard 1-bit telegram when activated or deactivated. It is designed in such a way that, in the event of an alarm triggered via the KNX bus, it regulates the lighting, shade and heating according to the parameters defined by the user. In the event of a fire alarm, for example, the escape routes are well lit and the roller shutters in front of the windows and doors are opened so that the people present can get to safety quickly. To do this, the button configured with the priority control must be linked with its group objects to the priority control group objects of the actuator. Three options can be selected under Operating concept.

Caution

If priority is activated prior to a bus power cut, it will automatically be deactivated after the bus power is restored. The corresponding effect of the Priority function depends on the linked actuator channel (lighting, shade, heating).

Scene

When the Scene function is selected, a scene number of 1 ... 64 must be assigned to the button. This value is transmitted via the KNX bus by pressing the button.

2-channel mode

You can choose from 2 different operating concepts.

Channel A or B:

Each button press transmits a telegram via the KNX bus:

- Short press: Telegram for channel A.
- Long press: Telegram for channel B

Channel A or B

Each button press transmits one or, alternatively, two telegrams via the KNX bus – a telegram for channel A on a short button press and an initial telegram for channel A followed by a telegram for channel B on a long button press.

Step switch

Choose one of three value types for all steps:

- Value (0 ... 255) for entering entire numerical values for each step
- Value (%) for setting a percentage value for each step via slider
- Scene for entering a scene number from 1 ... 64

Deactivate automatic

If an actuator channel is controlled simultaneously by a push button and an automatic function (e.g. a KNX timer or a KNX motion detector), the **Deactivate automatic** selection deactivates the automatic function and executes the push-button command.

Tamper-proof protection (not available for push button referenced WAK1016)

The Theft / dismantling protection function allows the removal of the push-button unit to be indicated by a predefined alarm message.

5 Parameter settings

5.1 General

The configuration of the general parameters for the push buttons is described in the following sections. The function of the different push buttons only differ in the number of push buttons. For this reason, only the first two individual buttons or the rocker are described at a time.

Note

The values shown in bold in the parameter tables are the standard values in the ETS application.

Parameter	Description	Value
Parameter type	Description of the parameter	**Value 1** Value 2

Table 4: Example of a parameter table

5.1.1 Type of push button

The type of push button is set in this section and also affects the visible parameter windows.

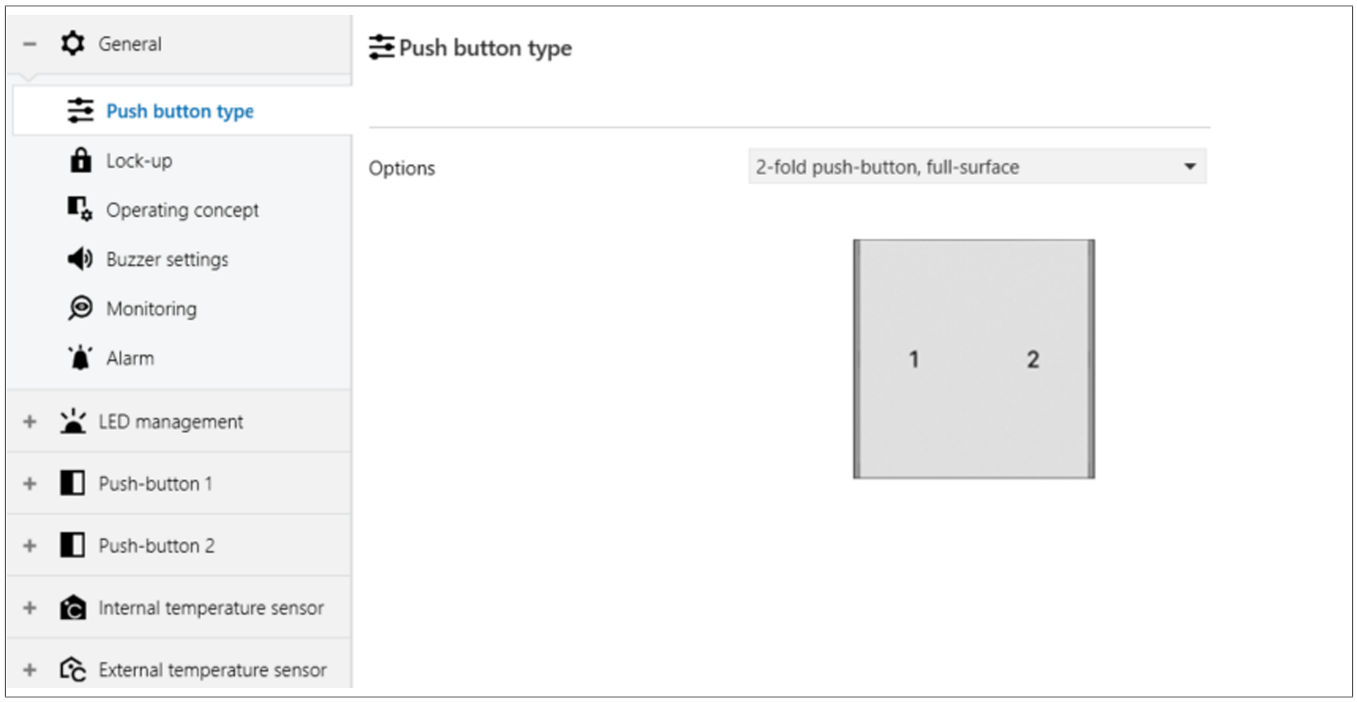


Fig. 5: General > Type of push button

Note

The device used and the choice of **type of push button** must match; i.e. if the selected **type of push button** is incorrect, the application software cannot be uploaded to the device.

Parameter	Description	Value
Options	Defines the number of buttons on the device.	Push button, 1-gang, full-surface cover **Push button, 2-gang, full-surface cover** Push button, 4-gang, full-surface cover Push button, 1-gang Push button, 2-gang Push button, 4-gang

Table 5: General > Type of push button

5.1.2 Disable function

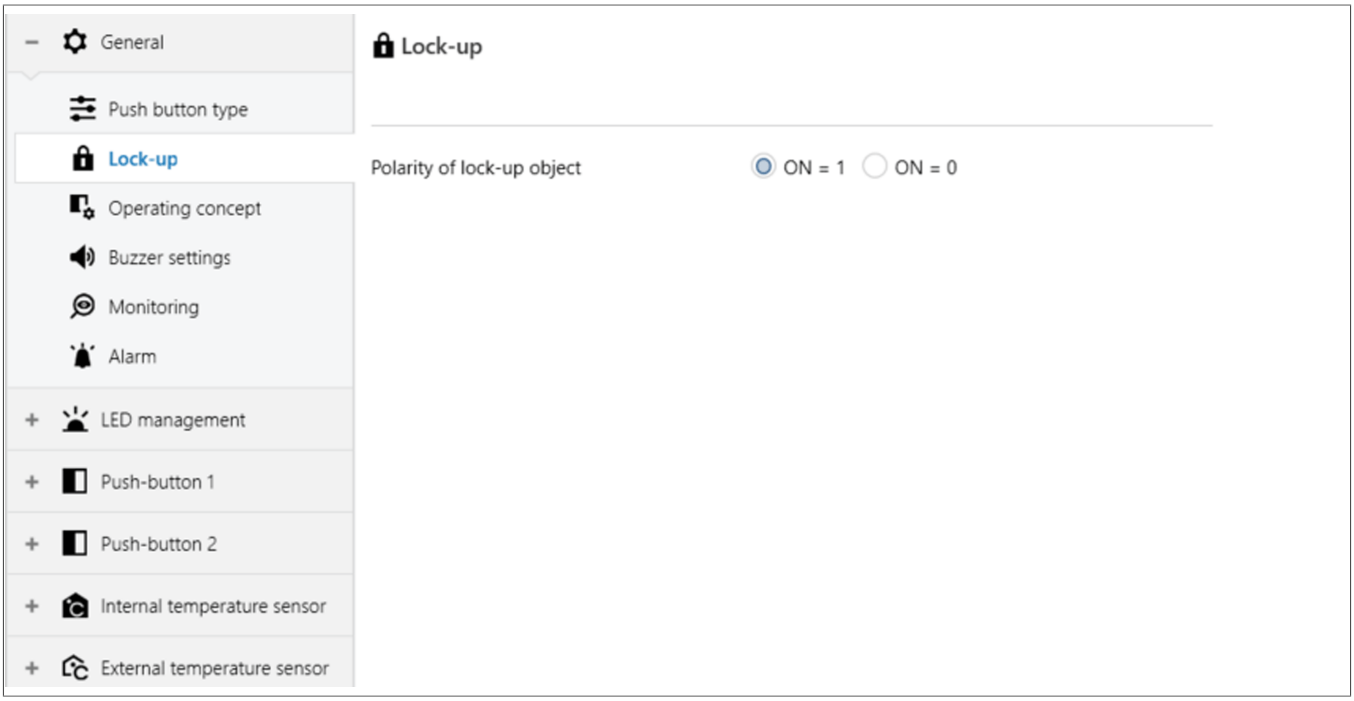


Fig. 6: General > Lock-up

Controls whether a button/rocker can transmit the assigned function to the KNX bus. Individual buttons/rockers or the entire device can be locked. If a button/rocker is locked-up, it does not trigger the assigned KNX function.

Parameter	Description	Value
Polarity of lock-up object	Defines the signal on which the lock-up is activated for all button(s)/rocker(s) on the device.	**ON at 1**: Lock-up activated on a signal with the value 1 ON at 0: Lock-up activated on a signal with the value 0

Table 6: General > Lock-up

	Name	Function	Length	Data type
17	General	Disable function	1 bit	1.011 Status

Table 7: Communication object – Lock-up

Note

An active lock-up is preserved in the event of bus voltage failure and return.

Function of LED lock-up

The parameters for the **Function of LED lock-up** are only visible when the **LED management** parameter is selected under **LED management – General** (tick the box).

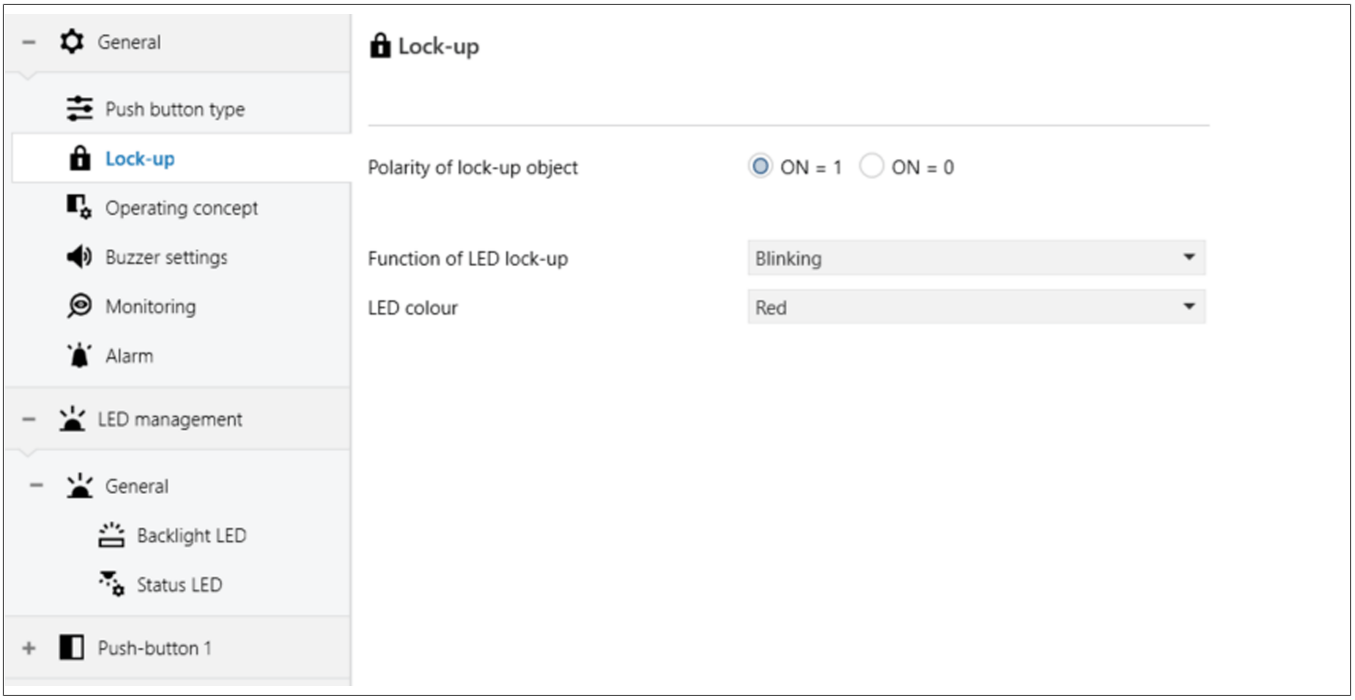


Fig. 7: General > Lock-up > Function of LED lock-up

Parameter	Description	Value
Function of LED lock-up	With lock-up activated, defines the LED display mode for around 5 s after actuating a locked-up button/rocker. The LED colour can be configured using the **General – Lock-up – LED colour** parameter.	**Flashing** ON: Lights or changes depending on the colour set for the lock-up Off: LED goes out

Table 8: General > Lock-up > Function of LED lock-up

LED colour when lock-up is active

This parameter defines the colour of the status LED when lock-up is active.

Parameter	Description	Value
LED colour	The lock-up function can be displayed in 7 colours or OFF.	Off White Red Yellow Green Cyan Blue Magenta

Table 9: General > Lock-up > LED colour

Caution

The selected colour will apply to all LEDs on the device.

5.1.3 Operating concept

The push buttons or button pairs of the devices can be assigned to different using modes by means of various functions.

The operating concept provides two different using modes:

Single button (1-push-button operation)

- Each button is assigned a specific function. The first actuation usually produces the exact inverse function of the second actuation (toggling), e.g. switching a light on and off or increasing and decreasing a temperature setpoint. It is therefore useful to assign a completely different function to the second button. 1-push-button operation provides more flexibility and allows more functions to be provided for each device.

Rocker (2-push-button operation)

- Left and right buttons (each with its own function) work like a rocker, for example, to increase or decrease brightness.

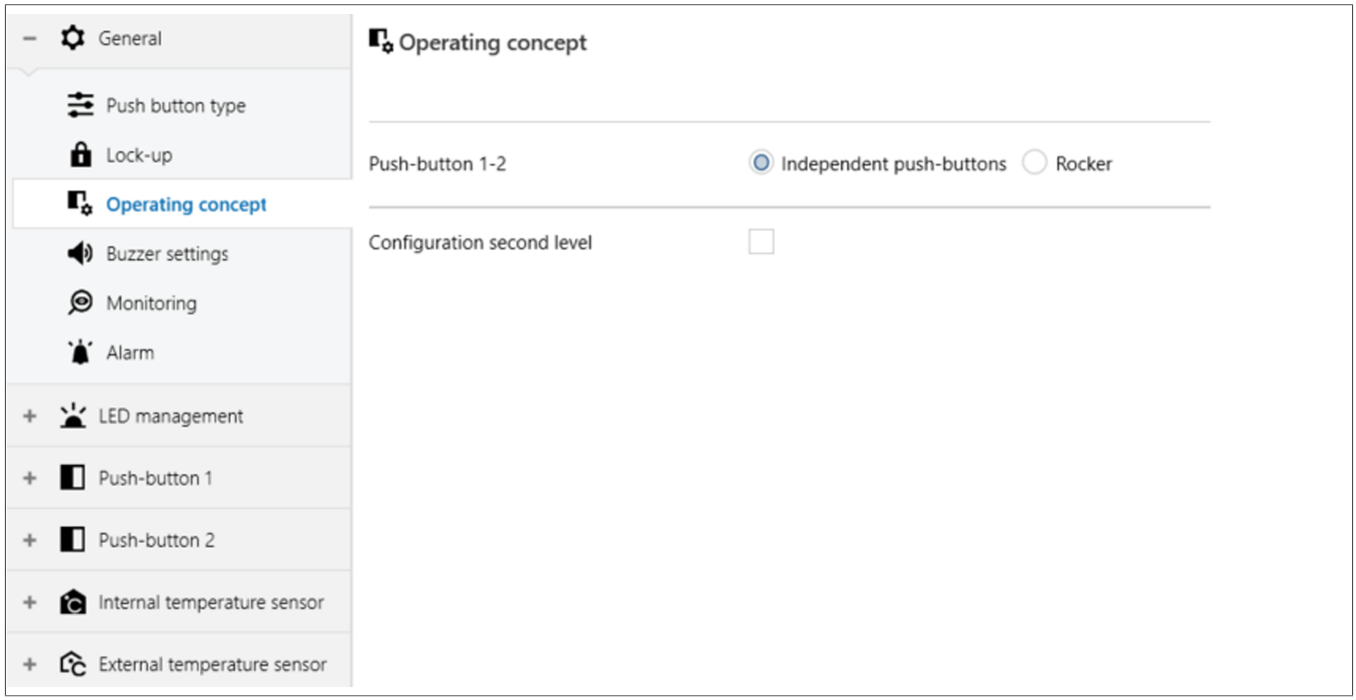


Fig. 8: General > Operating concept

Parameter	Description	Value
Operating concept of button 1 - 2	Determines whether each button functions independently or in combination as a rocker.	**Single push button** Rocker
Operating concept of button 3 - 4	Determines whether each button functions independently or in combination as a rocker.	**Single push button** Rocker
Operating concept of button 5 - 6	Determines whether each button functions independently or in combination as a rocker.	**Single push button** Rocker
Operating concept of button 7 - 8	Determines whether each button functions independently or in combination as a rocker.	**Single push button**

Table 10: General > Operating concept – Button

Parameter	Description	Value
		Rocker

Table 10: General > Operating concept – Button

Operating concept – Configuration second level

When the Configuration second level parameter is selected (①, tick the box), further parameter windows open. With these parameters (②) the function of the push buttons for the second operating level can be defined.

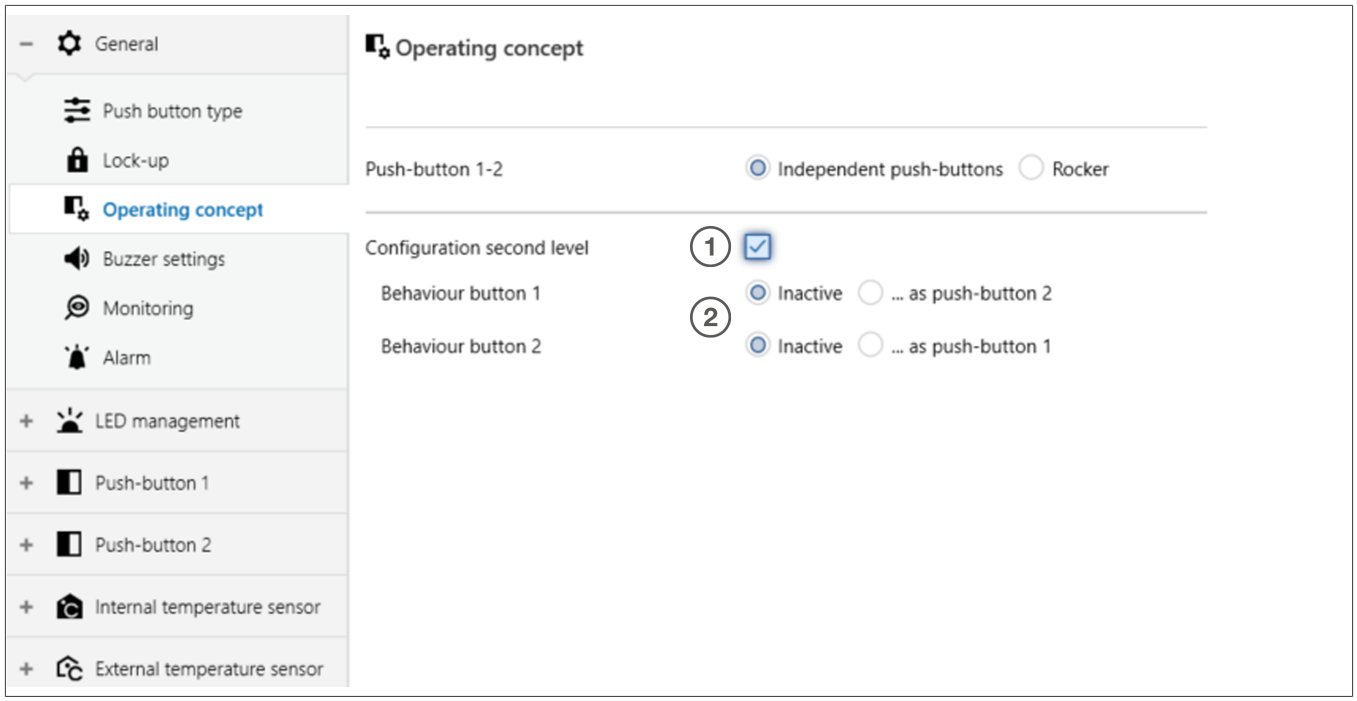


Fig. 9: General > Operating concept > Configuration second level

If the **Single push button** operating mode is selected and Configuration second level is activated (group object 15 **General – Configuration second level**), the device can be configured in the second functional level. For example, access to the device can be restricted to a certain group of people, such as switching a light on and off for cleaning personnel.

Parameter	Description	Value
Behaviour button 1	Defines the function of button 1 in the second operating level.	**Inactive** ...as button 2 ...as button 3 ...as button X
Behaviour button 2	Defines the function of button 2 in the second operating level.	**Inactive** ...as button 1 ...as button 3 ...as button X
Behaviour button X	Defines the function of button X in the second operating level.	**Inactive**

Table 11: General > Operating concept > Configuration second level

Parameter	Description	Value
		...as button 1 ...as button 2 ...as button X

Table 11: General > Operating concept > Configuration second level

	Name	Function	Length	Data type
15	General	Configuration second level	1 bit	1.011 Status

Table 12: Communication object – second level

In the second level, the behaviour of the **X** button can be assigned to the behaviour of the **Y** button.

Behaviour button 1	**Inactive** ...as button 2 ...as button 3 ...as button 4 ...as button 5 ...as button 6 ...as button 7 ...as button 8
Behaviour button 2	**Inactive** ...as button 1 ...as button 3 ...as button 4 ...as button 5 ...as button 6 ...as button 7 ...as button 8
Behaviour button 3	**Inactive** ...as button 1 ...as button 2 ...as button 4 ...as button 5 ...as button 6 ...as button 7 ...as button 8
Behaviour button 4	**Inactive** ...as button 1 ...as button 2 ...as button 3 ...as button 5 ...as button 6

	...as button 7 ...as button 8
Behaviour button 5	**Inactive** ...as button 1 ...as button 2 ...as button 3 ...as button 4 ...as button 6 ...as button 7 ...as button 8
Behaviour button 6	**Inactive** ...as button 1 ...as button 2 ...as button 3 ...as button 4 ...as button 5 ...as button 7 ...as button 8
Behaviour button 7	**Inactive** ...as button 1 ...as button 2 ...as button 3 ...as button 4 ...as button 5 ...as button 6 ...as button 8
Behaviour button 8	**Inactive** ...as button 1 ...as button 2 ...as button 3 ...as button 4 ...as button 5 ...as button 6 ...as button 7

The Configuration second level function, for example, can be used for only granting a certain group of persons limited access to the device (cleaning personnel). As a result, only the function such as switch on light and switch off light is then active.

Example: Service personnel function

The reaction of button 1 from operating level 1 (e. g. light ON/OFF function) is assigned to all buttons from operating level 2 for a defined period of time. The advantage of this operating variant lies in the fact that the service personnel only need to switch one button, no matter which, in order to illuminate the room.

5.1.4 Buzzer settings

The buzzer in the device can be used for different signalization: Physical localisation when the programming mode is getting activated through ETS (for the local physical addressing button no buzzer feedback) and acknowledgement for short and/or long button press and alarm. Furthermore it is possible to change the melody for the buzzer feedbacks.

The device has a buzzer for emitting acoustic signals so operation can be customised to the user's needs. This is especially useful for triggering an alarm event, for example, or for people with impairments, who receive an acoustic signal as confirmation after triggering an action.

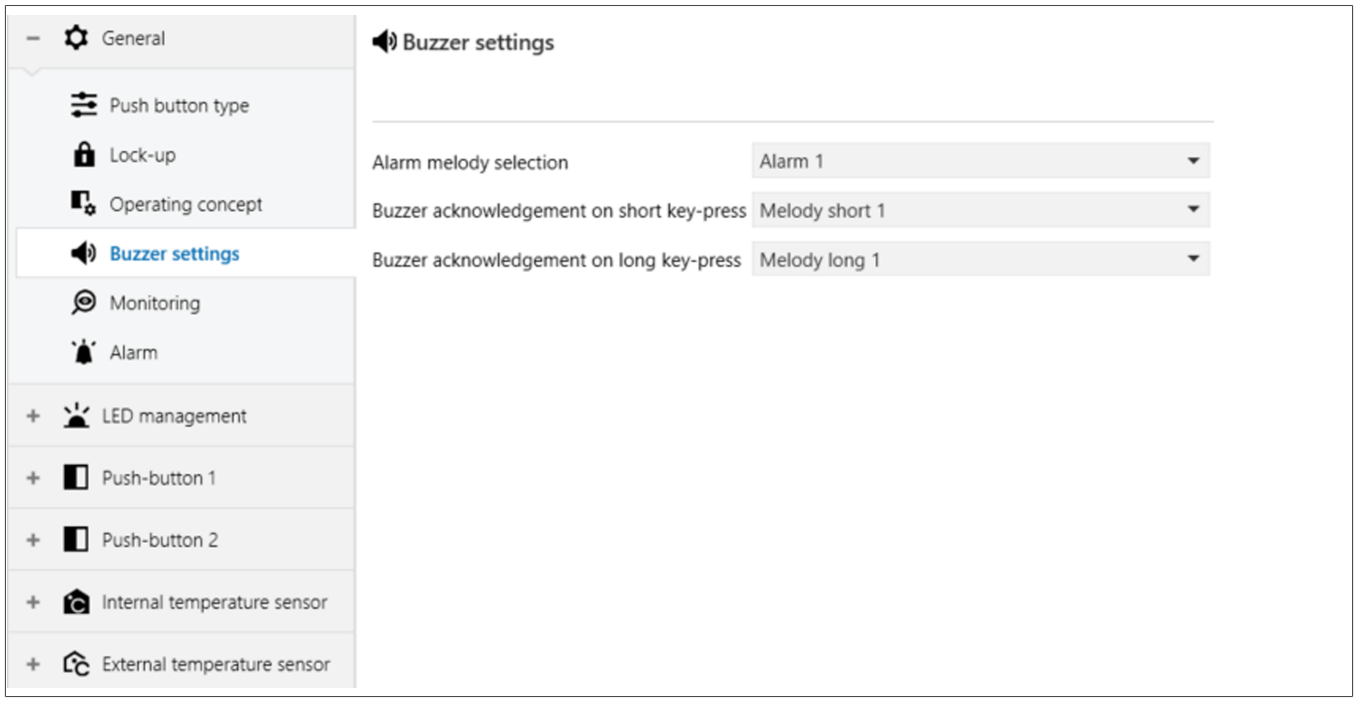


Fig. 10: General > Buzzer settings

Parameter	Description	Value
Alarm melody selection	Defines which tone is selected.	**Alarm 1** Alarm 2 Alarm 3 Alarm 4 Alarm 5
Buzzer acknowledgement by short press of button	3 melodies are available to acknowledge the signal for a short button press. The default configuration is Sound 1.	Inactive **Sound 1** Sound 2 Sound 3
Buzzer acknowledgement by long press of button	3 melodies are available to acknowledge the signal for a long button press. The default configuration is Long sound 1.	Inactive **Long sound 1** Long sound 2 Long sound 3

Table 13: General > Buzzer settings

5.1.5 Monitoring

Monitoring enables users to detect and quickly resolve failures or problems. If the device is connected to the KNX bus system, the operating status of the device is displayed. To check whether communication is working correctly, it transmits a 1-bit communication object to the bus at regular intervals. If this object is connected with a KNX server, the status can be visualised or a message can be transmitted to notify the user of any faults.

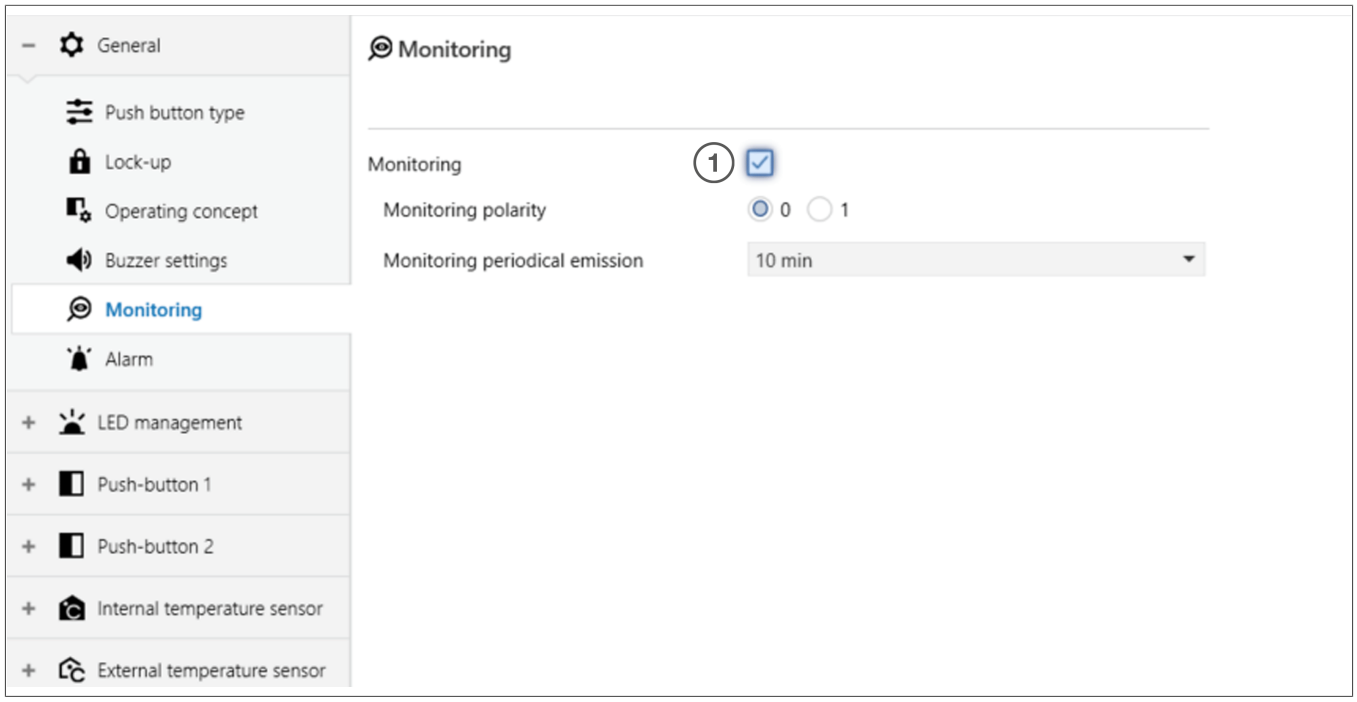


Fig. 11: General > Monitoring

If Monitoring is selected (①, tick the box), further setting windows open. These parameters can be used to set the polarity and the frequency of transmission.

Parameter	Description	Value
Monitoring polarity	Defines the value (group object 37 General – Monitoring) at which a signal is transmitted to the bus for monitoring. The value can be set to 0 or 1 depending on requirements.	**0** 1
Monitoring, transmit all	Use this interval to define a time gap between signals that are transmitted periodically to the bus for monitoring. You can choose from intervals of 10 or 30 minutes or 1, 3, 6, 12 or 24 hours. The factory setting is 10 minutes.	**10** 30 min 1 h 3 h 6 h 12 h 24 h

Table 14: General > Monitoring

	Name	Function	Length	Data type
37	General	Monitoring	1 bit	1.001 Switching

Table 15: Communication object – Alarm

5.1.6 Alarm

The device can signal critical events such as a burglar alarm or fire alarm coming from a central KNX alarm system via the bus with an acoustic signal (built-in buzzer) and LED indicators.

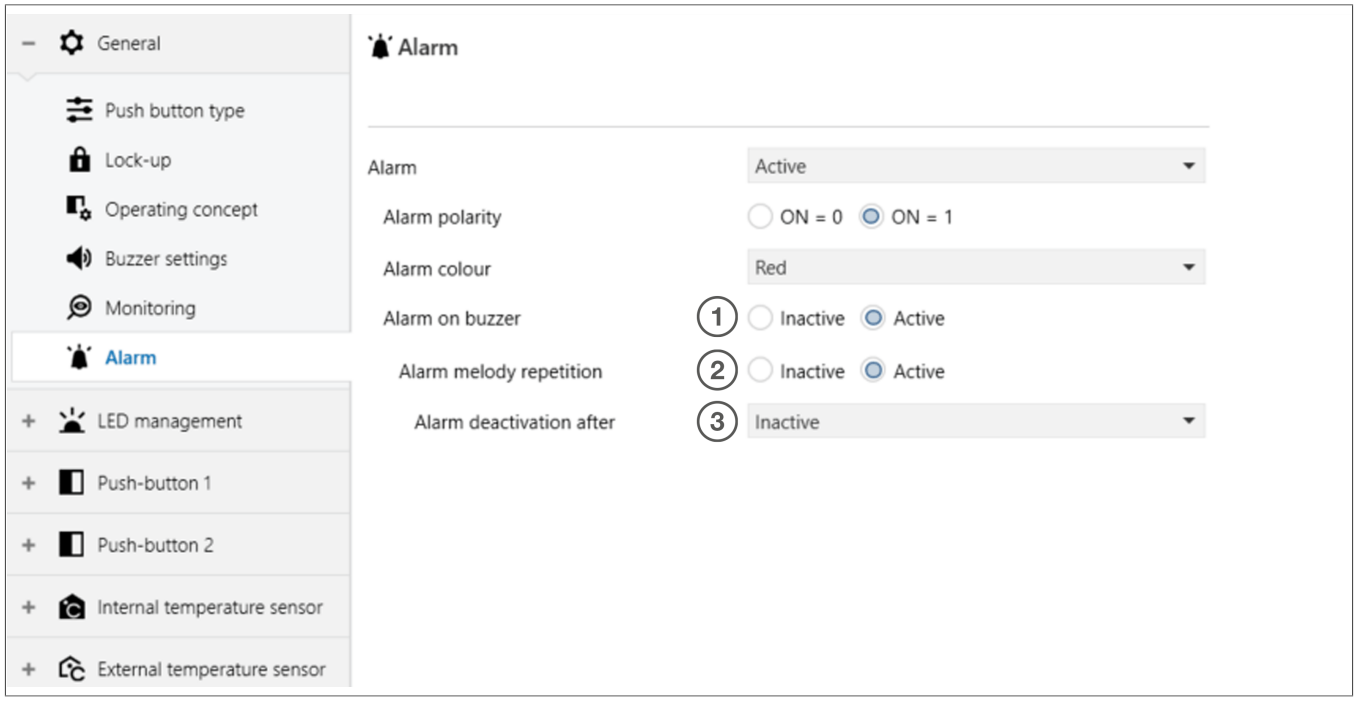


Fig. 12: General > Alarm

If Alarm is selected (①, tick the box, select Active), further setting windows open. With these parameters the function of the push buttons for the Monitoring function can be defined.

Parameter	Description	Value
Alarm	There are two ways to activate the alarm function. **Active** The **Active/Stop button press** function enable the alarm signals to be stopped by pressing a button.	**Active** Active/Stop by pressing a button
Alarm polarity	Defines the value (group object 1: General – Alarm) that triggers the alarm function of the device	0 **1**
Alarm colour	If an alarm is triggered, all LEDs on the device blink at a frequency of 2 Hz. An alarm display	Off White Red

Table 16: General > Alarm

Parameter	Description	Value
	can be selected from 7 colour options and the **Off** function.	Yellow Green Cyan Blue Magenta
The **Alarm colour** parameter only appears if the tick is set under **LED management**.		
Alarm at buzzer	If the **Alarm at buzzer** parameter is set to active, the device will play the melody set in the buzzer settings when an alarm occurs.	**Inactive** Active
Alarm melody repeat ②	The alarm signal can either be triggered just once or repeatedly within a defined time period. – The alarm melody repeat is set to **Inactive**: The alarm sounds only once and will not be repeated. – The alarm melody repeat is set to **Active**: The alarm sounds for the period of time set in **Alarm deactivation after**.	**Inactive** Active
Alarm deactivation after ③	The time to deactivate the alarm can be set and is therefore repeated for this period.	**Inactive** 10 min 30 min 1 h

Table 16: General > Alarm

	Name	Function	Length	Data type
1	General	Alarm	1 bit	1.005 Alarm

Table 17: Communication object – Alarm

The device enables the signalling of an alarm, which can be, for example, a burglar alarm or fire alarm of a KNX alarm central unit. In addition to deactivation via the object alarm, a alarm signal can also be deactivated directly on the device by pressing any button.

The **Active/Stop by pressing a button** parameter defines the button behaviour during an alarm message:

– If this parameter is set to Yes, an active alarm signal can be deactivated by pressing any button on the device. In the course of this, the parametrised button function of the pressed button is not executed. The parametrised button function is only executed the next time the button is pressed.

If an alarm signal can be deactivated by pressing any button, the Confirm alarm message parameter determines whether a telegram for confirming the alarm by pressing the button via the separate object Confirmation of alarm message should additionally be transmitted to the bus. Such a telegram can, for instance, be transmitted to the alarm message objects of other bus subscribers by means of a listening address in order to reset the alarm status there as well. At the same time, attention must be paid to the adjustable polarity of the acknowledgement object for resetting the alarm.

Note

Alarm polarity: In the Alarm if OFF and reset alarm if ON setting, the alarm object must first be actively written with 0 by the bus after a reset or after an ETS programming operation in order to activate the alarm.

An active alarm message is not saved, so that the alarm signal is always deactivated after a device reset or ETS programming operation.

5.2 LED management

5.2.1 General

To configure the LED of the device for alarm functions, lock-up functions or status indications, the **LED management** parameter must be active (①, tick the box). If it is active, a new parameter **Brightness value daytime/nighttime operation can be changed via object** ② appears directly below it. In addition, two further parameters are created in the function bar ③ under General. Click on **+** to display the two functions. These functions make it possible to configure the brightness value for the backlighting LED or the status LED.

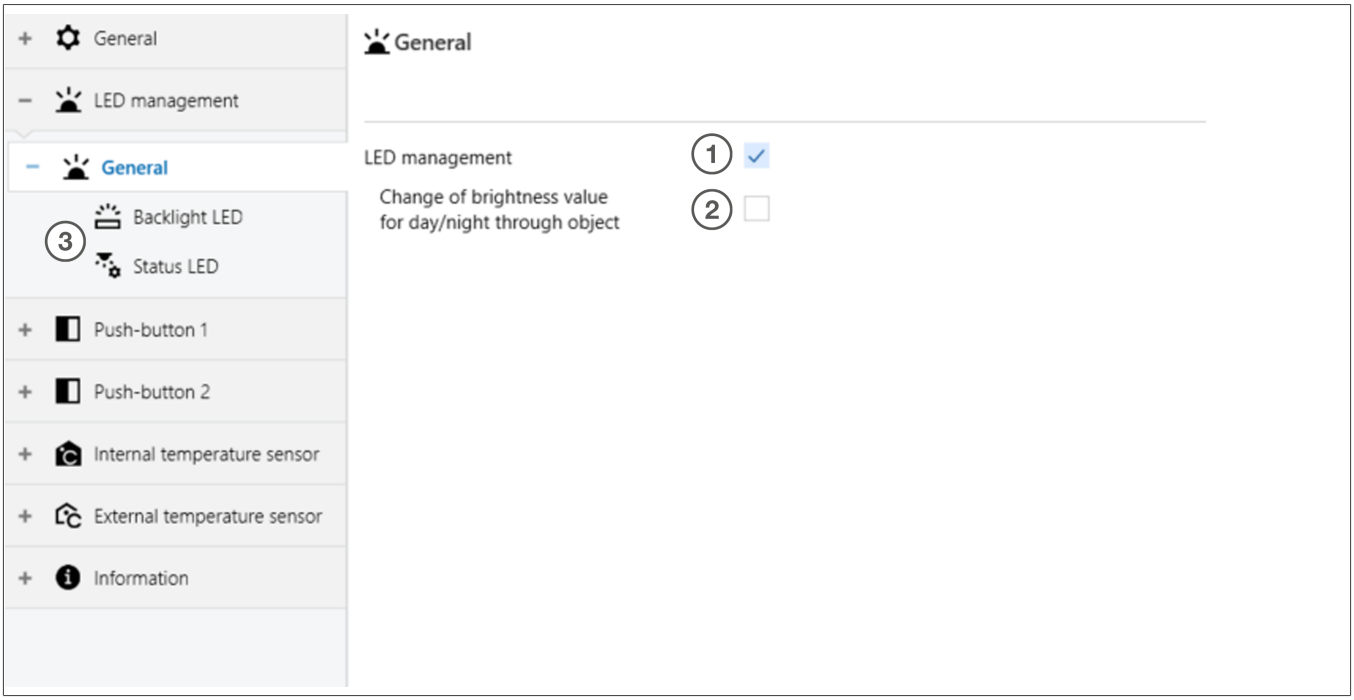


Fig. 13: LED management > General

	Name	Function	Length	Data type
11	LED management	Day/night	1 bit	1.011Status
56	LED management	Device status LED – ON/OFF	1 bit	1.001 Switching
57	LED management	Backlighting – ON/OFF	1 bit	1.001 Switching

Table 18: Communication object > LED management > General

Brightness value daytime/nighttime operation can be changed via object

This function makes it possible to configure the brightness value for the backlighting LED or the status LED for day or night via an external communication object.

	Name	Function	Length	Data type
9	LED management	Backlighting – brightness day	1 byte	5.001 Percentage (0...100%)

Table 19: Communication object – LED management

	Name	Function	Length	Data type
10	LED management	Backlighting – brightness night	1 byte	5.001 Percentage (0...100%)
13	LED management	Device status LED – brightness day	1 byte	5.001 Percentage (0...100%)
14	LED management	Device status LED – brightness night	1 byte	5.001 Percentage (0...100%)

Table 19: Communication object – LED management

5.2.1.1 LED backlighting

Information

The LED backlighting function is available for the Backlight push button.

The backlighting can make the labelling fields with the push-button functions easier to read during the day or serve as an orientation light at night.

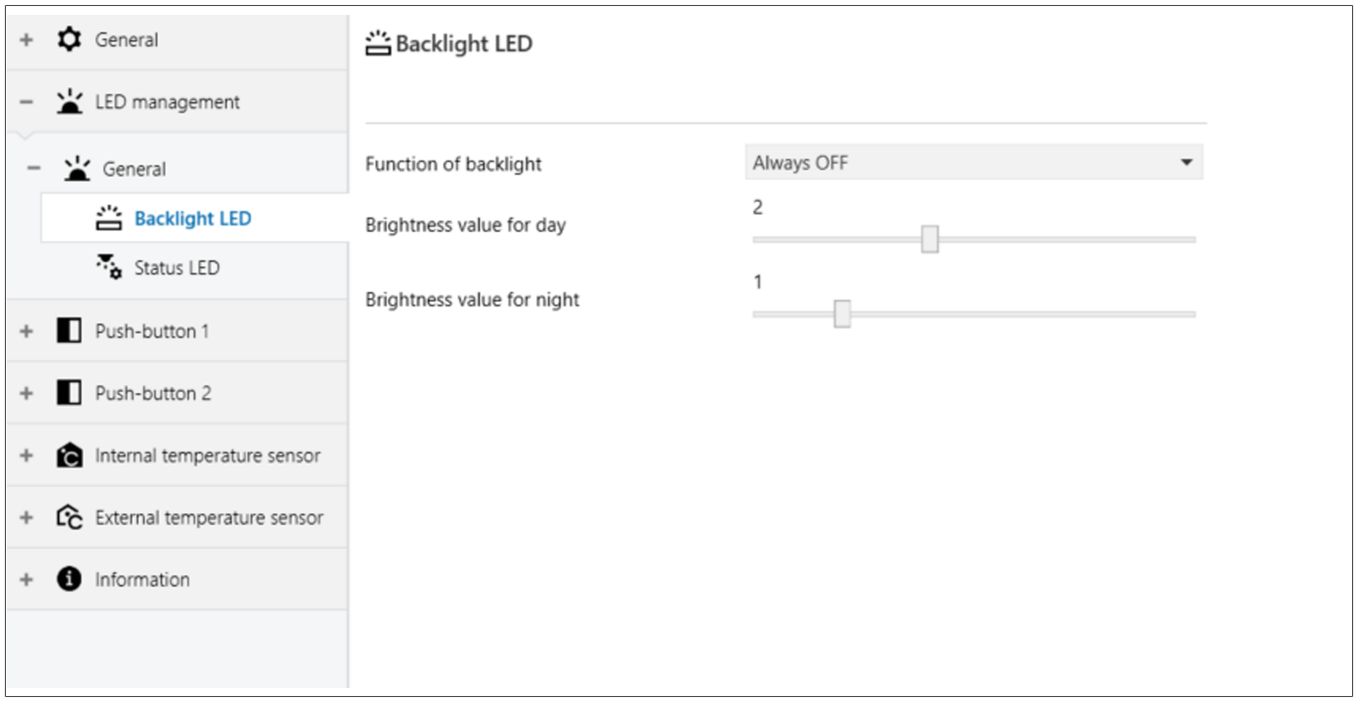


Fig. 14: LED management > General > LED backlighting

Parameter	Description	Value
Backlighting function	Defines which function and how the backlighting LED should perform.	Always ON Always OFF Status indication (ON = 1) Status indication (ON = 0) Status indication flashes at 1

Table 20: LED management > LED backlighting

Parameter	Description	Value
		Status indication flashes at 0

Table 20: LED management > LED backlighting

Always ON	The LED backlighting is always switched on
Always OFF	The LED backlighting is always switched off
Status indication (ON = 1)	Switches the backlighting on when the group object receives the value 1. To switch off, the group object must receive the value 0.
Status indication (ON = 0)	Switches the backlighting on when the group object receives the value 0. To switch off, the group object must receive the value 1.
Status indication flashes at	The backlighting flashes when the group object receives the value 1. To switch off, the group object must receive the value 0.
Status indication flashes at 0	The backlighting flashes when the group object receives the value 0. To switch off, the group object must receive the value 1.

Table 21: LED backlighting – value description

	Name	Function	Length	Data type
7	LED management	Status indicator	1 bit	5.001 Percentage (0...100%)

Table 22: Communication object – LED management

Brightness value daytime operation

The brightness of the backlighting can be adjusted in 6 steps using a slider.

0	Backlighting is OFF
1 ...4	Steps with increasing brightness values
5	Maximum brightness value

Table 23: LED backlighting > Brightness value daytime operation

Brightness value nighttime operation

The brightness of the backlighting can be adjusted in 6 steps using a slider.

0	Backlighting is OFF
1 ...4	Steps with increasing brightness values
5	Maximum brightness value

Table 24: LED backlighting > Brightness value nighttime operation

5.2.1.2 Status LED

In the Status LED menu, the **flashing duration**, the **brightness value** and the **dynamic colour control** parameters can be set either **individually** for each status LED or **globally** for all LEDs.

Note

Individual settings for the status LED parameters of the individual buttons is described in the chapter Button x > Function > LED status.

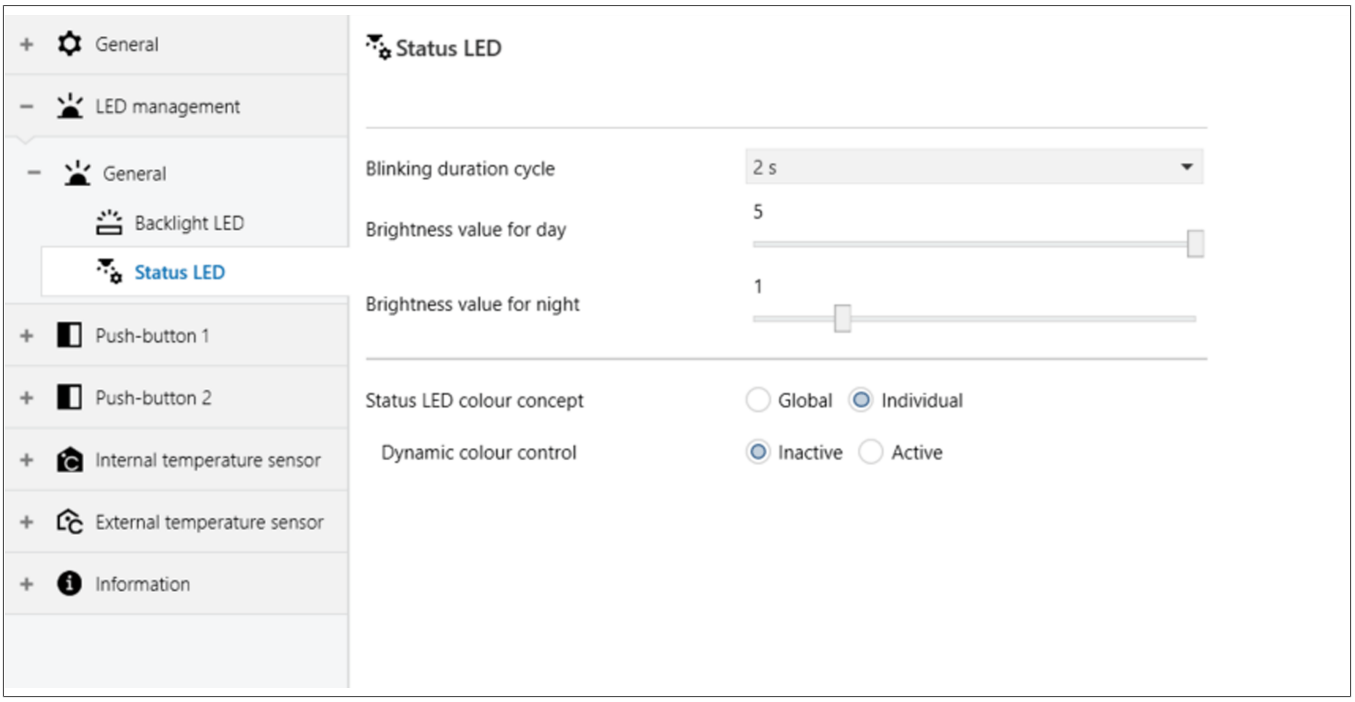


Fig. 15: LED management > General > Status LED

Parameter	Description	Value
Flashing duration	Regardless of the selected status LED management, the flashing frequency of the status LED can be set between 250 ms ... 5 s using the **flashing duration** parameter. If, for example, the user requires a time-controlled function such as the stairway light, the status LED can indicate that this function is switched on by flashing constantly at the set frequency	250 ms ... **2 s** ... 5 s
Brightness value daytime operation	The brightness of the backlighting can be adjusted in 6 steps using a slider.	0: Status LED is OFF 1 ...4: Steps with increasing brightness values **5: Maximum brightness value**
Brightness value nighttime operation	The brightness of the backlighting can be adjusted in 6 steps using a slider.	0: Status LED is OFF 1 ...4: Steps with increasing brightness values **5: Maximum brightness value**

Table 25: LED management > General > Status LED

Brightness value daytime operation

The brightness of the backlighting can be adjusted in 6 steps using a slider.

0	Backlighting is OFF
1 ...4	Steps with increasing brightness values
5	Maximum brightness value

Table 26: LED backlighting > Brightness value daytime operation

Brightness value nighttime operation

The brightness of the backlighting can be adjusted in 6 steps using a slider.

0	Backlighting is OFF
1 ...4	Steps with increasing brightness values
5	Maximum brightness value

Table 27: LED backlighting > Brightness value nighttime operation

Dynamic colour control of the status LED

If dynamic colour control is activated, the colour of the LED for each function is controlled via a communication object. Several functions can also be linked to the same colour object. Six LED management objects are available in total. If nothing is transmitted to the communication object initially, the LED function has the colour selected in the parameters.

	Name	Function	Length	Data type
50	LED management	Colour 1	3 byte	232.600 RGB value 3x(0...255)
51	LED management	Colour 2	3 byte	232.600 RGB value 3x(0...255)
52	LED management	Colour 3	3 byte	232.600 RGB value 3x(0...255)
53	LED management	Colour 4	3 byte	232.600 RGB value 3x(0...255)
54	LED management	Colour 5	3 byte	232.600 RGB value 3x(0...255)
55	LED management	Colour 6	3 byte	232.600 RGB value 3x(0...255)

Table 28: Communication object – Status LED colour concept > Global >

Status LED colour concept – Global

The colour concept can be set **globally** for the entire device on this page.

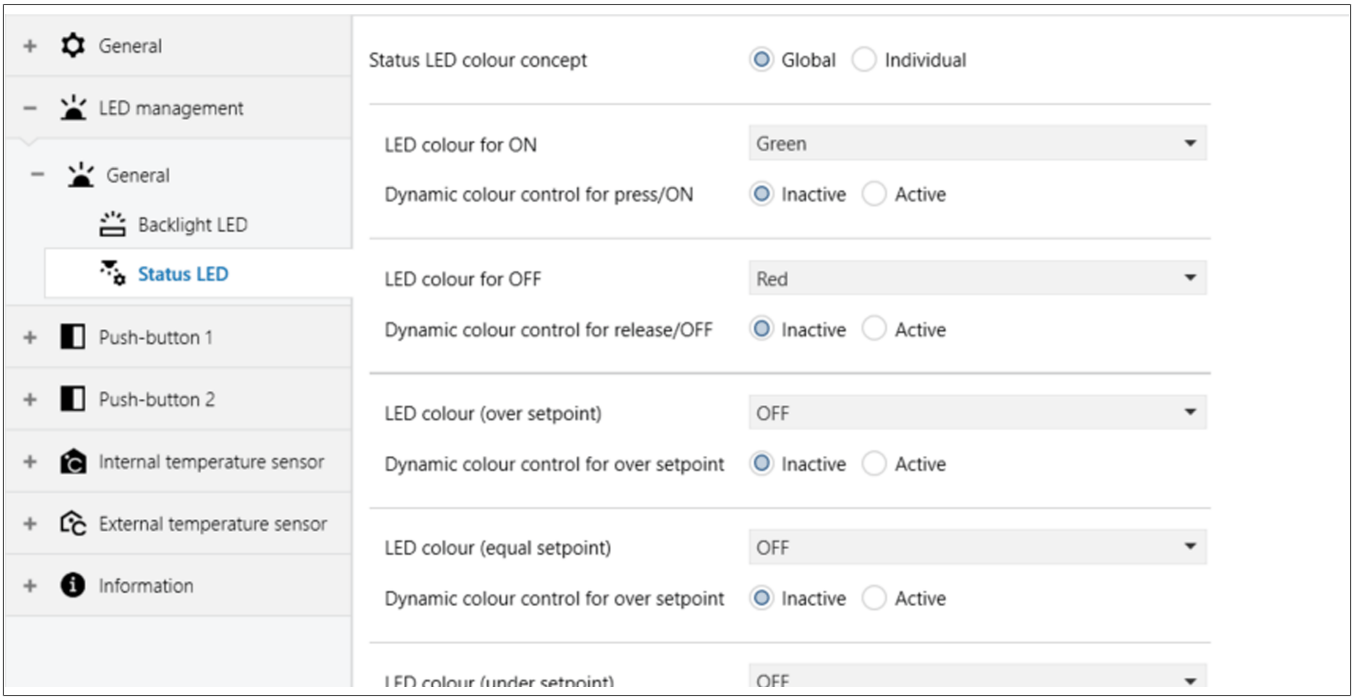


Fig. 16: LED management > General > Status LED colour concept > Global

LED colour for ON

Parameter	Description	Value
LED colour for ON	This status indicator can be selected from 7 colour options and OFF.	Off White (red + green + blue) Red Yellow (red + green) **Green** Cyan (green + blue) Blue Magenta (red + blue)
Dynamic colour control for Press/On	If the function is set to active, the **Colour object for Press/On** function opens.	**Inactive** Active
Colour object for Press/On	This status indicator can be selected from 6 colour options.	**1** ... 6

Table 29: LED management > General > Status LED colour concept > Global > LED colour for ON

LED colour for OFF

Parameter	Description	Value
LED colour for OFF	This status indicator can be selected from 7 colour options and OFF.	Off White (red + green + blue) **Red** Yellow (red + green)

Table 30: LED management > General > Status LED colour concept > Global > LED colour for OFF

Parameter	Description	Value
		Green Cyan (green + blue) Blue Magenta (red + blue)
Dynamic colour control for Release/Off	If the function is set to active, the **Colour object for Release/Off** function opens.	**Inactive** Active
Colour object for Release/Off	This status indicator can be selected from 6 colour options.	**1** ... 6

Table 30: LED management > General > Status LED colour concept > Global > LED colour for OFF

LED colour (over setpoint)

Parameter	Description	Value
LED colour (over setpoint)	This status indicator can be selected from 7 colour options and OFF.	**Off** White (red + green + blue) Red Yellow (red + green) Green Cyan (green + blue) Blue Magenta (red + blue)
Dynamic colour control over setpoint	If the function is set to active, the **Colour object for over setpoint** function opens.	**Inactive** Active
Colour object for over setpoint	This status indicator can be selected from 6 colour options.	**1** ... 6

Table 31: LED management > General > Status LED colour concept > Global > LED colour (over setpoint)

LED colour (equal to setpoint)

Parameter	Description	Value
LED colour (equal to setpoint)	This status indicator can be selected from 7 colour options and OFF.	**Off** White (red + green + blue) Red Yellow (red + green) Green Cyan (green + blue) Blue Magenta (red + blue)
Dynamic colour control equal to setpoint	If the function is set to active, the **Colour object for equal to setpoint** function opens.	**Inactive** Active

Table 32: LED management > General > Status LED colour concept > Global > LED colour (equal to setpoint)

Parameter	Description	Value
Colour object for equal to setpoint	This status indicator can be selected from 6 colour options.	**1** ... 6

Table 32: LED management > General > Status LED colour concept > Global > LED colour (equal to setpoint)

LED colour (below setpoint)

Parameter	Description	Value
LED colour (below setpoint)	This status indicator can be selected from 7 colour options and OFF.	**Off** White (red + green + blue) Red Yellow (red + green) Green Cyan (green + blue) Blue Magenta (red + blue)
Dynamic colour control below setpoint	If the function is set to active, the **Colour object for below setpoint** function opens.	**Inactive** Active
Colour object for below setpoint	This status indicator can be selected from 6 colour options.	**1** ... 6

Table 33: LED management > General > Status LED colour concept > Global > LED colour (below setpoint)

LED colour for comfort

Parameter	Description	Value
LED colour for comfort	This status indicator can be selected from 7 colour options and OFF.	Off White (red + green + blue) **Red** Yellow (red + green) Green Cyan (green + blue) Blue Magenta (red + blue)
Dynamic colour control for comfort	If the function is set to active, the **Colour object for comfort** function opens.	**Inactive** Active
Colour object for comfort	This status indicator can be selected from 6 colour options.	**1** ... 6

Table 34: LED management > General > Status LED colour concept > Global > LED colour for comfort

LED colour for standby

Parameter	Description	Value
LED colour for standby	This status indicator can be selected from 7 colour options and OFF.	Off White (red + green + blue) Red Yellow (red + green) **Green** Cyan (green + blue) Blue Magenta (red + blue)
Dynamic colour control for standby	If the function is set to active, the **Colour object for standby** function opens.	**Inactive** Active
Colour object for standby	This status indicator can be selected from 6 colour options.	**1** ... 6

Table 35: LED management > General > Status LED colour concept > Global > LED colour for standby

LED colour for night selection

Parameter	Description	Value
LED colour for night selection	This status indicator can be selected from 7 colour options and OFF.	Off White (red + green + blue) Red Yellow (red + green) Green Cyan (green + blue) **Blue** Magenta (red + blue)
Dynamic colour control for night selection	If the function is set to active, the **Colour object for night selection** function opens.	**Inactive** Active
Colour object for night selection	This status indicator can be selected from 6 colour options.	**1** ... 6

Table 36: LED management > General > Status LED colour concept > Global > LED colour for night selection

LED colour for frost/heat protection

Parameter	Description	Value
LED colour for frost/heat protection	This status indicator can be selected from 7 colour options and OFF.	Off White (red + green + blue) Red **Yellow (red + green)** Green Cyan (green + blue)

Table 37: LED management > General > Status LED colour concept > Global > LED colour for frost/heat protection

Parameter	Description	Value
		Blue Magenta (red + blue)
Dynamic colour control for frost/heat protection	If the function is set to active, the **Colour object for frost/ heat protection** function opens.	**Inactive** Active
Colour object for frost/ heat protection	This status indicator can be selected from 6 colour options.	**1** ... 6

Table 37: LED management > General > Status LED colour concept > Global > LED colour for frost/heat protection

5.3 Single push button function – Rocker function

In the following parameter window, the respective functions and selection options of the Button function are displayed and configured in the operating concept as single push button and in the operating concept as rocker. The operating concept must first be defined under General and then the function of the single push button or the rocker must be defined.

Setting as single push button operating concept:

If the **single push button** operating concept is set under General > Button x-y operating concept, two single push buttons are listed for each pair of buttons in the function list.

Example on device 8118 1000 – push button, 2-gang, full-surface:

Operating mode → single push button

The function bar lists two parameters: Button 1 and Button 2.

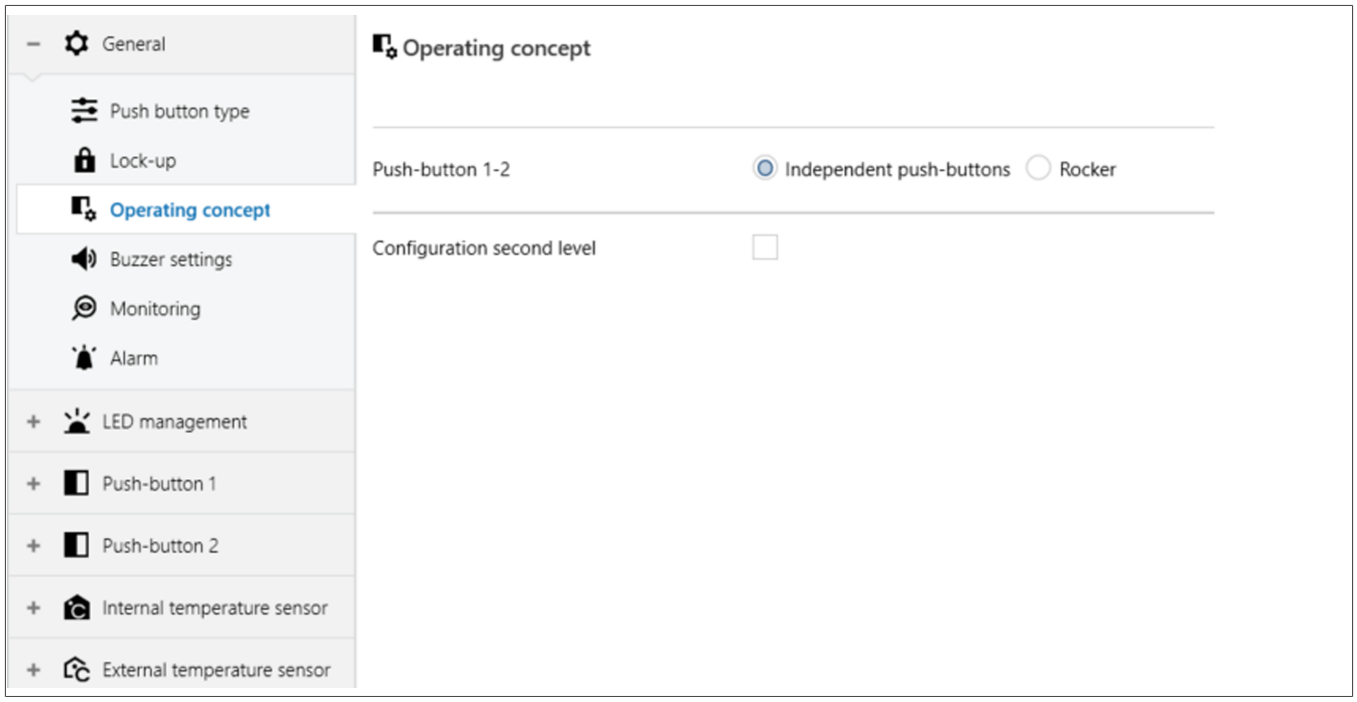


Fig. 17: Button operating concept

Setting as rocker operating concept:

If the **rocker** operating concept is set under General > Button x-y operating concept, a rocker x-y is listed for each pair of buttons in the function list.

Example on device 8118 1000 – push button, 2-gang, full-surface:

Operating concept Rocker

A Rocker 1-2 parameter is listed in the function bar.

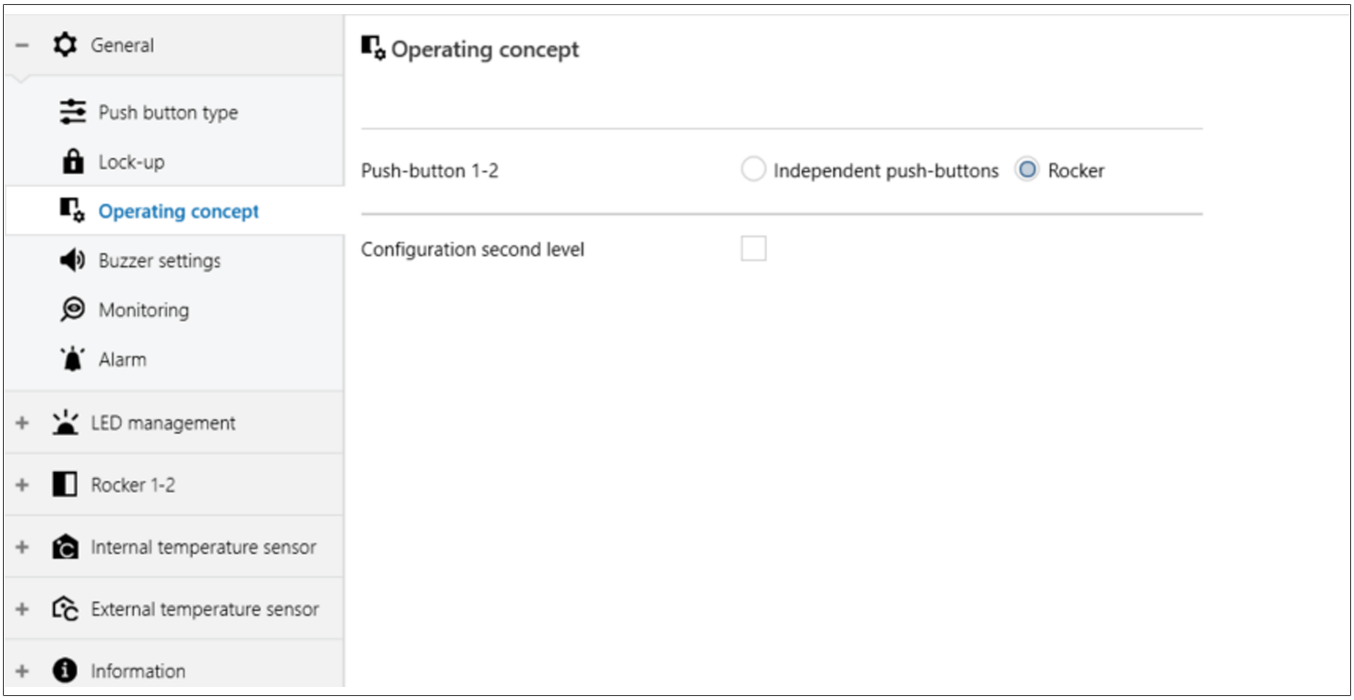


Fig. 18: Rocker operating concept

The individual functions are described and configured in the following section. The description of the functions always refers to the single push button or rocker.

Function selection

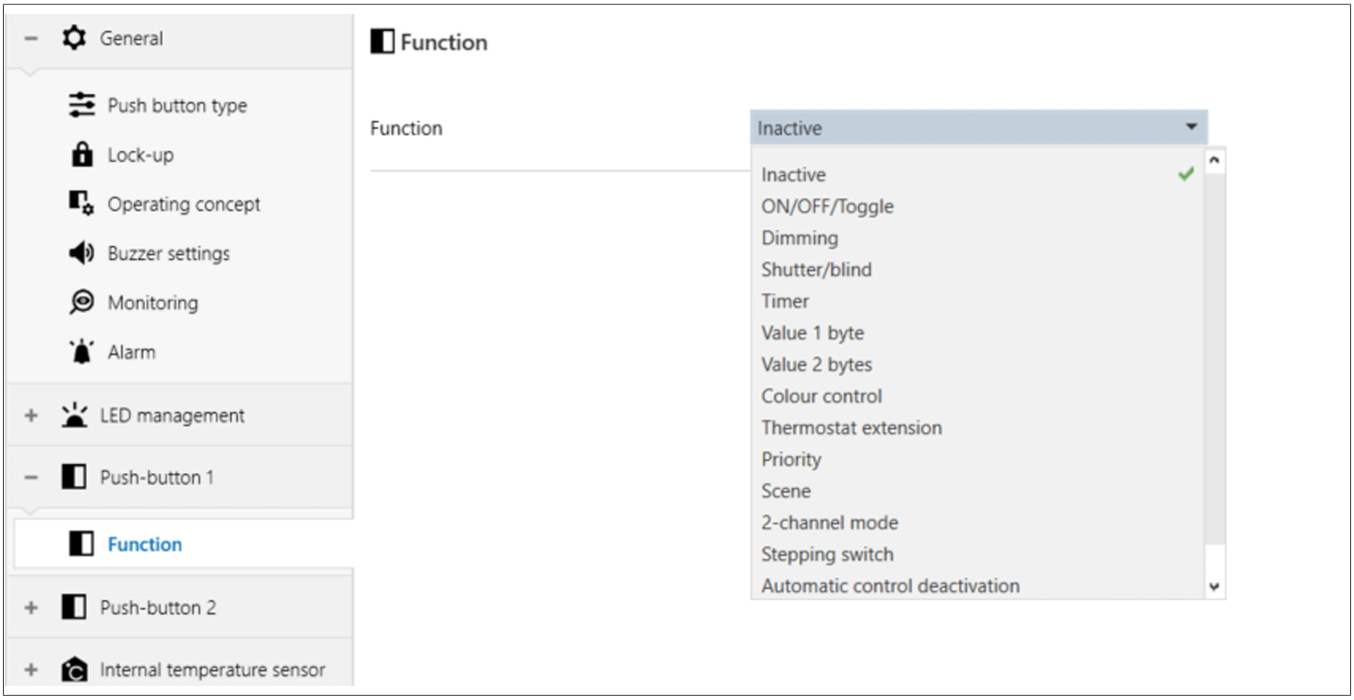


Fig. 19: Function selection

Parameter	Description	Value
Function of the button[1]	Determines which function the button should perform. Further information can be found on the respective function page.	Toggle switch Dimming Roller shutter/blind Timer Value 1 bytes Value 2 bytes Colour control Room thermostat extension unit Priority Scene 2-channel mode Step switch Deactivate automatic

Table 38: Button – Function selection

1 When selecting one of the functions, one or more of the parameter windows open in order to configure the selected function. If the Inactive function is selected, the corresponding rocker/button is deactivated, except for the function.

5.3.1 Status-LED (individual)

In this section, the status LED is parametrised individually for each button/rocker.

If the individual LED colour concept see Chapter , "Status-LED"is activated, both the colour and the function can be set for every status LED on the device.

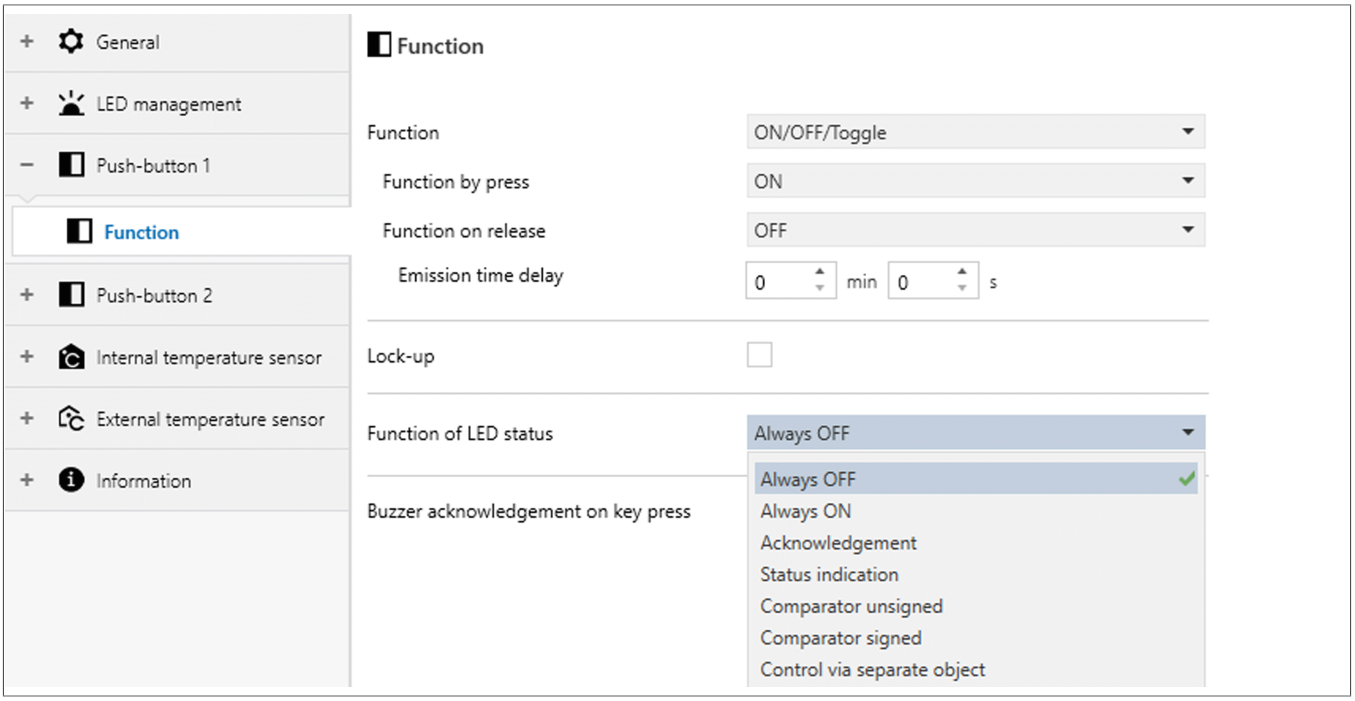


Fig. 20: LED status can be set individually

Parameter	Description	Value
Status LED	Determines which function the status LED should have individually for each button/rocker	**Always Off** Always On Actuation display Status indicator Unsigned comparison Signed comparison Activation through separate object
LED colour for ON	Defines which colour the status LED of the button/rocker should have permanently.	**Off** White (red + green + blue) Red Yellow (red + green) Green Cyan (green + blue) Blue Magenta (red + blue)

Table 39: LED status can be set individually

[1] This parameter opens if the value **Always On** is selected in the LED status function.

Actuation display

Each time the button is pressed, the status LED changes colour between ON and OFF for the time specified in the **LED light duration for actuation display** parameter.

Parameter	Description	Value
Status LED	Determines which function the status LED should have individually for each button/rocker	**Always Off** Always On Actuation display Status indicator Unsigned comparison Signed comparison Activation through separate object
LED colour for ON	Defines the colour of the button/rocker status LED for an **ON command**.	**Off** White (red + green + blue) Red Yellow (red + green) Green Cyan (green + blue) Blue Magenta (red + blue)
LED colour for OFF	Defines the colour of the button/rocker status LED for an **OFF command**.	**Off** White (red + green + blue) Red Yellow (red + green) Green Cyan (green + blue) Blue Magenta (red + blue)
LED light duration for actuation display	Determines how long the button/rocker LED lights up after actuation.	500 ms ... **3 s** ... 5 s

Table 40: LED status > Actuation display

[1] This parameter opens if the value **Always On** is selected in the LED status function.

Status indicator

The status indication LED is always updated according to the status of the button.

Parameter	Description	Value
LED behaviour	Defines which status LED is to be used individually for each button/rocker	**Status indicator (On at 1)** Status indicator (On at 0) Status indicator (On flashing at 1) Status indicator (On flashing at 0)

Table 41: Status LED > Status indicator

Parameter	Description	Value
LED colour for ON	Defines the colour of the button/rocker status LED for an **ON command**.	Off White (red + green + blue) Red Yellow (red + green) **Green** Cyan (green + blue) Blue Magenta (red + blue)
LED colour for OFF	Defines the colour of the button/rocker status LED for an **OFF command**.	**Off** White (red + green + blue) Red Yellow (red + green) Green Cyan (green + blue) Blue Magenta (red + blue)

Table 41: Status LED > Status indicator

Status indication (ON = 1) for switching on the status LED when the group object has the value 1. To switch off, the group object must receive the value 0.

Status indication (ON = 0) for switching on the status LED when the group object has the value 0. To switch off, the group object must receive the value 1.

Status indication flashing at 1, so the status LED flashes when the group object has the value 1. To switch off, the group object must receive the value 0.

Status indication flashing at 0, so the status LED flashes when the group object has the value 0. To switch off, the group object must receive the value 1.

Unsigned comparison

The device compares a set value with a received value. If the comparison value > received value, the status LED lights up in the set colour.

Parameter	Description	Value
Unsigned comparison of setpoint 1 byte	Defines which set 1-byte value is to be compared with the measured value.	**0** ... 255
LED colour (over set-point)	Defines the colour the status LED of the button/rocker should have if the measured value is **above** the setpoint.	**Off** White (red + green + blue) Red Yellow (red + green) Green Cyan (green + blue) Blue

Table 42: LED status > Unsigned comparison

Parameter	Description	Value
		Magenta (red + blue)
LED colour (equal to setpoint)	Defines the colour the status LED of the button/rocker should have for a measured value that is **equal** to the setpoint.	**Off** White (red + green + blue) Red Yellow (red + green) Green Cyan (green + blue) Blue Magenta (red + blue)
LED colour (below set-point)	Defines the colour the status LED of the button/rocker should have if the measured value is **below** the setpoint.	**Off** White (red + green + blue) Red Yellow (red + green) Green Cyan (green + blue) Blue Magenta (red + blue)

Table 42: LED status > Unsigned comparison

Signed comparison

A positive or negative comparison value is received via a separate communication object (1 byte).

Parameter	Description	Value
Signed comparison of setpoint 1 byte	Defines which set 1-byte value is to be compared with the measured value.	- 128 ... **0** ... 127
LED colour (over set-point)	Defines the colour the status LED of the button/rocker should have if the measured value is **above** the setpoint.	**Off** White (red + green + blue) Red Yellow (red + green) Green Cyan (green + blue) Blue Magenta (red + blue)
LED colour (equal to setpoint)	Defines the colour the status LED of the button/rocker should have for a measured value that is **equal** to the setpoint.	**Off** White (red + green + blue) Red Yellow (red + green) Green Cyan (green + blue) Blue Magenta (red + blue)

Table 43: LED status > Unsigned comparison

Parameter	Description	Value
LED colour (below set-point)	Defines the colour the status LED of the button/rocker should have if the measured value is **below** the setpoint.	**Off** White (red + green + blue) Red Yellow (red + green) Green Cyan (green + blue) Blue Magenta (red + blue)

Table 43: LED status > Unsigned comparison

5.3.2 Switching / Toggling functions

The **Switching / Toggling** functions are described below. With the **Switching** function, for example, the lighting can be switched on / off, and with the **Toggling** function the lighting can be switched on and off again by pressing repeatedly.

Defines which command is transmitted by pressing the button.

The following options are available:

- Inactive
- ON
- OFF
- Toggle switch

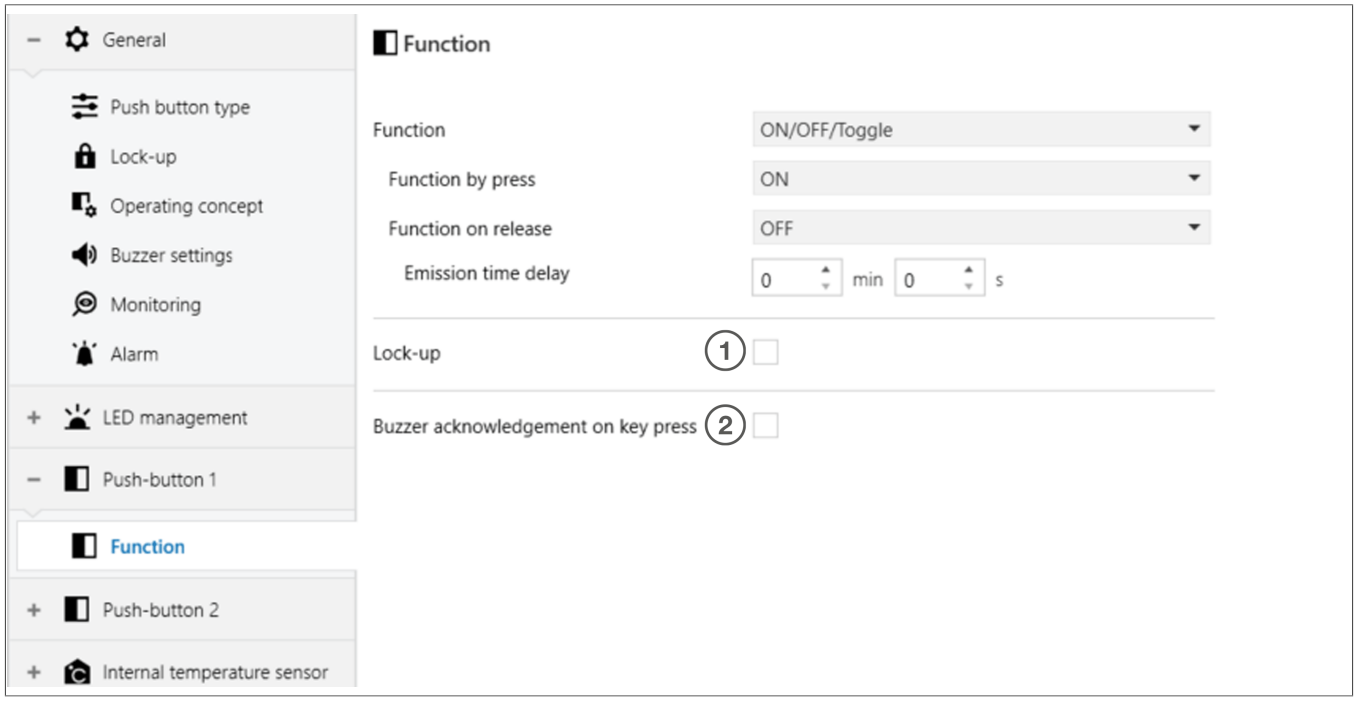


Fig. 21: Function > Switching / Toggling

Parameter	Description	Value
Function by pressing the button	Defines which command is transmitted by pressing the button.	**Inactive** An Off Toggle switch
Function on release	Defines which command is transmitted after the button is released.	**Inactive** An Off Toggle switch

Table 44: Function > Switching / Toggling

Parameter	Description	Value
Transmission delay [1]	Defines an individually configurable transmission delay in minutes and seconds, which will be observed before the command is transmitted. The set time applies to both commands, both for pressing and releasing the button.	

Table 44: Function > Switching / Toggling

[1] This parameter opens when the value On or Off is selected in the button function.

Button lock-up

If Lock-up ① is activated (Group object 17 – General – Lock-up), no command is transmitted via the KNX bus when the button is pressed. If lock-up is deactivated, the push button executes the configured function.

Buzzer acknowledgement by press of push button

If this function ② is activated, a short or long button press is acknowledged by an acoustic signal. In the **Buzzer settings** see Buzzer settings , specify which acoustic signal sounds when the button is pressed briefly and for a long time.

5.3.3 Dimming function

The Dimming function is described below. The lighting can be switched on/off (short press of button) and dimmed brighter, darker (long press of button) with the Dimming function.

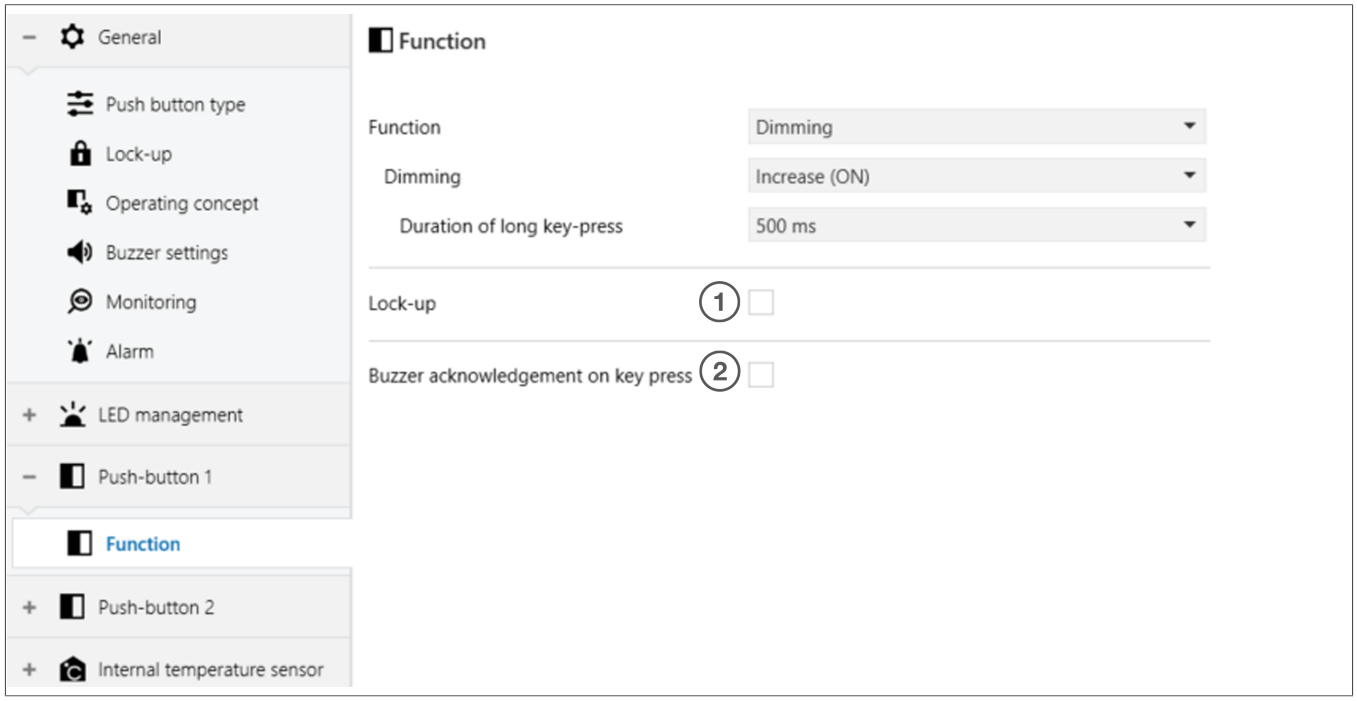


Fig. 22: Function > Dimming

Parameter	Description	Value
Function of the **Dimming** rocker	With this parameter the following function is assigned to the rocker in the Dimming function. A distinction is made here between the function when pressing the button left/right.	**Increase (On)** Decrease (Off) Increase (Toggle) Decrease (Toggle) Increase/Decrease (Toggle) Dimming value
Function of the **Dimming** button	This parameter assigns the following function to the independent button in the Dimming function when the button is pressed.	**Increase (On)** Decrease (Off) Increase (Toggle) Decrease (Toggle) Increase/Decrease (Toggle) Dimming value
Time for long button press	Defines how long you need to keep the button pressed to transmit the stored command (increase/decrease dimming).	400 ms ... **500 ms** ... 1s
Value (%)[1]	Use the slider to set which dimming value will be transmitted to the bus by a short button press.	**0** ... 100 %

Table 45: Function > Dimming

[1] This parameter opens when the value On or Off is selected in the function when the button is released.

The following options are available:

- Increase (ON): Switch on with a short button press and increase the brightness with a long button press
- Decrease (OFF): Switch off with a short button press and decrease the brightness with a long button press
- Increase (Toggle): Switch on/off with a short button press and increase the brightness with a long button press
- Decrease (Toggle): Switch on and off with a short button press and reduce the brightness with a long button press
- Increase/Decrease (Toggle): All dimming functions are combined in one button. One short button press to switch on, another to switch off. The same applies to dimming: A long button press increases the brightness, while another long button press decreases the brightness.
- Dimming value: A short button press activates the set dimming value. The required dimming value can be set using the Value (%) slider at the bottom.

In addition to the dimming communication objects, the communication objects for switching are visible as well. The Switching communication objects are responsible for the short press of the button and the Dimming communication objects are responsible for the actual dimming command, long press of the button. For this reason, two separate group addresses (0/0/1 dimming-short press of the button; 0/0/2 dimming-long press of the button) must be created and filled with the corresponding communication objects.

No.	Name	Function	Length	Data type
172	Button 1	Switching	1 bit	1.001 Switching
173	Button 1	Dimming	4 bit	3.007 dimmer step
174	Button 1	Switching status indicator	1 bit	1.001 Switching
178	Button 2	Switching	1 bit	1.001 Switching
179	Button 2	Dimming	4 bit	3.007 dimmer step
180	Button 2	Switching status indicator	1 bit	1.001 Switching
184	Button 3	Switching	1 bit	1.001 Switching
185	Button 3	Dimming	4 bit	3.007 dimmer step
186	Button 3	Switching status indicator	1 bit	1.001 Switching
190	Button 4	Switching	1 bit	1.001 Switching
191	Button 4	Dimming	4 bit	3.007 dimmer step
192	Button 4	Switching status indicator	1 bit	1.001 Switching
196	Button 5	Switching	1 bit	1.001 Switching
197	Button 5	Dimming	4 bit	3.007 dimmer step
198	Button 5	Switching status indicator	1 bit	1.001 Switching
202	Button 6	Switching	1 bit	1.001 Switching
203	Button 6	Dimming	4 bit	3.007 dimmer step

Table 46: Communication objects – Dimming

No.	Name	Function	Length	Data type
204	Button 6	Switching status indicator	1 bit	1.001 Switching
208	Button 7	Switching	1 bit	1.001 Switching
209	Button 7	Dimming	4 bit	3.007 dimmer step
201	Button 7	Switching status indicator	1 bit	1.001 Switching
214	Button 8	Switching	1 bit	1.001 Switching
215	Button 8	Dimming	4 bit	3.007 dimmer step
216	Button 8	Switching status indicator	1 bit	1.001 Switching

Table 46: Communication objects – Dimming

No.	Name	Function	Length	Data type
292	Button 1	Dimming value	1 byte	5.001 Percentage (0...100%)
304	Button 2	Dimming value	1 byte	5.001 Percentage (0...100%)
316	Button 3	Dimming value	1 byte	5.001 Percentage (0...100%)
328	Button 4	Dimming value	1 byte	5.001 Percentage (0...100%)
340	Button 5	Dimming value	1 byte	5.001 Percentage (0...100%)
352	Button 6	Dimming value	1 byte	5.001 Percentage (0...100%)
364	Button 7	Dimming value	1 byte	5.001 Percentage (0...100%)
376	Button 8	Dimming value	1 byte	5.001 Percentage (0...100%)

Table 47: Communication objects – Dimming – Dimming value

Dimming function – dimming value

If the Dimming – dimming value function is selected, the dimming value is to be set by means of the slidebar (0% … 100%). With this function only one communication object is available for selection. The Dimming – dimming value function assigns a specific brightness value to the lamp via the connected actuator. This is to be used for the configuration of scenes.

Dimming value:

- A short button press activates the set dimming value. The required dimming value can be set using the Value (%) slider at the bottom.

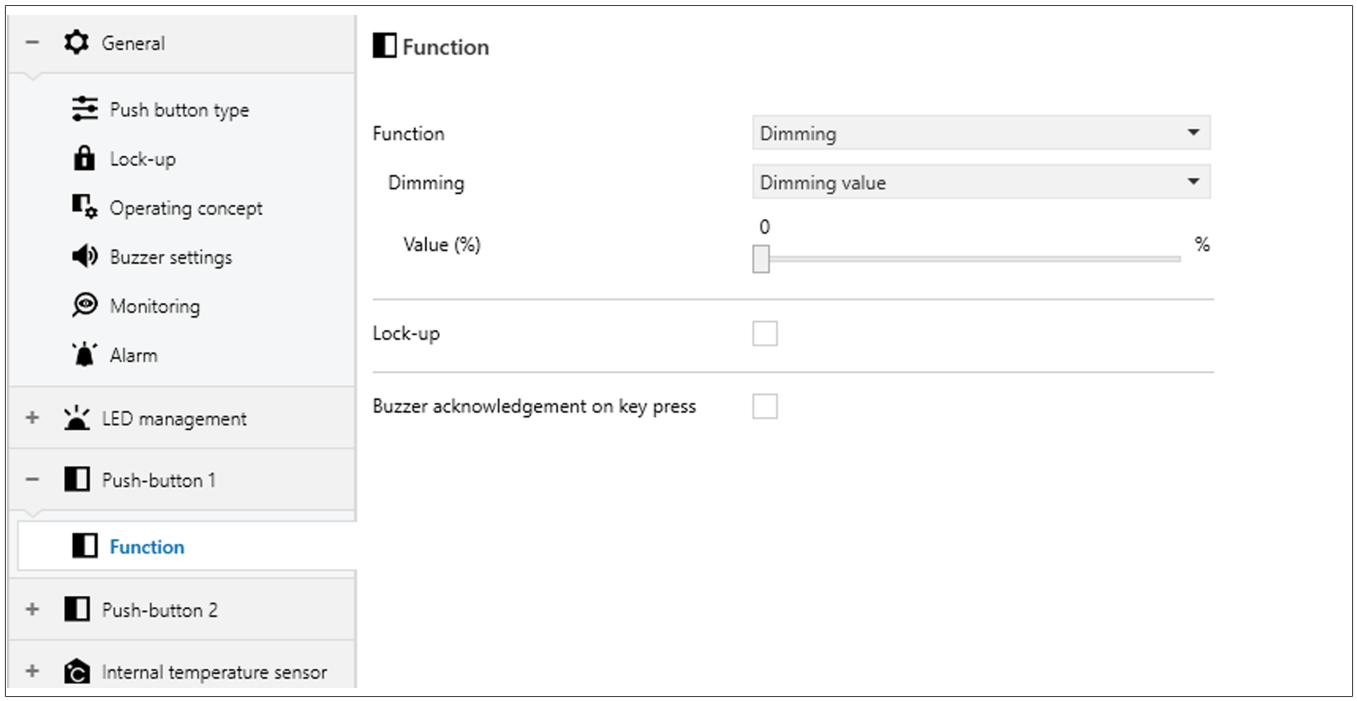


Fig. 23: Function > Dimming > Dimming value

Parameter	Description	Value
Value (%)	Use the slider to set which dimming value will be transmitted to the bus by a short button press.	**0** ... 100 %

No.	Name	Function	Length	Data type
292	Button 1	Dimming value	1 byte	5.001 Percentage (0...100%)
304	Button 2	Dimming value	1 byte	5.001 Percentage (0...100%)
316	Button 3	Dimming value	1 byte	5.001 Percentage (0...100%)
328	Button 4	Dimming value	1 byte	5.001 Percentage (0...100%)
340	Button 5	Dimming value	1 byte	5.001 Percentage (0...100%)
352	Button 6	Dimming value	1 byte	5.001 Percentage (0...100%)
364	Button 7	Dimming value	1 byte	5.001 Percentage (0...100%)
376	Button 8	Dimming value	1 byte	5.001 Percentage (0...100%)

5.3.4 Roller shutter/blind function

The Roller shutter/blind function is described and configured in the following section.

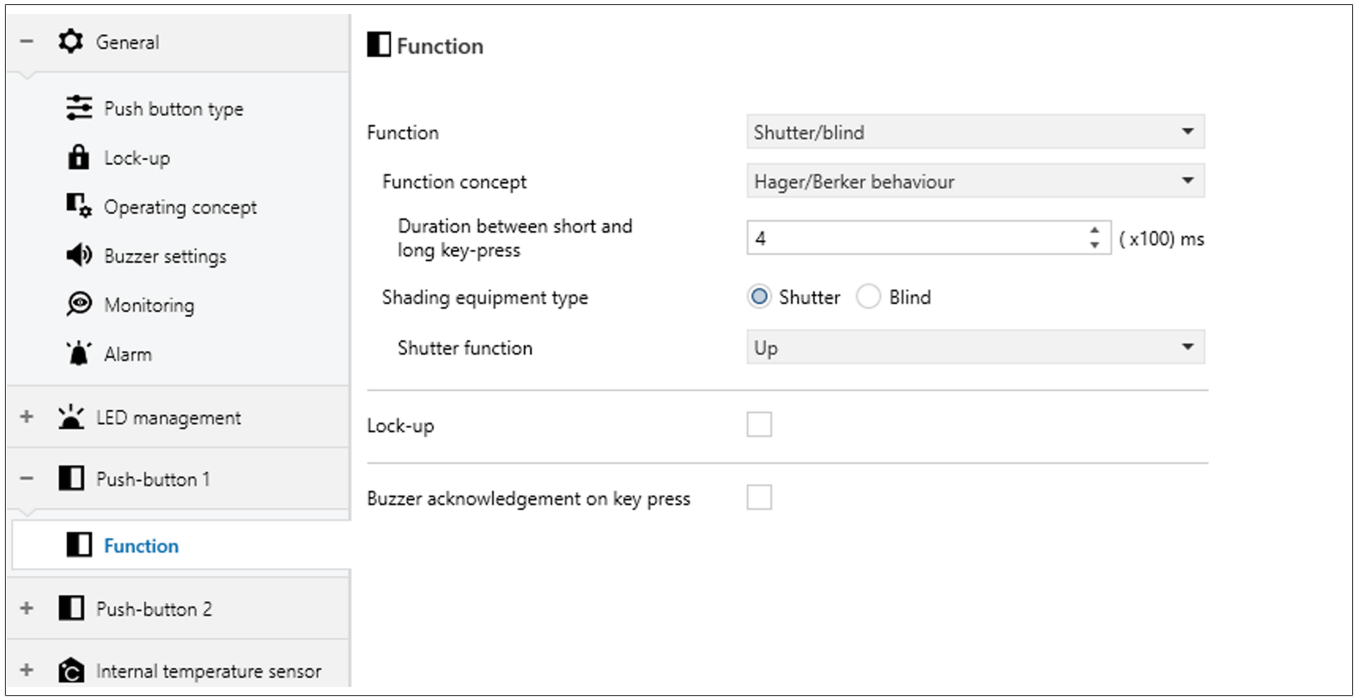


Fig. 24: Roller shutter/blind function of the rocker/button

Parameter	Description	Value
Functional concept	Defines the operation used to control roller shutters, blinds, awnings or other hangings. If Roller shutter/blind is selected, you should distinguish between a long and short button press.	**Hager/Berker behaviour** Short-Long-Short Long-Short Short-Long Long-Short or Short
Duration between Short-Long button press	Defines the time between a short and long button press. The time can be configured in steps.	1 ... **4** ... 3000 steps (x 100 ms)
Sun protection type	Allows the selection of roller shutters and blinds (with slat adjustment).	**Roller shutter** Blind
Roller shutter function	Allows the selection of roller shutters and blinds (with slat adjustment).	**Up** Down Up/Down/Stop Position (0–100%) Secured up (as long as pressed) Secured down (as long as pressed) Secured up/Secured down/Stop (as long as pressed)
Blind function [1]	Allows the selection of roller shutters and blinds (with slat adjustment).	**Up** Down

Table 48: Roller shutter/blind function of the rocker/single push button

Parameter	Description	Value
		Up/Down/Stop Position (0–100%) Position/Slat angle (0–100%) Slat angle (0–100%) Secured up (as long as pressed) Secured down (as long as pressed) Secured up/Secured down/Stop (as long as pressed)

Table 48: Roller shutter/blind function of the rocker/single push button

[1] The parameter is visible if blinds are selected under sun protection type.

Distinguishing between short and long button presses

- Short button press: The device sends the Stop or Slat step command to the bus via the corresponding communication object (slat step).
- Long button press: The device sends an Up/Down move command via the bus through the corresponding communication object (move).

Choose from 5 different operating concepts to control blinds and hangings. Telegrams are sent to the bus with a different time sequence. If the Hager/Berker behaviour specially developed for Hager actuators is selected, additional safety positions can be configured for the blinds:

No.	Name	Function	Length	Data type
232	Button 1	Stop (step)	1 bit	1.017 Trigger
233	Button 1	Up/down	1 bit	1.008 Up/Down
238	Button 2	Stop (step)	1 bit	1.017 Trigger
239	Button 2	Up/down	1 bit	1.008 Up/Down
244	Button 3	Stop (step)	1 bit	1.017 Trigger
245	Button 3	Up/down	1 bit	1.008 Up/Down
250	Button 4	Stop (step)	1 bit	1.017 Trigger
251	Button 4	Up/down	1 bit	1.008 Up/Down
256	Button 5	Stop (step)	1 bit	1.017 Trigger
257	Button 5	Up/down	1 bit	1.008 Up/Down
262	Button 6	Stop (step)	1 bit	1.017 Trigger
263	Button 6	Up/down	1 bit	1.008 Up/Down
268	Button 7	Stop (step)	1 bit	1.017 Trigger
269	Button 7	Up/down	1 bit	1.008 Up/Down
274	Button 8	Stop (step)	1 bit	1.017 Trigger

Table 49: Communication objects – Roller shutter

No.	Name	Function	Length	Data type
275	Button 8	Up/down	1 bit	1.008 Up/Down

Table 49: Communication objects – Roller shutter

No.	Name	Function	Length	Data type
235	Button 1	Position in %	1 byte	5.001 Percentage (0...100%)
241	Button 2	Position in %	1 byte	5.001 Percentage (0...100%)
247	Button 3	Position in %	1 byte	5.001 Percentage (0...100%)
253	Button 4	Position in %	1 byte	5.001 Percentage (0...100%)
259	Button 5	Position in %	1 byte	5.001 Percentage (0...100%)
265	Button 6	Position in %	1 byte	5.001 Percentage (0...100%)
2271	Button 7	Position in %	1 byte	5.001 Percentage (0...100%)
277	Button 8	Position in %	1 byte	5.001 Percentage (0...100%)

Table 50: Communication objects – Roller shutter position (0...100%)

No.	Name	Function	Length	Data type
236	Button 1	Slat angle in %	1 byte	5.001 Percentage (0...100%)
242	Button 2	Slat angle in %	1 byte	5.001 Percentage (0...100%)
248	Button 3	Slat angle in %	1 byte	5.001 Percentage (0...100%)
254	Button 4	Slat angle in %	1 byte	5.001 Percentage (0...100%)
260	Button 5	Slat angle in %	1 byte	5.001 Percentage (0...100%)
266	Button 6	Slat angle in %	1 byte	5.001 Percentage (0...100%)
272	Button 7	Slat angle in %	1 byte	5.001 Percentage (0...100%)
278	Button 8	Slat angle in %	1 byte	5.001 Percentage (0...100%)

Table 51: Communication objects – Blind – Slat angle

Functional concept – Hager/Berker behaviour

Five different operating concepts are available in the application for activating roller shutters, blinds or similar hangings. In these operating concepts, the telegrams are transmitted to the bus with a different time sequence. This allows the widest range of drive concepts to be set and operated.

If the Hager/Berker behaviour is selected, it is possible to select an additional position control, explained underneath.

- Secured up (as long as pressed)
- Secured down (as long as pressed)
- Secured up/Secured down/Stop (as long as pressed)

Secured means that the roller shutter/blind opens or closes as long as the button is pressed. When the button is released, the roller shutter/blind stops. Used, for example, for covering pools.

Note

The Hager operating concept has been specially adapted to the Hager blind and roller shutter actuators.

If the **Hager/Berker behaviour** functional concept is parametrised, the roller shutter/blind can be set to a dedicated position and a slat angle. After configuration, the user must perform a short button press after the long button press. The preconfigured values are then transmitted to the bus.

Short – Long – Short operating concept

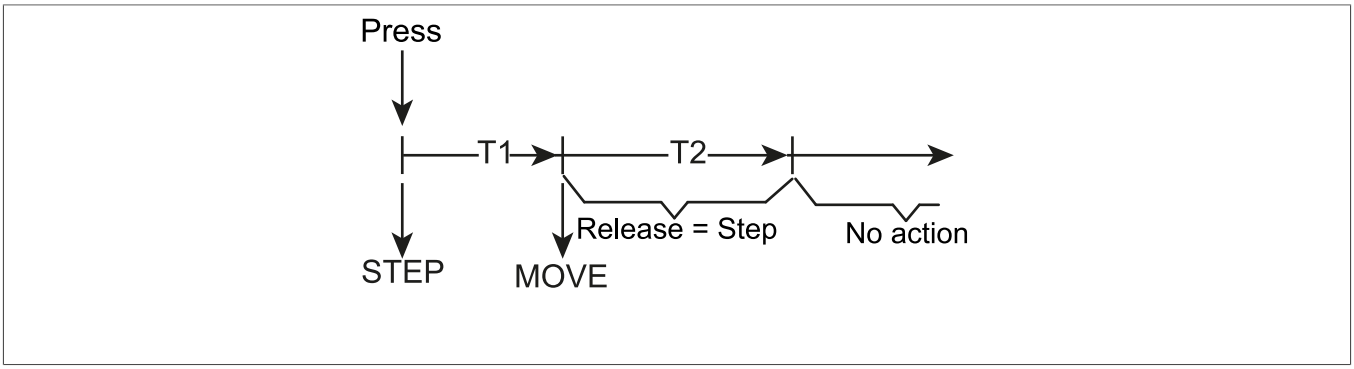


Fig. 25: Short – Long – Short operating concept

Immediately upon pressing the button, the device transmits a short-time telegram (step) to the bus. As a result, a moving drive is stopped and the time T1 (the time between a step and move command) is started. If the button is released again within T1, no further telegram is transmitted. This step serves the purpose of stopping an ongoing continuous move.

Note

The **time between a step and move command** in the device should be set shorter than the step operation of the actuator so that no disturbing buckling of the blind occurs.

If the button is kept pressed for longer than T1, the button transmits a move telegram for extending the drive after T1 has expired and the time T2 (slat angle setting) is started. If the button is released within the slat adjusting time, the device transmits another short-time telegram. This function is used for the slat adjustment of a blind. As a result, the slats can be stopped at any position within their rotation. The length of the slat adjusting time selected should be as long as the time required by the drive to turn the slats completely. If the slat adjusting time selected is longer than the complete operation time of the drive, a touch function is also possible. The driver only moves if the button is pressed down. If the button is pressed down longer than T2, the device does not transmit any further telegrams. The drive continues moving until the end position is reached.

Times T1 (**time between a step and move command**) and T2 (**slat adjusting time**) must first be adjusted.

Parameter	Description	Value
Time T1 (time between a step and move command)	T1 is the time between a step and move command.	1 … 3000 (x100) ms
Time T2 (slat adjusting time)	T2 is the time between a step and move command.	1 … 3000 (x100) ms

Table 52: Time setting under Short – Long

Long – Short operating concept

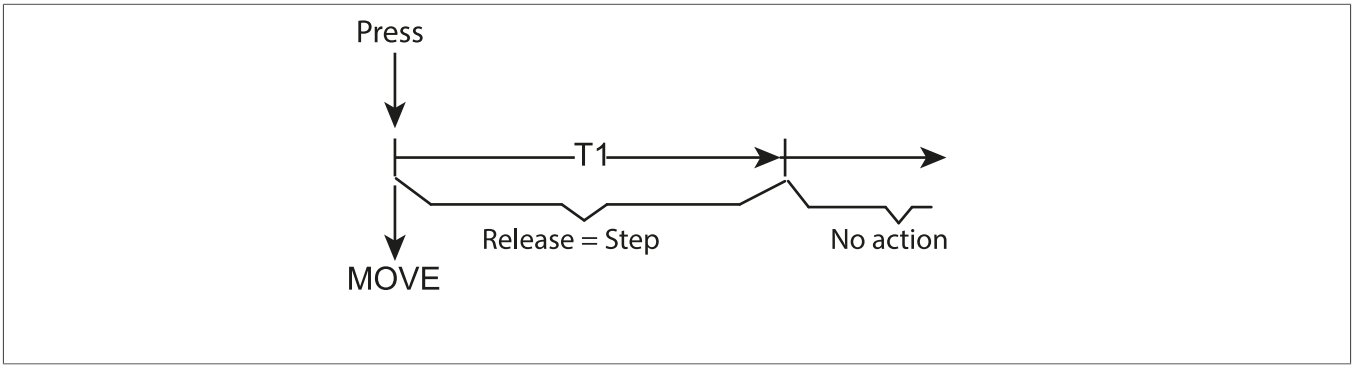


Fig. 26: Long – Short operating concept

Immediately upon pressing the button, the device transmits a long-time telegram (Move). As a result, the drive starts moving and time T1 (duration of the slat angle setting) is started. If the button is released within the slat adjusting time, the device transmits a short-time telegram (step). This function is used for the slat adjustment of a blind. As a result, the slats can be stopped at any position within their rotation.

The length of the slat adjusting time selected should be as long as the time required by the drive to turn the slats completely. If the slat adjusting time selected is longer than the complete operation time of the drive, a touch function is also possible. The driver only moves if the button is pressed down.

If the button is pressed down longer than T1, the device does not transmit any further telegrams. The drive continues moving until the end position is reached. Time T1 (**time between a step and move command**) must first be adjusted.

Parameter	Description	Value
Time T1 (time between a step and move command)	T1 is the time between a step and move command.	1 … 3000 (x100) ms

Table 53: Time setting under Short – Long

Short – Long operating concept

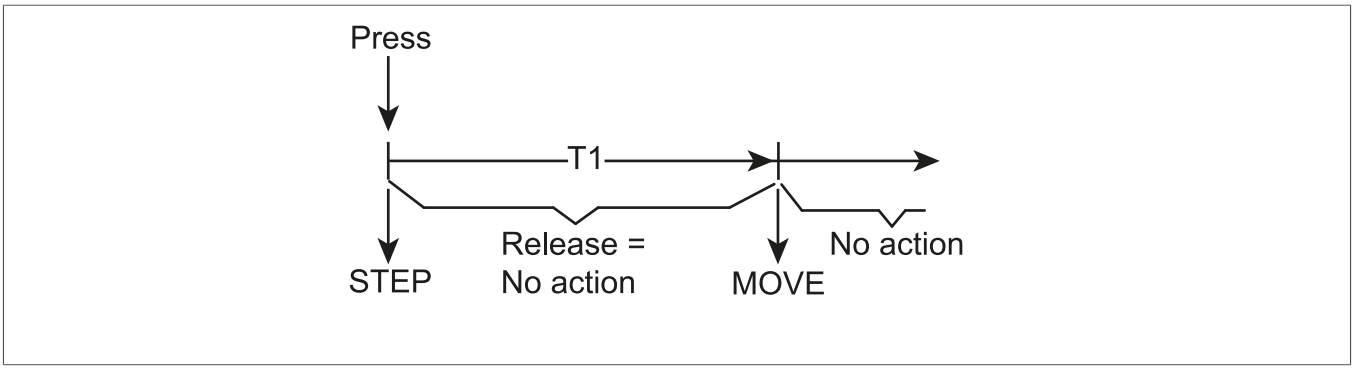


Fig. 27: Long – Short operating concept

Immediately upon pressing the button, the device transmits a short-time telegram. As a result, a moving drive is stopped and the time T1 (the time between a step and move command) is started. If the button is released again within T1, no further telegram is transmitted. This step serves the purpose of stopping an ongoing continuous move. The time between a step and move command in the button should be set shorter than the step operation of the actuator so that no disturbing buckling of the blind occurs.

If the button is kept pressed longer than T1, the push button transmits a long-time telegram for extending the driver after T1 has expired. When the button is released, the push button does not transmit any further telegrams. The drive continues moving until the end position is reached.

Time T1 (**time between a step and move command**) must first be adjusted.

Parameter	Description	Value
Time T1 (time between a step and move command)	T1 is the time between a step and move command.	1 … 3000 (x100) ms

Table 54: Time setting under Short – Long

Long – Short or Short operating concept

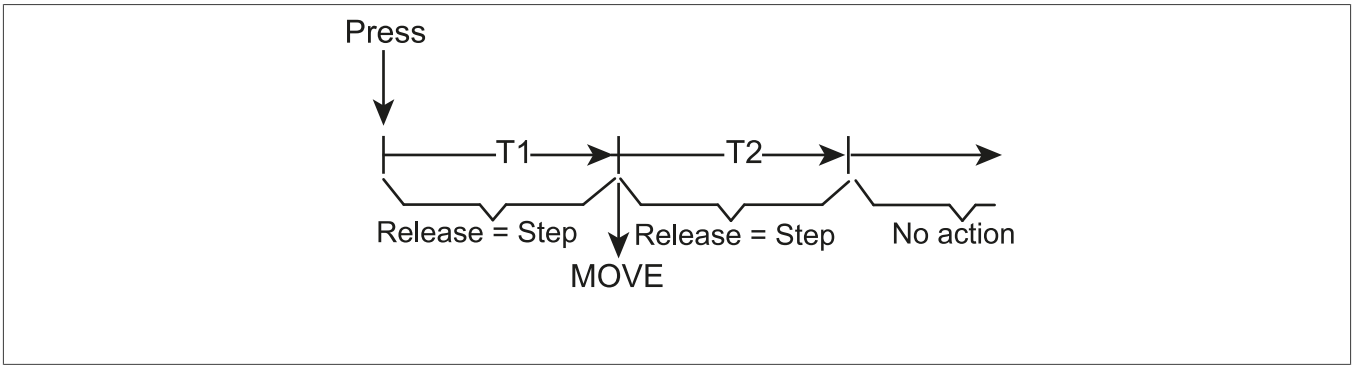


Fig. 28: Long – Short or Short operating concept

As soon as the button is pressed, the device starts the time T1 (time between a step and move command) and waits. If the button is released again before T1 expires, the device transmits a short-time telegram (step). In this way, a moving drive can be stopped. A stationary drive turns the slats by one step.

If the button remains pressed after T1 has expired, the device transmits a move telegram and starts the time T2 (duration of the slat angle setting).

If the button is released within T2, the device transmits a short-time telegram. This function is used for the slat adjustment of a blind. As a result, the slats can be stopped at any position within their rotation. The length of the slat adjusting time selected should be as long as the time required by the drive to turn the slats completely. If the slat adjusting time selected is longer than the complete operation time of the drive, a touch function is also possible. The driver only moves if the button is pressed down. If the button is pressed down longer than T2, the device does not transmit any further telegrams. The drive continues moving until the end position is reached.

Note

In this operating concept the device does not transmit a telegram immediately when pressing the button or a rocker. This makes it possible in the rocker configuration to also detect a full surface operation.

Times T1 (**time between a step and move command**) and T2 (**duration of the slat angle setting**) must first be adjusted.

Parameter	Description	Value
Time T1 (time between a step and move command)	T1 is the time between a step and move command.	1 … 3000 (x100) ms
Time T2 (duration of the slat angle setting)	T2 Duration of the slat angle setting.	1 … 3000 (x100) ms

Table 55: Time setting under Long – Short or Short

5.3.5 Timer function

The Timer function is described in the following section. This function is **only** available in the **operating concept for single buttons**.

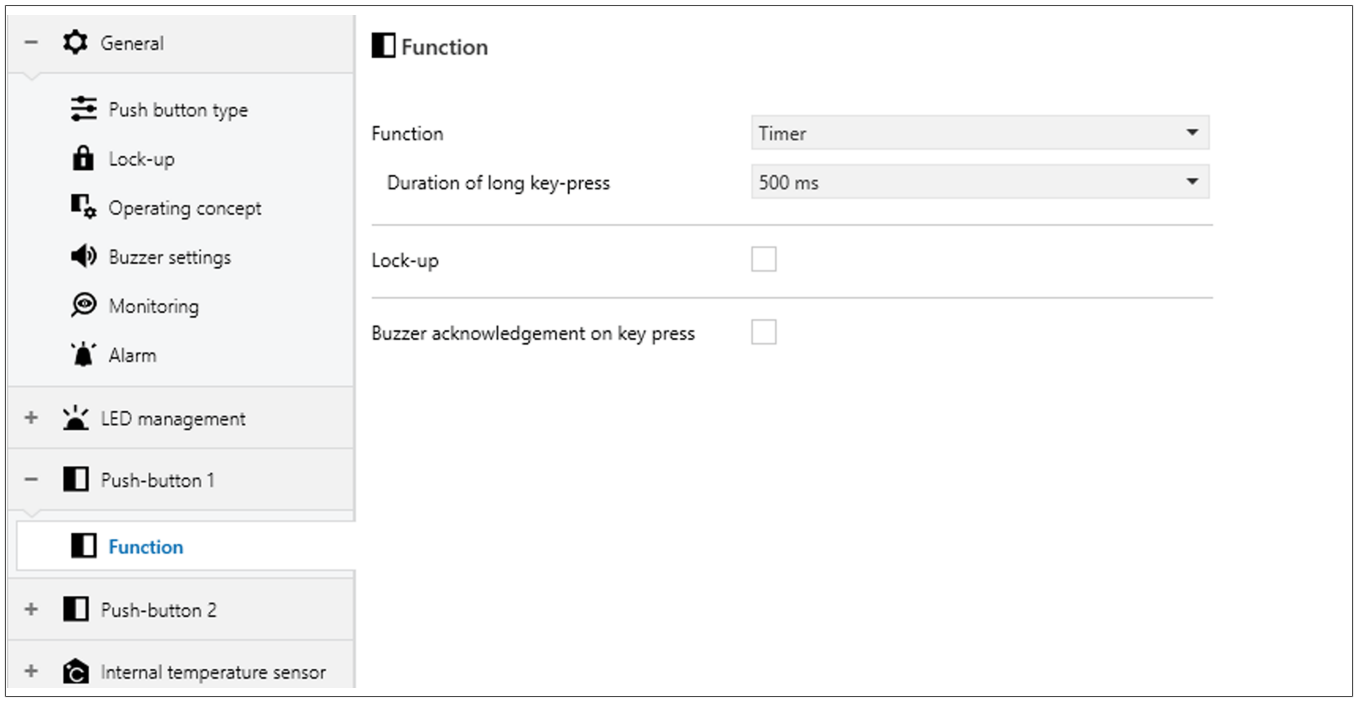


Fig. 29: Function > Timer

Parameter	Description	Value
Time for a long button press	This value is used to set the length of time after which a long button press is detected.	400 ... **500 ms** ... 1 s

Table 56: Function of the Timer button

Function is triggered on a:

- Short button press: The ON command is transmitted through the **Timer** object for the time set at the output.
- Long button press: The OFF command interrupts active timer operation through the **Timer** object and switches the output off directly.

No.	Name	Function	Length	Data type
132	Button 1	Timer	1 bit	1.010 Start/Stop
136	Button 2	Timer	1 bit	1.010 Start/Stop
140	Button 3	Timer	1 bit	1.010 Start/Stop
144	Button 4	Timer	1 bit	1.010 Start/Stop
148	Button 5	Timer	1 bit	1.010 Start/Stop
152	Button 6	Timer	1 bit	1.010 Start/Stop
156	Button 7	Timer	1 bit	1.010 Start/Stop

No.	Name	Function	Length	Data type
160	Button 8	Timer	1 bit	1.010 Start/Stop

If a button is pressed for a short time, an On command is transmitted via the Timer object. If a button is pressed for a long time, an Off command is transmitted via the Timer object. The On command switches on a switching actuator output for the set Timer time.

Switch-on time = (1 + number of additional touch operations) x set timer time

After the last press of a button, the timer time in the actuator output is switched on. After 10 s, an On command retriggers the set switch-on time in the parameters. An Off command switches off the output directly.

5.3.6 Value 1 bytes function

In the following parameter window, the **Value 1 bytes** function is parametrised and set as a rocker or button in the operating concept. The application provides a 1-byte communication object for each rocker or button. The set value or value that was last saved internally by a value adjustment is transmitted to the bus when a button is pressed. In the rocker operating mode, different values can be parametrised and set for the two rocker sides.

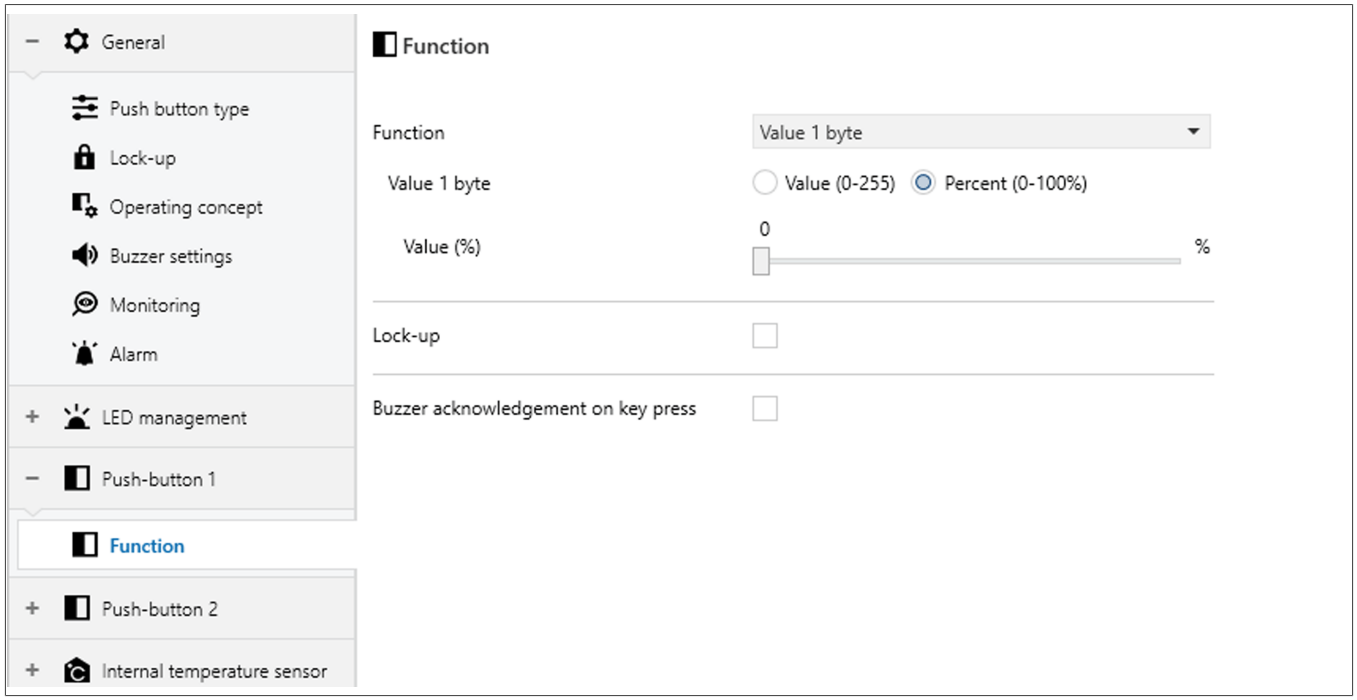


Fig. 30: Function > Value 1 bytes

The 1-byte object can be used to approach a roller shutter/blind position directly, for example, or to transmit a scene number to the bus with a short button press. This can be used to transmit the configured value or save the last value on the bus. In the rocker operating concept, different parameters can be configured for both sides of a rocker.

Parameter	Description	Value
Function of the Value 1 byte button pair 1	With this parameter the following function is assigned to the button pair in the Value transmitter 1-byte function. A distinction is made here between the function when pressing the button left/right.	**Value (0 … 255)** Percentage (0 … 100%)
Function of the Value 1 byte button [1]	With this parameter the following function is assigned to the button in the Value transmitter 1-byte function when pressing the button.	**Value (0 … 255)** Percentage (0 … 100%)

Table 57: Value 1 byte function of the rocker/button

[1] If the respective function value is selected, another parameter window opens for setting the desired 1-byte value (0 … 255 / 0 … 100%).

No.	Name	Function	Length	Data type
292	Button 1	Value in %	1 byte	5.001 Percentage (0... 100%)
304	Button 2	Value in %	1 byte	5.001 Percentage (0...100%)
316	Button 3	Value in %	1 byte	5.001 Percentage (0...100%)
328	Button 4	Value in %	1 byte	5.001 Percentage (0...100%)
340	Button 5	Value in %	1 byte	5.001 Percentage (0...100%)
352	Button 6	Value in %	1 byte	5.001 Percentage (0...100%)
364	Button 7	Value in %	1 byte	5.001 Percentage (0...100%)
376	Button 8	Value in %	1 byte	5.001 Percentage (0...100%)

Table 58: Value 1 byte – Percent (0–100%)

Note

During a value adjustment, the newly set values are only saved in the RAM volatile memory of the device. Thus, the saved values in the event of a reset (bus voltage failure or ETS programming operation) are replaced by the preset values programmed by the ETS.

No.	Name	Function	Length	Data type
292	Button 1	Value (0–255)	1 byte	5.010 counting pulse (0 … 255)
304	Button 2	Value (0–255)	1 byte	5.010 counting pulse (0 … 255)
316	Button 3	Value (0–255)	1 byte	5.010 counting pulse (0 … 255)
328	Button 4	Value (0–255)	1 byte	5.010 counting pulse (0 … 255)
340	Button 5	Value (0–255)	1 byte	5.010 counting pulse (0 … 255)
352	Button 6	Value (0–255)	1 byte	5.010 counting pulse (0 … 255)
364	Button 7	Value (0–255)	1 byte	5.010 counting pulse (0 … 255)
376	Button 8	Value (0–255)	1 byte	5.010 counting pulse (0 … 255)

Table 59: Value 1 byte – Value (0–255)

The value transmitter 1-byte parameter defines which value range the button uses. Integer numbers ranging from 0 … 255 or relative values ranging from 0 … 100% can be transmitted optionally to the bus for the value transmitter 1-byte function by means of a slide control.

Note

During a value adjustment, the newly set values are only saved in the RAM volatile memory of the device. Thus, the saved values in the event of a reset (bus voltage failure or ETS programming operation) are replaced by the preset values programmed by the ETS.

5.3.7 Value 2 bytes function

In the following parameter window, the **Value 2 bytes** function is parametrised and set as a rocker or button in the operating concept. The application provides a 2-byte communication object for each rocker or button. The set value or value that was last saved internally by a value adjustment is transmitted to the bus when a button is pressed. In the rocker operating concept, different values can be parametrised and set for both buttons.

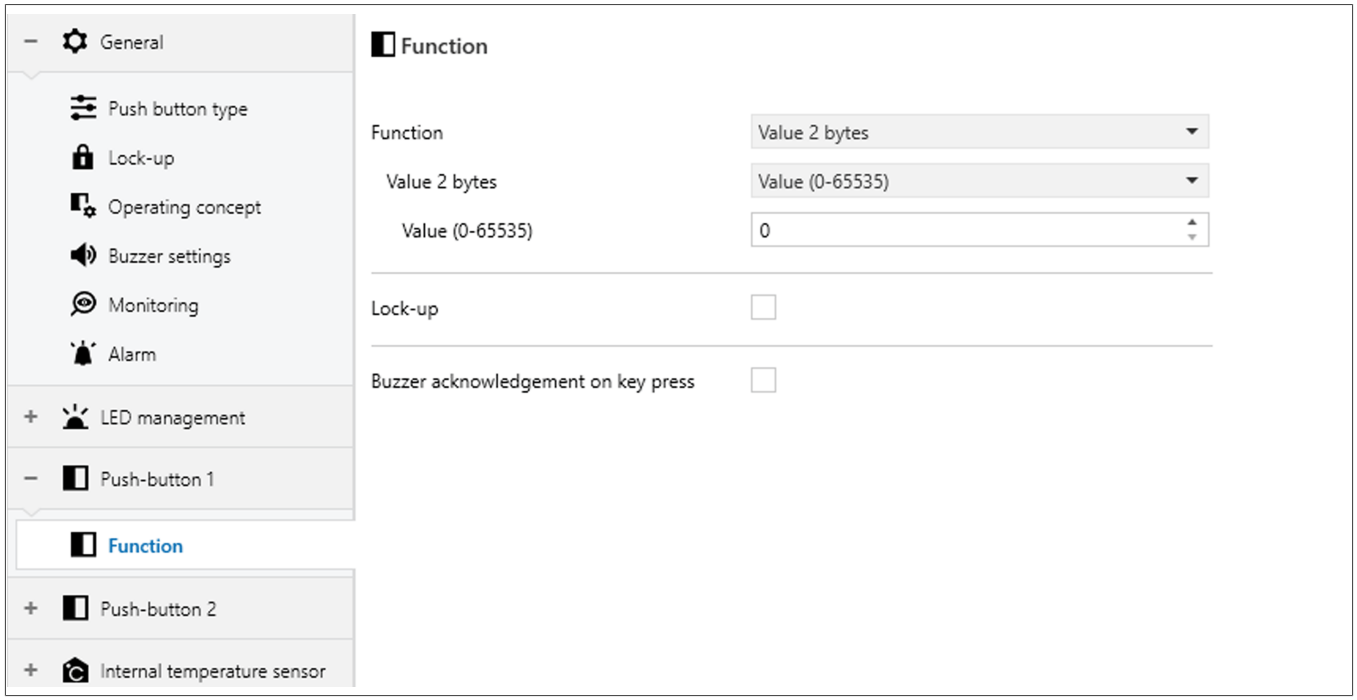


Fig. 31: Function > Value 2 bytes

Use the 2-byte object to transmit the set or most recently saved value to the bus with a short button press. Different parameters can be configured for both sides of a rocker in the **Rocker** operating concept.

Parameter	Description	Value
Function of Value 2 bytes button	With this parameter the following function is assigned to the button in the Value 2 byte function when pressing the button.	**Value (0-65535)** Temperature (0–40°C) Luminosity (0 … 1000 Lux)

Table 60: Function of the Value 2 bytes rocker/button

Note

During a value adjustment, the newly set values are only saved in the RAM volatile memory of the device. Thus, the saved values in the event of a reset (bus voltage failure or ETS programming operation) are replaced by the preset values programmed by the ETS.

No.	Name	Function	Length	Data type
292	Button 1	Value (0–65535)	2 bytes	7.001 pulses
304	Button 2	Value (0–65535)	2 bytes	7.001 pulses
316	Button 3	Value (0–65535)	2 bytes	7.001 pulses
328	Button 4	Value (0–65535)	2 bytes	7.001 pulses
340	Button 5	Value (0–65535)	2 bytes	7.001 pulses
352	Button 6	Value (0–65535)	2 bytes	7.001 pulses
364	Button 7	Value (0–65535)	2 bytes	7.001 pulses
376	Button 8	Value (0–65535)	2 bytes	7.001 pulses

Table 61: Value 2 bytes: Value (0–65535)

No.	Name	Function	Length	Data type
292	Button 1	Temperature	2 bytes	9.001 Temperature (°C)
304	Button 2	Temperature	2 bytes	9.001 Temperature (°C)
316	Button 3	Temperature	2 bytes	9.001 Temperature (°C)
328	Button 4	Temperature	2 bytes	9.001 Temperature (°C)
340	Button 5	Temperature	2 bytes	9.001 Temperature (°C)
352	Button 6	Temperature	2 bytes	9.001 Temperature (°C)
364	Button 7	Temperature	2 bytes	9.001 Temperature (°C)
376	Button 8	Temperature	2 bytes	9.001 Temperature (°C)

Table 62: Value 2 bytes temperature (-40°C)

No.	Name	Function	Length	Data type
292	Button 1	Brightness	2 bytes	9.004 Lux (Lux)
304	Button 2	Brightness	2 bytes	9.004 Lux (Lux)
316	Button 3	Brightness	2 bytes	9.004 Lux (Lux)
328	Button 4	Brightness	2 bytes	9.004 Lux (Lux)
340	Button 5	Brightness	2 bytes	9.004 Lux (Lux)
352	Button 6	Brightness	2 bytes	9.004 Lux (Lux)
364	Button 7	Brightness	2 bytes	9.004 Lux (Lux)
376	Button 8	Brightness	2 bytes	9.004 Lux (Lux)

Table 63: Value 2 bytes: Brightness (0–1000 Lux)

Note

The set values are only stored to the volatile memory of the device, so they can be replaced by the values programmed in the ETS in the event of a reset (bus power cut or ETS programming operation).

5.3.8 Colour control

Colour control

The colour control function can be used, for example, to control the luminaires or LED strips with RGB or RGBW colour values or the white light individually via the colour temperature.

Press the button to send a colour value via the bus. For example, the luminaires or LED strips with RGB or RGBW colour values or the white light can be individually controlled via the colour temperature.

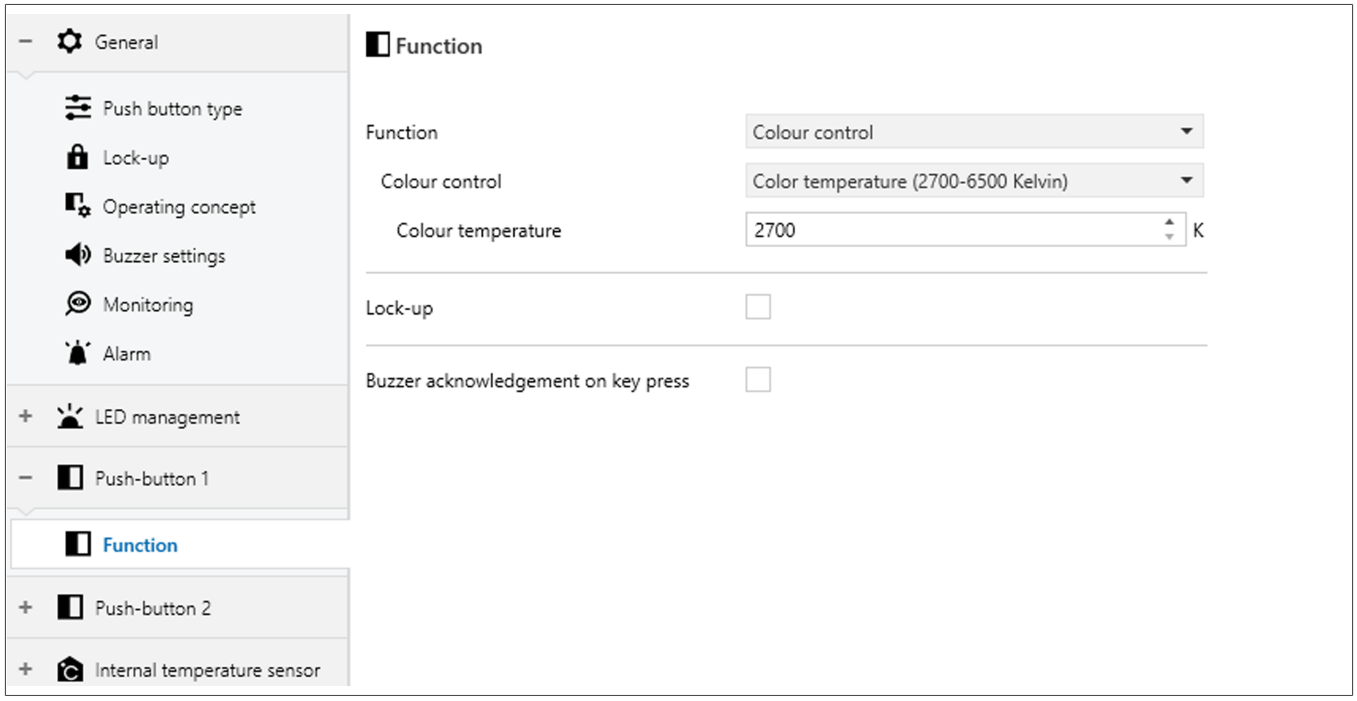


Fig. 32: Function > Colour control

Parameter	Description	Value
Colour control	Defines which type of colour control is to be used.	**Colour temperature (2700–6500 Kelvin)** RGB values RGBW values XY values

Table 64: Function > Colour control

Colour control – Colour temperature

Press the button to transmit a colour temperature for the white light in Kelvin via the bus. The values can be set between 2700 K (warm white) and 6500 K (cool white).

Parameter	Description	Value
Colour temperature	A precisely defined white value is set here.	**2700** ... 6500 K

Table 65: Colour control – Colour temperature

No.	Name	Function	Length	Data type

Table 66: Communication objects – Colour control – Colour temperature

292	Button 1	Colour temperature	2 bytes	7.600 Absolute colour temperature (K)
304	Button 2	Colour temperature	2 bytes	7.600 Absolute colour temperature (K)
316	Button 3	Colour temperature	2 bytes	7.600 Absolute colour temperature (K)
328	Button 4	Colour temperature	2 bytes	7.600 Absolute colour temperature (K)
340	Button 5	Colour temperature	2 bytes	7.600 Absolute colour temperature (K)
352	Button 6	Colour temperature	2 bytes	7.600 Absolute colour temperature (K)
364	Button 7	Colour temperature	2 bytes	7.600 Absolute colour temperature (K)
376	Button 8	Colour temperature	2 bytes	7.600 Absolute colour temperature (K)

Table 66: Communication objects – Colour control – Colour temperature

Colour control – RGB values

If the RGB or RGBW colour value function is selected, press the button to send the colour value selected from a colour pattern for the assigned light via the bus.

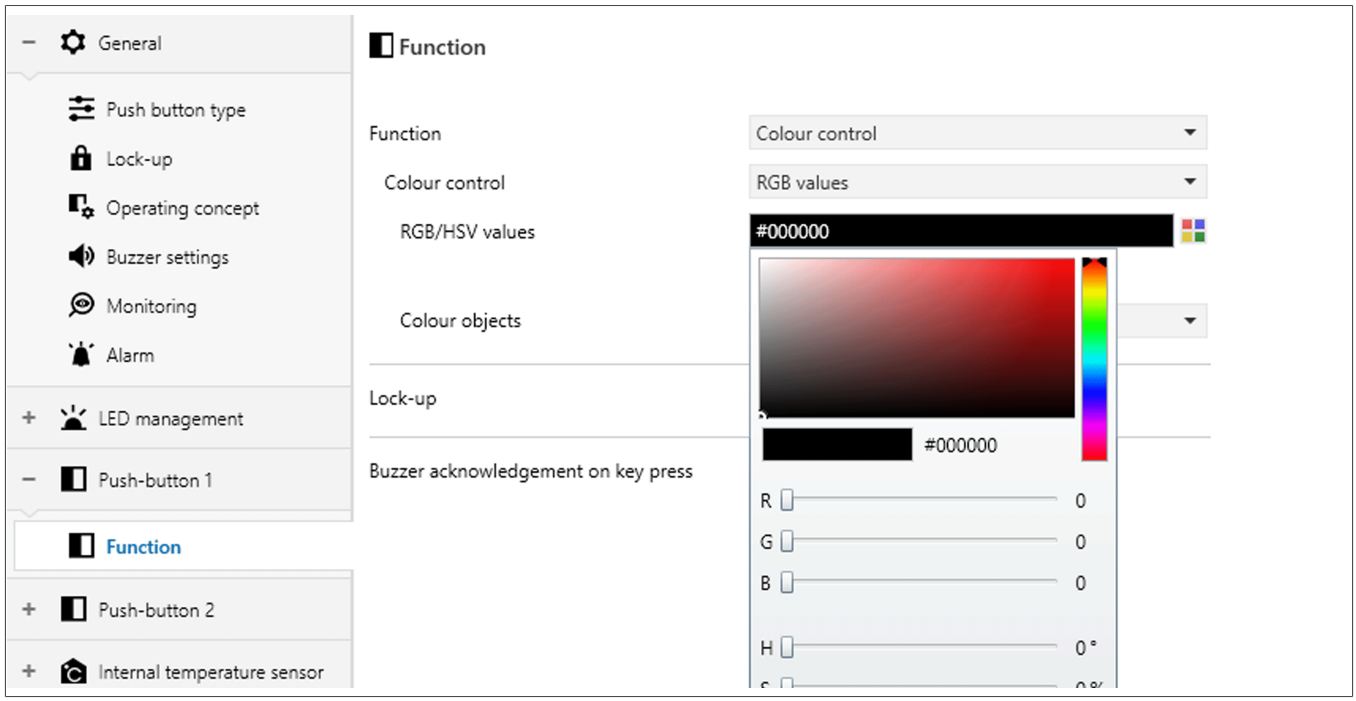


Fig. 33: RGB value colour control

Define the required colour using a colour code:

– By inputting the exact value, if it is known (e.g. #3482B9)

After opening the colour pattern

- By selecting in the colour pattern with a mouse click
- By adjusting the R, G, B sliders under the colour pattern or
- By adjusting the H, S, V sliders under the colour pattern

The following options are available:

- Combined RGB object
- Separate RGB object with 1-byte values for red, green, blue and white
- Separate HSV object with 1-byte values for H, S and V.
- When selecting the XY colour value, a separate 1-byte value for the X and Y colour value fields and the brightness must be set according to the CIE Standard

Parameter	Description	Value
RGB/HSV values	Define the required colour using a colour code: – By inputting the exact value, if it is known (e.g. #3482B9) After opening the colour pattern – By selecting in the colour pattern with a mouse click – By adjusting the R, G, B sliders under the colour pattern – By adjusting the H, S, V sliders under the colour pattern	**000000** Colour pattern palette
Object colours	The 6-byte colour value can be used as one value or split.	**Combined RGB object** Separate RGB objects Separate HSV objects

Table 67: RGB value colour control

No.	Name	Function	Length	Data type
292	Button 1	RGB values	3 bytes	232.600 RGB value 3x(0….255)
304	Button 2	RGB values	3 bytes	232.600 RGB value 3x(0….255)
316	Button 3	RGB values	3 bytes	232.600 RGB value 3x(0….255)
328	Button 4	RGB values	3 bytes	232.600 RGB value 3x(0….255)
340	Button 5	RGB values	3 bytes	232.600 RGB value 3x(0….255)

Table 68: Communication objects – RGB value colour control – Combined RGB object

No.	Name	Function	Length	Data type
352	Button 6	RGB values	3 bytes	232.600 RGB value 3x(0….255)
364	Button 7	RGB values	3 bytes	232.600 RGB value 3x(0….255)
376	Button 8	RGB values	3 bytes	232.600 RGB value 3x(0….255)

Table 68: Communication objects – RGB value colour control – Combined RGB object

No.	Name	Function	Length	Data type
293	Button 1	Red values	1 byte	5.001 Percentage (0...100%)
294	Button 1	Green values	1 byte	5.001 Percentage (0...100%)
295	Button 1	Blue values	1 byte	5.001 Percentage (0...100%)
305	Button 2	Red values	1 byte	5.001 Percentage (0...100%)
306	Button 2	Green values	1 byte	5.001 Percentage (0...100%)
307	Button 2	Blue values	1 byte	5.001 Percentage (0...100%)
317	Button 3	Red values	1 byte	5.001 Percentage (0...100%)
318	Button 3	Green values	1 byte	5.001 Percentage (0...100%)
319	Button 3	Blue values	1 byte	5.001 Percentage (0...100%)
329	Button 4	Red values	1 byte	5.001 Percentage (0...100%)
330	Button 4	Green values	1 byte	5.001 Percentage (0...100%)
331	Button 4	Blue values	1 byte	5.001 Percentage (0...100%)
341	Button 5	Red values	1 byte	5.001 Percentage (0...100%)
342	Button 5	Green values	1 byte	5.001 Percentage (0...100%)
343	Button 5	Blue values	1 byte	5.001 Percentage (0...100%)
353	Button 6	Red values	1 byte	5.001 Percentage (0...100%)
354	Button 6	Green values	1 byte	5.001 Percentage (0...100%)
355	Button 6	Blue values	1 byte	5.001 Percentage (0...100%)
365	Button 7	Red values	1 byte	5.001 Percentage (0...100%)
366	Button 7	Green values	1 byte	5.001 Percentage (0...100%)
367	Button 7	Blue values	1 byte	5.001 Percentage (0...100%)
377	Button 8	Red values	1 byte	5.001 Percentage (0...100%)
378	Button 8	Green values	1 byte	5.001 Percentage (0...100%)

Table 69: Communication objects – RGB value colour control – Separate RGB objects

No.	Name	Function	Length	Data type
379	Button 8	Blue values	1 byte	5.001 Percentage (0...100%)

Table 69: Communication objects – RGB value colour control – Separate RGB objects

No.	Name	Function	Length	Data type
293	Button 1	Colour tone	1 byte	5.003 Angle (degrees)
294	Button 1	Saturation	1 byte	5.001 Percentage (0...100%)
295	Button 1	Brightness	1 byte	5.001 Percentage (0...100%)
305	Button 2	Colour tone	1 byte	5.003 Angle (degrees)
306	Button 2	Saturation	1 byte	5.001 Percentage (0...100%)
307	Button 2	Brightness	1 byte	5.001 Percentage (0...100%)
317	Button 3	Colour tone	1 byte	5.003 Angle (degrees)
318	Button 3	Saturation	1 byte	5.001 Percentage (0...100%)
319	Button 3	Brightness	1 byte	5.001 Percentage (0...100%)
329	Button 4	Colour tone	1 byte	5.003 Angle (degrees)
330	Button 4	Saturation	1 byte	5.001 Percentage (0...100%)
331	Button 4	Brightness	1 byte	5.001 Percentage (0...100%)
341	Button 5	Colour tone	1 byte	5.003 Angle (degrees)
342	Button 5	Saturation	1 byte	5.001 Percentage (0...100%)
343	Button 5	Brightness	1 byte	5.001 Percentage (0...100%)
353	Button 6	Colour tone	1 byte	5.003 Angle (degrees)
354	Button 6	Saturation	1 byte	5.001 Percentage (0...100%)
355	Button 6	Brightness	1 byte	5.001 Percentage (0...100%)
365	Button 7	Colour tone	1 byte	5.003 Angle (degrees)
366	Button 7	Saturation	1 byte	5.001 Percentage (0...100%)
367	Button 7	Brightness	1 byte	5.001 Percentage (0...100%)
377	Button 8	Colour tone	1 byte	5.003 Angle (degrees)
378	Button 8	Saturation	1 byte	5.001 Percentage (0...100%)
379	Button 8	Brightness	1 byte	5.001 Percentage (0...100%)

Table 70: Communication objects – RGB value colour control – Separate HSV objects

RGBW value colour control

Parameter	Description	Value
RGBW/HSVW values	Define the required colour using a colour code: – By inputting the exact value, if it is known (e.g. #3482B9) After opening the colour pattern – By selecting in the colour pattern with a mouse click – By adjusting the R, G, B sliders under the colour pattern – By adjusting the H, S, V sliders under the colour pattern	**#000000** Colour pattern palette
White value	The slider can be used to define the proportion of white light besides the red, green and blue LEDs in RGBW strips, for example. Although RGB colours alone can produce a shade that gets close to white, it is impossible to produce a pure white. So an additional white LED element on the RGBW strips allow for a realistic, bright, white light. The value can be individually shifted between 0 ... 255.	
Object colours	The 6-byte colour value can be used as one value or split.	**Combined RGBW object** Separate RGB objects Separate HSVW objects

Table 71: Colour control – RGBW values

[1] This parameter is visible if **RGBW values** has been selected.

The 6-byte colour value can be used as one value or split.

The following options are available:

- Combined RGB object
- Separate RGBW objects with 1-byte values for red, green, blue and white
- Separate HSVW objects with 1-byte values for H, S and V and W.
- When selecting the XY colour value, a separate 1-byte value for the X and Y colour value fields and the brightness must be set according to the CIE Standard

No.	Name	Function	Length	Data type
292	Button 1	RGBW values	6 bytes	251.600 RGB value 4x(0….255)
304	Button 2	RGBW values	6 bytes	251.600 RGB value 4x(0….255)
316	Button 3	RGBW values	6 bytes	251.600 RGB value 4x(0….255)

Table 72: Communication objects – RGBW value colour control – Combined RGB object

No.	Name	Function	Length	Data type
328	Button 4	RGBW values	6 bytes	251.600 RGB value 4x(0….255)
340	Button 5	RGBW values	6 bytes	251.600 RGB value 4x(0….255)
352	Button 6	RGBW values	6 bytes	251.600 RGB value 4x(0….255)
364	Button 7	RGBW values	6 bytes	251.600 RGB value 4x(0….255)
376	Button 8	RGBW values	6 bytes	251.600 RGB value 4x(0….255)

Table 72: Communication objects – RGBW value colour control – Combined RGB object

No.	Name	Function	Length	Data type
293	Button 1	Red values	1 byte	5.001 Percentage (0...100%)
294	Button 1	Green values	1 byte	5.001 Percentage (0...100%)
295	Button 1	Blue values	1 byte	5.001 Percentage (0...100%)
296	Button 1	White values	1 byte	5.001 Percentage (0...100%)
305	Button 2	Red values	1 byte	5.001 Percentage (0...100%)
306	Button 2	Green values	1 byte	5.001 Percentage (0...100%)
307	Button 2	Blue values	1 byte	5.001 Percentage (0...100%)
308	Button 2	White values	1 byte	5.001 Percentage (0...100%)
317	Button 3	Red values	1 byte	5.001 Percentage (0...100%)
318	Button 3	Green values	1 byte	5.001 Percentage (0...100%)
319	Button 3	Blue values	1 byte	5.001 Percentage (0...100%)
320	Button 3	White values	1 byte	5.001 Percentage (0...100%)
329	Button 4	Red values	1 byte	5.001 Percentage (0...100%)
330	Button 4	Green values	1 byte	5.001 Percentage (0...100%)
331	Button 4	Blue values	1 byte	5.001 Percentage (0...100%)
332	Button 4	White values	1 byte	5.001 Percentage (0...100%)
341	Button 5	Red values	1 byte	5.001 Percentage (0...100%)
342	Button 5	Green values	1 byte	5.001 Percentage (0...100%)
343	Button 5	Blue values	1 byte	5.001 Percentage (0...100%)
344	Button 5	White values	1 byte	5.001 Percentage (0...100%)

Table 73: Communication objects – RGBW value colour control – Separate RGBW objects

No.	Name	Function	Length	Data type
353	Button 6	Red values	1 byte	5.001 Percentage (0...100%)
354	Button 6	Green values	1 byte	5.001 Percentage (0...100%)
355	Button 6	Blue values	1 byte	5.001 Percentage (0...100%)
356	Button 6	White values	1 byte	5.001 Percentage (0...100%)
365	Button 7	Red values	1 byte	5.001 Percentage (0...100%)
366	Button 7	Green values	1 byte	5.001 Percentage (0...100%)
367	Button 7	Blue values	1 byte	5.001 Percentage (0...100%)
368	Button 7	White values	1 byte	5.001 Percentage (0...100%)
377	Button 8	Red values	1 byte	5.001 Percentage (0...100%)
378	Button 8	Green values	1 byte	5.001 Percentage (0...100%)
379	Button 8	Blue values	1 byte	5.001 Percentage (0...100%)
380	Button 8	White values	1 byte	5.001 Percentage (0...100%)

Table 73: Communication objects – RGBW value colour control – Separate RGBW objects

No.	Name	Function	Length	Data type
293	Button 1	Colour tone	1 byte	5.003 Angle (degrees)
294	Button 1	Saturation	1 byte	5.001 Percentage (0...100%)
295	Button 1	Brightness	1 byte	5.001 Percentage (0...100%)
296	Button 1	White value	1 byte	5.001 Percentage (0...100%)
305	Button 2	Colour tone	1 byte	5.003 Angle (degrees)
306	Button 2	Saturation	1 byte	5.001 Percentage (0...100%)
307	Button 2	Brightness	1 byte	5.001 Percentage (0...100%)
308	Button 2	White value	1 byte	5.001 Percentage (0...100%)
317	Button 3	Colour tone	1 byte	5.003 Angle (degrees)
318	Button 3	Saturation	1 byte	5.001 Percentage (0...100%)
319	Button 3	Brightness	1 byte	5.001 Percentage (0...100%)
320	Button 3	White value	1 byte	5.001 Percentage (0...100%)
329	Button 4	Colour tone	1 byte	5.003 Angle (degrees)
330	Button 4	Saturation	1 byte	5.001 Percentage (0...100%)
331	Button 4	Brightness	1 byte	5.001 Percentage (0...100%)
332	Button 4	White value	1 byte	5.001 Percentage (0...100%)

Table 74: Communication objects – RGBW value colour control – Separate HSVW objects

No.	Name	Function	Length	Data type
341	Button 5	Colour tone	1 byte	5.003 Angle (degrees)
342	Button 5	Saturation	1 byte	5.001 Percentage (0...100%)
343	Button 5	Brightness	1 byte	5.001 Percentage (0...100%)
344	Button 5	White value	1 byte	5.001 Percentage (0...100%)
353	Button 6	Colour tone	1 byte	5.003 Angle (degrees)
354	Button 6	Saturation	1 byte	5.001 Percentage (0...100%)
355	Button 6	Brightness	1 byte	5.001 Percentage (0...100%)
356	Button 6	White value	1 byte	5.001 Percentage (0...100%)
365	Button 7	Colour tone	1 byte	5.003 Angle (degrees)
366	Button 7	Saturation	1 byte	5.001 Percentage (0...100%)
367	Button 7	Brightness	1 byte	5.001 Percentage (0...100%)
368	Button 7	White value	1 byte	5.001 Percentage (0...100%)
377	Button 8	Colour tone	1 byte	5.003 Angle (degrees)
378	Button 8	Saturation	1 byte	5.001 Percentage (0...100%)
379	Button 8	Brightness	1 byte	5.001 Percentage (0...100%)
380	Button 8	White value	1 byte	5.001 Percentage (0...100%)

Table 74: Communication objects – RGBW value colour control – Separate HSVW objects

XY values

XY colour value for transmitting a set colour value from the CIE Standard via XY coordinates and brightness

The 6-byte colour value can be used as one value or split.

The following options are available:

- RGB combined object
- RGB separate object with 1-byte values for red, green, blue and white
- HSV separate object with 1-byte values for H, S and V.
- When selecting the XY colour value, a separate 1-byte value for the X and Y colour value fields and the brightness must be set according to the CIE Standard

Parameter	Description	Value
X	The desired X value can be set	**0.00000** ... 1.00000
Y value	The desired Y value can be set	**0.00000** ... 1.00000
Brightness	The desired brightness value can be set	**0** ... 100

Table 75: Colour control – XY values

Parameter	Description	Value
Object colours	The 6-byte colour value can be used as one value or split.	**Combined XY object** Separate XY object

Table 75: Colour control – XY values

No.	Name	Function	Length	Data type
292	Button 1	XY values	6 bytes	242.600 Colour XY
304	Button 2	XY values	6 bytes	242.600 Colour XY
316	Button 3	XY values	6 bytes	242.600 Colour XY
328	Button 4	XY values	6 bytes	242.600 Colour XY
340	Button 5	XY values	6 bytes	242.600 Colour XY
352	Button 6	XY values	6 bytes	242.600 Colour XY
364	Button 7	XY values	6 bytes	242.600 Colour XY
376	Button 8	XY values	6 bytes	242.600 Colour XY

Table 76: Communication objects – XY value colour control – Combined XY object

No.	Name	Function	Length	Data type
293	Button 1	X value	2 bytes	7.001 pulses
294	Button 1	Y value	2 bytes	7.001 pulses
295	Button 1	XY brightness	1 byte	5.001 Percentage (0...100%)
305	Button 2	X value	2 bytes	7.001 pulses
306	Button 2	Y value	2 bytes	7.001 pulses
307	Button 2	XY brightness	1 byte	5.001 Percentage (0...100%)
317	Button 3	X value	2 bytes	7.001 pulses
318	Button 3	Y value	2 bytes	7.001 pulses
319	Button 3	XY brightness	1 byte	5.001 Percentage (0...100%)
329	Button 4	X value	2 bytes	7.001 pulses
330	Button 4	Y value	2 bytes	7.001 pulses
331	Button 4	XY brightness	1 byte	5.001 Percentage (0...100%)
341	Button 5	X value	2 bytes	7.001 pulses
342	Button 5	Y value	2 bytes	7.001 pulses
343	Button 5	XY brightness	1 byte	5.001 Percentage (0...100%)

Table 77: Communication objects – XY value colour control – Separate XY objects

No.	Name	Function	Length	Data type
353	Button 6	X value	2 bytes	7.001 pulses
354	Button 6	Y value	2 bytes	7.001 pulses
355	Button 6	XY brightness	1 byte	5.001 Percentage (0...100%)
365	Button 7	X value	2 bytes	7.001 pulses
366	Button 7	Y value	2 bytes	7.001 pulses
367	Button 7	XY brightness	1 byte	5.001 Percentage (0...100%)
377	Button 8	X value	2 bytes	7.001 pulses
378	Button 8	Y value	2 bytes	7.001 pulses
379	Button 8	XY brightness	1 byte	5.001 Percentage (0...100%)

Table 77: Communication objects – XY value colour control – Separate XY objects

5.3.9 Room thermostat extension unit

Press the button to control an external KNX room thermostat. The configured button of the push button then acts as an extension unit of the thermostat and can change its basic configurations (setpoint operating mode, switching from mode to cooling mode and vice versa, presence detection).

Caution

However, the room thermostat extension unit is not actively involved in the actual calculation for the thermostat. It only works properly when all communication objects are linked to the appropriate objects in the associated KNX room thermostat via a group address.

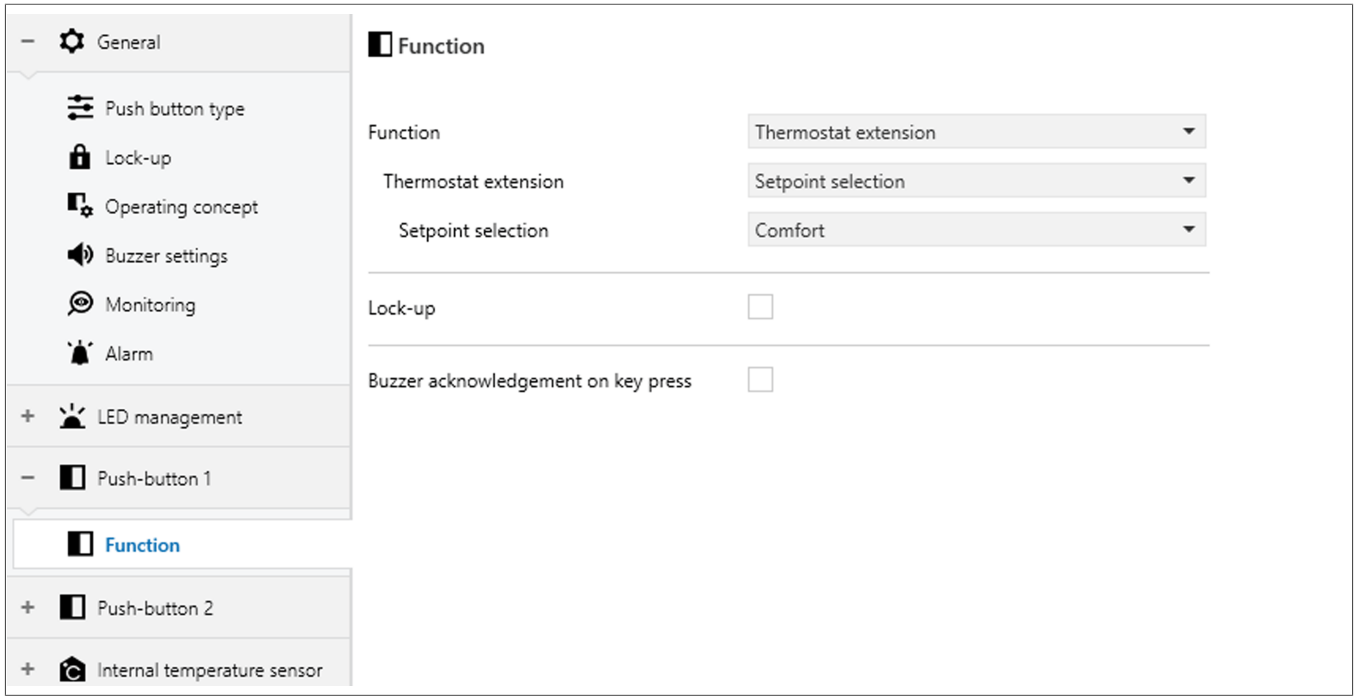


Fig. 34: Room thermostat extension unit

Operating mode changeover

This function can be used to switch the operating mode in the room thermostat control unit at the touch of a button.

Parameter	Description	Value
Operating mode changeover	Press the button to change the operating mode that the room thermostat extension unit transmits to the KNX bus. An operating mode can be assigned to every button on a device.	Auto **Comfort** Standby Night selection Frost protection

Table 78: RT – Operating mode changeover

No.	Name	Function	Length	Data type
613	Button 1	Operating mode changeover	1 byte	20.102 HVAC mode
620	Button 2	Operating mode changeover	1 byte	20.102 HVAC mode
627	Button 3	Operating mode changeover	1 byte	20.102 HVAC mode
634	Button 4	Operating mode changeover	1 byte	20.102 HVAC mode
641	Button 5	Operating mode changeover	1 byte	20.102 HVAC mode
648	Button 6	Operating mode changeover	1 byte	20.102 HVAC mode
655	Button 7	Operating mode changeover	1 byte	20.102 HVAC mode
662	Button 8	Operating mode changeover	1 byte	20.102 HVAC mode

Table 79: Room thermostat extension unit – Operating mode changeover

Setpoint selection

This function can be used to change the setpoint by a set value.

Parameter	Description	Value
Setpoint selection	Each button press increases/decreases the setpoint by the set value. It is then transmitted via the KNX bus or changed at the level of the room thermostat. Two 2-byte objects are available for communication.	**+1°C** +0.5 °C +0.2 °C -0.2 °C -0.5 °C -1 °C

Table 80: RT – Setpoint selection

No.	Name	Function	Length	Data type
613	Button 1	Setpoint selection	2 bytes	9.002 Temperature difference (K)
614	Button 1	Setpoint selection status	2 bytes	9.002 Temperature difference (K)
620	Button 2	Setpoint selection	2 bytes	9.002 Temperature difference (K)
621	Button 2	Setpoint selection status	2 bytes	9.002 Temperature difference (K)
627	Button 3	Setpoint selection	2 bytes	9.002 Temperature difference (K)
628	Button 3	Setpoint selection status	2 bytes	9.002 Temperature difference (K)

Table 81: Room thermostat extension unit – Setpoint selection

634	Button 4	Setpoint selection	2 bytes	9.002 Temperature difference (K)
635	Button 4	Setpoint selection status	2 bytes	9.002 Temperature difference (K)
641	Button 5	Setpoint selection	2 bytes	9.002 Temperature difference (K)
642	Button 5	Setpoint selection status	2 bytes	9.002 Temperature difference (K)
648	Button 6	Setpoint selection	2 bytes	9.002 Temperature difference (K)
649	Button 6	Setpoint selection status	2 bytes	9.002 Temperature difference (K)
655	Button 7	Setpoint selection	2 bytes	9.002 Temperature difference (K)
656	Button 7	Setpoint selection status	2 bytes	9.002 Temperature difference (K)
662	Button 8	Setpoint selection	2 bytes	9.002 Temperature difference (K)
663	Button 8	Setpoint selection status	2 bytes	9.002 Temperature difference (K)

Table 81: Room thermostat extension unit – Setpoint selection

Heating/cooling – Change-over

This function can be used to switch between the heating and cooling control variables.

Parameter	Description	Value
Heating/cooling – Change-over	Each time the button is pressed, the mode changes from heating to cooling or vice versa. It is then transmitted via the KNX bus or changed at the level of the room thermostat. Two 2-byte objects are available for communication.	

Table 82: RT – Heating/cooling – Change-over

No.	Name	Function	Length	Data type
132	Button 1	Heating/cooling – Change-over	1 bit	1.100 Heating/cooling
133	Button 1	Heating/cooling – Status indication	1 bit	1.002 Boolean
136	Button 2	Heating/cooling – Change-over	1 bit	1.100 Heating/cooling

Table 83: Room thermostat extension unit – Heating/cooling – Change-over

No.	Name	Function	Length	Data type
137	Button 2	Heating/cooling – Status indication	1 bit	1.002 Boolean
140	Button 3	Heating/cooling – Change-over	1 bit	1.100 Heating/cooling
141	Button 3	Heating/cooling – Status indication	1 bit	1.002 Boolean
144	Button 4	Heating/cooling – Change-over	1 bit	1.100 Heating/cooling
145	Button 4	Heating/cooling – Status indication	1 bit	1.002 Boolean
148	Button 5	Heating/cooling – Change-over	1 bit	1.100 Heating/cooling
149	Button 5	Heating/cooling – Status indication	1 bit	1.002 Boolean
152	Button 6	Heating/cooling – Change-over	1 bit	1.100 Heating/cooling
153	Button 6	Heating/cooling – Status indication	1 bit	1.002 Boolean
156	Button 7	Heating/cooling – Change-over	1 bit	1.100 Heating/cooling
157	Button 7	Heating/cooling – Status indication	1 bit	1.002 Boolean
160	Button 8	Heating/cooling – Change-over	1 bit	1.100 Heating/cooling
161	Button 8	Heating/cooling – Status indication	1 bit	1.002 Boolean

Table 83: Room thermostat extension unit – Heating/cooling – Change-over

Presence

Parameter	Description	Value
Presence	Press the button to activate the configurations saved in the room thermostat, if available. Press the button again to deactivate it when not in use.	**Presence Off** Presence On Presence Toggle

Table 84: RT – Presence

No.	Name	Function	Length	Data type
613	Button 1	Presence	1 bit	1.001 Switching
620	Button 2	Presence	1 bit	1.001 Switching
627	Button 3	Presence	1 bit	1.001 Switching
634	Button 4	Presence	1 bit	1.001 Switching
641	Button 5	Presence	1 bit	1.001 Switching
648	Button 6	Presence	1 bit	1.001 Switching
655	Button 7	Presence	1 bit	1.001 Switching
662	Button 8	Presence	1 bit	1.001 Switching

Table 85: Room thermostat extension unit – Presence

5.3.10 Priority function

This function uses a 2-bit telegram format that takes precedence over a standard 1-bit telegram when activated or deactivated. It is designed in such a way that, in the event of an alarm triggered via the KNX bus, it regulates the lighting, shade and heating according to the parameters defined by the user. In the event of a fire alarm, for example, the escape routes are well lit and the roller shutters in front of the windows and doors are opened so that the people present can get to safety quickly.

To do this, the button configured with the **priority** control must be linked with its group objects to the priority group objects of the actuator. 3 options can be selected under **Usage Mode**.

Caution

If priority is activated prior to a bus power cut, it will automatically be deactivated after the bus power is restored. The corresponding effect of the Priority function depends on the linked actuator channel (lighting, shade, heating).

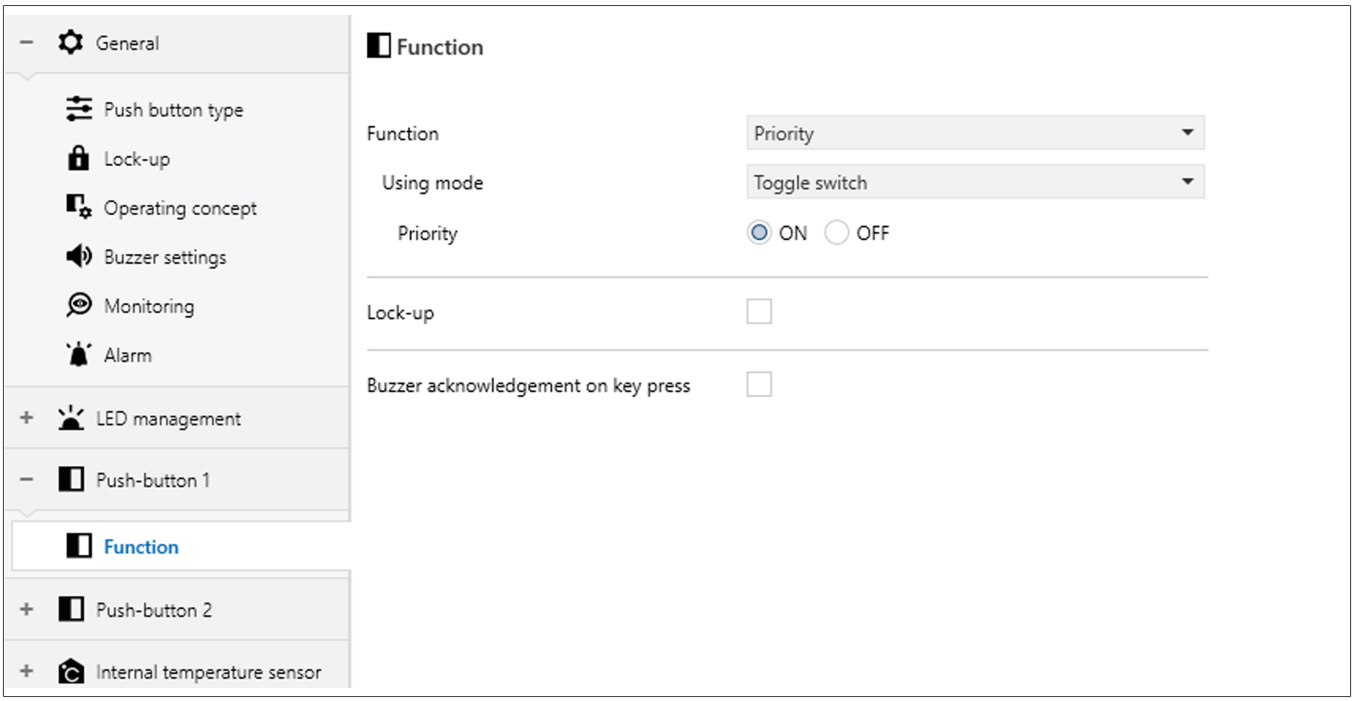


Fig. 35: Function > Priority

Parameter	Description	Value
Operating concept	Defines which function is executed by pressing the button.	**Toggle switch** Start Stop
Priority	Defines which command is transmitted by pressing the button.	**An** Off

Table 86: Priority – Operating concept

The following options are available:

- Change-over: Every button press activates/deactivates the priority alternately. The loads connected to the output of the linked actuator channel behave as described in **Start** and **Stop**.
- Start: Activates the priority, which switches the load at the output of the linked actuator channel on or off, depending on the defined value.
- Stop: Deactivates the priority, so the effect on the load connected to the actuator channel depends solely on the actuator parameters.

No.	Name	Function	Length	Data type
132	Button 1	Priority	2 bit	2.002. Boolean control
133	Button 1	Priority status indication	1 bit	1.011 Status
136	Button 2	Priority	2 bit	2.002. Boolean control
137	Button 2	Priority status indication	1 bit	1.011 Status
140	Button 3	Priority	2 bit	2.002. Boolean control
141	Button 3	Priority status indication	1 bit	1.011 Status
144	Button 4	Priority	2 bit	2.002. Boolean control
145	Button 4	Priority status indication	1 bit	1.011 Status
148	Button 5	Priority	2 bit	2.002. Boolean control
149	Button 5	Priority status indication	1 bit	1.011 Status
152	Button 6	Priority	2 bit	2.002. Boolean control
153	Button 6	Priority status indication	1 bit	1.011 Status
156	Button 7	Priority	2 bit	2.002. Boolean control
157	Button 7	Priority status indication	1 bit	1.011 Status
160	Button 8	Priority	2 bit	2.002. Boolean control
161	Button 8	Priority status indication	1 bit	1.011 Status

5.3.11 Scene function

In the following parameter window, the Scene function is parametrised and set as a rocker and button in the operating concept.

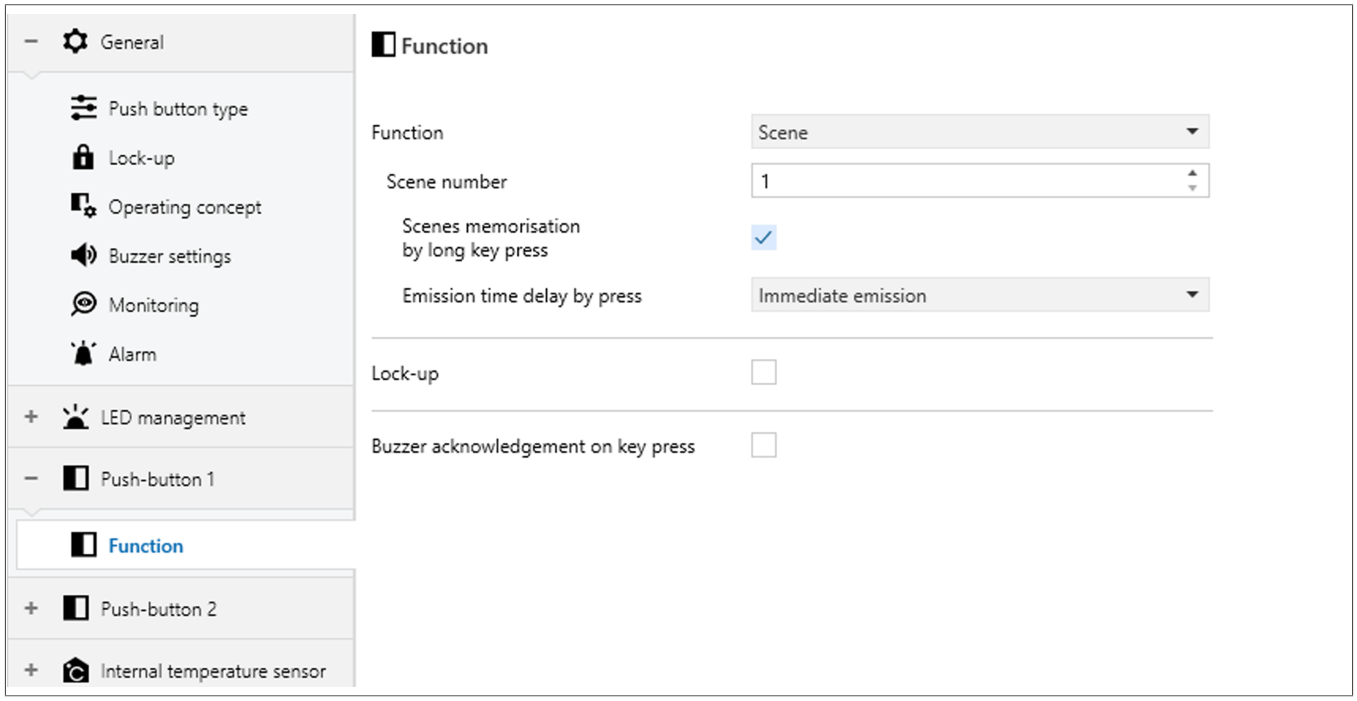


Fig. 36: Function > Scene

The application provides a 1-byte communication object for each rocker or button. If a button is pressed, the scene parameters saved under the set and parametrised scene number are opened and executed. At the same time, up to 64 scenes can be opened, adjusted and, if set, also saved.

Parameter	Description	Value
Scene number	When the Scene function is selected, a **scene number** of 1 ... 64 must be assigned to the button. This value is transmitted via the KNX bus by pressing the button.	**1** ... 64
Emission time delay by press	Defines which command is transmitted after the button is released.	**Immediate emission** 1 s ... 5 min

Table 87: Function > Scene

If a defined scene is activated and the save function is activated, the user can adapt the settings for the loads integrated in the scene as required and permanently save them with a long button press.

Proceed as follows:

- Press the button to activate the scene.
- Set the values of all individual loads at the outputs of the actuators as required. This can be done, for example, via KNX push buttons, visual interfaces or touch screens.
- Keep the scene button pressed. The outputs in question flash briefly to confirm that the configurations have been saved.

Save scene

These new parameters are only saved in the RAM module so that they are overwritten again by the values set previously in the ETS after a bus voltage failure or reset.

The Save scene by a long press of the button function is switched on by default.

In the Scene function the push button transmits a preset scene (1 … 64) via a separate communication object if a button is pressed. This makes it possible to open scenes stored in another device e.g. touch display, or to save scenes when using the save function. When opening an internal scene, no telegram (scene saved in the push button) is transmitted to the bus. Therefore, the corresponding communication object is also missing. With this function, only the maximum of 8 internally stored scenes can be opened, or saved when using the save function.

In the Scene setting without save function, a simple scene recall is generated if a button is pressed. A long press of a button has no other or additional effect. In the Scene setting with save function, the button checks the duration of the touch operation. Pressing a button for less than one second, as described above, causes a simple scene to be opened. If a touch operation is longer than five seconds, the push button generates a save command. In the function as a scene, a save telegram is transmitted to the bus at the same time. In the configuration as recall of an internal scene, the internal scene is saved in this case. The internal scene control module then requests the current scene values from the bus for the actuator groups used.

Note

A touch operation between one and five seconds is not detected, but discarded as invalid.

The scene number parameter defines which of the 8 internal or maximum 64 external scenes should be used if a button is pressed. In the case of a rocker function, two different scene numbers can be predefined.

No.	Name	Function	Length	Data type
682	Button 1	Scene	1 byte	18.001 Scene control
686	Button 2	Scene	1 byte	18.001 Scene control
690	Button 3	Scene	1 byte	18.001 Scene control
694	Button 4	Scene	1 byte	18.001 Scene control
698	Button 5	Scene	1 byte	18.001 Scene control
702	Button 6	Scene	1 byte	18.001 Scene control
706	Button 7	Scene	1 byte	18.001 Scene control
710	Button 8	Scene	1 byte	18.001 Scene control

Table 88: Communication objects – Scene

5.3.12 2-channel mode function

The different function variants of the 2-channel mode function for the independent button and the rocker are presented and described in the parameter window below.

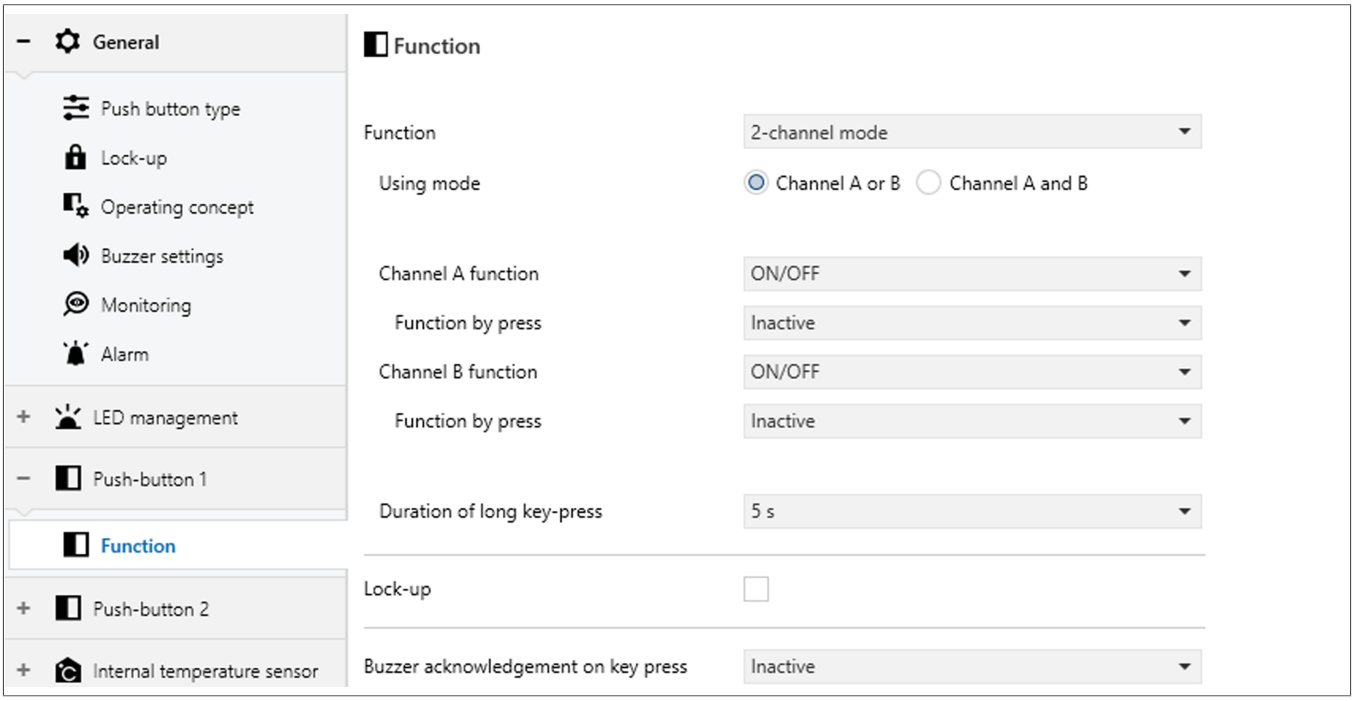


Fig. 37: Function > 2-channel mode

With the 2-channel mode (2-channel operation) it is possible to assign a second operating level to the device. In this function, two channels are assigned to the selected rocker/push button. Channel A is executed with the saved function by a short press of the respective button (left/right)/button and channel B is executed with the saved function by a long press of the button. In this operation mode, the only functions available are switching, value transmitter 1-byte/2-byte, temperature value transmitter, brightness value transmitter and percentage value.

Information

The objects of the associated buttons must be occupied with the same group address for double push button operation (2-channel mode).

Parameter	Description	Value
Operating concept	Defines which operating concept is to be used	**Channel A or B:** Channel A or B:

Table 89: 2-channel mode function – Operating concept

Channel A and Channel B operating concept

In this operating concept, one telegram, or alternatively two telegrams is/are transmitted to the bus for each actuation.

- In the case of a short actuation, the push button transmits a telegram for channel A.
- In the case of a long actuation, the push button first transmits the telegram for channel A and then the telegram for channel B.

The duration for distinguishing between a short and long touch operation is set by the parameter Time between channel 1 and channel 2 for rocker left and Time between channel 1 and channel 2 for rocker right. If the rocker is pressed for a duration shorter than the set time, then the telegram is only transmitted to channel A.

Channel A or B operating concept:

In this operating concept, exactly one telegram is transmitted to the bus for each actuation.

- In the case of a short actuation, the push button transmits a telegram for channel A.
- In the case of a long actuation, the push button transmits a telegram for channel B.

The duration for distinguishing between a short and long touch operation is set by the parameter General. If the rocker is pressed for a duration shorter than the set time, then the telegram is only transmitted to channel A. If the duration of the actuation exceeds the set time, only the telegram for channel B is performed. Therefore, this operating concept only provides for the transmission of a telegram for one channel. In this operating concept, the push button does not transmit a telegram immediately upon pressing the rocker.

Parameter	Description	Value
Channel A/B function	Defines which function is to be used for channel A.	Switching Roller shutter/blind Value 1 bytes Value 2 bytes Scene

Table 90: Channel A and/or B operating concept – Switching

Selecting one of the functions opens further parameters.

Parameter	Description	Value
Function by pressing the button A/B	Defines which command is transmitted for the Switching setting after the button is pressed for channel A/B.	Inactive An Off Toggle switch
Time for a long button press	This parameter defines how long a button needs to be pressed in 2-channel mode to trigger the function stored for a long button press. Times of 0.5, 1, 2, 3, … 10 s can be set.	0.5 s ... **5 s**... 10 s

Table 91: Channel A and/or B operating concept – Switching

Parameter	Description	Value
Sun protection type	Defines the exact type of shade to implement the appropriate configurations.	**Roller shutter** Blind

Table 92: Channel A and/or B operating concept – Roller shutter/blind

Parameter	Description	Value
Function by pressing the button A/B	Defines which command is transmitted for the Roller shutter/blind setting after the button is pressed for channel A/B.	Inactive Position (0–100%) Slat angle (0–100%)
Position (0–100%)	The slider adjusts the position of the roller shutter between 0 and 100%.	
Slat angle (0–100%)	The slider adjusts the angle of the slats between 0 and 100%.	

Table 92: Channel A and/or B operating concept – Roller shutter/blind

Parameter	Description	Value
Value 1 bytes	Defines which command is transmitted for the Value 1 byte setting after the button is pressed for channel A/B.	**Value (0–255)** Percentage (0-100 %)
Function by pressing the button A/B	Defines which command is transmitted for the Roller shutter/blind setting after the button is pressed for channel A/B.	Inactive Position (0–100%) Slat angle (0–100%)
Value (0–255)	A numerical value (0–255) can be entered here as an integer.	
Percentage (0–100%)	The slider adjusts a percentage value between 0 and 100%.	

Table 93: Channel A and/or B operating concept – Value 1 bytes

Information

During a value adjustment, the newly set values are only saved in the RAM volatile memory of the device. Thus, the saved values in the event of a reset (bus voltage failure or ETS programming operation) are replaced by the preset values programmed by the ETS.

Parameter	Description	Value
Value 2 bytes	Defines which command is transmitted for the Value 2 bytes setting after the button is pressed for channel A/B.	**Value (0–65535)** Temperature (0–40°C) Luminosity (0–1000 Lux)
Function by pressing the button A/B	Defines which command is transmitted for the Roller shutter/blind setting after the button is pressed for channel A/B.	Inactive Position (0–100%) Slat angle (0–100%)
Value (0–65535)	A numerical value (0–65535) can be entered here as an integer.	
Temperature (0–40°C)	A temperature value (0–40°C) can be entered here as an integer.	
Luminosity (0–1000 Lux)	A brightness value (0–1000 Lux) can be entered here as an integer.	

Table 94: Channel A and/or B operating concept – Value 2 bytes

Parameter	Description	Value
Scene	When the Scene function is selected, a scene number of 1 ... 64 must be assigned to both channels. This value is transmitted via the KNX bus when the channel A/B button is pressed.	
Scene number	A scene number (0–64) can be entered here as an integer.	

Table 95: Channel A and/or B operating concept – Scene

5.3.13 Step switch function

In the following parameter window, the respective function and selection options of the Step switch function are displayed and configured.

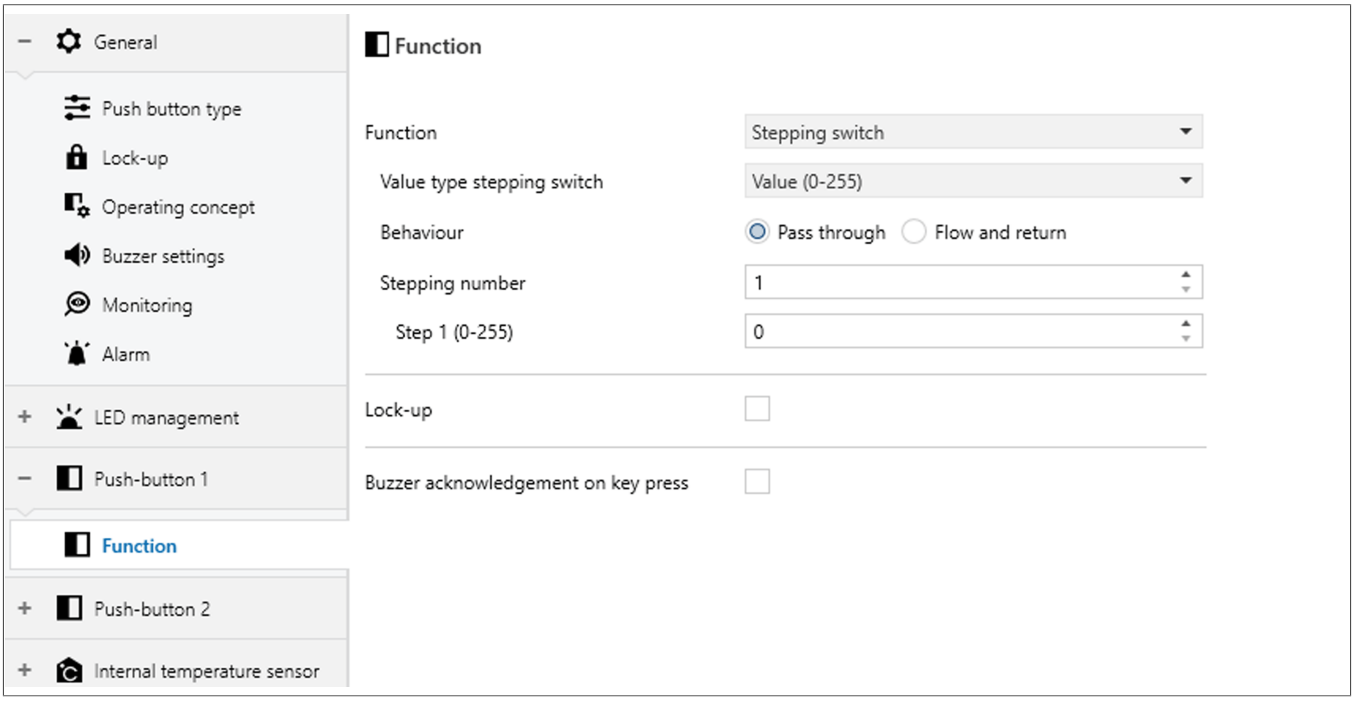


Fig. 38: Function > Step switch

Parameter	Description	Value
Step switch value type	Defines which command is transmitted by pressing the button.	**Value (0–255)** Value (%) Scene
Performance	Defines which command is transmitted after the button is released.	**Run-through** Flow and return
Run-through	Each time the button is pressed, the steps are incremented continuously and start again at step 1. Run through steps 1, 2, 3, ... 7, then steps 1, 2, 3, ...	
Flow and return	Each time the button is pressed, the steps are first increased and then decreased again. Flow and return of step 1, 2, 3, … 7, back to step 6, 5, 4, … 1 then again with step 2, 3, 4, …	
Stepping number	Define 1 to 7 steps of the same value type for the stepping switch.	1 ... 7
Level 1 (0-255)	Value (0 ... 255) for entering entire numerical values for each step	0 ... 255
Step X (0-255)	Value (0 ... 255) for entering entire numerical values for each step	0 ... 255
Step 1 (0-100%)	Value (%) for setting a percentage value for each step via slider	Slide switch 0 ... 100%

Table 96: Step switch function

Parameter	Description	Value
Step X (0–100%)	Value (%) for setting a percentage value for each step via slider	Slide switch 0 ... 100%
Step X (scene 1–64)	Scene for entering a scene number from 1 ... 64	1 ... 64
Step X (scene 1-64)	Scene for entering a scene number from 1 ... 64	1 ... 64

Table 96: Step switch function

The step switch provides the option of selecting and transmitting predefined values e.g. 1-byte values (0 … 100%, 0 … 255 or scenes 1 … 64) to the bus.

Data point type	Value type	Data point size	Value range limit
DPT 5.001	Percentage value	1 byte	0 … 100 %
DPT 5.010	Integer value	1 byte	0 ... 255
DPT 18.001	Scene No.	1 byte	1 ... 64

Table 97: Step switch data point types

The first setting to be selected within the configuration is the function of the respective button pair for every actuation. This selection is important in order to define the counting direction every time the individual button pair sides (lower side / upper side) are pressed.

In the next step it is possible to select the possible number of steps (values). The number of steps is the same for both rocker sides. A maximum of seven steps (1, 2, 3, 4, 5, 6, 7) are available. After selecting the possible number of steps, the type of value is configured. The possible value types can be found in see Tab. 97.

Example: Dimming value default using a step switch as a rocker

Parameter settings:

- Function principle – Left button = increase brightness / Right button = decrease brightness
- Number of steps = 7
- Data point type = DPT 5.001
- Value = 0 … 100% (dimming value default)

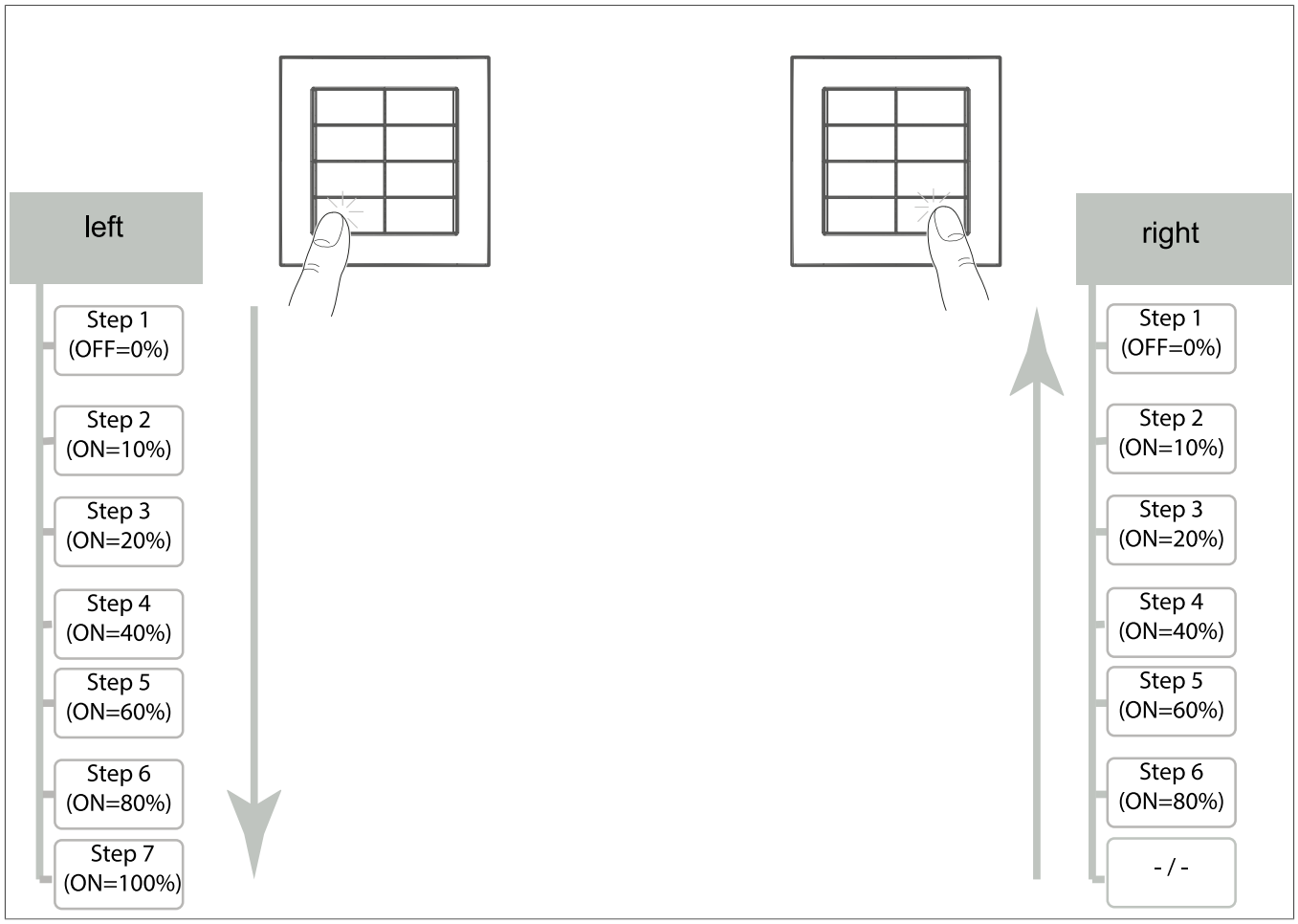


Fig. 39: Step switch as rocker

Each side of the rocker has the inverse behaviour of the other corresponding side. 2 different concepts can be selected.

Up/Down:

If a button is pressed repeatedly, the steps and functions stored for them will be passed through as follows:

- Left rocker: Ascending 1 ... 7
- Right rocker: Descending 7 ... 1

Down/Up:

If a button is pressed repeatedly, the steps and functions stored for them will be passed through as follows:

- Left rocker: Descending 7 ... 1
- Right rocker: Ascending 1 ... 7

Step switch – Run-through

Example: Dimming value default using a step switch as a single push button

Parameter settings:

- Function principle: Each time the button is pressed, the steps are incremented continuously and start again at step 1. Run through steps 1, 2, 3, ... 7, then steps 1, 2, 3, ...
- Number of steps = 7
- Data point type = DPT 5.001
- Value = 0 … 100% (dimming value default)

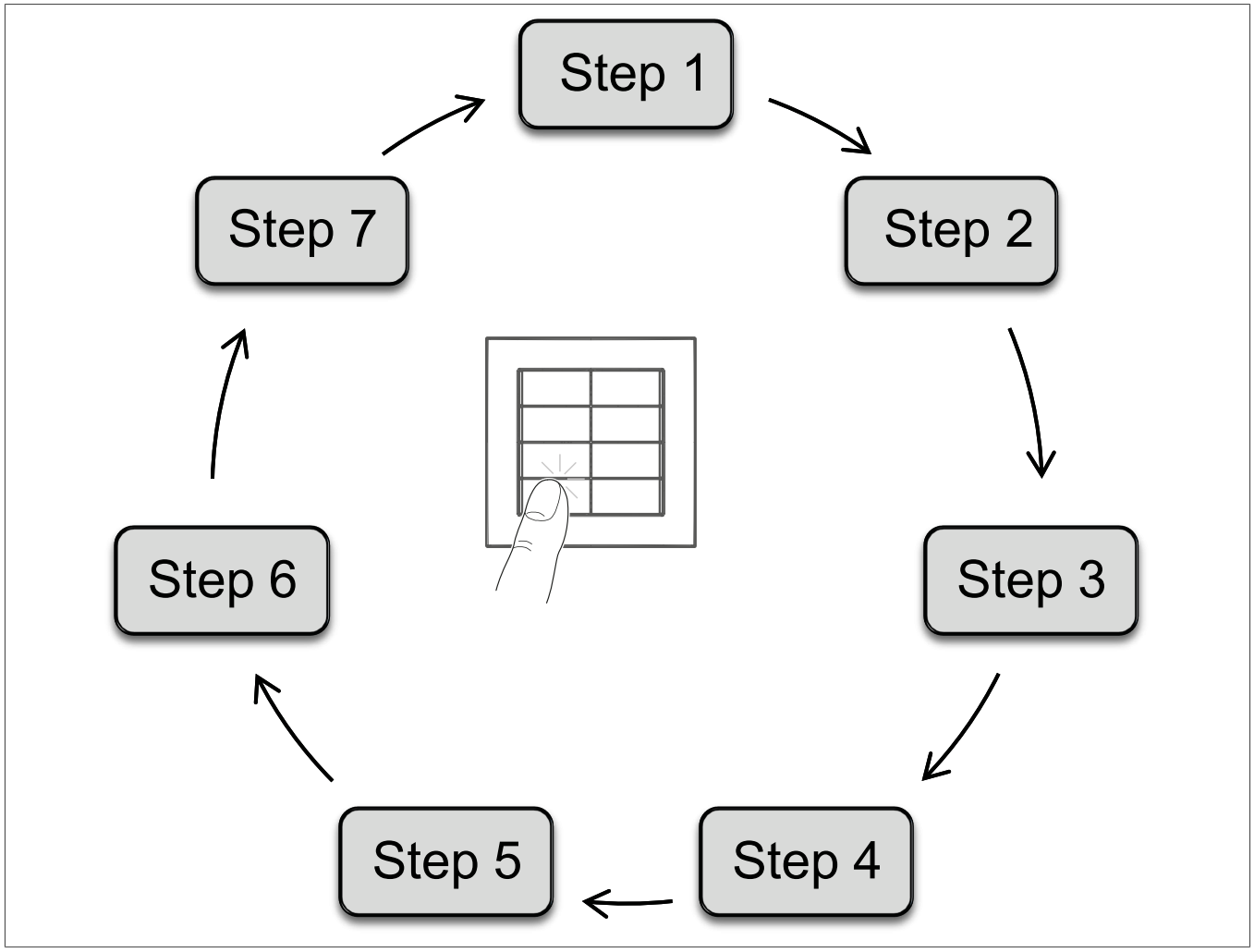


Fig. 40: Step switch – Run-through

Step switch – Flow and return

Example: Dimming value default using a step switch as a single push button

Parameter settings:

- Function principle: Each time the button is pressed, the steps are first increased and then decreased again: Flow and return of step 1, 2, 3, … 7, back to step 6, 5, 4, … 1 then again with step 2, 3, 4, …
- Number of steps = 7
- Data point type = DPT 5.001
- Value = 0 … 100% (dimming value default)

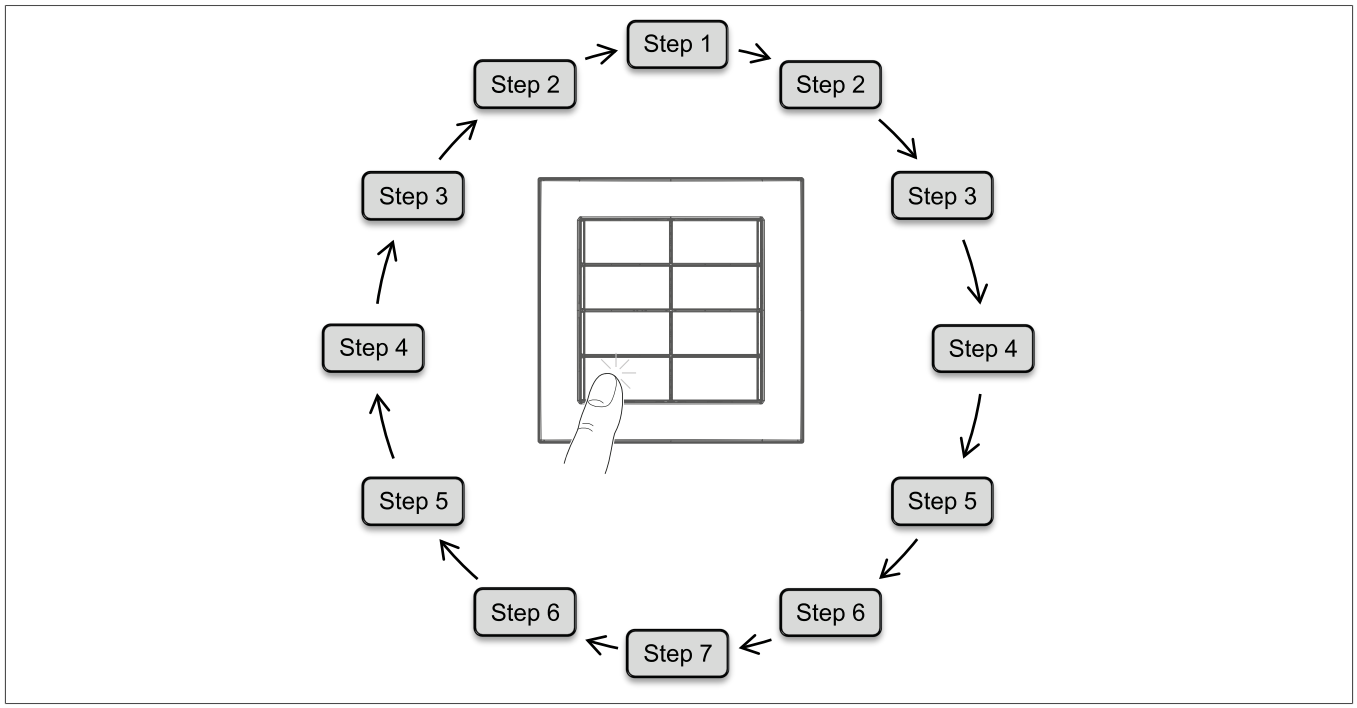


Fig. 41: Step switch – Flow and return

No.	Name	Function	Length	Data type
682	Button 1	Value (0–255)	1 byte	5010 counting pulse (0….255)
686	Button 2	Value (0–255)	1 byte	5.010 counting pulses (0...255)
690	Button 3	Value (0–255)	1 byte	5010 counting pulse (0….255)
694	Button 4	Value (0–255)	1 byte	5010 counting pulse (0….255)
698	Button 5	Value (0–255)	1 byte	5010 counting pulse (0….255)
702	Button 6	Value (0–255)	1 byte	5010 counting pulse (0….255)
706	Button 7	Value (0–255)	1 byte	5010 counting pulse (0….255)
710	Button 8	Value (0–255)	1 byte	5010 counting pulse (0….255)

Table 98: Communication objects – Step switch value (0–255)

No.	Name	Function	Length	Data type
682	Button 1	Value in %	1 byte	5.001 Percentage (0...100%)
686	Button 2	Value in %	1 byte	5.001 Percentage (0...100%)
690	Button 3	Value in %	1 byte	5.001 Percentage (0...100%)
694	Button 4	Value in %	1 byte	5.001 Percentage (0...100%)
698	Button 5	Value in %	1 byte	5.001 Percentage (0...100%)
702	Button 6	Value in %	1 byte	5.001 Percentage (0...100%)

Table 99: Communication objects – Step switch value (%)

706	Button 7	Value in %	1 byte	5.001 Percentage (0...100%)
710	Button 8	Value in %	1 byte	5.001 Percentage (0...100%)

Table 99: Communication objects – Step switch value (%)

No.	Name	Function	Length	Data type
682	Button 1	Scene	1 byte	18.001 Scene control
686	Button 2	Scene	1 byte	18.001 Scene control
690	Button 3	Scene	1 byte	18.001 Scene control
694	Button 4	Scene	1 byte	18.001 Scene control
698	Button 5	Scene	1 byte	18.001 Scene control
702	Button 6	Scene	1 byte	18.001 Scene control
706	Button 7	Scene	1 byte	18.001 Scene control
710	Button 8	Scene	1 byte	18.001 Scene control

Table 100: Communication objects – Scene step switch

5.3.14 Automatic control deactivation function

The Deactivate automatic functions function is described and presented in the following section.

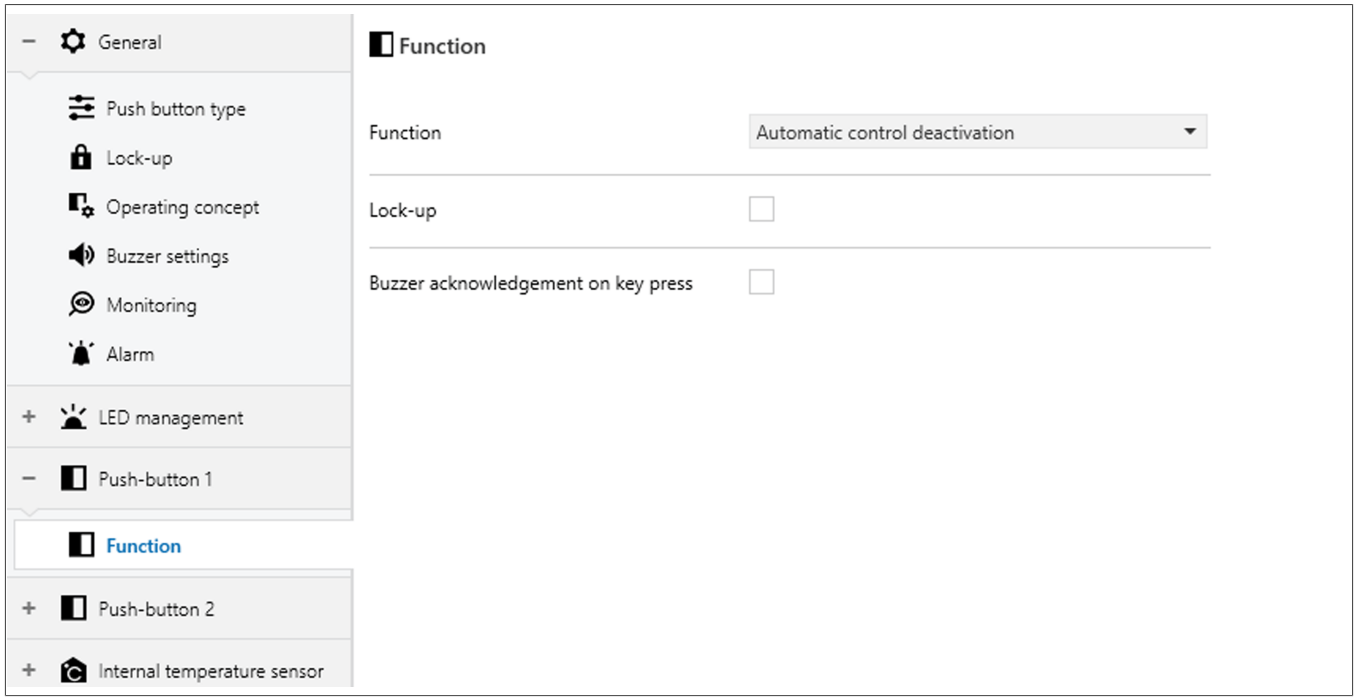


Fig. 42: Function > Automatic control deactivation

With this1-bit communication object automatic sequences already running in the actuators can be deactivated, switched off.

No.	Name	Function	Length	Data type
132	Button 1	Deactivate automatic	1 bit	1.003 Released
133	Button 1	Automatic control deactivation status	1 bit	1.002 Boolean
136	Button 2	Deactivate automatic	1 bit	1.003 Released
137	Button 2	Automatic control deactivation status	1 bit	1.002 Boolean
140	Button 3	Deactivate automatic	1 bit	1.003 Released
141	Button 3	Automatic control deactivation status	1 bit	1.002 Boolean
144	Button 4	Deactivate automatic	1 bit	1.003 Released
145	Button 4	Automatic control deactivation status	1 bit	1.002 Boolean
148	Button 5	Deactivate automatic	1 bit	1.003 Released
149	Button 5	Automatic control deactivation status	1 bit	1.002 Boolean

Table 101: Communication object – Automatic control deactivation

No.	Name	Function	Length	Data type
152	Button 6	Deactivate automatic	1 bit	1.003 Released
153	Button 6	Automatic control deactivation status	1 bit	1.002 Boolean
156	Button 7	Deactivate automatic	1 bit	1.003 Released
157	Button 7	Automatic control deactivation status	1 bit	1.002 Boolean
160	Button 8	Deactivate automatic	1 bit	1.003 Released
161	Button 8	Automatic control deactivation status	1 bit	1.002 Boolean

Table 101: Communication object – Automatic control deactivation

6 Internal temperature sensor

In the following parameter window, the configuration and parameterisation of the internal temperature sensor is described and presented.

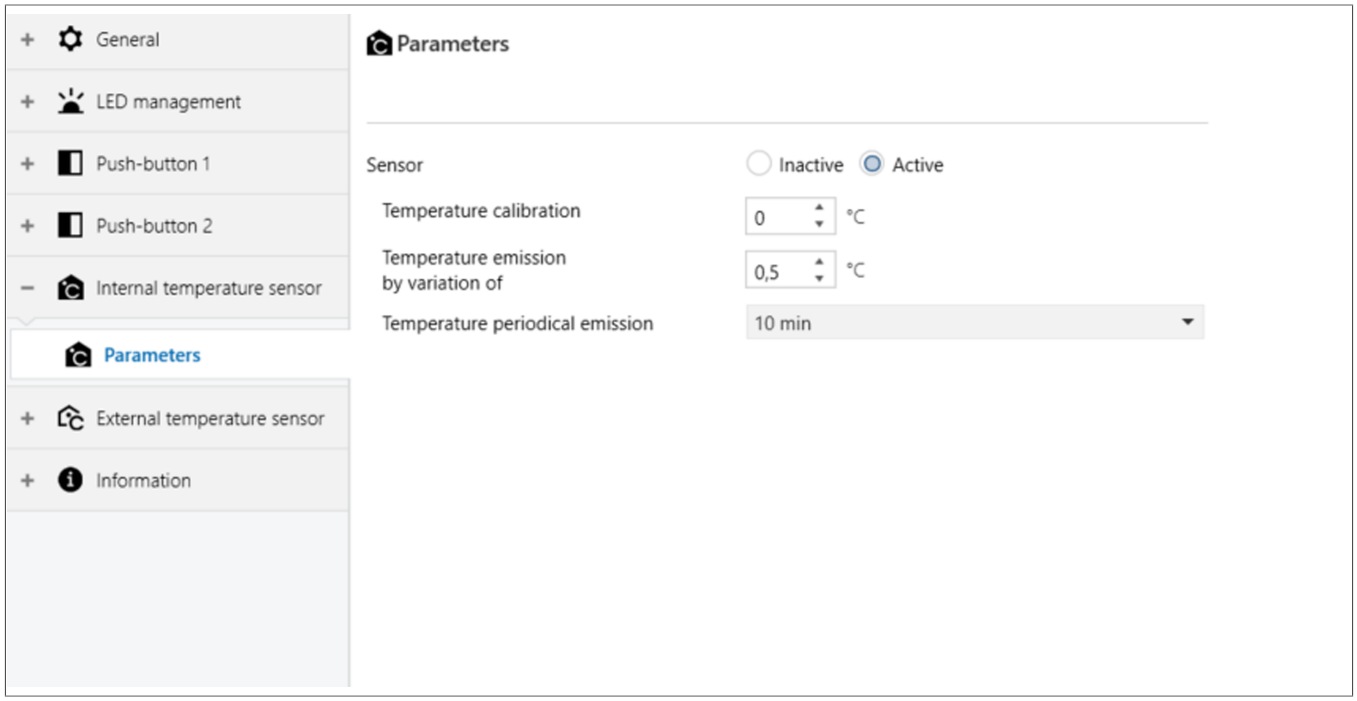


Fig. 43: Internal temperature sensor

The device can use the internal temperature sensor to measure the temperature at the location for installation. You then transmit this value via the KNX bus for visualisation purposes or to the input of a room thermostat, for example.

Parameter	Description	Value
Sensor	With this parameter the system first decides whether the internal temperature sensor is to be used.	**Inactive**
Temperature calibration	The measured temperature value can be set in 0.2°C increments between -5 ...+45.	-5°C ... **0°C** ... +45°C
Temperature emission by variation of	Defines the temperature change that leads to the transmission of a value to the KNX bus. Values from 0.2 to 25.5 are possible.	0.2 ... **0.5** ... 25.5°C
Temperature periodical transmission	This parameter defines in which cycle the actual value is compared with the setpoint and should be transmitted to the bus.	Inactive 10 ... **10 min**

Table 102: Internal temperature sensor function parameters

No.	Name	Function	Length	Data type
38	Internal temperature sensor	Internal temperature sensor	2byte	9.001 Temperature (°C)

Table 103: Communication object – Internal temperature sensor

7 External temperature sensor

In the following parameter window, the configuration and parameterisation of the external temperature sensor is described and presented.

The device is equipped with an additional plug-in terminal for connecting an external temperature sensor (Hager EK090). The temperature measured in this way cannot be used internally in the device, e.g. to enter the ambient temperature as a measured value if the device is installed in an unfavourable location (e.g. outdoors). This temperature value can only be transmitted to the input of a KNX room thermostat via the KNX bus in order to synchronise the floor temperature with a second measured value in large rooms (synchronisation).

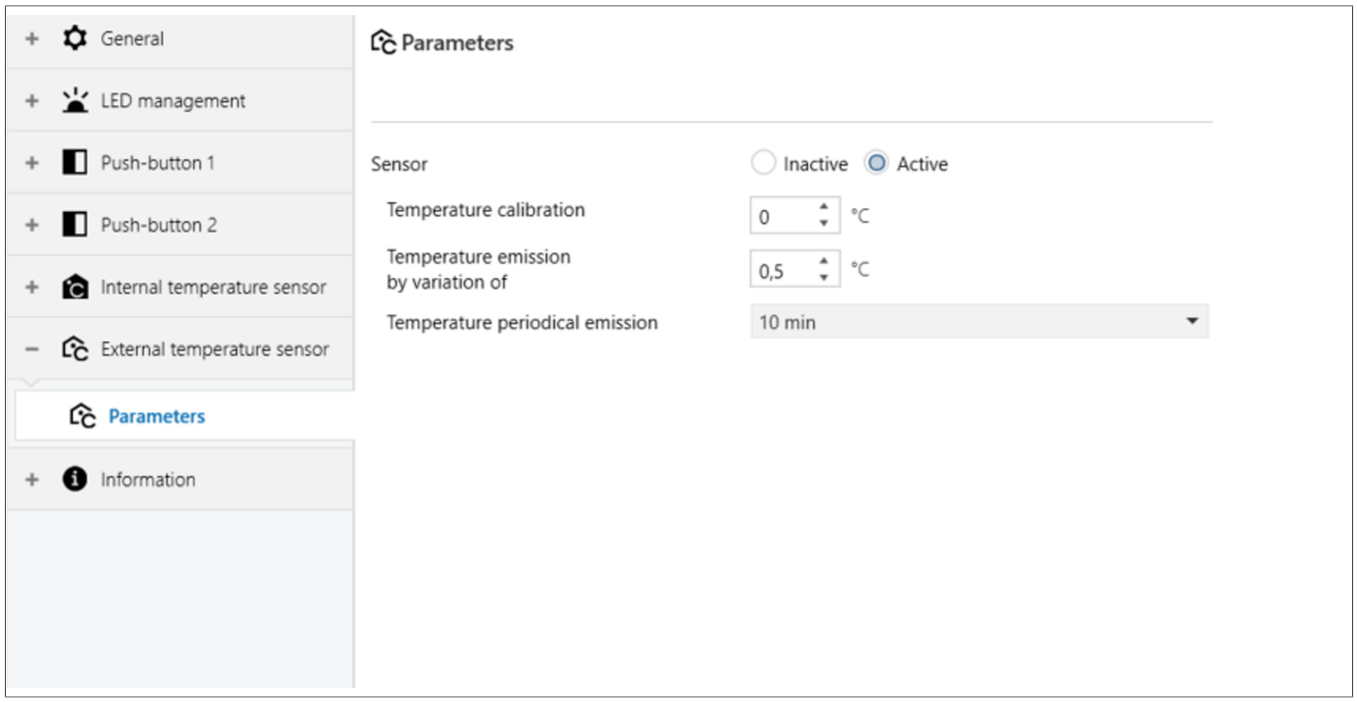


Fig. 44: External temperature sensor

The device can use the external temperature sensor to measure the temperature in the floor, for example. You then transmit this value via the KNX bus for visualisation purposes, for example, or to the input of a room thermostat and used as a mixed value between the internal and external temperature sensor.

Parameter	Description	Value
Sensor	With this parameter the system first decides whether the internal temperature sensor is to be used.	**Inactive**
Temperature calibration	The measured temperature value can be set in 0.2°C increments between -5 ...+45.	-5°C ... **0°C** ... +45°C
Temperature emission by variation of	Defines the temperature change that leads to the transmission of a value to the KNX bus. Values from 0.2 to 25.5 are possible.	0.2 ... **0.5** ... 25.5°C

Table 104: External temperature sensor function parameters

Parameter	Description	Value
Temperature periodical transmission	This parameter defines in which cycle the actual value is compared with the setpoint and should be transmitted to the bus.	Inactive 10 ... **10 min**

Table 104: External temperature sensor function parameters

No.	Name	Function	Length	Data type
44	External temperature sensor	External temperature sensor	2byte	9.001 Temperature (°C)

Table 105: Communication object – External temperature sensor

8 Master reset

The master reset sets the device back to the basic settings (factory settings).

Resetting will result in:

- The deletion of the encryption key
- The deletion of the BCU password
- The application of the default settings
- The application of an individual default address (15.15.255).

In Secure mode, a reset disables the security of the device. It can then be put back into operation using the device certificate.

Performing a master reset

1. Switch off the device by disconnecting the bus connection or turning off the power supply to the system.
2. Press and hold the Programming button.
3. Switch on the device again by plugging in the bus connection or by switching the power supply of the system back on.
   The programming LED lights up. After 5 seconds, the LED flashes.
4. Release the programming button.
5. The programming LED is lit continuously while the master reset is in progress. After a few seconds, the LED turns off, indicating that the reset is complete. The device will be restarted.

9 Firmware update

The device is updatable. Firmware updates can be easily implemented with the Hager ETS app. This app is free and can be used on site or via remote access.

How do I perform an update?

- Log in to my.knx.org.
- Create a new account or log in with your existing account.
- Look for the **Hager/Berker firmware update app**.
- Add to shopping cart.
- Go to the shopping cart and click Order.
- Select the billing and shipping address.
- Click **To Payment** to proceed.
- Confirm the payment (free of charge).

  The app is now visible in your account.
- Download the app and license to perform the update.
- Install the app and license in your ETS software.

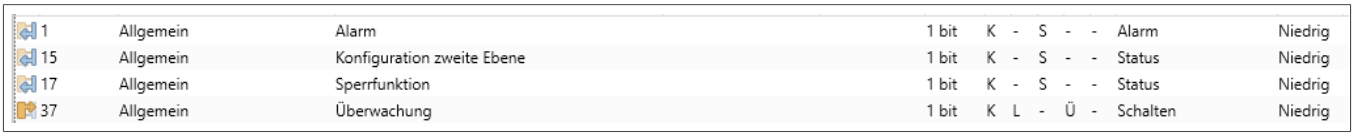
In the ETS project:

- Launch the app from the **Apps** tab.
- Select the device you want to update.
- Select the latest available firmware version.
- Load the device with the firmware.
- When the loading is complete, activate the firmware.

  The device is updated and then restarted.

10 Communication objects

10.1 General Parameter Settings



1	Allgemein	Alarm	1 bit	K	-	S	-	-	Alarm	Niedrig
15	Allgemein	Konfiguration zweite Ebene	1 bit	K	-	S	-	-	Status	Niedrig
17	Allgemein	Sperrfunktion	1 bit	K	-	S	-	-	Status	Niedrig
37	Allgemein	Überwachung	1 bit	K	L	-	Ü	-	Schalten	Niedrig

Fig. 45: Communication objects – General

General – Lock-up

No.	Name	Object function	Length	Data type	Flags
17	General	Disable function	1 bit	DPT_Status	C, W

Table 106: Communication object – Lock-up

This object is always visible under **General – Lock-up** and can be parametrised.

General – Configuration second level

No.	Name	Object function	Length	Data type	Flags
15	General	Configuration second level	1 bit	DPT_Status	C, W

Table 107: Communication object – Configuration second level

This object is activated if the 2-channel mode parameter is activated in the **General – Operating concept > Configuration second level** parameter. This object allows the control of the buttons in a second operating level.

General – Monitoring

No.	Name	Object function	Length	Data type	Flags
37	General	Monitoring	1 bit	DPT_Switching	K,L.Ü

Table 108: Communication object – Monitoring

This object is activated if the 2-channel mode parameter is activated in the **General – Monitoring – Monitoring** parameter. This object allows the control of the buttons in a second operating level.

10.2 LED management

Nummer	Name	Objektfunktion	Verbunden mit	Gruppenadres	Länge	K	L	S	Ü	A	Datentyp	Priorität
9	LED management	Hintergrundbeleuchtung -...			1 byte	K	-	S	-	A	Prozent (0..100%)	Niedrig
10	LED management	Hintergrundbeleuchtung -...			1 byte	K	-	S	-	A	Prozent (0..100%)	Niedrig
11	LED management	Tag/Nacht			1 bit	K	-	S	-	A	Status	Niedrig
13	LED management	Geräte-Status-LED - Helligk...			1 byte	K	-	S	-	A	Prozent (0..100%)	Niedrig
14	LED management	Geräte-Status-LED - Helligk...			1 byte	K	-	S	-	A	Prozent (0..100%)	Niedrig
56	LED management	Geräte-Status-LED - ON/OFF			1 bit	K	-	S	-	A	Schalten	Niedrig
57	LED management	Hintergrundbeleuchtung -...			1 bit	K	-	S	-	A	Schalten	Niedrig

Fig. 46: Communication object – LED management – General

No.	Name	Object function	Length	Data type	Flags
9	LED management	Backlighting – brightness day	1 byte	DPT_Percentage (0...100%)	C,W,U
10	LED management	Backlighting – brightness night	1 byte	DPT_Percentage (0...100%)	C,W,U
11	LED management	Day/night	1 bit	DPT_Status	C,W,U
13	LED management	Device status LED – brightness day	1 byte	DPT_Percentage (0...100%)	C,W,U
14	LED management	Device status LED – brightness night	1 byte	DPT_Percentage (0...100%)	C,W,U
56	LED management	Device status LED – ON/OFF	1 byte	DPT_Switching	C,W,U
57	LED management	Backlighting	1 byte	DPT_Switching	C,W,U
7	LED management	Backlighting – Status indicator	1 bit	DPT_Switching	C, W, T, U

Table 109: Communication object – LED management – General

Objects 11, 56 and 57 become visible if **LED MANAGEMENT** is ticked under **LED management – General – LED backlighting**. If one of the values for the status indicator in the backlighting function is also selected here, object 7 is visible

If the tick is also set for Brightness value daytime/nighttime operation can be changed via object, objects 9, 10, 13, 14 are visible

10.3 LED management – Status LED global

Nummer	Name	Objektfunktion	Verbunden mit	Gruppenadres	Länge	K	L	S	Ü	A	Datentyp
50	LED management	Farbe 1			3 bytes	K	-	S	Ü	A	RGB Wert 3x(0..255)
51	LED management	Farbe 2			3 bytes	K	-	S	Ü	A	RGB Wert 3x(0..255)
52	LED management	Farbe 3			3 bytes	K	-	S	Ü	A	RGB Wert 3x(0..255)
53	LED management	Farbe 4			3 bytes	K	-	S	Ü	A	RGB Wert 3x(0..255)
54	LED management	Farbe 5			3 bytes	K	-	S	Ü	A	RGB Wert 3x(0..255)
55	LED management	Farbe 6			3 bytes	K	-	S	Ü	A	RGB Wert 3x(0..255)

Fig. 47: Communication object – LED management – Status LED global

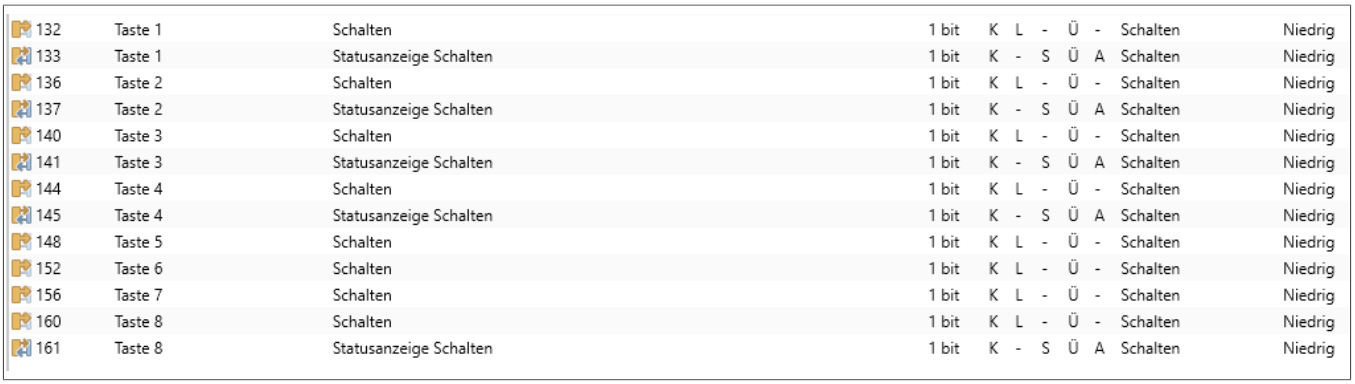
No.	Name	Object function	Length	Data type	Flags
50	LED management	Colour 1	3 bytes	DPT_RGB value 3x(0...255)(°C)	C, W, T, U
51	LED management	Colour 2	3 bytes	DPT_RGB value 3x(0...255)(°C)	C, W, T, U
52	LED management	Colour 3	3 bytes	DPT_RGB value 3x(0...255)(°C)	C, W, T, U
53	LED management	Colour 4	3 bytes	DPT_RGB value 3x(0...255)(°C)	C, W, T, U
54	LED management	Colour 5	3 bytes	DPT_RGB value 3x(0...255)(°C)	C, W, T, U
55	LED management	Colour 6	3 bytes	DPT_RGB value 3x(0...255)(°C)	C, W, T, U

Table 110: Communication object – LED management – Status LED global

This object is activated when the **Status LED colour concept** parameter is activated under **LED management – Status LED**.

These objects are globally responsible for the colour concept of all status LEDs on the device.

10.4 Switching/toggling



132	Taste 1	Schalten	1 bit	K	L	-	Ü	-	Schalten	Niedrig
133	Taste 1	Statusanzeige Schalten	1 bit	K	-	S	Ü	A	Schalten	Niedrig
136	Taste 2	Schalten	1 bit	K	L	-	Ü	-	Schalten	Niedrig
137	Taste 2	Statusanzeige Schalten	1 bit	K	-	S	Ü	A	Schalten	Niedrig
140	Taste 3	Schalten	1 bit	K	L	-	Ü	-	Schalten	Niedrig
141	Taste 3	Statusanzeige Schalten	1 bit	K	-	S	Ü	A	Schalten	Niedrig
144	Taste 4	Schalten	1 bit	K	L	-	Ü	-	Schalten	Niedrig
145	Taste 4	Statusanzeige Schalten	1 bit	K	-	S	Ü	A	Schalten	Niedrig
148	Taste 5	Schalten	1 bit	K	L	-	Ü	-	Schalten	Niedrig
152	Taste 6	Schalten	1 bit	K	L	-	Ü	-	Schalten	Niedrig
156	Taste 7	Schalten	1 bit	K	L	-	Ü	-	Schalten	Niedrig
160	Taste 8	Schalten	1 bit	K	L	-	Ü	-	Schalten	Niedrig
161	Taste 8	Statusanzeige Schalten	1 bit	K	-	S	Ü	A	Schalten	Niedrig

Fig. 48: Communication objects – Switching/toggling

No.	Name	Object function	Length	Data type	Flags
132, 136, 140, 144, 148, 152, 156, 160	Button x	Switching	1 bit	DPT_Switching	C, R, T
133, 137, 141, 145, 149, 153, 157, 161	Button x	Switching status indicator	1 bit	DPT_Switching	C, W, T, U

Table 111: Communication objects – Switching/toggling

The objects (132, 136, 140, 144, 148, 152, 156, 160) become visible when **Switching/toggling** and the **function when pressing or releasing the On** or **Off** button is selected.

In addition to the objects listed above, these objects (133, 137, 141, 145, 149, 153, 157, 161) become visible when the value **Toggle** is selected for the same function.

10.5 Dimming

Increase (On) – Decrease (Off)

172	Taste 1	Schalten	1 bit	K	L	-	Ü	-	Schalten
173	Taste 1	Dimmen	4 bit	K	L	-	Ü	-	Dimmer Schritt
174	Taste 1	Statusanzeige Schalten	1 bit	K	-	S	Ü	A	Schalten
178	Taste 2	Schalten	1 bit	K	L	-	Ü	-	Schalten
179	Taste 2	Dimmen	4 bit	K	L	-	Ü	-	Dimmer Schritt
180	Taste 2	Statusanzeige Schalten	1 bit	K	-	S	Ü	A	Schalten
184	Taste 3	Schalten	1 bit	K	L	-	Ü	-	Schalten
185	Taste 3	Dimmen	4 bit	K	L	-	Ü	-	Dimmer Schritt
186	Taste 3	Statusanzeige Schalten	1 bit	K	-	S	Ü	A	Schalten
190	Taste 4	Schalten	1 bit	K	L	-	Ü	-	Schalten
191	Taste 4	Dimmen	4 bit	K	L	-	Ü	-	Dimmer Schritt
192	Taste 4	Statusanzeige Schalten	1 bit	K	-	S	Ü	A	Schalten
196	Taste 5	Schalten	1 bit	K	L	-	Ü	-	Schalten
197	Taste 5	Dimmen	4 bit	K	L	-	Ü	-	Dimmer Schritt
198	Taste 5	Statusanzeige Schalten	1 bit	K	-	S	Ü	A	Schalten
202	Taste 6	Schalten	1 bit	K	L	-	Ü	-	Schalten
203	Taste 6	Dimmen	4 bit	K	L	-	Ü	-	Dimmer Schritt
204	Taste 6	Statusanzeige Schalten	1 bit	K	-	S	Ü	A	Schalten
208	Taste 7	Schalten	1 bit	K	L	-	Ü	-	Schalten
209	Taste 7	Dimmen	4 bit	K	L	-	Ü	-	Dimmer Schritt
210	Taste 7	Statusanzeige Schalten	1 bit	K	-	S	Ü	A	Schalten
214	Taste 8	Schalten	1 bit	K	L	-	Ü	-	Schalten
215	Taste 8	Dimmen	4 bit	K	L	-	Ü	-	Dimmer Schritt
216	Taste 8	Statusanzeige Schalten	1 bit	K	-	S	Ü	A	Schalten

Fig. 49: Communication objects – Dimming

No.	Name	Object function	Length	Data type	Flags
172, 178, 184, 190, 196, 202, 208, 214	Button x	Switching	1 bit	DPT_Switching	C, R, T
173, 179, 185, 191, 197, 203, 209, 215	Button x	Dimming	4 bit	DPT_Dimmer Step	C, R, T
174, 180, 186, 192, 198, 204, 210, 216	Button x	Switching status indicator	1 bit	DPT_Switching	C, W, T, U

Table 112: Communication objects – Dimming

These objects (172, 178, 184, 190, 196, 202, 208, 214) are activated if the Dimming – Increase (On) – Decrease (Off) function is selected in the parameters for each individual button. These objects transmit a 1-bit command to the actuator channel and trigger a switching command when a button is pressed. These objects (173, 179, 185, 191, 197, 203, 209, 215) trigger a 4-bit command on the bus in the same function and dim the lighting.

The status indicator objects (174, 180, 186, 192, 198, 204, 210, 216) are visible are visible if the Dimming – Increase (Toggle), decrease (Toggle) or Increase (Toggle)/Decrease (Toggle) function is activated.

Dimming value

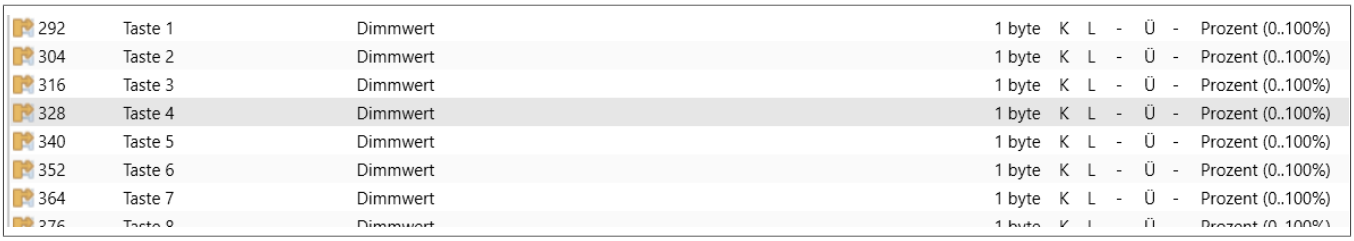


Fig. 50: Communication objects – Dimming value

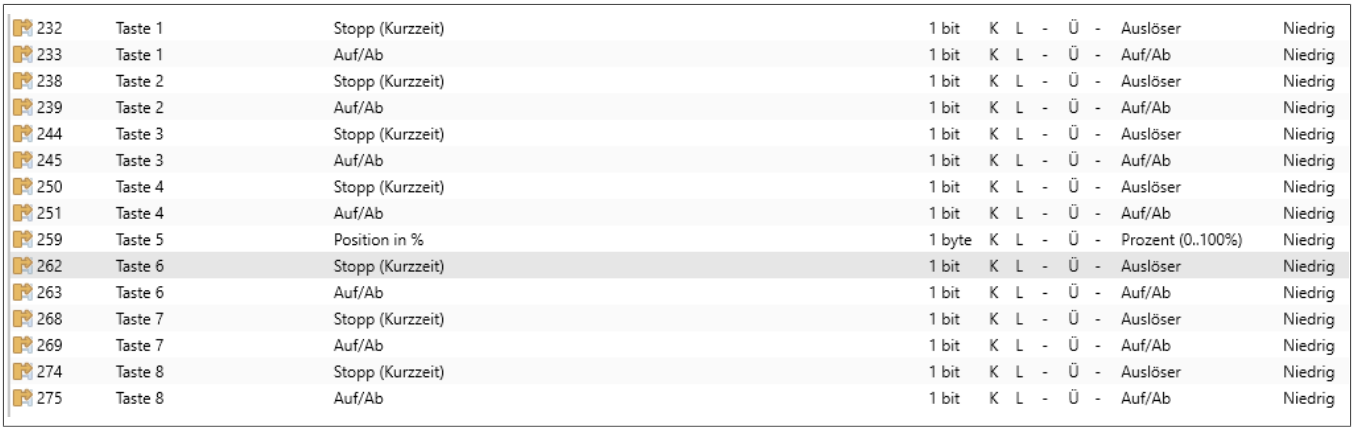
No.	Name	Object function	Length	Data type	Flags
292, 304, 316, 328, 340, 352, 364, 376	Button x	Dimming value	1 byte	DPT_Percentage (0...100%)	C, R, T

Table 113: Communication objects – Dimming

These objects are activated if the Dimming – Dimming value function is selected in the parameters for every single button. These objects transmit a 1-byte command to the actuator channel and transmit a value command when a button is pressed.

10.6 Roller shutter/blind

Roller shutter – Up/Down/Stop



232	Taste 1	Stopp (Kurzzeit)	1 bit	K	L	-	Ü	-	Auslöser	Niedrig
233	Taste 1	Auf/Ab	1 bit	K	L	-	Ü	-	Auf/Ab	Niedrig
238	Taste 2	Stopp (Kurzzeit)	1 bit	K	L	-	Ü	-	Auslöser	Niedrig
239	Taste 2	Auf/Ab	1 bit	K	L	-	Ü	-	Auf/Ab	Niedrig
244	Taste 3	Stopp (Kurzzeit)	1 bit	K	L	-	Ü	-	Auslöser	Niedrig
245	Taste 3	Auf/Ab	1 bit	K	L	-	Ü	-	Auf/Ab	Niedrig
250	Taste 4	Stopp (Kurzzeit)	1 bit	K	L	-	Ü	-	Auslöser	Niedrig
251	Taste 4	Auf/Ab	1 bit	K	L	-	Ü	-	Auf/Ab	Niedrig
259	Taste 5	Position in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
262	Taste 6	Stopp (Kurzzeit)	1 bit	K	L	-	Ü	-	Auslöser	Niedrig
263	Taste 6	Auf/Ab	1 bit	K	L	-	Ü	-	Auf/Ab	Niedrig
268	Taste 7	Stopp (Kurzzeit)	1 bit	K	L	-	Ü	-	Auslöser	Niedrig
269	Taste 7	Auf/Ab	1 bit	K	L	-	Ü	-	Auf/Ab	Niedrig
274	Taste 8	Stopp (Kurzzeit)	1 bit	K	L	-	Ü	-	Auslöser	Niedrig
275	Taste 8	Auf/Ab	1 bit	K	L	-	Ü	-	Auf/Ab	Niedrig

Fig. 51: Communication objects – Roller shutter/blind

No.	Name	Object function	Length	Data type	Flags
233, 239, 245, 251, 257, 263, 269, 275	Button x	Up/down	1 bit	DPT_Up/Down	C, R, T
232, 238, 244, 250, 256, 262, 268, 274	Button x	Stop (step)	1 bit	DPT_trigger	C, R, T

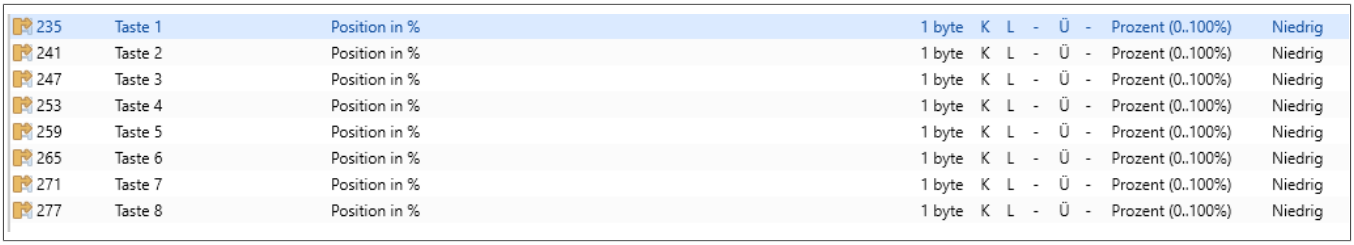
Table 114: Communication objects – Roller shutters/blind – Up/Down/Stop

These objects are visible if the Roller shutter/blind – Roller shutter function is selected in the parameters for every single button.

The objects (233, 239, 245, 251, 257, 263, 269, 275) transmit a 1-bit command to the actuator channel when the button is pressed and trigger a Move UP/DOWN switching command.

The objects (232, 238, 244, 250, 256, 262, 268, 274) transmit a 1-bit command to the actuator channel when the button is pressed briefly and trigger a Stop command.

Roller shutter – Position (0–100%)



235	Taste 1	Position in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
241	Taste 2	Position in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
247	Taste 3	Position in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
253	Taste 4	Position in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
259	Taste 5	Position in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
265	Taste 6	Position in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
271	Taste 7	Position in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
277	Taste 8	Position in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig

Fig. 52: Communication objects – Roller shutter – Position

No.	Name	Object function	Length	Data type	Flags
233, 239, 245, 251, 257, 263, 269, 275	Button x	Position in %	1 byte	DPT_Percentage (0...100%)	C, R, T

Table 115: Communication objects – Roller shutter – Position

These objects are activated if the Roller shutter/blind – Roller shutter – Position (0–100%) function is selected in the parameters for every single button. When the button is pressed, a 1-byte command is transmitted to the bus and the previously set percentage value is transmitted to the roller shutter in the set position.

Blind – Up/Down/Stop

232	Taste 1	Lamellenschr./Stopp (Kurzzeit)	1 bit	K	L	-	Ü	-	Schritt	Niedrig
233	Taste 1	Auf/Ab	1 bit	K	L	-	Ü	-	Auf/Ab	Niedrig
238	Taste 2	Lamellenschr./Stopp (Kurzzeit)	1 bit	K	L	-	Ü	-	Schritt	Niedrig
239	Taste 2	Auf/Ab	1 bit	K	L	-	Ü	-	Auf/Ab	Niedrig
244	Taste 3	Lamellenschr./Stopp (Kurzzeit)	1 bit	K	L	-	Ü	-	Schritt	Niedrig
245	Taste 3	Auf/Ab	1 bit	K	L	-	Ü	-	Auf/Ab	Niedrig
250	Taste 4	Lamellenschr./Stopp (Kurzzeit)	1 bit	K	L	-	Ü	-	Schritt	Niedrig
251	Taste 4	Auf/Ab	1 bit	K	L	-	Ü	-	Auf/Ab	Niedrig
256	Taste 5	Lamellenschr./Stopp (Kurzzeit)	1 bit	K	L	-	Ü	-	Schritt	Niedrig
257	Taste 5	Auf/Ab	1 bit	K	L	-	Ü	-	Auf/Ab	Niedrig
262	Taste 6	Lamellenschr./Stopp (Kurzzeit)	1 bit	K	L	-	Ü	-	Schritt	Niedrig
263	Taste 6	Auf/Ab	1 bit	K	L	-	Ü	-	Auf/Ab	Niedrig
268	Taste 7	Stopp (Kurzzeit)	1 bit	K	L	-	Ü	-	Auslöser	Niedrig
269	Taste 7	Auf/Ab	1 bit	K	L	-	Ü	-	Auf/Ab	Niedrig
274	Taste 8	Lamellenschr./Stopp (Kurzzeit)	1 bit	K	L	-	Ü	-	Schritt	Niedrig
275	Taste 8	Auf/Ab	1 bit	K	L	-	Ü	-	Auf/Ab	Niedrig

Fig. 53: Communication objects – Blind Up/Down/Stop

No.	Name	Object function	Length	Data type	Flags
233, 239, 245, 251, 257, 263, 269, 275	Button x	Up/down	1 bit	DPT_Up/Down	C, R, T
232, 238, 244, 250, 256, 262, 268, 274	Button x	Slat Step/Stop (step)	1 bit	DPT_Step	C, R, T

Table 116: Communication objects – Blind – Up/Down/Stop

These objects are visible if the Roller shutter/blind – Blind Up-Down-Up/Down/Stop function is selected in the parameters for every single button.

The objects (233, 239, 245, 251, 257, 263, 269, 275) transmit a 1-bit command to the actuator channel when the button is pressed and trigger a Move UP/DOWN switching command.

The objects (232, 238, 244, 250, 256, 262, 268, 274) transmit a 1-bit command to the actuator channel when the button is pressed briefly and trigger a Slat Step or Stop command.

Blind – Position/Slat angle

235	Taste 1	Position in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
236	Taste 1	Lamellenwinkel in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
241	Taste 2	Position in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
242	Taste 2	Lamellenwinkel in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
247	Taste 3	Position in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
248	Taste 3	Lamellenwinkel in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
253	Taste 4	Position in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
254	Taste 4	Lamellenwinkel in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
259	Taste 5	Position in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
260	Taste 5	Lamellenwinkel in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
265	Taste 6	Position in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
266	Taste 6	Lamellenwinkel in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
271	Taste 7	Position in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
272	Taste 7	Lamellenwinkel in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
277	Taste 8	Position in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
278	Taste 8	Lamellenwinkel in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig

Fig. 54: Communication objects – Blind – Position/Slat angle

No.	Name	Object function	Length	Data type	Flags
235, 241, 247, 253, 259, 265, 271, 277	Button x	Position in %	1 byte	DPT_Percentage (0...100%)	C, R, T
236, 242, 248, 254, 260, 266, 272, 278	Button x	Position in %	1 byte	DPT_Percentage (0...100%)	C, R, T

Table 117: Communication objects – Blind – Position/Slat angle

These objects are visible if the Roller shutter/blind – Blind position (0–100%) – Slat angle (0–100%) – Position/Slat angle (0–100%) is selected in the parameters for every single button.

When the button is pressed, a 1-byte command is transmitted to the bus as a percentage value and the position of the blind or slat angle is moved to the position.

10.7 Timer

132	Taste 1	Zeitschalter	1 bit	K	-	-	Ü	-	Start/Stop	Niedrig
136	Taste 2	Zeitschalter	1 bit	K	-	-	Ü	-	Start/Stop	Niedrig
140	Taste 3	Zeitschalter	1 bit	K	-	-	Ü	-	Start/Stop	Niedrig
144	Taste 4	Zeitschalter	1 bit	K	-	-	Ü	-	Start/Stop	Niedrig
148	Taste 5	Zeitschalter	1 bit	K	-	-	Ü	-	Start/Stop	Niedrig
152	Taste 6	Zeitschalter	1 bit	K	-	-	Ü	-	Start/Stop	Niedrig
156	Taste 7	Zeitschalter	1 bit	K	-	-	Ü	-	Start/Stop	Niedrig
160	Taste 8	Zeitschalter	1 bit	K	-	-	Ü	-	Start/Stop	Niedrig

Fig. 55: Communication object – Timer

No.	Name	Object function	Length	Data type	Flags
132, 136, 140, 144, 148, 152, 156, 160	Button x	Timer	1 bit	DPT_Start/Stop	C, R, T

Table 118: Communication object – Timer

These objects are activated when the Timer function is selected in the parameters for each independent button/rocker. These objects transmit a 1-bit command to the actuator channel and trigger a Start/Stop command when a button is pressed.

10.8 Value 1 bytes

292	Taste 1	Wert (0-255)	1 byte	K	L	-	Ü	-	Zählimpulse (0..255)	Niedrig
304	Taste 2	Wert (0-255)	1 byte	K	L	-	Ü	-	Zählimpulse (0..255)	Niedrig
316	Taste 3	Wert (0-255)	1 byte	K	L	-	Ü	-	Zählimpulse (0..255)	Niedrig
328	Taste 4	Wert (0-255)	1 byte	K	L	-	Ü	-	Zählimpulse (0..255)	Niedrig
340	Taste 5	Wert in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
352	Taste 6	Wert in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
364	Taste 7	Wert in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
376	Taste 8	Wert in %	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig

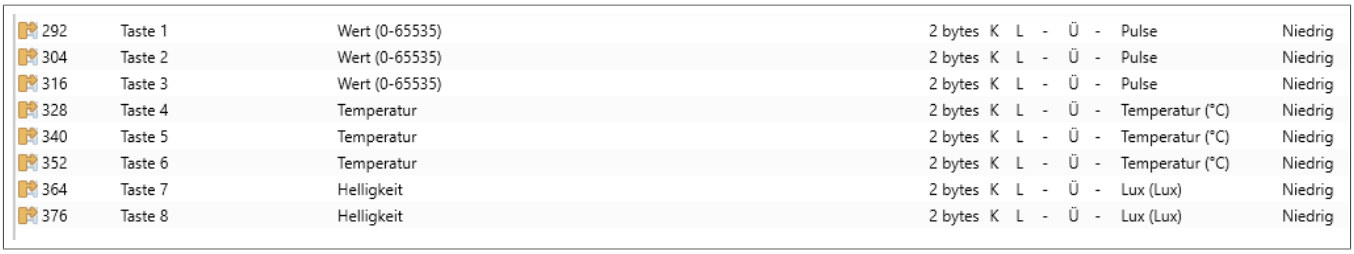
Fig. 56: Communication objects – Value 1 bytes

No.	Name	Object function	Length	Data type	Flags
292, 304, 316, 328, 340, 352, 364, 376	Button x	Value in %	1 byte	DPT_Percentage (0...100%)	C, R, T
292, 304, 316, 328, 340, 352, 364, 376	Button x	Value (0–255)	1 byte	DPT_Counting pulse (0...255)	C, R, T

Table 119: Communication objects – Value 1 bytes

These objects are activated if the Value 1 bytes function is selected in the parameters for every single button. These objects transmit a 1-byte command as a fixed value (0…255) or percentage value (0…100%) to the actuator channel and trigger a command when a button is pressed. This command can be, for instance, to assign a fixed dimming value to a dimmer channel.

10.9 Value 2 bytes



292	Taste 1	Wert (0-65535)	2 bytes	K	L	-	Ü	-	Pulse	Niedrig
304	Taste 2	Wert (0-65535)	2 bytes	K	L	-	Ü	-	Pulse	Niedrig
316	Taste 3	Wert (0-65535)	2 bytes	K	L	-	Ü	-	Pulse	Niedrig
328	Taste 4	Temperatur	2 bytes	K	L	-	Ü	-	Temperatur (°C)	Niedrig
340	Taste 5	Temperatur	2 bytes	K	L	-	Ü	-	Temperatur (°C)	Niedrig
352	Taste 6	Temperatur	2 bytes	K	L	-	Ü	-	Temperatur (°C)	Niedrig
364	Taste 7	Helligkeit	2 bytes	K	L	-	Ü	-	Lux (Lux)	Niedrig
376	Taste 8	Helligkeit	2 bytes	K	L	-	Ü	-	Lux (Lux)	Niedrig

Fig. 57: Communication objects – Value 2 bytes

No.	Name	Object function	Length	Data type	Flags
292, 304, 316, 328, 340, 352, 364, 376	Button x	Value (0–65535)	2 bytes	DPT_Pulse	C, R, T
292, 304, 316, 328, 340, 352, 364, 376	Button x	Temperature	2 bytes	DPT_Temperature (°C)	C, R, T
292, 304, 316, 328, 340, 352, 364, 376	Button x	Brightness	2 bytes	DPT_Lux (Lux)	C, R, T

Table 120: Communication objects – Value 2 bytes

These objects are activated if the Value 2 bytes function is selected in the parameters for every single button. These objects transmit a 2-byte command as a fixed value (0…65535), a temperature value (0…40°C) or brightness value (0…1000 Lux) to the actuator channel and trigger a command when a button is pressed. This command can be for instance, to assign a fixed dimming value to a dimmer channel. or a change of the set temperature in a room thermostat.

10.10 Colour control

292	Taste 1	Farbtemperatur	2 bytes	K	L	-	Ü	-	Absolute Farbtemper...	Niedrig
304	Taste 2	Farbtemperatur	2 bytes	K	L	-	Ü	-	Absolute Farbtemper...	Niedrig
316	Taste 3	RGB Werte	3 bytes	K	L	-	Ü	-	RGB Wert 3x(0..255)	Niedrig
328	Taste 4	RGB Werte	3 bytes	K	L	-	Ü	-	RGB Wert 3x(0..255)	Niedrig
340	Taste 5	RGBW Werte	6 bytes	K	L	-	Ü	-	RGB Wert 4x(0..255)	Niedrig
352	Taste 6	RGBW Werte	6 bytes	K	L	-	Ü	-	RGB Wert 4x(0..255)	Niedrig
364	Taste 7	XY Werte	6 bytes	K	L	-	Ü	-	Farbe xyY	Niedrig
376	Taste 8	XY Werte	6 bytes	K	L	-	Ü	-	Farbe xyY	Niedrig

Fig. 58: Communication objects – Colour control

No.	Name	Object function	Length	Data type	Flags
292, 304, 316, 328, 340, 352, 364, 376	Button x	Colour temperature	2 bytes	DPT_Absolute colour temperature	C, R, T
292, 304, 316, 328, 340, 352, 364, 376	Button x	RGB values	3 bytes	DPT_RGB value 3x(0...255)	C, R, T
292, 304, 316, 328, 340, 352, 364, 376	Button x	RGBW values	6 bytes	DPT_RGB value 4x(0...255)	C, R, T
292, 304, 316, 328, 340, 352, 364, 376	Button x	XY values	6 bytes	DPT_Colour xy	C, R, T

Table 121: Communication objects – Colour control

These objects are visible if the Colour control function is selected for the button.

The Colour temperature object function is used to transmit a precisely matched white value (2-byte group object)

The RGB value object function is used to transmit a set red-green-blue / HSV colour value (H=colour value, S=colour saturation, V=brightness) (3-byte group object).

The RGBW value object function is used to transmit a set red-green-blue / HSV colour value (H=colour value, S=colour saturation, V=brightness) (6-byte group object), including the white value, which is to be set via the W colour value slider.

The XY values object function is used to transmit a set colour value from the CIE Standard (standard colour system) via XY coordinates and brightness.

Colour control – RGB value – Separate RGB objects

293	Taste 1	Rot Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
294	Taste 1	Grün Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
295	Taste 1	Blau Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
305	Taste 2	Rot Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
306	Taste 2	Grün Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
307	Taste 2	Blau Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
317	Taste 3	Rot Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
318	Taste 3	Grün Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
319	Taste 3	Blau Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
329	Taste 4	Rot Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
330	Taste 4	Grün Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
331	Taste 4	Blau Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
341	Taste 5	Rot Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
342	Taste 5	Grün Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
343	Taste 5	Blau Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
353	Taste 6	Rot Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
354	Taste 6	Grün Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
355	Taste 6	Blau Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
365	Taste 7	Rot Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
366	Taste 7	Grün Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
367	Taste 7	Blau Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
377	Taste 8	Rot Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
378	Taste 8	Grün Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
379	Taste 8	Blau Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig

Fig. 59: Communication objects – RGB value – Separate RGB objects

No.	Name	Object function	Length	Data type	Flags
293, 305, 317, 329, 341, 353, 365, 377	Button x	Red value	1 byte	DPT_Percentage (0...100%)	C, R, T
294, 306, 318, 330, 342, 354, 366, 378	Button x	Green value	1 byte	DPT_Percentage (0...100%)	C, R, T
295, 307, 319, 331, 343, 355, 367, 379	Button x	Blue value	1 byte	DPT_Percentage (0...100%)	C, R, T

Table 122: Communication objects – RGB value – Separate RGB objects

These objects are visible if the button is selected for the Colour control function and the RGB value – Separate RGB objects object function. Each time a button is pressed, a 1-byte value is transmitted to the bus for each colour channel (red/green/blue) and, for example, the light colour is changed for an RGB luminaire.

Colour control – RGB value – Separate HSV objects

293	Taste 1	Farbton	1 byte	K	L	-	Ü	-	Winkel (Grad)	Niedrig
294	Taste 1	Sättigung	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
295	Taste 1	Helligkeit	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
305	Taste 2	Farbton	1 byte	K	L	-	Ü	-	Winkel (Grad)	Niedrig
306	Taste 2	Sättigung	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
307	Taste 2	Helligkeit	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
317	Taste 3	Farbton	1 byte	K	L	-	Ü	-	Winkel (Grad)	Niedrig
318	Taste 3	Sättigung	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
319	Taste 3	Helligkeit	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
329	Taste 4	Farbton	1 byte	K	L	-	Ü	-	Winkel (Grad)	Niedrig
330	Taste 4	Sättigung	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
331	Taste 4	Helligkeit	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
341	Taste 5	Farbton	1 byte	K	L	-	Ü	-	Winkel (Grad)	Niedrig
342	Taste 5	Sättigung	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
343	Taste 5	Helligkeit	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
353	Taste 6	Farbton	1 byte	K	L	-	Ü	-	Winkel (Grad)	Niedrig
354	Taste 6	Sättigung	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
355	Taste 6	Helligkeit	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
365	Taste 7	Farbton	1 byte	K	L	-	Ü	-	Winkel (Grad)	Niedrig
366	Taste 7	Sättigung	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
367	Taste 7	Helligkeit	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
377	Taste 8	Farbton	1 byte	K	L	-	Ü	-	Winkel (Grad)	Niedrig
378	Taste 8	Sättigung	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
379	Taste 8	Helligkeit	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig

Fig. 60: Communication objects – RGB value – Separate HSV objects

No.	Name	Object function	Length	Data type	Flags
293, 305, 317, 329, 341, 353, 365, 377	Button x	Colour tone	1 byte	DPT_Angle	C, R, T
294, 306, 318, 330, 342, 354, 366, 378	Button x	Saturation	1 byte	DPT_Percentage (0...100%)	C, R, T
295, 307, 319, 331, 343, 355, 367, 379	Button x	Brightness	1 byte	DPT_Percentage (0...100%)	C, R, T

Table 123: Communication objects – RGB value – Separate HSV objects

These objects are visible if the button is selected for the Colour control function and the RGB value – Separate HSV objects object function. Each time a button is pressed, a 1-byte value for the shade, saturation and brightness is transmitted to the bus and, for example, the light colour of an RGB luminaire is changed.

Colour control – RGBW value – Separate RGBW objects

293	Taste 1	Rot Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
294	Taste 1	Grün Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
295	Taste 1	Blau Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
296	Taste 1	Weiß Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
305	Taste 2	Rot Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
306	Taste 2	Grün Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
307	Taste 2	Blau Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
308	Taste 2	Weiß Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
317	Taste 3	Rot Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
318	Taste 3	Grün Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
319	Taste 3	Blau Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
320	Taste 3	Weiß Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
329	Taste 4	Rot Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
330	Taste 4	Grün Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
331	Taste 4	Blau Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
332	Taste 4	Weiß Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
341	Taste 5	Rot Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
342	Taste 5	Grün Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
343	Taste 5	Blau Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
344	Taste 5	Weiß Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
353	Taste 6	Rot Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
354	Taste 6	Grün Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
355	Taste 6	Blau Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
356	Taste 6	Weiß Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
365	Taste 7	Rot Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
366	Taste 7	Grün Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
367	Taste 7	Blau Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
368	Taste 7	Weiß Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
377	Taste 8	Rot Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
378	Taste 8	Grün Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
379	Taste 8	Blau Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
380	Taste 8	Weiß Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig

Fig. 61: Communication objects – RGBW value – Separate RGBW objects

No.	Name	Object function	Length	Data type	Flags
293, 305, 317, 329, 341, 353, 365, 377	Button x	Red value	1 byte	DPT_Percentage (0...100%)	C, R, T
294, 306, 318, 330, 342, 354, 366, 378	Button x	Green value	1 byte	DPT_Percentage (0...100%)	C, R, T
295, 307, 319, 331, 343, 355, 367, 379	Button x	Blue value	1 byte	DPT_Percentage (0...100%)	C, R, T
296, 308, 320, 332, 344, 356, 368, 380	Button x	White value	1 byte	DPT_Percentage (0...100%)	C, R, T

Table 124: Communication objects – RGBW value – Separate RGBW objects

These objects are visible if the button is selected for the Colour control function and the RGBW value – Separate RGBW objects object function. Each time a button is pressed, a 1-byte value is transmitted to the bus for each colour channel (red/green/blue/white) and, for example, the light colour is changed for an RGBW luminaire.

Colour control – RGBW value – Separate HSWV objects

293	Taste 1	Farbton	1 byte	K	L	-	Ü	-	Winkel (Grad)	Niedrig
294	Taste 1	Sättigung	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
295	Taste 1	Helligkeit	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
296	Taste 1	Weiß Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
305	Taste 2	Farbton	1 byte	K	L	-	Ü	-	Winkel (Grad)	Niedrig
306	Taste 2	Sättigung	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
307	Taste 2	Helligkeit	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
308	Taste 2	Weiß Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
317	Taste 3	Farbton	1 byte	K	L	-	Ü	-	Winkel (Grad)	Niedrig
318	Taste 3	Sättigung	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
319	Taste 3	Helligkeit	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
320	Taste 3	Weiß Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
329	Taste 4	Farbton	1 byte	K	L	-	Ü	-	Winkel (Grad)	Niedrig
330	Taste 4	Sättigung	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
331	Taste 4	Helligkeit	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
332	Taste 4	Weiß Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
341	Taste 5	Farbton	1 byte	K	L	-	Ü	-	Winkel (Grad)	Niedrig
342	Taste 5	Sättigung	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
343	Taste 5	Helligkeit	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
344	Taste 5	Weiß Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
353	Taste 6	Farbton	1 byte	K	L	-	Ü	-	Winkel (Grad)	Niedrig
354	Taste 6	Sättigung	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
355	Taste 6	Helligkeit	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
356	Taste 6	Weiß Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
365	Taste 7	Farbton	1 byte	K	L	-	Ü	-	Winkel (Grad)	Niedrig
366	Taste 7	Sättigung	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
367	Taste 7	Helligkeit	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
368	Taste 7	Weiß Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
377	Taste 8	Farbton	1 byte	K	L	-	Ü	-	Winkel (Grad)	Niedrig
378	Taste 8	Sättigung	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
379	Taste 8	Helligkeit	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
380	Taste 8	Weiß Wert	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig

Fig. 62: Communication objects – RGBW value – Separate HSWV objects

No.	Name	Object function	Length	Data type	Flags
293, 305, 317, 329, 341, 353, 365, 377	Button x	Colour tone	1 byte	DPT_Angle	C, R, T
294, 306, 318, 330, 342, 354, 366, 378	Button x	Saturation	1 byte	DPT_Percentage (0...100%)	C, R, T
295, 307, 319, 331, 343, 355, 367, 379	Button x	Brightness	1 byte	DPT_Percentage (0...100%)	C, R, T

Table 125: Communication objects – RGBW value – Separate HSWV objects

No.	Name	Object function	Length	Data type	Flags
296, 308, 320, 332, 344, 356, 368, 380	Button x	White value	1 byte	DPT_Percentage (0...100%)	C, R, T

Table 125: Communication objects – RGBW value – Separate HSWV objects

These objects are visible if the button is selected for the Colour control function and the RGBW value – Separate HSWV objects object function. Each time a button is pressed, a 1-byte value for the shade, saturation, brightness and a white value is transmitted to the bus and, for example, the light colour of an RGBW luminaire is changed.

Colour control – XY value – Separate XY objects

293	Taste 1	X Wert	2 bytes	K	L	-	Ü	-	Pulse	Niedrig
294	Taste 1	Y Wert	2 bytes	K	L	-	Ü	-	Pulse	Niedrig
295	Taste 1	XY Helligkeit	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
305	Taste 2	X Wert	2 bytes	K	L	-	Ü	-	Pulse	Niedrig
306	Taste 2	Y Wert	2 bytes	K	L	-	Ü	-	Pulse	Niedrig
307	Taste 2	XY Helligkeit	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
317	Taste 3	X Wert	2 bytes	K	L	-	Ü	-	Pulse	Niedrig
318	Taste 3	Y Wert	2 bytes	K	L	-	Ü	-	Pulse	Niedrig
319	Taste 3	XY Helligkeit	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
329	Taste 4	X Wert	2 bytes	K	L	-	Ü	-	Pulse	Niedrig
330	Taste 4	Y Wert	2 bytes	K	L	-	Ü	-	Pulse	Niedrig
331	Taste 4	XY Helligkeit	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
341	Taste 5	X Wert	2 bytes	K	L	-	Ü	-	Pulse	Niedrig
342	Taste 5	Y Wert	2 bytes	K	L	-	Ü	-	Pulse	Niedrig
343	Taste 5	XY Helligkeit	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
353	Taste 6	X Wert	2 bytes	K	L	-	Ü	-	Pulse	Niedrig
354	Taste 6	Y Wert	2 bytes	K	L	-	Ü	-	Pulse	Niedrig
355	Taste 6	XY Helligkeit	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
365	Taste 7	X Wert	2 bytes	K	L	-	Ü	-	Pulse	Niedrig
366	Taste 7	Y Wert	2 bytes	K	L	-	Ü	-	Pulse	Niedrig
367	Taste 7	XY Helligkeit	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
377	Taste 8	X Wert	2 bytes	K	L	-	Ü	-	Pulse	Niedrig
378	Taste 8	Y Wert	2 bytes	K	L	-	Ü	-	Pulse	Niedrig
379	Taste 8	XY Helligkeit	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig

Fig. 63: Communication objects – XY value – Separate XY objects

No.	Name	Object function	Length	Data type	Flags
293, 305, 317, 329, 341, 353, 365, 377	Button x	X value	2 bytes	DPT_Pulse	C, R, T
294, 306, 318, 330, 342, 354, 366, 378	Button x	Y value	2 bytes	DPT_Pulse	C, R, T
295, 307, 319, 331,	Button x	XY brightness	1 byte	DPT_Percentage (0...100%)	C, R, T

Table 126: Communication objects – XY value – Separate XY objects

No.	Name	Object function	Length	Data type	Flags
343, 355, 367, 379					

Table 126: Communication objects – XY value – Separate XY objects

These objects are visible if the button is selected for the Colour control function and the XY values – Separate XY objects object function. Each time a button is pressed, a 2-byte value for the X and Y values is transmitted to the bus and a 1-byte value for the XY brightness.

10.11 Room thermostat extension unit

No.	Name	Object function	Length	Data type	Flags
613, 620, 627, 634, 641, 648, 655, 662	Button x	Operating mode changeover	1 byte	DPT_HVAC Mode	C, R, T
These objects are activated if the Operating mode changeover function is selected in the parameters for every single button. These objects transmit a 1-byte command when a button is pressed and can thereby change the corresponding Comfort, Standby, Night selection or Frost Protection operating mode.					
613, 620, 627, 634, 641, 648, 655, 662	Button x	Setpoint selection	1 byte	DPT_Temperature difference (K)	C, R, T
These objects are activated if the Setpoint selection function is selected in the parameters for every single button. These objects transmit a 2-byte command when a button is pressed and can thereby change the corresponding temperature value.					
614, 621, 628, 635, 642, 649, 656, 663	Button x	Setpoint selection status	1 byte	DPT_Temperature difference (K)	C, W, T, U
These objects are activated if the Setpoint selection function is selected in the parameters for every single button. These objects receive a 2-byte command after a button is pressed and can thereby change the corresponding temperature value.					
132, 136, 140, 144, 148, 152, 156, 160	Button x	Heating/cooling – Change-over	1 bit	DPT_heating/cooling	C, R, T
These objects are activated if the Heating/cooling – Change-over function is selected in the parameters for every single button. These objects transmit a 1-bit command after a button is pressed and can thereby change the operation between heating and cooling.					
133, 137, 141, 145, 149, 153, 157, 161	Button x	Heating/cooling – Status indication	1 bit	DPT_Boolean	C, W, T, U
These objects are activated if the Heating/cooling – Change-over function is selected in the parameters for every single button. These objects receive a 1-bit command after a button is pressed and can thereby change the colour of the status LED on the button for heating or cooling.					
613, 620, 627, 634, 641, 648, 655, 662	Button x	Presence	1 bit	DPT_Switching	C, R, T
These objects are activated if the Presence function is selected in the parameters for every single button. These objects transmit a 1-bit command when a button is pressed and can thereby trigger the Presence operating mode.					

No.	Name	Object function	Length	Data type	Flags
614, 621, 628, 635, 642, 649, 656, 663	Button x	Presence status	1 bit	DPT_Switching	C, W, T, U
These objects are activated if the Presence function is selected in the parameters for every single button. These objects receive a 1-bit command when a button is pressed and can thereby change the colour of the status LED on the button for the operating mode.					

10.12 Priority

132	Taste 1	Zwangssteuerung	2 bit	K	L	-	Ü	-	Boolesche Steuerung	Niedrig
133	Taste 1	Statusanzeige Zwangssteuerung	1 bit	K	-	S	Ü	A	Status	Niedrig
136	Taste 2	Zwangssteuerung	2 bit	K	L	-	Ü	-	Boolesche Steuerung	Niedrig
137	Taste 2	Statusanzeige Zwangssteuerung	1 bit	K	-	S	Ü	A	Status	Niedrig
140	Taste 3	Zwangssteuerung	2 bit	K	L	-	Ü	-	Boolesche Steuerung	Niedrig
141	Taste 3	Statusanzeige Zwangssteuerung	1 bit	K	-	S	Ü	A	Status	Niedrig
144	Taste 4	Zwangssteuerung	2 bit	K	L	-	Ü	-	Boolesche Steuerung	Niedrig
145	Taste 4	Statusanzeige Zwangssteuerung	1 bit	K	-	S	Ü	A	Status	Niedrig
148	Taste 5	Zwangssteuerung	2 bit	K	L	-	Ü	-	Boolesche Steuerung	Niedrig
149	Taste 5	Statusanzeige Zwangssteuerung	1 bit	K	-	S	Ü	A	Status	Niedrig
152	Taste 6	Zwangssteuerung	2 bit	K	L	-	Ü	-	Boolesche Steuerung	Niedrig
153	Taste 6	Statusanzeige Zwangssteuerung	1 bit	K	-	S	Ü	A	Status	Niedrig
156	Taste 7	Zwangssteuerung	2 bit	K	L	-	Ü	-	Boolesche Steuerung	Niedrig
157	Taste 7	Statusanzeige Zwangssteuerung	1 bit	K	-	S	Ü	A	Status	Niedrig
160	Taste 8	Zwangssteuerung	2 bit	K	L	-	Ü	-	Boolesche Steuerung	Niedrig
161	Taste 8	Statusanzeige Zwangssteuerung	1 bit	K	-	S	Ü	A	Status	Niedrig

Fig. 64: Communication object – Priority

No.	Name	Object function	Length	Data type	Flags
132, 136, 140, 144, 148, 152, 156, 160	Button x	Priority	2 bit	DPT_Boolean control	C, R, T
133, 137, 141, 145, 149, 153, 157, 161	Button x	Priority status indicator	1 bit	DPT_Status	C, W, T, U

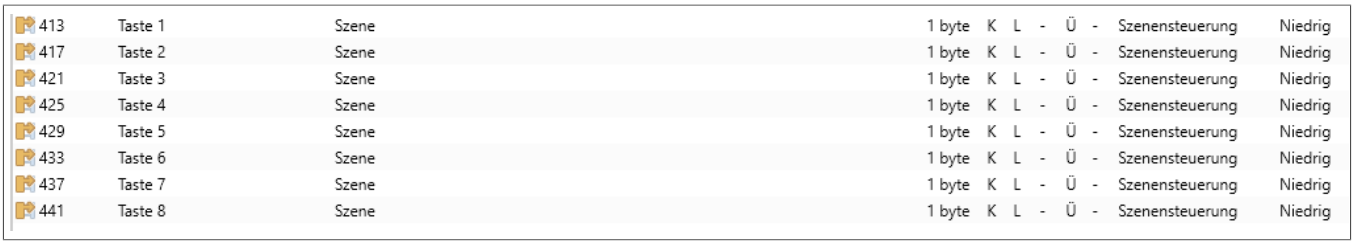
Table 127: Communication object – Priority

These objects are activated if the Priority function is selected in the parameters for every single button.

These objects for the **Priority** function transmit a 1-bit command when a button is pressed and can thereby output the status for the Priority function.

These objects for the **Priority status indicator** function receive a 1-bit command after a button is pressed and can thereby e.g. set a roller shutter channel to a forced mode.

10.13 Scene



413	Taste 1	Szene	1 byte	K	L	-	Ü	-	Szenensteuerung	Niedrig
417	Taste 2	Szene	1 byte	K	L	-	Ü	-	Szenensteuerung	Niedrig
421	Taste 3	Szene	1 byte	K	L	-	Ü	-	Szenensteuerung	Niedrig
425	Taste 4	Szene	1 byte	K	L	-	Ü	-	Szenensteuerung	Niedrig
429	Taste 5	Szene	1 byte	K	L	-	Ü	-	Szenensteuerung	Niedrig
433	Taste 6	Szene	1 byte	K	L	-	Ü	-	Szenensteuerung	Niedrig
437	Taste 7	Szene	1 byte	K	L	-	Ü	-	Szenensteuerung	Niedrig
441	Taste 8	Szene	1 byte	K	L	-	Ü	-	Szenensteuerung	Niedrig

Fig. 65: Communication objects – Scene

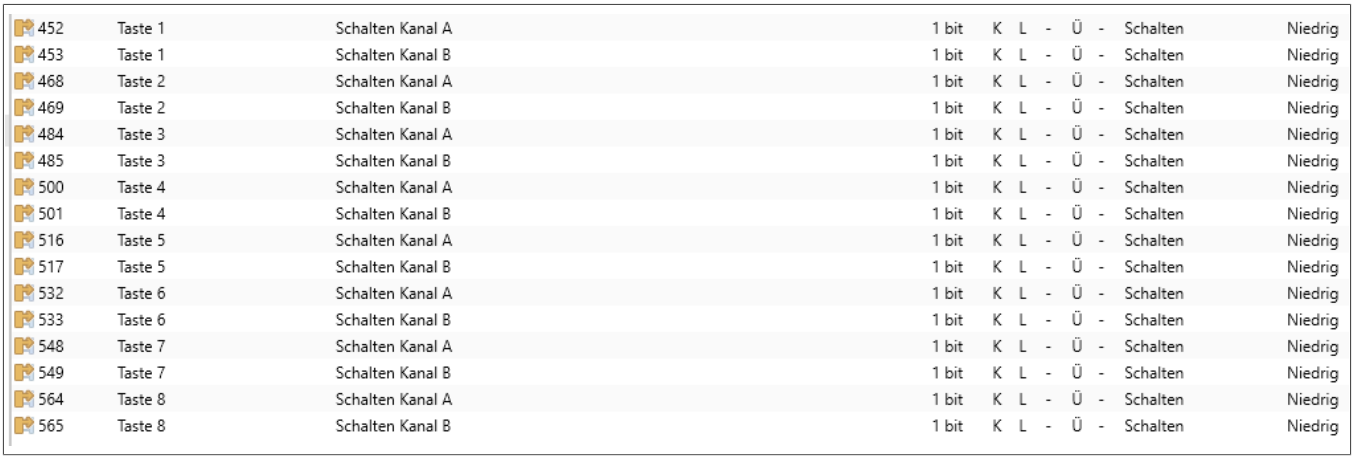
No.	Name	Object function	Length	Data type	Flags
413, 417, 421, 425, 429, 433, 437, 441	Button x	Scene	1 byte	DPT_scene control	C, R, T

Table 128: Communication objects – Scene

These objects are activated if the **Scene** function is selected in the parameters for every single button. These objects transmit a 1-byte command when a button is pressed and can open a set scene.

10.14 2-channel mode

Switching – 2-channel mode



452	Taste 1	Schalten Kanal A	1 bit	K	L	-	Ü	-	Schalten	Niedrig
453	Taste 1	Schalten Kanal B	1 bit	K	L	-	Ü	-	Schalten	Niedrig
468	Taste 2	Schalten Kanal A	1 bit	K	L	-	Ü	-	Schalten	Niedrig
469	Taste 2	Schalten Kanal B	1 bit	K	L	-	Ü	-	Schalten	Niedrig
484	Taste 3	Schalten Kanal A	1 bit	K	L	-	Ü	-	Schalten	Niedrig
485	Taste 3	Schalten Kanal B	1 bit	K	L	-	Ü	-	Schalten	Niedrig
500	Taste 4	Schalten Kanal A	1 bit	K	L	-	Ü	-	Schalten	Niedrig
501	Taste 4	Schalten Kanal B	1 bit	K	L	-	Ü	-	Schalten	Niedrig
516	Taste 5	Schalten Kanal A	1 bit	K	L	-	Ü	-	Schalten	Niedrig
517	Taste 5	Schalten Kanal B	1 bit	K	L	-	Ü	-	Schalten	Niedrig
532	Taste 6	Schalten Kanal A	1 bit	K	L	-	Ü	-	Schalten	Niedrig
533	Taste 6	Schalten Kanal B	1 bit	K	L	-	Ü	-	Schalten	Niedrig
548	Taste 7	Schalten Kanal A	1 bit	K	L	-	Ü	-	Schalten	Niedrig
549	Taste 7	Schalten Kanal B	1 bit	K	L	-	Ü	-	Schalten	Niedrig
564	Taste 8	Schalten Kanal A	1 bit	K	L	-	Ü	-	Schalten	Niedrig
565	Taste 8	Schalten Kanal B	1 bit	K	L	-	Ü	-	Schalten	Niedrig

Fig. 66: Communication objects – 2-channel mode – Switching On/Off

No.	Name	Object function	Length	Data type	Flags
452, 468, 484, 500, 516, 532, 548, 564	Button x	Channel A	1 bit	DPT_Switching	C, R, T
453, 469, 485, 501, 517, 533, 549, 565	Button x	Channel B	1 bit	DPT_Switching	C, R, T

Table 129: Communication objects – 2-channel mode – Switching On/Off

These objects are activated if the 2-channel mode - Switching function is selected in the parameters for every single button. These objects transmit a 1-bit command from the second operating level when a button is pressed and can thereby switch an actuator channel.

2-channel mode – Toggle

452	Taste 1	Schalten Kanal A	1 bit	K	L	-	Ü	-	Schalten	Niedrig
453	Taste 1	Schalten Kanal B	1 bit	K	L	-	Ü	-	Schalten	Niedrig
464	Taste 1	Status Kanal A	1 bit	K	-	S	Ü	A	Schalten	Niedrig
465	Taste 1	Status Kanal B	1 bit	K	-	S	Ü	A	Schalten	Niedrig
468	Taste 2	Schalten Kanal A	1 bit	K	L	-	Ü	-	Schalten	Niedrig
469	Taste 2	Schalten Kanal B	1 bit	K	L	-	Ü	-	Schalten	Niedrig
480	Taste 2	Status Kanal A	1 bit	K	-	S	Ü	A	Schalten	Niedrig
481	Taste 2	Status Kanal B	1 bit	K	-	S	Ü	A	Schalten	Niedrig
484	Taste 3	Schalten Kanal A	1 bit	K	L	-	Ü	-	Schalten	Niedrig
485	Taste 3	Schalten Kanal B	1 bit	K	L	-	Ü	-	Schalten	Niedrig
496	Taste 3	Status Kanal A	1 bit	K	-	S	Ü	A	Schalten	Niedrig
497	Taste 3	Status Kanal B	1 bit	K	-	S	Ü	A	Schalten	Niedrig
500	Taste 4	Schalten Kanal A	1 bit	K	L	-	Ü	-	Schalten	Niedrig
501	Taste 4	Schalten Kanal B	1 bit	K	L	-	Ü	-	Schalten	Niedrig
512	Taste 4	Status Kanal A	1 bit	K	-	S	Ü	A	Schalten	Niedrig
513	Taste 4	Status Kanal B	1 bit	K	-	S	Ü	A	Schalten	Niedrig
516	Taste 5	Schalten Kanal A	1 bit	K	L	-	Ü	-	Schalten	Niedrig
517	Taste 5	Schalten Kanal B	1 bit	K	L	-	Ü	-	Schalten	Niedrig
528	Taste 5	Status Kanal A	1 bit	K	-	S	Ü	A	Schalten	Niedrig
529	Taste 5	Status Kanal B	1 bit	K	-	S	Ü	A	Schalten	Niedrig
532	Taste 6	Schalten Kanal A	1 bit	K	L	-	Ü	-	Schalten	Niedrig
533	Taste 6	Schalten Kanal B	1 bit	K	L	-	Ü	-	Schalten	Niedrig
544	Taste 6	Status Kanal A	1 bit	K	-	S	Ü	A	Schalten	Niedrig
545	Taste 6	Status Kanal B	1 bit	K	-	S	Ü	A	Schalten	Niedrig
548	Taste 7	Schalten Kanal A	1 bit	K	L	-	Ü	-	Schalten	Niedrig
549	Taste 7	Schalten Kanal B	1 bit	K	L	-	Ü	-	Schalten	Niedrig
561	Taste 7	Status Kanal B	1 bit	K	-	S	Ü	A	Schalten	Niedrig
564	Taste 8	Schalten Kanal A	1 bit	K	L	-	Ü	-	Schalten	Niedrig
565	Taste 8	Schalten Kanal B	1 bit	K	L	-	Ü	-	Schalten	Niedrig
576	Taste 8	Status Kanal A	1 bit	K	-	S	Ü	A	Schalten	Niedrig
577	Taste 8	Status Kanal B	1 bit	K	-	S	Ü	A	Schalten	Niedrig

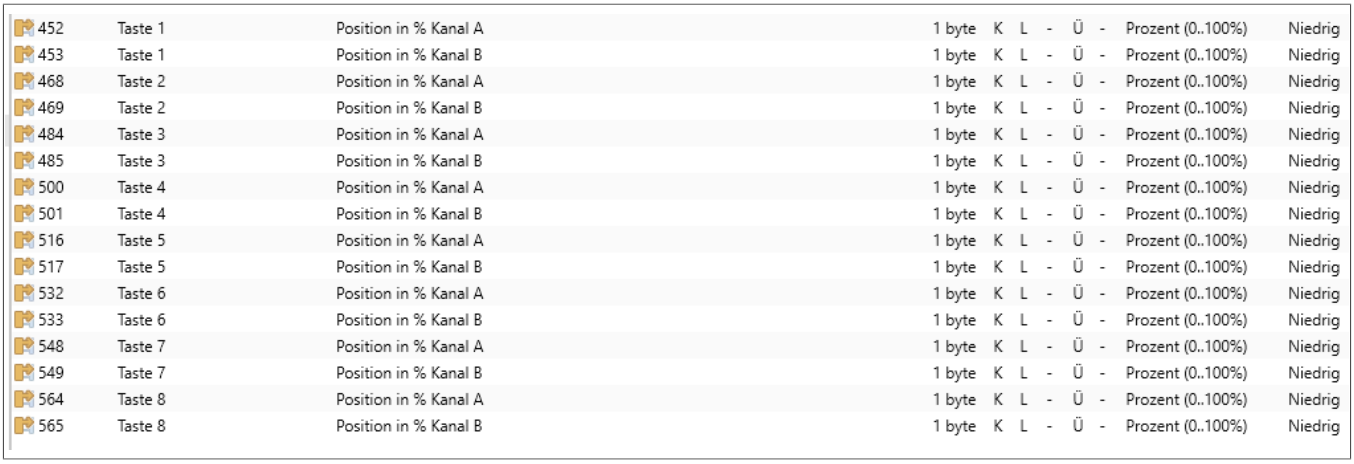
Fig. 67: 2-channel mode communication objects – Toggle

No.	Name	Object function	Length	Data type	Flags
452, 468, 484, 500, 516, 532, 548, 564	Button x	Channel A	1 bit	DPT_Switching	C, R, T
464, 480, 496, 512, 528, 544, 560, 576	Button x	Status Channel A	1 bit	DPT_Switching	C, R, T
453, 469, 485, 501, 517, 533, 549, 565	Button x	Channel B	1 bit	DPT_Switching	C, R, T
465, 481, 497, 513, 529, 545, 561, 577	Button x	Status Channel B	1 bit	DPT_Switching	C, R, T

Table 130: 2-channel mode communication objects – Toggle

These Status Channel A/B objects are also activated if the 2-Channel mode – Toggle function is selected in the parameters for every single button. These objects transmit a 1-bit command after a button is pressed and can display, output the respective status.

2-channel mode – Roller shutter – Position (0–100%)



452	Taste 1	Position in % Kanal A	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
453	Taste 1	Position in % Kanal B	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
468	Taste 2	Position in % Kanal A	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
469	Taste 2	Position in % Kanal B	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
484	Taste 3	Position in % Kanal A	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
485	Taste 3	Position in % Kanal B	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
500	Taste 4	Position in % Kanal A	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
501	Taste 4	Position in % Kanal B	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
516	Taste 5	Position in % Kanal A	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
517	Taste 5	Position in % Kanal B	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
532	Taste 6	Position in % Kanal A	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
533	Taste 6	Position in % Kanal B	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
548	Taste 7	Position in % Kanal A	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
549	Taste 7	Position in % Kanal B	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
564	Taste 8	Position in % Kanal A	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
565	Taste 8	Position in % Kanal B	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig

Fig. 68: 2-channel mode communication objects – Roller shutter – Position (0–100%)

No.	Name	Object function	Length	Data type	Flags
452, 468, 484, 500, 516, 532, 548, 564	Button x	Position in % channel A	1 byte	DPT_Percentage (0...100%)	C, R, T
453, 469, 485, 501, 517, 533, 549, 565	Button x	Position in % channel B	1 byte	DPT_Percentage (0...100%)	C, R, T

Table 131: 2-channel mode communication objects – Roller shutter – Position (0–100%)

These objects are activated if the 2-channel mode – Roller shutter/blind function or the sun protection type on the blind and the function when the button is pressed to Position (0–100%) is selected in the parameters for each button. These objects transmit a 1-byte command from the second operating level when a button is pressed and can thereby switch an actuator channel and allow the roller shutter to move to a defined position.

2-channel mode – Blind – Position/Slat angle (0–100%)

452	Taste 1	Lamellenwinkel in % Kanal A	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
453	Taste 1	Lamellenwinkel in % Kanal B	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
468	Taste 2	Lamellenwinkel in % Kanal A	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
469	Taste 2	Lamellenwinkel in % Kanal B	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
484	Taste 3	Lamellenwinkel in % Kanal A	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
485	Taste 3	Lamellenwinkel in % Kanal B	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
500	Taste 4	Lamellenwinkel in % Kanal A	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
501	Taste 4	Lamellenwinkel in % Kanal B	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
516	Taste 5	Position in % Kanal A	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
517	Taste 5	Position in % Kanal B	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
532	Taste 6	Position in % Kanal A	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
533	Taste 6	Position in % Kanal B	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
548	Taste 7	Position in % Kanal A	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
549	Taste 7	Position in % Kanal B	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
564	Taste 8	Position in % Kanal A	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
565	Taste 8	Position in % Kanal B	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig

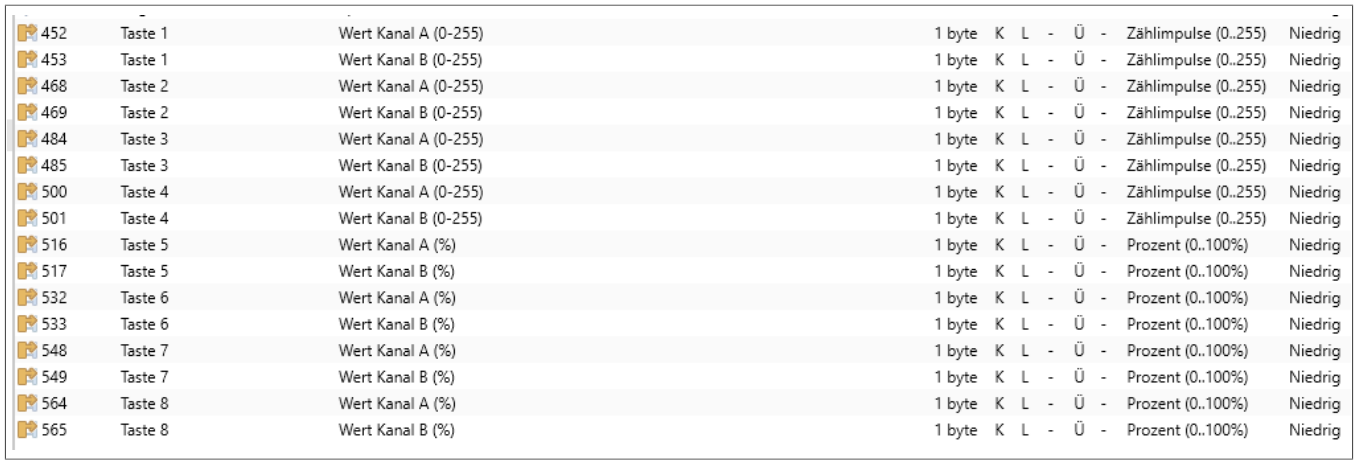
Fig. 69: 2-channel mode communication objects – Position (0–100%)

No.	Name	Object function	Length	Data type	Flags
452, 468, 484, 500, 516, 532, 548, 564	Button x	Position in % channel A	1 byte	DPT_Percentage (0...100%)	C, R, T
453, 469, 485, 501, 517, 533, 549, 565	Button x	Position in % channel B	1 byte	DPT_Percentage (0...100%)	C, R, T
452, 468, 484, 500, 516, 532, 548, 564	Button x	Slat angle in % channel A	1 byte	DPT_Percentage (0...100%)	C, R, T
453, 469, 485, 501, 517, 533, 549, 565	Button x	Slat angle in % channel B	1 byte	DPT_Percentage (0...100%)	C, R, T

Table 132: 2-channel mode communication objects – Position (0–100%)

These objects are activated if the 2-channel mode – Roller shutter/blind function or the sun protection type on the blind and the function when the button is pressed to Position (0–100%) is selected in the parameters for each button. These objects transmit a 1-byte command from the second operating level when a button is pressed and can thereby switch an actuator channel and allow the roller shutter to move to a defined position.

2-channel mode – Value 1 byte



452	Taste 1	Wert Kanal A (0-255)	1 byte	K	L	-	Ü	-	Zählimpulse (0..255)	Niedrig
453	Taste 1	Wert Kanal B (0-255)	1 byte	K	L	-	Ü	-	Zählimpulse (0..255)	Niedrig
468	Taste 2	Wert Kanal A (0-255)	1 byte	K	L	-	Ü	-	Zählimpulse (0..255)	Niedrig
469	Taste 2	Wert Kanal B (0-255)	1 byte	K	L	-	Ü	-	Zählimpulse (0..255)	Niedrig
484	Taste 3	Wert Kanal A (0-255)	1 byte	K	L	-	Ü	-	Zählimpulse (0..255)	Niedrig
485	Taste 3	Wert Kanal B (0-255)	1 byte	K	L	-	Ü	-	Zählimpulse (0..255)	Niedrig
500	Taste 4	Wert Kanal A (0-255)	1 byte	K	L	-	Ü	-	Zählimpulse (0..255)	Niedrig
501	Taste 4	Wert Kanal B (0-255)	1 byte	K	L	-	Ü	-	Zählimpulse (0..255)	Niedrig
516	Taste 5	Wert Kanal A (%)	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
517	Taste 5	Wert Kanal B (%)	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
532	Taste 6	Wert Kanal A (%)	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
533	Taste 6	Wert Kanal B (%)	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
548	Taste 7	Wert Kanal A (%)	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
549	Taste 7	Wert Kanal B (%)	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
564	Taste 8	Wert Kanal A (%)	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig
565	Taste 8	Wert Kanal B (%)	1 byte	K	L	-	Ü	-	Prozent (0..100%)	Niedrig

Fig. 70: 2-channel mode communication objects – Value 1 byte

No.	Name	Object function	Length	Data type	Flags
452, 468, 484, 500, 516, 532, 548, 564	Button x	Channel A value (0–255)	1 byte	DPT_Counting pulse (0…255)	C, R, T
453, 469, 485, 501, 517, 533, 549, 565	Button x	Channel B value (0-255)	1 byte	DPT_Counting pulse (0…255)	C, R, T

Table 133: 2-channel mode communication objects – Value 1 byte (0–255)

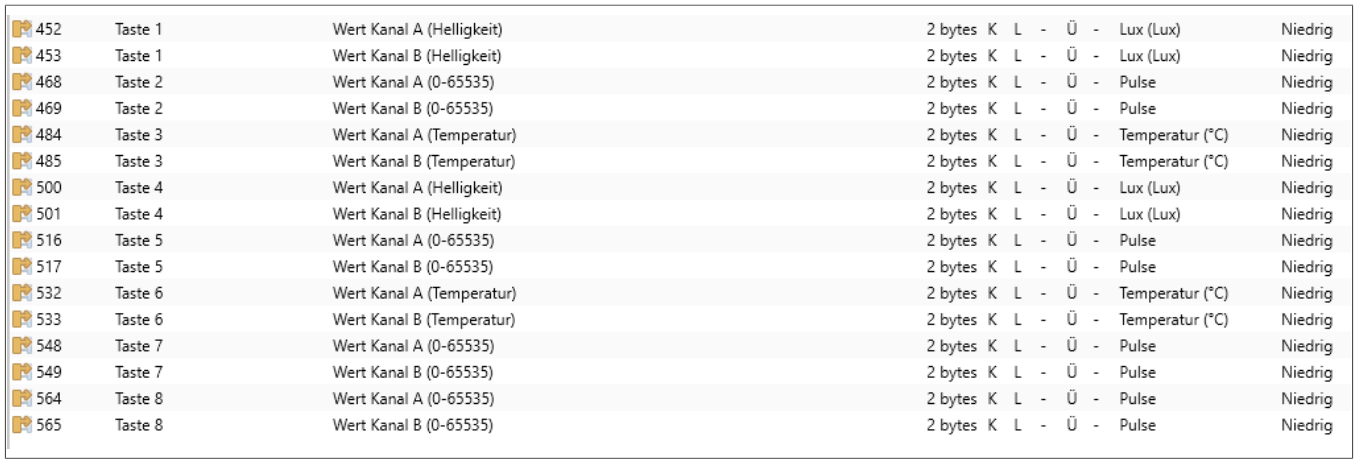
These objects are activated if the 2-Channel mode – Value 1 byte– Value (0–255) function is selected in the parameters for every single button. These objects transmit a 1-byte command after a button is pressed and can assign a set value to a dimming channel from the second operating level.

No.	Name	Object function	Length	Data type	Flags
452, 468, 484, 500, 516, 532, 548, 564	Button x	Channel A value (%)	1 byte	DPT_Percentage (0...100%)	C, R, T
453, 469, 485, 501, 517, 533, 549, 565	Button x	Channel B value (%)	1 byte	DPT_Percentage (0...100%)	C, R, T

Table 134: 2-channel mode communication objects – Value 1 byte (0–100%)

These objects are activated if the 2-Channel mode – Value 1 byte – Percentage (0–100%) function is selected in the parameters for every single button. These objects transmit a 1-byte command after a button is pressed and can assign a set percentage value to a dimming channel from the second operating level.

2-channel mode – Value 2 bytes



452	Taste 1	Wert Kanal A (Helligkeit)	2 bytes	K	L	-	Ü	-	Lux (Lux)	Niedrig
453	Taste 1	Wert Kanal B (Helligkeit)	2 bytes	K	L	-	Ü	-	Lux (Lux)	Niedrig
468	Taste 2	Wert Kanal A (0-65535)	2 bytes	K	L	-	Ü	-	Pulse	Niedrig
469	Taste 2	Wert Kanal B (0-65535)	2 bytes	K	L	-	Ü	-	Pulse	Niedrig
484	Taste 3	Wert Kanal A (Temperatur)	2 bytes	K	L	-	Ü	-	Temperatur (°C)	Niedrig
485	Taste 3	Wert Kanal B (Temperatur)	2 bytes	K	L	-	Ü	-	Temperatur (°C)	Niedrig
500	Taste 4	Wert Kanal A (Helligkeit)	2 bytes	K	L	-	Ü	-	Lux (Lux)	Niedrig
501	Taste 4	Wert Kanal B (Helligkeit)	2 bytes	K	L	-	Ü	-	Lux (Lux)	Niedrig
516	Taste 5	Wert Kanal A (0-65535)	2 bytes	K	L	-	Ü	-	Pulse	Niedrig
517	Taste 5	Wert Kanal B (0-65535)	2 bytes	K	L	-	Ü	-	Pulse	Niedrig
532	Taste 6	Wert Kanal A (Temperatur)	2 bytes	K	L	-	Ü	-	Temperatur (°C)	Niedrig
533	Taste 6	Wert Kanal B (Temperatur)	2 bytes	K	L	-	Ü	-	Temperatur (°C)	Niedrig
548	Taste 7	Wert Kanal A (0-65535)	2 bytes	K	L	-	Ü	-	Pulse	Niedrig
549	Taste 7	Wert Kanal B (0-65535)	2 bytes	K	L	-	Ü	-	Pulse	Niedrig
564	Taste 8	Wert Kanal A (0-65535)	2 bytes	K	L	-	Ü	-	Pulse	Niedrig
565	Taste 8	Wert Kanal B (0-65535)	2 bytes	K	L	-	Ü	-	Pulse	Niedrig

Fig. 71: 2-channel mode communication objects – Value 2 bytes

No.	Name	Object function	Length	Data type	Flags
452, 468, 484, 500, 516, 532, 548, 564	Button x	Channel A value (0–65535)	2 byte	DPT_Pulse	C, R, T
453, 469, 485, 501, 517, 533, 549, 565	Button x	Channel B value (0-65535)	2 byte	DPT_Pulse	C, R, T

Table 135: 2-channel mode communication objects – Value 2 bytes (0–65535)

These objects are activated if the 2-Channel mode – Value 2 bytes – Value (0–65535) function is selected in the parameters for every single button. These objects transmit a 2-byte command after a button is pressed and can assign a set value to a dimming channel from the second operating level.

No.	Name	Object function	Length	Data type	Flags
452, 468, 484, 500, 516, 532, 548, 564	Button x	Channel A value (temperature)	2 byte	DPT_Temperature	C, R, T
453, 469, 485, 501, 517, 533, 549, 565	Button x	Channel B value (temperature)	2 byte	DPT_Temperature	C, R, T

Table 136: 2-channel mode communication objects – Value 2 bytes – Temperature

These objects are activated if the 2-Channel mode – Value 2 bytes – Temperature function is selected in the parameters for every single button. These objects transmit a 2-byte command after a button is pressed and can e.g. assign a set value/temperature value to a room thermostat from the second operating level.

No.	Name	Object function	Length	Data type	Flags
452, 468, 484, 500, 516, 532, 548, 564	Button x	Channel A value (brightness)	2 byte	DPT_Lux (Lux)	C, R, T
453, 469, 485, 501, 517, 533, 549, 565	Button x	Channel B value (brightness)	2 byte	DPT_Lux (Lux)	C, R, T

Table 137: 2-channel mode communication objects – Value 2 bytes – Brightness

These objects are activated if the 2-Channel mode – Value 2 bytes – Brightness function is selected in the parameters for every single button. These objects transmit a 2-byte command after a button is pressed and can e.g. assign a brightness value to lighting from the second operating level.

2-channel mode – Scene

452	Taste 1	Szene Kanal A	1 byte	K	L	-	Ü	-	Szenen Nummer	Niedrig
453	Taste 1	Szene Kanal B	1 byte	K	L	-	Ü	-	Szenen Nummer	Niedrig
468	Taste 2	Szene Kanal A	1 byte	K	L	-	Ü	-	Szenen Nummer	Niedrig
469	Taste 2	Szene Kanal B	1 byte	K	L	-	Ü	-	Szenen Nummer	Niedrig
484	Taste 3	Szene Kanal A	1 byte	K	L	-	Ü	-	Szenen Nummer	Niedrig
485	Taste 3	Szene Kanal B	1 byte	K	L	-	Ü	-	Szenen Nummer	Niedrig
500	Taste 4	Szene Kanal A	1 byte	K	L	-	Ü	-	Szenen Nummer	Niedrig
501	Taste 4	Szene Kanal B	1 byte	K	L	-	Ü	-	Szenen Nummer	Niedrig
516	Taste 5	Szene Kanal A	1 byte	K	L	-	Ü	-	Szenen Nummer	Niedrig
517	Taste 5	Szene Kanal B	1 byte	K	L	-	Ü	-	Szenen Nummer	Niedrig
532	Taste 6	Szene Kanal A	1 byte	K	L	-	Ü	-	Szenen Nummer	Niedrig
533	Taste 6	Szene Kanal B	1 byte	K	L	-	Ü	-	Szenen Nummer	Niedrig
548	Taste 7	Szene Kanal A	1 byte	K	L	-	Ü	-	Szenen Nummer	Niedrig
549	Taste 7	Szene Kanal B	1 byte	K	L	-	Ü	-	Szenen Nummer	Niedrig
564	Taste 8	Szene Kanal A	1 byte	K	L	-	Ü	-	Szenen Nummer	Niedrig
565	Taste 8	Szene Kanal B	1 byte	K	L	-	Ü	-	Szenen Nummer	Niedrig

Fig. 72: 2-channel mode communication objects – Value 2 bytes – Scene

No.	Name	Object function	Length	Data type	Flags
452, 468, 484, 500, 516, 532, 548, 564	Button x	Channel A scene	1 byte	DPT_Scene number	C, R, T
453, 469, 485, 501, 517, 533, 549, 565	Button x	Channel B scene	1 byte	DPT_Scene number	C, R, T

Table 138: 2-channel mode communication objects – Value 2 bytes – Scene

These objects are activated if the 2-Channel mode – Scene function is selected in the parameters for every single button. These objects transmit a 1-byte command after a button is pressed and can e.g. assign a scene from the second operating level.

10.15 Step switch

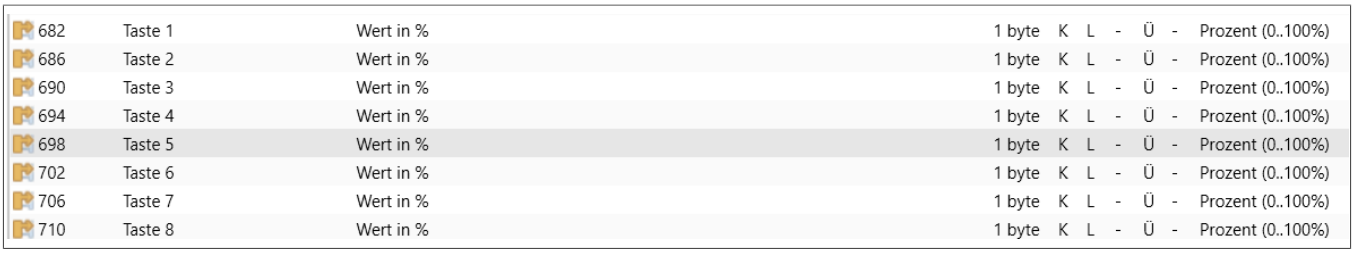


Fig. 73: Communication objects – Step switch value (%)

No.	Name	Object function	Length	Data type	Flags
682, 686, 690, 694, 698, 702, 706, 710	Button x	Value in %	1 byte	DPT_Percentage (0…100%)	C, R, T

Table 139: Communication objects – Step switch value (%)

These objects are activated if the **Step switch – Value – Step switch value (%)** function is selected in the parameters for every single button. These objects transmit a 1-byte command when a button is pressed and can thereby dim the dimming channel up/down incrementally.

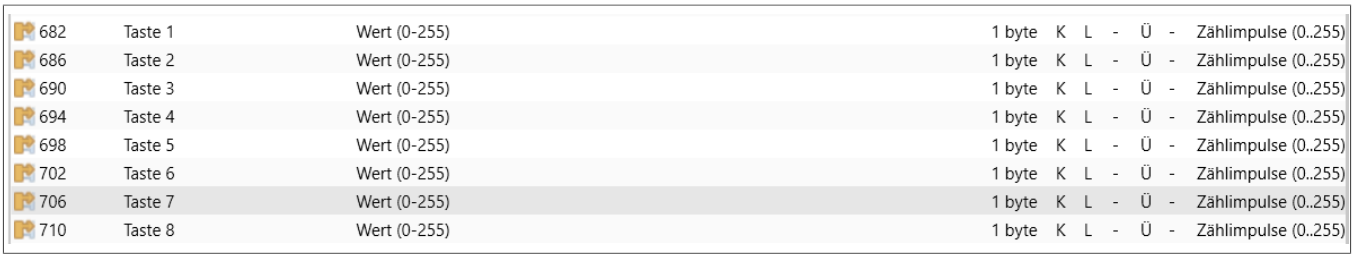
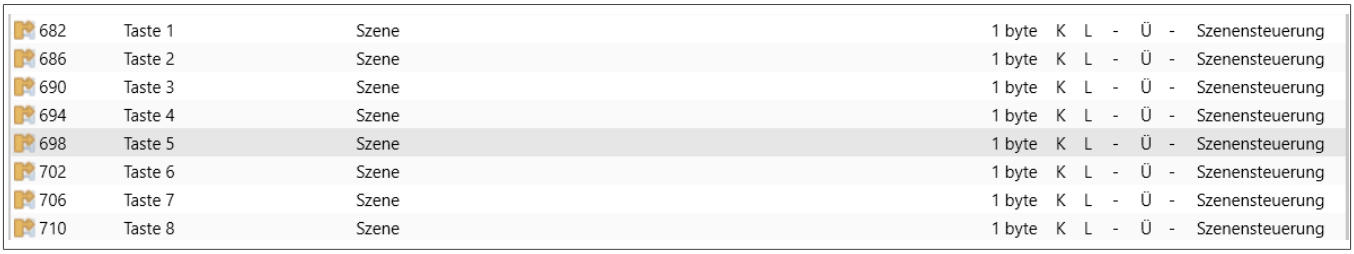


Fig. 74: Communication objects – Step switch value (0–255)

No.	Name	Object function	Length	Data type	Flags
682, 686, 690, 694, 698, 702, 706, 710	Button x	Value (0–255)	1 byte	DPT_Counting pulse (0…255)	C, R, T

Table 140: Communication objects – Step switch value (0–255)

These objects are activated if the **Step switch – Step switch value – Value (0–255)** function is selected in the parameters for every single button. These objects transmit a 1-byte command when a button is pressed and can thereby dim the dimming channel up/down incrementally.



682	Taste 1	Szene	1 byte	K	L	-	Ü	-	Szenensteuerung
686	Taste 2	Szene	1 byte	K	L	-	Ü	-	Szenensteuerung
690	Taste 3	Szene	1 byte	K	L	-	Ü	-	Szenensteuerung
694	Taste 4	Szene	1 byte	K	L	-	Ü	-	Szenensteuerung
698	Taste 5	Szene	1 byte	K	L	-	Ü	-	Szenensteuerung
702	Taste 6	Szene	1 byte	K	L	-	Ü	-	Szenensteuerung
706	Taste 7	Szene	1 byte	K	L	-	Ü	-	Szenensteuerung
710	Taste 8	Szene	1 byte	K	L	-	Ü	-	Szenensteuerung

Fig. 75: Communication objects – Scene step switch

No.	Name	Object function	Length	Data type	Flags
682, 686, 690, 694, 698, 702, 706, 710	Button x	Scene	1 byte	DPT_scene control	C, R, T

These objects are activated if the **Step switch – Step switch value – Scene** function is selected in the parameters for every single button. These objects transmit a 1-byte command when a button is pressed and can jump back and forth between the individually created scenes by pressing the button repeatedly.

10.16 Deactivate automatic

132	Taste 1	Automatik deaktivieren	1 bit	K	L	-	Ü	-	Freigeben
133	Taste 1	Status Automatik deaktivieren	1 bit	K	-	S	Ü	A	Boolesch
136	Taste 2	Automatik deaktivieren	1 bit	K	L	-	Ü	-	Freigeben
137	Taste 2	Status Automatik deaktivieren	1 bit	K	-	S	Ü	A	Boolesch
140	Taste 3	Automatik deaktivieren	1 bit	K	L	-	Ü	-	Freigeben
141	Taste 3	Status Automatik deaktivieren	1 bit	K	-	S	Ü	A	Boolesch
144	Taste 4	Automatik deaktivieren	1 bit	K	L	-	Ü	-	Freigeben
145	Taste 4	Status Automatik deaktivieren	1 bit	K	-	S	Ü	A	Boolesch
148	Taste 5	Automatik deaktivieren	1 bit	K	L	-	Ü	-	Freigeben
149	Taste 5	Status Automatik deaktivieren	1 bit	K	-	S	Ü	A	Boolesch
152	Taste 6	Automatik deaktivieren	1 bit	K	L	-	Ü	-	Freigeben
153	Taste 6	Status Automatik deaktivieren	1 bit	K	-	S	Ü	A	Boolesch
156	Taste 7	Automatik deaktivieren	1 bit	K	L	-	Ü	-	Freigeben
157	Taste 7	Status Automatik deaktivieren	1 bit	K	-	S	Ü	A	Boolesch
160	Taste 8	Automatik deaktivieren	1 bit	K	L	-	Ü	-	Freigeben
161	Taste 8	Status Automatik deaktivieren	1 bit	K	-	S	Ü	A	Boolesch

Fig. 76: Communication object – Automatic control deactivation

No.	Name	Object function	Length	Data type	Flags
132, 136, 140, 144, 148, 152, 156, 160	Button x	Deactivate automatic	1 bit	DPT_Switching	C, R, T
133, 137, 141, 145, 149, 153, 157, 161	Button x	Automatic control deactivation status	1 bit	DPT_Boolean	C, W, T, U

Table 141: Communication object – Automatic control deactivation

These objects are activated when the **Automatic control deactivation** function is selected in the parameters for each independent button. These objects transmit a 1-bit command when a button is pressed and can thereby start a set automatic mode and return the respective status.

10.17 Internal temperature sensor

Nummer	Name	Objektfunktion	Verbunden mit	Gruppenadres	Länge	K	L	S	Ü	A	Datentyp	Priorität
38	Interner Temperaturfühler	Interner Temperaturf...			2 bytes	K	L	-	Ü	-	Temperatur (°C)	Niedrig

Fig. 77: Communication object – Internal temperature sensor

No.	Name	Object function	Length	Data type	Flags
38	Internal temperature sensor	Internal temperature sensor	2 bytes	DPT_Temperature (°C)	C, R, T

Table 142: Communication object – Internal temperature sensor

This object is activated if the parameter under **Internal temperature sensor – Parameter – Sensor** is activated.

This object makes it possible, for example, to forward the measured temperature value to a room thermostat.

10.18 External temperature sensor

Nummer	Name	Objektfunktion	Verbunden mit	Gruppenadres	Länge	K	L	S	Ü	A	Datentyp	Priorität
44	Externer Temperaturfühler	Externer Temperaturf...			2 bytes	K	L	-	Ü	-	Temperatur (°C)	Niedrig

Fig. 78: Communication object – External temperature sensor

No.	Name	Object function	Length	Data type	Flags
44	External temperature sensor	External temperature sensor	2 bytes	DPT_Temperature (°C)	C, R, T

Table 143: Communication object – External temperature sensor

This object is activated if the parameter under **External temperature sensor – Parameter – Sensor** is activated.

This object makes it possible, for example, to forward the measured temperature value to a room thermostat.

11 Appendix

11.1 Characteristics

	1-gang	4-gang	6-gang	8-gang
Max. number of group addresses	254	254	254	254
Max. number of assignments	254	254	254	254
Objects	132	312	512	712

Table 144: Characteristics

11.2 List of Figures

11.3 List of Tables

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