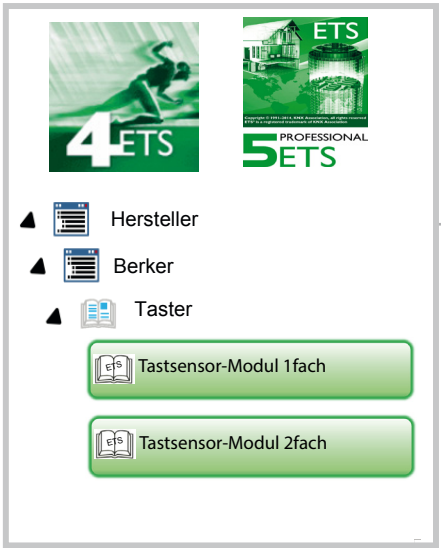

Application description

1-fold KNX push-button module, with integrated bus application unit
2-fold KNX push-button module, with integrated bus application unit

	Order number	Product designation	Application programme	TP product Radio product
	8014 11 xx	1-fold push-button module, with integrated bus application unit	S8014xxx0 V1.0	
	8014 21 xx	2-fold push-button module, with integrated bus application unit	S8014xxx0 V1.0	

Table of contents

1. General

1.1 General information about this application description

This document describes the operation and parameterisation of KNX devices with the aid of the Engineering Tool Software ETS.

The devices are parameterised by the ETS and the required settings are made during the first installation.

1.2 ETS Programming software

The application programmes are compatible with ETS5 or ETS4 and are always available in their latest version on our Internet website.

ETS version	File extension of compatible products	File extension of compatible projects
ETS 4 (v 4.18 and higher)	*.knxprod or *.vd5	*.knxproj
ETS 5 (v 5.04 and higher)	*.knxprod	*.knxproj

Table 1: ETS Software version

1.2.1 ETS Application designation

Application	Article order number
S8014xxx0 V1.0	1-fold push-button module, with integrated bus application unit
S8014xxx0 V1.0	2-fold push-button module, with integrated bus application unit

Table 2: ETS Application designations

1.3 Start-up

The start-up of the push-buttons modules primarily refers to the programming of the physical address and the application data by the ETS Engineering Tool Software.

1.3.1 Physical address

The ETS assigns the physical address. The push-button module has an integrated bus application unit for assigning the physical address; which is fitted with a programming button and a red programming LED.

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.

Example:

- Activate programming mode → Actuate the programming button on the front of the push-button module.

  Programming LED flashes red.
- The ETS starts downloading the physical address.

  The programming mode is automatically cancelled once the download is complete → The programming LED is switched off.
- Label bus application unit with the physical address.

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

1.3.2 Application program

The application software can be loaded on to the application unit directly when assigning the physical address, for example. If this has not taken place, it can also be programmed at a later date.

The application program is downloaded directly on to the bus application unit of the push-button module

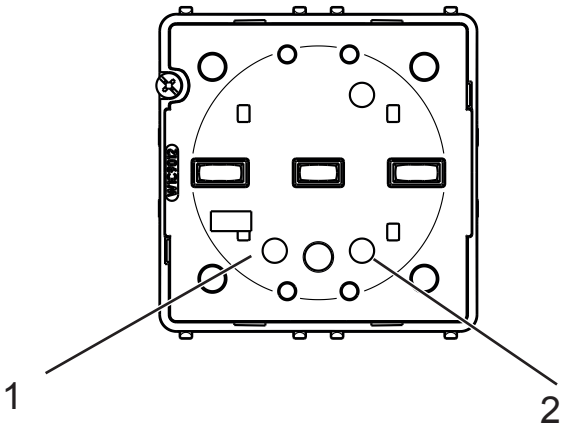

Figure 1: Push-button module

(1) Programming LED

(2) Programming button

2. Functional and device description

2.1 Device overview

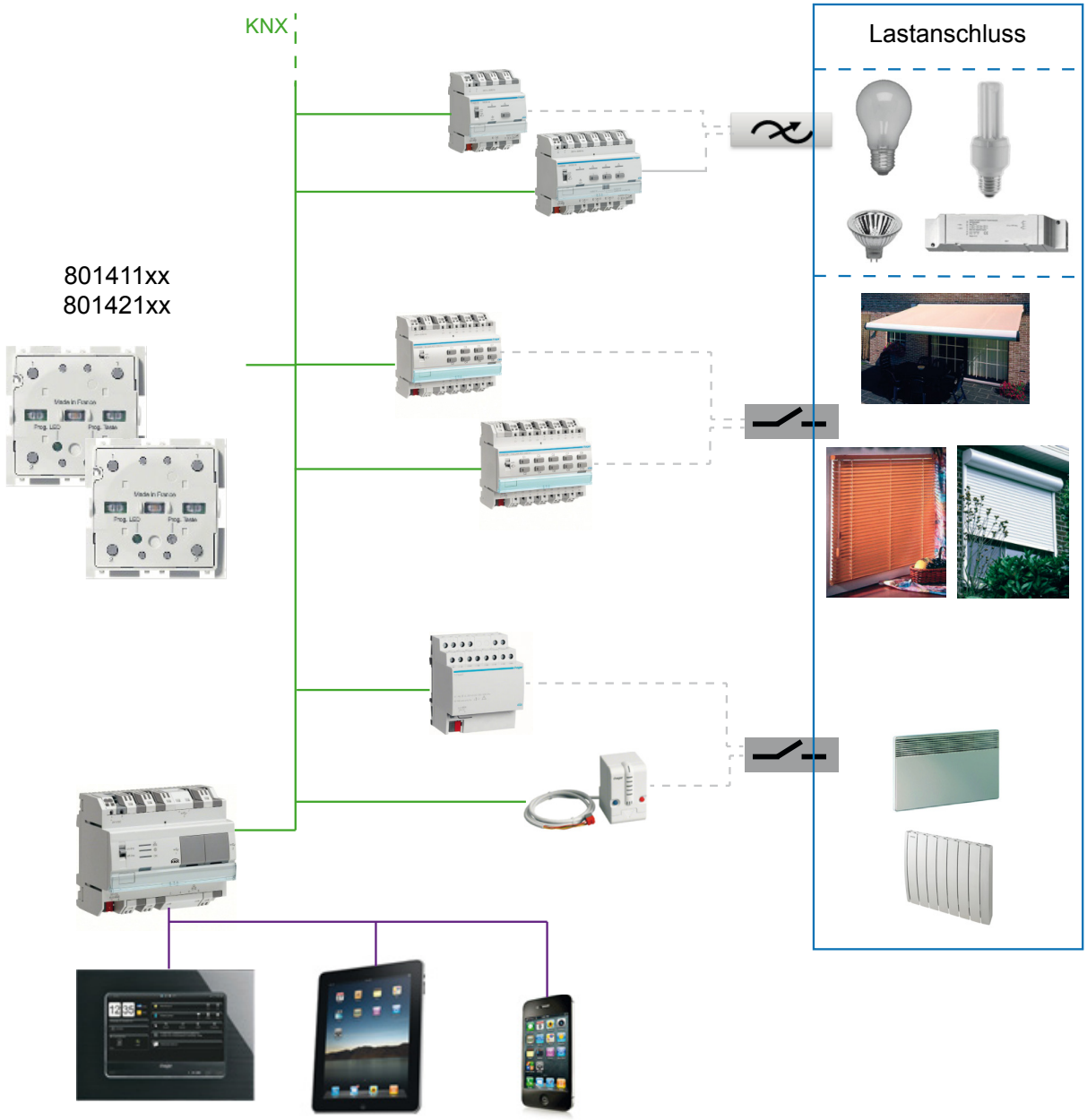

Figure 2: Device overview

2.2 Functional description

The 1gang and 2gang push-button modules are monoblock devices with an integrated bus application unit. The rockers/buttons can be assigned the following functions: ON/OFF, dimming, shutter/blind, light scene activation, value, priority and thermostat extension. The assignment of the various functions is freely selectable for each rocker/button and is defined by parameterisation in the ETS. Depending on the parameterised functions, telegrams that trigger ON/OFF, dimming, blind/shutter functions, call up or save light scenes and set dimming, brightness or temperature values in the corresponding actuators are transmitted to the KNX system bus when rockers/buttons are pressed.

The following functions are formulated for the terms "rocker" and "individual push-buttons" for the devices listed.

2.2.1 Operating concept

The function of the individual control rockers depends on the programming of the push-button module. The devices can be operated with a 1gang rocker (), two actuation points, or with a 2gang rocker (), four actuation points. Depending on the parameterisation, the rocker can be configured to function as a "whole" or as a button with a "top and bottom rocker side". The difference between a rocker and button is presented and described below.

Rocker (rocker)

The entire rocker (1) is designated as a rocker. Both the top rocker side (2) and the bottom rocker side (3) work together to carry out one function (e.g. shutter function: top rocker side UP, bottom rocker side DOWN).

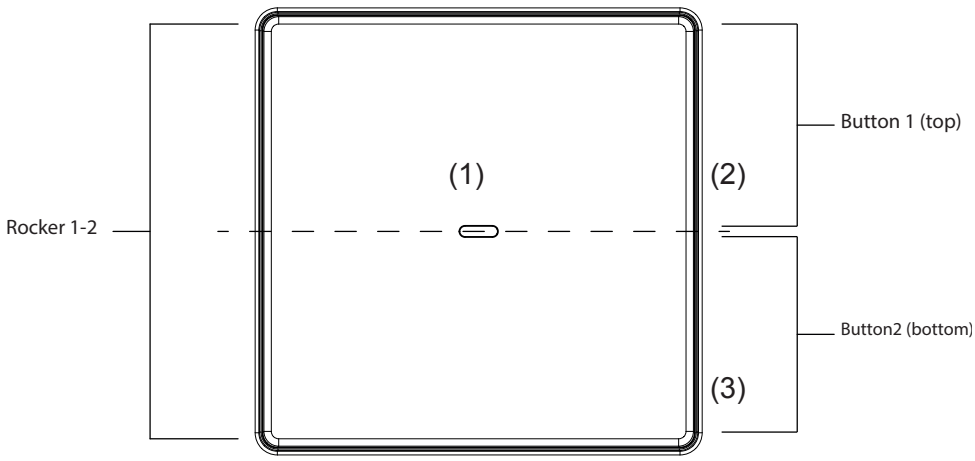

Figure 3: "1-fold rocker - R" rocker division

Button (button)

The top (2) or bottom (3) side of the rocker are designated as a button. The respective buttons can work independently of each other (for example, top button area → shutter no. 1 UP/DOWN and bottom button area → light ON/OFF) but can also work together in a single function (see rocker example).

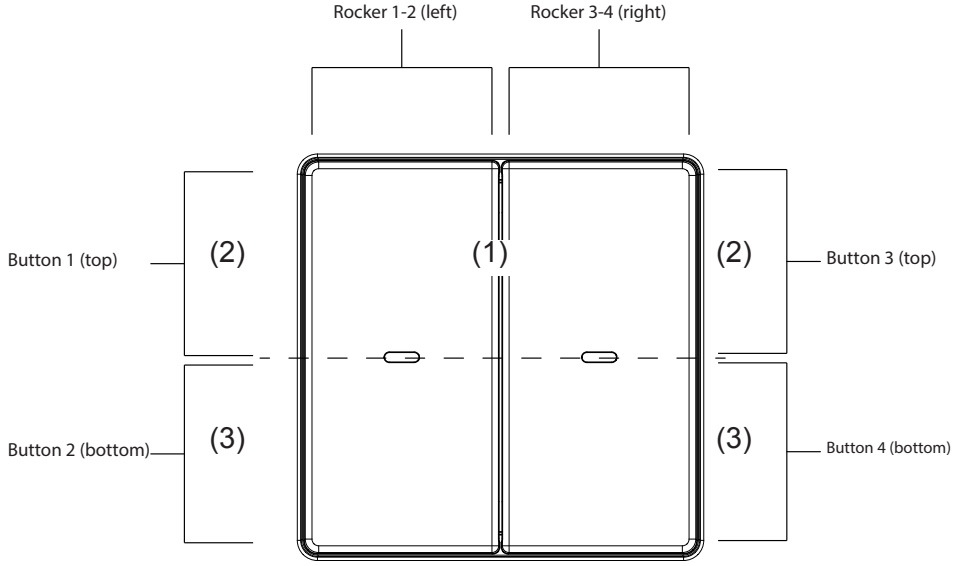

Figure 4: "2-fold rocker - R" rocker division

Operating instructions

The device differentiates between short and long touches.

- Short touch operation
  Switch lighting
  Shutter/blind step operation
  Operating mode changeover, etc.
- Long touch operation
  Dimming the lighting
  Move command (move) roller shutter/blind
  Saving of a scene

2.2.2 Range of functions

- Button surfaces can be configured as either a rocker or as independent buttons.
- Each rocker or independent button can be used for the following functions: ON/OFF, dimming, shutter/blind control, 1-byte value transmitter, 2-byte value transmitter, scene extension, room temperature control and thermostat extension.
- ON/OFF function: the following settings are possible for each button: response when the rocker/button is pressed and/or released, switching on, switching off, not active.
- The following adjustments are possible when dimming: times for short and long touches, dimming in different steps, transmitting a stop telegram at the end of the touch, transmitting dimming values.
- The following adjustments are possible during blind control: up/down, position (slat position / shutter/blind position), safety run
- The following settings are possible in the 1-byte and 2-byte value transmitter function: selection of the value range (0-100 %, 0-65535, 0-1500 Lux, 0-40°C), value when pressed.
- The following setting are possible in the scene function: call-up of a scene number (1–64), saving upon long key-press and emission time delay.
- When the button is being used as a control extension, the following adjustments are possible: operating mode change-over, heating/cooling-changeover.

2.3 Functional overview

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

Not active

The "Not active" function means that no function is assigned to the rocker/button; the rocker/button is disabled.

Toggle switch

The "Toggle switch" function switches on the lighting upon the first key-press and switches it off again upon the second.

Switching

The "ON/OFF" function enables the push-button (lighting circuits, for example) to be switched on or off (ON, OFF, ON/OFF, for example).

Dimming

The "Dimming" function enables the push-button to increase and decrease the dimming in lighting circuits.

This function can either be used as a rocker (for example, top side of the rocker dims up, bottom side dims down) or as a button (first key-press dims up, second dims down (during toggle mode)).

Shutter/blind

The "Shutter/blind" function allows blinds, shutters, awnings or similar hangings to be opened and closed.

This function can either be used as a rocker (for example, top side of the rocker OPENS blind, bottom side CLOSES blind) or as a button (first key-press OPENS blind, second CLOSES blind (during toggle mode)).

Value 1 byte/2 bytes

The value transmitter (1 byte) function allows values from 0 to 100 % to be transmitted to a dim actuator, for example.

The value transmitter (2 bytes) function allows values from 0 to 65535, brightness values from 0 to 1000 lx or temperature values from 0 to 40°C to be configured.

Thermostat extension

When being used as a control extension, the following parameter settings can be set/selected for each button or rocker. Override setpoint to a defined operating mode, setpoint selection or heating/cooling changeover

Mandatory control

The "Priority" function enables a precisely defined state (2 bits) to be specified or enables the function to impose a defined state.

Scene

When functioning as a scene extension, a light scene can be called up in a KNX device.

Deactivate automatic

This function can be used to interrupt and deactivate ongoing operations (time-controlled lighting).

ℹ This function must be configured in our TXA... and TYA... actuators.

3. General, "Parameters"

The following sections describe the configuration of the parameters for the devices push-button bus application unit 4-fold (2 buttons) and push-button module with bus application unit 2-fold (4 buttons). The function of the different push-button modules only differ in the number of channels/buttons. For this reason, only the first channel or first button/button pair will ever be described.

ETS Engineering Tool Software (version ETS4.x / ETS5.x) is used for parameterisation and start-up.

Global parameter settings for the entire device (i.e. for all buttons/rockers/channels) are performed under "General".

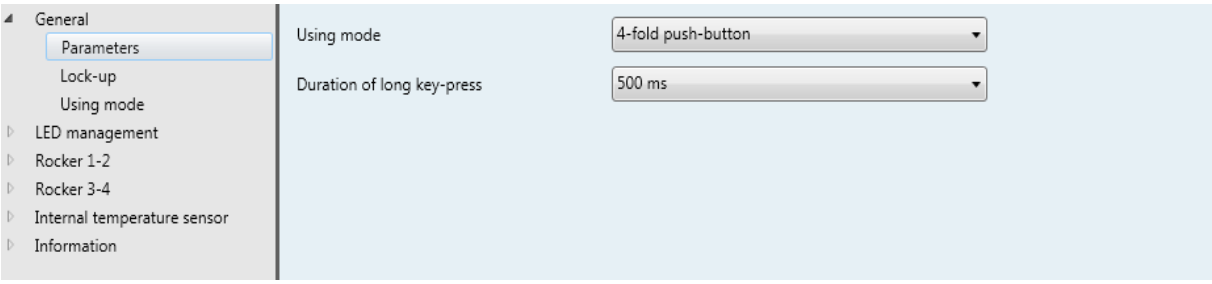

Figure 5: General, "Parameters"

Parameters	Description	Value
Operating concept	The function type of the device is defined with this parameter.	**1-fold push-button*** 2-fold push-button
Time for long key-press (dimming, shutter/blind)	This parameter defines the moment from when a long push-button action is detected.	400 ms - 500 ms - **1 s***

Table 3: General, "Parameters"

3.1 Blocking function

In the following parameter window, the respective functions and selection options of the "Lock-up" function are displayed and configured for the "rocker" and "button" using modes.

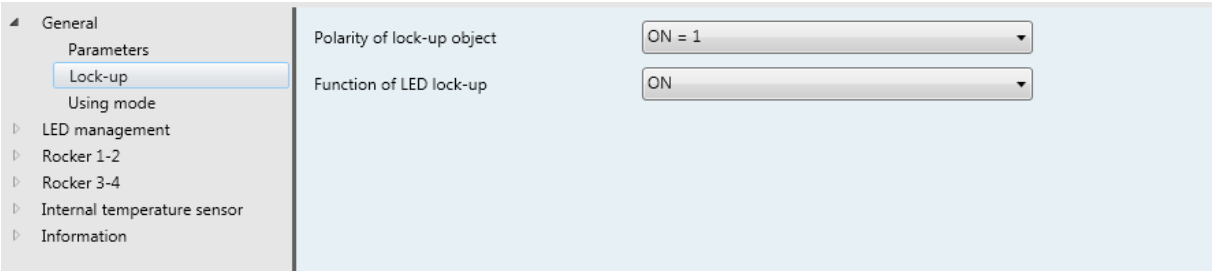

Figure 6: General "Lock-up"

Parameters	Description	Value
Polarity of lock-up object	This parameter defines at which value the blocking function is activated.	**ON = 1*** ON = 0
Function of LED lock-up	The function of the status LED for the respective button is set with this parameter if the disabling function is active.	**Off*** On

Table 4: General "Lock-up"

No.	Name	Object function	Length	Data type
4	General	Blocking function	1 bits	1.011 DPT_Status

The device has a lock-up function that can be used to lock independent buttons or rockers. To activate the lock-up function for each button/rocker, the "Lock-up" function must be explicitly activated (ticked) in the "Function" parameter branch for each button/rocker.

After bus voltage recovery, a lock-up remains active if it was activated before the bus voltage failed. The lock-up is always deactivated after a programming process by the ETS.

The polarity of the lock-up object can be parameterised.

If the polarity of the lock-up object is set to "Inverted (ON = 0)", the push-button is not immediately locked in the event of bus voltage recovery or after a download if no lock-up was switched on before the bus voltage failed. In such cases, the lock-up is only activated in the event of an object update (value = "0") for the lock-up object!

* Default value

3.2 Parameter „Bedienkonzept“

In the following parameter window, the type of the using mode of the button pairs is set and parameterised.

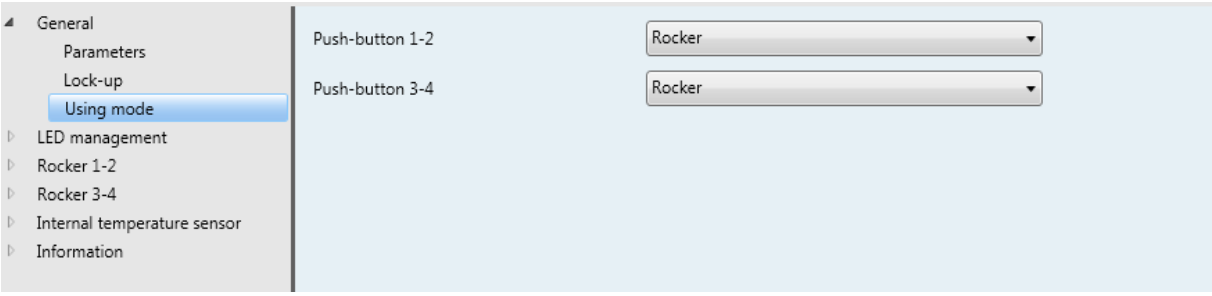

Figure 7: Parameter „Bedienkonzept“

The distinction between the "independent push-button" or "rocker" using mode must be made for the button pairs.

The button pair can be operated in the "independent push-button" function; i.e. each individual independent button can be assigned an individual function (for example, top side of the rocker (button 1) for light ON/OFF, bottom side of the rocker (button 2) for blind UP/DOWN).

The button pair can also be operated in the "rocker" function; i.e. the rocker pair work together to carry out a joint function (for example, top rocker side for light ON, bottom rocker side for light OFF).

Parameters	Description	Value
Push-button 1-2	This parameter can be used to configure the function of the buttons/rocker.	**Independent push-buttons** * Rocker
Push-button 3-4	This parameter can be used to configure the function of the buttons/rocker.	**Independent push-buttons** * Rocker

Table 5: Parameter „Bedienkonzept“

* Default value

3.3 "LED management" parameters

3.3.1 General

LED management is configured and described in the following parameter window.

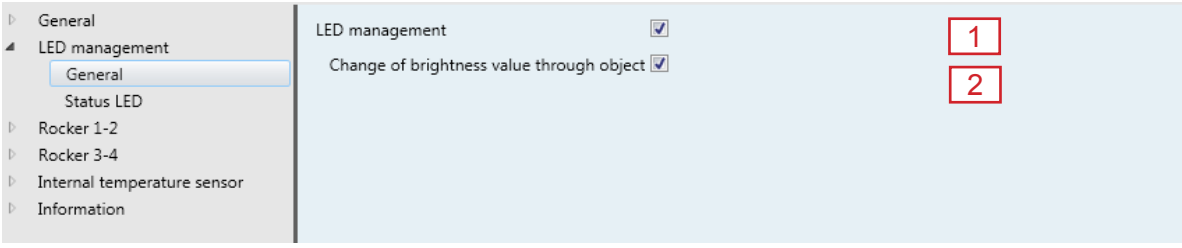

Figure 8: LED management, "General"

In order to make the settings for LED management, the tick box (Figure 8, 1) must be activated. The brightness value for both the status LED and the direction LED can also be changed separately for day and night using separate communication objects. (Figure 8, 2).

When "LED management" is activated, another a parameter for configuring the status LED opens.

3.3.2 Status LED

Each rocker is fitted with one RGB status LEDs that can be connected internally to the operating function depending on the function of the rocker or button.

ℹ If parameterised as an independent push-button, the status LED is assigned to the upper button.

1-fold push-button module (independent push-button):

Button 1 → RGB status LED

Button 2 → no LED function

2-fold push-button module (independent push-button):

Button 1 → RGB status LED

Button 2 → no LED function

Button 3 → RGB status LED

Button 4 → no LED function

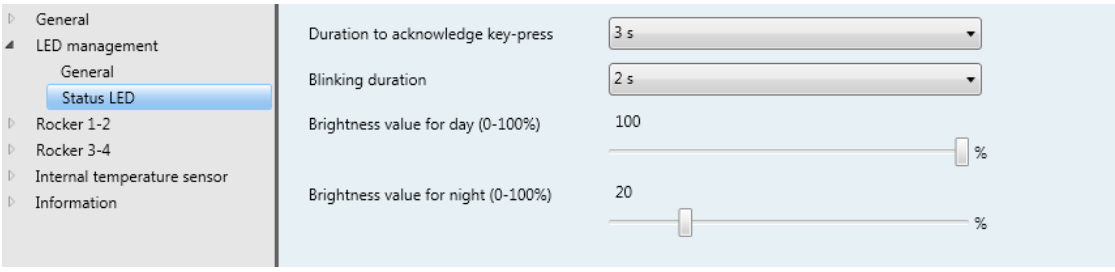

Figure 9: LED management, "Status LED"

Parameters	Description	Value
Duration to acknowledge key-press	With this parameter the lighting duration of the status LED upon pressing the button/rocker is set.	0.5 s... **3 s***... 5 s
Flashing duration	This parameter defines the blinking duration of the LED	250 ms - **2 s***... 5 s
Brightness value for day (0-100 %)	The slidebar for this parameter can be used to set the brightness value for daytime operation.	0 ... **100%***
Brightness value for night (0-100 %)	The sliding bar for this parameter can be used to set the brightness value for nighttime operation.	0 ... **20 %*** ... 100 %

Table 6: LED management, "Status LED"

No.	Name	Object function	Length	Data type
5	LED management	Day/Night	1 bits	
6	LED management	Device LED ON/OFF	1 bits	1.001 DPT_ON/OFF
9	LED management	Status LED – brightness day	1 byte	5.001 DPT_Percentage (0-100 %)
11	LED management	Status LED – brightness night	1 byte	5.001 DPT_Percentage (0-100 %)

* Default value

4. "Independent push-button"/"rocker" configuration

4.1 General information

This chapter describes the "rocker/independent push-button" configuration. Only the first rocker or the first pair of independent push-buttons are described. Additional rockers/independent push-buttons must be configured accordingly.

ℹ The cpolour of the status LED must be set in the rocker/individual push-button parameters.

4.1.1 Individual push-button using mode

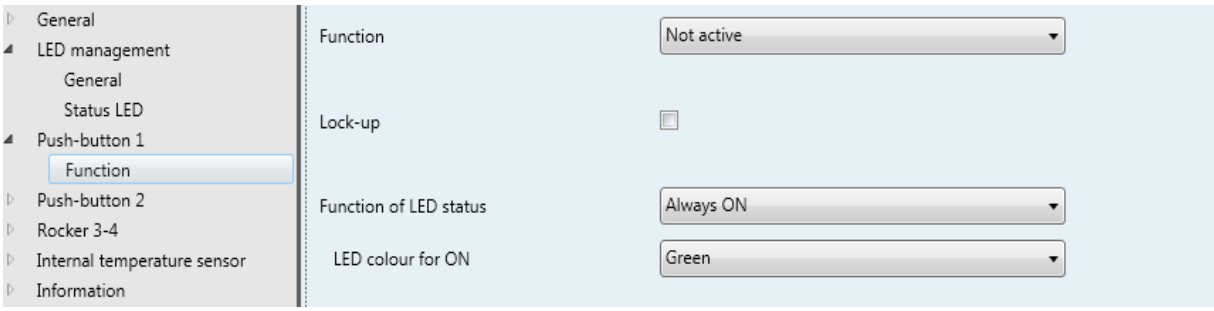

Figure 10: Function type of the button(s)

Parameters	Description	Value
Function of the independent push-button	This parameter defines the function type of the button(s).	**Not active** * Toggle switch ON/OFF Dimming Shutter/blind Value 1 byte Value 2 bytes Thermostat extension Priority Scene Automatic control deactivation
LED status	This parameter defines the status LED function.	**Always Off** * ALways on [1] Acknowledgement [2]
LED colour for ON [1; 2]	This parameter sets the status LED colour for "Always ON" or "Acknowledgement".	Off Red **Green** * Blue Red + green Red + blue Green + blue
LED colour for OFF [2]	This parameter sets the status LED colour for "Acknowledgement".	Off **Red** * Green Blue Red + green Red + blue Green + blue

Table 7: "Button function type" parameters

[1] This parameter is only visible when the "Always ON" function is selected under "LED status".

[2] These parameters are only visible when the "Acknowledgement" function is selected under "LED status".

ℹ The lock-up function can be activated for the respective independent push-button (tick boxFigure 15 ,1).

4.1.2 Rocker using mode

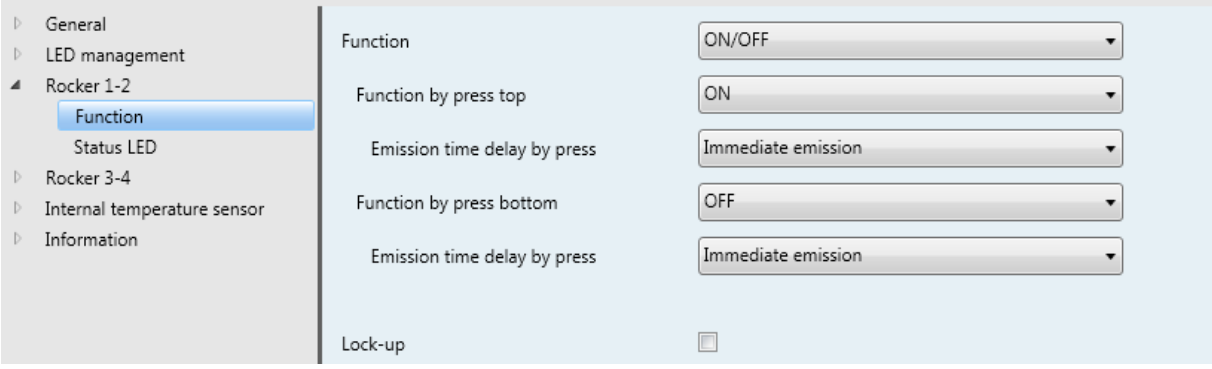

Figure 11: Function type of the rocker(s)

Figure 12: Status LED of the rocker(s)

Parameters	Description	Value
Function rocker	This parameter defines the function type of the rocker(s).	**Not active *** Toggle switch ON/OFF Dimming Shutter/blind Value 1 byte Value 2 bytes Thermostat extension Priority Scene Automatic control deactivation
LED status	This parameter defines the status LED function.	**Always Off *** ALways on [1] Acknowledgement [2]
LED colour for ON [1; 2]	This parameter sets the status LED colour for "Always ON" or "Acknowledgement".	Off Red **Green *** Blue Red + green Red + blue Green + blue
LED colour for OFF [2]	This parameter sets the status LED colour for "Acknowledgement".	Off **Red *** Green Blue Red + green Red + blue Green + blue

Table 8: "Rocker function type" parameters

[1] This parameter is only visible when the "Always ON" function is selected under "LED status".

[2] These parameters are only visible when the "Acknowledgement" function is selected under "LED status".

ℹ The lock-up function can be activated for the respective rocker (tick boxFigure 15 ,1).

* Default value

4.2 "Toggle switch" function

The "Toggle switch" function for the push-button or rocker using mode is configured in the parameter windows below (Figure 13).

The "Toggle switch" function means changing over. When the "Toggle switch" function is active, pressing the same push-button/rocker side triggers an alternate switching command.

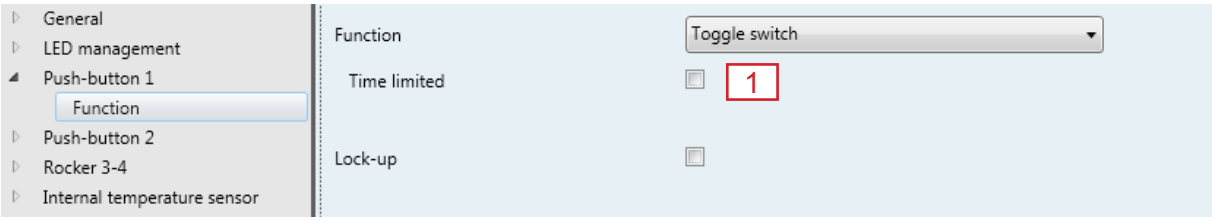

Figure 13: "Toggle switch" function of the push-button(s)

When the "Toggle switch" function is active in the rocker using mode, pressing the top or bottom rocker side triggers a switching command. In this parameterisation, no detailed settings are possible per rocker side.

"Toggle switch" function communication objects (rocker)

No.	Name	Object function	Length	Data type
13, 53,	Rocker x-y	ON/OFF status indication	1 bits	1.001 DPT_ON/OFF
18, 58,	Rocker x-y	Switching	1 bits	1.001 DPT_ON/OFF

"Toggle switch" function communication objects (button)

No.	Name	Object function	Length	Data type
13, 33, 53, 73,	Button x	ON/OFF status indication	1 bits	1.001 DPT_ON/OFF
18, 38, 58, 78,	Button x	Switching	1 bits	1.001 DPT_ON/OFF

"Toggle switch" function – time limited

This function is available in both operating concepts if the tick box 1 in the Figure 13 is activated.

Pressing the button quickly changes the output state. The state changes each time a short key-press occurs. If the button is not pressed, the output is switched off after the time set in the output. Pressing the button for a long time retriggers the switch-off time.

Details:

when a short key-press occurs, the push-button transmits the reversal of the last command received on the status object via the on pulse object. When the button is pressed for a long time, the push-button transmits an ON command via the on pulse object.

An ON command on the on pulse object in our TXA products switches on the output for the time set.

An OFF command on the on pulse object switches off the output. If an ON command follows even though the output is still switched on, the switch-on time is restarted (retriggered). "Toggle switch" function communication objects (rocker)

4.3 "ON/OFF" function

The different function variants of the "ON/OFF" function for the independent button (Figure 14) and rocker pair are presented and described in the parameter window below.

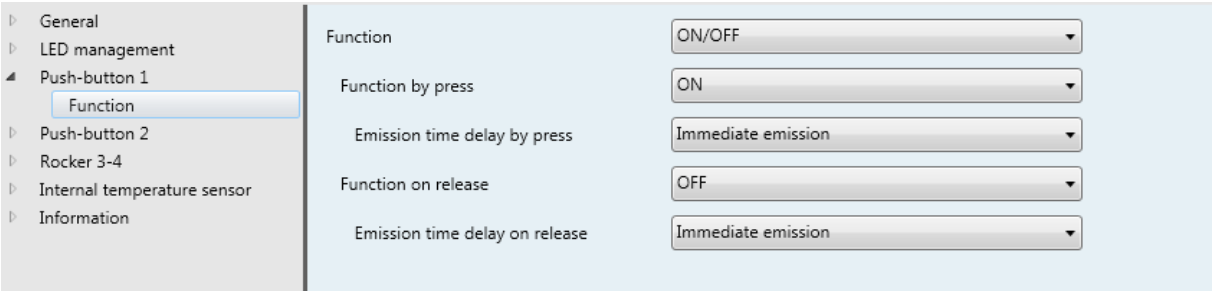

Figure 14: "Function by press/on release" parameters

ℹThe independent button can trigger different responses for the two actuation functions PRESS/RELEASE.

Parameters	Description	Value
Function by press Function on release" (Individual push-button configuration)	This parameter defines the function of the button.	**Not active** * ON OFF
Function by press top Function by press bottom (Configuration rocker)	This parameter defines the function of the rocker.	**Not active** * ON OFF
Emission time delay upon press Emission time delay uppon release	This parameter defines when the button command is to be transmitted to the bus.	**Immediate emission** * 1 s - 5 min

Table 9: "Function by press/on release" ON/OFF parameters

"ON/OFF" function communication objects (rocker)

No.	Name	Object function	Length	Data type
18, 58,	Rocker x-y	Switching	1 bits	1.001 DPT_ON/OFF

"ON/OFF" function communication objects (button)

No.	Name	Object function	Length	Data type
18, 38, 58, 78,	Button x	Switching	1 bits	1.001 DPT_ON/OFF

* Default value

4.4 "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.

One-push-button and two-push-button operation in the dimming function. When the operating surface is set as a rocker, two-push-button operation is preset for the dimming function. For example, this means that in the event of a short press, the push-button transmits a telegram to switch on and, in the event of a long press, a telegram to dim upward ("Increase"). In line with this, in the event of a short press, the push-button transmits a telegram to switch off and, in the event of a long press, a telegram to dim down ("Decrease"). When the operating surface is used as a button, the one-push-button dimming function is preset. Each time a short press of the respective button occurs, the push-button transmits alternate switch-on and switch-off telegrams ("Toggle switch"). In the event of long presses, the push-button transmits the telegrams "Increase" and "Decrease" on an alternate basis. The "Command when button is pressed" and "Command when rocker is pressed" parameters on the parameter pages for the buttons or rockers define the one-push-button or two-push-button dimming principle. For the rocker or button function, the command when the rocker or button is pressed can be set as desired.

Figure 15: "Dimming" Function

Parameters	Description	Value
Function of the independent push-button "Dimming"	With this parameter the following function is assigned to the button in the "Dimming" function when pressing the button.	**Increase (ON) *** Decrease (OFF) Increase (toggle switch) Decrease (toggle switch) Increase/Decrease (toggle switch) Dimming 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 the rocker is pressed up and the function when the rocker is pressed down.	**Increase (ON) *** Decrease (OFF) Increase (toggle switch) Decrease (toggle switch) Increase/Decrease (toggle switch) Dimming value

Table 10: Rocker/button "Dimming" function

"Dimming (Increase/Decrease)" function communication objects (rocker)

No.	Name	Object function	Length	Data type
18, 58,	Rocker x-y	Switching	1 bits	1.001 DPT_ON/OFF
21, 61,	Rocker x-y	Dimming	4 bits	3.007 DPT_Dimmer step

* Default value

"Dimming (Increase/Decrease)" function communication objects (button)

No.	Name	Object function	Length	Data type
18, 38, 58, 78,	Button x	Switching	1 bits	1.001 DPT_ON/OFF
21, 41, 61, 81	Button x	Dimming	4 bits	3.007 DPT_Dimmer step

"Dimming (Increase/Decrease toggle switch)" function communication objects (rocker)

No.	Name	Object function	Length	Data type
13, 53,	Rocker x-y	ON/OFF status indication	1 bits	1.001 DPT_ON/OFF
18, 58,	Rocker x-y	Switching	1 bits	1.001 DPT_ON/OFF
21, 61,	Rocker x-y	Dimming	4 bits	3.007 DPT_Dimmer step

"Dimming (Increase/Decrease toggle switch)" function communication objects (button)

No.	Name	Object function	Length	Data type
13, 33, 53.73,	Button x	ON/OFF status indication	1 bits	1.001 DPT_ON/OFF
18, 38, 58, 78,	Button x	Switching	1 bits	1.001 DPT_ON/OFF
21, 41, 61, 81	Button x	Dimming	4 bits	3.007 DPT_Dimmer step

In addition to the dimming communication objects, the ON/OFF communication objects are also visible. Two separate group addresses for ON/OFF and dimming must be created and connected with the corresponding communication objects.

If the "Dimming – dimming value" function is selected, the dimming value is to be set by means of the slidebar (0 % … 100 %). Only one communication object can be selected in this function. The "Dimming – dimming value" function assigns a specific brightness value to the lamp via the connected actuator. The scene values are primarily only set in the actuator. Scenes can only be called up or adjusted on the push-button.

4.5 "Shutter/blind" function

The "Shutter/blind" function for the button and rocker using modes are configured in the parameter windows below.

This function switches shutters, blinds, awnings and other hangings. In the "Shutter/blind" function, a distinction is made between long and short key-presses.

→ Short key-press: the device transmits a step or stop command to the bus via the Slat Step/Stop (step) communication object.

→ Long key-press: The device transmits a motion command (Up/Down) to the bus via the Up/Down (move) communication object.

Figure 16: "Roller shutter/blind" function

In the rocker using mode, the "Shutter/blind" function can be set so that the top rocker side raises the shutter and the bottom side lowers it. The rocker sides work as part of the same function (they function in the same way as 2 shutter/blind buttons). Two communication objects (Rocker x-y Slat Step/Stop (step) and rocker x-y Up/Down (move)) are displayed for the respective function version.

Operating concepts for the roller shutter / blind function

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.

Parameters	Description	Value
Using mode of the rocker(s)/ independent push-button(s)	This parameter selects the using mode of the "Shutter/blind" function	**Hager/Berker behaviour** * Short – Long – Short Long – Short Short – Long Long – Short or Short

Table 11: "Shutter/blind" rocker/button using mode

* Default value

4.5.1 HAGER operating concept

ℹ The "Hager/Berker behaviour" has been specially adapted to the Hager blind and roller shutter actuators.

Parameters	Description	Value
Function blind (Individual push-button configuration)	In the sun protection type, this parameter selects the function of the independent push-buttons.	**Up** * Down Up/Down/Stop Position (0-100 %) Position/slat angle (0-100 %) Slat angle (0-100 %)
Function upon press on top Function upon press on bottom (Configuration rocker)	In the sun protection type, this parameter selects the function of the top and bottom rocker side	**Up** * Down Up/Down/Stop Position (0-100 %) Position/slat angle (0-100 %) Slat angle (0-100 %)

Table 12: Parameters in the Hager/Berker behaviour

Parameters	Description	Value
Position (0-100 %) [1]	This parameter sets a specific shutter/blind position using the slidebar.	**0 %** * … 100 %
Slat angle (0-100 %) [3]	This parameter sets the slat angle of the slat using the slidebar.	**0 %** * ... 100 %

Table 13: Blind, shutter and slat position parameters

[1] This parameter is only visible when the value "Position (0-100 %)" or "Position/slat angle (0-100 %)" is selected in the "Function when pressing the rocker side/independent push-button" parameter.

[2] This parameter is only visible when the value "Slat angle (0-100 %)" or "Position/slat angle (0-100 %)" is selected in the "Function when pressing the rocker side/independent push-button".

* Default value

4.5.2 "Short – Long – Short" operating concept

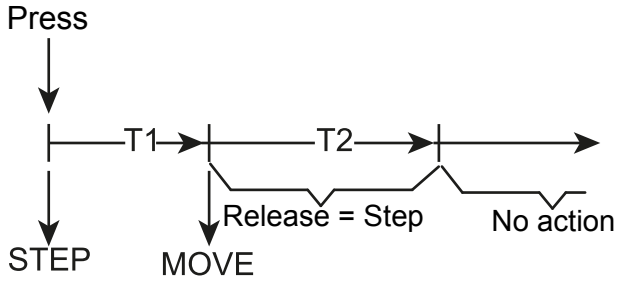

Figure 17: "Short – Long – Short" operating concept

As soon as the button is pressed, the device transmits a step telegram 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 stops an ongoing continuous move.

ℹ 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 push-button transmits a move telegram for extending the drive after T1 has expired and the time T2 ("slat adjusting time") 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 telegram. 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.

Parameters	Description	Value
Duration between short-long key-press T1	T1 is the time between a step and move command	1 ... **4** *... 3000 (x100 ms)
Duration of the slat angle setting T2	T2 is the slat adjusting time.	1 ... **5** *... 3000 (x100 ms)

Table 14: Time setting under "Short – Long – Short"

* Default value

Parameters	Description	Value
Function blind (Individual push-button configuration)	In the sun protection type, this parameter selects the function of the independent push-buttons.	**Up** * Down Up/Down/Stop Position (0-100 %) Position/slat angle (0-100 %) Slat angle (0-100 %)
Function upon press on top Function upon press on bottom (Configuration rocker)	In the sun protection type, this parameter selects the function of the top and bottom rocker side	**Up** * Down Up/Down/Stop Position (0-100 %) Position/slat angle (0-100 %) Slat angle (0-100 %)
Position (0-100 %) [1, 2]	This parameter allows the shutter/ blind to reach a specific position by pressing a button. The value is set using the slidebar.	**0 %** * … 100 %
Slat angle (0-100 %) [2,]	This parameter allows a specific blind slat angle to be set by pressing a button. The value is set using the slidebar.	**0 %** * … 100 %

Table 15: Blind, shutter and slat position parameters

[1] This parameter is only visible when the value "Position (0-100 %)" or "Position/slat angle (0-100 %)" is selected in the "Function when pressing the rocker side/independent push-button" parameter.

[2] This parameter is only visible when the value "Slat angle (0-100 %)" or "Position/slat angle (0-100 %)" is selected in the "Function when pressing the rocker side/independent push-button".

* Default value

4.5.3 "Long – Short" operating concept

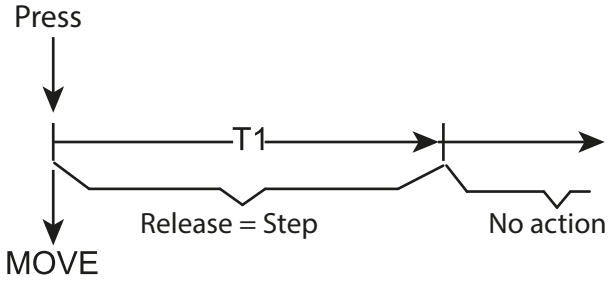

Figure 18: "Long – Short" operating concept

Immediately upon pressing the button, the device transmits a long-time telegram (Move). As a result, the drive starts moving and time T1 ("slat adjusting time") is started.

If the button is released during the slat adjusting time, the device transmits a step 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 T1, the device does not transmit any further telegram. The drive continues moving until the end position is reached.

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

Parameters	Description	Value
Duration between short-long key-press T1	T1 is the time between a step and move command	1 ... **4** *... 3000 (x100 ms)

Table 16: Time setting under "Long – Short"

* Default value

Parameters	Description	Value
Function blind (Individual push-button configuration)	In the sun protection type, this parameter selects the function of the independent push-buttons.	**Up** * Down Up/Down/Stop Position (0-100 %) Position/slat angle (0-100 %) Slat angle (0-100 %)
Function upon press on top Function upon press on bottom (Configuration rocker)	In the sun protection type, this parameter selects the function of the top and bottom rocker side	**Up** * Down Up/Down/Stop Position (0-100 %) Position/slat angle (0-100 %) Slat angle (0-100 %)
Position (0-100 %) [1]	This parameter allows the shutter/ blind to reach a specific position by pressing a button. The value is set using the slidebar.	**0 %** * … 100 %
Slat angle (0-100 %) [2,]	This parameter allows a specific blind slat angle to be set by pressing a button. The value is set using the slidebar.	**0 %** * … 100 %

Table 17: Blind, shutter and slat position parameters

[1] This parameter is only visible when the value "Position (0-100 %)" or "Position/slat angle (0-100 %)" is selected in the "Function when pressing the rocker side/independent push-button" parameter.

[2] This parameter is only visible when the value "Slat angle (0-100 %)" or "Position/slat angle (0-100 %)" is selected in the "Function when pressing the rocker side/independent push-button".

* *Default value*

4.5.4 "Short – Long" operating concept

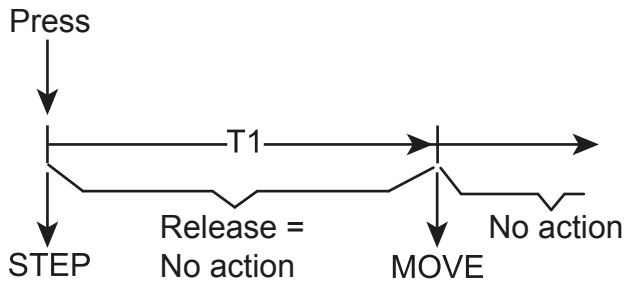

Figure 19: "Short – Long" using mode

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 stops an ongoing continuous move. The "time between a step and move command" in the push-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 telegram. 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.

Parameters	Description	Value
Duration between short-long key-press T1	T1 is the time between a step and move command	1 ... **4** *... 3000 (x100 ms)

Table 18: Time setting under "Short – Long"

* Default value

Parameters	Description	Value
Function blind (Individual push-button configuration)	In the sun protection type, this parameter selects the function of the independent push-buttons.	**Up** * Down Up/Down/Stop Position (0-100 %) Position/slat angle (0-100 %) Slat angle (0-100 %)
Function upon press on top Function upon press on bottom (Configuration rocker)	In the sun protection type, this parameter selects the function of the top and bottom rocker side	**Up** * Down Up/Down/Stop Position (0-100 %) Position/slat angle (0-100 %) Slat angle (0-100 %)
Position (0-100 %) [1]	This parameter allows the shutter/ blind to reach a specific position by pressing a button. The value is set using the slidebar.	**0 %** * … 100 %
Slat angle (0-100 %) [2,]	This parameter allows a specific blind slat angle to be set by pressing a button. The value is set using the slidebar.	**0 %** * … 100 %

Table 19: Blind, shutter and slat position parameters

[1] This parameter is only visible when the value "Position (0-100 %)" or "Position/slat angle (0-100 %)" is selected in the "Function when pressing the rocker side/independent push-button" parameter.

[2] This parameter is only visible when the value "Slat angle (0-100 %)" or "Position/slat angle (0-100 %)" is selected in the "Function when pressing the rocker side/independent push-button".

* Default value

4.5.5 "Long – Short or Short" operating concept

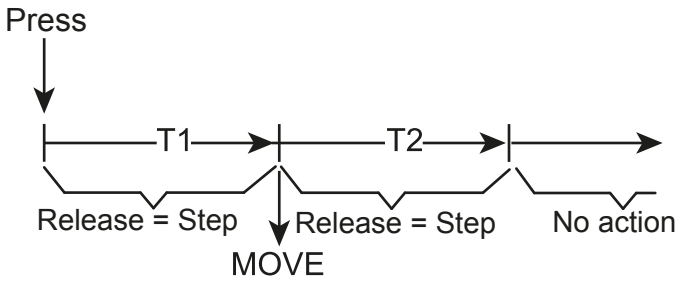

Figure 20: "Long – Short or Short" operating concept

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 step telegram. 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 ("slat adjusting time").

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 telegram. The drive continues moving until the end position is reached.

ℹ In this using mode, the device does not transmit a telegram as soon as a button is pressed. 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 ("slat adjusting time") must first be adjusted.

Parameters	Description	Value
Duration between short-long key-press T1	T1 is the time between a step and move command	1 ... **4** *... 3000 (x100 ms)
Duration of the slat angle setting T2	T2 is the slat adjusting time	1 ... 5 *... 3000 (x100 ms)

Table 20: Time setting under "Long – Short or Short"

* Default value

Parameters	Description	Value
Function blind (Individual push-button configuration)	In the sun protection type, this parameter selects the function of the independent push-buttons.	**Up** * Down Up/Down/Stop Position (0-100 %) Position/slat angle (0-100 %) Slat angle (0-100 %)
Function upon press on top Function upon press on bottom (Configuration rocker)	In the sun protection type, this parameter selects the function of the top and bottom rocker side	**Up** * Down Up/Down/Stop Position (0-100 %) Position/slat angle (0-100 %) Slat angle (0-100 %)
Position (0-100 %) [1]	This parameter allows the shutter/ blind to reach a specific position by pressing a button. The value is set using the slidebar.	**0 %** * … 100 %
Slat angle (0-100 %) [2,]	This parameter allows a specific blind slat angle to be set by pressing a button. The value is set using the slidebar.	**0 %** * … 100 %

Table 21: Blind, shutter and slat position parameters

[1] This parameter is only visible when the value "Position (0-100 %)" or "Position/slat angle (0-100 %)" is selected in the "Function when pressing the rocker side/independent push-button" parameter.

[2] This parameter is only visible when the value "Slat angle (0-100 %)" or "Position/slat angle (0-100 %)" is selected in the "Function when pressing the rocker side/independent push-button".

"Up/Down" communication objects for shutter/blind operation (rocker)

No.	Name	Object function	Length	Data type
18, 58	Rocker x-y	Up/Down	1 bits	1.008 DPT_Up/Down
19, 59	Rocker x-y	Slat Step/Stop (step)	1 bits	1.007 DPT_Step

"Position (0-100 %)" communication objects for shutter/blind operation (rocker)

No.	Name	Object function	Length	Data type
22.62,	Rocker x-y	Position in %	1 byte	5.001 DPT_Percentage (0-100 %)

Communication objects "Position/slat angle (0..100%)“ for shutter/blind operation (rocker)

No.	Name	Object function	Length	Data type
22.62	Rocker x-y	Position in %	1 byte	5.001 DPT_Percentage (0-100 %)
23, 63	Rocker x-y	Slat angle in %	1 byte	5.001 DPT_Percentage (0-100 %)

"Slat angle (0-100 %)" communication objects for shutter/blind operation (rocker)

No.	Name	Object function	Length	Data type
23, 63	Rocker x-y	Slat angle in %	1 byte	5.001 DPT_Percentage (0-100 %)

* Default value

"Up/Down" communication objects for shutter/blind operation (button)

No.	Name	Object function	Length	Data type
18, 38, 58.78	Button x	Up/Down	1 bits	1.008 DPT_Up/Down
19, 39, 59.79	Button x	Slat Step/Stop (step)	1 bits	1.007 DPT_Step

"Position (0-100 %)" communication objects for shutter/blind operation (button)

No.	Name	Object function	Length	Data type
22.42, 62.82	Button x	Position in %	1 byte	5.001 DPT_Percentage (0-100 %)

Communication objects "Position/slat angle (0..100%)“ for shutter/blind operation (button)

No.	Name	Object function	Length	Data type
22.42, 62.82	Button x	Position in %	1 byte	5.001 DPT_Percentage (0-100 %)
23, 43, 63.83	Button x	Slat angle in %	1 byte	5.001 DPT_Percentage (0-100 %)

"Slat angle (0-100 %)" communication objects for shutter/blind operation (button)

No.	Name	Object function	Length	Data type
23, 43, 63.83	Button x	Slat angle in %	1 byte	5.001 DPT_Percentage (0-100 %)

4.6 "Value 1 bytes" function

In the following parameter window, the "Value 1 byte" function is parameterised and set as a rocker or independent push-button in the using mode.

The application provides a 1-byte communication object for each rocker or independent push-button. Pressing a button transmits the set value to the bus. In the "rocker" using mode, different values can be parameterised and set for the two rocker sides.

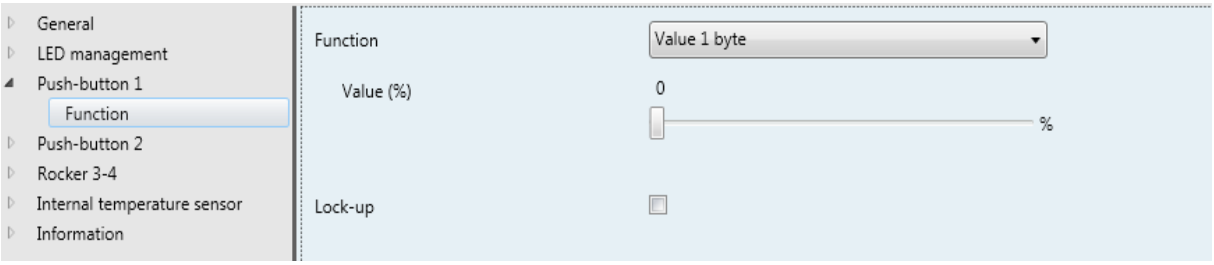

Figure 21: Function of the "Value 1 byte" rocker

Parameters	Description	Value
Function (Individual push-button configuration)	This parameter assigns the independent push-button one of the following object values. The 1-byte value as a percentage is set using the slidebar.	**Percentage (0 … 100%) ***
Function upon press on top Function upon press on bottom (Configuration rocker)	This parameter assigns the rocker one of the following object values when pressed. A distinction is made here between the push-button functions when it is pressed on top or bottom. The 1-byte value as a percentage is set using the slidebar.	**Percentage (0 … 100%) ***

Table 22: Function of the "Value 1 byte" rocker/independent push-button

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

"Value 1 byte (0-100 %)" communication objects (rocker)

No.	Name	Object function	Length	Data type
22.62,	Rocker x-y	Value in %	1 byte	5.001 DPT_Percentage

"Value 1 byte (0-100 %)" communication objects (button)

No.	Name	Object function	Length	Data type
22, 42, 62.82,	Button x	Value in %	1 byte	5.001 DPT_Percentage

The "Value 1 byte" parameter defines which value range the push-button should use. Relative values ranging from 0 to 100 % can be transmitted to the bus for the "Value 1 byte" function by means of a slide control.

* Default value

4.7 "Value 2 bytes" function

In the following parameter window, the "Value 2 bytes" function is parameterised and set as a rocker or button in the using mode.

The application provides a 2-byte communication object for each rocker or button. Pressing a button transmits the set value to the bus. In the "rocker" using mode, different values can be parameterised and set for the two rocker sides.

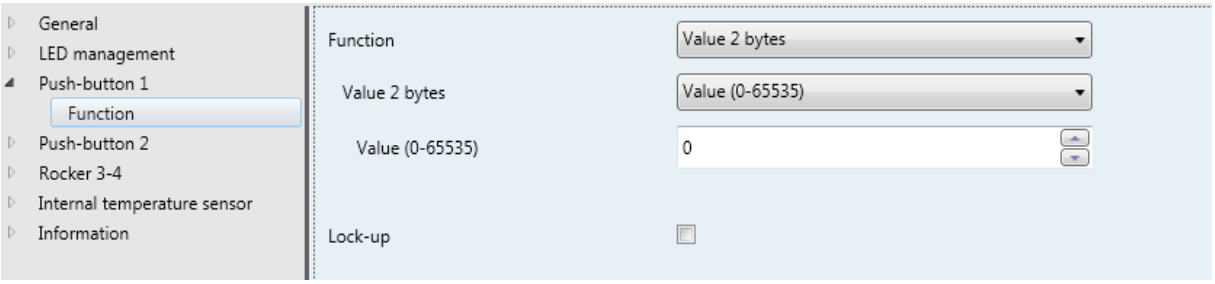

Figure 22: Function of the "Value 2 bytes" independent push-button

Parameters	Description	Value
Function of the "Value 2 bytes" independent push-button[1] (Individual push-button configuration)	This parameter assigns the independent push-button one of the following object values when pressed.	**Value (0-65535)** * temperature brightness
Function of the rocker "Value 2 bytes" [1] Function upon press on top Function upon press on bottom (Configuration rocker)	This parameter assigns the rocker one of the following object values when pressed. A distinction is made here between the push-button functions when it is pressed on top or bottom.	**Value (0-65535)** * temperature brightness

Table 23: Function of the "Value 2 bytes" rocker/independent push-button

[1] *If the respective function value is selected, another parameter window opens for setting the desired 2-byte value (0-65535 / 0-1000 Lux / 0- 40°C).*

"Value 2 bytes" communication objects (rocker)

No.	Name	Object function	Length	Data type
24.64	Rocker x-y	Value (0-65535)	2 byte	7.001 DPT_Pulse
24.64,	Rocker x-y	Temperature value	2 byte	9.001 DPT_Temperature (°C)
24.64	Rocker x-y	Brightness value	2 byte	9.004 DPT_Lux (Lux)

"Value 2 bytes" communication objects (independent push-button)

No.	Name	Object function	Length	Data type
24.44, 64, 84	Button x	Value (0-65535)	2 byte	7.001 DPT_Pulse
24.44, 64, 84	Button x	Temperature value	2 byte	9.001 DPT_Temperature (°C)
24.44, 64, 84	Button x	Brightness value	2 byte	9.004 DPT_Lux (Lux)

* default value

4.8 Function "Room thermostat extension unit

This function allows an external KNX thermostat (KNX thermostat 80440100 or KNX room controller 80660100, for example) to be activated using the push-button operation button.

This allows the user to change/adjust basic controller functions (such as operating mode change-over or heating/cooling changeover) from different places in the room.

ⓘ The thermostat extension is, however, not actively involved in the actual calculation of the temperature control.

ⓘ The thermostat extension only works properly when all communication objects are connected to the appropriate objects in the associated KNX thermostat with a group address.

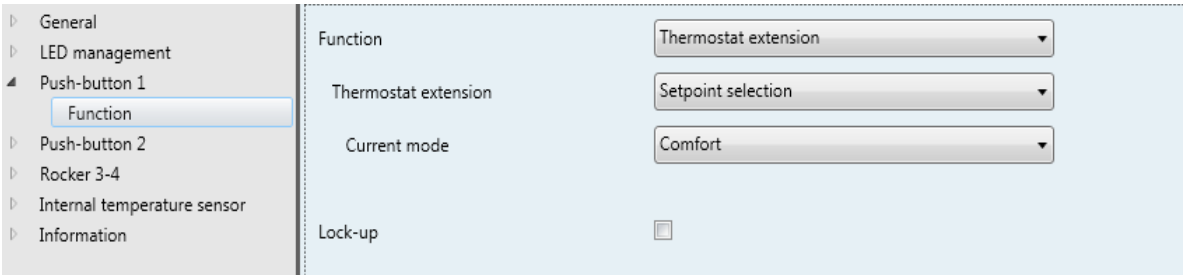

Figure 23: Function of the "Thermostat extension" independent push-button

Parameters	Description	Value
Function of the "Thermostat extension" independent push-button [1] (Individual push-button configuration)	This parameter assigns the following function to the rocker in the "Thermostat extension" function. A distinction is made here between the push-button functions when it is pressed on top or bottom.	**Override setpoint** * Heating/cooling-changeover
Function of the "Thermostat extension" rocker [1] Function upon press on top Function upon press on bottom (Configuration rocker)	This parameter assigns the following function to the push-button in the "Thermostat extension" function when the button is pressed.	**Override setpoint** * Heating/cooling-changeover

Table 24: Function of the "Thermostat extension" rocker/button

[1] *If the respective function value is selected, another parameter window opens for setting the desired function type.*

* Default value

Parameters	Description	Value
"Override setpoint"	This parameter defines which operating mode is transmitted to the KNX when a button is pressed (on the controller extension). Rocker function: different operating modes can be set for the top and bottom rocker sides Independent push-button: one operating mode assigned for when the button is pressed	Auto Comfort * Standby Night Reduction Frost Protection.
"Heating/cooling-changeover"	With this parameter, each time the independent push-button or rocker (top/bottom) is pressed, the function of the heating system (heating/cooling) is changed over. Two 1-bit objects are available for communication here (changeover and status indication).	

Table 25: Function of the "Thermostat extension" rocker/independent push-button

The "Override setpoint" function allows the "Comfort", "Standby", "Frost protection", "Night setpoint" or "Auto" operating modes to be transmitted to the bus.

Example:

- Comfort

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

  The **Standby** operating mode reduces the room temperature after leaving the room (brief absence) to a value predefined in the thermostat (19°C, for example).
- Frost protection

  The **Frost protection** operating mode reduces the heating circuit temperature to a minimum temperature of 7°C defined in the controller to protect against frost damage over night or during periods of extended absence.
- Night lowering

  The **Night setpoint** operating mode turns down the room temperature during a long absence (holiday, for example) to a value of 17°C, for example, defined in the thermostat.
- Auto

  The **Auto** operating mode automatically resets the operating mode to the current operating mode (after forced position, for example).

ℹ With underfloor heating, the chang-eover from "Comfort" to "Standby" is only noticeable after a certain period of time due to the sluggishness of the underfloor heating system.

* Default value

"Override setpoint" communication objects (rocker)

No.	Name	Object function	Length	Data type
22.62,	Rocker x-y	Override setpoint	1 byte	20.102 DPT_HVAC mode

"Override setpoint" communication objects (independent push-button)

No.	Name	Object function	Length	Data type
22, 42, 62, 82,	Button x	Override setpoint	1 byte	20.102 DPT_HVAC mode

"Heating/cooling-changeover" communication objects (rocker)

No.	Name	Object function	Length	Data type
13.53,	Rocker x-y	Heating/cooling - status indication	1 bits	1.100 DPT_heating/cooling
18.58,	Rocker x-y	Heating/cooling-changeover	1 bits	1.100 DPT_heating/cooling

"Heating/cooling-changeover" communication objects (independent push-button)

No.	Name	Object function	Length	Data type
13.33, 53, 73	Button x	Heating/cooling - status indication	1 bits	1.100 DPT_heating/cooling
18.38, 58, 78	Button x	Heating/cooling-changeover	1 bits	1.100 DPT_heating/cooling

4.9 "Mandatory control" function

The "Priority" function for the independent push-button and rocker is configured in this section. This function allows a switch output to be forced to a switch position by a 2-bit telegram regardless of the ON/OFF object (higher priority).

The value of the 2-bit telegram is defined according to the following syntax:

When "Priority" is active, incoming switch telegrams are still evaluated internally; when "Priority" is no longer active, the current internal switch condition, according to the ON/OFF object value, is set.

A "Priority" function activated before a bus voltage failure is always deactivated after a bus voltage recovery. The effect of the "Priority" function depends on the actuator channel connected (lighting, shutter/blind, heating).

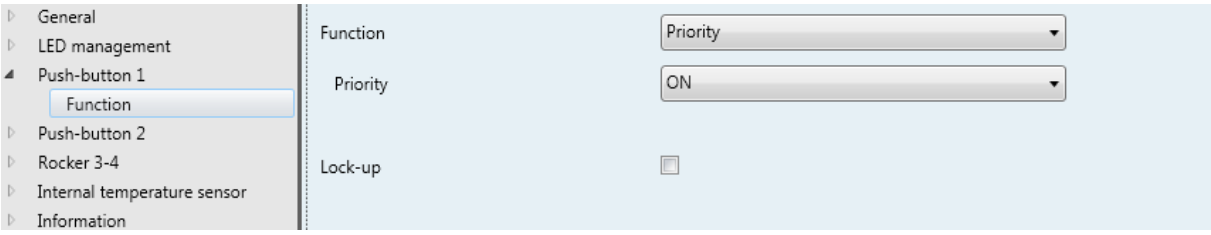

Figure 24: "Mandatory control" function

Value		Output behaviour
Bit 1	Bit 0	
0	0/1	End of "Priority"
1	0	"Priority" OFF
1	1	"Priority" ON

Table 26: "Priority" 2-bit communication object

Parameters	Description	Value
Function of the "Priority" independent push-button (Individual push-button configuration)	This parameter assigns the following function to the independent push-button in the "Priority" function when the button is pressed.	**ON** * Off
Function of the "Priority" rocker Function upon press on top Function upon press on bottom (Configuration rocker)	This parameter assigns the following function to the rocker in the "Priority" function. A distinction is made here between the rocker functions when it is pressed on top or bottom.	**ON** * Off

Table 27: Function of the "Priority" rocker/independent push-button

* Default value

"Priority" communication objects (rocker)

No.	Name	Object function	Length	Data type
13, 53	Rocker x-y	Priority status indication	1 bits	1.011 DPT_Status
20.60	Rocker x-y	Mandatory control	2 bits	2.001 DPT_Status

"Priority" communication objects (independent push-button)

No.	Name	Object function	Length	Data type
13.33, 53, 73	Button x	Priority status indication	1 bits	1.011 DPT_Status
20.40, 60.80	Button x	Mandatory control	2 bits	2.001 DPT_Status

Example: "Window cleaner" function

The window cleaner function is an application that prevents a manual operation of the blind/roller shutter from being executed during the window cleaning. As a result, the blind/roller shutter operation is disabled from a central point. Blinds that have already been lowered are moved to the upper stop position. The manual blind/roller shutter function is also enabled from a central point.

4.10 "Scene" function

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

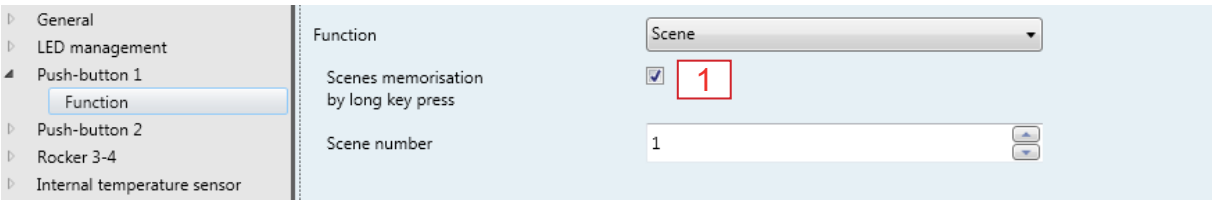

Figure 25: "Scene" function

The "Scene" function can be used as a scene extension and can be used to call up or save configured light scenes that are stored in other KNX devices. The device can call up and save a maximum of 64 scenes. Through a short key-press, the device transmits a value between 0 and 63 (where value 0 corresponds to scene 1 and value 63 corresponds to scene 64) to the bus via the scene control communication object. The scene is called up when the button is released.

Bit number							
7	6	5	4	3	2	1	0
Save	X	Scene number (0 = scene 1 ---- bit no. +1 = scene number)					

Table 28: Structure of 1-byte scene communication object

X = not relevant.

If the scene memorisation function is activated with a long key-press, the scene parameter values can be connected to the device and stored with a long key-press. Scene memorisation can also be deactivated with a long key-press (untick box Figure 25, 1).

Parameters	Description	Value
Function of the "Scene" (scene extension) push-button (Individual push-button configuration)	This parameter assigns a scene number to the push-button in the "Scene" function when the button is pressed.	Scene number (1*-64)
Function of the "Scene" (scene extension) rocker Function upon press on top Function upon press on bottom (Configuration rocker)	This parameter assigns a scene number to the rocker in the "Scene" function. A distinction is made here between the rocker functions when it is pressed up/ down.	Scene number, top button (1*-64) Scene number, bottom button (1*-64)
Scene memorisation by long key-press [1]	A changed scene can be saved again by activating this function by ticking the box.	

Table 29: Function of the "Scene" rocker/independent push-button

[1] *Scene memorisation is confirmed by the flashing of the respective status LED of the button (1 second).*

If the parameters of a scene are changed by the device, the new scene parameters can be saved by a long press of the button.

* Default value

"Scene" communication objects (rocker)

No.	Name	Object function	Length	Data type
22, 62	Rocker x-y	Scene	1 byte	18.001 DPT_Scene control

"Scene" communication objects (independent push-button)

No.	Name	Object function	Length	Data type
22, 42, 62, 82	Button x	Scene	1 byte	18.001 DPT_Scene control

Example: scene memorisation procedure

- Switch on scene (in this example "Scene TV") by briefly pressing the button on the push-button module (Figure 30, A-1)

  Scene is activated e.g., lighting dimmed to 30%, blind closed to 85%)

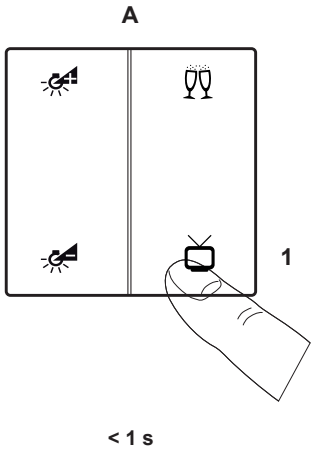

Figure 26: Scene call-up

Set and save new scene parameters on the push-button.

- Change lighting intensity, dim up or down (Figure 30, B)

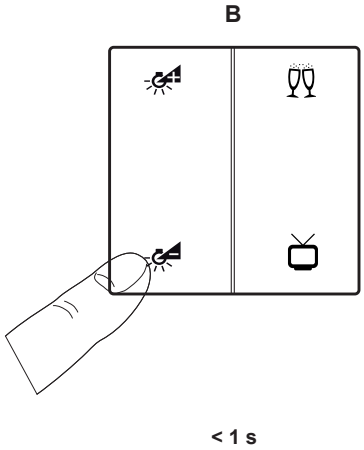

Figure 27: Setting new scene parameters

- Hold the button for "Scene TV" for longer than 5 s (Figure 30, C-1)
  New scene parameters have been saved. Pressing the "Scene TV" button again activates the new scene settings.

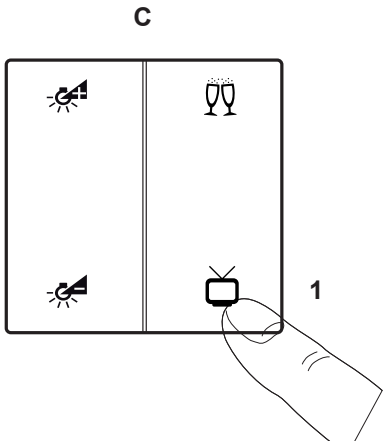

Figure 28: Saving new scene parameters

ℹ The "Save scene by a long key-press" function is switched on by default.

4.11 "Deactivate automatic functions" function

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

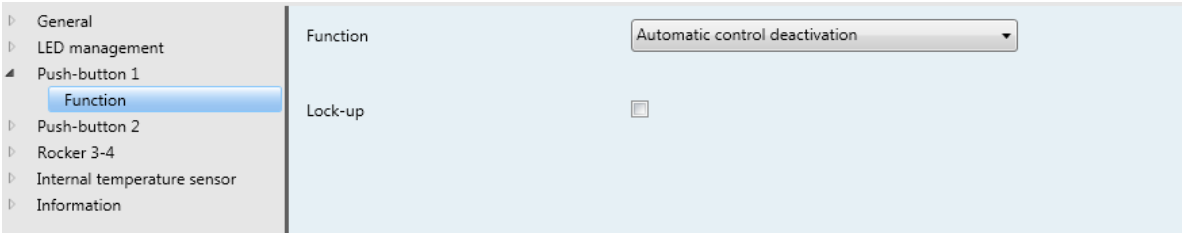

Figure 29: "Automatic control deactivation" parameter

"Automatic control" communication objects (rocker)

No.	Name	Object function	Length	Data type
13, 53	Rocker x-y	Automatic control deactivation status	1 bits	1.003 DPT_Enable
18, 58	Rocker x-y	Deactivate automatic	1 bits	1.003 DPT_Enable

"Priority" communication objects (independent push-button)

No.	Name	Object function	Length	Data type
13.33, 53, 73	Button x	Automatic control deactivation status	1 bits	1.003 DPT_Enable
18.38, 58, 78	Button x	Deactivate automatic	1 bits	1.003 DPT_Enable

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

Example: time-dependent outside lighting ON/OFF

The outside lighting is switched on and off at a certain time every day of the week.
However, on certain occasions (garden parties) the outside lighting should stay on for longer. In such cases, the "Automatic control deactivation" function is used to deactivate/ switch off the time-dependent switching on/off of the outside lighting. To do so, a 1-bit command is transmitted to the bus.

5. "Internal temperature sensor" function parameters

In this following section, the configuration and parameterisation of the internal temperature sensor is described and presented.

The push-button module is directly fitted with a sensor for temperature measurement.

The temperature measured can therefore be transmitted to the bus depending on the parameters shown below (see Figure 30).

ℹ The measured room air can, for example, be transmitted directly to a KNX thermostat as a second measuring point (measurement result) and can be used to synchronise the global actual temperature (synchronisation in larger rooms).

ℹ Room temperature recorded as a measurement result for a building visualisation

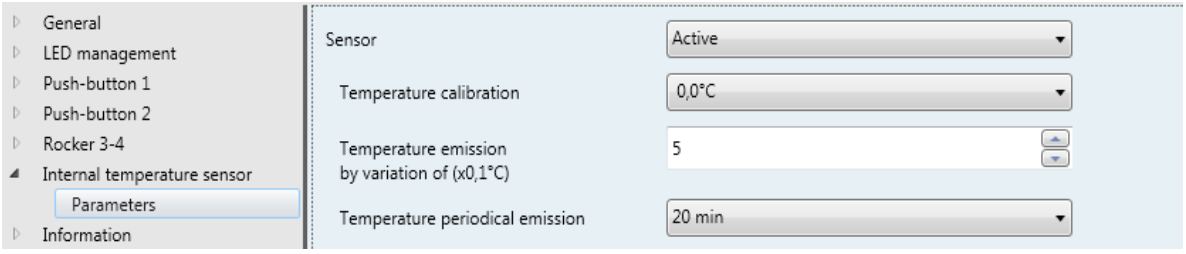

Figure 30: Internal temperature sensor function parameters

Parameters	Description	Value
Sensor	This parameter first decides whether the temperature sensor remains activated or deactivated.	**Not active** * Active
Temperature calibration [1]	With this parameter the difference between the measured temperature on the device and the measured temperature is adjusted by a reference measuring device. "Calibration of the temperature sensor"	-5°C - **0°C** * - 5°C
Temperature emission by variation of (x 0,1°C) [1]	This parameter defines at what temperature difference a new value is automatically transmitted to the bus. Should be transmitted (time-independently).	0 …**5** *… 255
Temperature periodical transmission [1]	This parameter defines in which cycle the actual value is compared with the setpoint and should be transmitted to the bus.	Not active 10 s - **20 min** * - 30 min

Table 30: Internal/external temperature sensor function parameters

[1] *These parameters are only visible when the "Sensor" parameter is set to "Active".*

[2] *This parameter is also visible in the external temperature sensor settings.*

* Default value

"External temperature sensor" communication objects

No.	Name	Object function	Length	Data type
172	Internal temperature sensor	Internal temperature sensor	2 byte	9.001 DPT_Temperature (°C)

When selecting the installation site of the device or external sensor, the following points should be taken into consideration:

- Integrating the push-button into multiple combinations should be avoided especially when a flush-mounted dimmer is also installed.
- The sensors should not be installed near to large electrical consumers (heat radiation).
- The device/sensor should not be installed near to heaters or cooling systems.
- The temperature sensor must be kept out of direct sunlight.
- Installing sensors on the inside of external walls may negatively influence the temperature measurement.
- Temperature sensors should be installed at least 30 cm away from doors and windows and at least 1.5 m above the floor.

The room temperature is only actually controlled using the thermostat.

6. "Information" parameter window

This parameter window specifies which application, database version and translation version the deployed device works with.

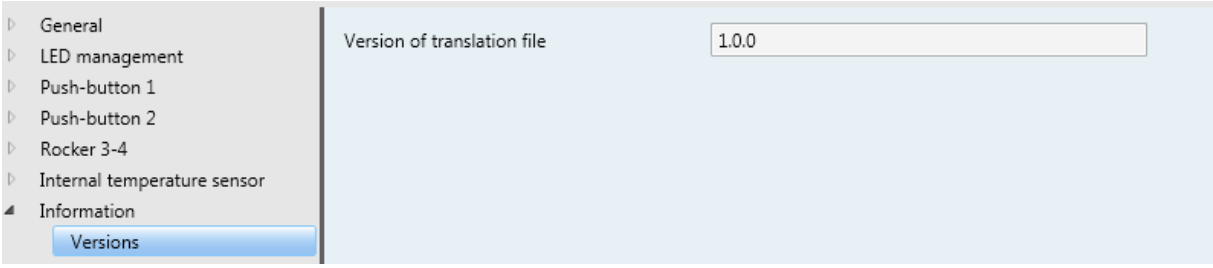

Figure 31: "Information" parameter window

7. Communication objects

7.1 "General" communication objects

7.1.1 Blocking function

4	General	Lock-up	1 bit	C	-	W	-	-	state	Low

Figure 32: "General - Lock-up" communication objects

No.	Name	Object function	Length	Data type	Flags
4	General	Blocking function	1 bits	DPT_Status	C, W
This object is always visible but must be activated for each independent push-button/rocker separately. This object enables the locking-up of another independent push-button/rocker; a 0/1 is transmitted to the respective lock-up object of the other device or the independent push-button/rocker is locked-up by another device when a 0/1 is received. For further information see „3.1 Blocking function“.					

7.2 Status LED communication objects

7.2.1 "Direction LED ON/OFF" colour and brightness

5	LED management	Day/night	1 bit	C	-	W	-	-		Low
6	LED management	Device LED - ON/OFF	1 bit	C	-	W	-	-	switch	Low
9	LED management	Status LED - luminosity day	1 Byte	C	-	W	-	-	percentage (0..100%)	Low
11	LED management	Status LED - luminosity night	1 Byte	C	-	W	-	-	percentage (0..100%)	Low

Figure 33: "LED management" communication objects

No.	Name	Object function	Length	Data type	Flags
5	LED management	Day/Night	1 bits		C, W
6	LED management	Device LED ON/OFF	1 bits	DPT_Switching	C, W
These objects are visible when the "LED management" function is activated under "LED management - General". This object enables the device LEDs to be permanently switched on/off. For further information see „3.3 „LED management“ parameters“.					

7.2.2 Change of brightness value through object

No.	Name	Object function	Length	Data type	Flags
9	LED management	Status LED – brightness day	1 byte	DPT_Percentage (0-100 %)	C, W
11	LED management	Status LED – brightness night	1 byte	DPT_Percentage (0-100 %)	C, W
These objects are visible when the "Change of brightness value through object" function is activated under "LED management - General". These objects enable the changing of the status LED brightness value for daytime and nighttime operation. For further information see „3.3 „LED management“ parameters“.					

7.3 "Independent push-button/rocker" communication objects

7.3.1 Toggle switch

13	Rocker 1-2	Status indication ON/OFF	1 bit	K	-	S	Ü	A	Schalten	Niedrig
18	Rocker 1-2	ON/OFF	1 bit	K	-	-	Ü	-	Schalten	Niedrig
53	Rocker 3-4	Status indication ON/OFF	1 bit	K	-	S	Ü	A	Schalten	Niedrig
58	Rocker 3-4	ON/OFF	1 bit	K	-	-	Ü	-	Schalten	Niedrig
93	Rocker 5-6	Status indication ON/OFF	1 bit	K	-	S	Ü	A	Schalten	Niedrig
98	Rocker 5-6	ON/OFF	1 bit	K	-	-	Ü	-	Schalten	Niedrig
133	Rocker 7-8	Status indication ON/OFF	1 bit	K	-	S	Ü	A	Schalten	Niedrig
138	Rocker 7-8	ON/OFF	1 bit	K	-	-	Ü	-	Schalten	Niedrig

Figure 34: Rocker "Toggle switch" communication object

13	Push-button 1	Status indication ON/OFF	1 bit	K	-	S	Ü	A	Schalten	Niedrig
18	Push-button 1	ON/OFF	1 bit	K	-	-	Ü	-	Schalten	Niedrig
33	Push-button 2	Status indication ON/OFF	1 bit	K	-	S	Ü	A	Schalten	Niedrig
38	Push-button 2	ON/OFF	1 bit	K	-	-	Ü	-	Schalten	Niedrig
53	Push-button 3	Status indication ON/OFF	1 bit	K	-	S	Ü	A	Schalten	Niedrig
58	Push-button 3	ON/OFF	1 bit	K	-	-	Ü	-	Schalten	Niedrig
73	Push-button 4	Status indication ON/OFF	1 bit	K	-	S	Ü	A	Schalten	Niedrig
78	Push-button 4	ON/OFF	1 bit	K	-	-	Ü	-	Schalten	Niedrig
93	Push-button 5	Status indication ON/OFF	1 bit	K	-	S	Ü	A	Schalten	Niedrig
98	Push-button 5	ON/OFF	1 bit	K	-	-	Ü	-	Schalten	Niedrig
113	Push-button 6	Status indication ON/OFF	1 bit	K	-	S	Ü	A	Schalten	Niedrig
118	Push-button 6	ON/OFF	1 bit	K	-	-	Ü	-	Schalten	Niedrig
133	Push-button 7	Status indication ON/OFF	1 bit	K	-	S	Ü	A	Schalten	Niedrig
138	Push-button 7	ON/OFF	1 bit	K	-	-	Ü	-	Schalten	Niedrig
153	Push-button 8	Status indication ON/OFF	1 bit	K	-	S	Ü	A	Schalten	Niedrig
158	Push-button 8	ON/OFF	1 bit	K	-	-	Ü	-	Schalten	Niedrig

Figure 35: Independent push-button "Toggle switch" communication object

No.	Name	Object function	Length	Data type	Flags
13, 53,	Rocker x	ON/OFF status indication	1 bits	DPT_Switching	C, W, T, U
13.33, 53.73,	Button x				
18, 58,	Rocker x	Switching	1 bits	DPT_Switching	C, T
18.38 58.78,	Button x				
These objects are activated when the "Toggle switch" function is selected in the parameters for each independent push-button/rocker. These objects (13,33,53,73) allow the return of the status value for the respective switching command. The return of the status value is used for switching an actuator channel by two buttons in toggle mode. These objects (18,38,58,78) transmit a 1-bit command to the actuator channel and trigger a switching command when a button is pressed. For further information see „4.2 „Toggle switch“ function“.					

7.3.2 Switching

18	Rocker 1-2	ON/OFF	1 bit	C	-	-	T	-	switch	Low
58	Rocker 3-4	ON/OFF	1 bit	C	-	-	T	-	switch	Low
98	Rocker 5-6	ON/OFF	1 bit	C	-	-	T	-	switch	Low
138	Rocker 7-8	ON/OFF	1 bit	C	-	-	T	-	switch	Low

Figure 36: Rocker "ON/OFF" communication object

18	Push-button 1	ON/OFF	1 bit	C	-	-	T	-	switch	Low
38	Push-button 2	ON/OFF	1 bit	C	-	-	T	-	switch	Low
58	Push-button 3	ON/OFF	1 bit	C	-	-	T	-	switch	Low
78	Push-button 4	ON/OFF	1 bit	C	-	-	T	-	switch	Low
98	Push-button 5	ON/OFF	1 bit	C	-	-	T	-	switch	Low
118	Push-button 6	ON/OFF	1 bit	C	-	-	T	-	switch	Low
138	Push-button 7	ON/OFF	1 bit	C	-	-	T	-	switch	Low
158	Push-button 8	ON/OFF	1 bit	C	-	-	T	-	switch	Low

Figure 37: Button "ON/OFF" communication object

No.	Name	Object function	Length	Data type	Flags
18, 58,	Rocker x	Switching	1 bits	DPT_Switching	C, T
18.38 58.78,	Button x				
These objects are activated when the "ON/OFF" function is selected in the parameters for each independent push-button/rocker. These objects (18,38,58,78) transmit a 1-bit command to the actuator channel and trigger a switching command when a button is pressed. For further information see „4.3 „ON/OFF“ function“.					

7.3.3 Dimming

18	Rocker 1-2	ON/OFF	1 bit	C	-	-	T	-	switch	Low
21	Rocker 1-2	Dimming	4 bit	C	-	-	T	-	dimming control	Low
58	Rocker 3-4	ON/OFF	1 bit	C	-	-	T	-	switch	Low
61	Rocker 3-4	Dimming	4 bit	C	-	-	T	-	dimming control	Low
98	Rocker 5-6	ON/OFF	1 bit	C	-	-	T	-	switch	Low
101	Rocker 5-6	Dimming	4 bit	C	-	-	T	-	dimming control	Low
138	Rocker 7-8	ON/OFF	1 bit	C	-	-	T	-	switch	Low
141	Rocker 7-8	Dimming	4 bit	C	-	-	T	-	dimming control	Low

Figure 38: Rocker "Dimming - ON/OFF" communication object

18	Push-button 1	ON/OFF	1 bit	C	-	-	T	-	switch	Low
21	Push-button 1	Dimming	4 bit	C	-	-	T	-	dimming control	Low
38	Push-button 2	ON/OFF	1 bit	C	-	-	T	-	switch	Low
41	Push-button 2	Dimming	4 bit	C	-	-	T	-	dimming control	Low
58	Push-button 3	ON/OFF	1 bit	C	-	-	T	-	switch	Low
61	Push-button 3	Dimming	4 bit	C	-	-	T	-	dimming control	Low
78	Push-button 4	ON/OFF	1 bit	C	-	-	T	-	switch	Low
81	Push-button 4	Dimming	4 bit	C	-	-	T	-	dimming control	Low
98	Push-button 5	ON/OFF	1 bit	C	-	-	T	-	switch	Low
101	Push-button 5	Dimming	4 bit	C	-	-	T	-	dimming control	Low
118	Push-button 6	ON/OFF	1 bit	C	-	-	T	-	switch	Low
121	Push-button 6	Dimming	4 bit	C	-	-	T	-	dimming control	Low
138	Push-button 7	ON/OFF	1 bit	C	-	-	T	-	switch	Low
141	Push-button 7	Dimming	4 bit	C	-	-	T	-	dimming control	Low
158	Push-button 8	ON/OFF	1 bit	C	-	-	T	-	switch	Low
161	Push-button 8	Dimming	4 bit	C	-	-	T	-	dimming control	Low

Figure 39: Button "Dimming - ON/OFF" communication object

No.	Name	Object function	Length	Data type	Flags
18, 58,	Rocker x	Switching	1 bits	DPT_Switching	C, T
18.38 58.78,	Button x				
21.61,	Rocker x	Dimming	4 bits	DPT_Switching	C, T
21.41 61.81,	Button x				
These objects are activated when the "Dimming - Increase (ON)/Decrease (OFF)" function is selected in the parameters for each independent push-button/rocker. The objects (18, 38, 58, 78) transmit a 1-bit command to the dimmer actuator channel and trigger a switching command and the objects (21, 41, 61, 81) transmit a 4-bit command to the dimmer actuator channel and trigger a dimming command when the button is pressed. For further information see „4.4 „Dimming“ Function“.					

13	Rocker 1-2	Status indication ON/OFF	1 bit	C	-	W	T	U	switch	Low
18	Rocker 1-2	ON/OFF	1 bit	C	-	-	T	-	switch	Low
21	Rocker 1-2	Dimming	4 bit	C	-	-	T	-	dimming control	Low
53	Rocker 3-4	Status indication ON/OFF	1 bit	C	-	W	T	U	switch	Low
58	Rocker 3-4	ON/OFF	1 bit	C	-	-	T	-	switch	Low
61	Rocker 3-4	Dimming	4 bit	C	-	-	T	-	dimming control	Low
93	Rocker 5-6	Status indication ON/OFF	1 bit	C	-	W	T	U	switch	Low
98	Rocker 5-6	ON/OFF	1 bit	C	-	-	T	-	switch	Low
101	Rocker 5-6	Dimming	4 bit	C	-	-	T	-	dimming control	Low
133	Rocker 7-8	Status indication ON/OFF	1 bit	C	-	W	T	U	switch	Low
138	Rocker 7-8	ON/OFF	1 bit	C	-	-	T	-	switch	Low
141	Rocker 7-8	Dimming	4 bit	C	-	-	T	-	dimming control	Low

Figure 40: Rocker "Dimming - Toggle switch" communication object

13	Push-button 1	Status indication ON/OFF	1 bit	C	-	W	T	U	switch	Low
18	Push-button 1	ON/OFF	1 bit	C	-	-	T	-	switch	Low
21	Push-button 1	Dimming	4 bit	C	-	-	T	-	dimming control	Low
33	Push-button 2	Status indication ON/OFF	1 bit	C	-	W	T	U	switch	Low
38	Push-button 2	ON/OFF	1 bit	C	-	-	T	-	switch	Low
41	Push-button 2	Dimming	4 bit	C	-	-	T	-	dimming control	Low
53	Push-button 3	Status indication ON/OFF	1 bit	C	-	W	T	U	switch	Low
58	Push-button 3	ON/OFF	1 bit	C	-	-	T	-	switch	Low
61	Push-button 3	Dimming	4 bit	C	-	-	T	-	dimming control	Low
73	Push-button 4	Status indication ON/OFF	1 bit	C	-	W	T	U	switch	Low
78	Push-button 4	ON/OFF	1 bit	C	-	-	T	-	switch	Low
81	Push-button 4	Dimming	4 bit	C	-	-	T	-	dimming control	Low
93	Push-button 5	Status indication ON/OFF	1 bit	C	-	W	T	U	switch	Low
98	Push-button 5	ON/OFF	1 bit	C	-	-	T	-	switch	Low
101	Push-button 5	Dimming	4 bit	C	-	-	T	-	dimming control	Low
113	Push-button 6	Status indication ON/OFF	1 bit	C	-	W	T	U	switch	Low
118	Push-button 6	ON/OFF	1 bit	C	-	-	T	-	switch	Low
121	Push-button 6	Dimming	4 bit	C	-	-	T	-	dimming control	Low
133	Push-button 7	Status indication ON/OFF	1 bit	C	-	W	T	U	switch	Low
138	Push-button 7	ON/OFF	1 bit	C	-	-	T	-	switch	Low
141	Push-button 7	Dimming	4 bit	C	-	-	T	-	dimming control	Low
153	Push-button 8	Status indication ON/OFF	1 bit	C	-	W	T	U	switch	Low
158	Push-button 8	ON/OFF	1 bit	C	-	-	T	-	switch	Low
161	Push-button 8	Dimming	4 bit	C	-	-	T	-	dimming control	Low

Figure 41: Button "Dimming - Toggle switch" communication object

No.	Name	Object function	Length	Data type	Flags
13.53,	Rocker x	ON/OFF status indication	1 bits	DPT_Switching	C, W, T, U
13.33, 53.73,	Button x				
18, 58,	Rocker x	Switching	1 bits	DPT_Switching	C, T
18.38 58.78,	Button x				
21.61,	Rocker x	Dimming	4 bits	DPT_Switching	C, T
21.41 61.81,	Button x				
These objects are activated when the "Dimming - Increase (toggle switch)/Decrease (toggle switch)" function is selected in the parameters for each independent push-button/rocker. The objects (18, 38, 58, 78) transmit a 1-bit command to the dimmer actuator channel and trigger a switching command and the objects (21, 41, 61, 81) transmit a 4-bit command to the dimmer actuator channel and trigger a dimming command when the button is pressed. The objects (13, 33, 53, 73) allow the return of the status value for the respective switching command (for linking with a status LED, for example). For further information see „4.4 „Dimming“ Function“.					

22	Rocker 1-2	Brightness value	1 Byte	C	-	-	T	-	percentage (0..100%) Low
62	Rocker 3-4	Brightness value	1 Byte	C	-	-	T	-	percentage (0..100%) Low
102	Rocker 5-6	Brightness value	1 Byte	C	-	-	T	-	percentage (0..100%) Low
142	Rocker 7-8	Brightness value	1 Byte	C	-	-	T	-	percentage (0..100%) Low

Figure 42: Rocker "Dimming - dimming value" communication object

22	Push-button 1	Brightness value	1 Byte	C	-	-	T	-	percentage (0..100%) Low
42	Push-button 2	Brightness value	1 Byte	C	-	-	T	-	percentage (0..100%) Low
62	Push-button 3	Brightness value	1 Byte	C	-	-	T	-	percentage (0..100%) Low
82	Push-button 4	Brightness value	1 Byte	C	-	-	T	-	percentage (0..100%) Low
102	Push-button 5	Brightness value	1 Byte	C	-	-	T	-	percentage (0..100%) Low
122	Push-button 6	Brightness value	1 Byte	C	-	-	T	-	percentage (0..100%) Low
142	Push-button 7	Brightness value	1 Byte	C	-	-	T	-	percentage (0..100%) Low
162	Push-button 8	Brightness value	1 Byte	C	-	-	T	-	percentage (0..100%) Low

Figure 43: Button "Dimming - dimming value" communication object

No.	Name	Object function	Length	Data type	Flags
22.62,	Rocker x	Dimming value	1 byte	DPT_Percentage (0-100 %)	C, T
22.42, 62.82,	Button x				
These objects are activated when the "Dimming - dimming value" function is selected in the parameters for each independent push-button/rocker. The objects (22, 42, 62, 82) transmit a 1-byte command to the dimmer actuator channel and switch on the lighting at a fixed percentage value when the button is pressed. For further information see „4.4 „Dimming“ Function“.					

7.3.4 Shutter/blind

18	Rocker 1-2	Up/down	1 bit	C	-	-	T	-	up/down	Low
19	Rocker 1-2	Stop (short press)	1 bit	C	-	-	T	-	trigger	Low
58	Rocker 3-4	Up/down	1 bit	C	-	-	T	-	up/down	Low
59	Rocker 3-4	Stop (short press)	1 bit	C	-	-	T	-	trigger	Low
98	Rocker 5-6	Up/down	1 bit	C	-	-	T	-	up/down	Low
99	Rocker 5-6	Stop (short press)	1 bit	C	-	-	T	-	trigger	Low
138	Rocker 7-8	Up/down	1 bit	C	-	-	T	-	up/down	Low
139	Rocker 7-8	Stop (short press)	1 bit	C	-	-	T	-	trigger	Low

Figure 44: Rocker "Shutter/blind" communication object

18	Push-button 1	Up/down	1 bit	C	-	-	T	-	up/down	Low
19	Push-button 1	Stop (short press)	1 bit	C	-	-	T	-	trigger	Low
38	Push-button 2	Up/down	1 bit	C	-	-	T	-	up/down	Low
39	Push-button 2	Stop (short press)	1 bit	C	-	-	T	-	trigger	Low
58	Push-button 3	Up/down	1 bit	C	-	-	T	-	up/down	Low
59	Push-button 3	Stop (short press)	1 bit	C	-	-	T	-	trigger	Low
78	Push-button 4	Up/down	1 bit	C	-	-	T	-	up/down	Low
79	Push-button 4	Stop (short press)	1 bit	C	-	-	T	-	trigger	Low
98	Push-button 5	Up/down	1 bit	C	-	-	T	-	up/down	Low
99	Push-button 5	Stop (short press)	1 bit	C	-	-	T	-	trigger	Low
118	Push-button 6	Up/down	1 bit	C	-	-	T	-	up/down	Low
119	Push-button 6	Stop (short press)	1 bit	C	-	-	T	-	trigger	Low
138	Push-button 7	Up/down	1 bit	C	-	-	T	-	up/down	Low
139	Push-button 7	Stop (short press)	1 bit	C	-	-	T	-	trigger	Low
158	Push-button 8	Up/down	1 bit	C	-	-	T	-	up/down	Low
159	Push-button 8	Stop (short press)	1 bit	C	-	-	T	-	trigger	Low

Figure 45: Button "Shutter/blind" communication object

No.	Name	Object function	Length	Data type	Flags
18.58,	Rocker x	Up/down	1 bits	DPT_Up/Down	C, T
18.38, 58.78,	Button x				
19.59,	Rocker x	Slat Step/Stop (step)	1 bits	DPT_Step	C, T
19.39, 59.79,	Button x				
22.62,	Rocker x	Position in %	1 byte	DPT_Percentage	C, T
22.42, 62.82,	Button x				
23.63,	Rocker x	Slat angle in %	1 byte	DPT_Percentage	C, T
23.43, 63.83,	Button x				

These objects are activated when the "Shutter/blind" function is selected in the parameters for each independent push-button/rocker.

The objects (18, 38, 58, 78) transmit a 1-bit command to the shutter/roller actuator channel and move the hanging up/down when the button is pressed.

The objects (19, 39, 59, 79) transmit a 1-bit command to the shutter/roller actuator channel and stop the shutter/ blind movement or gradually change the position of the hanging.

The objects (22, 42, 62, 82) transmit a 1-byte command to the shutter/roller actuator channel and and the position of the hanging.

The objects (23, 43, 63, 83) transmit a 1-byte command to the shutter/roller actuator channel and gradually change the position of the slats.

For further information see „4.5 „Shutter/blind“ function“.

7.3.5 Value 1 bytes

22	Rocker 1-2	Value in %	1 Byte	C	-	-	T	-	percentage (0..100%) Low
62	Rocker 3-4	Value in %	1 Byte	C	-	-	T	-	percentage (0..100%) Low

Figure 46: Rocker "Value 1 bytes" communication object

22	Push-button 1	Value in %	1 Byte	C	-	-	T	-	percentage (0..100%) Low
42	Push-button 2	Value in %	1 Byte	C	-	-	T	-	percentage (0..100%) Low
62	Push-button 3	Value in %	1 Byte	C	-	-	T	-	percentage (0..100%) Low
82	Push-button 4	Value in %	1 Byte	C	-	-	T	-	percentage (0..100%) Low

Figure 47: Button "Value 1 bytes" communication object

No.	Name	Object function	Length	Data type	Flags
22.62,	Rocker x	Value in %	1 byte	DPT_Percentage (0-100 %)	C, T
22.42, 62.82,	Button x				
These objects are activated when the "Value 1 bytes" function is selected in the parameters for each independent push-button/rocker. The objects (22, 42, 62, 82 - value) transmit a 2-byte command to a switching actuator channel and switch the lighting on at a defined value when the button is pressed. For further information see „4.6 „Value 1 bytes“ function“.					

7.3.6 Value 2 bytes

24	Rocker 1-2	Value (0-65535)	2 Byte	C	-	-	T	-	pulses	Low
64	Rocker 3-4	Temperature	2 Byte	C	-	-	T	-	temperature (°C)	Low
104	Rocker 5-6	Luminosity	2 Byte	C	-	-	T	-	lux (Lux)	Low
144	Rocker 7-8	Value (0-65535)	2 Byte	C	-	-	T	-	pulses	Low

Figure 48: Rocker "Value 2 bytes" communication object

24	Push-button 1	Value (0-65535)	2 Byte	C	-	-	T	-	pulses	Low
44	Push-button 2	Value (0-65535)	2 Byte	C	-	-	T	-	pulses	Low
64	Push-button 3	Temperature	2 Byte	C	-	-	T	-	temperature (°C)	Low
84	Push-button 4	Temperature	2 Byte	C	-	-	T	-	temperature (°C)	Low
104	Push-button 5	Luminosity	2 Byte	C	-	-	T	-	lux (Lux)	Low
124	Push-button 6	Luminosity	2 Byte	C	-	-	T	-	lux (Lux)	Low
144	Push-button 7	Value (0-65535)	2 Byte	C	-	-	T	-	pulses	Low
164	Push-button 8	Value (0-65535)	2 Byte	C	-	-	T	-	pulses	Low

Figure 49: Button "Value 2 bytes" communication object

No.	Name	Object function	Length	Data type	Flags
24.64,	Rocker x	Value (0-65535)	2 byte	DPT_Pulse	C, T
24.44, 64.84,	Button x				
24.64,	Rocker x	Temperature	2 byte	DPT_Temperature (°C)	C, T
24.44, 64.84,	Button x				
24.64,	Rocker x	Brightness	2 byte	DPT_Lux (Lux)	C, T
24.44, 64.84,	Button x				

These objects are activated when the "Value 2 bytes" function is selected in the parameters for each independent push-button/rocker.

The objects (24, 44, 64, 84 - value) transmit a 2-byte command to a switching actuator channel and switch the lighting on at a defined value when the button is pressed.

The objects (24, 44, 64, 84 - temperature) transmit a 2-byte command to a thermostat and change the set temperature, for example, when the button is pressed.

The objects (24, 44, 64, 84 - brightness) transmit a 2-byte command to a dimming actuator channel and switch the lighting on at a defined brightness value when the button is pressed.

For further information see „4.7 „Value 2 bytes“ function“

7.3.7 Thermostat extension

22	Rocker 1-2	Setpoint selection	1 Byte	C	-	-	T	-	HVAC mode	Low
53	Rocker 3-4	Heating/Cooling - status indication	1 bit	C	-	W	T	U	heating/cooling	Low
58	Rocker 3-4	Heating/Cooling - changeover	1 bit	C	-	-	T	-	heating/cooling	Low

Figure 50: Rocker "Thermostat extension" communication object

22	Push-button 1	Setpoint selection	1 Byte	C	-	-	T	-	HVAC mode	Low
42	Push-button 2	Setpoint selection	1 Byte	C	-	-	T	-	HVAC mode	Low
53	Push-button 3	Heating/Cooling - status indication	1 bit	C	-	W	T	U	heating/cooling	Low
58	Push-button 3	Heating/Cooling - changeover	1 bit	C	-	-	T	-	heating/cooling	Low
82	Push-button 4	Setpoint selection	1 Byte	C	-	-	T	-	HVAC mode	Low

Figure 51: Button "Thermostat extension" communication object

No.	Name	Object function	Length	Data type	Flags
22.62,	Rocker x	Override setpoint	1 byte	DPT_HVAC Mode	C, T
22.42, 62.82,	Button x				
13.53,	Rocker x	Heating/cooling - status indication	1 bits	DPT_heating/cooling	C, W, T, U
13.33, 53.73,	Button x				
18.58,	Rocker x	Heating/cooling-changeover	1 bits	DPT_heating/cooling	C, T
18.38, 58.78,	Button x				

These objects are activated when the "Thermostat extension" function is selected in the parameters for each independent push-button/rocker.

The objects (22, 42, 62, 82) transmit a 1-byte command to a thermostat and change the operating mode there (comfort, standby, etc.) when the button is pressed.

The objects (13, 33, 53, 73) transmit a 1-bit command to the bus and show the "Heating or cooling" status, for example, on a display when the button is pressed.

The objects (18, 38, 58, 78) transmit a 1-bit command to a heating actuator and can therefore switch back and forth between heating and cooling mode.

ℹ The heating system must be equipped for heating and cooling operation.

For further information see „4.8 Function „Room thermostat extension unit“.

7.3.8 Mandatory control

13	Rocker 1-2	Status indication priority	1 bit	C	-	W	T	U	state	Low
20	Rocker 1-2	Priority	2 bit	C	-	-	T	-	boolean control	Low
53	Rocker 3-4	Status indication priority	1 bit	C	-	W	T	U	state	Low
60	Rocker 3-4	Priority	2 bit	C	-	-	T	-	boolean control	Low
93	Rocker 5-6	Status indication priority	1 bit	C	-	W	T	U	state	Low
100	Rocker 5-6	Priority	2 bit	C	-	-	T	-	boolean control	Low
133	Rocker 7-8	Status indication priority	1 bit	C	-	W	T	U	state	Low
140	Rocker 7-8	Priority	2 bit	C	-	-	T	-	boolean control	Low

Figure 52: Rocker "Priority" communication object

13	Push-button 1	Status indication priority	1 bit	C	-	W	T	U	state	Low
20	Push-button 1	Priority	2 bit	C	-	-	T	-	boolean control	Low
33	Push-button 2	Status indication priority	1 bit	C	-	W	T	U	state	Low
40	Push-button 2	Priority	2 bit	C	-	-	T	-	boolean control	Low
53	Push-button 3	Status indication priority	1 bit	C	-	W	T	U	state	Low
60	Push-button 3	Priority	2 bit	C	-	-	T	-	boolean control	Low
73	Push-button 4	Status indication priority	1 bit	C	-	W	T	U	state	Low
80	Push-button 4	Priority	2 bit	C	-	-	T	-	boolean control	Low
93	Push-button 5	Status indication priority	1 bit	C	-	W	T	U	state	Low
100	Push-button 5	Priority	2 bit	C	-	-	T	-	boolean control	Low
113	Push-button 6	Status indication priority	1 bit	C	-	W	T	U	state	Low
120	Push-button 6	Priority	2 bit	C	-	-	T	-	boolean control	Low
133	Push-button 7	Status indication priority	1 bit	C	-	W	T	U	state	Low
140	Push-button 7	Priority	2 bit	C	-	-	T	-	boolean control	Low
153	Push-button 8	Status indication priority	1 bit	C	-	W	T	U	state	Low
160	Push-button 8	Priority	2 bit	C	-	-	T	-	boolean control	Low

Figure 53: Button "Priority" communication object

No.	Name	Object function	Length	Data type	Flags
13.53,	Rocker x	Priority status display	1 bits	DPT_Status	C, W, T, U
13.33 53.73,	Button x				
20.60,	Rocker x	Mandatory control	2 bits	DPT_Boolean control	C, T
20.40, 60.80,	Button x				
These objects are activated when the "Priority" function is selected in the parameters for each independent push-button/rocker. The objects (13, 33, 53, 73) transmit a 1-bit command to the bus and show the "Priority" status, for example, on a display when the button is pressed. The objects (20, 40, 60, 80) transmit a 2-bit command and switch an actuator channel (shutter/blind) into forced mode (movement operation of a shutter is locked) when the button is pressed. For further information see „4.9 „Mandatory control“ function“.					

7.3.9 Scene

22	Rocker 1-2	Scene	1 Byte	C	-	-	T	-	scene control	Low
62	Rocker 3-4	Scene	1 Byte	C	-	-	T	-	scene control	Low
102	Rocker 5-6	Scene	1 Byte	C	-	-	T	-	scene control	Low
142	Rocker 7-8	Scene	1 Byte	C	-	-	T	-	scene control	Low

Figure 54: Rocker "Scene" communication object

22	Push-button 1	Scene	1 Byte	C	-	-	T	-	scene control	Low
42	Push-button 2	Scene	1 Byte	C	-	-	T	-	scene control	Low
62	Push-button 3	Scene	1 Byte	C	-	-	T	-	scene control	Low
82	Push-button 4	Scene	1 Byte	C	-	-	T	-	scene control	Low
102	Push-button 5	Scene	1 Byte	C	-	-	T	-	scene control	Low
122	Push-button 6	Scene	1 Byte	C	-	-	T	-	scene control	Low
142	Push-button 7	Scene	1 Byte	C	-	-	T	-	scene control	Low
162	Push-button 8	Scene	1 Byte	C	-	-	T	-	scene control	Low

Figure 55: Button "Scene" communication object

No.	Name	Object function	Length	Data type	Flags
22.62,	Rocker x	Scene	1 byte	DPT_Scenes Control	C, T
22.42, 62.82,	Button x				
These objects are activated when the "Scene" function is selected in the parameters for each independent push-button/rocker. The objects (22, 42, 62, 82) transmit a 1-byte command to the bus and switch on the respectively stored scene in the actuator channels (light TV 50%, shutters closed to 75%) when the button is pressed. For further information see „4.10 „Scene“ function“					

7.3.10 Deactivate automatic

13	Rocker 1-2	Automatic control deactivation status	1 bit	C	-	W	T	U	enable	Low
18	Rocker 1-2	Automatic control deactivation	1 bit	C	-	-	T	-	enable	Low
53	Rocker 3-4	Automatic control deactivation status	1 bit	C	-	W	T	U	enable	Low
58	Rocker 3-4	Automatic control deactivation	1 bit	C	-	-	T	-	enable	Low
93	Rocker 5-6	Automatic control deactivation status	1 bit	C	-	W	T	U	enable	Low
98	Rocker 5-6	Automatic control deactivation	1 bit	C	-	-	T	-	enable	Low
133	Rocker 7-8	Automatic control deactivation status	1 bit	C	-	W	T	U	enable	Low
138	Rocker 7-8	Automatic control deactivation	1 bit	C	-	-	T	-	enable	Low

Figure 56: Rocker "Automatic mode" communication object

13	Push-button 1	Automatic control deactivation status	1 bit	C	-	W	T	U	enable	Low
18	Push-button 1	Automatic control deactivation	1 bit	C	-	-	T	-	enable	Low
33	Push-button 2	Automatic control deactivation status	1 bit	C	-	W	T	U	enable	Low
38	Push-button 2	Automatic control deactivation	1 bit	C	-	-	T	-	enable	Low
53	Push-button 3	Automatic control deactivation status	1 bit	C	-	W	T	U	enable	Low
58	Push-button 3	Automatic control deactivation	1 bit	C	-	-	T	-	enable	Low
73	Push-button 4	Automatic control deactivation status	1 bit	C	-	W	T	U	enable	Low
78	Push-button 4	Automatic control deactivation	1 bit	C	-	-	T	-	enable	Low
93	Push-button 5	Automatic control deactivation status	1 bit	C	-	W	T	U	enable	Low
98	Push-button 5	Automatic control deactivation	1 bit	C	-	-	T	-	enable	Low
113	Push-button 6	Automatic control deactivation status	1 bit	C	-	W	T	U	enable	Low
118	Push-button 6	Automatic control deactivation	1 bit	C	-	-	T	-	enable	Low
133	Push-button 7	Automatic control deactivation status	1 bit	C	-	W	T	U	enable	Low
138	Push-button 7	Automatic control deactivation	1 bit	C	-	-	T	-	enable	Low
153	Push-button 8	Automatic control deactivation status	1 bit	C	-	W	T	U	enable	Low
158	Push-button 8	Automatic control deactivation	1 bit	C	-	-	T	-	enable	Low

Figure 57: Button "Automatic mode" communication object

No.	Name	Object function	Length	Data type	Flags
13.53,	Rocker x	Automatic control deactivation status	1 bits	DPT_Enable	C, W, T, U
13.33 53.73,	Button x				
18.58,	Rocker x	Deactivate automatic	1 bits	DPT_Enable	C, T
18.38, 58.78,	Button x				
These objects are activated when the "Automatic control deactivation" function is selected in the parameters for each independent button/rocker. The objects (13, 33, 53, 73) transmit a 1-bit command to the bus and show the "Automatic mode" status, for example, on a display when the button is pressed. The objects (18, 38, 58, 78) transmit a 1-bit command when the button is pressed which allows it to start/stop a set automatic mode. For further information see „4.11 „Deactivate automatic functions“ function“					

7.4 "Internal temperature sensor" communication objects

172	Internal temperature sensor	Internal temperature sensor	2 Byte	C	R	-	T	-	temperature (°C)	Low

Figure 58: "Internal temperature sensor" communication object

No.	Name	Object function	Length	Data type	Flags
172	Internal temperature sensor	Internal temperature sensor	2 byte	DPT_Temperature (°C)	C, R, T
This object is activated when the "Sensor" parameter is activated. This object makes it possible to forward the internally measured temperature value to a thermostat, for example. For further information see „5. „Internal temperature sensor“ function parameters“					

8. Appendix

8.1 ETS software characteristics

Product	1gang	2gang
Max. number of group addresses	254	254
Max. number of assignments	255	255
Objects	132	132

Table 31: ETS software characteristics

8.2 Technical data

KNX medium	TP 1
Configuration mode	system link
Rated voltage KNX	21 ... 32 V⎓ SELV
Current consumption KNX	typ. 10 mA
Connection mode KNX	bus connecting terminals
Dimensions (W x H x D)	71 x 71 x 32 mm
Clamping range of attachment claws	52 … 70 mm
assembling height from supporting ring	11 mm
Degree of protection	IP 20
Protection class	III
Operating temperature	-5 … +45 °C
Storage/transport temperature	-20 … +70 °C
Standards	EN 60669-2-1; EN 60669-1 EN 50428

8.3 Accessories

Touch cover 1gang with lens	8096 02 xx
Touch cover 1gang with lens	8096 03 xx

8.4 Warranty

We reserve the right to realise technical and formal changes to the product in the interest of technical progress.

Our products are under guarantee within the scope of the statutory provisions.

If you have a warranty claim, please contact the point of sale.

Table of Figures

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