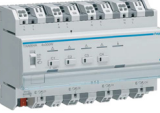


	application software	
- Manufacturers - Hager Electro - Lighting Dimmer	Dimmer KNX: 1, 3 and 4-fold <i>Electrical/Mechanical characteristics: see product user manual</i>	

	Product reference	Product designation	Application software ref	TP device  Radio device 
	TXA661A TXA661B	1-fold dimming actuator 300W, universal 1-fold dimming actuator 600W, universal	STXA661 1.x Version	
	TXA663A	3-fold dimming actuator 300W, universal	STXA663 1.x Version	
	TXA664A	4-fold dimming actuator 300W, universal	STXA664A 1.x Version	

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1. General

1.1 About this guide

The purpose of this manual is to describe the operation and configuration of KNX devices using ETS software or Easy tool software.

It consists of 4 parts:

- General information.
- The parameters and KNX objects available.
- The Easy tool configurations are available.
- Technical characteristics.

1.2 About the program ETS

1.2.1 ETS compatibility

The application programs are compatible with ETS4 and ETS5. They can be downloaded from our website under the order number.

ETS Version	File extension of compatible files
ETS4 (V4.1.8 or higher)	*.knxprod
ETS5	*.knxprod

1.2.2 Application descriptions

Application	Product reference
STXA661	TXA661A/B
STXA663	TXA663A
STXA664	TXA664A

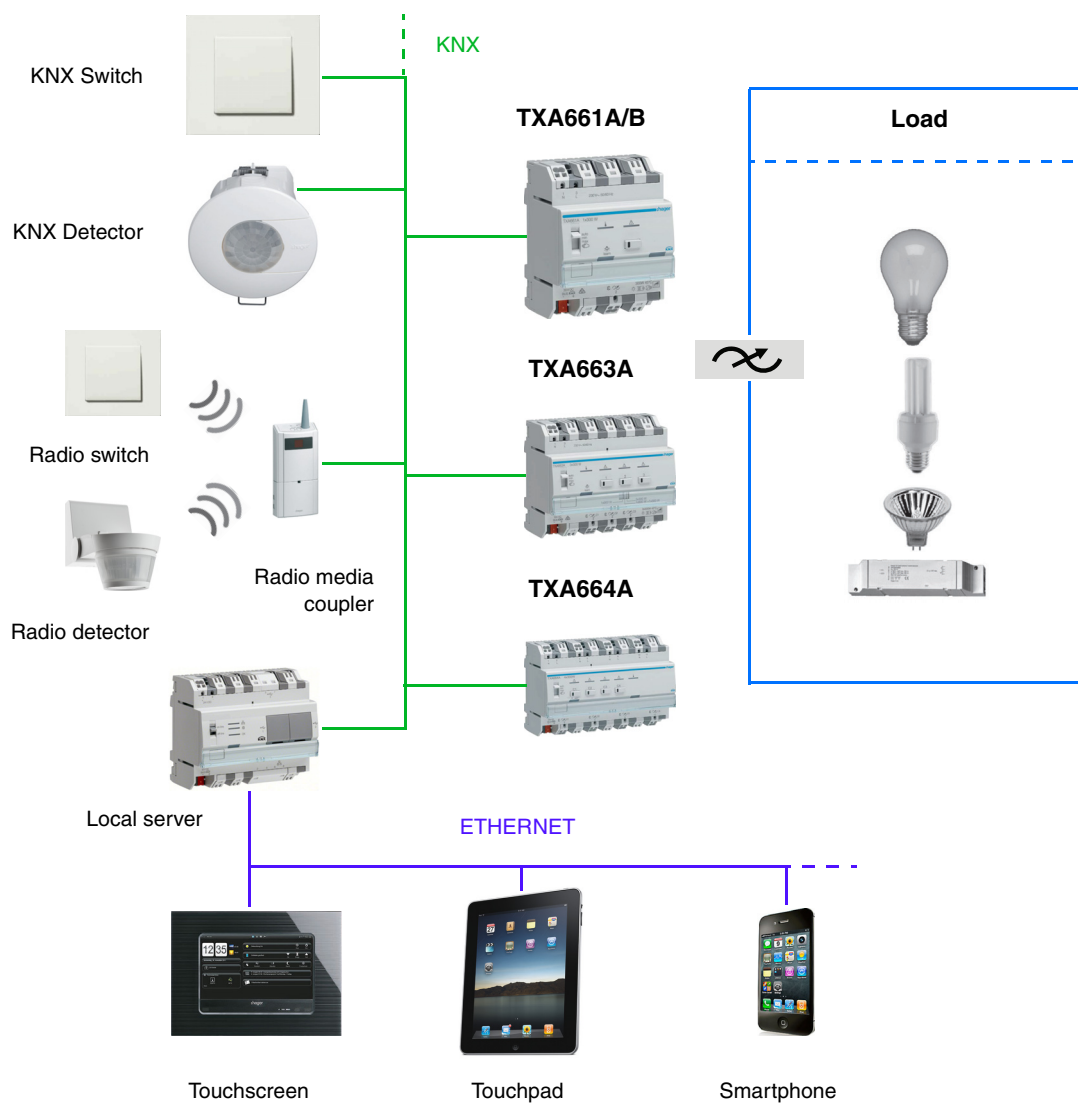
1.3 Easy tool software appearance

This product can also be configured using the TXA100 configuration tool. It is composed of a TJA665 configuration server. It is essential to update the configuration server software version. (Please refer to the TXA100 user manual).

2. General Description

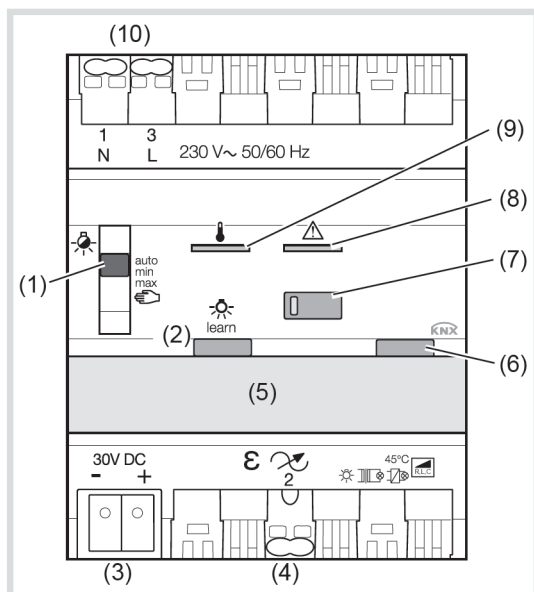
2.1 Installation of the device

2.1.1 Overview presentation



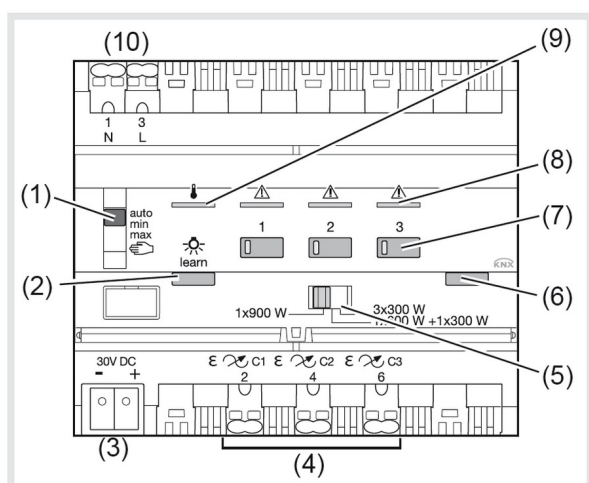
2.1.2 Connection

- TXA661A/B



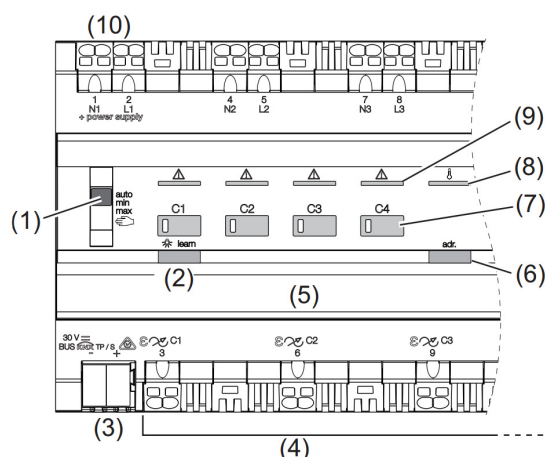
- (1) Slide switch auto/min/max/manu
- (2) Illuminated button for dimming mode
- (3) KNX bus connection terminal
- (4) Connection of load
- (5) Labelling field with cover
- (6) Illuminated programming button
- (7) Operation button for manual operation with status LED
- (8) Control LED short-circuit and overload protection
- (9) Control LED overheating protection
- (10) Mains connection

- TXA663A



- (1) Slide switch **auto/min/max/manu**
- (2) Illuminated button for dimming mode
- (3) KNX bus connection terminal
- (4) Connection of loads
- (5) Slide switch channel selection
- (6) Illuminated programming button
- (7) Operation button for manual operation with status LED
- (8) Control LED short-circuit and overload protection per output
- (9) Control LED overheating protection
- (10) Mains connection

- TXA664A



- (1) Slide switch **auto/min/max**/☞
- (2) Illuminated button for dimming mode
- (3) KNX bus connection terminal
- (4) Connection of load
- (5) Labelling field with cover
- (6) Illuminated programming button
- (7) Operation button for manual operation with status LED
- (8) Control LED overheating protection
- (9) Control LED short-circuit and overload protection per output
- (10) Mains connection

Note: the min and max settings are used to set the lowest and highest lighting levels for the outputs. These settings are achieved by storing the current output values through a long press on the relevant buttons next to the output on the front of the device.

2.1.3 Physical addressing

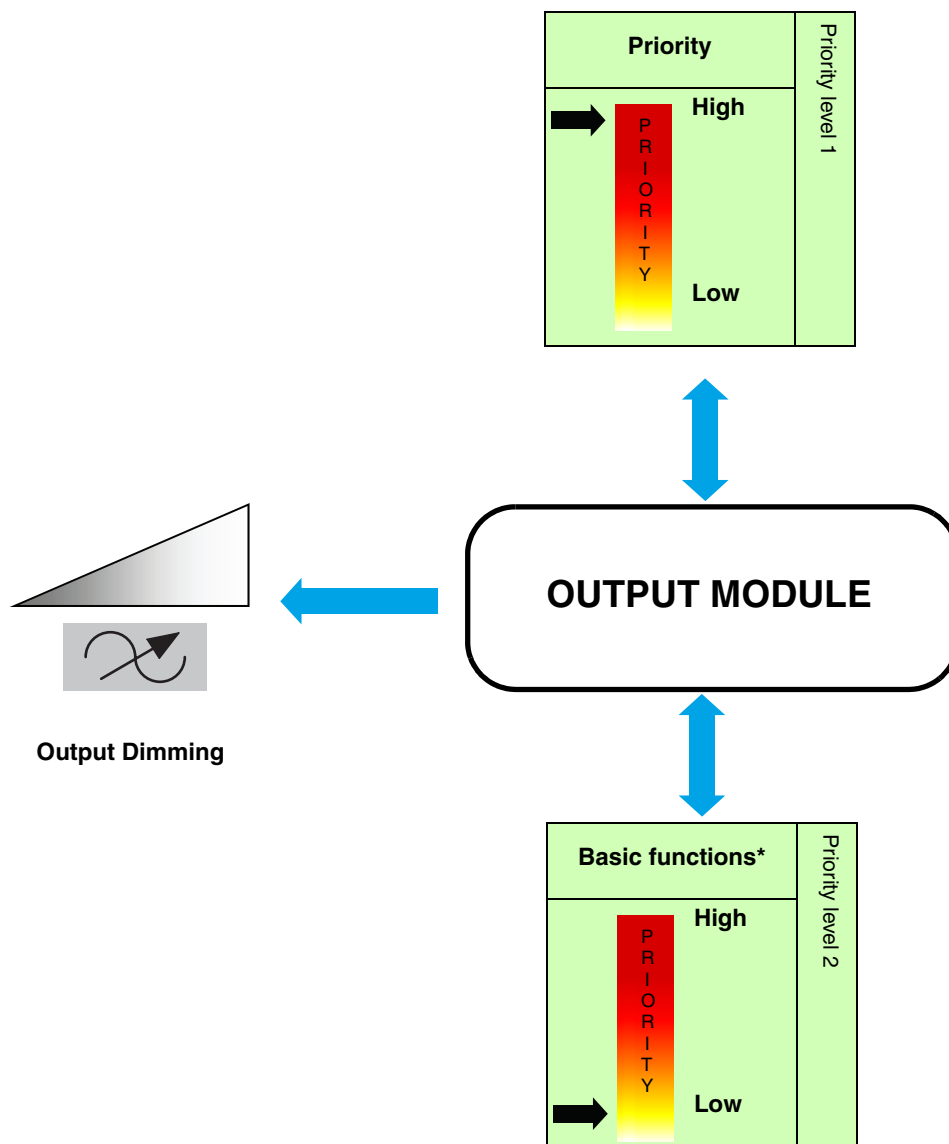
In order to perform the physical addressing or to check whether or not the bus is connected, press the lighted push button (see chapter 2.1.2 for the button location).

Light on = bus connected and ready for physical addressing.

Programming mode is activated, until the physical address is transferred from ETS. Pressing the button again, exits programming mode. Physical addressing can be carried out in automatic or manual mode.

2.2 Function modules of the application

The product has several command modes, each with a different priority..



* ON/OFF - Dimming - Timer - Scene: The last command received will have priority.

2.2.1 Primary functions

The applications allow individual configuration of the device outputs.

The most important functions are:

■ ON/OFF

An output can be switched on or off using the ON/OFF function. The command can come from switches, buttons or other control inputs.

■ Relative or absolute dimming (Brightness value)

With relative dimming, the brightness value is raised or lowered with respect to the current brightness value. This is achieved, for example, by a long press on a sensor button. With absolute dimming, the brightness value to be achieved is set on the dimmer as a % value.

■ Timer

The Timer function can switch a lighting circuit on or off for a configurable period. The output can be switched to a desired brightness level for a specified period. The timer may be interrupted before expiry of the delay time. A programmable Cut-OFF pre-warning announces the end of the delay time by halving the present brightness value of the output.

■ Priority

The Priority function is used to force the output into a defined state. The Priority function is controlled with a 2-bit command.

Priority: **Priority** > Basic function.

Only a Priority OFF command authorizes the output for control.

Application: Keeping lighting on for security reasons.

■ Automatic control

The Automation functionality allows commanding an output at the same time as the ON/OFF functionality or lighting value. The two functions have the same level of priority. The last command received will act on the status of the output.

An additional command object is used to activate or deactivate the Automatic control.

■ Scene

The Scene function is used to switch groups of outputs into a configurable predefined state.

A scene is activated by receipt of a 1-byte command.

Each output can be included in 64 different scenes.

■ Number of used outputs selection (Reference TXA663A only)

1, 2 or 3 lighting circuits can be controlled using this device. The maximum available power per output depends on the number of outputs used. The total power output is limited to 900W:

- 1 output uses: 900W.
- 2 outputs use: One 600W output and one 300W output.
- 3 outputs use: 300W per output.

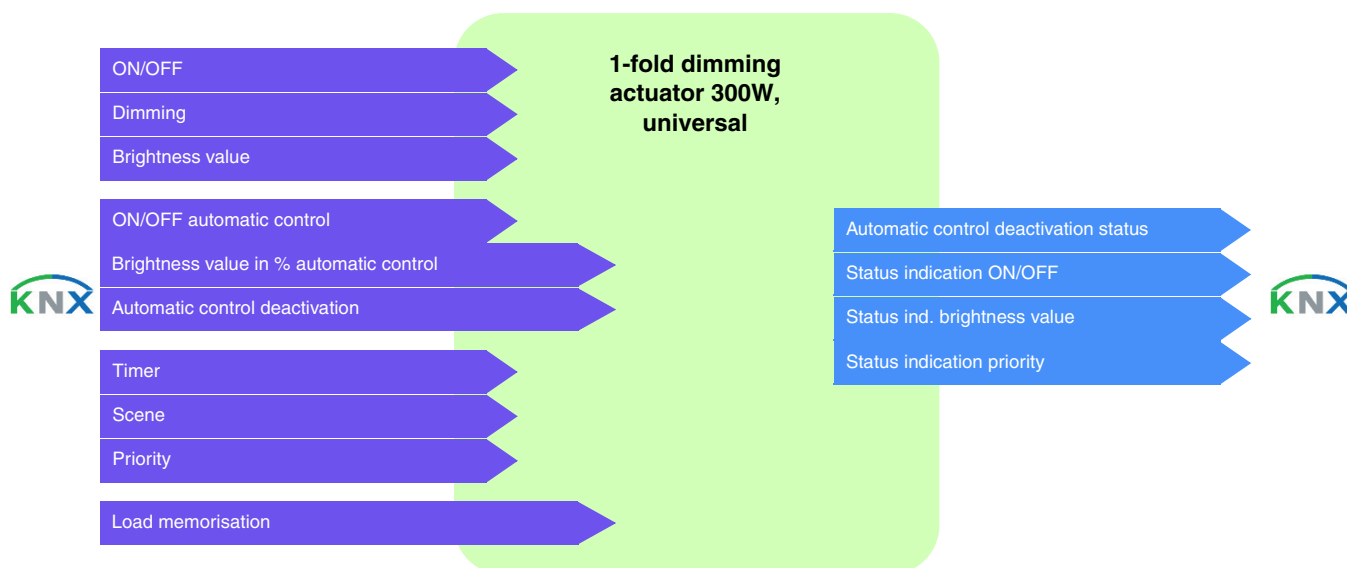
■ Manual mode

Manual mode allows the device to be disconnected from the bus. In this mode, each output can be priority controlled locally.

■ Status indication

The Status indication sends the switching status of the individual output contact on the KNX bus.

Communication objects



3. Programming by ETS

The function of the different devices only differs in the number of outputs. For this reason, only one device or one output will ever be described.

3.1 Parameters

3.1.1 Number of used outputs selection (Reference TXA663A only)

Number of used outputs

3

▼

1

2

3 ✓

Parameter	Description	Value
Number of used outputs	This setting defines the number of outputs used for the setting.	1 - 2 - 3*

Note: If the programme is configured for 3 outputs and the product is configured for 1 output, downloading in ETS will be made for the 3 pathways but the product will only use pathway 1.

3.1.2 Fixed parameters

The fixed parameters define the operating mode of the output relays.

Parameter	Description	Value
Status after ETS download	The output status remains unchanged after ETS download. <i>Note: During ETS-parameters download, the outputs remain unchanged.</i>	Maintain status
Parameters overwrite at next download (scenes)	The parameter values stored in the device will be overwritten with the ETS configured values at the next download.	Active
Status after priority	At the end of the priority, the output is: Switched back to the status before priority was activated.	Status before priority
Status after bus power cut	The output status remains unchanged during at bus return. <i>Note: the device will reboot on bus return. The priority functions that were present before the bus power cut, are no longer active (Priority).</i>	Maintain status

* Default value

Parameter	Description	Value
Switch ON speed (soft ON)	This parameter defines the switch ON speed for attaining the brightness value after input of an ON command.	0* ...1h45m00s

Parameter	Description	Value
Switch OFF speed (soft OFF)	This parameter defines the switch OFF speed for attaining brightness value 0% after input of an OFF command.	0* ...1h45m00s

3.1.3.2 Timer

The Timer function is used to switch on a lighting circuit for a programmable period. The timer may be interrupted before expiry of the delay time. A programmable Cut-OFF pre-warning announces the end of the delay time by halving the present brightness value of the output.

Timer

☒

Timer duration

2 min

Cut-OFF pre-warning

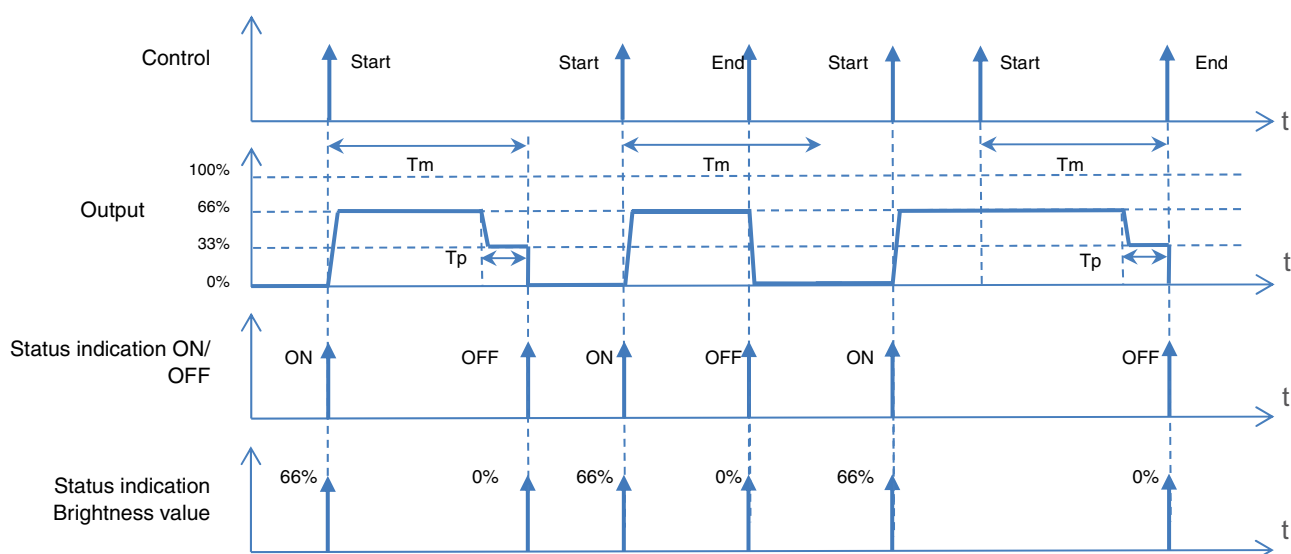
30 s

Parameter	Description	Value
Timer duration	This parameter determines the timer duration.	Not active, 1 s, 2 s, 3 s, 5 s, 10 s, 15 s, 20 s, 30 s, 45 s, 1 min, 1 min 15 s, 1 min 30 s, 2 min* , 2 min 30 s, 3 min, 5 min, 15 min, 20 min, 30 min, 1 h, 2 h, 3 h, 5 h, 12 h, 24 h

Parameter	Description	Value
Cut-OFF pre-warning	This parameter determines the lead time of the cut-OFF pre-warning.	Not active, 15 s, 30 s* , 1 min

* Default value

Operating principle:



Tm: Timer duration
Tp: Pre-warning lead time

Note: if the lead time of the cut-off pre-warning is greater than the duration of the timer, the cut-off pre-warning is not triggered.

Communication objects:

- 10 - Output 1 - Timer** (1 Bit – 1.001 DPT_Switch)
- 24 - Output 2 - Timer** (1 Bit – 1.001 DPT_Switch)
- 38 - Output 3 - Timer** (1 Bit – 1.001 DPT_Switch)

3.1.3.3 Priority

The Priority function is used to force the output into a defined state.

Priority: **Priority** > Basic function.

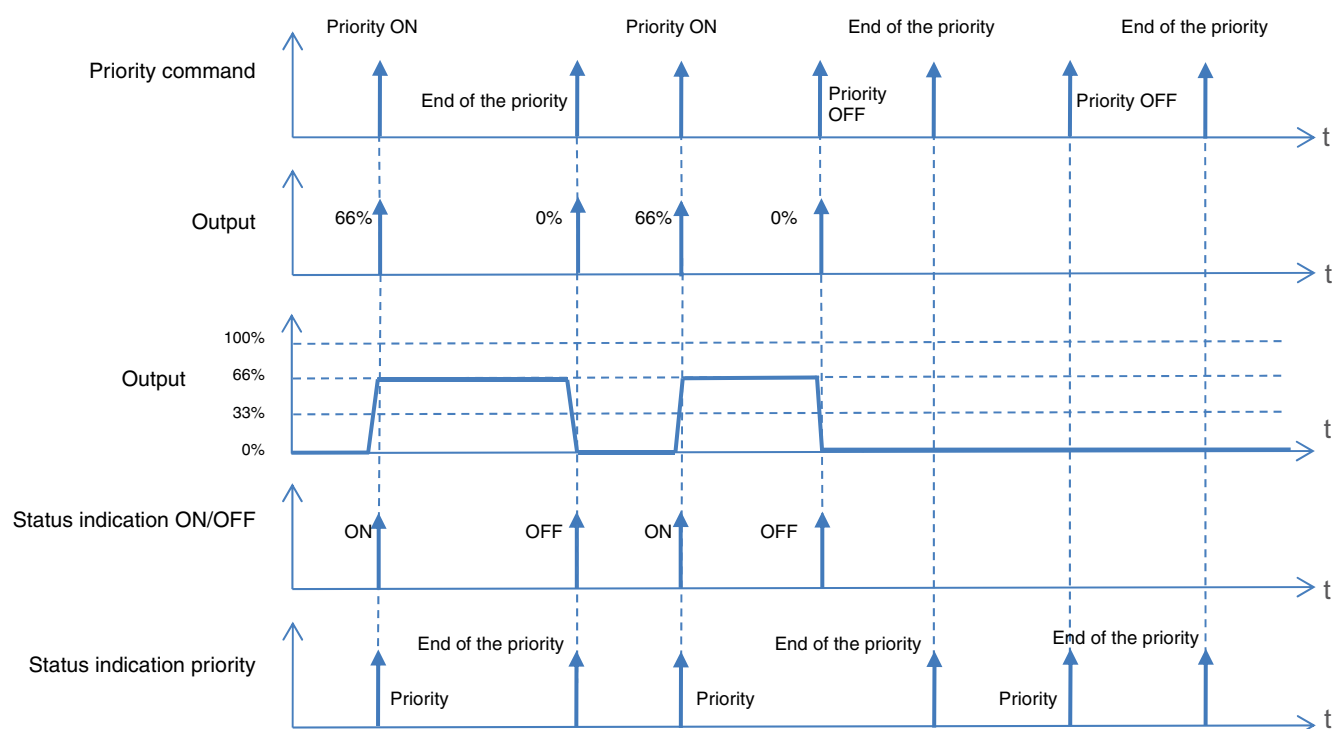
Only a Priority OFF command authorizes the output for control.

At the end of the priority, the output returns to the status it had before the priority (Memorisation function).

The device responds to telegrams received via the **Priority** object, as given in the following table:

Telegram received by the priority operation object			Output behaviour
Hexadecimal Value	Binary Value		
	Bit 1 (MSB)	Bit 0 (LSB)	
00	0	0	End of the priority
01	0	1	End of the priority
02	1	0	Priority OFF
03	1	1	Priority ON

Operating principle:



Communication objects:

- 12 - Output 1 - Priority** (2 Bit – 2.002 DPT_Bool_Control)
- 26 - Output 2 - Priority** (2 Bit – 2.002 DPT_Bool_Control)
- 40 - Output 3 - Priority** (2 Bit – 2.002 DPT_Bool_Control)
- 13 - Output 1 - Status indication priority** (1 Bit – 1.011 DPT_State)
- 27 - Output 2 - Status indication priority** (1 Bit – 1.011 DPT_State)
- 41 - Output 3 - Status indication priority** (1 Bit – 1.011 DPT_State)

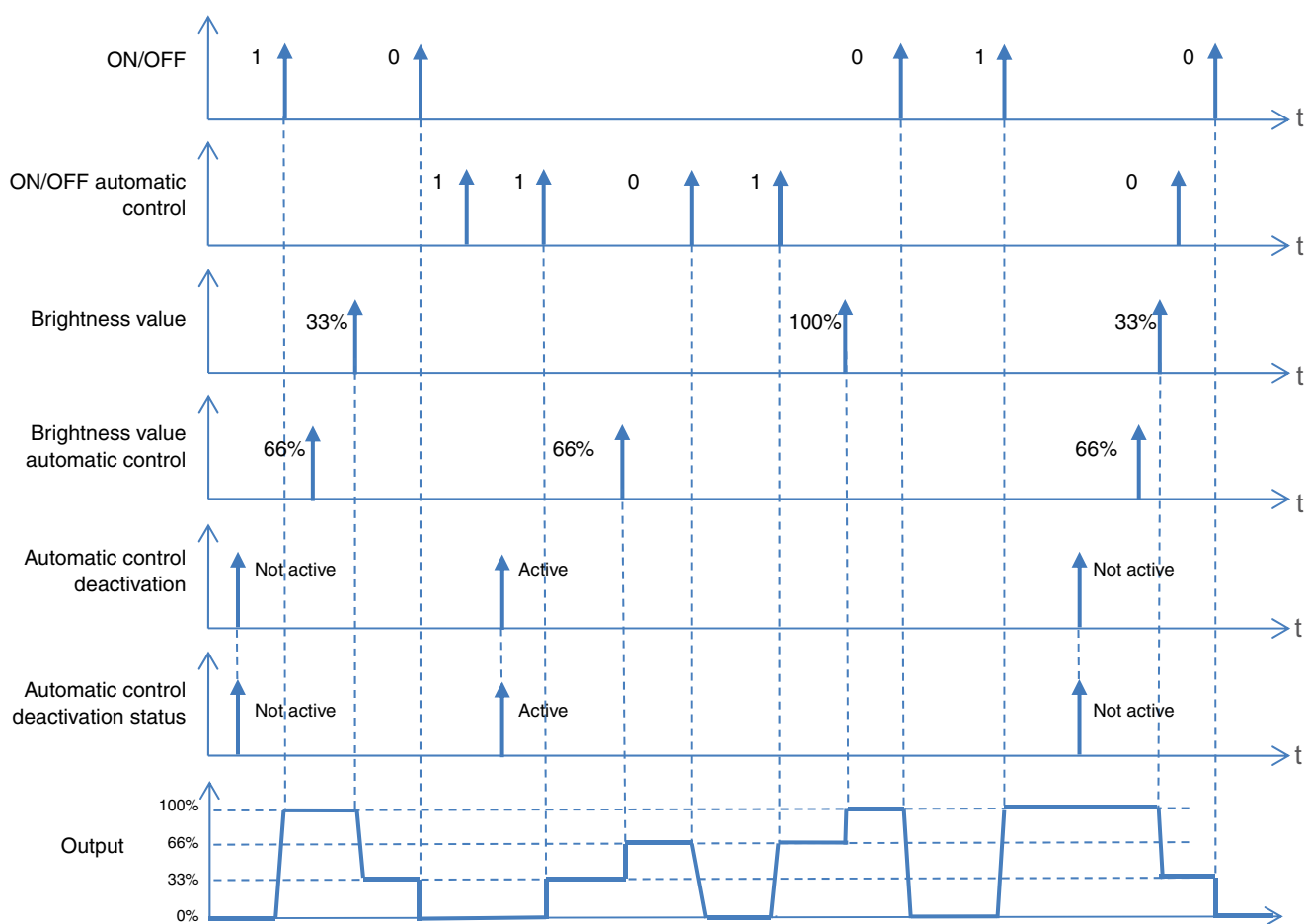
3.1.3.4 Automatic control

The Automatic control function is used to command an output in parallel to the ON/OFF function. The two functions have the same level of priority. The last command received will act on the status of the output. An additional command object is used to activate or deactivate the Automatic control.

Example: when an output is controlled by a button and in parallel by an automatic control (timer, twilight switch, weather station, etc.) the automatic control can be deactivated for reasons of comfort (vacations, public holidays, etc.).

Automatic control	☒
Automatic control deactivation	☒

Operating principle:



Communication objects:

- 4 - Output 1 - ON/OFF automatic control** (1 Bit – 1.001 DPT_Switch)
- 18 - Output 2 - ON/OFF automatic control** (1 Bit – 1.001 DPT_Switch)
- 32 - Output 3 - ON/OFF automatic control** (1 Bit – 1.001 DPT_Switch)
- 5 - Output 1 - Brightness value in % automatic control** (1 Byte – 5.001 DPT_Scaling)
- 19 - Output 2 - Brightness value in % automatic control** (1 Byte – 5.001 DPT_Scaling)
- 33 - Output 3 - Brightness value in % automatic control** (1 Byte – 5.001 DPT_Scaling)

Communication objects:

- 6 - Output 1 - Automatic control deactivation** (1 Bit – 1.001 DPT_Switch)
- 20 - Output 2 - Automatic control deactivation** (1 Bit – 1.001 DPT_Switch)
- 34 - Output 3 - Automatic control deactivation** (1 Bit – 1.001 DPT_Switch)
- 7 - Output 1 - Automatic control deactivation status** (1 Bit – 1.001 DPT_Switch)
- 21 - Output 2 - Automatic control deactivation status** (1 Bit – 1.001 DPT_Switch)
- 35 - Output 3 - Automatic control deactivation status** (1 Bit – 1.001 DPT_Switch)

3.1.3.5 Scene

The Scene function is used to switch groups of outputs into a configurable predefined state. Each output can be included in 64 different scenes.

Parameter	Description	Value
Number of scenes used	This parameter determines the number of scenes used.	8* - 16 - 32 - 48 - 64

Note: if the scene number received on the scene object is greater than the maximum number of scenes, the status of the output remains unchanged.

Parameter	Description
Scene x	This parameter is used to activate the scene in question.

Parameter	Description	Value
Brightness value for scene x (0-100%)	This parameter defines the brightness value that is applied to the output when Scene x is selected.	0...100*

x = 1 to 64

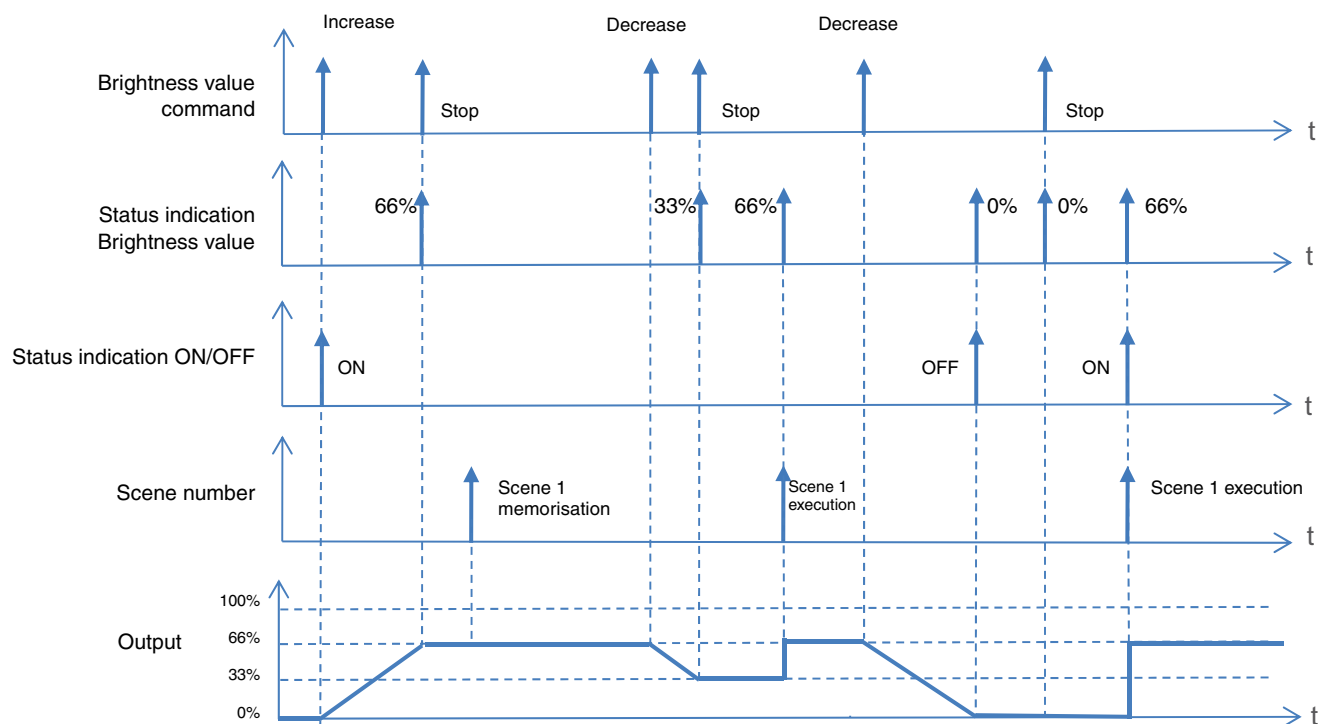
*Note: Each output has up to 64 scenes available, in accordance with the **Number of scenes used** parameter.*

Communication objects:

- 11 - Output 1 - Scene** (1 Byte – 17.001 DPT_SceneNumber)
- 25 - Output 2 - Scene** (1 Byte – 17.001 DPT_SceneNumber)
- 39 - Output 3 - Scene** (1 Byte – 17.001 DPT_SceneNumber)

* Default value

Operating principle:



Learning and storing scenes

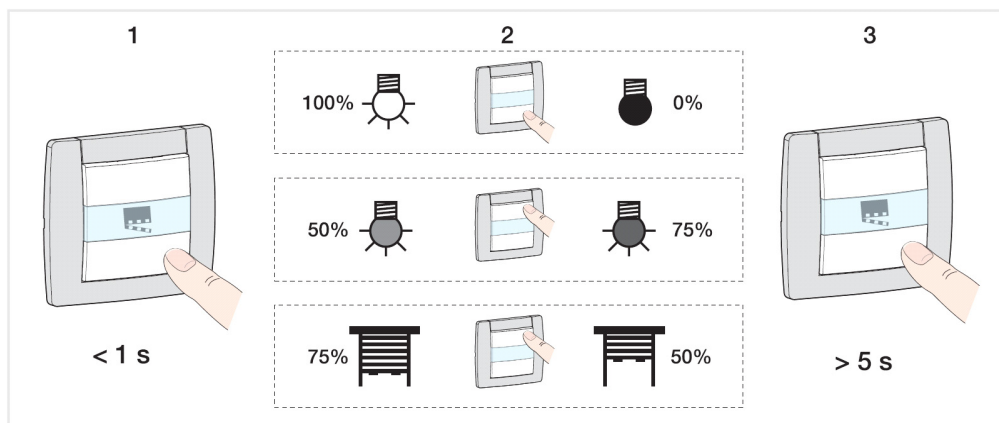
This process is used to change and store a scene. For example, by locally pressing the key in the room or by emission of the values from a visualization.

To access and store scenes, the following values must be sent:

Scene number	Access scene (Object value: 1 byte)	Store scene (Object value: 1 byte)
1-64	= Scene number - 1	= Scene number + 128
Examples		
1	0	128
2	1	129
3	2	130
...	...	
64	63	191

Here is the scene memorisation for local switches, for example.

- Activate scene by briefly pressing the transmitter that starts it.
- The outputs (lights, shutters, etc.) are set in the desired state using the usual local control devices (buttons, remote control, etc.).
- Memorise the status of the outputs with a press greater than 5 seconds long on the transmitter that starts the scene. The memorisation can be displayed by short-term activation of the outputs.



Product learning and memorisation

This procedure allows modifying a scene using a local action on the push buttons located on the front side of the product.

- Activate the scene using a short press on the ambiance push button, which triggers the scene,
- Set the dimmer to Manual mode and set the outputs to the desired setting by pressing the appropriate output push-buttons,
- Return to Auto mode,
- Save the scene using a long push for more than 5 seconds on the push-button that triggers the scene,
- Memorisation is signalled by the inversion of the concerned output status for 3 sec.

3.2 Communication objects

	Number	Name	Function of the object	Length	C	R	W	T
	0	Output 1	ON/OFF	1 bit	C	R	W	-
	1	Output 1	Dimming	4 bit	C	R	W	-
	2	Output 1	Brightness value	1 byte	C	R	W	-
	3	Output 1	Load memorisation	1 bit	C	R	W	-
	4	Output 1	ON/OFF automatic control	1 bit	C	R	W	-
	5	Output 1	Brightness value in % automatic control	1 byte	C	R	W	-
	6	Output 1	Automatic control deactivation	1 bit	C	R	W	-
	7	Output 1	Automatic control deactivation status	1 bit	C	R	-	T
	8	Output 1	Status indication ON/OFF	1 bit	C	R	-	T
	9	Output 1	Status ind. brightness value	1 byte	C	R	-	T
	10	Output 1	Timer	1 bit	C	R	W	-
	11	Output 1	Scene	1 byte	C	R	W	-
	12	Output 1	Priority	2 bit	C	R	W	-
	13	Output 1	Status indication priority	1 bit	C	R	-	T
	14	Output 2	ON/OFF	1 bit	C	R	W	-
	15	Output 2	Dimming	4 bit	C	R	W	-
	16	Output 2	Brightness value	1 byte	C	R	W	-
	17	Output 2	Load memorisation	1 bit	C	R	W	-
	18	Output 2	ON/OFF automatic control	1 bit	C	R	W	-
	19	Output 2	Brightness value in % automatic control	1 byte	C	R	W	-
	20	Output 2	Automatic control deactivation	1 bit	C	R	W	-
	21	Output 2	Automatic control deactivation status	1 bit	C	R	-	T
	22	Output 2	Status indication ON/OFF	1 bit	C	R	-	T
	23	Output 2	Status ind. brightness value	1 byte	C	R	-	T
	24	Output 2	Timer	1 bit	C	R	W	-
	25	Output 2	Scene	1 byte	C	R	W	-
	26	Output 2	Priority	2 bit	C	R	W	-
	27	Output 2	Status indication priority	1 bit	C	R	-	T

	Number	Name	Function of the object	Length	C	R	W	T
	28	Output 3	ON/OFF	1 bit	C	R	W	-
	29	Output 3	Dimming	4 bit	C	R	W	-
	30	Output 3	Brightness value	1 byte	C	R	W	-
	31	Output 3	Load memorisation	1 bit	C	R	W	-
	32	Output 3	ON/OFF automatic control	1 bit	C	R	W	-
	33	Output 3	Brightness value in % automatic control	1 byte	C	R	W	-
	34	Output 3	Automatic control deactivation	1 bit	C	R	W	-
	35	Output 3	Automatic control deactivation status	1 bit	C	R	-	T
	36	Output 3	Status indication ON/OFF	1 bit	C	R	-	T
	37	Output 3	Status ind. brightness value	1 byte	C	R	-	T
	38	Output 3	Timer	1 bit	C	R	W	-
	39	Output 3	Scene	1 byte	C	R	W	-
	40	Output 3	Priority	2 bit	C	R	W	-
	41	Output 3	Status indication priority	1 bit	C	R	-	T
	42	Output 4	ON/OFF	1 bit	C	R	W	-
	43	Output 4	Dimming	4 bit	C	R	W	-
	44	Output 4	Brightness value	1 byte	C	R	W	-
	45	Output 4	Load memorisation	1 bit	C	R	W	-
	46	Output 4	ON/OFF automatic control	1 bit	C	R	W	-
	47	Output 4	Brightness value in % automatic control	1 byte	C	R	W	-
	48	Output 4	Automatic control deactivation	1 bit	C	R	W	-
	49	Output 4	Automatic control deactivation status	1 bit	C	R	-	T
	50	Output 4	Status indication ON/OFF	1 bit	C	R	-	T
	51	Output 4	Status ind. brightness value	1 byte	C	R	-	T
	52	Output 4	Timer	1 bit	C	R	W	-
	53	Output 4	Scene	1 byte	C	R	W	-
	54	Output 4	Priority	2 bit	C	R	W	-
	55	Output 4	Status indication priority	1 bit	C	R	-	T

3.2.1 ON/OFF

No.	Name	Function of the object	Data type	Flags
0, 14, 28, 42	Output x	ON/OFF	1 bit - 1.001 DPT_Switch	C, R, W

These objects are always activated.
They enable switching of the output contact in accordance with the value that is sent via the KNX bus.

Normally open:

- Upon reception of an OFF command, the output varies the brightness value 0%.
- Upon reception of an ON command, the output varies to the last brightness value received (1 to 100%).

3.2.2 Dimming

No.	Name	Function of the object	Data type	Flags
1, 15, 29, 43	Output x	Dimming	4 bit - 3.007 DPT_Control_Dimming	C, R, W

These objects are always activated. It allows for relative dimming of the output as a function of the value sent by the KNX bus.
The output is dimmed in accordance with the 4-bit format value that arrives.

Object value:

b3	b2	b1	b0
C	Steps		

Data fields	Description	Code
C	Increase or reduction in brightness	0: Decrease 1: Increase
Steps	Brightness between 0% and 100% divided into steps	0: Stop 1: 100% 2: 50% 3: 25% 4: 12% 5: 6% 6: 3% 7: 1%

No.	Name	Function of the object	Data type	Flags
2, 16, 30, 44	Output x	Brightness value	1 byte - 5.001 DPT_Scaling	C, R, W

These objects are always activated. It allows for absolute dimming of the output as a function of the value sent by the KNX bus.
The output is dimmed according to the value that arrives in 1-byte format and corresponds in % to the brightness value to be attained.

Object value: 0 to 255: 0 = 0%, 255 = 100%.
Resolution: Approx. 0.4%.

3.2.3 Load memorisation

No.	Name	Function of the object	Data type	Flags
3, 17, 31, 45	Output x	Load memorisation	1 bit - 1.003 DPT_Enable	C, R, W

These objects are always activated. They are used to start the memorisation process in accordance with the value that is sent on the KNX bus.

This process lasts around 30 seconds and results in varying brightness.

After the memorisation, the load is activated on the highest step and blinks once, to report that the learning is completed.

If the object receives the value 1, the Load memorisation is started.

3.2.4 Automatic control

No.	Name	Function of the object	Data type	Flags
4, 18, 32, 46	Output x	ON/OFF automatic control	1 bit - 1.001 DPT_Switch	C, R, W

This object is activated when the **Automatic control** parameter is active. They enable switching of the output contact in accordance with the value that is sent via the KNX bus.

Normally open:

- Upon reception of an OFF command, the output varies the brightness value 0%.
- Upon reception of an ON command, the output varies to the last brightness value received (1 to 100%).

For further information, see: [Automatic control](#).

No.	Name	Function of the object	Data type	Flags
5, 19, 33, 47	Output x	Brightness value in % automatic control	1 byte - 5.001 DPT_Scaling	C, R, W

This object is activated when the **Automatic control** parameter is active. It allows for absolute dimming of the output as a function of the value sent by the KNX bus.

The output is dimmed according to the value that arrives in 1-byte format and corresponds in % to the brightness value to be attained.

Object value: 0 to 255: 0 = 0%, 255 = 100%.

Resolution: Approx. 0.4%.

For further information, see: [Automatic control](#).

No.	Name	Function of the object	Data type	Flags
6, 20, 34, 48	Output x	Automatic control deactivation	1 bit - 1.003 DPT_Enable	C, R, W

This object is activated when the **Automatic control deactivation** parameter is active.

This object is used to activate the automatic control function.

Object value:

- If the object receives the value 0, the automatic control function is inactive.
- If the object receives the value 1, the automatic control function is active.

For further information, see: [Automatic control](#).

No.	Name	Function of the object	Data type	Flags
7, 21, 35, 49	Output x	Automatic control deactivation status	1 bit - 1.003 DPT_Enable	C, R, T

This object is activated when the **Automatic control deactivation** parameter is active.
This object is used to send the status of the Automatic control deactivation function of the device on the KNX bus.

Object value:

- If the Automatic control deactivation function is deactivated, a telegram with a logical value 0 is sent.
- If the Automatic control deactivation function is activated, a telegram with a logical value 1 is sent.

This object is sent when there is a status change.
For further information, see: [Automatic control](#).

3.2.5 Status indication

No.	Name	Function of the object	Data type	Flags
8, 22, 36, 50	Output x	Status indication ON/OFF	1 bit - 1.001 DPT_Switch	C, R, T

These objects are always activated.
This object allows the status of the output contact to be sent from the device over the KNX bus.

Object value:

- If the output relay is open, a telegram with logic value 0 is sent on the KNX bus.
- If the output relay is closed, a telegram with logic value 1 is sent on the KNX bus.

This object is sent when there is a status change.

No.	Name	Function of the object	Data type	Flags
9, 23, 37, 51	Output x	Status ind. brightness value	1 byte - 5.001 DPT_Scaling	C, R, T

These objects are always activated.
This object allows the status of the brightness value of the Output to be sent over the KNX bus.

Object value: 0 to 255: 0 = 0%, 255 = 100%.

This object is sent when there is a status change.

3.2.6 Timer

No.	Name	Function of the object	Data type	Flags
10, 24, 38, 52	Output x	Timer	1 bit - 1.010 DPT_Start	C, R, W

This object is activated when the **Timer** parameter is active.
This object is used to activate the Timer function of the device via the KNX bus.

Object value:

- If a rising edge (0 to 1) arrives at this object, the output switches for a configurable period.
- If a falling edge (1 to 0) arrives at this object, the output remains in its current state.

Note: the timer duration can be interrupted by a long press on the button controlling the timer.
Note: when a start command is received during the timer, the timer duration is reset.

For further information, see: [Timer](#).

3.2.7 Scene

No.	Name	Function of the object	Data type	Flags
11, 25, 39, 53	Output x	Scene	1 byte - 18.001 DPT_SceneNumber	C, R, W

This object is activated when the **Scene** parameter is active.
This object is used to recall or save a scene.

Details on the format of the object are given below.

7	6	5	4	3	2	1	0
Learning	Not used	Scene number					

Bit 7: 0: The scene is called / 1: The scene is saved.

Bit 6: Not used.

Bit 5 to Bit 0: Scene numbers from 0 (Scene 1) to 63 (Scene 64).

For further information, see: [Scene](#).

3.2.8 Priority

No.	Name	Function of the object	Data type	Flags
12, 26, 40, 54	Output x	Priority	2 bit - 2.002 DPT_Bool_Control	C, R, W

This object is activated if the **Priority** parameter is active.
The status of the output contact is determined directly by this object.

Details on the format of the object are given below.

Telegram received by the priority operation object			Output behaviour
Hexadecimal Value	Binary Value		
	Bit 1 (MSB)	Bit 0 (LSB)	
00	0	0	End of the priority
01	0	1	End of the priority
02	1	0	Priority OFF
03	1	1	Priority ON

The first bit of this object (Bit 0) determines the status of the output contact, which should be priority controlled. The second bit activates or deactivates the Priority.

For further information, see: [Priority](#).

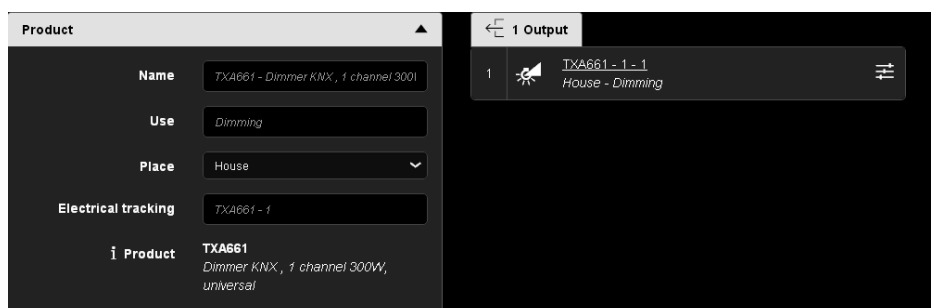
No.	Name	Function of the object	Data type	Flags
13, 27, 41, 55	Output x	Status indication priority	1 bit - 1.011 DPT_State	C, R, T
This object is activated if the Priority parameter is active. This object allows the status of the Priority to be sent from the device on the KNX bus. Object value: 0 = Not forced, 1 = Forced: - If Priority is deactivated, a telegram is sent with logic value 0. - If Priority is activated, a telegram is sent with logic value 1. This object is sent when there is a status change. For further information, see: Priority.				

4. Programming by Easy Tool

4.1 Product overview

■ TXA 661A/B: 1-fold dimming actuator 300W, universal

Product view:



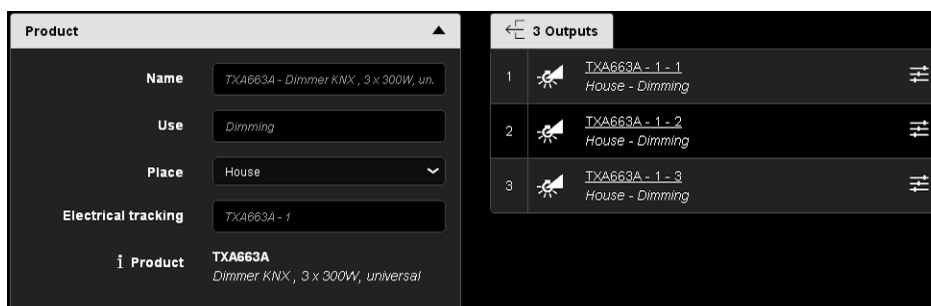
View of channels:

0 Input

1 Output	
	TXA661A - 1 - 1 Housing - Dimming

■ TXA 663A: 3-fold dimming actuator 300W, universal

Product view:



View of channels:

0 Input

3-fold output	
	TXA663A - 1 - 1 Housing - Dimming
	TXA663A - 1 - 2 Housing - Dimming
	TXA663A - 1 - 3 Housing - Dimming

■ TXA 664A: 4-fold dimming actuator 300W, universal

Product view:

Product

Name

TXA664A - Dimmer KNX, 4 x 300W, un.

Use

Dimming

Place

House

Electrical tracking

TXA664A - 1

Product

TXA664A

Dimmer KNX, 4 x 300W, universal

4 Outputs

1		TXA664A - 1 - 1	House - Dimming	
2		TXA664A - 1 - 2	House - Dimming	
3		TXA664A - 1 - 3	House - Dimming	
4		TXA664A - 1 - 4	House - Dimming	

View of channels:

0 Input

4-fold output	
	TXA663A - 1 - 1 Housing - Dimming
	TXA663A - 1 - 2 Housing - Dimming
	TXA663A - 1 - 3 Housing - Dimming
	TXA663A - 1 - 4 Housing - Dimming

■ Pathway parameters

This parameter window is used to set the device outputs. These parameters are available individually for each output.

TXA663A - 1 - 1

Timer duration

2 min

Cut-OFF pre-warning

30 s

Switch ON speed (soft ON)

0

Switch OFF speed (soft OFF)

0

■ Available functionalities

Lighting		Dimming	
	ON		Increase dimming/ON
	OFF		Decrease dimming/OFF
	ON/OFF		Increase/decrease dimming
	Toggle switch		Dimming
	Timer		Dimming switch
	Priority ON		Dimming automatic control PB
	Priority OFF		Dimmer switch automatic control
	Priority ON push-button (1)		Scene
	Priority OFF push-button (1)		Scene switch
	Automatic control ON		Automatic control deactivation
	Automatic control OFF		Deactivation Automatic control push-button (1)
	ON/OFF automatic control		
	Scene		
	Scene switch		
	Automatic control deactivation		
	Deactivation Automatic control push-button (1)		

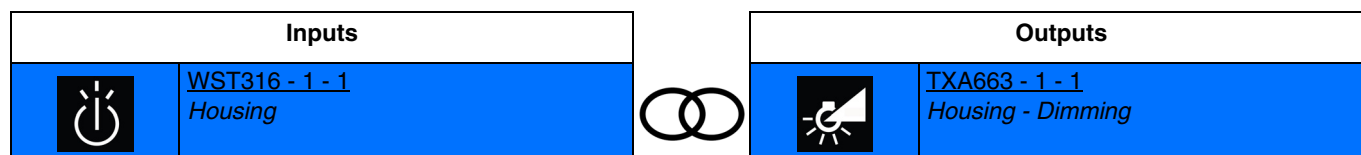
(1) These functionalities are only available with products with push-button input that have status indication LEDs.

4.2 Product functionalities

4.2.1 ON/OFF

An output can be switched on or off using the ON/OFF function. The command can come from switches, buttons or other control inputs.

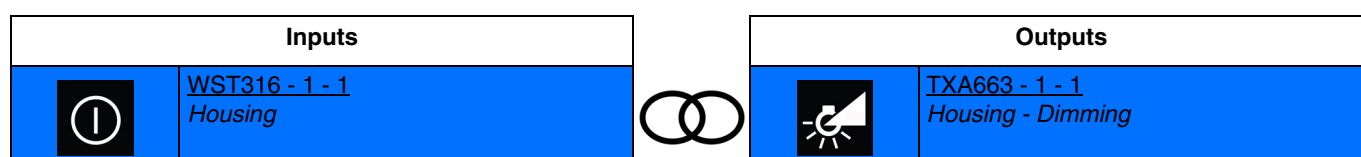
- **ON:** turns on the lighting circuit.



Closing input contact: turns on the light at the last saved level

Opening input contact: no action

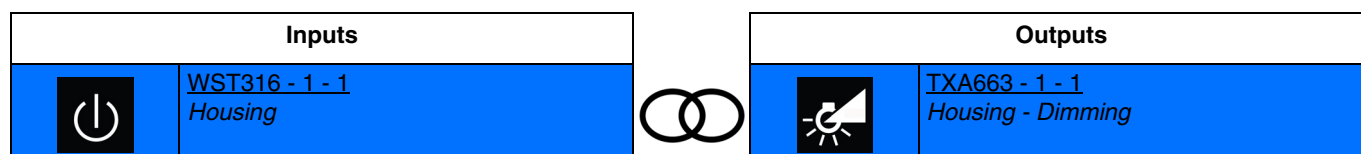
- **OFF:** turns off the lighting circuit.



Closing input contact: turns off the light

Opening input contact: no action

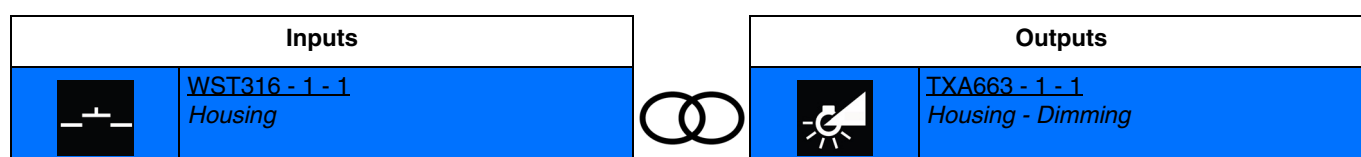
- **ON/OFF:** turns on or shuts off the lighting circuit (switch).



Closing input contact: turns on the light at the last saved level

Opening input contact: Turns off the light

- **Toggle switch:** inverses the lighting circuit status.



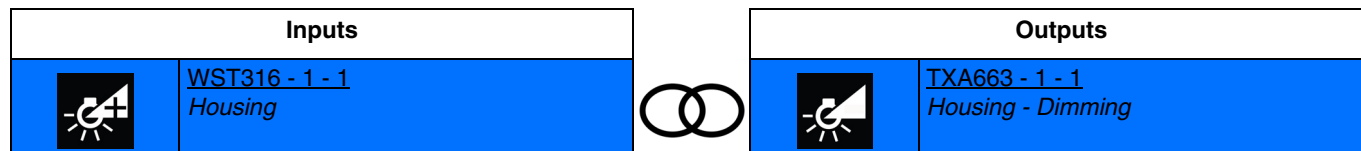
Closing input contact: toggles between turning on at the last saved level and turning off the light

Successive closings inverse output contact status each time.

4.2.2 Relative or absolute dimming (Brightness value)

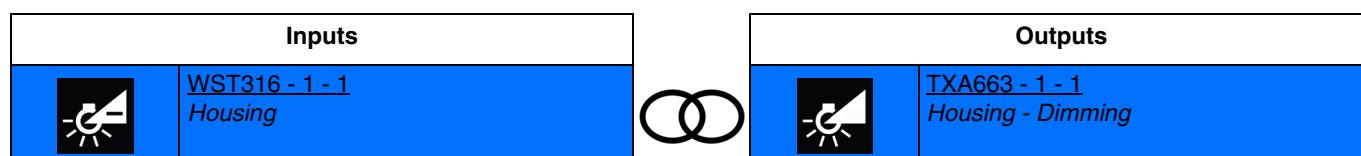
With relative dimming, the brightness value is raised or lowered with respect to the current brightness value. This is achieved, for example, by a long press on a sensor button. With absolute dimming, the brightness value to be achieved is set on the dimmer as a % value.

- **Increase dimming/ON:** increases the output level.



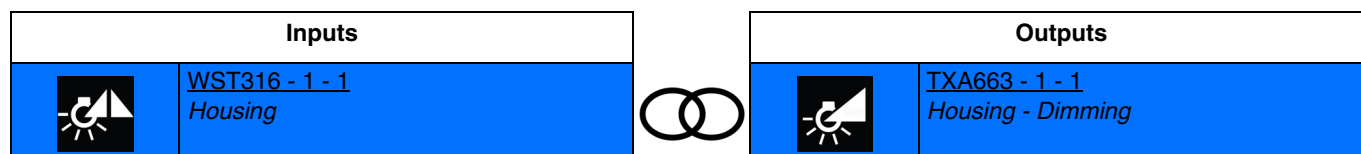
Brief closing of the input contact: turns on the light at the last saved level
Prolonged closing of the input contact: increase in the brightness level

- **Decrease dimming/OFF:** decreases the output level



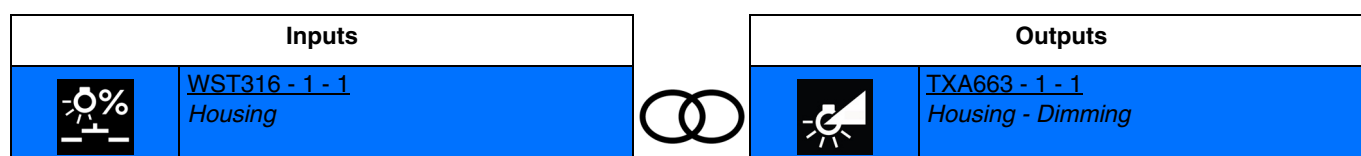
Brief closing of the input contact: turns off the light
Prolonged closing of the input contact: decrease in the brightness level

- **Increase/decrease dimming:** varies the light with a single push-button



Brief closing of the input contact: turns on the light at the last saved level or turns off the light
Prolonged closing of the input contact: increase or decrease in the lighting level

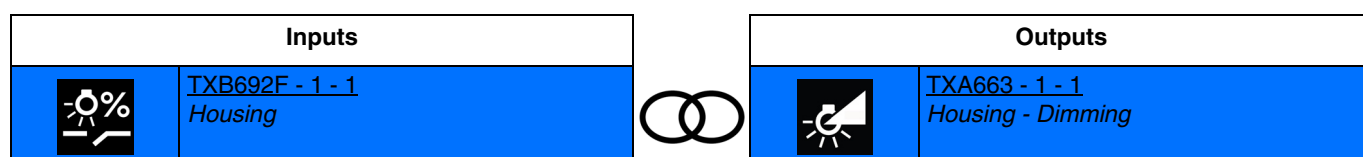
- **Dimming:** varies the light with a defined brightness value.



Closing input contact: turns on the light at the defined brightness value
Opening input contact: no action

Note: at the time the connection is made, the brightness value must be defined for the contact closure input.

■ **Dimming switch:** varies the light with two brightness values defined according to the opening and closing of the input contact.



Closing input contact: turns on the light at the 1 brightness value

Opening input contact: turns on the light at the 2 brightness value

Note: at the time the connection is made, the brightness values must be defined for the contact closure input.

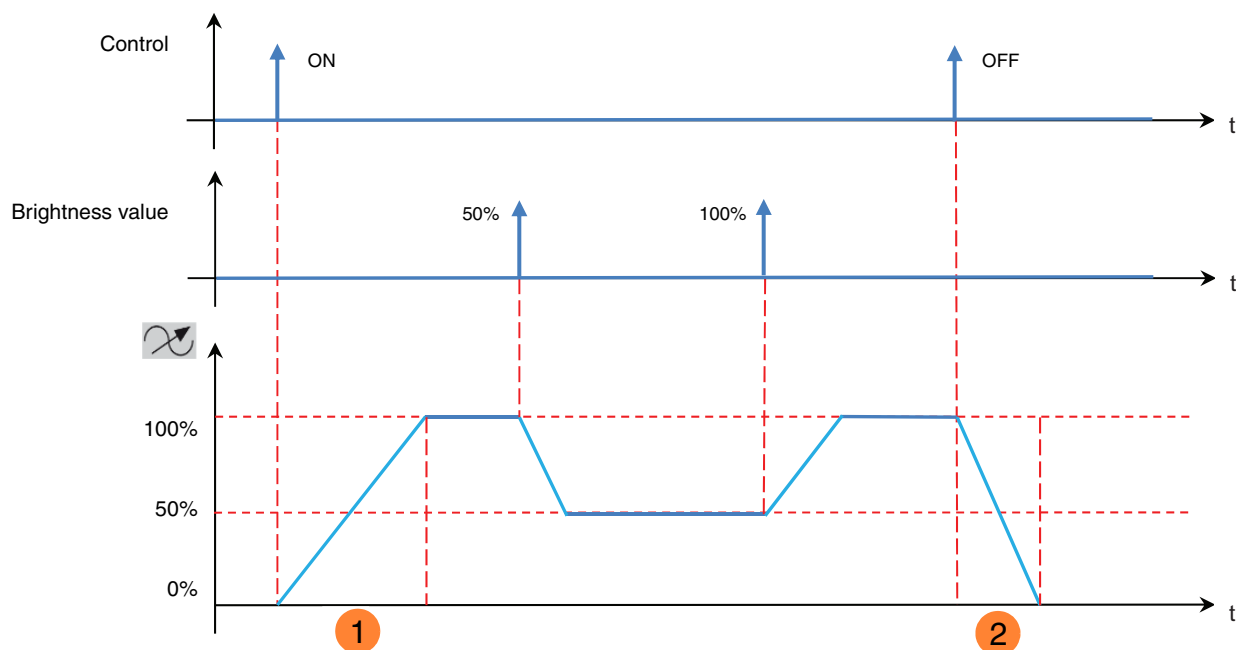
4.2.3 Switch ON speed (soft ON) - Switch OFF speed (soft OFF)

Switch ON speed (soft ON)

0

Switch OFF speed (soft OFF)

0



- 1 Switch ON speed (soft ON)
- 2 Switch OFF speed (soft OFF)

Parameter	Description	Value
Switch ON speed (soft ON)	This parameter defines the switch ON speed for attaining the brightness value after input of an ON command.	0*...6553s
Switch OFF speed (soft OFF)	This parameter defines the switch OFF speed for attaining brightness value 0% after input of an OFF command.	0*...6553s

* Default value

4.2.4 Timer

The Timer function is used to switch on a lighting circuit for a programmable period. The timer may be interrupted before expiry of the delay time. A programmable Cut-OFF pre-warning announces the end of the delay time by halving the present brightness value of the output.

Timer duration

2 min

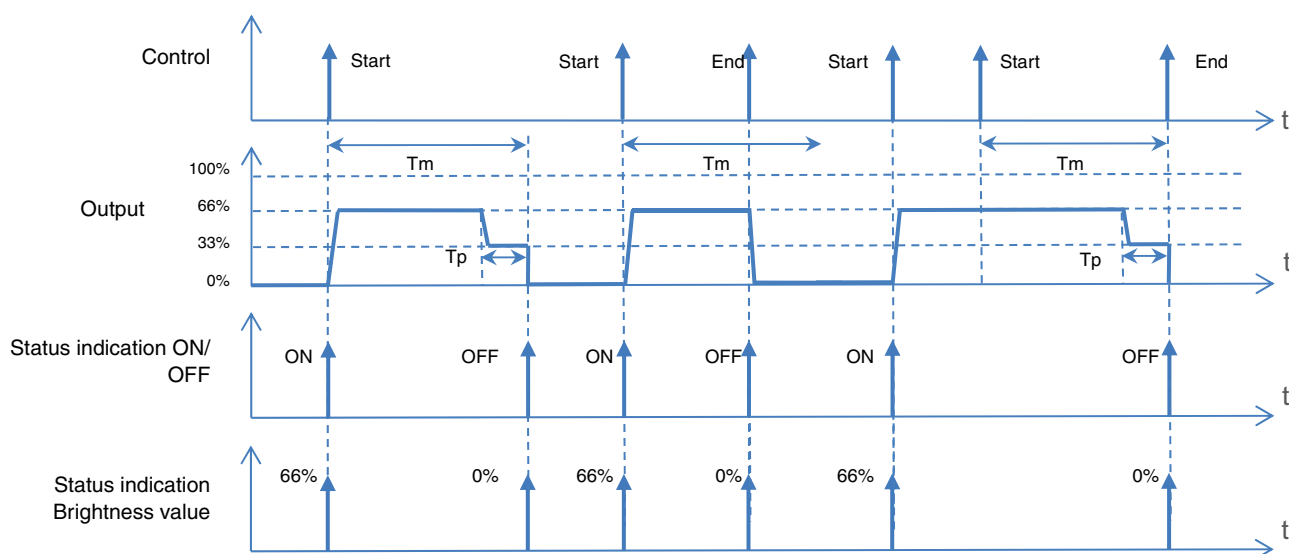
Cut-OFF pre-warning

30 s

Parameter	Description	Value
Timer duration	This parameter determines the timer duration.	Not active, 1 s, 2 s, 3 s, 5 s, 10 s, 15 s, 20 s, 30 s, 45 s, 1 min, 1 min 15 s, 1 min 30 s, 2 min* , 2 min 30 s, 3 min, 5 min, 15 min, 20 min, 30 min, 1 h, 2 h, 3 h, 5 h, 12 h, 24 h

Parameter	Description	Value
Cut-OFF pre-warning	This parameter determines the lead time of the cut-OFF pre-warning.	Not active, 15 s, 30 s* , 1 min

Operating principle:



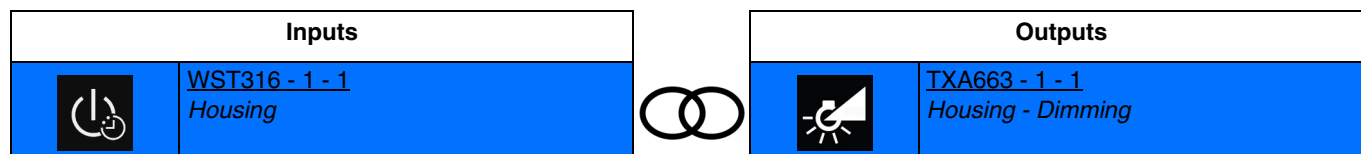
T_m : Timer duration
 T_p : Pre-warning lead time

Note: if the lead time of the cut-off pre-warning is greater than the duration of the timer, the cut-off pre-warning is not triggered.

* Default value

■ The connection:

The Timer function is used to switch on a lighting circuit for a programmable period.

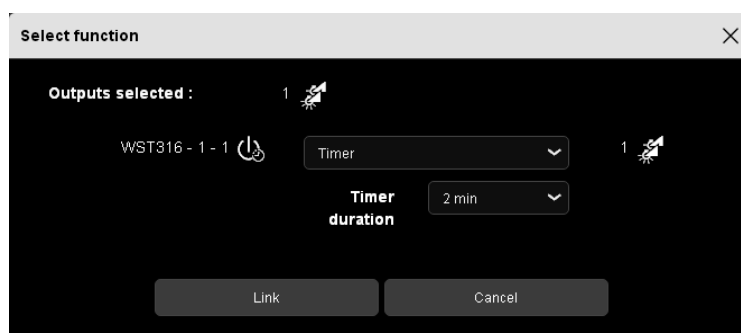


Brief closing of the input contact: timing function light switched on at the last saved level

Timing function interruption:

Prolonged closing of the input contact: stop of timing delay in progress and light is turned off

Note: at the time of connection, it is possible to define the timer duration.



4.2.5 Priority

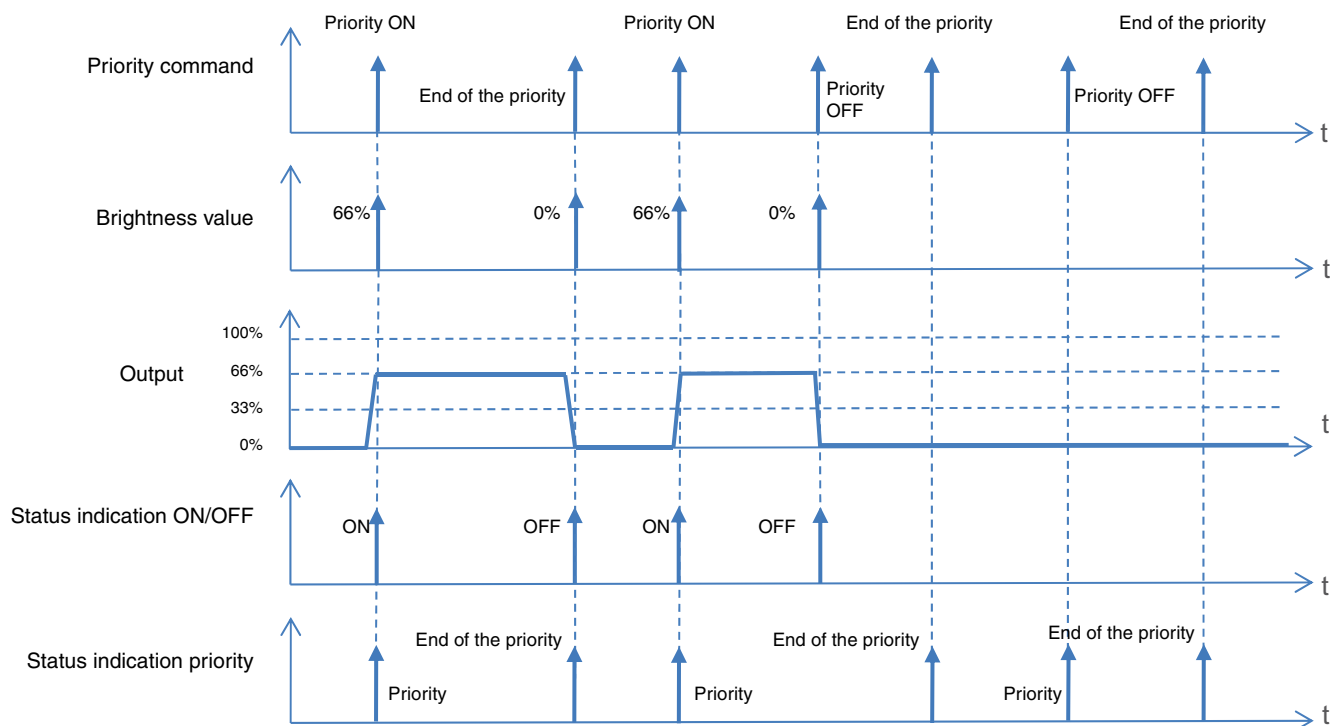
The Priority function is used to force the output into a defined state.

Priority: **Priority** > Basic function.

Only a Priority OFF command authorizes the output for control.

At the end of the priority, the output returns to the status it had before the priority (Memorisation function).

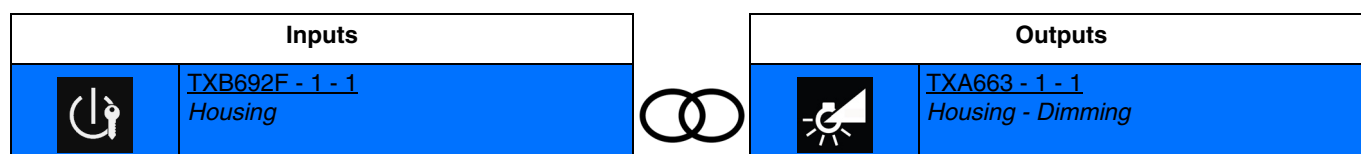
Operating principle:



Note: the brightness value for the on priority corresponds to the last saved level.

■ Links

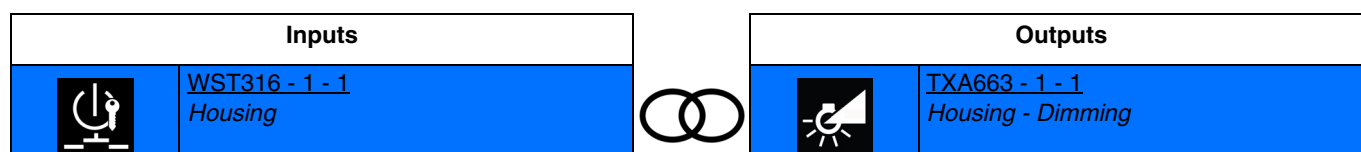
- **Priority ON:** allows forcing and keeping the lighting circuit on.



Closing input contact: turns on the light at the last saved level

Opening input contact: end of the priority

- **Priority ON push-button:** allows forcing and keeping the light circuit on using a push-button.

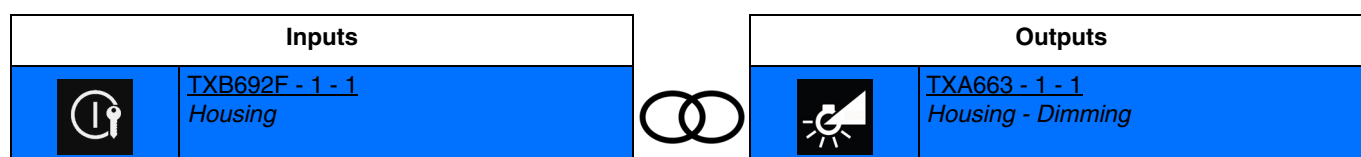


Closing input contact: turns on the light at the last saved level

Opening input contact: no action

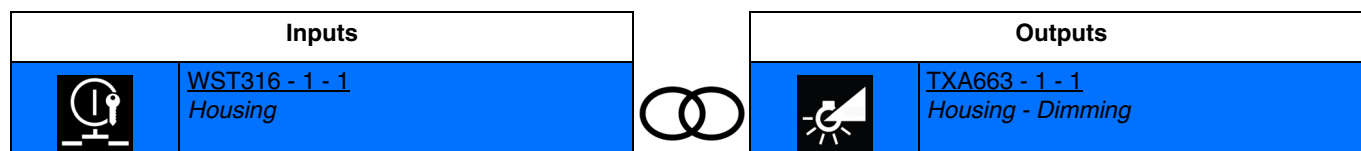
A second closure of the input contact triggers the end of priority.

- **Priority OFF:** allows forcing and keeping the lighting circuit off.



Closing input contact: turns off the light
 Opening input contact: end of the priority

- **Priority OFF push-button:** allows forcing and keeping the lighting circuit off using a push-button.



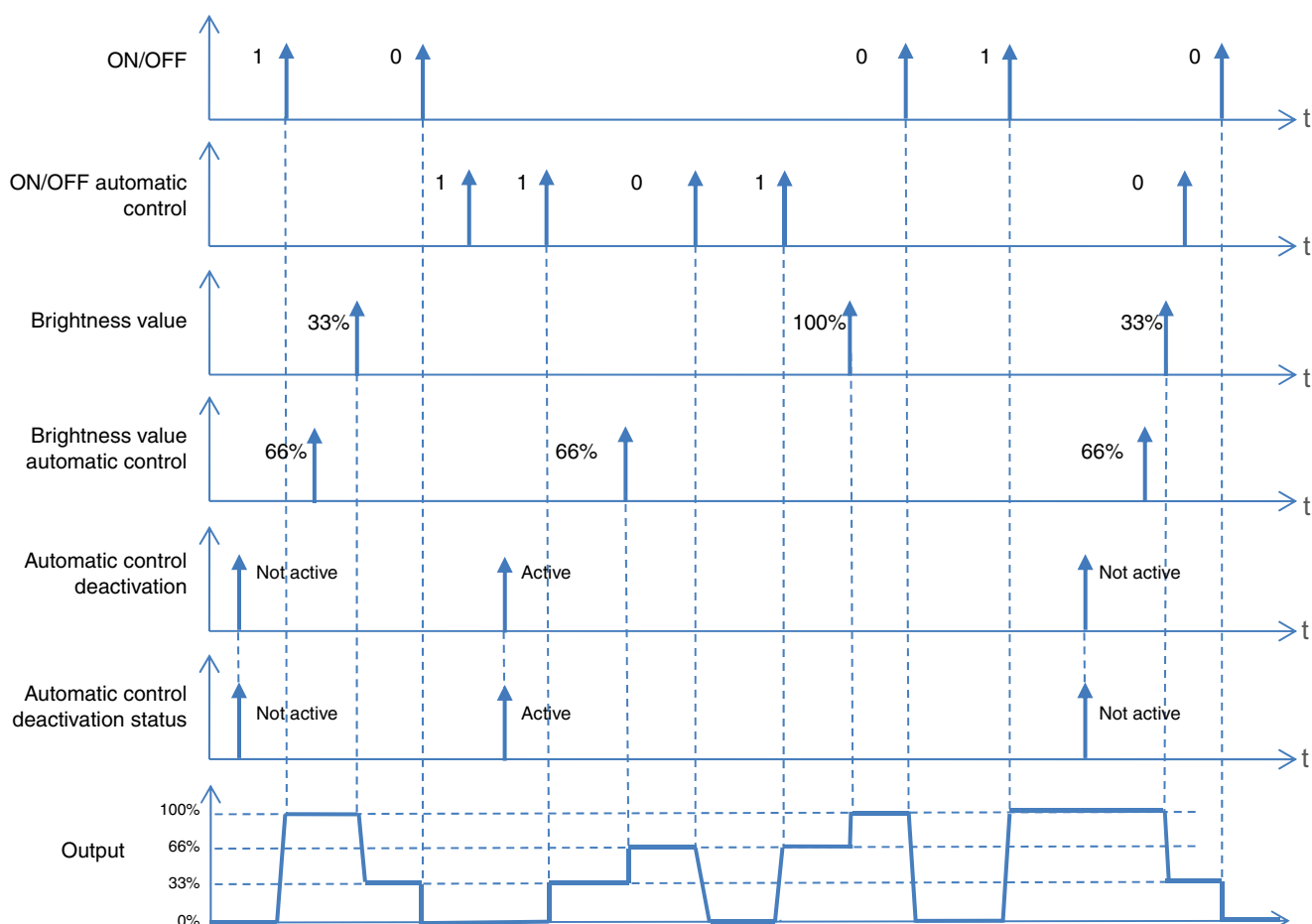
Closing input contact: turns off the light
 Opening input contact: no action
 A second closure of the input contact triggers the end of priority.

4.2.6 Automatic control

The Automatic control function is used to command an output in parallel to the ON/OFF function. The two functions have the same level of priority. The last command received will act on the status of the output. An additional command object is used to activate or deactivate the Automatic control.

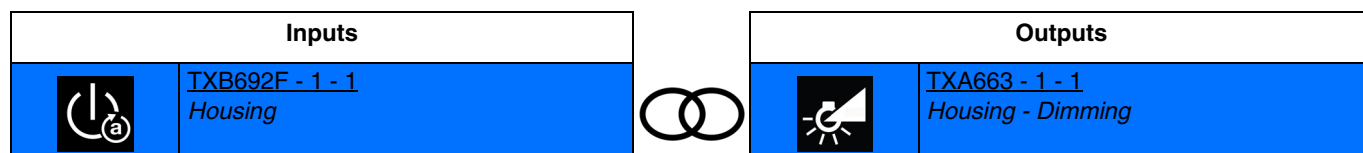
Example: when an output is controlled by a button and in parallel by an automatic control (timer, twilight switch, weather station, etc.) the automatic control can be deactivated for reasons of comfort (vacations, public holidays, etc.).

Operating principle:



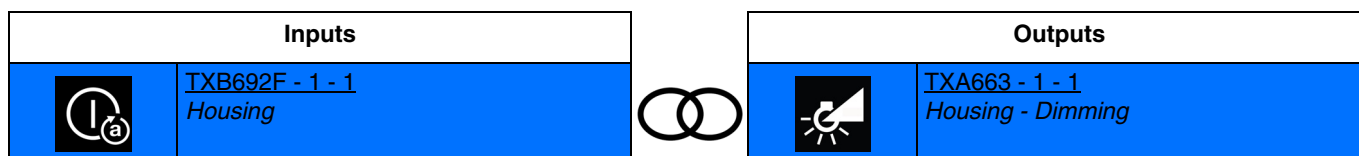
■ Links

- **Automatic control ON:** allows turning on the light circuit using automatic control.



Closing input contact: turns on the light at the last saved level
Opening input contact: no action

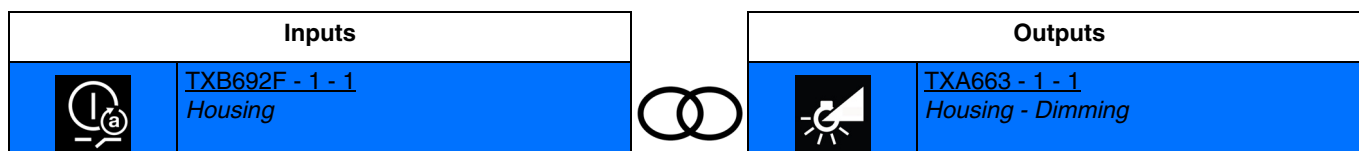
- **Automatic control OFF:** allows turning on the light circuit using automatic control.



Closing input contact: turns off the light

Opening input contact: no action

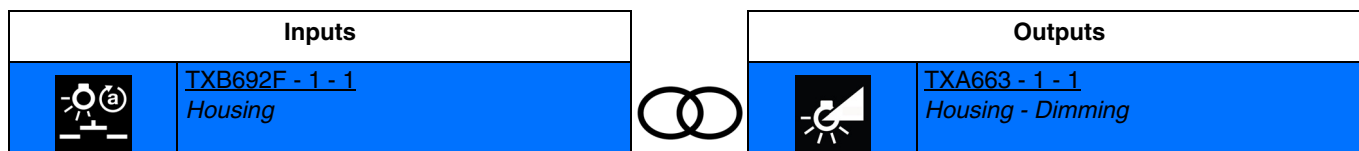
- **ON/OFF automatic control:** allows turning the lighting circuit on or off using automatic control (switch).



Closing input contact: turns on the light at the last saved level

Opening input contact: turns off the light

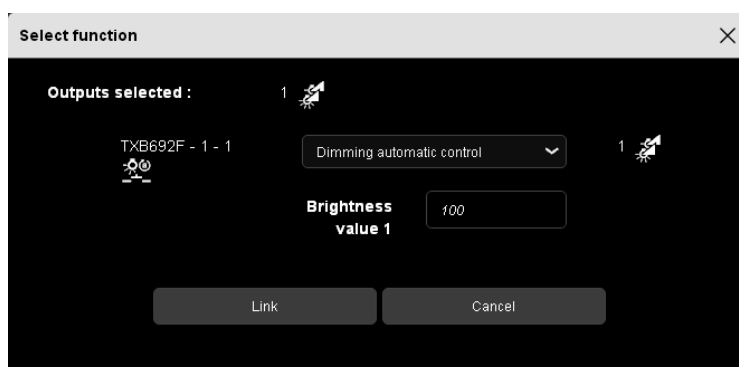
- **Dimming automatic control PB:** allows varying the light with a defined brightness value using automatic control.



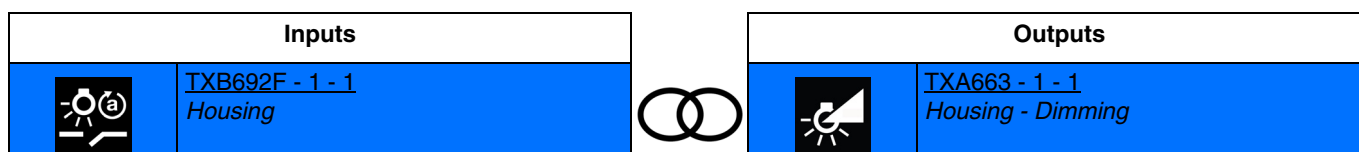
Closing input contact: turns on the light at the last saved level

Opening input contact: turns off the light

Note: at the time the connection is made, the brightness value must be defined for the contact closure input.



- **Dimmer switch automatic control:** allows varying the light with two defined brightness values according to the opening and closing input contact using automatic control.



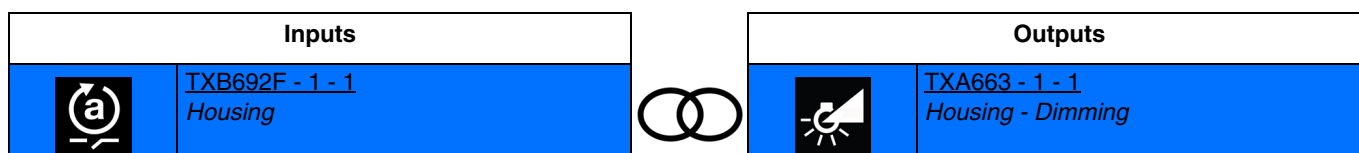
Closing input contact: turns on the light at the 1 brightness value

Opening input contact: turns on the light at the 2 brightness value

Note: at the time the connection is made, the brightness values must be defined for the contact closure input.



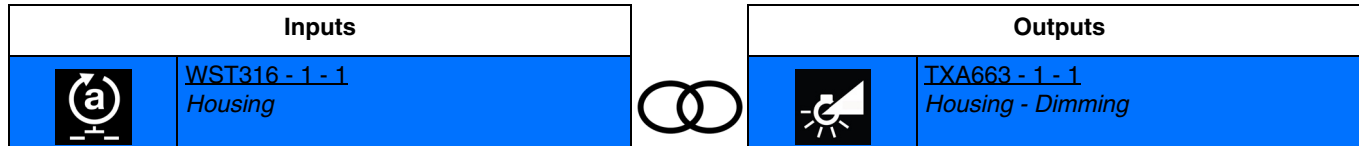
- **Automatic control deactivation:** deactivates automatic control.



Closing input contact: deactivated automatic control

Opening input contact: activated automatic control

- **Deactivation Automatic control push-button:** deactivates Automatic control using a push-button.



Closing input contact: deactivated automatic control

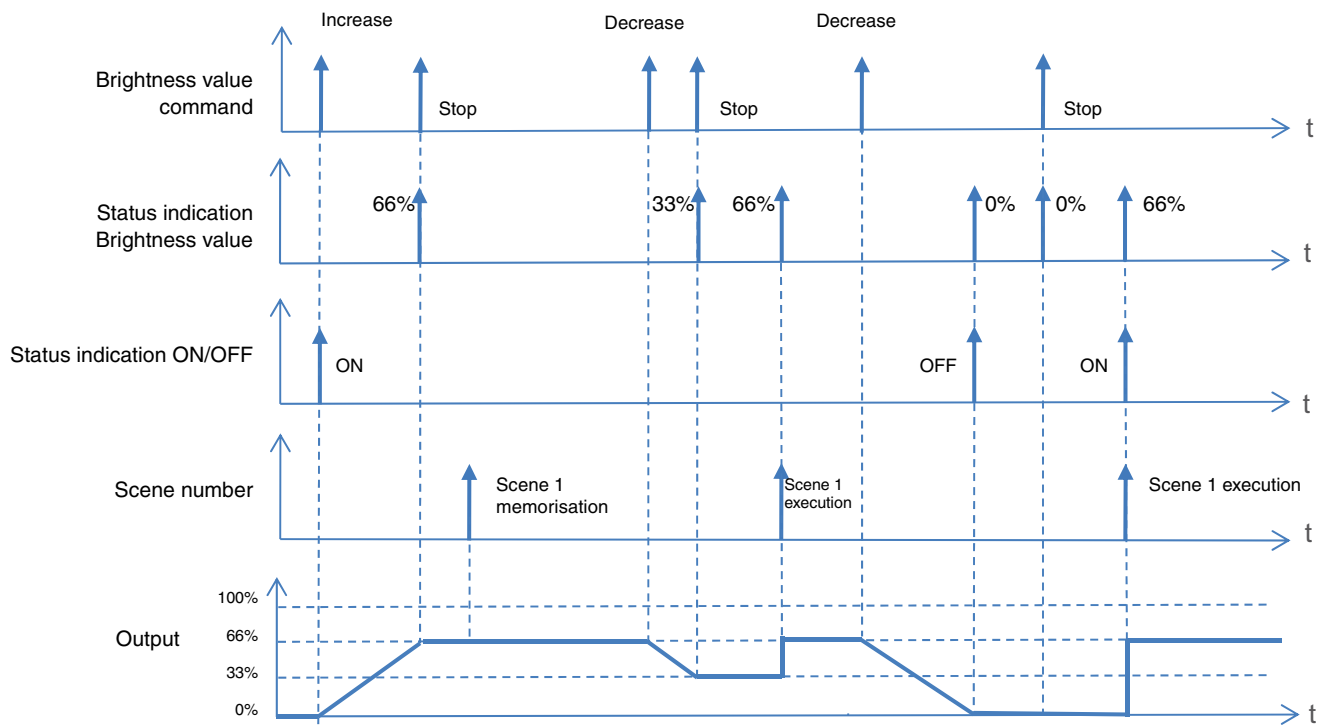
Opening input contact: no action

A second closing input contact triggers activation of the automatic control.

4.2.7 Scene

The Scene function is used to switch groups of outputs into a configurable predefined state. Each output can be included in 8 different scenes.

Operating principle:



Learning and storing scenes

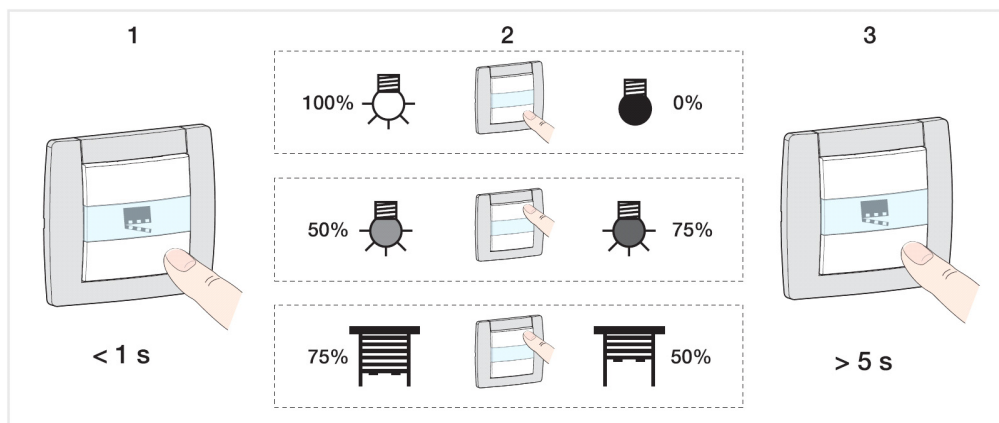
This process is used to change and store a scene. For example, by locally pressing the key in the room or by emission of the values from a visualization.

To access and store scenes, the following values must be sent:

Scene number	Access scene (Object value: 1 byte)	Store scene (Object value: 1 byte)
1-64	= Scene number - 1	= Scene number + 128
Examples		
1	0	128
2	1	129
3	2	130
...	...	
64	63	191

Here is the scene memorisation for local switches, for example.

- Activate scene by briefly pressing the transmitter that starts it.
- The outputs (lights, shutters, etc.) are set in the desired state using the usual local control devices (buttons, remote control, etc.).
- Memorise the status of the outputs with a press greater than 5 seconds long on the transmitter that starts the scene. The memorisation can be displayed by short-term activation of the outputs.



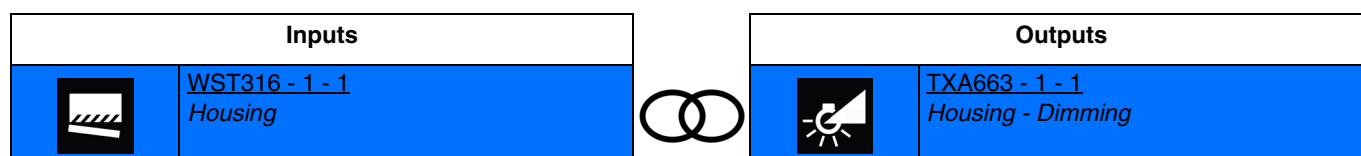
Product learning and memorisation

This procedure allows modifying a scene using a local action on the push buttons located on the front side of the product.

- Activate the scene using a short press on the ambiance push button, which triggers the scene,
- Set the dimmer to Manual mode and set the outputs to the desired setting by pressing the appropriate output push-buttons,
- Return to Auto mode,
- Save the scene using a long push for more than 5 seconds on the push-button that triggers the scene,
- Memorisation is signalled by the inversion of the concerned output status for 3 sec.

Links

- **Scene:** the scene is activated by pressing the push-button.

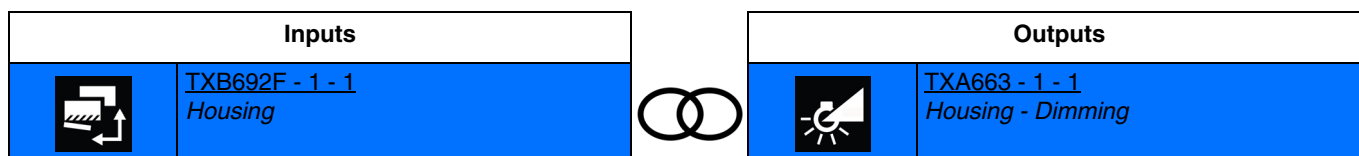


Closing input contact: scene activation
Opening input contact: no action

Note: at the time the connection is made, the scene number must be defined for the closing input contact.



- **Scene switch:** the scene is activated according to the closing or opening input contact.



Closing input contact: scene activation 1

Opening input contact: scene activation 2

Note: at the time the connection is made, the scene number must be defined for the closing and opening input contact.



5. Appendix

5.1 Specifications

5.1.1 TXA661A/B

Supply voltage via mains	230 V AC, +10 % .. -15 %
	240 V AC, +6 % .. -6%
Supply voltage KNX	DC 21...32 V SELV
Current consumption KNX	2,3 mA
Consumption without load	350 mW
Operating altitude max.	2000 m
Pollution degree	2
Surge voltage	4 kV
Degree of protection of housing	IP20
Degree of protection of housing under front panel	IP30
IK (impact protection)	04
Overvoltage class	III
Dimension	4 TE, 4 x 17,5 mm
Connection capacity	0,75 mm ² ...2,5 mm ²
Operating temperature	-5 ...+ 45 °C
Storage temperature	-20 ...+ 70 °C
Standards	EN50491-3
	EN60669-2-1
	EN50428
Variant 300 W	
Energy dissipation	4 W
230 V incandescent lamps, halogen lamps	300 W
12 V / 24 V halogen lamps with conventional transformer	300 VA
12 V / 24 V halogen lamps with electronic transformer	300 W
Dimmable energy-saving lamps (CFL)/ Dimmable LED lamps	60 W
Variant 600 W	
Energy dissipation	7,5 W
230 V incandescent lamps, halogen lamps	600 W
12 V / 24 V halogen lamps with conventional transformer	600 VA
12 V / 24 V halogen lamps with electronic transformer	600 W
Dimmable energy-saving lamps (CFL)/ Dimmable LED lamps	120 W

5.1.2 TXA663A

Supply voltage via mains	230 V AC, +10 % .. -15 %
	240 V AC, +6 % .. -6%
Energy dissipation	8,9 W
Supply voltage KNX	DC 21...32 V SELV
Current consumption KNX	2,3 mA
Consumption without load	600 mW
Operating altitude max.	2000 m
Pollution degree	2
Surge voltage	4 kV
Degree of protection of housing	IP20
Degree of protection of housing under front panel	IP30
IK (impact protection)	04
Overvoltage class	III
Dimension	6 TE, 6 x 17,5 mm
Connection capacity	0,75 mm ² ...2,5 mm ²
Operating temperature	-5 ...+ 45 °C
Storage temperature	-20 ...+ 70 °C
Standards	EN50491-3
	EN60669-2-1
	EN50428

Number of outputs		1	2	3
Position of the slider switch (5)				
Load type	Maximum load on the output			
Incandescent lamps, halogen lamps 230 V	C1	900 W	600 W	300 W
	C2		300 W	300 W
	C3			300 W
Conventional transformer.	C1	900 VA	600 VA	300 VA
	C2		300 VA	300 VA
	C3			300 VA
Electronic transformer.	C1	900 W	600 W	300 W
	C2		300 W	300 W
	C3			300 W
Dimmable energy-saving lamps (CFL)	C1	210 W	120 W	60 W
	C2		60 W	60 W
	C3			60 W
Dimmable LED lamps	C1	210 W 15 lamps	120 W 15 lamps	60 W 8 lamps
	C2		60 W 8 lamps	60 W 8 lamps
	C3			60 W 8 lamps

5.1.3 TXA664A

Supply voltage via mains	230 V AC, + 10 % .. - 15 %
	240 V AC, + 6 % .. - 6%
Supply voltage KNX/EIB	DC 21...32 V TBTS
Current consumption KNX/EIB	2,3 mA
Consumption without load	600 mW
Operating altitude max	2000 m.
Pollution degree	2
Power dissipation per output	2 W
Surge voltage	4 kV
Degree of protection of housing	IP 20
Degree of protection of housing under front panel	IP30
IK (impact protection)	4
Overvoltage class	III
Dimension	8 TE, 8 x 17,5 mm
Connection capacity	0,75 mm ² ...2,5 mm ²
Operating temperature	-5 ...+ 45°C
Storage temperature	- 20 ...+ 70°C
Standards	EN50491-3
	EN60669-2-1
	EN50428
Load that can be connected per output	
230 V incandescent lamps, halogen lamps	300 W
12 V / 24 V halogen lamps with conventional transformer	300 VA
12 V / 24 V halogen lamps with electronic transformer	300 W
Dimmable energy-saving lamps (CFL)/LED lamps (max. of lamps)	60 W (8)

5.2 Characteristics

TXA664A

Device	TXA661A/B	TXA663A	TXA664A
Max. number of group addresses	254	254	254
Max. number of allocations	255	255	255
Objects	14	42	56

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