25 A8 Switch/dim actuator 981301

Use of the application program

Product family: Lighting
Product type: Dimmer
Manufacturer: Siemens

Name: Switch/dim actuator N 526E02
Order no.: 5WG1 526-1EB02

Functional description

The switch/dim actuator N 526E02 offers the following functions in combination with the application program *25 A8 Switch/dim actuator 981301*, which can be configured with the ETS2 V1.3 or a higher version:

Identical / individual configuration per channel
Using the "Functions, Objects" parameter window you can set whether it should be possible for channels A through H to be configured in a time-saving manner jointly (i.e., identically) or individually (i.e., differently).

Switching on/off
In the case of an "ON" switching telegram, the configuration determines whether the maximum dimming value, the dimming value before switching off or the last dimming value received has to be set. "OFF" switching telegrams always result in switching off. A parameter can be used to set whether there should be a jump to the set switch-on value or to the switch-off value 0% or at what speed dimming to the configured value should occur.

Dimming brighter/darker
The "dimming time" can be set from 0% to 100% via a parameter. Once the start command or the dimming step width has been received, the actuator begins to change the brightness in the given direction at the speed configured for dimming brighter/darker. If a stop command is received before the end of the dimming operation, the dimming operation will be interrupted and the dimming value reached will be maintained. It can be set via parameters whether the channel can be switched on or off by dimming brighter/darker.

Dimming value (8 bit)
The channel can be set to the dimming value received via the object "dimming value, channel x." It can be configured whether there should be a jump to the dimming value or at what speed dimming to it should occur. It can be adjusted via a parameter whether and under what conditions the channel can also be switched on and/or off by a dimming value received.

Status switching on /off (1 bit)
It can be adjusted via a parameter in the "Functions, Objects" parameter window whether for each channel one object should be available via which the current switching state of the channel can be read and/or can be sent automatically after a change of state.

Status dimming value (8 bit)
It can be adjusted via a parameter in the "Functions, Objects" parameter window whether for each channel one object should be available via which the current dimming value of the channel can be read and/or can be sent automatically in the event of a change. So that an unnecessary flood of telegrams is not generated through the value change occurring constantly with dimming brighter/darker, it can be set using the parameter "Blocking time after change of state of dimming value**"** when the next telegram may be sent after a dimming value status telegram has been sent.

Minimum dimming value
A minimum dimming value can be set either individually for each channel or as common value for all channels. When dimming down, a channel can be dimmed only to the minimum value set. Further dimming down will result in switching-off the channel if this is released via the configuration. This configurable "Switching Threshold" makes it possible to save energy, since with low dimming values the fluorescent lamps may help more to heat the space than to illuminate it.
Upon receipt of a dimming value that is lower than the minimum dimming value, the channel is dimmed down only to the minimum dimming value. Upon receipt of the value "0" the lighting is switched off, if this released via the configuration.

Maximum dimming value
The maximum dimming value that can be set either individually for each channel or as common value for all channels can be used to limit the dimming range. The maximum dimming value cannot be exceeded by dimming brighter/darker or by a dimming value received that is higher than the configured value.

Night mode (time-controlled lighting for cleaning purposes)
Night mode can be enabled or disabled via an object (1 bit or 8 bit) and can be released or blocked for each channel individually via parameters in the "Night Mode" parameter window. If night mode is active and released for a channel, this channel can be switched on only for a limited time (lighting for cleaning purposes). If night mode is activated when the channel is switched on, the

dimming value of the channel is set to the maximum dimming value. If night mode is ended when the channel is switched on, the dimming value of the channel remains unchanged. The ON period during night mode can be set via a parameter for all channels jointly.

Warning before switching off
It can be set in the "Functions, Objects" parameter window via the parameter "Warning before switching off" whether a channel in night mode or 1-level time switch mode should signal an imminent automatic switch-off approx. 30 seconds before the set ON period is to end by reducing the brightness (dimming to 50% of the previous dimming value). This will warn the person using the space and makes it possible for him to extend the ON period for the lighting by the configured value by pressing the light switch again, before the lighting is switched off and he is left standing in the dark.

Behaviour at bus voltage failure / recovery
Behavior at bus voltage failure and recovery can be adjusted either individually for each channel or identically for all channels via two parameters.

8-bit scene control
Using the "Functions, Objects" parameter window, it can be set whether the 8-bit scene control integrated into the actuator should be activated and an "8-bit scene" communication object and an "8-bit scene" parameter window should be added via which each channel can be integrated in up to 8 scenes (of max. 64).

Communication objects

The following table shows the maximum possible communication objects.

no.	Object name	Function	Type	C	R	W	T
01.01.001	25 A8 Switch/dim actuator 981301		Siemens				
0	Night mode	On / Off	1 Bit	✓		✓	
1	8-bit scene	recall / program	1 Byte	✓		✓	
2	Switching, Channel A	On / Off	1 Bit	✓		✓	
3	Dimming, Channel A	Brighter / Darker	4 Bit	✓		✓	
4	Dimming value, Channel A	8-bit Value	1 Byte	✓		✓	
5	Status switching, Channel A	On / Off	1 Bit	✓	✓		✓
6	Status dimming value, Channel A	8-bit Value	1 Byte	✓	✓		✓
7	Switching, Channel B	On / Off	1 Bit	✓		✓	
8	Dimming, Channel B	Brighter / Darker	4 Bit	✓		✓	
9	Dimming value, Channel B	8-bit Value	1 Byte	✓		✓	
10	Status switching, Channel B	On / Off	1 Bit	✓	✓		✓
11	Status dimming value, Channel B	8-bit Value	1 Byte	✓	✓		✓
12	Switching, Channel C	On / Off	1 Bit	✓		✓	
13	Dimming, Channel C	Brighter / Darker	4 Bit	✓		✓	
14	Dimming value, Channel C	8-bit Value	1 Byte	✓		✓	
15	Status switching, Channel C	On / Off	1 Bit	✓	✓		✓
16	Status dimming value, Channel C	8-bit Value	1 Byte	✓	✓		✓
17	Switching, Channel D	On / Off	1 Bit	✓		✓	
18	Dimming, Channel D	Brighter / Darker	4 Bit	✓		✓	
19	Dimming value, Channel D	8-bit Value	1 Byte	✓		✓	
20	Status switching, Channel D	On / Off	1 Bit	✓	✓		✓
21	Status dimming value, Channel D	8-bit Value	1 Byte	✓	✓		✓
22	Switching, Channel E	On / Off	1 Bit	✓		✓	
23	Dimming, Channel E	Brighter / Darker	4 Bit	✓		✓	
24	Dimming value, Channel E	8-bit Value	1 Byte	✓		✓	
25	Status switching, Channel E	On / Off	1 Bit	✓	✓		✓
26	Status dimming value, Channel E	8-bit Value	1 Byte	✓	✓		✓
27	Switching, Channel F	On / Off	1 Bit	✓		✓	
28	Dimming, Channel F	Brighter / Darker	4 Bit	✓		✓	
29	Dimming value, Channel F	8-bit Value	1 Byte	✓		✓	
30	Status switching, Channel F	On / Off	1 Bit	✓	✓		✓
31	Status dimming value, Channel F	8-bit Value	1 Byte	✓	✓		✓
32	Switching, Channel G	On / Off	1 Bit	✓		✓	
33	Dimming, Channel G	Brighter / Darker	4 Bit	✓		✓	
34	Dimming value, Channel G	8-bit Value	1 Byte	✓		✓	
35	Status switching, Channel G	On / Off	1 Bit	✓	✓		✓
36	Status dimming value, Channel G	8-bit Value	1 Byte	✓	✓		✓
37	Switching, Channel H	On / Off	1 Bit	✓		✓	
38	Dimming, Channel H	Brighter / Darker	4 Bit	✓		✓	
39	Dimming value, Channel H	8-bit Value	1 Byte	✓		✓	
40	Status switching, Channel H	On / Off	1 Bit	✓	✓		✓
41	Status dimming value, Channel H	8-bit Value	1 Byte	✓	✓		✓

Maximum number of group addresses: 114
Maximum number of associations: 163

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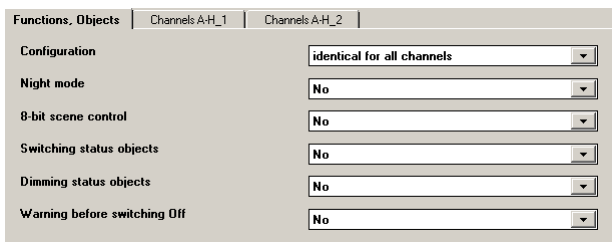
Obj	Object name	Function	Type	Flags
0	Night mode	On / Off	1 Bit (1 Byte)	CW
With this object the "night mode" operating mode can be enabled or disabled. It can be set via a parameter whether night mode is switched via a bit-object or a byte-object. The object can thereby be sent, e.g., by a push button, a timer switch or a building automation system. If in the case of a bit-object a logical one is received or in the case of a byte-object the third bit (bit 2^2) is set (0000 0100), all the channels on which night mode is released via parameters switch over to night mode. If night mode is enabled when a channel is switched on, its dimming value is set at 100%. In the "night mode" operating mode a channel can no longer be switched on permanently but only for a limited time (e.g., for 30 minutes as lighting for cleaning purposes). If "Warning before switching Off" is enabled, approx. 30 s before the end of the ON period the respective channel will be dimmed to half of the previous dimming value in order to thus warn the user of the space that the lighting is about to be switched off and to give him enough time to press the light switch again. Through this, the ON period of the lighting is extended by the configured ON period. If the "night mode" object is not used, the lighting can always be switched on permanently.				
1	8-bit scene	recall / program	1 Byte	CW
Through this object the 8-bit scene with the number x is recalled (i.e., reestablished) or stored. Bit 0 to bit 5 contain (in binary coding) the number of the desired scene as a decimal number in the range 1 to 64 (whereby the decimal number 1 corresponds to the binary number 0, the decimal number 2 corresponds to the binary number 1, etc.). If bit 7 = logical 1, the scene is stored, if bit 7 = logical 0, it is recalled. Bit 6 is currently without significance and must be set at logical 0.				
2, 7, 12, 17, 22, 27, 32, 37	Switching, Channel A, B, C, D, E, F, G, H	On / Off	1 Bit	CW
The switching outputs of channels A through H are activated via these objects. A corresponding telegram is triggered, e.g., by the short actuation of a bus push button.				
3, 8, 13, 18, 23, 28, 33, 38	Dimming, Channel A, B, C, D, E, F, G, H	Brighter / Darker	4 Bit	CW
Through these objects the telegrams are received for the relative dimming of channels A through H. A corresponding telegram is triggered, e.g., by the long actuation of a bus push button.				

Obj	Object name	Function	Type	Flags
4, 9, 14, 19, 24, 29, 34, 39	Dimming value, Channel A, B, C, D, E, F, G, H	8-bit Value	1 Byte	CW
Through these objects the telegrams are received with a dimming value for channels A through H. A corresponding telegram is triggered, e.g., by the actuation of a scene push button. If the dimming value received is lower than the minimum dimming value, the behaviour of the channel is determined by the setting of the parameter "Switching via dimming value."				
5, 10, 15, 20, 25, 30, 35, 40	Status switching, Channel A, B, C, D, E, F, G, H	On / Off	1 Bit	CRT
Through these objects the switching status of a channel can be requested or sent. The T-flag has to be set for the object value (0 or 1) to be sent after receipt of a switching telegram or after a status change. In order to be able to read the object value, the R-flag must be set.				
6, 11, 16, 21, 26, 31, 36, 41	Status dimming value, Channel A, B, C, D, E, F, G, H	8-bit Value	1 Byte	CRT
Depending on the configuration, the current dimming value of the corresponding channel can be sent or requested via these objects.				

Parameters

Parameter window "Functions, Objects"



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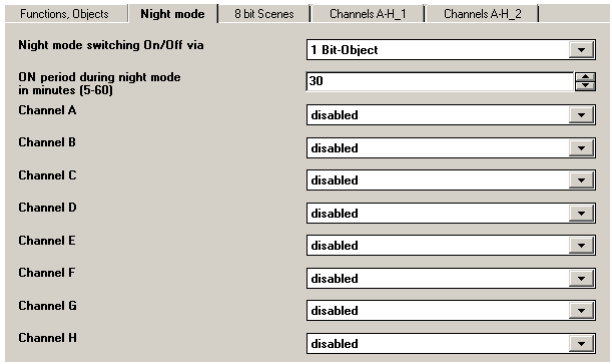
Parameters	Settings
Configuration	**identical for all channels** individual for each channel
This parameter is used to set whether channels A through H should be configurable jointly (i.e., identically) or individually (i.e., differently). Whereas with the selection of "identical for all channels" only one parameter window for joint configuration of channels A through H is visible, after the selection of "individual for each channel" one parameter window per channel is shown in each case.	
Night mode	**No** Yes
This parameter is used to set whether it should be possible to switch on the lighting only for a limited period at night (e.g., as lighting for cleaning purposes) or whether it should remain possible to switch it on permanently. (night mode = no). If "night mode = yes" is selected, the "night mode" parameter window and a "night mode on/ off" object are added through which night mode can be enabled or disabled via the bus. It can be set via a parameter in the "night mode" parameter window whether night mode is switched via a bit-object or a byte-object and how long the lighting remains switched on in night mode. Moreover, night mode can be blocked or released separately for each channel.	
8-bit scene control	**No** Yes
If this parameter is set to "Yes," an 8-bit scene communication object is added. In addition, a "8-bit Scenes" parameter window is shown via which each channel can be incorporated into up to 8 scenes.	
Switching status objects	**No** send on read request only send on change or read request
This parameter is used to set whether a "Switching Status" communication object should be added for each channel and when these objects should be sent. If "send on change or read request" is selected, each status change is sent. In the case of "send on read request only," the switching status is not sent automatically.	
Dimming status objects	**No** send on read request only send on change or read request
This parameter is used to set whether a "Dimming Status Value" communication object should be added for each channel and when these objects are to be sent. If "send on change or read request" is selected, each status change will be sent. In the case of "send on read request only," the dimming value status is not sent automatically.	

Parameters	Settings
Blocking time after change of state of dimming value (in seconds)	**15** (1...60)
This parameter is displayed only if the parameter "Dimming status objects" is set at "send on change or read request". The "Blocking time after change of state of dimming value" ensures that an unnecessary bus load is not generated in the case of dimming brighter/darker by dimming value status telegrams sent in quick succession. After a status telegram is sent, the next is sent only after the blocking time set here has ended.	
Warning before switching Off	**No** Yes
This parameter is used to set for all channels jointly whether a channel in night mode or 1-level time switch mode, should signal an imminent automatic switch-off by reducing the brightness (dimming to 50% of the previous dimming value) approx. 30 s before the end of the set ON period.	

Parameter window "Night mode"



Parameters	Settings
Night mode switching On/Off via	**1 Bit Object** 8 Bit Object
This parameter is used to set whether night mode is switched on and off via a 1-bit object or via an 8-bit object via which the operating mode of the room temperature controller is also switched over. With the 8-bit object the third bit (bit 2^2) is evaluated to this end. If this bit has the value 1 or if the third bit is set (00000100), night mode is activated.	

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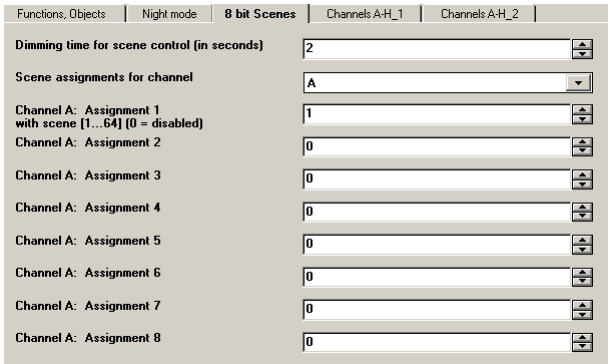
Parameters	Settings
ON period during night mode in minutes (5-60)	**30** (5-60)
If, during activated night mode, a channel released for this is switched on, the lighting is automatically switched off at the end of the time-limited ON period set here (lighting for cleaning purposes). If the "Warning before switching Off" parameter in the "Functions, Objects" parameter window is set to "Yes," approx. 30 s before the end of the ON period, the respective channel is dimmed down to half the previous dimming value in order to thus signal to the user of the space that the lighting will soon be switched off and to give him enough time to press the switch again. Through this the ON period of the lighting is extended by the configured ON period. If, with night mode activated and released and the channel switched on (i.e., during the activated ON period), a switching, dimming or value command is received again via the associated objects, through this the ON period is started again (i.e., extended by the configured ON period). If, with the channel switched on and released for night mode, night mode is activated, the dimming value of this channel is set at 100% and the time-controlled lighting for cleaning purposes is started according to the configured ON period.	
Channel A...Channel H	**disabled** enabled
This parameter is used to set whether night mode can be enabled or not for the respective channel via the "night mode" object.	

Parameter window "8 bit Scenes"

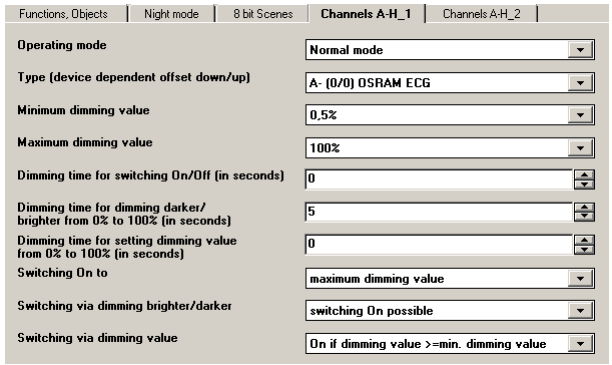


Parameters	Settings
Dimming time for scene control (in seconds)	0-255, **2**
With the "Dimming time for scene control" parameter, the time is jointly set for all the channels at the end of which when a scene is called the dimming operation from the previous dimming value to the new dimming value for all the channels involved in the scene is jointly concluded. The set dimming time is the time for dimming from the previous to the new value, i.e. the dimming time at the beginning of a new scene is always the time configured here. This means that even different scenes with different dimming values are always started with the same dimming time.	
Scene assignments for channel	**A ,** B, C, D, E, F, G, H
This parameter is used to set for which channel the scene assignments are to be shown so that they can be assigned or changed.	
Channel A: Assignment 1 with scene [1...64] (0 = disabled)	0-64, **0**
This parameter can be used to link channel A to a scene number in the range of 1 through 64. 0 hereby means "no scene assigned" (link unused). Note: If a scene is recalled before a dimming value has been stored for this scene, no reaction occurs to the scene retrieval.	

and so on until

Channel A: Assignment 8	0-64, **0**
This parameter can be used to link channel A to another scene number in the range of 1 through 64. 0 hereby means "no scene assigned" (link unused). Note: if a scene is recalled before a dimming value has been stored for this scene, no reaction occurs to the scene retrieval.	

Parameter window "Channels A-H"



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Parameters	Settings
Operating mode	**Normal mode** 1-level time switch mode 2-level time switch mode

This parameter is used to set whether the channel should operate as a "normal" switching/ dimming channel or as a 1-level time switch that is switched on only via a switching, dimming, dimming value or scene recall command and is automatically switched off at the end of the configured ON period, or whether it should operate as a 2-level time switch. A 2-level time switch mode is used for hallway and stairwell lighting whenever switching off the fluorescent lamps at the end of the ON period should be avoided in order to thus increase the service life of the fluorescent lamps. Furthermore, a 2-level time switch mode is used with color light controls.

If "1-level time switch mode" is selected, the parameter "ON time (in minutes)" is additionally shown. If, in 1-level time switch mode and with ON period 1 running, a switching, dimming, dimming value or scene recall command is received again, the timing element is set back again to its initial value and the ON period is extended accordingly.

If "2-level time switch mode" is selected, the three parameters "ON period 1 (in minutes)," "ON period 2 (in minutes)" and "dimming value during ON period 2" are additionally displayed. Whereas at the end of the 1-level time switch mode it is dimmed to 0%, with the 2-level time switch mode it is dimmed at the end of the first ON period to the "dimming value during ON period 2," which can be higher or lower than the previous dimming value. It is then dimmed to 0% at the end of the 2-level time switch mode.

If "Warning before switching off" is enabled, the respective channel is dimmed down to the previous dimming value approx. 30 s before the end of the ON period in order to thus signal to the user of the space that the lighting will soon be switched off and to give him enough time to press the light switch again, in order to thus switch on the lighting again for the configured time period (not valid for 2-level time switch mode).

Parameters	Settings
Type (device dependent offset down/up)	**A - (0/0) OSRAM ECG** B - (0/1) C - (0/2) D - (0/3) E - (0/4) F - (1/0) ... Y - (4/4)

According to DIN EN 60929/A1 the output power of a dimmable electronic ballast is controlled by an input DC voltage in the range from 1 – 10 V, with 1 V corresponding to the minimum output power and 10 V to the maximum power. This control range from 1 – 10 V (= 9 V) is divided into 255 brightness values, which correspond to a dimming range from 0 – 100% (0% = OFF, 100% = 255 = max. power).

The parameter "Type" (= offset down/up) is used to adapt the output voltage of each channel to the beginning and end of the control range of the connected electronic ballast, especially if this range begins at a higher voltage than 1 V and ends at a lower voltage than 10 V.

For example with a set offset down of "1" the control range begins at 2 V, with a set offset down of "2" it begins at 3 V, etc. With a set offset up of "1" the control range ends at 9 V, with a set offset up of "2" it ends at 8 V, etc.

Minimum dimming value	**0.5%**, 1%, 2%, 3%, 4%, 5%, 7%, 10%, 15%, 20%, 30%, 40%, 50%

This parameter is used to define the minimum dimming value, below which the value cannot fall (i.e., dimming can go only as far as the minimum dimming value).

If the parameter "Switching via dimming brighter/darker" is set at "Switching off possible," dimming darker below the minimum dimming value leads to the respective channel being switched off. If a dimming value received is below the minimum dimming value, the behavior of the channel is determined by the setting of the parameter "Switching via dimming value."

Maximum dimming value	20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, **100%**

This parameter is used to define the maximum dimming value that cannot be exceeded when dimming brighter. If a dimming value is received that is above the maximum dimming value, there is a dimming to or jump to only the maximum dimming value.

Dimming time for switching On/Off (in seconds)	255, **0**

This parameter is used to set whether a jump (dimming time = 0) should be made to the configured ON value or OFF value (0%) or what time should be taken to dim to it. If there is no switching on from 0% to 100% or switching off from 100% to 0% the dimming time is calculated proportionally to the difference between the previous and the new dimming value. The size of the calculated difference value thus determines the variable time for dimming to the on or off value.

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Parameters	Settings
Dimming time for dimming darker / brighter from 0% to 100% (in seconds)	1-255, **5**
This parameter is used to set the time to be taken in dimming manually from 0% to 100% (or from 100% to 0%). The actual dimming time is calculated proportionally to the difference between the previous and the new dimming value. The size of the calculated difference value thus determines the variable time for dimming to the new value.	
Dimming time for setting dimming value from 0% to 100% (in seconds)	0-255, **0**
This parameter is used to set whether to jump (dimming time = 0) to a new dimming value or what time should be taken to dim from 0% to 100% (or from 100% to 0%). The actual dimming time is calculated proportionally to the difference between the previous and the new dimming value. The size of the calculated difference value thus determines the variable time for dimming to the new value.	
Switching On to	**maximum dimming value** dimming value at switching Off last received dimming value
This parameter defines the switching-on value upon receipt of a telegram with a switching command "On." The setting "Switching on to dimming value at switching off" is advantageous, e.g., in a child's room or a bedroom. An initial short actuation of the on button then results in switching on to the dimming value at switching off. A repeated brief actuation of the on button then results in dimming to or jumping to the maximum dimming value. If the channel was switched off via an 8-bit dimming value below the minimum dimming value or by dimming brighter/ darker below the minimum dimming value or by the time limit of the ON period (time switch operation or lighting for cleaning purposes), the dimming value at switching off was the minimum dimming value to which it is switched on when switching on again with this parameter setting. The setting "Switching on to last received dimming value" is necessary in the case of a constant brightness control if the lighting is not to be switched off by dimming values sent by a brightness controller that are lower than the minimum dimming value and switched on by dimming values that are higher. Moreover, to this end the parameter "Switching via dimming value" must be set to "No."	

Parameters	Settings
Switching via dimming brighter / darker	not possible **switching On possible** **switching Off possible** **switching On and switching Off possible**
If, in the switched-off state, switching on is made possible by the receipt of a relative dimming value "brighter," this parameter has to be set to "Switching on possible." In this case the channel is always switched on first, there is a jump to the minimum dimming value and then, starting from this, with the configured dimming time for dimming brighter / darker it is dimmed brighter by the relative dimming value received. With this setting, it is not possible to switch off via dimming brighter / darker.	
Switching via dimming value	not possible **On if dimming value >= min. dimming value** Off if dimming value < min. dimming value **switching On and switching Off possible** On if dimming val. > 0% / Off if dimming val. = 0%
If, in the switched-off state, switching on is to be possible by the receipt of a dimming value that is equal to or greater than the minimum dimming value, this parameter has to be set at "On if dimming value >= minimum dimming value." The channel is then switched on and there is either a jump to or a dimming to the dimming value, depending on the configured dimming time for setting a dimming value. If the dimming value received is below the minimum dimming value, the channel remains switched off. Switching off via a dimming value setting is not possible with this setting. If the channel is switched on and this parameter is set at "Off if dimming value < minimum dimming value," the receipt of a telegram with a dimming value lower than the minimum dimming value results in dimming (with the configured dimming time for setting a dimming value) to the minimum dimming value and then in the channel being switched off. Switching on via a dimming value setting is not possible with this setting. If this parameter is set at "switching On and Off possible," the channel is switched on when the dimming value received is greater than or equal to the minimum dimming value, and it is switched off when the dimming value received is lower than the minimum dimming value. If the parameter is set at "On if dimming value > 0% / Off if dimming value = 0%," each dimming value > 0% results in the channel being switched on. If the dimming value is below the minimum dimming value, the channel is set at the minimum dimming value. Only if a dimming value 0% is received, is the channel switched off.	

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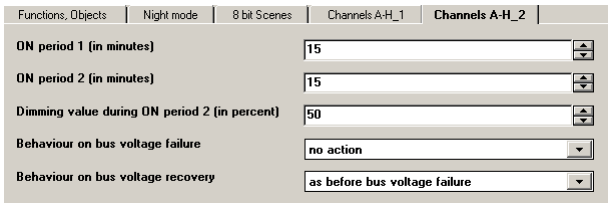
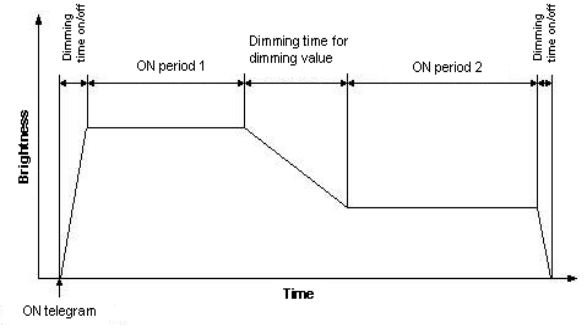


Parameters	Settings
ON period 1 (in minutes)	1-255, **15**
This parameter is used to set the desired ON period when "1-level time switch mode" is selected as the operating mode respectively to set the desired On period 1 when "2-level time switch mode" is selected. If a switching, dimming, dimming value or scene call command is received again with ON time running, this is carried out, the timing element is reset to its initial value and the ON period begins to run again.	
ON period 2 (in minutes)	1-255, **15**
This parameter is used to set the desired ON period 2 when "2-level Time Switch mode" has been selected as the operating mode. If a switching, dimming, dimming value or scene call command is received again with ON time 2 running, this is carried out, the timing element is loaded with the ON period 1 and the 2-level time switch operation starts from the beginning.	
Dimming value during ON period 2 (in percent)	1-100, **50**
This parameter is used to set the dimming value during the ON period 2 with 2-level time switch operation. The diagram below shows by way of example the course of dimming in the case of 2-level time switch operation.  	

Parameters	Settings
Behaviour on bus voltage failure	**no action** switch on switch off
The behaviour of both channel outputs (relay contact and control voltage) on bus voltage failure can be set via this parameter. "no action": On bus voltage failure, the relay output maintains its current switching state. "switch on": On bus voltage failure, the relay contact is closed. "switch off": On bus voltage failure, the relay contact is opened. Note: As the bus voltage supplies the actuator electronics the control voltage output goes at a bus voltage failure to 10V (= max. brightness).	
Behaviour on bus voltage recovery	**as before bus voltage failure** switch on switch off
On a bus voltage failure, the current switching states and dimming values of all the channels are stored in a long-term storage where they cannot be lost. This makes it possible, if desired, to reestablish the state at the bus voltage failure upon bus voltage recovery. This parameter is used to set the behavior of the actuator channel (relay contact and control voltage) upon bus voltage recovery: "As before bus voltage failure:" on bus voltage recovery, the last operating state before the bus voltage failure is reestablished. A night mode activated via the "night mode" object before the bus voltage failure is then continued with an ON period started anew on bus voltage recovery. "Switch on:" on bus voltage recovery, the channel is switched on permanently (On state, 100% or maximum dimming value). A night mode activated via the "night mode object" before the bus voltage failure is not activated again. "Switch off:" on bus voltage recovery, the channel is switched off permanently (off state, 0%). A night mode activated via the "night mode" object before the bus voltage failure is not activated again.	