

21 A4 Dimming, Time, Scenes, Sequences 300115**Use of the application program**

Product family: Lighting
Product type: Dimmer
Manufacturer: se Lightmanagement AG

Name: Universal dimmer N 527/21
Catalogue no.: 5WG1 527-1AB21

Functional description

The universal dimmer N 527/21 has 4 channels (outputs) for dimming resistive, inductive or capacitive loads rated in each case at up to 570 VA. It is permissible to connect two channels (channels A and B and channels C and D) in parallel in each case, in order to be able to dim loads of up to 1,140 VA.

The corresponding application program "4x dimming, time, scenes, sequences 3001-15" provides the following functions for each channel:

- On / off switching,
- Dimming brighter / darker,
- Send dimming value,
- Switch through dimming,
- Limit dimming value,
- Soft on / off switching,
- Variable dimming time for dimming brighter / darker,
- Variable dimming time for dimming values, scenes and sequences,
- Select whether on / off switching delay, staircase function or blinking,
- 2 sequences per channel with up to 4 actions per sequence and variable waiting time between two actions in each case,
- Integration of each channel in up to 8 scenes,
- Inhibit / release,
- Send switching and dimming value status as well as 3 error messages.

The individual functions and their adjustment options will be explained in the corresponding parameter window.

Bus voltage recovery

The behaviour on bus voltage recovery is adjustable for each channel (see "Channel x" parameter window).

Communication objects**Note:**

The objects view is determined by the selected parameter setting.

The following picture shows the communication objects for a N 527/21 dimmer in the as-delivered state (3 objects per channel).

0	input A switching	channel A object 1	1 Bit	✓	✓
1	input A dimming	channel A object 2	4 Bit	✓	✓
2	input A value	channel A object 3	1 Byte	✓	✓
12	input B switching	channel B object 1	1 Bit	✓	✓
13	input B dimming	channel B object 2	4 Bit	✓	✓
14	input B value	channel B object 3	1 Byte	✓	✓
24	input C switching	channel C object 1	1 Bit	✓	✓
25	input C dimming	channel C object 2	4 Bit	✓	✓
26	input C value	channel C object 3	1 Byte	✓	✓
36	input D switching	channel D object 1	1 Bit	✓	✓
37	input D dimming	channel D object 2	4 Bit	✓	✓
38	input D value	channel D object 3	1 Byte	✓	✓

The following picture shows on this and on the next page the max. possible communication objects for a N 527/21 dimmer, if all channels are operated separately and all functions have been enabled (12 objects per channel).

0	input A switching	channel A object 1	1 Bit	✓	✓
1	input A dimming	channel A object 2	4 Bit	✓	✓
2	input A value	channel A object 3	1 Byte	✓	✓
3	output A switching status	channel A object 4	1 Bit	✓	✓
4	output A value status	channel A object 5	1 Byte	✓	✓
5	input A inhibit	channel A object 6	1 Bit	✓	✓
6	input A scenes	channel A object 7	1 Byte	✓	✓
7	input A sequence 1	channel A object 8	1 Bit	✓	✓
8	input A sequence 2	channel A object 9	1 Bit	✓	✓
9	output A gen. error	channel A object 10	1 Bit	✓	✓
10	output A no mains error	channel A object 11	1 Bit	✓	✓
11	output A overload error	channel A object 12	1 Bit	✓	✓
12	input B switching	channel B object 1	1 Bit	✓	✓
13	input B dimming	channel B object 2	4 Bit	✓	✓
14	input B value	channel B object 3	1 Byte	✓	✓
15	output B switching status	channel B object 4	1 Bit	✓	✓
16	output B value status	channel B object 5	1 Byte	✓	✓
17	input B inhibit	channel B object 6	1 Bit	✓	✓
18	input B scenes	channel B object 7	1 Byte	✓	✓
19	input B sequence 1	channel B object 8	1 Bit	✓	✓
20	input B sequence 2	channel B object 9	1 Bit	✓	✓

Application Program Description

November 2008

21 A4 Dimming, Time, Scenes, Sequences 300115

21	output B gen. error	channel B object 10	1 Bit	✓	✓
22	output B no mains error	channel B object 11	1 Bit	✓	✓
23	output B overload error	channel B object 12	1 Bit	✓	✓
24	input C switching	channel C object 1	1 Bit	✓	✓
25	input C dimming	channel C object 2	4 Bit	✓	✓
26	input C value	channel C object 3	1 Byte	✓	✓
27	output C switching status	channel C object 4	1 Bit	✓	✓
28	output C value status	channel C object 5	1 Byte	✓	✓
29	input C inhibit	channel C object 6	1 Bit	✓	✓
30	input C scenes	channel C object 7	1 Byte	✓	✓
31	input C sequence 1	channel C object 8	1 Bit	✓	✓
32	input C sequence 2	channel C object 9	1 Bit	✓	✓
33	output C gen. error	channel C object 10	1 Bit	✓	✓
34	output C no mains error	channel C object 11	1 Bit	✓	✓
35	output C overload error	channel C object 12	1 Bit	✓	✓
36	input D switching	channel D object 1	1 Bit	✓	✓
37	input D dimming	channel D object 2	4 Bit	✓	✓
38	input D value	channel D object 3	1 Byte	✓	✓
39	output D switching status	channel D object 4	1 Bit	✓	✓
40	output D value status	channel D object 5	1 Byte	✓	✓
41	input D inhibit	channel D object 6	1 Bit	✓	✓
42	input D scenes	channel D object 7	1 Byte	✓	✓
43	input D sequence 1	channel D object 8	1 Bit	✓	✓
44	input D sequence 2	channel D object 9	1 Bit	✓	✓
45	output D gen. error	channel D object 10	1 Bit	✓	✓
46	output D no mains error	channel D object 11	1 Bit	✓	✓
47	output D overload error	channel D object 12	1 Bit	✓	✓

Obj	Object name	Function	Type	Flags
6, 18, 30, 42	Input A (B, C, D) scenes	recall / store	8 bits	CW
Via this object the telegrams will be received to recall /store scenes for channel A (B, C, D).				
7, 19, 31, 43	Input A (B, C, D) sequence 1	On/Off	1 bit	CW
Via this object the telegrams will be received to start sequence 1 for channel A (B, C, D).				
8, 20, 32, 44	Input A (B, C, D) sequence 2	On/Off	1 bit	CW
Via this object the telegrams will be received to start sequence 2 for channel A (B, C, D).				
9, 21, 33, 45	Output A (B, C, D) gen. error	On/Off	1 bit	CT
This object is used for sending the telegram to report a detected error on channel A (B, C, D).				
10, 22, 34, 46	Output A (B, C, D) no mains error	On/Off	1 bit	CT
This object is used for sending the telegram to report that there is no mains power on channel A (B, C, D).				
11, 23, 35, 47	Output A (B, C, D) overload error	On/Off	1 bit	CT
This object is used for sending the telegram to report that channel A (B, C, D) is overloaded.				

Obj	Object name	Function	Type	Flags
0, 12, 24, 36	Input A (B, C, D) switching	On/Off	1 bit	CW
Via this object the telegrams will be received to switch the load connected to channel A (B, C, D) on or off.				
1, 13, 25, 37	Input A (B, C, D) dimming	brighter / darker	4 bits	CW
Via this object the telegrams for dimming channel A (B, C, D) brighter / darker will be received.				
2, 14, 26, 38	Input A (B, C, D) switching	dimming value	8 bits	CW
Via this object the dimming value telegrams for channel A (B, C, D) will be received.				
3, 15, 27, 39	Output A (B, C, D) switching status	On/Off	1 bit	CT
This object is used for sending the current switching status of channel A (B, C, D) after a change.				
4, 16, 28, 40	Output A (B, C, D) value status	Dimming value	8 bits	CT
This object is used for sending the current dimming value status of channel A (B, C, D) after a change.				
5, 17, 29, 41	Input A (B, C, D) inhibit	On/Off	1 bit	CW
Via this object the telegrams will be received to inhibit / release channel A (B, C, D).				

21 A4 Dimming, Time, Scenes, Sequences 300115

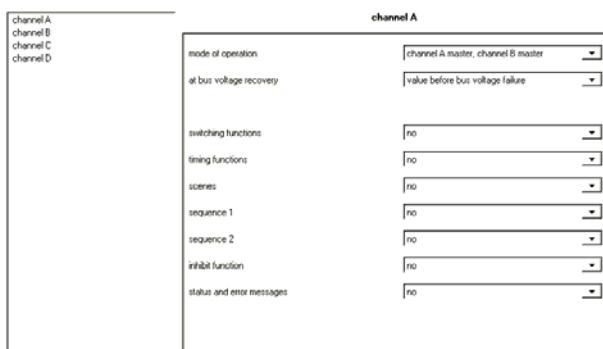
Parameter

"Channel A" parameter window

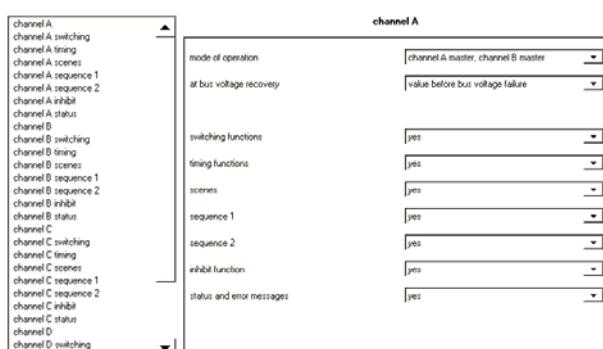
You use this parameter window to set:

- whether channels A and B (or C and D) will be operated independently of each other or whether both channels are connected in parallel, in order to be able to dim a load of up to double the value (max. 1,140 VA) for a single channel,
- how the channel will behave on bus voltage recovery and
- what additional functions will be available on the channel.

The following picture shows the "Channel A" parameter window on a N 527/21 in the as delivered state.



The following picture shows the selectable parameter windows if all channels are individually variable and if all functions provided for each channel have been enabled via the relevant "Channel X" window.



The following explanations of the parameters in the "Channel A" parameter window are accordingly true also for channels B, C and D.

Parameters in bold typeface correspond to the default factory setting.

Parameter	Setting
mode of operation	channel A master, channel B master; channel A master, channel B slave
This parameter sets whether channels A and B are to be controlled separately or together. If channels A and B are connected in parallel, then this parameter must be set to "channel A master, channel B slave".	
at bus voltage recovery	no action; value before bus voltage failure; OFF; MIN; 5%; 10%; 15%; 20%; 25%; 30%; 35%; 40%; 45%; 50%; 55%; 60%; 65%; 70%; 75%; 80%; 85%; 90%; 95%; MAX
This parameter sets to what dimming value channel A is to be set on bus voltage recovery.	
switching functions	no yes
If this parameter is set to "yes", then the "channel A switching" parameter window becomes visible.	
This parameter window sets	
- what dimming value is to set on switching on, - whether by dimming, the light is to be switched on or off, - whether on dimming a lower or an upper limit value is to be considered.	
timing functions	no yes
If this parameter is set to "yes", then the "channel A timing" parameter window becomes visible.	
This parameter window sets	
- the time for dimming from 0...100%, - whether to go immediately to a new dimming value (also in scenes, sequences and on inhibiting/releasing the channel) or to dim to it, - whether a soft switch-on or a soft switch off is to be effected and with which time in each case, - whether one of the functions "On/off delay", "Staircase function", "Blinking if "1" or "Blinking if "0" is to be enabled and with which timing sequence in each case.	

21 A4 Dimming, Time, Scenes, Sequences 300115

Parameter	Setting
scenes	no yes

If this parameter is set to "yes", then the "channel A scenes" parameter window becomes visible.

You use this parameter window with the channel for scenes 1...8 to set the value at which the channel is to be dimmed when the corresponding scene is called up or whether it is not be integrated in this scene. You can also set whether scenes can be stored for the channel or not.

sequence 1	no yes
------------	-----------

If this parameter is set to "yes", then the "Channel A sequence 1" parameter window becomes visible.

You use this parameter window to set for the channel whether and to what value the channel is to be dimmed on receiving the communication object "Input A sequence 1" with the object value "1" and whether then, if need be, after an individually variable waiting time, the channel is to be dimmed automatically to the next of up to 3 further dimming values. You can also set whether and to which value the channel is to be dimmed on receiving the communication object "Input A sequence 1" with the object value "0".

sequence 2	no yes
------------	-----------

If this parameter is set to "yes", then the "Channel A sequence 2" parameter window becomes visible.

You use this parameter window to set for the channel whether and to what value the channel is to be dimmed on receiving the communication object "Input A sequence 2" with the object value "1" and whether then, if need be, after an individually variable waiting time, the channel is to be dimmed automatically to the next of up to 3 further dimming values. You can also set whether and to which value the channel is to be dimmed on receiving the communication object "Input A sequence 2" with the object value "0".

inhibit function	no yes
------------------	-----------

If this parameter is set to "yes", then the "channel A inhibit" parameter window becomes visible.

You use this parameter window to set,

- whether channel A is to be inhibited if the communication object "Input A inhibit" is received with the object value "0" or with the object value "1",
- to which value the inhibiting object is to be set on bus voltage recovery,
- to which value the channel is to be dimmed on beginning and ending of inhibiting in each case.

Parameter	Setting
status and error messages	no yes

If this parameter is set to "yes", then the "channel A status" parameter window becomes visible.

You use this parameter window to set,

- whether and when the Channel A switching status and dimming value status are to be sent,
- whether a "General" error message, a "No mains supply" error message and an "Overload" error message of channel A are to be sent.

"Channel A switching" parameter window

This parameter window sets

- what dimming value is to set when switching on,
- whether by dimming, the light is to be switched on or off,
- whether on dimming a lower or an upper limit value is to be considered.

channel A switching

value when switching ON	MAX	▼
ON with dimming	yes	▼
OFF with dimming	yes	▼
lower output limit	10%	▼
upper output limit	100%	▼

The following explanations of the parameters in the "Channel A" parameter window are accordingly true also for channels B, C and D.

Parameters in bold typeface correspond to the default factory setting.

Parameter	Setting
value when switching ON	MIN; 5%; 10%; 15%; 20%; 25%; 30%; 35%; 40%; 45%; 50%; 55%; 60%; 65%; 70%; 75%; 80%; 85%; 90%; 95%; MAX; last value

This parameter sets to what dimming value channel A is to be set when switching on.

21 A4 Dimming, Time, Scenes, Sequences 300115

Parameter	Setting
ON with dimming	no yes
	This parameter sets whether, with the channel switched off, said channel is switched on automatically by a dimming telegram at a value greater than 0%.
OFF with dimming	no yes
	This parameter sets whether, with the channel switched on, said channel is switched off automatically by a dimming telegram with the value 0%.
lower output limit	0%; 5%; 10% ; 15%, 20%; 25%; 30%; 35%; 40%; 45%
	If necessary, this parameter sets the minimum dimming value to which channel A can be dimmed.
upper output limit	55%; 60%; 65%; 70%; 75%; 80%; 85%; 90%; 95%; 100%
	If necessary, this parameter sets the maximum dimming value to which channel A can be dimmed.

"Channel A timing" parameter window

You use this parameter window to set,

- the time for dimming from 0...100%,
- whether to go immediately to a new dimming value (also in scenes, sequences and on inhibiting/releasing the channel) or to dim to it,
- whether a soft switch-on or a soft switch off is to be effected and with which time in each case,
- whether one of the functions "On/off delay", "Staircase function", Blinking if "1" or "Blinking if "0" is to be enabled and with which timing sequence in each case.

channel A timing

time for dimming (1..14400 s) (0%..100%)	5
value is (also scenes, sequences and inhibit)	set soft
time for soft setting (1..14400 s) (0%..100%)	5
soft ON	yes
time for soft ON (1..14400 s) (0%..100%)	5
soft OFF	yes
time for soft OFF (1..14400 s) (100%..0%)	5
time delay / blinking	on / off delay
time for ON delay (0..64800 s)	0
time for OFF delay (0..64800 s)	0

Parameter	Setting
time for dimming (1...14400 s) (0%...100%)	5
	This parameter sets the time for dimming brighter / darker from 0...100%.
value is (also scenes, sequences and inhibit)	set soft set fast
	This parameter sets whether to go immediately to a new dimming value or whether to dim to it.
time for soft setting (1...14400 s) (0%...100%)	5
	This parameter is visible only if the preceding parameter is set to "set soft".
	This parameter sets the time for dimming to a new dimming value. The set time corresponds to the dimming time from 0% to 100%.
soft ON	no yes
	This parameter sets whether to go immediately to the dimming value on switching on (no) or whether to dim to it (yes).
time for soft ON (1...14400 s) (0%...100%)	5
	This parameter is visible only if the preceding parameter is set to "yes".
	This parameter sets the time for dimming to the switch-on value. The set time corresponds to the dimming time from 0% to 100%.
soft OFF	no yes
	This parameter sets whether to go immediately to the dimming value on switching off (no) or whether to dim to it (yes).
time for soft OFF (1...14400 s) (0%...100%)	5
	This parameter is visible only if the preceding parameter is set to "yes".
	This parameter sets the time for dimming to the switch-off value. The set time corresponds to the dimming time from 0% to 100%.
time delay / blinking	none; on/off delay; staircase function; blinking if „1“; blinking if „0“
	You use this parameter for the channel to enable an on or off delay, a timer function or blinking, either when the channel is switched on or when it is switched off.
time for ON delay (0...64800 s)	0
	This parameter is only visible if the "time delay / blinking" parameter is set to "on/off delay".
	This parameter sets the switch-on delay.

21 A4 Dimming, Time, Scenes, Sequences 300115

Parameter	Setting
time for OFF delay (0...64800 s)	0
	This parameter is only visible if the "time delay / blinking" parameter is set to "on/off delay".
	This parameter sets the switch-off delay.
time for staircase function (1...64800 s)	180
	This parameter is only visible if the "time delay / blinking" parameter is set to "staircase function".
	This parameter sets how long the channel is to remain switched on.
blinking ON time (1...64800 s)	6
	This parameter is visible only if the "time delay / blinking" parameter is set either to "Blinking if "1" or to "Blinking if "0".
	This parameter sets how long the channel is to remain switched on when blinking.
blinking OFF time (1...64800 s)	6
	This parameter is visible only if the "time delay / blinking" parameter is set either to "Blinking if "1" or to "Blinking if "0".
	This parameter sets how long the channel is to remain switched off when blinking.

"Channel A scenes" parameter window

You use this parameter window to set to what value the channel is to be dimmed on calling up scenes 1...8 in each case or whether it is not to be integrated in the scene. You can also set whether scenes can be stored for the channel or not.

channel A scenes

scene 1	no action
scene 2	OFF
scene 3	MIN
scene 4	20%
scene 5	40%
scene 6	60%
scene 7	80%
scene 8	MAX
enable scene saving	no

Parameter	Setting
scene 1	no action; OFF; MIN; 5%; 10%; 15%; 20%; 25%; 30%; 35%; 40%; 45%; 50%; 55%; 60%; 65%; 70%; 75%; 80%; 85%; 90%; 95%; MAX
	This parameter sets the channel to the wanted value when recalling scene 1.

Scenes 2...8 will be set accordingly.

enable scene saving	no yes
	This parameter sets whether scenes for the channel can be stored or not.

"Channel A sequence 1" parameter window

You use this parameter window to set whether and to what value the channel is to be dimmed on receiving the communication object "Input A sequence 1" with the object value "1" and whether then, if need be, after an individually variable waiting time, the channel is to be dimmed automatically to the next of up to 3 further dimming values. You can also set whether and to which value the channel is to be dimmed on receiving the communication object "Input A sequence 1" with the object value "0".

channel A sequence 1

action when object value = 1	
1st action of sequence 1	MAX
time between 1st and 2nd action (0...64800 s)	0
2nd action of sequence 1	no action
time between 2nd and 3rd action (0...64800 s)	0
3rd action of sequence 1	no action
time between 3rd and 4th action (0...64800 s)	0
4th action of sequence 1	no action
action when object value = 0	
	OFF

21 A4 Dimming, Time, Scenes, Sequences 300115

Parameter	Setting
action when object value = 1	no action; OFF; MIN; 5%; 10%; 15%; 20%; 25%; 30%; 35%; 40%; 45%; 50%; 55%; 60%; 65%; 70%; 75%; 80%; 85%; 90%; 95%; MAX
1st action of sequence 1	If the communication object "Input A sequence 1" is received with the object value "1", then the channel is dimmed to the value set here.
time between 1st and 2nd action (0...64800 s)	0
	This parameter sets how long the pause between the 1 st and 2 nd actions in sequence 1 is to last.
2nd action of sequence 1	no action; OFF; MIN; 5%; 10%; 15%; 20%; 25%; 30%; 35%; 40%; 45%; 50%; 55%; 60%; 65%; 70%; 75%; 80%; 85%; 90%; 95%; MAX
	This parameter sets that value to which as 2 nd action is to be dimmed during sequence 1.
time between 2nd and 3rd action (0...64800 s)	0
	This parameter sets how long the pause between the 2 nd and 3 rd actions in sequence 1 is to last.
3rd action of sequence 1	no action; OFF; MIN; 5%; 10%; 15%; 20%; 25%; 30%; 35%; 40%; 45%; 50%; 55%; 60%; 65%; 70%; 75%; 80%; 85%; 90%; 95%; MAX
	This parameter sets that value to which as 3 rd action is to be dimmed during sequence 1.
time between 3rd and 4th action (0...64800 s)	0
	This parameter sets how long the pause between the 3 rd and 4 th actions in sequence 3 is to last.
4th action of sequence 1	no action; OFF; MIN; 5%; 10%; 15%; 20%; 25%; 30%; 35%; 40%; 45%; 50%; 55%; 60%; 65%; 70%; 75%; 80%; 85%; 90%; 95%; MAX
	This parameter sets that value to which as 4 th action is to be dimmed during sequence 1.

Parameter	Setting
action when object value = 0	no action; OFF; MIN; 5%; 10%; 15%; 20%; 25%; 30%; 35%; 40%; 45%; 50%; 55%; 60%; 65%; 70%; 75%; 80%; 85%; 90%; 95%; MAX
	If the communication object "Input A sequence 1" is received with the object value "0", then the channel is dimmed to the value set here.

The parameters in the "Channel A sequence 2" parameter window are set accordingly.

"Channel A inhibit" parameter window

You use this parameter window to set:

- whether channel A is to be inhibited if the communication object "Input A inhibit" is received with the object value "0" or with the object value "1",
- to which value the inhibiting object is to be set on bus voltage recovery,
- to which value the channel is to be dimmed on beginning and ending of inhibiting in each case.

channel A inhibit

inhibit with	<input type="button" value="1 (ON)"/>
at bus voltage recovery set inhibit object to	<input type="button" value="0 (OFF)"/>
value when inhibit starts	<input type="button" value="no action"/>
value when inhibit ends	<input type="button" value="no action"/>

Parameter	Setting
inhibit with	0 (OFF) 1 (ON)
	You use this parameter to set whether channel A is to be inhibited if the communication object "Input A inhibit" is received with the object value "1" or if it is received with the object value "0".
at bus voltage recovery set inhibit object to	0 (OFF) 1 (ON)
	This parameter sets to what value the inhibiting object is to be set on bus voltage recovery.

21 A4 Dimming, Time, Scenes, Sequences 300115

Parameter	Setting
value when inhibit starts	no action; OFF; MIN; 5%; 10%; 15%; 20%; 25%; 30%; 35%; 40%; 45%; 50%; 55%; 60%; 65%; 70%; 75%; 80%; 85%; 90%; 95%; MAX
	This parameter sets that value to which the channel is to be dimmed when inhibiting begins.

value when inhibit ends	no action; OFF; MIN; 5%; 10%; 15%; 20%; 25%; 30%; 35%; 40%; 45%; 50%; 55%; 60%; 65%; 70%; 75%; 80%; 85%; 90%; 95%; MAX
	This parameter sets that value to which the channel is to be dimmed when inhibiting ends.

Parameter	Setting
value status	do not transmit; at value change
	This parameter sets whether and when the dimming value status is to be sent automatically.
general error message	do not transmit; at value change; INVERTED at value change
	This parameter sets whether, when and how the "Output A general error" object is to be sent automatically.
no mains error message	do not transmit; at value change; INVERTED at value change
	This parameter sets whether, when and how the "Output A no mains error" object is to be sent automatically.
overload error message	do not transmit; at value change; INVERTED at value change
	This parameter sets whether, when and how the "Output A overload error" object is to be sent automatically.

"Channel A status" parameter window

You use this parameter window to set:

- whether and when the switching status and dimming value status of channel A are to be sent,
- whether a "General" error message, a "No mains supply" error message and an "Overload" error message of channel A are to be sent.

channel A status

switching status	do not transmit
value status	do not transmit
general error message	do not transmit
no mains error message	do not transmit
overload error message	do not transmit

Parameter	Setting
switching status	do not transmit; at value change; INVERTED at value change
	This parameter sets whether, when and how the switching status is to be sent automatically.