SIEMENS

April 2009

25 A4 8x In / 4x Blind 981701

Use of the application program

Product family:	Shutter
Product type:	Input / Shutter
Manufacturer:	Siemens
Name:	Combi Sunblind Actuator N 501
Order no.:	5WG1 501-1AB01

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1. Functional description

The N 501 combination sunblind actuator N 501 is a device for DIN-rail mounting with N-system dimensions, 8 inputs for 12-230V AC/DC and 4 channels (= 8 relay contact outputs) for 230V AC, 6A (with a resistive load) for the control of 1 sun protection drive each. 8 red light-emitting diodes (LED) on top of the device indicate the switching status of each of the inputs. The power supply of the electronics is carried out via an integrated power supply unit for 230V AC.

Only one 230V AC drive (motor), with electromechanical limit switches or with integrated limit switching electronics, may be connected at a time to each of the 4 sunblind channels. Parallel operation of a number of drives on a single channel requires intermediate switching by an isolating relay. The pause time for a change of movement direction must not be configured. The default setting for all channels is approx. 1 second.

The device is used in the as delivered state for standalone sun protection control, (even without a bus line connected and without prior configuration with the Engineering Tool Software (ETS)) without networking with other devices. When connected to a KNX network, the features and properties of the inputs and sunblind channels are configured jointly or individually with the ETS from Version ETS3.0f and upwards.

As-delivered state (stand-alone mode)

In the as-delivered state and with no bus line connected, the device works fully in "Stand-alone mode". In the asdelivered state, the inputs act directly on the corresponding outputs, i.e. a pushbutton on input a disables (i.e. drives up) the sunblind on channel A, a pushbutton on input b enables (i.e. drives down) the sunblind on channel A, etc.. The time to drive the sunblind from one end position to the other is set to approx. 120 s and the time for slat or sunblind adjustment by one step to approx. 200 ms. It should be noted that, for sunblinds with horizontal slats and a standard blind motor, changing the slat position. Opening the slats is always associated with a small moving up and closing the slats with a small moving down.

If a sunblind is to be operated from several points, then a number of pushbuttons can be connected in parallel to the corresponding inputs.

The long operation of a pushbutton drives the sunblind into the relevant end position whereas tapping a pushbutton (it is immaterial which of the two pushbuttons assigned to a sunblind channel is tapped) stops a blind movement or, with a stationary blind, leads to opening or closing the slats by one step or to moving the sunblind up or down by one step.

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If the potential-free alarm contact of a wind sensor is connected in parallel with the pushbuttons to one, a number of or all input(s) to deactivate (move up) sun protection, then sun protection on the outputs assigned to the inputs will be deactivated when the alarm contact is closed (i.e. moved up) and remains deactivated (even if pressing the pushbutton to activate sun protection remains ineffective meanwhile) while the alarm contact is closed.

Switching-on an output in direct mode

You switch each output on in "Direct mode" by pressing the corresponding pushbutton on the top of the device. To do this, first switch on this mode by pressing the "Direct mode" pushbutton (yellow LED for direct mode indication comes on) and then press the pushbutton assigned to the output to be switched. Because direct mode is decoupled completely from the bus communication, when directly switching-on a sunblind output an alarm received via the bus or a movement blockade enabled via the bus or via a closed contact at an input are not taken into account.

If, after direct switching of an output, direct mode is not ended by another press of the "Direct mode" pushbutton, then this occurs automatically 15 minutes (value in the as-delivered state) after the last press of one of the pushbuttons on the top of the device.

Bus mode

With a N 501 combination sunblind actuator connected to the KNX bus line, the behavior of each input and each sunblind channel can be set with the ETS. An N 501 output can be controlled directly not only via a pushbutton connected to the corresponding N 501 input, but also, via a bus pushbutton connected to the bus. A pushbutton connected to an input of the N 501 not only controls its corresponding output, but may be also used to control (switching, dimming, scene control, etc.) other KNX actuators.

Inputs and outputs may also be used completely independently of each other (decoupled) when configuring with ETS. Each input may be configured and used similarly as inputs of a N 263/E01 binary input device and each sunblind channel may be configured and used similarly as with a N 523/11 sunblind actuator.

Input functions

With the ETS one of the following functions can be assigned to one of two adjacent inputs which do not act directly on a sunblind channel:

- Switching, edge-triggered
- Switching, short / long operation
- Send switching status, binary value
- 1 button switching sequence control
- 1 button dimming
- 1 button sunblind control
- 8 bit value, edge-triggered
- 8 bit value, short / long operation
- 16 bit value, edge-triggered
- 16 bit value, short / long operation
- 16 bit floating point value, edge-triggered
- 16 bit floating point value, short / long operation
- 1 bit scene control
- 8 bit scene control.

With the ETS one of the following functions can be assigned to an input pair, i.e. two adjacent inputs (a and b, c and d, etc.):

- 2 buttons dimming with stop telegram
- 2 buttons dimming with cyclic transmission
- 2 buttons sunblind control.

Sun protection functions

With a sunblind channel, on which the corresponding inputs act directly, you can adjust with the ETS only the sunblind drive time and the time for adjusting the slats by one step.

If an input pair does not act directly on the corresponding sunblind channel, then both the two inputs and the sunblind channel can be configured with the ETS. With the sunblind channel, you can then set whether a single alarm object acting on all channels or an alarm object per channel is wanted, where, if there is a wind or rain alarm, the sunblind at all channels is driven up automatically and driving down is prevented while the alarm remains active. You can also set whether a single movement blockade object acting on all channels or a movement blockade object per channel is wanted, by means of which a travel of the sunblind can be blocked at any time (e.g. while cleaning outside blinds).

You can also add two objects per channel to store/restore 2 positions and up to two 1-bit status objects "End position up / down".

Automatic / manual mode or standard mode

You use the parameter " Differentiation automatic mode / manual mode " in the parameter window "Functions, objects sunblind" to set whether for the sunblind channels there is to be a distinction between automatic mode and

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3.9.1.16.1/2

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manual mode or whether there is only one mode (Standard mode)

In standard mode, there are always the two 1-bit objects for each channel for starting or stopping the sunblind movement or for driving the sunblind up or down (or for adjusting the slats) by one step. These objects can be complemented by further objects as required via the parameter window "Functions, objects sunblind".

The "Channel X, sunblind, centrally up/down" object, available only in automatic mode, switches a sunblind channel via the corresponding central command first to automatic mode and then moves the sunblind into the respective end position. This central command also ensures that sun protection for rooms where the user has switched to manual mode and has then forgotten to switch back to automatic mode when leaving the room (or building) are driven up centrally in the evening and driven down again centrally in the morning. If a blind is used inside to darken a room, e.g. and shall be driven only locally by hand and not automatically by central commands, then the linking of the central command with a group address must be dispensed with for this sunblind channel.

Moreover, for each channel, the blinds and their slats can be moved into intermediate positions in automatic mode by commands with setting information in the range 0...100%. How exactly the desired position in % of the sunblind and the slats will be reached is determined by the motor and gear used and not by this software.

In automatic mode, there are for each channel an object to switch the channel to manual or automatic mode and two 1-bit objects to control the sunblind and slats in manual mode. Use the "Functions, objects sunblind" parameter window to add further objects as required.

If a weather station is installed which can send the object "Sunshine" this object can be used in automatic mode to block and release the positioning of the slats after the sunblind was driven before into the top or bottom position.

In automatic mode, a manual control of a sunblind or an adjustment of slats via the two 1-bit objects for manual mode (e.g. by using a sunblind pushbutton in the room) always results in an automatic switching-over from automatic to manual mode for the channel in question. Then, in manual mode, all automatic commands for the channel in manual mode are no longer executed. This ensures that the user of a room can bring its sun / anti-glare protection permanently into his desired position and that this can only be changed by a superior automatic control (e.g. a weather station) if the channel has been switched back to automatic mode or can be overridden by a central command if this command is released for the channel.

Behavior on failure / recovery of bus / mains voltage Behavior of the sunblind channels

If the bus voltage fails, a sunblind travel or slat adjustment that has started is completed. The new sunblind and slat positions will be stored and transferred automatically after bus voltage recovery.

A mains voltage failure leads to immediate switching off of all sunblind channels (mandated by the mains supply of the electronics and the relays used). The current sunblind and slat positions for all channels will be stored permanently so that they can be reproduced if necessary after mains voltage recovery.

After mains voltage recovery, the configured actions are executed and new positions reported when indicated. If the current sunblind and slat positions are unknown after mains voltage recovery or after the application program has been loaded or after a switching-over from direct to bus mode, then the first telegram for a travel of the sunblind triggers a reference travel into one of the end positions. If the sunblind is already in the end position to which it is to move, then the relay of the relevant sunblind output is nonetheless switched-on for the period of the configured movement time.

Behavior of the inputs

If the mains voltage fails, no input statuses are stored and after mains voltage recovery, no current input status is sent.

If the signal status at an input is changed once or several times during a bus voltage failure, then a changed respectively the last changed object value (0 or 1) is sent after bus voltage recovery.

However, if the function "Send switching status, binary value" is assigned to an input and the corresponding parameter "Send current binary value after mains / bus voltage recovery" is set to "Yes", then the current input status is sent both after mains and after bus voltage recovery.

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2. Communication objects

Maximum number of group addresses:	220
Maximum number of assignments:	220

Subsequently, the communication objects are set out in detail when the bus line is connected and the device is in bus mode.

Note

Type and number of available objects are determined by the parameter setting with the ETS, i.e. the views can vary. In particular, the type and number of objects from object number 77 onwards will be determined by the functions which were assigned with the ETS to inputs a...h.

No.	Object name	Function	Bits	Flags
0	Status direct mode	On/Off	1	CRT
1	8 bit scene	restore/store	8	CRWT
2	Alarm	On/Off	1	CRWT
3	Movement blockade	On/Off	1	CRWT
4	Sunblind, centrally	Up/Down	1	CRWT
5	Channel A, Alarm	On/Off	1	CRWT
6	Channel A, Movement blockade	On/Off	1	CRWT
7	Channel A, Sunblind, centrally	Up/Down	1	CRWT
8	Channel A, Automatic mode	On/Off	1	CRWT
9	Channel A, Sunshine	On/Off	1	CRWT
	Channel A. Automatic mode, Sunblind			
10	position	0100%	8	CRWT
	Channel A, Automatic mode, Slats			
11	position	0100%	8	CRWT
12	Channel A, Sunblind position	0100%	8	CRWT
13	Channel A, Slats position	0100%	8	CRWT
14	Channel A, Sunblind	Up/Down	1	CRWT
15	Channel A, Stop/Slats	Open/Close	1	CRWT
16	Channel A, Position 1/2	restore	1	CRWT
17	Channel A, Position 1/2	store	1	CRWT
18	Channel A, Status Automatic mode	On/Off	1	CRT
19	Channel A, Status Sunblind position	0100%	8	CRT
20	Channel A, Status Slats position	0100%	8	CRT
21	Channel A, Status End position up	On/Off	1	CRT
22	Channel A, Status End position down	On/Off	1	CRT
23	Channel B, Alarm	On/Off	1	CRWT
24	Channel B, Movement blockade	On/Off	1	CRWT
25	Channel B, Sunblind, centrally	Up/Down	1	CRWT
26	Channel B, Automatic mode	On/Off	1	CRWT
27	Channel B, Sunshine	On/Off	1	CRWT
28	Channel B, Automatic mode, Sunblind position	0100%	8	CRWT
29	Channel B, Automatic mode, Slats position	0100%	8	CRWT
30	Channel B, Sunblind position	0100%	8	CRWT
31	Channel B, Slats position	0100%	8	CRWT
32	Channel B, Sunblind	Up/Down	1	CRWT
33	Channel B, Stop/Slats	Open/Close	1	CRWT
34	Channel B, Position 1/2	restore	1	CRWT
35	Channel B, Position 1/2	store	1	CRWT
36	Channel B, Status Automatic mode	On/Off	1	CRT
37	Channel B, Status Sunblind position	0100%	8	CRT
38	Channel B, Status Slats position	0100%	8	CRT
39	Channel B, Status End position up	On/Off	1	CRT
40	Channel B, Status End position down	On/Off	1	CRT

No.	Object name	Function	Bits	Flags
41	Channel C, Alarm	On/Off	1	CRWT
42	Channel C, Movement blockade	On/Off	1	CRWT
43	Channel C, Sunblind, centrally	Up/Down	1	CRWT
44	Channel C, Automatic mode	On/Off	1	CRWT
45	Channel C, Sunshine	On/Off	1	CRWT
46	Channel C, Automatic mode, Sunblind position	0100%	8	CRWT
47	Channel C, Automatic mode, Slats position	0100%	8	CRWT
48	Channel C, Sunblind position	0100%	8	CRWT
49	Channel C, Slats position	0100%	8	CRWT
50	Channel C, Sunblind	Up/Down	1	CRWT
51	Channel C, Stop/Slats	Open/Close	1	CRWT
52	Channel C, Position 1/2	restore	1	CRWT
53	Channel C, Position 1/2	store	1	CRWT
54	Channel C, Status Automatic mode	On/Off	1	CRT
55	Channel C, Status Sunblind position	0100%	8	CRT
56	Channel C, Status Slats position	0100%	8	CRT
57	Channel C, Status End position up	On/Off	1	CRT
58	Channel C, Status End position down	On/Off	1	CRT
59	Channel D, Alarm	On/Off	1	CRWT
60	Channel D, Movement blockade	On/Off	1	CRWT
61	Channel D, Sunblind, centrally	Up/Down	1	CRWT
62	Channel D, Automatic mode	On/Off	1	CRWT
63	Channel D, Sunshine	On/Off	1	CRWT
64	Channel D, Automatic mode, Sunblind position	0100%	8	CRWT
65	Channel D, Automatic mode, Slats position	0100%	8	CRWT
66	Channel D, Sunblind position	0100%	8	CRWT
67	Channel D, Slats position	0100%	8	CRWT
68	Channel D, Sunblind	Up/Down	1	CRWT
69	Channel D, Stop/Slats	Open/Close	1	CRWT
70	Channel D, Position 1/2	restore	1	CRWT
71	Channel D, Position 1/2	store	1	CRWT
72	Channel D, Status Automatic mode	On/Off	1	CRT
73	Channel D, Status Sunblind position	0100%	8	CRT
74	Channel D, Status Slats position	0100%	8	CRT
75	Channel D, Status End position up	On/Off	1	CRT
76	Channel D, Status End position down	On/Off	1	CRT
77	Input a, Switching	On/Off/Toggle	1	CRWT
77	Input a, Status switching/binary value	On/Off	1	CRWT
77	Input a, Switching Group 1	On/Off	1	CRWT
77	Input a, Sunblind	Up/Down	1	CRWT
77	Input a, 8 bit value	send	8	CRWT
77	Input a, 16 bit value	send	16	CRWT
77	Input a, Scene 1/2	restore	1	CRWT
77	Input a, 8 bit scene	restore/ store	8	CRWT
-77	Inputs a+b, Switching	Un/Uff/Toggle	1	CRWI
//	Inputs a+b, Slats	Stop/Open/Close	1	CRWT
/8	Input a, Dimming	prighter/darker	4	CRWI
/8	Input a, Switching Group 2		1	CRWI
/8	Input a, Slats	Stop/Open/Close	1	CRWI
70	Input a, Scene 1/2	SIUI'e	1	CRWI
/8	Inputs a+b, Dimming	brighter/darker	4	CRWT
/8	Inputs a+b, Sunblind	Op/Down	1	CRWT
79	Input a, Switching Group 3	0. 100%	1	CWTU
19	Input a, Dimining value Status	0100%	0	CIVIU
80	Inputs a+b	lock/release	1	CRWT
00		1000010100000	1 1	

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Application Program Description

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No.	Object name	Function	Bits	Flags
81	Input b, Switching	On/Off/Toggle	1	CRWT
81	Input b, Status switching/binary value	On/Off	1	CRWT
81	Input b, Switching Group 1	On/Off	1	CRWT
81	Input b, Sunblind	Up/Down	1	CRWT
81	Input b, 8 bit value	send	8	CRWT
81	Input b, 16 bit value	send	16	CRWT
81	Input b, Scene 1/2	restore	1	CRWT
81	Input b, 8 bit scene	restore/ store	8	CRWT
82	Input b. Dimming	brighter/darker	4	CRWT
82	Input b. Switching Group 2	On/Off	1	CRWT
82	Input b. Slats	Stop/Open/Close	1	CRWT
82	Input b. Scene 1/2	store	1	CRWT
83	Input b. Switching Group 3	On/Off	1	CRWT
83	Input b. Dimming Value Status	0100%	8	CWTU
84	Input b	lock/release	1	CRWT
85	Input c. Switching	On/Off/Toggle	1	CRWT
85	Input c. Status switching/binary value	On/Off	1	CRWT
85	Input c. Switching Group 1	On/Off	1	CRWT
85	Input c Sunblind	Un/Down	1	CRWT
85	Input c. 8 bit value	send	8	CRWT
85	Input c. 16 bit value	send	16	CRWT
85	Input c. Scene 1/2	restore	1	CRWT
85	Input c, 8 bit scene	restore/ store	8	CRWT
85	Inputs c+d Switching		1	CRWT
85	Inputs c+d. Slats	Ston/Onen/Close	1	CRWT
86	Input c Dimming	brighter/darker	4	CRWT
86	Input c. Switching Group 2		1	CRWT
86	Input c. Slate	Stop/Open/Close	1	CRWT
86	Input c, Stats	store	1	CRWT
86	Inputs c+d Dimming	brighter/darker	4	CRWT
86	Inputs c+d, Supplind	Lin/Down	4	CRWT
87	Input c. Switching Group 3	Op/Down	1	CRWT
87	Input c, Dimming Value Status	0 100%	8	CWTU
88	Input c, Dimining Value Status	010078	0	CWIU
		1000//1010200	1	CDWT
88	Inputs c+d	lock/release	1	CRWT
88	Input c Inputs c+d	lock/release	1 1 1	CRWT CRWT
88 89 80	Input c Inputs c+d Input d, Switching Input d, Status switching/bingp(value	lock/release lock/release On/Off/Toggle	1 1 1 1	CRWT CRWT CRWT
88 89 89	Input c Inputs c+d Input d, Switching Input d, Status switching/binary value	lock/release lock/release On/Off/Toggle On/Off	1 1 1 1 1	CRWT CRWT CRWT CRWT
88 89 89 89	Input c Inputs c+d Input d, Switching Input d, Status switching/binary value Input d, Switching Group 1 Input d, Suphind	lock/release lock/release On/Off/Toggle On/Off On/Off	1 1 1 1 1 1	CRWT CRWT CRWT CRWT CRWT
88 89 89 89 89 89 89	Input c Input c+d Input d, Switching Input d, Status switching/binary value Input d, Switching Group 1 Input d, Sunblind Input d, Sunblind	lock/release lock/release On/Off/Toggle On/Off On/Off Up/Down	1 1 1 1 1 1 2	CRWT CRWT CRWT CRWT CRWT
88 89 89 89 89 89 89 89 89	Input c Input c, Switching Input d, Status switching/binary value Input d, Status switching/binary value Input d, Switching Group 1 Input d, Sunblind Input d, 8 bit value	lock/release lock/release On/Off/Toggle On/Off On/Off Up/Down send	1 1 1 1 1 1 8	CRWT CRWT CRWT CRWT CRWT CRWT CRWT
88 89 89 89 89 89 89 89 89 89	Input c Input c, Switching Input d, Switching/binary value Input d, Status switching/binary value Input d, Switching Group 1 Input d, Switching Group 1 Input d, Switching Input d, 8 bit value Input d, 16 bit value	lock/release lock/release On/Off/Toggle On/Off On/Off Up/Down send send send	1 1 1 1 1 8 16	CRWT CRWT CRWT CRWT CRWT CRWT CRWT
88 89 89 89 89 89 89 89 89 89 89	Input c Input c, Switching Input d, Switching /binary value Input d, Switching Group 1 Input d, Sunblind Input d, 8 bit value Input d, 16 bit value Input d, 9 bit acces	lock/release lock/release On/Off/Toggle On/Off Up/Down send send restore reatore	1 1 1 1 1 1 8 16 1 1 8	CRWT CRWT CRWT CRWT CRWT CRWT CRWT CRWT
88 89 89 89 89 89 89 89 89 89 89 89	Input c Input c +d Input d, Switching Input d, Status switching/binary value Input d, Switching Group 1 Input d, Sunblind Input d, 8 bit value Input d, 16 bit value Input d, 16 bit value Input d, 8 bit scene Input d, 8 bit scene	Iock/release Iock/release On/Off/Toggle On/Off On/Off Up/Down send send restore restore/store	1 1 1 1 1 8 16 1 8 8	CRWT CRWT CRWT CRWT CRWT CRWT CRWT CRWT
38 88 89 89 89 89 89 89 89 89 89 89 89 89 89 89 89 89 89 89 89 90	Input c Input c Input d, Switching Input d, Status switching/binary value Input d, Switching Group 1 Input d, Sunblind Input d, Sunblind Input d, B bit value Input d, 16 bit value Input d, Scene 1/2 Input d, B bit scene Input d, Dimming Input d, Dimming	lock/release lock/release On/Off/Toggle On/Off Up/Down send send restore restore restore brighter/darker On/Off	1 1 1 1 1 1 8 16 1 8 8 4	CRWT CRWT CRWT CRWT CRWT CRWT CRWT CRWT
38 88 89 90 90	Input c Input c, Switching Input d, Switching Group 1 Input d, Switching Group 1 Input d, Switching Group 1 Input d, Switching Group 1 Input d, 8 bit value Input d, Scene 1/2 Input d, Sene 1/2 Input d, Switching Group 2 Input d, State	lock/release lock/release On/Off/Toggle On/Off Up/Down send send restore restore restore/store brighter/darker On/Off	1 1 1 1 1 1 8 16 1 8 4 1	CRWT CRWT CRWT CRWT CRWT CRWT CRWT CRWT
38 88 89 89 89 89 89 89 89 89 89 89 89 89 90 90 90	Input c Input c Input d, Switching Input d, Switching Group 1 Input d, Switching Group 1 Input d, Sublind Input d, 8 bit value Input d, 16 bit value Input d, Scene 1/2 Input d, Switching Group 2 Input d, Slats Input d, Slats	Iock/release On/Off/Toggle On/Off Up/Down send send restore restore/store brighter/darker On/Off Stop/Open/Close	1 1 1 1 1 1 8 16 1 8 4 1 1	CRWT CRWT CRWT CRWT CRWT CRWT CRWT CRWT
30 88 89 89 89 89 89 89 89 89 90 90 90 90	Input c Input c Input d, Switching Input d, Switching Group 1 Input d, Switching Group 1 Input d, Sublind Input d, S bit value Input d, 16 bit value Input d, Sene 1/2 Input d, B bit scene Input d, Switching Group 2 Input d, Skats Input d, Skats Input d, Skats Input d, Skats	Iock/release On/Off/Toggle On/Off On/Off Up/Down send send restore restore/store brighter/darker On/Off Stop/Open/Close store	1 1 1 1 1 1 1 1 8 16 1 8 4 1 1 1	CRWT CRWT CRWT CRWT CRWT CRWT CRWT CRWT
30 88 89 89 89 89 89 89 89 90 90 90 91	Input c Input c Input d, Switching Input d, Status switching/binary value Input d, Switching Group 1 Input d, Sunblind Input d, Sublind Input d, 16 bit value Input d, 16 bit value Input d, Scene 1/2 Input d, Skits cene Input d, Slats Input d, Slats Input d, Skits Croup 3 Input 4 Input 4 In	Iock/release Iock/release On/Off/Toggle On/Off Up/Down send send restore/ restore/ store/ on/Off Stop/Open/Close store On/Off 0 - 000/	1 1 1 1 1 1 8 16 1 1 8 4 1 1 1 1 1 1	CRWT CRWT CRWT CRWT CRWT CRWT CRWT CRWT
38 88 89 89 89 89 89 89 89 89 90 90 90 90 91 92	Input c Input c Input d, Switching Input d, Status switching/binary value Input d, Switching Group 1 Input d, Sunblind Input d, Sublind Input d, 16 bit value Input d, Scene 1/2 Input d, Seit scene Input d, Switching Group 2 Input d, Sere 1/2 Input d, Stats Input d, Seene 1/2 Input d, Seene 1/2 Input d, Seene 1/2 Input d, Seene 1/2 Input d, Switching Group 3 Input d, Dimming Value Status Input d, Dimming Value Status	Iock/release Iock/release On/Off/Toggle On/Off Up/Down send send restore restore/store brighter/darker On/Off Stop/Open/Close store On/Off On/Off	1 1 1 1 1 1 8 16 1 8 4 1 1 1 1 1 1 8	CRWT CRWT CRWT CRWT CRWT CRWT CRWT CRWT
38 88 89 89 89 89 89 89 89 89 90 90 90 90 91 91 92	Input c Input c, Switching Input d, Switching Group 1 Input d, Sunblind Input d, Sublind Input d, 8 bit value Input d, 16 bit value Input d, Scene 1/2 Input d, Switching Group 2 Input d, Switching Group 2 Input d, Switching Group 3 Input d, Dimming Value Status Input d	Iock/release On/Off/Toggle On/Off Up/Down send send restore restore/store brighter/darker On/Off Stop/Open/Close store On/Off 0100% Iock/release	1 1 1 1 1 1 8 16 1 8 4 1 1 1 1 1 8 1 1 1 1 1	CRWT CRWT CRWT CRWT CRWT CRWT CRWT CRWT
38 88 89 89 89 89 89 89 89 90 90 90 90 90 91 92 93	Input c Input c Input d, Switching Input d, Switching Group 1 Input d, Sunblind Input d, Sublind Input d, 8 bit value Input d, 8 bit value Input d, 8 bit value Input d, 8 bit scene Input d, Switching Group 2 Input d, Switching Group 2 Input d, Switching Group 3 Input d, Dimming Value Status Input d	Iock/release On/Off/Toggle On/Off On/Off Up/Down send send restore restore/store brighter/darker On/Off Stop/Open/Close store On/Off On/Off On/Off On/Off	1 1 1 1 1 1 1 8 16 1 8 4 1 1 1 1 1 8 1 1 1 1 1 1 1 1 1 1 1	CRWT CRWT CRWT CRWT CRWT CRWT CRWT CRWT
38 88 89 89 89 89 89 89 89 90 90 90 90 90 90 91 92 93 93	Input c Input c Input d, Switching Input d, Status switching/binary value Input d, Switching Group 1 Input d, Sunblind Input d, 8 bit value Input d, 16 bit value Input d, 16 bit value Input d, Scene 1/2 Input d, Switching Group 2 Input d, Skits Input d, Skit	Iock/release On/Off/Toggle On/Off On/Off Up/Down send send restore restore/store brighter/darker On/Off Stop/Open/Close store on/Off 0100% Iock/release On/Off/Toggle On/Off	1 1 1 1 1 1 8 16 1 8 4 1 1 1 1 8 1 1 1 1 1 1 1 1	CRWT CRWT CRWT CRWT CRWT CRWT CRWT CRWT
38 88 89 89 89 89 89 89 90 90 90 91 91 92 93 93	Input c Input c Input d, Switching Input d, Switching Group 1 Input d, Switching Group 1 Input d, Switching Group 1 Input d, 8 bit value Input d, 16 bit value Input d, Scene 1/2 Input d, Sene 1/2 Input d, Switching Group 2 Input d, Skits Input d, Skits Input d, Skits Input d, Switching Group 3 Input d, Switching Group 3 Input d, Dimming Value Status Input d Input d, Status switching/binary value Input e, Status switching/binary value Input e, Switching Group 1	Iock/release Iock/release On/Off/Toggle On/Off Up/Down send send restore restore/store brighter/darker On/Off Stop/Open/Close store On/Off O100% Iock/release On/Off/Toggle On/Off On/Off On/Off On/Off	1 1 1 1 1 1 8 16 1 8 4 1 1 1 1 8 8 1 1 1 1 1 1 1	CRWT CRWT CRWT CRWT CRWT CRWT CRWT CRWT
36 88 89 89 89 89 89 89 89 90 90 90 91 91 92 93 93 93	Input c Input c, Switching Input d, Switching Group 1 Input d, Sunblind Input d, Sublind Input d, 8 bit value Input d, 8 bit value Input d, 16 bit value Input d, Scene 1/2 Input d, Switching Group 2 Input d, Switching Group 2 Input d, Switching Group 3 Input d, Switching Group 3 Input d, Dimming Value Status Input d Input d, Dimming Value Status Input d Input e, Switching Group 1 Input e, Switching Group 1 Input e, Sunblind	Iock/release On/Off/Toggle On/Off Up/Down send send restore restore/store brighter/darker On/Off Stop/Open/Close store On/Off 0100% lock/release On/Off On/Off On/Off On/Off Up/Down	1 1 1 1 1 8 16 1 1 1 1 1 1 1 1 1 1 1	CRWT CRWT CRWT CRWT CRWT CRWT CRWT CRWT
38 88 89 89 89 89 89 89 90 90 90 90 90 90 90 90 91 92 93 93 93 93 93	Input c Input c Input d, Switching Input d, Switching Group 1 Input d, Sunbind Input d, S bit value Input d, 8 bit value Input d, 8 bit value Input d, 8 bit scene Input d, Switching Group 2 Input d, Switching Group 2 Input d, Switching Group 3 Input d, Switching Group 3 Input d, Dimming Value Status Input d, Dimming Value Status Input d, Switching Group 1 Input e, Switching Group 1 Input e, Sublind Input e, Sublind Input e, Sublind	Iock/release On/Off/Toggle On/Off Up/Down send send restore restore/store brighter/darker On/Off Stop/Open/Close store On/Off 0100% lock/release On/Off On/Off On/Off On/Off Up/Down send	1 1 1 1 1 8 16 1 1 1 1 1 1 1 1 1 1 1 1 1	CRWT CRWT CRWT CRWT CRWT CRWT CRWT CRWT
38 88 89 89 89 89 89 89 90 90 90 90 91 91 91 92 93 93 93 93 93 93	Input c Input c Input d, Switching Input d, Switching Group 1 Input d, Sunblind Input d, 8 bit value Input d, 16 bit value Input d, 16 bit value Input d, 8 bit scene Input d, 8 bit scene Input d, Switching Group 2 Input d, Switching Group 2 Input d, Switching Group 3 Input d, Switching Group 3 Input d, Switching Value Status Input d Input e, Switching Input e, Switching Input e, Switching Input e, Switching Input e, Switching Input e, Switching Input e, Sublind Input e, 8 bit value Input e, 16 bit value	Iock/release On/Off/Toggle On/Off On/Off Send send restore restore/store brighter/darker On/Off Stop/Open/Close store On/Off O100% Iock/release On/Off On/Off On/Off On/Off On/Off On/Off On/Off On/Off On/Off Send Send Send Send	1 1 1 1 1 8 16 1 1 1 1 1 1 1 1 1 1 1 1 1	CRWT CRWT CRWT CRWT CRWT CRWT CRWT CRWT
00 00 88 89 89 89 89 89 89 89 89 90 90 90 90 90 91 91 92 93 93 93 93 93 93 93 93 93	Input c Input c Input d, Switching Input d, Switching Group 1 Input d, Switching Group 1 Input d, Sunblind Input d, 8 bit value Input d, 16 bit value Input d, 16 bit value Input d, Secne 1/2 Input d, Skits Input d, Switching Group 2 Input d, Switching Group 3 Input d, Switching Group 1 Input e, Switching Group 1 Input e, Sublind Input e, Sublind Input e, Status Input e, Sublind Input e, Status Input e, Status Input e, Sublind Input e, Status Input e,	Iock/release On/Off/Toggle On/Off On/Off Send send send restore/store brighter/darker On/Off Stop/Open/Close store On/Off 0100% Iock/release On/Off On/Off On/Off On/Off On/Off On/Off On/Off On/Off On/Off On/Off Send send send send send	1 1 1 1 1 1 8 16 1 1 1 1 1 1 1 1 1 1 1 1 1	CRWT CRWT CRWT CRWT CRWT CRWT CRWT CRWT
88 88 89 89 89 89 89 89 89 89 89 90 90 90 90 90 90 91 91 92 93 93 93 93 93 93 93 93 93 93	Input c Input c, Switching Input d, Switching Group 1 Input d, Sunblind Input d, Sublind Input d, 8 bit value Input d, 16 bit value Input d, 16 bit value Input d, Scene 1/2 Input d, Switching Group 2 Input d, Switching Group 2 Input d, Switching Group 3 Input d, Switching Group 1 Input e, Switching Group 1 Input e, Status switching/binary value Input e, Switching Group 1 Input e, Sunblind Input e, Sene 1/2 Input e, Sene 1/2	Iock/release On/Off/Toggle On/Off Up/Down send send restore restore/store brighter/darker On/Off Stop/Open/Close store On/Off 0100% lock/release On/Off On/Off On/Off On/Off Up/Down send send restore restore restore store	$ \begin{array}{r} 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 8 \\ 1 \\ 3 \\ 1 \\ 1 \\ 3 \\ 1 \\ 3 \\ 1 \\ 1 \\ 3 \\ 1 \\ 3 \\ 1 \\ 3 \\ 3 \\ 1 \\ 3 \\ 3 \\ 1 \\ 3 \\ 3 \\ 1 \\ 3 \\ $	CRWT CRWT CRWT CRWT CRWT CRWT CRWT CRWT
00 00 88 89 89 89 89 89 89 89 89 90 90 90 90 90 91 91 92 93 93 93 93 93 93 93 93 93 93 93 93 93	Input c Input c Input d, Switching Input d, Switching Group 1 Input d, Sunblind Input d, Sunblind Input d, 8 bit value Input d, 8 bit value Input d, 8 bit scene Input d, Switching Group 2 Input d, Switching Group 2 Input d, Switching Group 3 Input d, Switching Group 3 Input d, Dimming Value Status Input d, Dimming Value Status Input d, Dimming Value Status Input d, Dimming Group 1 Input e, Switching Group 1 Input e, Switching Group 1 Input e, Switching Group 1 Input e, Sublind Input e, Sublind Input e, Some 1/2 Input e, Status switching/binary value Input e, Sublind Input e, Sublind Input e, B bit value Input e, 8 bit scene Input e+f, Switching	Iock/release On/Off/Toggle On/Off On/Off Up/Down send send restore brighter/darker On/Off Stop/Open/Close store On/Off Stop/Open/Close store On/Off On/Off On/Off On/Off On/Off On/Off Up/Down send send restore restore send restore On/Off	1 1 1 1 1 1 8 16 1 1 1 1 1 1 1 1 1 1 1 1 1	CRWT CRWT CRWT CRWT CRWT CRWT CRWT CRWT

No.	Object name	Function	Bits	Flags
94	Input e, Dimming	brighter/darker	4	CRWT
94	Input e, Switching Group 2	On/Off	1	CRWT
94	Input e, Slats	Stop/Open/Close	1	CRWT
94	Input e, Scene 1/2	store	1	CRWT
94	Inputs e+f, Dimming	brighter/darker	4	CRWT
94	Inputs e+f, Sunblind	Up/Down	1	CRWT
95	Input e, Switching Group 3	On/Off	1	CRWT
95	Input e, Dimming Value Status	0100%	8	CWTU
96	Input e	lock/release	1	CRWT
96	Inputs e+f	lock/release	1	CRWT
97	Input f, Switching	On/Off/Toggle	1	CRWT
97	Input f, Status switching/binary value	On/Off	1	CRWT
97	Input f, Switching Group 1	On/Off	1	CRWT
97	Input f, Sunblind	Up/Down	1	CRWT
97	Input f, 8 bit value	send	8	CRWT
97	Input f, 16 bit value	send	16	CRWT
97	Input f, Scene 1/2	restore	1	CRWT
97	Input f, 8 bit scene	restore/ store	8	CRWT
98	Input f, Dimming	brighter/darker	4	CRWT
98	Input f, Switching Group 2	On/Off	1	CRWT
98	Input f, Slats	Stop/Open/Close	1	CRWT
98	Input f, Scene 1/2	store	1	CRWT
99	Input f, Switching Group 3	On/Off	1	CRWT
99	Input f, Dimming Value Status	0100%	8	CWTU
100	Input f	lock/release	1	CRWT
101	Input g, Switching	On/Off/Toggle	1	CRWI
101	Input g, Status switching/binary value	On/Off	1	CRWI
101	Input g, Switching Group 1	On/Off	1	CRWI
101	Input g, Sunblind	Up/Down	1	CRWI
101	Input g, 8 bit value	send	8	CRWT
101	Input g, 16 bit value	send	16	CRWT
101	Input g, Scene 1/2	restore	1	CRWT
101	Input g, 8 bit scene	restore/ store	8	CRWT
101	Inputs g+h, Switching	On/On/Toggle	1	CRWT
101	Inputs g+n, Stats	Stop/Open/Close	1	CRWT
102	Input g, Dirinning	On/Off	4	CRWT
102	Input a Slate	Stop/Open/Close	1	CRWT
102	Input g. Stats	store	1	CRWT
102	Inputs a+b Dimming	brighter/darker	4	CRWT
102	Inputs a+b Supplied	Un/Down	1	CRWT
102	Input a Switching Group 3	Op/Off	1	CRWT
103	Input g. Dimming Value Status	0 100%	8	CWTU
104	Input g	lock/release	1	CRWT
104	Inputs a+h	lock/release	1	CRWT
105	Input h. Switching	On/Off/Toggle	1	CRWT
105	Input h. Status switching/binary value	On/Off	1	CRWT
105	Input h. Switching Group 1	On/Off	1	CRWT
105	Input h. Sunblind	Up/Down	1	CRWT
105	Input h, 8 bit value	send	8	CRWT
105	Input h, 16 bit value	send	16	CRWT
105	Input h, Scene 1/2	restore	1	CRWT
105	Input h, 8 bit scene	restore/ store	8	CRWT
106	Input h, Dimming	brighter/darker	4	CRWT
106	Input h, Switching Group 2	On/Off	1	CRWT
106	Input h, Slats	Stop/Open/Close	1	CRWT
106	Input h, Scene 1/2	store	1	CRWT
107	Input h, Switching Group 3	On/Off	1	CRWT
107	Input h, Dimming Value Status	0100%	8	CWTU
108	Input h	lock/release	1	CRWT

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Obj. no.	Object name	Function	Туре	Flags	Obj. no.	Object name	Function	Туре	Flags
0	Status direct mode	On/Off	1 bit	CRT	2 (5, 23,	Alarm (Channel A,	On/Off	1 bit	CRWT
was swit operation it was swit rect mod tive yelld switching top of th Comman by the co are store bus mod of the de tor comp target co the curre After ma	ched from bus mode t n" button on its top (si vitched back from direc le = Off). With direct ow LED on top of the g-on of an output usin e device is released. In telegrams received ombi sunblind actuator d as the desired targe e (the yellow LED to i evice is switched off ag bares the current states conditions and automa ent states from the targ ins voltage recovery,	to direct mode tatus direct mode tatus direct mode to bus mode switcher actuator ligh g the correspon via the bus ar or in direct mode t state. After so ndicate direct gain) the comb so of the output tically elimina get conditions. the object "Stat	using the odd = On) mode (st d on (the ts up) the onding bu e not carr ode; inste- switching operation of sunbling s with the tes deviat	e "direct or that iatus di- respec- e direct tton on ried out ad they back to on top d actua- e stored tions of	This obje rain or fr idle state rameter ' nel X", i channel s channel alarm and alarm is Automati received switching ried out I The sunb	ect can be linked with cost sensor, which ser and a logical 1 in the 'Behavior on alarm'' in t can be set individu should not react to ar an interior blind) or .g. move the outer Ve into the upper end p d block movement out till present. ic mode commands w during alarm operati g the automatic mode ater when Alarm = 0. lind likewise moves to a assigned to the par	an alarm signeds cyclically a e event of an a the parameter ally per chan a alarm ("no a whether the se enetian blind a osition in the t of this position with sunblind a ion, as well a e On or Off, ar	nal from a a logical C alarm. Via er window nel wheth ction", e.g sunblind a connected event of on while th and slat po s comma e stored a position in	a wind,) in the the pa- "Chan- ner the . in the ctuator to this a wind ne wind positions nds for nd car- f a time
is transm	nitted automatically.		1.0.1	CDIA/T	alarm" in	the "Functions, objec	ts sunblind" pa	arameter v	vindow
This para trol" para to "Yes". This obje bit scene	ameter window is only ameter in the "Basic se ect is used to restore (with the number x. B	store/store visible if the ttings" parame recall) or store its 05 here of	"8 bit sce ter windo (program	ne con- w is set n) the 8 e scene	terval. <u>Caution</u> : ment of top of the ceived via 3 (6, 24,	If the device is switcl a sunblind by pressing e device is possible in a the bus.	hed to direct i g the correspo spite of an ala On/Off	mode, the onding but rm which	move- tton on was re-
log. 0, th and mus (automat automati manual r Successfi travel tir slats hav and slat moveme not movi	then it y = log. r, then hen it is restored. Bit tic mode = On), ther ically leads to switch mode (automatic mode ully storing a sunblind me of the sunblind ar been specified, the positions have been nt into the upper encong.	6 currently ha 6 automatic m a storing or r ing the sunb e = Off). position is or nd the adjustr status objects synchronized I position and	s no sign iode is ac estoring a lind chan ly possibl nent time for the s with a re the sun	ificance ctivated a scene nels to le if the of the unblind ference blind is	If a logica sunblind ceived vi while ou blinds fro cleaning open, to damaged lowered v	movement blockade) al 1 is received via this via bus telegrams is a this object. This obj ter Venetian blinds ar om being raised e.g. staff are not endang prevent an internal I as a result or to prev when the patio door is is.	s object, then blocked until ject can there e being cleane by a time sv gered, or whe blind from be vent a roller sh s open and thu	movemen a logical fore be us ed to prev vitch so tl n the wir ing lower nutter fron us locking	t of the 0 is re- ed e.g. ent the hat the idow is ed and n being out the
					Movemel be overrie commany switch au "Sunblind, ce objects ru carried o end of a cerned cl position f <u>Caution</u> : ment of top of th object ha	nt plockade = 1 has t dden by an alarm. Alar ds with sunblind and itomatic mode On or C d, centrally" objects or on eceived with Moveme ut later when Movem movement blockade a hannel will be moved for alarm. If the device is switch a sunblind by pressin e device is possible ev s been activated via th	The highest pr rm commands, is a stat position Off as well as c for one of the e of the "Chain nt blockade = nent blockade an alarm is sti automatically hed to direct is g the correspondent ren if the "Mon- ne bus.	iority and , automati is, comma ommands "Channel nnel x, su 1 are stor = 0, i.e. if Il active, tl to the se mode, the pending but yement blo	cannot c mode ands to for the X, sun- nshine" red and f at the he con- t safety move- tton on pockade"

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Obj. no.	Object name	Function	Туре	Flags	0	bj. no.	Object name	Function	Туре	Flags
4 (7, 25, 43, 61)	Sunblind, centrally (Channel A, B, C, D, sunblind, centrally)	Up/Down	1 bit	CRWT	1 4	0, 28, 6, 64	Channel A, B, C, D, automatic mode, sunblind position	0100%	1 Byte	CRWT
If a teleg leased fc mode" (it blinds are is received, into the stipulated percent"	ram is received at this or this object are first f released in the paran e moved by all channe ed, then the blind is ra- then it is lowered (cl lower end position vi d via the "Position of parameter in the "Ch	object, all cha c of all switch neter setting) els simultaneo aised (opened losed). If Vene a this object, c slats after su nannel X" para	annels tha ed to "Au and then 1 usly. If a l usly. If a log etian blinc the slats unblind Do uneter win	t are re- tomatic the sun- ogical 0 ical 1 is ls travel position OWN in ndow is	U o tł n t U v k o o	Using thi only be r he chan oot exec o autom Jsing th alue rar ept:) or 1	is object, the blind of noved into any positio inel is in "manual mo uted but is stored and latic mode. is object, sunblind po ige of 0 to 255. The f (=0%)	the correspon n if <u>automatic</u> de", a moven l executed aft sitions can be ollowing defin Blind fully Up	ding chan mode is a nent comn er switchir transmitt itions hav	nel can ctive. If nand is ng back ed in a re to be
8, 26, 44, 62 With the switched and "Mar = manua	Channel A, B, C, D, automatic mode ese objects, the cor between the operat nual mode". The objec I mode) of these objec	on/Off cresponding of ting modes "/ t value (1 = au cts is updated y	1 bit channels Automatic utomatic r when the	CRWT can be mode" mode, 0 channel	– A b "∕ s∣ If	As soon been rea Automa pective f the blin ect for t	as the sunblind position ached, the slats position tic mode, slats position channel is automatical and is moved into an in the first time after m	on stipulated v on which was on" object belo lly restored. termediate po ains voltage r	ia this obj last set onging to sition via ecovery, t	ect has via the the re- this ob- hen an
9, 27, 45, 63 When us serves to travel the tionally. linked to If a teleg channels moved a the blind	c mode is changed and Channel A, B, C, D, sunshine ing a weather station release or lock the sl e sunblinds into the up To do this, this object the corresponding obj ram is received for this for which automatic t the same time, and s s and slats via percent	d can be querie On/Off with façade c lats positionin oper or lower e "Channel X, s ject of the wea s object, then : mode is swi subsequently	ed via the 1 bit ontrol, thi g and posi- end position unshine" in ather station all blinds of tched On the position the position th	bus. CRWT s object ssibly to on addi- must be on. of those will be oning of released	e ci o a th lo S C S si (s c P	nd positi hronize ppen (ho djust th pproach he set p power er witch. Once the ition ha status s position	tion switch is approacl the position. In addit prizontal slat position) e slats is received. If o red, the set travel tim rolongation time, so th nd position is guarar e blind adjustment has s been reached, the o unblind and slats pos up/down) is updated	ned beforehan ion, the slats until a position ne of the end e is automatic nat the reachir nteed by add been complet bject value of ition together d and, if set	d in order then rema ning comn positions cally exten og of the u ressing th ed or the o all status with stat correspor	to syn- iin fully nand to is to be nded by pper or he limit end po- objects tus end ndingly,
or locked If a log. (upper en slats via)) is received, then the d position (opened) an percentage command	sunblinds wil nd the position s will be locke	l be move ning of bli d• if a log.	d to the nds and	1 4	1, 29, 7, 65	Channel A, B, C, D, automatic mode, slats position	0100%	1 Byte	CRWT
ceived, tl sition (cl centage moved ir quently r slats afte nel X" pa	hen the sunblinds will osed) and the positior commands will be re- nto the lower limit po- rotated into the positi- r sunblind DOWN in p- rameter window.	be moved to ning of blinds eleased. If a sition, then th on specified b ercent" param	and slats Venetian e slats are y the "Pos eter in the	end po- via per- blind is e subse- sition of e "Chan-	U o ti r t t t t t t u v a 0 2 A p j ę p t t	Jsing thi only be n ive. If the nand is in ng back he heigh ion is in he slat is pplied of Jsing thi ange of O or 1 (s soon a cosition rects (stato ransmither the statistics)	s object, the slats of the noved into a chosen per the channel is in "manua- not executed but is store to automatic mode. The not of the blind to vary seven valid (status value = 0, s not adjusted. The slatore only after a final positions 0 to 255. The followin (=0%) Slats fully op (=100%) Slats f	the correspondi osition if "auto al mode", the r red and execu- ne slat adjustm slightly. If the of e.g. after bus t position becco on has been re- can be transm g definitions h been (horizonta osed (vertical) has been com e object value sition togethe d and, if set	ng channe matic moc novement ted after s cent may c current sla voltage re mes valid ached. nitted in a ave to be l) pleted or f of all stat correspor	el can de" is ac- com- witch- ause t posi- covery), and is value kept: the end tus ob- tus end ndingly,

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					.	-	
Obj. no.	Object name	Function	Туре	Flags		Obj. no.	Ob
12, 30, 48, 66	Channel A, B, C, D, sunblind position	0100%	1 Byte	CRWT		14, 32, 50, 68	C SL
Using th	is object, the sunbling	l of the corres	ponding o	hannel		The Up/E	Dow
can be m	noved into a chosen po	sition in <u>stand</u>	ard mode.			ing chan	nel i
Using th	is object, sunblind po	sitions can be	transmitt	ed in a		on receip	ot of
value rar	nge of 0 to 255. The f	ollowing defin	itions hav	e to be		The moto	or of
kept:						comman	d is
0 or 1	(=0%)	Sunblind fully l	Jp			longation	n tin
255	(=100%) <u>S</u>	Sunblind fully L	Jown			fore have	e be
As soon	as the sundlind position	on stipulated v	la this obj	ect nas		If the bill	na n
"Slats no	sition" object belongi	a to the resp	a idsi sel Antiva cha	annel is		tion after	e io r hlii
automat	ically restored	ig to the resp				X" naram	i Dili Ietei
If the bli	nd is moved into an in	termediate po	sition via t	this ob-		During a	utor
iect for	the first time after m	ains voltage r	ecoverv. t	hen an		these ob	iect
end posi	tion switch is approacl	ned beforehan	d in order	to syn-		matic to	, ma
chronise	the position. In addit	ion, the slats	then rema	in fully		matic me	ode
open (ho	prizontal slat position)	until a positior	ning comn	nand to		then are	not
adjust th	e slats is received.					15, 33,	C
If one of	the end positions is t	o be approach	ed, the se	t travel		51, 69	st
time is a	iutomatically extended	l by the set p	rolongatio	n time,		Via these	e ob
so that	the reaching of the l	ipper or lowe	r ena pos	ition is		the resp	ectiv
Once the	slat adjustment has h	een completer	d or the er	nd nosi-		contains	a lo
tion has	been reached the of	piect value of	all status	objects		the slats	are
(status b	lind and slats position	together with	n status er	-izog br		closed by	/ on
tion up/o	down) is updated and	, if set corres	pondingly	, trans-		facts aut	ipt i
mitted vi	ia the bus.					the chan	nol
13, 31,	Channel A, B, C, D,	0100%	1 Byte	CRWT		channel	bein
49, 67	slats position					16, 34,	C
Using thi	is object, the slats of th	ie correspondi	ng channe	l can be		52, 70	р
moved in	nto a chosen position in	n <u>standard mo</u>	de. The sla	its ad-		This and	the
Justment	t may cause the height	of the venetia	an blind to	vary		ing a ro	om
signuy.	r fue current siat posit	the slat is no	status vaiu t adjustad	e = 0, The		function	"Sto
slats nos	ition becomes valid an	, the slat is no d is applied on	lv after a f	inal no-		sired pos	itio
sition ha	s been reached.	a is applied off	ily unter u i	inui po		respondi	ng t
l Isina thi	is object slat positions	can be transm	nitted in a v	مبالدر		call) the	stor
range of	0 to 255. The followin	a definitions h	ave to be	kept:		With this	nei s ob
0 or 1 (=	0%) Slats fully or	g dennitions n pen (horizonta	1)			sunblind	con
255 ((=100%) Slats fully cl	osed (vertical)	•/			slats car) be
As soon	as the slate adjustme	nt has been	omnlated	or the		these set	ting
end posi	tion has been reached	the object w	alue of al	l status		object.	
objects (status blind and slats	position toa	ether with	status		On receiv	ving
end posi	tion up/down) is upda	ted and, if set	correspor	ndingly,		position	1 is
transmit	ted via the bus.	-	•	5.5.		blind and	d sla

Obj. no.	Object name	Function	Туре	Flags
14, 32, 50, 68	Channel A, B, C, D, sunblind	Up/Down	1 bit	CRWT
The Op/L ing chann on receip The moto comman longation fore have If the blin per to th tion after X" param During a these ob matic to matic to	bown movement of the nel is initiated via thes of of a logical 0 and lo or of the blind remains d is received or the se time has elapsed an e been reached. In moves without any e lower end position v blind DOWN in perce- eter window, the slats utomatic mode, the r jects always effects a manual mode for the ode commands for a co	e objects. The wered on rece s switched-on r et travel time in d the end pos intermediate s via this object nt" has been se s are opened ac eccipt of a tel utomatic swite c channel in q channel being	supplied to the correct supplied is in the correct supplied in the including t it is to p from and a "Slate tin the "Cocordingly legram to ching from uestion. A in manual	spond- s raised gical 1. r a stop he pro- t there- the up- ts posi- ts posi- channel one of n auto- ll auto- l mode
then are 15, 33, 51, 69	not executed. Channel A, B, C, D, stop/slats	Open/Clos	1 bit	CRWT
the resp contains the slats closed by The rece fects auto the chan channel l	ective channel regard a logical 0 or a logical are opened by one st or one step on receipt o ipt of a telegram to c omatic switching from nel in question. All au opeing operated manual	less of wheth I 1. If the sunb ep on receipt of f a logical 1. one of these of automatic to stomatic mode illy then are no	ler the te lind is stat of a logica bjects alw manual m command t executed	legram ionary, I 0 and vays ef- ode for ds for a d.
16, 34, 52, 70	Channel A, B, C, D, position 1/2	restore	1 bit	CRWT
This and ing a roo function sired pos respondii call) the cally by b With this sunblind slats can these set	the following object n om with a pair of bus "Store/restore 1 bit so ition of the sunblind a ng bus pushbutton fo stored position of the riefly pressing this but s object, two desired connected to the resp be restored automa	nake it possible s pushbuttons cene", to store and its slats by r at least 1 s a sunblind and i tton. intermediate pective channe tically. To ma	e for a per allocated (program pressing t nd to rest ts slats au positions el as well a ke this po	son us- to the b) a de- che cor- ore (re- tomati- of the as of its ossible,

Obj. no.	Object name	Function	Туре	Flags
17, 35, 53, 71	Channel A, B, C, D, position 1/2	store	1 bit	CRWT
Via this of tions of t its slats of can subs ceding of Successfu time of been spe slats pos ments in On receive sunblind ried and after reco	bbject, the storing of the sunblind connecter can be initiated. The se equently be approached bject at any time. Illy storing a position the sunblind and the scified and the status of itions have been sync to the upper end positi ving a "0"-telegram, th position" and "Status stored as position 1. I siving a "1"-telegram	two desired ir ed to this char stored (progra ed again (resto a solution of the adjustment of objects for the hronised with ion. he current stat slats position " Position 2 is st	ntermediat nel as we mmed) po ored) via t ible if the of the slat sunblind a reference tes of the objects a tored acco	te posi- ill as of positions he pre- e travel ts have and the move- "Status re que- ordingly
18, 36, 54, 72	Channel A, B, C, D, status automatic mode	On/Off	1 bit	CRT
mode/ma sunblind' desired. With the queried may also well as at The "aut backgrou ment blo ingly, eve operation	second and a mode paramet 'parameter window is se objects, the status per channel and, dep be sent automatically fter mains voltage recc omatic mode operati and even during activickage and alarm, and en if another operating	ter in the "Fi set, i.e. if this of the automa bending on th in case of a ch overy. ng mode is m vated direct of the status obj g mode overric	differenti atic mode ne configu nange in st naintained operation, lect is set les the aut	objects ation is can be uration, tatus as in the move- accord- tomatic
19, 37, 55, 73	Channel A, B, C, D, status sunblind position	0100%	1 Byte	CRI
Via this of value) cat the trave the value (= 100%) (e.g. afte Updating the trave the slats final position	bbject, the position of in be queried at any t I has stopped. The upp e 1 (= 0%) and the lowe b. The value 0 is used to r the device has just be this status object take el time of the sunbline have been entered ar tion has taken place.	the sunblind ime or sent au per end position o indicate an u een (re-)starte es place for th d and the adju nd an uninterr	(as a perc utomatical on correspont to the val unknown p d). e first time ustment ti upted trav	entage ly after onds to lue 255 position e when mes of vel to a

Obj. no.	Object name	Function	Туре	Flags		
20, 38, 56, 74	Channel A, B, C, D, status slats position	0100%	1 Byte	CRT		
Via this object, the position of Venetian blind slats (as a per- centage value) can be queried at any time or sent automati- cally after the slats have been adjusted. The horizontal slat po- sition corresponds to the value 1 (= 0%) and the lower limit position (slats completely closed) to the value 255 (= 100%). The value 0 is used to indicate an unknown slat position (e.g. after the device has just been (re-)started or if the slats are turned backwards before the travel begins). Updating this status object takes place for the first time when the travel time of the sunblind and the adjustment times of the slats have been entered and an uninterrupted travel to a final position has taken place.						
21, 39, 57, 75	Channel A, B, C, D, status end position up	On/Off	1 bit	CRT		
Via this object, a logical 1 object value reports that the sun- blind is in the upper end position.						
22, 40, 58, 76	Channel A, B, C, D, status end position down	On/Off	1 bit	CRT		
Via this o blind is in	object, a logical 1 obj	ect value repo	orts that t	ne sun-		

Objects for "Switching, edge-triggered" or "Switching, short/long operation"

Obj. no.	Object name	Function	Туре	Flags	
77 (81, 85, 89, 93, 97, 101, 105)	Input a (b, c, d, e, f, g, h), switching	On/Off/To ggle	1 bit	CRWT	
These objects with this name and function are only visible if either the "Switching, edge-triggered" or the "Switching, short/ long operation" or the "1 button dimming" function was allo- cated to the respective input.					

Objects for "Send switching status, binary value"

Obj. no.	Object name	Function	Туре	Flags	
77 (81, 85, 89, 93, 97, 101, 105)	Input a (b, c, d, e, f, g, h), switching status/binary value	On/Off	1 bit	CRWT	
These objects with this name and function are only visible if the "Send switching status, binary value" function was allo- cated to the respective input.					

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Objects for "1 button switching-sequence control"

Obj. no.	Object name	Function	Туре	Flags	
77 (81, 85, 89, 93, 97, 101, 105)	Input a (b, c, d, e, f, g, h), switching group 1	On/Off	1 bit	CRWT	
These objects with this name and function are only visible if the "1 button switching-sequence control" function was allo- cated to the respective input.					
78 (82, 86, 90, 94, 98, 102, 106)	Input a (b, c, d, e, f, g, h), switching group 2	On/Off	1 bit	CRWT	
These objects with this name and function are only visible if the "1 button switching-sequence control" function was allo- cated to the respective input.					
79 (83, 87, 91, 95, 99, 103, 107)	Input a (b, c, d, e, f, g, h), switching group 3	On/Off	1 bit	CRWT	
These objects with this name and function are only visible if the "1 button switching-sequence control" function was allo- cated to the respective input.					

Objects for "1 button dimming"

Obj. no.	Object name	Function	Туре	Flags	
77 (81, 85, 89, 93, 97, 101, 105)	Input a (b, c, d, e, f, g, h), switching	On/Off	1 bit	CRWT	
These objects with this name and function are only visible if the "1 button dimming" function was allocated to the respec- tive input.					
78 (82, 86, 90, 94, 98, 102, 106)	Input a (b, c, d, e, f, g, h), dimming	brighter/d arker	4 bits	CRWT	
These objects with this name and function are only visible if the "1 button dimming" function was allocated to the respec- tive input.					
79 (83, 87, 91, 95, 99, 103, 107)	Input a (b, c, d, e, f, g, h), status dimming value	0100%	1 Byte	CWTU	
These objects with this name and function are only visible if the "1 button dimming" function was allocated to the respec- tive input.					

This object must be linked with the dimming actuator's "Status dimming value" object, in order that it is possible to distinguish correctly whether the dimming actuator is to be switched on or off by a short operation of the pushbutton.

Objects for "1 button sunblind control"

Obj. no.	Object name	Function	Туре	Flags
77 (81, 85, 89, 93, 97, 101, 105)	Input a (b, c, d, e, f, g, h), sunblind	Up/Down	1 bit	CRWT
These objects with this name and function are only visible if the "1 button sunblind control" function was allocated to the respective input.				
78 (82, 86, 90, 94, 98, 102, 106)	Input a (b, c, d, e, f, g, h), slats	Stop/Ope n/Close	1 bit	CRWT
These objects with this name and function are only visible if the "1 button sunblind control" function was allocated to the respective input.				

Objects for ",8 bit value, edge-triggered" or 8 bit value, short/long operation"

Obj. no.	Object name	Function	Туре	Flags	
77 (81, 85, 89, 93, 97, 101, 105)	Input a (b, c, d, e, f, g, h), 8 bit value	send	1 Byte	CRWT	
These objects with this name and function are only visible if either the "8 bit value, edge-triggered" function or the "8 bit value, short/long operation" function was allocated to the re- spective input.					

Objects for "16 bit value, edge-triggered" or "16 bit value, short/long operation"

Obj. no.	Object name	Function	Туре	Flags	
77 (81, 85, 89, 93, 97, 101, 105)	Input a (b, c, d, e, f, g, h), 16 bit value	send	2 Bytes	CRWT	
These objects with this name and function are only visible if either the "16 bit value, edge-triggered" function or the "16 bit value, short/long operation" function was allocated to the re- spective input.					

Objects for "16 bit floating point value, edge-triggered" or "16 bit floating point value, short/long operation"

Obj. no.	Object name	Function	Туре	Flags	
77 (81, 85, 89, 93, 97, 101, 105)	Input a (b, c, d, e, f, g, h), 16 bit value	send	2 Bytes	CRWT	
These objects with this name and function are only visible if either the "16 bit floating point value, edge-triggered" func- tion or the "16 bit floating point value, short/long operation" function was allocated to the respective input					

Objects for "1 bit scene control"

Obj. no.	Object name	Function	Туре	Flags
77 (81, 85, 89, 93, 97, 101, 105)	Input a (b, c, d, e, f, g, h), scene 1/2	restore	1 bit	CRWT
These objects with this name and function are only visible if the "1 bit scene control" function was allocated to the respec- tive input.				
78 (82, 86, 90, 94, 98, 102, 106)	Input a (b, c, d, e, f, g, h), scene 1/2	store	1 bit	CRWT
These objects with this name and function are only visible if the "1 bit scene control" function was allocated to the respec- tive input.				

Objects for "8 bit scene control"

Obj. no.	Object name		Function	Туре	Flags
77 (81, 85, 89, 93, 97, 101, 105)	Input a (b, c, d, e, f, g, h), 8 bit sce- ne	r s	e- tore/store	1 Byte	CRWT
These objects with this name and function are only visible if the "8 bit scene control" function was allocated to the respec- tive input.					

Objects for "2 buttons dimming"

Obj. no.	Object name	Function	Туре	Flags	
77 (85, 93, 101)	Inputs a+b (c+d, e+f, g+h), switching	On/Off/To ggle	1 bit	CRWT	
These objects with this name and function are only visible if either the "2 buttons dimming with stop telegram" function or the "2 buttons dimming with cyclic transmission" function was allocated to the respective input pair.					
78 (86, 94, 102)	Inputs a+b (c+d, e+f, g+h), dimming	brighter/d arker	4 bits	CRWT	
These objects with this name and function are only visible if either the "2 buttons dimming with stop telegram" function or the "2 buttons dimming with cyclic transmission" function was allocated to the respective input pair.					

Objects for "2 buttons sunblind control"

Obj. no.	Object name	Function	Туре	Flags
77 (85, 93, 101)	Inputs a+b (c+d, e+f, g+h), slats	Stop/Ope n/Close	1 bit	CRWT
These objects with this name and function are only visible if the "2 buttons sunblind control" function was allocated to the respective input pair.				
78 (86, 94, 102)	Inputs a+b (c+d, e+f, g+h), sunblind	Up/Down	1 bit	CRWT
These objects with this name and function are only visible if the "2 buttons sunblind control" function was allocated to the respective input pair.				

Objects for "Insert blocking object"

Obj. no.	Object name	Function	Туре	Flags
80 (84, 88, 92, 96, 100, 104, 108)	Input a (b, c, d, e, f, g, h)	lock/ release	1 bit	CRWT
These objects with this name and function are only visible if the "Insert blocking object" parameter was set to "Yes" for the respective input.				

Obj. no.	Object name	Function	Туре	Flags
80 (88, 96, 104)	Inputs a+b (c+d, e+f, g+h)	lock/ release	1 bit	CRWT
These objects with this name and function are only visible if the "Insert blocking object" parameter was set to "Yes" for the respective input pair with a 2 buttons function.				

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3. Parameter windows

3.1 "Basic settings"

Basic settings	. Basic settings		
	Inputs, each directly operating a suriblind output	Yes, only in the as-delivered condition	•
Parameter wind	w in the ac delivered	d stata	

Parameter window in the as-delivered state

Basic settings	Basic	: settings	
8 bit scenes channel A			
8 bit scenes channel B	leasts and death secondary undefind a test	No	-
8 bit scenes channel C	inputs, each drectly operating a sunblind output	INO	<u> </u>
8 bit scenes channel D			
Functions, objects sunblind	Parameter settings for sunblind channels AD	separately	<u> </u>
Channel A			
Channel B	Parameter settings for inputs ah	separately	<u> </u>
Channel C			
Channel D	ON-time during direct mode	15 minutes	<u> </u>
Inputs a + b			
Inputs c + d	8 bit scene control	Yes	•
Inputs e + f			
Inputs g + h			

Parameter window for configuring all inputs and sunblind channels individually

Parameter	Settings
Inputs, each directly operating a sunblind output	Yes, all inputs; Yes, only inputs a to f; Yes, only inputs a to d; Yes, only inputs a to b; Yes, only in the as- delivered condition; No

These parameters set whether and which binary inputs are to act directly on the corresponding sunblind output in each case. <u>Yes, all inputs</u>: All inputs act directly on the corresponding sunblind output. All sunblind channels work in stand-alone mode. For each sunblind channel the movement time and the adjustment time for one step can be set individually.

<u>Yes, only inputs a to f</u>: Only inputs a to f act directly on the corresponding sunblind output in each case. Sunblind channels A to C then work in stand-alone mode. Inputs g + h and channel D are freely configurable.

Yes, only inputs a to d: Only inputs a to d act directly on the corresponding sunblind output in each case. Sunblind channels A and B then work in stand-alone mode. Inputs e to h and channels C and D are freely configurable.

Yes, only inputs a to b: Only inputs a and b act directly on the corresponding sunblind output in each case. Sunblind channel A then works in stand-alone mode. Inputs c to h and channels B to D are freely configurable.

Yes, only in the as-delivered condition: The device is reset to the as-delivered state. All inputs act directly on the corresponding sunblind output. All sunblind channels then work in stand-alone mode. For all sunblind channels, the movement time is preset to 120 s and the adjustment time to 200 ms and these cannot be changed.

<u>No:</u> All inputs and sunblind channels can be configured individually with the ETS.

Demonstern	Contribution and		
	Securigs		
Parameter settings for sublind channels A D	Identically separately		
ing a sunblind output" parameter is se	nputs, each directly operat- et to "No".		
This parameter is used to set whether	er only one parameter win-		
supplied channels A D or one para	meter window per channel		
for the individual parameter setting o	f every channel.		
Parameter settings for inputs ah	identically		
	separately		
This parameter is visible only if the "li ing a sunblind output" parameter is se	nputs, each directly operat- et to "No".		
This parameter is used to set whethe	er only one parameter win-		
dow is shown for the joint and idention	cal parameter setting of the		
inputs ah or one parameter windov	v for any two inputs for the		
ON time during directions de	input pair.		
ON-time during direct mode	unimited; 5 minutes: 10 minutes:		
	15 minutes; 20 minutes;		
	30 minutes; 45 minutes;		
	60 minutes		
This parameter is <u>not</u> visible only if the preceding "Inputs, each			
directly operating a sunblind output" parameter is set to "Yes, only in the as-delivered condition"			
This parameter is used to set whether the direct operating mode			
is switched on permanently via the button for switching the op-			
erating modes and needs to be switched off again through a			
second push of the button ("unlimited"), or whether it is			
switched on for a limited time and is switched off automatically			
again after the expiration of the set of	again after the expiration of the set on-time. The limited switch-		
not be blocked permanently through the direct operation. Every			
push of the button in direct operation	n always leads to an exten-		
sion of direct operation by the set or	n-time. After the expiration		
of the on-time without an additional	push of the button, the di-		
rect operation is switched off automatically and thus the "bus			
mode" is activated again (as far as a communication via the bus			
reported via the respective communication object "Status direct			
mode" via the bus.			
8 bit scene control	No		
	Yes		
This parameter is used to set whethe	r the sunblind channels are		
to be integrated in an 8 bit scene c	control. If yes, then the re-		
spective communication object and	the parameter windows 8		

bit scenes channel X" for the allocation of up to 8 scene num-

bers per sunblind channel are shown.

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3.2 "Stand-alone mode, channel X"

Stand-alone mode, channel A		
Sunblind as	Venetian blind	•
Factor travel time sunblind (basis 1s)	120	÷
Factor travel time slats (basis: 50ms)	4	

These parameter windows are visible only if one, several or all input pairs act directly on the corresponding sunblind channels, i.e. if the parameter "Inputs, each directly operating a sunblind output" is set either to "Yes, all inputs" or "Yes, only inputs a to f" or to "Yes, only inputs a to d" or to "Yes, only inputs a to b".

Parameter	Settings	
Sunblind as	Venetian blind; Roller shutter, awning	
This parameter is used to set whether a drive for a Venetian blind or a roller shutter or an awning is connected to the chan- nel.		
Factor travel time sunblind (basis: 1s)	6255 120	
The travel time of the sunbline end position is set via this parar	d from the upper to the lower meter.	
Factor travel time slats (basis: 50ms)	3255 4	
This parameter only appears if the "Sunblind as" parameter is set to "Venetian blind". This parameter is used to set the movement time of the Ve- netian blind slats for 1 step or to set the travel time of a sun- blind for 1 step.		

3.3 "8 bit scenes channel X"

8 bit scenes channel A		
Assignment 1 to scene [164] (0=disabled)	0	-
Assignment 2	0	-
Assignment 3	0	-
Assignment 4	0	
Assignment 5	0	
Assignment 6	0	
Assignment 7	0	-
Assignment 8	0	-

This parameter window can be selected only if the parameter "8-bit scene control" in the "Basic settings" parameter window is set to "Yes".

Parameter	Settings
Assignment 1 to scene [164] (0=disabled)	0-64, 0

This parameter can be used to link the selected channel A with a scene number in the range from 1 to 64. "0" in this case means "no scene assigned" (link not used).

Notes:

If a scene is called-up before the positions of sunblind and slats have been stored (programmed) for this scene and this channel, then the affected channel is not taken into account.

Successfully storing a position is only possible if the travel time of the sunblind and the adjustment time of the slats have been specified and the status objects for sunblind and slats position have been synchronized with a reference movement into a final position.

If automatic mode is activated (automatic mode = On), then storing or restoring a scene automatically leads to switching to manual mode (automatic mode = Off).

Assignment 2	0-64, 0
see channel A, assignment 1	

and so on until

Parameter	Settings
Assignment 8	0-64, 0
see channel A, assignment 1	

3.4 "Functions, objects sunblind"

Functions, objects sunblind		
Object Alarm per	channel	
Monitoring time for alarm	15 minutes	
Object Movement blockade per	channel	
Objects Store / restore position 1 / 2 per channel	Yes	
Differentiation automatic mode / manual mode	Yes	
Object Sunblind centrally UP / DOW/N per	channel	
Objects Centrally UP / DOWN, switching-on of channels temporally shifted by	appr. 1s	
Object Status automatic mode per channel	Yes	
Object Status sunblind position in % per channel	Yes	
Objects Status end position up / down per channel	Yes	
Send end position ON / OFF	Yes	
Send status objects	on change or using read request	

This parameter window can be selected only if the parameter "Inputs, each directly operating a sunblind output" in the "Basic settings" parameter window is set either to "No" or to "Yes, only inputs a to f" or to "Yes, only inputs a to b".

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Parameter	Settings	F	Parameter	Settings
Object Alarm per	device; channel	(Dbjects Store/restore position	No; Yes
should be available to have an influence on all sunblind chan- nels, or whether each sunblind channel should receive its own alarm object. Whether and how to react on an alarm object set to logical 1 has to be adjusted per channel.		T c a F F	This parameter determines whet objects "Channel X, position 1/2 oble per sunblind channel. In pushbutton" up to two desired p per channel can be stored by th	her the two communications store/restore" are to be avail- connection with a "scene ositions of sunblind and slats e push of a button and also
······································	1 minute; 2 minutes;	a	automatically restored.	
	5 minutes; 4 minutes; 5 minutes; 7 minutes; 10 minutes: 15 minutes :		Differentiation automatic mode/manual mode	No; Yes
	30 minutes; 60 minutes	l k	bis parameter determines wheth between automatic and manual	ner a distinction is to be made mode. If this parameter is set
This monitoring time applies, even with one alarm object per channel, for all alarm objects at once. If e.g. a wind detector is faulty or the bus cable to it is dis- rupted, gusts of wind can lead to the damage or destruction of an exterior solar protection. To prevent this, the combi sunblind actuator can monitor whether the wind detector as- signed to it or to a channel is sending telegrams cyclically. If the setting "disabled" is assigned to the parameter "Monitor- ing time for alarm", the cyclical sending of the alarm object is not monitored. Otherwise, this parameter determines within		t c r T r t s t	ween automatic and manual mo of all sunblind drives as well a nove the sunblind and one to a values in automatic mode. The differentiation between aut equired if, for example, the Ven up the position of the sun via c station (sun tracking control), bu be able to stop this.	supplemented to switch be- de and for the central control s one object per channel to djust the slats via percentage omatic and manual mode is etian blind slats are to follow ommands from the weather it the user of the room shall
which period at least one televine received at the alarm object. If the alarm object during the "M	gram with a logical 0 must be f no telegrams are received at onitoring time for alarm", then) I I	Dbject Sunblind position in% per channel with standard node	No; Yes
this object is set to logical 1 in blind connected to the actuato position according to the "Beh remains in that position (even logical 0 are received cyclically movement command is receive After a restart of the device (e ery), the monitoring time is or tion of the "Alarm" object.	side the actuator, i.e. the sun- r channel is moved into the set avior on alarm" parameter and when alarm telegrams with a again) until a telegram with a d. e.g. after mains voltage recov- ily started after the first recep-	T t r <u>r</u> c	This parameter only appears in s er "Differentiation automatic m No". It is used to set whether c ust the sunblind position in% s mode. <u>Note</u> : If in standard mode "Slat p desired, then this can be adjust Channels A – D" or per channe Channel X".	tandard mode if the parame- ode/manual mode" is set to ommunication objects to ad- hall be available in standard position in%" objects are also ed in the parameter window I via the parameter window
Object Movement blockade per	device; channel		Dbject Sunblind centrally JP/DOWN per	device; channel
This parameter determines wh communication object should sunblind channel. If a telegrar ON" is received via this channe the Venetian blind and its sla channel (i.e. all commands to r just the slats or restore a por command generated via the a and are also not stored interm "Movement blockade = OFF" is sent at this point in time, the a event is then carried out. If "direct mode" is switched o move-up blockade is taken whil	nether a "Movement blockade" be available per device or per m with "Movement blockade = el, then the current position of this is frozen at the addressed move the Venetian blind or ad- sition as well as a movement larm object remain ineffective ediately) until a telegram with received. If an alarm is still pre- faction configured for the alarm n, no account of an activated e the direct mode lasts.	T r c t c r v t c r v t c s	This parameter is only visible if t matic mode and manual mode w "his parameter is used to set wh command to move the sunblind ion is to be made available only channel respectively ("Channel" s makes it possible that not all ch with the central command, but of his object was linked to the c quired, for example, if one or mo activate an externally mounted v are used to activate an internally chutter to darken the room.	he distinction between auto- as desired. ether the object for a central into the specified final posi- once ("Device" setting) or per etting). The "Channel" setting nannels are controlled jointly nly those channels for which entral command. This is re- re sunblind channels serve to denetian blind, but the others mounted sunblind or a roller

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Parameter	Settings	
Objects Centrally UP/DOWN, switching-on of channels temporally shifted by	No; appr. 0.3s; appr. 0.5s; appr. 0.7s; appr. 1s	
This parameter is only visible if the distinction between auto- matic mode and manual mode was desired. Depending on the configuration, the sunblind channels linked with the "Sunblind centrally UP/DOWN" object are switched-on staggered in time. This can prevent a high current spike as well as an increased telegram frequency.		
Object Status automatic mode	No;	
per channel Yes This parameter is only visible if the distinction between automatic mode and manual mode was desired. This parameter is used to set whether a communication object "Status automatic mode" is to be available per channel		
Object Status sunblind	No; Yes	
This parameter is only visible if either the distinction between automatic mode and manual mode was desired or if the pa- rameter "Object sunblind position in% per channel with stan- dard mode" is set to "Yes". This parameter is used to set whether a communication object "Status sunblind position" is to be available per channel. <u>Note:</u> If in standard mode "Status slats position in%" objects are also desired, then this can be adjusted in the parameter window "Channels A - D" or per channel via the parameter window "Channel X".		
Objects Status end position up/down per channel	No; Yes; only status up-position; only status down-position	
This parameter is used to set whether none, both or only 1 communication object "Status end position up" or "Status end position down" is to be available per channel. The object "Status end position up" (or "Status end position down") is only equal to log. 1 if the sunblind is in the upper (or lower) end position.		
Send end position ON/OFF	Yes; send only ON	
This parameter is only visible if the preceding parameter is not set to "No". This parameter is used to set whether both the reaching (ON) as well as the leaving (OFF) of an end position is to be sent or whether only the reaching of an end position is to be sent		
Send status objects	using read request only; on change or using read request	
Depending on the parameter setting the status objects are sent automatically every time the status is changed or only on read request.		

3.5 "Channels A-D" or "Channel X" (with Venetian blind)

Channel A		
Sunblind as	Venetian blind	
Factor travel time sunblind from upper to lower end position (basis 1s)	255	
Factor travel time sunblind from lower to upper end position (basis 1s)	255	
Prolongation of in-motion time by	5 seconds	
Positioning time of slats from vertical to horizontal	0.5s (max Step = 5; min change of value = 18	
Positioning time of slats from vertical until start of sunblind motion	1.0s	
Position of slats after sunblind DOWN in percent (0-100)	50	
Number of steps from slats position vertical to horizontal in manual mode	2	
Min. change of value for initiation of slats positioning in automatic mode (*)	3	
Channels A-D, automatic mode = 0N + sunblinds centrally UP / D0WN	released	
Object Sunshine	released	
Behavior on sunshine = On	execute autom. commands + move to stored p	
Behavior on sunshine = Off	ignore automatic-commands	
Object Status slats position in %	Yes	
Behavior on alarm	move upwards	
Behavior at mains voltage recovery	no action	
Behavior at bus voltage failure	no action	

The parameters in the parameter window shown above are visible only if the parameter "Sunblind as" is set to "Venetian blind".

Parameter	Settings	
Sunblind as	Venetian blind; Roller shutter, awning	
This parameter is used to set whether a drive for a Venetian blind or a roller shutter or an awning is connected to the chan- nel. If a roller shutter or awning drive is connected, then the special objects and parameters for Venetian blinds and their slats are not shown.		
Factor travel time sunblind from upper to lower end position (basis: 1s)	3255 255	
The travel time of the sunblind from the upper to the lower end position is set via this parameter.		
Factor travel time sunblind from lower to upper end position (basis: 1s)	3255 255	
This parameter is used to set the travel time of the sunblind from the lower to the upper end position. This travel time must be at least as long or up to 20% longer than the travel time from the top to the bottom end position.		

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Parameter	Settings	Parameter	Settings
Prolongation of in-motion time by	no additional time; 120 seconds (5 seconds)	Number of steps from slats position vertical to horizon- tal in manual mode	0255 2
This parameter is used to set w the sunblind to the end positio tended by an additional period reached the end position and t end position switch.	hether during the movement of n the set travel time is to be ex- to ensure that the sunblind has the drive is switched off via the	This parameter is used to set move the slats from the very This number is taken into accord of the slats, i.e. the slats are tion has changed by a perce	the number of steps required to ical to the horizontal position. bunt in the sun tracking control only re-adjusted if the sun posi- ntage value (angle) that corre-
Positioning time of slats	0.2s (max Step = 2; min	sponds to at least one step.	
from vertical to horizontal	change of value = 45°) 0.5s (max Step = 5; min change of value = 18°); 10s (max Step = 100;	Min. change of value for ini- tiation of slats positioning in automatic mode (°) This parameter is only visible matic mode and manual mode This parameter is used to set	045 3 if the distinction between auto- was set. by what difference (in degrees)
This parameter only appears if set to "Venetian blind". This parameter is used to set netian blind slats from complet zontal slat position (=0%) in <u>Note:</u> This time is to be determine The values behind the specific permissible for the subsequer commands from slats position mode" as max. value as well as the subsequent parameter .M	min change of value = 1°) the "Sunblind as" parameter is the adjusting time of the Ve- tely closed (=100%) to the hori- the range from 0.2s to 10s. ined as accurately as possible. ed time indicate which value is nt parameter "Number of step vertical to horizontal in manual s which value is permissible for line, change of value (in%) for	in automatic mode a new s "Automatic mode, slats positic current one so that the new s value set here is to correspon tion set in the weather station new slats position. If the value 0 as well as 1 or th "Automatic mode, slats positic ing end position is always ap smallest possible activation tim 50ms, then it depends on the impulse leads to a change in p	slats position received via the on" object has to differ from the lats position is approached. The d to a change of the slats posi- n that leads to the sending of a e value 255 are received via the on" object, then the correspond- proached. If this results in the ne of the Venetian blind drive of e drive used whether this short position or not.
slats positioning in automatic n	node" as the smallest value.	Channels A-D automatic	locked:
Positioning time of slats from vertical until start of supplied motion	0.3s; 1.0s; 12.5s	mode = ON + sublinds centrally UP/DOWN	released
This parameter only appears if set to "Venetian blind". This parameter is used to set netian blind slats from complet which the upward travel of th range from 0.3s to 12.5s. Ope tated beyond the horizontal po that they are again partially clo <u>Note:</u> This time is to be determine Position of slats after sunblind DOWN in percent	the "Sunblind as" parameter is the adjusting time of the Ve- ely closed to the slat position at e Venetian blind begins, in the ening the slats, they can be ro- sition (i.e. turned backwards so sed). ined as accurately as possible. 0100 50	 This parameter is visite only matic and manual modes wa "Object Sunblind centrally UP / This parameter sets whether t additional switching on of aut released (i.e. can act on it) or ignores the central command darkening a room). Object Sunshine This parameter is only visible matic mode and manual mode This parameter is used to release the central command the parameter is used to release the central command the parameter is used to release the central command the parameter is used to release the central command the parameter is used to release the parameter is used to release the parameter is used to release the central command the parameter is used to release the parameter is parameter is used to release the parameter is param	s wanted and if the parameter DOWN per" is set to "Device". he central travel command with omatic mode for this channel is is blocked, so that the channel I (e.g. if a channel is used for locked; released if the distinction between auto- was desired. se the "Sunshine" object for this
(0-100) This parameter only appears if set to "Venetian blind". After an uninterrupted movem the upper to the lower end p travel DOWN via one of the c are adjusted from their vertica fied in this parameter. 0% = slats completely op 100% = slats completely clo <u>Note:</u> With Venetian blinds it is downwards with closed slats.	the "Sunblind as" parameter is eent of the Venetian blind from position or a centrally initiated orresponding objects, the slats I position to the position speci- ened (horizontal) osed (vertical) s a prerequisite that they move	channel (i.e. that this object ca if the channel is in automatic that this object is not taken int The corresponding communica is released here.	in have an effect on the channel mode) or to lock (disable) it (i.e. o account for this channel). ation object is only available if it

Parameter	Settings	
Behavior on sunshine = On	sunblind down + execute	
	automatic-commands;	
	execute autom. commands	
	+ move to stored position	
This parameter only appears if	the "Object Sunshine" parame-	
ter is set to "released". It is used	to set how a sunblind channel	
is to act when receiving a tele	gram for the "Sunshine" object	
with the object value 1, as lor	ig as automatic mode has been	
activated for it and the object	for the affected channel then	
the telegram for this channel is	ignored	
"supplied down + execute a	utomatic-commands": The Ve-	
netian blind is moved into the	e lower end position the slats	
may be rotated into the config	ured position, the execution of	
automatic commands is release	sed and subsequent automatic	
commands are awaited. If, wh	ile moving into the lower end	
position, a telegram with a Ver	netian blind or slats position in	
percent is received, then this new telegram is carried out right		
away.		
<u>"execute autom. commands +</u>	move to stored position": The	
stored Venetian blind position is approached. Only the execu-		
tion of automatic commands is released and subsequent		
automatic commands are await		
Behavior on sunshine = Off	sunblind up + ignore auto-	
	matic-commands;	
	commands	
This parameter only appears if	the "Object Sunshine" parame	
ter is set to "released". It is used	the object substitute parame-	
ter is set to released. It is used to set now a sunblind channel		
with the object value " 0 " as long as automatic mode has been		
activated for it and the object has been released. If automatic		
mode has not been activated for the affected channel, then		
the telegram for this channel is ignored.		
"sunblind up + ignore automatic-commands": The Venetian		
blind is moved into the upper end position and the execution		
of automatic commands is blocked, i.e. automatic commands		
for the affected channel are ignored and not carried out as		
long as "Sunshine = Off" is set. If, while moving into the upper		
end position, a telegram with a Venetian blind or slat position		
in percent is received, then this new telegram is already ig-		
nored.		
"Ignore automatic commands": The Venetian blind position		
remains unchanged. Only the execution of automatic com-		
mands is blocked, i.e. automatic commands for the affected		
Channel are ignored and not carned out as long as SUNSNINE =		
UTT IS SET.		

Parameter	Settings	
Object Status slats position in%	No; Yes	
This parameter only appears if the "Sunblind as" parameter has been set to "Venetian blind" and also a distinction between automatic mode and manual mode or a "Slat position in%" ob- ject was desired in standard operation mode. This parameter is used to set whether a communication object "Status slats position" is to be available for the channel (or for all channels)		
Behavior on alarm	move upwards; move downwards; ignore alarm (no action)	
This parameter is used to set how the sunblind channel is to act when receiving an alarm or when the cyclical message that there is no pending alarm is omitted.		
Behavior at mains voltage recovery	move upwards; move downwards; no action	
This parameter is used to set how the sunblind channel is to act when the mains voltage is recovered.		
Behavior at bus voltage failure	move upwards; move downwards; no action	
This parameter is used to set how the sunblind channel is to act when the bus voltage supply fails (without simultaneous mains voltage failure).		

3.6 "Channels A-D" or "Channel X" (with Roller shutter, awning)

Channel A		
Sunblind as	Roller shutter, awning	
Factor travel time sunblind from upper to lower end position (basis 1s)	255	
Factor travel time sunblind from lower to upper end position (basis 1s)	255	
Prolongation of in-motion time by	5 seconds	
Factor travel time for opening the blind out of end position down (basis 0.1s)	0	
Stepwise positioning (travel time for 1 step)	No	
Channels A-D, automatic mode = ON + sunblinds centrally UP / DOWN	released	
Object Sunshine	released	
Behavior on sunshine = On	execute autom. commands + move to stored p_	
Behavior on sunshine = Off	ignore automatic-commands	
Behavior on alarm	move upwards	
Behavior at mains voltage recovery	no action	
Behavior at bus voltage failure	no action	

The parameters in the parameter window shown above are visible only if the parameter "Sunblind as" is set to "Roller shutter, awning".

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Parameter	Settings	
Factor travel time for open- ing the blind out of end po- sition down (basis 0.1s)	0255 0	
This parameter only appears if the "Sunblind as" parameter is set to "Roller shutter, awning". After an uninterrupted travel of the roller shutter from the up- per into the lower end position, it can be moved up again a lit- tle, so that light can get into the room through the spaces in between. If the value is "0", then the roller shutter is not moved up again		
Stepwise positioning (travel time for 1 step)	No; 0.1s; 0.2s; 0.3s; 1s	
This parameter only appears if the "Sunblind as" parameter is set to "Roller shutter, awning". This parameter is used to set whether for a roller shutter, after stopping a movement with a brief push of the button, any subsequent brief push of the button is to be ignored ("No") or whether it should move the roller shutter by one step. If Yes, then it is set how long the drive is to be switched on for one step.		

<u>Note</u>: All other parameters comply with the aforementioned descriptions when setting the parameter "Sunblind as" to "Venetian blind".

3.7 "Inputs a to h" or "Inputs x+y"

The number and type of the parameters shown in these parameter windows are both determined by the "Function of inputs" parameter (i.e. whether two inputs are adjustable separately or adjustable jointly for a 2-button function) as well as especially by the parameter "Function input x" or "Function inputs x+y".

Parameter	Settings
Function of inputs	separately adjustable ; jointly adjustable (dimming, sunblind)
This parameter is used to set whether a joint 2-button function should be allocated to an input pair (dimming or solar protec- tion) or whether it should be possible for each of the two input to be configured separately.	

	c	
Parameter	Settings	
Function of input a (b, c, d, e, f, g,	Switching, edge-	
h)	triggered;	
(or Function of inputs a, c, e, g)	operation:	
	Send switching status	
	binary value:	
	1 button switching	
	sequence control:	
	1 button dimmina:	
	1 button sunblind	
	control;	
	8 bit value, edge-	
	triggered;	
	8 bit value, short/long	
	operation;	
	16 bit value, edge-	
	triggered;	
	16 bit value, short/long	
	operation;	
	16 bit floating point	
	value, edge-triggered;	
	16 bit floating point	
	value, snort/long opera-	
	1 bit scope control:	
	8 bit scene control	
This parameter is used to allocate the	e desired function to an in-	
put. Depending on the selected function	tion the following parame-	
ters that are shown will change.	active and the second parameters	
Function of inputs a+b (c+d_e+f	2 buttons dimming	
q+h)	with stop telegram;	
5,	(2 buttons dimming with	
	cyclic transmission);	
	2 buttons sunblind con-	
	trol	
This parameter is only visible if a common 2-button function is		
to be assigned to an input pair, i.e. if the parameter "Function of		
inputs" is set to "jointly adjustable	(dimming, sunblind)". The	
subsequently shown parameters dep	pend on the selected func-	
tion (dimming or sunblind).		
Insert blocking object	No ; Yes	
This parameter sets for the chosen function whether the input		
or two functionally associated inputs are to be blocked by an		
additional blocking object or not. If an input or two functionally		
associated inputs are blocked (blocking object = 1), then status		
changes at this input or these inputs during the blocking are not analyzed. If after the blocking has ended, there is a signal lovel		
analyzed. If, after the blocking has ended, there is a signal level at the input differing from that at the start of the blocking, then		
at the input differing from that at the start of the blocking, then		
this status change is analyzed and transferred if necessary.		

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3.7.1 Switching, edge-triggered

For inputs to which a switch or a pushbutton is connected, this function serves to send a switching telegram (ON, OFF or TOGGLE) as a reaction to a rising and/or falling signal edge on this input (i.e. when pushing and/or releasing the pushbutton or closing and/or opening the switch, a telegram is sent).

Inputs a + b		
Function of inputs	separately adjustable	•
Function of input a	Switching, edge-triggered	-
Reaction on rising edge	Toggle	-
Reaction on falling edge	no reaction	_
Insert blocking object	No	•

Parameter	Settings	
Reaction on leading edge	no reaction; On; Off; Toggle	
This parameter is used to set which switching value should be sent after a leading edge of the input signal. The leading edge corresponds to a change of the signal state on the input from logical "0" to "1".		
"no reaction": An edge change on the input does not result in a telegram being sent.		
"On": In case of a leading edge, an "C	0N" is sent.	
"Off": In case of a leading edge, an "C	OFF" is sent.	
"Toggle": In case of a leading edge, the last switching value sent/received is inverted and the new value is sent.		
Reaction on trailing edge	no reaction; On; Off; Toggle	
This parameter is used to set which switching value should be sent after a trailing edge of the input signal. The trailing edge corresponds to a change of the signal state on the input from logical "1" to "0".		
"no reaction": An edge change on the input does not result in a telegram being sent.		
"On": In case of a trailing edge, an "ON" is sent.		
"Off": In case of a trailing edge, an "OFF" is sent.		
"Toggle": In case of a trailing edge, the last switching value sent/received is inverted and the new value is sent.		

3.7.2 Switching, short/long operation

For inputs to which a pushbutton is connected, this function serves to send a switching telegram (ON, OFF or TOGGLE) as a reaction to a short or long pressing of the button.

Inputs a + b		
Function of inputs	separately adjustable	•
Function of input a	Switching, short / long operation	•
Reaction on short operation	Toggle	_
Reaction on long operation	no reaction	•
Long pushbutton action min.	0.5 seconds	•
Insert blocking object	No	•

Parameter	Settings	
Reaction on short operation	no reaction; On; Off; Toggle	
This parameter is used to set which sent after a short pressing of the butt	switching value should be on connected to the input.	
"no reaction": A short pressing of the button does not result in a telegram being sent.		
"On": After a short pressing of the bu	tton, an "ON" is sent.	
"Off": After a short pressing of the bu	tton, an "OFF" is sent.	
"Toggle": After a short pressing of the button, the last switching value sent/received is inverted and the new value is sent.		
Reaction on long operation	no reaction; On; Off; Toggle	
This parameter is used to set which switching value should be sent after a long pressing of the button connected to the input. From which point on a button push is to be interpreted as "long" can be adjusted in the subsequent "Long pushbutton action min" parameter.		
"no reaction": A long pressing of the button does not result in a telegram being sent.		
"On": After a long pressing of the button, an "ON" is sent.		
"Off": After a long pressing of the button, an "OFF" is sent.		
"Toggle": After a long pressing of the button, the last switching value sent/received is inverted and the new value is sent.		

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Parameter	Settings	
Long pushbutton action min.	0.3 seconds	
	0.4 seconds	
	0.5 seconds	
	0.6 seconds	
	0.8 seconds	
	1.0 seconds	
	1.2 seconds	
	1.5 seconds	
	2.0 seconds	
	2.5 seconds	
	3.0 seconds	
	4.0 seconds	
	5.0 seconds	
	6.0 seconds	
	7.0 seconds	
This parameter is used to set the duration from which a button		
counts as being pressed long.		

3.7.3 Send switching status, binary value

This function serves, for example, to query and transmit the switching status of a contact or the voltage level present at this input. Parameters can be used to adjust which binary value is to be sent after a status change, whether the switching status/binary value is to be sent cyclically in addition and whether the current switching status/binary value is also to be sent automatically after the recovery of bus/mains voltage.

Inputs a + b		
Function of inputs	separately adjustable	
Function of input a	Send switching status, binary value	
Reaction on rising edge	On	
Reaction on falling edge	Off	
Send cyclically if	ON- and OFF-level at input	
Cycle time in minutes (1-255)	1	
Send current binary value after mains/ bus voltage recovery	Yes	
Insert blocking object	No	

Parameter	Settings	
Reaction on leading edge	no reaction ; On; Off	
This parameter is used to set which switching value should be sent after a leading edge of the input signal. The leading edge corresponds to a change of the signal state on the input from logical "0" to "1".		
"no reaction": An edge change on th telegram being sent. "On": In case of a leading edge, the s	e input does not result in a	
"Off": In case of a leading edge, the sent.	e switching value "OFF" is	
Reaction on trailing edge	no reaction ; On; Off	
This parameter is used to set which switching value should be sent after a trailing edge of the input signal. The trailing edge corresponds to a change of the signal state on the input from logical "1" to "0"		
"no reaction": An edge change on the input does not result in a telegram being sent.		
"On": In case of a trailing edge, the switching value "ON" is sent. "Off": In case of a trailing edge, the switching value "OFF" is sent		
Send cyclically if	ON-level at input; OFF-level at input; ON- and OFF-level at input	
This parameter is used to set whether the communication object belonging to the input should be sent cyclically in addition to the spontaneous sending of a condition change: as long as an ON-level ($V_{in} > 9 V = log$. 1) is present at the input, as long as an OFF-level ($V_{in} < 2 V = log$. 0) is present at the input or whether it should always be sent cyclically.		
Cycle time in minutes (1-255)	1 255	
This parameter is used to set the desi	red cycle time in minutes.	
Send current binary value after mains/bus voltage recovery	No; Yes	
This parameter sets whether the current status (logical 0 or logical 1) of the signal level at the input is to be sent after mains and bus voltage recovery (logical 0 for $V_{in} < 2 V$; logical 1 for $V_{in} > 9 V$).		

3.7.4 1 button switching-sequence control

The "1-button switching-sequence control" function makes it possible, for example, to use a single button to switch the lamps of a luminaire with two or three lamp groups on and off again in groups by multiple pushes of the button. The number of switchable groups is set via a parameter. The switching sequence is fixed and cannot be changed by the user. If the same groups are controlled by several buttons with switching-sequence control, then this takes place by each button independently of the other buttons, i.e. every button only remembers which switching command combination it sent last, and when pushed again it sends the next switching command combination that follows for that button.

Inputs a + b

Function of inputs	separately adjustable	•
Function of input a	1 button switching sequence control	•
Number of switching-sequence groups	3	•
Insert blocking object	No	•

Parameter	Settings
Number of switching-sequence	3, 2
groups	

The number of switchable groups is set via this parameter.

"2": 2 groups are controlled via 2 switching command telegrams per button push, generating the following switching sequence (0=group switched off, 1=group switched on):

00-01-11-10-00

"3": 3 groups are controlled via 3 switching command telegrams per button push, generating the following switching sequence (0=group switched off, 1=group switched on):

000-001-010-011-111-110-101-100-000

After mains voltage recovery, the procedure always starts with the switching telegrams Off/On for group B/A or Off/Off/On for group C/B/A.

3.7.5 1 button dimming

This function makes it possible, to switch On/Off as well as dim brighter/darker a luminaire/group of luminaires with only one button. A differentiation is made here between a short push of the button and a long push of the button.

- Switching TOGGLE (short press of the button)

In case of a short push of the button, the value that is in the switching object (Input x, switching) is inverted and the ON- or OFF-telegram is sent when the button is released (=falling edge). If the input object "Status dimming value" is linked with the corresponding status object of the controlled dimming actuator, then whether the actuator is to be switched on or off is derived from the last received dimming value status.

- Dimming brighter/darker (long push of the button)

In case of a long push of the button (the duration can be set via the "Long push button action min." parameter), the lamp is dimmed brighter or darker depending on the object value and the dimming direction that was controlled last. If the dimming actuator was switched off, then a long push of the button results in the light being switched on and dimmed brighter. If the actuator was previously switched on with a short push of the button, then it is dimmed darker by the first long push of the button. If the dimming actuator is set to a dimming value of 1 to 99%, the last dimming direction used is inverted and the light dimmed in the new direction. In case of a long push of the button, the command "100% dimming" is sent via the dimming object and when the button is released (=trailing edge), the command "Stop" is sent.

Inputs a + b		
Function of inputs	separately adjustable	•
Function of input a	1 button dimming	•
Long pushbutton action min.	0.5 seconds	•
Insert blocking object	No	•

Parameter	Settings
Long pushbutton action min.	0.3 seconds
	0.4 seconds
	0.5 seconds
	0.6 seconds
	0.8 seconds
	1.0 seconds
	1.2 seconds
	1.5 seconds
	2.0 seconds
	2.5 seconds
	3.0 seconds
	4.0 seconds
	5.0 seconds
	6.0 seconds
	7.0 seconds
This parameter is used to set the duration from which a button counts as being pressed long.	

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3.7.6 1 button sunblind control

Inputs a + b		
Function of inputs	separately adjustable	_ _
Function of input a	1 button sunblind control	•
Long pushbutton action min.	0.5 seconds	•
Insert blocking object	No	•

This function makes it possible to move the sunblind up and down with only one button, to stop the movement and to open and close slats. A differentiation is made here between a short push of the button and a long push of the button.

- Sunblind Up/Down (long button push)

In case of a long push of the button (the duration can be set via the "Long pushbutton action min." parameter), depending of the last direction stored in the "Sunblind Up/Down" object, this is inverted and the sunblind moved up or down until the respective limit position is reached and the actuator is switched off via the limit switch.

If a stop command is received before a limit position is reached and the limit switch responds, then the movement is ended immediately, the attained position is maintained and the last movement direction stored.

- Stop or slats Open/Close (short button push)

In case of a short push of the button, a telegram is sent that leads to the actuator being stopped if the sunblind is moving and that leads to short movement opposite the previous movement direction (which is stored in the movement object) in case of a resting sunblind. In case of a closed blind, this would lead, for example, to the opening of the slats by one step. The STOP- or OPEN- or CLOSE slats telegram is only generated when the button is released (=trailing edge). With every additional short push of the button an additional "Open/Close slats" telegram is sent, in which the movement direction is not changed. The software of the sunblind actuator determines whether and how several successive "Open/Close slats" telegrams can be interpreted and carried out.

0.3 seconds
0.4 seconds
0.5 seconds
0.6 seconds
0.8 seconds
1.0 seconds
1.2 seconds
1.5 seconds
2.0 seconds
2.5 seconds
3.0 seconds
4.0 seconds
5.0 seconds
6.0 seconds
7.0 seconds

3.7.7 8 bit value, edge-triggered

This function serves to send 8-bit integer values in the range of 0...255. It can be adjusted whether a value telegram is sent either as a reaction to a rising and/or falling signal edge on the output (e.g. when pushing and/or releasing a button). With this function it is possible, for example, to allocate a dimming value to a button to dim the connected lights to the configured value with the push of a button, or one can assign different values to several buttons to make it possible to control, for example, the rotational speed of a fan with these buttons.

Inputs a + b	
Function of inputs	separately adjustable
Function of input a	8 bit value edge-triggered
Send value on rising edge	Yes
Value on rising edge	0
Send value on falling edge	Yes
Value on falling edge	0
Insert blocking object	No

Parameter	Settings	
Send value on leading edge	No Yes	
This parameter is used to set whether the configured 8-bit value is to be written into the memory cell of the communication ob- ject and to be sent or not after a leading edge of the signal state at the input. The leading edge corresponds to a change of the signal state on the input from logical "0" to "1".		
Value on leading edge	0 (0255)	
This parameter is used to set which value (0255) is to be writ- ten into the memory cell of the communication object and to be sent after a leading edge of the signal state at the input. The leading edge corresponds to a change of the signal state on the input from logical "0" to "1".		
Send value on trailing edge	No Yes	
This parameter is used to set whether the configured 8-bit value is to be written into the memory cell of the communication ob- ject and to be sent or not after a trailing edge of the signal state at the input. The trailing edge corresponds to a change of the signal state on the input from logical "1" to "0".		
Value on trailing edge	0 (0255)	
This parameter is used to set which value (0255) is to be writ- ten into the memory cell of the communication object and to be sent after a trailing edge of the signal state at the input. The trailing edge corresponds to a change of the signal state on the input from logical "1" to "0".		

3.7.8 8 bit value, short/long operation

This function serves to send 8-bit integer values in the range of 0...255. It can be adjusted whether a value telegram is sent either as a reaction to a short and/or long push of a button.

Inputs a + b	
Function of inputs	separately adjustable
Function of input a	8 bit value short / long operation
Send value on short operation	Yes
Value on short operation	0
Send value on long operation	Yes
Value on long operation	0
Long pushbutton action min.	0.5 seconds
Insert blocking object	No

Parameter	Settings
Send value on short operation	No Yes
This parameter is used to set wheth is to be written into the memory ce ject and to be sent or not after a sl nected to the input.	er the configured 8-bit value ell of the communication ob hort push of the button con
Value on short operation	0 (0255)
This parameter is used to set which ten into the memory cell of the corr sent after a short push of the buttor	value (0255) is to be writ munication object and to be connected to the input.
Send value on long operation	No Yes
This parameter is used to set wheth is to be written into the memory ce ject and to be sent or not after a le nected to the input.	er the configured 8-bit value ell of the communication ob ong push of the button con
Value on long operation	0 (0255)
This parameter is used to set which ten into the memory cell of the corr sent after a long push of the button	value (0255) is to be writ munication object and to b connected to the input.
Long pushbutton action min.	0.3 seconds 0.4 seconds 0.5 seconds 0.6 seconds 0.8 seconds 1.0 seconds 1.2 seconds 1.5 seconds 2.0 seconds 2.5 seconds 3.0 seconds

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3.7.9 16 bit value, edge-triggered

This function serves to send 16-bit integer values in the range of 0... 65535. It can be adjusted whether a value telegram is sent either as a reaction to a rising and/or falling signal edge on the output (e.g. when pushing and/or releasing a button).

Inputs a + b	
Function of inputs	separately adjustable
Function of input a	16 bit value edge-triggered
Send value on rising edge	Yes
Value on rising edge	0
Send value on falling edge	Yes
Value on falling edge	0
Insert blocking object	No

Parameter	Settings	
Send value on leading edge	No Yes	
This parameter is used to set whether the configured 16-bit value is to be written into the memory cell of the communica- tion object and to be sent or not after a leading edge of the sig- nal state at the input. The leading edge corresponds to a change of the signal state on the input from logical "0" to "1".		
Value on leading edge	0 (065535)	
This parameter is used to set which value (065535) is to be written into the memory cell of the communication object and to be sent after a leading edge of the signal state at the input. The leading edge corresponds to a change of the signal state on the input from logical "0" to "1".		
Send value on trailing edge	No Yes	
This parameter is used to set whether the configured 16-bit value is to be written into the memory cell of the communica- tion object and to be sent or not after a trailing edge of the sig- nal state at the input. The trailing edge corresponds to a change of the signal state on the input from logical "1" to "0".		
Value on trailing edge	0 (065535)	
This parameter is used to set which value (065535) is to be written into the memory cell of the communication object and to be sent after a trailing edge of the signal state at the input. The trailing edge corresponds to a change of the signal state on the input from logical "1" to "0".		

3.7.10 16 bit value, short/long operation

This function serves to send 16-bit integer values in the range of 0... 65535. It can be adjusted whether a value telegram is sent either as a reaction to a short and/or long push of a button.

Inputs a + b	
Function of inputs	separately adjustable
Function of input a	16 bit value short / long operation
Send value on short operation	Yes
Value on short operation	0
Send value on long operation	Yes
Value on long operation	0
Long pushbutton action min.	0.5 seconds
Insert blocking object	No

Parameter	Settings	
Send value on short operation	No Yes	
This parameter is used to set whether the configured 16-bit value is to be written into the memory cell of the communica- tion object and to be sent or not after a short push of the button connected to the input.		
Value on short operation	0 (065535)	
This parameter is used to set which value (065535) is to be written into the memory cell of the communication object and to be sent after a short push of the button connected to the in- put.		
Send value on long operation	No Yes	
This parameter is used to set whether the configured 16-bit value is to be written into the memory cell of the communica- tion object and to be sent or not after a long push of the button connected to the input.		
Value on long operation	0 (065535)	
This parameter is used to set which value (065535) is to be written into the memory cell of the communication object and to be sent after a long push of the button connected to the input.		

Parameter	Settings
Long pushbutton action min.	0.3 seconds
	0.4 seconds
	0.5 seconds
	0.6 seconds
	0.8 seconds
	1.0 seconds
	1.2 seconds
	1.5 seconds
	2.0 seconds
	2.5 seconds
	3.0 seconds
	4.0 seconds
	5.0 seconds
	6.0 seconds
	7.0 seconds
This parameter is used to set the c counts as being pressed long.	luration from which a button

3.7.11 16 bit floating point value, edge-triggered

This function serves to send 16-bit floating point values (floating point value as EIS 5) in the range of -3276.8 to +3276.7 (with one decimal place). The exponent of the 16-bit floating point value is set automatically during this. It can be adjusted whether a value telegram is sent either as a reaction to a rising and/or falling signal edge on the output (e.g. when pushing and/or releasing a button).

With this function it is possible, for example, to toggle between a daytime and a night-time setpoint value for the room temperature control using a switch.

Inputs a + b

Function of inputs	separately adjustable
Function of input a	16 bit floating point value edge-triggered
Send value on rising edge	Yes
Value on rising edge (x 0.1)	0
Send value on falling edge	Yes
Value on falling edge (x 0.1)	0
Insert blocking object	No

Parameter	Settings		
Send value on leading edge	No Yes		
This parameter is used to set floating point value is to be wr communication object and to b of the signal state at the input.	This parameter is used to set whether the configured 16-bit floating point value is to be written into the memory cell of the communication object and to be sent or not after a leading edge of the signal state at the input. The leading edge corresponds to		
a change of the signal state on	the input from logical "0" to "1".		

Parameter	Settings	
Value on leading edge (x 0.1)	0 (-32768+32767)	
This parameter is used to set which floating point value is to be written into the memory cell of the communication object and to be sent after a leading edge of the signal state at the input. The floating point value to be sent is to be entered (possibly with prefix) as ten times the desired floating point value (i.e. in- cluding the decimal place but without comma or point). The leading edge corresponds to a change of the signal state on the input from logical "0" to "1".		
Send value on trailing edge	No; Yes	
This parameter is used to set whether the configured 16-bit floating point value is to be written into the memory cell of the communication object and to be sent or not after a trailing edge of the signal state at the input. The trailing edge corresponds to a change of the signal state on the input from logical "1" to "0".		
Value on trailing edge (x 0.1)	0 (-32768+32767)	
This parameter is used to set wh written into the memory cell of to be sent after a trailing edge of The floating point value to be s with prefix) as ten times the desi cluding the decimal place but w trailing edge corresponds to a ch input from logical "1" to "0".	ich floating point value is to be the communication object and of the signal state at the input. sent is to be entered (possibly red floating point value (i.e. in- without comma or point). The ange of the signal state on the	

3.7.12 16 bit floating point value, short/long operation

This function serves to send 16-bit floating point values (floating point value as EIS 5) in the range of -3276.8 to +3276.7 (with one decimal place). The exponent of the 16-bit floating point value is set automatically during this. It can be adjusted whether a value telegram is sent either as a reaction to a short and/or long push of a button.

Inputs a + b		
Function of inputs	separately adjustable	
Function of input a	16 bit floating point value short / long operation_	
Send value on short operation	Yes	
Value on short operation (x 0.1)	0	
Send value on long operation	Yes	
Value on long operation (x 0.1)	0	
Long pushbutton action min.	0.5 seconds	
Insert blocking object	No	

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	c. 11:	
Parameter	Settings	
Send value on short	No	
	fes	
This parameter is used to set whether the configured 16-bit		
communication object and to be	ent or not after a short push	
of the button connected to the input.		
Value on short operation	0 (-32768+32767)	
(x 0.1)	· · · ·	
This parameter is used to set which floating point value is to be written into the memory cell of the communication object and to be sent after a short push of the button connected to the in- put. The floating point value to be sent is to be entered (possibly with prefix) as ten times the desired floating point value (i.e. in- cluding the decimal place but without comma or point).		
Send value on long	No	
operation	Yes	
This parameter is used to set whether the configured 16-bit floating point value is to be written into the memory cell of the communication object and to be sent or not after a long push of the button connected to the input.		
Value on long operation	0 (-32768+32767)	
(x 0.1)		
This parameter is used to set which floating point value is to be written into the memory cell of the communication object and to be sent after a long push of the button connected to the in- put. The floating point value to be sent is to be entered (possibly with prefix) as ten times the desired floating point value (i.e. in- cluding the decimal place but without comma or point).		
Long pushbutton action min.	0.3 seconds	
	0.4 seconds	
	0.5 seconds	
	0.8 seconds	
	1.0 seconds	
	1.2 seconds	
	1.5 seconds	
	2.0 seconds	
	2.5 seconds	
	4 0 seconds	
	5.0 seconds	
	6.0 seconds	
	7.0 seconds	
This parameter is used to set the duration from which a button counts as being pressed long.		

3.7.13 1 bit scene control

The "1 bit scene control" function makes it possible for the user him- or herself to reprogram a scene controller to the 1 bit scene control without using the ETS (Engineering Tool Software), i.e. other brightness values or switching states are allocated to the individual groups of the respective scene. A scene can be restored (recalled) with a short push of the button and stored (programmed) with a long push of the button, with one communication object serving to store a scene and a second to restore a scene. A parameter setting determines whether a telegram with the value "0" stores or restores scene 1 and a telegram with the value "1" stores or restores scene 2.

Before storing a scene, the affected actuators have to be set for the desired brightness values or switching states via the buttons/sensors provided for the purpose. The reception of a "store" telegram results in the addressed scene controllers being requested to query the current values and status information on the actuators integrated in the scene and to store them in the corresponding scene.

So as not to accidentally trigger a scene being stored with the touch of a button that is only marginally longer than a short touch of a button, storing a scene should only be initiated with an "extra long" push of a button.

Inputs a + b		
Function of inputs	separately adjustable	J
Function of input a	1 bit scene control	·
Scene number	1	•
Long pushbutton action min.	3.0 seconds	·
Insert blocking object	No	J

Parameter	Settings
Scene number	1
	2

This parameter specifies which scene should be stored or restored.

"1": a short push of the button sends a telegram with the value "0", so that scene 1 is restored by the addressed scene controllers. A long push of the button results in the addressed scene controllers being requested to query the currently set values and conditions on the actuators integrated in the scene and to store them under the scene with the number 1.

"2": With this setting, scene 2 is stored and restored.

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Parameter	Settings
Long pushbutton action min.	1.0 seconds 2.0 seconds 3.0 seconds 4.0 seconds 5.0 seconds 6.0 seconds 7.0 seconds
This parameter is used for scene control to set the duration from which a button counts as being pressed long to initiate the stor- ing of a scene via this long push of a button.	

3.7.14 8 bit scene control

The "8 bit scene control" function makes it possible for the user to restore (recall) 8 bit scenes and to store (program) a scene controller with 8 bit scene control or actuators with integrated 8 bit scene control without using the ETS, i.e. current values or switching states are allocated to the respective scene.

The scene with the set number (1...64) can be restored with a short push of the button and stored with a long push of the button, with a single communication object transmitting as well the number of the desired scene as the command to store a scene as the command to restore a scene.

Before storing a scene, the affected actuators have to be set to the desired brightness values or switching states with the buttons/sensors provided for the purpose. The reception of a telegram to store a scene results in the addressed scene controllers or actuators with an integrated scene control function being requested to query the current values and status information on the actuators integrated in the scene and to store them in the corresponding scene.

A parameter setting determines whether the button should only serve to restore a scene (telegrams to store a scene are not sent) or whether one can also initiate the storing of a scene with the button. So as not to accidentally trigger a scene being stored with the touch of a button that is only marginally longer than a short touch of a button, storing a scene should only be initiated with an "extra long" push of a button.

Inputs a + b

Function of inputs	separately adjustable	•
Function of input a	8 bit scene control	•
Scene number	1	- <u></u>
Programming of scenes possible	Yes	•
Long pushbutton action min.	3.0 seconds	•
Insert blocking object	No	•

Parameter	Settings
Scene number (164)	1
This parameter specifies which scene or restored.	e (164) should be stored
Programming of scenes possible	No Yes
This parameter is used to set whether telegrams are only sent t restore a scene or whether telegrams are also sent to store scene.	
Long pushbutton action min.	1.0 seconds 2.0 seconds 3.0 seconds 4.0 seconds 5.0 seconds 6.0 seconds 7.0 seconds

3.7.15 2 buttons dimming with stop telegram

With the pair of buttons connected to the two inputs, a short push of the button can switch the light on/off and a long push of the button can dim the light brighter or darker. It is possible to adjust with which button (or via which input) the light is to be switched off and dimmed darker or switched on and dimmed brighter.

With "2 buttons dimming with stop telegram", as soon as a long push of a button is detected, a "100% brighter" or "100% darker" dimming telegram is sent, and as soon as the button is released, a stop-telegram is sent.

Inputs a + b		
Function of inputs	jointly adjustable (dimming, solar protection)	
Function of inputs a+b	2 buttons dimming with stop telegram	
Function per input	Off, darker / On, brighter 📃 💌	
Long pushbutton action min.	0.5 seconds	
Insert blocking object	No	

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Parameter	Settings	
Function per input	Off, darker/On, brighter; On, brighter/Off, darker; Toggle, darker/Toggle, brighter; Toggle, brighter/Toggle, darker	
This parameter is used to set which short or long push of the respective b	bus telegram is sent for a utton.	
Long pushbutton action min.	0.3 seconds	
	0.4 seconds	
	0.5 seconds	
	0.6 seconds	
	0.8 seconds	
	1.0 seconds	
	1.2 seconds	
	1.5 seconds	
	2.0 seconds	
	2.5 seconds	
	4 0 seconds	
	5 0 seconds	
	6.0 seconds	
	7.0 seconds	
This parameter is used to set the duration from which a button		
Insert blocking object	No; Yes	
This parameter is used to set whether the two functionally re- lated inputs are to be jointly blocked/released via an additional blocking object or not. If both inputs are blocked (blocking ob-		

blocking object or not. If both inputs are blocked (blocking object = 1), then condition changes on these inputs are no longer evaluated and transmitted.

3.7.16 2 buttons dimming with cyclic transmission

With the pair of buttons connected to the two inputs, a short push of the button can switch the light on/off and a long push of the button can dim the light brighter or darker. It is possible to adjust with which button (or via which input) the light is to be switched off and dimmed darker or switched on and dimmed brighter.

With "2 buttons dimming with cyclical transmission", as soon as a long push of a button is detected, a Brighter or Darker dimming telegram with a step of 1/8 is sent every 0.5 seconds as long as the button continues to be pushed (this means that it is possible to dim from 0% to 100% and vice versa in 4 seconds).

<u>Note:</u> Instead of the "2 buttons dimming with cyclical transmission", the "2 buttons dimming with stop-telegram" should be used if possible (lower bus load due to significantly fewer telegrams).

Inputs a + b

Function of inputs	jointly adjustable (dimming, solar protection)	•
Function of inputs a+b	(2 buttons dimming with cyclic transmission)	•
Function per input	Off, darker / On, brighter	•
Long pushbutton action min.	0.5 seconds	•
Insert blocking object	No	•

Parameter	Settings	
Function per input	Off, darker/On, brighter; On, brighter/Off, darker; Toggle, darker/Toggle, brighter; Toggle, brighter/Toggle, darker	
This parameter is used to set which bus telegram is sent for a short or long push of the respective button.		
Long pushbutton action min.	0.3 seconds 0.4 seconds 0.5 seconds 0.6 seconds 1.0 seconds 1.2 seconds 1.5 seconds 2.0 seconds 2.5 seconds 3.0 seconds 4.0 seconds 5.0 seconds 6.0 seconds 7.0 seconds	
This parameter is used to set the duration from which a button counts as being pressed long.		
Insert blocking object	No; Yes	
This parameter is used to set whether the two functionally re-		

This parameter is used to set whether the two functionally related inputs are to be jointly blocked/released via an additional blocking object or not. If both inputs are blocked (blocking object = 1), then condition changes on these inputs are no longer evaluated and transmitted.

3.7.17 2 buttons sunblind control

With a pair of buttons it is possible, with a long push, to move the sunblind up or down to the respective limit position as well as to stop the movement or move the slats by one step with a short push of a button. It is possible to adjust with which button (or via which input) the sunblind is moved down and the slats may be closed by one step or the sunblind is moved up and the slats may be opened by one step.

Inputs a + b		
Function of inputs	jointly adjustable (dimming, solar protection)	
Function of inputs a+b	2 buttons sunblind control	
Function per input	Blind down, close slats / blind up, open slats 📃 💌	
Long pushbutton action min.	0.5 seconds	
Insert blocking object	No 🔽	

Parameter	Settings	
Function per input	Blind down, close slats/blind up, open slats; Blind up, open slats/ blind down, close slats	
This parameter is used to set which bus telegram is sent on a short or long push of the respective button.		
Long pushbutton action min.	0.3 seconds 0.4 seconds 0.5 seconds 0.6 seconds 1.0 seconds 1.2 seconds 1.5 seconds 2.0 seconds 2.5 seconds 3.0 seconds 4.0 seconds 5.0 seconds 6.0 seconds 7.0 seconds	
This parameter is used to set the duration from which a button counts as being pressed long.		
Insert blocking object	No; Yes	
This parameter is used to set whether the two functionally re- lated inputs are to be jointly blocked/released via an additional blocking object or not. If both inputs are blocked (blocking ob- ject = 1), then condition changes on these inputs are no longer evaluated and transmitted.		

Space for notes