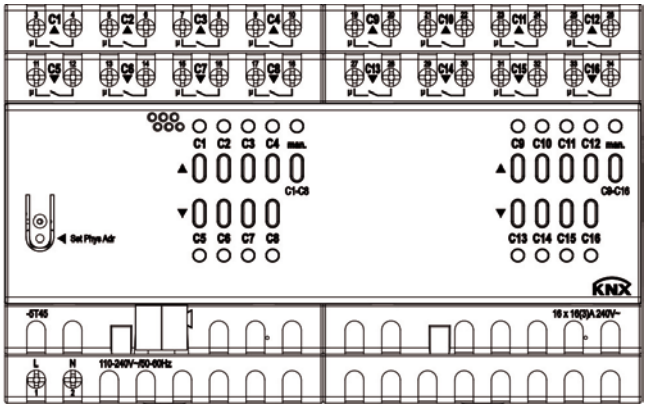
KNX Manual
Combi actuators
GKA-16K8K KNX
GKA-8K4K KNX



GKA-8K4K KNX	108404
GKA-16K8K KNX	108405

Contents

1 Functional characteristics

- 8/16-way switch or 4/8-way blinds actuator.
- Flexible selection of channel function as switch actuator or blinds actuator for controlling drives for blinds, sun and vision protection devices, skylights and ventilation flaps (for blinds function, two adjacent channels are combined)
- LED switching status indicator for each channel
- Manual operation on the device (even without bus voltage)
- Adjustable features: e.g. switching, delayed switching, pulse function
- Links, type of contact (opening contact/NO contact) and participation in central commands such as permanent On, permanent Off, central switching and save/call up scene
- Switch functions: e.g. On/Off, pulse, On/Off delay, staircase light with forewarning
- Logical links: e.g. block, AND, enable, OR

1.1 Operation

Each channel can be switched independently of all parameters using the buttons on the device. A status LED shows the current switching status or the current direction of movement.
The channels can be configured as a switch actuator as well as a blinds actuator.

- If channels C1, C2, C3, or C4 are defined as switch actuator, C5 to C8 are also available as switch actuator channels.

- For blinds or roller blinds function, 2 channels are required per drive.

Table 1: Channel assignment and direction of movement for the blinds actuator[1]

First drive	Second drive	Third drive	Fourth drive
▲ C1	▲ C2	▲ C3	▲ C4
▼ C5	▼ C6	▼ C7	▼ C8

All bus telegrams are ignored with manual operation switched on (manual button) and the channels are exclusively to be operated via the buttons.
Telegrams on the objects *Safety* and *Priority on safety* are still being executed.

Mains voltage is required for the functioning of the buttons and LEDs, bus voltage or bus module are not required.

[1] These directional information are only valid if the parameter *direction of movement of drives = normal* is set.

2 Technical data

Operating voltage KNX	Bus voltage, bus current ≤ 4 mA
Operating voltage	110–240 V AC
Frequency	50 – 60 Hz
Standby output	0.3 W / 0.5 W[2]
Type of installation	DIN-rail
Width	4 TE / 8 TE[3]
Connection type	KNX bus terminal
Max. cable cross-section	Solid: 0.5 mm² (Ø 0.8) to 4 mm² | strand with crimp terminal: 0.5 mm² to 2.5 mm²
Number of channels	8 switching or 4 blinds channels 16 switching or 8 blinds channels[4]
Type of contact	16 A, 3 A NO contact
Permissible starting current	max. 800 A / 200 µs
Switching cycles	40 000 at 140 µF
Contact gap	< 3 mm
Resistive load	3680 W
Incandescent/halogen lamp load	2000 W
Fluorescent lamp load (KVG) parallel-corrected	1300 W (140 µF)
Fluorescent lamp load (KVG) not corrected	2000 VA
Fluorescent lamp load (EB)	1200 W
Energy-saving lamps	300 W
LED lamp	< 2 W = 55 W or > 2 W < 8 W = 180 W
Voltage output	240 V AC
Switch output	Floating
Switching different external phases	Possible
Suitable for SELV	Yes, if all channels switch SELV
Ambient temperature	-5 °C–+45 °C

[2] GKA-16K8K KNX
[3] GKA-16K8K KNX
[4] GKA-16K8K KNX

Protection rating	IP 20
Protection class	II

3 The application programme "GKA-16K8K KNX"

3.1 Selection in the product database

Manufacturer	GARO AB
Product family	Combi actuators
Product type	GKA-8K4K KNX / GKA-16K8K KNX
Program name	GKA-16K8K KNX

Table 2

Number of communication objects	161
Number of group addresses	254
Number of associations	255

3.2 Communication objects

The objects are divided into channel-related and common objects
The function of the objects depends on the selected channel function, i.e. switch or blinds actuator.

3.2.1 Channel-related objects for the switch actuator

Table 3

No.	Object name	Function	Type DPT	Flags			
				C	R	W	T
0	*Channel C1*	*Switching object*	1 bit 1.001	✓	✓	✓	-
	Channel C1	*Threshold 0..255*	1 byte 5.010	✓	✓	✓	-
	Channel C1	*Threshold 0..65535*	2 byte 7.001	✓	✓	✓	-
	Channel C1	*Threshold EIS 5 (DPT9.xxx)*	2 byte 9.xxx	✓	✓	✓	-
	Channel C1	*Threshold as percent*	1 byte 5.001	✓	✓	✓	-
1	*Channel C1*	*Logic input in OR gate*	1 bit 1.001	✓	✓	✓	-
	Channel C1	*Logic input in AND gate*	1 bit 1.001	✓	✓	✓	-
	Channel C1	*Logic input in XOR gate*	1 bit 1.001	✓	✓	✓	-
2	*Channel C1*	*Block*	1 bit 1.003	✓	✓	✓	-
3	*Channel C1*	*Call up/save scenes*	1 byte 18.001	✓	✓	✓	✓
4	*Channel C1*	*Enable scenes = 1*	1 bit 1.003	✓	✓	✓	-
	Channel C1	*Block scenes = 1*	1 bit 1.003	✓	✓	✓	-
5	*Channel C1*	*Feedback On/Off*	1 bit 1.001	✓	✓	-	✓
6	*Channel C1*	*Operating hours feedback*	2 byte 7.001	✓	✓	✓	✓
	Channel C1	*Time to next service*	2 byte 7.001	✓	✓	✓	✓
7	*Channel C1*	*Service required*	1 bit 1.001	✓	✓	-	✓
8	*Channel C1*	*Reset operating hours*	1 bit 1.001	✓	✓	✓	-
	Channel C1	*Reset service*	1 bit 1.001	✓	✓	✓	-
	Channel C1	*Switching with priority*	2 bit 2.001	✓	✓	✓	-

Continuation:

No.	Object name	Function	Type DPT	Flags			
				C	R	W	T
10	*Channel C2*	*Switching object*	1 bit 1.001	✓	✓	✓	-
	Channel C2	*Threshold 0..255*	1 byte 5.010	✓	✓	✓	-
	Channel C2	*Threshold 0..65535*	2 byte 7.001	✓	✓	✓	-
	Channel C2	*Threshold EIS 5 (DPT9.xxx)*	2 byte 9.xxx	✓	✓	✓	-
	Channel C2	*Threshold as percent*	1 byte 5.001	✓	✓	✓	-
11	*Channel C2*	*Logic input in OR gate*	1 bit 1.001	✓	✓	✓	-
	Channel C2	*Logic input in AND gate*	1 bit 1.001	✓	✓	✓	-
	Channel C2	*Logic input in XOR gate*	1 bit 1.001	✓	✓	✓	-
12	*Channel C2*	*Block*	1 bit 1.003	✓	✓	✓	-
13	*Channel C2*	*Call up/save scenes*	1 byte 18.001	✓	✓	✓	✓
14	*Channel C2*	*Enable scenes = 1*	1 bit 1.003	✓	✓	✓	-
	Channel C2	*Block scenes = 1*	1 bit 1.003	✓	✓	✓	-
15	*Channel C2*	*Feedback On/Off*	1 bit 1.001	✓	✓	-	✓
16	*Channel C2*	*Operating hours feedback*	2 byte 7.001	✓	✓	✓	✓
	Channel C2	*Time to next service*	2 byte 7.001	✓	✓	✓	✓
17	*Channel C2*	*Service required*	1 bit 1.001	✓	✓	-	✓
18	*Channel C2*	*Reset operating hours*	1 bit 1.001	✓	✓	✓	-
	Channel C2	*Reset service*	1 bit 1.001	✓	✓	✓	-
	Channel C2	*Switching with priority*	2 bit 2.001	✓	✓	✓	-
20	*Channel C3*	*Switching object*	1 bit 1.001	✓	✓	✓	-
	Channel C3	*Threshold 0..255*	1 byte 5.010	✓	✓	✓	-
	Channel C3	*Threshold 0..65535*	2 byte 7.001	✓	✓	✓	-
	Channel C3	*Threshold EIS 5 (DPT9.xxx)*	2 byte 9.xxx	✓	✓	✓	-
	Channel C3	*Threshold as percent*	1 byte 5.001	✓	✓	✓	-

Continuation:

No.	Object name	Function	Type DPT	Flags			
				C	R	W	T
21	*Channel C3*	*Logic input in OR gate*	1 bit 1.001	✓	✓	✓	-
	Channel C3	*Logic input in AND gate*	1 bit 1.001	✓	✓	✓	-
	Channel C3	*Logic input in XOR gate*	1 bit 1.001	✓	✓	✓	-
22	*Channel C3*	*Block*	1 bit 1.003	✓	✓	✓	-
23	*Channel C3*	*Call up/save scenes*	1 byte 18.001	✓	✓	✓	✓
24	*Channel C3*	*Enable scenes = 1*	1 bit 1.003	✓	✓	✓	-
	Channel C3	*Block scenes = 1*	1 bit 1.003	✓	✓	✓	-
25	*Channel C3*	*Feedback On/Off*	1 bit 1.001	✓	✓	-	✓
26	*Channel C3*	*Operating hours feedback*	2 byte 7.001	✓	✓	✓	✓
	Channel C3	*Time to next service*	2 byte 7.001	✓	✓	✓	✓
27	*Channel C3*	*Service required*	1 bit 1.001	✓	✓	-	✓
28	*Channel C3*	*Reset operating hours*	1 bit 1.001	✓	✓	✓	-
	Channel C3	*Reset service*	1 bit 1.001	✓	✓	✓	-
	Channel C3	*Switching with priority*	2 bit 2.001	✓	✓	✓	-
30	*Channel C4*	*Switching object*	1 bit 1.001	✓	✓	✓	-
	Channel C4	*Threshold 0..255*	1 byte 5.010	✓	✓	✓	-
	Channel C4	*Threshold 0..65535*	2 byte 7.001	✓	✓	✓	-
	Channel C4	*Threshold EIS 5 (DPT9.xxx)*	2 byte 9.xxx	✓	✓	✓	-
	Channel C4	*Threshold as percent*	1 byte 5.001	✓	✓	✓	-
31	*Channel C4*	*Logic input in OR gate*	1 bit 1.001	✓	✓	✓	-
	Channel C4	*Logic input in AND gate*	1 bit 1.001	✓	✓	✓	-
	Channel C4	*Logic input in XOR gate*	1 bit 1.001	✓	✓	✓	-
32	*Channel C4*	*Block*	1 bit 1.003	✓	✓	✓	-

Continuation:

No.	Object name	Function	Type DPT	Flags			
				C	R	W	T
33	*Channel C4*	*Call up/save scenes*	1 byte 18.001	✓	✓	✓	✓
34	*Channel C4*	*Enable scenes = 1*	1 bit 1.003	✓	✓	✓	-
	Channel C4	*Block scenes = 1*	1 bit 1.003	✓	✓	✓	-
35	*Channel C4*	*Feedback On/Off*	1 bit 1.001	✓	✓	-	✓
36	*Channel C4*	*Operating hours feedback*	2 byte 7.001	✓	✓	✓	✓
	Channel C4	*Time to next service*	2 byte 7.001	✓	✓	✓	✓
37	*Channel C4*	*Service required*	1 bit 1.001	✓	✓	-	✓
38	*Channel C4*	*Reset operating hours*	1 bit 1.001	✓	✓	✓	-
	Channel C4	*Reset service*	1 bit 1.001	✓	✓	✓	-
	Channel C4	*Switching with priority*	2 bit 2.001	✓	✓	✓	-
40	*Channel C5*	*Switching object*	1 bit 1.001	✓	✓	✓	-
	Channel C5	*Threshold 0..255*	1 byte 5.010	✓	✓	✓	-
	Channel C5	*Threshold 0..65535*	2 byte 7.001	✓	✓	✓	-
	Channel C5	*Threshold EIS 5 (DPT9.xxx)*	2 byte 9.xxx	✓	✓	✓	-
	Channel C5	*Threshold as percent*	1 byte 5.001	✓	✓	✓	-
41	*Channel C5*	*Logic input in OR gate*	1 bit 1.001	✓	✓	✓	-
	Channel C5	*Logic input in AND gate*	1 bit 1.001	✓	✓	✓	-
	Channel C5	*Logic input in XOR gate*	1 bit 1.001	✓	✓	✓	-
42	*Channel C5*	*Block*	1 bit 1.003	✓	✓	✓	-
43	*Channel C5*	*Call up/save scenes*	1 byte 18.001	✓	✓	✓	✓
44	*Channel C5*	*Enable scenes = 1*	1 bit 1.003	✓	✓	✓	-
	Channel C5	*Block scenes = 1*	1 bit 1.003	✓	✓	✓	-
45	*Channel C5*	*Feedback On/Off*	1 bit 1.001	✓	✓	-	✓

Continuation:

No.	Object name	Function	Type DPT	Flags			
				C	R	W	T
46	*Channel C5*	*Operating hours feedback*	2 byte 7.001	✓	✓	✓	✓
	Channel C5	*Time to next service*	2 byte 7.001	✓	✓	✓	✓
47	*Channel C5*	*Service required*	1 bit 1.001	✓	✓	-	✓
48	*Channel C5*	*Reset operating hours*	1 bit 1.001	✓	✓	✓	-
	Channel C5	*Reset service*	1 bit 1.001	✓	✓	✓	-
	Channel C5	*Switching with priority*	2 bit 2.001	✓	✓	✓	-
50	*Channel C6*	*Switching object*	1 bit 1.001	✓	✓	✓	-
	Channel C6	*Threshold 0..255*	1 byte 5.010	✓	✓	✓	-
	Channel C6	*Threshold 0..65535*	2 byte 7.001	✓	✓	✓	-
	Channel C6	*Threshold EIS 5 (DPT9.xxx)*	2 byte 9.xxx	✓	✓	✓	-
	Channel C6	*Threshold as percent*	1 byte 5.001	✓	✓	✓	-
51	*Channel C6*	*Logic input in OR gate*	1 bit 1.001	✓	✓	✓	-
	Channel C6	*Logic input in AND gate*	1 bit 1.001	✓	✓	✓	-
	Channel C6	*Logic input in XOR gate*	1 bit 1.001	✓	✓	✓	-
52	*Channel C6*	*Block*	1 bit 1.003	✓	✓	✓	-
53	*Channel C6*	*Call up/save scenes*	1 byte 18.001	✓	✓	✓	✓
54	*Channel C6*	*Enable scenes = 1*	1 bit 1.003	✓	✓	✓	-
	Channel C6	*Block scenes = 1*	1 bit 1.003	✓	✓	✓	-
55	*Channel C6*	*Feedback On/Off*	1 bit 1.001	✓	✓	-	✓
56	*Channel C6*	*Operating hours feedback*	2 byte 7.001	✓	✓	✓	✓
	Channel C6	*Time to next service*	2 byte 7.001	✓	✓	✓	✓
57	*Channel C6*	*Service required*	1 bit 1.001	✓	✓	-	✓

Continuation:

No.	Object name	Function	Type DPT	Flags			
				C	R	W	T
58	*Channel C6*	*Reset operating hours*	1 bit 1.001	✓	✓	✓	-
	Channel C6	*Reset service*	1 bit 1.001	✓	✓	✓	-
	Channel C6	*Switching with priority*	2 bit 2.001	✓	✓	✓	-
60	*Channel C7*	*Switching object*	1 bit 1.001	✓	✓	✓	-
	Channel C7	*Threshold 0..255*	1 byte 5.010	✓	✓	✓	-
	Channel C7	*Threshold 0..65535*	2 byte 7.001	✓	✓	✓	-
	Channel C7	*Threshold EIS 5 (DPT9.xxx)*	2 byte 9.xxx	✓	✓	✓	-
	Channel C7	*Threshold as percent*	1 byte 5.001	✓	✓	✓	-
61	*Channel C7*	*Logic input in OR gate*	1 bit 1.001	✓	✓	✓	-
	Channel C7	*Logic input in AND gate*	1 bit 1.001	✓	✓	✓	-
	Channel C7	*Logic input in XOR gate*	1 bit 1.001	✓	✓	✓	-
62	*Channel C7*	*Block*	1 bit 1.003	✓	✓	✓	-
63	*Channel C7*	*Call up/save scenes*	1 byte 18.001	✓	✓	✓	✓
64	*Channel C7*	*Enable scenes = 1*	1 bit 1.003	✓	✓	✓	-
	Channel C7	*Block scenes = 1*	1 bit 1.003	✓	✓	✓	-
65	*Channel C7*	*Feedback On/Off*	1 bit 1.001	✓	✓	-	✓
66	*Channel C7*	*Operating hours feedback*	2 byte 7.001	✓	✓	✓	✓
	Channel C7	*Time to next service*	2 byte 7.001	✓	✓	✓	✓
67	*Channel C7*	*Service required*	1 bit 1.001	✓	✓	-	✓
68	*Channel C7*	*Reset operating hours*	1 bit 1.001	✓	✓	✓	-
	Channel C7	*Reset service*	1 bit 1.001	✓	✓	✓	-
	Channel C7	*Switching with priority*	2 bit 2.001	✓	✓	✓	-

Continuation:

No.	Object name	Function	Type DPT	Flags			
				C	R	W	T
69	*Channel C8*	*Switching object*	1 bit 1.001	✓	✓	✓	-
	Channel C8	*Threshold 0..255*	1 byte 5.010	✓	✓	✓	-
	Channel C8	*Threshold 0..65535*	2 byte 7.001	✓	✓	✓	-
	Channel C8	*Threshold EIS 5 (DPT9.xxx)*	2 byte 9.xxx	✓	✓	✓	-
	Channel C8	*Threshold as percent*	1 byte 5.001	✓	✓	✓	-
70	*Channel C8*	*Logic input in OR gate*	1 bit 1.001	✓	✓	✓	-
	Channel C8	*Logic input in AND gate*	1 bit 1.001	✓	✓	✓	-
	Channel C8	*Logic input in XOR gate*	1 bit 1.001	✓	✓	✓	-
71	*Channel C8*	*Block*	1 bit 1.003	✓	✓	✓	-
72	*Channel C8*	*Call up/save scenes*	1 byte 18.001	✓	✓	✓	✓
73	*Channel C8*	*Enable scenes = 1*	1 bit 1.003	✓	✓	✓	-
	Channel C8	*Block scenes = 1*	1 bit 1.003	✓	✓	✓	-
74	*Channel C8*	*Feedback On/Off*	1 bit 1.001	✓	✓	-	✓
75	*Channel C8*	*Operating hours feedback*	2 byte 7.001	✓	✓	✓	✓
	Channel C8	*Time to next service*	2 byte 7.001	✓	✓	✓	✓
76	*Channel C8*	*Service required*	1 bit 1.001	✓	✓	-	✓
77	*Channel C8*	*Reset operating hours*	1 bit 1.001	✓	✓	✓	-
	Channel C8	*Reset service*	1 bit 1.001	✓	✓	✓	-
	Channel C8	*Switching with priority*	2 bit 2.001	✓	✓	✓	-

3.2.2 Channel-related objects for the blinds actuator:

For the blinds function, 2 channels (e.g. C1+C5) are combined.
Therefore, the object numbers are not in consecutive order.

Table 4:

No.	Object name	Function	Type DPT	Flags			
				C	R	W	T
0	*Channel C1*	*UP/DOWN*	1 bit 1.008	✓	✓	✓	-
1	*Channel C1*	*Step/stop*	1 bit 1.010	✓	✓	✓	-
2	*Channel C1*	*% Height*	1 byte 5.001	✓	✓	✓	-
3	*Channel C1*	*% Slat*	1 byte 5.001	✓	✓	✓	-
4	*Channel C1*	*Block comfort/automatic*	1 bit 1.003	✓	✓	✓	-
5	*Channel C1*	*1 = Block*	1 bit 1.003	✓	✓	✓	-
	Channel C1	*1 = Enable*		✓	✓	✓	-
6	*Channel C1*	*Call up/save scenes*	1 byte 18.001	✓	✓	✓	-
7	*Channel C1*	*Enable scenes = 1*	1 bit 1.003	✓	✓	✓	-
	Channel C1	*Block scenes = 1*		✓	✓	✓	-
8	*Channel C1*	*Priority on safety*	2 bit 2.003	✓	✓	✓	-
40	*Channel C1*	*Position A*	1 bit 1.003	✓	✓	✓	-
41	*Channel C1*	*Position B*	1 bit 1.003	✓	✓	✓	-
42	*Channel C1*	*Position C*	1 bit 1.003	✓	✓	✓	-
43	*Channel C1*	*Height feedback %*	1 byte 5.001	✓	✓	-	✓
		Height feedback 1 bit	1 bit 1.009	✓	✓	-	✓
44	*Channel C1*	*Slat feedback %*	1 byte 5.001	✓	✓	-	✓

Continuation:

No.	Object name	Function	Type DPT	Flags			
				C	R	W	T
10	*Channel C2*	*UP/DOWN*	1 bit 1.008	✓	✓	✓	-
11	*Channel C2*	*Step/stop*	1 bit 1.010	✓	✓	✓	-
12	*Channel C2*	*% Height*	1 byte 5.001	✓	✓	✓	-
13	*Channel C2*	*% Slat*	1 byte 5.001	✓	✓	✓	-
14	*Channel C2*	*Block comfort/automatic*	1 bit 1.003	✓	✓	✓	-
15	*Channel C2*	*1 = Block*	1 bit 1.003	✓	✓	✓	-
	Channel C2	*1 = Enable*		✓	✓	✓	-
16	*Channel C2*	*Call up/save scenes*	1 byte 18.001	✓	✓	✓	-
17	*Channel C2*	*Enable scenes = 1*	1 bit 1.003	✓	✓	✓	-
	Channel C2	*Block scenes = 1*		✓	✓	✓	-
18	*Channel C2*	*Priority on safety*	2 bit 2.003	✓	✓	✓	-
50	*Channel C2*	*Position A*	1 bit 1.003	✓	✓	✓	-
51	*Channel C2*	*Position B*	1 bit 1.003	✓	✓	✓	-
52	*Channel C2*	*Position C*	1 bit 1.003	✓	✓	✓	-
53	*Channel C2*	*Height feedback %*	1 byte 5.001	✓	✓	-	✓
		Height feedback 1 bit	1 bit 1.009	✓	✓	-	✓
54	*Channel C2*	*Slat feedback %*	1 byte 5.001	✓	✓	-	✓
20	*Channel C3*	*UP/DOWN*	1 bit 1.008	✓	✓	✓	-
21	*Channel C3*	*Step/stop*	1 bit 1.010	✓	✓	✓	-
22	*Channel C3*	*% Height*	1 byte 5.001	✓	✓	✓	-
23	*Channel C3*	*% Slat*	1 byte 5.001	✓	✓	✓	-
24	*Channel C3*	*Block comfort/automatic*	1 bit 1.003	✓	✓	✓	-
25	*Channel C3*	*1 = Block*	1 bit 1.003	✓	✓	✓	-
	Channel C3	*1 = Enable*		✓	✓	✓	-
26	*Channel C3*	*Call up/save scenes*	1 byte 18.001	✓	✓	✓	-

Continuation:

No.	Object name	Function	Type DPT	Flags			
				C	R	W	T
27	*Channel C3*	*Block scenes = 1*	1 bit 1.003	✓	✓	✓	-
	Channel C3	*Enable scenes = 1*		✓	✓	✓	-
28	*Channel C3*	*Priority on safety*	2 bit 2.003	✓	✓	✓	-
60	*Channel C3*	*Position A*	1 bit 1.003	✓	✓	✓	-
61	*Channel C3*	*Position B*	1 bit 1.003	✓	✓	✓	-
62	*Channel C3*	*Position C*	1 bit 1.003	✓	✓	✓	-
63	*Channel C3*	*Height feedback %*	1 byte 5.001	✓	✓	-	✓
		Height feedback 1 bit	1 bit 1.009	✓	✓	-	✓
64	*Channel C3*	*Slat feedback %*	1 byte 5.001	✓	✓	-	✓
30	*Channel C4*	*UP/DOWN*	1 bit 1.008	✓	✓	✓	-
31	*Channel C4*	*Step/stop*	1 bit 1.010	✓	✓	✓	-
32	*Channel C4*	*% Height*	1 byte 5.001	✓	✓	✓	-
33	*Channel C4*	*% Slat*	1 byte 5.001	✓	✓	✓	-
34	*Channel C4*	*Block comfort/automatic*	1 bit 1.003	✓	✓	✓	-
35	*Channel C4*	*1 = Enable*	1 bit 1.003	✓	✓	✓	-
	Channel C4	*1 = Block*		✓	✓	✓	-
36	*Channel C4*	*Call up/save scenes*	1 byte 18.001	✓	✓	✓	-
37	*Channel C4*	*Block scenes = 1*	1 bit 1.003	✓	✓	✓	-
	Channel C4	*Enable scenes = 1*		✓	✓	✓	-
38	*Channel C4*	*Priority on safety*	2 bit 2.003	✓	✓	✓	-
70	*Channel C4*	*Position A*	1 bit 1.003	✓	✓	✓	-
71	*Channel C4*	*Position B*	1 bit 1.003	✓	✓	✓	-
72	*Channel C4*	*Position C*	1 bit 1.003	✓	✓	✓	-
73	*Channel C4*	*Height feedback %*	1 byte 5.001	✓	✓	-	✓
		Height feedback 1 bit	1 bit 1.009	✓	✓	-	✓
74	*Channel C4*	*Slat feedback %*	1 byte 5.001	✓	✓	-	✓

3.2.3 Common objects:

Table 5:

No.	Object name	Function	Type DPT	Flags			
				C	R	W	T
78	*C1 – C8*	*Manual*	1 bit 1.001	✓	✓	✓	✓
158	*C9 – C16*	*Manual*	1 bit 1.001	✓	✓	✓	✓
240	*Central permanent ON*	*Switch actuator*	1 bit 1.001	✓	✓	✓	✓
241	*Central permanent OFF*	*Switch actuator*	1 bit 1.001	✓	✓	✓	✓
242	*Central switching*	*Switch actuator*	1 bit 1.001	✓	✓	✓	✓
243	*Call up/save central scenes*	*Switch/blinds actuator*	1 byte 18.001	✓	✓	✓	✓
244	*Central safety 1*	*Blinds actuator (wind)*	1 bit 1.001	✓	✓	✓	
245	*Central safety 2*	*Blinds actuator (wind)*	1 bit 1.001	✓	✓	✓	
246	*Central safety 3*	*Blinds actuator (wind)*	1 bit 1.001	✓	✓	✓	
247	*Central UP/DOWN*	*Blinds actuator*	1 bit 1.008	✓	✓	✓	
248	*Central safety rain*	*Blinds actuator*	1 bit 1.001	✓	✓	✓	
249	*Central safety frost*	*Blinds actuator*	1 bit 1.001	✓	✓	✓	
250	*Version of bus coupling unit*	*send*	14 byte 16.001	✓	✓		✓
251	*Firmware version 1*	*send*	14 byte 16.001	✓	✓		✓
252	*Firmware version 2*	*send*	14 byte 16.001	✓	✓		✓

3.2.4 Description of objects for the switch actuator (channel C1)

- **Object 0** "*Switch object, threshold as percent, threshold 0..255, threshold EIS 5 (DPT 9.xxx), threshold 0..65535*"

This object activates the set channel function (see parameter: *Channel function*).

The set channel function can either be activated via 1-bit telegram or by exceeding a threshold (8- or 16-bit telegram).

Table 6:

Parameter		Activation of channel function via
Activation of function via	*Type of threshold object*	
Switch object		1-bit telegram
Exceeding the threshold	*Object type: Percent (DPT 5.001)*	Exceeding per cent value
	Object type: Counter value 0..255 (DPT 5.010)	Any value in given numerical range
	Object type: Counter value 0..65535 (DPT 7.001)	
	Object type: EIS5 e.g. CO2, brightness (DPT 9.xxx)	2 byte floating-point number

- **Object 1** "*Logic input in AND gate, in OR gate, in XOR gate*"

Only available if *Link* is activated (*Configuration options* parameter page).
Forms a logical link together with object 0 to activate the channel function.

- **Object 2** "*Block*"

Blocks the channel function.
Responses to setting and cancelling the block can be configured if the block function has been activated (*Configuration options* parameter page).

- **Object 3** "*Call up/save scene*"

Only available if the scene function has been activated (*Configuration options* parameter page).

This object can be used to save and subsequently call up scenes.
Saving stores the channel status.
It does not matter how this status is produced (whether via switch commands, central objects or the buttons on the device).
The saved status is restored when it is called up.

All scene numbers from 1 to 64 are supported.
Each channel can participate in up to 8 scenes.

See appendix: Scenes

- **Object 4** "*Block scenes = 1, Enable scenes = 1*"

Blocks the scene function with a 1 or a 0 depending on the configuration.
As long as it is blocked, scenes cannot be saved or called up.

- **Object 5** "*On/Off feedback*"

Reports the current channel status.
The status can also be inverted depending on configuration.

- **Object 6** "*Time to next service, operating hours feedback* "

Only available if the operating hours counter function has been activated
(*Configuration options* parameter page).
Reports, depending on selected *Type of hour counter* (*Hour counter and service* parameter page), either the remaining period to the next service or the current status of the hour counter.

- **Object 7** "*Service required*"

Only available if the operating hours counter function has been activated (*Configuration options* parameter page) and *Type of hour counter = Counter for time to next service*.

Reports if the next service is due.
0 = not due
1 = service is due.

- **Object 8** "*Switching with priority, reset service, reset operating hours*"

The function of the object depends on whether or not the operating hours counter function has been activated (*Configuration options* parameter page).

<table>
<tr><th>Activate hour counter</th><th>Function</th><th>Use</th></tr>
<tr><td rowspan="2">yes</td><td>Reset service[5]</td><td>Reset service interval counter.</td></tr>
<tr><td>Reset operating hours[6]</td><td>Reset hour counter</td></tr>
<tr><td>no</td><td>Switching with priority</td><td>Priority control:
<table>
<tr><th>Status of object 8</th><th>Channel status</th></tr>
<tr><td>0</td><td rowspan="2">as set by object 0[7]</td></tr>
<tr><td>1</td></tr>
<tr><td>2</td><td>OFF</td></tr>
<tr><td>3</td><td>ON</td></tr>
</table></td></tr>
</table>

[5] Depending on configuration
[6] Depending on configuration
[7] or set by logic, central objects or scene

3.2.5 Description of objects for the blinds actuator (channel C1)

For the blinds function, 2 channels (e.g. C1+C5) are combined.
Therefore, the object numbers are not in consecutive order.

- **Object 0** "*UP/DOWN*"

Raise the roller blinds/blinds with “0” and lower with “1”.

- **Object 1** "*Step/Stop*"

If the drive moves, it will be stopped when a Step/Stop telegram is received.
If the drive is stationary at this moment, then a short slat turning (step) is performed on blinds.
With the other drive types, the current position is adjusted up or down depending on the specified step direction.

The direction of the step is determined from whether a "0" or "1" is sent to the object.
No step is performed if the configured number of steps for a complete turn has already been reached.

- **Object 2** "*% Height*"

This raises/lowers the roller blinds/blinds to a certain height.
The set point value is expressed in %.
0% ... 3% = upper end position
100% = lower end position
This function can be blocked by the comfort automatic object (see below).

- **Object 3** "*% Slat*"

Specification of a particular slat turning in %
This function can be blocked by the comfort automatic object (see below)

- **Object 4** "*Block Comfort/Automatic*"

A "1" on this object blocks the functions Drive 1 Height and Drive 1 Slat.
This function is used to prevent the blind from being adjusted due to external influences, and to thus maintain a preferred slat position of the blinds.
The Up/Down function (obj. 0) is maintained.

- **Object 5** "*Block/enable*"

Blocks the channel function.
Responses to setting and cancelling the block can be configured if the block function has been activated (configuration options parameter page).

- **Object 6** "*Call up/save scenes*"

Only available if the scene function has been activated (Configuration options parameter page).
This object can be used to save and subsequently call up scenes.
Saving stores the channel status.
It does not matter how this status is produced (whether via switch commands, central objects or the buttons on the device). The saved status is re-established when it is called up.
All scene numbers from 1 to 63 are supported.
Each channel can participate in up to 8 scenes.

The scene that is currently active can be ended with the value 63 (= scene 64).
See appendix: Scenes

- **Object 7** "*Block scenes/enable scenes* "

Blocks the scene function with a 1 or a 0 depending on the configuration.
As long as it is locked, scenes cannot be saved or called up

- **Object 8** "*Priority on safety*"

Priority on safety will be used when the roller blinds or sun protection devices must remain stationary in an end position for a certain time, e.g. for window cleaning.

This operating mode has the highest priority level.
While priority on safety is active, all operating commands (*UP/DOWN, % Height, Step/Stop, Slat %*), the other safety objects and the manual operation will be ignored.

Value obj. 8	Priority on safety
0	inactive
1	
2	UP
3	DOWN

Priority on safety is ended with a 1 or a 0.

- **Object 40** "*Position A*"

With a 1, the drive is brought to the predefined position A (preset or end position).
See parameter page *Positions via 1 bit*.

- **Object 41** "*Position B"*

With a 1, the drive is brought to the predefined position B (preset or end position).
See parameter page *Positions via 1 bit*.

- **Object 42** "*Position C*"

With a 1, the drive is brought to the predefined position C (preset or end position).
See parameter page *Positions via 1 bit*.

- **Object 43** *"Height feedback %", "Height feedback 1 bit"*

Current drive height feedback in %.
Can also be configured as a 1-bit telegram DPT1.009. See parameter: *Format of height feedback.*

- **Object 44** "*Slat feedback %"*

Current slat position feedback in %.

3.2.6 Description of common objects

- **Objects 78, 158** "*Manual*"

Puts the relevant module in manual mode or sends the status of the manual operation.

Telegram	Meaning	Explanation
0	Auto	All channels can be operated via the bus as well as via the buttons.
1	Manual	The channels can only be operated via the buttons on the device. The safety telegrams are still being executed.

The duration of the manual mode, i.e. the *Function of the manual button* is set on the *General* parameter page.

- **Object 240** "*Central permanent ON*"

Central switch-on function.
Enables simultaneous switching on of all channels with one single telegram.
0 = No function
1 = Permanent ON

Participation in this object can be set individually for each channel (*Configuration options* parameter page).

IMPORTANT:
This object takes top priority.
As long as it is set, the other switch commands will not work on the participating channels.

- **Object 241** "*Central permanent OFF*"

Central switch-off function.
Enables simultaneous switching off of all channels with one single telegram.
0 = No function
1 = Permanent OFF

Participation in this object can be set individually for each channel (*Configuration options* parameter page).

IMPORTANT: This object has the second highest priority after *Central permanent ON*. As long as it is set, the other switch commands will not work on the participating channels.

- **Object 242** "*Central switching*"

Central switch function.

Enables simultaneous switching on or off of all channels with one single telegram.
0 = OFF
1 = ON
Participation in this object can be set individually for each channel (*Configuration options* parameter page).
With this object, every participating channel responds exactly as if its 1st object
(i.e. obj. 0, 10, 20, etc.) were receiving a switch command.

- **Object 243** "*Call up/save central scenes*"

Central object for using scenes.
This object can be used to save and subsequently call up "scenes".

See appendix: Scenes.

- **Objects 244, 245, 246** "*Central safety 1, 2, 3*"

The safety objects allow a specific response of the drives to a particular situation with a high priority. These objects can, for example, be linked with 3 differently placed wind sensors (weather stations).

Example:
A safety object is linked to a wind sensor.
A drive to which a textile sun protection device is connected is configured to react to this safety object.
The operating condition is normal as long as a “0” is present.
In the event of a storm, the wind sensor sends a "1" to the safety object and the sun protection is immediately moved to the configured safety position.

Comments:

1. A safety object must only be actuated by one device, as otherwise conflicting commands could cancel each other out.
2. With a request for safety objects e.g. via the ETS function "Read value":
   If the "Safety on" status arises through cyclical monitoring, the object value remains at 0.
3. The safety statuses must be reinitialized after download.

- **Object 247** "*Central Up/Down*"

This object can be used to centrally control all drives which are configured for it.
For example, all of the roller blinds on one facade can be raised or lowered at the same time with one push button
0 = raise
1 = lower

- **Object 248** *"Central safety rain"*

This object can be used to move all drives which are configured for it into a defined position when there is a central rain alarm.

- **Object 249** *"Central safety frost"*

This object can be used to move all drives which are configured for it into a defined position when there is a central frost alarm.

- **Object 250** "*Version of bus coupling unit*"

For diagnostic purposes only.

Sends the bus coupling unit software version after reset or download.
Can also be read out via the ETS.

Format: **A**xx **H**yy **V**zzz

Code	Meaning
xx	00 .. FF = Version of application without dividing point (10 = V1.0, 11 = V1.1, etc.).
yy	Hardware version 00..99
zzz	Firmware version 000..999

EXAMPLE: A12 H00 V09
- ETS application version 1.2
- Hardware version $00
- Firmware version $09

- **Object 251, 252** "*Firmware version 1.2*"

For diagnostic purposes only.

Sends the firmware versions of the device after reset or download.
Can also be read out via the ETS.

The version is issued as an ASCII character string.
Format: **M**xx **H**yy **V**zzz

Code	Meaning
xx	01 .. FF = Module code (hexadecimal).
yy	Hardware version 00..99
zzz	Firmware version 000..999

EXAMPLE: M17 **H**00 **V**05
- Module $17 = GKA-16K8K KNX
- Hardware version V00
- Firmware version V05

3.3 Parameter

3.3.1 Common parameter pages

Table 7

Function	Description
General	General parameters.

3.3.2 Parameter pages for the switch actuator

Table 8

Function	Description
Channel Cx Configuration options	Characteristics of channel and activation of additional functions (scenes, links, etc.).
Contact characteristics	Type of contact and status after download, bus failure etc.
Threshold	Settings for triggering channel function through exceeding threshold.
Block function	Type of block telegram and response to blocking.
Scenes	Selection of scene numbers relevant to the channel.
Feedback	Status of feedback object etc.
Hour counter and service	Type of hour counter and, if required, service interval etc.
Link	Selection of logical link.

3.3.3 Parameter pages for the blinds actuator

Channel Cx Configuration options	Characteristics of channel and activation of additional functions (scenes, sun protection, block, etc.).
Drive settings	Direction of movement, runtimes, etc.
Block function	Type of block telegram and response to blocking.
Safety wind/rain/frost	Priority and participation in the safety objects for wind, rain and frost.
Presets	8 preset heights and slat positions that can be called up via scenes or 1-bit objects
Scenes	Selection of scene numbers relevant to the channel.
Positions over 1 bit	Behaviour when calling up or leaving the 1-bit positions
Power failure and restoration	Behaviour during mains or bus failure and restoration.

3.3.4 Parameter description for common parameters

Settings that lead to the display of other pages or functions are identified by .. .
Example: *Pulse function..*

3.3.4.1 The "*General*" parameter page

Designation	Values	Description
Device type	***GKA-8K4K KNX..*** *GKA-16K8K KNX..*	Select device type.
Function of the manual button	*applies for 24 hours or until reset via object* *blocked* ***applies until reset via object*** *applies for 30 minutes or until reset via object* *applies for 1 hour or until reset via object* *applies for 2 hours or until reset via object* *applies for 4 hours or until reset via object* *applies for 8 hours or until reset via object* *applies for 12 hours or until reset via object*	Determines how long the device works manually and how this is ended. In manual mode, the channels can only be switched on and off via the buttons on the device. See also: object 78
Manual operation of the channels	***enabled*** *blocked*	The channels can be operated via the buttons on the device. No manual operation, the buttons on the device are locked.

3.3.4.2 Parameter page *"Channels C1-C8 (or C9-C16)"*

Designation	Values	Description
Channel C1 function	***Switch actuator*** *Blinds actuator*	Select channel function.
Channel C2 function	***Switch actuator*** *Blinds actuator*	Select channel function.
Channel C3 function	***Switch actuator*** *Blinds actuator*	Select channel function.
Channel C4 function	***Switch actuator*** *Blinds actuator*	Select channel function.
Channel C5 function	*Switch actuator* *used for C1 blinds*	Channel is used as a switch actuator Channel is required together with C1 for the blinds function.
Channel C6 function	*Switch actuator* *used for C2 blinds*	Channel is used as a switch actuator Channel is required together with C2 for the blinds function.
Channel C7 function	*Switch actuator* *used for C3 blinds*	Channel is used as a switch actuator Channel is required together with C3 for the blinds function.
Channel C8 function	*Switch actuator* *used for C4 blinds*	Channel is used as a switch actuator Channel is required together with C4 for the blinds function.
Send collective feedback (Only switching actuator channels)	*no* ***report as inactive*** *only at change* *cyclically and at change*	No collective feedback, object is unavailable (obj. 79, 159, 239). Object value cannot be requested. Sends whenever a channel status changes. Sends cyclically and with status changes See appendix: collective feedback

Continuation:

Designation	Values	Description
Relay switch delay		This parameter sets the minimum delay between switching on 2 relays if several are activated at the same time. The shortest delay is achieved by using the central switch object (object 242). When switching on via individual telegrams (1 telegram per channel) , the bus running times and the sequential processing of commands cause an additional delay. This can help avoid high current peaks when devices are switched on simultaneously (e.g. with a number of lighting strips).

3.3.4.3 The "*Channel Cx: Configuration options*" parameter page

Table 9

Designation	Values	Description
Channel function	***Switching On/Off..*** *On/off time delay..* *Pulse function..* *Staircase light time switch with forewarning function..* *Flashing..*	Determines the basic functionality of the channel.
Activation of function via	***Switch object*** *Exceeding the threshold*	The channel is operated via a 1-bit object. The channel is operated through exceeding a 1 or 2-byte threshold. See below: The "Threshold" parameter page
Activate block function	*Yes..* ***no***	The block function can be individually adjusted. The relevant parameter page is shown. No block function.
Activate scenes	*Yes..* ***no***	Should scenes be used?
Participation in central objects	***no*** *at Central switching, Permanent On, Permanent OFF* *only in central permanent ON* *only in central permanent OFF* *only in central switching* *only in central switching and permanent ON* *only in central switching and permanent OFF* *only in central permanent On and permanent OFF*	Central objects are not taken into account. Which central objects are to be taken into account? Central objects enable simultaneous switching on and off of several channels with one single object.

Continuation:

Designation	Values	Description
Adjust feedback	*Yes.*. ***no***	The feedback function can be individually adjusted. The relevant parameter page is shown. The *Feedback* function works with the standard parameters: *- not inverted* *- do not transmit cyclically*
Activate hour counter	*Yes.*. ***no***	Is the *hour counter/service interval* function to be used?
Activate link	*Yes.*. ***no***	Are logical links to be used with the channel object?

3.3.4.4 The "*Contact characteristics*" parameter page

Table 10

Designation	Values	Description
Type of contact	***NO contact***	Standard: The relay contact is closed when a switch-on command is issued.
	Opening contact	Inverted: The relay contact is opened when a switch-on command is issued.
Status with download and bus failure		After download or with loss of bus voltage…
	OFF	..the relay remains switched off.
	ON	..the relay switches on.
	unchanged	…the relay remains in the same state as before.
Status after restoration of the mains supply or bus supply		After return of mains or bus voltage…
	OFF	..the relay remains switched off.
	ON	..the relay switches on.
	Same as before failure	…the relay remains in the same state as before.

3.3.4.5 The "*On/Off delay*" parameter page

This parameter page appears if *On/Off delay* is chosen as the *Channel function*.

Table 11

Designation	Values	Description
Switch-on delay		
hours (0..3)	***0**..3*	Input of desired switch-on delay in hours.
minutes (0..60)	***0**..60*	Input of desired switch-on delay in minutes.
seconds (0.225)	***0**..255*	Input of desired switch-on delay in seconds.
Switch-off delay		
hours (0..3)	***0**..3*	Input of desired switch-off delay in hours.
minutes (0..60)	***0**..60*	Input of desired switch-off delay in minutes.
seconds (0.255)	***0**..255*	Input of desired switch-off delay in seconds.

3.3.4.6 The "*Pulse function..*" parameter page

This parameter page appears if *Pulse function* is chosen as the *Channel function*.

Table 12

Designation	Values	Description
hours (0..3)	***0**..3*	Input of desired pulse duration in hours.
minutes (0..60)	***0**..60*	Input of desired pulse duration in minutes.
seconds (0.255)	***0**..255*	Input of desired pulse duration in seconds.
Pulse can be retriggered (with 1 on switch object)	*Yes* ***no***	The pulse can be extended as often as desired via a 1-telegram The pulse cannot be extended.
Pulse can be reset (with 0 on switch object)	*Yes* ***no***	The pulse can be ended early at anytime via a 0-telegram. The pulse cannot be ended early

3.3.4.7 The "*Staircase light with forewarning function ..*" parameter page

This parameter page appears if *Staircase light with forewarning function* is chosen as the *Channel function*.
The user can, anytime, press a push button again, to extend the staircase light time.

Table 13

Designation	Values	Description
Staircase light time (min. 1 s)		
hours (0..3)	***0**..3*	Input of desired staircase light time in hours.
minutes (0..60)	***0**..60*	Input of desired staircase light time in minutes.
seconds (0.255)	*0..255* Default value = ***1***	Input of desired staircase light time in seconds.
The maximum sum of pulses 1..40	*1..40*	determines how long the staircase light time can be extended by pressing the button again.
Duration of 1st forewarning in s (0..60)	*0* *1..60* Default value = *10*	The light switches off immediately once the staircase light time is completed. Once the staircase light time is completed, the light should briefly flash and then stay on for the duration of the forewarning
Duration of 2nd forewarning in s (0..60)	0 *1..60* Default value = *10*	No 2nd forewarning. The light switches off at the end of the 1st forewarning. Second forewarning: Once the 1st forewarning is completed, the light should flash briefly and then stay on for the duration of the 2nd forewarning. The light switches off when this time is completed.

Example of forewarning function:

Staircase light time	Flashing	1st forewarning	Flashing	2nd forewarning	OFF

3.3.4.8 The "*Flashing..*" parameter page

This parameter page appears if *Flashing* is chosen as the *Channel function*.

Table 14

Designation	Values	Description
ON phase of flash pulse		
hours (0..3)	***0**..3*	Input of desired pulse time (t_i) in hours.
minutes (0..60)	***0**..60*	Input of desired pulse time in minutes.
seconds (0.255)	***0**..255*	Input of desired pulse time in seconds.
OFF phase of flash pulse		
hours (0..3)	***0**..3*	Input of desired length of break (t_p) in hours.
minutes (0..60)	***0**..60*	Input of desired length of break in minutes.
seconds (0.255)	***0**..255*	Input of desired length of break in seconds.
How often should it flash	*Until it switches off* *1 x* *2 x* ***3 x*** *4 x* *5 x* *7 x* *10 x* *15 x* *20 x* *30 x* *50 x*	The channel flashes until a switch-off telegram is received. The channel flashes as often as set here.

3.3.4.9 The "*Threshold*" parameter page

This side is shown if the *Activation of the function by* parameter is set to *Exceeding threshold*.

Table 15

Designation	Values	Description
Type of threshold object	***Object type: Percent (DPT 5.001)*** *Object type: Counter value 0..255 (DPT 5.010)* *Object type: Counter value 0..65535 (DPT 7.001)* *Object type: EIS5 e.g. CO2, brightness etc. (DPT 9.xxx)*	Value type for threshold.
Response on exceeding the threshold		Should the channel switch on or off on exceeding the threshold? The set *type of contact* must be taken into account here.
	As switch object = 0	*NO contact*: the relay switches **off** if threshold is exceeded. *Opening contact:* The relay switches **on** if threshold is exceeded.
	As switch object = 1	*NO contact*: The relay switches **on** if threshold is exceeded. *Opening contact:* the relay switches **off** if threshold is exceeded.
Parameter for *Percent* threshold object		
Threshold	*1..99%* *Default value = **50%***	Desired threshold. Example of *NO contact* with response *as switch object = 1*: Switches on when: Object value > threshold Switches off when: Object value = threshold - hysteresis
Hysteresis (as %)	*1..99%* *Default value = **10%***	The hysteresis prevents frequent switching after small fluctuations in readings.

Continuation:

Designation	Values	Description
Parameter for threshold object *Counter value 0..255*		
Threshold	*1..254* *Default value = **127***	Desired threshold. Example of *NO contact* with response *as switch object = 1*: Switches on when: Object value > threshold Switches off when: Object value = threshold - hysteresis
Hysteresis	*1..254* *Default value = **5***	The hysteresis prevents frequent switching after small fluctuations in readings.
Parameter for threshold object *Counter value 0..65535*		
Threshold	*1..65534* *Default value = **1000***	Desired threshold. Example of *NO contact* with response *as switch object = 1*: Switches on when: Object value > threshold Switches off when: Object value = threshold - hysteresis
Hysteresis	*1..65534* *Default value = **5***	
Parameter for threshold object *EIS5 (e.g. CO_2, brightness…)*		
Threshold *Format (-)0.00..99999*	*0.00..99999* *Default value = **20***	Desired threshold. Example of *NO contact* with response *as switch object = 1*: Switches on when: Object value > threshold Switches off when: Object value = threshold - hysteresis
Hysteresis *0.00..9999*	*0.00..9999* *Default value = **1***	The hysteresis prevents frequent switching after small fluctuations in readings.

3.3.4.10 The "*Block function*" parameter page

This page appears when *Adjust block function* is selected on the *Configuration options* parameter page.

Table 16

Designation	Values	Description
Block telegram	***Block with ON telegram***	0 = Cancel block 1 = Block
	Block with OFF telegram	0 = Block 1 = Cancel block **Note:** The block is always deactivated after reset.
Response when setting the block	*OFF*	Switch off
	ON	Switching on
	unchanged	No response
Response when cancelling the block	*OFF*	Switch off
	ON	Switching on
	Unchanged	No response
	update	Restore normal operation and switch relay accordingly.

3.3.4.11 The "*Scenes*" parameter page

This page appears when the *Scenes* are activated on the *Configuration options* parameter page.
Each channel can participate in up to 8 scenes.

Table 17

Designation	Values	Description
Block telegram for scenes	***Block with ON telegram***	0 = Cancel block 1 = Block
	Block with OFF telegram	0 = Block 1 = Cancel block **Note:** With this setting the scenes are always locked immediately after reset or download.
All channel scene statuses	***Overwrite on download***	A download deletes all scene memories in a channel, i.e. all previously taught-in scenes. When a scene number is called, the channel assumes the configured *Status after download* (see below). See appendix: Teach in scenes without telegrams
	Unchanged after download	All previously taught-in scenes are saved. However, the scene numbers the channel should react to can be changed (see below: *Channel reacts to*).
Participation in central scene object	***No*** *yes*	Should the device react to the central scene object?
Channel reacts to	*No scene number* ***Scene number 1*** *Scene number 63*	First of the 8 possible scene numbers the channel is to react to.
Status after download	***Off*** *On*	New switching status that the selected scene number is to be allocated to. Only possible if the scene statuses are to be overwritten after download.
Permit teach in	***No***	Scenes can only be called up.
	Yes	The user can both call up and teach in or amend scenes.

Continuation:

Designation	Values	Description
Channel reacts to	*No scene number* *Scene number1* ***Scene number 2*** … *Scene number 63*	Second of the 8 possible scene numbers
Status after download	***Off*** *On*	See above.
Permit teach in	*No* ***Yes***	See above.
Channel reacts to	*No scene number* *Scene number1* … ***Scene number 3*** … *Scene number 63*	Third of the 8 possible scene numbers
Status after download	***Off*** *On*	See above.
Permit teach in	*No* ***Yes***	See above.
Channel reacts to	*No scene number* *Scene number1* … ***Scene number 4*** … *Scene number 63*	Fourth of the 8 possible scene numbers
Status after download	***Off*** *On*	See above.
Permit teach in	*No* ***Yes***	See above.
Channel reacts to	*No scene number* *Scene number1* … ***Scene number 5*** … *Scene number 63*	Fifth of the 8 possible scene numbers
Status after download	***Off*** *On*	See above.
Permit teach in	*No* ***Yes***	See above.
Channel reacts to	*No scene number* *Scene number1* … ***Scene number 6*** … *Scene number 63*	Sixth of the 8 possible scene numbers

Continuation:

Designation	Values	Description
Status after download	***Off*** *On*	See above.
Permit teach in	*No* ***Yes***	See above.
Channel reacts to	*No scene number* *Scene number1* … ***Scene number 7*** … *Scene number 63*	Seventh of the 8 possible scene numbers
Status after download	***Off*** *On*	See above.
Permit teach in	*No* ***Yes***	See above.
Channel reacts to	*No scene number* *Scene number1* … ***Scene number 8*** … *Scene number 63*	Last of the 8 possible scene numbers
Status after download	***Off*** *On*	See above.
Permit teach in	*No* ***Yes***	See above.

3.3.4.12 The "*Feedback*" parameter page

This page appears when *Adjust feedback* is selected on the *Configuration options* parameter page.

Table 18

Designation	Values	Description
Reported status	***Not inverted***	Channel switched on: feedback object sends a 1
	inverted	Channel switched on: feedback object sends a 0
Transmit feedback cyclically	***No*** *yes*	Send at regular intervals?
Time for cyclical transmission of feedback	*2 minutes, 3 minutes, 5 minutes, 10 minutes,* ***15 minutes****, 20 minutes, 30 minutes, 45 minutes 60 Minutes*	At what interval?

3.3.4.13 The "*Hour counter and service*" parameter page

This page appears when *Activate operating hours counter* is selected on the *Configuration options* parameter page.

Table 19

Designation	Values	Description
Type of hour counter	***Hour counter*** *Counter for time period before next service*	Forward counter for duty cycle of the channel. Backward counter for duty cycle of the channel.
Hour counter		
Reporting of operating hours when changing (0..100 h, 0 = no report)	*0..100* *Default value = **10***	At what interval is the current meter reading to be sent? Example: 10 = Send each time the meter reading increases by another 10 hours.
Report operating hours cyclically	***No*** *yes*	Send at regular intervals?
Time for cyclical transmission	*2 minutes, 3 minutes, 5 minutes, 10 minutes, 15 minutes, 20 minutes, 30 minutes, 45 minutes* ***60 Minutes***	At what interval?
Counter for time period before next service		
Service interval (0..2000, x10 h)	*0..2000* *Default value = **100***	Desired timescale between 2 services. Example: 10 = 10 x 10 h = 100 hours
Reporting of time to service when changing (0..100 h, 0 = no report)	*0..100* *Default value = **10***	At what interval is the current meter reading to be sent? Example: 10 = Send each time the meter reading decreases by another 10 hours.
Report time to service cyclically	***no*** *Yes*	Send **remaining** time to next service at regular intervals? → Object *Time to next service*.
Report service cyclically	***no*** *Yes*	Send report, whether the *time to next service* has expired at regular intervals? → Object *Service required*.

Continuation:

Designation	Values	Description
Time for cyclical transmission (time to service and service	*2 minutes, 3 minutes, 5 minutes, 10 minutes, 15 minutes, 20 minutes, 30 minutes, 45 minutes* ***60 Minutes***	At what interval?

3.3.4.14 The "*Link*" parameter page

This page appears when *Activate link* is selected on the *Configuration options* parameter page.

An additional object appears, which forms a logical link in combination with the channel's switching/threshold object.
The channel only switches if the link requirement has been met.

Table 20

Designation	Values	Description
Activate link		Selection of logical link with the channel object
	AND link	The *Logic input in AND gate* object appears (e.g. object 1).
	OR link (override)	The *Logic input in OR gate* object appears (e.g. object 1).
	XOR link	The *Logic input in XOR gate* object appears (e.g. object 1).
Block object affects logic object	***No***	The block object only affects the channel object (e.g. object 0). If required, the logic object can activate the channel function despite block (with OR and XOR link).
	yes	The block object affects the channel object and the logic object. The channel function is completely blocked if the block is active.

3.3.5 Parameter description for the blinds actuator

3.3.5.1 The "*General*" parameter page

Designation	Values	Description
Relay switch delay		This parameter sets the minimum delay between switching on 2 relays if several are activated at the same time. The shortest delay is achieved by using the central UP/DOWN object (Obj. 247). When switching via individual telegrams (1 telegram per channel), the bus running time and the sequential processing of commands causes an additional delay. This can help avoid high current peaks when devices are switched on simultaneously
	None	There is no added delay.
	60 ms *100 ms* *200 ms*	When a relay has switched on, the next one (within the module) can only switch on after the set delay is completed. The switch-on delay between the first and last relay is calculated according to the following formula: (Number of channels – 1) x delay **Example:** GKA-8K4K KNX and 60 ms: = (4 channels – 1) * 60 ms = 180 ms → Last channel switches with a delay of 180 ms.

3.3.5.2 The "*Channel Cx: Configuration options*" parameter page

Table 21

Designation	Values	Description
Type of hanging	***Blinds*** *Roller blinds/awning/general drive…*	The type of hanging which is to be actuated
Activate block function	*Yes..* ***no***	Should the block function be used?
Activate scenes	*Yes..* ***no***	Should scenes be used?
Block Comfort/Auto on UP/DOWN/STOP command	 *no, only via object Comfort/Automatic* *yes, and via object Comfort/Automatic OFF* *yes, and after 0.5 h OFF* *yes, and after 1 h OFF* … *yes, and after 2 h OFF* … *yes, and after 48 h OFF*	Suppression of the Comfort/Auto function by manual positioning via On, Off or Stop telegrams. No suppression: *Comfort/Auto* remains active after manual positioning. *Comfort/Auto* can be ended both by manual positioning and via the object *Comfort/Automatic*. The *Comfort/Auto* function is locked for the set time via manual positioning. Once this time has lapsed, *Comfort/Auto* is active once again and the drive reacts to height telegrams. The block can be ended at any time via the object *Comfort / Automatic* (=1).
Format of height feedback	*%* *1 bit*	Standard. New: The location is sent as a 1-bit telegram (DPT1.009). 0%, open = 0 > 0%, closed = 1

3.3.5.3 The "*Drive settings*" parameter page

Table 22

Designation	Values	Description
Direction of drive run	*normal* *inverted*	Standard setting: Hanging moves from top to bottom. For special applications or quick fix for wrongly wired devices (up/down directions mixed up).
Complete runtime Down (s)	Manual input 5 .. 500	Only available when *Drive runtime setting = via ETS*. Enter the measured runtime for descending (in seconds).
Runtime adjustment for ascent (s)	Manual input -15 .. +15	Enter difference between runtime when ascending and runtime (in seconds) when descending. Correction value = $t_{Up} - t_{Down}$
Step duration of Step/Stop object	*No steps* *250 ms* *500 ms* ***1 s*** *2 s* *3 s* *4 s* *5 s* *6 s* *7 s* *10 s*	Only for *roller blinds/awning/general drive.* This specifies whether or not it should be possible to adjust the drive in small steps, and it also specifies the duration of a single step.
Complete slat turning 4 ... 250 [x100 ms]	*4 .. 250*	Enter the measured turn time of the slats in increments of 100 ms. 10 = 10 x 100 ms = 1s
No. of steps for a complete turn	*3 Steps* *4 Steps* ***7 Steps*** … *12 Steps*	This specifies the number of individual steps a complete slat turn is to be divided into (3 to 12).

Continuation:

Designation	Values	Description
On receipt of a step/stop command	***Process immediately (recommended)*** *Wait 0.3 s to see if an UP/DOWN command follows* *Wait 0.4 s to see if an UP/DOWN command follows* *Wait 0.5 s to see if an UP/DOWN command follows*	Every received step command is carried out immediately Step commands are only executed if no operating command is received within the set time. These settings apply to push buttons which, when pressed and held, first send a step command and then an operating command.
Tighten fabric (awning)	*yes* ***no***	Only for *roller blinds/awning/general drive.* At values above 70%, the hanging, awning or roller blind will be retightened by moving back briefly. On roller blinds it is guaranteed that the vent slots will remain open. No tensioning.
Pause time before reversal of direction	***0.5 s*** *1 s* *2 s* *3 s*	Pause introduced to protect the drive motor against conflicting commands (e.g. if a descend command is received while ascending). This setting depends on the information supplied by the manufacturer of the drive
Automatic execution of the slat object value [%] after the height object [%]	***yes*** *no*	Selection whether or not the slat position (according to the slat object *% slat*) is to be resumed after the height adjustment via the height object *% Height*.
Assignment of the 0% position to the slat objects [%]	***0% corresponds to slat position on lowering*** *0% corresponds to slat position on ascending*	Input of the starting position for the calculations of the slat turn.
Participation in central Up/Down object	***yes*** *no*	Should the drive respond to the central object?
Transmission of feedback	***only at change*** *cyclically and at change*	When should feedback (Obj. *Slat feedback* and *Height feedback*) be sent?
Time for cyclical transmission of feedback	*2 minutes, 3 minutes, 5 minutes, 10 minutes,* ***15 minutes****, 20 minutes, 30 minutes, 45 minutes 60 Minutes*	If cyclically, at what interval?

3.3.5.4 The "*Block function*" parameter page

This page can be activated on the Configuration options parameter page.

Table 23

Designation	Values	Description
Block telegram	***Block with ON telegram***	0 = Cancel block 1 = Block
	Block with OFF telegram	0 = Block 1 = Cancel block **Note:** The block is always deactivated after reset.
Response when setting the block	*Preset 1* *Preset 2* *Preset 3* *Preset 4* *Preset 5* *Preset 6* *Preset 7* *Preset 8*	Approach a preset position. See Presets parameter page.
	Top end position *Lower end position*	Approach an end position.
	unchanged (stopped upon operating command)	Do not react. The drive should stop when a block command is received during a movement.
Response when cancelling the block	*Preset 1* *Preset 2* *Preset 3* *Preset 4* *Preset 5* *Preset 6* *Preset 7* *Preset 8*	Approach a preset position. See Presets parameter page.
	Top end position *Lower end position*	Approach an end position.
	unchanged (stopped upon operating command)	Do not react. The drive should stop when a block command is received during a movement.
	Update (height/slat)	Approach last received position.

3.3.5.5 The "*Safety Wind/Rain/Frost*" parameter page

Table 24

Designation	Values	Description
Priority of safety objects	***1. Wind 2. Rain, 3. Frost*** *1. Wind, 2. Frost, 3. Rain* *1. Rain, 2. Wind, 3. Frost* *1. Rain, 2. Frost, 3. Wind* *1. Frost, 2. Wind, 3. Rain* *1. Frost, 2. Rain, 3. Wind*	If wind, rain and frost alarm occur together, the parameters of the object with the highest priority will be implemented. Example: 1. Rain, 2. Frost, 3. Wind The parameters with priority 1 apply, i.e. *Start* and *End* of *Safety rain.* If the rain alarm (Priority 1) is cancelled, the parameters for the object with priority 2 apply, here *Frost - Start*. If the object with priority 2 is also cancelled, the one with priority 3 applies.
Monitor safety objects cyclically	***no*** *every 10 min* *every 20 min* *every 60 min*	No monitoring. After mains failure the safety object will be reset to 0. Safety objects that do not receive any telegrams within the time set here will be handled as if they had received an ON telegram and trigger an alarm (e.g. WIND, etc.). The sender of the safety telegrams (e.g. weather station) must transmit them cyclically. *Max. cycle time = Monitoring time/2* Example: Monitoring time = every 20 minutes, cyclical transmission time = 10 min or less.

Continuation:

Designation	Values	Description
Participation in safety WIND	*yes* ***no***	Should channel react to wind alarm?
Source(s)	*Safety object 1 wind* *Safety object 2 wind* *Safety object 3 wind* *Safety object 1 + 2 (OR linked)* *Safety object 1 + 3 (OR linked)* *Safety object 2 + 3 (OR linked)* ***Safety object 1 + 2 + 3 (OR linked)***	Which safety objects are used for wind alarm?
Start		Start on wind alarm:
	Preset 1 *Preset 2* *Preset 3* *Preset 4* *Preset 5* *Preset 6* *Preset 7* *Preset 8*	Approach a preset position. See Presets parameter page.
	Top end position	Approach an end position.
	Lower end position	
	unchanged (stopped upon operating command)	Do not react. The drive should stop upon safety start during a movement.
End		End on wind alarm:
	same as before safety	move back to the previous position.
	Preset 1 *Preset 2* *Preset 3* *Preset 4* *Preset 5* *Preset 6* *Preset 7* *Preset 8*	Approach a preset position. See Presets parameter page.
	Top end position	Approach an end position.
	Lower end position	
	Update (height/slat)	Approach last received position.
	no response	Do not react.

Continuation:

Designation	Values	Description
Participation in safety RAIN	*yes* ***no***	Should channel react to rain alarm?
Start		Start on rain alarm:
	Preset 1	Approach a preset position.
	Preset 2	See Presets parameter page.
	Preset 3	
	Preset 4	
	Preset 5	
	Preset 6	
	Preset 7	
	Preset 8	
	Top end position	Approach an end position.
	Lower end position	
	unchanged (stopped upon operating command)	Do not react. The drive should stop upon safety start during a movement.
End		End on rain alarm:
	same as before safety	move back to the previous position.
	Preset 1	Approach a preset position.
	Preset 2	See Presets parameter page.
	Preset 3	
	Preset 4	
	Preset 5	
	Preset 6	
	Preset 7	
	Preset 8	
	Top end position	Approach an end position.
	Lower end position	
	Update (height/slat)	Approach last received position.
	no response	Do not react.
Participation in safety FROST	*yes* ***no***	Should channel react to frost alarm?
Start		Start on frost alarm:
	Preset 1	Approach a preset position.
	Preset 2	See Presets parameter page.
	Preset 3	
	Preset 4	
	Preset 5	
	Preset 6	
	Preset 7	
	Preset 8	
	Top end position	Approach an end position.
	Lower end position	
	unchanged (stopped upon operating command)	Do not react. The drive should stop upon safety start during a movement.

Continuation:

Designation	Values	Description
End		End on frost alarm:
	same as before safety	move back to the previous position.
	Preset 1	Approach a preset position.
	Preset 2	See Presets parameter page.
	Preset 3	
	Preset 4	
	Preset 5	
	Preset 6	
	Preset 7	
	Preset 8	
	Top end position	Approach an end position.
	Lower end position	
	Update (height/slat)	Approach last received position.
	no response	Do not react.
Response after priority on safety		Priority on safety will be used when the roller blinds or sun protection devices must remain stationary in an end position for a certain time, e.g. for window cleaning. See object 8. This operating mode has the highest priority level.
	Preset 1	Approach a preset position.
	Preset 2	See Presets parameter page.
	Preset 3	
	Preset 4	
	Preset 5	
	Preset 6	
	Preset 7	
	Preset 8	
	Top end position	Approach an end position.
	Lower end position	
	no reaction, unchanged	Do not react.
	Update (height/slat)	Approach last received position.

3.3.5.6 The "*Presets*" parameter page

With the presets, the user can freely configure presettings for drive height and slat position. These can, for example, be called up with *Safety* with *Set or cancel the block* or when a scene is cancelled.

Table 25

Designation	Values	Description
Preset 1		
Position	*0%, 10%, 20% 30%, 40%, 50% 60%, 70%, 80% 90%, 100%, no change*	Desired drive height and slat position for preset 1
Slat	*0%, 10%, 20% 30%, 40%, 50% 60%, 70%, 80% 90%, 100%, no change*	
Preset 2		
Position	*See above*	Desired drive height and slat position for preset 2
Slat	*See above*	
Preset 3		
Position	*See above*	Desired drive height and slat position for preset 3
Slat	*See above*	
Preset 4		
Position	*See above*	Desired drive height and slat position for preset 4
Slat	*See above*	
Preset 5		
Position	*See above*	Desired drive height and slat position for preset 5
Slat	*See above*	
Preset 6		
Position	*See above*	Desired drive height and slat position for preset 6
Slat	*See above*	
Preset7		
Position	*See above*	Desired drive height and slat position for preset 7
Slat	*See above*	
Preset 8		
Position	*See above*	Desired drive height and slat position for preset 8
Slat	*See above*	

3.3.5.7 The "*Scenes*" parameter page

This page appears when the *Scenes* are activated on the *Configuration options* parameter page.
Each channel can participate in up to 8 scenes.
Each of these 8 scenes reacts to a specific, freely configurable scene number.
When the associated number is called up, the taught in position will be approached.

Each of the 8 scenes is preconfigured with a position from the Presets page.
When a scene number that has not been taught in is received, this preset position will be called up.

Table 26

Designation	Values	Description
Block telegram for scenes	***Block with ON telegram***	0 = Cancel block 1 = Block
	Block with OFF telegram	0 = Block 1 = Cancel block **Note:** With this setting the scenes are always locked immediately after reset or download.
All channel scene statuses	***Overwrite on download***	A download deletes all scene memories in a channel, i.e. all previously taught-in scenes. When a scene number is called, the channel assumes the configured *Status after download* (see below). See appendix: Teach in scenes without telegrams
	Unchanged after download	All previously taught-in scenes are saved. However, the scene numbers the channel should react to can be changed (see below: *Channel reacts to*).
Participation in central scene object	***No*** *yes*	Should the device react to the central scene object?

Continuation:

Designation	Values	Description
Response when unlocking the scene (with scene value 63)		Behaviour when object 6 receives the value 63 ($3F) and thus the current scene is cancelled.
	Preset 1	Approach a preset position.
	Preset 2	See Presets parameter page.
	Preset 3	
	Preset 4	
	Preset 5	
	Preset 6	
	Preset 7	
	Preset 8	
	Top end position	Approach an end position.
	Lower end position	
	no response	Do not react.
	Update (height/slat)	Approach last received position.
1st scene - Preallocated preset 1		
Channel reacts to	*No scene number*	First of the 8 possible scene numbers the channel is to react to.
	Scene number 1 (value = 0)	
	…	
	Scene number 63 (value = 62)	
Comment for this scene number	*(Enter name)*	Description or comment for this scene number.
Block comfort/automatic during this scene	***no***	During this scene the channel continues to react to height and slat telegrams
	yes	During this scene the channel no longer reacts to height and slat telegrams. The Up/Down function is maintained.
Permit teach in	*No*	Scenes can only be called up.
	Yes	The user can both call up and teach in or amend scenes.
2nd scene - Preallocated preset 2		
Channel reacts to	*No scene number*	Second of the 8 possible scene numbers
	Scene number 1 (value = 0)	
	Scene number 2 (value = 1)	
	…	
	Scene number 63 (value = 62)	
Comment for this scene number	*(Enter name)*	See above.
Block comfort/automatic during this scene	***no***	See above.
	yes	
Permit teach in	*No*	See above.
	Yes	

Continuation:

Designation	Values	Description
3rd scene - Preallocated preset 3		
Channel reacts to	*No scene number* *Scene number 1 (value = 0)* … ***Scene number 3 (value = 2)*** … *Scene number 63 (value = 62)*	Third of the 8 possible scene numbers
Comment for this scene number	*(Enter name)*	See above.
Block comfort/automatic during this scene	***no*** *yes*	See above.
Permit teach in	*No* ***Yes***	See above.
4th scene - Preallocated preset 4		
Channel reacts to	*No scene number* *Scene number 1 (value = 0)* … ***Scene number 4 (value = 3)*** … *Scene number 63 (value = 62)*	Fourth of the 8 possible scene numbers
Comment for this scene number	*(Enter name)*	See above.
Block comfort/automatic during this scene	***no*** *yes*	See above.
Permit teach in	*No* ***Yes***	See above.
5th scene - Preallocated preset 5		
Channel reacts to	*No scene number* *Scene number 1 (value = 0)* … ***Scene number 5 (value = 4)*** … *Scene number 63 (value = 62)*	Fifth of the 8 possible scene numbers
Comment for this scene number	*(Enter name)*	See above.
Block comfort/automatic during this scene	***no*** *yes*	See above.
Permit teach in	*No* ***Yes***	See above.
6th scene - Preallocated preset 6		
Channel reacts to	*No scene number* *Scene number 1 (value = 0)* … ***Scene number 6 (value = 5)*** … *Scene number 63 (value = 62)*	Sixth of the 8 possible scene numbers

Continuation:

Designation	Values	Description
Comment for this scene number	*(Enter name)*	See above.
Block comfort/automatic during this scene	***no*** *yes*	See above.
Permit teach in	*No* ***Yes***	See above.
7th scene - Preallocated preset 7		
Channel reacts to	*No scene number* *Scene number 1 (value = 0)* … ***Scene number 7 (value = 6)*** … *Scene number 63 (value = 62)*	Seventh of the 8 possible scene numbers
Comment for this scene number	*(Enter name)*	See above.
Block comfort/automatic during this scene	***no*** *yes*	See above.
Permit teach in	*No* ***Yes***	See above.
8th scene - Preallocated preset 8		
Channel reacts to	*No scene number* *Scene number 1 (value = 0)* … ***Scene number 8 (value = 7)*** … *Scene number 63 (value = 62)*	Last of the 8 possible scene numbers
Comment for this scene number	*(Enter name)*	See above.
Block comfort/automatic during this scene	***no*** *yes*	See above.
Permit teach in	*No* ***Yes***	See above.

3.3.5.8 The "*Positions via 1 bit*" parameter page

This page will only be shown when the *Sun protection* function is **not** activated on the *Configuration options* parameter page.
3 individual preallocated positions can be called up using 1-bit objects (Obj. 40, 41, 42).

Table 27

Designation	Values	Description
Position A		
Response when receiving a 1	*Preset 1* *Preset 2* *Preset 3* *Preset 4* *Preset 5* *Preset 6* *Preset 7* *Preset 8* ***Top end position*** *Lower end position*	Approach a preset position. See Presets parameter page. Approach an end position.
Response when receiving a 0	*Preset 1* *Preset 2* *Preset 3* *Preset 4* *Preset 5* *Preset 6* *Preset 7* *Preset 8* *Top end position* *Lower end position* ***no response*** *Update (height/slat)*	Approach a preset position. See Presets parameter page. Approach an end position. Do not react. Approach last received position.
Position B		
Response when receiving a 1	*See above*	Desired drive height or slat position for position B
Response when receiving a 0	*See above*	
Position C		
Response when receiving a 1	*See above*	Desired drive height or slat position for position C
Response when receiving a 0	*See above*	

3.3.5.9 The "*Power failure and restoration*" parameter page

Table 28

Designation	Values	Description
Response in the event of download and bus failure		After download or with loss of bus voltage…
	Preset 1	Approach a preset position.
	Preset 2	See Presets parameter page.
	Preset 3	
	Preset 4	
	Preset 5	
	Preset 6	
	Preset 7	
	Preset 8	
	Top end position	Approach an end position.
	Lower end position	
	no response	Do not react.
Behaviour after restoration of the mains supply or bus supply		After return of mains or bus voltage…
	Preset 1	Approach a preset position.
	Preset 2	See Presets parameter page.
	Preset 3	
	Preset 4	
	Preset 5	
	Preset 6	
	Preset 7	
	Preset 8	
	Top end position	Approach an end position.
	Lower end position	
	no response	Do not react.

4 Appendix

4.1 Manual mode

This mode can be set or reset with the manual button or via object 78 (manual).
The object can be locked on the General parameter page.
Whether manual mode should be ended after the expiry of a set time can also be defined.

4.1.1 With blinds channels

The positions of the hangings will be frozen.
All non-safety related bus telegrams are blocked, i.e. only the safety commands (on objects 8, 244, 245, 246, 248, 249) can still be executed.

Any current operating commands will be terminated when the specified position or the end position is reached. The condition will be reported to the associated object.

After cancelling manual mode, the bus telegrams work again. Bus events already received will not be obtained later.
Manual mode will be reset after power returns.

4.2 The scenes

4.2.1 Principle

The current status of a channel can be stored and retrieved later via the scene function.

That applies to switching, blinds and dimming channels.
Each channel can participate simultaneously in up to 8 scenes.

This requires permission to access scenes for the relevant channel via parameter.
See Activate scenes parameter and Scenes parameter page.

The current status is allocated to the appropriate scene number when a scene is saved.
The previously saved status is restored when a scene number is called up.

This allows a system to be easily associated with any user scene.
Permitted scene numbers: 1…64

The scenes are permanently stored and remain intact even after the application has been downloaded again.
See parameter: All scene statuses of the channel on the Scenes parameter page.

4.2.2 Calling up or saving scenes:

To call up or save a scene, the relevant code is sent to the scene object (obj. 243).

Table 29

Scene	Call up		Save	
	Hex.	Dec.	Hex.	Dec.
1	$00	0	$80	128
2	$01	1	$81	129
3	$02	2	$82	130
4	$03	3	$83	131
5	$04	4	$84	132
6	$05	5	$85	133
7	$06	6	$86	134
8	$07	7	$87	135
9	$08	8	$88	136
10	$09	9	$89	137
11	$0A	10	$8A	138
12	$0B	11	$8B	139
13	$0C	12	$8C	140
14	$0D	13	$8D	141
15	$0E	14	$8E	142
16	$0F	15	$8F	143
17	$10	16	$90	144
18	$11	17	$91	145
19	$12	18	$92	146
20	$13	19	$93	147
21	$14	20	$94	148
22	$15	21	$95	149
23	$16	22	$96	150
24	$17	23	$97	151
25	$18	24	$98	152
26	$19	25	$99	153
27	$1A	26	$9A	154
28	$1B	27	$9B	155
29	$1C	28	$9C	156
30	$1D	29	$9D	157
31	$1E	30	$9E	158
32	$1F	31	$9F	159

Continuation:

Scene	Call up		Save	
	Hex	Dec.	Hex	Dec.
33	$20	32	$A0	160
34	$21	33	$A1	161
35	$22	34	$A2	162
36	$23	35	$A3	163
37	$24	36	$A4	164
38	$25	37	$A5	165
39	$26	38	$A6	166
40	$27	39	$A7	167
41	$28	40	$A8	168
42	$29	41	$A9	169
43	$2A	42	$AA	170
44	$2B	43	$AB	171
45	$2C	44	$AC	172
46	$2D	45	$AD	173
47	$2E	46	$AE	174
48	$2F	47	$AF	175
49	$30	48	$B0	176
50	$31	49	$B1	177
51	$32	50	$B2	178
52	$33	51	$B3	179
53	$34	52	$B4	180
54	$35	53	$B5	181
55	$36	54	$B6	182
56	$37	55	$B7	183
57	$38	56	$B8	184
58	$39	57	$B9	185
59	$3A	58	$BA	186
60	$3B	59	$BB	187
61	$3C	60	$BC	188
62	$3D	61	$BD	189
63	$3E	62	$BE	190
64	$3F	63	$BF	191

Examples (central or channel-related)**:**

Select status of scene 5:
→ Send $04 to the relevant scene object.

Save current status with scene 5:
→ Send $84 to the relevant scene object.

4.2.3 Teach in scenes without telegrams

Instead of defining scenes individually by telegram, this can be done in advance in the ETS.
This merely requires the setting of the *All channel scene statuses* parameter (*Scenes* parameter page) to *overwrite at download*.

Accordingly, the required status can be selected for each of the 8 possible scene numbers in a channel (= *Status after download* parameter).
The scenes are programmed into the device after the download has been completed.

Later changes via teach in telegrams are possible if required and they can be permitted or blocked via parameter.

4.3 Conversion of percentages to hexadecimal and decimal values

Percentage value	**0%**	**10%**	**20%**	**30%**	**40%**	**50%**	**60%**	**70%**	**80%**	**90%**	**100%**
Hexadecimal	00	1a	33	4D	66	80	99	B3	CC	E6	FF
Decimal	00	26	51	77	102	128	153	179	204	230	255

All values from 00 to FF hex. (0 to 255 dec.) are valid.