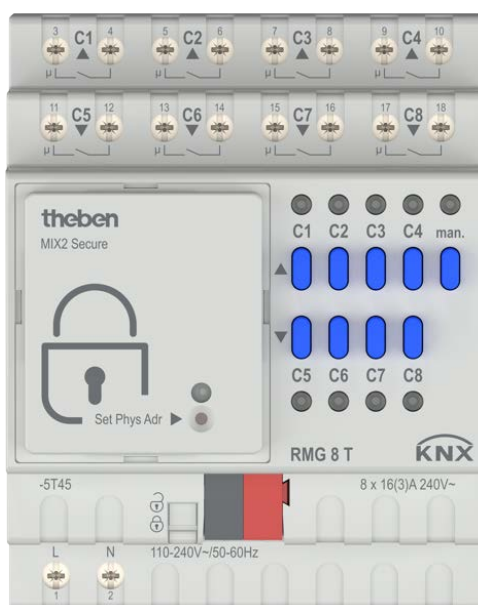


# **KNX manual**

## **MIX2 secure series actuators**

### **RMG 8 T / RME 8 T**



RMG 8 T	4930200
RME 8 T	4930205

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# 1 Functional characteristics

- 8-way switch or 4-way blinds actuator MIX2
- MIX2 basic module
- For extension to a maximum of 24 channels
- 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)
- Up to 2 MIX or MIX2 extension modules can be connected to a basic module
- Device and KNX bus module can be swapped independently of each other
- Removable KNX bus module enables devices to be changed without reprogramming
- Manual start-up and operation of the actuators are also possible without KNX bus module
- LED switching status indicator for each channel
- Manual operation on 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. lock, AND, release, OR



This manual can only be used for devices with MIX2 secure BCU.

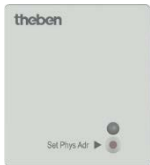



## 2 MIX2 secure

**i** Each MIX2 basic module can be used with both a standard and a secure BCU.

**i** The extension units (MIX and MIX2) are always compatible.

### 2.1 BCU and application programmes

**i** For the MIX2 secure BCU, the application programme MIX2 secure V2.x is required.

	Standard	Secure
<b>BCU</b>		 <i>FDSK on the back</i>
<b>MIX2 basic module with BCU</b>		
<b>Application programme</b>	<b>MIX2 V1.x</b>	<b>MIX2 secure V2.x</b>

### 3 MIX and MIX2 devices

The MIX2 series consists of the basic modules RMG 8 S, RMG 8 T, RMG 4 I, RMG 4 U, DMG 2 T, JMG 4 T, JMG 4 T 24V, HMG 6 T, BMG 6 T + extensions RME 8 S, RME 8 T, RME 4 I, RME 4 U, DME 2 T, JME 4 T, JME 4 T 24V, HMG 6 T, BME 6 T (2021).

**Different MiX and MIX2 extension modules can be connected to one MIX2 basic module.**

**Table 1**

Device type	Order No.	Designation	Can be used with basic module.	
			in the MIX series	in the MIX2 series
MIX2 basic modules	493...	RMG 8 S, RMG 8 T, RMG 4 I, RMG 4 U, DMG 2 T, JMG 4 T, JMG 4 T 24V, HMG 6 T, BMG 6 T	-	-
MIX2 extensions	493...	RME 8 S, RME 8 T, RME 4 I, RME 4 U, DME 2 T, JME 4 T, JME 4 T 24V, HME 6 T, BME 6 T	no	Yes
MIX basic modules	491...	BMG 6, DMG 2 S, HMG 4, JMG 4 S, RMG 4 S, RMG 4 C-load, SMG 2 S.	-	-
MIX extensions	491...	BME 6, DME 2 S, HME 4, JME 4 S, RME 4 S, RME 4 C-load, SME 2 S.	yes	Yes*

\* Adjusted parameter display and object numbering.

### **3.1 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 2: Channel assignment and direction of movement for the blinds actuator\***

First drive	Second drive	Third drive	Fourth drive
-------------	--------------	-------------	--------------

## 4 Technical data

Operating voltage KNX	
Operating voltage	110 – 240 V AC
Frequency	50 – 60 Hz
Standby output	0,3 W
Type of installation	DIN-rail
Width	4 module
Connection type	KNX bus terminal
Max. cable cross-section	Solid: 0.5 mm <sup>2</sup> (Ø 0.8) to 6 mm <sup>2</sup>   strand with crimp terminal: 0.5 mm <sup>2</sup> to 4 mm <sup>2</sup>
Number of channels	8 switching or 4 blinds channels
Type of contact	16 A, 3 A NO contact
Contact gap	< 3 mm
Resistive load	3680 W
Incandescent and halogen lamp load	2000 W
Fluorescent lamp load (conventional) parallel-corrected	
Fluorescent lamp load (conventional) not corrected	2000 VA
Fluorescent lamp load (EB)	1200 W
Energy-saving lamps	300 W
LED lamps	< 2 W = 55 W > 2 W = 600 W
Voltage output	240 V AC
Switch output	Floating
Switching of different phases	Possible
Suitable for SELV	Yes, if all channels switch SELV
Ambient temperature	-5 °C ... +45 °C
Protection rating	IP 20
Protection class	II



## 5 General information about KNX Secure

ETS Version 5.7 and higher support secure communication in KNX systems. A distinction is made between secure communication via the IP medium using KNX IP Secure and secure communication via the TP and RF media using KNX Data Secure. The following information refers to KNX Data Secure.



In the ETS catalogue, KNX products supporting "KNX Secure" are clearly identified:

As soon as a "KNX-Secure" device is included in the project, the ETS requests a project password. If no password is entered, the device is included with Secure Mode deactivated. However, the password can also be entered or changed later in the project overview.

### 5.1 Start-up with "KNX Data Secure"

For secure communication, the FDSK (Factory Device Setup Key) is required. If a KNX product supporting "KNX Data Secure" is included in a line, the ETS requires the input of the FDSK. This device-specific key is printed on the device label and can either be entered by keyboard or read by using a code scanner or notebook camera.

Example of FDSK on device label:



After entering the FDSK, the ETS generates a device-specific tool key. The ETS sends the tool key to the device to be configured via the bus. The transmission is encrypted and authenticated with the original and previously entered FDSK key. Neither the tool key nor the FDSK key are sent in plain text via the bus.

After the previous action, the device only accepts the tool key for further communication with the ETS.

The FDSK key is no longer used for further communication, unless the device is reset to the factory setting: In this case, all set safety-related data will be deleted.

The ETS generates as many runtime keys as needed for the group communication you want to protect. The ETS sends the runtime keys to the device to be configured via the bus.

Transmission takes place by encrypting and authenticating them via the tool key. The runtime keys are never sent in plain text via the bus.

The FDSK is saved in the project and can be viewed in the project overview. All keys for this project can also be exported (backup).

During project planning, it can be defined subsequently which functions / objects are to communicate securely. All objects with encrypted communication are identified by the "Secure" icon in the ETS:



### **5.2 Start-up without "KNX Data Secure"**

Alternatively, the device can also be put into operation without KNX Data Secure. In this case, the device is unsecured and behaves like any other KNX device without KNX Data Secure function.

To start up the device without KNX Data Secure, select the device in the 'Topology' or 'Devices' section and set the 'Secure start up' option in the 'Properties' area of the 'Settings' tab to 'Disabled'.

## 6 The application programme "MIX2 secure"

### 6.1 Selection in the product database

<b>Manufacturer</b>	<a href="#">THEBEN AG</a>
<b>Product family</b>	Output
<b>Product type</b>	RMG 8 T
<b>Program name</b>	MIX2 secure

The ETS database can be found on our downloads page: [www.theben.de/downloads](http://www.theben.de/downloads).

**Table 3**

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

## 6.2 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.

### 6.2.1 Channel-related objects for the switch actuator

Table 4

No.	Object name	Function	Type DPT
1	<i>RMG 8 T channel C1</i>	<i>Switch object</i>	1 bit 1,001
	<i>RMG 8 T channel C1</i>	<i>Threshold 0..255</i>	1 byte 5,010
	<i>RMG 8 T channel C1</i>	<i>Threshold 0..65535</i>	2 byte 7,001
	<i>RMG 8 T channel C1</i>	<i>Threshold EIS 5 (DPT9.xxx)</i>	2 byte 9.xxx
	<i>RMG 8 T channel C1</i>	<i>Threshold as percent</i>	1 byte 5,001
2	<i>RMG 8 T channel C1</i>	<i>Logic input in OR gate</i>	1 bit 1,001
	<i>RMG 8 T channel C1</i>	<i>Logic input in AND gate</i>	1 bit 1,001
	<i>RMG 8 T channel C1</i>	<i>Logic input in XOR gate</i>	1 bit 1,001
3	<i>RMG 8 T channel C1</i>	<i>Lock</i>	1 bit 1,003
4	<i>RMG 8 T channel C1</i>	<i>Call up/save scenes</i>	1 byte 18,001
5	<i>RMG 8 T channel C1</i>	<i>Enable scenes = 1</i>	1 bit 1,003
	<i>RMG 8 T channel C1</i>	<i>Lock scenes = 1</i>	1 bit 1,003
6	<i>RMG 8 T channel C1</i>	<i>Feedback On/Off</i>	1 bit 1,001
7	<i>RMG 8 T channel C1</i>	<i>Operating hours feedback</i>	2 byte 7,001
	<i>RMG 8 T channel C1</i>	<i>Time to next service</i>	2 byte 7,001
8	<i>RMG 8 T channel C1</i>	<i>Service required</i>	1 bit 1,001
9	<i>RMG 8 T channel C1</i>	<i>Reset operating hours</i>	1 bit 1,001
	<i>RMG 8 T channel C1</i>	<i>Reset service</i>	1 bit 1,001
	<i>RMG 8 T channel C1</i>	<i>Switching with priority</i>	2 bit 2,001

No.	Object name	Function	Type DPT
11	<i>RMG 8 T channel C2</i>	<i>Switch object</i>	1 bit 1,001
	<i>RMG 8 T channel C2</i>	<i>Threshold 0..255</i>	1 byte 5,010
	<i>RMG 8 T channel C2</i>	<i>Threshold 0..65535</i>	2 byte 7,001
	<i>RMG 8 T channel C2</i>	<i>Threshold EIS 5 (DPT9.xxx)</i>	2 byte 9.xxx
	<i>RMG 8 T channel C2</i>	<i>Threshold as percent</i>	1 byte 5,001
12	<i>RMG 8 T channel C2</i>	<i>Logic input in OR gate</i>	1 bit 1,001
	<i>RMG 8 T channel C2</i>	<i>Logic input in AND gate</i>	1 bit 1,001
	<i>RMG 8 T channel C2</i>	<i>Logic input in XOR gate</i>	1 bit 1,001
13	<i>RMG 8 T channel C2</i>	<i>Lock</i>	1 bit 1,003
14	<i>RMG 8 T channel C2</i>	<i>Call up/save scenes</i>	1 byte 18,001
15	<i>RMG 8 T channel C2</i>	<i>Enable scenes = 1</i>	1 bit 1,003
	<i>RMG 8 T channel C2</i>	<i>Lock scenes = 1</i>	1 bit 1,003
16	<i>RMG 8 T channel C2</i>	<i>Feedback On/Off</i>	1 bit 1,001
17	<i>RMG 8 T channel C2</i>	<i>Operating hours feedback</i>	2 byte 7,001
	<i>RMG 8 T channel C2</i>	<i>Time to next service</i>	2 byte 7,001
18	<i>RMG 8 T channel C2</i>	<i>Service required</i>	1 bit 1,001
19	<i>RMG 8 T channel C2</i>	<i>Reset operating hours</i>	1 bit 1,001
	<i>RMG 8 T channel C2</i>	<i>Reset service</i>	1 bit 1,001
	<i>RMG 8 T channel C2</i>	<i>Switching with priority</i>	2 bit 2,001
21	<i>RMG 8 T channel C3</i>	<i>Switch object</i>	1 bit 1,001
	<i>RMG 8 T channel C3</i>	<i>Threshold 0..255</i>	1 byte 5,010
	<i>RMG 8 T channel C3</i>	<i>Threshold 0..65535</i>	2 byte 7,001
	<i>RMG 8 T channel C3</i>	<i>Threshold EIS 5 (DPT9.xxx)</i>	2 byte 9.xxx
	<i>RMG 8 T channel C3</i>	<i>Threshold as percent</i>	1 byte 5,001
22	<i>RMG 8 T channel C3</i>	<i>Logic input in OR gate</i>	1 bit 1,001

No.	Object name	Function	Type DPT
	<i>RMG 8 T channel C3</i>	<i>Logic input in AND gate</i>	1 bit 1,001
	<i>RMG 8 T channel C3</i>	<i>Logic input in XOR gate</i>	1 bit 1,001
23	<i>RMG 8 T channel C3</i>	<i>Lock</i>	1 bit 1,003
24	<i>RMG 8 T channel C3</i>	<i>Call up/save scenes</i>	1 byte 18,001
25	<i>RMG 8 T channel C3</i>	<i>Enable scenes = 1</i>	1 bit 1,003
	<i>RMG 8 T channel C3</i>	<i>Lock scenes = 1</i>	1 bit 1,003
26	<i>RMG 8 T channel C3</i>	<i>Feedback On/Off</i>	1 bit 1,001
27	<i>RMG 8 T channel C3</i>	<i>Operating hours feedback</i>	2 byte 7,001
	<i>RMG 8 T channel C3</i>	<i>Time to next service</i>	2 byte 7,001
28	<i>RMG 8 T channel C3</i>	<i>Service required</i>	1 bit 1,001
29	<i>RMG 8 T channel C3</i>	<i>Reset operating hours</i>	1 bit 1,001
	<i>RMG 8 T channel C3</i>	<i>Reset service</i>	1 bit 1,001
	<i>RMG 8 T channel C3</i>	<i>Switching with priority</i>	2 bit 2,001
31	<i>RMG 8 T channel C4</i>	<i>Switch object</i>	1 bit 1,001
	<i>RMG 8 T channel C4</i>	<i>Threshold 0..255</i>	1 byte 5,010
	<i>RMG 8 T channel C4</i>	<i>Threshold 0..65535</i>	2 byte 7,001
	<i>RMG 8 T channel C4</i>	<i>Threshold EIS 5 (DPT9.xxx)</i>	2 byte 9,xxx
	<i>RMG 8 T channel C4</i>	<i>Threshold as percent</i>	1 byte 5,001
32	<i>RMG 8 T channel C4</i>	<i>Logic input in OR gate</i>	1 bit 1,001
	<i>RMG 8 T channel C4</i>	<i>Logic input in AND gate</i>	1 bit 1,001
	<i>RMG 8 T channel C4</i>	<i>Logic input in XOR gate</i>	1 bit 1,001
33	<i>RMG 8 T channel C4</i>	<i>Lock</i>	1 bit 1,003
34	<i>RMG 8 T channel C4</i>	<i>Call up/save scenes</i>	1 byte 18,001
35	<i>RMG 8 T channel C4</i>	<i>Enable scenes = 1</i>	1 bit 1,003
	<i>RMG 8 T channel C4</i>	<i>Lock scenes = 1</i>	1 bit 1,003

No.	Object name	Function	Type DPT
36	<i>RMG 8 T channel C4</i>	<i>Feedback On/Off</i>	1 bit 1,001
37	<i>RMG 8 T channel C4</i>	<i>Operating hours feedback</i>	2 byte 7,001
	<i>RMG 8 T channel C4</i>	<i>Time to next service</i>	2 byte 7,001
38	<i>RMG 8 T channel C4</i>	<i>Service required</i>	1 bit 1,001
39	<i>RMG 8 T channel C4</i>	<i>Reset operating hours</i>	1 bit 1,001
	<i>RMG 8 T channel C4</i>	<i>Reset service</i>	1 bit 1,001
	<i>RMG 8 T channel C4</i>	<i>Switching with priority</i>	2 bit 2,001
41	<i>RMG 8 T channel C5</i>	<i>Switch object</i>	1 bit 1,001
	<i>RMG 8 T channel C5</i>	<i>Threshold 0..255</i>	1 byte 5,010
	<i>RMG 8 T channel C5</i>	<i>Threshold 0..65535</i>	2 byte 7,001
	<i>RMG 8 T channel C5</i>	<i>Threshold EIS 5 (DPT9.xxx)</i>	2 byte 9.xxx
	<i>RMG 8 T channel C5</i>	<i>Threshold as percent</i>	1 byte 5,001
42	<i>RMG 8 T channel C5</i>	<i>Logic input in OR gate</i>	1 bit 1,001
	<i>RMG 8 T channel C5</i>	<i>Logic input in AND gate</i>	1 bit 1,001
	<i>RMG 8 T channel C5</i>	<i>Logic input in XOR gate</i>	1 bit 1,001
43	<i>RMG 8 T channel C5</i>	<i>Lock</i>	1 bit 1,003
44	<i>RMG 8 T channel C5</i>	<i>Call up/save scenes</i>	1 byte 18,001
45	<i>RMG 8 T channel C5</i>	<i>Enable scenes = 1</i>	1 bit 1,003
	<i>RMG 8 T channel C5</i>	<i>Lock scenes = 1</i>	1 bit 1,003
46	<i>RMG 8 T channel C5</i>	<i>Feedback On/Off</i>	1 bit 1,001
47	<i>RMG 8 T channel C5</i>	<i>Operating hours feedback</i>	2 byte 7,001
	<i>RMG 8 T channel C5</i>	<i>Time to next service</i>	2 byte 7,001
48	<i>RMG 8 T channel C5</i>	<i>Service required</i>	1 bit 1,001
49	<i>RMG 8 T channel C5</i>	<i>Reset operating hours</i>	1 bit 1,001
	<i>RMG 8 T channel C5</i>	<i>Reset service</i>	1 bit 1,001

No.	Object name	Function	Type DPT
	<i>RMG 8 T channel C5</i>	<i>Switching with priority</i>	2 bit 2,001
51	<i>RMG 8 T channel C6</i>	<i>Switch object</i>	1 bit 1,001
	<i>RMG 8 T channel C6</i>	<i>Threshold 0..255</i>	1 byte 5,010
	<i>RMG 8 T channel C6</i>	<i>Threshold 0..65535</i>	2 byte 7,001
	<i>RMG 8 T channel C6</i>	<i>Threshold EIS 5 (DPT9.xxx)</i>	2 byte 9.xxx
	<i>RMG 8 T channel C6</i>	<i>Threshold as percent</i>	1 byte 5,001
52	<i>RMG 8 T channel C6</i>	<i>Logic input in OR gate</i>	1 bit 1,001
	<i>RMG 8 T channel C6</i>	<i>Logic input in AND gate</i>	1 bit 1,001
	<i>RMG 8 T channel C6</i>	<i>Logic input in XOR gate</i>	1 bit 1,001
53	<i>RMG 8 T channel C6</i>	<i>Lock</i>	1 bit 1,003
54	<i>RMG 8 T channel C6</i>	<i>Call up/save scenes</i>	1 byte 18,001
55	<i>RMG 8 T channel C6</i>	<i>Enable scenes = 1</i>	1 bit 1,003
	<i>RMG 8 T channel C6</i>	<i>Lock scenes = 1</i>	1 bit 1,003
56	<i>RMG 8 T channel C6</i>	<i>Feedback On/Off</i>	1 bit 1,001
57	<i>RMG 8 T channel C6</i>	<i>Operating hours feedback</i>	2 byte 7,001
	<i>RMG 8 T channel C6</i>	<i>Time to next service</i>	2 byte 7,001
58	<i>RMG 8 T channel C6</i>	<i>Service required</i>	1 bit 1,001
59	<i>RMG 8 T channel C6</i>	<i>Reset operating hours</i>	1 bit 1,001
	<i>RMG 8 T channel C6</i>	<i>Reset service</i>	1 bit 1,001
	<i>RMG 8 T channel C6</i>	<i>Switching with priority</i>	2 bit 2,001
61	<i>RMG 8 T channel C7</i>	<i>Switch object</i>	1 bit 1,001
	<i>RMG 8 T channel C7</i>	<i>Threshold 0..255</i>	1 byte 5,010
	<i>RMG 8 T channel C7</i>	<i>Threshold 0..65535</i>	2 byte 7,001
	<i>RMG 8 T channel C7</i>	<i>Threshold EIS 5 (DPT9.xxx)</i>	2 byte 9.xxx
	<i>RMG 8 T channel C7</i>	<i>Threshold as percent</i>	1 byte 5,001



No.	Object name	Function	Type DPT
62	<i>RMG 8 T channel C7</i>	<i>Logic input in OR gate</i>	1 bit 1,001
	<i>RMG 8 T channel C7</i>	<i>Logic input in AND gate</i>	1 bit 1,001
	<i>RMG 8 T channel C7</i>	<i>Logic input in XOR gate</i>	1 bit 1,001
63	<i>RMG 8 T channel C7</i>	<i>Lock</i>	1 bit 1,003
64	<i>RMG 8 T channel C7</i>	<i>Call up/save scenes</i>	1 byte 18,001
65	<i>RMG 8 T channel C7</i>	<i>Enable scenes = 1</i>	1 bit 1,003
	<i>RMG 8 T channel C7</i>	<i>Lock scenes = 1</i>	1 bit 1,003
66	<i>RMG 8 T channel C7</i>	<i>Feedback On/Off</i>	1 bit 1,001
67	<i>RMG 8 T channel C7</i>	<i>Operating hours feedback</i>	2 byte 7,001
	<i>RMG 8 T channel C7</i>	<i>Time to next service</i>	2 byte 7,001
68	<i>RMG 8 T channel C7</i>	<i>Service required</i>	1 bit 1,001
69	<i>RMG 8 T channel C7</i>	<i>Reset operating hours</i>	1 bit 1,001
	<i>RMG 8 T channel C7</i>	<i>Reset service</i>	1 bit 1,001
	<i>RMG 8 T channel C7</i>	<i>Switching with priority</i>	2 bit 2,001
70	<i>RMG 8 T channel C8</i>	<i>Switch object</i>	1 bit 1,001
	<i>RMG 8 T channel C8</i>	<i>Threshold 0..255</i>	1 byte 5,010
	<i>RMG 8 T channel C8</i>	<i>Threshold 0..65535</i>	2 byte 7,001
	<i>RMG 8 T channel C8</i>	<i>Threshold EIS 5 (DPT9.xxx)</i>	2 byte 9.xxx
	<i>RMG 8 T channel C8</i>	<i>Threshold as percent</i>	1 byte 5,001
71	<i>RMG 8 T channel C8</i>	<i>Logic input in OR gate</i>	1 bit 1,001
	<i>RMG 8 T channel C8</i>	<i>Logic input in AND gate</i>	1 bit 1,001
	<i>RMG 8 T channel C8</i>	<i>Logic input in XOR gate</i>	1 bit 1,001
72	<i>RMG 8 T channel C8</i>	<i>Lock</i>	1 bit 1,003
73	<i>RMG 8 T channel C8</i>	<i>Call up/save scenes</i>	1 byte 18,001
74	<i>RMG 8 T channel C8</i>	<i>Enable scenes = 1</i>	1 bit 1,003

No.	Object name	Function	Type DPT
	<i>RMG 8 T channel C8</i>	<i>Lock scenes = 1</i>	1 bit 1,003
75	<i>RMG 8 T channel C8</i>	<i>Feedback On/Off</i>	1 bit 1,001
76	<i>RMG 8 T channel C8</i>	<i>Operating hours feedback</i>	2 byte 7,001
	<i>RMG 8 T channel C8</i>	<i>Time to next service</i>	2 byte 7,001
77	<i>RMG 8 T channel C8</i>	<i>Service required</i>	1 bit 1,001
78	<i>RMG 8 T channel C8</i>	<i>Reset operating hours</i>	1 bit 1,001
	<i>RMG 8 T channel C8</i>	<i>Reset service</i>	1 bit 1,001
	<i>RMG 8 T channel C8</i>	<i>Switching with priority</i>	2 bit 2,001

## 6.2.2 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 5:**

No.	Object name	Function	Type DPT
1	<i>RMG 8 T channel C1</i>	<i>UP/DOWN</i>	1 bit 1.008
2	<i>RMG 8 T channel C1</i>	<i>Step/stop</i>	1 bit 1.010
3	<i>RMG 8 T channel C1</i>	<i>% Height</i>	1 byte 5.001
4	<i>RMG 8 T channel C1</i>	<i>% Slat</i>	1 byte 5.001
5	<i>RMG 8 T channel C1</i>	<i>Lock comfort/automatic</i>	1 bit 1.003
6	<i>RMG 8 T channel C1</i>	<i>1 = Lock</i>	1 bit 1.003
	<i>RMG 8 T channel C1</i>	<i>1 = Release</i>	
7	<i>RMG 8 T channel C1</i>	<i>Call up/save scenes</i>	1 byte 18.001
8	<i>RMG 8 T channel C1</i>	<i>Enable scenes = 1</i>	1 bit 1.003
	<i>RMG 8 T channel C1</i>	<i>Lock scenes = 1</i>	
9	<i>RMG 8 T channel C1</i>	<i>Priority on safety</i>	2 bit 2.003
41	<i>RMG 8 T channel C1</i>	<i>Position A</i>	1 bit 1.003
42	<i>RMG 8 T channel C1</i>	<i>Position B</i>	1 bit 1.003
43	<i>RMG 8 T channel C1</i>	<i>Position C</i>	1 bit 1.003
44	<i>RMG 8 T channel C1</i>	<i>Height feedback %</i>	1 byte 5.001
		<i>Height feedback 1 bit</i>	1 bit 1.009
45	<i>RMG 8 T channel C1</i>	<i>Slat feedback %</i>	1 byte 5.001
11	<i>RMG 8 T channel C2</i>	<i>UP/DOWN</i>	1 bit 1.008
12	<i>RMG 8 T channel C2</i>	<i>Step/stop</i>	1 bit 1.010
13	<i>RMG 8 T channel C2</i>	<i>% Height</i>	1 byte 5.001
14	<i>RMG 8 T channel C2</i>	<i>% Slat</i>	1 byte 5.001
15	<i>RMG 8 T channel C2</i>	<i>Lock comfort/automatic</i>	1 bit 1.003
16	<i>RMG 8 T channel C2</i>	<i>1 = Lock</i>	1 bit 1.003
	<i>RMG 8 T channel C2</i>	<i>1 = Release</i>	

No.	Object name	Function	Type DPT
17	<i>RMG 8 T channel C2</i>	<i>Call up/save scenes</i>	1 byte 18.001
18	<i>RMG 8 T channel C2</i>	<i>Enable scenes = 1</i>	1 bit
	<i>RMG 8 T channel C2</i>	<i>Lock scenes = 1</i>	1.003
19	<i>RMG 8 T channel C2</i>	<i>Priority on safety</i>	2 bit 2.003
51	<i>RMG 8 T channel C2</i>	<i>Position A</i>	1 bit 1.003
52	<i>RMG 8 T channel C2</i>	<i>Position B</i>	1 bit 1.003
53	<i>RMG 8 T channel C2</i>	<i>Position C</i>	1 bit 1.003
54	<i>RMG 8 T channel C2</i>	<i>Height feedback %</i>	1 byte 5.001
		<i>Height feedback 1 bit</i>	1 bit 1.009
55	<i>RMG 8 T channel C2</i>	<i>Slat feedback %</i>	1 byte 5.001
21	<i>RMG 8 T channel C3</i>	<i>UP/DOWN</i>	1 bit 1.008
22	<i>RMG 8 T channel C3</i>	<i>Step/stop</i>	1 bit 1.010
23	<i>RMG 8 T channel C3</i>	<i>% Height</i>	1 byte 5.001
24	<i>RMG 8 T channel C3</i>	<i>% Slat</i>	1 byte 5.001
25	<i>RMG 8 T channel C3</i>	<i>Lock comfort/automatic</i>	1 bit 1.003
26	<i>RMG 8 T channel C3</i>	<i>1 = Lock</i>	1 bit
	<i>RMG 8 T channel C3</i>	<i>1 = Release</i>	1.003
27	<i>RMG 8 T channel C3</i>	<i>Call up/save scenes</i>	1 byte 18.001
28	<i>RMG 8 T channel C3</i>	<i>Lock scenes = 1</i>	1 bit
	<i>RMG 8 T channel C3</i>	<i>Enable scenes = 1</i>	1.003
29	<i>RMG 8 T channel C3</i>	<i>Priority on safety</i>	2 bit 2.003
61	<i>RMG 8 T channel C3</i>	<i>Position A</i>	1 bit 1.003
62	<i>RMG 8 T channel C3</i>	<i>Position B</i>	1 bit 1.003
63	<i>RMG 8 T channel C3</i>	<i>Position C</i>	1 bit 1.003
64	<i>RMG 8 T channel C3</i>	<i>Height feedback %</i>	1 byte 5.001
		<i>Height feedback 1 bit</i>	1 bit 1.009
65	<i>RMG 8 T channel C3</i>	<i>Slat feedback %</i>	1 byte 5.001
31	<i>RMG 8 T channel C4</i>	<i>UP/DOWN</i>	1 bit

No.	Object name	Function	Type DPT
			1.008
32	<i>RMG 8 T channel C4</i>	<i>Step/stop</i>	1 bit 1.010
33	<i>RMG 8 T channel C4</i>	<i>% Height</i>	1 byte 5.001
34	<i>RMG 8 T channel C4</i>	<i>% Slat</i>	1 byte 5.001
35	<i>RMG 8 T channel C4</i>	<i>Lock comfort/automatic</i>	1 bit 1.003
36	<i>RMG 8 T channel C4</i>	<i>1 = Release</i>	1 bit
	<i>RMG 8 T channel C4</i>	<i>1 = Lock</i>	1.003
37	<i>RMG 8 T channel C4</i>	<i>Call up/save scenes</i>	1 byte 18.001
38	<i>RMG 8 T channel C4</i>	<i>Lock scenes = 1</i>	1 bit
	<i>RMG 8 T channel C4</i>	<i>Enable scenes = 1</i>	1.003
39	<i>RMG 8 T channel C4</i>	<i>Priority on safety</i>	2 bit 2.003
71	<i>RMG 8 T channel C4</i>	<i>Position A</i>	1 bit 1.003
72	<i>RMG 8 T channel C4</i>	<i>Position B</i>	1 bit 1.003
73	<i>RMG 8 T channel C4</i>	<i>Position C</i>	1 bit 1.003
74	<i>RMG 8 T channel C4</i>	<i>Height feedback %</i>	1 byte 5.001
		<i>Height feedback 1 bit</i>	1 bit 1.009
75	<i>RMG 8 T channel C4</i>	<i>Slat feedback %</i>	1 byte 5.001

## 6.2.3 Common objects:

These objects are partly used by the basic module and the two extension modules.

Table 6:

No.	Object name	Function	Type DPT
79	<i>RMG 8 T</i>	<i>Manual</i>	1 bit 1.001
159	<i>EM1 RME 8 T</i>		
239	<i>EM2 RME 8 T</i>		
80	<i>RMG 8 T*</i>	<i>Collective feedback</i>	4 Byte 27.001
160	<i>EM1 RME 8 T*</i>		
240	<i>EM2 RME 8 T*</i>		
241	<i>Central continuous ON</i>	<i>RMG4I/8x, DMG/E2x, SME2S</i>	1 bit 1.001
242	<i>Central continuous OFF</i>	<i>RMG4I/8x, DMG/E2x, SME2S</i>	1 bit 1.001
243	<i>Central switching</i>	<i>RMG4I/8x, DMG/E2x, SME2S</i>	1 bit 1.001
244	<i>Call up/save central scenes</i>	<i>RMG4I/8x, DMG/E2x, JMG/E4x, SME2S</i>	1 byte 18.001
245	<i>Central safety 1</i>	<i>JMG/E4T, RMG/E8T (Wind), JME4S</i>	1 bit 1.001
246	<i>Central safety 2</i>	<i>JMG/E4T, RMG/E8T (Wind), JME4S</i>	1 bit 1.001
247	<i>Central safety 3</i>	<i>JMG/E4T, RMG/E8T (Wind), JME4S</i>	1 bit 1.001
248	<i>Central up/down</i>	<i>JMG/E 4 T, RMG/E 8 T, JME 4 S</i>	1 bit 1.008
249	<i>Central safety rain</i>	<i>JMG/E 4 T, RMG/E 8 T</i>	1 bit 1.001
250	<i>Central safety frost</i>	<i>JMG/E 4 T, RMG/E 8 T</i>	1 bit 1.001
251	<i>Version of bus coupling unit</i>	<i>transmit</i>	14 byte 16.001
252	<i>Version of basic module</i>	<i>transmit</i>	14 byte 16.001
253	<i>Version of 1st extension module</i>	<i>transmit</i>	14 byte 16.001
254	<i>Version of 2nd extension module</i>	<i>transmit</i>	14 byte 16.001

\*Only for the switch actuator channels.

#### 6.2.4 Description of objects for the switch actuator (channel C1)

- **Object 1** "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 7:

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

- **Object 2** "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 1 to activate the channel function.

- **Object 3** "Lock"

Locks the channel function.

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

- **Object 4 "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 5 "Lock scenes = 1, Enable scenes = 1"**

Locks 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 6 "On/Off feedback"**

Reports the current channel status.

The status can also be inverted depending on configuration.

- **Object 7 "Time to next service, operating hours feedback "**

Only available if the hour 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 8 "Service required"**

Only available if the hour 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 9** "*Switching with priority, reset service, reset operating hours*"

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

<i>Activate hour counter</i>	Function	Use									
<i>yes</i>	<i>Reset service*</i>	Reset service interval counter.									
	<i>Reset operating hours*</i>	Reset hour counter									
<i>no</i>	<i>Switching with priority</i>	Priority control:									
		<table><tr><th>Status of object 9</th><th>Channel status</th></tr><tr><td>0</td><td rowspan="2">as set by object 1**</td></tr><tr><td>1</td></tr><tr><td>2</td><td>OFF</td></tr><tr><td>3</td><td>ON</td></tr></table>	Status of object 9	Channel status	0	as set by object 1**	1	2	OFF	3	ON
		Status of object 9	Channel status								
		0	as set by object 1**								
		1									
		2	OFF								
3	ON										

\* Depending on configuration.

\*\* or set by logic, central objects or scene

### 6.2.5 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 1 "UP/DOWN"**

Raise the roller blinds/blinds with "0" and lower with "1".

- **Object 2 "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 3 "% 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 disabled by the comfort automatic object (see below).

- **Object 4 "% Slat"**

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

- **Object 5 "Lock Comfort/Automatic"**

A "1" on this object locks 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 6 "Lock/Release"**

Locks the channel function.

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

- **Object 7 "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 restored 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 8 "Lock scenes/Release scenes "**

Locks 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 9 "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. 9	Priority on safety
0	inactive
1	
2	UP
3	DOWN

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

- **Object 41 „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 42 „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 43 „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 44 „Height feedback %“, „Height feedback 1 bit“**

Current drive height feedback in %.

For devices manufactured as of August 2016: Parameters can also be set as a 1-bit telegram DPT1.009. *See parameter: Format of height feedback.*

- **Object 45 "Slat feedback %"**

Current slat position feedback in %.

## 6.2.6 Description of common objects

- **Objects 79, 159, 239 "Manual"**

Only available for devices in the MIX2 series (order number 493...)

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* can be configured on the *General* parameter page.

- **Objects 80, 160, 240 „RMG 8 T, EM1 RME 8 T, EM2 RME 8 T collective feedback“**

Only applies to switch actuator channels.

Sends the current switching status of the channels in a module as DPT 27.001.

- **Object 241 "Central permanent ON"**

Central switch-on function.

Enables simultaneous switch on of all channels (basic and extension modules) with a 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.

Works on the following devices:

RMG 8 S/RME 8 S, RMG 4 I/RME 4 I, RMG 8 T\*/RME 8 T\*, RME 4 S/C-load, DMG 2 T, DME 2 S/T, SME 2 S.

\* Only applies to switch actuator channels

- **Object 242** "*Central permanent OFF*"

Central switch-off function.

Enables simultaneous switch off of all channels (basic and extension modules) with a 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.

Works on the following devices:

RMG 8 S/RME 8 S, RMG 4 I/RME 4 I, RMG 8 T\*/RME 8 T\*, RME 4 S/C-load, DMG 2 T, DME 2 S/T, SME 2 S.

- **Object 243** "*Central switching*"

Central switch function.

Enables simultaneous switch on or off of all channels (basic and extension modules) with a 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. 1, 11, 21, etc.) were receiving a switch command.

Works on the following devices:

RMG 8 S/RME 8 S, RMG 4 I/RME 4 I, RMG 8 T\*/RME 8 T\*, RME 4 S/C-load, DMG 2 T, DME 2 S/T, SME 2 S.

- **Object 244** "*Call up/save central scenes*"

Central object for using scenes.

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

Works on the following devices:

RMG 4 I/RME 4 I, RMG 8 S/RME 8 S, RMG 8 T/RME 8 T, DMG 2 T/DME 2 T, JMG 4 T/JME 4 T, RME 4 S/C-load, DME 2 S, SME 2 S, JME 4 S

See appendix: Scenes.

\* Only applies to switch actuator channels

- **Objects 245, 246, 247** "*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.

Notes:

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.

Works on the following devices: JMG 4 T, JME 4 T, JME 4 S, RMG 8 T\*, RME 8 T\*.

- **Object 248** "*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

Works on the following devices: JMG 4 T, JME 4 T, JME 4 S, RMG 8 T\*, RME 8 T\*.

- **Object 249** "*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.

Works on the following devices: JMG 4 T, JME 4 T, JME 4 S, RMG 8 T\*, RME 8 T\*.

\*Only applies to blinds channels.

- **Object 250** *"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.

Works on the following devices: JMG 4 T, JME 4 T, JME 4 S, RMG 8 T\*, RME 8 T\*.

- **Object 251** *"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: **Axx Hyy Vzzz**

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:** A16 H03 V014

- ETS application version 1.6

- Hardware version 03

- Firmware version 14

\*Only applies to blinds channels.



- **Object 252** "*Version of basic module*"

For diagnostic purposes only.

Only for basic modules in the MIX2 series (order number 493...).

Sends the software version (firmware) of the basic module after reset or download.

Can also be read out via the ETS.

The version is issued as an ASCII character string.

**Format:** Mxx Hyy Vzzz

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

**EXAMPLE: M11 H25 V025**

- Module \$11 = RMG 8 T

- Hardware version V25

- Firmware version V25

Possible module codes

Module	Code
Module or mains voltage are unavailable.	\$00
RMG 8 S	\$11
RMG 4 I	\$12
DMG 2 T	\$13
JMG 4 T/JMG 4 T 24V	\$14
HMG 6 T	\$15
RMG 8 T	\$17
RMG 4 U	\$18
BMG 6 T	\$92

- **Object 253** "*Version of 1st extension module*"

Telegram format: See above, object 252

Possible module codes

Module	Code
Module or mains voltage are unavailable.	\$00
RME 8 S	\$11
RME 4 I	\$12
DME 2 T	\$13
JME 4 T/JME 4 T 24V	\$14
HME 6 T	\$15
RME 8 T	\$17
RME 4 U	\$18
BME 6 T	\$92

- **Object 254** "*Version of 2nd extension module*"

See above, object 253

## 6.3 Parameters

### 6.3.1 Common parameter pages

Table 8

Function	Description
<b>General</b>	Selection of module and central parameters.
<b>BASIC MODULE: RMG 8 T</b>	Channel functions: switch actuator/blinds actuator. General parameters for the basic module.

### 6.3.2 Parameter pages for the switch actuator

Table 9

Function	Description
<b>RMG 8 T channel Cx configuration options</b>	Characteristics of channel and activation of additional functions (scenes, links, etc.).
<b>Contact characteristics</b>	Type of contact and status after download, bus failure etc.
<b>Threshold</b>	Settings for triggering channel function through exceeding threshold.
<b>Block function</b>	Type of lock telegram and response to locking.
<b>Scenes</b>	Selection of scene numbers relevant to the channel.
<b>Feedback</b>	Status of feedback object etc.
<b>Hour counter and service</b>	Type of hour counter and, if required, service interval etc.
<b>Link</b>	Selection of logical link.

### 6.3.3 Parameter pages for the blinds actuator

Table 10

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

### 6.3.4 Parameter description for common parameters

Settings that lead to the display of other pages or functions are identified by .. .

Example: *Pulse function..*

#### 6.3.4.1 The "General" parameter page

Table 11

Designation	Values	Description
<i>Type of basic module</i>	<b>Select device..</b> RMG 8 S.. RMG 8 T.. RMG 4 I.. DMG 2 T.. JMG 4 T/JMG 4 T 24V.. HMG 6 T..	Selection of available basic module (MIX2 series only)
<i>Type of 1st extension module</i>	<b>not available/inactive</b> RME 8 S.. RME 8 T.. RME 4 I.. DME 2 T.. JME 4 T/JME 4 T 24V.. HME 6 T.. RME 4 S/RME 4 C-load.. DME 2/SME 2.. BME 6.. JME 4 S.. HME 4..	Selection of 1st extension module, if available. (MIX or MIX2 series)
<i>Type of 2nd extension module</i>	<b>not available/inactive</b> RME 8 S.. RME 8 T.. RME 4 I.. DME 2 T.. JME 4 T/JME 4 T 24V.. HME 6 T.. RME 4 S/RME 4 C-load.. DME 2/SME 2.. BME 6.. JME 4 S.. HME 4..	Selection of 2nd extension module, if available. (MIX or MIX2 series)
<i>Time for cyclical sending of feedback object (MIX series, order no. 491...)</i>	2 minutes, 3 minutes, 5 minutes, 10 minutes, <b>15 minutes</b> , 20 minutes 30 minutes, 45 minutes 60 minutes	This parameter is used exclusively for MIX series extension modules. (DME 2 S, SME 2, JME 4 S, BME 6 RME 4 S/C-load, and HME 4)
<i>Function of manual button (MIX2 series, order no. 493...)</i>	<i>applies for 24 hours or until reset via object locked</i> <b>applies until reset via object</b> <i>applies for 30 minutes or until reset via object</i> <i>applies for 1 hour or until reset via object</i>	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 79

Designation	Values	Description
	<i>applies for 2 hours or until reset via object</i> <i>applies for 4 hours or until reset via object</i> <i>applies for 8 hours or until reset via object</i> <i>applies for 12 hours or until reset via object</i>	This parameter is used exclusively for MIX2 series devices.
Manual operation of channels (MIX2 series, order no. 493...)	<b>unlocked</b>  <b>locked</b>	The channels can be operated via the buttons on the device. No manual operation, the buttons on the device are locked.

### 6.3.5 Parameter description for the switch actuator

#### 6.3.5.1 The "RMG 8 T basic module" parameter page

Table 12

Designation	Values	Description
<i>Sending collective feedback</i>	<i>no</i>	No collective feedback, object is unavailable (obj. 80, 160, 240).
	<i>report as inactive</i>	Object value cannot be requested.
	<i>only at change</i>	Sends whenever a channel status changes.
	<i>cyclically and at change</i>	Sends cyclically and with status changes
		See appendix: collective feedback
<i>Relay switch delay</i>		This parameter sets the minimum delay between switching on two relays if several are activated at the same time. The shortest delay is achieved by using the central switch object (object 243).
		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).
	<i>None</i>	There is no added delay.
	<i>60 ms</i> <i>100 ms</i> <i>200 ms</i>	When a relay switches on, the next one 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 RMG 8 T and 60 ms: = (8 channels – 1) * 60 ms = 420 ms The last channel switches 420 ms after the first. The same applies to the first or second extension module.

### 6.3.5.2 The "RMG 8 T channel Cx: configuration options" parameter page

Table 13

Designation	Values	Description
<i>Channel function</i>	<b>Switching On/Off..</b> <i>On/off time delay..</i> <i>Pulse function..</i> <i>Staircase light time switch with forewarning function..</i> <i>Flashing..</i>	Determines the basic functionality of the channel.
<i>Activation of function via</i>	<b>Switch object</b>  <i>Exceeding the threshold</i>	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
<i>Activate block function</i>	<i>Yes..</i>  <b>no</b>	The block function can be individually adjusted. The relevant parameter page is shown.  No block function.
<i>Activate scenes</i>	<i>Yes..</i> <b>no</b>	Should scenes be used?
<i>Participation in central objects</i>	<b>no</b>  <i>at Central switching, Permanent On, Permanent OFF</i> <i>only in central continuous ON</i> <i>only in central continuous OFF</i> <i>only in central switching</i> <i>only in central switching and continuous ON</i> <i>only in central switching and continuous OFF</i> <i>only in central permanent On and permanent OFF</i>	Central objects are not taken into account.  Which central objects are to be taken into account?  Central objects enable the simultaneous switching on and off of several channels with one single object.
<i>Adjust feedback</i>	<i>Yes..</i>  <b>no</b>	The feedback function can be individually adjusted. The relevant parameter page is shown.  The <i>Feedback</i> function works with the standard parameters: - <i>not inverted</i> - <i>do not transmit cyclically</i>
<i>Activate hour counter</i>	<i>Yes..</i> <b>no</b>	Is the <i>hour counter/service interval</i> function to be used?
<i>Activate link</i>	<i>Yes..</i> <b>no</b>	Are logical links to be used with the channel object?

### 6.3.5.3 The "Contact characteristics" parameter page

Table 14

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



### 6.3.5.4 The "On/Off delay" parameter page

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

**Table 15**

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

### 6.3.5.5 The "Pulse function.." parameter page

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

**Table 16**

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

### 6.3.5.6 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 17

Designation	Values	Description
Staircase light time (min. 1 s)		
<i>hours (0..3)</i>	<b>0..3</b>	Input of desired staircase light time in hours.
<i>minutes (0..60)</i>	<b>0..60</b>	Input of desired staircase light time in minutes.
<i>seconds (0.255)</i>	<b>0..255</b> Default value = <b>1</b>	Input of desired staircase light time in seconds.
<i>The maximum sum of pulses 1..40</i>	<b>1..40</b>	determines how long the staircase light time can be extended by pressing the button again.
<i>Duration of 1st forewarning in s (0..60)</i>	<b>0</b>	The light switches off immediately once the staircase light time is completed.
	<b>1..60</b> Default value = <b>10</b>	Once the staircase light time is completed, the light should briefly flash and then stay on for the duration of the forewarning
<i>Duration of 2nd forewarning in s (0..60)</i>	<b>0</b>	No 2nd forewarning. The light switches off at the end of the 1st forewarning.
	<b>1..60</b> Default value = <b>10</b>	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	Flashin	1st forewarning	Flashin	2nd forewarning	OFF
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### 6.3.5.7 The "Flashing.." parameter page

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

Table 18

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

### 6.3.5.8 The "Threshold" parameter page

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

Table 19

Designation	Values	Description
<i>Type of threshold object</i>	<b>Object type: Percent (DPT 5.001)</b> <i>Object type: Counter value 0..255 (DPT 5.010)</i> <i>Object type: Counter value 0..65535 (DPT 7.001)</i> <i>Object type: EIS5 e.g. CO2, brightness etc. (DPT 9.xxx)</i>	Value type for threshold.
<i>Response on exceeding the threshold</i>	<p><i>As switch object = 0</i></p> <p><i>As switch object = 1</i></p>	<p>Should the channel switch on or off on exceeding the threshold? The set <i>type of contact</i> must be taken into account here.</p> <p><i>NO contact:</i> the relay switches <b>off</b> if threshold is exceeded. <i>Opening contact:</i> The relay switches <b>on</b> if threshold is exceeded.</p> <p><i>NO contact:</i> The relay switches <b>on</b> if threshold is exceeded. <i>Opening contact:</i> the relay switches <b>off</b> if threshold is exceeded.</p>
Parameter for <i>Percent</i> threshold object		
<i>Threshold</i>	1..99 % Default value = <b>50%</b>	Desired threshold. Example of <i>NO contact</i> with response <i>as switch object = 1</i> : Switches on when: Object value > threshold Switches off when: Object value = threshold - hysteresis
<i>Hysteresis (as %)</i>	1..99 % Default value = <b>10%</b>	<ul style="list-style-type: none"> <li>The hysteresis prevents frequent switching after small fluctuations in readings.</li> </ul>
Parameter for threshold object <i>Counter value 0..255</i>		
<i>Threshold</i>	1..254 Default value = <b>127</b>	Desired threshold. Example of <i>NO contact</i> with response <i>as switch object = 1</i> : Switches on when: Object value > threshold Switches off when: Object value = threshold - hysteresis
<i>Hysteresis</i>	1..254 Default value = <b>5</b>	The hysteresis prevents frequent switching after small fluctuations in readings.
Parameter for threshold object <i>Counter value 0..65535</i>		
<i>Threshold</i>	1..65534	Desired threshold.

Designation	Values	Description
	<i>Default value = 1000</i>	Example of <i>NO</i> contact with response as switch object = 1: Switches on when: Object value > threshold Switches off when: Object value = threshold - hysteresis
<i>Hysteresis</i>	<i>1..65534</i> <i>Default value = 5</i>	
<b>Parameter for threshold object EIS5 (e.g. CO<sub>2</sub>, brightness...)</b>		
<i>Threshold</i> <i>Format (-)0.00..99999</i>	<i>0.00..99999</i> <i>Default value = 20</i>	Desired threshold. Example of <i>NO</i> contact with response as switch object = 1: Switches on when: Object value > threshold Switches off when: Object value = threshold - hysteresis
<i>Hysteresis</i> <i>0.00..9999</i>	<i>0.00..9999</i> <i>Default value = 1</i>	The hysteresis prevents frequent switching after small fluctuations in readings.

### 6.3.5.9 The "Block function" parameter page

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

Table 20

Designation	Values	Description
<i>Lock telegram</i>	<b><i>Lock with ON telegram</i></b>	0 = Enable 1 = Lock
	<b><i>Lock with OFF telegram</i></b>	0 = Lock 1 = Enable  <b>Note:</b> The lock is always deactivated after reset.
<i>Response when setting the lock</i>	<b><i>OFF</i></b>	Switch off
	<b><i>ON</i></b>	Switch on
	<b><i>unchanged</i></b>	No response
<i>Response when cancelling the lock</i>	<b><i>OFF</i></b>	Switch off
	<b><i>ON</i></b>	Switch on
	<b><i>Unchanged</i></b>	No response
	<b><i>update</i></b>	Restore normal operation and switch relay accordingly.

### 6.3.5.10 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 21

Designation	Values	Description
<i>Lock telegram for scenes</i>	<b><i>Lock with ON telegram</i></b>	0 = Enable 1 = Lock
	<b><i>Lock with OFF telegram</i></b>	0 = Lock 1 = Enable <b>Note:</b> With this setting the scenes are always locked immediately after reset or download.
<i>All channel scene statuses</i>	<b><i>Overwrite on download</i></b>	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 <i>Status after download</i> (see below). See appendix: Teach in scenes without telegrams
	<b><i>Unchanged after download</i></b>	All previously taught in scenes are saved. However, the scene numbers the channel should react to can be changed (see below: <i>Channel reacts to</i> ).
<i>Participation in central scene object</i>	<b>No</b> <b>yes</b>	Should the device react to the central scene object?
<i>Channel reacts to</i>	<b><i>No scene number</i></b> <b><i>Scene number 1</i></b>  <b><i>Scene number 63</i></b>	First of the 8 possible scene numbers the channel is to react to.
<i>Status after download</i>	<b><i>Off</i></b> <b><i>On</i></b>	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.
<i>Permit teach in</i>	<b>No</b>  <b>Yes</b>	Scenes can only be called up.  The user can both call up and teach in or amend scenes.
<i>Channel reacts to</i>	<b><i>No scene number</i></b> <b><i>Scene number 1</i></b> <b><i>Scene number 2</i></b> ... <b><i>Scene number 63</i></b>	Second of the 8 possible scene numbers
<i>Status after download</i>	<b><i>Off</i></b>	See above.

Designation	Values	Description
	<i>On</i>	
<i>Permit teach in</i>	<i>No</i> <i>Yes</i>	See above.
<i>Channel reacts to</i>	<i>No scene number</i> <i>Scene number 1</i> ... <b><i>Scene number 3</i></b> ... <i>Scene number 63</i>	Third of the 8 possible scene numbers
<i>Status after download</i>	<b><i>Off</i></b> <i>On</i>	See above.
<i>Permit teach in</i>	<i>No</i> <i>Yes</i>	See above.
<i>Channel reacts to</i>	<i>No scene number</i> <i>Scene number 1</i> ... <b><i>Scene number 4</i></b> ... <i>Scene number 63</i>	Fourth of the 8 possible scene numbers
<i>Status after download</i>	<b><i>Off</i></b> <i>On</i>	See above.
<i>Permit teach in</i>	<i>No</i> <i>Yes</i>	See above.
<i>Channel reacts to</i>	<i>No scene number</i> <i>Scene number 1</i> ... <b><i>Scene number 5</i></b> ... <i>Scene number 63</i>	Fifth of the 8 possible scene numbers
<i>Status after download</i>	<b><i>Off</i></b> <i>On</i>	See above.
<i>Permit teach in</i>	<i>No</i> <i>Yes</i>	See above.
<i>Channel reacts to</i>	<i>No scene number</i> <i>Scene number 1</i> ... <b><i>Scene number 6</i></b> ... <i>Scene number 63</i>	Sixth of the 8 possible scene numbers
<i>Status after download</i>	<b><i>Off</i></b> <i>On</i>	See above.
<i>Permit teach in</i>	<i>No</i> <i>Yes</i>	See above.
<i>Channel reacts to</i>	<i>No scene number</i> <i>Scene number 1</i> ... <b><i>Scene number 7</i></b> ...	Seventh of the 8 possible scene numbers



Designation	Values	Description
	<i>Scene number 63</i>	
<i>Status after download</i>	<b>Off</b> <b>On</b>	See above.
<i>Permit teach in</i>	<b>No</b> <b>Yes</b>	See above.
<i>Channel reacts to</i>	<i>No scene number</i> <i>Scene number 1</i> ... <b><i>Scene number 8</i></b> ... <i>Scene number 63</i>	Last of the 8 possible scene numbers
<i>Status after download</i>	<b>Off</b> <b>On</b>	See above.
<i>Permit teach in</i>	<b>No</b> <b>Yes</b>	See above.

### 6.3.5.11 The "*Feedback*" parameter page

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

**Table 22**

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

### 6.3.5.12 The "*Hour counter and service*" parameter page

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

Table 23

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

### 6.3.5.13 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 24**

Designation	Values	Description
<i>Activate link</i>		Selection of logical link with the channel object
	<i>AND link</i>	The <i>Logic input in AND gate</i> object appears (e.g. object 2).
	<i>OR link (override)</i>	The <i>Logic input in OR gate</i> object appears (e.g. object 2).
	<i>XOR link</i>	The <i>Logic input in XOR gate</i> object appears (e.g. object 2).
<i>Disable object affects logic object</i>	<i>No</i>	The disable object only affects the channel object (e.g. object 1). If required, the logic object can activate the channel function despite lock (with OR and XOR link).
	<i>yes</i>	The disable object affects the channel object and the logic object. The channel function is completely blocked if the lock is active.

### 6.3.6 Parameter description for the blinds actuator

#### 6.3.6.1 The "RMG 8 T basic module" parameter page

Designation	Values	Description
<i>Relay switch delay</i>		<p>This parameter sets the minimum delay between switching on two relays if several are activated at the same time. The shortest delay is achieved by using the central UP/DOWN object (Obj. 248).</p> <p>When switching via individual telegrams (1 telegram per channel), the bus running time and the sequential processing of commands causes an additional delay.</p> <p>This can help avoid high current peaks when devices are switched on simultaneously</p>
	<i>None</i>	There is no added delay.
	<i>60 ms</i>	When a relay has switched on, the next
	<i>100 ms</i>	one (within the module) can only switch
	<i>200 ms</i>	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
		<b>Example:</b>
		RMG 8 T and 60 ms:
		= (4 channels – 1) * 60 ms = 180 ms
		Last channel switches with a delay of 180 ms.
		The same applies to the first or second extension module.

### 6.3.6.2 The "RMG 8 T channel Cx: configuration options" parameter page

Table 25

Designation	Values	Description
Type of hanging	<b>Blinds</b> Roller blinds/awning/general drive...	The type of hanging which is to be actuated
Activate block function	Yes.. <b>no</b>	Should the block function be used?
Activate scenes	Yes.. <b>no</b>	Should scenes be used?
<b>For devices with version V0.05 or higher</b>		
Comfort/Auto locked on UP/DOWN/STOP command	no, only via object Comfort/Automatic yes, and via object Comfort/Automatic OFF yes, and after 0.5hrs OFF yes, and after 1hr OFF ... yes, and after 2hrs OFF ... yes, and after 48hrs OFF	Suppression of the Comfort/Auto function by manual positioning via On, Off or Stop telegrams. No suppression: <i>Comfort/Auto</i> remains active after manual positioning. <i>Comfort/Auto</i> can be ended both by manual positioning and via the object <i>Comfort/Automatic</i> . The <i>Comfort/Auto</i> function is locked for the set time via manual positioning. Once this time has lapsed, <i>Comfort/Auto</i> is active once again and the drive reacts to height telegrams. The block can be ended at any time via the object <i>Comfort / Automatic</i> (=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

## 6.3.6.3 The "Drive settings" parameter page

Table 26

Designation	Values	Description
<i>Direction of drive run</i>	<i>normal</i>  <i>inverted</i>	Standard setting: Hanging moves from top to bottom.  For special applications or quick fix for wrongly wired devices (up/down directions mixed up).
<i>Complete runtime Down (s)</i>	Manual input 5 .. 500	Only available when <i>Drive runtime setting = via ETS</i> . Enter the measured runtime for descending (in seconds).
<i>Runtime adjustment for ascent (s)</i>	Manual input -15 .. +15	Enter difference between runtime when ascending and runtime (in seconds) when descending. Correction value = $t_{Up} - t_{Down}$
<i>Step duration of Step/Stop object</i>	<i>No steps</i> <i>250 ms</i> <i>500 ms</i> <i>1 s</i> <i>2 s</i> <i>3 s</i> <i>4 s</i> <i>5 s</i> <i>6 s</i> <i>7 s</i> <i>10 s</i>	Only for <i>roller blinds/awning/general drive</i> . 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.
<i>Complete slat turning 4 ... 250 [x100 ms]</i>	4 .. 250	Enter the measured turn time of the slats in increments of 100 ms. $10 = 10 \times 100 \text{ ms} = 1 \text{ s}$
<i>No. of steps for a complete turn</i>	<i>3 Steps</i> <i>4 Steps</i> <i>7 Steps</i> ... <i>12 Steps</i>	This specifies the number of individual steps a complete slat turn is to be divided into (3 to 12).
<i>On receipt of a step/stop command</i>	<b><i>Process immediately (recommended)</i></b>  <i>Wait 0.3 s to see if an UP/DOWN command follows</i> <i>Wait 0.4 s to see if an UP/DOWN command follows</i> <i>Wait 0.5 s to see if an UP/DOWN command follows</i>	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.
<i>Tighten fabric (awning)</i>	<i>yes</i>	Only for <i>roller blinds/awning/general drive</i> . At values above 70%, the hanging, awning or roller blind will be retightened by moving back briefly.

Designation	Values	Description
		On roller blinds it is guaranteed that the vent slots will remain open.
	<b>no</b>	No tensioning.
<i>Pause time before reversal of direction</i>	<b>0.5 s</b> <i>1 s</i> <i>2 s</i> <i>3 s</i>	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
<i>Automatic execution of the slat object value [%] after the height object [%]</i>	<b>yes</b> <i>no</i>	Selection whether or not the slat position (according to the slat object % <i>slat</i> ) is to be resumed after the height adjustment via the height object % <i>Height</i> .
<i>Assignment of the 0% position to the slat objects [%]</i>	<b>0% corresponds to slat position on lowering</b> <i>0% corresponds to slat position on ascending</i>	Input of the starting position for the calculations of the slat turn.
<i>Participation in central Up/Down object</i>	<b>yes</b> <i>no</i>	Should the drive respond to the central object?
<i>Transmission of feedback</i>	<b>only at change</b> <i>cyclically and at change</i>	When should feedback (Obj. <i>Slat feedback</i> and <i>Height feedback</i> ) be sent?
<i>Time for cyclical transmission of feedback</i>	<i>2 minutes, 3 minutes,</i> <i>5 minutes, 10 minutes,</i> <b>15 minutes</b> , <i>20 minutes,</i> <i>30 minutes, 45 minutes</i> <i>60 minutes</i>	If cyclically, at what interval?



### 6.3.6.4 The "Block function" parameter page

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

Table 27

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

### 6.3.6.5 The "Safety Wind/Rain/Frost" parameter page

Table 28

Designation	Values	Description
<i>Priority of safety objects</i>	<b>1. Wind 2. Rain, 3. Frost</b> 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. <i>Start</i> and <i>End</i> of <i>Safety rain</i> . If the rain alarm (Priority 1) is cancelled, the parameters for the object with priority 2 apply, here <i>Frost - Start</i> . If the object with priority 2 is also cancelled, the one with priority 3 applies.
<i>Monitor safety objects cyclically</i>	<b>no</b>  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. <i>Max. cycle time = Monitoring time/2</i> Example: Monitoring time = every 20 minutes, cyclical transmission time = 10 min or less.
<i>Participation in safety WIND</i>	yes <b>no</b>	Should channel react to wind alarm?
<i>Source(s)</i>	<i>Safety object 1 wind</i> <i>Safety object 2 wind</i> <i>Safety object 3 wind</i> <i>Safety object 1 + 2 (OR linked)</i> <i>Safety object 1 + 3 (OR linked)</i> <i>Safety object 2 + 3 (OR linked)</i> <b><i>Safety object 1 + 2 + 3 (OR linked)</i></b>	Which safety objects are used for wind alarm?
<i>Start</i>	Preset 1 Preset 2 Preset 3 Preset 4 Preset 5	Start on wind alarm: Approach a preset position. See Presets parameter page.

Designation	Values	Description
	Preset 6 Preset 7 Preset 8 <b>Top end position</b> Lower end position unchanged (stopped upon operating command)	Approach an end position. Do not react. The drive should stop upon safety start during a movement.
End	<b>same as before safety</b> Preset 1 Preset 2 Preset 3 Preset 4 Preset 5 Preset 6 Preset 7 Preset 8 Top end position Lower end position Update (height/slat)  No response  As before safety, or update (position) if a new value (height/slat) has been received	End on wind alarm: move back to the previous position. Approach a preset position. See Presets parameter page.  Approach an end position. Approach last received position. Do not react. Move back to the previous position. However, if a new position was received during safety, this new position will be moved to.
Participation in safety RAIN	yes no	Should channel react to rain alarm?
Start	Preset 1 Preset 2 Preset 3 Preset 4 Preset 5 Preset 6 Preset 7 Preset 8 <b>Top end position</b> Lower end position unchanged (stopped upon operating command)	Start on rain alarm: Approach a preset position. See Presets parameter page.  Approach an end position. Do not react. The drive should stop upon safety start during a movement.
End	<b>same as before safety</b> Preset 1 Preset 2 Preset 3 Preset 4 Preset 5 Preset 6 Preset 7 Preset 8 Top end position	End on rain alarm: move back to the previous position. Approach a preset position. See Presets parameter page.  Approach an end position.

Designation	Values	Description
	<i>Lower end position</i> <i>Update (height/slat)</i>  <i>No response</i>  <i>As before safety, or update (position) if a new value (height/slat) has been received</i>	Approach last received position.  Do not react.  Move back to the previous position. However, if a new position was received during safety, this new position will be moved to.
<i>Participation in safety</i> <b>FROST</b>	<i>yes</i> <b>no</b>	Should channel react to frost alarm?
<i>Start</i>	 <i>Preset 1</i> <i>Preset 2</i> <i>Preset 3</i> <i>Preset 4</i> <i>Preset 5</i> <i>Preset 6</i> <i>Preset 7</i> <i>Preset 8</i>  <b>Top end position</b> <i>Lower end position</i> <i>unchanged (stopped upon operating command)</i>	Start on frost alarm: Approach a preset position. See Presets parameter page.  Approach an end position.  Do not react. The drive should stop upon safety start during a movement.
<i>End</i>	 <b>same as before safety</b> <i>Preset 1</i> <i>Preset 2</i> <i>Preset 3</i> <i>Preset 4</i> <i>Preset 5</i> <i>Preset 6</i> <i>Preset 7</i> <i>Preset 8</i>  <i>Top end position</i> <i>Lower end position</i> <i>Update (height/slat)</i>  <i>No response</i>  <i>As before safety, or update (position) if a new value (height/slat) has been received</i>	End on frost alarm: move back to the previous position. Approach a preset position. See Presets parameter page.  Approach an end position. Approach last received position.  Do not react.  Move back to the previous position. However, if a new position was received during safety, this new position will be moved to.
<i>Response after priority on safety</i>		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 9. This operating mode has the highest priority level.

Designation	Values	Description
	<i>Preset 1</i>	Approach a preset position.
	<i>Preset 2</i>	See Presets parameter page.
	<i>Preset 3</i>	
	<i>Preset 4</i>	
	<i>Preset 5</i>	
	<i>Preset 6</i>	
	<i>Preset 7</i>	
	<i>Preset 8</i>	
	<i>Top end position</i>	Approach an end position.
	<i>Lower end position</i>	
	<i>no reaction, unchanged</i>	Do not react.
	<i>Update (height/slat)</i>	Approach last received position.

### 6.3.6.6 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 lock* or when a scene is cancelled.

Table 29

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

### 6.3.6.7 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 30**

Designation	Values	Description
<i>Lock telegram for scenes</i>	<b><i>Lock with ON telegram</i></b>  <b><i>Lock with OFF telegram</i></b>	0 = Enable 1 = Lock  0 = Lock 1 = Enable <b>Note:</b> With this setting the scenes are always locked immediately after reset or download.
<i>All channel scene statuses</i>	<b><i>Overwrite on download</i></b>  <b><i>Unchanged after download</i></b>	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 <i>Status after download</i> (see below). See appendix: Teach in scenes without telegrams  All previously taught in scenes are saved. However, the scene numbers the channel should react to can be changed (see below: <i>Channel reacts to</i> ).
<i>Participation in central scene object</i>	<b>No</b> <b>yes</b>	Should the device react to the central scene object?
<i>Response when unlocking the scene (with scene value 63)</i>	Preset 1 Preset 2 Preset 3 Preset 4 Preset 5 Preset 6 Preset 7 Preset 8  Top end position Lower end position	Behaviour when object 7 receives the value 63 (\$3F) and thus the current scene is cancelled.  Approach a preset position. See Presets parameter page.  Approach an end position.

Designation	Values	Description
	<i>No response</i>	Do not react.
	<i>Update (height/slat)</i>	Approach last received position.
<b>1st scene - Preallocated preset 1</b>		
<i>Channel reacts to</i>	<i>No scene number</i> <b>Scene number 1 (value = 0)</b> ... <b>Scene number 63 (value = 62)</b>	First of the 8 possible scene numbers the channel is to react to.
<i>Comment for this scene number</i>	<i>(Enter name)</i>	Description or comment for this scene number.
<i>Lock comfort/automatic during this scene</i>	<b>no</b>	During this scene the channel continues to react to height and slat telegrams
	<b>yes</b>	During this scene the channel no longer reacts to height and slat telegrams. The Up/Down function is maintained.
<i>Permit teach in</i>	<b>No</b>	Scenes can only be called up.
	<b>Yes</b>	The user can both call up and teach in or amend scenes.
<b>2nd scene - Preallocated preset 2</b>		
<i>Channel reacts to</i>	<i>No scene number</i> <b>Scene number 1 (value = 0)</b> <b>Scene number 2 (value = 1)</b> ... <b>Scene number 63 (value = 62)</b>	Second of the 8 possible scene numbers
<i>Comment for this scene number</i>	<i>(Enter name)</i>	See above.
<i>Lock comfort/automatic during this scene</i>	<b>no</b> <b>yes</b>	See above.
<i>Permit teach in</i>	<b>No</b> <b>Yes</b>	See above.
<b>3rd scene - Preallocated preset 3</b>		
<i>Channel reacts to</i>	<i>No scene number</i> <b>Scene number 1 (value = 0)</b> ... <b>Scene number 3 (value = 2)</b> ... <b>Scene number 63 (value = 62)</b>	Third of the 8 possible scene numbers
<i>Comment for this scene number</i>	<i>(Enter name)</i>	See above.
<i>Lock comfort/automatic during this scene</i>	<b>no</b> <b>yes</b>	See above.
<i>Permit teach in</i>	<b>No</b> <b>Yes</b>	See above.
<b>4th scene - Preallocated preset 4</b>		
<i>Channel reacts to</i>	<i>No scene number</i> <b>Scene number 1 (value = 0)</b> ... <b>Scene number 4 (value = 3)</b> ... <b>Scene number 63 (value = 62)</b>	Fourth of the 8 possible scene numbers



Designation	Values	Description
<i>Comment for this scene number</i>	(Enter name)	See above.
<i>Lock comfort/automatic during this scene</i>	<b>no</b> <b>yes</b>	See above.
<i>Permit teach in</i>	<b>No</b> <b>Yes</b>	See above.
<b>5th scene - Preallocated preset 5</b>		
<i>Channel reacts to</i>	No scene number Scene number 1 (value = 0) ... <b>Scene number 5 (value = 4)</b> ... Scene number 63 (value = 62)	Fifth of the 8 possible scene numbers
<i>Comment for this scene number</i>	(Enter name)	See above.
<i>Lock comfort/automatic during this scene</i>	<b>no</b> <b>yes</b>	See above.
<i>Permit teach in</i>	<b>No</b> <b>Yes</b>	See above.
<b>6th scene - Preallocated preset 6</b>		
<i>Channel reacts to</i>	No scene number Scene number 1 (value = 0) ... <b>Scene number 6 (value = 5)</b> ... Scene number 63 (value = 62)	Sixth of the 8 possible scene numbers
<i>Comment for this scene number</i>	(Enter name)	See above.
<i>Lock comfort/automatic during this scene</i>	<b>no</b> <b>yes</b>	See above.
<i>Permit teach in</i>	<b>No</b> <b>Yes</b>	See above.
<b>7th scene - Preallocated preset 7</b>		
<i>Channel reacts to</i>	No scene number Scene number 1 (value = 0) ... <b>Scene number 7 (value = 6)</b> ... Scene number 63 (value = 62)	Seventh of the 8 possible scene numbers
<i>Comment for this scene number</i>	(Enter name)	See above.
<i>Lock comfort/automatic during this scene</i>	<b>no</b> <b>yes</b>	See above.
<i>Permit teach in</i>	<b>No</b> <b>Yes</b>	See above.
<b>8th scene - Preallocated preset 8</b>		
<i>Channel reacts to</i>	No scene number Scene number 1 (value = 0) ... <b>Scene number 8 (value = 7)</b> ... Scene number 63 (value = 62)	Last of the 8 possible scene numbers

Designation	Values	Description
<i>Comment for this scene number</i>	<i>(Enter name)</i>	See above.
<i>Lock comfort/automatic during this scene</i>	<b>no</b> <b>yes</b>	See above.
<i>Permit teach in</i>	<b>No</b> <b>Yes</b>	See above.

### 6.3.6.8 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. 41, 42, 43).

**Table 31**

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

### 6.3.6.9 The "Power failure and restoration" parameter page

Table 32

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

## 7 Typical applications

These typical applications are designed to aid planning and are not to be considered an exhaustive list. It can be extended and updated as required.

### 7.1 2x switching with push button interface

2 push buttons are connected to a TA 2 push button interface and they control 2 channels of the RMG 8 T.

#### 7.1.1 Devices:

- RMG 8 T (4930200)
- TA 2 S (4969222)

#### 7.1.2 Overview

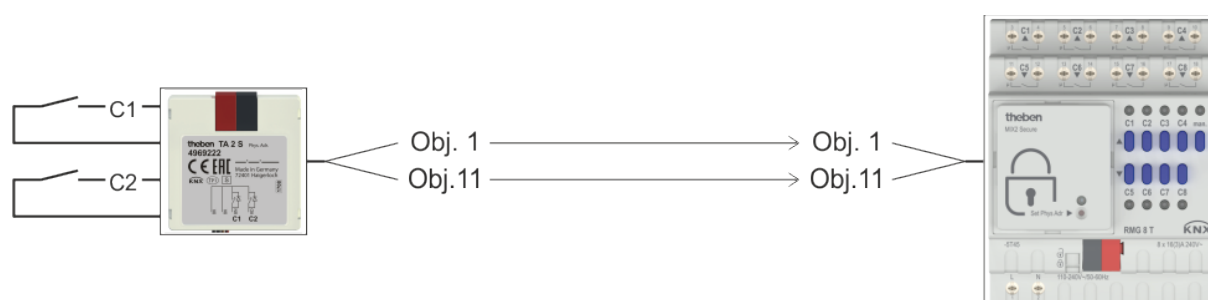


Figure 1

#### 7.1.3 Objects and links

Table 33

No.		TA 2 S	No.	RMG 8
		Object name		Object name
1		Channel 1 switching	1	RMG 8 T channel 1 switching
11		Channel 2 switching	11	RMG 8 T channel 11 switching

## 7.1.4 Important parameter settings

Standard or customer-defined parameter settings apply for unlisted parameters.

**Table 34: TA 2 S**

Parameter page	Parameter	Setting
<i>Channel 1 / Configuration options</i>	<i>Channel function 1</i>	<i>Push button</i>
<i>Channel 2 / Configuration options</i>	<i>Channel function 2</i>	<i>Push button</i>

**Table 35: RMG 8 T**

Parameter page	Parameter	Setting
<i>RMG 8 T channel C1: Configuration options</i>	<i>Channel function</i>	<i>Switching ON/OFF</i>
	<i>Activation of function via</i>	<i>Switch object</i>
<i>Contact characteristics</i>	<i>Type of contact</i>	<i>NO contact</i>
<i>RMG 8 T channel C2</i>	<i>See channel C1</i>	

## 7.2 Switching light with service counter and display

A fluorescent light strip in a hall is controlled by channel C1.

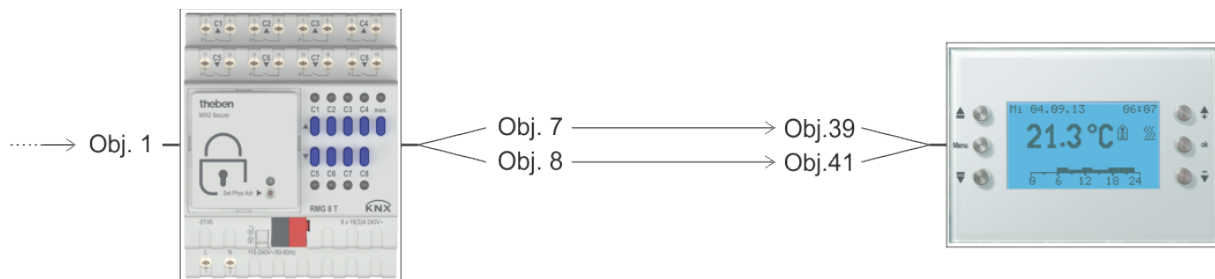
The lamps have to be replaced after 20,000 hours (= service).

The time period to the service and the service status are shown on the VARIA 826 S display.

### 7.2.1 Devices

- RMG 8 T (4930200)
- VARIA 826 S (8269210/8269211)

### 7.2.2 Overview



**Figure 2**

## 7.2.3 Objects and links

Table 36

No.	KNX sensor	No.	RMG 8 T	Comment
	Object name		Object name	
-	<i>(Switching object)</i>	1	<i>Switch object</i>	Any KNX sensor: Push button, time switch, twilight switch, etc. sends the switch command to RMG 8 T

Table 37:

No.	RMG 8 T	No.	VARIA	Comment
	Object name		Object name	
7	<i>Time to next service</i>	39	<i>Counter value 0 ..65535</i>	Time in hours
8	<i>Service required</i>	41	<i>Switching ON/OFF</i>	1 = Time has elapsed



## 7.2.4 Important parameter settings

Standard or customer-defined parameter settings apply for unlisted parameters.

**Table 38: RMG 8 T**

Parameter page	Parameter	Setting
<i>General</i>	<i>Type of basic module</i>	<i>RMG 8 T</i>
<i>RMG 8 T channel C1: Configuration options</i>	<i>Channel function</i>	<i>Switching ON/OFF</i>
	<i>Activate hour counter</i>	<i>Yes..</i>
<i>Contact characteristics</i>	<i>Type of contact</i>	<i>NO contact</i>
<i>Hour counter and service</i>	<i>Type of hour counter</i>	<i>Counter for time period before next service</i>
	<i>Service interval (0..2000, x10 h)</i>	<i>200</i>
	<i>Reporting of time to service when changing (0..100 h, 0 = no report)</i>	<i>100</i>
	<i>Report service cyclically</i>	<i>yes</i>

**Table 39: VARIA**

Parameter page	Parameter	Setting
<i>Selection of display pages</i>	<i>Show page 1 for display objects</i>	<i>yes</i>
<i>Display objects page 1</i>	<i>Fade in operating instructions on page 1</i>	<i>No</i>
	<i>Page heading</i>	<i>Lamp maintenance*</i>
<i>Page 1, line 1</i>	<i>Line format</i>	<i>16 bit counter value object type</i>
	<i>Text for line 1</i>	<i>Service in*</i>
	<i>Unit for display object</i>	<i>h</i>
	<i>Value range</i>	<i>Negative and positive numbers</i>
	<i>Display before receipt of value</i>	<i>Read from object via bus</i>
<i>Page 1, line 2</i>	<i>Line format</i>	<i>Switch on object type</i>
	<i>Text for line 1</i>	<i>Lamp status*</i>
	<i>Text for object value = 0</i>	<i>OK*</i>
	<i>Text for object value = 1</i>	<i>Service*</i>
	<i>Display before receipt of value</i>	<i>Read from object via bus</i>

\*Suggested text

## 7.3 Simple warning function with flashing light

A monitoring device, e.g. flood alarm is connected to a TA 2 S push button interface, and it controls a channel of the RMG 8 T.

A lamp shall flash in the event of an error (channel 1 relay output).

### 7.3.1 Devices:

- RMG 8 T (4930200)
- TA 2 S (4969222)

### 7.3.2 Overview

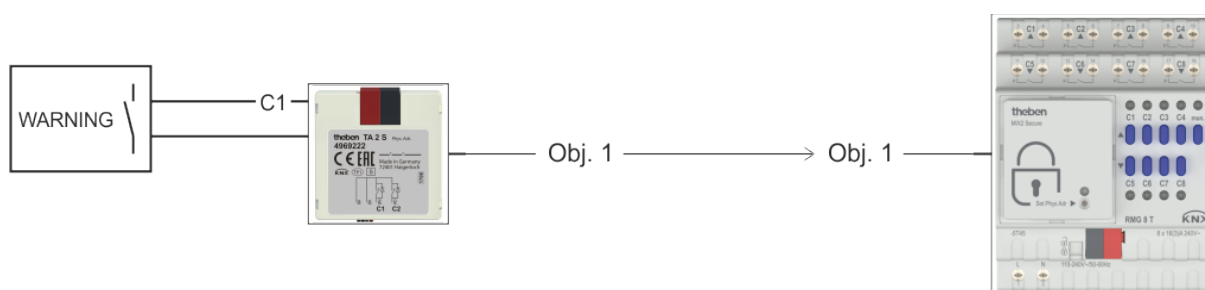


Figure 3

### 7.3.3 Objects and links

Table 40

No.	TA 2 S	No.	RMG 8 T	Comment
	Object name		Object name	
1	Channel 1 switching	1	RMG 8 T channel C1 Switch object	-

## 7.3.4 Important parameter settings

Standard or customer-defined parameter settings apply for unlisted parameters.

**Table 41: TA 2 S**

Parameter page	Parameter	Setting
<i>Channel 1 / Configuration options</i>	<i>Channel function</i>	<i>Switch</i>

**Table 42: RMG 8 T**

Parameter page	Parameter	Setting
<i>General</i>	<i>Type of basic module</i>	<i>RMG 8 T</i>
<i>RMG 8 T channel C1: Configuration options</i>	<i>Channel function</i>	<i>Flashing</i>
	<i>Activation of function via</i>	<i>Switch object</i>
<i>Contact characteristics</i>	<i>Type of contact</i>	<i>NO contact</i>
<i>Flashing</i>	<i>ON phase:</i>	
	<i>Hours</i>	<i>0</i>
	<i>Minutes</i>	<i>0</i>
	<i>Seconds</i>	<i>1</i>
	<i>OFF phase:</i>	
	<i>Hours</i>	<i>0</i>
	<i>Minutes</i>	<i>0</i>
	<i>Seconds</i>	<i>1</i>
	<i>How often should it flash</i>	<i>Until it switches off</i>

### **7.4 Basic switching, simple blind controls (blinds actuator)**

All channels are configured as blinds actuators and are controlled by the push button interface TA 4.

1 single push button is connected to the push button interface TA 4 for each set of blinds (single-surface operation).

Depending on whether the push buttons are pressed for a short or long time, the push button interface sends UP/DOWN or step/stop telegrams.

The blinds should be raised in the evenings and remain open at night.

For this purpose the time switch TR 648 top2 RC is programmed in such a way that channel 1 sends an Off telegram (astro-pulse) to the central UP-DOWN object.

#### **7.4.1 Devices:**

- RMG 8 T (Order no. 4930200)
- TA 4 S (Order no. 4969224)
- TR 648 top2 RC-DFC or RC (6489210/6489212)

## 7.4.2 Overview

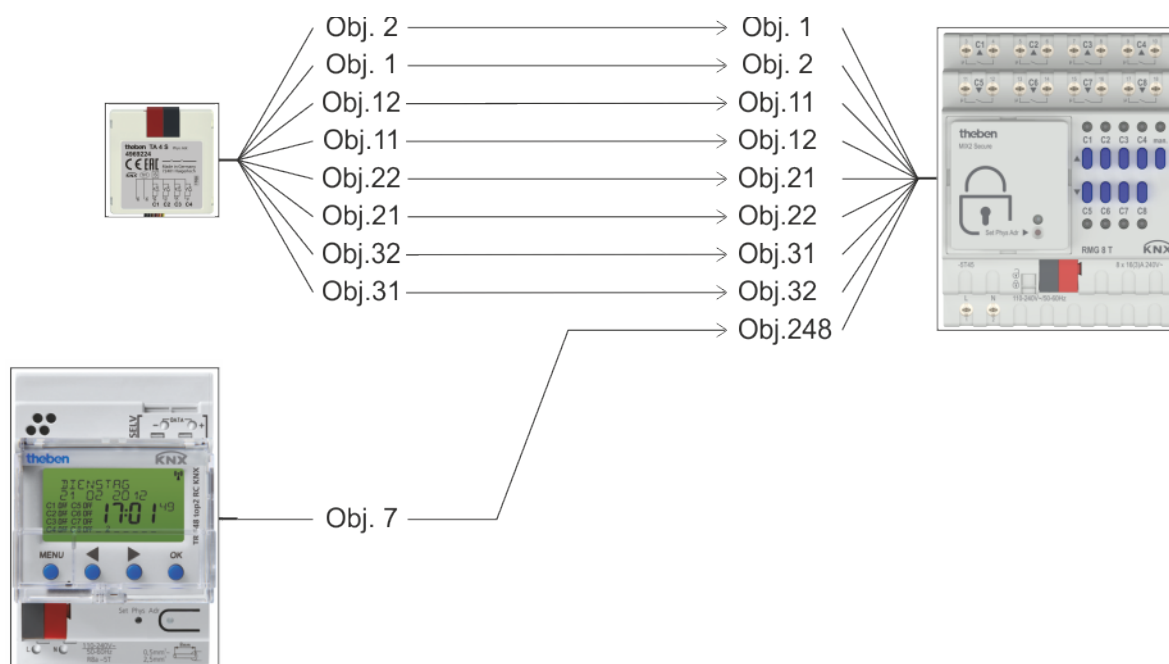


Figure 4

From top to bottom:

- The push button interface: operation by the user (up/down, step/stop).
- The time switch: sends an OFF telegram at sunset as an UP command for all blinds.

### 7.4.3 Objects and links

**Table 43**

No.	TA 4 S Object name	No.	RMG 8 T Object name	Comment
2	<i>Channel 1 Up/Down</i>	1	<i>RMG 8 T channel C1 Up/Down</i>	<p>Long keystroke for Up/down operating commands.</p> <p>Short press of push button for Step/stop commands.</p>
1	<i>Channel 1 Step/stop</i>	2	<i>RMG 8 T channel C1 Step/stop</i>	
12	<i>Channel 2 Up/Down</i>	11	<i>RMG 8 T channel C2 Up/Down</i>	
11	<i>Channel 2 Step/stop</i>	12	<i>RMG 8 T channel C2 Step/stop</i>	
22	<i>Channel 3 Up/Down</i>	21	<i>RMG 8 T channel C3 Up/Down</i>	
21	<i>Channel 3 Step/stop</i>	22	<i>RMG 8 T channel C3 Step/stop</i>	
32	<i>Channel 4 Up/Down</i>	31	<i>RMG 8 T channel C4 Up/Down</i>	
31	<i>Channel 4 Step/stop</i>	32	<i>RMG 8 T channel C4 Step/stop</i>	

**Table 44**

No.	TR 648 top2 Object name	No.	RMG 8 T Object name	Comment
7	<i>C1.1 Switching channel - switching</i>	248	<i>Central UP/DOWN</i>	Timer sends an OFF telegram at sunset. All drives are run up.

## 7.4.4 Important parameter settings

The standard parameter settings apply for unlisted parameters or user's own parameter settings.

**Table 45: TA 4 S**

Parameter page	Parameters	Setting
<b>Channel 1.. Channel 4</b>		
<i>Configuration options</i>	<i>Channel function</i>	<i>Blinds</i>
<i>Blinds</i>	<i>Operation</i>	<i>Single-surface operation</i>

**Table 46: RMG 8 T**

Parameter page	Parameters	Setting
<i>General</i>	<i>Type of basic module</i>	<i>RMG 8 T</i>
<i>Basic module: RMG 8 T</i>	<i>Channel C1 function</i>	<i>Blinds actuator</i>
<i>RMG 8 T</i>	<i>Type of hanging</i>	<i>Blinds</i>

**Table 47: TR 648 top2 KNX**

Parameter page	Parameters	Setting
<i>General</i>	<i>Activate time switch channel C1</i>	<i>Yes</i>
<i>Switching channel C1</i>	<i>Telegram type C1.1*</i>	<i>Switch command</i>
	<i>With clock ON</i>	<i>no telegram</i>
	<i>With clock OFF</i>	<i>send following telegram once</i>
	<i>Telegram</i>	<i>OFF</i>

\* Channel C1 of the TR 648 top2 time switch is programmed as an Astro channel. This channel should generate a 1 s long Astro pulse at sunset. An OFF telegram will be sent when the pulse is switched off.

## 7.5 Blinds control with sun position tracking and frost alarm (blinds actuator)

Channel 1 is set as blinds actuator.

A push button, which is connected with the binary input TA2 S, sends the up/down and step/stop commands. The weather station Meteodata 140 S controls the slat tilt in accordance with the sun position.

This helps achieve optimal light incidence without direct solar radiation.

The blinds should be raised when there is a danger of frost. The object *Central safety frost* is involved in this.

### 7.5.1 Devices:

- RMG 8 T (Order no. 4930200)
- Meteodata 140 S (order no. 1409207)
- TA 2 S (Order no. 4969222)

### 7.5.2 Overview

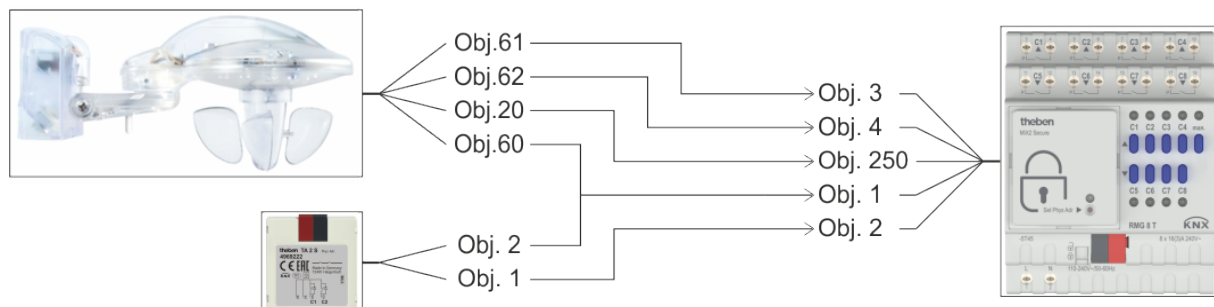


Figure 5

From top to bottom:

- The weather station: sends the telegrams for positioning of the blinds according to the position of the sun.  
If no shading is required, the blinds will be raised (obj. 61).
- The push button interface: operation by the user (up/down, step/stop)



### 7.5.3 Objects and links

**Table 48**

No.	Meteodata 140	No.	RMG 8 T	Comment
	Object name		Object name	
20	<i>C1.1 Switching</i>	250	<i>Central safety frost</i>	The safety telegram is sent by Meteodata ( <i>C1.1 universal channel</i> ).
60	<i>C11 up/down</i>	1	<i>RMG 8 T channel C1 Up/Down</i>	-
61	<i>C11 Blinds height</i>	3	<i>% Height</i>	-
62	<i>C11 Slat position</i>	4	<i>% Slat</i>	-

**Table 49**

No.	TA 4	No.	RMG 8 T	Comment
	Object name		Object name	
1	<i>Channel 1 Step/stop</i>	2	<i>RMG 8 T channel C1 Step/stop</i>	Long keystroke for Up/down operating commands. Short press of push button for Step/stop commands.
2	<i>Channel 1 Up/Down</i>	1	<i>RMG 8 T channel C1 Up/Down</i>	

## 7.5.4 Important parameter settings

Standard or customer-defined parameter settings apply for unlisted parameters.

**Table 50: Meteodata 140**

Parameter page	Parameters	Setting
<i>General</i>	<i>Activate universal channel C1</i>	<i>yes</i>
	<i>Activate sun protection channel C11</i>	<i>yes</i>
<i>Universal channel C1: Function</i>	<i>Channel function</i>	<i>Temperature sensor</i>
	<i>Temperature threshold</i>	<i>below 4 °C</i>
	<i>Temperature hysteresis</i>	<i>1.0 K</i>
<i>Sun protection channel C11</i>	<i>Channel controls</i>	<i>Blinds</i>
	<i>Sun position adjustment</i>	<i>yes..</i>
	<i>Drive height when brightness threshold is exceeded</i>	<i>100 %</i>
<i>Automatic sun function</i>	<i>Activation of automatic sun function</i>	<i>via dimming threshold</i>
<i>Sun position adjustment</i>	The individual location and user-dependent settings apply here.	

**Table 51: RMG 8 T**

Parameter page	Parameters	Setting
<i>General</i>	<i>Type of basic module</i>	<i>RMG 8 T</i>
<i>Basic module: RMG 8 T</i>	<i>Channel C1 function</i>	<i>Blinds actuator</i>
<i>RMG 8 T channel C1 configuration options</i>	<i>Type of hanging</i>	<i>Blinds</i>
<i>Safety wind/rain/frost</i>	<i>Participation in safety wind</i>	<i>no</i>
	<i>Participation in safety rain</i>	<i>no</i>
	<i>Participation in safety frost</i>	<i>yes</i>
	<i>Start</i>	<i>Top end position</i>
	<i>End</i>	<i>Update (Height/Slat)</i>

**Table 52: TA 2 S**

Parameter page	Parameters	Setting
<i>Configuration options</i>	<i>Channel function</i>	<i>Blinds</i>
<i>Blinds</i>	<i>Operation</i>	<i>Single-surface operation</i>

## 8 Appendix

### 8.1 *Manual mode*

This mode can be set or reset with the manual button or via object 79 (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.

#### 8.1.1 With blinds channels

The positions of the hangings will be frozen.  
All non-safety related bus telegrams are disabled, i.e. only the safety commands (on objects 9, 245, 246, 247, 249, 250) 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.

## 8.2 The scenes

### 8.2.1 Principle

The current status of a channel, or a complete MIX system can be stored and retrieved as required at a later point 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 MIX system to be easily associated with each chosen user scene.

**Table 53: Permitted scene numbers**

Series	Device	Supported scene numbers
MIX (order no. 4910xxx)	DME 2 S	1 .. 8
	JME 4 S	
	RME 4 S / C-load	
MIX2 (order no. 4930xxx)	RMG/RME 8 S	1 .. 64
	RMG/RME 4 I	
	DMG 2 T/DME 2 T	
	RMG 8 T/JME 4 T	
	RMG 8 T/RME 8 T	

The scenes are permanently stored and remain intact even after the application has been downloaded again.

See All channel scene statuses parameter on the Scenes parameter page.

## 8.2.2 Call up or save scenes:

To call up or save a scene, the relevant code is sent to the scene object (obj. 244).

Table 54

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
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

Scene	Call up		Save	
	Hex.	Dec.	Hex.	Dec.
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:

Save current status with scene 5:

### 8.2.3 Teach in scenes without telegrams (MIX2 ONLY)

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* (*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 locked via a parameter.

### 8.3 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.

## 9 Release notes

From date of production	Changes
2027	<p>If the drive moves to 0% height (via auto object "Height %"), the slat is no longer tracked</p> <p>If the same value is received on the height object, the blind does not move again.</p> <p>If a height of &lt; 3% via the object is approached, the slat is not tracked.</p> <p>If the starting height is <math>\geq 3\%</math>, the slat position just set is reset.</p> <p>If a position has been received via the object "Slat %" up to 1s before receiving the height, this position is set after approaching the height.</p> <p>If the same height was reached via position A, B or C, the slat was not changed.</p> <p>Now the new slat position is approached, even if the height remains the same.</p> <p>Fixed bug with sun protection presence object.</p> <p>With older version the presence behavior was performed only once.</p>



Date of manufacture = Year, week  
**1731** = 2017, week 31