Binary inputs of MIX2 series
BMG 6 T, BME 6 T
FIX1 BM 6 T
FIX2 BM 12 T

BMG 6 T	4930230
BME 6 T	4930235
BM 6 T	4940230
BM 12 T	4940235

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2 Functional characteristics

- 6-way binary input MIX2.
- MIX2 basic module.
- For extension to a maximum of 18 channels.
- 6 floating universal and wide-range voltage inputs
  (10-240 V AC/DC or internally generated auxiliary voltage of approx. 12 V DC).
- 2 additional channels operable by buttons on the device, but without input.
- 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 use of the actuators is possible even without the KNX bus module.
- LED switching status indicator for each channel.
- Manual operation on device (even without bus voltage).
- Manual operation per channel for simulating the input states.
- All inputs can be operated with different voltages and at different potentials.
- Connectable cable length up to 100 m.
- Free allocation of functions: switch/push button, dimming, blinds/roller blinds, counter, repeat telegram, sequences.

3 MIX2 and FIX1/FIX2 devices

This manual describes the MIX2 devices and can also be used with devices from the FIX Series.

A FIX1 device behaves like a MIX2 basic module.
A FIX2 device behaves like a MIX2 basic module and an extension module of the same type (e.g. blinds actuator) in a common housing.

Devices in the FIX Series (Order No. 494..):
- Cannot be extended
- Cannot be combined

The remaining functions are identical to those in the MIX2 series.

4 MIX and MIX2 devices

The MIX2 series consists, among others, of the basic modules RMG 4 I, RMG 8 S, RMG 8 T, DMG 2 T, JMG 4 T, JMG 4 T 24V, HMG 6 T BMG 6 T as well as the extensions RME 4 I, RME 8 S, RME 8 T, DME 2 T, JME 4 T, JME 4 T 24V, HMG 6 T, BME 6 T (as of 12/2014).

Any MiX and MIX2 extension modules can be connected to a 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 4 I, RMG 8 S, RMG 8 T, DMG 2 T, JMG 4 T, HMG 6 T, JMG 4 T 24V, BMG 6 T	-	-
MIX2 extensions	493…	RME 4 I, RME 8 S, RME 8 T, DME 2 T, JME 4 T, HME 6 T JME 4 T 24V, 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.

5 Operation

5.1 Channel button and LED

The BMG 6 T has 6 binary inputs (I1-I6) and 2 additional channels (C1, C2), which each have to be operated via a button on the device
One button and one LED are available for each input.
The LED shows the current status of the input:
LED on = voltage present at the input.

The channel buttons simulate the inputs I1-I6:
Pressing the button simulates applying the voltage to an input, (with edge evaluation: pressing = rising edge, releasing = falling edge).

This operating philosophy does not apply if the input is configured as a switch.
In this case, each push of the button inverts the previously detected edge.
I.e. the channel button can be used to invert the actual switching status.

The buttons on the device can be blocked via a parameter.
If a blocked button is operated, the channel LED flashes at a frequency of 2 Hz.

Channels C1 and C2 have to be operated only on the device. The following functions are available:

- Push button
- Dimming
- Blinds
- Sequence

5.2 Manual button and LED

In manual mode, the inputs are not evaluated anymore.
Telegrams can only be generated via the buttons on the device.
If the „Manual“ function is selected, the Manual LED is lit.
Any running time functions (delays) will be stopped.

This mode can be set or reset with the manual button or via object 78.
Whether manual mode should be ended after the expiry of a set time can also be defined.

5.2.1 Blocking the manual button

The function of the button can be blocked via a parameter, whereby the corresponding object also looses any function.
After unlocking, the inputs are active again.
Events during manual (by change of state at the inputs) will not be performed later. The "Manual" state will be reset in the event of a mains failure, but not in case of a bus failure.

6 Technical data

Operating voltage KNX	Bus voltage, ≤ 4 mA
Operating voltage	110–240 V AC, +10 % / –15 %
Frequency	50 – 60 Hz
Standby output	0.3 W / 0.5 W[1]
Inputs	6 (I1–I6)
Auxiliary voltage	12 V DC, max. 18 mA. BMG 6 T, BME 6 T: FELV BM 12 T: SELV
Connection of SELV to the inputs	only if all inputs (I1–I3 or I4–I6) are connected to SELV.
Protection rating	IP 20 in accordance with EN 60529
Protection class	II subject to designated installation
Operating temperature	–5 °C … +45 °C

[1] BM 12 T

7 The application program "MIX2 V1.7"

7.1 Selection in the product database

Manufacturer	Theben AG
Product family	inputs
Product type	BMG 6 T
Programme name	MIX2 V1.7

The ETS database can be found on our website: www.theben.de/downloads

Table 2

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

7.2 Communication objects

The objects are divided into channel-related and common objects.
Name and function of the objects are determined by the selected channel function (parameter *Input function*).
For reasons of clarity, only the objects of channel I1 are listed here.

Note: The *Switch*, *Counter* and *Repeat telegram* functions are not available with the additional channels C1 and C2:

7.2.1 SWITCH function

Table 3

No.	Object name	Function	Length DPT	Flags			
				C	R	W	T
0	*BMG 6 T Channel I1.1*	*Switching ON/OFF*	1 bit 1.001	C	R	W	T
		Priority	2 bit 2,003	C	R	-	T
		Send percentage value	1 byte 5,001	C	R	-	T
		Send value	1 byte 5,010	C	R	-	T
		2 byte DPT 9.x	2 byte 9.xxx	C	R	-	T
		4 byte DPT 14.x	4 byte 14.xxx	C	R	-	T
1	*BMG 6 T Channel I1.2*	*Switching ON/OFF*	1 bit 1.001	C	R	W	T
		Priority	2 bit 2,003	C	R	-	T
		Send percentage value	1 byte 5,001	C	R	-	T
		Send value	1 byte 5,010	C	R	-	T
		2 byte DPT 9.x	2 byte 9.xxx	C	R	-	T
		4 byte DPT 14.x	4 byte 14.xxx	C	R	-	T
2	*BMG 6 T Channel I1.3*	*Switching ON/OFF*	1 bit 1.001	C	R	W	T
		Priority	2 bit 2,003	C	R	-	T
		Send percentage value	1 byte 5,001	C	R	-	T
		Send value	1 byte 5,010	C	R	-	T
		2 byte DPT 9.x	2 byte 9.xxx	C	R	-	T
		4 byte DPT 14.x	4 byte 14.xxx	C	R	-	T

Continuation:

No.	Object name	Function	Length DPT	Flags			
				C	R	W	T
4	*BMG 6 T Channel I1*	*Block = 0*	1 bit 1,003	C	R	W	-
	BMG 6 T Channel I1	*Block = 1*	1 bit 1,003	C	R	W	-
5	*BMG 6 T Channel I1*	*Acknowledge alert*	1 bit 1,015	C	R	W	-

7.2.2 PUSH BUTTON function

Table 4

No.	Object name	Function	Length DPT	Flags			
				C	R	W	T
0	*BMG 6 T Channel I1.1*	*Switching ON/OFF*	1 bit 1.001	C	R	W	T
		Priority	2 bit 2,003	C	R	-	T
		Send percentage value	1 byte 5,001	C	R	-	T
		Send value	1 byte 5,010	C	R	-	T
		2 byte DPT 9.x	2 byte 9.xxx	C	R	-	T
		4 byte DPT 14.x	4 byte 14.xxx	C	R	-	T
1	*BMG 6 T Channel I1.2*	*Switching ON/OFF*	1 bit 1.001	C	R	W	T
		Priority	2 bit 2,003	C	R	-	T
		Send percentage value	1 byte 5,001	C	R	-	T
		Send value	1 byte 5,010	C	R	-	T
		2 byte DPT 9.x	2 byte 9.xxx	C	R	-	T
		4 byte DPT 14.x	4 byte 14.xxx	C	R	-	T
2	*BMG 6 T Channel I1.3*	*Switching ON/OFF*	1 bit 1.001	C	R	W	T
		Priority	2 bit 2,003	C	R	-	T
		Send percentage value	1 byte 5,001	C	R	-	T
		Send value	1 byte 5,010	C	R	-	T
		2 byte DPT 9.x	2 byte 9.xxx	C	R	-	T
		4 byte DPT 14.x	4 byte 14.xxx	C	R	-	T
4	*BMG 6 T Channel I1*	*Block = 1*	1 bit 1,003	C	R	W	-
		Block = 0	1 bit 1,003	C	R	W	-

7.2.3 DIMMING function

Table 5

No.	Object name	Function	Length DPT	Flags			
				C	R	W	T
0	*BMG 6 T Channel I1*	*Switching ON/OFF*	1 bit 1.001	C	R	W	T
1	*BMG 6 T Channel I1*	*Brighter/darker*	4 bit 3,007	C	R	-	T
		Brighter	4 bit 3,007	C	R	W	T
		Darker	4 bit 3,007	C	R	W	T
2	*BMG 6 T Channel I1*	*Switching ON/OFF*	1 bit 1.001	C	R	W	T
		Send percentage value	1 byte 5,001	C	R	-	T
		Send value	1 byte 5,010	C	R	-	T
4	*BMG 6 T Channel I1*	*Block = 0*	1 bit 1,003	C	R	W	-
		Block = 1	1 bit 1,003	C	R	W	-

7.2.4 BLINDS function

Table 6

No.	Object name	Function	Length DPT	Flags			
				C	R	W	T
0	*BMG 6 T Channel I1*	*Step/Stop*	1 bit 1,010	C	R	-	T
1	*BMG 6 T Channel I1*	*UP/DOWN*	1 bit 1,008	C	R	W	T
		UP	1 bit 1,008	C	R	-	T
		DOWN	1 bit 1,008	C	R	-	T
2	*BMG 6 T Channel I1.1*	*Switching ON/OFF*	1 bit 1,001	C	R	W	T
		Send percentage value	1 byte 5,001	C	R	-	T
		Height %	1 byte 5,001	C	R	-	T
		Send value	1 byte 5,010	C	R	-	T
3	*BMG 6 T Channel I1.2*	*Slat %*	1 byte 5,001	C	R	-	T
4	*BMG 6 T Channel I1*	*Block = 0*	1 bit 1,003	C	R	W	-
		Block = 1	1 bit 1,003	C	R	W	-

7.2.5 REPEAT TELEGRAM function

IMPORTANT:
For the *Repeat telegram* function, object 0 must be linked to at least 2 group addresses:

- One sending group address.
- One (or more) receiving group address.

Via the receiving address, the object is set to the desired value (receive telegrams).
The sending address repeats the previously received (saved) telegram, as soon as the input (button) is activated.

Table 7

No.	Object name	Function	Length DPT	Flags			
				C	R	W	T
0	*BMG 6 T Channel I1.1*	*Switching ON/OFF*	1 bit	C	R	W	T
		Priority	2 bit	C	R	W	T
		Repeat 1 byte	1 byte	C	R	W	T
		2 byte DPT 9.x	2 byte	C	R	W	T
		4 byte DPT 14.x	4 byte	C	R	W	T
4	*BMG 6 T Channel I1*	*Block = 0*	1 bit 1,003	C	R	W	-
		Block = 1	1 bit 1,003	C	R	W	-

7.2.6 COUNTER function

Table 8

No.	Object name	Function	Length DPT	Flags			
				C	R	W	T
0	*BMG 6 T Channel I1*	*Comparison value reached*	1 bit 1,002	C	R	-	T
	BMG 6 T Channel I1	*Send counter value*	2 byte 7,001	C	R	-	T
1	*BMG 6 T Channel I1*	*Current counter value*	2 byte 7,001	C	R	-	T
4	*BMG 6 T Channel I1*	*1 = block counter*	1 bit 1,003	C	R	W	-
	BMG 6 T Channel I1	*1 = enable counter*	1 bit 1,003	C	R	W	-
5	*BMG 6 T Channel I1*	*Reset counter*	1 bit 1,015	C	R	W	-

7.2.7 SEQUENCE function

Table 9

No.	Object name	Function	Length DPT	Flags			
				C	R	W	T
0	*BMG 6 T Channel I1.1*	*Switching ON/OFF*	1 bit 1.001	C	R	-	T
	BMG 6 T Channel I1.1	*Priority*	2 bit 2,003	C	R	-	T
	BMG 6 T Channel I1.1	*Send percentage value*	1 byte 5,001	C	R	-	T
	BMG 6 T Channel I1.1	*Send value*	1 byte 5,010	C	R	-	T
	BMG 6 T Channel I1.1	*2 byte DPT 9.x*	2 byte 9.xxx	C	R	-	T
	BMG 6 T Channel I1.1	*4 byte DPT 14.x*	4 byte 14.xxx	C	R	-	T
1	*BMG 6 T Channel I1.2*	*Switching ON/OFF*	1 bit 1.001	C	R	-	T
	BMG 6 T Channel I1.2	*Priority*	2 bit 2,003	C	R	-	T
	BMG 6 T Channel I1.2	*Send percentage value*	1 byte 5,001	C	R	-	T
	BMG 6 T Channel I1.2	*Send value*	1 byte 5,010	C	R	-	T
	BMG 6 T Channel I1.2	*2 byte DPT 9.x*	2 byte 9.xxx	C	R	-	T
	BMG 6 T Channel I1.2	*4 byte DPT 14.x*	4 byte 14.xxx	C	R	-	T
2	*BMG 6 T Channel I1.3*	*Switching ON/OFF*	1 bit 1.001	C	R	-	T
	BMG 6 T Channel I1.3	*Priority*	2 bit 2,003	C	R	-	T
	BMG 6 T Channel I1.3	*Send percentage value*	1 byte 5,001	C	R	-	T
	BMG 6 T Channel I1.3	*Send value*	1 byte 5,010	C	R	-	T
3	*BMG 6 T Channel I1.4*	*Switching ON/OFF*	1 bit 1.001	C	R	-	T
	BMG 6 T Channel I1.4	*Priority*	2 bit 2,003	C	R	-	T
	BMG 6 T Channel I1.4	*Send percentage value*	1 byte 5,001	C	R	-	T
	BMG 6 T Channel I1.4	*Send value*	1 byte 5,010	C	R	-	T
4	*BMG 6 T Channel I1*	*Block = 1*	1 bit 1,003	C	R	W	-
	BMG 6 T Channel I1	*Block = 0*	1 bit 1,003	C	R	W	-

Table 10: Overview of channel- and module-related objects

Basic module BMG 6 T	I1	I2	I3	I4	I5	I6	C1	C2	Manual
	0	10	20	30	40	50	60	70	78
	1	11	21	31	41	51	61	71	
	2	12	22	32	42	52	62	72	
	3	13	23	33	43	53	63	73	
	4	14	24	34	44	54	64	74	
	5	15	25	35	45	55	65	75	
1st extension BME 6 T	I1	I2	I3	I4	I5	I6	C1	C2	Manual
	80	90	100	110	120	130	140	150	158
	81	91	101	111	121	131	141	151	
	82	92	102	112	122	132	142	152	
	83	93	103	113	123	133	143	153	
	84	94	104	114	124	134	144	154	
	85	95	105	115	125	135	145	155	
2nd extension BME 6 T	I1	I2	I3	I4	I5	I6	C1	C2	Manual
	160	170	180	190	200	210	220	230	238
	161	171	181	191	201	211	221	231	
	162	172	182	192	202	212	222	232	
	163	173	183	193	203	213	223	233	
	164	174	184	194	204	214	224	234	
	165	175	185	195	205	215	225	235	

7.2.8 Common objects

These objects are partly used by the basic module and the two extension modules.
The manual object always refers to an entire MIX2 module.

Elements highlighted in grey are common MIX2 objects, which are not used by the BMG 6 T or BME 6 T.

Table 11:

No.	Object name	Function	Type DPT	Flags			
				C	R	W	T
78	*BMG 6 T*	*Manual*	1 bit 1.001	C	R	W	T
158	*EM1 BME 6 T*	*Manual*	1 bit 1.001	C	R	W	T
238	*EM2 BME 6 T*	*Manual*	1 bit 1.001	C	R	W	T
240	*Central continuous ON*	*For RMG 8S, DME 2 S, SME 2 S, DMG 2 T, DME 2 T*	1 bit 1,001	C	R	W	T
241	*Central continuous OFF*	*For RMG 8S, DME 2S, SME 2S, DMG 2 T, DME 2 T*	1 bit 1,001	C	R	W	T
242	*Central switching*	*For RMG8S, DME 2S, SME 2S, DMG 2 T, DME 2 T*	1 bit 1,001	C	R	W	T
243	*Call up/save central scenes*	*RMG8S, DME2S, JME4S, SME2S, DMG 2 T, DME 2 T*	1 byte 18,001	C	R	W	T
244	*Central safety 1*	*For JMG 4 T (Wind), JME 4 S*	1 bit 1,005	C	R	W	-
245	*Central safety 2*	*For JMG 4 T (Wind), JME 4 S*	1 bit 1,005	C	R	W	-
246	*Central safety 3*	*For JMG 4 T (Wind), JME 4 S*	1 bit 1,005	C	R	W	-
247	*Central up/down*	*For JMG 4 T, JME 4 S*	1 bit 1,008	C	R	W	-
248	*Central safety rain*	*For JMG 4 T*	1 bit 1,005	C	R	W	-
249	*Central safety frost*	*For JMG 4 T*	1 bit 1,005	C	R	W	-
250	*Version of bus coupling unit*	*Send*	14 byte 16,001	C	R	-	T
251	*Version of basic module*	*Send*	14 byte 16,001	C	R	-	T
252	*Version of 1st extension module*	*Send*	14 byte 16,001	C	R	-	T
253	*Version of 2nd extension module*	*Send*	14 byte 16,001	C	R	-	T

7.2.9 Description of objects

7.2.9.1 Objects for the switch function

- **Object 0 „*BMG 6 T Channel I1.1*“**

First initial object of the channel (First telegram).
6 telegram formats can be set:
Switching ON/OFF, priority, send percentage value, send value, 2 byte DPT 9.x, 4 byte DPT 14.x.

- **Object 1 „*BMG 6 T Channel I1.2*“**

Second initial object of the channel (Second telegram).
6 telegram formats can be set:
Switching ON/OFF, priority, send percentage value, send value, 2 byte DPT 9.x, 4 byte DPT 14.x.

- **Object 2 „*BMG 6 T Channel I1.3*“**

Third initial object of the channel (Third telegram).
6 telegram formats can be set:
Switching ON/OFF, priority, send percentage value, send value, 2 byte DPT 9.x, 4 byte DPT 14.x.

- **Object 4 „*Block = 0, Block = 1*“**

The channel is blocked via this object.
The acting direction and behaviour when setting or cancelling the block can be set on the block function parameter page.

- **Object 5 „*Acknowledge alert*“**

Only available if the channel is configured as an alert input.
Deletes the alert.

- **Objects 10-55**

Objects for channels I2-I6.

- **Objects 60-75**

This function is not supported by C1-C2.

7.2.9.2 Objects for the push button function

- **Object 0 *„BMG 6 T Channel I1.1“***

First initial object of the channel (First telegram).
6 telegram formats can be set:
Switching ON/OFF, priority, send percentage value, send value, 2 byte DPT 9.x, 4 byte DPT 14.x.

- **Object 1 *„BMG 6 T Channel I1.2“***

Second initial object of the channel (Second telegram).
6 telegram formats can be set:
Switching ON/OFF, priority, send percentage value, send value, 2 byte DPT 9.x, 4 byte DPT 14.x.

- **Object 2 *„BMG 6 T Channel I1.3“***

Third initial object of the channel (Third telegram).
6 telegram formats can be set:
Switching ON/OFF, priority, send percentage value, send value, 2 byte DPT 9.x, 4 byte DPT 14.x.

- **Object 4 *„Block = 0, Block = 1“***

The channel is blocked via this object.
The acting direction and behaviour when setting or cancelling the block can be set on the block function parameter page.

- **Objects 10-75**

Objects for channels I2-I6 and C1-C2.

7.2.9.3 Objects for the dimming function

- **Object 0 „*Switching ON/OFF*“**

Switches the dimmer on and off

- **Object 1 „*Brighter, darker, brighter/darker*“**

4-bit dim commands for the dimmer.

- **Object 2 „*BMG 6 T Channel I1.1*“**

Initial object for the additional function with double-click.
3 telegram formats can be set:
Switching ON/OFF, send percentage value, send 8-bit value.

- **Object 4 „*Block = 0, Block = 1*“**

The channel is blocked via this object.
The acting direction and behaviour when setting or cancelling the block can be set on the *configuration options and double-click* parameter pages.

- **Objects 10-75**

Objects for channels I2-I6 and C1-C2.

7.2.9.4 Objects for the blinds function

- **Object 0 „*UP/DOWN*“**

Sends operating command to the blind actuator.

- **Object 1 „*Step/Stop*“**

Sends Step/Stop commands to the blind actuator.

- **Object 2 „*BMG 6 T Channel I1.1*“**

First initial object for the additional function with double-click.
4 telegram formats can be set:
Switching ON/OFF, send percentage value, send 8-bit value, send height %.

- **Object 3 „*BMG 6 T Channel I1.3 (Slat %)*“**

Second initial object for the additional function with double-click: Slat %.
This object is only available if object type *Height % + Slat %* is selected.

- **Object 4 „*Block = 0, Block = 1*“**

The channel is blocked via this object.
The acting direction and behaviour when setting or cancelling the block can be set on the *configuration options and double-click* parameter pages.

- **Objects 10-75**

Objects for channels I2-I6 and C1-C2.

7.2.9.5 Objects for the repeat telegram function

- **Object 0 „*BMG 6 T Channel I1.1*“**

When activating the input, the object sends the previously received telegram to the bus again.
6 telegram formats can be set:
1 bit (ON/OFF), 4 bit (priority), 1 byte (%, 1-255..), 2 byte (DPT 9.x), 4 byte (DPT 14.x).

- **Object 4 „*Block = 0, Block = 1*“**

The channel is blocked via this object.
The acting direction and behaviour when setting or cancelling the block can be set on the block function parameter page.

- **Objects 10-55**

Objects for channels I2-I6.

- **Objects 60-75**

This function is not supported by C1-C2.

7.2.9.6 Objects for the counter function

- **Object 0 „***Comparison value reached, send counter value***“**

Table 12

Counter type	Object function
Event counter	Sends the current meter reading (0-65535).
Comparator	Reports, whether the preset comparison value is reached. See also: *Telegram once the comparison value is reached* parameter.

- **Object 4 „***1 = Block counter, 1 = Enable counter***“**

The channel is blocked or enabled via this object.
The counter can be blocked with a 0 0 or with a 1.
See *Function of the input object* parameter.

- **Object 5 „***Reset counter***“**

Reset counter to 0.

- **Objects 10-55**

Objects for channels I2-I6.

- **Objects 60-75**

This function is not supported by C1-C2.

7.2.9.7 Objects for the sequence function

- **Object 0 *„BMG 6 T Channel I1.1“***

First initial object of the channel (object 1).
6 telegram formats can be set:
Switching ON/OFF, priority, send percentage value, send value, 2 byte DPT 9.x, 4 byte DPT 14.x.

- **Object 1 *„BMG 6 T Channel I1.2“***

Second initial object of the channel (object 2).
6 telegram formats can be set:
Switching ON/OFF, priority, send percentage value, send value, 2 byte DPT 9.x, 4 byte DPT 14.x.

- **Object 2 *„BMG 6 T Channel I1.3“***

Third initial object of the channel (object 3).
4 telegram formats can be set:
Switching ON/OFF, priority, send percentage value, send value.

- **Object 3 *„BMG 6 T Channel I1.4“***

Fourth initial object of the channel (object 4).
4 telegram formats can be set:
Switching ON/OFF, priority, send percentage value, send value.

- **Object 4 *„Block = 0, Block = 1“***

The channel is blocked via this object.
The acting direction and behaviour when setting or cancelling the block can be set on the block function parameter page.

- **Objects 10-75**

Objects for channels I2-I6 and C1-C2.

7.2.9.8 Common objects for extension modules

- **Object 78** *"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.

Table 13

Telegram	Meaning	Explanation
0	Auto	Device inputs and manual buttons are evaluated.
1	Manual	Only manual buttons are evaluated, the device inputs are not taken into account.

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

After cancelling manual operation, the state of the channel is redefined, based on the hardware inputs. The "Manual" state will be reset in the event of a mains failure.

- **Objects 80-159**

Objects for the first extension module.

- **Objects 160-239**

Objects for the second extension module.

- **Objects 240 - 249**

Not used for BMG 6 T and BME 6 T.

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

For diagnostic purposes only.

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

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

Code	Meaning
xx	00 .. FF = Version of application without dividing point (14 = V1.4, 15 = V1.5 etc.).
yy	Hardware version 00..99
zzz	Firmware version 000..999

EXAMPLE: A15 H03 V014
- ETS Application Version 1.5
- Hardware version $03
- Firmware version $14

- **Object 251** "*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: **M**xx **H**yy **V**zzz

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

Possible module codes (as of 12/2014)

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
BMG 6 T	$92

EXAMPLE: M92 **H**25 **V**025
- Module $92 = BMG 6 T
- Hardware version V25
- Firmware version V25

- **Object 252** "*Version of 1st extension module*"

Telegram format: See above, object 251

Possible module codes (as of 12/2014)

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
BME 6 T	$92

- **Object 253** "*Version of 2nd extension module*"

See above, object 252

7.3 Parameters

7.3.1 Parameter pages

Binary input BMG 6 T has 6 identical, individually configurable input channels (I1-I6).
Via 2 push buttons on the device, 2 additional channels (C1-C2) can be controlled directly.

Each of the input channels I1-I6 can implement seven different functions.
Four of these functions are also available for channels C1 and C2:

- Push button
- Dimming
- Blinds
- Sequence

Table 14

Function	Description
General	Selection of modules and central parameters.
BASIC MODULE: BMG 6 T	(Empty page).
BMG 6 T channel I1 configuration options	Function of the input, activate block function etc.
Objects for switch	Object type, 1, 2 or 3 send telegrams.
Objects for push buttons	Object type, 1, 2 or 3 send telegrams.
Dimming function	Type of control
Blinds function	Type of control
Double-click	Additional telegrams for *dimming* and *blinds*
Objects for repeat telegram	Object type etc.
Counter function	Counter type, prescaler etc.
Sequence function	Settings for step 1 to step 4 of the telegram sequence
Block function	Reaction when activating/cancelling the block etc.

7.3.2 General

Table 15

Designation	Values	Description
Type of basic module	***Select device..*** *RMG 8 S..* *RMG 8 T..* *RMG 4 I..* *DMG 2 T..* *JMG 4 T/JMG 4 T 24V..* *HMG 6 T.* *BMG 6 T.*	Selection of available basic module (MIX2 series only)
Type of 1st extension module	***not available/inactive*** *RME 8 S..* *RME 8 T..* *RME 4 I..* *DME 2 T..* *JME 4 T/JME 4 T 24V..* *HME 6 T.* *BME 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)
Type of 2nd extension module	***not available/inactive*** *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)
Time for cycl. sending of feedback obj. *(MIX series, order no. 491...)*	*2 minutes, 3 minutes,* *5 minutes, 10 minutes,* ***15 minutes,** 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).

Continuation:

Designation	Values	Description
Function of manual button (MIX2 series, order no. 493...)	*applies for 24 hours or until reset via object* *blocked* ***applies until reset via object*** *applies for 30 minutes or until reset via object* *applies for 1 hour or until reset via object* *applies for 2 hours or until reset via object* *applies for 4 hours or until reset via object* *applies for 8 hours or until reset via object* *applies for 12 hours or until reset via object*	Determines how long the device works manually and how this is ended. In manual mode, the channels can only be switched on and off via the buttons on the device. See also: object 78 This parameter is used exclusively for MIX2 series devices. (RMG 4 I, RMG 8 S, RME 4 I, RME 8 S, DMG 2 T, DME 2 T, BMG 6 T, BME 6 T)
Manual operation of channels (MIX2 series, order no. 493...)	***unblocked*** *blocked*	The channels can be operated via the buttons on the device. No manual operation, the buttons on the device are blocked..

7.3.3 Parameters for the SWITCH function

7.3.3.1 BMG 6 T channel I1 parameter page: Functions

Table 16

Designation	Values	Description
Sensitivity of the input	***normal***	for normal application.
	reduced	Recommended in case of faulty control due to malfunctions, especially with long cables. **Important:** This setting can be used unrestrictedly for DC voltage control. With AC voltage only for input voltage ≥ 110 V AC suitable.
Input function	***Switch..***	Sends, depending on whether the input is 0 or 1.
	Push button.. *Dimming..* *Blinds..* *Repeat telegram..* *Counter..* *Sequence..*	See below.
Debounce time	*30 ms* ***50 ms*** *80 ms* *100 ms* *200 ms* *1 s* *5 s* *10 s*	In order to avoid a disruptive switching due to debouncing of the contact connected to the input, the new status of the input is only accepted after a delay time. Larger values (≥ 1s) can be used as a switch-on delay
Use channel as an alert input	***no***	Channel is used as a standard switch input.
	yes	The input is used together with any alarm generator, e.g. alarm button, over temperature switch, etc.

Continuation:

Designation	Values	Description
Cycle time	***2 min,*** *3 min, 5 min* *10 min, 15 min, 20 min* *30 min, 45 min, 60 min*	Common cycle time for all 3 initial objects of the channel.
Activate block function	***no***	No block function.
	yes	Show block function parameter page.
Parameter for channel as fault indicator		
Report fault	***with rising edge***	Adjustment to the available alarm generator.
	with falling edge	
Acknowledgement mandatory	***no***	The alert is only as long active as the input.
	yes	Channel reports fault, which must be acknowledged. **See appendix:** Fault indicator function.
Acting direction of the acknowledgement object	***acknowledge with 1***	Is the alert to be acknowledged with 1 or 0 telegram?
	acknowledge with 0	
Update after acknowledgement if fault still present		Behaviour in case of acknowledgement if fault is permanently present at the input:
	do not update automatically	Alert is terminated.
	10 min, 20 min, 30 min *40 min, 50 min* ***1 h*** *1 h 10 min, 1 h 20 min* *1 h 30 min, 1 h 40 min* *1 h 50 min* *2 h* *2 h 10 min, 2 h 20 min* *2 h 30 min*	If the fault is still present after acknowledgement, it will be alerted again after expiration of the set time. **See appendix:** Fault indicator function.

7.3.3.2 Objects for switch parameter page

Table 17

Designation	Values	Description
FIRST TELEGRAM		
Object type	***Switching (1 bit)*** *Priority (2 bit)* *Value 0-255* *Percentage value (1 byte)* *2 byte floating-point number DPT 9.x* *4 byte floating-point number DPT 14.x*	Select telegram type for this channel.
Send if input = 1 (or fault active)	*no* ***yes***	Send if voltage is present at the input?
Telegram	With object type = *switching (1 bit)*	
	ON	Send switch-on command
	OFF	Send switch-off command
	BY	Invert current state (ON→OFF→ON etc.)
	With object type = *priority (2 bit)*	
		Function: Value
	inactive	Priority inactive (no control): 0 (00_{bin})
	ON	Priority ON Priority ON (control: enable, on): 3 (11_{bin})
	OFF	Priority OFF (control: disable, off): 2 (10_{bin})
	With object type = *value 0-255*	
	*0-**255***	Any value between 0 and 255 can be sent.
	With object type = *percentage value (1 byte)*	
	*0-**100 %***	Any percentage value between 0 and 100 % can be sent in 5 % increments.
	With object type = *2 byte floating-point number DPT 9.x*	
Value	***-999 to +999***	The telegram is calculated from a value and a factor (telegr. = value x factor). Examples: Value 10 and factor 100 = 1000. Value 10 and factor 0.1 = 1. Set base value
Factor	***1*** ***10*** ***100*** ***1000*** ***10000*** ***100000*** ***0.01*** ***0.1***	Set factor (= multiplier).

Continuation:

Designation	Values	Description
	With object type = *4 byte floating-point number DPT 14.x*	
Value	***-999 to +999***	Set base value
Factor	***1*** ***10*** ***100*** ***1000*** ***10000*** ***100000*** ***1,000,000*** ***10^7, 10^8*** ***10^9, 10^{10}*** ***10^{11}, 10^{12}*** ***0.1*** ***0.01*** ***0.001***	Set factor (= multiplier).
Send if input = 0 (or fault inactive)	*no* ***yes***	Send if no voltage is present at the input?
Telegram	With object type = *switching (1 bit)*	
	ON	Send switch-on command
	OFF	Send switch-off command
	BY	Invert current state (ON→OFF→ON etc.)
	With object type = *priority (2 bit)*	
	Function / Value	
	inactive — Priority inactive (no control)	0 (00_{bin})
	ON — Priority ON (control: enable, on)	3 (11_{bin})
	OFF — Priority OFF (control: disable, off)	2 (10_{bin})
	With object type = *value 0-255*	
	0*-255*	Any value between 0 and 255 can be sent.
	With object type = *percentage value (1 byte)*	
	0*-100 %*	Any percentage value between 0 and 100 % can be sent in 5 % increments.
	With object type = *2 byte floating-point number DPT 9.x*	
Value	*-999 to +999*	Set base value
Factor	*1* *10* *100* *1000* *10000* *100000* *0.01* *0.1*	Set factor (= multiplier).

Continuation:

Designation	Values	Description
	With object type = *4 byte floating-point number DPT 14.x*	
Value	*-999 to +999*	Set base value
Factor	*1* *10* *100* *1000* *10000* *100000* *1,000,000* 10^7, 10^8 10^9, 10^{10} 10^{11}, 10^{12} *0.1* *0.01* *0.001*	Set factor (= multiplier).
Send telegram cyclically	***no***	do not send cyclically.
	yes, always	Send cyclically.
	only if input = 1 (or fault active) *only if input = 0 (or fault inactive)*	send cyclically only with one state.
Response after bus and mains restoration	***none***	Do not send.
	update (after 5 s) *update (after 10 s)* *update (after 15 s)*	Send update telegram with delay.
Send a second telegram?	***no***	Only one initial object should be active.
	yes	A second initial object including parameters is shown and enables the sending of 2 telegrams.
SECOND TELEGRAM → see above, FIRST TELEGRAM.		
Send a third telegram?	***no***	Only two initial objects should be active.
	yes	A third initial object including parameters is shown and enables the sending of 3 telegrams.
THIRD TELEGRAM → see above, FIRST TELEGRAM.		

7.3.3.3 Block function parameter page

Table 18

Designation	Values	Description
Block telegram	***Block with 1 (standard)***	0 = enable 1 = block
	Block with 0	0 = block 1 = enable
FIRST TELEGRAM		
Response when setting the block	*Ignore block*	Block function is ineffective with this telegram.
	no response	Do not respond when setting the block.
	As with input = 1 (or fault active)	React as if input is set to 1 or fault is reported.
	As with input = 0 (or fault inactive)	React as if input is set to 0 or no fault is reported.
Response when cancelling the block	*no response*	Do not respond when the block is cancelled.
	update	Send the current channel status.
SECOND TELEGRAM		
Response when setting the block	*Ignore block*	Block function is ineffective with this telegram.
	no response	Do not respond when setting the block.
	As with input = 1 (or fault active)	React as if input is set to 1 or fault is reported.
	As with input = 0 (or fault inactive)	React as if input is set to 0 or no fault is reported.
Response when cancelling the block	*no response*	Do not respond when the block is cancelled.
	update	Send the current channel status.

Continuation:

Designation	Values	Description
THIRD TELEGRAM		
Response when setting the block	*Ignore block*	Block function is ineffective with this telegram.
	no response	Do not respond when setting the block.
	As with input = 1 (or fault active)	React as if input is set to 1 or fault is reported.
	As with input = 0 (or fault inactive)	React as if input is set to 0 or no fault is reported.
Response when cancelling the block	*no response*	Do not respond when the block is cancelled.
	update	Send the current channel status.

Note: If a channel is blocked, no telegrams will be sent cyclically.

7.3.4 Parameters for the PUSH BUTTON function

7.3.4.1 BMG 6 T channel I1 parameter page: Functions

Table 19

Designation	Values	Description
Sensitivity of the input	***normal***	for normal application.
	reduced	Recommended in case of faulty control due to malfunctions, especially with long cables. **Important:** This setting can be used unrestrictedly for DC voltage control. With AC voltage only for input voltage ≥ 110 V AC suitable.
Input function	*Switch..*	See above.
	Push button..	A push button is connected to the input.
	Dimming.. *Blinds..* *Repeat telegram..* *Counter..* *Sequence..*	See below
Connected push button	*NO contact* *Opening contact*	Set the Type of connected contact.
Debounce time	*30 ms* ***50 ms*** *80 ms* *100 ms* *200 ms* *1 s* *5 s* *10 s*	In order to avoid a disruptive switching due to debouncing of the contact connected to the input, the new status of the input is only accepted after a delay time. Larger values (≥ 1s) can be used as a switch-on delay
Long button push starting at	*300 ms* *400 ms* *500 ms* *600 ms* *700 ms* *800 ms* *900 ms* *1 s*	Serves to clearly differentiate between long and short button push. If the push button is pressed for at least as long as the set time, then a long button push will be registered.

Continuation:

Designation	Values	Description
Time for double-click	*300 ms, 400 ms, 500 ms* *600 ms, 700 ms, 800 ms* *900 ms* *1 s*	Serves to differentiate between a double-click and 2 single clicks. Time period in which the second click must begin, in order to recognise a double-click.
Cycle time	***2 min,** 3 min, 5 min* *10 min, 15 min, 20 min* *30 min, 45 min, 60 min*	Common cycle time for all 3 initial objects of the channel.
Activate block function	***no*** *yes*	No block function. Show block function parameter page.

7.3.4.2 Objects for push buttons parameter page

Table 20

Designation	Values	Description
FIRST TELEGRAM		
Object type	***Switching (1 bit)*** *Priority (2 bit)* *Value 0-255* *Percentage value (1 byte)* *2 byte floating-point number DPT 9.x* *4 byte floating-point number DPT 14.x*	Select telegram type for this channel.
After short operation	*do not send* ***Send telegram***	Respond to short button push?
Telegram	With object type = *switching (1 bit)*	
	ON	Send switch-on command
	OFF	Send switch-off command
	BY	Invert current state (ON→OFF→ON etc.)
	With object type = *priority (2 bit)*	
	Function / Value	
	inactive	Priority inactive (no control) — 0 (00_{bin})
	ON	Priority ON (control: enable, on) — 3 (11_{bin})
	OFF	Priority OFF (control: disable, off) — 2 (10_{bin})
	With object type = *value 0-255*	
	*0-**255***	Any value between 0 and 255 can be sent.
	With object type = *percentage value (1 byte)*	
	*0-**100 %***	Any percentage value between 0 and 100 % can be sent in 5 % increments.
	With object type = *2 byte floating-point number DPT 9.x*	
Value	***-999 to +999***	The telegram is calculated from a value and a factor (telegr. = value x factor). Examples: Value 10 and factor 100 = 1000. Value 10 and factor 0.1 = 1. Set base value
Factor	***1*** ***10*** ***100*** ***1000*** ***10000*** ***100000*** ***0.01*** ***0.1***	Set factor (= multiplier).

Continuation:

Designation	Values	Description
	With object type = *4 byte floating-point number DPT 14.x*	
Value	***-999 to +999***	Set base value
Factor	***1*** ***10*** ***100*** ***1000*** ***10000*** ***100000*** ***1,000,000*** ***10^7, 10^8*** ***10^9, 10^{10}*** ***10^{11}, 10^{12}*** ***0.1*** ***0.01*** ***0.001***	Set factor (= multiplier).
After long operation	*do not send* ***Send telegram***	Respond to long button push?
Telegram	See above: Same object type as with short operation.	
After double-click	*do not send* ***Send telegram***	Respond to double-click?
Telegram	See above: Same object type as with short operation.	
Send telegram cyclically	***no*** *yes, always* *only if input = 1 (or fault active)* *only if input = 0 (or fault inactive)*	do not send cyclically. Send cyclically. send cyclically only with one state.
Response after bus and mains restoration	***none*** *update (after 5 s)* *update (after 10 s)* *update (after 15 s)*	Do not send. Send update telegram with delay
Send a second telegram?	***no*** *yes*	Only one initial object should be active. A second initial object including parameters is shown and enables the sending of 2 telegrams.
SECOND TELEGRAM → see above, FIRST TELEGRAM.		
Send a third telegram?	***no*** *yes*	A third initial object and its parameters is shown. The channel sends 3 telegrams.
THIRD TELEGRAM → see above, FIRST TELEGRAM.		

7.3.4.3 Block function parameter page

Table 21

Designation	Values	Description
Block telegram	***Block with 1 (standard)***	0 = enable 1 = block
	Block with 0	0 = block 1 = enable
FIRST TELEGRAM		
Response when setting the block	*Ignore block*	Block function is ineffective with this telegram.
	no response	Do not respond when setting the block.
	as with short	Respond as with a short button push.
	as with long	Respond as with a long button push.
	as with double-click	Respond as with a double-click.
Response when cancelling the block	***no response***	Do not respond when the block is cancelled.
	as with short	Respond as with a short button push.
	as with long	Respond as with a long button push.
	as with double-click	Respond as with a double-click.
SECOND TELEGRAM (if used)		
Response when setting the block	*Ignore block*	Block function is ineffective with this telegram.
	no response	Do not respond when setting the block.
	as with short	Respond as with a short button push.
	as with long	Respond as with a long button push.
	as with double-click	Respond as with a double-click.

Continuation:

Designation	Values	Description
Response when cancelling the block	***no response***	Do not respond when the block is cancelled.
	as with short	Respond as with a short button push.
	as with long	Respond as with a long button push.
	as with double-click	Respond as with a double-click.
THIRD TELEGRAM (if used)		
Response when setting the block	*Ignore block*	Block function is ineffective with this telegram.
	no response	Do not respond when setting the block.
	as with short	Respond as with a short button push.
	as with long	Respond as with a long button push.
	as with double-click	Respond as with a double-click.
Response when cancelling the block	***no response***	Do not respond when the block is cancelled.
	as with short	Respond as with a short button push.
	as with long	Respond as with a long button push.
	as with double-click	Respond as with a double-click.

Note: If a channel is blocked, no telegrams will be sent cyclically.

7.3.5 Parameters for the DIMMING function

The input is connected to a push button and sends ON/OFF and relative dim commands (brighter/darker) to a dimming actuator e.g. DMG 2 T (4930270) or DM 4 T (4940275).

7.3.5.1 BMG 6 T channel I1 parameter page: Functions

Table 22

Designation	Values	Description
Sensitivity of the input	***normal***	for normal application.
	reduced	Recommended in case of faulty control due to malfunctions, especially with long cables. **Important:** This setting can be used unrestrictedly for DC voltage control. With AC voltage only for input voltage ≥ 110 V AC suitable.
Input function	*Switch..* *Push button..* *Dimming..* *Blinds..* *Repeat telegram..* *Counter..* *Sequence..*	See above. The input controls a dimming actuator, See below
Debounce time	*30 ms* ***50 ms*** *80 ms* *100 ms* *200 ms* *1 s* *5 s* *10 s*	In order to avoid a disruptive switching due to debouncing of the contact connected to the input, the new status of the input is only accepted after a delay time. Larger values (≥ 1s) can be used as a switch-on delay
Block telegram (if used)	***Block with 1 (standard)***	0 = enable 1 = block
	Block with 0	0 = block 1 = enable

Continuation:

Designation	Values	Description
Response when setting the block	***Ignore block***	Block function is ineffective with this telegram.
	no response	Do not respond when setting the block.
	ON	Switch on dimmer
	OFF	Switch off dimmer
Response when cancelling the block	*no response*	Do not respond when the block is cancelled.
	ON	Switch on dimmer
	OFF	Switch off dimmer
Response in case of bus and mains restoration	*none*	Do not react.
	ON	Switch on dimmer
	OFF	Switch off dimmer
	after 5 s ON	Switch on dimmer with delay
	after 10 s ON	
	after 15 s ON	
	after 5 s OFF	Switch off dimmer with delay
	after 10 s OFF	
	after 15 s OFF	
Additional function with double-click	*no*	No double-click function
	yes..	The double-click parameter page is shown.

Note: If a channel is blocked, no telegrams will be sent cyclically.

7.3.5.2 Dimming function parameter page

Table 23

Designation	Values	Description
Long button push starting at	***300*** *.. 1000 ms*	This function serves to clearly differentiate between long and short button pushes. If the push button is pressed for at least as long as the set time, then a long button push will be registered.
Response to „long“ / „short“		The input distinguishes between a long and a short button push, and can thus carry out 2 functions.
	Single-surface operation	The dimmer is operated with a single push button. Short button push = ON/OFF Long button push = brighter/darker With the other variants, the dimmer is operated using 2 buttons (rocker).
	brighter/ON	Short button push = ON Long button push = brighter Release = stop
	brighter/BY	Short button push = ON/OFF Long button push = brighter Release = stop
	darker/Off	Short button push = OFF Long button push = darker Release = stop
	darker/BY	Short button push = ON/OFF Long button push = darker Release = stop

Continuation:

Designation	Values	Description
Increment for dimming		With a long button push, the dimming value is:
	100 %	Increased (or decreased) until the button is released.
	50 %	Increased by the selected value (or reduced)
	25 %	
	12.5 %	
	6 %	
	3 %	
	1.5 %	

7.3.5.3 Double-click parameter page

With a double-click, additional telegrams can be sent to the bus, independently of the dimming function.

Table 24

Designation	Values	Description
Time for double-click	*300 ms, 400 ms, 500 ms* *600 ms, 700 ms, 800 ms* *900 ms* *1 s*	Serves to differentiate between a double-click and 2 single clicks. Time period in which the second click must begin, in order to recognise a double-click.
Object type	***Switching (1 bit)*** *Value 0-255* *Percentage value (1 byte)*	Select telegram type.
Telegram	With object type = *switching (1 bit)*	
	ON *OFF* *BY*	Send switch-on command Send switch-off command Invert current state (ON→OFF→ON etc.)
	With object type = *value 0-255*	
	*0-**255***	Any value between 0 and 255 can be sent.
	With object type = *percentage value (1 byte)*	
	*0-**100 %***	Any percentage value between 0 and 100 % can be sent in 5 % increments.
Send telegram cyclically	*no* *yes*	do not send cyclically. Send cyclically.
Cycle time	***2 min,** 3 min, 5 min* *10 min, 15 min, 20 min* *30 min, 45 min, 60 min*	Cycle time for the double-click function
Response when setting the block	***Ignore block*** *no response* *as with double-click*	Block function is ineffective with this telegram. Do not respond when setting the block. Respond as with a double-click.
Response when cancelling the block	***no response*** *as with double-click*	Do not respond when the block is cancelled. Respond as with a double-click.

Continuation:

Designation	Values	Description
Response after bus and mains restoration	***none***	Do not send.
	as after double-click (after 5 s)	Send update telegram with delay
	as after double-click (after 10 s)	
	as after double-click (after 15 s)	

Note: If a channel is blocked, no telegrams will be sent cyclically.

7.3.6 Parameters for the BLINDS function

The input is connected to a push button and sends STEP/STOP and operating commands (UP/DOWN) to a blinds actuator e.g. JMG 4 T (4930250) or JM 8 T (4940255).

7.3.6.1 BMG 6 T channel I1 parameter page: Functions

Table 25

Designation	Values	Description
Sensitivity of the input	***normal***	for normal application.
	reduced	Recommended in case of faulty control due to malfunctions, especially with long cables. **Important:** This setting can be used unrestrictedly for DC voltage control. With AC voltage only for input voltage ≥ 110 V AC suitable.
Input function	*Switch..* *Push button..* *Dimming..* *Blinds..* *Repeat telegram..* *Counter..* *Sequence..*	See above. The input controls a blinds actuator. See below.
Debounce time	*30 ms* ***50 ms*** *80 ms* *100 ms* *200 ms* *1 s* *5 s* *10 s*	In order to avoid a disruptive switching due to debouncing of the contact connected to the input, the new status of the input is only accepted after a delay time. Larger values (≥ 1s) can be used as a switch-on delay
Long button push starting at	***300*** *.. 1000ms*	This function serves to clearly differentiate between long and short button pushes. If the push button is pressed for at least as long as the set time, then a long button push will be registered.

Continuation:

Designation	Values	Description
Block telegram (if used)	***Block with 1 (standard)***	0 = enable 1 = block
	Block with 0	0 = block 1 = enable
Response when setting the block	***Ignore block***	Block function is ineffective with this telegram.
	no response	Do not respond when setting the block.
	UP	Raise the blind
	DOWN	Lower blinds
Response when cancelling the block	***no response***	Do not respond when the block is cancelled.
	UP	Raise the blind
	DOWN	Lower blinds
Response in case of bus and mains restoration	***none***	Do not react.
	UP	Raise the blind
	DOWN	Lower blinds
	after 5 sec UP	Raise blinds with delay
	after 10 sec UP	
	after 15 sec UP	
	after 5 s DOWN	Lower blinds with delay
	after 10 s DOWN	
	after 15 s DOWN	
Additional function with double-click	***no***	No double-click function
	yes..	The double-click parameter page is shown.

Note: If a channel is blocked, no telegrams will be sent cyclically.

7.3.6.2 Blinds function parameter page

Table 26

Designation	Values	Description
Operation		The input distinguishes between a long and a short button push, and can thus carry out 2 functions.
	Single-surface operation	The blinds are operated with a single push button. Short button push = Step. Long button push = Move.
	DOWN	Short button push = Step. Long button push = lowering.
	UP	Short button push = Step. Long button push = raising.
Movement is stopped by	*releasing the button* ***Short operation***	How is the stop command to be triggered?

7.3.6.3 Double-click parameter page

With a double-click, additional telegrams can be sent to the bus, independently of the blinds function.

Table 27

Designation	Values	Description
Time for double-click	*300 ms, 400 ms, 500 ms* *600 ms, 700 ms, 800 ms* *900 ms* *1 s*	Serves to differentiate between a double-click and 2 single clicks. Time period in which the second click must begin, in order to recognise a double-click.
Object type	***Switching (1 bit)*** *Value 0-255* *Percentage value (1 byte)* *Height % + slat %*	Switching telegrams. 8 bit value. Percent. Send 2 telegrams: height of blinds and slat position.
Telegram	With object type = *switching (1 bit)*	
	ON *OFF* *BY*	Send switch-on command Send switch-off command Invert current state (ON→OFF→ON etc.)
	With object type = *value 0-255*	
	*0-**255***	Any value between 0 and 255 can be sent.
	With object type = *percentage value (1 byte)*	
	0-100 %	Any percentage value between 0 and 100 % can be sent in 5 % increments.
	With object type = *height % + slat %*	
Height	*0-100 %* Default value = ***50 %***	Desired height for blinds.
Slat	*0-100 %* Default value = ***75 %***	Desired slat position for blinds.
Send telegram cyclically	*no* *yes*	do not send cyclically. Send cyclically.
Cycle time	***2 min,*** *3 min, 5 min* *10 min, 15 min, 20 min* *30 min, 45 min, 60 min*	Cycle time for the double-click function

Continuation:

Designation	Values	Description
Response when setting the block	***Ignore block***	Block function is ineffective with this telegram.
	no response	Do not respond when setting the block.
	as with double-click	Respond as with a double-click.
Response when cancelling the block	***no response***	Do not respond when the block is cancelled.
	as with double-click	Respond as with a double-click.
Response after bus and mains restoration	***none***	Do not send.
	as after double-click (immediately)	Send update telegram without delay
	as after double-click (after 5 s)	Send update telegram with delay
	as after double-click (after 10 s)	
	as after double-click (after 15 s)	

Note: If a channel is blocked, no telegrams will be sent cyclically.

7.3.7 Parameter for the REPEAT TELEGRAM function

With this function, the previously received telegram will be saved and can be sent again with the push of a button.

7.3.7.1 BMG 6 T channel I1 parameter page: Functions

Table 28

Designation	Values	Description
Sensitivity of the input	***normal***	for normal application.
	reduced	Recommended in case of faulty control due to malfunctions, especially with long cables. **Important:** This setting can be used unrestrictedly for DC voltage control. With AC voltage only for input voltage ≥ 110 V AC suitable.
Input function	*Switch..*	See above.
	Push button..	
	Dimming..	
	Blinds..	
	Repeat telegram..	The previously received telegram is sent to the bus again when the input is activated.
	Counter..	See below
	Sequence..	
Debounce time	*30 ms*	In order to avoid a disruptive switching due to debouncing of the contact connected to the input, the new status of the input is only accepted after a delay time.
	50 ms	
	80 ms	
	100 ms	
	200 ms	
	1 s	
	5 s	Larger values (≥ 1s) can be used as a switch-on delay
	10 s	
Activate block function	***no***	No block function.
	yes	Show block function parameter page.

Continuation:

Designation	Values	Description
Save object value in the event of bus and mains failure	*no*	The previously received telegram will be lost because of a bus or mains failure.
	yes	The previously received telegram will be preserved, even after bus or mains restoration.
Delete object value at download	***no***	The saved telegram will not be deleted by a download.
	yes	The saved telegram will be lost after a download.

7.3.7.2 Objects for repeat telegram parameter page

Table 29

Designation	Values	Description
Object type	***1 bit (e.g. switching)*** *2 bit (e.g. priority)* *1 byte (e.g. 0-255, % etc.)* *2 byte (e.g. DPT 9.x)* *4 byte (e.g. DPT 14.x)*	Select data type of the telegram to be repeated.
*Response after bus and mains restoration**	***none*** *send immediately* *send after 5 s* *send after 10 s* *send after 15 s*	Do not send. Send without delay Send with delay.

* IMPORTANT: Sending after bus and mains restoration is only possible if a value has been saved, i.e. if the parameter ***Save object value in the event of bus and mains failure*** is set to ***yes***.

7.3.7.3 Block function parameter page

Table 30

Designation	Values	Description
Block telegram	***Block with 1 (standard)***	0 = enable 1 = block
	Block with 0	0 = block 1 = enable
FIRST TELEGRAM		
Response when setting the block	*Ignore block*	Block function is ineffective.
	no response	Do not respond when setting the block.
	Repeat telegram	Send the saved telegram.
Response when cancelling the block	***no response***	Do not respond when the block is cancelled.
	Repeat telegram	Send the saved telegram.

7.3.8 Parameters for the COUNTER function

Basic functionalities:
2 basic types of counter are possible:

- The event counter is incremented and sends its status to the bus
- The comparator compares the meter reading with a fixed configured counter value (comparison value). When the comparison value is reached, the channel sends a preset telegram to the bus, and the counter is reset.

Moreover, if necessary both the rising and the falling signal edge can be evaluated.
The counting capacity is up to 65535, and can be extended to 65,535,000 through the use of the prescaler.

7.3.8.1 BMG 6 T channel I1 parameter page: Functions

Table 31

Designation	Values	Description
Sensitivity of the input	***normal***	for normal application.
	reduced	Recommended in case of faulty control due to malfunctions, especially with long cables. **Important:** This setting can be used unrestrictedly for DC voltage control. With AC voltage only for input voltage ≥ 110 V AC suitable.
Input function	*Switch..* *Push button..* *Dimming..* *Blinds..* *Repeat telegram..*	See above.
	Counter..	Count input pulses.
	Sequence..	See below
Debounce time	*30 ms* ***50 ms*** *80 ms* *100 ms* *200 ms* *1 s* *5 s* *10 s*	In order to avoid a disruptive switching due to debouncing of the contact connected to the input, the new status of the input is only accepted after a delay time. Larger values (≥ 1s) can be used as a switch-on delay
Counting at	***Rising edge***	Only count at a change from 0 → 1
	Falling edge	Only count at a change from 1 → 0
	Both edges	Count at each change of state.
Function of the input object		Direction of action of object 4
	Block	1 = block counter 0 = enable counter
	Release	0 = block counter 1 = enable counter

Continuation:

Designation	Values	Description
Save meter reading in the event of bus and mains failure	*no*	The meter reading will be lost because of a bus or mains failure.
	yes	The meter reading will be preserved, even after bus or mains restoration.
Reset meter reading at download	***no***	The meter reading will be preserved after a download.
	yes	The meter reading will be lost after a download.

7.3.8.2 Counter function parameter page

Table 32

Designation	Values	Description
Prescaler	Input: ***1*** *.. 1000*	The prescaler is a virtual counter which is connected upstream of the actual counter. With the setting 1, the prescaler is inoperative, and the counter is increased with each input pulse. If the prescaler is set to 10, then only every 10th pulse is forwarded to the counter. The meter reading must be multiplied by 10 in this case. This function makes it possible to count large quantities without exceeding the maximum meter reading of 65,535. Calculating the actual counter value: Actual meter reading = Prescaler x sent counter value Example: Prescaler = 10 Sent meter reading = 100 Actual counter value = 100 x 10 = 1000
Counter type	***Event counter***	The counter counts up until it is reset to 0 by the reset object or once the maximum value (65,535) has been reached
	Comparator	When the comparison value is reached, the set telegram (see below) is sent to the bus and the counter is reset to 0.

Continuation:

Designation	Values	Description
All send meter reading	*1 .. 1000*	Only for counter type: event counter. At what counter interval is the current meter reading to be sent?
Comparison value	*1 .. 1000*	Only for counter type: comparator What value should the counter (comparator) count up to?
Telegram once the comparison value is reached		Only for counter type: comparator.
	OFF otherwise ON	When the comparison value is reached, send OFF, and as long as the value is not reached, send ON.
	ON otherwise no	Send only when the comparison value has been reached (ON telegram).
	OFF otherwise no	Send only when the comparison value has been reached (OFF telegram).
	ON otherwise OFF	When the comparison value is reached, send ON, and as long as the value is not reached, send OFF.
Send telegram cyclically	*no*	do not send cyclically.
	yes	Send cyclically.
Cycle time	***2 min,*** *3 min, 5 min 10 min, 15 min, 20 min 30 min, 45 min, 60 min*	Cycle time.

Note: If a channel is blocked, no telegrams will be sent cyclically.

7.3.9 Parameters for the SEQUENCE function

The sequence function allows sending certain telegrams consecutively with a push button.
A sequence consists of 4 single steps and can use up to 4 initial objects.
At each step, these objects can send different values.
See appendix: Sequence function.

7.3.9.1 BMG 6 T channel I1 parameter page: Functions

Table 33

Designation	Values	Description
Sensitivity of the input	***normal***	for normal application.
	reduced	Recommended in case of faulty control due to malfunctions, especially with long cables. **Important:** This setting can be used unrestrictedly for DC voltage control. With AC voltage only for input voltage ≥ 110 V AC suitable.
Input function	*Switch..* *Push button..* *Dimming..* *Blinds..* *Repeat telegram..* *Counter..*	See above.
	Sequence..	Send individual 4 step telegram sequence with up to 4 telegrams per step.
Debounce time	*30 ms* ***50 ms*** *80 ms* *100 ms* *200 ms* *1 s* *5 s* *10 s*	In order to avoid a disruptive switching due to debouncing of the contact connected to the input, the new status of the input is only accepted after a delay time. Larger values (≥ 1s) can be used as a switch-on delay

Continuation:

Designation	Values	Description
Object 1 type	*Switching (1 bit)* *Priority (2 bit)* *Value 0-255* ***Percentage value (1 byte)*** *2 byte floating-point number DPT 9.x* *4 byte floating-point number DPT 14.x*	Select telegram type for the first of the 4 sequence objects (6 formats can be set)..
Object 2 type	***Switching (1 bit)*** *Priority (2 bit)* *Value 0-255* *Percentage value (1 byte)* *2 byte floating-point number DPT 9.x* *4 byte floating-point number DPT 14.x*	Select telegram type for the second of the 4 sequence objects (6 formats can be set).
Object 3 type	***Switching (1 bit)*** *Priority (2 bit)* *Value 0-255* *Percentage value (1 byte)*	Select telegram type for the third of the sequence objects (4 formats can be set).
Object 4 type	***Switching (1 bit)*** *Priority (2 bit)* *Value 0-255* *Percentage value (1 byte)*	Select telegram type for the fourth of the sequence objects (4 formats can be set).
Long button push starting at	***300 ms*** *400 ms* *500 ms* *600 ms* *700 ms* *800 ms* *900 ms* *1 s*	Serves to clearly differentiate between long and short button push. If the push button is pressed for at least as long as the set time, then a long button push will be registered.
Sequence details	***Step 1-2-3-4-1-2-3-4*** *Step 1-2-3-4-3-2-1*	In which order should the steps be processed?
With a long button push	*no function* ***set to step 1***	Long button push will be ignored. Reset sequence to the beginning.
Response after bus and mains restoration	***none*** *Step 1 (immediately)* *Step 1 (after 5 s)* *Step 1 (after 10 s)* *Step 1 (after 15 s)*	No response. Reset sequence immediately Reset sequence with delay
Activate block function	***no*** *yes*	No block function. Show block function parameter page.

7.3.9.2 Sequence function parameter page

Table 34

Designation	Values	Description	
FIRST STEP			
Send object 1	*no*	Do not use first object during this step.	
	yes..	First object has to send during this step.	
Telegram	With object type = *switching (1 bit)*		
	ON	Send switch-on command	
	OFF	Send switch-off command	
	BY	Invert current state (ON→OFF→ON etc.)	
	With object type = *priority (2 bit)*		
		Function	Value
	inactive	Priority inactive (no control)	0 (00_{bin})
	ON	Priority ON Priority ON (control: enable, on)	3 (11_{bin})
	OFF	Priority OFF (control: disable, off)	2 (10_{bin})
	With object type = *value 0-255*		
	0-255	Any value between 0 and 255 can be sent.	
	With object type = *percentage value (1 byte)*		
	*0-**100 %***	Any percentage value between 0 and 100 % can be sent in 5 % increments.	
	With object type = *2 byte floating-point number DPT 9.x*		
Value	***-999 to +999***	The telegram is calculated from a value and a factor (telegr. = value x factor). Examples: Value 10 and factor 100 = 1000. Value 10 and factor 0.1 = 1. Set base value	
Factor	***1***	Set factor (= multiplier).	
	10		
	100		
	1000		
	10000		
	100000		
	0.01		
	0.1		

Continuation:

Designation	Values	Description
	With object type = *4 byte floating-point number DPT 14.x*	
Value	***-999 to +999***	Set base value
Factor	***1*** ***10*** ***100*** ***1000*** ***10000*** ***100000*** ***1,000,000*** ***10^7, 10^8*** ***10^9, 10^{10}*** ***10^{11}, 10^{12}*** ***0.1*** ***0.01*** ***0.001***	Set factor (= multiplier).
Send object 2	*no* *yes*	Do not use second object during this step. Second object has to send during this step.
Telegram	With object type = *switching (1 bit)*	
	ON *OFF* *BY*	Send switch-on command Send switch-off command Invert current state (ON→OFF→ON etc.)
	With object type = *priority (2 bit)*	
	Function / Value	
	inactive	Priority inactive (no control) — 0 (00_{bin})
	ON	Priority ON Priority ON (control: enable, on) — 3 (11_{bin})
	OFF	Priority OFF (control: disable, off) — 2 (10_{bin})
	With object type = *value 0-255*	
	*0-**255***	Any value between 0 and 255 can be sent.
	With object type = *percentage value (1 byte)*	
	*0-**100 %***	Any percentage value between 0 and 100 % can be sent in 5 % increments.
	With object type = *2 byte floating-point number DPT 9.x*	
Value	***-999 to +999***	The telegram is calculated from a value and a factor (telegr. = value x factor). Examples: Value 10 and factor 100 = 1000. Value 10 and factor 0.1 = 1. Set base value

Continuation:

Designation	Values	Description
Factor	***1*** ***10*** ***100*** ***1000*** ***10000*** ***100000*** ***0.01*** ***0.1***	Set factor (= multiplier).
	With object type = *4 byte floating-point number DPT 14.x*	
Value	***-999 to +999***	Set base value
Factor	***1*** ***10*** ***100*** ***1000*** ***10000*** ***100000*** ***1,000,000*** ***10^7, 10^8*** ***10^9, 10^{10}*** ***10^{11}, 10^{12}*** ***0.1*** ***0.01*** ***0.001***	Set factor (= multiplier).
Send object 3	*no* *yes.*.	Do not use third object during this step. Third object has to send during this step.
Telegram	With object type = *switching (1 bit)*	
	ON *OFF* *BY*	Send switch-on command Send switch-off command Invert current state (ON→OFF→ON etc.)
	With object type = *priority (2 bit)*	
		Function / Value
	inactive	Priority inactive (no control) / 0 (00_{bin})
	ON	Priority ON Priority ON (control: enable, on) / 3 (11_{bin})
	OFF	Priority OFF (control: disable, off) / 2 (10_{bin})
	With object type = *value 0-255*	
	*0-**255***	Any value between 0 and 255 can be sent.
	With object type = *percentage value (1 byte)*	
	*0-**100 %***	Any percentage value between 0 and 100 % can be sent in 5 % increments.

Continuation:

Designation	Values	Description	
Send object 4	*no*	Do not use fourth object during this step.	
	yes	Fourth object has to send during this step.	
Telegram	With object type = *switching (1 bit)*		
	ON	Send switch-on command	
	OFF	Send switch-off command	
	BY	Invert current state (ON→OFF→ON etc.)	
	With object type = *priority (2 bit)*		
		Function	Value
	inactive	Priority inactive (no control)	0 (00_{bin})
	ON	Priority ON Priority ON (control: enable, on)	3 (11_{bin})
	OFF	Priority OFF (control: disable, off)	2 (10_{bin})
	With object type = *value 0-255*		
	0-255	Any value between 0 and 255 can be sent.	
	With object type = *percentage value (1 byte)*		
	0-100 %	Any percentage value between 0 and 100 % can be sent in 5 % increments.	
SECOND STEP			
Send object 1	see above: *First step.*		
Telegram			
Send object 2			
Telegram			
Send object 3			
Telegram			
Send object 4			
Telegram			
THIRD STEP			
Send object 1	see above: *First step.*		
Telegram			
Send object 2			
Telegram			
Send object 3			
Telegram			
Send object 4			
Telegram			

Continuation:

Designation	Values	Description
FOURTH STEP		
Send object 1	see above: *First step.*	
Telegram		
Send object 2		
Telegram		
Send object 3		
Telegram		
Send object 4		
Telegram		

7.3.9.3 Block function parameter page

Table 35

Designation	Values	Description
Block telegram	***Block with 1 (standard)***	0 = enable 1 = block
	Block with 0	0 = block 1 = enable
Response when setting the block	*Ignore block*	Block function is ineffective.
	no response	Do not respond when setting the block.
	Send step 1	Send object values of step 1.
Response when cancelling the block	***no response***	Do not respond when the block is cancelled.
	Send step 1	Send object values of step 1.

8 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.

8.1 Switching light

A push button is connected to the input terminals of I1.
The input I1 controls a channel of the switch actuator RME 8 S.

8.1.1 Devices:

- BMG 6 T (4930230)
- RMG 8 S (4930220)

8.1.2 Overview

Figure 1

8.1.3 Objects and links

Table 36: Links

No.	BMG 6 T Object name	No.	RMG 8 S Object name	Comment
0	*Switching ON/OFF*	0	*Switch object*	BMG 6 T sends switch commands to RMG 8 S

8.1.4 Important parameter settings

The standard parameter settings apply for unlisted parameters.

Table 37: BMG 6 T

Parameter page	Parameter	Setting
BMG 6 T Channel I1: Functions	*Input function*	*Push button*
	Connected push button	*NO contact*
Objects for push buttons	*Object type*	*Switching*
	After short operation	*Send telegram*

Table 38: RMG 8 S

Parameter page	Parameter	Setting
RMG 8 S channel C1: Functions	*Channel function*	*Switching On/Off*

8.2 Water level monitoring with alert input

When exceeding a certain water level, an alert shall be issued.

A float switch is connected to the input terminals of I1.
The input I1 controls a channel of the switch actuator RME 8 S, to which an optical or acoustical signalling device is connected.
An acknowledgement push button is connected to input I2, which can send the acknowledgement telegram to the acknowledgement object of I1.

The alert can be terminated with the acknowledgement push button under the following conditions:

- Permanently: As soon as the trigger is not present anymore (water level dropped).
- Temporarily: During persistent fault (e.g. water level too high).

8.2.1 Devices:

- BMG 6 T (4930230)
- RMG 8 S (4930220)

8.2.2 Overview

Figure 2

8.2.3 Objects and links

Table 39: BMG 6 T, alert

No.	BMG 6 T Object name	No.	RMG 8 S Object name	Comment
0	*Switching ON/OFF*	0	*Switch object*	I1 sends the alert as a switch command to RMG 8 S

Table 40: BMG 6 T acknowledgement

No.	BMG 6 T Object name	No.	BMG 6 T Object name	Comment
0	*Switching ON/OFF*	5	*Acknowledge alert*	I2 sends acknowledgement to I1.

8.2.4 Important parameter settings

The standard parameter settings apply for unlisted parameters.

Table 41: BMG 6 T

Parameter page	Parameter	Setting
BMG 6 T Channel I1: Functions	*Input function*	*Switch*
	Connected push button	*NO contact*
	Use channel as an alert input	*yes*
	Report fault	*with rising edge*
	Acknowledgement mandatory	*yes*
	Acting direction of the acknowledgement object	*acknowledge with 1*
Objects for switch	*Object type*	*Switching*
	Send if input = 1 (or fault active)	*Send telegram*
	Telegram	*ON*
	Send if input = 0 (or fault inactive)	*OFF*
BMG 6 T Channel I2: Functions	*Input function*	*Push button*
	Connected push button	*NO contact*
Objects for switch	*Object type*	*Switching*
	After short operation	*Send telegram*
	Send telegram cyclically	*no*

Table 42: RMG 8 S

Parameter page	Parameter	Setting
RMG 8 S channel C1: Functions	*Channel function*	*Switching On/Off*

8.3 Dimming

A push button is connected to the input terminals of I1.
The input I1 controls a channel of the dimming actuator DMG 2 T.

8.3.1 Devices:

- BMG 6 T (4930230)
- DMG 2 T (4930270)

8.3.2 Overview

Figure 3

8.3.3 Objects and links

Table 43: Links

No.	BMG 6 T Object name	No.	DMG 2 T Object name	Comment
0	*Switching ON/OFF*	0	*Switching On/Off*	Long button push for brighter/darker dimming commands. Short button push for On/Off commands.
1	*Brighter/Darker*	1	*brighter/darker*	

8.3.4 Important parameter settings

The standard parameter settings apply for unlisted parameters.

Table 44: BMG 6 T

Parameter page	Parameter	Setting
BMG 6 T Channel I1: Functions	*Input function*	*Dimming..*
Dimming function	*Reaction to long/short*	*Single-surface operation*

Table 45: DMG 2 T

Parameter page	Parameter	Setting
Dimming response	*Switching on/off with a 4-bit telegram*	*no*

8.4 Controlling blinds or blinds group

2 push buttons are connected to the input terminals of I1 and I2 (or one double push button).
Input I1 is used for raising and I2 for lowering the blinds.
Both inputs together control a channel of blinds actuator JMG 4 T.

8.4.1 Devices:

- BMG 6 T (4930230)
- JMG 4 T (4930250)

8.4.2 Overview

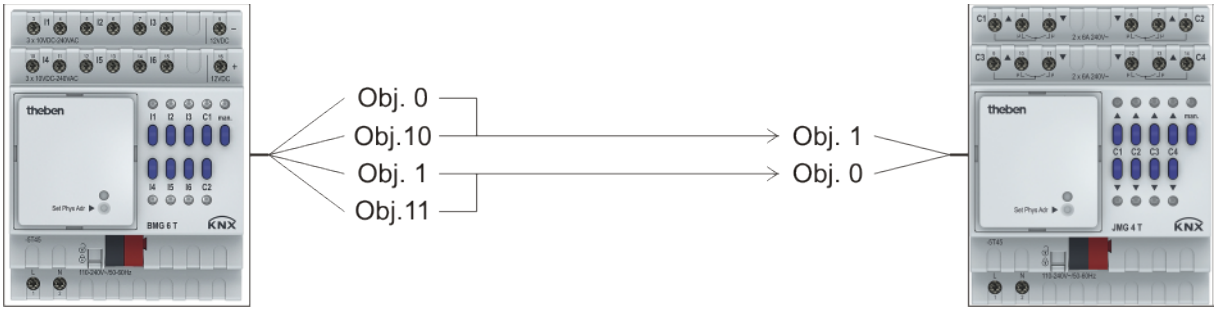


Figure 4

8.4.3 Objects and links

Table 46: Links

No.	BMG 6 T Object name	No.	JMG 4 T Object name	Comment
0	*Step/Stop*	1	*Step/Stop*	Short button push on I1/I2 for Step/Stop command.
10	*Step/Stop*			
1	*UP*	0	*UP/DOWN*	Long button push on I1 for UP operating command.
11	*DOWN*			Long button push on I2 for DOWN operating command.

8.4.4 Important parameter settings

The standard parameter settings apply for unlisted parameters.

Table 47: BMG 6 T

Parameter page	Parameter	Setting
BMG 6 T Channel I1: Functions	*Input function*	*Blinds..*
Blinds function	*Operation*	*UP*
BMG 6 T Channel I2: Functions	*Input function*	*Blinds..*
Blinds function	*Operation*	*DOWN*

Table 48: JMG 4 S

Parameter page	Parameter	Setting
JMG 4 S	*Type of hanging*	*Blinds*

8.5 Counter function: Visitor counter with turnstile

A turnstile is connected to the input terminals of I1.
This provides a pulse for counting people with every passing.
Input I1 counts the pulses and sends the current meter reading to the VARIA 826 S multi function display.
The counter can be reset anytime via another object.

8.5.1 Devices

- BMG 6 T (4930230)
- VARIA 826 S (8269210)

8.5.2 Overview

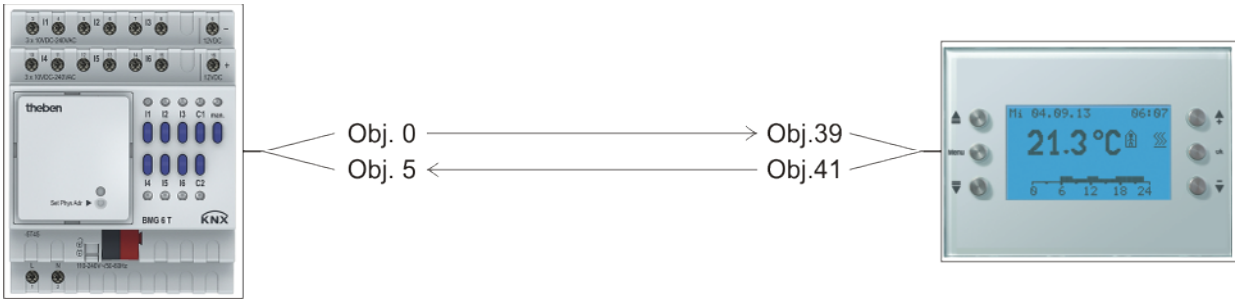


Figure 5

8.5.3 Objects and links

Table 49: Links

No.	BMG 6 T Object name	No.	VARIA 826 S Object name	Comment
0	*Send counter value*	39	*Display page 1, line 1* *Counter value 0 ..65535*	BMG 6 T sends the current counter value to the display.
5	*Reset counter*	41	*Operation page 1, line 2* *Switching ON/OFF*	Reset counter.

8.5.4 Important parameter settings

The standard parameter settings apply for unlisted parameters.

Table 50: BMG 6 T

Parameter page	Parameter	Setting
BMG 6 T Channel I1: Functions	*Input function*	*Counter*

Table 51: VARIA 826 S

Parameter page	Parameter	Setting
Selection of display pages	*Show page 1 for display objects*	*yes*
	Show weather forecast on page 1	*no*
Page 1, line 1	*Line format*	*16 bit counter value object type (DPT 7.001, 8.001)*
	Text for line 1	Visitors
	Unit for display object	*prs*
	Value range	*positive numbers only*
	Authorise amendment of object value	*no*
Page 1, line 2	*Line format*	*Switching object type (DPT 1.xxx)*
	Text for line 1	Reset
	Text at object value = 0	*
	Text at object value = 1	*
	Authorise amendment of object value	*yes*
	Function of +/- buttons	*+/- = ON*
	Display before receipt of a value	*Space*

*These lines shall remain empty, please do not fill in.

8.6 Sequence function: Fan control

A push button is connected to the input terminals of I1.
Input I1 controls a fan via the MIX2 dimming actuator DMG 2 T.
With each short button push, I1 sends a new setpoint value to the dimmer, in the sequence
0 % - 30 % - 60 % - 100 % - 0 % etc.
The fan can be switched on with a long button push.

8.6.1 Devices:

- BMG 6 T (4930230)
- DMG 2 T (4930270)

8.6.2 Overview

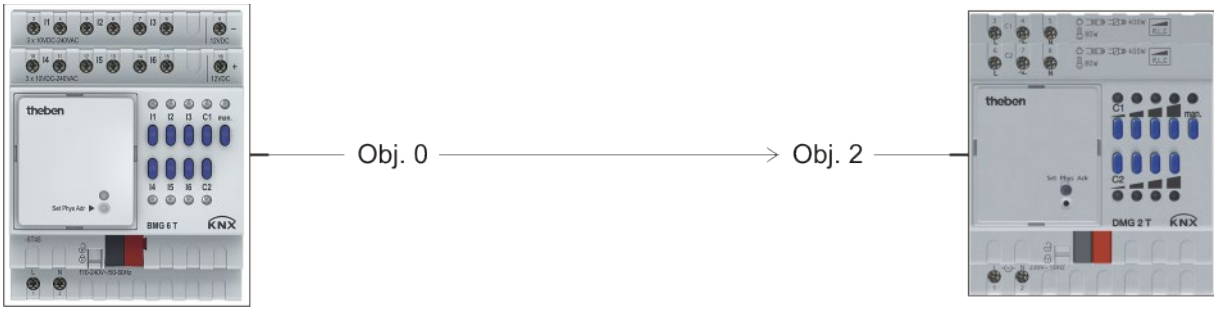


Figure 6

8.6.3 Objects and links

Table 52: Links

No.	BMG 6 T Object name	No.	DMG 2 T Object name	Comment
0	*Send percentage value*	2	*Dimming value*	With each short button push, BMG 6 T sends a new setpoint value to the dimmer, in the sequence ▶ 0 % - 30 % - 60 % - 100 % ┐

8.6.4 Important parameter settings

The standard parameter settings apply for unlisted parameters.

Table 53: BMG 6 T

Parameter page	Parameter	Setting
BMG 6 T Channel I1: Functions	*Input function*	*Sequence..*
	Object 1 type	*Percentage value (1 byte)*
	Sequence details	*1-2-3-4-1-2-3-4*
	With a long button push	*set to step 1* (i.e. switch off)
	Response after bus and mains restoration	*Step 1 (immediately)*
Sequence function	*FIRST STEP*	
	Send object 1	*yes*
	Telegram	*0 %*
	Send object 2	*no*
	Send object 3	*no*
	Send object 4	*no*
	SECOND STEP	
	Send object 1	*yes*
	Telegram	*30 %*
	Send object 2	*no*
	Send object 3	*no*
	Send object 4	*no*
	THIRD STEP	
	Send object 1	*yes*
	Telegram	*60 %*
	Send object 2	*no*
	Send object 3	*no*
	Send object 4	*no*
	FOURTH STEP	
	Send object 1	*yes*
	Telegram	*100 %*
	Send object 2	*no*
	Send object 3	*no*
	Send object 4	*no*

Table 54: DMG 2 T

Parameter page	Parameter	Setting
When receiving an absolute value dimming behaviour	*Load selection*	*Fan (soft switching deactivated)*
	Start-up time	*10 s*
	Dimming time 1 from 0% to 100%	*1-60 s (if used)*
	When receiving an absolute value	*See below**
	Switching on/off with a 4-bit telegram	*no*

* For a fast reaction of the fan: select *startup*.
For a slow change of the speed: select *dimming with dimming time 1* and set *dimming time 1 from 0 % to 100 %* as desired.

9 APPENDIX

9.1 Fault indicator function

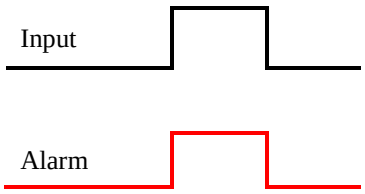
In switch function, inputs I1-I6 can be configured as fault indicator.
To do this, the corresponding input is used together with any sensor, e.g. float switch, over temperature switch, etc.
If a fault is detected, the channel will send an alert.

With the parameters *Acknowledgement mandatory* and *Update after acknowledgement if fault still present*, many applications can be covered.

9.1.1 Without acknowledgement function

The alert remains active, as long as a fault is present at the input terminals.

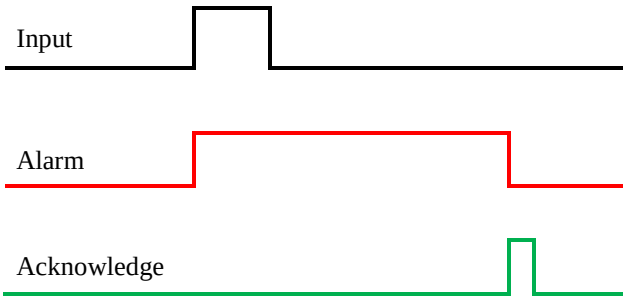
Acknowledgement mandatory = no



9.1.2 Acknowledgement function without update

The alert remains active, even if no fault is present at the input terminals anymore.
This detects and retains brief errors.
The alert can only be terminated with an acknowledgement telegram.

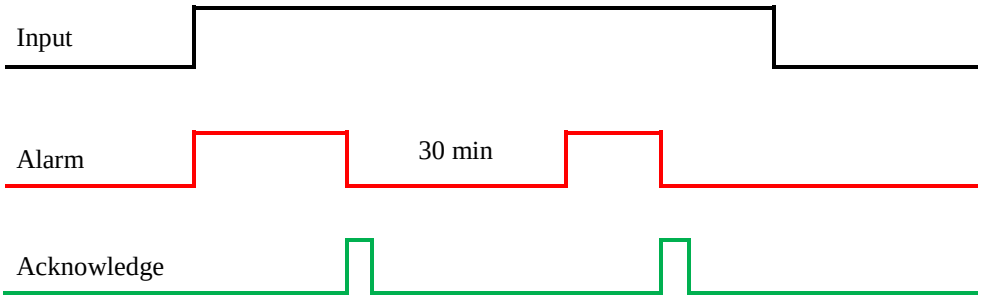
Acknowledgement mandatory = yes



9.1.3 Acknowledgement function with update

The alert can be interrupted temporarily with an acknowledgement telegram, while the fault is still present at the input terminals.
The alert will be repeated at regular intervals (update, here every 30 min.)
and has to be acknowledged each time.

Acknowledgement mandatory = yes
Update after acknowledgement if fault still present = 10 min



9.2 The sequence function

A sequence:

- Consists of 4 steps, which are called up consecutively via button push.
- Has a maximum of 4 objects.

A step:

- Triggers the sending of the 4 objects with a defined value.
- Can also, when required, send only individual objects (e.g. obj. 1 + obj. 3)
- Is omitted, if no object is activated in it (applies to step 2, 3, and 4)

The 4 objects

- Have a fixed, individually adjustable type within a sequence
  (e.g. obj. 1 = DPT 1,001, obj. 2 = DPT 5,010 etc.)
- Can send a different value at each step
  (e.g. obj. 1, step 1 = 10 %; obj. 1, step 2 = 25 % etc.) or be deactivated.

Execution of a sequence 1-2-3-4-1-2-3-4 if all 4 objects shall send at each step:

1st button push = 1st step			
Object 1 sends	Object 2 sends	Object 3 sends	Object 4 sends
Telegram for step 1	Telegram for step 1	Telegram for step 1	Telegram for step 1

2nd button push = 2nd step			
Object 1 sends	Object 2 sends	Object 3 sends	Object 4 sends
Telegram for step 2	Telegram for step 2	Telegram for step 2	Telegram for step 2

3rd button push = 3rd step			
Object 1 sends	Object 2 sends	Object 3 sends	Object 4 sends
Telegram for step 3	Telegram for step 3	Telegram for step 3	Telegram for step 3

4th button push = 4th step			
Object 1 sends	Object 2 sends	Object 3 sends	Object 4 sends
Telegram for step 4	Telegram for step 4	Telegram for step 4	Telegram for step 4

5th button push = 1st step			
Object 1 sends	Object 2 sends	Object 3 sends	Object 4 sends
Telegram for step 1	Telegram for step 1	Telegram for step 1	Telegram for step 1

etc..

9.3 Conversion of percentages to hexadecimal and decimal values

Table 55

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.