

**12 S8 Multiswitch+Motion detector 280103****Use of the application program**

Product family: Push button  
Product type: Push button, 4-fold  
Manufacturer: Siemens

Name: Push button UP 230/2  
pearl grey/ DELTA profil  
Order no.: 5WG1 230-2AB02

Name: Push button UP 230/2  
titanium white/ DELTA profil  
Order no.: 5WG1 230-2AB12

Name: Push button UP 230/2  
anthracite/ DELTA profil  
Order no.: 5WG1 230-2AB22

Name: Push button UP 230/2  
silver/ DELTA profil  
Order no.: 5WG1 230-2AB72

Name: Push button UP 230/2  
titanium white/ DELTA style  
Order no.: 5WG1 230-2EB11

Name: Push button UP 230/2  
basalt black/ DELTA style  
Order no.: 5WG1 230-2EB21

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## **12 S8 Multiswitch+Motion detector 280103**

### **1. Functional description**

The multiswitch has two main rockers and two auxiliary rockers. The motion detector with a brightness sensor is located underneath the rockers and covers the entire width.

Using the application program "12 S8 Multiswitch + Motion detector 280103", it is possible to assign switching, value, shutter control or dimming functions independently to the four rockers of the multiswitch. Each rocker contact has a separate communication object available. Using the setting "User-defined", it is possible to assign a separate function to each rocker contact. The parameter window of the corresponding rocker changes and each rocker contact can be assigned parameters individually.

The application program also has a "multiobject" which can be used as a sending object (e.g. for sending the brightness value), as an additional object for LED display or for controlling the objects of the auxiliary rockers.

#### **1.1 Main and auxiliary rockers**

##### **1.1.1 Switching**

When a rocker contact is pressed, the corresponding signal (On/Off/Toggle/8 bit value) is sent via a separate object with no distinction being made between a long and short push button action. The decision as to whether an "On" or "Off" telegram is sent is dependent on the parameters that have been assigned to the rocker contact. If the contact is set to "Toggle" mode, the inverse signal to the one that is present in the status object is sent after a push button action.

The "Switch" function can also be assigned to the respective rocker using the "User-defined" setting in the parameter window. It should be noted that the object type of the switching object must be modified accordingly.

If the signal contains the 8 bit value, the sending value and the object type should be changed accordingly. Four 8 bit values can be assigned. Each pair of contacts i.e. both upper left, lower left, upper right and lower right contacts of the main and auxiliary rockers, sends the same 8 bit value.

##### **1.1.2 Shutter control**

A distinction is made between a long and short push button action. A short switch operation causes a switching telegram to be sent which adjusts the louvres or stops any possible shutter movement. After a long switch operation, the shutter is raised or lowered according to the parameters that have been assigned.

The distinction as to whether an "Up" or "Down" command is sent is dependent on the parameters that have been assigned.

The "Shutter" function can also be assigned to the respective rocker via the "User-defined" setting in the parameter window. The first of the two rocker objects is then used as a louvre object and the second is used as a shutter object. It should also be noted that the object type of the objects must be modified accordingly.

##### **1.1.3 Dimming**

A distinction is made between a long and short push button action. A short switch operation sends a corresponding switching command (On, Off or Toggle). If the push button is held down for a longer period (the duration of which can be set), a dimming command is sent. The "Dimming" function can also be set in the parameter list for the corresponding rocker via the setting "User-defined" in the parameter window. During this attention has to be paid that the object type of the dimming object has to be changed correspondingly. The dimming object is always the object after the switching object.

The functions "Dimming with stop telegram" and "Dimming with cyclical sending" are available.

In the function "Dimming with stop telegram", a command can be sent to the dimming function after a long push button action to dim by 100%. When the push button is released, a stop telegram is sent.

The setting "Dimming with cyclical sending" generates a dimming command according to an adjustable interval for the duration of the push button action. The change in the brightness level can be set per dimming telegram (e.g. adjust by 1/8).

#### **1.2 Multiobject**

##### **1.2.1 Blocking (enable/disable) the auxiliary rockers**

The objects of the auxiliary rockers (objects 4, 5, 6 and 7) can be logically linked with the multiobject (object 9). Due to this link, a signal of the auxiliary rockers is only sent via the object if the object value of the multiobject has the value "1". If the value is "0", pressing the corresponding rocker contact does not trigger a sending process.

If the multiobject is used for brightness, it is not possible to link an object with the multiobject.

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### 1.2.2 Brightness value (Lux value)

The brightness value that is measured by the brightness sensor can be sent via the multiobject.

The brightness value is sent cyclically approx. every 10 minutes. If the Lux value has changed since the last send by more than 100 Lux from 650 Lux onwards or by more than 70 Lux up to 650 Lux, then the Lux value is sent after several seconds.

### 1.2.3 Additional object for LED display

The multiobject can be used as a receiving object for LED display. The object value can then be displayed by an LED with corresponding parameter settings.

### 1.3 LED display

The display LEDs can indicate always "On", always "Off" or the status of an object. They can thus be used for status display or as an orientation light. The status of each LED can also be inverted. The LEDs under the main rockers can display the object values of objects 0 to 3, 8 and 9. The LEDs under the auxiliary rockers can display the object values of objects 4 to 7, 8 and 9. The LED in the motion detector (in the centre) is only used for displaying detected movement while the motion detector is being set (assigned parameters). It is normally always switched Off.

### 1.4 Motion detector

#### 1.4.1 Non brightness-dependent motion detector

The motion detector has two sensors that are located in the base of the multiswitch. They are positioned so that one sensor monitors the left side of the room and the other one monitors the right side of the room. The evaluation range can be defined by blocking the left or right sensor. If the motion detector senses movement, it sends an "On" signal. If further movement is detected within a set period (overshoot time), this period is restarted but no signal is sent. This means that if someone is constantly moving around the room, a signal is only sent once. After this period has elapsed, an "Off" signal is sent if the corresponding parameters are assigned. It is possible to send the ON-signal cyclically in order to restart the tail-end time components.

### 1.4.2 Brightness-dependent motion detector

The brightness-dependent motion detector is based on the non brightness-dependent motion detector. It has however its own adjustable cycle-/ overshoot time and defined evaluation range. The transmission signal can also be parameterised. It is also possible to set a separate sending object and a blocking time.

If the brightness in the room exceeds a set brightness value, the brightness-dependent motion detector is disabled only if neither the cycle time nor the overshoot time are activated.

### 1.5 Initialisation signal

An initialisation signal (on bus voltage recovery) is not possible. It should therefore be noted that the rockers are always in the neutral position on bus voltage recovery.

## 2. Communication objects and parameters

Maximum number of group addresses: 14  
Maximum number of associations: 15

### 2.1 Assigning parameters to the rockers

#### 2.1.1 General - Parameters

General	
Interval for cyclical sending (only for dimming)	0.5 seconds
Long push button action min. (only for dimming or shutter)	0.5 seconds
Long switch operation (only for dimming with cyclical sending)	adjust by 1/8
Prolonged pressing (only valid for outer buttons with shutter func.)	no extension
8-bit value - upper left contact main or outer rocker	48
8-bit value - lower left contact main or outer rocker	96
8-bit value - upper right contact main or outer rocker	144
8-bit value - lower right contact main or outer rocker	192

Parameters	Settings
Interval for cyclical sending (only for dimming)	0.3; 0.4; <b>0.5</b> ; 0.6; 0.7; 0.8; 1.0; 1.2; 1.5; 2.0; 2.5; 3.0; 4.0; 5.0; 6.0; 7.0 seconds
The repetition rate for cyclical sending after a long push button action is set here. The specified time applies to each rocker contact that is assigned a dimming function. When setting the interval for cyclical sending, the bus load must be taken into consideration.	

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Parameters	Settings
<b>Long push button action min. (only for dimming or shutter)</b>	0.3; 0.4; <b>0.5</b> ; 0.6; 0.7; 0.8; 1.0; 1.2; 1.5; 2.0; 2.5; 3.0; 4.0; 5.0; 6.0; 7.0 seconds
This parameter defines the time limit for a short/long rocker operation. If a rocker contact is pressed for longer than the set time, the software detects a long push button action. The setting applies to each rocker contact that is assigned a dimming or shutter control function.	
<b>Long switch operation (only for dimming with cyclical sending)</b>	adjust by 100% adjust by 1/2 adjust by 1/4 <b>adjust by 1/8</b> adjust by 1/16 adjust by 1/32 adjust by 1/64
The dimming step width of the telegrams after a long switch operation is specified via this parameter. The step width together with the "Interval for cyclical sending" should be set according to the dimming time of the actuator. For example, if the dimming time of 0 to 100% in the switch/dim actuator is set to 4 seconds, a transmission frequency of 0.52 seconds with an adjustment of 1/8 is selected. This means that a dimming command of 12.5% brighter or darker is sent every 0.52 seconds. With an adjustment of 8 x 12.5% and 8 x 0.52 seconds, this concurs with the dimming speed of the actuator of 100% in 4.2 seconds.	
<b>Prolonged pressing (only valid for outer buttons with shutter function)</b>	<b>no extension</b> 2 seconds 5 seconds 10 seconds
Using this parameter, a separate interval for distinguishing between a long/short push button action can be set for the two outer rockers. At least one of these outer rockers must be assigned a "Shutter" function in order for this interval to have an effect.	
<b>8-bit value – upper left contact main or outer rocker</b>	<b>48</b>
<b>8-bit value – lower left contact main or outer rocker</b>	<b>96</b>
<b>8-bit value – upper right contact main or outer rocker</b>	<b>144</b>
<b>8-bit value – lower right contact main or outer rocker</b>	<b>192</b>
8 bit values are allocated to the contacts of the main and outer rockers with these parameters. The value is however only sent when the rockers are operated if the function, the sending value of the rocker contact and the object type of the associated object have been assigned accordingly. The setting range includes the values 0 to 255.	

## 2.1.2 Switching - Communication objects

Number	Name	Object Function	Length
0	Switch left	On	1 bit
1	Switch left	Off	1 bit
2	Switch right	On	1 bit
3	Switch right	Off	1 bit
4	Switch outer left	On	1 bit
5	Switch outer left	Off	1 bit
6	Switch outer right	On	1 bit
7	Switch outer right	Off	1 bit

## Note

The view of the objects can be arranged individually i.e. this view can vary.

No.	Name	Function	Length	Flag
0	Switch left	On	1 Bit	CWTU
This object is used after a push button action as a switching object for the upper contact of the main left rocker. An "On" telegram is sent when the rocker contact is pressed.				
1	Switch left	Off	1 Bit	CWTU
This object is used after a push button action as a switching object for the lower contact of the main left rocker. An "Off" telegram is sent when the rocker contact is pressed.				

When assigning the parameters for the "Switch" function, objects 2-7 have the same function as objects 0 and 1.

## 2.1.3 Switching - Parameters

Main left rocker	
Upper / Lower contact	Switch On / Off

Parameters	Settings
Upper / Lower contact	<b>Switch On / Off</b> Shutter Up / Down Dimming On / Off User-defined

This parameter is used to set the "Switch" function of the main left rocker. When the upper contact is pressed, an "On" telegram is sent while an "Off" telegram is sent when the lower contact is pressed. No distinction is made between a long and short push button action.

The object types in the object list change automatically depending on the function that is selected in these parameters.

The functions and parameters of the parameter windows "Main left rocker", "Main right rocker", "Outer left rocker" and "Outer right rocker" are identical.

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### 2.1.4 Shutter - Communication objects

Number	Name	Object Function	Length
0	Louvres left	Open / Closed	1 bit
1	Shutter left	Up / Down	1 bit
2	Louvres right	Open / Closed	1 bit
3	Shutter right	Up / Down	1 bit
4	Louvres outer left	Open / Closed	1 bit
5	Shutter outer left	Up / Down	1 bit
6	Louvres outer right	Open / Closed	1 bit
7	Shutter outer right	Up / Down	1 bit

#### Note

The view of the objects can be arranged individually i.e. this view can vary.

No.	Name	Function	Length	Flag
0	Louvres left	Open / closed	1 Bit	CWTU
This object serves as a switching object for louvre adjustment after a short operation of the main left rocker.				
		The following applies: pressing the upper contact opens the louvre by one step with an "Off" telegram while pressing the lower contact closes the louvre by one step with an "On" telegram.		
1	Shutter left	Up / down	1 Bit	CWTU
This object is used as a switching object for shutter movement after a long operation of the main left rocker. When the upper contact is pressed, the shutter is raised via an "Off" telegram while the shutter is lowered via an "On" telegram when the lower contact is pressed. A short operation of one of the two contacts during shutter movement stops the shutter.				

When assigning parameters for the "Shutter" function, objects 2-7 have the same function as objects 0 and 1.

### 2.1.5 Shutter - Parameters

Main left rocker	
Upper / Lower contact	Shutter Up / Down

Parameters	Settings
Upper / Lower contact	Switch On / Off <b>Shutter Up / Down</b> Dimming On / Off User-defined

Using this parameter, the "Shutter" function of the main left rocker is set. When this setting is selected, a short operation of the upper rocker contact causes the louvres to open by a step with an "Off" telegram. Pressing the lower rocker contact closes the louvres by one step with an "On" telegram. A long operation of the upper contact raises the shutter with an "Off" telegram while a long operation of the lower contact lowers the shutter with an "On" telegram.  
The object types in the object list change automatically depending on the function that is selected in this parameter.

The functions and parameters of the parameter windows "Main left rocker", "Main right rocker", "Outer left rocker" and "Outer right rocker" are identical.

### 2.1.6 Dimming - Communication objects

Number	Name	Object Function	Length
0	Dimming On / Off left	On / Off	1 bit
1	Dimming left	Brighter / Darker	4 bit
2	Dimming On / Off right	On / Off	1 bit
3	Dimming right	Brighter / Darker	4 bit
4	Dimming On / Off outer left	On / Off	1 bit
5	Dimming outer left	Brighter / Darker	4 bit
6	Dimming On / Off outer right	On / Off	1 bit
7	Dimming outer right	Brighter / Darker	4 bit

#### Note

The view of the objects can be arranged individually i.e. this view can vary.

No.	Name	Function	Length	Flag
0	Dimming On/Off left	On / Off	1 Bit	CWTU
This object serves as a switching object for the main left rocker after a short push button action. Pressing the upper contact causes an "On" telegram to be sent while an "Off" telegram is sent when the lower contact is pressed.				
1	Dimming left	Brighter / Darker	4 Bit	CWTU
This object is used as a dimming object for the main left rocker after a long push button action. When the upper contact is pressed, a "Dim brighter" telegram is sent via this object while a "Dim darker" telegram is sent when the lower contact is pressed.				

When assigning parameters for the "Dimming" function, objects 2-7 have the same function as objects 0 and 1.

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## 2.1.7 Dimming - Parameters

Main left rocker	
Upper / Lower contact	Dimming On / Off

Parameters	Settings
Upper / Lower contact	Switch On / Off Shutter Up / Down <b>Dimming On / Off</b> User-defined

The "Dimming" function for the main left rocker is set using this parameter. The object type of object [1] automatically changes (e.g. from switching 1 bit to dimming 4 bit). When this setting is selected, a short operation of the upper contact causes an "On" telegram to be sent while an "Off" telegram is sent after a short operation of the lower contact. A long operation of the upper contact sends a "Dim brighter" telegram while a long operation of the lower contact sends a "Dim darker" telegram. When the push button is released, a "Stop" telegram is sent.

The functions and parameters of the parameter windows "Main left rocker", "Main right rocker", "Outer left rocker" and "Outer right rocker" are identical.

## 2.1.8 User-defined: Switching - Communication objects

Number	Name	Object Function	Length
■■■0	Switch / Louvres / Dimming left	On / Off / Toggle / Up / Down	1 bit
■■■1	Switch / Shutter left	On / Off / Toggle / Up / Down	1 bit
■■■2	Switch / Louvres / Dimming right	On / Off / Toggle / Up / Down	1 bit
■■■3	Switch / Shutter right	On / Off / Toggle / Up / Down	1 bit
■■■4	Switch / Louvres / Dimming outer left	On / Off / Toggle / Up / Down	1 bit
■■■5	Switch / Shutter outer left	On / Off / Toggle / Up / Down	1 bit
■■■6	Switch / Louvres / Dimming outer ...	On / Off / Toggle / Up / Down	1 bit
■■■7	Switch / Shutter outer right	On / Off / Toggle / Up / Down	1 bit

## Note

The view of the objects can be arranged individually i.e. this view can vary.

No.	Name	Function	Length	Flag
0	Switch / Louvres / Dimming left	On / Off / Toggle / Up / Down	1 Bit	CWTU

This object is used as a switching object for the upper contact of the main left rocker. When the rocker contact is pressed, an "On" or "Off" telegram is sent via this object depending on the parameter settings. If "Toggle" is selected, either an "On" or an "Off" telegram is sent (toggling), depending on the current switching status.

No.	Name	Function	Length	Flag
1	Switch / Shutter left	On / Off / Toggle / Up / Down	1 Bit	CWTU

This object is used as a switching object for the lower contact of the main left rocker. When the rocker contact is pressed, an "On" or an "Off" telegram is sent via this object, depending on the parameter settings. If "Toggle" is selected, either an "On" or an "Off" telegram is sent (toggling), depending on the current switching status.

When assigning parameters for the "User-defined: Switching" function, objects 2-7 have the same function as objects 0 and 1.

## 2.1.9 User-defined: Switching - Parameters

Main left rocker	
Upper / Lower contact	User-defined
Upper function	Switch
Setting of upper function	On (Down)
Lower function	Switch
Setting of lower function	Off (Up)
Object type of object [0]	On / Off / Toggle / Up / Down
Object type of object [1]	On / Off / Toggle / Up / Down

Parameters	Settings
Upper / Lower contact	Switch On / Off Shutter up / down Dimming On / Off <b>User-defined</b>

The function of the main left rocker is set with this parameter. The setting "User-defined" makes it possible to assign a separate function to each of the rocker contacts. The parameter window changes automatically as a result and the following parameters are displayed.

Upper function	Switch Shutter Dimming with stop telegram Dimming with cyclical sending
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This parameter specifies the function of the upper rocker contact. If "Switch" is selected, no distinction is made between a long and short push button action. The associated parameters "Setting of upper function" and "Object type of object [0]" should be modified accordingly.

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Parameters	Settings
<b>Setting of upper function</b>	Off (Up) On (Down) Toggle Value (8 bit)
	This parameter defines the sending value of the upper rocker contact. The setting "On (Down)" sends an "On" telegram via object [0] when the contact is pressed while the setting "Off (Up)" causes an "Off" telegram to be sent. If "Toggle" is selected, either an "On" or "Off" telegram is sent (toggling), depending on the current object status. If "Value (8 bit)" is selected, the value set in the "General" parameter window can be sent via object [0]. The object type of object [0] should be modified according to the setting selected.
<b>Lower function</b>	Switch Shutter Dimming with stop telegram Dimming with cyclical sending
	This parameter specifies the function of the lower rocker contact. If "Switch" is selected, no distinction is made between a long and short push button action. The associated parameters "Setting of lower function" and "Object type of object [1]" should be modified accordingly.
<b>Setting of lower function</b>	Off (Up) On (Down) Toggle Value (8 bit)
	This parameter defines the sending value of the lower rocker contact. The setting "On (Down)" sends an "On" telegram via object [1] when the contact is pressed while the setting "Off (Up)" causes an "Off" telegram to be sent. If "Toggle" is selected, either an "On" or "Off" telegram is sent (toggling), depending on the current object status. If "Value (8 bit)" is selected, the value set in the "General" parameter window can be sent via object [1]. The object type of object [1] should be modified according to the setting selected.
<b>Object type of object [0]</b>	On / Off / Toggle / Up / Down Value (8 bit)
	The object type of object [0] is defined with this parameter and should be specified according to the selected function of the upper contact.
<b>Object type of object [1]</b>	On / Off / Toggle / Up / Down Dimming Value (8 bit)
	The object type of object [1] is defined with this parameter and should be specified according to the selected function of the lower contact.

The functions and parameters of the parameter windows "Main left rocker", "Main right rocker", "Outer left rocker" and "Outer right rocker" are identical.

## 2.1.10 User-defined: Value – Communication objects

Number	Name	Object Function	Length
0	Value of upper left contact	8-bit Value	1 Byte
1	Value of lower left contact	8-bit Value	1 Byte
2	Value of upper right contact	8-bit Value	1 Byte
3	Value of lower right contact	8-bit Value	1 Byte
4	Value of upper left outer contact	8-bit Value	1 Byte
5	Value of lower left outer contact	8-bit Value	1 Byte
6	Value of upper right outer contact	8-bit Value	1 Byte
7	Value of lower right outer contact	8-bit Value	1 Byte

## Note

The view of the objects can be arranged individually i.e. this view can vary.

No.	Name	Function	Length	Flag
0	Value of upper left contact	8-bit value	1 Byte	CWTU
This object serves as a sending object for the upper contact of the main left rocker.				
1	Value of lower left contact	8-bit value	1 Byte	CWTU
This object serves as a sending object for the lower contact of the main left rocker.				

When assigning parameters for the "User-defined: Value" function, objects 2-7 have the same function as objects 0 and 1.

## 2.1.11 User-defined: Value - Parameters

Main left rocker	
Upper / Lower contact	User-defined
Upper function	Switch
Setting of upper function	Value (8 bit)
Lower function	Switch
Setting of lower function	Value (8 bit)
Object type of object [0]	Value (8 bit)
Object type of object [1]	Value (8 bit)

Parameters	Settings
Upper / lower contact	Switch On / Off Shutter up / down Dimming On / Off <b>User-defined</b>
The function of the main left rocker is set with this parameter. The setting "User-defined" makes it possible to assign a separate function to each of the rocker contacts. The parameter window changes automatically as a result and the following parameters are displayed.	

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Parameters	Settings
<b>Upper function</b>	<b>Switch</b> Shutter Dimming with stop telegram Dimming with cyclical sending
	This parameter specifies the function of the upper rocker contact. If "Switch" is selected, no distinction is made between a long and a short push button action. The associated parameter settings "Setting of upper function" and "Object type of object [0]" should be modified accordingly.
<b>Setting of upper function</b>	Off (Up) On (Down) Toggle <b>Value (8 bit)</b>
	This parameter defines whether an "On" or "Off" telegram should be sent via object [0] when the upper rocker contact is pressed. If "Toggle" is selected, either an "On" or an "Off" telegram is sent (toggling), depending on the current object status. If "Value (8 bit)" is selected, the value set in the "General" parameter window is sent via object [0] when the contact is pressed. The object type of object [0] should be changed to "Value (8 bit)" according to the setting selected.
<b>Lower function</b>	<b>Switch</b> Shutter Dimming with stop telegram Dimming with cyclical sending
	This parameter specifies the function of the lower rocker contact. If "Switch" is selected, no distinction is made between a long and short push button action. The associated parameters "Setting of lower function" and "Object type of object [1]" should be changed accordingly.
<b>Setting of lower function</b>	Off (Up) On (Down) Toggle <b>Value (8 bit)</b>
	This parameter defines whether an "On" or an "Off" telegram should be sent via object [1] when the lower contact is pressed. If "Toggle" is selected, either an "On" or "Off" telegram is sent (toggling) depending on the current object status. If "Value (8 bit)" is selected, the value set in the "General" parameter window is sent via object [1] when the contact is pressed. The object type of object [1] should be changed to "Value (8 bit)" according to the setting.
<b>Object type of object [0]</b>	On / Off / Toggle / Up / Down <b>Value (8 bit)</b>
	The object type of object [0] is defined with this parameter. To be able to send the value, the setting "Value (8 bit)" must be selected.
<b>Object type of object [1]</b>	On / Off / Toggle / up / down Dimming <b>Value (8 bit)</b>
	The object type of object [1] is defined with this parameter. To be able to send the value, the setting "Value (8 bit)" must be selected.

The functions and parameters of the parameter windows "Main left rocker", "Main right rocker", "Outer left rocker" and "Outer right rocker" are identical.

## 2.1.12 User-defined: Shutter – Communication objects

Number	Name	Object Function	Length
0	Switch / Louvres / Dimming left	On / Off / Toggle / Up / Down	1 bit
1	Switch / Shutter left	On / Off / Toggle / Up / Down	1 bit
2	Switch / Louvres / Dimming right	On / Off / Toggle / Up / Down	1 bit
3	Switch / Shutter right	On / Off / Toggle / Up / Down	1 bit
4	Switch / Louvres / Dimming outer left	On / Off / Toggle / Up / Down	1 bit
5	Switch / Shutter outer left	On / Off / Toggle / Up / Down	1 bit
6	Switch / Louvres / Dimming outer right	On / Off / Toggle / Up / Down	1 bit
7	Switch / Shutter outer right	On / Off / Toggle / Up / Down	1 bit

## Note

The view of the objects can be arranged individually i.e. this view can vary.

No.	Name	Function	Length	Flag
0	Switch / Louvres/ Dimming left	On / Off / Toggle / Up / Down	1 Bit	CWTU

This object serves as a switching object for louvre adjustment when the main left rocker is pressed briefly.  
After a push button action, the louvre is opened by a step with an "Off" telegram or closed by a step with an "On" telegram, depending on the parameter settings.

1	Switch / Shutter left	On / Off / Toggle / Up / Down	1 Bit	CWTU
---	-----------------------	-------------------------------	-------	------

This object serves as a switching object for shutter movement when the main left rocker is pressed for a long period. After a push button action, the shutter is raised via an "Off" telegram or lowered via an "On" telegram, depending on the parameter settings. A short operation of one of the two contacts during shutter movement stops the shutter.

When assigned parameters for the "User-defined: Shutter" function, objects 2-7 have the same function as objects 0 and 1.

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### 2.1.13 User-defined: Shutter - Parameters

Main left rocker	
Upper / Lower contact	User-defined
Upper function	Shutter
Setting of upper function	On (Down)
Lower function	Shutter
Setting of lower function	Off (Up)
Object type of object [0]	On / Off / Toggle / Up / Down
Object type of object [1]	On / Off / Toggle / Up / Down

Parameters	Settings
<b>Upper / lower contact</b>	Switch On / Off Shutter Up / Down Dimming On / Off <b>User-defined</b>
The function of the main left rocker is set using this parameter. The setting "User-defined" makes it possible to assign a function to each of the two rocker contacts. The parameter window then changes automatically and the following parameters are displayed.	
<b>Upper function</b>	Switch <b>Shutter</b> Dimming with stop telegram Dimming with cyclical sending
This parameter defines the function of the upper rocker contact. If the "Shutter" setting is selected, object [0] is used for louvre adjustment and object [1] is used for shutter movement. Note: If this setting is used, the parameter "Lower function" must also be assigned a shutter function.	
<b>Setting of upper function</b>	Off (Up) On (Down) Toggle Value (8 bit)
This parameter defines the sending value for the upper rocker contact. In the setting "Off (Up)", the louvres are opened by one step after a short push button action with an "Off" telegram via object [0]. If the contact is pressed for a longer period, the shutter is raised with an "Off" telegram (via object [1]). In the setting "On (Down)", a push button action causes an "On" telegram to be sent via object [0] and the louvre closes by one step. A long push button action causes the shutter to be lowered with an "On" telegram (via object [1]). The time limit for a distinction between a short and long push button action can be set in the "General" parameter window.	

Parameters	Settings
<b>Lower function</b>	Switch <b>Shutter</b> Dimming with stop telegram Dimming with cyclical sending
This parameter defines the function of the lower rocker contact. The associated parameters "Setting of lower function" and "Object type of object [1]".	
<b>Setting of lower function</b>	Off (Up) <b>On (Down)</b> Toggle Value (8 bit)
This parameter defines the sending value for the lower rocker contact. In the setting "Off (Up)", a short operation of the contact causes the louvre to be opened by a step with an "Off" telegram via object [0]. A long switch operation causes the shutter to be raised with an "Off" telegram (via object [1]). In the setting "On (Down)", pressing the contact sends an "On" telegram via object [0] and closes the louvre by one step. A long switch operation lowers the shutter with an "On" telegram (via object [1]). The time limit for a distinction between a short and long push button action can be set in the "General" parameter window.	
<b>Object type of object [0]</b>	On / Off / Toggle / Up / Down Value (8 bit)
The object type of object [0] is defined with this parameter and must be specified according to the selected function of the upper rocker contact.	
<b>Object type of object [1]</b>	On / Off / Toggle / Up / Down Value (8 bit)
The object type of object [1] is defined with this parameter and must be specified according to the selected function of the upper rocker contact.	

The functions and parameters of the parameter windows "Main left rocker", "Main right rocker", "Outer left rocker" and "Outer right rocker" are identical.

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## 2.1.14 User-defined: Dimming with stop telegram - Communication objects

Number	Name	Object Function	Length
0	Switch / Louvres / Dimming left	On / Off / Toggle / Up / Down	1 bit
1	Dimming left	Brighter / Darker	4 bit
2	Switch / Louvres / Dimming right	On / Off / Toggle / Up / Down	1 bit
3	Dimming right	Brighter / Darker	4 bit
4	Switch / Louvres / Dimming outer left	On / Off / Toggle / Up / Down	1 bit
5	Dimming outer left	Brighter / Darker	4 bit
6	Switch / Louvres / Dimming outer right	On / Off / Toggle / Up / Down	1 bit
7	Dimming outer right	Brighter / Darker	4 bit

## Note

The view of the objects can be arranged individually i.e. this view can vary.

No.	Name	Function	Length	Flag
0	Switch / Louvres / Dimming left	On / Off / Toggle / Up / Down	1 Bit	CWTU
This object is used as a switching object for the main left rocker after a short push button action. When the contact is pressed, either an "On" telegram or an "Off" telegram is sent via this object, depending on the parameters selected. If "Toggle" is selected in the parameters, either an "On" or an "Off" telegram is sent (toggling), depending on the current switching status.				
1	Dimming left	Brighter / Darker	4 Bit	CWTU
This object is used as a dimming object for the main left rocker after a long push button action. When a rocker contact is pressed for a long period, a "Dim brighter" or a "Dim darker" telegram is sent via this object, depending on the parameters selected. When the push button is released, a "Stop" telegram is sent.				

When assigned parameters for the function "User-defined: Dimming", objects 2-7 have the same function as objects 0 and 1.

## 2.1.15 User-defined: Dimming with stop telegram - Parameters

Main left rocker	
Upper / Lower contact	User-defined
Upper function	Dimming with stop telegram
Setting of upper function	On (Down)
Lower function	Dimming with stop telegram
Setting of lower function	Off (Up)
Object type of object [0]	On / Off / Toggle / Up / Down
Object type of object [1]	Dimming

Parameters	Settings
Upper / lower contact	Switch On / Off Shutter Up / Down Dimming On / Off <b>User-defined</b>

The function of the main left rocker is specified in this parameter. The "User-defined" setting makes it possible to assign a separate function for each of the two contacts. The parameter window then changes automatically and the following parameters are displayed.

Upper function	Switch Shutter <b>Dimming with stop telegram</b> Dimming with cyclical sending
----------------	---

This parameter specifies the function of the upper contact. The setting "Dimming with stop telegram" causes object [0] to be used as a switching object and object [1] to be used as a dimming object.

Note: When this setting is used, the parameter "Lower function" must also be assigned the function of "Dimming with stop telegram".

Setting of upper function	Off (Up) On (Down) Toggle Value (8 bit)
---------------------------	--

This parameter defines the sending value for the upper rocker contact. In the setting "On (Down)", a short operation of the contact sends an "On" telegram via object [0] while a long operation causes a "Dim brighter" telegram to be sent. In the setting "Off (Up)", a short operation sends an "Off" telegram via object [0] and a long operation sends a "Dim darker" telegram via object [1]. When the push button is released, a "Stop" telegram is sent. If "Toggle" is selected, a short operation causes either an "On" or "Off" telegram to be sent (toggling), depending on the current object status. The dimming function is maintained as for the setting "On" or "Off". The time limit for the distinction between a long and short push button action can be set in the "General" parameter window.

Lower function	Switch Shutter <b>Dimming with stop telegram</b> Dimming with cyclical sending
----------------	---

This parameter defines the function of the lower rocker contact. The setting "Dimming with stop telegram" causes object [0] to be used as a switching object and object [1] to be used as a dimming object.

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Parameters	Settings
<b>Setting of lower function</b>	Off (Up) On (Down) Toggle Value (8 bit)
This parameter specifies the sending value of the lower rocker contact. In the setting "On (Down)", a short operation of the contact sends an "On" telegram via object [0] while a long operation sends a "Dim brighter" telegram via object [1]. When the push button is released, a "Stop" telegram is sent. In the setting "Off (Up)", a short operation sends an "Off" telegram via object [0] while a long operation causes a "Dim darker" telegram to be sent via object [1]. If "Toggle" is selected, a short push button action sends either an "On" or an "Off" telegram (toggling), depending on the current object status. The dimming function is maintained as for the setting "On" or "Off". The time limit for the distinction between a short and long push button action can be set in the "General" parameter window.	
<b>Object type of object [0]</b>	On / off / toggle / up / down Value (8 bit)
The object type of object [0] is defined in this parameter and specified according to the function that is selected for the lower contact.	
<b>Object type of object [1]</b>	On / off / toggle / up / down Dimming Value (8 bit)
The object type of object [1] is defined in this parameter and specified according to the function that is selected for the lower contact.	

The functions and parameters of the parameter windows "Main left rocker", "Main right rocker", "Outer left rocker" and "Outer right rocker" are identical.

### 2.1.16 User-defined: Dimming with cyclical sending - Communication objects

Number	Name	Object Function	Length
0	Switch / Louvres / Dimming left	On / Off / Toggle / Up / Down	1 bit
1	Dimming left	Brighter / Darker	4 bit
2	Switch / Louvres / Dimming right	On / Off / Toggle / Up / Down	1 bit
3	Dimming right	Brighter / Darker	4 bit
4	Switch / Louvres / Dimming outer left	On / Off / Toggle / Up / Down	1 bit
5	Dimming outer left	Brighter / Darker	4 bit
6	Switch / Louvres / Dimming outer right	On / Off / Toggle / Up / Down	1 bit
7	Dimming outer right	Brighter / Darker	4 bit

#### Note

The view of the objects can be arranged individually i.e. this view can vary.

No.	Name	Function	Length	Flag
0	Switch / Louvres / Dimming left	On / Off / Toggle / Up / Down	1 Bit	CWTU
This object is used as a switching object for the main left rocker. Depending on the parameters that have been assigned to the rocker contact, an "On" or an "Off" telegram is sent via this object. If "Toggle" is selected, either an "On" or "Off" telegram is sent (toggling), depending on the current switching status.				
1	Dimming left	Brighter / Darker	4 Bit	CWTU
This object serves as a dimming object for the main left rocker and sends a dimming telegram after a long push button action. The following applies: a long operation of a rocker contact sends a "Dim brighter" or a "Dim Darker" telegram depending on the parameters assigned. The transmission rate specified in the parameter "Interval for cyclical sending" is used.				

When assigning parameters for the function "User-defined: Dimming", objects 2-7 have the same function as objects 0 and 1.

### 2.1.17 User-defined: Dimming with cyclical sending - Parameters

Main left rocker	
Upper / Lower contact	User-defined
Upper function	Dimming with cyclical sending
Setting of upper function	On (Down)
Lower function	Dimming with cyclical sending
Setting of lower function	Off (Up)
Object type of object [0]	On / Off / Toggle / Up / Down
Object type of object [1]	Dimming

Parameters	Settings
<b>Upper / lower contact</b>	Switch On / Off Shutter Up / Down Dimming On / Off <b>User-defined</b>

The function of the main left rocker is set with this parameter. The "User-defined" setting makes it possible to assign a separate function to each of the two rocker contacts. The parameter window then changes automatically and the following parameters are displayed.

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Parameters	Settings
<b>Upper function</b>	Switch Shutter Dimming with stop telegram <b>Dimming with cyclical sending</b>
	This parameter defines the function of the upper rocker contact. The setting "Dimming with cyclical sending" causes object [0] to be used as a switching object and object [1] to be used as a dimming object. Note: If this setting is used, the parameter "Lower function" must also be assigned the function of "Dimming with cyclical sending".
<b>Setting of upper function</b>	Off (Up) <b>On (Down)</b> Toggle Value (8 bit)
	This parameter defines the sending value of the upper rocker contact. In the setting "On (Down)", a short push button action sends an "Off" telegram via object [0] while the setting "Off (Up)" sends an "Off" telegram. A long operation of the rocker contact causes "Dim brighter" telegrams to be sent via object [1] in the setting "On (Down)" while "Dim darker" telegrams are sent in the setting "Off (Up)" at set intervals until the push button is released. If "Toggle" is selected, either an "On" or an "Off" telegram is sent (toggling) after a short push button action, depending on the current object status. The dimming function is maintained as for the setting "On" or "Off". The time limit for the distinction between a short and a long push button action can be set in the "General" parameter window.
<b>Lower function</b>	Switch Shutter Dimming with stop telegram <b>Dimming with cyclical sending</b>
	This parameter defines the function for the lower rocker contact. The associated parameters "Setting of lower function" and "Object type of object [1]" should be modified accordingly.
<b>Setting of lower function</b>	Off (Up) On (Down) Toggle Value (8 bit)
	This parameter specifies the sending value of the lower rocker contact. In the setting "On (Down)", a short push button action sends an "On" telegram via object [0] while the setting "Off (Up)" sends an "Off" telegram. A long operation of the contact causes "Dim brighter" telegrams to be sent in the setting "On (Down)" via object [1] and "Dim darker" telegrams to be sent in the setting "Off (Up)" at set intervals until the push button is released. If "Toggle" is selected, a short operation sends either "On" or "Off" telegrams (toggling), depending on the current object status. The dimming function remains the same as for "On" or "Off". The time limit for the distinction between a short and long push button action can be set in the "General" parameter window.

Parameters	Settings
<b>Object type of object [0]</b>	On / Off / Toggle / Up / Down Value (8 bit)
	This parameter defines the object type of object [0] which is specified according to the selected function of the upper contact.
<b>Object type of object [1]</b>	On / Off / Toggle / Up / Down <b>Dimming</b> Value (8 bit)
	This parameter defines the object type of object [1] which is specified according to the selected function of the lower contact.

The functions and parameters of the parameter windows "Main left rocker", "Main right rocker", "Outer left rocker" and "Outer right rocker" are identical.

## 2.2 Multiobject

### 2.2.1 Additional functions (multiobject) - Communication objects

Number	Name	Object Function	Length
09	Disable / LED / movement	disabled / enabled	1 bit

#### Note

The view of the objects can be arranged individually i.e. this view can vary.

No.	Name	Function	Length	Flag
9	Disable / LED / movement	disabled / enabled	1 Bit	CWTU

This object is used to disable or enable the objects connected in the parameter window "additional functions".

### 2.2.2 Additional functions (multiobject) - Parameters

Additional functions	
Object [4] linked with blocking object [9]	no logic operation
Object [5] linked with blocking object [9]	no logic operation
Object [6] linked with blocking object [9]	no logic operation
Object [7] linked with blocking object [9]	no logic operation
Reaction of blocking object - when blocking object value is 1	Sending disabled

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Parameters	Settings
Object [4] linked with blocking object [9]	<b>no logic operation</b> linked with blocking object [9]
Object [5] linked with blocking object [9]	<b>no logic operation</b> linked with blocking object [9]
Object [6] linked with blocking object [9]	<b>no logic operation</b> linked with blocking object [9]
Object [7] linked with blocking object [9]	<b>no logic operation</b> linked with blocking object [9]
These parameters indicate whether the sending of the respective object of the auxiliary rockers is dependent on the value of the blocking object.	
The blocking object has only an effect to the auxiliary rockers and not to the brightness-dependent motion detector, this one at corresponding parameter setting also sends via object 4 or 6.	
<b>Reaction of blocking object – when blocking object has a value of 1</b>	<b>Sending disabled</b> Sending enabled
This parameter indicates whether the linked auxiliary rockers are disabled or enabled when the object value equals 1.	

### Note

The parameter window “Additional functions” is not displayed if the multiobject is used for sending the brightness value (Lux value).

### 2.2.3 Lux value – Communication objects

Number	Name	Object Function	Length
9	Brightness	Lux value	2 Byte

### Note

The view of the objects can be arranged individually i.e. this view can vary.

No.	Name	Function	Length	Flag
9	Brightness	Lux value	2 Byte	CWTU

The brightness value is sent cyclically via this object every 10 minutes. If the Lux value changes since the last send by more than 100 Lux from 650 Lux onwards or by more than 70 Lux up to 650 Lux, then the Lux value is sent after several seconds.

### 2.2.4 Lux value - Parameters

Lux value	
Brightness sensor active (note device variant)	No

Parameters	Settings
<b>Brightness sensor active (note device variant)</b>	<b>No</b> Yes

It is determined with this parameter whether the Lux value should be sent. If “Yes” is selected, the object type of object 9 changes from 1 bit to 2 byte and is then not available as a blocking object.

### 2.3 Motion detector

#### 2.3.1 Motion detector - Communication objects

Number	Name	Object Function	Length
8	Motion detector (without brightness)	On / Off (movement Yes / No)	1 bit

### Note

The view of the objects can be arranged individually i.e. this view can vary.

No.	Name	Function	Length	Flag
8	Motion detector (without brightness)	On / Off (Movement Yes/no)	1 Bit	CWTU

The non brightness-dependent motion detector sends an “On” telegram via this object once movement is detected. Once a set blocking time has elapsed, it is possible to select that the non brightness-dependent motion detector sends an “Off” telegram via this object.

#### 2.3.2 Brightness-dependent motion detector - Parameters

Brightness-dependent motion detector (note device variant)	
Send signal via	Object [0]
Evaluation range	±90 degrees
Transmission message	only On message
Motion evaluation until	Brightness level 3
Cycle time for On messages	5 seconds
Blocking time - after an object update (receipt)	none
Motion detector active after manual switch on	No

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Parameters	Settings
Send signal via	Object [0] Object [1] Object [2] Object [3] Object [4] Object [6] Object [8] Object [9]
	<p>This parameter is used to define an object, which the brightness-dependent motion detector uses to send its "On" or "Off" signals.</p> <p>If the motion detector is assigned to send the Lux value, object [9] does not appear in the list of settings.</p>
Evaluation range	disabled +90 degrees (Left *) -90 degrees (Right *) *i. 90 degrees
	<p>This parameter defines the detection range of both brightness sensors. (*) in the front view of the device)</p>
Transmission signal	<b>only On message</b> On and Off message
	<p>If the parameter "only On message" is set ON-signals are sent cyclically as long as a movement is detected.</p> <p>Transmission message "On and Off message"</p> <p>This parameter defines that the motion detector sends an "Off" telegram once the set overshoot time has elapsed. No cyclic ON-telegrams.</p>
Motion evaluation until	Brightness level 1 = 0 ... 10 Brightness level 2 = 0 ... 20 <b>Brightness level 3 = 0 ... 50</b> Brightness level 4 = 0 ... 100 Brightness level 5 = 0 ... 150 Brightness level 6 = 0 ... 200 Brightness level 7 = 0 ... 300 Brightness level 8 = 0 ... 500
	<p>This parameter specifies the brightness level for disabling the brightness-dependent motion detector. If the brightness in the room exceeds the set value, the motion detector is disabled.</p> <p>The values are approx. 10, 20, 50, 100, 150, 200, 300 and 500 Lux (0 .. 10 Lux corresponds to brightness level 1).</p>

Parameters	Settings
Cycle time for ON-messages	0,5 seconds 2 seconds <b>5 seconds</b> 10 seconds 20 seconds 30 seconds 1 minute 2 minutes 3 minutes 5 minutes 10 minutes 15 minutes 20 minutes 30 minutes 60 minutes 90 minutes
	<p>If movements are detected ON-telegrams are sent cyclically depending on the cycle time which has been set in the parameter list. If no movement is detected during the time cycle set in the parameter list no further ON-signals are sent. The OFF-signal is then carried out by tail-end time components (time switches).</p>
Overshoot time	0,5 seconds 2 seconds <b>5 seconds</b> 10 seconds 20 seconds 30 seconds 1 minute 2 minutes 3 minutes 5 minutes 10 minutes 15 minutes 20 minutes 30 minutes 60 minutes 90 minutes
	<p>When the period that is specified here has elapsed an OFF-signal is sent. If a movement is detected again during the overshoot time the overshoot time is restarted.</p> <p>During this period, no "On" signals are sent if further movement is detected.</p>
Blocking time – after an object update (receipt)	<b>none</b> 5 seconds 10 seconds 20 seconds 30 seconds 1 minute 2 minutes 5 minutes
	<p>This parameter specifies the period, which keeps the brightness-dependent motion detector disabled once it receives a signal via its sending object. During this period, no "On" signals are sent respectively the overshoot time is not extended if any movement is detected.</p>

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Parameters	Settings
<b>Enabling the motion detector manually</b>	<b>Yes</b> No
If the setting "Yes" of the parameter setting "motion detector active" is enabled manually: Receiving an ON-signal at the sending object of the brightness-dependent motion detector or enabling the setting manually is treated in the same way as if a motion was detected. Thus the cycle/overshoot time cycle which has been set in the parameter list is triggered non-dependently on the current brightness.	
If the setting "No" of the parameter setting "motion detector active" is enabled manually: Receiving an ON-signal at the sending object of the brightness-dependent motion detector or disabling the setting manually disables the motion detector until an OFF-signal is received at the sending object of the detector or until the device is switched off manually.	

Parameters	Settings
<b>Cycle time for ON-messages</b>	<b>2 seconds</b> 10 seconds 30 seconds 2 minutes 5 minutes 15 minutes 30 minutes 90 minutes
	If movements are detected ON-telegrams are sent cyclically depending on the cycle time which has been set in the parameter list. If no movement is detected during the time cycle set in the parameter list no further ON-signals are sent. The OFF-signal is then carried out by tail-end time components (time switches).
<b>Overshoot time</b>	<b>2 seconds</b> 10 seconds 30 seconds 2 minutes 5 minutes 15 minutes 30 minutes 90 minutes
	When the period that is specified here has elapsed an OFF-signal is sent. If a movement is detected again during the overshoot time the overshoot time is restarted. During this period, no "On" signals are sent if further movement is detected.

### 2.3.3 Motion detector - Parameters

Motion detector	
Evaluation range	±90 degrees
Transmission message	only On message
Cycle time for On messages	2 seconds
LED for motion display (for test purposes)	disabled

<b>LED for motion display (for test purposes)</b>	<b>disabled</b> enabled
	The LED in the motion detector (in the centre) can be enabled via this parameter for the display of movement that is recorded while the motion detector is being set.

Parameters	Settings
<b>Evaluation range</b>	disabled +90 degrees (Left *) -90 degrees (Right *) */ <b>90 degrees</b>
	This parameter defines the detection range of both brightness sensors. (*) in the front view of the device)
<b>Transmission signal</b>	<b>only On message</b> On and Off message
	When setting "only On-signals" cyclical On-signals are sent until a movement is detected – no OFF-signals are sent. If the parameter "On- and Off-signal" is set the overshoot time is activated. If a movement is detected for the first time an On-telegram is sent and the overshoot time is started. If a further movement is detected within the overshoot period no On-telegram is sent, only the overshoot time is restarted according to the time that has been set.

**12 S8 Multiswitch+Motion detector 280103****2.4 LEDs - Parameters**

LEDs	
LED of main left rocker	always Off
LED of main right rocker	always Off
Upper left LED	always Off
Lower left LED	always Off
Upper right LED	always Off
Lower right LED	always Off

**Notes:**

Parameters	Settings
<b>LED of main left rocker</b>	<b>always Off</b> always On Switching value of object 0 Switching value of object 1 Switching value of object 2 Switching value of object 3 Switching value of object 8 Switching value of object 9 Inv. switching value of object 0 Inv. switching value of object 1 Inv. switching value of object 2 Inv. switching value of object 3 Inv. switching value of object 8 Inv. switching value of object 9
This parameter is used to set the function of the LEDs of the main rockers. They can be used as an orientation light (always On) or to display the switching value of an object (status display). Object 9 is only displayed if the object is not used for sending the brightness value.	
<b>Upper left LED</b> <b>Lower left LED</b>	<b>always Off</b> always On Switching value of object 4 Switching value of object 5 Switching value of object 6 Switching value of object 7 Switching value of object 8 Switching value of object 9 Inv. switching value of object 4 Inv. switching value of object 5 Inv. switching value of object 6 Inv. switching value of object 7 Inv. switching value of object 8 Inv. switching value of object 9
This parameter is used to set the function of the LEDs of the auxiliary rockers. They can be used as an orientation light (always On) or to display the switching value of an object (status display). Object 9 is only displayed if the object is not used for sending the brightness value.	