User Manual

3X300 DIMMER MODULE

DM03B02KNX

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1. Presentation of the Dimming functions

The application software allows each output to be individually configured for Dimming applications.

The main functions are the following :

■ **ON/OFF**

The ON/OFF function allows ON or OFF switching of a lighting circuit.

-ON : switching ON at the lighting level defined by parameters. The switching can be made gradually or instantaneously.

-OFF : lights out. The switching OFF can be made gradually or instantaneously.

The command may come from pushbuttons.

■ **Relative or absolute dimming**

The relative dimming allows increasing or decreasing the lighting level as long as a pushbutton is pressed down. The dimmer speed is settable.
The absolute dimming allows defining in % the lighting level to reach.

■ **Timer**

The Timer function allows ON or OFF switching of a lighting circuit for an adjustable time. Depending on the timer operation selected, the output may be delayed for ON or OFF. An adjustable cut-OFF pre-warning indicates the end of the delay time by dividing the lighting level by two.

■ **Priority**

The Priority function allows overriding an output to an adjustable lighting level.
This command has the highest priority. No other command is taken into consideration if a priority is active. Only a priority end command enables again the other commands.

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Application : maintaining a lighting ON for safety reasons.

■ **Scene**

The Scene function allows grouping a set of outputs. These outputs can be put in a adjustable predefined status. Pressing one single pushbutton activates a scene.
The dimmer speed to reach these lighting levels are adjustable.

■ **Metering**

The Metering function is used to measure the total duration at ON or OFF for an output. A set-point triggering an alarm may be programmed.

■ **Setting of minimum and maximum dimming values**

This function allows defining minimum and maximum dimming levels for each ouptut. These values can be defined via an ETS parameter or directly on the front of the product.

■ **Selection of the number of outputs used**

The product enables controlling 1, 2 or 3 lighting circuits. The maximum power available by output depends on the number of outputs used. The cumulated power is limited to 900W :

1 output used : 900W
2 outputs used : one output 600W and one output 300W
3 outputs used : 300W by output

■ **Manual mode**

The Manual mode isolates the product from the bus.
In this mode, the brightness of the lighting circuits can be forced locally.

■ **Expert mode**

Expert mode is used to force dimming mode manually. It is possible to carry out this adjustment locally on the front face of the product or via an ETS parameter.

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2. Configuration and param. of the Dimming functions

■ Selection of the number of outputs

This parameter allows selecting the number of outputs used.

Designation	Description	Values
Number of outputs used*	This parameter is used to select the number of outputs used.	1, 2, 3 Default value: 3
Activation of manual mode**	This parameter enables or disables the 2 position switch located on the front side of the product. This switch is used to select Manu or Auto mode. In Manu mode, the outputs can be controlled using the push buttons on the front of the product. In Auto mode, the orders from the bus control the outputs.	Manual mode authorised, Manual mode inhibited, Time limited manual mode. • Manual mode authorised: Manual mode can be activated at any time, • Manual mode inhibited: The switch is permanently inhibited. It is impossible to switch to manual mode. • Time limited manual mode: Manual mode can be activated for a configurable duration. Default value: Manual mode authorised
Duration of manual mode activation***	This parameters defines the duration of activation of the manual mode.	15 min, 30 min, 60 min Default value: 15 min
Scenes restore object (See also Scene function)	If the value is Active, the values associated with the scenes during the last download are restored during the receipt of thei object.	Not active, Active Default value: Not active

■ Setting of minimum and maximum dimming values

The relative dimming range can be defined on the product or via an ETS parameter.

■ Local settings

A 4 positions switch on the front side of the product allows selecting the following modes : **Auto / Min / Max / Manual**

The Min and Max position allows setting the minimum and the maximum lighting level of the outputs. This setting is made by storing the current lighting level of the output

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after a long pressure on the output corresponding pushbutton on the front side of the product.

■ ETS parameters

In case of ETS downloading, the possibilities are :
- the limits set on the product are not modified.
- the limits set locally are replaced by the values on the parameters.
- the dimming mode configured values are replaced by the selected values

Designation	Description	Values
Local min / max dimmer settings autorisation	This parameter is used to authorise or prohibit the taking into account of the Min and Max positions of the switch.	Forbidden, Authorized Default value: Authorized
Relative dimming min / max values after download	This parameter authorises or prohibits the taking into account of the limit values for the dimming range configured with the ETS.	Values adjusted on the product, Values settings in ETS Default value: Values adjusted on the product
Dimming mode after download	This parameter is used to define which setting is taken into account after downloading.	Values adjusted on the product, Values settings in ETS Default value: Values adjusted on the product

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Functions description

Dimmer DM03B02KNX have a load memorisation function in order to control dimmable fluocompact lamps and LED lamps more effectively. These products also have a priority function for the dimming mode which allows the desired dimming modes to be selected.
The Memorisation object is used to launch the memorisation procedure. Memorisation of the load can also be launched thanks to a specific sequence of presses on a KNX push button:

- With a KNX push button configured for dimming, give 5 short presses (5 ON; 5 OFF or 5 ON / OFF) followed by a long press until the load switches off,
- Give a brief press on the push button to launch memorisation (two presses to return to factory dimming mode).

This operation lasts approximately 30 s and varies the level of lighting.
After this memorisation, the load lights at the maximum level and flashes once to indicate that memorisation is terminated.
Depending on the load connected, the minimum lighting level can be modified.
This memorisation can be authorised or not authorised thanks to the memorisation authorisation parameter.
Dimming mode can be configured to a fixed value using the Selection of the dimmig mode parameter.

Designation	Description	Values
Dimming mode selection*	This parameter is used to define the dimming mode applied.	Fluocompact, Capacitive load, Induction load, LED load, Load memorisation, Factory mode Default value: Factory mode
Authorisation of the expert button	This parameter is used to define if it is possible to modify the dimming mode using the expert button on the front of the product.	Used, Not used Default value: Used
Load memorisation	This parameter defines if the load memorisation function can be used or not.	Used, Not used Default value: Not used

This parameter is only available when the Dimming mode after download parameter is defined as the value configured in ETS.

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■ ON / OFF, Status indication and Brightness value indication functions
The ON/OFF function enables switching the output to ON or to OFF using the ON/OFF object.

- ON: switching ON at the lighting level defined by parameters. Switching ON can be gradual or instantaneous.
- OFF: switching OFF. Switching off can be progressive or instantaneous.

The speed of dimming is configurable.
The speed at which the lighting switches on and off are configured for the ON / OFF function, the values of these parameters are re-used by the Absolute dimming, Timer and Priority functions.
The output status and the lighting level are indicated on the bus by the Status indication object and Brightness value indication object.

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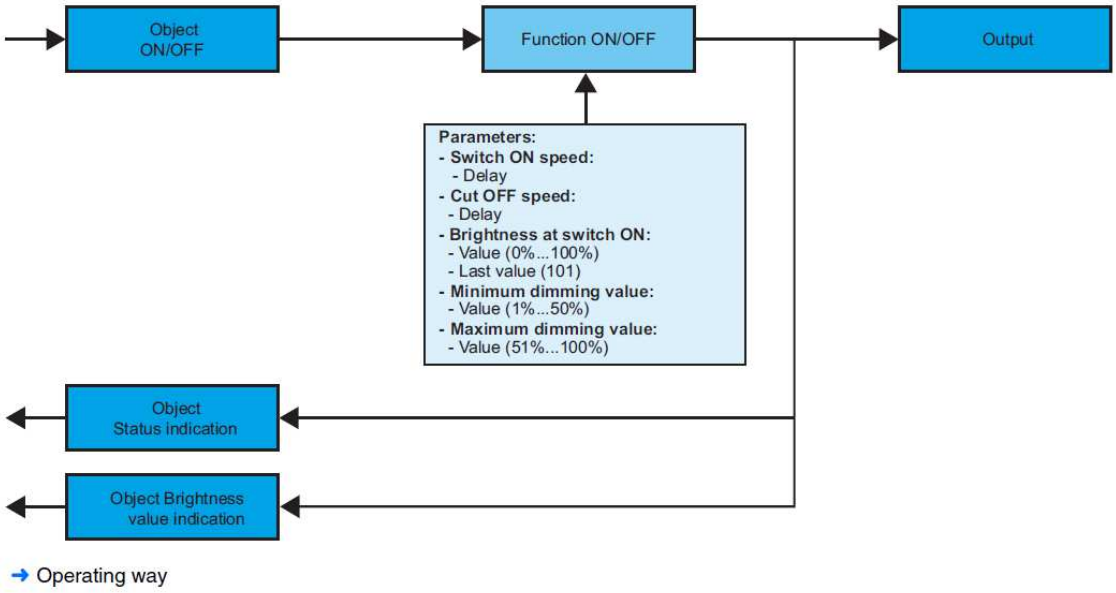
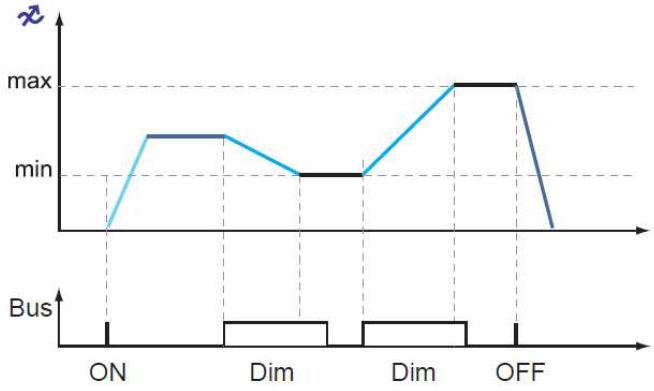


➜ Operating way



	Switch ON speed
	Relative dimmer speed
	Cut OFF speed
	Brightness at switching ON

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➜ Parameter Setting screen

Designation	Description	Values
Switch-ON speed	This parameter defines the dimming speed to achieve the lighting level when switching on.	0 s, 1 s, 2 s, 3 s, 4 s, 5 s, 6 s, 9 s, 15 s, 30 s, 60 s, 2 min, 5 min, 10 min, 20 min, 30 min Default value: 0 s
Cut-OFF speed	This parameter defines the dimming speed for switching off the light.	0 s, 1 s, 2 s, 3 s, 4 s, 5 s, 6 s, 9 s, 15 s, 30 s, 60 s, 2 min, 5 min, 10 min, 20 min, 30 min Default value: 0 s
Lighting level on switching on	This parameter defines the lighting level when switching on.	From 0% to 100% in intervals of 1%, 101 (Last value) Default value: 101 (Last value)
Minimum dimming value*	This parameter defines the minimum value for the lighting level during dimming.	From 1% to 50% in intervals of 1% Default value: 1%
Maximum dimming value*	This parameter defines the maximum value of the lighting level during dimming.	From 51% to 100% in intervals of 1% Default value: 100%

* These parameters are only visible if the **Relative dimming limits** parameter during downloading has the value: Values settings in ETS.

■ Dimming function

The dimming can be relative or absolute.

A. Relative dimming

The relative dimming allows increasing or decreasing the lighting level of the lighting circuit as long as a pushbutton is pressed down.
The relative dimming function is started by the Dimming object.
The dimmer speed is settable.

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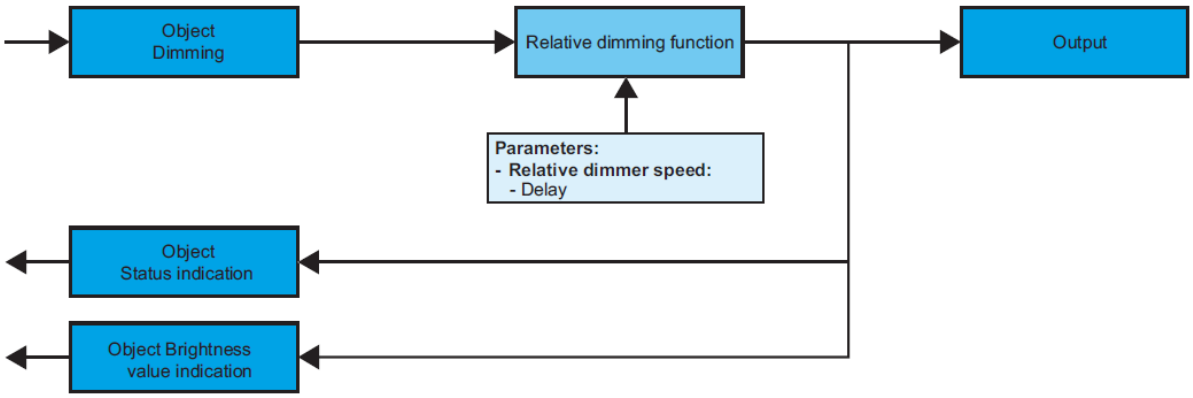


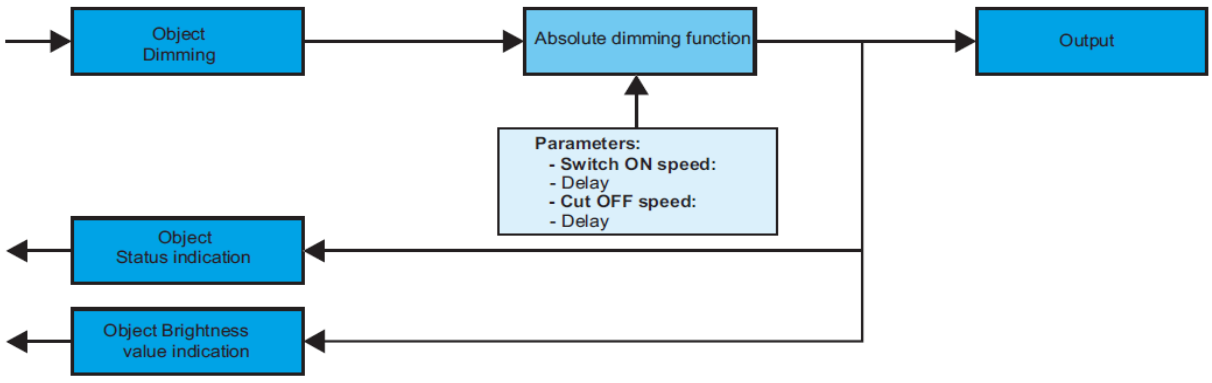
➜ Parameters setting screen : see "Screen 2".

➜ Parameter

Designation	Description	Values
Relative dimmer speed	This parameter defines the dimming speed to go from 0% level to 100% level.	1 s, 2 s, 3 s, 4 s, 5 s, 6 s, 9 s, 15 s, 30 s, 60 s. Default value : 4 s.

B. Absolute dimming

The absolute dimming function allows bringing the lighting circuit to a brightness level. The absolute dimming function is started by the brightness value object. The dimmer speed is settable (same values than for the ON/OFF function).



➜ Parameters setting screen : see "Screen 2".

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➜ Parameters

Designation	Description	Values
Switch ON speed (similar to ON/OFF function)	This parameter defines the dimming speed to reach the brightness level at switching ON.	0 s, 1 s, 2 s, 3 s, 4 s, 5 s, 6 s, 9 s, 15 s, 30 s, 60 s, 2 min, 5 min, 10 min, 20 min, 30 min. Default value : 0 s.
Cut OFF speed (similar to ON/OFF function)	This parameter defines the dimming speed at switching OFF.	0 s, 1 s, 2 s, 3 s, 4 s, 5 s, 6 s, 9 s, 15 s, 30 s, 60 s, 2 min, 5 min, 10 min, 20 min, 30 min. Default value : 0 s.

■ Timer function

The Timer function allows ON or OFF switching of a lighting circuit for an adjustable time. The function is started by the Timer object. The dimmer speed is settable (same values than for the ON/OFF function).

Cut-OFF pre-warning (in ON operation) :

An adjustable cut-OFF pre-warning indicates the end of the delay time by dividing the lighting level by two.
The value of the parameter cut-OFF pre-warning defines the time before the end of the delay time, when the pre-warning will be applied.

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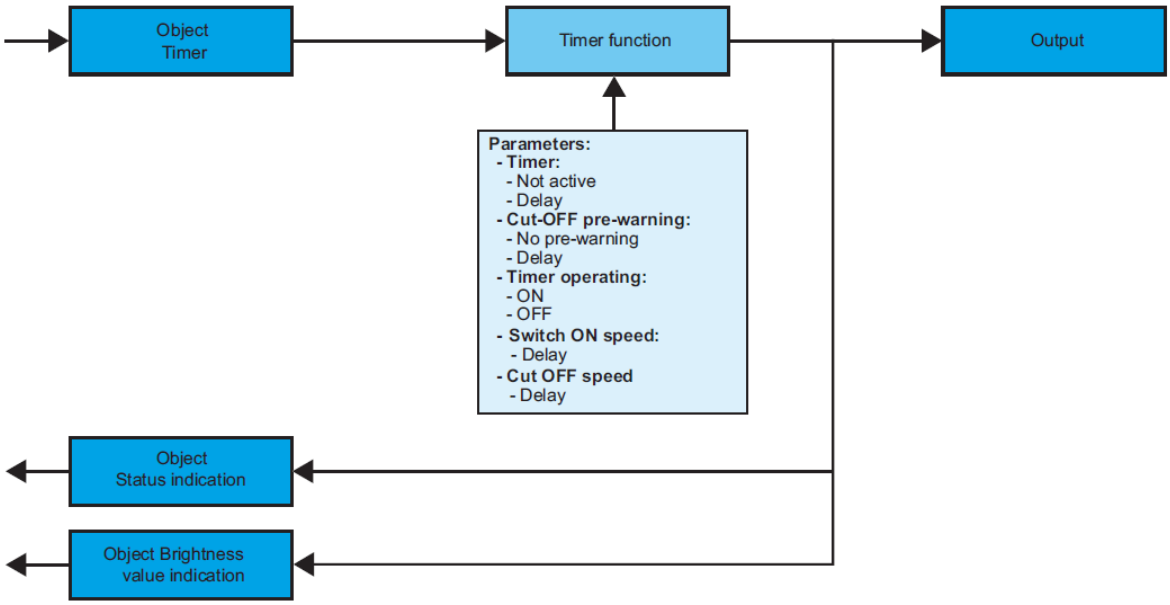

➜ Parameters setting screen : see "Screen 2".

Designation	Description	Values
Timer	This parameter defines the length of the delay time.	Not active, Range [1 s - 24 h]* Default value: 3 min
Cut-OFF pre-warning	The parameter value defines the time before the end of the delay time, when the pre-warning will be applied.	No pre-warning, 15 s, 30 s, 1 min Default value: No pre-warning
Timer operation	This parameter defines whether the delay time triggers an ON or an OFF status.	ON, OFF Default value: ON
Switch-ON speed (As for the ON/OFF function)	This parameter defines the dimming speed to achieve the lighting level when switching on.	0 s, 1 s, 2 s, 3 s, 4 s, 5 s, 6 s, 9 s, 15 s, 30 s, 60 s, 2 min, 5 min, 10 min, 20 min, 30 min Default value: 0 s
Cut-OFF speed (As for the ON/OFF function)	This parameter defines the dimming speed for switching off the light.	0 s, 1 s, 2 s, 3 s, 4 s, 5 s, 6 s, 9 s, 15 s, 30 s, 60 s, 2 min, 5 min, 10 min, 20 min, 30 min Default value: 0 s
Timer interruption	This parameter allows or not the interruption of the timer when the associated push button is pressed for a long time.	Interruptible timer, Non-interruptible timer Default value: Interruptible timer

* Setting range [1 s - 24 h]
1 s, 2 s, 3 s, 5 s, 10 s, 15 s, 20 s, 30 s, 40 s, 45 s, 50 s, 1 min, 1 min 15 s, 1 min 30 s, 2 min, 2 min 30 s, 3 min, 4 min, 5 min, 6 min, 7 min, 8 min, 9 min, 10 min, 11 min, 12 min, 13 min, 14 min, 15 min, 20 min, 30 min, 40 min, 50 min, 1 h, 1 h 30 min, 2 h, 2 h 30 min, 3 h, 3 h 30 min, 4 h, 5 h, 6 h, 12 h, 24 h.

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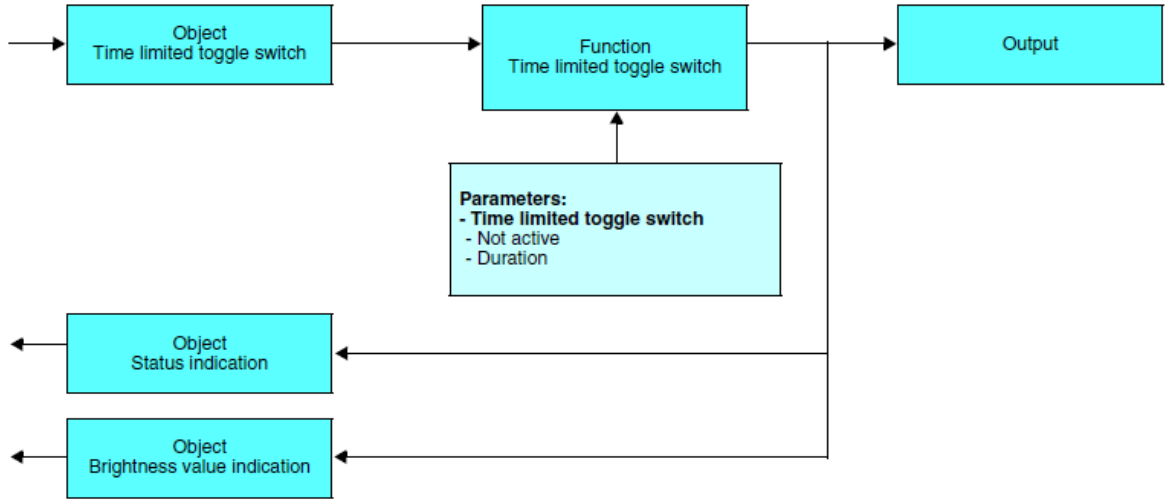
Note:

- Timer commands repeated n times during the first ten seconds after the beginning of the time delay multiply the duration of the time delay by n times the value of the Timer parameter,
- Timer commands repeated n times within 10 seconds after the beginning of the delay time restart the timer only once.

■ Time limited toggle switch function

The Time limited toggle switch function is used to create a toggle switch with a configurable cut-off time delay. This function is started by the Time limited toggle switch object.



Designation	Description	Value
Time limited toggle switch	This parameter defines the duration of the switch-OFF delay time.	Not active, Range [0.5 s - 24 h]* Default value: 1 h

* Setting range [0.5 s - 24 h]
0.5 s, 1 s, 2 s, 3 s, 5 s, 10 s, 15 s, 20 s, 30 s, 40 s, 45 s, 50 s, 1 min, 1 min 15 s, 1 min 30 s, 2 min, 2 min 30 s, 3 min, 4 min, 5 min, 6 min, 7 min, 8 min, 9 min, 10 min, 11 min, 12 min, 13 min, 14 min, 15 min, 20 min, 30 min, 40 min, 50 min, 1 h, 1 h 30 min, 2 h, 2 h 30 min, 3 h, 3 h 30 min, 4 h, 5 h, 6 h, 12 h, 24 h.

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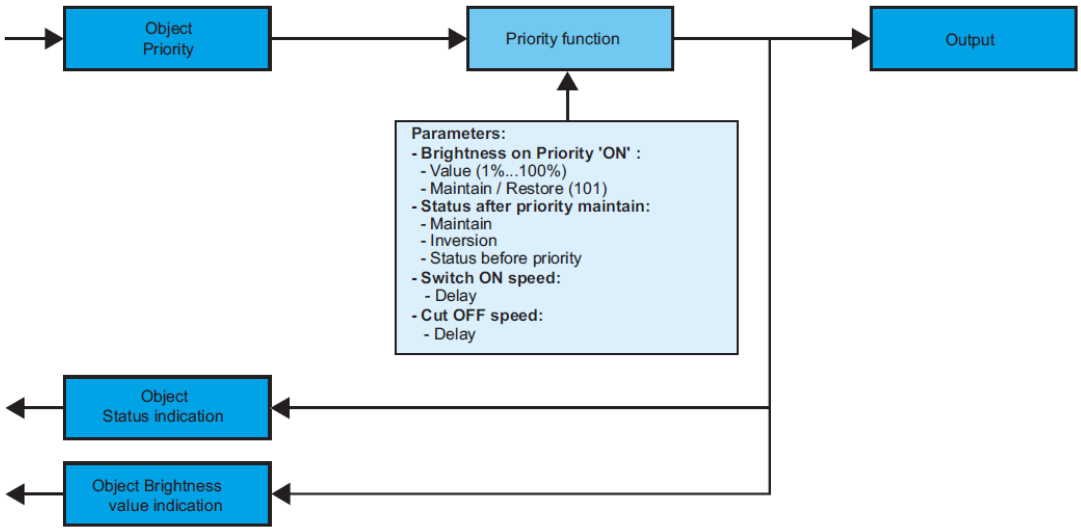
■ Priority function

The Priority function allows the outputs to be forced and maintained at a definite ON or OFF status imposed by the input. This function is started by the Priority object (EIS priority). The brightness on priority ON is settable.
The dimmer speed is settable (same values than for the ON/OFF function).
Priority is the function with the highest priority. Only a priority end command ends the Priority and allows again the commands from the bus to be taken into consideration.



➜ Priority function description (EIS priority).

Bit 1	Bit 0
Output behaviour	

Output behaviour	00 = Priority end 01 = Priority end 10 = OFF priority 11 = ON priority

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Designation	Description	Values
Brightness on priority ON	This parameter defines the brightness level at priority.	1 % to 100% by steps of 1%, 101. 101 : - If the output is OFF : restoring the lighting level defined by the parameter Brightness at switch ON. - If the output is ON : upholding the level before priority. Default value : 100%.
Status after priority	This parameter defines the brightness level to be applied at the end of the Priority.	Maintain, Inversion, Status before first priority. - Maintain : maintains the output at the status active during Priority. - Inversion : inversion of the output status with regards to the status active during Priority (ON to OFF and OFF to ON). - Status before first priority : switches the output to the status active before the Priority command. Default value : Status before first priority.
Switch ON speed (similar to ON/OFF function)	This parameter defines the dimming speed to reach the brightness level at switching ON.	0 s, 1 s, 2 s, 3 s, 4 s, 5 s, 6 s, 9 s, 15 s, 30 s, 60 s, 2 min, 5 min, 10 min, 20 min, 30 min. Default value : 0 s.
Cut OFF speed (similar to ON/OFF function)	This parameter defines the dimming speed at switching OFF.	0 s, 1 s, 2 s, 3 s, 4 s, 5 s, 6 s, 9 s, 15 s, 30 s, 60 s, 2 min, 5 min, 10 min, 20 min, 30 min. Default value : 0 s.

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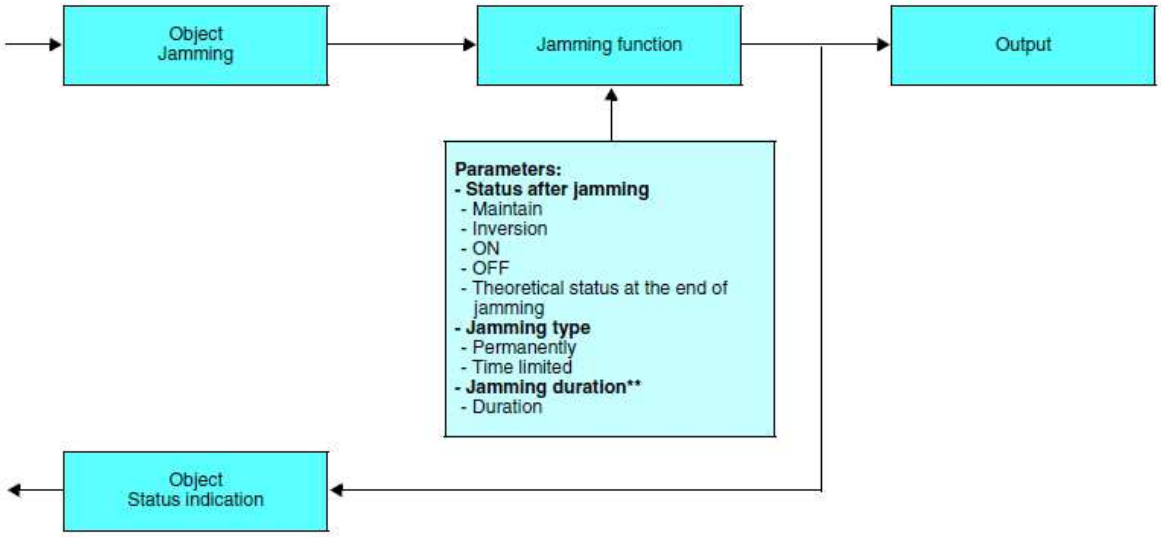
■ Jamming function

The Jamming function allows the outputs to be locked in their current status.
This function is started by the Jamming object. The Jamming function is the function with the second highest priority after Priority. A Jamming end command ends the jamming and allows again taking the commands from the bus into consideration.
A Priority command ends the Jamming.



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Designation	Description	Value
Status after jamming	This parameter defines the output status to be applied at the end of the Jamming.	Maintain, Inversion, ON, OFF, Theoretical status at the end of jamming • Maintain: Maintains the output at the status active during Jamming. • Inversion: Inversion of the output status with regards to the status active during Jamming (ON to OFF and OFF to ON). • ON: Switch the output to ON, • OFF: Switch the output to OFF, • Theoretical status at the end of jamming: Switch the output to the status which would be in place if no jamming control had taken place. Default value: Maintain
Jamming type	This parameter defines whether Jamming is permanent or time limited.	Permanently, Time limited • Time limited: Jamming is active for a parameterisable limited duration. Default value: Permanently
Jamming duration**	This parameter defines the Jamming duration.	Not active, Range [0 s - 24 h]* Default value: 1 h

* Setting range [0 s - 24 h]
0 s, 1 s, 2 s, 3 s, 5 s, 10 s, 15 s, 20 s, 30 s, 40 s, 45 s, 50 s, 1 min, 1 min 15 s, 1 min 30 s, 2 min, 2 min 30 s, 3 min, 4 min, 5 min, 6 min, 7 min, 8 min, 9 min, 10 min, 11 min, 12 min, 13 min, 14 min, 15 min, 20 min, 30 min, 40 min, 50 min, 1 h, 1 h 30 min, 2 h, 2 h 30 min, 3 h, 3 h 30 min, 4 h, 5 h, 6 h, 12 h, 24 h.

** This parameter is only visible if the **Jamming type** parameter has following value: Time limited.

■ Scene function

A scene allows controlling a group of outputs. Each of the outputs of this group will be put in a status predefined for this scene.
A scene is started by the Scene object.
For each scene, the brightness level and the dimming speed to reach it can be defined. The group of outputs is created previously by establishing the link between the outputs that must belong to the scene and the pushbutton that will trigger the scene. Each output may be integrated in 32 different scenes.
The status of each output may be defined by parameterizing or by learning in the room using the pushbuttons of the installation.

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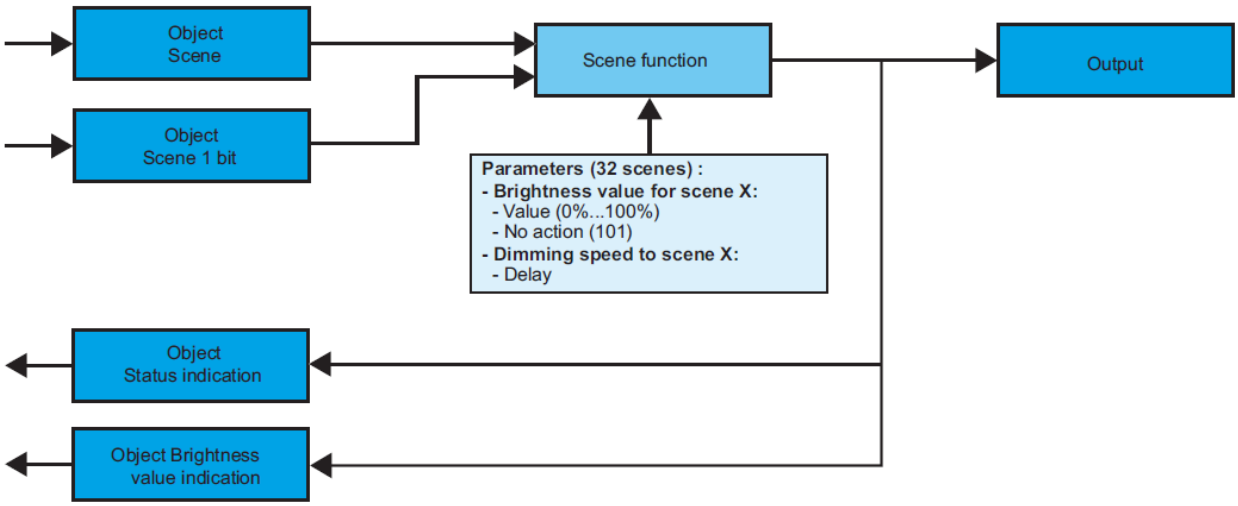
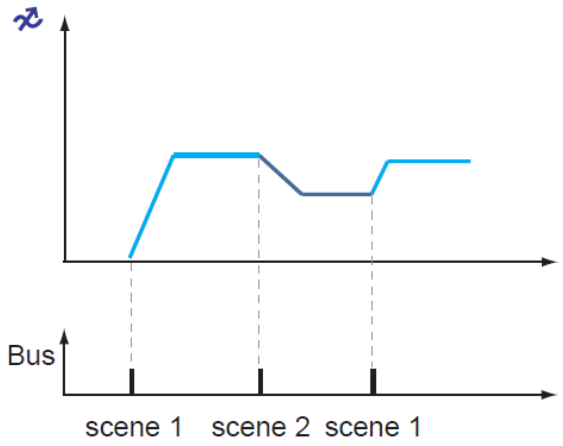
A. Configuration and storing by means of parameterising



➜ Description of scene object (1 byte)

7	6	5	4	3	2	1	0
Learn	X	Scene number					

➜ Operating way



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Designation	Description	Values
Scene storing	This parameter authorizes or forbids scene storing.	Used, Not used Default value: Used
Scene memorisation acknowledge*	This parameter activates or deactivates inversion of the status of the output indicating memorisation.	Used, Not used Default value: Used
Lighting value of the scene X	This parameter defines the status of the output associated to scene X.	From 0% to 100% in intervals of 1%, 101 (Do nothing) Default value: 101 (Do nothing)
Dimming speed to scene X	This parameter defines the dimming speed to achieve the lighting level applied for scene X.	0 s, 1 s, 2 s, 3 s, 4 s, 5 s, 10 s, 15 s, 20 s, 30 s, 45 s, 1 min, 2 min, 3 min, 4 min, 5 min, 10 min, 15 min, 20 min, 30 min, 45 min, 1 h, 1 h 30 min, 2 h, 2 h 30 min, 3 h, 3 h 30 min, 4 h Default value: 0 s
Scene activation 1 bit	This parameter allows 2 of the 32 possible scenes to be activated, with the help of the **Scene 1 bit** object.	Not active, Active Default value: Not active
Scene A activation** (0) Scene B activation** (1)	When the parameter Scene activation 1 bit has the value Active, the parameters **Scene activation A** and **Scene activation B** must be set. These parameters define the scenes to be activated for the two values of the **Scene 1 bit** object.	No active scene, Scene 1 to Scene 32 Default value: No active scene

* This parameter is only visible if the **Scenes memorisation** parameter is activated.
** These parameters are only visible if the **Activation scene 1 bit** parameter has the value: Active.

B. Learning and storing in the room

This procedure allows modifying and storing a scene by means of local action on the pushbuttons located in the room.

• Activate the scene pressing briefly on the room pushbutton that triggers the scene.

• Set the outputs to the desired status using the pushbuttons that control them individually.

• Store the status of the outputs pressing for more than 5 sec the room pushbutton that triggers the scene.

The storage is indicated by the status inversion of the involved outputs for 3 sec.

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C. Learning and storing on the product

This procedure allows modifying and storing a scene by means of local action on the push buttons located on the front side of the products. This procedure also allows an output to be removed from a scene (Not involved).

- Activate the scene by pressing briefly on the room push button that triggers the scene,
- Store the output statuses by pressing the room push button that triggers the scene for longer than 5 s, The storage is indicated by the status inversion of the involved outputs for 3 sec.
- As soon as the indicators associated with the outputs blink slowly, press briefly and repeatedly the push buttons linked with the outputs to set the outputs to the desired status. The indicators associated with the outputs show the status chosen:
  - Off if the value selected for the scene is 0%,
  - Permanent red if the value selected for the scene is greater than or equal to 1%,
  - Red and quickly blinking if the value selected for the scene is Not involved.
- Store the status selected for this scene pressing for a time longer than 3 sec the push button associated with the output. The storage is indicated by the return of the slow blinking of the indicators associated with the outputs.
- Repeat the previous step for each of the outputs of the scene.

■ Timer and Automatic controls functions

The Timer and Automatic controls function allow the outputs to be controlled by:

- The time delay functions: Timer / toggle switch change over, Timer, Switching delay, Tripping delay, Switching and tripping delay,
- The automatic controls functions: Authorization, AND or OR logical combinations,
- Parameters: The status of the output depends on the combination of the parameters Type of automatic control and Control type.

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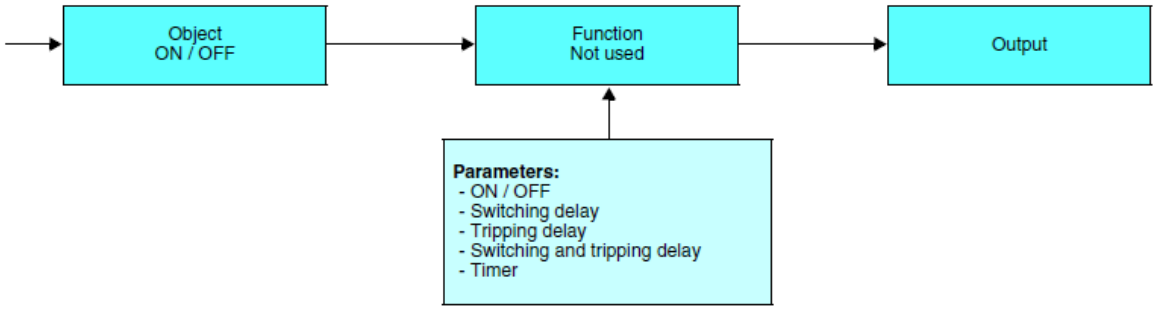

Automatism type	Control type	Operation	Parameter
Not used (Default value)	ON / OFF (Default value)	The output is controlled directly. The **Automatic control** object is ignored.	
	Switching delay	The output is delayed when switching. The **Automatic control** object is ignored.	Switching delay: [0.5 s - 24 h]* Default value: 3 min
	Tripping delay	The output is delayed when tripping. The **Automatic control** object is ignored.	Tripping delay: [0.5 s - 24 h]* Default value: 3 min
	Switching and tripping delay	The output is delayed when switching and when tripping. The **Automatic control** object is ignored. The switching and tripping delay times may be different.	Switching delay: [0.5 s - 24 h]* Default value: 3 min
			Tripping delay: [0.5 s - 24 h]* Default value: 3 min
	Timer	The output is delayed at ON or at OFF. The **Automatic control** object is ignored.	Time switch delay: [0.5 s - 24 h]* Default value: 3 min
			Timer operation: ON, OFF Default value: ON

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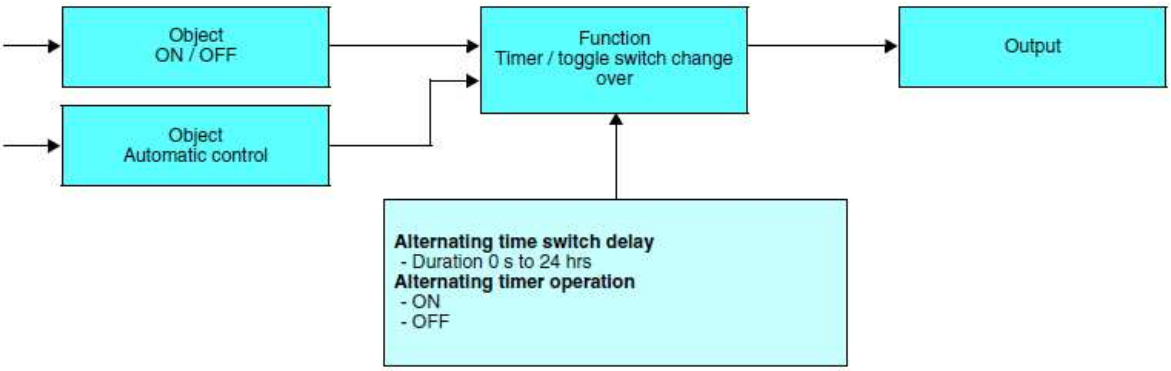

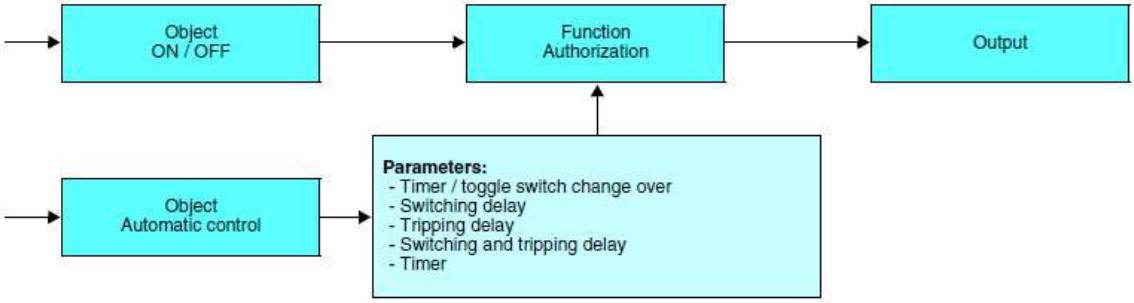

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Automatism type	Control type	Operation	Parameter
Authorization	Timer / toggle switch change over	The output is controlled directly by the **ON / OFF** object if the value of the **Automatic control** object is 1. The output is delayed at ON or at OFF if the value of the **Automatic control** object is 0.	Time switch delay: [0 s - 24 h]* Default value: 3 min
			Time switch delay: ON, OFF Default value: ON
	Switching delay	The output is delayed when switching if the value of the **Automatic control** object is 1. The commands are not taken into consideration if the value of the **Automatic control** object is 0.	Switching delay: [0.5 s - 24 h]* Default value: 3 min
	Tripping delay	The output is delayed when tripping of the value of the **Automatic control** object is 1. The commands are not taken into consideration if the value of the **Automatic control** object is 0.	Tripping delay: [0.5 s - 24 h]* Default value: 3 min
	Switching and tripping delay	The output is delayed when switching and when tripping if the value of the **Automatic control** object is 1. The commands are not taken into consideration if the value of the **Automatic control** object is 0.	Switching delay: [0.5 s - 24 h]* Default value: 3 min
			Tripping delay: [0.5 s - 24 h]* Default value: 3 min
	Timer	The output is delayed if the value of the **Automatic control** object is 1. The commands are not taken into consideration if the value of the **Automatic control** object is 0.	Time switch delay: [0 s - 24 h]** Default value: 3 min
			Timer operation: ON, OFF Default value: ON

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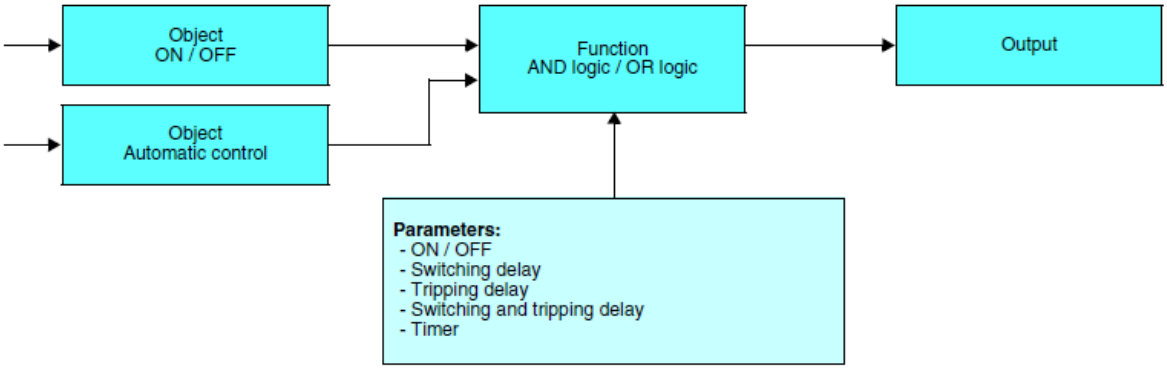

Automatism type	Control type	Operation	Parameter
AND logic	ON / OFF	The output is the result of the AND logic between the value of the **ON / OFF** object and the value of the **Automatic control** object.	
	Switching delay	The output is the result of the AND logic between the value of the **ON / OFF** object delayed when switching and the value of the **Automatic control** object.	Switching delay: [0.5 s - 24 h]* Default value: 3 min
	Tripping delay	The output is the result of the AND logic between the value of the **ON / OFF** logic delayed when switching and the value of the **Automatic control** object.	Tripping delay: [0.5 s - 24 h]* Default value: 3 min
	Switching and tripping delay	The output is the result of the logical AND between the value of the **ON / OFF** object delayed when switching and when tripping, and the value of the **Automatic control** object.	Switching delay: [0.5 s - 24 h]* Default value: 3 min
			Tripping delay: [0.5 s - 24 h]* Default value: 3 min
	Timer	The output is the result of the AND logic between the value of the **ON / OFF delayed** object and the value of the **Automatic control** object.	Time switch delay: [0 s - 24 h]** Default value: 3 min
			Timer operation: ON, OFF Default value: ON

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Automatism type	Control type	Operation	Parameter
OR logicOR	ON / OFF	The output is the result of the OR logic between the value of the **ON / OFF** object and the value of the **Automatic control** object.	
	Switching delay	The output is the result of the OR logic between the value of the **ON / OFF** object delayed when switching and the value of the **Automatic control** object.	Switching delay: [0.5 s - 24 h]* Default value: 3 min
	Tripping delay	The output is the result of the OR logic between the value of the **ON / OFF** object delayed when trippign and the value of the **Automatic control** object.	Tripping delay: [0.5 s - 24 h]* Default value: 3 min
	Switching and tripping delay	The output is the result of the OR logic between the **ON / OFF** object delayed when switching and tripping and the value of the **Automatic control** object.	Switching delay: [0.5 s - 24 h]* Default value: 3 min
			Tripping delay: [0.5 s - 24 h]* Default value: 3 min
	Timer	The output is the result of the OR logic between the value of the **ON / OFF delayed** object and the value of the **Automatic control** object.	Time switch delay: [0 s - 24 h]** Default value: 3 min
			Timer operation: ON, OFF Default value: ON

* Setting range [0.5 s - 24 h]
0.5 s, 1 s, 2 s, 3 s, 5 s, 10 s, 15 s, 20 s, 30 s, 40 s, 45 s, 50 s, 1 min, 1 min 15 s, 1 min 30 s, 2 min, 2 min 30 s, 3 min, 4 min, 5 min, 6 min, 7 min, 8 min, 9 min, 10 min, 11 min, 12 min, 13 min, 14 min, 15 min, 20 min, 30 min, 40 min, 50 min, 1 h, 1 h 30 min, 2 h, 2 h 30 min, 3 h, 3 h 30 min, 4 h, 5 h, 6 h, 12 h, 24 h.

** Setting range [0 s - 24 h]
0 s, 0.5 s, 1 s, 2 s, 3 s, 5 s, 10 s, 15 s, 20 s, 30 s, 40 s, 45 s, 50 s, 1 min, 1 min 15 s, 1 min 30 s, 2 min, 2 min 30 s, 3 min, 4 min, 5 min, 6 min, 7 min, 8 min, 9 min, 10 min, 11 min, 12 min, 13 min, 14 min, 15 min, 20 min, 30 min, 40 min, 50 min, 1 h, 1 h 30 min, 2 h, 2 h 30 min, 3 h, 3 h 30 min, 4 h, 5 h, 6 h, 12 h, 24 h.

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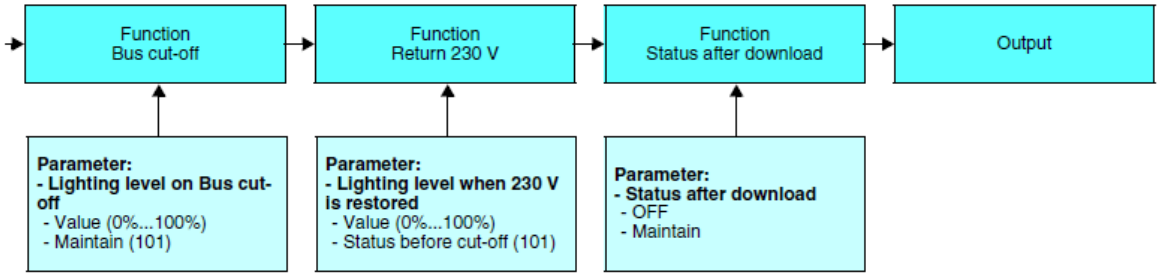
■ Special status

The settings covered in this section make it possible to define the behaviour of the outputs in certain specific cases.



Designation	Description	Values
Lighting level on Bus cut-off	This parameter defines the lighting level applied when the bus is restored.	From 0% to 100% in intervals of 1%, 101 (Maintain) Default value: 101 (Maintain)
Lighting level when 230 V is restored	This parameter defines the lighting level applied when the 230 V is restored.	From 1% to 100% in intervals of 1%, 101 (Status before cut-off) Default value: 101 (Status before cut-off)
Status after download	This parameter defines the status of the output applied after a download.	OFF, Maintain Default value: Maintain

■ Metering

The Metering function is used to measure the total duration of an output at ON or at OFF. The duration is transmitted by the Metering object. A set-point triggering an alarm may be programmed. The alarm is transmitted by the Counter set point reached object. The current measurement can be consulted at any time using the Meter object.

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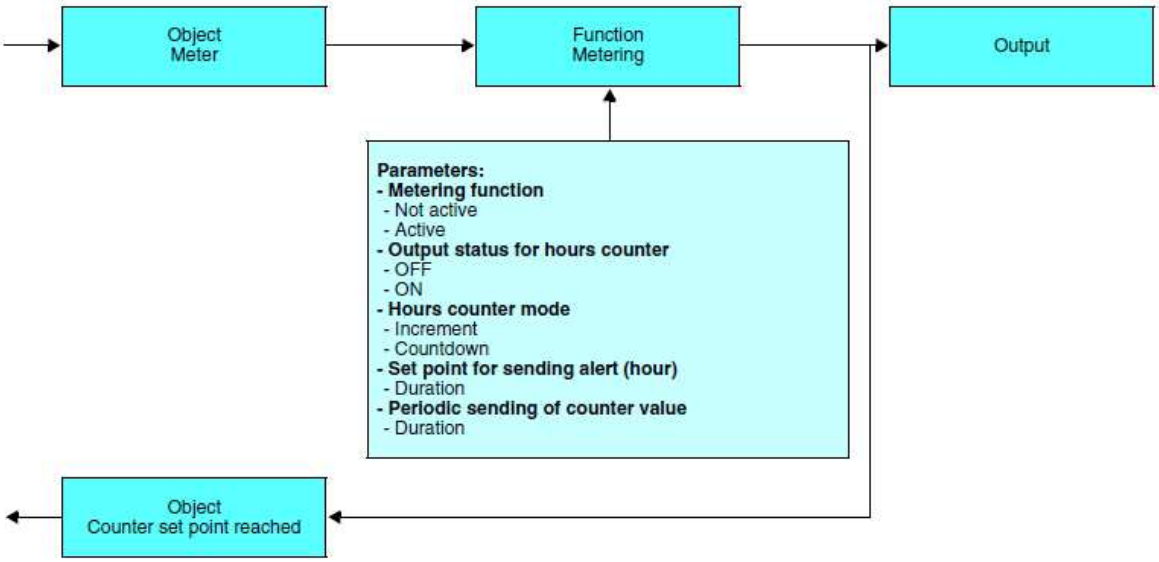

Designation	Description	Values
Metering function	This parameter allows activating the Counter function. The value of the counter can be read through the **Hours counter** object.	Not active, Active Default value: Not active
Output status for hours counter*	This parameter allows choosing the status of which the cumulated time is measured.	OFF, ON Default value: ON
Hours counter mode*	This parameter is used to define the Hours counter mode.	Increment, Countdown Default value: Increment
Set point for sending alert (hour)*	This parameter defines an alarm set-point for which the **Counter set-point reached** object will be sent.	From 0 to 50000 hours with 1-hour steps Remark: The **Counter set-point reached object** may be reset either by a new download or by means of a display tool. Default value: 1000

* This parameter is only visible if the **Counter function** parameter has following value: Active.

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3. Physical addressing

To perform physical addressing or check for the presence of the bus, press the lighted pushbutton located above the label holder on the right of the product.
Indicator on = bus present and product in physical addressing.
The product remains in physical addressing until the physical address is transmitted by ETS. Pressing a second time allows
leaving the physical addressing mode.
Physical addressing may be performed in Auto or in Manual () mode.

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