Product manual

Mylos KNX
Switch Actuator with rocker switches
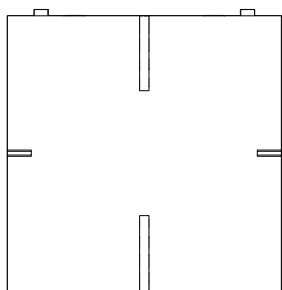# 2CSYK1102C/S
2CSYK1103C/S
2CSYK1106C/S

Power and productivity
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ABB

1   Technical features

1.1   Switch Actuator 16A, 1 switch

2CSYK1102x

The one-channel 16A Switch Actuator one switch is a flash-mounted device for the ABB's Mylos Building Automation system.
On the rear side, the device has an exchange output contact (NA/NC) that can be configured for the control of different kinds of loads. These contacts need additional power supply. The device relay can receive a switching command from the device itself, from other control devices of the Building Automation system or from conventional control devices (push-buttons, switches, relays) duly associated with input devices of the Building Automation system. For the simple output it is possible to control the following functions separately:

- Time, delay, ON/OFF functions;
- Stairlights with pre-warning and adjustable time for stairway lighting functions;
- Scene control through 8 bit /1 bit controls
- AND, OR, XOR logic operation and gate function.

On the front side it has a rocker switch with programmable indicator light, that can be configured according to the following functions:
- simple switching or switching with two communication objects
- Dimmer functionality;
- Shutter functionality;
- 1 bit and 8 bit scene functionality;
- manual operation that makes it possible to control the relays directly.

1.1.1   Technical data

Power supply	- Operating voltage	21…30 VDC over the bus
	- Absorbed power EIB / KNX	< 12 mA
Nominal output values	- Number of voltage-free contacts	1
	- Rated voltage U_n	240/400 VAC (50/60Hz)
	- Rated current I_n (per output)	16A
	- Mechanical contacts duration	>$5*10^6$
	- Number of relay changes of position to the minimum	40
Connections	- EIB / KNX	Connection terminal Bus 0.6-0.8 mm ø, unipole
	- Load circuit	Screw terminals
	- Connection cable cross section	0,2….2,5 mm² braid 0,2….4 mm² unipole
	- Tightening torque	Max. 0.5 Nm
Control and display elements EIB / KNX	- red LED and EIB / KNX button	To set the physical address
EIB / KNX voltage	- SELV 24 VDC (safety extra low voltage)	
Ambient temperature	- Use	-5 °C … + 45 °C
	- Storage	-25 °C … + 55 °C
	- Transport	-25 °C … + 70 °C
Execution	- Dimensions (H x W x D) in mm	17 x W x 15
	- Width W in mm	17
	- Mounting width in mm	7
	- Mounting depth in mm	5
Case, colour	- Plastic container, white or black	
CE marking	- acc. to EMC and Low-Voltage Directives	

Device type	Application program	Maximum number of communication objects	Maximum number of group addresses	Maximum number of associations
2CSYK1102x	Switching 1c 16A/1.0 1 interr.	18	255	255

1.1.2 Connection diagram
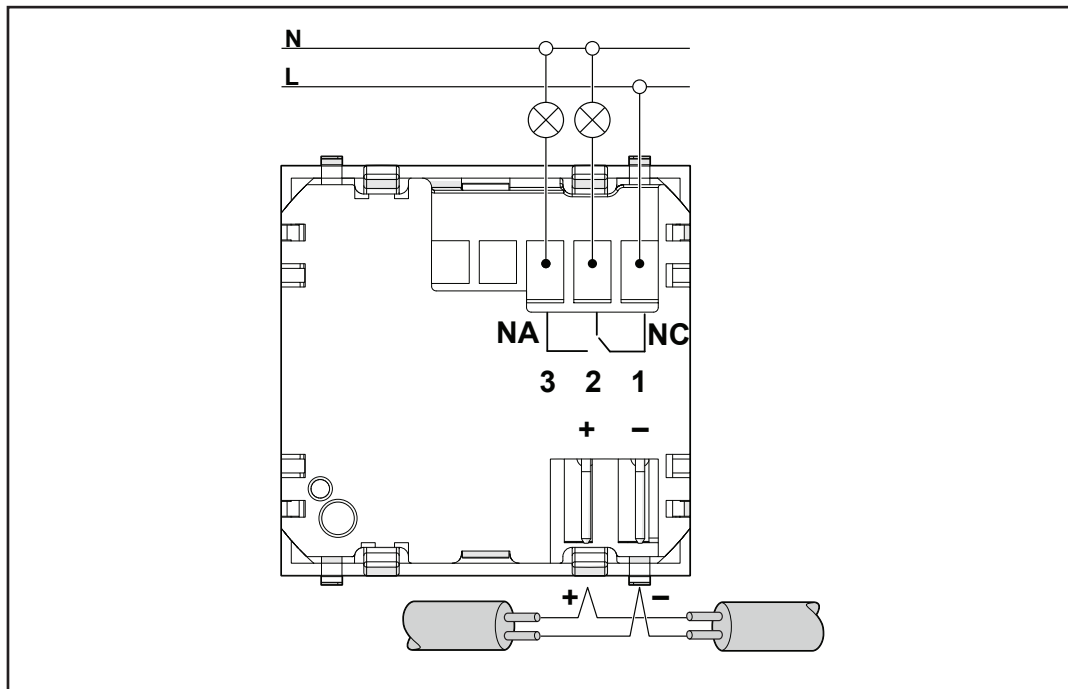
1.2   Switch Actuator 16A, 2 switches
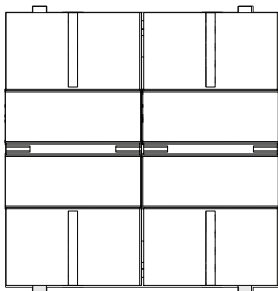
2CSYK1103x

The one-channel 16A Switch Actuator two switches is a flash-mounted device for the ABB's Mylos Building Automation system.

On the rear side, the device has an exchange output contact (NA/NC) that can be configured for the control of different kinds of loads. These contacts need additional power supply. The device relay can receive a switching command from the device itself, from other control devices of the Building Automation system or from conventional control devices (push-buttons, switches, relays) duly associated with input devices of the Home Automation system. For the simple output it is possible to control the following functions separately:

- Time, delay, ON/OFF functions;
- Stairlights with pre-warning and adjustable time for stairway lighting functions;
- Scene control through 8 bit /1 bit controls
- AND, OR, XOR logic operation and gate function.

On the front side it has two rocker switches with programmable indicator light, that can be configured separately according to the following functions:
- simple switching or switching with two communication objects
- Dimmer functionality;
- Shutter functionality;
- 1 bit and 8 bit scene functionality;
- manual operation that makes it possible to control the relays directly.

1.2.1   Technical data

Power supply	- Operating voltage	21…30 VDC over the bus
	- Absorbed power EIB / KNX	< 12 mA
Nominal output values	- Number of voltage-free contacts	1
	- Rated voltage U_n	240/400 VAC (50/60Hz)
	- Rated current I_n (per output)	16A
	- Mechanical contacts duration	$>5*10^6$
	- Number of relay changes of position to the minimum	40
Connections	- EIB / KNX	Connection terminal Bus 0.6-0.8 mm ø, unipole
	- Load circuit	Screw terminals
	- Connection cable cross section	0,2….2,5 mm² braid 0,2….4 mm² unipole
	- Tightening torque	Max. 0.5 Nm
Control and display elements EIB / KNX	- red LED and EIB / KNX button	To set the physical address
EIB / KNX voltage	- SELV 24 VDC (safety extra low voltage)	
Ambient temperature	- Use	-5 °C … + 45 °C
	- Storage	-25 °C … + 55 °C
	- Transport	-25 °C … + 70 °C
Execution	- Dimensions (H x W x D) in mm	17 x W x 15
	- Width W in mm	17
	- Mounting width in mm	7
	- Mounting depth in mm	5
Case, colour	- Plastic container, white or black	
CE marking	- acc. to EMC and Low-Voltage Directives	

Device type	Application program	Maximum number of communication objects	Maximum number of group addresses	Maximum number of associations
2CSYK1103x	Switching 1c 16A/1.0 2 switches	28	255	255

1.2.2 Connection diagram
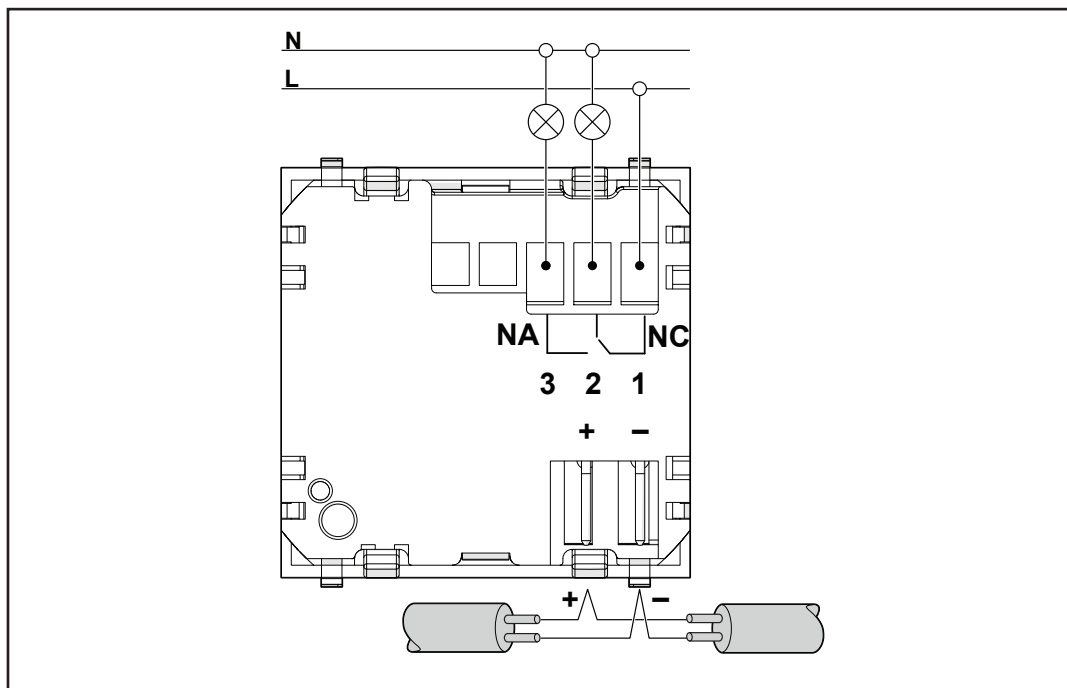
1.3   Switch Actuator 8A, 2 switches
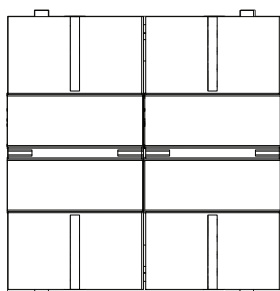
2CSYK1106x

The 2-channel 8A Switch Actuator with two switches is a flash-mounted device for the ABB's Mylos Building Automation system.

On the rear side, the device has a bus connection and two output contacts (NA) that can be configured for the control of different kinds of loads. These contacts need additional power supply. The device relays can receive a switching command from the device itself, from other control devices of the Building Automation system or from conventional control devices (push-buttons, switches, relays) duly associated with input devices. For each output it is possible to control the following functions separately:

-     Time, delay, ON/OFF functions;
-     Stairlights with pre-warning and adjustable time for stairway lighting functions;
-     Scene control through 8 bit /1 bit controls
-     AND, OR, XOR logic operation and gate function.

On the front side it has two rocker switches with programmable indicator light, that can be configured separately according to the following functions:
-   simple switching or switching with two communication objects
-     Dimmer functionality;
-     Shutter functionality;
-     1 bit and 8 bit scene functionality;
-     manual operation that makes it possible to control the relays directly.

1.3.1   Technical data

Power supply	- Operating voltage	21…30 VDC over the bus
	- Absorbed power EIB / KNX	< 12 mA
Nominal output values	- Number of voltage-free contacts	2
	- Rated voltage U_n	240/400 VAC (50/60Hz)
	- Rated current I_n (per output)	8A
	- Mechanical contacts duration	>5*10^7
	- Max. number of relay changes of position per output to the minimum if all relays are switched at the same time.	40
Connections	- EIB / KNX	Connection terminal Bus 0.6-0.8 mm ø, unipole
	- Load circuit	Screw terminals
	- Connection cable cross section	0,2….2,5 mm² braid 0,2….4 mm² unipole
	- Tightening torque	Max. 0.5 Nm
Control and display elements EIB / KNX	- red LED and EIB / KNX button	To set the physical address
EIB / KNX voltage	- SELV 24 VDC (safety extra low voltage)	
Ambient temperature	- Use	-5 °C … + 45 °C
	- Storage	-25 °C … + 55 °C
	- Transport	-25 °C … + 70 °C
Execution	- Dimensions (H x W x D) in mm	17 x W x 15
	- Width W in mm	17
	- Mounting width in mm	7
	- Mounting depth in mm	5
Case, colour	- Plastic container, white or black	
CE marking	- acc. to EMC and Low-Voltage Directives	

Device type	Application program	Maximum number of communication objects	Maximum number of group addresses	Maximum number of associations
2CSYK1106x	Switching 2c 8A/1.0 2 switches	36	255	255

1.3.2　Connection diagram
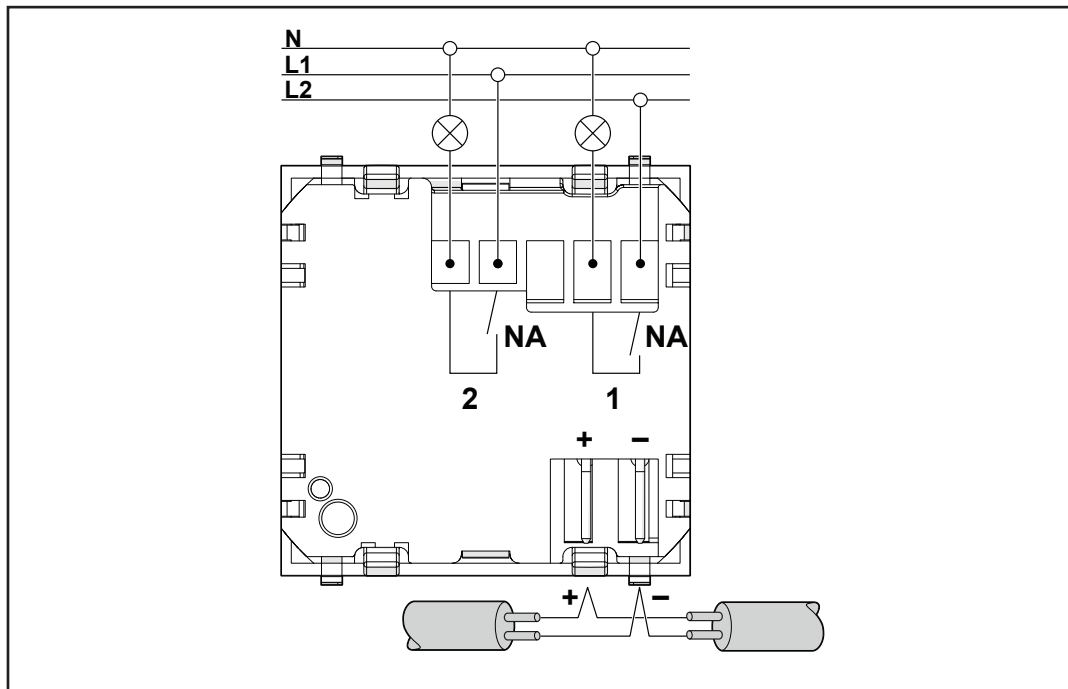
Supplied state
The device is supplied with the physical address 1.0.1. The application program is preloaded. It is therefore only necessary to load group addresses and parameters during commissioning. However, the complete application program can be reloaded if required. A longer downtime may result if the application program is changed or after a discharge.

Assignment of the physical address
The assignment and programming of the physical address is carried out in the ETS. The device features a Programming button for assignment of the physical device address. The red Programming LED lights up, after the button has been pushed. It switches off, as soon as the ETS has assigned the physical address or the Programming button is pressed again.

Cleaning
If devices become dirty, they can be cleaned using a dry cloth or a cloth dampened with a soapy solution. Corrosive agents or solutions should never be used.

Download behaviour
Depending on the PC, which is used, the progress bar for the download may take up to one and a half minutes, before it appears, due to the complexity of the device.

Maintenance
The device is maintenance-free. No repairs should be carried out by unauthorised personnel if damage occurs, e. g. during transport and/or storage.

2   Commissioning

The main functions of the 2CSYK110xx Switch Actuators are described in this section.

The 16A Switch Actuator parametrisation is performed via the Engineering Tool ETS Software application program. For the parametrisation you need a pc desktop or a laptop with ETS and connection to the KNX system (obtainable for example by means of RS232, USB or IP Interface).

The Switch Actuators 2CSYK110xx offer the same functions and the same user interface. Therefore it is possible to set each output freely depending on the application and to configure it accordingly.

2.1   Parameters

2.1.1   General
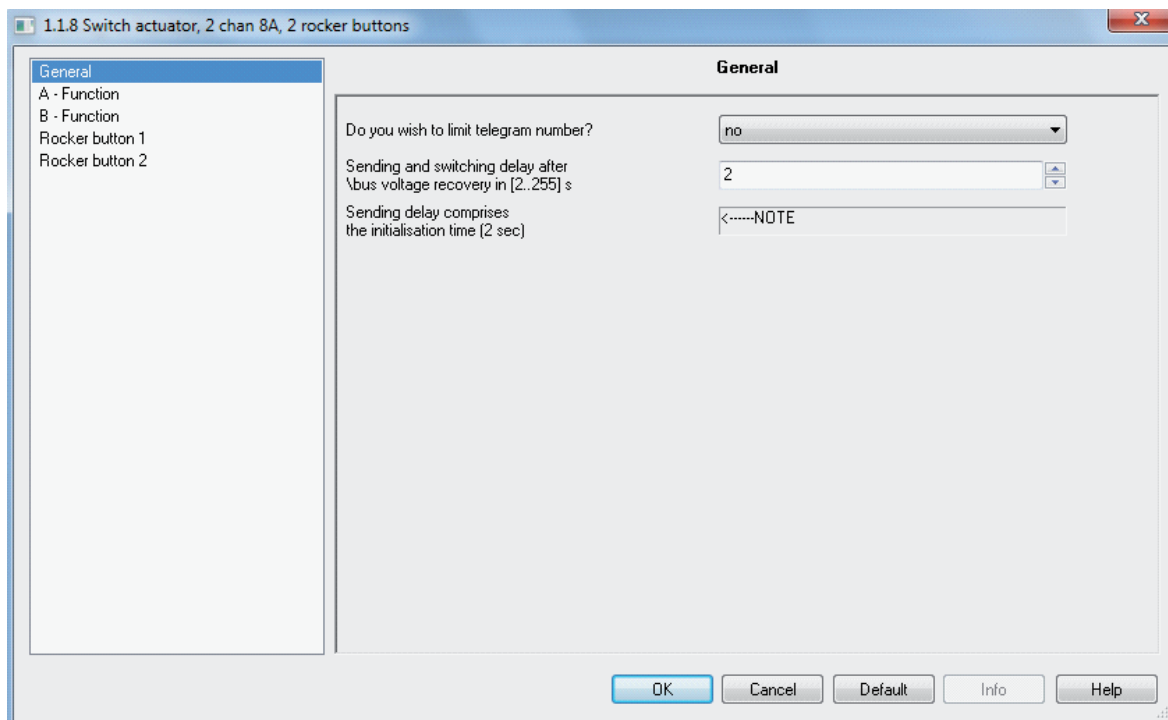
Do you wish to limit the number of telegrams?
It is possible to define the maximum number of unchanged telegrams during a time interval. This parameter is important upon bus voltage restoration since many devices can send their status at the same time.

Maximum number of telegrams every 10 seconds (if you wish to limit the telegram number it is set on Yes)
Maximum number of telegrams that can be sent by the device within 10 seconds.

Sending and switching delay after bus voltage restoration in [2..255] s
The delay determines the time that elapses between bus voltage restoration and the first moment in which telegrams can be sent and the relay can be switched. Initialisation time – reaction time of about 2 seconds until the processor is fully operation – it is already included in the delay time.

Reaction upon voltage failure
Through this parameter, the output can assume a definite status when a bus voltage failure occurs.
The following operation modes are available:

Options:
- **Unchanged contact**
- Open contact
- Closed contact

Switching object value upon bus voltage restoration
With this parameter you can affect the output upon bus voltage restoration using the "Switching" object value.
The "Switching" object can be written with '0' or '1' when bus voltage is restored. The contact position is determined again and the device parametrisation function is set.

Courtesy light activation
Selecting "Yes" courtesy lights are activated

LED operating mode
It is possible to adjust the status of LEDs to that of the relay ("Show relay status"), to the "LED" communication object value ("Show communication object value") or to keep them always on or always off ("Always on" "Always off" respectively).

2.2   Function
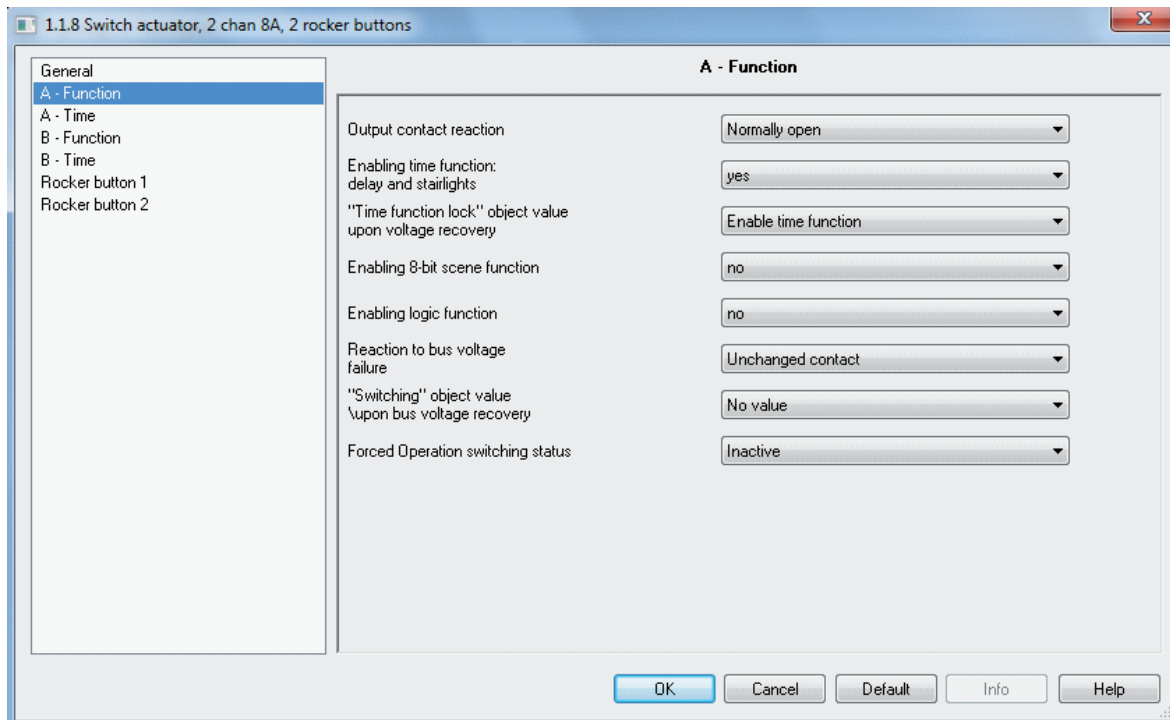
Output contact reaction
With this parameter you can determine whether the output works as a "Normally closed contact" or as a "Normally open contact"
Options:
- **Normally open contact**
- Normally closed contact

Enabling time functions: delay and stairlights
This parameter enables the following time functions: Delay upon switching on and switching off, stairlights.
The "Time" parameter window is activated with a "yes" setting. With "no" the window will be locked and not visible. When the time function is activated, the "Time function lock" communication object is enabled. With this 1 bit object it is possible to enable ("0") or lock ("1") the delay time upon switching on or off and stairlight functions, over the bus. As long as the time function is locked, the output can be activated or deactivated only without delay, by means of the "Switching" object. If a time function is enabled and subsequently disabled using "time function lock" the output position remains unchanged. A switching command through the "Switching" communication object determines an immediate switching.
"Time function lock" object value upon bus voltage restoration.
This parameter is visible only if a time function is activated.
Selecting "1", i.e. "time function lock", time functions for the delay and stairlights are disabled. They can be enabled only through the "Time function lock" object. Selecting "0", i.e. "time function unlock", the time function is enabled and active after bus voltage restoration.

"Enable scene function (8 Bit)" parameter
The "8-Bit scene" object is enabled through this parameter.

Options:
- **no**
- yes

The scene parametrisation for the X output is implemented in the "X: Scene" parameter window, which is enabled with the option "yes".
With "no" the parameter window will be locked and not visible.

Parameter "Enable logic function"
This parameter enables the "Logic".

Options:
- **no**
- yes

The parametrisation for the X output is implemented in the "X: Logic" parameter window, which is enabled with the option "yes". The parameter window remains active when the setting is "no".

Forced operation switching status
Forced operation refers to the safety 1 bit or 2 bit "Forced operation" object of X output that is available for each output.

Options:
- **inactive**
- unchanged via 1 bit object
- ON via 1 bit object
- OFF via 1 bit object
- switching status via 2 bit object

With the option "inactive" the object "forced operation" is not visible and the forced operation function is not active. The options "unchanged via 1 bit object", "ON, via 1 bit object" and "OFF, via 1 bit object" refer to the 1 bit "Forced operation" safety object and determine the output switching status during forced operation.

A "Forced operation" 2 bit object is enabled with the option "switching status via 2 bit object". The telegram value that is sent via the 2 bit object determines how it follows switch position:

Value	Bit 1	Bit 0	Access	Description
0	0	0	Free	If the "Forced operation" object receives a telegram with value "0" (00 binary) or "1"
1	0	1	Free	(01 binary), the output is enabled and can be operated through different objects.
2	1	0	OFF forced	If the "forced operation" object receives a telegram with value "2" (10 binary) or "1", the terminal output is switched off and remains disabled until forced operation is deactivated again. It is not possible to operate using another object as long as the forced operation is active. The output status can be programmed at the end of the forced operation.
3	1	1	ON forced	If the "forced operation" object receives a telegram with value "3" (11 binary), the terminal output is switched on and remains disabled until forced operation is deactivated again. It is not possible to operate using another object as long as the forced operation is active. The output status can be programmed at the end of the forced operation.

Forced operation upon bus voltage restoration

This parameter is visible only if the forced operation is activated.
Depending on whether the forced operation object is a 1 bit or 2 bit object, two different types of programming are available:

Options for 1 bit:
- **inactive**
- active

The "active" selection keeps the forced operation active after bus voltage restoration. The output switching position is defined by the "Contact switching status in forced operation" programming.
With the selection "inactive" the forced operation is disabled and the output works as if it were programmed with the "Behaviour upon safety end" parameter.

Options for 2 bit:
- **"0" inactive**
- "2" OFF
- "3" ON

Selecting "'2' OFF" causes the "forced operation" object to be written with the "2" value and the output to be deactivated.
Selecting "'3' ON" causes the "forced operation" object to be written with the "3" value and the output to be activated.

With the selection "inactive" the forced operation is disabled and the output works as if it were programmed with the "Behaviour upon safety end" parameter.

2.3   Time - Stairlights
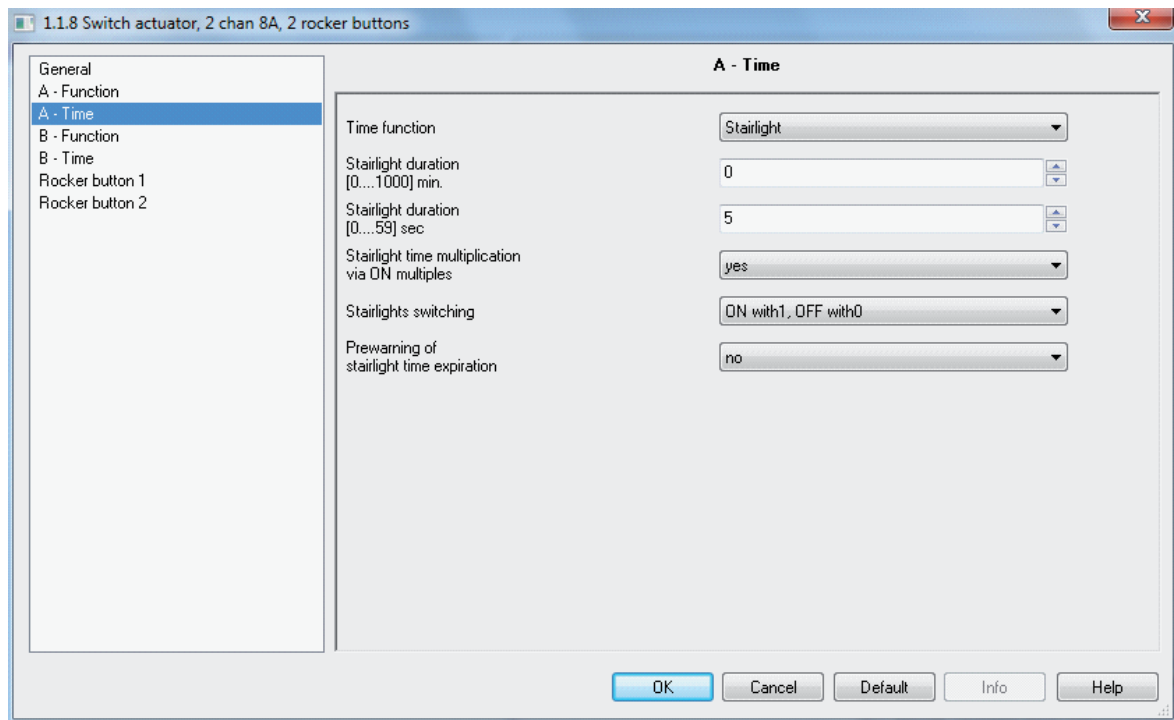
"Time function" parameter
This parameter defines the type of output time function.

Options:
  - **Stairlight function**
  - Delay ON/OFF
  - Flashing

"Stairlight function" selection
The stairlight function is activated via the switch on the "Switching" communication object telegram of X output. The communication object value can be programmed. The stairlight time starts as soon as the lights are turned on. They are immediately turned off when the stairlight time has elapsed, unless a pre-warning time has been set. If pre-warning time and stairlight time are different from "0", the stairlight time is extended with the pre-warning time.

Note: "Active" means that a "normally open" contact is closed or a "normally closed" contact is opened.
Note: The stairlight function can be recalled from the "Switching" object, "Logic gate x" or from a bright scene call.
Note: The stairlight function can be disabled by a telegram on the "Block time function" object. This function can be programmed in the "X: function" parameter window with a time function activated after a bus voltage failure.

"Stairlight time" parameter Minutes (0...1.000), Seconds (0...59)"
The operation time defines for how long the stairlights stay on after an ON command. Two parameters are available for entering the time in minutes and seconds:

Options:
Minutes
  - 0
  - ...
  - 5
  - ...
  - 1.000

Seconds
  - 0
  - ...
  - 59

If the pre-warning time is different from "0", the stairlight time is extended with the pre-warning time.

"Stairlight time increases by means of multiple ON" parameter
If during stairlight time a further ON telegram is received, the remaining stairlight time can be extended with an additional time.
This is possible until the maximum time has been reached. The maximum time can be programmed and set as 1, 2, 3, 4 or 5 times the stairlight time. If a part of the "increased" time has elapsed, it is taken back to the maximum value. However it is not possible to exceed the maximum parametrised time. The pre-warning time is not modified by the "increasing" action.

Options:
  - **no**
  - max. up to 1x stairlight time
  - max. up to 2x stairlight time
  - max. up to 3x stairlight time
  - max. up to 4x stairlight time
  - max. up to 5x stairlight time

With the "no" setting, a switching telegram ON is simply ignored.
The stairlight time passes without modifications until it is over.
If a simple boot function is required, "max. until 1x stairlight time" must be set. In this case the stairlight time is reset by a new switching ON command on the telegram and it restarts from the beginning.

"Switchable stairlights" parameter
Here you can set the value of the telegram to be used for switching stairlight on and off in advance.

Options:
  - **ON with "1" and OFF with "0"**
  - ON with "1" no action with "0"
  - ON with "0" or "1", switching off not possible

With the option "ON with '0' or '1', switching off not possible" the stairlight function is activated independently from the incoming telegram value. In this case the advance switching off is not possible.

"Pre-warning before the stairlight end" parameter
Before stairlight time elapses, the user can be warned that the lights are about to be turned off.
If the pre-warning time is different from "0", the stairlight time is extended with the pre-warning time. The pre-warning time is not modified by the "increasing" action. With the option "no", no pre-warning is given to the user and the stairlights switch off immediately after the stairlight time has elapsed. If the stairlights are turned off in advance (for example using a switching command) there is no pre-warning.

Options:
- **no**
- via object
- via quick OFF/ON switching
- via object and ON/OFF switching

There are two types of pre-warning:
- The "Stairlight pre-warning telegram" object is set at "1" at the beginning of the pre-warning time and remains unchanged until the pre-warning time has elapsed. The object can be used, for example, to switch an indicator light on.
- Switching the output (briefly OFF and ON again).

Both possibilities can be used individually or can be combined. The duration time between OFF and ON is approximately 1 second. This time is extended when more than x switching operations are carried out in a minute and for each device. Please refer to the technical data of chapter 2.

If the pre-warning time is different from "0", the stairlight time is extended with the pre-warning time.

"Pre-warning time in sec. (0...65.535) to add to stairlight duration" parameter
This parameter is visible if a pre-warning is programmed for the stairlight time function. The "pre-warning time" must be entered in seconds. The stairlight time is extended with the prewarning time.
The warning is activated during the beginning of prewarning time.

Options:
- 0
- ...
- **45**
- ...
- 65.535

2.4   Time - On/off delay
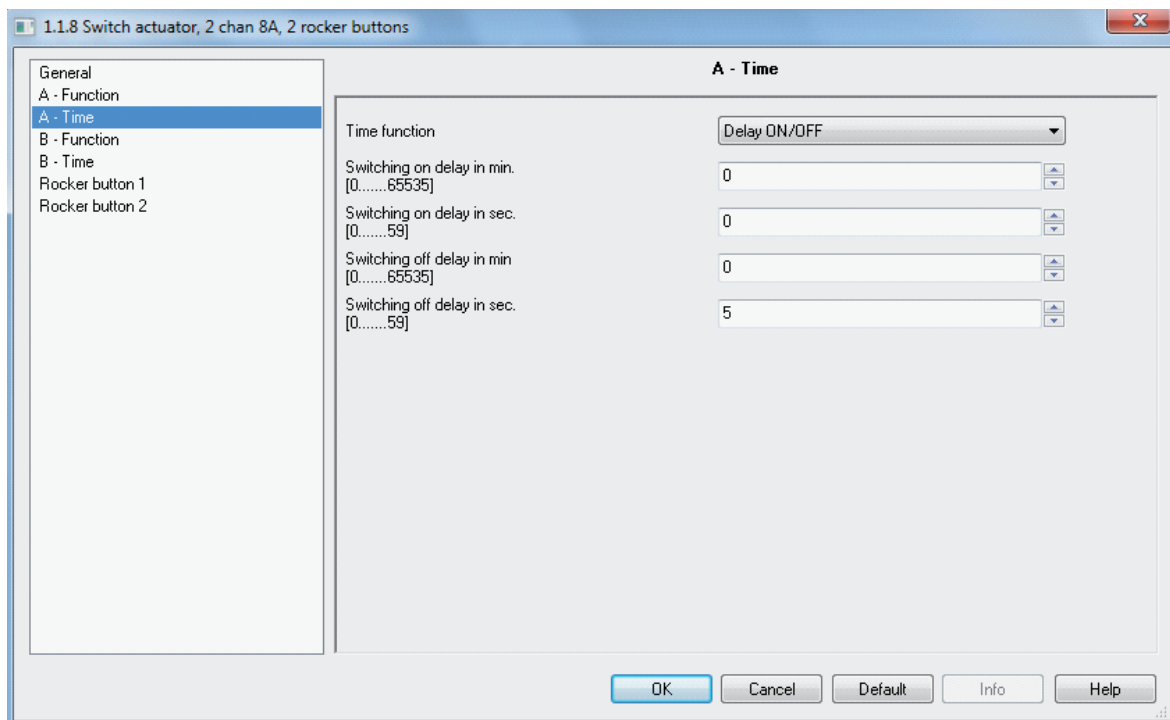
"Delayed ON: Min. (0...65.535)" parameter
Here you set the time in minutes by which the switching on command is delayed. The time can be entered in minutes and in seconds (see the following parameter).

Options:
- 0
- ...
- 65,535 minutes

"Delayed ON: Sec. (0...59)" parameter
Here you set the time in seconds by which the switching on command is delayed. The time can be entered in minutes and in seconds (see the previous parameter).

Options:
- 0
- ...
- 59 seconds

"Delayed OFF: Min. (0...65.535)" parameter
Here you set the time in minutes by which the switching off is delayed after a switching off command. The time can be entered in minutes and in seconds (see the following parameter).

Options:
- 0
- ...
- 65,535 minutes

"Delayed OFF: Sec. (0...59)" parameter
Here you set the time in seconds by which the switching off is delayed after a switching off command. The time can be entered in minutes and in seconds (see the previous parameter).

Options:
- 0
- ...
- 59 seconds

2.5   Scenes
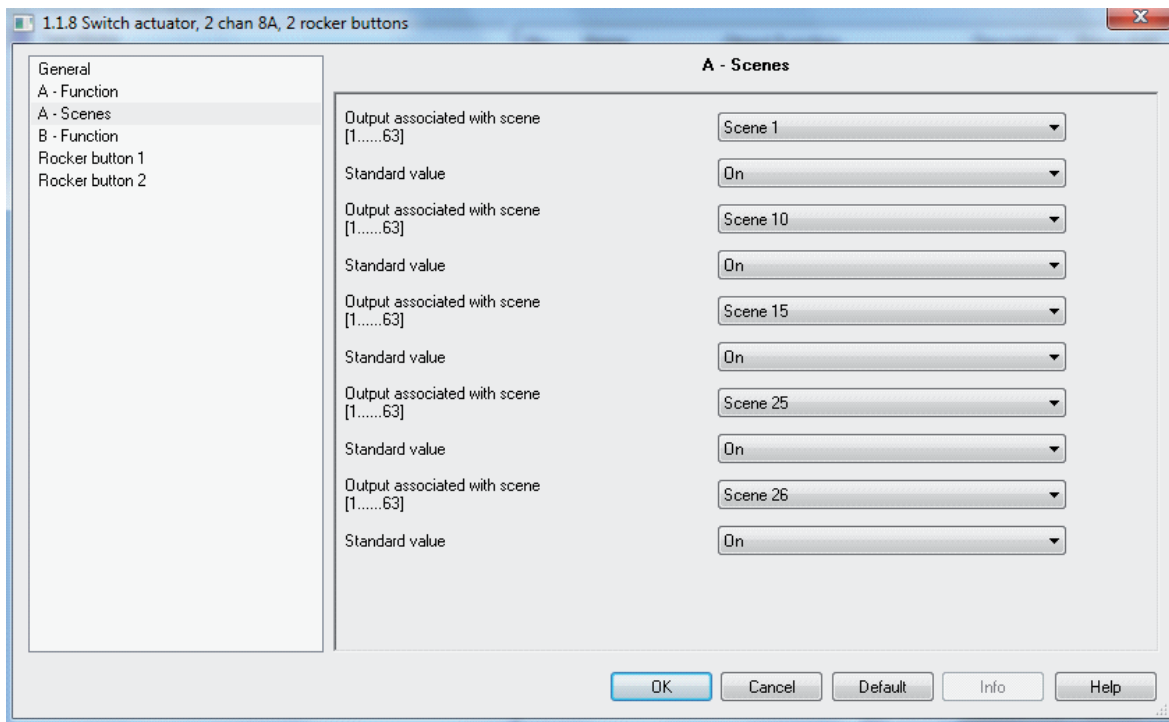
The scene function is enabled in the "Function" parameter window.
Scene values can be set (stored) over the bus. In the "General" parameter window you can determine that the values set in the ETS are transferred in the Switch Actuator during download. In this mode the values stored in the terminal are overwritten and lost.

"Associate output with (Scene 1...63)" parameter
The output can be associated with 63 different bright scenes using a group address.
The output can be associated with 5 bright scenes as a slave output.

Options:
 - **no scene**
 - Scene 1
 - ...
 - Scene 63

"Standard value" parameter
Here you set the status that the output assumes when the scene is recalled.

Options:
 - **ON**
 - OFF

When a scene is stored, the user has the possibility to modify the value that has been parametrised here. The stored scene values are lost if the bus voltage fails. The values programmed in the ETS are recovered upon bus voltage restoration.

Note: When a scene is recalled
 - the time functions start from scratch
 - the logic operations are evaluated again

2.6   Logic function
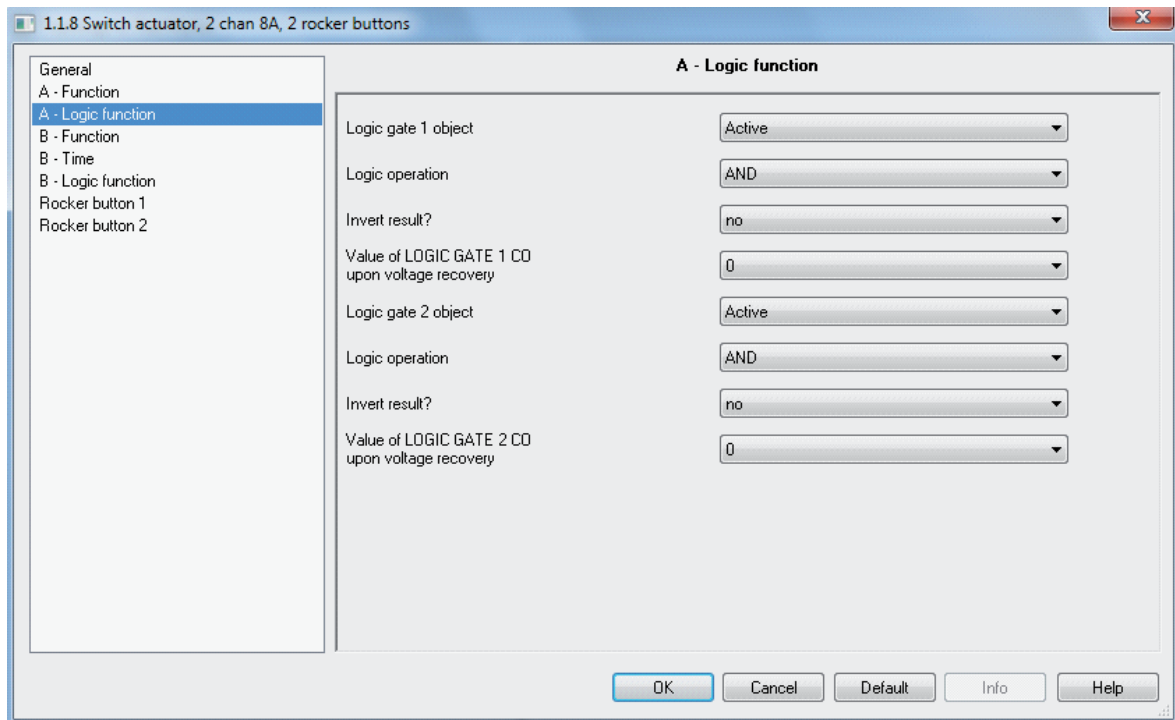
For each output the logic function makes up to two logic objects available, that are logically connected to the "Switching" communication object.
The parameter window is enabled in "Function".
When receiving an object value, the logic function is always recalculated. First of all the "Logic gate 1" object is evaluated with the "Switching" object. The result is connected to the object "Logic gate 2".
See section 4.2.3. for explanations of the logic function.
Please examine the chart of operation of section 4.2.1.

"Logic gate x object" parameter (x = 1, 2)
The object "Logic gate 1" or "Logic gate 2" is enabled with this parameter.

Options:
 - **inactive**
 - active

"Logic gate x object function" parameter (x = 1, 2)
Here the logic function of the "Logic gate x" object is defined together with the "Logic gate x". Three standard operators are available (AND, OR, XOR). The gate function is also available to lock switching commands. Setting the "Logic gate x object" parameter to "not active", the logic function is disabled.

Options:
 - AND
 - OR
 - XOR
 - Gate function

"Invert result" parameter
This parameter is visible only if a logic function has been selected.
The logic operation result can be inverted using the "Yes" setting. The "no" setting does not invert the result.

Options:
 - **no**
 - yes

"'Logic gate x' (x=1, 2) object value upon Bus voltage restoration"
This parameter is visible only if a logic function has been selected. This parameter determines the value that is assigned to the "Logic gate x" object after bus voltage restoration. The same object values "0" and "1" are available.

Options:
 - **0**
 - 1

2.7   Rocker switch 1/2

2.7.1   Switching Rocker switch
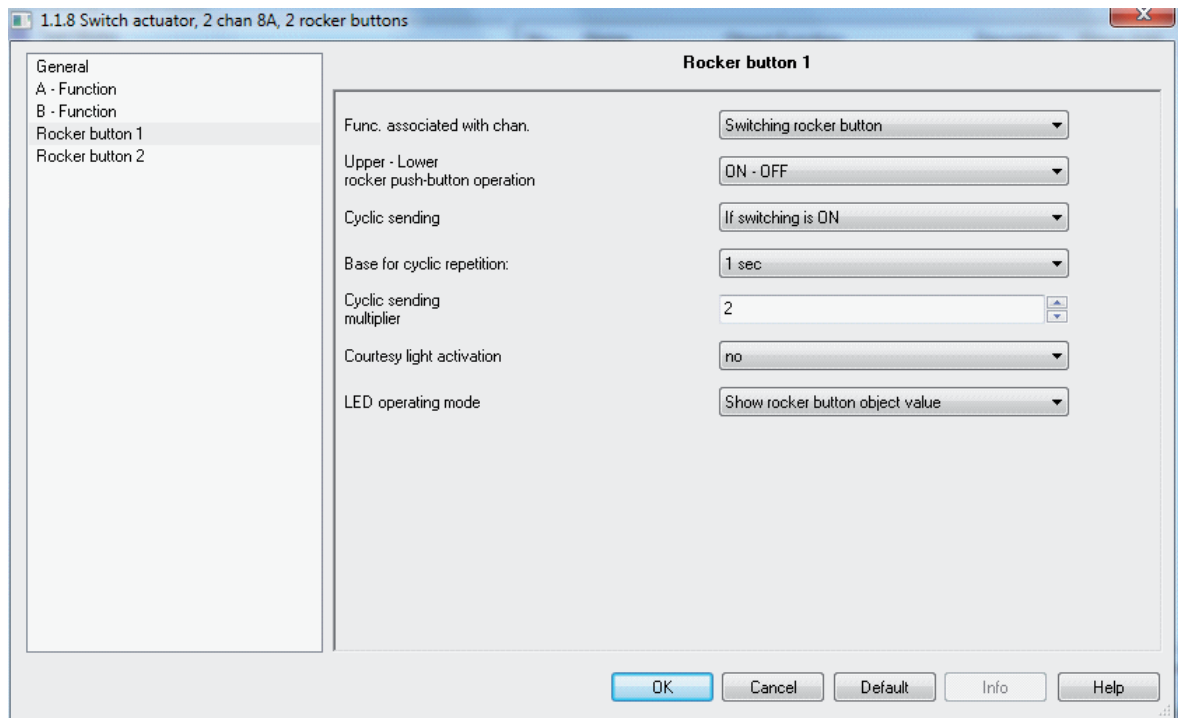
Upper Rocker switch push-button operation
It defines the operating mode if an upper or lower Rocker switch is pressed.

Cyclic sending
This parameter allows you to determine in which cases the cyclic sending should begin (if different from "no").

Base for cyclic repetition (if "Cyclic Sending" is different from no)
Cyclic sending multiplier (if "Cyclic Sending" is different from no)
These two parameters allow you to determine the time period for message cyclic repetition over the bus. Time interval is calculated as follows: Period for message repetition = Base * Multiplier.

Courtesy light activation
This parameter allows you to switch on the courtesy lights.

LED operating mode
The LEDs can remain always on or always off, they can be controlled by communication objects ("Show communication object value"), follow the rocker switch direct value ("Show rocker switch object value) or inverted value ("Show rocker switch object inverted value").

2.7.2   Rocker switch 2 switching objects
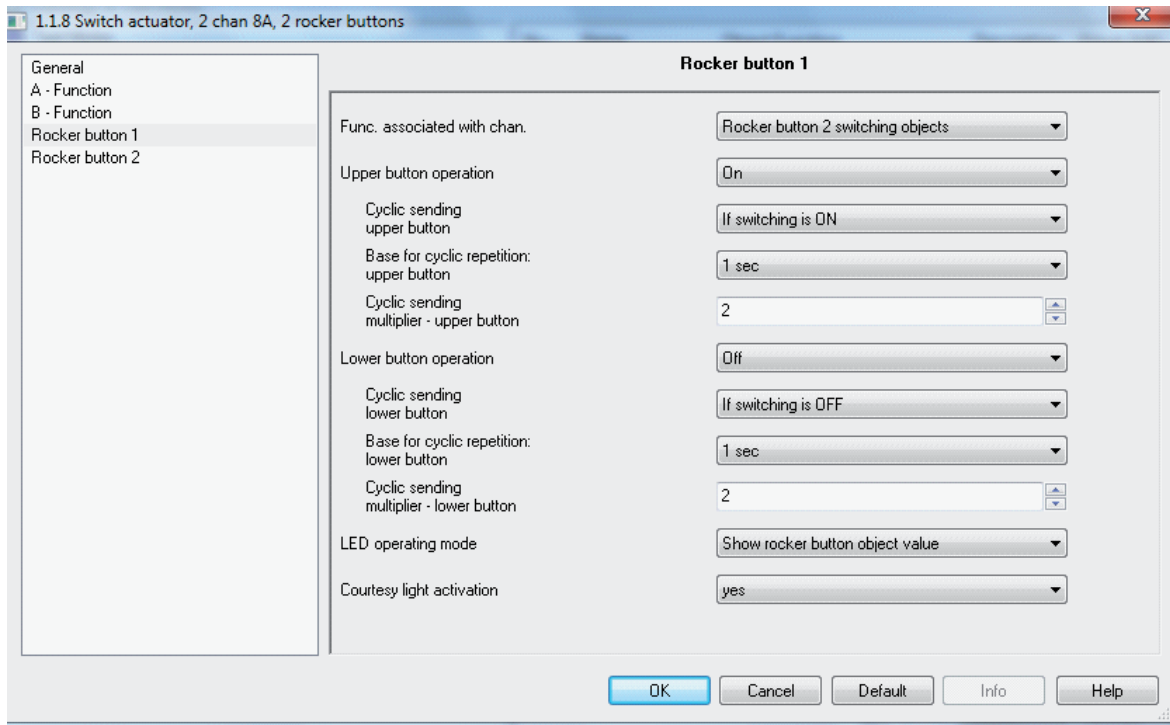
Upper Rocker switch operation
It defines the operating mode if the upper rocker switch is pressed.

Upper push-button cyclic sending
This parameter allows you to determine in which cases the cyclic sending should begin (if different from "no").

Base for cyclic repetition: upper push-button (if "Cyclic Sending" is different from no)
Cyclic sending multiplier - upper push-button (if "Cyclic Sending" is different from no)
These two parameters allow you to determine the time period for message cyclic repetition over the bus. Time interval is calculated as follows: Period for message repetition = Base * Multiplier

Lower rocker switch operation
It defines the operating mode if the lower rocker switch is pressed.

Lower push-button cyclic sending
This parameter allows you to determine in which cases the cyclic sending should begin (if different from "no").

Base for cyclic repetition: lower push-button (if "Cyclic Sending" is different from no)
Cyclic sending multiplier - lower push-button (if "Cyclic Sending" is different from no)
These two parameters allow you to determine the time period for message cyclic repetition over the bus. Time interval is calculated as follows: Period for message repetition = Base * Multiplier.

Courtesy light activation
This parameter allows you to switch on the courtesy lights.

LED operating mode

The LEDs can remain always on or always off, they can be controlled by communication objects ("Show communication object value"), follow the rocker switch direct value ("Show rocker switch object value) or inverted value ("Show rocker switch object inverted value").

2.7.3   Dimmer rocker switch
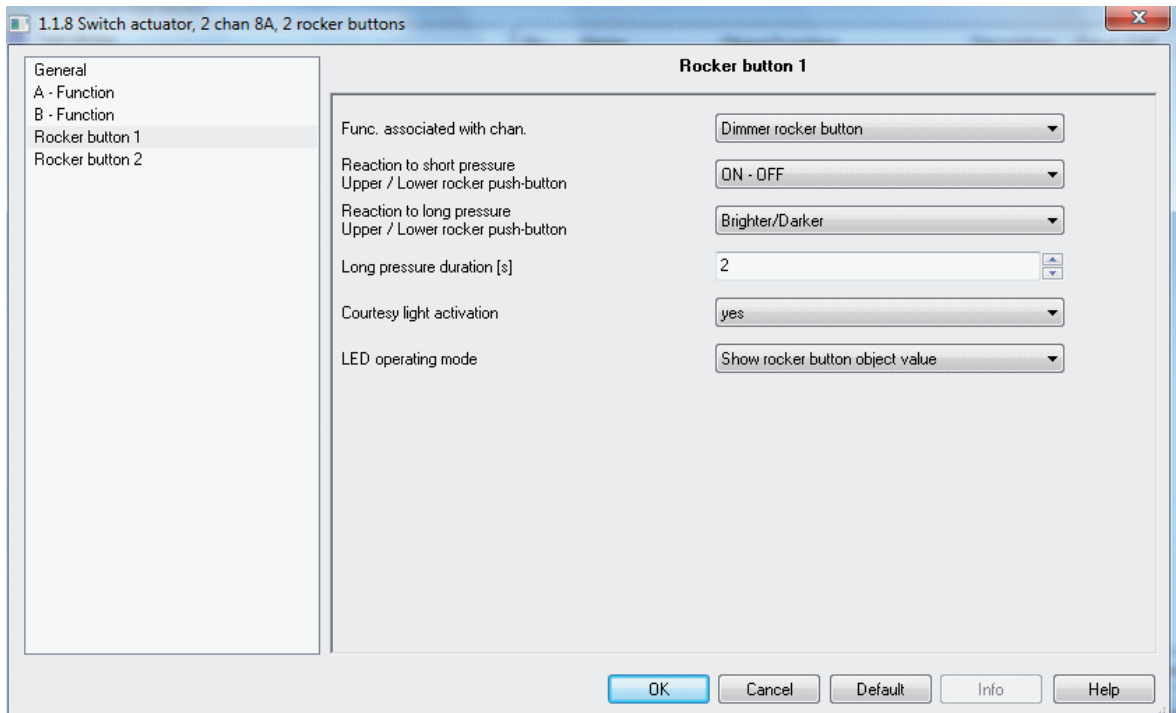
Reaction to short pressure

It determines device reaction after a short pressure on the rocker switch.

Rocker switch reaction to long pressure Upper/Lower Rocker switch

It determines device reaction after a long pressure on the upper and lower rocker switch.

Long pressure duration

It allows you to determine the time that is sufficient to consider a pressure as a long pressure.

Courtesy light activation

This parameter allows you to switch on the courtesy lights.

LED operating mode

The LEDs can remain always on or always off, they can be controlled by communication objects ("Show communication object value"), follow the rocker switch direct value ("Show rocker switch object value) or inverted value ("Show rocker switch object inverted value").

2.8   Shutter rocker switch

2.8.1   Rocker switch - Standard
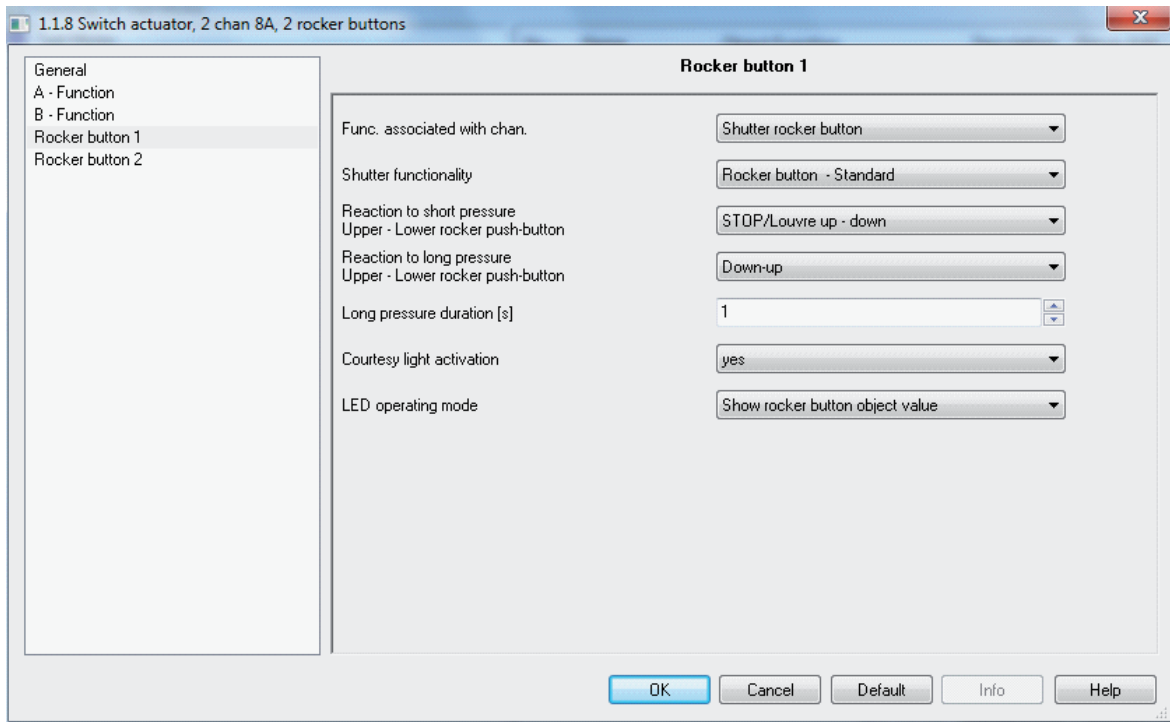
Shutter functionality
With this parameter it is possible to choose between the following shutter control modes:
- Rocker switch - Standard;
- Rocker switch – Movement.

Rocker switch reaction to short pressure Upper – Lower Rocker switch
It determines device reaction after a short pressure on the upper and lower rocker switch.

Rocker switch reaction to long pressure Upper – Lower Rocker switch
It determines device reaction after a long pressure on the upper and lower rocker switch.

Long pressure duration [s]
It allows you to determine the time that is sufficient to consider a pressure as a long pressure.

Courtesy light activation
This parameter allows you to switch on the courtesy lights.

LED operating mode
The LEDs can remain always on or always off, they can be controlled by communication objects ("Show communication object value"), follow the rocker switch direct value ("Show rocker switch object value) or inverted value ("Show rocker switch object inverted value").

2.8.2   Rocker switch - Movement
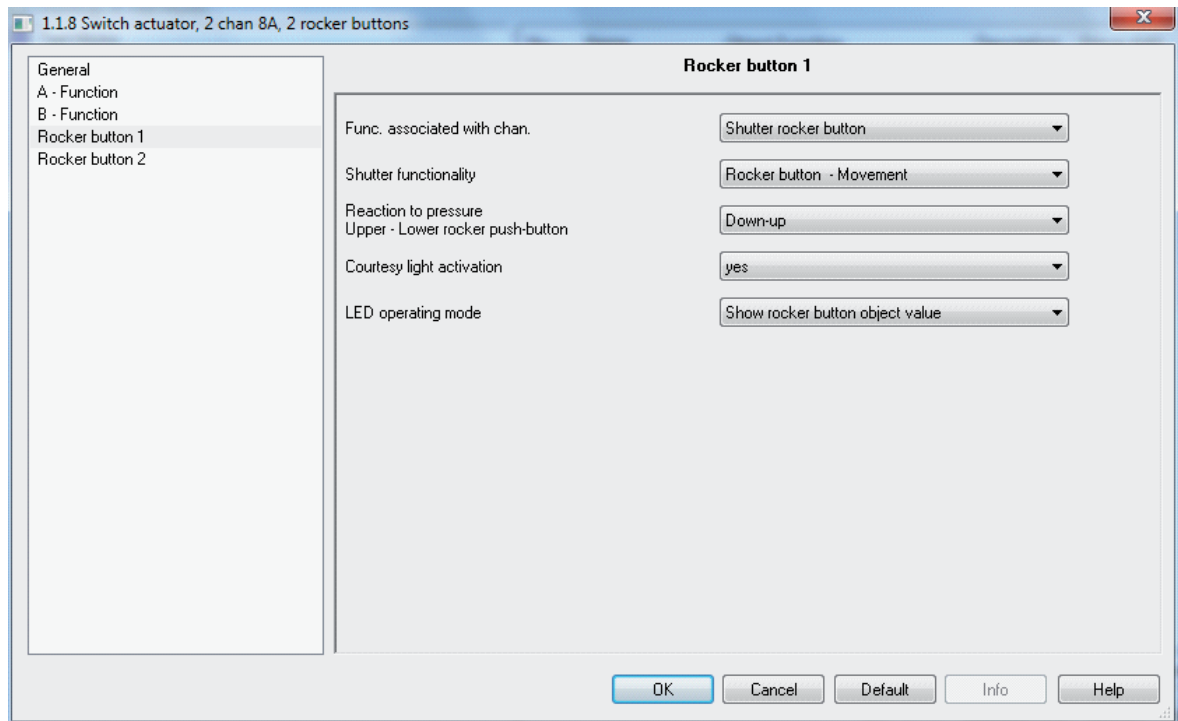
Shutter functionality
With this parameter it is possible to choose between the following shutter control modes:
  - Rocker switch - Standard;
  - Rocker switch – Movement.

Rocker switch reaction to pressure Upper – Lower Rocker switch
It determines device reaction after a pressure on the upper and lower rocker switch.

Courtesy light activation
This parameter allows you to switch on the courtesy lights.

LED operating mode
The LEDs can remain always on or always off, they can be controlled by communication objects ("Show communication object value"), follow the rocker switch direct value ("Show rocker switch object value) or inverted value ("Show rocker switch object inverted value").

2.9   Scene rocker switch
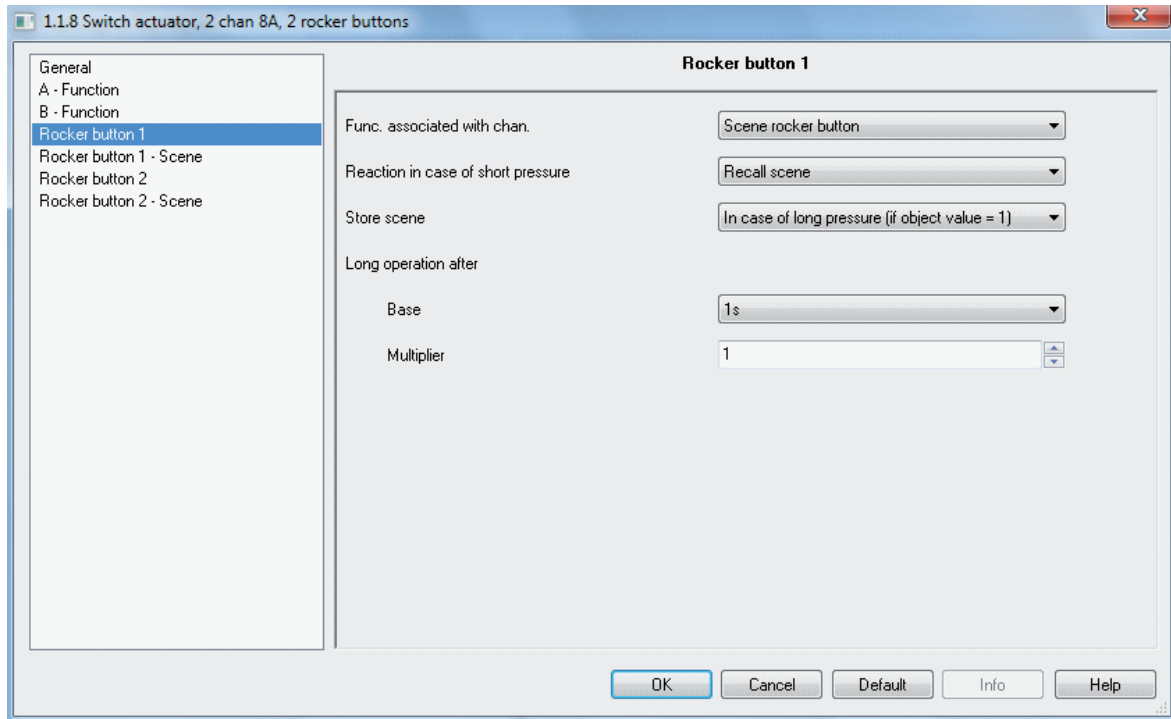
Reaction to short pressure
After a short pressure the device will respond recalling a scene ("Recall scene") or not ("No reaction").

Store scene
This parameter determines the way in which the current scene storage begins and which function the "Store scene" communication object has.
If "In case of long pressure" the scene is stored as soon as a long pressure command is detected and storage ends as soon as the push-button is released.
If "With object value = 1" storage is activated as soon as the "Store scene" communication object receives value 1.
If "In case of long pressure (if object value = 1)" storage is activated as soon as a long pressure is detected and the value of "Store scene" communication object is 1. Storage ends as soon as the push-button is released.

Long pressure: Base
Long pressure: Multiplier [0…255] (if "In case of long pressure" or if "in case of long pressure (if object value = 1)")
These two parameters allow you to determine the time that is sufficient to consider a pressure as a long pressure. Time interval is calculated as follows: Period for long pressure = Base * Multiplier.

2.9.1   Scene
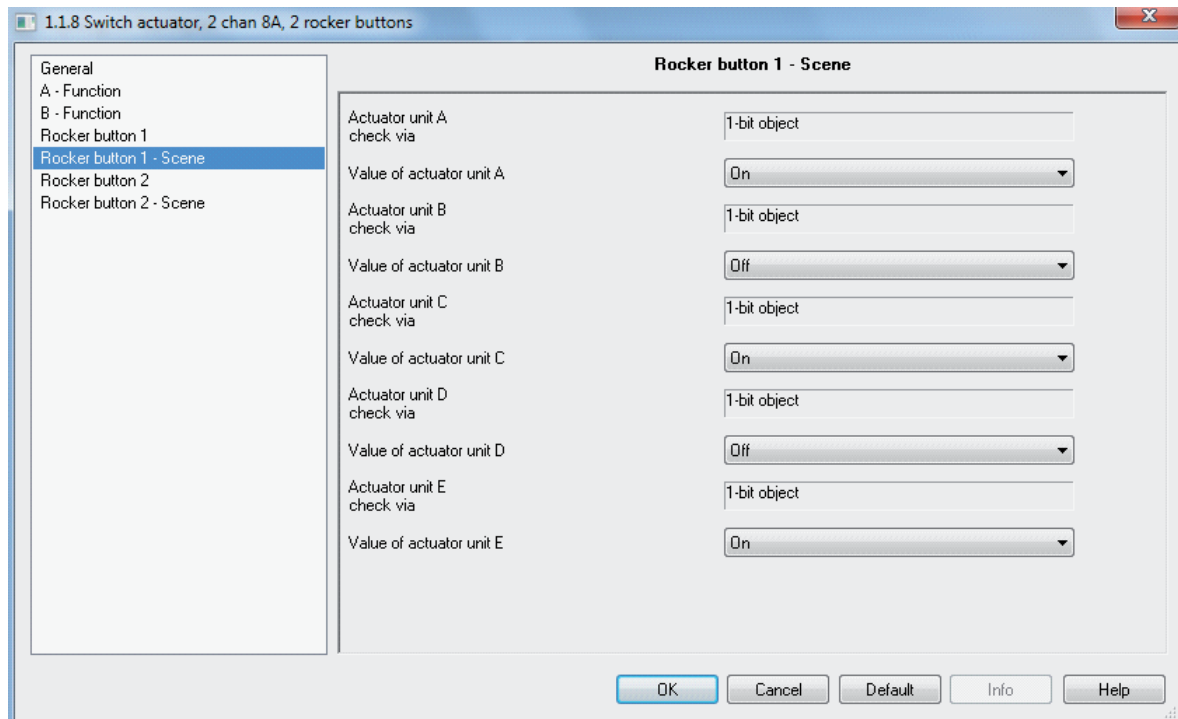
Actuator unit A/B/C/D/E check via
It is possible to choose only one type of 1 bit datum.

Actuator unit A/B/C/D/E value
It associates the corresponding actuator unit with a 1 bit value (ON/OFF).

2.10   8 bit scene rocker switch
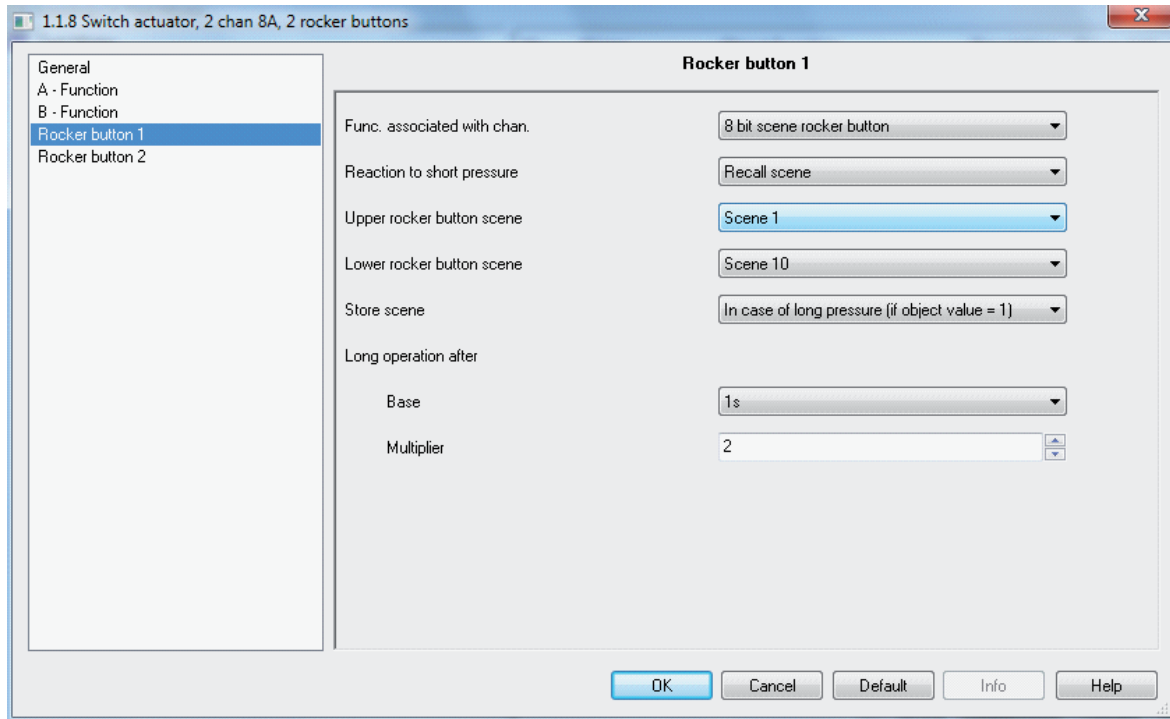
Reaction to short pressure
After a short pressure the device will respond recalling a scene ("Recall scene") or not ("No reaction").

Upper rocker switch scene
This parameter allows you to choose which scene should be recalled with the short pressure of the upper rocker switch or which scene the new value should be associated with after a storage request.

Lower rocker switch scene
This parameter allows you to choose which scene should be recalled with the short pressure of the lower rocker switch or which scene the new value should be associated with after a storage request.

Store scene
This parameter determines the way in which the current scene storage begins and which function the "Store scene" communication object has.
If "In case of long pressure" the scene is stored as soon as a long pressure command is detected and storage ends as soon as the push-button is released.
If "With object value = 1" storage is activated as soon as the "Store scene" communication object receives value 1.
If "In case of long pressure (if object value = 1)" storage is activated as soon as a long pressure is detected and the value of "Store scene" communication object is 1. Storage ends as soon as the push-button is released.

Long pressure: Base
Long pressure: Multiplier [0…255] (if "In case of long pressure" or if "in case of long pressure (if object value = 1)")
These two parameters allow you to determine the time that is sufficient to consider a pressure as a long pressure. Time interval is calculated as follows: Period for long pressure = Base * Multiplier.

3   Operation of communication objects

0	Output A	Switching		1 bit	C	-	W	-	-	1 bit DPT_Swi...	Low
1	Output A	Time function lock		1 bit	C	-	W	-	-	1 bit DPT_Ena...	Low
2	Output A	Forced operation		1 bit	C	-	W	-	-	1 bit DPT_Ena...	Low
3	Output A	Scenes		1 Byte	C	-	W	-	-		Low
4	Output A	Switching status		1 bit	C	R	-	T	-	1 bit DPT_Bool	Low
5	Output A	Stairlight pre-warn.		1 bit	C	-	-	T	-	1 bit DPT_Ena...	Low
6	Output A	Logic gate 1		1 bit	C	-	W	-	-	1 bit DPT_Bool	Low
7	Output A	Logic gate 2		1 bit	C	-	W	-	-	1 bit DPT_Bool	Low
8	Output B	Switching		1 bit	C	-	W	-	-	1 bit DPT_Swi...	Low
9	Output B	Time function lock		1 bit	C	-	W	-	-	1 bit DPT_Ena...	Low
10	Output B	Forced operation		1 bit	C	-	W	-	-	1 bit DPT_Ena...	Low
11	Output B	Scenes		1 Byte	C	-	W	-	-		Low
12	Output B	Switching status		1 bit	C	R	-	T	-	1 bit DPT_Bool	Low
13	Output B	Stairlight pre-warn.		1 bit	C	-	-	T	-	1 bit DPT_Ena...	Low
14	Output B	Logic gate 1		1 bit	C	-	W	-	-	1 bit DPT_Bool	Low
15	Output B	Logic gate 2		1 bit	C	-	W	-	-	1 bit DPT_Bool	Low

No.	Function	Object name	Type of datum	Flags
0	**Switching**	**Output A**	**1 bit (EIS 1) DPT 1.001**	**C, W**
8	**Switching**	**Output B**	**1 bit (EIS 1) DPT 1.001**	**C, W**

This object is used to switch an output ON/OFF.
The device receives a switching command via the communication object. If the output is programmed as "normally open" contact, the relay is closed with a "1" telegram value and opened with a "0" telegram value (and the opposite is true when it is programmed as "normally open" contact).

No.	Function	Object name	Type of datum	Flags
1	**Block Time function**	**Output A**	**1 bit (EIS 1) DPT 1.003**	**C, W**
9	**Block Time function**	**Output B**	**1 bit (EIS 1) DPT 1.003**	**C, W**

The object is visible if the time function has been enabled in the parameter window "X: Function". The time function (delay, stairlights and flashing) can be enabled or disabled using this object. After bus voltage restoration, the object value can be determined via the "'Disable time function' object value after bus voltage restoration" object in the parameter window "X: Function". See paragraph 4.2.2 for an application example.
Telegram value"1" disables the time function.
Telegram value"0" enables the time function.
If the time function is blocked only a switching without delay is possible.
Contact position at the moment of inhibition continues and will be changed only with the next switching command.

No.	Function	Object name	Type of datum	Flags
2	**Forced operation**	**Output A**	**1 bit (EIS 1) DPT 1.003**	**C, W**
10	**Forced operation**	**Output B**	**1 bit (EIS 1) DPT 1.003**	**C, W**

This object is visible if in the "Function" parameter window the "Switching status in forced operation" has been selected as 1 bit object.
If this object contains the value "1", the output is forcedly set at the programmed switching position that has been configured in the "Function" parameter window. The forced contact position continues until the end. This happens if a "0" is received via the "Forced operation" object.

No.	Function	Object name	Type of datum	Flags
2	**Forced operation**	**Output A**	**2 bit (EIS 8) DPT 2.001**	**C, W**
10	**Forced operation**	**Output B**	**1 bit (EIS 8) DPT 2.001**	**C, W**

This object is visible if in the "Function" parameter window the "Switching status in forced operation" has been selected as 2 bit object.
The output can be controlled forcedly using this object (for example an upper level control). The object value defines the contact forced position.
- "0" or "1": The output is not switched forcedly
- "2": The output is switched forcedly on OFF
- "3": The output is switched forcedly on ON

3	Scenes	Output A	1 bit non EIS DPT 18.001	C, W
11	Scenes	Output B	1 bit non EIS DPT 18.001	C, W

Using this 8 bit communication object it is possible to send a scene command with a coded telegram.
The telegram contains the corresponding scene number and the indication about whether the scene has to be recalled or the current switching status must be assigned to it.
The communication object is visible only if the output X in the "Function" parameter window is assigned to at least a 8 bit scene.

Telegram size (1 byte):
- MXSSSSSS
- (MSB) (LSB)

M:
- 0 – the scene is recalled
- 1 – the scene is stored (if permitted)

X:
- not used

S
- Scene number (1 ... 64: 00000000 ... 00111111)

Value of the 1 byte EIB / KNX telegram		Meaning
decimal	hexadecimal	
00 or 64	00h or 40h	Recall scene 1
01 or 65	01h or 41h	Recall scene 2
02 or 66	02h or 42h	Recall scene 3
...	...	...
63 or 127	3Fh or 7Fh	Recall scene 64
128 or 192	80h or B0h	Store scene 1
129 or 193	81h or B1h	Store scene 2
130 or 194	82h or B2h	Store scene 3
...	...	...
191 or 255	AFh or FFh	Store scene 64

4	Switching status	Output A	1 bit (EIS 1) DPT 1.002	C, R, T
12	Switching status	Output B	1 bit (EIS 1) DPT 1.002	C, R, T

This object is always visible.
The object value indicates the relay contact position.

5	Stairlight pre-warning	Output A	1 bit (EIS 1) DPT 1.003	C, T
13	Stairlight pre-warning	Output A	1 bit (EIS 1) DPT 1.003	C, T

This object will be visible if the time function in the "X: Time" parameter window and a pre-warning object via the "Pre-warning before stairlight end" parameter are selected. The object value is programmable and gives a pre-warning before the stairlights are turned off.

For example, during stairlights switching on, until the beginning of pre-warning time, a "0" can be sent to this object and at the moment of pre-warning a "1" can be sent. In this way it is possible to activate a pre-warning.

| 6 | Logic gate 1 | Output A | 1 bit (EIS 1) DPT 1.002 | C, W |
| 14 | Logic gate 1 | Output B | 1 bit (EIS 1) DPT 1.002 | C, W |

The object is visible if the logic function has been enabled in the parameter window "X: Function". The output X can be assigned to the first of two logic objects. The logic operation should be defined in the parameter window "X: Logic".

The communication object is first of all connected to the object "Logic gate 1". The result is connected to the object "Logic gate 2".

An example with chart of operation can be found in section 4.2.3.

| 7 | Logic gate 2 | Output A | 1 bit (EIS 1) DPT 1.002 | C, W |
| 15 | Logic gate 2 | Output B | 1 bit (EIS 1) DPT 1.002 | C, W |

With this object the output X can be assigned to the second logic function. The logic operation should be defined in the parameter window "X: Logic".

The communication object is first of all connected to the object "Logic gate 1". The result is connected to the object "Logic gate 2".

3.1   Rocker switch 1/2

3.1.1   Switching rocker switch

16	Rocker button 1	Disabling	1 bit	C	-	W	T	-	1 bit DPT_Ena...	Low
17	Rocker button 1	Switching	1 bit	C	-	W	T	-	1 bit DPT_Swi...	Low
23	Rocker button 2	Disabling	1 bit	C	-	W	T	U	1 bit DPT_Ena...	Low
24	Rocker button 2	Switching	1 bit	C	-	W	T	-	1 bit DPT_Swi...	Low
34	Rocker button 1	Disabling LED	1 bit	C	-	W	-	-	1 bit DPT_Ena...	Low
35	Rocker button 2	Disabling LED	1 bit	C	-	W	-	-	1 bit DPT_Ena...	Low

No.	Function	Object name	Type of datum	Flags
16	**Disabling**	**Rocker switch 1**	**1 bit DPT_Enable**	**C,W,T**
23	**Disabling**	**Rocker switch 2**	**1 bit DPT_Enable**	**C,W,T,U**

The channel circuitry can be blocked or enabled using the communication object.

A blocked channel behaves as if there was no input signal. The communication objects of the channel are still available.

17	**Switching**	**Rocker switch 1**	**1 bit DPT_Switch**	**C,W,T**
24	**Switching**	**Rocker switch 2**	**1 bit DPT_Switch**	**C,W,T**

Telegram value: "0" OFF
                                   "1" ON

According to parameter setting, this communication object can be switched by the ON, OFF or Switching input drive. With Switching the previous value, for example "1", is directly switched to value "0". It is important to ensure that the communication object can be written from the outside. Therefore cyclic sending is interrupted or is not possible.

34	**Disabling LED**	**Rocker switch 1**	**1 bit DPT_Enable**	**C,W**
34	**Disabling LED**	**Rocker switch 2**	**1 bit DPT_Enable**	**C,W**

The "Disabling Led" communication object makes it possible to enable (1) the LED so as that it switches on or off depending on the operating mode selected from the parameters or to disable it (0) forcing it into a continuous switching off status.

3.1.2   Switching rocker switch

16	Rocker button 1	Disabling	1 bit	C	-	W	-	-	1 bit DPT_Ena...	Low
17	Rocker button 1	Upper rocker button 1 -Switch.	1 bit	C	-	W	T	-	1 bit DPT_Swi...	Low
18	Rocker button 1	Lower rocker button 1 -Switch.	1 bit	C	-	W	T	-	1 bit DPT_Swi...	Low
23	Rocker button 2	Disabling	1 bit	C	-	W	T	U	1 bit DPT_Ena...	Low
24	Rocker button 2	Switching	1 bit	C	-	W	T	-	1 bit DPT_Swi...	Low
34	Rocker button 1	Disabling LED	1 bit	C	-	W	-	-	1 bit DPT_Ena...	Low
35	Rocker button 2	Disabling LED	1 bit	C	-	W	-	-	1 bit DPT_Ena...	Low

No.	Function	Object name	Type of datum	Flags
16	**Disabling**	**Rocker switch 1**	**1 bit DPT_Enable**	**C,W**
23	**Disabling**	**Rocker switch 2**	**1 bit DPT_Enable**	**C,W**

The channel circuitry can be blocked or enabled using the communication object.

A blocked channel behaves as if there was no input signal. The communication objects of the channel are still available.

17	**Upper rocker switch Switching**	**Rocker switch 1**	**1 bit DPT_Switch**	**C,W,T**
24	**Upper rocker switch Switching**	**Rocker switch 2**	**1 bit DPT_Switch**	**C,W,T**

Telegram value:	"0" OFF "1" ON

According to parameter setting, this communication object can be switched by the ON, OFF or Switching input drive. With Switching the previous value, for example "1", is directly switched to value "0". It is important to ensure that the communication object can be written from the outside. Therefore cyclic sending is interrupted or is not possible.

18	**Lower rocker switch Switching**	**Rocker switch 1**	**1 bit DPT_Switch**	**C,W,T**
25	**Lower rocker switch Switching**	**Rocker switch 2**	**1 bit DPT_Switch**	**C,W,T**

Telegram value:	"0" OFF "1" ON

According to parameter setting, this communication object can be switched by the ON, OFF or Switching input drive. With Switching the previous value, for example "1", is directly switched to value "0". It is important to ensure that the communication object can be written from the outside. Therefore cyclic sending is interrupted or is not possible.

34	**Disabling LED**	**Rocker switch 1**	**1 bit DPT_Enable**	**C,W**
35	**Disabling LED**	**Rocker switch 2**	**1 bit DPT_Enable**	**C,W**

The "Disabling Led" communication object makes it possible to enable (1) the LED so as that it switches on or off depending on the operating mode selected from the parameters or to disable it (0) forcing it into a continuous switching off status.

3.1.3 Dimmer rocker switch

16	Rocker button 1	Disabling	1 bit	C	-	W	T	U	1 bit DPT_Ena...	Low
17	Rocker button 1	Switching	1 bit	C	-	W	T	U	1 bit DPT_Swi...	Low
18	Rocker button 1	Relative dimming	4 bit	C	-	W	T	U	3 bit controlle...	Low
23	Rocker button 2	Disabling	1 bit	C	-	W	-	-	1 bit DPT_Ena...	Low
24	Rocker button 2	Switching	1 bit	C	-	W	T	-	1 bit DPT_Swi...	Low
25	Rocker button 2	Relative dimming	4 bit	C	-	W	T	-	3 bit controlle...	Low
34	Rocker button 1	Disabling LED	1 bit	C	-	W	T	-	1 bit DPT_Ena...	Low
35	Rocker button 2	Disabling LED	1 bit	C	-	W	-	-	1 bit DPT_Ena...	Low

No.	Function	Object name	Type of datum	Flags
16	**Disabling**	**Rocker switch 1**	**1 bit DPT_Enable**	**C,W,T,U**
23	**Disabling**	**Rocker switch 2**	**1 bit DPT_Enable**	**C,W**

The channel circuitry can be blocked or enabled using the communication object.

A blocked channel behaves as if there was no input signal. Communication objects of the channel are still available.

17	**Switching**	**Rocker switch 1**	**1 bit DPT_Switch**	**C,W,T,U**
24	**Switching**	**Rocker switch 2**	**1 bit DPT_Switch**	**C,W,T**

Telegram value:	"0" OFF "1" ON

According to parameter setting, this communication object can be switched by the ON, OFF or Switching input drive. With Switching the previous value, for example "1", is directly switched to value "0". It is important to ensure that the communication object can be written from the outside. Therefore cyclic sending is interrupted or is not possible.

18	**Relative dimming**	**Rocker switch 1**	**3 bit DPT_Control_ Dimming**	**C,W,T,U**
25	**Relative dimming**	**Rocker switch 2**	**3 bit DPT_Control_ Dimming**	**C,W,T**

A long input operation via this communication object causes an adjusting command "BRIGHTER" or "DARKER" to be sent over the bus. At the end of the command a Stop command is sent to the input.

34	**Disabling LED**	**Rocker switch 1**	**1 bit DPT_Enable**	**C,W**
35	**Disabling LED**	**Rocker switch 2**	**1 bit DPT_Enable**	**C,W**

The "Disabling Led" communication object makes it possible to enable (1) the LED so as that it switches on or off depending on the operating mode selected from the parameters or to disable it (0) forcing it into a continuous switching off status.

3.1.4   Shutter rocker switch

16	Rocker button 1	Disabling	1 bit	C	-	W	-	-	1 bit DPT_Ena...	Low
17	Rocker button 1	Shutter Up/Down	1 bit	C	-	-	T	-	1 bit DPT_Up...	Low
18	Rocker button 1	Stop/Louvre Up-Down	1 bit	C	-	-	T	-		Low
23	Rocker button 2	Disabling	1 bit	C	-	W	T	U	1 bit DPT_Ena...	Low
24	Rocker button 2	Shutter up/down	1 bit	C	-	W	T	U	1 bit DPT_Up...	Low
25	Rocker button 2	Stop/Louvre Up-Down	1 bit	C	-	W	T	U		Low
34	Rocker button 1	Disabling LED	1 bit	C	-	W	-	-	1 bit DPT_Ena...	Low
35	Rocker button 2	Disabling LED	1 bit	C	-	W	T	-	1 bit DPT_Ena...	Low

No.	Function	Object name	Type of datum	Flags
16	**Disabling**	**Rocker switch 1**	**1 bit DPT_Enable**	**C,W**
23	**Disabling**	**Rocker switch 2**	**1 bit DPT_Enable**	**C,W,T,U**

The channel circuitry can be blocked or enabled using the communication object.

A blocked channel behaves as if there was no input signal. Communication objects of the channel are still available.

17	**Shutter up-down**	**Rocker switch 1**	**1 bit DPT_UpDown**	**C,T**
24	**Shutter up-down**	**Rocker switch 2**	**1 bit DPT_UpDown**	**C,W,T,U**

This communication object sends a shutter movement control (UP or DOWN) over the bus.

18	**Stop/Louvre up-down**	**Rocker switch 1**	**1 bit DPT_Step**	**C,T**
25	**Stop/Louvre up-down**	**Rocker switch 2**	**1 bit DPT_Step**	**C,W,T,U**

Telegram value: "0" OFF
       "1" ON

According to parameter setting, this communication object can be switched by the ON, OFF or Switching input drive. With Switching the previous value, for example "1", is directly switched to value "0". It is important to ensure that the communication object can be written from the outside. Therefore cyclic sending is interrupted or is not possible.

34	**Disabling LED**	**Rocker switch 1**	**1 bit DPT_Enable**	**C,W**
35	**Disabling LED**	**Rocker switch 2**	**1 bit DPT_Enable**	**C,W,T**

The "Disabling Led" communication object makes it possible to enable (1) the LED so as that it switches on or off depending on the operating mode selected from the parameters or to disable it (0) forcing it into a continuous switching off status.

3.1.5 Scene rocker switch

16	Rocker button 1	Disabling	1 bit	C	-	W	-	-	1 bit DPT_Ena...	Low
17	Rocker button 1	Upp. rocker 1 button:Scene A	1 bit	C	-	W	T	U	1 bit DPT_Swi...	Low
18	Rocker button 1	Upp. rocker 1 button:Scene B	1 bit	C	-	W	T	U	1 bit DPT_Swi...	Low
19	Rocker button 1	Upp. rocker 1 button:Scene C	1 bit	C	-	W	T	U	1 bit DPT_Swi...	Low
20	Rocker button 1	Upp. rocker 1 button:Scene D	1 bit	C	-	W	T	U	1 bit DPT_Swi...	Low
21	Rocker button 1	Upp. rocker 1 button:Scene E	1 bit	C	-	W	T	U	1 bit DPT_Swi...	Low
22	Rocker button 1	Store scene	1 bit	C	-	W	T	U	1 bit DPT_Ena...	Low
23	Rocker button 2	Disabling	1 bit	C	-	W	-	-	1 bit DPT_Ena...	Low
24	Rocker button 2	Upper rocker button 2:Scene A	1 bit	C	-	W	T	U	1 bit DPT_Swi...	Low
25	Rocker button 2	Upper rocker button 2:Scene B	1 bit	C	-	W	T	U	1 bit DPT_Swi...	Low
26	Rocker button 2	Upper rocker button 2:Scene C	1 bit	C	-	W	T	U	1 bit DPT_Swi...	Low
27	Rocker button 2	Upper rocker button 2:Scene D	1 bit	C	-	W	T	U	1 bit DPT_Swi...	Low
28	Rocker button 2	Upper rocker button 2:Scene E	1 bit	C	-	W	T	-	1 bit DPT_Swi...	Low
29	Rocker button 2	Store scene	1 bit	C	-	W	T	U	1 bit DPT_Ena...	Low
34	Rocker button 1	Disabling LED	1 bit	C	-	W	-	-	1 bit DPT_Ena...	Low
35	Rocker button 2	Disabling LED	1 bit	C	-	W	-	-	1 bit DPT_Ena...	Low

No.	Function	Object name	Type of datum	Flags
16	**Disabling**	**Rocker switch 1**	**1 bit DPT_Enable**	**C,W**
23	**Disabling**	**Rocker switch 2**	**1 bit DPT_Enable**	**C,W**
— The channel circuitry can be blocked or enabled using the communication object. A blocked channel behaves as if there was no input signal. The communication objects of the channel are still available.				
17,18,19 20.21	**Upper rocker 1 push-button: Scene A/B/C/D/E**	**Rocker switch 1**	**1 bit DPT_Switch**	**C,W,T,U**
24,25,26 27.28	**Upper rocker 2 push-button: Scene A/B/C/D/E**	**Rocker switch 2**	**1 bit DPT_Switch**	**C,W,T,U**
This communication object sends the following values over the bus to fulfil the scene setting. 1-Byte value [ON/OFF] EIS 1 DPT 1.001 switching command				
22	**Scene memory**	**Rocker switch 1**	**1 bit DPT_Enable**	**C,W,T,U**
29	**Scene memory**	**Rocker switch 2**	**1 bit DPT_Enable**	**C,W,T,U**
This communication object appears only with the option "object value = 1". This option can be set in the parameter "Store scene". This communication object is used to start scene storage over the bus. The function depends on the type of scene storage.				
34	**Disabling LED**	**Rocker switch 1**	**1 bit DPT_Enable**	**C,W**
35	**Disabling LED**	**Rocker switch 2**	**1 bit DPT_Enable**	**C,W**
The "Disabling Led" communication object makes it possible to enable (1) the LED so as that it switches on or off depending on the operating mode selected from the parameters or to disable it (0) forcing it into a continuous switching off status.				

3.1.6   8 bit scene rocker switch

16	Rocker button 1	Disabling	1 bit	C	-	W	-	-	1 bit DPT_Ena...	Low
17	Rocker button 1	8 bit scene	1 Byte	C	-	W	T	U		Low
22	Rocker button 1	Store scene	1 bit	C	-	W	T	U	1 bit DPT_Ena...	Low
23	Rocker button 2	Disabling	1 bit	C	-	W	-	-	1 bit DPT_Ena...	Low
24	Rocker button 2	8 bit scene	1 Byte	C	-	W	T	U		Low
29	Rocker button 2	Store scene	1 bit	C	-	W	T	U	1 bit DPT_Ena...	Low
34	Rocker button 1	Disabling LED	1 bit	C	-	W	-	-	1 bit DPT_Ena...	Low
35	Rocker button 2	Disabling LED	1 bit	C	-	W	-	-	1 bit DPT_Ena...	Low

No.	Function	Object name	Type of datum	Flags
16	**Disabling**	**Rocker switch 1**	**1 bit DPT_Enable**	**C,W**
23	**Disabling**	**Rocker switch 2**	**1 bit DPT_Enable**	**C,W**
The channel circuitry can be blocked or enabled using the communication object. A blocked channel behaves as if there was no input signal. The communication objects of the channel are still available.			
17	**8 bit scene**	**Rocker switch 1**	**1 byte DPT_Unsigned_ Counter_value**	**C,W,T,U**
24	**8 bit scene**	**Rocker switch 2**	**1 byte DPT_Unsigned_ Counter_value**	**C,W,T,U**
This communication object sends the following values over the bus to fulfil the scene setting.			
	1-Byte value [ON/OFF]	EIS 1	DPT 1.001 switching command	
22	**Store scene**	**Rocker switch 1**	**1 bit DPT_Enable**	**C,W,T,U**
29	**Store scene**	**Rocker switch 2**	**1 bit DPT_Enable**	**C,W,T,U**
This communication object appears only with the option "object value = 1". This option can be set in the parameter "Store scene". This communication object is used to start scene storage over the bus. The function depends on the type of scene storage.			
34	**Disabling LED**	**Rocker switch 1**	**1 bit DPT_Enable**	**C,W**
35	**Disabling LED**	**Rocker switch 2**	**1 bit DPT_Enable**	**C,W**
The "Disabling Led" communication object makes it possible to enable (1) the LED so as that it switches on or off depending on the operating mode selected from the parameters or to disable it (0) forcing it into a continuous switching off status.			

3.1.7   Direct LED management

30	Rocker button 1	Upper LED	1 bit	C	-	W	-	-	1 bit DPT_Swi...	Low
31	Rocker button 1	Lower LED	1 bit	C	-	W	-	-	1 bit DPT_Swi...	Low
32	Rocker button 2	Upper LED	1 bit	C	-	W	-	-	1 bit DPT_Swi...	Low
33	Rocker button 2	Lower LED	1 bit	C	-	W	-	-	1 bit DPT_Swi...	Low

No.	Function	Object name	Type of datum	Flags
30	**Upper LED**	**Rocker switch 1**	**1 bit DPT_Switch**	**C,W**
32	**Upper LED**	**Rocker switch 2**	**1 bit DPT_Switch**	**C,W**
Through these communication objects it is possible to control the upper LED status directly over the bus. Send a telegram containing the value 1 to switch them on, or value 0 to switch them off.				
31	**Lower LED**	**Rocker switch 1**	**1 bit DPT_Switch**	**C,W**
33	**Lower LED**	**Rocker switch 2**	**1 bit DPT_Switch**	**C,W**
Through these communication objects it is possible to control the lower LED status directly over the bus. Send a telegram containing the value 1 to switch them on, or value 0 to switch them off.				

4   Table of 8 bit scene telegram codes

Bit no.		7	6	5	4	3	2	1	0		
8-Bit Values	Hexadecimal	Recall/Store	Not defined			Scene number				Scene no.	Recall (A)/Store (S)
0	00	0	0	0	0	0	0	0	0	1	A
1	01	0	0	0	0	0	0	0	1	2	A
2	02	0	0	0	0	0	0	1	0	3	A
3	03	0	0	0	0	0	0	1	1	4	A
4	04	0	0	0	0	0	1	0	0	5	A
5	05	0	0	0	0	0	1	0	1	6	A
6	06	0	0	0	0	0	1	1	0	7	A
7	07	0	0	0	0	0	1	1	1	8	A
8	08	0	0	0	0	1	0	0	0	9	A
9	09	0	0	0	0	1	0	0	1	10	A
10	0A	0	0	0	0	1	0	1	0	11	A
11	0B	0	0	0	0	1	0	1	1	12	A
12	0C	0	0	0	0	1	1	0	0	13	A
13	0D	0	0	0	0	1	1	0	1	14	A
14	0E	0	0	0	0	1	1	1	0	15	A
15	0F	0	0	0	0	1	1	1	1	16	A
16	10	0	0	0	1	0	0	0	0	17	A
17	11	0	0	0	1	0	0	0	1	18	A
18	12	0	0	0	1	0	0	1	0	19	A
19	13	0	0	0	1	0	0	1	1	20	A
20	14	0	0	0	1	0	1	0	0	21	A
21	15	0	0	0	1	0	1	0	1	22	A
22	16	0	0	0	1	0	1	1	0	23	A
23	17	0	0	0	1	0	1	1	1	24	A
24	18	0	0	0	1	1	0	0	0	25	A
25	19	0	0	0	1	1	0	0	1	26	A
26	1A	0	0	0	1	1	0	1	0	27	A
27	1B	0	0	0	1	1	0	1	1	28	A
28	1C	0	0	0	1	1	1	0	0	29	A
29	1D	0	0	0	1	1	1	0	1	30	A
30	1E	0	0	0	1	1	1	1	0	31	A
31	1F	0	0	0	1	1	1	1	1	32	A
32	20	0	0	1	0	0	0	0	0	33	A
33	21	0	0	1	0	0	0	0	1	34	A
34	22	0	0	1	0	0	0	1	0	35	A
35	23	0	0	1	0	0	0	1	1	36	A
36	24	0	0	1	0	0	1	0	0	37	A
37	25	0	0	1	0	0	1	0	1	38	A
38	26	0	0	1	0	0	1	1	0	39	A
39	27	0	0	1	0	0	1	1	1	40	A
40	28	0	0	1	0	1	0	0	0	41	A
41	29	0	0	1	0	1	0	0	1	42	A
42	2A	0	0	1	0	1	0	1	0	43	A
43	2B	0	0	1	0	1	0	1	1	44	A
44	2C	0	0	1	0	1	1	0	0	45	A
45	2D	0	0	1	0	1	1	0	1	46	A
46	2E	0	0	1	0	1	1	1	0	47	A
47	2F	0	0	1	0	1	1	1	1	48	A
48	30	0	0	1	1	0	0	0	0	49	A
49	31	0	0	1	1	0	0	0	1	50	A
50	32	0	0	1	1	0	0	1	0	51	A
51	33	0	0	1	1	0	0	1	1	52	A
52	34	0	0	1	1	0	1	0	0	53	A
53	35	0	0	1	1	0	1	0	1	54	A
54	36	0	0	1	1	0	1	1	0	55	A
55	37	0	0	1	1	0	1	1	1	56	A
56	38	0	0	1	1	1	0	0	0	57	A
57	39	0	0	1	1	1	0	0	1	58	A
58	3A	0	0	1	1	1	0	1	0	59	A
59	3B	0	0	1	1	1	0	1	1	60	A
60	3C	0	0	1	1	1	1	0	0	61	A
61	3D	0	0	1	1	1	1	0	1	62	A
62	3E	0	0	1	1	1	1	1	0	63	A
128	80	1	0	0	0	0	0	0	0	1	S
129	81	1	0	0	0	0	0	0	1	2	S
130	82	1	0	0	0	0	0	1	0	3	S
131	83	1	0	0	0	0	0	1	1	4	S
132	84	1	0	0	0	0	1	0	0	5	S
133	85	1	0	0	0	0	1	0	1	6	S
134	86	1	0	0	0	0	1	1	0	7	S
135	87	1	0	0	0	0	1	1	1	8	S
136	88	1	0	0	0	1	0	0	0	9	S
137	89	1	0	0	0	1	0	0	1	10	S
138	8A	1	0	0	0	1	0	1	0	11	S
139	8B	1	0	0	0	1	0	1	1	12	S
140	8C	1	0	0	0	1	1	0	0	13	S
141	8D	1	0	0	0	1	1	0	1	14	S
142	8E	1	0	0	0	1	1	1	0	15	S
143	8F	1	0	0	0	1	1	1	1	16	S
144	90	1	0	0	1	0	0	0	0	17	S
145	91	1	0	0	1	0	0	0	1	18	S
146	92	1	0	0	1	0	0	1	0	19	S
147	93	1	0	0	1	0	0	1	1	20	S
148	94	1	0	0	1	0	1	0	0	21	S
149	95	1	0	0	1	0	1	0	1	22	S
150	96	1	0	0	1	0	1	1	0	23	S
151	97	1	0	0	1	0	1	1	1	24	S
152	98	1	0	0	1	1	0	0	0	25	S
153	99	1	0	0	1	1	0	0	1	26	S
154	9A	1	0	0	1	1	0	1	0	27	S
155	9B	1	0	0	1	1	0	1	1	28	S
156	9C	1	0	0	1	1	1	0	0	29	S
157	9D	1	0	0	1	1	1	0	1	30	S
158	9E	1	0	0	1	1	1	1	0	31	S
159	9F	1	0	0	1	1	1	1	1	32	S
160	A0	1	0	1	0	0	0	0	0	33	S
161	A1	1	0	1	0	0	0	0	1	34	S
162	A2	1	0	1	0	0	0	1	0	35	S
163	A3	1	0	1	0	0	0	1	1	36	S
164	A4	1	0	1	0	0	1	0	0	37	S
165	A5	1	0	1	0	0	1	0	1	38	S
166	A6	1	0	1	0	0	1	1	0	39	S
167	A7	1	0	1	0	0	1	1	1	40	S
168	A8	1	0	1	0	1	0	0	0	41	S
169	A9	1	0	1	0	1	0	0	1	42	S
170	AA	1	0	1	0	1	0	1	0	43	S
171	AB	1	0	1	0	1	0	1	1	44	S
172	AC	1	0	1	0	1	1	0	0	45	S
173	AD	1	0	1	0	1	1	0	1	46	S
174	AE	1	0	1	0	1	1	1	0	47	S
175	AF	1	0	1	0	1	1	1	1	48	S
176	B0	1	0	1	1	0	0	0	0	49	S
177	B1	1	0	1	1	0	0	0	1	50	S
178	B2	1	0	1	1	0	0	1	0	51	S
179	B3	1	0	1	1	0	0	1	1	52	S
180	B4	1	0	1	1	0	1	0	0	53	S
181	B5	1	0	1	1	0	1	0	1	54	S
182	B6	1	0	1	1	0	1	1	0	55	S
183	B7	1	0	1	1	0	1	1	1	56	S
184	B8	1	0	1	1	1	0	0	0	57	S
185	B9	1	0	1	1	1	0	0	1	58	S
186	BA	1	0	1	1	1	0	1	0	59	S
187	BB	1	0	1	1	1	0	1	1	60	S
188	BC	1	0	1	1	1	1	0	0	61	S
189	BD	1	0	1	1	1	1	0	1	62	S
190	BE	1	0	1	1	1	1	1	0	63	S

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