



The switch sensor application module is placed on a flush-mounted bus coupler or switch actuator/-sensor.

The single push button can send e.g. switching, dimming, shutter control or 1 byte value telegrams to EIB actuators.

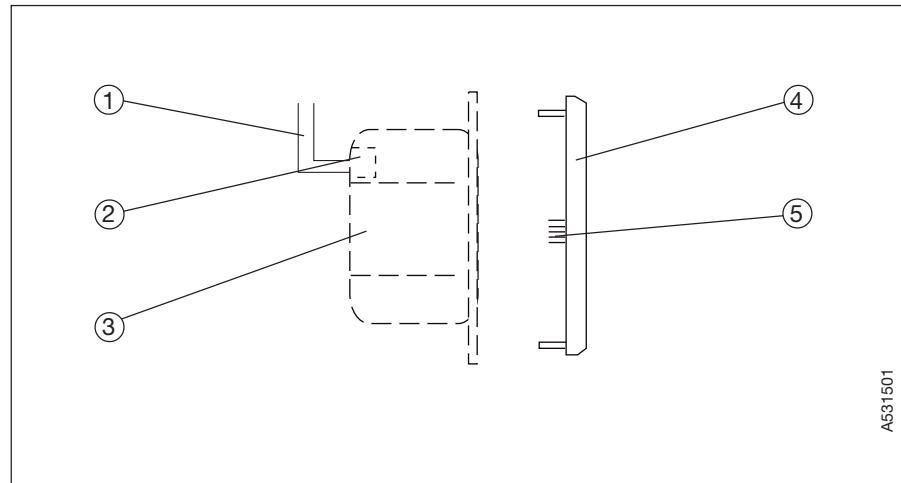
Under the rocker switch there are two contacts and an LED which can flash red or green.

In addition a cover frame in the chosen colour, a flush-mounted bus coupler or a switch actuator/-sensor and a bus connecting terminal are required.

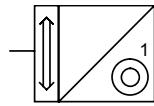
Technical Data

Power supply	– EIB		24 VDC, via the bus line
Operating and display elements	– Upper rocker switch contact – Lower rocker switch contact – two-colour LED		red / green
Connections	– Flush-mounted bus coupler or switch actuator/-sensor		10-pole plug connector
Type of protection	– IP 20, EN 60 529 mounted on the FM insert		
Ambient temperature range	– Operation – Storage – Transport		– 5 °C ... 45 °C –25 °C ... 55 °C –25 °C ... 70 °C
Design	– <i>alpha nea</i> ®		
Colours	– studio white, matt studio white, high gloss platinum bronze basalt black cardinal red hansa blue		
Mounting	– latched onto the flush-mounted insert		
Dimensions	– 56 x 71 x 17 mm (H x W x D)		
Weight	– 0.04 kg		
Certification	– EIB-certified		
CE norm	– in accordance with the EMC guideline and the low voltage guideline		

Application programs	Number of communication objects	Max. number of group addresses	Max. number of associations
For bus coupler FM:			
Switch LED /1	2	12	12
Switch Dim LED /1	2	13	13
Switch Shutter LED /1	3	8	8
Switch Edge Flexible allocation /1	2	12	12
Value (EIS 6) LED /1	2	8	8
For Switch actuator/ -sensor, FM:			
Switch Logic Priority Status Stairc. fct/1	3	8	8

Circuit diagram

Switch LED /1



Switch

The switch sensor sends an “On” telegram to the EIB when the upper rocker switch contact is pressed, and an “Off” telegram when the lower contact is pressed.

Selection in ETS2

- ABB
 - └ Push Button alpha nea
 - └ Push button, single

LED

With the parameter “Function of the LED”, it can be determined whether the LED displays the value of the object “LED” or as an orientation light always glows the same colour. If the LED is to be used as an orientation light, the ETS2 does not display the “LED” communication object.

Communication objects

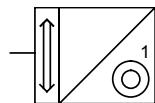
No.	Type	Name	Function
0	1 bit	Push button	Telegr. switch
4	1 bit	LED	Change colour

Parameters

The default setting for the values is **printed in bold type**.

Function of the LED	orientation light (indicates colour for "0")
Colour of the LED	LED indicates value of object "0" = green, "1" = red "0" = red, "1" = green

Switch Dim LED /1



Selection in ETS2

- ABB
 - └ Push Button alpha nea
 - └ Push button, single

Switch

In the default setting “switch / dimming sensor”, “On” or “Off” telegrams are sent to the EIB by the switch sensor when the rocker switch is pressed for a short period. With the parameter setting “switch sensor”, no distinction is made between whether the push button is pressed for a long or short period.

Dim

When the rocker switch is pressed for a long period, the switch sensor sends a dimming telegram. When the push button is released, a “Stop dimming” telegram is sent.

With the help of the parameter „Function of the LED“ it can be defined whether the LED displays the value of the object „push button -short“ or whether it shines as orientation light always in the same colour.

Communication objects

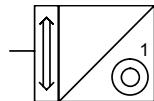
No.	Type	Name	Function
0	1 bit	LED	Change colour
2	1 bit	Push button -short	Telegr. switch
6	4 bit	Push button -long	Telegr. relative dimming

Parameters

The default setting for the values is **printed in bold type**.

Function	switch / dimming sensor switch sensor
Function of the LED	LED indicates value of object orientation light (indicates colour for 0)
Colour of the LED	0 = green, 1 = red 0 = red, 1 = green

Switch Shutter LED /1



Selection in ETS2

- ABB
 - └ Push Button alpha nea
 - └ Push button, single

Switch

In the default setting "switch sensor", "On" or "Off" telegrams are sent by the switch sensor to the EIB when the rocker switch is pressed. In this case the communication object "Push button -long" is not displayed in the ETS2 and the communication object "Push button -short" is just called "Push button".

Shutter

In the default setting "shutter sensor", the push button sends a "Move shutter up/down" telegram if it is pressed for a long period. When it is pressed for a short period, it sends an "Adjust lamella / stop" telegram.

LED

If the push button is assigned the parameter of "shutter sensor", the LED normally functions as a green orientation light. It can however also display the value of the object "Push button -long". If the push button is assigned the parameter of "switch sensor", the LED indicates the value of the object "Push button". Alternatively it can be allocated the function of an orientation light.

Communication objects
for the "shutter sensor" function

No.	Type	Name	Function
0	1 bit	Push button -long	Telegr. move shutter Up-Down
4	1 bit	Push button -short	Telegr. lamella adj. / stop

Communication objects
for the "switch sensor" function

No.	Type	Name	Function
0	1 bit	Push button	Telegr. switch

Parameters

The default setting for the values is **printed in bold type**.

Function of the push button

shutter sensor

switch sensor

top = up / bottom = down (Sh)

top = on / bottom = off (Sw)

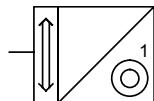
Function of the LED

LED indicates value of object **orientation light (indicates colour for "0")**

Colour of the LED

"0" = green, "1" = red

"0" = red, "1" = green

Switch Edge
Flexible allocation /1

Selection in ETS2

- ABB
 - └ Push Button alpha nea
 - └ Push button, single

Switch

The switch sensor has two communication objects "Object A" and "Object B", that can send switching telegrams.

Edge

With the parameters "Reaction to close upper contact", "Reaction to open upper contact" and the corresponding parameters for the lower contact, it can be determined when the push button sends "On" or "Off" telegrams.

Flexible allocation

With this parameter setting, it can be freely determined which communication object is used for sending switching telegrams. The LED can if required display the value of one of the communication objects. In this case it lights up red, if the object value is "1", and green if the value is "0". Alternatively, as an orientation light it can glow permanently green.

Communication objects

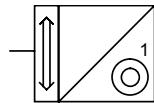
No.	Type	Name	Function
0	1 bit	Object A	Telegr. switch
1	1 bit	Object B	Telegr. switch

Parameters

The default setting for the values is **printed in bold type**.

Function of the LED	LED indicates value of object A LED indicates value of object B orientation light (green) no reaction / ON / OFF / TOGGLE Object A / Object B
Reaction to close upper contact "Close upper contact" allocated to	no reaction / ON / OFF / TOGGLE Object A / Object B
Reaction to open upper contact "Open upper contact" allocated to	no reaction / ON / OFF / TOGGLE Object A / Object B
Reaction to close lower contact "Close lower contact" allocated to	no reaction / ON / OFF / TOGGLE Object A / Object B
Reaction to open lower contact "Open lower contact" allocated to	no reaction / ON / OFF / TOGGLE Object A / Object B

Value (EIS 6) LED /1



Value (EIS 6)

When the rocker switch is pressed, the switch sensor sends a 1 byte value telegram to the bus. The values for the upper and lower contact can be set separately in a range of 0 to 255.

Selection in ETS2

- ABB
 - └ Push Button alpha nea
 - └ Push button, single

LED

With the parameter “Function of the LED”, it can be determined whether the LED indicates the value of the object “LED” or as an orientation light always lights up in the same colour. If the LED is used as an orientation light, the ETS2 does not display the “LED” communication object.

Communication objects

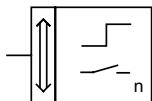
No.	Type	Name	Function
0	1 byte	Push button	Telegr. value
1	1 byte	LED	Change colour

Parameters

The default setting for the values is **printed in bold type**.

Upper push button -value on pressing (0...255)	128
Lower push button -value on pressing (0...255)	0
Function of the LED	LED indicates value of object orientation light (lights colour for "0")
Colour of the LED	"0" = green, "1-255" = red "0" = red, "1-255" = green

Switch Logic Priority Status Stairc.fct. /1



Selection in ETS2

- ABB
 - └ Push Button alpha nea
 - └ Push button, single for 1SA

The application program is specifically for the 1-fold switch sensor application module in connection with the flush-mounted switch actuator/sensor.

Switch

In the default setting, the output switches on after receiving a telegram with the value “1” and switches off on receipt of a telegram with the value “0”. If the parameter “Switching characteristic” is set to “normally closed contact”, the relay closes when a telegram with the value “0” is received and opens on receipt of a telegram with the value “1”.

If the upper rocker of the application module is pressed, an “On” telegram is sent by communication object 0. The object sends an “Off” telegram when the lower rocker is pressed.

Logic

Using the parameter “Logical connection”, it is possible to specify an AND or an OR connection. In both cases the ETS2 program displays an additional communication object. The output then links the values of communication objects 0 and 1 and switches the relay according to the result.

Priority

If the parameter “Status/priority operation mode” is set to “Priority”, the ETS2 program displays a further communication object. With the 2 bit communication object, the actuator can be positively driven by a primary control (e.g. application controller). There are three different states:

- The priority object has the value “3”. The value of the switching object is not important. The output is switched on through priority control.
- The priority object has the value “2”. The value of the switching object is not important. The output is switched off through priority control.
- The priority object has the value “1” or “0”. The output is not priority controlled. It is operated via the switching object.

If the actuator is priority controlled, changes to the 1 bit object are stored, even if the current switching state has not been directly changed as a result. When the priority controlled operation has finished, a priority operation takes place according to the current value of the switching object.

Status

If the parameter “Status/priority operation mode” is set to “Status response”, the ETS2 program displays a further 1 bit communication object. This communication object sends a telegram each time the actuator is switched. The value “1” means that the relay has accepted the active switching state in accordance with the parameter “Switching characteristic”.

In the default setting, the LED displays the status of the relay by its change in colour. Alternatively it can as an orientation light always glows the same colour.

Staircase lighting function

In the operation mode “Staircase lighting function”, the output switches on immediately after receiving an “On” telegram. Once the time specified in the two parameters “Time base” and “Factor” has elapsed, the relay opens automatically. If the output receives further “On” telegrams during this interval, the period restarts each time.

If both a logical connection and a staircase lighting function have been assigned, the time setting only applies if the actuator is switched via object 0.

The relay contact is opened on bus voltage failure. When the bus voltage is restored, the output can either switch in the set state or recover the state that was active prior to the bus voltage failure. If the output is defined as switching on or off, the actuator takes the “Switching characteristic” parameter into account.

Communication objects

No.	Type	Object name	Function
0	1 bit	Output / Rocker	Switch / Telegr. switch

Communication objects
for OR connection

No.	Type	Object name	Function
0	1 bit	Output / Rocker	Switch / Telegr. switch
1	1 bit	Output A	OR connection

Communication objects
for AND connection

No.	Type	Object name	Function
0	1 bit	Output / Rocker	Switch / Telegr. switch
1	1 bit	Output A	AND connection

Communication objects
for additional function "Priority"

No.	Type	Object name	Function
...			
2	1 bit	Output A	Priority

Communication objects
for additional function "Status response"

No.	Type	Object name	Function
...			
2	1 bit	Output A	Status

Parameters

The default setting for the values is **printed in bold type**.

– Switching characteristic	normally open contact normally closed contact
– Operation mode	normal operation staircase lighting function
only for staircase lighting function:	
– Time base for staircase lighting function	130 ms / ... / 520 ms / ... / 1.2 h
– Factor for staircase lighting function (2 ... 127)	8
– Logical connection	no logical connection OR connection AND connection
– Status/priority operation mode	no additional function priority status response
– Behaviour on bus voltage recovery	recover old state switch on switch off
– Function of the LED	orientation light LED indicates status of relay
only for orientation light:	
– Colour of the LED	green red
only for display of relay status:	
– Colour of the LED	“OFF” = green, “ON” = red “OFF” = red, “ON” = green