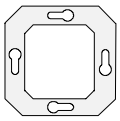
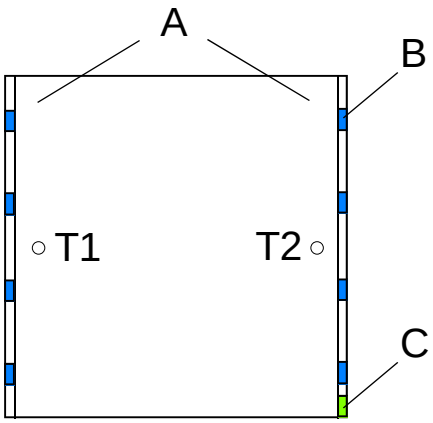


Product name: **Push button sensor 2 1fold without controller F-Line**
Design: Flush-mounting type (uP)
Article no.: **2011 …**
ETS search path: Push button / Push button, 1fold / push sensor 2 1fold without controller F-line

Functional description:

The push sensor 2 F-line is plugged onto a flush-mounted bus coupler (cf. wiring diagram). On pressing of a key, the push sensor 2 F-line transmits telegrams depending on the application program programmed via the KNX / EIB. These may include telegrams for switching or dimming or for blind/shutter control. It is also possible to program value-transmit functions such as dimming value transmitter or light-scene extensions. The keys or rockers can be assigned to the different functions depending on the application program.

Layout:



Dimensions:

Width: 70 mm
Height: 70 mm
Depth: 13 mm (ohne AST)

Controls:

A: rocker or buttons with labelling field

B: status-LEDs (blue)

C: 1 operation-LED (green) (goes out automatically when the status-LED lights up)

Technical data:

External supply	---
KNX / EIB supply	
voltage:	21 ... 32 V DC SELV
power consumption:	typically 150 mW
connection:	2 x 5-pole male connector strip
Input:	---
Output:	---
Response to mains failures	
bus voltage only:	object values are deleted, LEDs switch off
mains voltage only:	---
bus and mains voltage:	---
Response on return of voltage	
bus voltage only:	no reaction
mains voltage only:	---
bus and mains voltage:	---
Type of protection:	IP 20
Safety class:	III
Mark of approval:	KNX / EIB
Ambient temperature:	-5 °C ... +45 °C
Storage / transport temperature:	-25 °C ... +70 °C (storage above +45 °C reduces the service life)
Mounting position:	any (please refer to: "Hardware information")
Minimum distances:	none
Type of fastening:	plug-in on flush-mounted bus coupler (please refer to: "Hardware information")

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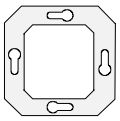
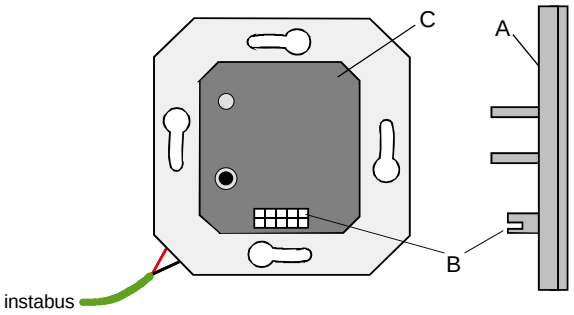
Sensor



Wiring:



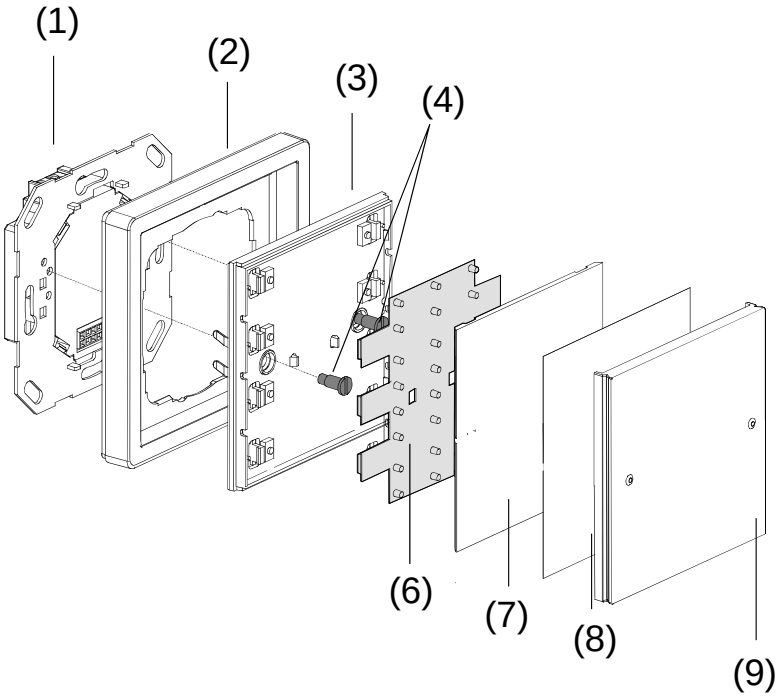
Terminal connections:

A: push sensor 2 F-line
B: user interface
C: bus coupler

Hardware remarks:

- The push sensor 2 F-line with controller may only be plugged into bus couplers of the "new generation" (cf. bus coupler picture above with round programming button). Plugging the push sensor 2 F-line into older flush-mounted bus couplers results in malfunctions.
- The operation-LED (green) goes out automatically when the status-LED lights up

Montage



Procedure:

1.) Assembly without anti-theft protection:
Place the cover frame (2) and the user module (3) on a flush-mounted BCU (1).

2.) Assembly with removal protection:
The device is protected against theft by fastening it with screws on the bus coupler insert.
- remove the cover frame (9),
- remove the rocker carrier (7) carefully with a screwdriver or with your fingernail,
- lift off the ESD protection mat (6),
- place the cover frame (2) and the user module (3) on the flush-mounted BCU already in place (1),
- screw the pushbutton sensor to the insert using only the screw set (4, 5a, 5b, 5c) supplied with the device,
- put the ESD protection mat (6) carefully back in place.
  Important: proper functioning can only be guaranteed when the ESD protection mat is in place. Otherwise risk of irreparable damage to the device in operation by electro-static discharge.
- Fit the rocker carrier (7), the inscription foil (8) and the rocker cover (9) by snap-fastening them on the device.

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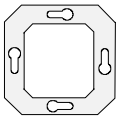
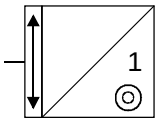
Sensor



Software description:

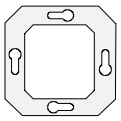
ETS-search path:
push button / push button, 1fold / push sensor 2 1fold without controller F-line

ETS-symbol:



Applicationen:

Summarized description:	Name:	Date:	Page:	Version:
Switching, status	Switching, status 100102	01/07	5	20119190
Switching, acknowledgement	Switching, acknowledgement 100902	01/07	6	20119190
Dimming	Dimming 100C12	01/07	7	20119190
Shutter	Shutter 100D12	01/07	8	20119190
Switching / pushbutton mode	Switching / pushbutton mode 103302	01/07	9	20119190
Value transmitter	Value transmitter 101B02	01/07	11	20119190



Application description: **Switching, status100102**

Scope of functions

- Function of operating LED and of status LED parameterizable
- Command on key press parameterizable (ON, OFF)

	Object		Object description
↦	**0**	**(Switching)**	1-bit object for the transmission of switching telegrams (ON, OFF)

Number of addresses (max):	10	dynamic table handling	Yes ☒ No ☐
Number of assignments (max):	10	maximum length of table	20

Communication objects 1

Object	Function	Name	Type	Flag
↦ 0	Switching	Rocker	1 bit	C, W, T

Parameters		
Description:	Values:	Remarks:
General		
Function operation LED	OFF **ON**	Defines the status of the operation LED.
Function status LED	OFF **ON**	Defines the status of the operation LED.
Command on pressing of left key	OFF **ON**	Defines the command transmitted on pressing of the left key.
Command on pressing of right key	OFF **ON**	Defines the command transmitted on pressing of the right key.

Software remarks

- The status LED is on for a parameterizable time in case of a positive acknowledgement from an addressed actuator. If a key is pressed (e.g. ON) and if the push button sensor does not get a positive acknowledgement (IACK) from an addressed actuator, the object status is updated, but the corresponding status LED is not lit up.
- The operation-LED (green) goes out automatically when the status-LED lights up

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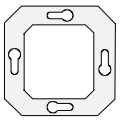
Sensor



Application description: **Switching, acknowlegment 100902**

Scope of functions

- Function of operating LED and of status LED parameterizable
- Command on key press parameterizable (ON, OFF)

	Object		Object description
↓	**0**	**(Switching)**	1-bit object for the transmission of switching telegrams (ON, OFF)

Number of addresses (max):	10	dynamic table handling	Yes ☒ No ☐
Number of assignments (max):	10	maximum length of table	20

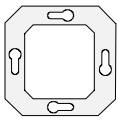
Communication objects 1

Object	Function	Name	Type	Flag
↓ 0	Switching	Rocker	1 bit	C, W, T

Parameters		
Description:	Values:	Remarks:
General		
Function operation LED	OFF **ON**	Defines the status of the operation LED.
Function status LED	OFF **ON**	Defines the status of the operation LED.
LED illumination time	0,75 s -- 1,5 s -- 2,25 s -- **2,7 s** 3,0 s -- 4,5 s -- 6,0 s -- 10 s 15 s -- 20 s	Defines the time during which the status LED is on in case of a positive acknowledgement of receipt from an addressed actuator.
Command on pressing of left key	OFF **ON**	Defines the command transmitted on pressing of the left key.
Command on pressing of right key	OFF **ON**	Defines the command transmitted on pressing of the right key.

Software remarks

- The status LED is on for a parameterizable time in case of a positive acknowledgement from an addressed actuator. If a key is pressed (e.g. ON) and if the push button sensor does not get a positive acknowledgement (IACK) from an addressed actuator, the object status is updated, but the corresponding status LED is not lit up.
- The operation-LED (green) goes out automatically when the status-LED lights up



Application description: **Dimming 100C12**

Scope of functions

- Function of operating LED and of status LED parameterizable
- Dimming step width, telegram repetition and transmission of stop telegrams possible

Object		Object description
0	**(Switching)**	1-bit object for the transmission of switching telegrams (ON, OFF)
1	**(Dimming)**	4-bit object for change of relartive brightness between 0 and 100 %

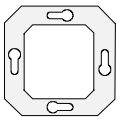
Number of addresses (max):	10	dynamic table handling	Yes ☒ No ☐
Number of assignments (max):	10	maximum length of table	20
Communication objects	2		

Object	Function	Name	Type	Flag
0	Switching	Rocker	1 bit	C, W, T
1	Dimming	Rocker	4 bit	C, W, T

Parameters		
Description:	Values:	Remarks:
General		
Function operation LED	OFF **ON**	Defines the status of the operation LED.
Function status LED	OFF **ON**	Defines the status of the operation LED.
Increase brightness by	**100 %** -- 50 % -- 25 % 12,5 % -- 6 % -- 3 % -- 1,5 %	Defines the maximum dimming step performed on reception of a relative dimming telegram (brighter).
Reduce brightness by	**100 %** -- 50 % -- 25 % 12,5 % -- 6 % -- 3 % -- 1,5 %	Defines the maximum dimming step performed on reception of a relative dimming telegram (darker).
Telegram repetition ?	YES **NO**	Defines whether dimming telegrams are to be cyclically repeated
Time between two telegrams	100 ms; 200 ms; 300 ms; **400 ms**; 500 ms 750 ms; 1.0 s; 1.5 s; 2.0 s	Defines the time between two dimming telegrams for telegram repetition
Send stop telegram ?	**YES** NO	Defines whether a dimming procedure in progress is to be stopped when the key is released (YES).

Software remarks

- The status LED indicates the instantaneous status of the switching object. If a key is pressed (e.g. ON) and if the push button sensor does not get a positive acknowledgement (IACK) from an addressed actuator, the object status is updated, but the corresponding status LED is not lit up.
- The operation-LED (green) goes out automatically when the status-LED lights up



Application description: **Shutter 100D12**

Scope of functions

- Function of operation LED parameterizable
- Time between two telegrams and number of steps before continuous run (slat adjustment) presettable

	Object		Object description
	0	**(Short-time operation)**	1-bit object for the short-time operation of a shutter
	1	**(Long-time operation)**	1-bit object for the long-time operation of a shutter

Number of addresses (max):	10	dynamic table handling	Yes ☒ No ☐
Number of assignments (max):	10	maximum length of table	20

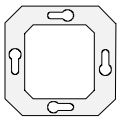
Communication objects 2

Object	Function	Name	Type	Flag
0	Short-time operation	Rocker	1 bit	C, W, T
1	Long-time operation	Rocker	1 bit	C, W, T

Parameters		
Description:	Values:	Remarks:
General		
Function operation LED	OFF **ON**	Defines the status of the operation LED.
Number of steps before continuous run	1 ... 30; **1**	A short-time telegram (STEP) permits adjusting the slats of a shutter. This parameter defines how many short-time telegrams are transmitted before a continuous run (MOVE) after a long key-press.
Time between two telegrams, base	0.5 ms; **8 ms**; 130 ms 2.1 s; 33 s	Defines the time base between two telegrams. (Time between STEP – STEP or between STEP – MOVE) Time = base · factor
Time between two telegrams, factor(0...255)	0 ... 255; **46**	Defines the time factor between two telegrams. (Time between STEP – STEP or between STEP – MOVE) Time = base · factor Presetting: 8 ms · 46 = 368 ms

Software remarks

- The operation-LED (green) goes out automatically when the status-LED lights up



Application description: **Switching / pushbutton mode 103302**

Scope of functions

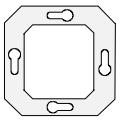
- Function of operation LED can be parameterized and status indication controlled by means of objects
- Key functions (ON / OFF / TOGGLE) can be parameterized

Object		Object description
0 - 1	**(Switching)**	1-bit object for the transmission of switching telegrams (ON, OFF)
2	**(LED control)**	1-bit object for status LED control

Number of addresses (max):	13	dynamic table handling	Yes ☒ No ☐
Number of assignments (max):	13	maximum length of table	26

Communication objects 3

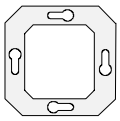
Object	Function	Name	Type	Flag
0	Switching	Key left	1 bit	C, W, T
1	Switching	Key right	1 bit	C, W, T
2	LED control	Status LED	1 bit	C, W, T



Parameters		
Description:	Values:	Remarks:
General		
Function operation LED	OFF **ON**	Defines the status of the operation LED.
Keys		
Function of status LED	 **ON (status)** LED always on LED always OFF	Defines the operation of the status LED. The status LED indicates the object status of the LED control object. The status LED is always on. The status LED is always off.
Command on pressing of left key	press = ON, release = ON press = ON, release = OFF **press = ON, release = ---** press = ON, release = ON press = OFF, release = OFF press = ON, release = --- press = TOGGLE, release = --- press = ---, release = ON press = ---, release = OFF press = ---, release = TOGGLE press = ---, release = ---	Defines the command transmitted on pressing or on releasing of the left key.
Command on pressing of right key	press = ON, release = ON press = ON, release = OFF press = ON, release = --- press = ON, release = ON press = OFF, release = OFF **press = ON, release = ---** press = TOGGLE, release = --- press = ---, release = ON press = ---, release = OFF press = ---, release = TOGGLE press = ---, release = ---	Defines the command transmitted on pressing or on releasing of the right key.

Software remarks

- The operation-LED (green) goes out automatically when the status-LED lights up



Application description: **Value transmitter 101B02**

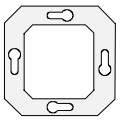
Scope of functions

- Function of operating LED and of status LED parameterizable
- Mode of operation (value transmitter / light-scene recall with / without storage function) freely selectable
- Values (1 byte) or light-scene numbers (1...8) for all keys individually parameterizable

	Object		Object description
☐	**0**	**(Value / light scene)**	1-byte object for the transmitting value telegrams of for recalling of light-scenes

Number of addresses (max):	1	dynamic table handling	Yes ☒ No ☐
Number of assignments (max):	1	maximum length of table	2
Communication objects	1		

Object	Function	Name	Type	Flag
☐ 0	Value / light-scene	Rocker 1	1 byte	C, T



Parameters		
Description:	Values:	Remarks:
General		
Function operation LED	OFF **ON**	Determines the status of the operation LED.
Function status LED	OFF **ON**	Determines the status of the operation LED.
Mode of operation	Value transmitter **Light-scene recall without storage function** Light-scene recall with storage function	Defines the function of the push button sensor.
Rocker (with "Mode of operation = value transmitter")		
Value (0...255) left key	0 ... 255; **1**	Defines the value transmitted when the left key is pressed.
Value (0...255) right key	0 ... 255; **2**	Defines the value transmitted when the right key is pressed.
Rocker (with "Mode of operation = light-scene recall with / without storage function")		
Light-scene (1...8) left key	1 ... 8; **1**	Defines the value transmitted when the left key is pressed.
Light-scene (1...8) right key	1 ... 8; **2**	Defines the value transmitted when the right key is pressed.

Software remarks

- Light-scene extension unit:
  When a key is pressed for more than 1 s, the parameterized light-scene is recalled and the pertaining status LED switched on for about 1 s. If a key is pressed during a light-scene recall with storage function for more than 5 s, a storage telegram corresponding to the parameterized light-scene will be transmitted and the status LED is lit up for 4 s. Pressing a key with storage function for a time between 1 s and 5 s is without effect.
  The status LED lights up after a key-press only in conjunction with a positive acknowledgement (IACK) from an addressed actuator.
- Value transmitter:
  The status LED lights up after a key-press only in conjunction with a positive acknowledgement (IACK) from an addressed actuator.
- The operation-LED (green) goes out automatically when the status-LED lights up