

Issue:
07.07.2010
628x1220

Push button sensor 3 basic 1-gang

Push button sensor 3 basic 2-gang (1+1)

Push button sensor 3 basic 3-gang

Order-No. 5111 00

Order-No. 5112 00

Order-No. 5113 00



Content

1	Product definition	3
1.1	Product catalogue	3
1.2	Function	3
1.3	Accessories	
2	Installation, electrical connection and operation	4
2.1	Safety instructions	4
2.2	Device components	5
2.3	Fitting and electrical connection	6
2.4	Commissioning	9
2.5	Operation	10
3	Technical data	11
4	Software description	12
4.1	Software specification	12
4.2	Software "Push button sensor 3 basic"	13
4.2.1	Scope of functions	13
4.2.2	Notes on software	14
4.2.3	Object table	15
4.2.4	Parameters	17
5	Appendix	21
5.1	Index	21

1 Product definition

1.1 Product catalogue

Product name: Push button sensor 3 basic 1-gang / Push button sensor 3 basic 2-gang (1+1) / Push button sensor 3 basic 3-gang

Use: Sensor

Design: UP (concealed)

Order-No. 5111 00 / 5112 00 / 5113 00

1.2 Function

When its buttons are pushed, the push button sensor basic sends telegrams to the KNX / EIB, depending on the parameter settings in the loaded application program. These can be, for instance, telegrams for switching or pushbutton control, for dimming or for controlling blinds. It is also possible to program value transmitter functions such as dimming value transmitters or light scene extensions.

The push button sensor basic consists of up to 3 control surfaces, depending on the device variant. The control concept of a control surface can be configured in ETS for the functions "Switching", "Dimming", "Blind", "Value transmitter" and "Scene extension". The control concept is defined as "Rocker". With the rocker function, one control surface is divided into two actuation pressure points with the same basic function.

The push button sensor basic is equipped with two red status LEDs per control surface (left & right), which are always controlled in the same way. The status LEDs can either be switched on or off permanently, or can function as a status indicator for a button or rocker.

The labelling field of the pushbutton can be illuminated. If no or a wrong application has been loaded into the pushbutton sensor with the ETS, the backlighting flashes with a frequency of approx. 0.75 Hz to indicate an error, and in this case the pushbutton sensor does not work.

The device's programming mode is indicated by a separate programming LED, which is located on the front below the decorative covers directly adjacent to the programming button. In this manner the device can be commissioned easily with the ETS even in the installed state. Project planning and commissioning of the device is performed using the ETS 3.0d with Patch A or newer versions.

The push button sensor basic must be plugged onto the flush-mounted bus coupling unit 3 (see Accessories). Only the combination of this bus coupling unit and the pushbutton sensor cover results in a functional unit.

Plugging the pushbutton sensor onto a flush-mounted bus coupling unit 1 or 2 (older generation) is not possible.

2 Installation, electrical connection and operation

2.1 Safety instructions

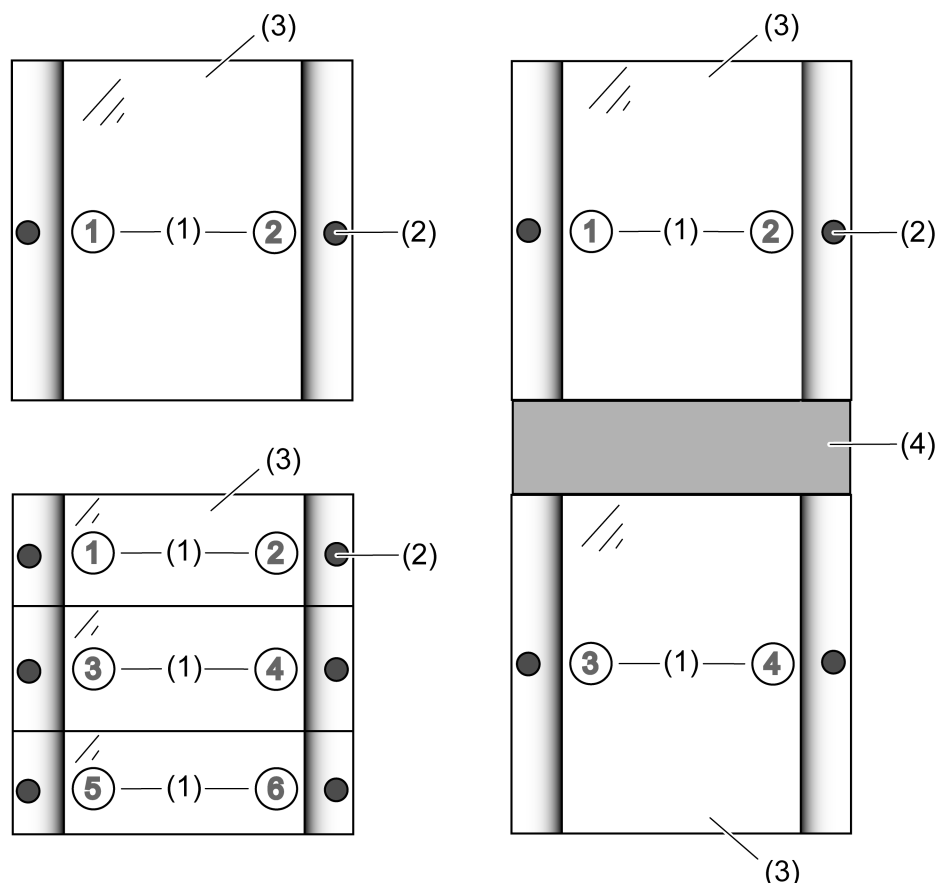
Electrical devices may only be fitted and installed by electrically skilled persons. The applicable accident prevention regulations must be observed.

Failure to observe the instructions may cause damage to the device and result in fire and other hazards.

Make sure during the installation that there is always sufficient insulation between the mains voltage and the bus. A minimum distance of at least 4 mm must be maintained between bus conductors and mains voltage cores.

The device may not be opened or operated outside the technical specifications.

2.2 Device components



picture 1: Device components of push-button sensor 3 basic

- (1) Control surfaces
(1 x rocker switch with actuation point on left and right / colours depend on design)
- (2) Status-LED red
(2 x per control surface / always controlled identically)
- (3) Labelling field with backlighting (39 x 54 mm)
- (4) Central web (colours depend on design)

Dimensions (1-gang & 3-gang):

Width (W): 55 mm / Height (H): 55 mm / Depth (D): 10 mm

Dimensions (2-gang):

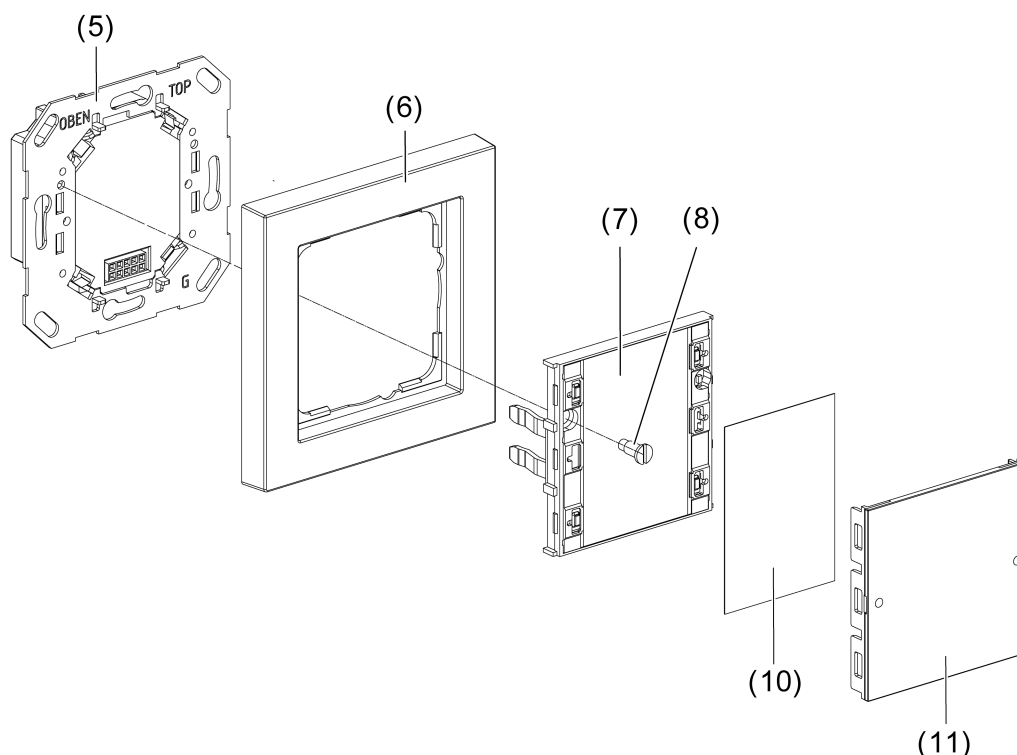
Width (W): 55 mm / Height (H): 126 mm / Depth (D): 10 mm

i Specifications without flush-mounted bus coupling unit, without fastening brackets and without design frame.

i Neutral inscription panels are included with the devices as part of the scope of supply. If necessary, individual labels can be created using optionally available labelling sheets (see Accessories) and labelling software, or on the Internet at marking.gira.com.

2.3 Fitting and electrical connection

Fitting and connecting a device for device variants 1gang and 3gang



picture 2: Device fitting using the example of a push button sensor 3 basic 1-gang

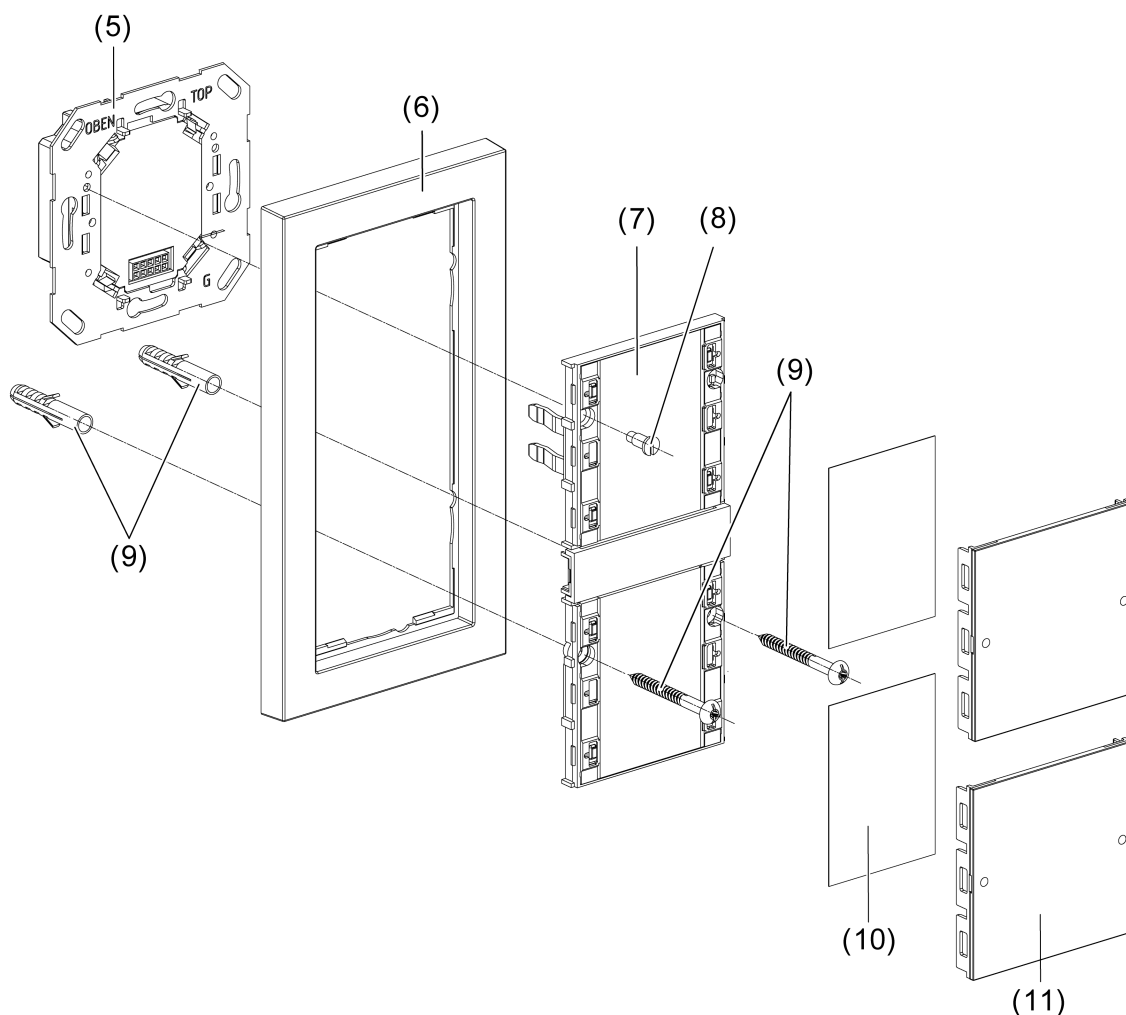
- (5) Flush-mounted bus coupling unit 3 with supporting frame
- (6) Design frame
- (7) Pushbutton sensor cover
- (8) Fit bolt for anti-theft protection (included with the pushbutton sensor cover)
- (10) Inscription panel
- (11) Rocker cover

The pushbutton sensor cover must be plugged onto a flush-mounted bus coupling unit 3. Anti-dismantling protection is provided by screwing to the supporting frame of the bus coupling unit.

- Connect the bus coupling unit (5) with the KNX/EIB bus cable and fasten in place in an appliance box.
- Remove the rocker covers (11) and inscription panels (10) from the pushbutton sensor cover (7).
- Position the design frame (6) in front of the bus coupling unit and carefully plug the pushbutton sensor cover into the bus coupling unit.
- Screw the pushbutton sensor cover to the supporting frame of the bus coupling unit. Use the screw (8) provided.
- If necessary, label the inscription signs. Optionally the separately available labelling sheets (see Accessories) can be used.
- Finally, mount the rocker covers together with the labelling panel by snapping them on.

- i** Before final fitting of the rocker covers, the physical address has to be loaded into the device (see page 9).

Fitting and connecting the device for device variant 2gang



picture 3: Device fitting of the push button sensor 3 basic 2gang (with frame, without central web)

- (5) Flush-mounted bus coupling unit 3 with supporting frame
- (6) Design frame
- (7) Pushbutton sensor cover
- (8) Fit bolt for anti-theft protection (included with the pushbutton sensor cover)
- (9) Screw and anchor set for mechanical fastening and for anti-theft protection (included with the pushbutton sensor cover)
- (10) Inscription panel
- (11) Rocker cover

The pushbutton sensor cover must be plugged onto a flush-mounted bus coupling unit 3. Anti-dismantling protection is provided by screwing to the supporting frame of the bus coupling unit.

In addition, the lower part of the pushbutton sensor cover is screwed to the wall, or in the case of mounting on 2 appliance boxes, to a second supporting frame. Mounting requires a design frame 2gang without central web.

- Connect the bus coupling unit (5) with the KNX/EIB bus cable and fasten in place in an appliance box.
- Remove the rocker covers (11) and inscription panels (10) from the pushbutton sensor cover (7).

For mounting on only one appliance box, the lower part of the pushbutton sensor cover is screwed to the wall with the aid of the supplied screw and anchor set (9). To do this, proceed as follows:

- Position the design frame 2gang without central web (6) in front of the bus coupling unit and carefully plug the pushbutton sensor cover into the bus coupling unit.
- Mark the drill hole positions on the wall. Do this by using the pushbutton sensor cover as a template.
- Pull the pushbutton sensor off of the flush-mounted bus coupling unit again. Drill holes (Ø 5mm) and insert the anchors.
- **i** The use of the anchors depends on the properties of the surface.
- Position the design frame 2gang without central web in front of the bus coupling unit and carefully plug the pushbutton sensor cover into the bus coupling unit again.
- Screw the pushbutton sensor cover to the supporting frame of the bus coupling unit. Use the screw (8) provided.
- In addition, fasten the lower part of the pushbutton sensor cover in the predrilled holes with the aid of the wall screws (9).
- If necessary, label the inscription signs. Optionally the separately available labelling sheets (see Accessories) can be used.
- Finally, mount the rocker covers together with the labelling panel by snapping them on.

For mounting on two appliance boxes, the lower part of the pushbutton sensor cover is screwed to a second supporting frame (see Accessories). To do this, proceed as follows:

- Mount the second supporting frame on the lower appliance box.
- Position the design frame 2gang without central web (6) in front of the bus coupling unit and the second supporting frame and carefully plug the pushbutton sensor cover into the bus coupling unit.
- Screw the pushbutton sensor cover to the supporting frame of the bus coupling unit. Use the screw (8) provided.
- Screw the lower part of the pushbutton sensor cover to the second supporting frame. Do this using the screws included in the scope of supply of the supporting frame.
- If necessary, label the inscription signs. Optionally the separately available labelling sheets (see Accessories) can be used.
- Finally, mount the rocker covers together with the labelling panel by snapping them on.

- **i** Before final fitting of the rocker covers, the physical address has to be loaded into the device (see page 9).

2.4 Commissioning

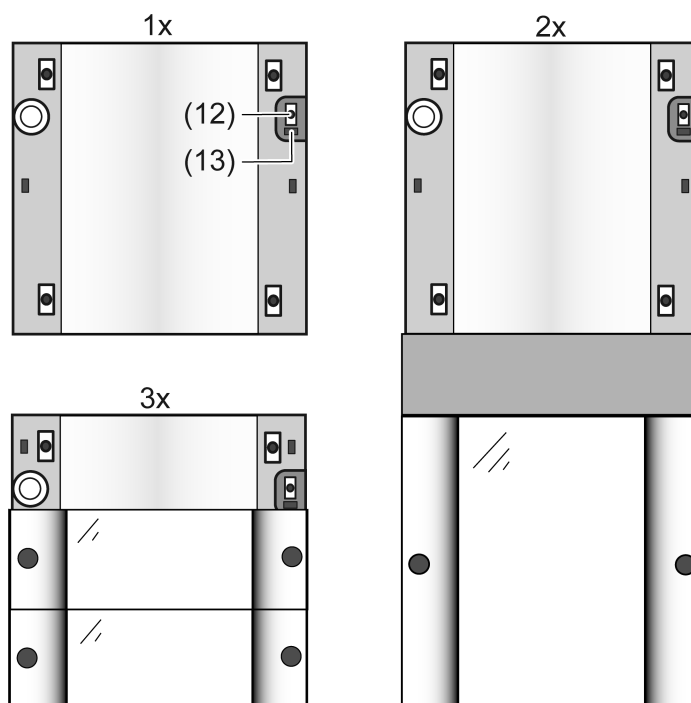
Loading the physical address and application software

The commissioning of the device is basically confined to programming of the physical address and the application data with the ETS.

Project planning and commissioning of the device using the ETS 3.0d with Patch A or newer versions.

The device is connected and ready for operation.

An appropriate device must be created and configured in the ETS project.



picture 4: Arrangement of the programming button and LED on the front of the device

The programming button is located on the front of the device behind a labelling panel (picture 4). Before final fitting of the rocker covers, the physical address has to be loaded into the device.

- Detach the control surface over the programming button/LED, if the rocker covers are already fitted.
- Activating Programming mode: press the programming button (12).
The programming LED (13) lights up red.
- Program the physical address with the help of the ETS.
The programming LED goes out.
- Load the application data into the device using the ETS.
- Mount control surface(s).

i If the device was programmed with incorrect application data, then backlighting of the labelling field flashes slowly. In this case, the device will not function after start-up.

2.5 Operation

Operating areas

The push button sensor 3 basic consists of up to 3 control surfaces, depending on the device variant. The control concept of a control surface can be configured in ETS for the functions "Switching", "Dimming", "Blind", "Value transmitter" and "Scene extension". The control concept is defined as "Rocker". With the rocker function, one control surface is divided into two actuation pressure points with the same basic function.

The push button sensor 3 basic is equipped with two red status LEDs per control surface (left & right), which are always controlled identically. The LEDs can be switched on continuously - as an orientation light, for example - or also switched off - for example in bedrooms.

The labelling field illumination of the pushbutton sensor can be permanently on or off or alternatively be switched via an object. Furthermore, slow flashing of the labelling field illumination indicates an incorrectly loaded application program or an unprogrammed state as supplied.

3 Technical data

General

Safety class	III
Mark of approval	KNX/EIB
Ambient temperature	-5 ... +45 °C
Storage/transport temperature	-20 ... +70 °C

KNX/EIB supply

KNX medium	TP 1
Commissioning mode	S mode
Rated voltage	DC 21 V ... 32 V SELV (Via bus coupler 3)
Power consumption	typical 150 mW (Via bus coupler 3)
Connection mode	10 pole male connector strip

4 Software description

4.1 Software specification

ETS search paths:	<ul style="list-style-type: none"> - push button / push button, 1fold / Push button sensor 3 basic 1-gang - push button / push button, 2fold / Push button sensor 3 basic 2-gang (1+1) - push button / push button, 3fold / Push button sensor 3 basic 3-gang
Configuration:	S mode standard
PEI type:	"00" _{Hex} / "0" _{Dec}
PEI connector:	No PEI! Electrical connection via 10pole pin contact strip exclusively with a bus coupling unit 3.

Applications for push button sensor 3 basic 1-gang:

No.	Short description	Name	Version	from mask version
1	Basic pushbutton sensor application with 1 control surface.	Push button sensor 3 basic 1-gang 10D111	1.1 for ETS3.0 version d onwards	705

Applications for push button sensor 3 basic 2-gang:

No.	Short description	Name	Version	from mask version
1	Basic pushbutton sensor application with 2 control surfaces.	Push button sensor 3 basic 2-gang 10D211	1.1 for ETS3.0 version d onwards	705

Applications for push button sensor 3 basic 3-gang:

No.	Short description	Name	Version	from mask version
1	Basic pushbutton sensor application with 3 control surfaces.	Push button sensor 3 basic 3-gang 10D311	1.1 for ETS3.0 version d onwards	705

4.2 Software "Push button sensor 3 basic"

4.2.1 Scope of functions

Scope of functions

General:

- Function of the labelling field illumination and status LED configurable.

"Switching" function:

- Rocker function
- Command on actuating the buttons configurable (ON, OFF, TOGGLE).

"Dimming" function:

- Rocker function
- Command on actuating the rocker configurable (lighter - ON, darker - OFF).
- Time between switching and dimming can be set.

"Blind" function:

- Rocker function
- Command on actuating the rocker configurable (UP, DOWN).
- Time between short-time and long-time commands can be set.

"Value transmitter" and "Scene extension" functions:

- Rocker function
- Command on pressing the rocker configurable (values 0...255 / 0...100 % or scene numbers).

4.2.2 Notes on software


ETS project design and commissioning

For configuration and commissioning of the device, ETS3.0 from Version "d" Patch "A" onwards or ETS4 is required. Through use of these ETS version, advantages are gained with regard to the programming process and the parameter presentation.

The necessary product database is offered in the *.VD4 format.

Device combination with a bus coupling unit 3


The pushbutton sensor must be plugged onto the flush-mounted bus coupling unit 3 (see Accessories). Only the combination of this bus coupling unit and the pushbutton sensor cover results in a functional unit. The device configuration is not programmed into the bus coupling unit. Therefore it is possible to operate devices that have already been put into operation on any desired third-generation bus coupling units. This can simplify commissioning significantly, because programming of the devices no longer has to be performed on the same bus coupling unit that the pushbutton sensor will later be plugged onto in the building.

-  Plugging the pushbutton sensor onto a flush-mounted bus coupling unit 1 or 2 (older generation) is not possible in some cases, and generally not intended, and as a result the device combination will not function.


4.2.3 Object table


Number of communication objects:	Depends on the device variant and the set function. max. 6
Number of addresses (max):	100
Number of assignments (max):	100
Dynamic table management	No
Maximum table length	---

Objects for "switching"


Function: Switching					
Object	Function	Name	Type	DPT	Flag
 0, 2, 4	Switching	Rocker 1-3 ¹	1-bit	1.xxx	C, W, T
Description	1-bit object for transmission of switching telegrams (ON, OFF).				

Objects for "dimming"

Function: Switching					
Object	Function	Name	Type	DPT	Flag
 0, 2, 4	Switching	Rocker 1-3 ¹	1-bit	1.xxx	C, W, T
Description	1-bit object for transmission of switching telegrams (ON, OFF).				


Function: Dimming					
Object	Function	Name	Type	DPT	Flag
 8, 10, 12	Dimming	Rocker 1-3 ¹	4-bit	3.007	C, W, T
Description	4-bit object for relative brightness adjustment between 0% and 100 %.				

Objects for "Venetian blind"

Function: Venetian blind					
Object	Function	Name	Type	DPT	Flag
 0, 2, 4	Short time operation	Rocker 1-3 ¹	1-bit	1.007	C, -, T
Description	1-bit object for short-time operation of a blind or roller shutter.				

1: The number of rockers or buttons depends on the planned device variant.


Function: Venetian blind

Object	Function	Name	Type	DPT	Flag
 ^{8, 10, 12}	Long-time operation	Rocker 1-3 ¹	1-bit	1.008	C, -, T

Description 1-bit object for long-time operation of a blind or roller shutter.

Objects for "value transmitter"


Function: Value transmitter

Object	Function	Name	Type	DPT	Flag
 ^{0, 2, 4}	Value	Rocker 1-3 ¹	1 byte	5.xxx	C, -, T

Description 1-byte object for the transmission of values from 0 to 255 (0 ... 100 %).

Objects for "scene extension"

Function: Scene extension

Object	Function	Name	Type	DPT	Flag
 ^{0, 2, 4}	Scene extension	Rocker 1-3 ¹	1 byte	18.001	C, -, T

Description 1-byte object for recalling or for storing a scene.

1: The number of rockers or buttons depends on the planned device variant.

4.2.4 Parameters

Description	Values	Comment
☐ General		
Light period of status LED for button-press indicator	1 sec 2 sec 3 sec 4 sec 5 sec	This parameter defines the switch-on time the status LED is lit up to indicate actuation. The setting concerns all status LEDs whose function is set to "Button-press display".
Function of operation LED / Labelling field illumination	Always OFF Always ON	Specifies the state of the operation LED or the labelling field illumination.
☐ Rocker 1		
Function	No function Switching Dimming Venetian blind Value transmitter Scene extension	This parameter is used to define the basic function of the rocker.

These parameters are only visible for the function "Switching"...

Function of status LED	Always OFF Always ON Button-press display Status display (of the switching object) Inverted status display (of the switching display)	Specifies the control of the status LED.
Command on pressing left rocker	No function ON OFF TOGGLE	Defines the command when the left rocker button is pressed.
Command on pressing right rocker	No function ON OFF TOGGLE	Defines the command when the right rocker button is pressed.

These parameters are only visible for the function "Dimming"...

Function of status LED	Always OFF Always ON	Specifies the control of the status LED.
	Button-press display	
	Status indicator (of the switching object)	
	Inverted status indicator (of the switching object)	
Command on pressing rocker	Left brighter (ON), right darker (OFF) Left darker (ON), right brighter (OFF)	Defines the command when the rocker button is pressed.
Time between switching and dimming	0.3 s 0.4 s 0.5 s 0.7 s 1.0 s	Defines the time between between a switching and a dimming telegram.

These parameters are only visible for the function "Venetian blind"...

Function of status LED	Always OFF Always ON	Specifies the control of the status LED.
	Button-press display	
Command on pressing rocker	Left rocker: UP / Right rocker: DOWN Left rocker: DOWN / Right rocker: UP	Defines the command when the rocker button is pressed.
Time between short-time and long-time command	0.3 s 0.4 s 0.5 s 0.7 s 1.0 s	Defines the time between a short-time and a long-time telegram.

These parameters are only visible for the function "Value transmitter"...

Function of status LED	Always OFF Always ON	Specifies the control of the status LED.
	Button-press display	
Command on pressing rocker	Value transmitter 0...255 Value transmitter 0...100 %	A button configured as "Value transmitter" permits selecting whether the values to be transmitted are

interpreted as integers from 0 to 255 or as a percentage from 0 % to 100 %. The following parameters and their settings depend on this distinction.

Value, left rocker (0...255)	0... 255	Defines the value when the left rocker button is pressed. i Only for "Command on pressing the rocker = Value transmitter 0...255"!
Value, right rocker (0...255)	0...255	Defines the value when the right rocker button is pressed. i Only for "Command on pressing the rocker = Value transmitter 0...255"!
Value, left rocker (0...100 %)	0... 100	Defines the value when the left rocker button is pressed. i Only for "Command on pressing the rocker = Value transmitter 0...100 %"!
Value, right rocker (0...100 %)	0...100	Defines the value when the right rocker button is pressed. i Only for "Command on pressing the rocker = Value transmitter 0...100 %"!

These parameters are only visible for the function "Scene extension"...

Function of status LED	Always OFF	Specifies the control of the status LED.
	Always ON	

Button-press display

Command on pressing rocker	Scene extension without storage function	With a rocker configured as a "Scene extension", there is the option of choosing whether only scenes are loaded or whether a storage function is possible.
	Scene extension with storage function	

Scene number, left rocker (1...64)	1...64	Defines the scene number when the left rocker button is pressed.
Scene number, right rocker (1...64)	1... 2 ...64	Defines the scene number when the right rocker button is pressed.

☐ For rocker 2...n see rocker 1.

5 Appendix

5.1 Index

C

commissioning..... 9, 14

communication objects..... 15

D

Device combination..... 14

Device components..... 5

Device fitting..... 6-7

Dimensions..... 5

E

ETS 9, 14

ETS search paths..... 12

I

inscription panels..... 5

O

Operating areas..... 10

P

product database..... 14

Gira
Giersiepen GmbH & Co. KG
Elektro-Installations-
Systeme

Industriegebiet Mermbach
Dahlienstraße
42477 Radevormwald

Postfach 12 20
42461 Radevormwald

Deutschland

Tel +49(0)21 95 - 602-0
Fax +49(0)21 95 - 602-399

www.gira.de
info@gira.de