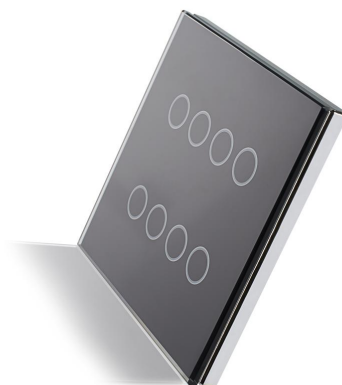


Touch Sensor Glass, single UP 211
 Touch Sensor Glass, double UP 212
 Touch Sensor Glass, quadruple UP 213

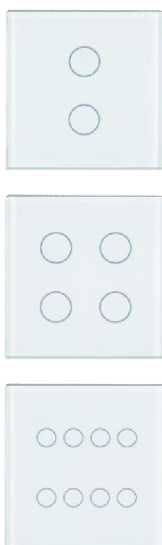
5WG1 211-2DB01
 5WG1 211-8DB_1

5WG1 212-2DB01
 5WG1 212-8DB_1

5WG1 213-2DB01
 5WG1 213-8DB_1



Touch sensors of glass to the display and operation of the room functions.

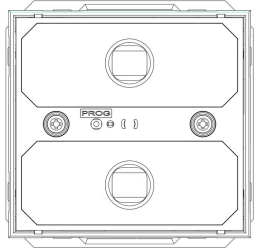
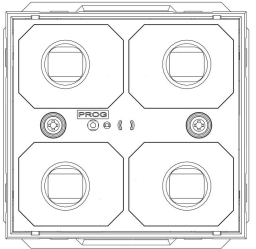
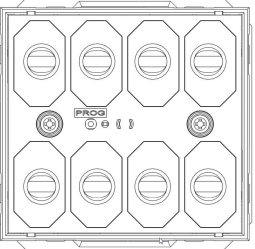


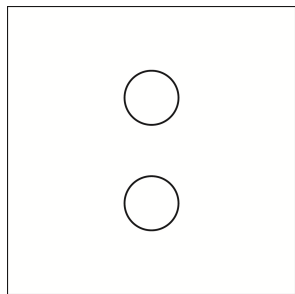
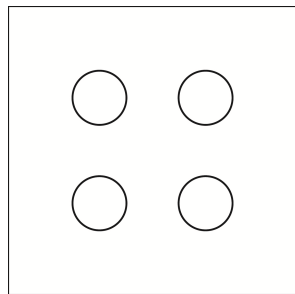
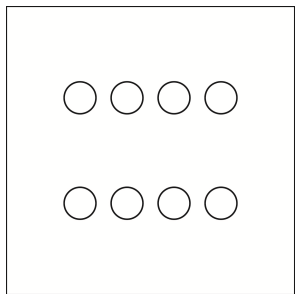
- Touch sensors for sensitive operation
- consisting of touch sensor unit and high-quality glass surface
- based on uniform bus coupling unit (BTM)
- with multicolored and dimmable status RGB-LED per touch button, also be used as orientation lighting
- with proximity sensor for all types of touch sensors for a comfortable operation
- Application programme with the highest functionality for all type of touch sensors

Functions with commission with ETS

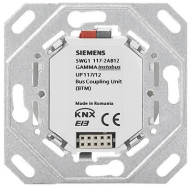
- Touch buttons to use as single touch buttons or touch button pair
- Main functions: switching, door bell function, dimming, control of solar protection, send different values, scene control, forced control
- Additional to the selected main function, further functions can also be run with time delay or alternatively run when the button is held down
- Scene controller with up to eight scene channels




Product	Touch Sensor Unit single	Touch Sensor Unit double	Touch Sensor Unit quadruple
	5WG1 211-2DB01	5WG1 212-2DB01	5WG1 213-2DB01
			

Product	Touch Sensor Cover single	Touch Sensor Cover double	Touch Sensor Cover quadruple
white	5WG1 211-8DB11	5WG1 212-8DB11	5WG1 213-8DB11
black	5WG1 211-8DB21	5WG1 212-8DB21	5WG1 213-8DB21
			

Accessories

Type	Article number	Description
	5WG1 117-2AB12	Bus coupling unit (BTM), UP 117/12

Other flush-mounting actuators are available to the bus coupling with functional actuating modules. These can be ordered separately (see valid catalogue).

Type	Article number	Description
	5WG1 510-2AB03 5WG1 525-2AB03 5WG1 520-2AB03	Binary Output, 10 A, with mounting frame and BTI socket Universal Dimmer, with mounting frame and BTI socket Shutter Actuator, 6A, with mounting frame and BTI socket

Product description

The touch sensors glass offers one, two, or four vertically arranged touch button pairs. They are each surrounded by transparent rings which are backlit by a status RGB LED (RGB = red, green, blue). The backlighting can be set to seven different colors and also be used as orientation lighting.

Each touch sensor consists of a sensor unit and a square sensor cover

The sensor unit includes the electronics with a programming button, a programmer LED and the Bus Transceiver Interface (BTI).

The cover is made of white or black glass. It contains the respective touch areas with the illuminated rings.

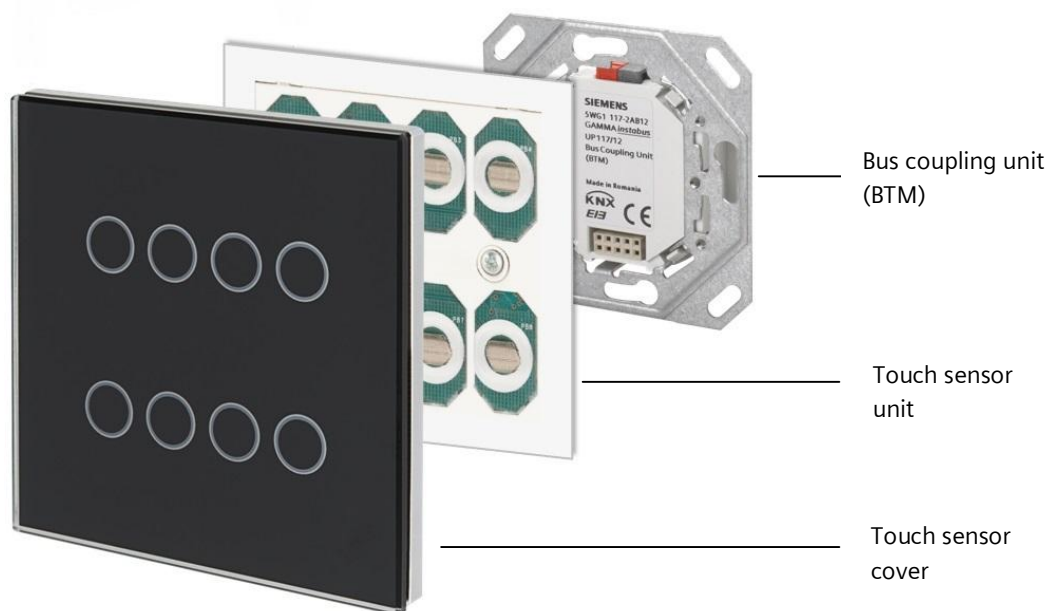
The touch sensors are available in the following designs:

- Touch sensor single: consisting of a single unit and a single cover, each in the color white or black. The cover includes two buttons, types above.
- Touch sensor double: consisting of a double unit and a double cover, each in the color white or black. The cover includes four buttons, see types above.
- Touch sensor quadruple: consisting of a quadruple unit and a quadruple cover, each in the color white or black. The cover includes eight buttons, see types above.

The touch sensors are equipped with a proximity sensor.

The touch sensors are attached to a bus coupling unit (BTM). In this process, the electrical connection between the touch sensor unit and the bus coupling unit (BTM) is made by the Bus Transceiver Interface (BTI).

The touch sensor cover, the touch sensor unit and the bus coupling unit (BTM) UP 117 are each ordered separately (see valid catalog).



Application program

25 CO Sensor Switch 910901

The application program already has been loaded in the factory.

With the ETS (Engineering Tool Software) the specific parameters and addresses are assigned appropriately, and downloaded into the device.

The touch sensors are available in the following models:

- Touch sensor single, with RGB LED per touch button, scene controller and proximity sensor
- Touch sensor double, with RGB LED per touch button, scene controller and proximity sensor
- Touch sensor quadruple, with RGB LED per touch button, scene controller and proximity sensor

Depending on the device type the touch sensors provides two to eight touch areas, vertically arranged as pairs of sensitive areas acting.

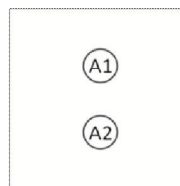
Two touch buttons arranged opposite to each other can be used as a linked touch pair (e.g. for defined switching, dimming and roller blind or venetian blind operation, i.e. the top touch button is used to switch on and the bottom touch button to switch off) or also as single touch buttons for sending values, single touch dimming or single touch solar protection control. Touch areas belonging together are interlocked via software avoiding false operation when pressed simultaneously

The application program is universally applicable to the single, double and quadruple touch sensors glass. The touch sensor type (number of touch area pairs) is selected via parameter. Only those communication objects and parameters are visible for which a pair of touch areas (1, 2 or 4 pairs) is present.

For a unique assignment of communication objects and parameters to the touch areas respectively the pairs of touch areas the touch areas are labeled A1/A2, B1/B2, C1/C2 and D1/D2:

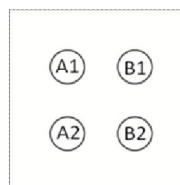
Touch sensor single glass

Touch area top A1
Touch area bottom A2



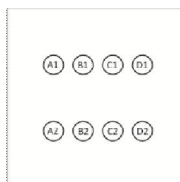
Touch sensor double glass

Touch area left top A1
Touch area left bottom A2
Touch area right top B1
Touch area right bottom B2



Touch sensor quadruple glass

Touch area left top A1
Touch area left bottom A2
T. area middle-left top B1
T. area middle-left bottom B2
T. area middle-right top C1
T. area middle-right bottom C2
Touch area right top D1
Touch area right bottom D2



Touch Buttons

Depending on the design, the touch sensor offers two to eight touch buttons (A1, A2, B1, B2, C1, C2, D1, D2).

Two touch buttons arranged opposite to each other can be used as a linked pair (A, B, C, D) or also as single buttons.

Every single touch button (A1, A2, B1, B2, C1, C2, D1, D2) can then optionally be assigned one of the following functions:

- Switching (On, Off, Toggle)
- Door bell function
- Single button dimming
- Single button control of solar protection (blinds, roller shades)
- 1-bit scene control (call/save scene 1 or 2)
- 8-bit scene/effect control (call, call/save)
- Send value (8-bit value, percentage value)
- Send value (16-bit value, temperature value, brightness value)
- Forced control

Depending on the main function selected, an additional function can also be run with time delay (time delay adjustable from 100 ms to 655 s) or alternatively run when the button is held down.

Touch buttons configured as a touch button pair can be assigned one of the following functions:

- Dual button dimming with stop telegram
- Dual button control of solar protection (blinds, roller shades)
- Send percentage value, variable
- Send 8-bit value, variable
- 1-bit scene control (Call/save scenes 1 and 2)
- 8-bit scene control / effects control (call/save)
- Forced control

Depending on the selected main function, an additional function can also be run with time delay (time delay adjustable from 100 ms to 655 s).

The following are available as additional functions for individual touch buttons or touch button pairs:

- Switching (On)
- Switching (Off)
- Send percentage value
- Send 8-bit value (0...255)
- Send temperature value
- Send brightness value
- Send 16-bit value (0...65535)
- 1-bit scene control: call/save scene 1
- 1-bit scene control: call/save scene 2
- 8-bit scene control: call
- Forced ON
- Forced OFF
- Forced control inactive

Note

The touch sensor calibrates approx. all 40 seconds his capacitive touch buttons of the touch sensor cover anew.

Therefore, long presses of buttons (till approx. 40 seconds), as they are used for the dimming, for the control of solar protection, for save scenes, for the deactivation of forced control or for send variable values (e.g., cyclic sending is stopped), should be avoided possibly. Should this be necessary, nevertheless, the respective function stops after approx. 40 seconds because of the sensor calibration.

The respective function is carried out again by unhand and renewed operating of the touch buttons (e.g., it is sent out further cyclically with variable value setting).

Locking of touch buttons

Operation of each touch button respectively pair of touch buttons can be locked or unlocked via a communication object.

A parameter determines whether the operation of the touch button respectively pair of touch buttons is always unlocked or is locked via the blocking object with a configurable blocking object value of 1 or 0.

There are no special actions associated with this function on bus voltage failure or recovery

Note

With operation of a locked touch button it flashes the relevant LED independent of the configuration of the status LED and the current LED display.

Status LED

Every touch sensor status LED can optionally be switched on or off continuously or as a function of a status object. LEDs which are switched on continuously can also be used as orientation light.

The following alternatives can be selected for the configuration of every status LED:

- LED continuously Off
- LED continuously On
- Binary status object controls LED for binary value On (=1) or Off (=0), optionally in each case
 - on
 - off
 - slow blinking (0,3 Hz)
 - moderate blinking (1 Hz)
 - fast blinking (5 Hz)
- LED indicates activation
- Analog status object (8-bit value [0...255], percentage value, 16-bit value [0...65535], temperature value [0°C...40°C], brightness value [0...2000 lux]) controls LED for up to three value ranges, optionally in each case
 - on
 - off
 - slow blinking (0,3 Hz)
 - moderate blinking (1 Hz)
 - fast blinking (5 Hz)
- LED indicates a touch button being held down

The brightness and color of the Status LEDs can be jointly configured for all cases and also affected by an object (e.g. for nighttime mode). The color of the LED can be also adjusted via an object or one can change the color of the LED via an object. The following LED colors can be selected:

- Blue
- Green
- Cyan
- Red
- Magenta
- Yellow
- White

There are no special actions associated with status LED's on bus voltage failure.

On bus voltage recovery, the current status values for the LED status displays (1 Bit, 8 Bit, 16 Bit) are requested via the bus if this function is configured in the parameter window "General- Timers".

Proximity sensor:

The touch sensors are equipped with a proximity sensor. Their effects can be jointly configured for all of the status LEDs and also influenced by an object. The status LEDs switch to 50 % brightness when a proximity sensor is activated and an approach occurs. Status LEDs already active are switched to 100 % brightness when an approach is detected, regardless of the set dimming value. An approach will be detected within a distance of 2-3 cm to the sensor.

LED Alarm annunciation:

To signal certain states or alarm announcements, all status LEDs together can be set flashed about an object.

Scene control module

A scene is defined as a set of predefined switching states and values that are sent to various actuators upon a scene control event e.g. pressing a touch button to set the lights and the venetian blinds in a presentation room to the preset settings for a presentation.

The application program defines eight scene channels (A to H) that each can be assigned to up to eight 8-bit scene numbers. Each scene number defines a separate state.

The scene control module allows including actuators that do not support 8-bit scene control into an 8-bit scene.

For scene channels that are enabled an associated parameter window and corresponding communication objects are displayed. For each channel one of these functions can be selected:

- Switching
- Venetian blind
- Forced control
- 8-bit value
- 16-bit value

Each channel can be assigned to up to eight different scene numbers (1...64).

The scenes for all scene channels are mutually recalled and saved via the 8-bit scene object.

Before saving a scene the actuators belonging to that scene must be set to the desired light levels and switching states. When receiving a save telegram scene controllers or actuators with 8-bit scene function are commanded to interrogate the current light levels and switching states of the actuators and save these as scene settings.

Saved scene values are only deleted by a new configuration of the device if the parameter "Delete scene memory after bus voltage recovery" is set to "Yes". When this parameter is set to "No", the saved values are retained even after a restart of the device (e.g. after bus voltage recovery) and when the device configuration is downloaded again.

Reading the states of the actuators that are part of a scene is executed via the group addresses that are assigned to the objects (e.g. "scene channel A save").

To enable the scene control module to read a status via a read request, the group address used must be configured as "sending address" in the switching, value or status object of an actuator and the read flag of the object must be set.

Scenes are recalled and saved via 8-bit scene telegrams. Bits 0 through 5 of the 8-bit scene object contain the scene number (1...64). The most significant bit 7 determines if a scene is recalled (bit value = 0) or saved (bit value = 1). Bit 6 is not used.

Note

A scene setting can be recalled for the first time about 2 seconds after the 8-bit scene save command.

Note

If several scene save commands are triggered after each other the scene save commands are executed in the sequence of reception.

Building site function

The building site function enables switching the building site lighting on and off via bus touch sensor and actuators, even if these devices have not yet been commissioned with ETS.

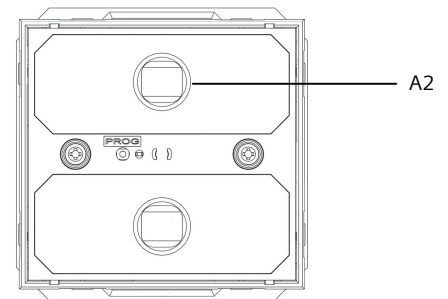
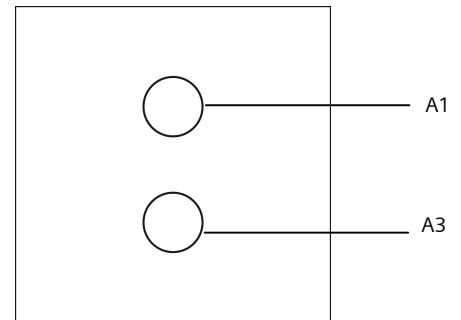
All touch button pairs are preconfigured with the building site function for switching (top On, bottom Off).

Additional information like Desigo system description, product catalog for Room automation etc. is available here:

www.siemens.com/bt/en/desigo-tra

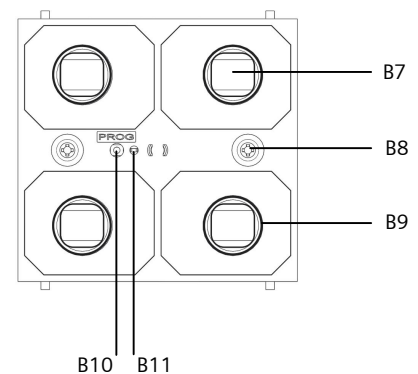
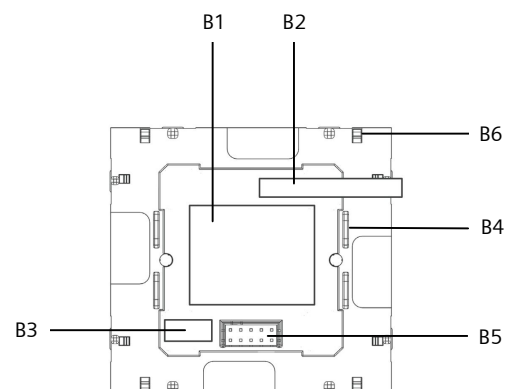
Location and Function of the Display and Operating Elements

- A1 Top control panel (Sensor cover)
- A2 LEDs for the status display and for orientation lighting (Sensor unit)
- A3 Bottom control panel (Sensor cover)



Design Sensor Unit

- B1 Device label for sensor unit
- B2 Label for KNX serial number
- B3 Data code label
- B4 Sensor unit guide fins
- B5 Bus Transceiver Interface (BTI)
- B6 Supporting points
- B7 Gaskets
- B8 Holes for mounting bolts
- B9 LED lighting
- B10 Programming button
- B11 LED for displaying normal mode or addressing mode




Additional information like operating and mounting instruction, application program description, Product database, additional software, product image, CE declaration etc. is available here:

<http://www.siemens.com/gamma-td>

Notes

Safety

	DANGER
	<ul style="list-style-type: none"> • The device must be mounted and commissioned by an authorized electrician. • The applicable safety and accident prevention regulations must be complied with. • The device must not be opened. • The relevant guidelines, regulations and standards of the respective country must be considered when planning and constructing electrical installations.

Mounting

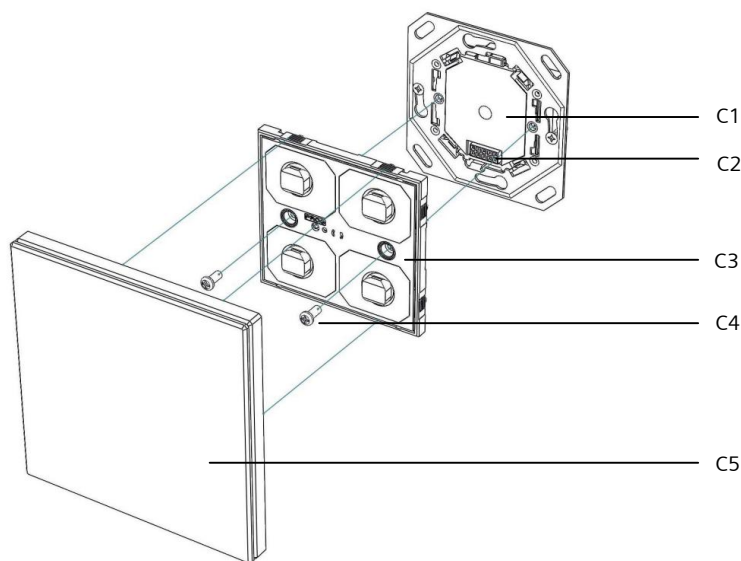
General description

The bus coupling unit (BTM) UP 117 (C1) is connected and attached in the UP socket (see Bus Coupling Unit Assembly Manual (BTM) UP 117).

The sensor unit guide fins (B4) are used to position and screw the sensor unit (C3) onto the bus coupling unit (BTM) (C1).

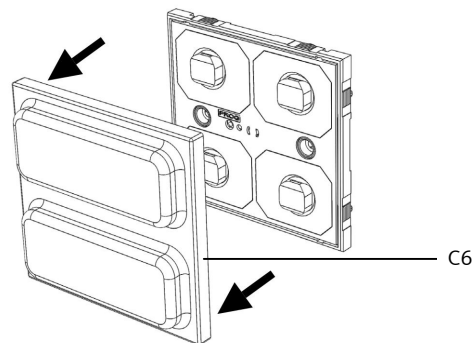
The cover is placed on the sensor unit and latched in accordance with the corresponding orientation.

The bus coupling unit (BTM), sensor unit and sensor cover must be ordered separately (see valid catalog). They each have their own order numbers.

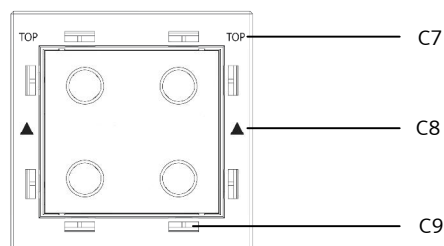


Mounting

- Remove the transparent protective cover (C6) from the sensor unit (C3). This serves to protect the gas-gaskets (B7).

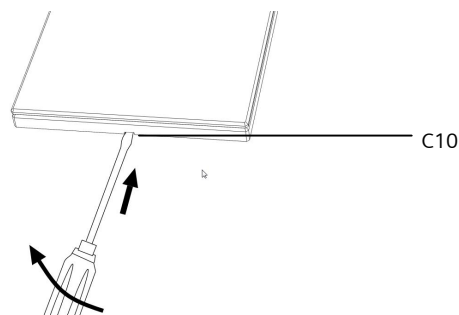


- Use the sensor unit guide fins (B4) to position the sensor unit (C3) on the bus coupling unit (BTM) (C1). In this process, the electrical connection is established between the sensor unit and the bus coupling unit by the Bus Transceiver Interface (BTI) (B5 and C2).
- To prevent theft and for fastening, use the two pre-assembled screws (C4) included in the delivery to fasten the sensor unit to the bus coupling unit (BTM). They must be tightly screwed on.
- Please ensure that the sensor unit (C3) is placed with each supporting point (B6) flatly on all four sides of the bus coupling unit's (C1) mounting plate.
- The "TOP" marking (C7) can be seen in the left and right top corners on the rear side of the cover (C5) and the correct orientation can be recognized by the arrows (C8) on the left and right sides. Place the cover (C5) flat on the sensor unit (C3) with the top edge facing upwards and latch it completely in the snap closures (C9) on all four sides.



Unmounting

- Remove the cover (C5) from the sensor unit (C3). A slot for this purpose is located on the bottom of the cover in the chromed border (C10). Insert a screwdriver into this slot to lift the cover (C5).



- Loosen the two screws (C4) which are used to attach the sensor unit (C3) to the bus coupling unit (BTM) (C1) for theft protection.
- Use its sensor unit guide fins (B4) to pull the sensor unit (C3) out of the bus coupling unit (BTM) (C1).

Address assignment

- Remove the cover (C5) from the sensor unit (C3) by lifting it by the screwdriver slot on the bottom.
- Press the programming button (B10) on the device to assign the physical address.
- The programming LED (B11) lights up and then goes out again after the physical address has been accepted.

Programming mode

Tapping the programming button (< 2 s) activates the programming mode. This is displayed by continuous flashing of the programming LED. Pressing the button again deactivates the programming mode.

Factory settings

Pressing and holding down the programming button for a prolonged time period (> 20 s) restores the device to its factory settings. This is displayed by uniform blinking of the programming LED for a period of 8 s.

Special mode

The connection test for commissioning with Desigo is selected by pressing and holding down the programming button (> 5 s and < 20 s). This mode can be ended by pressing the button briefly.

Behavior after programming

The behavior of the device after programming with the ETS is dependent on the configuration. Features, parameters and objects are described in the device's Application Program Description (APB)

Building site function

The building site function enables switching the building site lighting on and off via bus wall switches and actuators, even if these devices have not yet been commissioned with ETS.

All touch button pairs are preconfigured with the building site function for switching (top On, bottom Off).

Technical Specifications

Power supply	
KNX bus voltage	via bus coupling unit (BTM) UP 117
KNX bus current, single Touch Sensor	max. 15 mA
KNX bus current, double Touch Sensor	max. 20 mA
KNX bus current, quadruple Touch Sensor	max. 25 mA

Control elements	
Single, double or quadruple pairs of touch button	for sensitive operation of the room functions
1 learning button (programming button)	for toggling between normal mode / addressing mode, for reset the device to the default factory settings and to activate manufacturer specific functions

Display elements	
RGB LED per touch button	Zur Anzeige von Status, zur Orientierungsbeleuchtung, zur Alarmsignalisierung
1 red LED	For monitoring bus voltage and for displaying normal mode/ addressing mode. This LED indicated also the reset to the default factory settings and further activated manufacturer specific functions

Connections	
10-pin connector (BTI)	for connection to a bus coupling unit (BTM) UP 117

Physical specifications	
material touch sensor unit	plastic
material touch sensor cover	glass with chrome ring on plastic medium
dimensions (L x W x H)	95 x 95 x 22,2 mm (including the four guide fins)
weight touch sensor unit	35 g
weight glass sensor cover	105 g
fire load touch sensor unit	approx. 1 MJ ± 10%
fire load touch sensor cover	approx. 1 MJ ± 10%

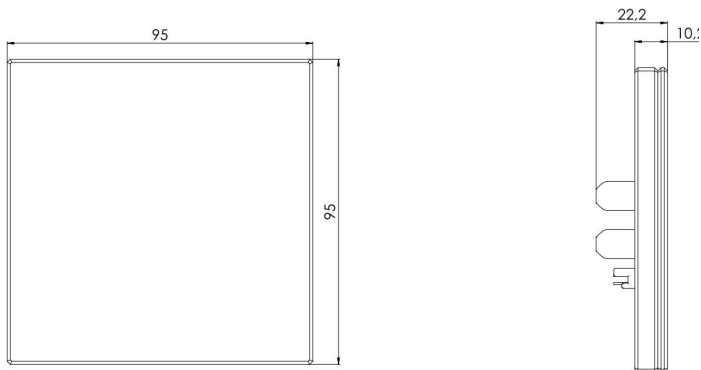
Electrical safety	
Degree of pollution (according to IEC 60664-1)	2
Protection type (according to EN 60529)	IP 20
Protection class (according to IEC 61140)	III
Overvoltage category (according to IEC 60664-1)	III
Bus	Safety extra low voltage SELV DC 24 V
Device complies with	EN 50090-2-2 und IEC 60664-1

Environmental specifications	
Climatic conditions	EN 50491-2
Ambient temperature in operation	- 5 ... + 45 °C
Storage temperature	- 25 ... + 70 °C
Relative humidity (non-condensing)	5 % to 93 %

Reliability	
Failure rate touch sensor glass, single	183 fit at 40 °C
Failure rate touch sensor glass, double	193 fit at 40 °C
Failure rate touch sensor glass, quadruple	212 fit at 40 °C

Dimension drawing

Dimensions in mm



Support

General notes

- The operating instructions must be handed over to the client.
- Any faulty device is to be sent together with a return delivery note of the local Siemens office.
- If you have further questions concerning the product please contact our technical support.

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☎ +49 (911) 895-7223

✉ support.automation@siemens.com

www.siemens.de/automation/support-request
