Transmitter battery wave UP 110 **5WG3 110-2AB01**

Product- and Application Description

The transmitter battery wave UP 110 is a radio transmitter for the wireless operation of room functions and is designed for insertion within flush-mounted box mounts. A single or double *instabus* push button (to be ordered separately), which is connected to the insert via a 10-pin plug-in connector, acts as a user interface. Via the push button rockers, it is possible to operate universal dimmer inserts sys or shutter control inserts sys, which are equipped with push buttons wave, via remote control according to the intended application. The transmitter is powered by a lithium battery (1/2 AA 3.6V).
The commissioning of the transmitter battery wave is carried out without any additional means via the four DIP switches located at the front (Easy mode Push Button: EP).
There are two different operation modes for the transmitter battery wave:

Normal function
- Switching of switch inserts connected via radio control
- Switching and dimming of dimmer inserts connected via radio control
- Operating shutter control inserts connected via radio control
- Retrieving scenes
- Saving scenes

Special function
- Establishing connections with other radio control components
- Deleting connections with other radio control components

Operation

The single or double *instabus* push button placed on the transmitter battery wave can be operated at the TOP or BOTTOM. The exact operational functionality depends on the devices connected via radio control: switching, dimming, shutter control or scene function.

Switching (Actions shorter than 0.4s):
TOP: ON (in connection with a dimmer, switching on with saved memory value)
BOTTOM: OFF

Dimming (Actions longer than 0.4s):
TOP: Dimming BRIGHTER up to max. light intensity
BOTTOM: Dimming DARKER down to min. light Intensity

Shutter STEP command (Actions shorter than 0.4s):
TOP: STOP/louvres OPEN
BOTTOM: STOP/louvres CLOSED

Shutter UP/DOWN comm. (Actions longer than 0.4s):
TOP: UP command
BOTTOM: DOWN command

Scene function:
Preselected states for the lighting (ON or OFF or any brightness value) and the shutters (UP or DOWN) can be saved in a scene and reset via a push button action. Up to four scenes can be saved and retrieved with the transmitter battery wave. If a single *instabus* push button is used, scenes 1 and 2 are operated via the rocker. If a double *instabus* push button is used, scenes 1 and 2 are operated via the left rocker and scenes 3 and 4 are operated via the right rocker.

Before saving a scene, each switch, dimmer and shutter control insert (actuator) that is linked to this scene function must be set to the required state:

- Switch: ON or OFF
- Dimmer: Desired light intensity value
- Shutter: TOP or BOTTOM

When saving a scene, each connected actuator saves the current state under the activated scene number.

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Saving scene functions (Actions longer than 3s):
TOP: Saves scene 1 (or scene 3 when operating the right rocker of the double push button)
BOTTOM: Saves scene 2 (or scene 4 when operating the right rocker of the double push button)

When retrieving a scene, each connected actuator is set to the state that has been stored under this scene number.

Retrieving scene functions (Actions shorter than 0.4s):
TOP: Retrieves scene 1 (or scene 3 when operating the right rocker of the double push button)
BOTTOM: Retrieves scene 2 (or scene 4 when operating the right rocker of the double push button)

Technical Specifications

Frequency band
868 MHz (transmission is not susceptible to interference; frequency band reserved for system and security applications)

Range of radio control
approx. 100 m (applying to free field applications)

Power supply
via a lithium battery (1/2 AA 3.6V). The lifetime of the battery is approx. 5 years depending on the operating conditions. The LED on the *instabus* push button flashes slowly to indicate when the battery is low.

Connections
10 pins for connection of the single or double *instabus* push button which must be plugged onto the PEI.

Mechanical specifications
- Housing: plastic
- Dimensions:
  - Spacer units: 71 x 71 mm
  - Mounting depth: 24 mm
- Weight: approx. 55g (including mounting hanger)
- Fire load: approx. 500kJ ± 10 %
- Mounting: inserted in box mounts ∅ 60 mm, depth 40 mm.

Electrical safety
- Pollution degree (according to IEC 60664-1): 2
- Protection (according to EN 60529): IP 20
- Overvoltage category (according to IEC 60664-1): III
- Device complies with EN 60669-2-1 and IEC 60664-1

Electromagnetic compatibility
complies with EN 60669-2-1, EN 301489, EN 300220

Environmental specifications
- Climatic conditions: EN 50090-2-2
- Ambient operating temperature: - 5 ... + 45°C
- Storage temperature: - 25 ... + 70°C
- Relative humidity (non-condensing): 5% to 93%

Certification
VDE certificate in preparation, complies with KNX - standard
radio frequency rf
easy mode push button EP

CE norm
complies with the EMC regulations (residential buildings), low voltage regulations and R&TTE regulations:

CE

The CE declaration can be inspected at:
SIEMENS AG
Siemensstraße 10
93055 Regensburg

Installation Instructions

Caution:
- The device may be used for interior installations and in dry rooms only.
- The installation of the device into metal walls has to be avoided since through this the range of radio control is reduced considerably.
- Occasionally the transmission range may be influenced by structural conditions (e.g. reinforced concrete) or electric / electronic sources of interference.
- A minimum distance of 0.5 m must be maintained between the transmitter and the relevant receivers.
- Though the radio transmission is carried out in the safe 868 MHz range, disruptions to the radio transmission cannot be excluded.
- The radio transmission is not suitable for security applications.

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⚠ WARNING

- The device must be mounted and commissioned by an authorised electrician.
- The device must not be opened.
- The device may be mounted in switch and socket combination box mounts provided that only VDE-certified devices are used.
- The prevailing safety and accident regulations must be observed.

Mounting

The transmitter battery wave is attached to box mounts, Ø 60 mm and 40 mm depth, with screw or claw fixing. The insulating strip in the battery compartment must be removed. When replacing the battery, the correct polarity has to be ensured. The exhausted battery has to be disposed of in accordance with the regulations. The user interface (single or double *instabus* push button) is placed on the transmitter battery wave with guide and mounting clamps.

Mounting the transmitter battery wave UP 110:

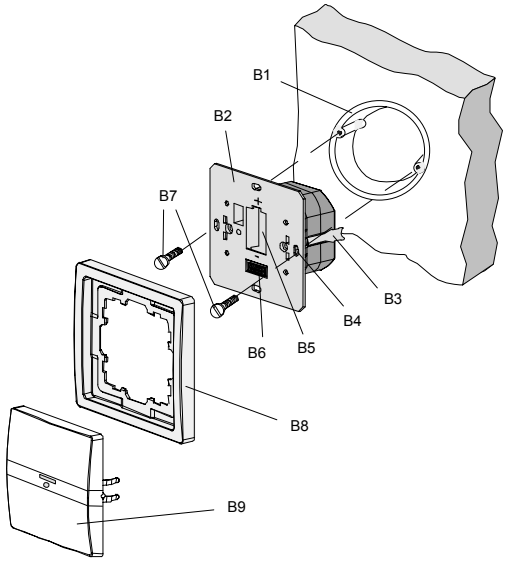


Diagram B

B1 Installation box (60 mm Ø, according to DIN 49073-1)
B2 Transmitter battery wave UP 110
B3 Mounting claws
B4 Mounting slots
B5 Battery compartment
B6 10-pole socket connector
B7 Mounting screws
B8 Frame
B9 *instabus* push button

Location and Function of the Display and Operating Elements

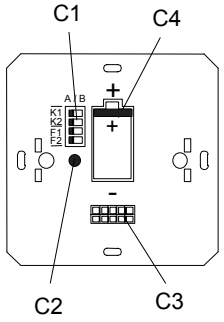
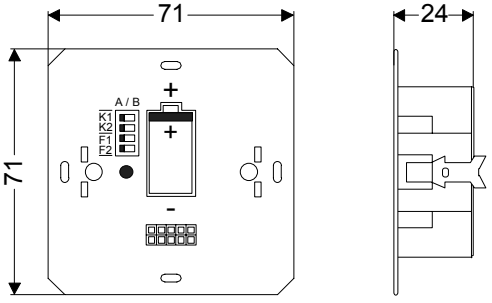


Diagram C

C1 DIP switches for selecting the function and connecting the transmitter via radio control
C2 LED for displaying the operating state while the connections to other radio control components are established
C3 Physical external interface (PEI) for connecting a single or double *instabus* push button
C4 Battery

Dimension Diagram

Dimensions in mm



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Commissioning

The commissioning of the transmitter battery wave is carried out without the *instabus* push button via the 4 DIP switches located at the front and is indicated via flashing LEDs located below the DIP switches. The switches K1 and K2 are used for the assignment of the channels to the applied rocker. If a double *instabus* push button is used, DIP switch K1 is required for commissioning the left rocker while DIP switch K2 is required for commissioning the right rocker. If a single *instabus* push button is implemented, DIP switch K1 must be used for commissioning the device. The DIP switches F1 and F2 can be used for setting the available functions of switching, switching / dimming, shutter or scene function.

Switch positions for the function (Diagram D):

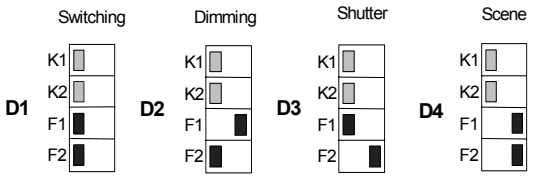

Diagram D

D1 Switching (switch function only)
D2 Dimming (switching and dimming)
D3 Shutter (shutter function)
D4 Scene (scene function)

Note: To commission the transmitter battery wave, the insulating strip in the battery compartment must be removed.

Connection via radio control:

Connecting the transmitter battery wave to a dimmer insert sys with a push button wave UP 210 via radio control (Diagram E).

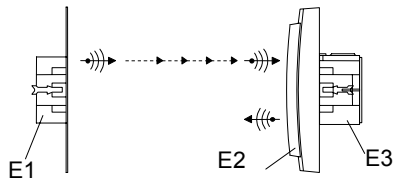

Diagram E

E1 Transmitter battery wave UP 110
E2 Push button wave UP 210
E3 Dimmer insert sys

1. Push button wave: Switch to the special function (Diagram F).

Action: Press the push button rocker in the CENTRE for at least 10 seconds.

Display: The LED of the push button begins to flash slowly (approx. once per second) after 10 seconds (switches to the special function).

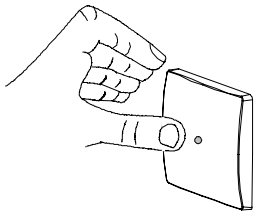

Diagram F

2. Transmitter: Select the dimming function via DIP switches F1 and F2 (G1 in Diagram G).

Action: Slide DIP switch F1 to position B and DIP switch F2 to position A.

3. Transmitter: Trigger linking telegram via DIP switch K1 (G2 in Diagram G).

Action: Slide DIP switch K1 to position B. The transmitter sends a linking telegram.

Display: After 3 seconds, the LED of the transmitter begins to flash quickly (approx. 3 times per second) once K1 has been toggled and then 3 times slowly (approx. once per second).
The LED of the push button wave also flashes quickly for approx. 3 seconds (approx. 3 times per second). The LED is then extinguished and the push button exits the special function.

4. Transmitter: Reset the DIP switches (G3 in Diagram G).

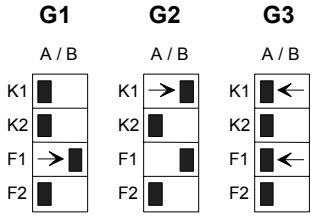

Diagram G

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Note: There is only a limited period available for the connection as the push button wave exits the special function after 2 minutes.

If the DIP switches are not reset to position A after the connection, this is indicated by the LED on the *instabus* push button by flashing quickly and continuously.

The connection of channel 1 (single push button or left rocker if a double push button is used] of the transmitter battery wave to the dimmer is complete.

If the connection has failed (e.g. if the distance is too great), the push button wave exits the special function after approx. 2 minutes, without confirming the success of the connection by flashing rapidly.

This procedure must be repeated if transmitter battery wave is to be connected with other dimmer inserts sys.

If the use of a double push button is planned and the connection with another radio control component is required, this procedure must be repeated, whereby the transmission of the linking telegram is triggered by toggling DIP switch K2 (Diagram H).

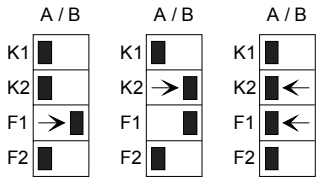

Diagram H

If a channel of the transmitter is linked with several inserts with various functions (dimming and shutter), the last set function remains active.

Note: Switch and dimmer inserts can be controlled together in groups. The common operation of dimming and shutter functions is possible via scenes.

Connecting a scene function via radio control:

Connecting a transmitter battery wave with 4 scenes when using a double *instabus* push button.

1. First push button wave: Switch to the special function.
2. Transmitter: Select the scene function via DIP switch F1 and F2.
3. Transmitter: Trigger linking telegram via DIP switch K1 (for the left rocker; Scene 1 and 2).
4. Transmitter: Switch DIP switch K1 back to position A.
5. First push button wave: Switch to the special function again.
6. Transmitter: Trigger linking telegram via DIP switch K2 (for the right rocker; Scene 3 and 4).

Repeat steps 1 to 6 for each further push button wave or push button wave shutter that is involved in scene function.

7. Transmitter: Switch all DIP switches back to position A.

An unlimited number of switch inserts sys, dimmer inserts sys or shutter control inserts sys can be operated remotely by a transmitter battery wave (Diagram I).

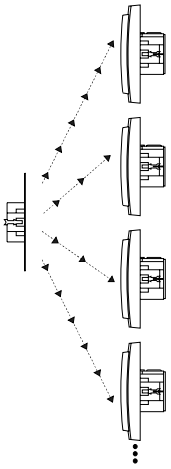

Diagram I

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Procedure for deleting a connection:

Single connections can be deleted by assigning the new correlation.

Deletion of the connection between the transmitter battery wave and the dimmer insert sys (Diagram E).

1. Push button wave: Switch to the special function.

2. Transmitter: Select the dimming function via DIP switches F1 and F2.

3. Transmitter: Trigger a linking telegram via DIP switch K1.

4. Transmitter: Switch all DIP switches back to position A.

The connection between the transmitter battery wave and the dimmer is thereby deleted.

Resetting the device to the supplied state:

1. Switch the DIP switches F1 and F2 from position A to position B (J1 in Diagram J).

2. Switch the DIP switches K1 and K2 from position A to position B (J2 in Diagram J).

The LED of the transmitter flashes quickly for approx. 3 seconds once all the DIP switches have been toggled. The LED then begins to flash slowly, whereby the flashing rate increases and the LED is extinguished after approx. 10 seconds.

3. The DIP switches must be switched back to position A (J3 in Diagram J). The device is in the supplied state.

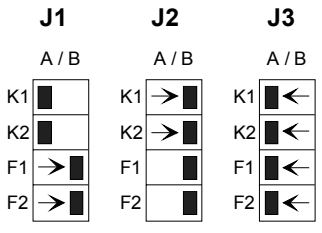

Diagram J

General Notes

- The operating instructions must be handed over to the client.
- Any faulty devices should be returned to the local Siemens office.
- If you have further questions concerning the product please contact our technical support:

☎ +49 (0) 180 50 50-222
🖷 +49 (0) 180 50 50-223
✉ adsupport@siemens.com
❒ www.siemens.de/automation/support-request