

Operating instructions

1 Battery safety instructions

This device or its accessories are supplied with batteries in the form of button cells.

DANGER! Batteries can be swallowed. This can lead directly to death by suffocation. Dangerous substances may cause severe internal burns leading to death within 2 hours.

Keep new and used batteries away from children.

Do not use devices if the battery compartment does not close securely and keep away from children.

If you suspect that a battery has been swallowed or is in any orifice of the body, seek immediate medical attention.

WARNING! Improper handling of batteries can result in explosion, fire or chemical burn due to leakage.

Do not heat or throw batteries into fire.

Do not reverse polarity, short-circuit or recharge batteries.

Do not deform or disassemble batteries.

Replace batteries only with an identical or equivalent type.

Remove empty batteries immediately and dispose of in an environmentally friendly manner.

These instructions are an integral part of the product, and must remain with the end customer.

Device components

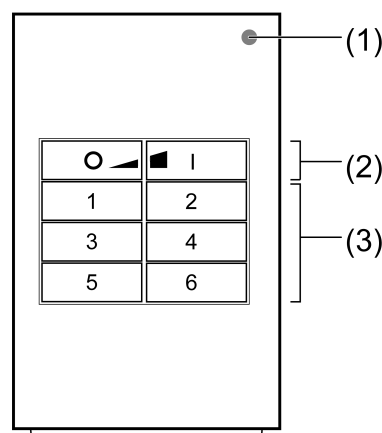


Figure 1

- (1) LED
The LED lights up green as long as the button is pressed.
When the "Individually set lights" or "Service functions" functions are active, the LED lights up in red.
During commissioning the LED indicates the functional state, see chapter 4.
- (2) Buttons for switching/dimming
- (3) Scene buttons/functional buttons

Intended use

- ZigBee Light Link transmitter for operation of participants conforming with ZigBee Light Link, e.g. lamps, luminaires, light bands, ballast units, adapters
- The transmitter can cooperate with ZigBee Light Link devices or systems of other manufacturers, e.g. Philips Hue.

i Hereinafter, the participants will be called luminaires.

ZigBee radio hand-held transmitter 4-gang

Product characteristics

- Supports the adjustment of: brightness, colour temperature, light colour and colour saturation
- Corresponds with the ZigBee Light Link specification
- Saving and recalling of up to 6 scenes
- Status indication with LED
- Battery-powered device
- Software update using separate additional device via radio possible

Insert battery

- i** Obey the battery safety instructions.
- Unscrew the battery compartment on the back of the hand-held transmitter.
 - Keep contacts of batteries and device free of grease.
 - Apply battery to the positive contact of the battery holder. Observe polarity: the positive pole of the battery must be at the top.
 - Press gently on battery to snap it in.
 - Close and screw the battery compartment.
- Hand-held transmitter is ready for operation.

2 Basic functions

2.1 Switching or dimming luminaires

- i** All luminaires connected to the transmitter will be collectively switched or dimmed.

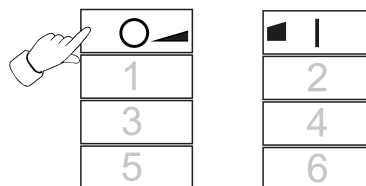






Figure 2

- Switch: Short press on  or  button.
- Dim: Long press on  the or  button. The dimming process ends when the button is released.

2.2 Recalling scenes

Scenes help you to save individual settings of one or more persons and to recall them with a single press of a button.

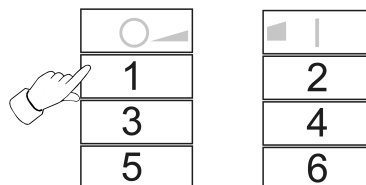




Figure 3

- Press the corresponding scene button  briefly until . The luminaires that belong to that scene will switch to the saved values.

2.3 Saving scenes

- i** If the scene shall be recalled from several transmitters, it must be saved at each transmitter separately.
- Luminaires that shall not be part of the scene must be disconnected prior to saving.
- Set the luminaires to the desired values, see chapter 3.

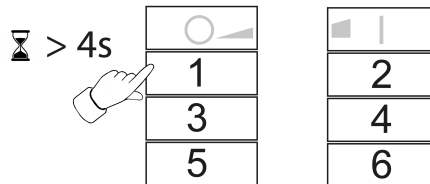


Figure 4

- Press the corresponding scene button to for longer than 4 seconds. LED lights up in green for 3 seconds. The scene has been saved on the selected button.

3 Setting luminaires individually

3.1 Selecting a luminaire

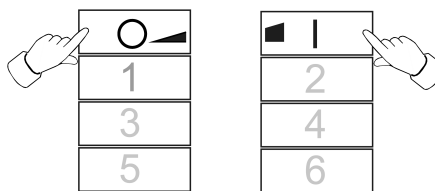


Figure 5

- Simultaneously press the and buttons shortly. LED lights up red. All luminaires that are connected to the transmitter are selected. The luminaires acknowledge this by e.g. short flashing.
- i** If only a single luminaire shall be set, press the and buttons simultaneously until the respective luminaire is selected. When the last luminaire connected to the transmitter has been selected, all luminaires connected to the transmitter will be selected upon the next press.
- Switch on the luminaire by shortly pressing the button.
- Set the luminaire. The available settings depend on the luminaire used.

Luminaire selection ⚙️	<input type="button" value="O"/> and <input type="button" value="I"/>
Switching and brightness ⚙️	<input type="button" value="O"/> or <input type="button" value="I"/>
Light colour 🌈	<input type="button" value="1"/> or <input type="button" value="2"/>
Colour saturation 💧	<input type="button" value="3"/> or <input type="button" value="4"/>
Colour temperature 🌡️	<input type="button" value="5"/> or <input type="button" value="6"/>

- Wait for approx. 6 seconds until the transmitter switches back the basic functions.
- As an option, save the settings as a scene, see chapter 2.3.

ZigBee radio hand-held transmitter 4-gang

3.2 Switching or dimming luminaires individually

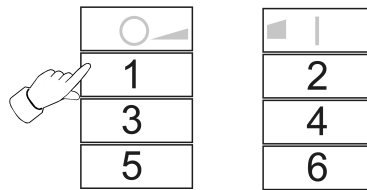


Figure 6

- Select a luminaire, see chapter 3.1.
- Switch: Short press on or button.
- Dim: Long press on the or button. The dimming process ends when the button is released.

3.3 Setting the light colour

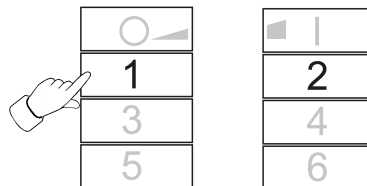


Figure 7

- Select a luminaire, see chapter 3.1.
- Setting a predefined colour: press the or button shortly until the desired light colour is set.
- Setting an individual light colour: press the or button until the desired light colour is set.
Depending on the current light colour, the colour changes towards the next predefined colour.

3.4 Setting the colour saturation

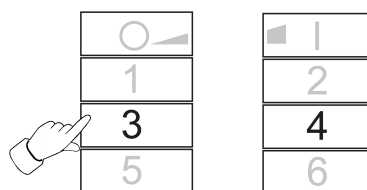


Figure 8

- Select a luminaire, see chapter 3.1.
- Setting white: shortly press .
- Setting the maximum colour saturation: shortly press .
- Setting individual colour saturations: press the or button until the desired colour saturation is set.

3.5 Setting the colour temperature 🌡️

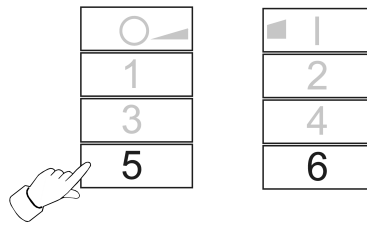


Figure 9

- Select a luminaire, see chapter 3.1.
- Setting warm white: shortly press the button.
The colour temperature is set to approx. 2700 K, which is typical for light bulbs.
- Setting cold white: shortly press the button.
The colour temperature is set to approx. 4500 K, which is typical for fluorescent lamps.
- Setting individual colour temperatures: hold the or button until the desired colour temperature is set.
The colour temperature increases or decreases to the respective final value that the luminaire supports.

4 Commissioning

4.1 Basic commissioning procedure

Precondition 1:

During commissioning, the respective devices must have a distance of 10 to 50 cm to each other.

Precondition 2:

Each device can only be part of one network.

The luminaire shall be operated using a Philips Hue Bridge and transmitters.

- Commission the luminaire with a bridge.
- Add the transmitter to the network of the bridge.
- i** If the transmitter already had belonged to a network, reset the transmitter, see chapter 4.7.
- i** The procedure depends on the app used and may deviate from the procedure described herein. Up-to-date information can be found on our website.
- Start the Philips Hue app
- Select "Settings"
- Select "Lamp settings".
- Press "+"
- Press "Search"
- On the transmitter, press the and buttons simultaneously until the LED flashes in green.
- i** After approx. 10 seconds the transmitter searches for an open network.
LED lights up in green for 3 seconds. The transmitter has joined the network of the bridge.
LED flashes rapidly in red for 10 seconds. The transmitter has not joined the network.
- i** The Phillips Hue Bridge app does not display transmitters of other manufacturers.
- Connect the luminaire to a transmitter, see chapter 4.2.

ZigBee radio hand-held transmitter 4-gang

The luminaire shall exclusively be operated using a transmitter without connection to a Philips Hue Bridge

The luminaire has default settings.

- Connect the luminaire to a transmitter, see chapter 4.2.

or the luminaire belongs to another network.

- Reset luminaire, see chapter 4.5.
- Connect the luminaire to a transmitter, see chapter 4.2.

i For another luminaire repeat the corresponding actions.

The luminaire shall be operated with several transmitters without a connection to a Philips Hue Bridge

Precondition:

The lamp is already connected to a transmitter, see chapter 4.2.

- Add a new transmitter to the network, see chapter 4.3.
- Connect the luminaire to the new transmitter, see chapter 4.2.

4.2 Connecting a luminaire to a transmitter

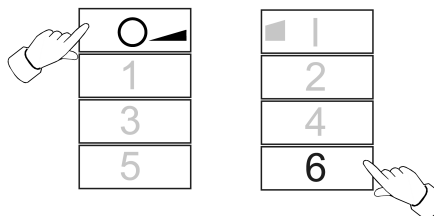


Figure 10

- Press the **○** and **6** buttons simultaneously until the LED flashes in green. The luminaire flashes briefly. Connection in process.

LED on the transmitter turns green. Luminaire turns green or flashes twice. Connection has been set up successfully.

LED on the transmitter flashes quickly in red for 3 seconds. Could not set up connection.

i In case of error, the distance between the devices is too big or the luminaire already belongs to an existing network, see chapter 4.5. Alternatively, all memory locations in the transmitter are occupied. In this case, delete all connections to luminaires that are no needed, see chapter 4.6.

4.3 Adding the transmitter to an existing network

i If the transmitter already had belonged to a network, reset the transmitter, see chapter 4.7.

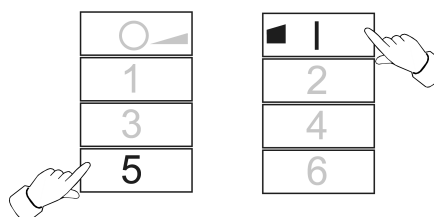



Figure 11

Precondition:

At least one luminaire must be switched on.

ZigBee radio hand-held transmitter 4-gang

- Press **5** and  buttons on the new transmitter simultaneously until the LED flashes green.
The new transmitter is in programming mode.
- Within 10 seconds, start a connection process on a transmitter from the existing network (see chapter 4.2 or the manual of the respective transmitter).
- i** After 10 seconds, if no connection process is started, the transmitter will search an open network in order to join it.
LED lights up in green for 3 seconds. Transmitter has been added to a network.
LED flashes rapidly in red for 10 seconds. Transmitter has not been added to a network.

4.4 Cloning the transmitter

All connections of a transmitter will be transferred to another transmitter. This function can only be used with our transmitters.

- Add a new transmitter to the network, see chapter 4.3.

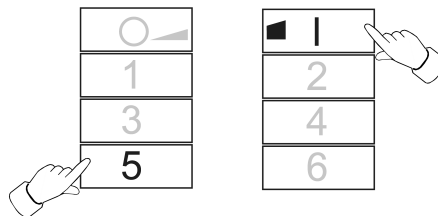



Figure 12

Precondition:

At least one luminaire must be switched on.

- Press **5** and  buttons on the new transmitter simultaneously until the LED flashes green.
The new transmitter is in programming mode.
- Within 10 seconds, start a connection process on the transmitter to be cloned, see chapter 4.2.
LED lights up in green for 3 seconds. The new transmitter has accepted the connection.
LED flashes rapidly in red for 10 seconds. The new transmitter has not accepted a connection.

4.5 Resetting a luminaire

All connections of the luminaire will be disconnected and the allocation to a network will be deleted.

- i** If several luminaires are mounted near to each other, it might be necessary to disconnect those luminaires from the mains that are not supposed to be reset.

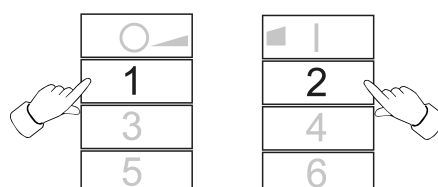


Figure 13

- Keep the **1** and **2** buttons pressed until the LED flashes in green.
The luminaire flashes. Resetting in process.

ZigBee radio hand-held transmitter 4-gang

LED lights up in green, luminaire lights up. Resetting successful.
 LED flashes rapidly in red for 3 seconds. Participant could not be reset.

4.6 Deleting connections from the transmitter to the luminaires

i The transmitter can save a maximum of 10 connections to luminaires. If the memory is full, a connection needs to be deleted first in order to be able to save a new connection.

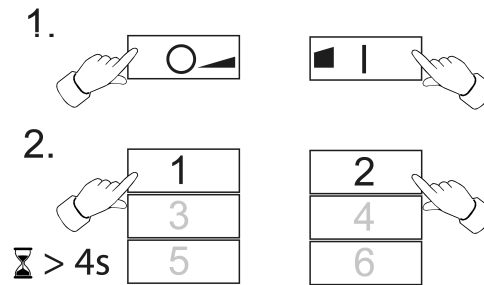


Figure 14

- Press and buttons simultaneously and briefly until the connection to be deleted is selected.
LED lights up red. All connections to luminaires are selected.
- Press the and buttons simultaneously and briefly until the connection to be deleted is selected.
The corresponding luminaire flashes.
- i** If the corresponding luminaire is defective or does not exist any more, press the or buttons simultaneously until to luminaire flashes after pressing. The transmitter will indicate this by an LED flashing in red.
- Press the and buttons simultaneously for longer than 4 seconds.
LED lights up in green for 3 seconds. The connection has been deleted from the transmitter.

4.7 Resetting the transmitter to the default setting

i All connections to luminaires will be disconnected and the allocation to a network will be deleted.

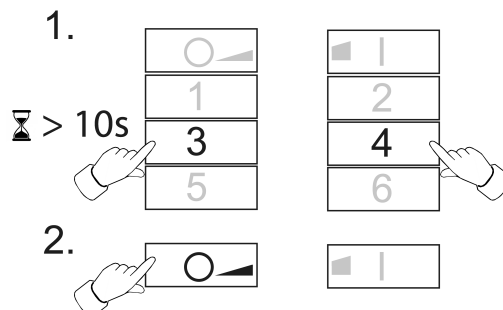


Figure 15

- Keep the and buttons pressed.
After approx. 10 seconds the LED flashes in green.
- Release the and buttons and press the button within 10 seconds.

Transmitter will be reset to the default settings. After completion, the LED lights up in green for 3 seconds.

5 Service functions

5.1 Switching on the service functions

The service functions can exclusively be used with our transmitters. They enable you for example to connect fixed wall transmitters to luminaires when these cannot be brought into connection range to each other or to pass on existing connections from one transmitter to another.

Precondition:

To be able to use the service functions (switch them on) the transmitter must be part of the network, see chapter 4.3 and at least one luminaire must be switched on.

- Keep the transmitter within a range of 10 to 50 cm from the luminaire or transmitter.

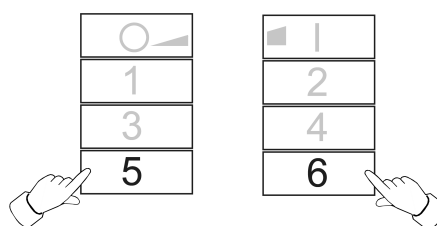


Figure 16

- Switch on the service functions. To do so, shortly press the and buttons. LED lights up red. The service functions have been switched on.
 - Save luminaires or connections in the buffer memory of the transmitter, see chapter 5.2, 5.3 or 5.4.
 - Pass on luminaires or connections to a transmitter, see chapter 5.5.
- i** By pressing the above buttons again or after 2 minutes without action the service functions are switched off and the buffer memory is deleted.

5.2 Seizing selected luminaires

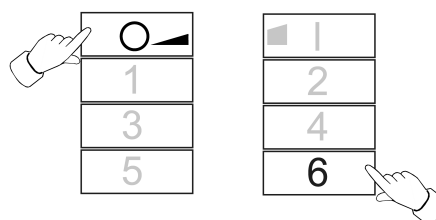


Figure 17

- Switch on the service functions, see chapter 5.1.
- Press the and buttons simultaneously until the LED flashes in green. LED lights up in green for 3 seconds: the connection to the luminaire is saved in the buffer memory. The transmitter waits for further connections. LED flashes rapidly in red for 3 seconds: the connection to the luminaires has not been saved in the buffer memory. The transmitter waits for further connections.
- As an option, save further connections in the buffer memory. To do so repeat the previous step.
- As an option, press the button shortly in order to show all luminaires in the buffer memory.

ZigBee radio hand-held transmitter 4-gang

The luminaires saved in the buffer memory light up shortly.

- Within 2 minutes, after the last button has been pressed, transfer the buffer memory to the desired transmitter, see chapter 5.5.

5.3 Accepting connections from another transmitter

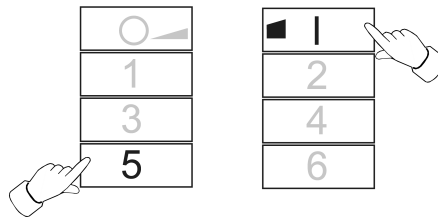





Figure 18

- Switch on the service functions, see chapter 5.1.
- On the receiving transmitter, press the  and  buttons simultaneously until the LED flashes in green.
- Start a connection process on the transmitter to be read, see chapter 4.2.
LED lights up in green for 3 seconds. The connections from the transmitter to be read have been saved in the buffer memory.
LED flashes rapidly in red for 3 seconds. The connections from the transmitter to be read have not been saved in the buffer memory.
- As an option, press the  button shortly in order to show all luminaires in the buffer memory.
The luminaires saved in the buffer memory light up shortly.
- Within 2 minutes, after the last button has been pressed, transfer the buffer memory to the desired transmitter, see chapter 5.5.

5.4 Copy the connections that are saved in the transmitter into the buffer memory.

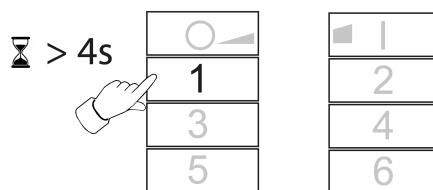




Figure 19

- Switch on the service functions, see chapter 5.1.
- Press the  button for longer than 4 seconds.
LED lights up in green for 3 seconds. The transmitter's connections have been saved in the buffer memory.
- As an option, press the  button shortly in order to show all luminaires in the buffer memory.
The luminaires saved in the buffer memory light up shortly.
- Within 2 minutes, after the last button has been pressed, transfer the buffer memory to the desired transmitter, see chapter 5.5.

5.5 Passing connections from the buffer memory to a transmitter

- Put the receiving transmitter in programming mode, see chapter 4.3.

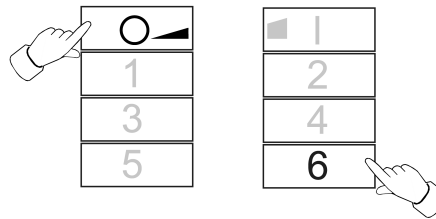




Figure 20

- Start a connection process on the sending transmitter by pressing the  and  buttons simultaneously until the LED flashes in green.
 The connections are passed from the buffer memory to the receiving transmitter.
 LED lights up in green for 3 seconds. The connections from the buffer memory are passed on.
 LED flashes rapidly in red for 3 seconds. The connections from the buffer memory have not been passed on.

6 Disposal of batteries



Remove empty batteries immediately and dispose of in an environmentally friendly manner. Do not throw batteries into household waste. Consult your local authorities about environmentally friendly disposal. According to statutory provisions, the end consumer is obligated to return used batteries.

7 Technical data

Rated voltage	DC 3 V
Battery type	1×Lithium CR 2450N
Ambient temperature	-5 ... +45 °C
Relative humidity	max. 80 % (no condensation)
Storage/transport temperature	-25 ... +70 °C
Degree of protection	IP20
Number of connections	max. 10
Dimensions L×W×H	93×53×15.5 mm
Transmitting range in free field	typ. 100 m
Radio frequency	2.400 ... 2.483 GHz
Transmission capacity	< 10 mW



This ZigBee® Certified product works in ZigBee Light Link networks (version 1.0; December 5th, 2014).

This device works with other ZigBee Light Link products.

Global 2.4 GHz wireless use.

ZigBee® Certified is a registered trademark of the ZigBee Alliance.

Figure 21

8 Troubleshooting

Removing a luminaire from a scene

Cause: a luminaire has not been disconnected from the mains when a scene was saved which it is not supposed to belong to.

Reset the luminaire and connect it to the transmitter again, see chapter 4.2.

Luminaire cannot be connected to the transmitter, LED on the transmitter flashes in red.

The luminaire is already part of another network.

Reset the luminaire, see chapter 4.5 and start another connection process, see chapter 4.2.

The LED does not light up when a button is pressed.

Battery in the transmitter is empty.

Change the battery, see Inserting a battery.

9 Conformity

Albrecht Jung GmbH & Co. KG hereby declares that the radio system type art. no. ZLLHS4 meets the directive 2014/53/EU. You can find the full article number on the device. The complete text of the EU Declaration of Conformity is available under the Internet address: www.jung.de/ce

10 Warranty

The warranty is provided in accordance with statutory requirements via the specialist trade.

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