ESYLUX

OPERATING INSTRUCTIONS
PD-FLAT

DALI

ESYLUX

Version	Date	Comment
MA00724800	18/05/2016	First edition with corrected item number of the remote control Mobil-PDi/Dali
MA00724801	13/02/2018	
MA00724802	29/09/2023	Change circuit diagram + Delay
MA00724803	13/03/2025	Remote controls, detection range, wiring diagram

An der Strusbek 40, 22926 Ahrensburg, Germany

Contents

1 Information about the document

These operating instructions contain detailed information about device functions and the processes for commissioning and assembling the specified devices.

This document is also available online at www.esylux.com and can be printed in A4 format.

Please read the operating instructions through in full and note all safety information and warnings.

1.1 Manufacturer address

ESYLUX GmbH
An der Strusbek 40
22926 Ahrensburg, Germany

Website: www.esylux.com
Email: info@esylux.com

1.2 Liability and damages

The product is designed only for the intended use, which is described in the corresponding chapter of these instructions. The device must not be changed, modified or painted — doing so will void any warranty claims.

Check the product for damage after unpacking. If the device is damaged in any way, return it to the relevant place of sale.

1.3 Product identification

These operating instructions apply to the following products:

Item number	Item designation
EP10427541	PD-FLAT 360i/8 RW DALI
EP10427558	PD-FLAT 360i/8 SW DALI
EP10427909	PD-FLAT 360i/8 SB DALI
EP10427916	PD-FLAT 360i/8 RB DALI
EP10428708	PD-FLAT-S 360i/8 RW DALI
EP10428715	PD-FLAT-S 360i/8 SW DALI
EP10428661	PD-FLAT-LS 360i/8 RW DALI

The item number and item name are also found on the type plate of the detector.

1.4 Highlighted information within the text

To make these user instructions easier to read, certain information is highlighted using different formatting.

The meaning of this formatting is explained below:

< > indicates remote control menu items and buttons

Grey indicates a function

➢ indicates a call for user action

✓ is used to highlight results of actions

indicates important and useful information

warns of high voltage

1.5 Warnings

Warnings are listed at the start of the relevant chapter if a hazardous situation is likely to occur.

The signal words have the following meanings:

DANGER!

This signal word denotes a hazard involving a high level of risk. Failure to observe the warning may lead to serious or fatal injury.

WARNING!

This signal word denotes a hazard involving a moderate level of risk. Failure to observe the warning may lead to serious or fatal injury.

ATTENTION!

This signal word denotes a hazard involving a low level of risk. Failure to observe the warning may lead to minor or moderate injury.

CAUTION!

This signal word warns against situations that could lead to instances of property damage if the information is not observed.

2 Basic safety information

2.1 Intended use

The ESYLUX ceiling-mounted presence detector is designed for small rooms and passageways that benefit from natural light.

The manufacturer will not accept any liability for instances of personal injury or property damage caused by improper use.

If you suspect that safe operation of the device cannot be guaranteed, you should turn the device off immediately and make sure that it cannot be operated unintentionally.

2.2 Safety instructions

Authorised personnel only

Electrical devices connected to a 230 V mains supply may only be assembled and commissioned by electrical installation technicians or trained electricians, taking country-specific regulations into account.

DANGER!

Risk of fatal injury from electric shock!

➢ The following five safety rules must always be observed:

1. Disconnect the power supply
2. Secure the power supply from being switched on again
3. Check that the relevant components have been de-energised
4. Set up the earthing and short-circuiting mechanisms as required
5. Cover or isolate neighbouring live parts.

3 Product description

3.1 Introduction

The ESYLUX Flat series ceiling-mounted presence detector is a passive infrared presence detector. It is designed for small rooms and passageways that benefit from natural light, and responds to moving heat sources. The ceiling-mounted presence detector can turn lighting on and off by detecting when people are present and according to the ambient light levels.

Properties

Main product features:

- 360° field of detection, 8 m range at an installation height of 3 m.
- DALI interface: Automatically controls light channels depending on presence and daylight.
- Control function: The presence detector is a control device for DALI equipment. There is no need to address the lights/electronic ballasts

connected by DALI separately. All ballasts are addressed at the same time via the broadcast address.

3.2 Overview of functions

Function	Benefit
Switch-on at brightness target value	The adjustable brightness target value prevents the light being switched on unnecessarily when there is sufficient ambient brightness.
Switch-off if no presence is detected	This function prevents the lighting being switched on unnecessarily.
Switch-off warning	The presence detector issues a warning that the light will soon be switched off.
Orientation light	Lighting with low power consumption.
Adjustable switch-off delay for orientation light	The duration of the orientation light can be adjusted.
Master/slave function	Motion detection range can be extended by connecting with other detectors.
Twilight switch function	Controls the lighting based solely on set brightness levels.

3.2.1 Switch-on and switch-off behaviour

Switching on

- The presence detector switches the light on if ambient brightness falls below the set level and motion is detected.

Switching off

- The presence detector switches off the light when no motion is detected and the switch-off delay time has expired.

A flashing red LED on the presence detector indicates that motion has been detected. The LED signals can be switched off. For more information, see the "Programming" section of the remote control instructions.

3.2.2 Switch-off delay and switch-off warning

The switch-off delay is the period of time in which the presence detector does not switch off the light despite not detecting any motion. It begins from the moment at which no further movements are detected. The factory setting is five minutes. Each time a movement is detected, the switch-off delay starts again from the beginning.

When the switch-off delay has expired, the switch-off warning begins. It has a duration of 60 seconds. During the switch-off warning period, the light is dimmed to the brightness value of the orientation light.

If the presence detector detects a movement during this 60 seconds, it returns to the settings for detected presence. If the presence detector does not detect a movement during the switch-off warning, it switches the light off.

3.2.3 Master/slave function

The motion detection range of the detector can be extended by adding additional DALI presence detectors from the DALI Mini/Flat series. In extended configurations, it is important to ensure that only one detector is acting as the "master" and the other detectors as "slaves". ESYLUX recommends installing the master detector in the darkest location.

How it works

Address 15 is the read address of the master detector and the write address of the slave detector. The addresses cannot be changed. The slave detector sends an ON signal to the master detector every thirty seconds if it detects movement. The light measurements and switch-off delay time settings are defined via the master detector. A movement detected by a slave detector therefore causes the light to switch on if the ambient light is below the brightness target value on the master detector. If the light is already switched on, the movement detected by the slave detector leads to a restart of the switch-off delay.

You can use the remote control to define which detector acts as the master and which as the slave. For more information, see Chapter “Master/slave configuration” from page 23. The connections S/S have no function in SLAVE mode.

3.2.4 Twilight switch operation

The presence detector can also be set for use as a twilight switch. In this case, the detector no longer switches the light on and off on the basis of motion. In this mode, the connected lights are always lit up 100%.

Switch-on value

The default switch-on value is 50 Lux. You can set different switch-on values using the remote control. You can also save the current light value as the switch-on value.

Switch-off value

The switch-off value is always twice the switch-on set value. If the default value of 50 Lux is used, the detector switches on below 50 Lux, and switches off above 100 Lux.

For information on how to set the twilight mode, see Chapter “Manufacturer address” from page 4.

In twilight switch mode, the detector does not respond to any connected DALI buttons.

3.3 Setting the presence detector

The presence detector has no setting elements. It can be set in three ways:

- Using the button
- Using the REMOTE CONTROL PDi DALI, available as an accessory

Setting via button

Using the button, you can temporarily change the brightness of the lighting. If the light is switched off and then on again, it therefore lights up with the preset values and not the values that were manually set using the button. For more details, refer to Chapter “Information about the document” from page 4.

The remote controls enable temporary settings and permanent, programmed settings. The setting options are not the same for the two remote controls:

ESY-App with ESY-Pen

All settings can be made with the ESY-Pen and ESY app. The ESY-Pen is available as an accessory from ESYLUX under item number EP10425356. The settings are explained in chapter “8.2 Connecting the ESY-Pen to the ESY-App” on page 27.

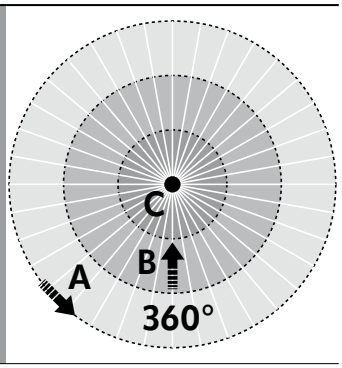
REMOTE CONTROL PDi DALI

With the REMOTE CONTROL PDi DALI, you can make a wide range of settings. Chapter “1 Information about the document” on page 4 provides the necessary information regarding whether these setting options are sufficient or whether the universal remote control would be more suitable.

The REMOTE CONTROL PDi DALI is available as an accessory from ESYLUX under item number EP10425899.

3.4 Field of detection

- Field of detection 360°.
- Detection range of 8 m at an installation height of 2.5 m.

Field of detection	Diagonally (A) ø m	Head-on (B) ø m	Presence area (C)* ø m	
	8	6	4	

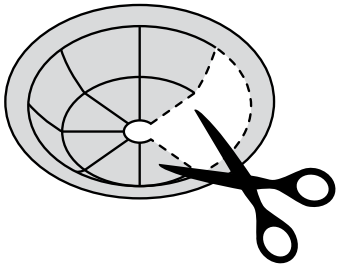
Movement crossways to the detector is ideal for detection. Direct and head-

on approaches are more difficult to detect and therefore the range of the detector is significantly reduced.

The range specifications apply for an ambient temperature of approx. 20 °C.

Reduce the field of detection

Using the lens mask provided, specific areas of detection can be masked out.



4 Installation and connection

DANGER!

Risk of fatal injury from electric shock!

- Switch off the power to the cable.
- Check that the cable is de-energised.

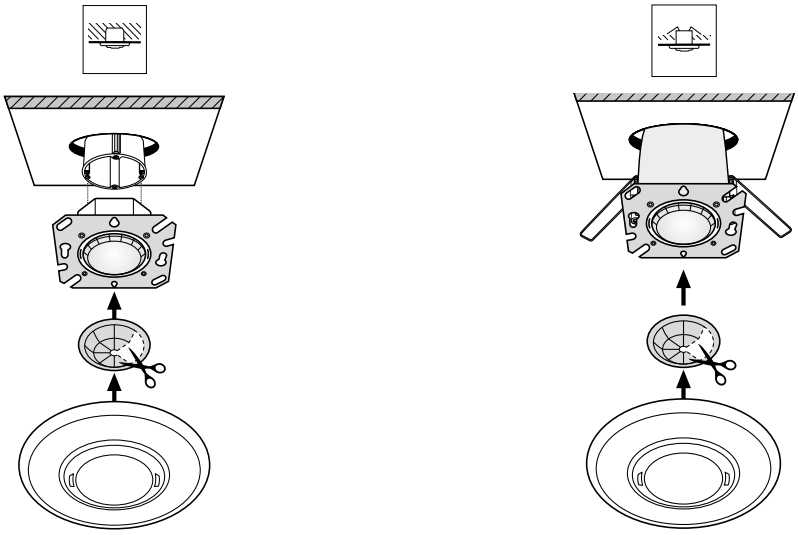
The detectors are intended for flush mounting and for recessed ceiling mounting. For recessed surface ceiling mounting, use the FLAT MOUNTING SET IP20 FM available as an accessory (item number EP10426889).

Choose an installation location where the detector has an unobstructed view, as infrared beams cannot penetrate solid objects.

Assembly variants

Flush mounting

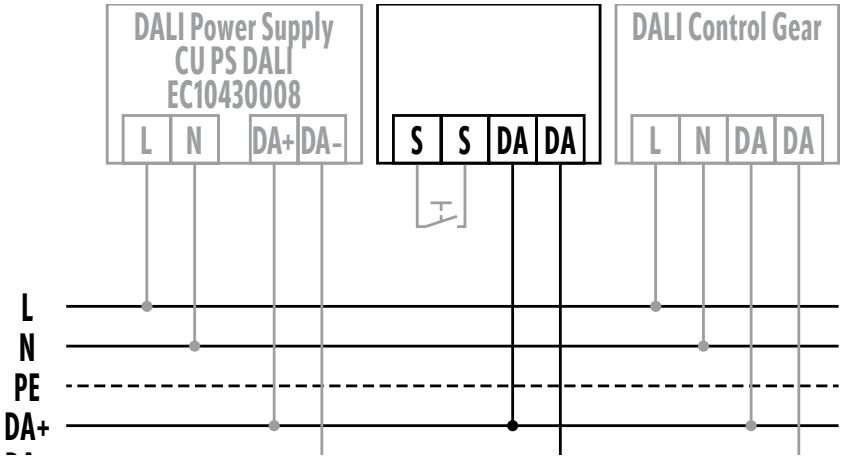
Recessed ceiling mounting
(using PD-F recessed ceiling mounting set, item no. EP10426889)



- The detector should be positioned depending on the available space and
  usage requirements.
- Make sure that the detector has a clear line of sight, as infrared beams cannot
  penetrate solid objects.
- Connect the detector in accordance with the circuit diagram.

DA DALI bus
S Button (potential-free)

Connection



Standard with optional control via a closing button and parallel wiring of max. 8 devices.

5 Initial operation

➢ Connect the power supply.

Warm-up phase

✓ A warm-up phase of approx. 30 seconds is initiated. The red and the blue LED flash alternately. During this time, the lighting is switched on.

Factory settings

After the initialisation phase, the presence detector works with the following factory settings:

Light value	approx. 500 Lux
Switch-off delay time	5 min.
Sensitivity	100%
Operating mode	Fully automatic
Orientation light	On (10%)
Operation	Master

You can change these settings using the two remote controls named above.

6 Control via button

You can use an external button or a DALI button to make temporary settings. A lighting state that is set using a button remains set for as long as people are present in the room. Should these persons leave the detection range, the preset switch-off delay time will start. Once this time has elapsed, the detector will revert to the set operating mode. The next time the light is switched on, the preset lighting value is used, and not the lighting value set using the button.

6.1 Control via external button

The ceiling-mounted presence detector is equipped with a connection for an external button (terminals S and S, see “Installation and connection” from page 10). The following commands can be issued using the external button:

- Press the button once briefly: switches the light on or off.
- Hold the button for longer than two seconds: Dim lighting. Keep the button held down until the required brightness is reached.

6.2 Control using the DALI button

The presence detector can receive commands from a DALI button via the DALI bus.

Prerequisite:

The DALI button must be set to address 15 to communicate with the detector.

The following commands can be issued using the DALI button:

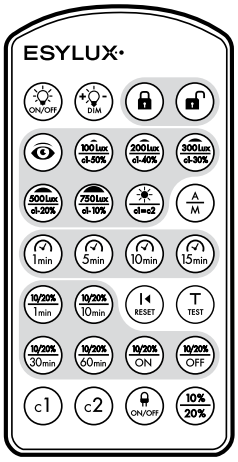
- Switch the light channel on or off: press the button once briefly.
- Dim the light channel: hold down the button until the desired ambient brightness is reached.

7 Operation with REMOTE CONTROL PDi DALI

The REMOTE CONTROL PDi DALI is available as an accessory from ESYLUX under item number EP10425899.

The REMOTE CONTROL PDi DALI can be used to make temporary settings and permanent programming.

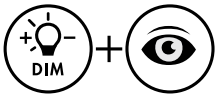
For optimum reception, when programming the settings, point the remote control at the detector.
Please note that if the sensor is exposed to direct sunlight, the standard detection range of approx. 8 metres may be reduced due to the infrared rays in the sunlight.



7.1 Making temporary settings

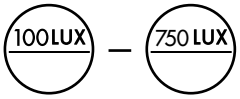
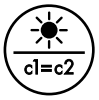
Button	Function
	**ON/OFF** Manually switch the lighting on/off. **"ON"** acknowledgement: Two short flashes of the red LED when motion is detected. **"OFF"** acknowledgement: One short flash of the red LED when motion is detected. Note: The ON/OFF mode can be cancelled using the <Reset> button.

Button	Function
	**Reset/settings** Pressing this button deletes temporary settings. The detector returns to the preset operating mode.
	**Test** Operating mode for testing the detection range. **Acknowledgement:** The connected lighting is switched on. Two short flashes of the blue LED when movements are detected, enables the user to step out of the field of detection. Note: Exit test mode by pressing the <TEST> or <RESET> button.

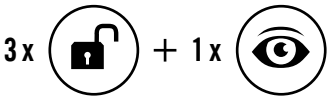
Button	Function
	**Set the required light value using the dimming function** ➢ Press the DIM 1 button once ✓ The dimming process begins. The direction of dimming is reversed when the maximum or minimum value is reached. **Stop the dimming function at the required level** ➢ Press the <Eye> button. ✓ The dimming process stops. This light value will be maintained for as long as persons are present in the room. Should these persons leave the detection range, the presence detector will revert to the previous setting mode after the default time setting has elapsed. This combination of buttons has the same function as the **Dim** button, see “Control via button” from page 13.

7.2 Permanent settings: Programming

Please note: Each programming setting must begin with activation of programming mode, and end with deactivation of programming mode, to ensure that your input is saved.
The first two actions of the following table therefore have to be performed at the beginning and end of all other permanent settings.

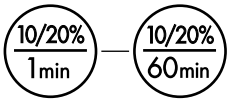
Button	Function
	**Activate programming mode** ➢ Press the button. ✓ After you press this button, the detector is in programming mode. ✓ **Acknowledgement**: the blue LED is permanently it, the lighting is switched on.
	**Exit programming mode** ➢ Press the button. ✓ Pressing this button saves the set parameters on the detector and the presence detector returns to the normal operating mode. ✓ **Acknowledgement**: The blue LED is switched off.
	**Set the brightness switching value** Possible values: 100, 200, 300, 500, 750 Lux. ➢ Press the required button ✓ The detector switches the lighting on if the target brightness value is below the preset lux value and when it detects a movement. ✓ **Acknowledgement:** red and blue LEDs flash alternately three times.
	**Set the detector to daytime mode** ➢ Press the button ✓ The light measurement is deactivated. When switched on, the connected light works with the set maximum luminous efficiency. ✓ **Acknowledgement:** red and blue LEDs flash alternately three times.

Button	Function
	**Save the current ambient light value as switch-on light value** ➢ Press the button ✓ The current ambient light value (between 5 - 2000 lux) is entered as the target light value. ✓ **Acknowledgement**: the blue LED switches off briefly after the remote control signal is received. Once the input process has been successfully completed, the lighting turns on and the blue LED lights up continuously until programming mode is ended.
	**Activate fully-automatic/semi-automatic mode** The detector can control the light in fully-automatic and semi-automatic mode. Press this button to switch between fully-automatic and semi-automatic mode. **Fully automatic**: The lighting is switched on depending on the set lux value and movement being detected. If movement is no longer detected, the preset switch-off delay time begins. ➢ Press the button. ✓ Fully-automatic mode is enabled. ✓ **Acknowledgement**: blue LED flashes 3 times. The currently active mode can be overridden by external buttons.

Button	Function
	**Semi-automatic**: The lighting is activated by external buttons. The lighting remains switched on for as long as movement is detected and the target brightness value is greater than the preset lux value. ➢ Press the button. ✓ Semi-automatic mode is enabled. ✓ **Acknowledgement**: blue LED turns off for approx. 3 seconds.
	**Switch detector LEDs On/Off** The LEDs in the detector can be switched on or off. Press this button to switch between on and off. ➢ Press the button ✓ **Acknowledgement that LEDs are off**: blue LED turns off for approx. 3 seconds. ✓ **Acknowledgement that LEDs are on**: blue LED flashes 3x.
	**Light level switching** ➢ Press the <Activate Programming Mode> button three times. ➢ Press the <Eye> button once. ✓ The light value measurement switches between ceiling and wall mounting. ✓ **Acknowledgement of ceiling mounting:** red LED is lit (factory settings). ✓ **Acknowledgement of wall mounting:** green LED is lit.

Button	Function
	**Restore factory settings** ➢ Press the <Reset> button. ✓ The presence detector returns to using the factory settings. ✓ **Acknowledgement:** Red LED flashes 3 x. Confirmed by blue and red LED on the detector briefly flashing alternately.
	**Activate the orientation light** The orientation light is a "night light" function. It can be lit with 10 or 20% of the maximum brightness. Press this button to switch between 10% and 20%. **Activation with 10%:** ➢ Press the button. ✓ **Acknowledgement:** red LED flashes 3 times. **Activation with 20%:** ➢ Press the button again. ✓ **Acknowledgement:** red LED flashes 3 times. **Example for use of the orientation light:** If the natural light in a room decreases and the lighting level falls below the light value set on the detector (e.g.: 400 Lux), the light on the activated orientation light is automatically dimmed to approx. 10% or 20% of the maximum luminous efficiency.

Button	Function
	If motion is detected, the detector regulates the lighting to the preset light value. If the presence detector no longer detects motion, the lights revert to approx. 10% or 20% of their maximum luminous efficiency once the set switch-off delay time has elapsed. If the ambient brightness is greater than the preset light value, the presence detector automatically switches the orientation light off.
	**Set the orientation light brightness** The orientation light can light up with 10% or 20% of the maximum luminous efficiency. Press this button to switch between 10% and 20%. **Set to 10%:** ➢ Press the button. ✓ **Acknowledgement:** green LED flashes. **Set to 20%:** ➢ Press the button again. ✓ **Acknowledgement:** red LED flashes.

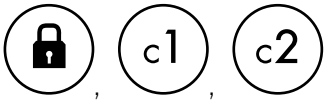
Button	Function
	**Activate the orientation light switch-off delay with 10% or 20% of the luminous efficiency with a switch-off delay time of 1 minute to 60 minutes** The orientation light switch-off delay can be set to 1, 10, 30, or 60 minutes. **Set the switch-off delay to the required duration with 10% or 20% luminous efficiency:** ➢ Press the button for the required time. ➢ Press the button again to switch between 10% and 20% luminous efficiency. ✓ Confirmed by blue and red LED on the detector briefly flashing alternately.
	Application example: The light has been switched on, either automatically, by the light switch, or by remote control. If the presence detector no longer detects motion, it switches to approx. 10% or 20% of the luminous efficiency once the switch-off delay time has elapsed. The selected orientation light switch-on time (e.g. 10 minutes) will now begin. If the detector detects new movement within this period, it returns the lighting to the preset light value. If, however, no new movement is detected within this period, the orientation light is switched off automatically.

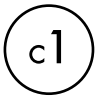
Button	Function
	**Deactivating the orientation light (10% or 20% of luminous efficiency)** **Deactivate at 10%:** ➢ Press the button. ✓ **Acknowledgement:** red LED flashes 3 times. **Deactivate at 20%:** ➢ Press the button again. ✓ **Acknowledgement:** red LED flashes 3 times. Confirmed by blue and red LED on the detector briefly flashing alternately.

7.3 Master/slave configuration

The motion detection range of the detector can be extended by adding additional DALI presence detectors from the DALI Mini/Flat series. Only one detector can work as the "Master" at any one time. The others must be set to "Slave" mode. For more information, see Chapter “3.2.3 Master/slave function” on page 8.

All switch-off delay time settings and light value settings must always be configured on the master detector.

Button	Function
	**Query whether master or slave mode is active** ➢ Press one of the buttons <Lock>, <C1> or <C2>. ✓ The detector LEDs indicate the status. Master mode: red LED flashes 3 x. Slave mode: green LED flashes 3 x.

Button	Function
	**Switch from master detector to slave detector** ➢ Press the <Unlock> button. ✓ Programming mode is active, the blue LED is lit. ➢ Press button C2 until the green LED flashes 3 times. ➢ Press the <Lock> button. ✓ The detector is now in slave mode and programming mode is ended.
	
	
	**Switch from slave detector to master detector** ➢ Press the <Unlock> button. ✓ Programming mode is active, the blue LED is lit. ➢ Press button C1 until the red LED flashes 3 times. ➢ Press the <Lock> button. ✓ The detector is now in master mode and programming mode is ended.
	
	

7.4 Twilight switch mode

The detector can be configured to act as a twilight switch.

The standard switching value is 50 lux. However, the light values specified on the remote control can also be selected, or the current light value can be read and stored using the "Eye button" on the remote control.

In this mode, the connected lights are always lit up 100%.

In twilight switch mode, the detector does not respond to any connected DALI buttons.

Button	Function
	**Switch from presence detector to twilight switch** ➢ Press the <Unlock> button. ✓ Programming mode is active, the blue LED is lit. ➢ Press button C1 until the purple LED flashes 3 times. ➢ Press the <Lock> button. ✓ The detector is now in twilight switch mode and programming mode is ended.
	**Query twilight switch mode** ➢ Press one of the buttons <Lock>, <C1> or <C2>. ✓ The detector LEDs indicate the status: Purple LED flashes 3x: Twilight switch. Red LED flashes 3x: Master mode. Green LED flashes 3x: Slave mode.

8 Configuring parameters via ESY-App with ESY-Pen

First, the parameters are changed in the ESY-App. Then the ESY-Pen serves as a bridge to transmit the Bluetooth commands from the mobile device to the motion / presence detector using infrared technology.

The infrared interface is located in the head of the ESY-Pen. In order for the ESY-Pen to communicate with the product, the head of the ESY-Pen must be pointed in the direction of the product. The On/Off button flashes red or green (depending on your selection) when an infrared signal is being transmitted. It is not possible to transfer parameters from the product to the ESY-App. Communication between the ESY-Pen and the product is unidirectional.

Note: For optimum signal transmission, maintain a minimum distance corresponding to the mounting height. Direct sunlight can prevent signal transmission.

Communication: smartphone – ESY-Pen – motion / presence detector

8.1 Installing the ESY-App

The free ESY-App is available in the Google Play Store and Apple App Store for the following mobile devices:

- Apple devices with operating system iOS 12.5.5 or above
- Android devices with Android version 8.0 or above

➢ Scan the QR code to download the ESY-App.

To be able to parameterise your product, you must add it to the ESY-App product list the first time:

➢ Start the ESY-App.
➢ Press the button **< Select products and configure >**.
➢ Press the button **< Add product >** and select your product using the

search function or by scanning the bar code on your product.

✓ Your product appears in the product list.
✓ 9 Parameters can be configured.

To be able to transfer the changed parameters to the unit, you need the ESY-Pen,
which you connect to your mobile device via Bluetooth.

8.2 Connecting the ESY-Pen to the ESY-App

1. Switch on the ESY-Pen.

➢ Press the **< On / Off button** ⊙ **>** for two seconds.

✓ The **< On / Off button** ⊙ **>** lights up red.
✓ Both **< function buttons** ☼ **+** ☼ **>** will light up white when the mobile device
is switched on.

2. Activate Bluetooth® on your mobile device.

3. Start the ESY-App.

➢ In the dashboard, press the **< No connection >** button at the bottom.
➢ Select your ESY-Pen **< ESY-Pen Vx.x xxxx >** from the list.
➢ Enter the security pin when requested.

✓ After it has been successfully connected, your **< ESY-Pen Vx.x xxxx >** will be listed at the bottom of the dashboard.
✓ The ESY-Pen is now ready for use.

> **i** If no ESY-Pen (ESY-Pen Vx.x xxxx) is listed, swipe down to update the list. You can find the name and security pin of your ESY-Pen on the identification label on the device.

9 Technical data

Operating voltage	9.5 – 22.4 V ⎓
Target brightness value approx.	5 - 2000 Lux
Switch-off delay time	approx. 15 sec. - 30 mins.

Protection type/Protection class	IP 20/-
Operating temperature range	0°C to +50°C

10 Troubleshooting

Fault	Cause/solution
Lighting does not switch on.	• Ambient light level is above the preset target brightness value • Lighting has been switched off manually. • The people are outside the range of detection. • There are sources of thermal interference within the field of detection, e.g. heating or air-conditioning. • There are moving objects within the field of detection, such as curtains next to an open window. • The switch-off delay time setting is too short.
Lighting is switched off during the hours of darkness despite the presence of persons.	• Ambient light level is above the preset target brightness value • Lighting has been switched off manually.
Lighting does not switch off or lighting switches on spontaneously when no persons are present.	• The switch-off delay time has not yet elapsed • There are sources of thermal interference within the field of detection, e.g. heating or air-conditioning. • There are moving objects within the field of detection, such as curtains next to an open window.
Button does not work.	• Device is still in the start-up phase • Illuminated button has been used without a neutral wire connection. • The button is not routed to the “S terminal”

Fault	Cause/solution
Lighting switches on and off in warm-up phase.	• Too much artificial light is falling on the detector
Detector does not respond.	• Check the power supply

11 Maintenance, cleaning, and disposal

The ceiling-mounted presence detector does not contain any components that require maintenance. The device can only be replaced as a complete unit.

Do not use corrosive cleaning agents or solvents for cleaning and care of the device. Please use a lint-free cloth that is either dry or dampened only with water.

As the owner, you are required by law to correctly dispose of used devices. Contact your local town council for more information.

12 ESYLUX manufacturer's guarantee

The ESYLUX manufacturer‘s guarantee can be found on the relevant product page at www.esylux.com.