ESYLUX

OPERATING INSTRUCTIONS BASIC

- MD 360 …
- PD 360 …

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1 Description

The motion detector (MD) / presence detector (PD) is designed for indoor use and is a passive infrared presence detector that responds to moving heat sources, such as people walking.

Note: Use this product only as intended (as described in the user instructions).
The device must not be changed, modified or painted – doing so will void any warranty claims. You must check the device for damage immediately after unpacking it. If there is any damage, you should not install the device under any circumstances.
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 Safety instructions

- **Work on the 230-V power system must be carried out by authorised personnel only, with due regard to the applicable installation regulations / standards.**
- **Switch off the power supply before installing the system.**
- **On the input side, the device is to be protected against short circuits with a 10-A circuit breaker.**

3 Operation / functionality

- 360° field of detection, 8 m / 24 m range at an installation height of 2.5 m.
- Automatically controlled lighting channels when motion is detected (MD).
- Automatically controls light channels depending on presence and daylight (PD).
- With zero-cross switching.

3.1 Conditions in which the lighting is switched on

The lighting is switched on if the target brightness value is below the preset lux value and movement is detected in the field of detection. Further movement is acknowledged by the sensor with two short flashes of the **red LED** (the LED can be switched off; see "Configuring parameters via remote control").

MD BASIC: Once the lighting has been switched on, the sensor deactivates light measurement for this period.

3.2 Conditions in which the lighting is switched off

The lighting is switched off if no movement is detected in the field of detection and the preset switch-off delay time has elapsed.

3.3 Switching delay – not in pulse mode

When persons are present, in order to avoid sudden changes in brightness caused by undesired switching on / off of the lighting, the detector will only be triggered after a time delay.
Example: a passing cloud could potentially cause unnecessary switching.

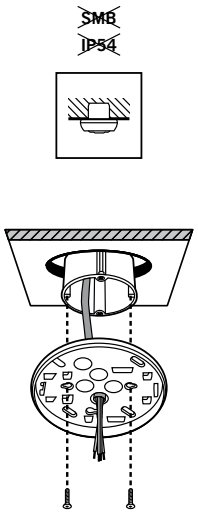
Time delay from light to dark:	30 sec. = **red LED** lights up during this period
Time delay from dark to light:	none = only switch-off delay active (MD)
	5 min. = **red LED** flashes during this period (PD)

4 Installation / connection

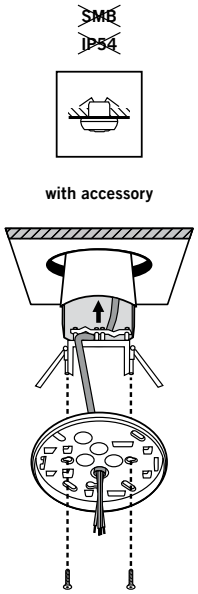
Note: Switch off the power supply before installing the system!

- The detectors can be flush mounted or surface mounted, and are also suitable for recessed ceiling mounting using accessories.

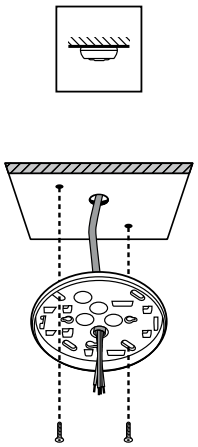
Recessed mounting



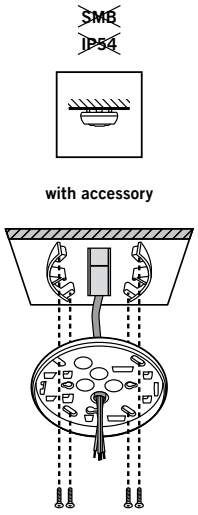
Recessed ceiling mounting (see accessories) for suspended ceilings



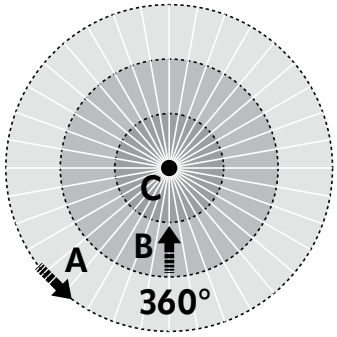
Surface mounting



Surface mounting with spacers



- Specifications regarding the range of the detector relate to an ambient temperature of approx. 20°C.
- Movement crossways to the detector is optimal for triggering the detector; head-on approaches to the detector are more difficult to detect and therefore the range of the detector is significantly reduced.

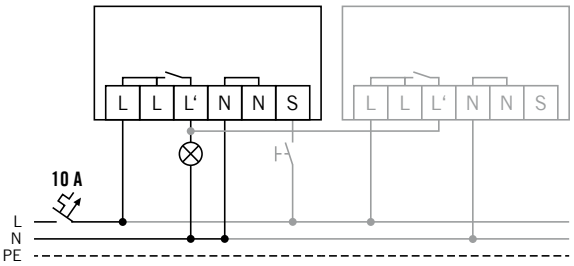
Field of detection	Diagonally (A) ø m	Head-on (B) ø m	Presence area (C)* ø m	
… 8 BASIC	8	6	4	
… 24 BASIC	24	8	6	

*** only PD BASIC …**

- 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.

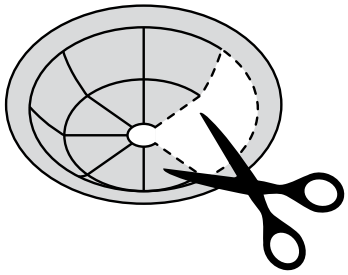
Standard with optional control via a closing button and parallel wiring of max. 8 devices.

L External conductor 230 V ~
L' Switched external conductor 230 V ~
N Neutral conductor
S Button



4.1 Masking the field of detection

Use the lens mask available as an accessory (item no. EB10423093 or EB10423109) to mask out specific areas of detection.



5 Activation

Connect the power supply.

A warm-up phase of 25 seconds is initiated. The **red LED** flashes.
During this time, the lighting is switched on.

5.1 Overview of factory settings

Factory settings

Light value	approx. 100 lux (MD) / approx. 500 lux (PD)
Switch-off delay time	5 min.
Sensitivity	100 %

The manual setting element values are active on delivery. The values can be overridden at any time by programming the detector using one of the optional remote controls.

6 Settings

6.1 Control via external “S” button

The ceiling-mounted detector is equipped with a connection for an external button (S terminal). This can be used to switch the lighting on and off manually.

Note: If several detectors are connected in parallel, also connect any existing push-button in parallel with all other detectors.

Modes activated by pressing the external button:

Press button for approx. 1 second:	The lighting is switched on or off (for the duration of the switch-off delay time)
Press button for approx. 3 second:	The lighting is switched on or off continuously for 4 hours

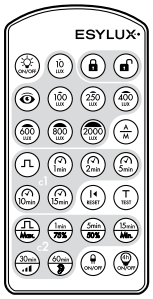
Further parameters can be configured via remote control. Remote controls can be purchased as accessories.

6.2 Configuring parameters via remote control

Only models:
MD 360i/8 Basic … MD 360i/24 Basic …
PD 360i/8 Basic … PD 360i/24 Basic …

Note: 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 m may be dramatically reduced due to the sun's infrared rays.

6.3 REMOTE CONTROL MDi/PDi (EM10425509)



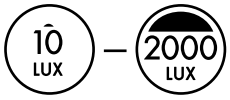
6.4 REMOTE CONTROL MDi/PDi temporary settings

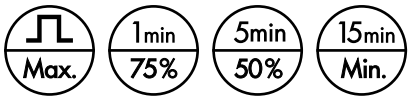
Parameter configurations are only temporarily applied.

Function	Customised setting
ON/OFF	**ON / OFF** Switching the lighting ON / OFF manually. **Note:** The **"ON / OFF"** mode can be cancelled by pressing the **"Reset" button**. **"ON" acknowledgement:** Movement detected in the field of detection is acknowledged with two short flashes of the **red LED**. **"OFF" acknowledgement:** Movement detected in the field of detection is acknowledged with one short flash of the **red LED**.
RESET	**Reset / settings** Temporarily set values are cleared and the detector returns to the manually preset operating mode.
4h ON/OFF	**4h ON / OFF** The lighting is switched on or off continuously for approx. 4 hours. If no movement is detected in the field of detection and the preset switch-off delay time has elapsed, the detector returns to the previous operating mode. **Note:** The **"4h ON / OFF"** mode can be cancelled by pressing the **"Reset" button**.

6.5 Programming the Mobil-PDi/MDi

Alterations to parameters are applied permanently.

Function	Customised setting
	**Enter programming mode** The detector goes into programming mode. **Acknowledgement:** The **red LED** lights up permanently and the lighting is switched on continuously.
	**Exit programming mode** The set parameters are stored on the detector. **Acknowledgement:** The **red LED** is switched off.
	**Set the brightness switching value, max. 1000 lux (MD) / 2000 lux (PD)** The detector switches the lighting on if the target brightness value is below the preset lux value and movement is detected in the field of detection. **Acknowledgement:** The **red LED** flashes three times.
	**The detector operates in daytime mode** Light measurement is no longer active.
	**Take a reading of the current ambient light value** The detector switches the lighting on if the target brightness value is below the preset lux value and movement is detected. **Acknowledgement:** The **red LED** and the lighting are switched off for approx. 5 seconds while the reading is taken.
	**Fully automatic / semi-automatic mode** The lighting can be controlled in fully automatic and semi-automatic modes. **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 will start. The relevant active status can be optionally overridden using the external "S" button. **Acknowledgement:** The **red LED** flashes three times. **Semi-automatic:** Control (activation of the lighting) via the external "S" button. The lighting remains switched on as long as movement is detected and the target brightness value is greater than the preset lux value. **Acknowledgement:** The **red LED** is switched off for approx. 2 seconds.

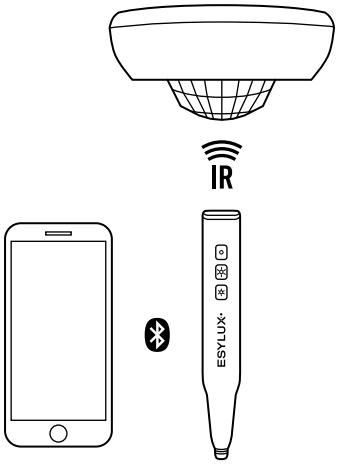
Function	Customised setting
	**Short pulse** As soon as movement has been detected in the field of detection, the detector switches the lighting on for approx. 5 second and off for approx. 5 seconds. This function can be used to control automatic stairwell lights, for example. **Acknowledgement:** The **red LED** is switched on for approx. 5 seconds and off for 5 seconds.
	**Switch-off delay time** The switch-off delay time starts once movement is no longer detected in the field of detection. **Acknowledgement:** The **red LED** flashes.
	**PIR sensitivity** **Settings:** maximum (100 %), 75 %, 50 %, minimum (25 %) The sensitivity of the detector for the purpose of detecting movement can be set. **Acknowledgement:** The **red LED** flashes three times.
	**Detector LEDs ON / OFF** The LEDs in the detector can be switched on or off. **Acknowledgement:** **LEDs OFF:** The **red LED** is switched off for approx. 2 seconds. **LEDs ON:** The **red LED** flashes three times.
	**Factory reset** The detector adopts the factory settings regardless of the setting of the potentiometers. 5 min, 100 lux (MD) / 5 min, 500 lux (PD)

6.6 Configuring parameters via ESY Control with ESY-Pen

First, the parameters are changed in the ESY Control 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 Control 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

6.7 Installing the ESY Control app

The free ESY Control 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 Control app.

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

➢ Start the ESY Control 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.

6.8 Connecting the ESY-Pen to the ESY Control 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 Control 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.

7 Technical data

Nominal voltage	230 V ~ / 50 – 60 Hz
µ = contact opening width	≤ 1.2 mm
Level of brightness	5 - 1000 lux (MD) / 5 - 2000 lux (PD)
Switching capacity	2300 W / 10 A (cos φ = 1) 1150 VA / 5A (cos φ = 0,5)
Max. inrush current	78 A / 5 ms
Switch-off delay time	Short pulse / approx. 15 sec. - 30 min.
Protection type / protection class	IP40 / II IP54 / II
Operating temperature range	0 °C . . . +50 °C

8 Troubleshooting

Fault	Cause
Lighting does not switch on.	- Ambient light level is above the preset target brightness value - Lighting has been switched off manually - There are people in the field of detection - There are sources of thermal interference in the field of detection, such as heating, air-conditioning or moving objects (e.g. curtains by open windows) - The switch-off delay time has been set 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 in the field of detection, such as heating, air-conditioning or moving objects (e.g. curtains by open windows)
Button does not work.	- Device is still in the start-up phase - Illuminated button has been used without a neutral wire connection - Button is not routed to the "S terminal"
Lighting switches on and off in warm-up phase.	- Detector exposed to too much artificial light
Detector does not respond.	- Check the power supply

8.1 Maintenance

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

This device must not be disposed of as unsorted residual waste. Used devices must be disposed of correctly. Contact your local town council for more information.

8.2 Cleaning

No corrosive cleaning agents or solvents may be used for cleaning and care of the device. Please use a lint-free cloth that is either dry or dampened only with water.

9 ESYLUX manufacturer's guarantee

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