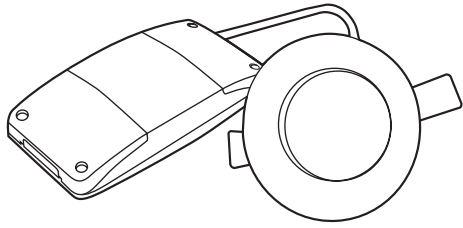


PRESENCE DETECTOR



- PDE 360i/8
- PDE 360i/24
- PDE 360i/KORRIDOR

ESYLUX

www.esylux.com

GB • PRESENCE DETECTOR

Congratulations on your purchase of this high-quality ESYLUX product. To ensure proper operation, please read these user instructions carefully and keep them for future reference.

1 • SAFETY INSTRUCTIONS

CAUTION: Work on the 230 V power system must be carried out by authorised personnel only with due regard to the applicable installation regulations. Switch off the power supply before installing the system.

Use this product only as intended (as described in the user instructions). Changes or modifications to the product or painting it will result in loss of warranty. You should 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 • DESCRIPTION

The ESYLUX PDE 360i/8, PDE 360i/24 and PDE 360i/Korridor are presence detectors with a 360° field of detection for ceiling mounting. Automatic light control depending on presence and daylight. Additional "HVAC" switch contact for controlling heating, ventilation and air conditioning depending on presence. Programmable by remote control; therefore fast and precise setting of various parameters with no need for tools or a ladder.

3 • INSTALLATION / MOUNTING / CONNECTION

- The recommended installation height is 2.50 - 3 m. The greater the installation height, the greater the range. The sensitivity is, however, reduced. The detector is at its most sensitive if approached diagonally. If approached directly or frontally it is difficult for the detector to recognise motion and the range is therefore much smaller.
- The detector should be positioned as suits the local environment and the user requirements (1 (1) Seated persons (2) Working area (3) Persons moving diagonally towards the detector).
- Switch off the mains supply before installing the product.
- The detectors are designed for ceiling mounting (Fig. 2, ceiling cut: approx. Ø 56 - 68 mm).
- Connect the power supply (Powerbox Fig. 3a) as shown in the circuit diagram (Fig. 5).
- The PDE 360i/Korridor detector should be installed so that the Fresnel lens segments (Fig. 3c) are turned to face the hallway.

(5.1) Standard operating mode

(5.2) Standard operating mode with additional control using lock button.

The light can be switched on and off manually as required using the button.

(5.3) Master-Slave switch: The master device switches connected loads depending on the set parameters.

The slave devices only serve to register if a room/area is occupied - if motion is detected they send an impulse to the master. Please note: A maximum of 10 slave devices can be connected to the master device.

NOTE: Parallel connection of the master device is not authorised!

- Connect the sensor part (master) to the powerbox (input master) with the RJ 11 plug (Fig. 3b).

4 • STARTING UP AND SETTING

The sensor is supplied with default settings and is thus immediately ready for use. Individual settings can simply be made using the remote control (Fig. 7).

• Default settings

- Lux value: work area (approx. 400 Lux)
- Time setting channel 1: 5 min.
- Time setting channel 2: 60 min.
- Fully-automatic mode

Connecting mains voltage

An initialisation phase (warm-up) starts. This lasts approximately 60 sec. The red LED shows the status of channel 1 = lighting, while the green LED shows the status of channel 2 = HVAC.

Red LED and green LED flash slowly (f = 1Hz) = EEPROM is empty.
Red LED and green LED flash quickly (f = 4Hz) = EEPROM has saved data from the remote control settings. The connected lighting is switched on.

• LED display after warm-up phase

The level of light is below the set light value → the LED is then activated as a display for the motion detector = 2 brief flashes each time motion is detected (red and green LED). The connected lighting is switched on.

NOTE: In operating mode, the red and green LEDs will light up only if they have not been disabled via the LED ON/OFF function on the infrared remote control. When disabled, they will light up only during the warm-up phase and to acknowledge settings programmed with the infrared remote control.

When the ambient lighting level is higher than the default light intensity value → the red LED is disabled. Motion detection is indicated by the green LED only. The connected lighting is switched OFF.

4.1. Operating modes for channel 1 = lighting

Function of "fully automatic" and "semi-automatic"

"Fully automatic" and "semi-automatic" can be selected using the "⊖" key on the infrared remote control.

4.1.1 "Fully automatic" operating mode

The lighting is automatically switched on if the sensor is triggered by motion and the lighting level is below the set value. The light automatically switches off if motion is no longer detected and when the set follow-up time has expired.

FIG. 1

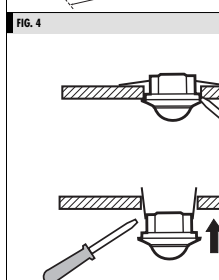
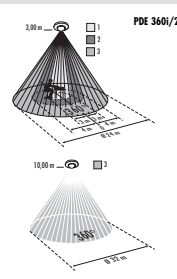
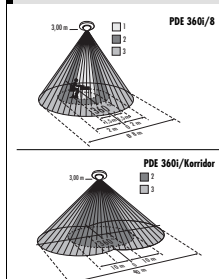


FIG. 2

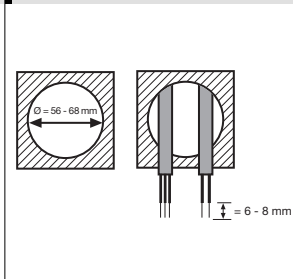


FIG. 3

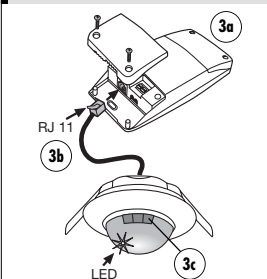


FIG. 4

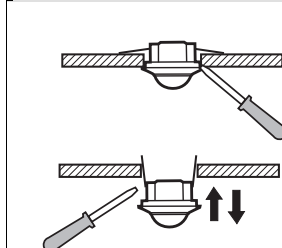


FIG. 5

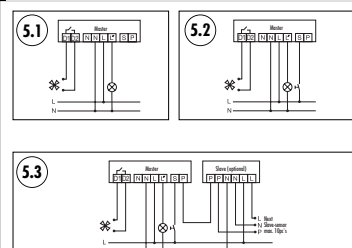


FIG. 8

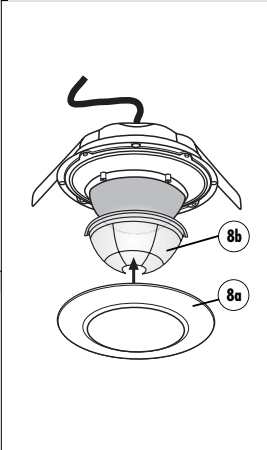


FIG. 6

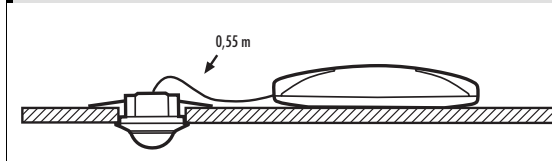
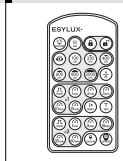


FIG. 7



To avoid sudden changes in the lighting level caused by inadvertent activation/deactivation of the light when the room/area is occupied, the sensor is only triggered with a time delay. For instance: A passing cloud would be able to cause unnecessary activation of the light.

Time delay from "light to dark": 30 sec.
Time delay from "dark to light": 5 min.

Additional manual lighting control in fully-automatic mode

The lighting can be switched on or off at any time using the ⊕ button on the infrared remote control or with the external button (button - operating current - with neutral wire connection) connected to the sensor with the "S" clip (Fig. 5.2). If the artificial light is switched on manually despite the high level of light in the room (surrounding lighting level higher than the set lighting level). The lighting stays on for as long as motion is detected.

When motion is no longer detected the lighting is switched off after the set follow-up time. To ensure effective energy saving, the lighting is automatically switched off after 30 min., even if motion is still detected or the follow-up time is still active. The lighting can then be switched back on manually at any time. If the artificial light is switched on manually it remains switched on for as long as motion is still detected. When no further motion is detected the sensor does not return to the previous setting mode until the follow-up time has expired.

4.1.2. "Semi-automatic" operating mode

If "semi-automatic" operating mode is selected, the lighting must be switched on using the infrared remote control ⊕ or with the external button (button - operating current - with neutral wire connection) connected to the "S"-terminal of the sensor. This means that the sensor cannot be activated by motion.

If the artificial light is switched on manually despite the high level of light in the room (surrounding light higher than the set lighting level) the lighting stays on for as long as motion is detected (lighting level detection is deactivated). When no further motion is detected the lighting is switched off after the set follow-up time has expired. To ensure effective energy saving, the lighting is automatically switched off after 30 min., even if motion is still detected or the follow-up time is still active. The lighting can then be switched back on manually at any time.

If the artificial light is switched on manually and the level of light in the room is low (surrounding light lower than the set lighting level) the lighting stays on for as long as motion is detected (lighting level detection is activated). When no further motion is detected the lighting is switched off after the set follow-up time has expired. If, however, the level of natural light increases and the surrounding lighting level rises above the set lighting level, the sensor automatically switches the lighting off 5 min. after the set lighting level is reached. The lighting can then be switched back on manually at any time.

4.2. Operating modes for channel 2 = HVAC

The HVAC channel (heating, ventilator, air conditioning, etc) is only automatically controlled if the sensor is activated by motion; it is not controlled by the lighting level.

5 • SETTING WITH THE REMOTE CONTROL

All entries made by remote control are saved. If there is a power cut the values are not lost. The remote control Mobil-PDI/MDi (Fig. 7) allows you to set the device conveniently from the ground, without the need for a ladder or tools. To ensure the best reception, the remote control should be pointed towards the presence sensor. Please note that the standard range of approx. 5 m can be substantially affected by direct sunlight, on account of the infrared rays of the sun.

Key	Function
	Signal reception: - The red or green LED flashes for 2 sec. → The signal from the remote control has been understood. - The red or green LED flashes briefly 2 x → The signal from the remote control has not been understood.
🔒	Lock programming mode Programming mode is ended by pressing this key. The detector only reacts automatically in accordance with the set values.
⚠️	NOTE: when programming mode is disabled, only the LIGHT ON/OFF, TEST, RESET and 4 h ON/OFF keys can be used; all other keys are disabled.

Key	Function
🔑	Programming mode open Programming mode is opened with this key. 1. The connected lighting is switched OFF. - Press the ⊕ key; this lighting switches ON/OFF. The red and green LEDs lit continuously, providing the detector is in programming mode. 2. The connected lighting is switched ON. - Press the ⊖ key; this lighting switches OFF. The red and green LEDs lit up continuously, providing the detector is in programming mode. NB: If programming mode is not locked by pressing the key ⊕, the detector automatically doses programming mode if no key is pressed for 10 min. The detector does not react to motion when in programming mode.
📊	Reading in the current lighting level as the value to switch on/off the lighting. • The range of the current lighting level (between 5 - 2000 Lux) can be read in as the activation/deactivation value. Please note: Press the ⊕ key when the programming mode is not locked. Rapid flashing of the LEDs shows that the current lighting level is too high (> 2000 Lux) or too low (< 5 Lux), i.e. the current lighting level cannot be read. 2 Programming options: 1. Programming the current lighting level as the activation value (when the lighting is switched off) Method of programming: When the selected lighting level is reached, press the ⊕ button while the programming mode is not blocked. Confirmation of the signal received: The connected lighting is switched ON/OFF and the red LED flashes slowly. The red LED flashes slowly during the entire programming process. When the activation value is set, the lighting is switched ON. The programming for the deactivation value is then started. ⚠️ Please note: The connected fluorescent lights are switched on for 5 min. until they have reached their maximum output. When the programming process has been successfully completed, the lighting is switched OFF and the red LED lights up continuously again. 2. Programming the current lighting levels as the deactivation value (when the lighting is switched on): Method of programming: When the required lighting level is reached, press the ⊖ button while the programming mode is not blocked. Confirmation of the signal received: The connected lighting switches OFF/ON and the red LED flashes slowly. The red LED flashes slowly during the entire programming process. When the activation value is set, the lighting is switched OFF. The activation value is then programmed. This takes 10 sec. When the programming process has been successfully completed, the lighting switches ON and the red LED lights up continuously again.
	When the keys Lighting values (LUX) the signal is confirmed as follows: 1. The connected lighting is switched OFF. - Press the key, the lighting switches ON/OFF. The red LED flashes for 2 sec. 2. The connected lighting is switched ON. - Press the key, the lighting switches OFF/ON. The red LED flashes for 2 sec.
10 Lux	Set activation value (10 Lux)
100 Lux	Set activation value (100 Lux)
250 Lux	Set activation value (250 Lux)
400 Lux	Set activation value (400 Lux)
600 Lux	Set activation value (600 Lux)
800 Lux	Set activation value (800 Lux)
2000 Lux	Set activation value (2000 Lux)

Key	Function
Keypad c1	<p>When the keys "time value" and "test for channel 1" the signal is confirmed as follows:</p> <ol style="list-style-type: none"> The connected lighting is switched OFF. <ul style="list-style-type: none"> Press the key; the lighting switches ON/OFF. The red LED flashes for 2 sec. The connected lighting is switched ON. <ul style="list-style-type: none"> Press the key; the lighting switches OFF/ON. The red LED flashes for 2 sec.
	<p>Short impulse: The detector reacts to motion and to the set value for the lighting level. When the detector is activated by motion, the red LED and the lighting are switched on for 1 sec. and off for 9 sec.</p>
	Set follow-up time (1 min.)
	Set follow-up time (2 min.)
	Set follow-up time (5 min.)
	Set follow-up time (10 min.)
	Set follow-up time (15 min.)
	<p>Test mode: The light value is deactivated. When the detector is activated by motion, the red LED and the connected lighting switch ON for 1 sec. and OFF for 2 sec.</p> <p>NB: Press to quit test mode.</p>
	<p>Lighting ON/OFF</p> <p>By pressing the key the lighting can be switched on at any time in case it was switched off. If you repeat this process the lighting can be switched off (see section for "Manual lighting control", function outline).</p>
Keypad c2	<p>When the "time values" buttons for channel 2 are operated, the signal is confirmed as follows:</p> <ol style="list-style-type: none"> The connected lighting is switched OFF. <ul style="list-style-type: none"> Press the button; the lighting switches ON/OFF. The green LED flashes for 2 sec. The connected lighting is switched ON. <ul style="list-style-type: none"> Press the button; the lighting switches OFF/ON. The green LED flashes for 2 sec.
	Channel 2 for HVAC control (floating output contact)
	<p>Short impulse: The sensor only responds to motion and is not controlled by the lighting level. When the detector is activated by motion, the green LED and channel 2 is activated for 5 sec. and then deactivated for 5 sec.</p>
	Set follow-up time (1 min.)
	Set follow-up time (5 min.)
	Set follow-up time (15 min.)
	Set follow-up time (30 min.)
	Set follow-up time (60 min.)
	<p>Resetting</p> <ul style="list-style-type: none"> If you press the key when programming mode is open, the information is deleted in EEPROM and the sensor operates according to the factory settings. If you press the key when programming mode is locked, the lighting switches OFF and the sensor is in preset mode.
	<p>Switching between "fully automatic" and "semi-automatic" mode</p> <p>To switch between "fully automatic" mode and "semi-automatic" mode, the programming mode must not be locked. Fully automatic = press key; the red LED flashes for approx. 3 sec. Semi-automatic = press key; the green LED flashes for approx. 3 sec.</p>
	<p>LED ON/OFF</p> <p>Pressing the key in open programming mode allows the red and green LEDs to be deactivated or activated.</p> <p>The signal is also confirmed by the lighting as follows:</p> <ol style="list-style-type: none"> The connected lighting is switched OFF. <ul style="list-style-type: none"> Press the key; the lighting switches ON/OFF. The connected lighting is switched ON. <ul style="list-style-type: none"> Press the key; the lighting switches OFF/ON. <p>Function: Deactivate LEDs:</p> <ul style="list-style-type: none"> Press the key. The red LED and the green LED are switched OFF for 2 seconds. The LEDs are now deactivated and only work in the warm-up phase and when programming mode is open as a confirmation display. <p>Function: Activate LEDs:</p> <ul style="list-style-type: none"> Press the key. The red LED and the green LED flash for 2 seconds. The LEDs are now once again active in operating mode.
	<p>Maintained lighting 4 h ON/OFF for channel 1 = lighting</p> <p>If the lighting is OFF, it can be switched on at any time for a duration of 4 hours by pressing the key. Press this key again to switch the 4 hour-lighting OFF. Once the 4 hours have expired, the detector will switch back to the corresponding set operating mode. You can interrupt the 4 h ON/OFF feature before the 4 hours have expired by pressing the key.</p> <p>Notes: the detector no longer enables the 4 h ON/OFF feature when movement is detected and is not controlled by the light intensity value.</p>

8 • PRACTICAL ADVICE

Fault	Cause
Lighting does not switch on or lighting switches despite motion and darkness	<ul style="list-style-type: none"> Lighting value is set too low Sensor set to semi-automatic mode Lighting was switched off manually Person is not in the field of detection Obstacle(s) affect(ed) detection Set follow-up time too short
Lighting switches on if motion is detected, even if the lighting level is sufficient	<ul style="list-style-type: none"> Lighting value is set too high Lighting has been recently operated manually Detector is in test mode
Lighting does not switch off or lighting switches on, even if there is no motion	<ul style="list-style-type: none"> Wait for follow-up time Thermal disturbance in field of detection: Patio heaters, halogen flood light/light bulb, moving objects (e.g. curtains at an open window), load (series connection unit relay) not suppressed
Pushbutton switch does not work	<ul style="list-style-type: none"> Device used in start phase or lighting key used without neutral wire connection Key not fed onto "S" clip
Light constantly switches ON and OFF in the warm-up phase	<ul style="list-style-type: none"> Too much artificial light on the detector Increase lighting value or reposition detector
Device does not react	<ul style="list-style-type: none"> Check mains voltage

9 • ESYLUX WARRANTY

ESYLUX products are tested in accordance with applicable regulations and manufactured with the utmost care. The duration of the warranty is based on statutory guidelines. The warranty can only be honoured if the appliance is sent back with the receipt, unchanged, packed and with sufficient postage to ESYLUX GmbH or to the relevant distributor in your country. (Visit www.esylux.com for a complete overview.) Please include a brief written description of the fault with any device you send back. If the warranty claim proves justified, ESYLUX GmbH will, within a reasonable period, either repair the device or replace it. If a claim is unfounded (e.g. because the warranty has expired or the fault is not covered by the warranty), then ESYLUX GmbH will attempt to repair the device for you in a cost-effective manner. The warranty does not apply to natural wear and tear, changes caused by environmental factors or damage in transit, nor to damage caused as a result of failure to follow the installation or user instructions. Any batteries or bulbs supplied with the device are not covered by the warranty. ESYLUX GmbH shall not be liable for any indirect, consequential or financial losses.

• TECHNICAL DATA

OPERATING TEMPERATURE RANGE	-25 °C...+55 °C
CASING	UV stabilised polycarbonate
APPROX. DIMENSIONS	<p>PDE 360i/8</p> <p>sensor: height 59 mm Ø 100 mm, Powerbox: width 58 mm height 27 mm, depth 122 mm</p> <p>PDE 360i/24, PDE 360i/KORRIDOR</p> <p>sensor: height 72 mm Ø 100 mm, Powerbox: width 58 mm height 27 mm depth 122 mm</p>
COLOUR	white, similar to RAL 9010

Technical and design features may be subject to change.

• TECHNICAL DATA

MAINS VOLTAGE	230 V ~ 50 - 60 Hz
FIELD OF DETECTION	360°
RANGE	<p>PDE 360i/8 PDE 360i/24 PDE 360i/KORRIDOR</p> <p>approx. 8 m in diameter at an installation height of approx. 3 m approx. 24 m in diameter at an installation height of approx. 3 m approx. 40m in diameter at an installation height of approx. 3 m</p>
SETTINGS	electronically using infrared remote control (accessory)
CHANNEL 1 = LIGHTING BREAKING CAPACITY	<p>230 V ~ 50 - 60 Hz, 2300 W / 10 A (cos φ = 1), 1150 VA / 5 A (cos φ = 0,5)</p> <p>EVG: 30 x (1 x 18 W) 20 x (2 x 18 W) 25 x (1 x 36 W) 15 x (2 x 36 W) 20 x (1 x 58 W) 10 x (2 x 58 W)</p>
FOLLOW-UP TIME	impulse / approx. 1 min. - 15 min.
LIGHT EXPOSURE RANGE	5 - 2000 Lux
LIGHT MEASURING	mixed light
INPUT BY PUSHBUTTON SWITCH	yes
KANAL 2 = HLK KONTAKT MAXIMUM BREAKING CAPACITY	floating output 230 V ~ / 2 A, 24 V = / 2 A 100 W / 460 VA
FOLLOW-UP TIME	impulse / approx. 1 min. - 60 min.
SLAVE INPUT	yes
PROTECTION TYPE	IP 20 - Powerbox IP 44 - sensor
PROTECTION CLASS	II
TEST SYMBOL	TÜV Süd

6 • COLOURS

The presence detector is shipped as standard in white. The cover (fig. 8a) can be removed and painted a specific colour to meet customer requirements or replaced by a silver cover (accessories).

7 • LENS MASK

Use the lens mask provided (fig. 8b) (half shell) to mask specific areas of detection.