## theben

## EN Motion detector

thePiccola S360-100 DE 1060200

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## 1. Basic safety information



- The device conforms with EN 60669-2-1 if correctly installed


## 2. Proper use

- Motion detector for automatic lighting control dependent on presence and brightness
- Suitable for ceiling installation (false ceilings)
- Suitable for small rooms, corridors, toilets, etc.


## Disposal

> Dispose of the device in an environmentally sound manner (electronic waste)

## 3. Device description

Sensor unit
2 potentiometers for setting the time delay (TIME) and the brightness switching value (LUX)
red LED


Power supply unit

## 4. Installation and connection

## Installing the motion detector

(i) Installation height: 2-4 m
(i) Cable length: 45 cm
(1) Motion detector requires clear line of sight to people
> Disconnect power source
> Create a ceiling opening of $\emptyset 34$ - 36 mm
> Connect power supply unit according to the wiring diagram
> Make settings at the potentiometers
> Push the power supply unit through the ceiling opening and attach the sensor with tensioned springs in the ceiling



## Connecting the motion detector


> Disconnect power source
> Ensure device cannot be switched on
> Check absence of voltage
> Earth and bypass
> Cover or shield any adjacent live components
The warm-up phase takes approx. 1 min. The LED is permanently red.

## Individual switching

In individual switching, the motion detector as master detects presence and brightness and controls lighting.


## Master-Slave switching



If the detection area covered by a single motion detector is insufficient (in large rooms), then several detectors can be operated in parallel by connecting the S and L ' terminals. Presence detection is performed by all detectors together. The master measures the brightness and controls the lighting. The other detectors (slaves) only provide presence information via the L' terminal.
> At the slave devices, set the potentiometers for the brightness switching value (LUX) to and for the time delay (TIME) to 30 s .

## Installation instructions and detection area

As the detector reacts to variations in temperature, avoid the following situations:
> Do not direct motion detectors at objects with highlyreflective surfaces such as mirrors, etc.
> Do not install the motion detector near heat sources, such as heating outlets, air conditioning systems, lamps, etc.
> Do not direct the motion detector at objects that move in the wind, such as curtains, large plants, etc.
> Pay attention to the direction of motion during the test run.

(i) Recommended installation height: 2 - 4 m
(1) Transverse detection area: 8 m (transversal to the detector)
(1) Frontal detection area: 2 m (directly approaching the detector)
(i) Detection angle: $360^{\circ}$

## 5. Walking test

The walking test is used to test the detection area.
> Set the time delay potentiometer (TIME) to T (Test). The motion detector only reacts to movements, brightness measurement is switched off.
> Walk through the detection area. Every detected movement is indicated by the LED, and the light switch contact closes. When no one is present the light switch contact opens after 3 seconds.


## 6. Setting

The motion detector has 2 potentiometers for setting time delay (TIME) and brightness switching value (LUX).


## Setting the brightness switching value (LUX)

You can set different brightness values with the potentiometer for the brightness switching value (LUX).
If you want to change the preset brightness
> Set the potentiometer to the desired brightness (5 - 1000 lux = 次

or want a specific brightness value to be learned using the teach-in function
> At the desired brightness, set the potentiometer to ©. The LED flashes for 20 s , afterwards the measured brightness value is accepted as the new brightness switching value.
> Leave the potentiometer at position ©.


## Brightness measurement

The motion detector measures the surrounding brightness below the detector. The installation location is the reference
point for the lighting level. The light measurement is switched off when the light switch contact closes.
(i) The brightness measurement value is influenced by the installation location, incidence of light, position of the sun, weather conditions, the reflection properties of the room, and the furniture. Therefore, the lux values are guide values.

## Setting the time delay (TIME)

If the motion detector detects no further movement, it switches off after the set time delay.
If you want to change the preset time
> Set the potentiometer to the desired time ( $30 \mathrm{~s}-30 \mathrm{~min}$ ).


If you want to use the pulse function (e.g. for a staircase light timer switch)
> Set the potentiometer to $\_$. Presence detector for „staircase light timer switch" operation is on for 0.5 s and off for 10 s


## 7. Technical data

| Operating voltage | 110-240 V AC +10 \% / - 15 \% |
| :---: | :---: |
| Frequency | $50-60 \mathrm{~Hz}$ |
| Upstream protection device | 10 A |
| Standby output | $<0.5 \mathrm{~W}$ |
| Switching capacity max. | $10 \mathrm{~A}($ at $240 \mathrm{VAC}, \cos \varphi=1)$ |
| Switching capacity min. | $100 \mathrm{~mA} / 24 \mathrm{~V} \mathrm{AC/DC}$ |
| Protection rating | IP 21 (sensor unit), IP 20 (power supply unit) in accordance with EN 60529 |
| Protection class | II |
| Operating temperature | $-20^{\circ} \mathrm{C} \ldots+50^{\circ} \mathrm{C}$ |
| Brightness setting range | $5-10001 \mathrm{x}$ |
| Duty cycle range | $30 \mathrm{~s}-30 \mathrm{~min}$ |
| Detection angle | $360^{\circ}$ |
| Detection area | transversal: min. $8 \mathrm{~m}(+/-1 \mathrm{~m})$; frontal: min. 2 m (+/ - 1 m ) |
| Max. cable length | 50 m |
| Installation height | 2-4m |
| Contact | $\mu$ contact $240 \mathrm{~V} \mathrm{AC} \mathrm{(NO} \mathrm{contact)}$ |
| Incandescent lamp load | 2000 W |
| Halogen lamp load | 2000 W |
| ```Fluorescent lamps (LLB low-loss ballasts): uncompensated series compensated parallel compensated``` | $\begin{aligned} & 2000 \text { VA } \\ & 2000 \text { VA } \\ & 1300 \mathrm{~W}(140 \mu \mathrm{~F}) \\ & \hline \end{aligned}$ |
| Fluorescent lamps (EB - Electronic Ballasts) | 1200 W |
| Compact fluorescent lamps (EB) | 300 W |
| LED lamps (< 2 W ) | 55 W |
| LED lamps (2 W - 8 W ) | 180 W |
| LED lamps (> 8 W ) | 200 W |

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