

## Description



5 years  
guarantee\*

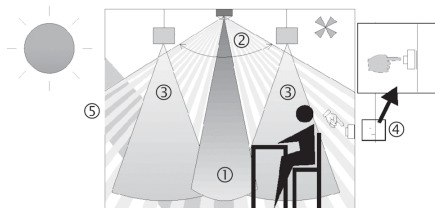


- KNX Passive infrared presence detector for ceiling mounting
- Square detection range of 360° (up to 64 m<sup>2</sup>) for safe and easy planning
- 2 channel light C1, C2 with 1 light measurement
- 2 presence channels C4, C5 can be set individually
- Adaptable 1 channel light measurement
- Mixed light measurement suitable for LEDs, fluorescent lamps (FL/PL/ESL) and halogen/incandescent lamps
- Can be used as fully or semi-automatic, switchable
- Switch or constant light control mode with stand-by function
- Dimmable lighting in switch mode with stand-by function
- Brightness switching value or set point value can be set in lux using parameters, on the device itself or via remote control
- Teaching in of the brightness switching value or the set point value
- Room correction factor setting for brightness measurement calibration
- Light time delay can be set using parameters, on the device itself or via remote control
- Switch on delay and time delay for presence can be set
- Detection sensitivity can be set
- Self-learning time delay
- Reduced time delay in the event of a shorter stay in the room (short presence)
- Scenario functions
- Extremely easy setting of energy saving characteristics with the new "eco plus" function
- Test mode for checking function and detection range
- Parallel switching of several detectors in Master/Slave or Master/Master possible
- User remote control and management-remote control (optional)
- Room monitoring
- \* According to warranty terms and conditions, see [www.theben.de/en/guarantee](http://www.theben.de/en/guarantee)

## Technical data

Operating voltage KNX	Bus voltage, ca. 8 mA
Recommended installation height	2 – 3 m
Minimum height	> 1,7 m
Setting range brightness	5 – 3000 lx
Detection angle	360°
Type of connection	Spring terminals WAGO 243
Installation type	Ceiling installation
Light switch-off delay	30 s – 60 min
Lamps	Energy saving lamps, fluorescent lamps, Incandescent/halogen lamps, LEDs
Light measurement	Mixed light measurement
Presence switch-off delay	10 s - 120 min
Switch-on delay presence	10 s – 30 min / inactive
Ambient temperature	+0 °C ... +50 °C
Colour	Grey
Type of protection	IP 40 (when fitted)

## Description



- 1 Mixed light measurement
- 2 Presence detection
- 3 Artificial light
- 4 Push button for manual lighting control
- 5 Incident daylight

### Light channel C1, C2

The presence detector detects people present based on the smallest movements. Its light sensor simultaneously measures the brightness in the room and can thus steplessly control the lighting or switch it on and off according to the daylight. The light outputs can be dynamically faded up and down by the integrator. The brightness switching value or set point value can be done via parameters, object or the management remote control.

#### Switching

The lighting switches on with presence and insufficient brightness, and off with absence or sufficient brightness. Manual switching or dimming can be performed with a push button.

#### Constant light control

When constant light control is active, the brightness is held constant at the set point value. The control is started fully automatically or manually via push button or remote control. Manual switching off, dimming and scenes stop control for as long as the presence continues.

#### Time delay

The minimum time delay can be set for all light channels in the range of 30 seconds to 60 minutes. It adjusts automatically to the user's behaviour and can increase independently to 30 min or reduce back to the set minimum time. With settings  $\leq 2$  min or  $\geq 30$  min the time delay remains unchanged at the set value. If someone goes into an unoccupied room only briefly and leaves it within 30 seconds, then the light shuts off prematurely after 2 minutes (short-term presence).

#### Stand-by

The stand-by function acts as an orientation light. After the time delay expires, the lighting is set to the stand-by dimming value (1 - 25%). The stand-by time can be set between 30 s and 60 min or permanently. The lighting switches off if the brightness level in the rooms exceeds the brightness switching value / set point value. The lighting switches to the standby dimming value independently if the room brightness falls below the brightness switching value / set point value. The stand-by function can be activated or locked via an object. In conjunction with a time switch, this allows energy-saving solutions to be implemented.

#### Push button control

The lighting can be manually switched or dimmed at any time via a push button. If the light is switched on manually, the light will remain on during switching operation for at least 30 minutes provided people are present. It then switches off when there is enough brightness. The light is forced off after a preset time delay if the room was (previously) vacated. If artificial lighting is switched off manually, the lighting remains switched off as long as the room is occupied. The lighting switches again automatically after the time delay has expired.

#### Fully or semi-automatic

Lighting control via the presence detector operates fully automatically for increased comfort or semi-automatically for greater energy savings. In „fully automatic“ the lights switch on and off automatically. Light switching has to be completed manually in „semi-automatic mode“. The lighting is switched off automatically.

#### Exceptionally easy configuration of the energy-saving behaviour

By selecting „eco“ for optimal switching behaviour or „eco plus“ for maximum energy saving, users can adjust the presence detector to their requirements very easily.

### Presence channel C4, C5

The presence channels are typically used for HVAC control. According to the selection, a telegram will only be sent due to presence, completely independently of the brightness and after expiry of the switch-on delay. After every telegram, the time delay will be restarted on every movement. Push buttons do not influence the presence channel.

#### Switch-on delay

The switch-on delay prevents instantaneous switch on. The telegram is sent only on expiry of the switch-on delay, provided that people are present at this time.

#### Time delay

The time delay enables delayed switching off of HVAC devices and systems after the room is vacated.

#### Room monitoring channel C6

In the room monitoring channel the sensitivity of the presence detection is reduced. A telegram is only sent when a significant movement occurs and indicates the presence of people with a high degree of certainty. A separate time delay is available for the room monitoring.

### Detection range

The square detection area of the presence detector guarantees accurate and simple planning. Square detection areas make it possible to cover a whole room with parallel switching. Note that seated and moving persons can be detected in differently-sized areas. The recommended installation height is 2.0 m – 3.0 m. The sensitivity of the presence detector decreases with higher installation heights. Walking motions are necessary from installation heights of 3.0 m and the detection areas of several detectors should overlap in the marginal zones.

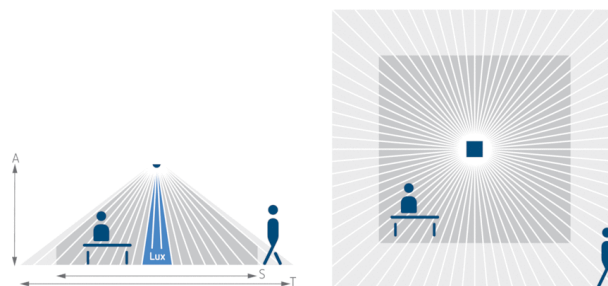
#### Seated persons:

The presence detector reacts very sensitively to the slightest movements. The details relate to the reduced detection area for movements at table height (approx. 0.80 m). The detection sensitivity is reduced from an installation height of > 3.0 m. More pronounced movements are required for clear detection.

#### Moving persons:

Use of the whole detection area with low tolerance in marginal area (+/- 0.5 m).

Mounting height (A)	Sitting (S)	Walking (T)
2 m	9 m²   3 m x 3 m	20 m²   4,5 m x 4,5 m ± 0,5 m
2,5 m	16 m²   4 m x 4 m	36 m²   6 m x 6 m ± 0,5 m
3 m	25 m²   5 m x 5 m	49 m²   7 m x 7 m ± 1 m
3,5 m	–	64 m²   8 m x 8 m ± 1 m



## Brightness Measurement

The presence detector measures artificial and natural light (opening angle for each approx.  $\pm 30^\circ$ ). The installation site is a reference point for the lighting level. The brightness measurement can be adapted to the conditions in a room with the room correction factor. The use of the following light measurements is recommended: The light measurement area maps a rectangle of about 2 x 3.5 m at table height. During installation this rectangle can be adjusted with the help of the marking „window“ / „inside“ on the base plate.

### Switching

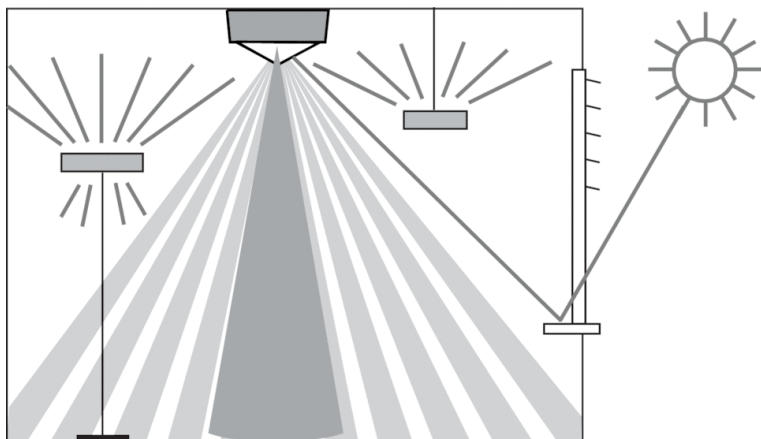
Direct light influences the light measurement. The placement of the floor lamps or suspended lighting directly below the detector is to be avoided.

### Constant light control

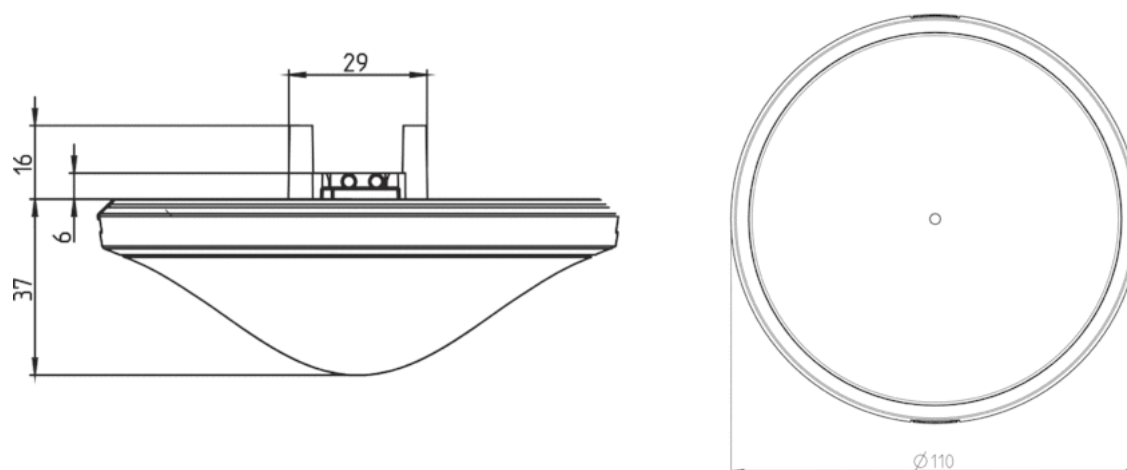
The detector must be positioned in such a way that it only detects artificial light that it itself controls. Artificial light that is controlled by other detectors or manually switched work lighting influence the brightness measurement of the detector. Direct artificial light on the detector must be avoided.

### Suitable lamps

The presence detector is designed for the operation of fluorescent lamps, compact fluorescent lamps, halogen/incandescent lamps and LEDs.



## Scale drawings



## Accessories

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### Surface frame 110A GR

- Article number: 9070913  
[Details ► www.theben.de](http://www.theben.de)



### Surface frame 110B GR

- Article number: 9070919  
[Details ► www.theben.de](http://www.theben.de)



### SendoPro 868-A

- Article number: 9070675  
[Details ► www.theben.de](http://www.theben.de)



### theSenda P

- Article number: 9070910  
[Details ► www.theben.de](http://www.theben.de)



### theSenda S

- Article number: 9070911  
[Details ► www.theben.de](http://www.theben.de)



### Ceiling installation box 73A

- Article number: 9070917  
[Details ► www.theben.de](http://www.theben.de)



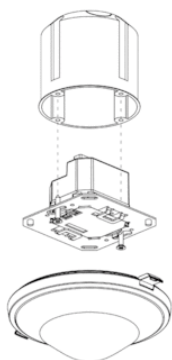
### QuickSafe

- Article number: 9070531  
[Details ► www.theben.de](http://www.theben.de)



## Installation type

UP



### Flush-mounted installation

The flush-mount installation of the detector is done using a standard UP (flush-mount) installation socket Size 1.

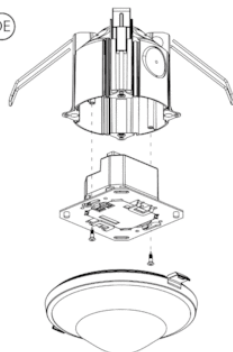
### Ceiling installation

A ceiling installation unit is available for a simplified ceiling installation of the detector (see accessories). This ensures strain relief and contact protection at the same time. The installation diameter is 72 mm (drill diameter 73 mm).

### Surface-mount installation

A suitable surface-mount frame is available for surface installation (see accessories).

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AP

