

## Description

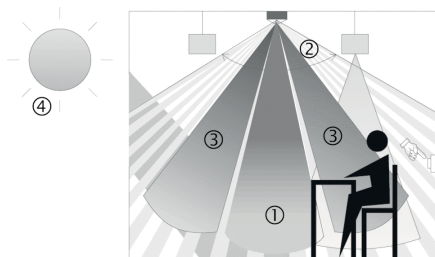


- KNX Passive infrared presence detector for ceiling mounting
- Round detection area 360°, up to Ø 24 m (452 m<sup>2</sup>)
- 2 channel light and 2 channel presence
- 2 channel light C1, C2 with 1 light measurement
- 2 presence channels can be parametrized individually
- Adaptable 1 channel light measurement
- 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
- Reduced time delay in the event of a shorter stay in the room (short presence)
- Scenario functions
- Test mode for checking function and detection range
- Sensitivity adjustable
- Detection area can be limited using cover clip
- Manual override using telegram or remote control
- Parallel switching of several detectors in Master/Slave or Master/Master possible
- Ceiling installation in flush-mounted socket
- Ceiling installation also possible with surface-mounted frame
- User remote control and management-remote control (optional)

## Technical data

Operating voltage KNX	Bus voltage
Installation height	2 – 10 m
Minimum height	> 1,7 m
Setting range brightness	30 – 3000 lx
Detection angle	360°
Type of connection	KNX bus terminal
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	-15 °C ... +50 °C
Detection range	452 m <sup>2</sup> (Ø 24 m   360°)
Colour	White
Type of protection	IP 54 (when fitted)

## Description



- 1 Mixed light measurement
- 2 Presence detection
- 3 Artificial light
- 4 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.

### 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.

## Detection range

The circular detection area of the Ronda presence detector covers a large detection area and permits a good room coverage with many applications. Note that seated and moving persons can be detected in differently-sized areas. The recommended installation height is 2.0 m – 6.0 m. As installation height increases, the sensitivity of the presence detector decreases. Walking motions are necessary from installation heights of 3.5 m, and the detection areas of several detectors should overlap in the marginal zones. The detection range is reduced as the temperature increases.

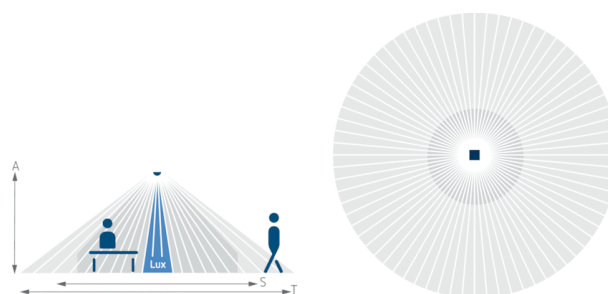
### Seated persons

The details relate to smallest movements at table height (approx. 0.8 m).

### Moving persons

At installation heights between 5 and 10 m, the extent and distance between the active and passive zones increase.

Mounting height (A)	Sitting (S)	Diagonally (T)
2 m	16 m²   4,5 m	380 m²   22 m
2,5 m	24 m²   5,5 m	415 m²   23 m
3 m	28 m²   6 m	452 m²   24 m
3,5 m	38 m²   7 m	452 m²   24 m
6 m	–	452 m²   24 m
10 m	–	491 m²   25 m



## Brightness Measurement

The presence detector measures artificial light and daylight that is reflected below the detector. The light measurement area maps a rectangle of about 2 x 3.5 m at table height. The installation location is the reference point for the lighting level. If the brightness measurement is deactivated, the light channel only switches depending on the presence.

### Switching

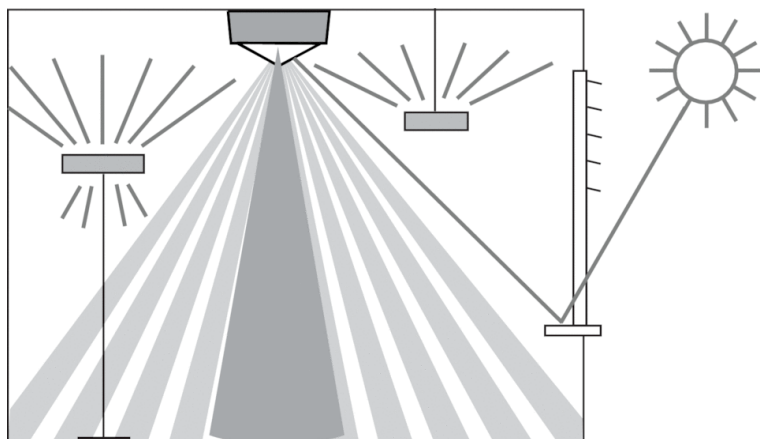
Direct light influences the light measurement. The placement of the floor lamps or suspended lighting directly below the detector is to be avoided.

### Constant light control

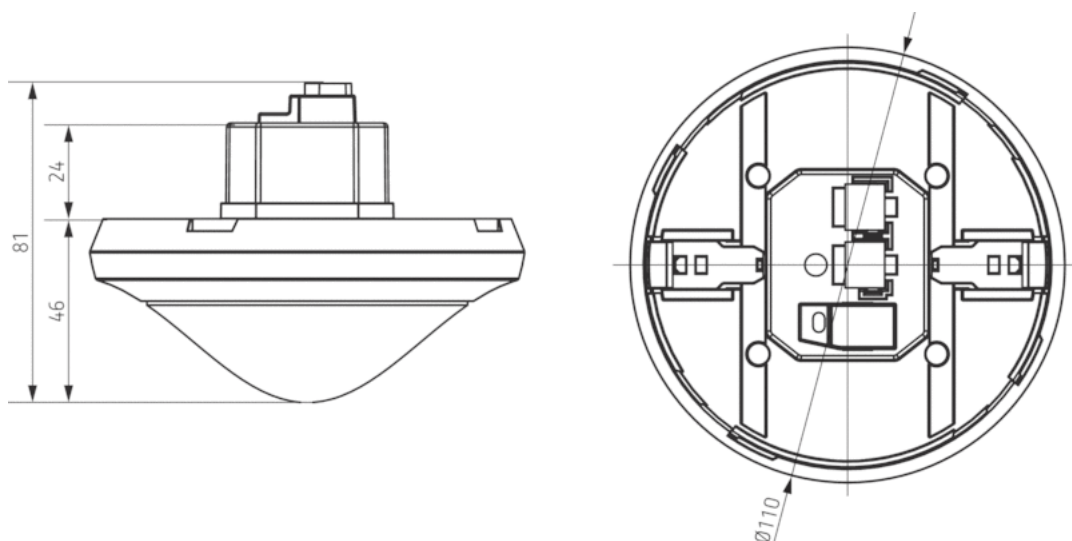
The detector must be positioned in such a way that it only detects artificial light that it controls itself. Artificial light that is controlled by other detectors, or manually switched work lighting, influence the brightness measurement of the detector. Direct artificial light on the detector must be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

### Suitable lamps

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



## Scale drawings



## Accessories

### Surface frame 110A WH

- Article number: 9070912  
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)



### Masking clip

- Article number: 9070921  
Details ► [www.theben.de](http://www.theben.de)



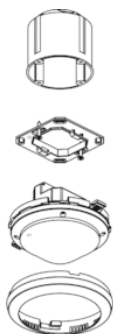
### QuickSafe

- 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.

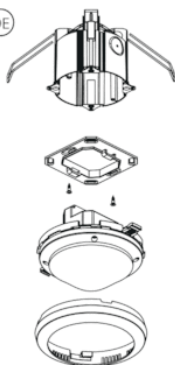
### Ceiling installation

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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