

## Description

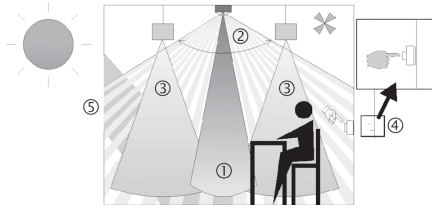


- Passive infrared presence detector for ceiling mounting
- Round detection area 360°, up to Ø 24 m (452 m<sup>2</sup>)
- Automatic presence- and brightness-dependent control for lighting and HVAC
- Mixed light measurement suitable for fluorescent lamps (FL/PL/ESL), halogen/incandescent lamps and LEDs
- Channel A, light: relay, 230V
- Choice of fully or semi-automatic operation
- Adjustable brightness switching value, teach-in function
- Reduction of switch-off delay time in the event of short presence (brief-presence)
- Connection option for sensors or switches for manual switching with automatic recognition of sensor/switch
- Pulse function for staircase light time switch
- Channel H, presence: relay, floating
- e.g. for HVAC control
- Switch-on delay and switch-off delay configurable
- Sensitivity adjustable
- Detection area can be limited using cover clip
- Ready for immediate use due to factory preset
- Test mode for checking function and detection area
- Ceiling installation in flush-mounted socket
- Ceiling installation also possible with surface-mounted frame
- User remote control theSenda S, management remote control SendoPro (optional)

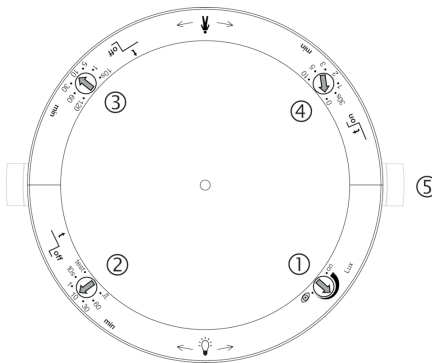
## Technical data

Operating voltage	110 – 230 V AC
Frequency	50 – 60 Hz
Installation height	2 – 10 m
Minimum height	> 1,7 m
Installation type	Ceiling installation
Light measurement	Mixed light measurement
Setting range brightness	30 – 3000 lx
Light switch-off delay	10 s - 60 min
Lamps	Incandescent/halogen lamps, fluorescent lamps, Energy saving lamps, LEDs
Incandescent/halogen lamp load	2300 W
Compact and fluorescent lamps	1150 VA (cos φ = 0,5)
LED lamp < 2 W	60 W
LED lamp 2-8 W	180 W
LED lamp > 8 W	200 W
Switch-on delay presence	0 s – 10 min
Presence switch-off delay	10 s - 120 min
Switching capacity presence	50 W/50 VA
Type of connection	Screw terminals
Max. cable cross section	max. 2 x 2,5 mm <sup>2</sup>
Size of concealed housing	Ø 55 mm (NIS, PMI)
Ambient temperature	-15 °C ... +50 °C
Type of protection	IP 54 (when fitted)

## Description



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



- 1 Desired brightness level (Lux)
- 2 Lighting switch-off delay time
- 3 Presence switch-off delay
- 4 Switch-on delay presence
- 5 Mechanical safety lock

### Light channel

Switching response is controlled by presence and brightness. The switch contact closes during darkness and when someone is present. It opens with a delay when there is brightness or when no one is present.

#### Time delay

The minimum switch-off delay (10 s - 60 min) is adjustable. 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).

#### Push button control

The lighting can be manually switched at any time via a push button or switch. If the light is switched on manually, it will remain on for at least 30 minutes providing people are present. It then switches off when the brightness is adequate. 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 always switched off automatically.

#### Pulse function

Time delay can be set to pulse for controlling existing staircase light timer switch. The light output produces a pulse of 0.5 seconds duration every 10 seconds if people are present or it is dark.

### Channel presence

Channel presence is used for HVAC control. The switching response of the floating contact is influenced only by presence and not by brightness. If the contact is closed, the time delay will be restarted at every movement. The contact is not influenced by the push button or switch.

#### Switch-on delay

The switch-on delay prevents instantaneous switch on. The contact closes only on expiry of the switch-on delay, providing people are constantly present.

#### Time delay

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

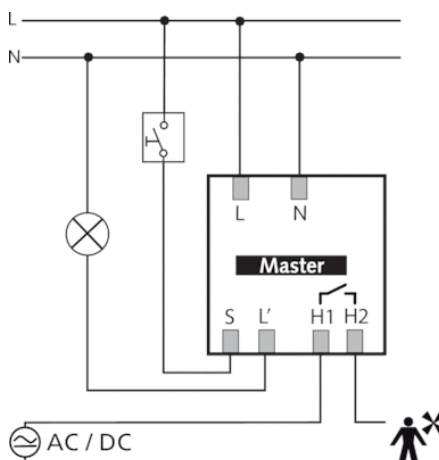
## Connection example

### Switching

The presence detectors can be operated as a master in individual switching. Several push buttons can be connected to one control input. Illuminated push buttons can only be used with neutral conductor connection.

### Single unit operation

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



## Detection range

The circular detection area of theRonda 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.

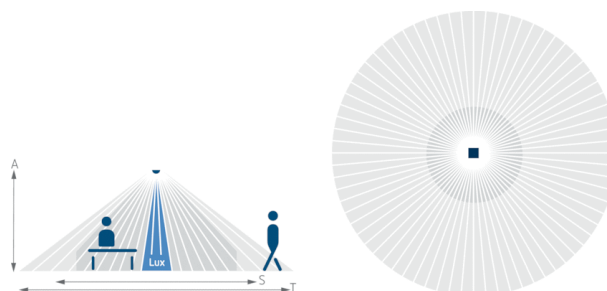
### Seated persons

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 m <sup>2</sup>   4,5 m	380 m <sup>2</sup>   22 m
2,5 m	24 m <sup>2</sup>   5,5 m	415 m <sup>2</sup>   23 m
3 m	28 m <sup>2</sup>   6 m	452 m <sup>2</sup>   24 m
3,5 m	38 m <sup>2</sup>   7 m	452 m <sup>2</sup>   24 m
6 m	–	452 m <sup>2</sup>   24 m
10 m	–	491 m <sup>2</sup>   25 m

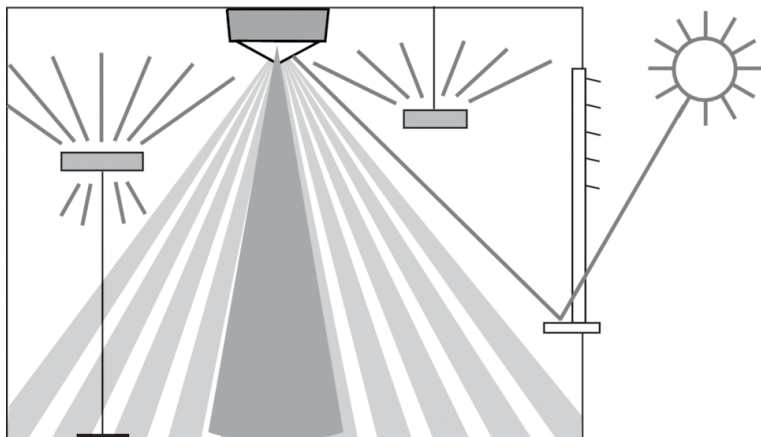


## Brightness Measurement

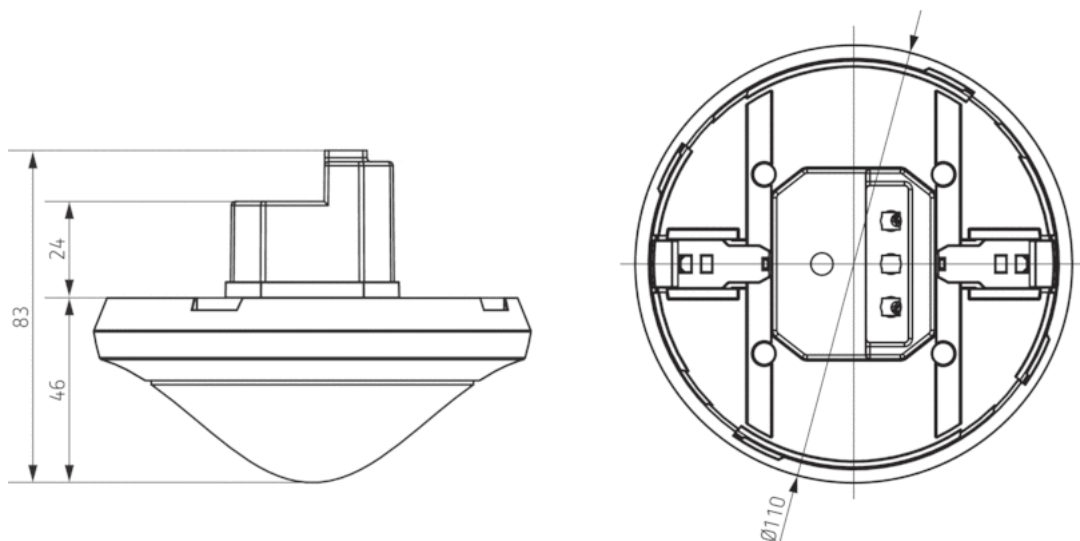
The presence detector measures artificial light and daylight that is reflected directly below the detector. The light measurement area maps a rectangle of about 2 x 3.5 m at table height. The installation location is a reference point for the lighting level. Direct light influences the light measurement. Avoid placing floor lamps or suspended lighting directly below the detector. If the brightness measurement is deactivated, the light channel only switches depending on the presence (brightness switching value set to „lux on“ via potentiometer or set to „measurement off“ via the remote control).

### Suitable lamps

The presence detector is designed for the operation of fluorescent lamps, compact fluorescent lamps, halogen/incandescent lamps and LEDs. The maximum number of switchable lights is restricted due to the high inrush current levels of the EBs and LED drivers. The use of an external contactor helps with large loads. All switched loads must be properly suppressed.



## 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)



Article number: 2080005

**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**

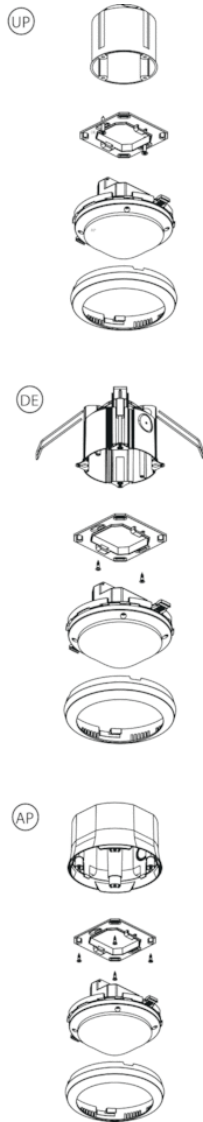
- Article number: 9070531  
 Details ▶ [www.theben.de](http://www.theben.de)



**Product selection**

Installation type	Channel	Operating voltage	Colour	Type	Article number
Ceiling installation	Light   Presence	110 – 230 V AC	White	theRonda P360-101 UP WH	2080005
Ceiling installation	Light   Presence	110 – 230 V AC	Grey	theRonda P360-101 UP GR	2080006

## Installation type



### 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).