

Description



5 years
guarantee*




- Passive infrared presence detector for ceiling mounting
- Square detection area 360° (up to 64 m²) for reliable and easy planning
- 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, 230 V
- Choice of fully or semi-automatic operation
- Adjustable brightness switching value, teach-in function
- Self-learning time delay
- 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
- Room monitoring with selective movement detection
- Ready for immediate use due to factory preset
- Exceptionally easy configuration of the energy-saving behaviour with the new «eco plus» function
- Test mode for checking function and detection area
- Extension of detection area via Master/Slave or Master/Master switching, a maximum of 10 detectors can be switched in parallel with each other
- Ceiling installation in flush-mounted socket
- Ceiling installation also possible with surface-mounted frame
- User remote control theSenda S, management remote control SendoPro (optional)
- * According to warranty terms and conditions, see www.theben.de/en/guarantee

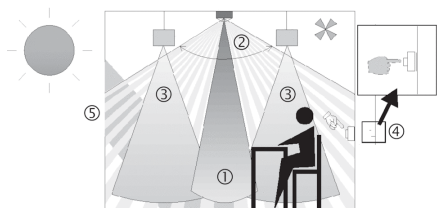
Technical data

Operating voltage	230 V AC ± 10 %
Frequency	50 Hz
Installation height	2 – 3 m
Minimum height	> 1,7 m
Installation type	Ceiling installation
Power consumption	~0,5 W
Light measurement	Mixed light measurement
Setting range brightness	5 – 3000 lx
Light switch-off delay	10 s – 60 min
Type of contact light	Relay 230 V/10 A µ-contact
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)
Inrush current	max. 400 A / 200 µs
Compact and fluorescent lamps (Number of electronic ballasts)	16 x 54/58 W, 24 x 35/36 W, 8 x 2 x 54/58 W, 12 x 2 x 35/36 W
LED lamp < 2 W	25 W
LED lamp 2-8 W	70 W
LED lamp > 8 W	80 W

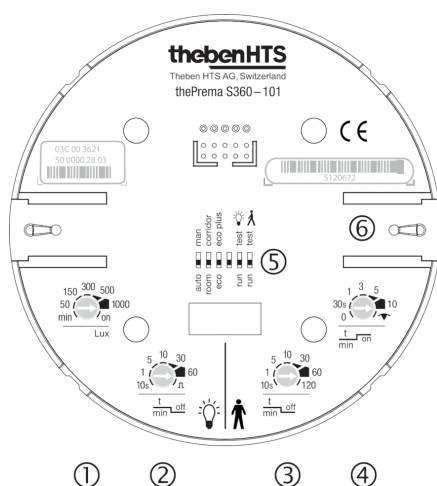
Article number: 2070505

Switch-on delay presence	0 s – 10 min / Room surveillance
Presence switch-off delay	10 s – 120 min
Type of contact presence	Relay potential-free
Switching capacity presence	50 W / 50 VA (max. 2 A), min. 0,5 mV / 10mA
Type of connection	Screw terminals
Max. cable cross section	max. 2 x 2,5 mm ²
Size of concealed housing	Ø 55 mm (NIS, PMI)
Ambient temperature	+0 °C ... +50 °C
Type of protection	IP 40 (when fitted)
Conformity to type CE 	This device complies with the protection regulations of the EMC directives 2004/108/EC and of the Low Voltage directive 2006/95/EC.

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 DIP-switches
 - DIP1 fully / semi-automatic
 - DIP2 Staircase light function: room/corridor
 - DIP3 eco/eco plus
 - DIP5 Light test: normal operation/test
 - DIP6 Presence test: normal operation/
Walking test
- 6 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. It adjusts automatically to the user's behaviour and can increase independently to 30 minutes or reduce back to the set minimum time. With settings ≤ 2 mins or ≥ 30 mins 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 (brief-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, the light will remain on for at least 30 minutes providing people are present. It then switches off when the brightness is adequate. The light will go off after a preset time delay if the room is vacated. If artificial lighting is switched off manually, the lighting remains switched off as long as the room is occupied. The lighting switches on again automatically after the switch-off 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.

Staircase light function

The staircase light function can be set to „room“ or „corridor“ using the DIP switch or the SendoPro management remote control. Lighting can be switched on and off manually at any time in the ‚room‘ position. The detector operates as a staircase light control in the ‚corridor‘ setting. Manual switch off is no longer possible.

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.

Pulse function

Time delay can be set to pulse for controlling existing staircase light time switches. In this every 10 seconds the light output produces a pulse of 0.5 seconds duration if people are present or it is dark.

Presence channel

Channel H, presence, is used for HVAC control or room monitoring. The switching behaviour of the floating contact is only influenced by presence and not by brightness. If the contact is closed, the run-on time will be restarted at every movement. Sensors or switches do not influence the contact.

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

Switch-off delay enables delayed switching off of HVAC devices and system after the room is vacated.

Room monitoring

If the switch-on delay is set to monitoring this reduces the sensitivity of the presence switching output. The contact closes with significant movement and indicates the presence of people with a high degree of certainty. The switch-off delay remains active. The switch-on delay is inactive.

Connection example

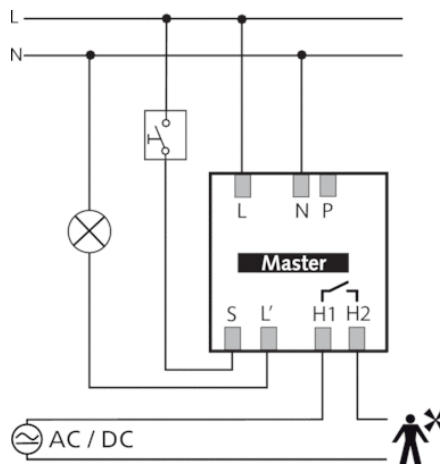
Switching

The presence detectors can be combined as master and slave: master in individual switching, master in parallel switching, master-slave parallel switching.

Several push buttons can be connected to one control input. Illuminated push button switches can only be used with neutral conductor connection.

Single unit operation

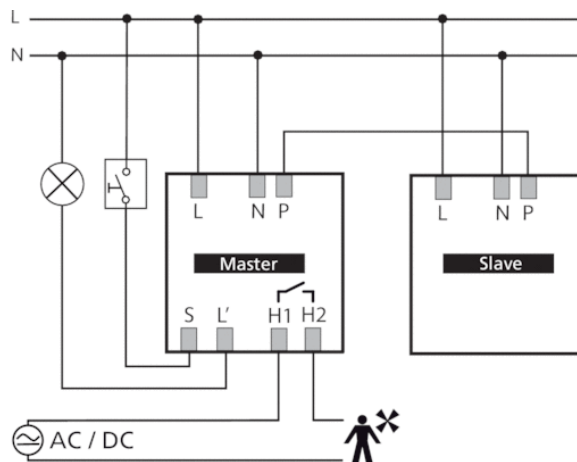
In individual switching, the presence detector as master detects presence and brightness and controls lighting.



Master/slave parallel connection

If the detection area covered by one presence detector is insufficient (larger rooms), then up to 10 detectors can be operated in parallel by connecting P terminals. In the process presence detection is performed by all detectors together. The master measures the brightness, operates the push buttons and controls the lighting. All other detectors are used as slaves. They only provide presence information.

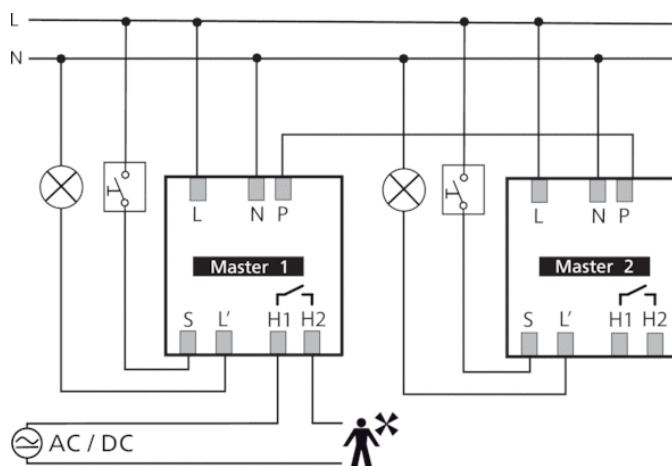
- Light measurement only with the master
- Parameters are only set on the master
- Switch up to 10 detectors in parallel
- Use the phase conductor with the same phase for all detectors



Master-Master parallel switching (for several lighting groups)

Several Masters can be used in parallel switching setup. Each Master controls its lighting group according to its own brightness measurements. Delay times and brightness switching values are set individually on each Master. Presence continues to be detected by all the detectors.

- One Master with individual brightness measurement per lighting group
- Set parameters and DIP switch individually for each Master
- Switch up to 10 detectors in parallel
- Use the phase conductor with the same phase for all detectors
- The presence switch contact can be read by any master



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.

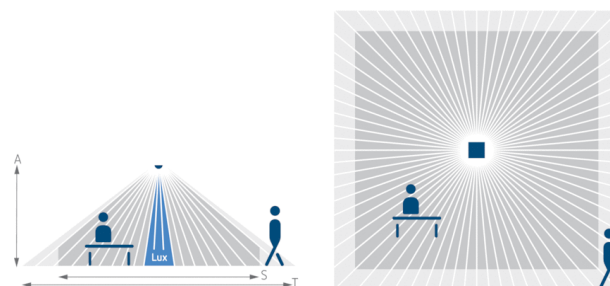
Seated persons:

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 m ² 3 m x 3 m	20 m ² 4,5 m x 4,5 m ± 0,5 m
2,5 m	16 m ² 4 m x 4 m	36 m ² 6 m x 6 m ± 0,5 m
3 m	25 m ² 5 m x 5 m	49 m ² 7 m x 7 m ± 1 m
3,5 m	–	64 m ² 8 m x 8 m ± 1 m

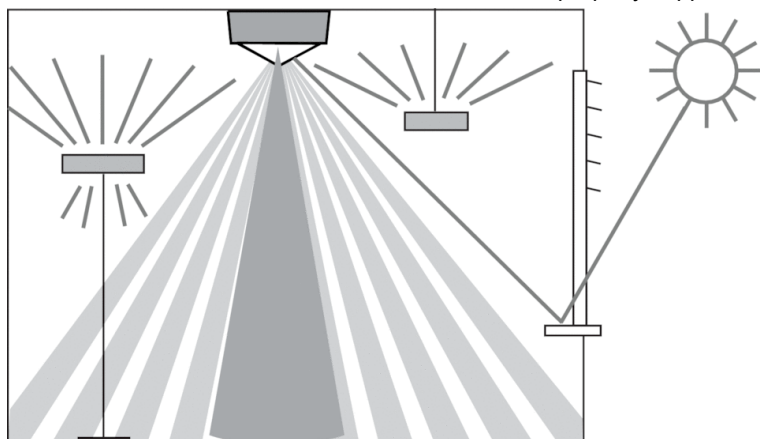


Brightness Measurement

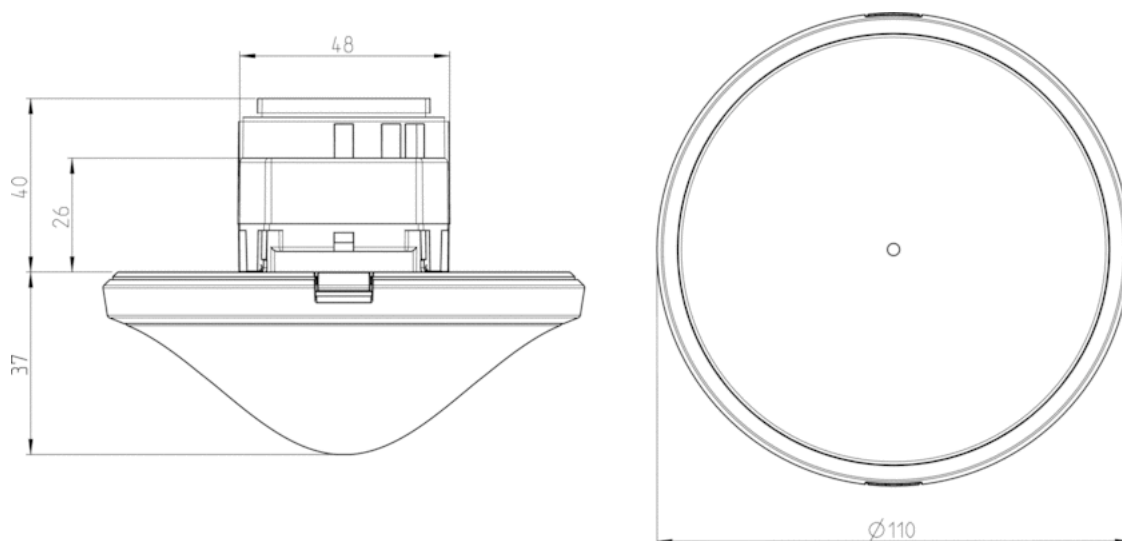
The presence detector measures artificial light and daylight that is reflected directly below the detector (opening angle approx. ± 25°). The installation site is a reference point for the lighting level. Brightness measurement can be adapted to the conditions in a room with the room correction factor. Direct light influences the light measurement. The placement of the floor lamps or suspended lighting directly below the detector is to be avoided. If the brightness measurement is deactivated, the light channels only switch depending on the presence (brightness threshold value set to „lux on“ via potentiometer or set to „measurement on“ via the remote control).

Suitable lamps

The presence detector is designed for the operation for fluorescent lamps, compact fluorescent lamps, halogen/incandescent lamps and LEDs. The maximum number of switchable lights is restricted due to the high switch-on peaks of the EBs and LED drivers. The use of an external contactor helps with large loads. Parallel switching enables allocation of load to several Masters. 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)



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)

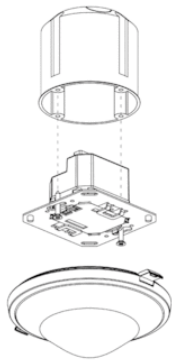


Product selection

Installation type	Channel	Operating voltage	Colour	Type	Article number
Ceiling installation	Light Presence	230 V AC	White	thePrema S360-101 UP WH	2070505
Ceiling installation	Light Presence	230 V AC	Grey	thePrema S360-101 UP GR	2070506

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.

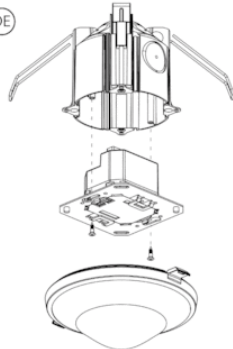
Ceiling installation

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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