


Presence detector PlanoSpot DALI

Product characteristics

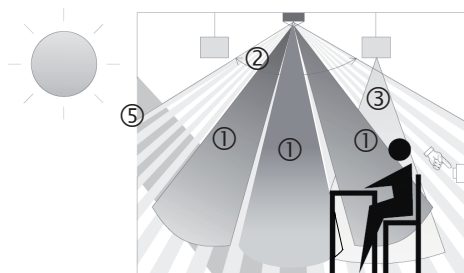
- Passive infrared presence detector for mounting in suspended ceilings
- Detection area: 360°, square (up to 64 sqm) for easy and reliable planning
- Higher flexibility due to two detection areas, different in size
- Detection of brightness and presence for automatic control of lighting and HVAC
- Triple light measurement (mixed light), suitable for fluorescent lamps, halogen-/incandescent lamps and LEDs
- Totally flat design, cover frames changeable in form, colour and material
- Optical system can be swiveled for adjusting detection area
- Test mode for verification of function and detection area
- Adjustable detection sensitivity
- Setting of parameters via DALI-bus or remote control
- Management remote control (optional)



Technical Data

Power supply	DALI, typ. 16 V (min. 11,5 V, max. 20,5 V)
Current consumption	3 mA / 5,5 mA with LED on (16 V)
Installation type	ceiling mounting
Recommended mounting height	2 – 3 m (minimum height > 1,7 m)
Detection area	Square 360° detection area
Max. detection area	4,7 x 4,7 m (Mh. 3,5 m) / 22 m ² detection zone reduced 8,0 x 8,0 m (Mh. 3,5 m) / 64 m ² detection zone standard
Measurement range for brightness	ca. 10 – 10'000 Lux
Type of terminals	plug-in terminals
Cable cross section	0,2 – 1,5 mm ²
Length of isolation dismantling	9 – 10 mm
Protection rating	IP 20 (installed IP 40)
Ambient temperature	0 °C – 50 °C
CE conformity	This device conforms to the safety regulations of the EMC directive 2004/108/EC. 

Description



- ① Mixed light measurement (triple)
- ② Presence detection
- ③ Artificial light
- ⑤ Incident daylight

Function

The PlanoSpot DALI presence detector only sends information for presence and luminosity via the DALI bus (i.e. the PlanoSpot DALI acts as a sensor only). Switching, constant light control, handling of manual inputs etc. is done by a DALI master (application controller, implemented in a "SPS", a DALI gateway etc.).

The PlanoSpot DALI sends one "Instanz" for the presence information and up to 4 "Instanzen" for the luminosity to the bus. The values of these "Instanzen" can be polled individually. In addition these "Instanzen" may be configured to act only event-driven in order to reduce the bus traffic compared to polling mode.

Presence

Information for presence may be polled from the sensor at any time. In addition the sensor can be configured for cyclic transmission of the status of presence. Interval of repetition and duration of a detected movement may be adjusted via DALI-bus or the management remote control SendoPro.

Measurement of Luminosity

The PlanoSpot DALI provides 4 identical "Instanzen" for luminosity.

- Integrated luminosity
- Luminosity towards the interior of the room
- Luminosity in the middle (i.e. below the PlanoSpot DALI)
- Luminosity towards the windows

Integrated luminosity outputs the average of the other three "Instanzen".

Luminosity

The actual value of each luminosity "Instanz" may be polled at any time. In addition PlanoSpot DALI may be configured for sending an event only based on a definable change in luminosity, the value for the change can be chosen between 5% and 80%. It could be programmed either via the Management remote control SendoPor or via the DALI bus individually for each of these luminosity "Instanzen".

Adjusting the room factor

By adjustment of the room factors one may take into account different reflection properties of the surfaces in a room (floor, walls, furniture etc.). Only by proper adjustment of the room factors the trigger value for switching of the luminaires can be specified in Lux.

The room factor can be adjusted individually for the four luminosity "Instanzen".

To adjust the room factor you may:

- Measure the actual luminosity below the presence detector by means of a Lux-meter and send the measured value via the SendoPro management remote control to the presence detector. Based on the received value the presence detector automatically calculates the appropriate room factor and in turn will be adjusted to the actual room.
- Based on a table for scaling distinctive values may be sent to the presence detector by means of SendoPro or via the DALI bus.

Note

PlanoSpot DALI is configured as a sensor only. It cannot control loads, process events or make any bus configurations (addressing, binding). Configuring the PlanoSpot DALI via the DALI bus therefore requires a commissioning device which supports the functionality of PlanoSpot DALI. Detection area, detection sensitivity and room factor may be optionally configured by means of the SendoPro management remote control.

Description

Detection area

The square detection area of the presence detector guarantees accurate and simple planning. There are 2 detection zones available which can be selected via the DALI bus or management remote control.

Note that seated and moving persons can be detected in differently-sized areas.

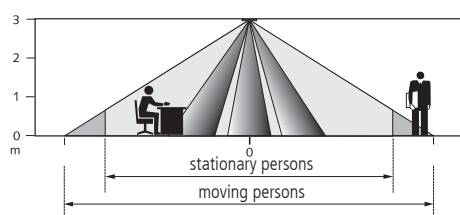
The recommended installation height is 2 m – 3 m. The sensitivity of the presence detector decreases with higher installation heights. Walking motions are necessary from installation heights of 3 m and the detection areas of several detectors should overlap in the marginal zones.

The sensitivity can be adjusted via DALI bus or with the management remote control SendoPro in 5 levels.

Seated persons:

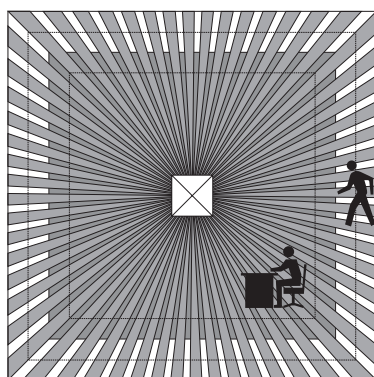
The presence detector reacts very sensitively to the slightest movements. The details relate to the reduced detection area for movements at table height (approx. 0,80 m). The detection sensitivity is reduced from an installation height of > 3 m. More pronounced movements are required for clear detection.

Moving persons:



Detection area reduced

Installation height	stationary persons	moving persons
2,0 m	4,0 m ² 2,0m x 2,0m	4,4 m ² 2,1m x 2,1m ± 0,5m
2,5 m	6,3 m ² 2,5m x 2,5m	9,0 m ² 3,0m x 3,0m ± 0,5m
3,0 m	9,0 m ² 3,0m x 3,0m	14,4 m ² 3,8m x 3,8m ± 1,0m
3,5 m	-	22,1 m ² 4,7m x 4,7m ± 1,0m



Detection area standard

Installation height	stationary persons	moving persons
2,0 m	9 m ² 3,0m x 3,0m	20 m ² 4,5m x 4,5m ± 0,5m
2,5 m	16 m ² 4,0m x 4,0m	36 m ² 6,0m x 6,0m ± 0,5m
3,0 m	20 m ² 4,5m x 4,5m	49 m ² 7,0m x 7,0m ± 1,0m
3,5 m	-	64 m ² 8,0m x 8,0m ± 1,0m

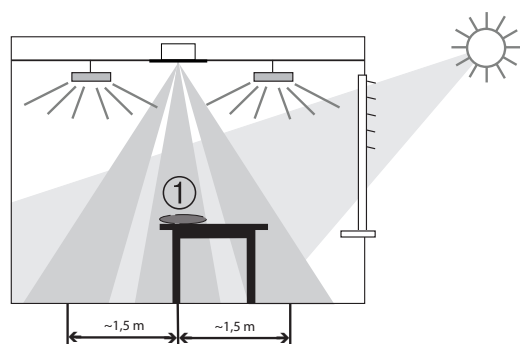
By manually moving of the optical part, the detection range can be shifted depending on the mounting height in a range of 0,5 to 1 meter towards the window or indoors.

Brightness measurement

The presence detector measures artificial and natural light through three directional light measurements. The central light measurement detects the brightness directly below the detector, while the two other light measurements detect the brightness close to the window or in the interior. 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. Direct light influences the light measurement. The placement of the floor lamps or suspended lighting directly below the detector is to be avoided.

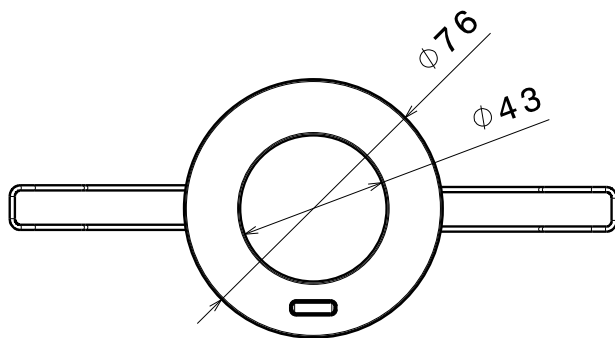
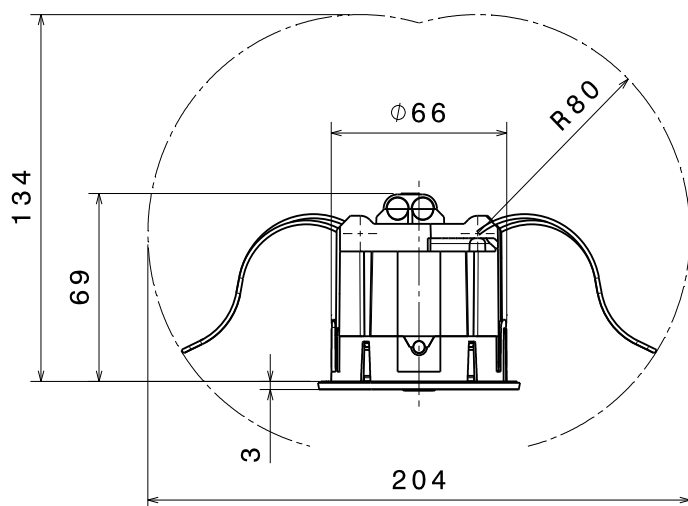
Suitable lamps

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



Dimensional drawings

ceiling mounting PlanoSpot DALI



Accessories

SendoPro 868-A

- Item No.: 9070675
[Details ► www.theben-hts.ch](http://www.theben-hts.ch)



Product overview

Installation type	Channel	Colour	Type	Item No.
ceiling mounting	DALI	White (similar to RAL 9010)	PlanoSpot 360 DALI DE WH	2030110
ceiling mounting	DALI	Black (similar to RAL 9005)	PlanoSpot 360 DALI DE BK	2030111
ceiling mounting	DALI	Silver (similar to RAL 9006)	PlanoSpot 360 DALI DE SR	2030112