



Presence detector compact passage 24V

Art. Nr. 201 4 090

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Presence detector
compact passage 24V

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Thank you for purchasing an Theben HTS presence detector and putting your trust in us.

1. Safety

Familiarise yourself with the compact passage 24V before assembly and start-up by reading this operating instructions.

IMPORTANT!

The unit requires no maintenance. Opening the unit or inserting foreign bodies into it will invalidate the warranty.

Proper use

The presence detector serves exclusively for the purpose contractually agreed between the manufacturer and the user. Any other use is regarded as improper. The manufacturer is not responsible for any resulting damage.

2. Function and performance characteristics

The presence detector compact passage 24V detects persons within a corridor. Simultaneously, its light sensor measures the brightness in the room and compares it to the pre-set brightness threshold.

The switching contact A «Light» switches on the lighting in case of presence **and** insufficient brightness, and off in case of absence **or** sufficient brightness.

- Switching contact „Light”: potential-free relay
- Adjustable brightness threshold and switch-off delay
- Suitable for fluorescent and compact energy saving lamps as wells as for halogen and incandescent lamps
- Pulse function for staircase lighting timer
- SendoPro 868-A management remote control (optionally)

The switching contact B «Presence» controls heating, ventilation and air-conditioning systems. The contact closes in case of presence, a switch-on delay allows a delayed switching on. The contact can also be used for room surveillance purposes. Using reduced sensitivity, it only responds on very distinct movements.

- Switching contact „Presence”: potential-free relay

- Adjustable switch-on delay and switch-off delay
- Surveillance function

3. Fitting and connection

GB

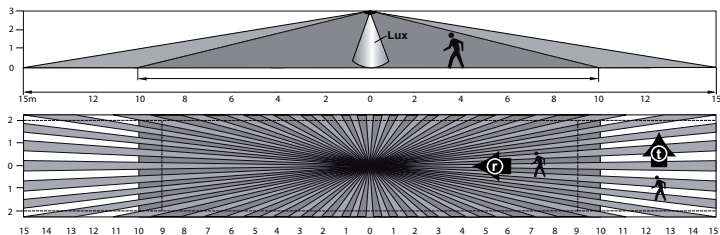
3.1 Presence detection

The ideal mounting height is 2 m - 3,5m.

The sensitivity of the detector decreases with increasing mounting height. The detection ranges of multiple detectors should overlap in their fringe zone. Ensure the horizontal installation of the detector.

M-height	radial (r)	tangential (t)
2,0m	56m ² 16,0m ± 1,5m x 3,5m	56m ² 16,0m ± 1,5m x 3,5m
2,5m	72m ² 18,0m ± 1,5m x 4,0m	88m ² 22,0m ± 1,5m x 4,0m
3,0m	90m ² 20,0m ± 1,5m x 4,5m	135m ² 30,0m ± 1,5m x 4,5m
3,5m	100m ² 20,0m ± 1,5m x 5,0m	150m ² 30,0m ± 1,5m x 5,0m
4,0m	100m ² 20,0m ± 2,0m x 5,0m	150m ² 30,0m ± 2,0m x 5,0m
4,5m	100m ² 20,0m ± 2,0m x 5,0m	150m ² 30,0m ± 2,0m x 5,0m
5,0m	100m ² 20,0m ± 2,5m x 5,0m	150m ² 30,0m ± 2,5m x 5,0m
6,0m	100m ² 20,0m ± 2,5m x 5,0m	150m ² 30,0m ± 2,5m x 5,0m

Detection range (mounting height 3,0m)

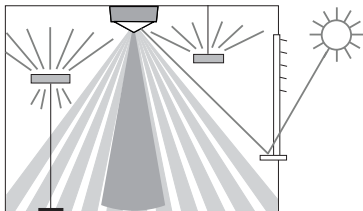


Please note: because of the virtually horizontal detection of compact passage to both directions, the detection range of tangential (**t**) movements of persons is different to the range of radial (**r**) movements towards the detector.

3.2 Light measurement

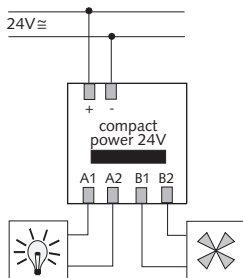
The detector measures artificial light and daylight reflected directly beneath the detector (beam width approx. $\pm 30^\circ$). The mounting location is used as the reference for the lighting levels.

With indirect lighting, the artificial light at the detector's mounting location should not exceed 2000 Lux (Brightness value > 2000 Lux).



3.3 Connection

A concealed housing should be used for flush-mounted fitting of the compact passage 24V. A surface frame is available for surface mounting.



See the technical data

4. Start-up

The detectors are supplied ready for operation with a factory setting of recommended standard values. The SendoPro 868-A management remote control for starting-up the system is optionally available. With the remote control all potentiometer values can be set from a distance.

4.1 Settings for switching contact A «Light»

Potentiometer

① **Brightness threshold “LUX”**

- Transfer zones (no working area)
- Bright transfer zones
- Deactivation of brightness measurement

Scale

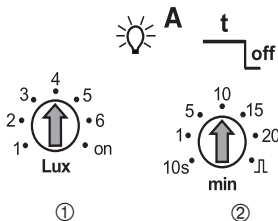
approx. 2

approx. 3


“on”

Depending on the installation location, natural light intensity, furniture, reflection characteristics of the room and the furniture it may be necessary to correct the settings by 1-2 steps on the scale.

For ease of setting up, we recommend the management remote control SendoPro 868-A.







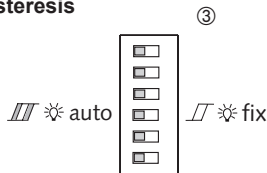
② Switch-off delay time

- Transfer zones approx. 5min.
- In the range between 2 - 15min the switch-off delay varies according to its self-learning behavior. The set values <2min or >15min remain fixed.
-  «Pulse»: staircase lighting timer control (0.5sec. "on" / 10sec. "off")

DIP switch

③ Light measurement: adaptive or fixed hysteresis

-   auto : the light measurement is in adaptive mode.
-   fix : if the lighting is continuously overridden by a superordinate logic, the adaptive mode can be deactivated.



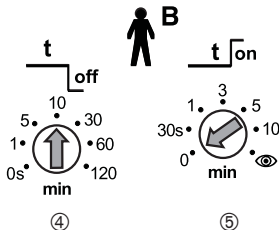
4.2 Settings for switching output B «Presence»

④ Switch-off delay time for presence

- The pre-set values remain unchanged (no self-learning effect).

⑤ Switch-on delay time for presence

- In case of presence, the contact does not close before the set switch-on delay has elapsed.
- 0 = Contact closes immediately in case of presence.
- 👁 Room surveillance function; the contact closes only in case of distinct movements (effective protection against false alarms).



4.3 Behaviour on switching on

Whenever the sensor module is plugged onto the power module or the unit is energised, the detector goes through three phases which are indicated by an LED.

1. Start-up phase (30sec)

- LED flashes every second, both contacts are closed (light and presence on)
- In case of absence, both contacts open after 30sec.

2. Service phase (10min)

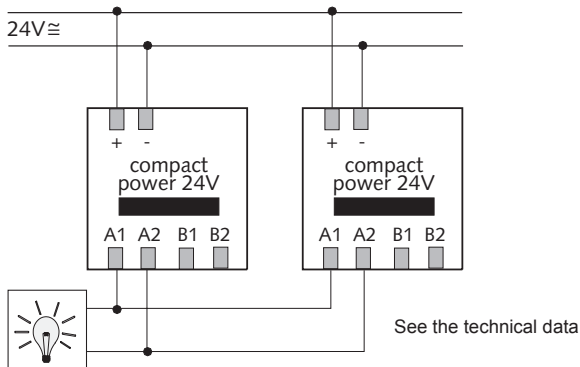
- The “Light” contact reacts instantaneously on brightness in order to check the brightness threshold.
- If the brightness is insufficient the lighting is switched on (LED on), and if the brightness is sufficient the lighting is switched off (LED off).

3. Operation

- The detector is ready for operation (LED off).

5. Parallel circuit operation

- The outputs of a number of detectors can be connected in parallel circuit operation. This enables coverage of large and irregularly shaped rooms such as corridors, underground parkings e.g.
- The total permissible load does not increase.
- Presence detection and brightness measurement by all detectors together.
- The brightness threshold value and switch-off delay time must be adjusted individually for each detector.



6. Test Operation

The test mode serves to check the presence detection and the wiring.



GB

6.1 Setting the test mode with DIP-Switch

- Set DIP switch to «Test».

1. Start-up phase (30sec)

- Both contacts are closed for 30sec. (LED 20s «on», 10s «off»)


2. Test mode

- In case of movement (LED on), both contacts close.
- In case of absence (LED off), both contacts open after 10sec.
- NOTE: no brightness measurement.
- The detector remains permanently in the test mode.

6.2 Setting the test mode with SendoPro 868-A

- While setting the test mode with the management remote control SendoPro 868-A, the detector jumps the start-up phase and changes directly into the test mode.
- Test mode ceases automatically after 10 minutes. The detector performs a reset (see section 4.3).

7. Technical specifications

Sensor module		compact passage 24V
Detection range:	horizontal	360°
Recommended mounting height (Mh)		2,0 - 3,5m / max. 6m
Maximum range		30 x 5 m tangential, 20 x 5 m radial
Mixed light control Light measurement deactivated		ca. 10 - 1500Lux „on“
Switch off delay for light Short pulse		10sec. - 20min. 0.5sec. „on“/ 10sec. „off“
Switch off delay for presence		10sec. - 120min.
Switch on delay for presence Room surveillance		0sec. - 10min. 
Power module		compact power 24V
Nominal voltage		24V AC/DC $\pm 20\%$
Relay output A1, A2 for „light“		Relais, potential free
Type of contact potential-free micro-contact		24V \cong AC/DC $\pm 20\%$
Switching capacity:		minimal 1V / 1mA *) maximal 50W / 460VA

Relay output B1, B2 for „presence“	Relay potential-free
Type of contact potential-free micro-contact	24V \cong 2A μ , 230V~2A μ
Switching capacity:	50 W (24 V AC/DC), 460 VA (230 V AC), μ , min. 1 V/1 mA
Depth	40mm
Diameter	48mm
Mounting plate	70 x 70mm
Screw terminals	max. 2x 2.5mm2
Size of concealed housing (for flush-mounting)	Dim. 1, (NIS,PMI)
Ambient temperature	0° - 50°C
Degree of protection	IP 20 (IP 40 installed)
Article numbers	
compact passage 24V	201 4 090
Surface frame for compact	907 0 514
Management remote control SendoPro 868-A	907 0 675

*) A load of more than 60V or 100mA on the switching contact (max. 1.5W) changes its characteristics permanently; the minimum load specification of 1V/1mA can no longer be guaranteed.

8. Warranty declaration

Theben HTS presence detectors are manufactured and quality-tested with the utmost care using state-of-the-art technologies. Theben HTS therefore guarantees perfect function, provided the detectors are used as intended. However, should a defect occur, Theben HTS offers the following warranty within the scope of its General Terms and Conditions of Business:

Please bear in mind the following points:

- The warranty period is 24 months, commencing from the manufacturing date.
- The warranty becomes null and void if you or third parties undertake alterations to the units.
- If the presence detector is connected to a software-controlled system, the warranty for this connection is only valid provided the stated interface specification is adhered to.

We undertake to repair or replace as quickly as possible all supplied components which have become defective or unusable as a result of demonstrably bad material, faulty design or defective workmanship up to the expiry of the warranty period.

Returns

In the event of a warranty claim please send the unit together with the delivery note and a brief description of the fault to the dealer concerned.

Industrial property rights

The concept including hardware and software of these units is protected by copyright.

9. Troubleshooting

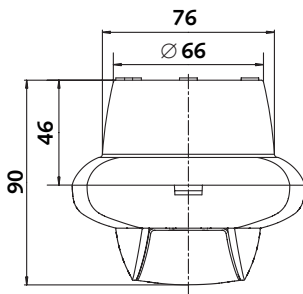
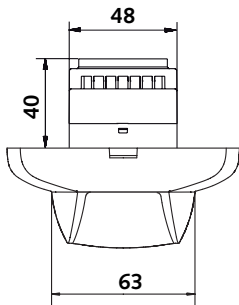
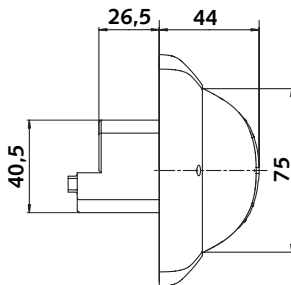
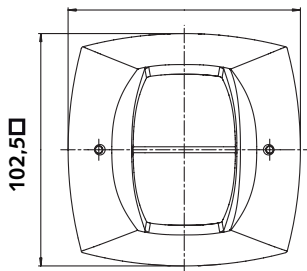
Fault	Cause
Lighting does not switch on or switches off in case of presence and darkness	Lux value setting is too low; Lighting was switched off manually with clic; Person is outside the detection range; Detection is disturbed by obstacles; Set switch-off delay setting is too short
With persons present, the lighting is on although the brightness is sufficient	Lux value setting is too high; The lighting has been switched on manually with clic recently (wait for 30 min); Detector is in test mode
Lighting does not switch off or switches on spontaneously in case of absence	Wait until the switch-off delay time has elapsed (self-learning effect); Disturbing heat sources within the detection range (heaters, incandescent lamp/ halogen lamp, moving objects (e.g. curtains due to open windows)
Lighting keeps switching on and off during the service phase	Too much artificial light is falling on the detector, increase lux value. Set DIP switch to „fix“ or reposition the detector.
Error blinking (4x per second)	Failure during self test; Device not working!

CE Declaration of Conformity



This device complies with the protection regulations of the EMC directives 2004/108/EC and of the Low Voltage directive 2006/95/EC.

Dimensions compact passage 24V



Subject to change without prior notice. Errors and omissions excepted.

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