

Presence Detector compact office 24V



compact office 24V Product Features

- ◆ Passive infrared presence detector for ceiling mounting
- ◆ Square 360° detection range
- ◆ Automatic HVAC and lighting control as well as room surveillance
- ◆ Mixed light measurement
- ◆ Switched output for light (potential-free relay)
- ◆ Lighting control with brightness threshold value and self-learning switch off delay time
- ◆ Pulse function for staircase lighting timer
- ◆ Switched output for presence (potential-free relay)
- ◆ HVAC control with switch on delay and switch off delay time
- ◆ Reduced response characteristic for room surveillance
- ◆ Management remote control SendoPro 868-A (option)

Switched Output for «Light»

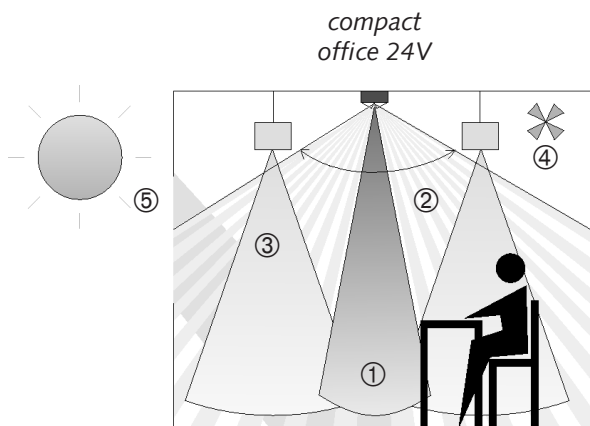
The switching behavior is controlled by presence and brightness. The contact closes in case of darkness **and** presence, and opens in case of brightness **or** absence.

The minimum switch off delay time (10s - 20min) and the desired brightness switching threshold (10 - 1500Lux) are adjustable. The switch off delay time automatically adapts to the occupant's behavior (self-learning characteristic), i.e. the unit is able to automatically extend the switch off delay time to max. 15min or reduce it to the minimum set time.

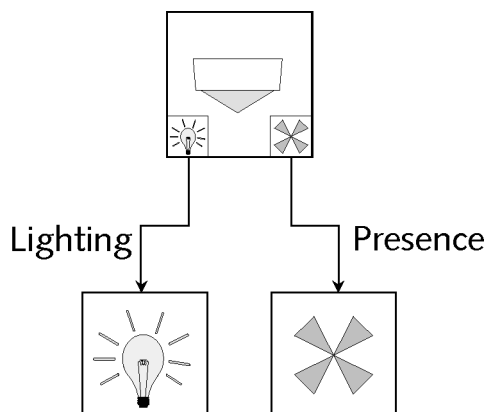
Note: The switch-off delay time does not change with a setting of 2 minutes or less. Optimum switching behaviour will be obtained when the switch-off delay time is controlled from the detector with settings of more than 2 minutes.

Pulse Function

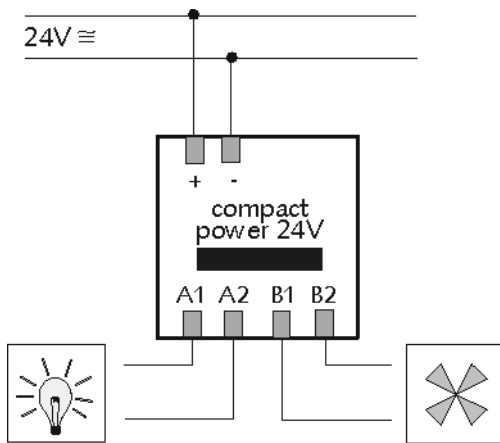
In order to control existing staircase lighting timers, the switch off delay time can be set to "Pulse". In this position, the switched output for light generates a short pulse (duration 0.5s) every 10 seconds in case of presence and darkness.



- ① Mixed light measurement
- ② Presence detection
- ③ Artificial light
- ④ HVAC/surveillance
- ⑤ Incident daylight

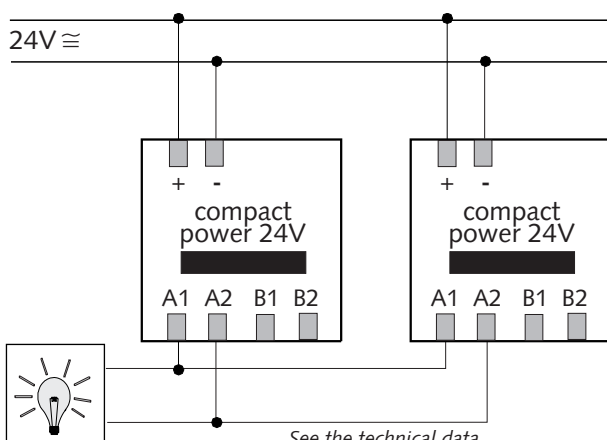


Schematic Wiring Diagram - Single Unit Operation



See the technical data

Parallel Circuit Operation



See the technical data

Switched Output for «Presence»

The switched output for presence is used for HVAC control and room surveillance. The switching behavior of the potential-free contact is only affected by presence and not by brightness. The contact closes in case of presence and opens in case of absence.

HVAC Control with Switch-on Time Delay

The switch on delay (0s - 10min) prevents that the system is switched on immediately. The contact does not close before the switch on delay time has elapsed, provided of course that persons are present all the time. If the contact is closed the switch off delay time (10s - 120min) is restarted at each detection of movement.

Room Surveillance

If the switch on delay is set to "Surveillance", the sensitivity of the switched output for presence is reduced. The contact closes in case of distinct movements only and thus reliably indicates the presence of persons. The switch off delay time remains active. The switch-on time delay is inactive.

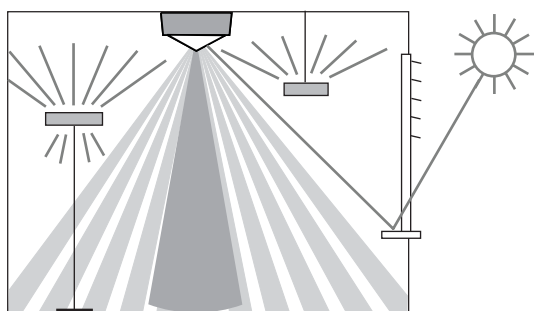
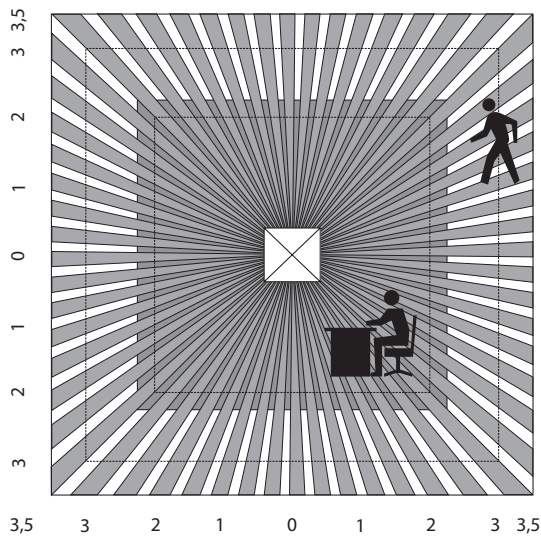
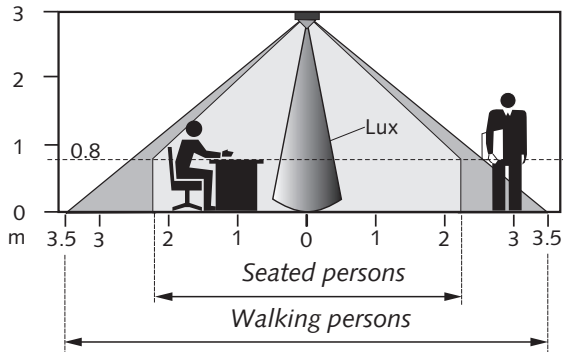
Interconnection

In single unit operation, the compact office 24V is set up to detect presence and brightness and controls the lighting and HVAC/surveillance by means of its two contacts.

If the detection range of one detector is insufficient the outputs of several detectors can be connected in parallel. Herewith very large rooms like open plan offices, corridors, underground parking e.g. can be covered.

This does not increase the maximum permissible load. The brightness threshold value and the switch-off delay time have to be set individually for each detector.

Detection Range (Mounting height 3.0m)



Location

Detection Range

The square detection ranges ensure a safe and simple planning. Connected in parallel, they allow the entire room to be covered. Please note that the detection range for seated persons and walking persons differ in their extension.

The recommended mounting height is 2,0m - 3,0m. The sensitivity of the detector decreases with increasing mounting height. From a mounting height of 3m walking movements are required for detection, and the detection ranges of multiple detectors should overlap in their fringe zones.

M.height	seated 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

Seated Persons:

The values given refer to the restricted detection range for movements taking place at table height, i.e. approx. 0.80m above the floor. From a mounting height of > 3m, the sensitivity of the detector is limited, and more distinct movements are required for detection.

Walking Persons:

For walking persons, the entire detection range is valid with a small tolerance in the fringe zone (+/- 0.5m).

Brightness Measurement

The compact office 24V presence detector is equipped with a mixed light measurement. As the mixed light measurement is influenced by artificial light, the brightness for indirect lighting on the site of installation must not exceed 2000Lux (for brightness threshold > 200Lux).

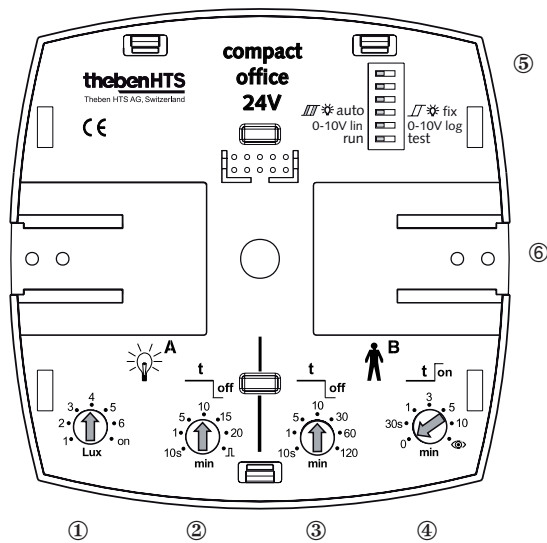
The light measurement possesses an integral self-adaptive mode (DIP switch position "☒☒ auto", see reverse). If the lighting is overridden by a superordinate logic, the adaptive mode can be deactivated (DIP switch setting "☒☒ fix", see reverse).

If the brightness threshold value is set to "On", the brightness measurement is deactivated (no influence by brightness desired).

Suitable Lamps

The compact office 24V presence detector is designed for use with fluorescent lights (FL/PL) as well as halogen/incandescent lights.

Sensor Module - Rear Side



Settings on the compact office (see figure above)

- ① Brightness threshold (Lux)
- ② Switch off delay for light/ activation of pulse function
- ③ Switch off delay for presence (HVAC/surveillance)
- ④ Switch on delay for HVAC/ activation of room surveillance function
- ⑤ DIP switches:
 DIP4 automatic or fixed lighting measurement
 DIP5 no function for compact office 24V
 DIP6 Operation mode: normal operation/test
- ⑥ Mechanical safety lock
 The mechanical lock serves to secure the sensor module firmly on the power module.

Technical Specifications for Presence Detector compact office 24V

Sensor module	compact office 24V
Detection range:	horizontal 360°
Recommended mounting height	2.0m - 3.0m/max. 3.5m
Maximum range	6 x 6 m (Mh 2.5 m) 8 x 8 m (Mh 3.5 m)
Mixed light control Light measurement deactivated	approx. 10 - 1500 Lux "on"
Switch off delay for light Short pulse	10 s - 20 min. 0.5 s "on" / 10 s "off"
Switch off delay for presence	10 s - 120 min.
Switch on delay for presence Room surveillance	0 s - 10 min. 👁️
Power module	compact power 24V
Mains voltage	24V AC/DC ± 10%
Relay output A1, A2 for "light"	potential free relay
Type of contact potential-free micro-contact	24V≅AC/DC ±20%
Switching capacity *)	minimum 1V / 1mA maximum 50W / 460VA

*) 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.

Accessories

Management Remote Control

For the start-up procedure, the management remote control SendoPro is available for the installation personnel or the technical service. They allows convenient remote adjustment of all potentiometer values. Manual adjustment of the potentiometers directly on the device remains possible at all times.

Surface Frame

A suitable frame for surface mounting is also available.

„Relay output B1, B2 for "presence"“	Relay potential-free
Type of contact potential-free micro-contact	24V≅2Aμ, 230V~2Aμ
Switching capacity:	minimum 1V / 1mA maximum 50W / 460VA
Depth Diameter Mounting plate	40 mm 48 mm 70 x 70 mm
Terminals	Screws max. 2.5 mm ²
Size of concealed housing	1 (NIS,PMI) (for flush-mounting)
Ambient temperature	0° - 50°C
Degree of protection	IP 20 (IP 40 when fitted)
Article numbers	
compact office 24V complete	201 4 000
• Sensor module compact office 24V	907 0 555
• Power module compact power 24V	907 0 557
Surface frame for compact office	907 0 514
Management remote control SendoPro	907 0 675

Declaration of CE conformity

This device complies with the protection regulations of the EMC directives 2014/30/EU and of the Low Voltage directive 2014/35/EU.

