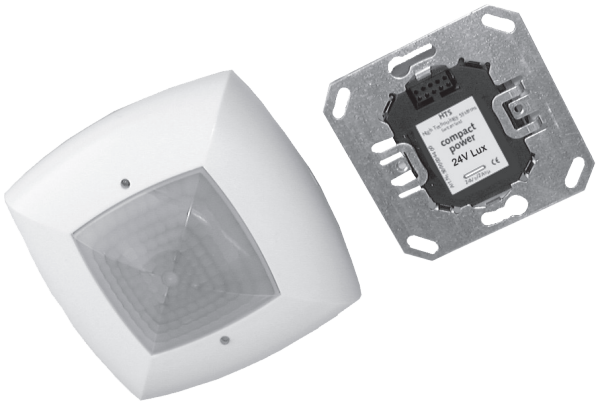
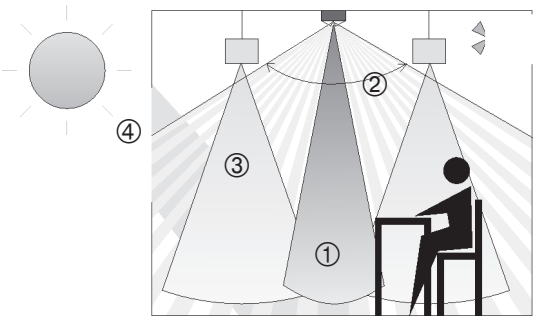
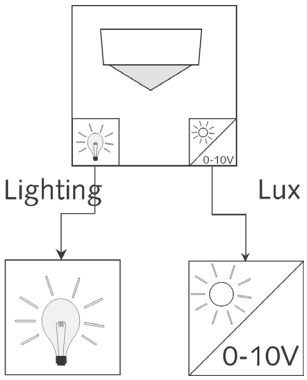
Presence Detector
compact office 24V Lux



compact office 24V Lux



① *Mixed light measurement*
② *Presence detection*
③ *Artificial light*
④ *Incident daylight*



compact office 24V Lux Product Features

- *Passive infrared presence detector for ceiling mounting*
- *Square 360° detection range*
- *Automatic lighting control as well as analog value output of the measured brightness*
- *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
- *Analog output 0-10V for brightness*
  Linear or logarithmic output of brightness
  May be used as a light sensor for PLC controls
- *Management remote control SendoPro 868-A (optional)*

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.*

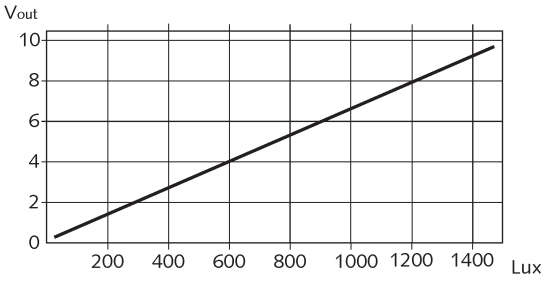
The minimum switch off delay time (10s - 20min) and the desired brightness switching threshold (10 - 1500Lux) are adjustable. The switch off delay time automatically adapts to the occupant's behavior (self-learning characteristic), i.e. the unit is able to automatically extend the switch off delay time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

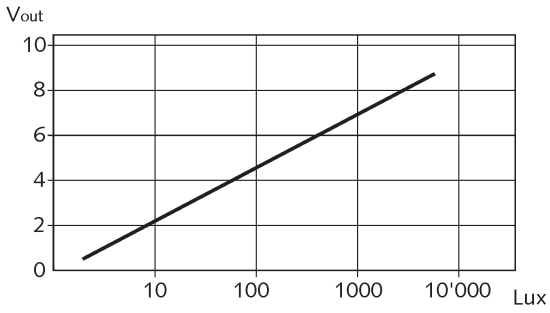
Pulse Function

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.

Output voltage 0-10V

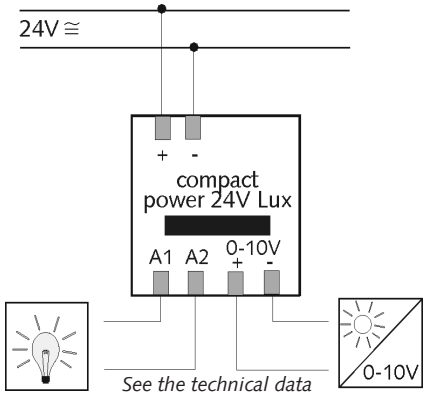


linear output (standard values)

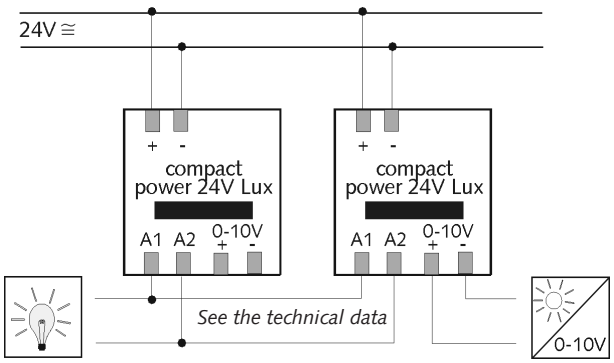


logarithmic output (standard values)

Schematic Wiring Diagram - Single Unit Operation



Parallel Circuit Operation



Analog output 0-10V

The 0-10V analog output provides the brightness measured by the detector's light sensor as an analog signal. The output can be used like a light sensor and functions independently from the presence detector. It serves to control room automation systems.

The analog signal output can be provided either linearly or logarithmically in relation to the measured brightness. The choice between linear and logarithmic output is made by the position of the DIP switch "0-10V lin" or "0-10V log". The logarithmic output improves the resolution at low lux values.

The built-in light sensor is based on mixed light measurement; it takes all types of light sources into consideration (natural daylight, fluorescent light, incandescent and halogen light).

Note: *the brightness values given out by the compact office 24V Lux, are measured at the ceiling. Values which refer to working surfaces must take the specific reflective properties of the room into account (furnishings, walls, floors).*

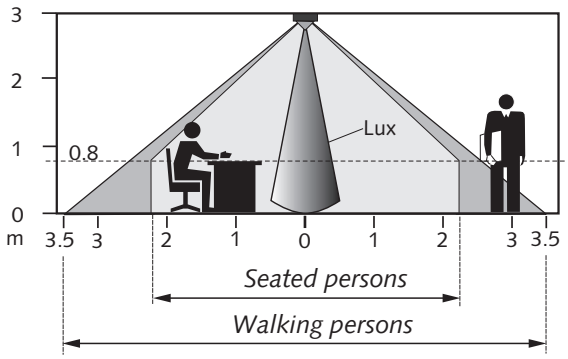
Interconnection

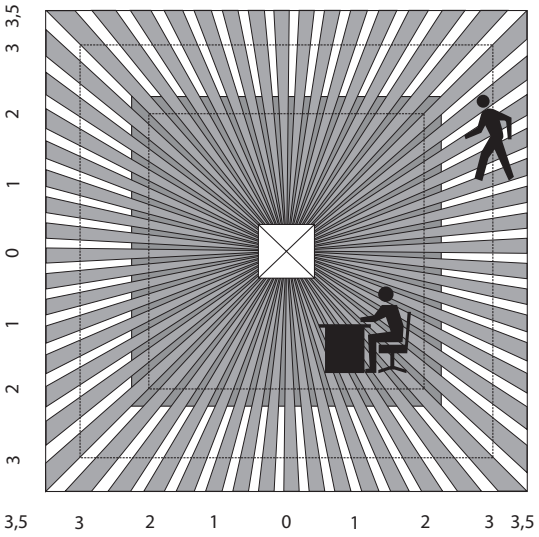
In single unit operation, the compact office 24V Lux is set up to detect presence and brightness and controls the lighting by means of its switching contact.

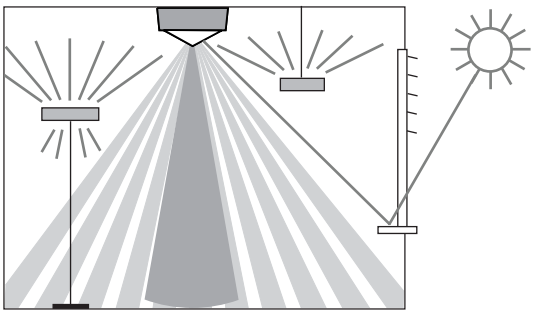
If the detection range of one detector is insufficient the outputs of several detectors can be connected in parallel. Herewith very large rooms like open plan offices, corridors, underground parking e.g. can be covered.

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*	*walking persons*
2.0 m	*9 m² 3.0m x 3.0m*	*20 m² 4.5m x 4.5m ± 0,5m*
2.5 m	*16 m² 4.0m x 4.0m*	*36 m² 6.0m x 6.0m ± 0,5m*
3.0 m	*20 m² 4.5m x 4.5m*	*49 m² 7.0m x 7.0m ± 1,0m*
3.5 m	*--*	*64 m² 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 Lux 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).

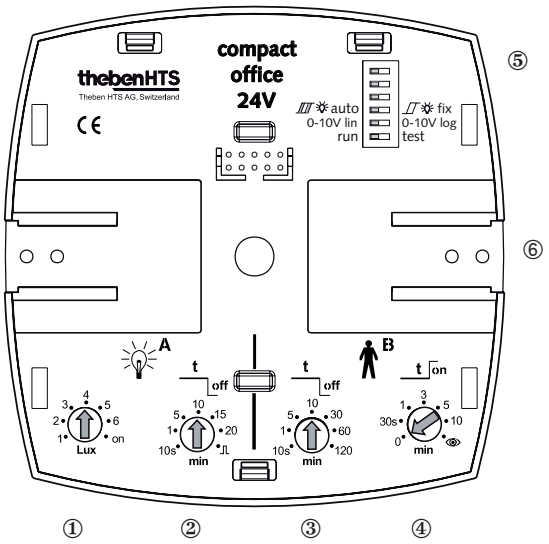
The light measurement possesses an integral self-adaptive mode (DIP switch position "auto", see reverse). If the lighting is overridden by a superordinate logic, the adaptive mode can be deactivated (DIP switch setting "fix", see reverse).

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 Lux 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 24V Lux (see figure above)

① *Brightness threshold (Lux)*

② *Switch off delay for light/ activation of pulse function*

③ *no function with the compact office 24V Lux*

④ *no function with the compact office 24V Lux*

⑤ *DIP switches*:
DIP4 Automatic or fixed lighting measurement
DIP5 Linear or logarithmic brightness output
DIP6 Operation mode: normal operation/test

⑥ *Mechanical safety lock*
The mechanical lock serves to secure the sensor module firmly on the power module.

Accessories

Management Remote Control SendoPro 848-A

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

Surface Frame

A suitable frame for surface mounting is also available.

Technical Specifications for Presence Detector compact office 24V Lux

Sensor module	**compact office 24V**
Detection range: horizontal	360°
Recommended mounting height	2.0 - 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 - 1500Lux "on"
Switch off delay for light Short pulse	10 s - 20 min. 0.5 s "on" / 10 s "off"
Power module	**compact power 24V Lux**
Mains voltage	24V AC/DC ± 20%
Relay output A1, A2 for "light"	potential free relay
Type of contact potential-free micro-contact	24V ≅ 2Aμ, 230V ~ 2Aμ
Switching capacity *) minimum maximum	1V / 1mA 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.*

Analog output 0-10V	
Output voltage	0 - 10V
Load resistor	> 10 kΩ
Mixed light control: linear logarithmic	approx. 10 - 1500 Lux approx. 10 - 5000 Lux
Depth Diameter Mounting plate	40 mm 48 mm 70 x 70 mm
Screw Terminals	max. 2 x 2.5 mm²
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 Lux complete	201 4 001
Sensor module compact office 24V	907 0 555
Power module compact power 24V Lux	907 0 558
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.