



Presence detector compact office DIM

Art. Nr. 201 0 001

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compact office DIM****Table of contents**

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

1. Safety

DANGER !

Any work on electrical systems must exclusively be carried out by qualified electricians or instructed persons under the direction and supervision of a qualified electrician in accordance with the relevant electrotechnical rules! Any national safety regulations regarding the manipulation of electrical systems must be observed! **The voltage supply must be disconnected prior to installation!**

CAUTION !

The device is maintenance-free. The warranty terminates if the device is opened or entered with any kind of object.

Designated use

The presence detector is solely intended for the purpose contractually specified between the manufacturer and the user. Any other or extended use has to be regarded as not complying with the designated use. The manufacturer is not liable for any resulting damage.

2. Function and performance characteristics

The compact office DIM presence detector detects persons present as a result of the slightest move-ments. At the same time its light sensor measures the brightness level in the room and compares it with the preset brightness value.

A **relay (switching contact A)** serves as a switched output. The detector switches the lighting on when people are present and the brightness level is insufficient, or off if no one is present or the brightness level is sufficient.

The artificial light is dimmed via a **1-10V interface**. With **constant light control** selected, the brightness is maintained constant at a preset level. With control operation switched off, the light measurement is deactivated and the presence detector functions as a **manual dimmer control**.

A **single button control** enables the lighting to be switched manually at any time (short push-button depression) or dimmed (long push-button depression).

- Switching contact A: relay 230V
- 1-10V interface (EN 60929/A1)
- Constant light control or manual dimming operation
- Manual switching/dimming by means of push-button
- Semi or fully automatic operation
- Suitable for fluorescent/compact energy saving lamps (dimmable electronic ballasts), as well as for halogen/incandescent lamps (control modules)
- Mechanical safety locking
- QuickSet plus service remote control
- Clic user remote control

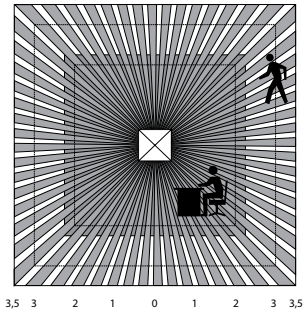
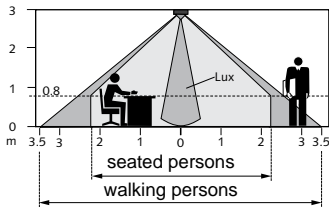
3. Fitting and connection

3.1 Presence detection

The ideal mounting height is 2,0 - 3,0m. The sensitivity of the detector decreases with increasing mounting height. In order to ensure proper detection of persons, the detector requires an unobstructed "view" of the persons. Office equipment, plants, suspended lamps etc. may affect the presence detection (shading).

M'height	Seated persons	Walking persons
2,0m	3,0m x 3,0m	4,5m x 4,5m ± 0,5m
2,5m	4,0m x 4,0m </td <td>6,0m x 6,0m ± 0,5m</td>	6,0m x 6,0m ± 0,5m
3,0m	4,5m x 4,5m	7,0m x 7,0m ± 1,0m
3,5m	---	8,0m x 8,0m ± 1,0m

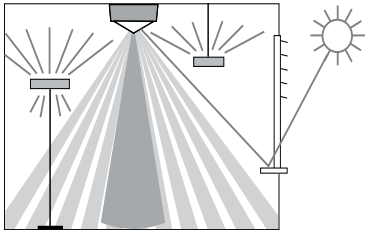
Detection range (mounting height 3,0m)



3.2 Light measurement

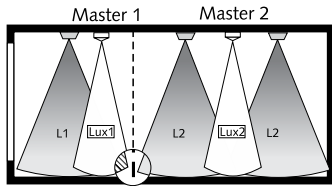
Compact office DIM measures the artificial and natural light, reflected from directly beneath the detector (angle of beam approx. 30°). **Direct artificial light on the detector should be avoided!** If the constant light control is switched off the light measurement is inactive.

The control is based on the overall brightness measured by the detector in its installed location. To ensure optimum control, the light characteristics of any stray light emitted from sources as standard lamps, desk lamps etc. should be taken into account in the overall planning.



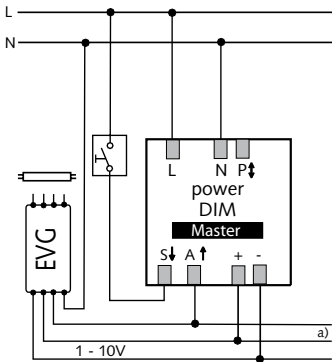
Fitting the detector within the area of its own (controlled) lighting group:

- L 1: Lighting group 1 of master 1
- L 2: Lighting group 2 of master 2
- Lux1: Light measurement master 1
- Lux2: Light measurement master 2



3.3 Connection

Please follow the circuit diagrams for single circuit operation. Flush-mounted fitting of the compact office DIM must be in a housing. A surface frame is available for surface mounting.



a) 1-10V connection to additional ballasts

Please follow also the circuit diagrams for parallel circuit operation (see chapter 5).

4. Start-up

The detectors are supplied ready for use with a factory setting. We recommend the QuickSet plus service remote control. It enables all potentiometer values to be set without dismantling the detector. The desired brightness value can also be programmed by means of a push-button (see 4.4).

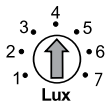
4.1 Settings

Potentiometer

① Desired brightness value

Constant light control ON (DIP «reg.on»)

- | | scale |
|---|-----------|
| ● Transfer zones (non-working area) | approx. 3 |
| ● Working areas (office, etc.) | approx. 4 |
| ● Visually demanding work (laboratory, drawing) | > 5 |



Depending on the mounting position, incident light, furnishings, reflective properties of the room, etc. an adjustment of the setting by 1-2 units may be necessary.

For ease of setting up, we recommend the service remote control QuickSet plus.

Constant light control OFF (DIP «reg.off»)

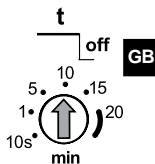
- | | scale |
|-------------------------------|-------|
| ● Full light (100%) | 7 |
| ● Subdued light (approx. 50%) | 4 |



② Switch-off delay time

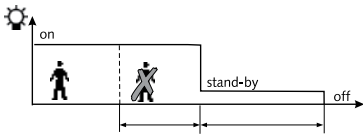
- Transfer zones approx. 5min.
- Working areas approx. 10min.

For settings between 2 - 15min. the switch-off delay time has a self-learning feature which varies within this range. Settings <2min. or >15min. remain constant.

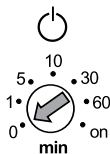


③ Stand-by time

If stand-by time is activated, the lighting is not switched off on expiry of the switch-off delay time but remains in the stand-by mode (approx. 10% light output). This reduces the number of switching operations.



- Individual office (inactive) 0min.
- Open plan office approx. 10min.
- Transfer zones approx. 30min.
- Transfer zones with continuous light «on»

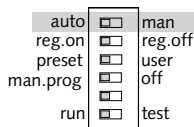


«on» : If no one is present, the lighting remains continuously in stand-by mode. If the room brightness is above the desired value, the lighting switches off; if it falls below this value the lighting switches automatically to stand-by mode, even if no one is present.

DIP switch

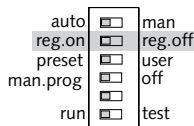
④ Fully automatic / semi-automatic operation

- «auto»: fully automatic: the lighting switches on automatically
- «man»: semi-automatic: the lighting must always be switched on manually



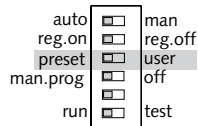
⑤ Constant light control ON/OFF

- «reg.on»: constant light control switched on, lighting controlled by presence and daylight
- «reg.off»: control switched off, lighting only controlled by presence (light measurement inactive)



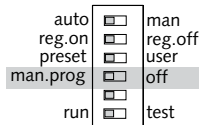
⑥ Specifying the desired value preset/user

- «preset»: the desired brightness value is determined by the installer during the start-up procedure and remains unchanged.
- «user»: the desired brightness value is changed with each manual dimming and is reset by the user.



⑦ Adaptation of desired brightness value

- «man.prog»: Adaptation of the desired brightness value by push button enabled. (see 4.4)
- «off»: No modification of desired brightness value by push button possible.

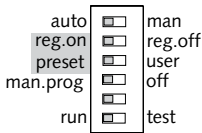


4.2 Tips on DIP-switch combinations

⑧ Constant light control ON «reg.on»

Recommendation: «preset»

- Manual dimming does not change the stored desired brightness value
- Constant light control is suspended by manual dimming
- Switching off and back on again restores controlled operation? constant light control



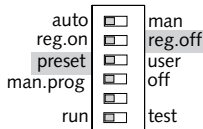
Variant: «user»

- Manual dimming determines the new desired brightness level
- Constant light control always remains switched on

⑨ Constant light control OFF «reg.off»

Recommendation: «preset»

- Manual dimming does not change the stored switch-on brightness level



Variant «user»

- Manual dimming determines the new switch-o brightness level.

4.3 Switch-on behaviour

Each time the sensor module is plugged into the power module, or each time the power supply is switched on, the detector performs the start-up phase (shown by the LED).

1. Start-up phase (30sec.)

- The LED flashes at one-second intervals, the switching contact is closed, the brightness value is set to 100%
- If no one is present, the contact opens after 30sec. (light off)

2. Operation:

- If persons are present, the detector dims immediately to the desired brightness value (LED off)
- The detector is operational

4.4 Adjusting the desired brightness value with the push-button

Adjustment of the desired brightness value can also be carried out with the push-button during operation (enabling/disabling by DIP-switch, see item ⑦ on page 54). Programming of the desired brightness value is only meaningful in the «preset» position.

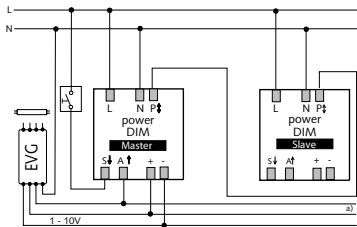
- Dim to the desired value using the push-button
- Release the push-button
- Keep the push-button pressed down for > 10 sec until the lighting flashes (lighting brightens or dims to the max. or min. value in the meantime).
- The new desired value is stored.

5. Additional wiring examples

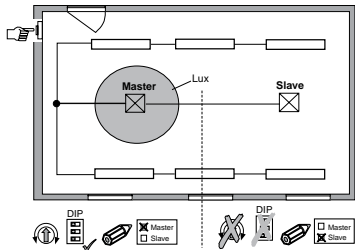
5.1 Parallel switching master-slave

Several detectors control **one** lighting group

- Only the master controls the lighting.
All other detectors are slaves.
- Presence detection is carried out by all detectors together
- Light measurement only at the master
- Potentiometer and DIP-switch are only set at the master
- Max. of 10 detectors may be switched in parallel
- Use the same phase for all detectors
- Mark power modules as master/slave



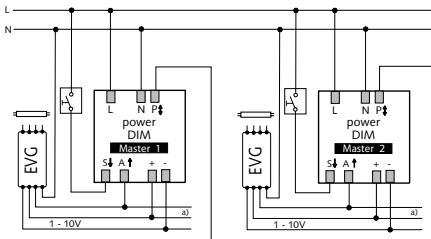
a) to other electronic ballasts



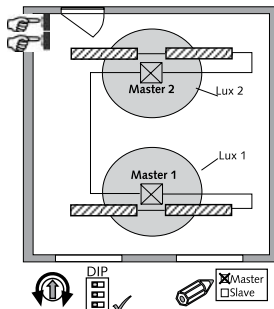
5.2 Parallel switching master-master

Several masters control **several** lighting groups

- One master per lighting group with individual brightness measurement
- Presence detection is carried out by all detectors together
- Potentiometer and DIP-switch are set individually at each master
- A max. of 10 detectors may be switched in parallel
- Use the same phase for all detectors
- Mark power modules as master



a) to other electronic ballasts



6. Test mode

The test mode serves to check the presence detection and the wiring (Master-Slave parallel circuit operation).

auto	<input type="checkbox"/>	man
reg.on	<input type="checkbox"/>	reg.off
preset	<input type="checkbox"/>	user
man.prog	<input type="checkbox"/>	off
run	<input type="checkbox"/>	test

6.1 Setting the test mode with DIP-Switch

- Set DIP switch to «Test» (on all detectors in parallel circuit operation)

1. Start-up phase (30sec)

- The contact is closed for 30sec. (LED 20s «on», 10s «off»)

2. Test mode

- In case of movement (LED on), the contact closes
- In case of absence (LED off), contact opens after 10sec.
- **Note:** The dimming function is switched off in test operation, this means after switching on the lighting is always set to 100%. The unit always responds in fully automatic mode.
- The detector remains permanently in the test mode

6.2 Setting the test mode with QuickSet plus

- While setting test mode with the service remote control QuickSet plus, 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 office DIM
Detection range	horizontal vertical	360° 120°
Recommended mounting height		2,0 - 3,0m
Maximum range		6 x 6 m (Mh. 2.5m) 8 x 8 m (Mh 3.5m)
Mixed light measurement		ca. 50 - 1500Lux
Switch-off delay time		10sec. - 20min.
Stand-by time		0sec. - 60min. / ON
Power module		power DIM
Mains voltage		230V ± 10%, 50Hz
Relais output A		230V ± 10%
In-line fuse		max. 10A
Max. switching capacity Incandescent lamps, halogen		1400VA 1200W
Max. nr. of electronic ballasts *) (A relay or contactor must be connected in case of more powerful devices)		10x (1x58W); 5x (2x58W) 16x (1x36W); 8x (2x36W) 16x (< 36W)

1-10V Interface	(EN 60929 / A1)
Control output Max. number of electronic ballasts that may be controlled	1-10V DC / 100mA 50x
Depth Diameter Mounting place	40mm 48mm 70 x 70mm
Screw terminals	max. 2x 2.5mm ²
Size of concealed housing	Size 1, (NIS,PMI)
Ambient temperature	0° - 50°C
Degree of protection	IP 40
Article numbers	
compact office DIM	201 0 001
Surface frame for compact	907 0 514
Service remote control QuickSet plus	907 0 532
User remote control clic	907 0 515

*) Use of T5-FL: When using T5-FL lamps with a comparable wattage, the same number of electronic ballasts may be connected to the detector's switching contact as for the T8-FL. When using the 80W-FL, the number should be halved in comparison to the 58W-FL.

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.

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.

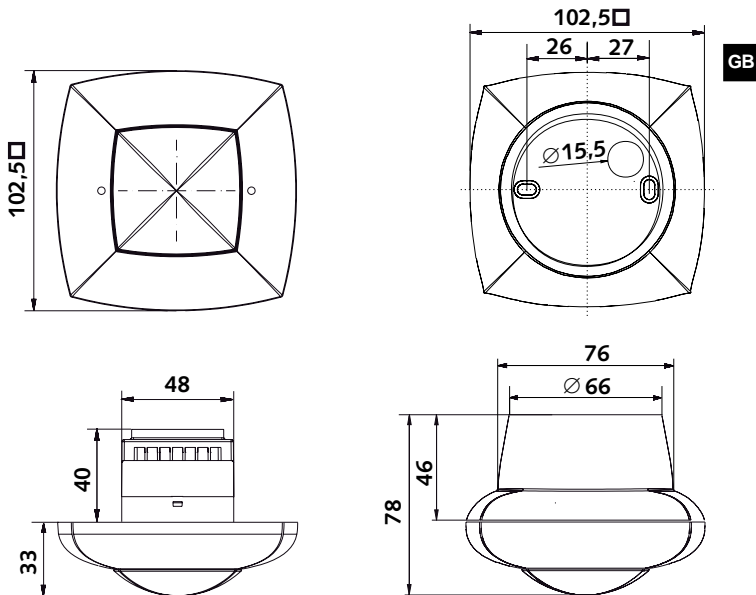
Industrial property rights

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; Detector is in semi-automatic mode; Lighting was switched off manually; Person is outside the detection range; Detection is disturbed by obstacle(s); 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; 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); Load (el. starter devices, relay) has no interference suppression
Push-button does not work	Device is still in start-up phase; Push-button is not connected to the master
Parallel connection does not work	Short circuit/ multiple phases connected in parallel! Disconnect detector from mains for 5 min. (thermal protection switch).
Error blinking (4x per sec.)	Failure during self test. Device not working!

Dimensions compact office DIM



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

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