thebenHTS

Presence detector
compact office EIB

Art. Nr. 201 9 200

Installation manual

Presence detector
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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 office EIB 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 compact office EIB presence detector detects persons present as a result of the slightest movements. At the same time its light sensor measures the brightness level in the room and compares it with the preset brightness value.

- Control of one or two lighting groups
- Switching mode or constant light control
- Mixed light measurement
- Semi or fully automatic operation
- Presence output with switch-on/off delay time
- Surveillance mode with manipulation protection
- Brightness value output in Lux
- Parallel circuit operation of several detectors (Master-Slave, Master-Master) without logic component
- Suitable for fluorescent/compact energy saving lamps, as well as for halogen/incandescent lamps
- Mechanical safety locking
- QuickSet plus service remote control (optional)
- clic user remote control (optional)

2.1 Switching Mode

The lighting switches on in case of presence **and** insufficient brightness, and off in case of absence **or** sufficient brightness

2.2 Constant Light Control Mode

In **Constant Light Control** mode, the brightness is constantly maintained at th pre-set value. It can be started fully automatically or manually using the push button or remote control. Manually switching off, dimming or changing the settings stops control mode for the duration of the presence.

3. Fitting and connection

3.1 Presence detection

The ideal mounting height is 2.0 - 3.0m.

The detector sensitivity decreases as the mounting height increases. The compact office EIB requires a clear line of sight for reliable detection of persons. Office furniture, mobile partitions, plants, suspended lamps, etc. may have a detrimental effect on 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	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)
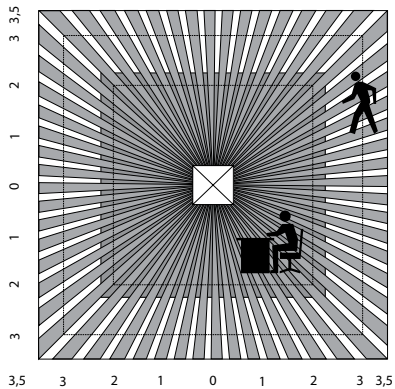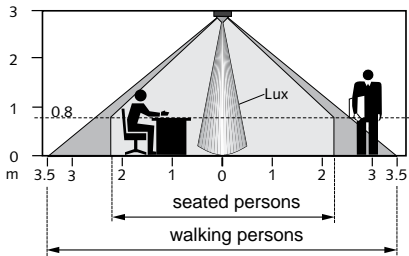
3.2 Light measurement
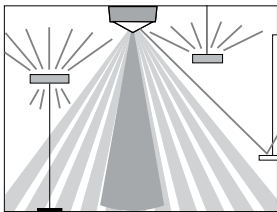
The detector measures artificial light and daylight reflected directly beneath the detector (beam width approx. ± 30°).

The mounting location is used as the reference for the lighting levels.

Switching

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

Constant light control mode

The detector must be positioned so that it only receives artificial light that it controls itself. Artificial light controlled by other detectors or manually operated work lights affect the brightness measurement of the detector. Direct artificial light on the detector should be avoided

3.3 Connection

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

4. Start-up procedure

4.1 Settings

All settings are adjusted using ETS. The QuickSet plus service remote control serves as adjustment aid (see chapter 5). ETS2 V1.2 or newer is required.

4.2 Programming Mode

Programming mode can be selected either by using the programming button on the back of the detector or, without unmounting the detector, using the QuickSet plus service remote control.

4.3 Lighting Settings (recommended)

Brightness value

Setting the desired brightness (Lux)   scale

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

Depending on the installation location, natural light intensity, furniture, reflection characteristics of the room and the furniture, an adjustment of the setting by 1 or 2 steps may be necessary.

Brightness difference (Outlets Lights A, B active)

A detector can switch or control up to two lighting rows. The lighting row nearest the window (know as Output A) usually requires less light.

- homogenous light relationship   +20%
- large brightness differences   +40%

Switch-off delay time

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.

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

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.
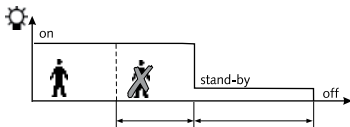
- Individual office   (inactive)
- Transfer zones   approx. 15min.
- Transfer zones with continuous light   **"on"**

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Lighting remains continuously in stand-by mode without presence. If the room brightness is above the desired value, the lighting switches off; if it falls below, the lighting switches automatically to stand-by mode, even if no one is present.

4.4 Presence settings

Switch-off delay time presence

The settings remain unchanged (no self-learning effect).

Switch-on delay time presence

When switch-on delay is activated, the telegram sent when movement is detected is delayed by the set value.

4.5 Switch-on behaviour

After every time the bus voltage is switched or the parameters are downloaded by ETS, the detector runs through its start-up phase (indicated by LED).

1. Start-up phase (30sec.)

- LED blinks once per second
- **Switching:** outlet light receives an ON telegram irrespective of brightness
- **Constant light control:** control is inactive, lighting is maximum dimmed (Value telegram 100 %).
- If there is no presence or sufficient brightness, an OFF telegram is sent after 30 sec. (Light off).

2. Operation:

- The detector is ready for use

- **Switching:** if there is presence and insufficient daylight, the detector switches on the lighting.

- **Constant light control:** if there is presence, the detector sets the lighting to the desired brightness.

- If there is no presence or sufficient brightness, the detector switches the lighting off.

5. Setting the Brightness Value

Using the QuickSet plus service remote control (software V3.02 or newer), the desired brightness can be easily set.

- Set the brightness by adjusting the artificial light and blinds until the brightness in the working area corresponds to the desired value.

  Example: 400 Lux is required in the working area. The blinds are adjusted so that the light meter shows around 400 Lux.
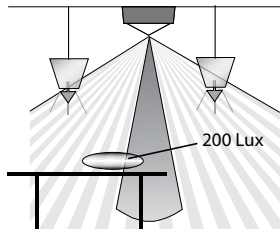
200 Lux

- In case of dimmable lighting, the brightness should be made up of half artificial light and half daylight where possible.

Example: 400 Lux is required in the working area. The blinds are adjusted with the lights switched off so that the light meter shows around 200 Lux. The lighting is then gradually brightened, until the light meter shows around 400 Lux.

- Using the "Brightness" menu on the Quick-Set plus remote control, the values can be sent to the detector in an increasing or decreasing sequence.
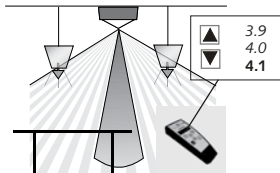
- If the value sent is too small, the LED will blink briefly (error blinking), if the value is too large, the LED will flicker for one second.

- A value which makes the detector flicker straight away rather than show the error blinking, (e.g. 4.3) must be entered in the settings window on the ETS as the brightness value. This value is now the detector's new desired value.

- The desired value found in this way should take into account reflection and influences such as furniture, installation location, incidence of light, etc.

6. Test Operation

Test operation is used to check the presence detection and connections (parallel switching master-slave, master-master).

(i) The unit always reacts fully automatically in test operation. Constant light control mode is not possible in test operation, i.e. after switching on, the lights will always dim 100 %.

- Set the detector to "Test Operation" using the QuickSet plus remote control service or ETS (for parallel switching, set all detectors to "Test Operation").
- The LED shows the movement signal immediately without switch-off delay time.
- The lighting is switched on if motion is detected.
- If no presence is detected, the lighting is switched off after 10 sec.
- On completion of the test, set the detector to "Normal Operation" using the QuickSet plus or ETS.
- If "Test Operation" was set using ETS it cannot be terminated using QuickSet plus.
- If "Test Operation" was set using QuickSet plus, it will end automatically after 10 minutes.

7. Examples

7.1 One Detector, Two Lighting Rows

- Two lighting rows are switched or controlled with one detector.
- Operation: master with individual switching
- Output light A, B active
- Set operation as required: switched or constant light control
- The mounting location should be chosen so that the master receives as near as possible the same amount of light from both lighting rows.

- Further detectors can be used as slaves to extend the detection area.
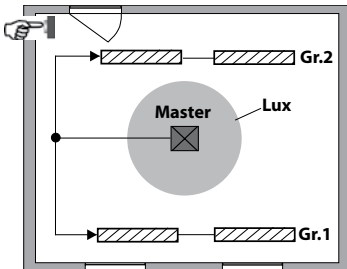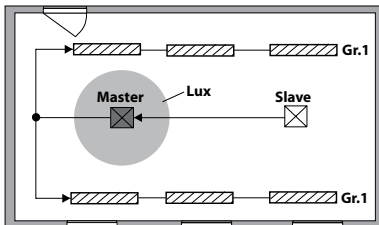
7.2 Two Detectors, One Lighting Row

Master:

- Operation: master with parallel switching
- Output light A active
- Set operation as required: switched or constant light control
- The mounting location serves as the reference for the brightness relationship for the room.

Slave:

- Used to extend the detection area.

- Further detectors can be used as slaves to extend the detection area.

7.3 Two Detectors, Two Lighting Rows

Both Detectors:

- Each detector must be positioned so that only the light it controls itself falls on it.

- Operation: master with parallel switching

- Output light A active

- Set operation as required: switched or constant light control

- The mounting location serves as the reference for the brightness relationship for the room.
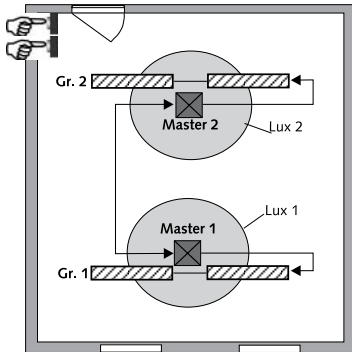
8. Technical specifications

Presence detector	compact office EIB
Detection range:	horizontal 360°, vertical 120°
Recommended mounting height	2,0 - 3,0m
Maximum range	6 x 6 m (Mh. 2.5m) 8 x 8 m (Mh. 3.5m)
Settings	
All settings can be set remotely	see „KNX/EIB Product Database - Outline"
Mixed light measurement Light measurement deactivated	approx. 10 - 1500Lux „none"
Switch-off delay time light	30sec. - 20min.
Stand-by time light	0sec. - 60min./on
Switch-off delay time presence	30sec. - 120min.
Switch-on delay time presence	0sec. - 30min.
Mounting plate	70 x 70mm
Terminals	KNX
Size of concealed housing (flush mounting)	Size 1, (NIS,PMI)
Ambient temperature	0° - 50°C
Degree of protection	IP 40
Article numbers	
compact office EIB	201 9 200
Surface frame for compact	907 0 514
QuickSet plus service remote control	907 0 532
clic user remote control	907 0 515

9. 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.
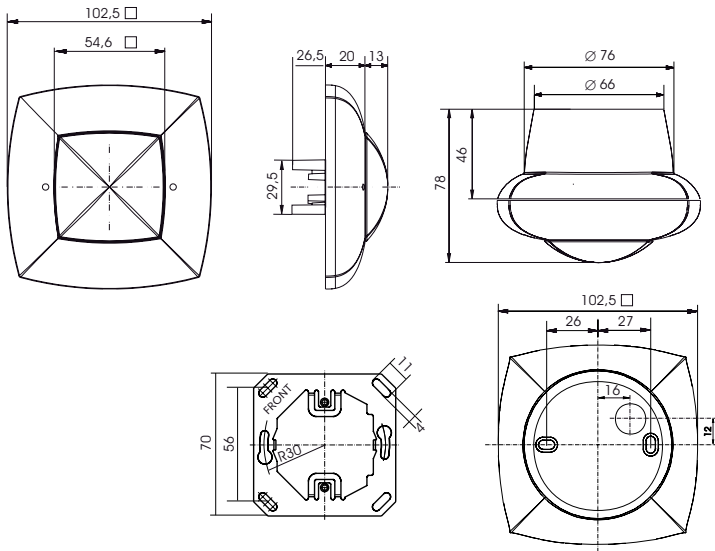
10. Troubleshooting

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; incorrect group adressing of detector - actuator
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 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)
Error blinking (4x per second)	Failure during self test; Device not working!

CE Declaration of Conformity $C \in$

Product complies with the requirements of the directive 2004/108/EC.

Dimensions compact office EIB

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

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