

theben 309902 01
Movement detector for flush-mounting
LUXA 103-200 T 103 0 031



GB
1. Designated use

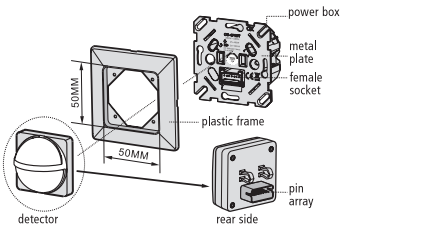
- The device of LUXA 103-200 T is an indoor movement detector for automatic lighting control
- Easy to be installed on the wall
- Apply to various locations: small-scaled stores or factories, offices, homes, such as corridors, staircase, dining rooms, cellars, garages etc.
- For the European standard flush-mounted socket

2. Basic safety instructions

WARNING
Danger of death through electric shock or fire!
 ➤ Assembly may only be carried out by qualified electricians!

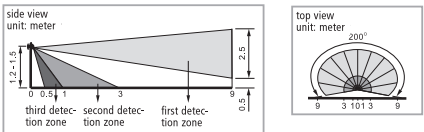
- The device corresponds to EN 60669-2-1 for designated installation; IP 40 in accordance with EN 60529
- Designed for use in normal environment
- Intended for indoor installation

Decomposed pattern
 Fig. shows the individual part of 103-200 T. The internal size of plastic frames is 50 x 50 mm. It fits European standard frames.

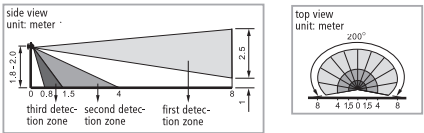


3. Installation and Connection

Select a proper location
 It is recommended to install at the height of 1.2 m-2.0 m. The detection range is up to 9 m at the height of 1.2 m-1.5 m, and up to 8 m at the height of 1.8 m-2.0 m. The min. height of motion object is above 0.5 m or 1 m; it can be detected in a fan-shaped whose radius is 8 m or 9 m.



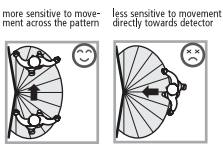
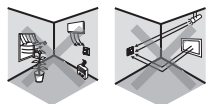
at the height of 1.2 - 1.5 m



at the height of 1.8 - 2.0 m

Tips for installation
 Since the detector responds the temperature change, please avoid the following conditions:

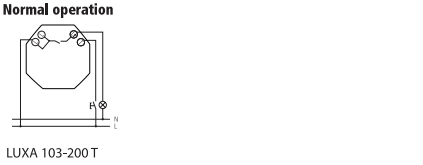
- Avoid pointing the detector toward the objects whose surfaces are highly reflective, such as mirror, etc.
- Avoid mounting the detector near heat sources, such as heating vents, air conditioners, lights, etc.
- Avoid aiming the detector toward the objects which may be swayed in the wind, such as curtain, tall plants, etc.
- Pay attention to the walking direction in the test proceeding.



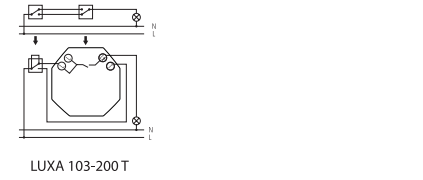
Connection

Warning, danger of death through electric shock!
 ➤ Must be installed by professional electrician!
 ➤ Disconnect power source.
 ➤ Cover or shield any adjacent live components.
 ➤ Ensure device cannot be switched on!
 ➤ Check power supply is disconnected!
 ➤ Earth and bypass!
 ➤ Do not connect dimmer or electronic switch to load in series.

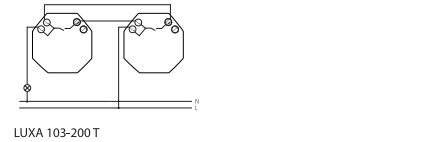
Cable specification: 0.8 mm²-0.25 mm², 2.5 mm max.



Replace a two-way switch by LUXA 103-200 T in a two-way circuit
 ➤ Use a bridge on the second switch. The second switch serves as a manual switch.
 When pressing the connected manual switch each time or detector is triggered, the light turns on for pre-set switch-on time.

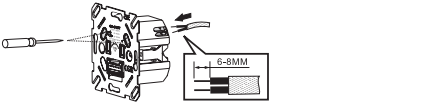


Replace 2 pieces of two-way switch by 2 pieces of LUXA 103-200 T in a two-way circuit
 When any of the two detectors is triggered, the light turns on for pre-set switch-on time.



Installation procedure
 LUXA 103-200 T can be fixed on the wall either in the European standard flush-mounted socket or in the surface-mounted frame (907 0 504).

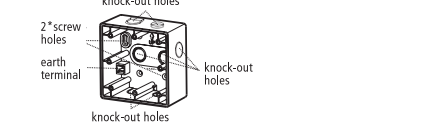
- Flush mount with European standard junction box**
- Remove the head of the motion detector and the frame of the power unit.
 - Unscrew the terminal and refer to the wiring diagram to insert the power cables into the corresponding terminal pin jack.
 - Strip off 6-8 mm of cable sheathing by tool.



- Screw the terminal and make sure the wires are securely fixed.
- Put the wired power box into the European junction box.
- Put together the head of the motion detector with the cover and power unit and insert in the standard flush-mounted socket, then affix the terminal screws.
- Supply power and carry out function test to check if LUXA 103-200 T works normally.

Surface-mounted installation with surface-mounted frame 907 0 504

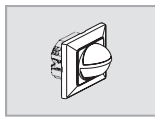
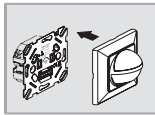
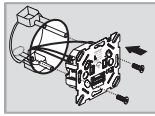
- Break the knock-out you intend the wires going through, then insert the wires into the corresponding hole.



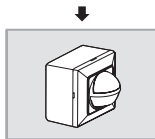
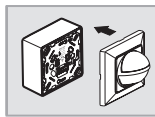
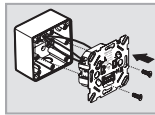
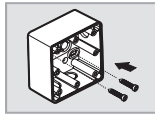
- Fix surface-mounted frame to the wall with 2 terminal screws (0.4 x 25.4 mm) (refer to fig. for position of screw holes). Refer to the steps below to finish the installation.

Note: Use 3 x 12 mm self-tapping screw to fix LUXA 103-200 with surface-mounted frame.

Installation with European standard junction box



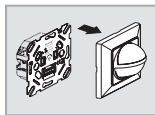
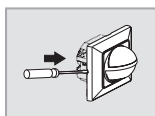
Installation with surface-mounted frame



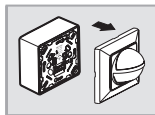
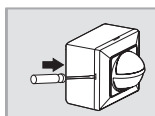
Dismantle the plastic frame

- To dismantle a fixed LUXA 103-200 T, please put the head of screwdriver at the nick of frame, then prize up the frame.
- To remove a flush mounted or surface mounted on junction box (JB-40) of LUXA 103-200 T, please refer to fig. above.

Dismantle LUXA 103-200 T from flush mount installation



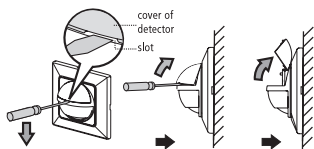
Dismantle LUXA 103-200 T from surface mount installation



4. Operation

Pull out the cover of the movement detector

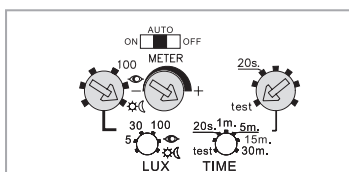
- Use a screwdriver at the position shown in fig., pull out the cover of the detector slightly.
- Turn it upwards to adjust the knob (see fig.), then turn it downwards and fasten it at the original place after the setting is completed.



Knob setting

Note:

- Make sure the detector is on the position of AUTO while adjusting the knob.
- As there are only scales printed at the right and left knob, please adjust the knob referring to corresponding printing marks (LUX and TIME).
- TIME and LUX knobs must be set at right position of value figure marked, DO NOT adjust knobs between two value figures to avoid value functional failure or value confusion.

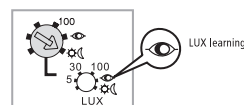


LUX knob setting

- LUXA 103-200 has 3 pre-defined LUX settings: 5/30/100, and Teach-in function and (reset).
- The actual light level (5-1000 LUX) can be read in.
- Learning procedure: Adjust the knob at more than 1 s, then adjust it at when the actual light level matches with the desired value, (the LUX knob can be adjusted at directly if it is at originally), LED begins to flash and detector enters into learning mode, the learning time is 10 s. During which, LED flashes slowly, after 10 s, LED and load will turn on for 5 s, then both will turn off, the learning process is completed, detector returns to AUTO mode automatically. If you want to proceed the learning mode again, adjust LUX knob at more than 1 s, then switch the knob at , LED flashes, and now is in learning mode, the learning procedure is the same as above.
- LUX value of LUXA 103-200 T can be read in only when slide switch is on the position of AUTO and the TIME knob isn't at "test".
- When the LUX learning procedure is finished, adjust the LUX knob at , detector will work according to the latest LUX value.

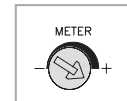
Note:

- If the LUX rotary switch is only briefly set to then to , the motion detector cannot go to learn mode.
- If the LUX rotary switch is set first to , then to another and then back to the motion detector cannot go to learn mode and the existing LUX value is retained.
- When adjust LUX knob at , detector is uncontrolled by LUX.
- When LUX is learning, detector can't be blocked by any objects.
- If the teach-in function is used to enter a LUX value outside 5-1000 lux, this causes a malfunction and the LED flashes rapidly for 10 seconds and detector works according to the last LUX setting.



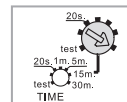
METER knob setting

- Set Meter knob value at the position of -.
- minimum detection area
- Set Meter knob value at the position of +.
- maximum detection area
- To adjust the Meter knob according to user's desire in between the position of - and +.



TIME knob setting

- LUXA 103-200 T has 2 pre-defined setting options: 20 s/1 min/5 min/15 min/30 min, and test (LUX disable)
- TEST mode: Set TIME knob at "test".
- If movement is detected, the consumer and LED switch ON for 2 seconds and then switch OFF again then turn off, and LUX is disable.

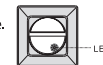


5. Walk Test

Note: LED comes ON for 30 seconds when power is supplied, then turn off. During the period of warming up, the load is uncontrolled by LUX. Once any movement is detected after warming up period, it will enter into normal mode. If no movement is detected within 15 s, load will turn off automatically and won't be controlled by pre-set timer but enter into standby mode immediately.

LED function

- The LED of LUXA 103-200 T is equipped inside of the lens.
- Only in the walk test, LED will turn on for 2 s in AUTO mode once the detector is triggered. It is uncontrolled by LUX and can be regarded as indicator.
- LED remains OFF either in AUTO mode or OFF mode.



Test procedure

The purpose of the walk test is to select a proper installation place to get the best detection range.

- Set the slide switch at the position of AUTO, turn METER knob to +, TIME knob to "test", then conduct a walk test referring to the following steps and LUX is disable.

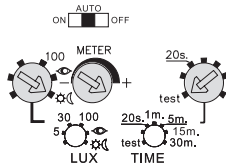
Walk Test



- Install the detector correctly and make sure wiring is connected correctly.
- Switch the power on.
- Walk from outside across to the detection pattern, once the detector is triggered, LED and load will all turn on for 2 s.
- Set the METER rotary switch according to the desired detection area
- Refer to point "Usage of lens shield", detection range and angle can be changed by adjusting lens shield.
- Repeat the steps until it meets user's demands.
- Pay attention to the walking direction while proceeding the test.

6. Manual Switch Function

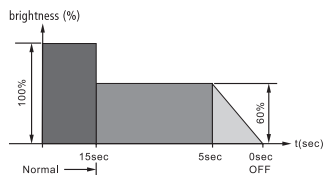
- AUTO:** Set slide switch in the middle, detector is in AUTO mode.
- ON:** Push the slide switch leftward, ON mode is activated, load will continue ON 2 hrs, LED flashes on 1 s and off 5 s, then return to AUTO mode automatically. Even if slide switch is set to ON, detector enters into AUTO mode once the power is re-supplied again.
- OFF:** Push the slide switch rightward, detector is in OFF mode, lighting keeps OFF permanently.



7. Dimming OFF Function

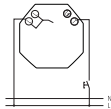
Two steps to indicate load will turn off:

- 15 s before time setting is expired, the brightness of lighting reduces to 60 %.
- 5 s before it is expired, the lighting will gradually turn off from 60 %.



8. Manual ON Operation

Additional push button can be connected to the terminal "T" and "L" with wires. Load turns on when the button is pushed, and turns off as the set time expired, it is uncontrolled by LUX.



LUXA 103-200 T

9. Usage of Lens Shield

Lens shield consists of three layers, each layer is divided into four small units, and the unit can mask an angle of approx. 50°. When mounting the detector at the height of 1.2 m–1.5 m, the detection range is:

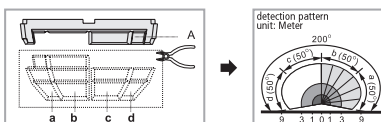
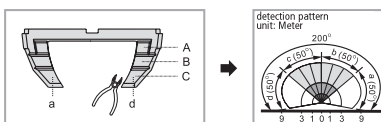
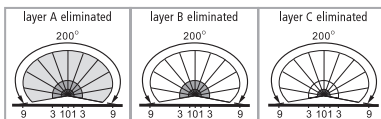
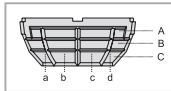
Layer A: mask the zone with a circle about from 0 m to 9 m.

Layer B: mask the zone with a circle about from 0 m to 3 m.

Layer C: mask the zone with a circle about from 0 m to 1 m.

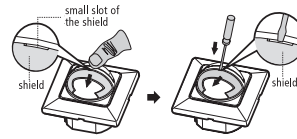
For detection angle of LUXA see fig.

Separate lens shield can be eliminated as each user's desired detection area.



To detach the shield

- Prod the shield outwards slightly, a small slot shows on the top of the lens, prize up the layer at the slot with a screwdriver to peel the shield off.



Note: The following conditions may cause lower sensitivity:

- In very foggy nights the sensitivity may be less due to moisture collecting on the lens.
- In very hot days the sensitivity may be reduced since high ambient temperature is close to body temperature.
- In very cold days when heavy clothes are dressed, especially the facial area is covered, very little heat will be emitted from the body causing the unit to be less sensitive.
- Cleaning – wipe with dry and clean cloth only. Soap or rough cloth may damage the detectors.

10. Technical Data

Nominal voltage:	230V~ +10%/-15%
Frequency:	50-60Hz
Power consumption:	typ. 6 VA
Contact:	Triac
Switching capacity:	2 A, 230 V
Incandescent lamp load:	25-400 W
Halogen lamp load:	25-400 W
Detection angle:	200°
Detector range:	up to 9 m at the height of 1.2 m–1.5 m up to 8 m at the height of 1.8 m–2.0 m
Mounting height:	1.2–2 m
LUX adjustable:	3 precise LUX settings: 5/30/100 and (Learning, range: 5–1000 Lux) (Reset)
Auto Off timer adjustment:	precise time setting: 20 s/1 m/5 m/15 m/30 m/test (2 s)
Environmental protection:	II, IP 40
Operating temperature:	0 °C to +45 °C

Theben AG

Hohenbergstr. 32
72401 Haigerloch
DEUTSCHLAND
Fon +49 (0) 74 74/6 92-0
Fax +49 (0) 74 74/6 92-150

Service

Fon +49 (0) 74 74/6 92-369
Fax +49 (0) 74 74/6 92-207
hotline@theben.de

Addresses, telephone numbers etc. at
www.theben.de