

theben

LUNA

LUNA 109

LUNA 110

109 0 100, 109 0 200

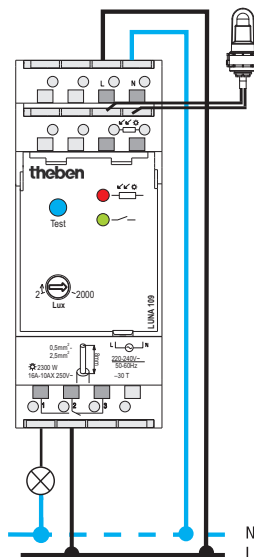
110 0 100, 110 0 200

**GB Assembly and
operating instructions**
Twilight Switch

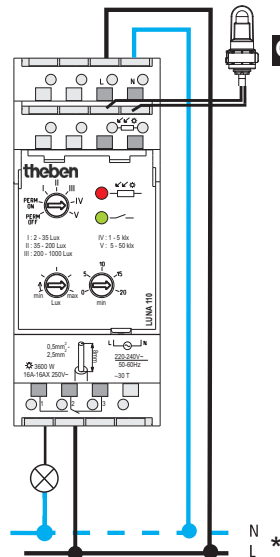


310 317 02

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* Current connection required for smooth zero-crossing switch operation (see connection diagram) only LUNA 110).

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Serviceadresse

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Addresses, telefon numbers etc.

www.theben.de

Basic advice

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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; it is designed for installation on DIN top hat rails (in accordance with EN 50022)

Designated use

- The twilight switch is used for controlling the light facilities of streets, external stairways, shop windows, entrances etc.
- For use only in closed, dry rooms (device); the sensor is intended for outdoor installation

Disposal

Dispose of equipment in an environmentally-friendly manner

Connection/assembly



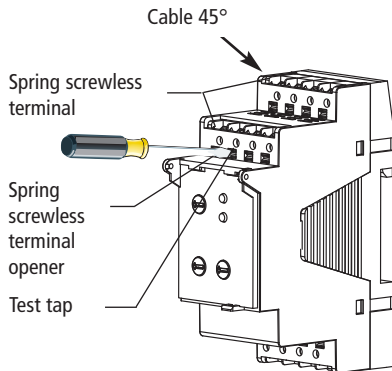
! WARNUNG

Danger of death through electric shock!

- Assembly may only be carried out by qualified electricians!
- Disconnect power supply!
- Ensure it is not turned on again!
- Check power is off!
- Earth and short-out!
- Cover or shield any adjacent live parts.

Connect cable

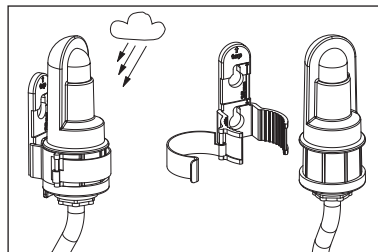
- Strip cable back to 8 mm (max. 9).
- Insert cable in open terminal at 45° angle (2 cables per terminal position possible).
- To open spring screwless terminal, press upwards with screwdriver.



Connection/Assembly of a light sensor

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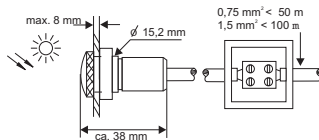
- Note the length of the connecting cable:
max. 100 m ($2 \times 1,5 \text{ mm}^2$), max. 50 m ($2 \times 0,75 \text{ mm}^2$)
- Avoid running the sensor line parallel to conductors.
- Surface-mounted light sensor: $0,5\text{--}2,5 \text{ mm}^2$, strip the wire to 10 mm (max. 11 mm).



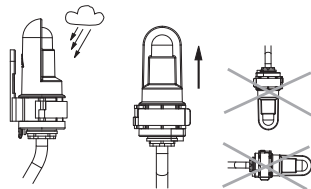
907 0 011



907 0 416



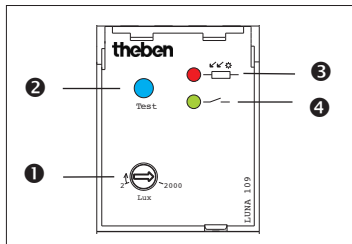
Surface-mounted light sensor



Built-in light sensor

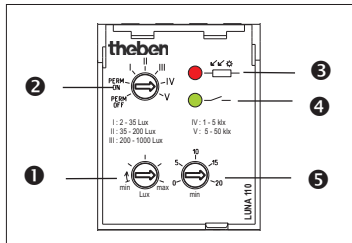
Display and control elements

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- ❶ Potentiometer for setting the brightness: 2-2000 lx
- ❷ Key **Test** for checking the installation (independent of brightness)
- ❸ Immediate display of the switched condition by means of a red LED
- ❹ Display of channel condition by means of a green LED (relay)

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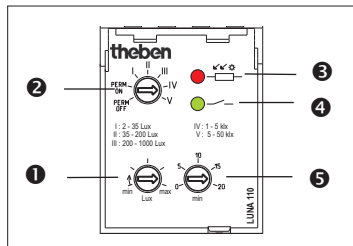
- ❶ Potentiometer for setting the brightness threshold
- ❷ Potentiometer for setting the brightness range:
 – I: 2–35 lx
 – II: 35–200 lx
 – III: 200–1.000 lx
 – IV: 1.000–5.000 lx
 – V: 5.000–50.000 lx
- ❸+❹ as described above
- ❺ Potentiometer for switch ON/switch Off delay (0 to 20 min.)

Initial start-up

The twilight switch with external light sensor is used for controlling the light facilities of streets, stairways, entrances etc.

- Set the desired range I-V on the potentiometer ② using a screw driver.
- Set the desired treshold ①.
The red LED will light up, if the set Lux value underruns the ambient brightness.
- Recommendation: set a delay ⑤ of at least 1 min, to avoid switching errors owing to lightening flashes, car headlights etc.

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Typical brightness values

daylight (bright)	80.000 lx
office rooms	500 lx
corridors and stairs	100-150 lx
street lighting	15 lx
full moon	ca. 0,3 lx

Technical Data

Nominal voltage:

Frequency:

On/off switch delay:

Power consumption:

Contact material:

Contact:

Gap:

Switching capacity max.:

Switching capacity min.:

Switching capacity fluorescent lamps:

Incandescent lamp load:

Halogen lamp load:

Fluorescent lamp loads – capacitive ballast
uncorrected:

series corrected:

parallel corrected:

dual circuit:

Fluorescent lamps – electronic ballast:

Mercury and sodium vapour

lamps: series corrected:

Compact fluorescent

lamps – electronic ballast:

Permissible ambient temperature:

Protection class:

Protection rating:

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220–240 V, ~, +10 %/–15 %

50–60 Hz

1 min.

ca. 3 VA

AgSnO₂

floating

<3 mm (μ)

16 A, 250 V~, cos φ = 1

10 mA/230 V AC

100 mA/12 V AC/DC

10 AX

2300 W

2300 W

2300 VA

2300 VA

400 VA (42μF)

2300 VA

300 VA

400 VA (42μF)

9x 7W, 7x11 W,

7x15 W, 7x20 W, 7x23 W

–30 °C ... +55 °C (device)

–40 °C ... +70 °C (sensor)

II (light sensors III) for designated installation

IP 20, IP 55 (surface-mounted light sensor), IP 65 (built-in light sensor) in accordance with EN 60529

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220–240 V, ~, +10 %/–15 %

50–60 Hz

0–20 min.

ca. 3 VA

AgSnO₂

phase-independent
(zero-crossover switching)

<3 mm (μ)

16 A, 250 V~, cos φ = 1

10 mA/230 V AC

100 mA/12 V AC/DC

16 AX

3600 W

3600 W

3600 VA

3600 VA

1200 VA (130μF)

3600 VA

1200 VA

1200 VA (130μF)

34x7 W, 27x11 W, 24x15 W,

22x23 W

–30 °C ... +55 °C (device)

–40 °C ... +70 °C (sensor)