

# theben

307038

**EN** Digital twilight  
switch

LUNA 111 top2

1110100/ 1110200

LUNA 112 top2

1120100/ 1120200



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# 1. Basic safety information



## WARNING

**Danger of death through electric shock or fire!**

- Installation should only be carried out by a qualified electrician!

- The device is designed for installation on DIN top hat rails (in accordance with EN 60715)



OBELISK top2 memory card: Avoid mechanical overload and contamination during storage/transportation



# 2. Proper use

- The digital twilight switch is used for lighting equipment (streets), external stairways, display windows, entrances etc.
- Only for use in closed, dry rooms
- Sensor is installed in the open-air



Do not use on safety devices, e.g. escape route doors, fire safety equipment etc.

## Disposal

- Dispose of device in environmentally sound manner

## 3. Installation and connection

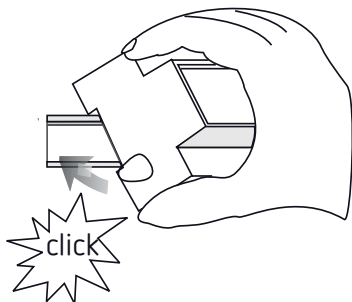
### Mounting the time switch

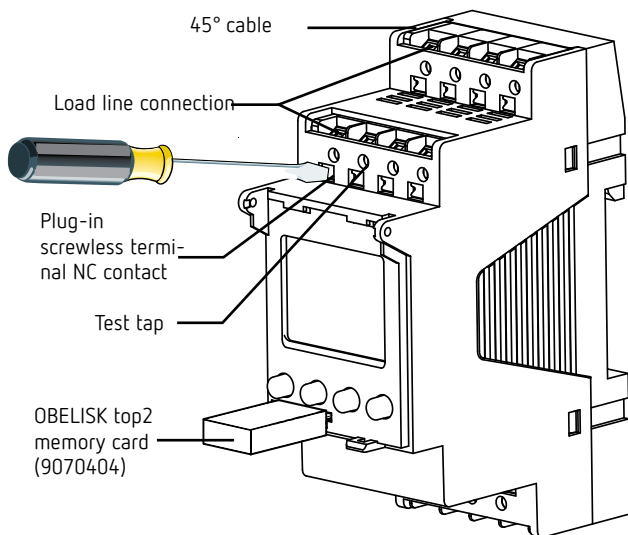


**WARNING**

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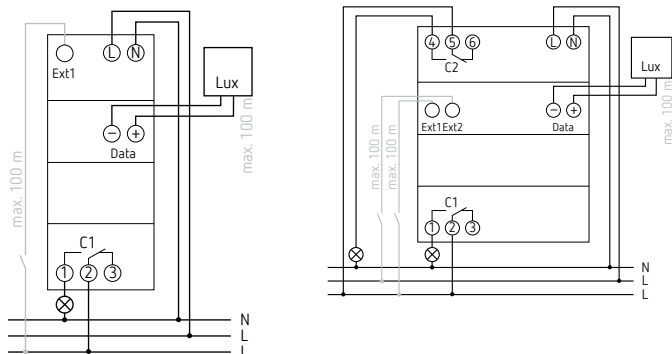




- Mount on DIN top hat rails (as defined in EN 60715)
- Switched voltage-free
- Ensure device cannot be switched on
- Check absence of voltage
- Earth and bypass
- Cover or shield any adjacent live components

# Connecting the cable

## Wiring diagrams LUNA 111 top2 / LUNA 112 top2



- Strip cable to 8 mm (max. 9)
- Insert cable in the open DuoFix® plug-in terminal at 45°
  - ① 2 cables per terminal position possible
- To open the DuoFix® plug-in terminal, press screwdriver downwards

## Disconnecting the cable

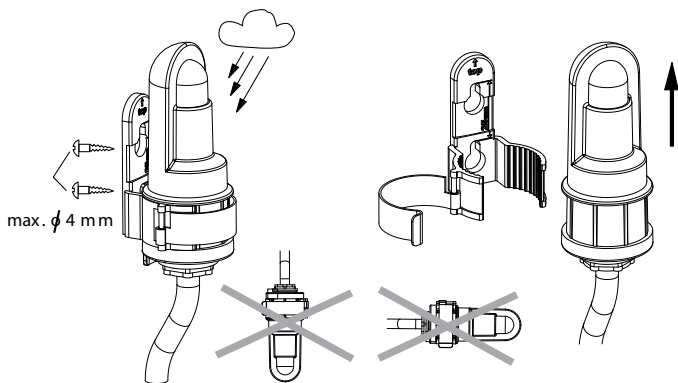
- Use the screwdriver to push the load line connection opener downwards

## Connection/installation of light sensor

- ⚠ Take length of connection cable into account: max. 100 m (2 x 1.5 mm<sup>2</sup>), max. 50 m (2 x 0.75 mm<sup>2</sup>)
- ⚠ Avoid running sensor wiring parallel to mains power cables
- Ensure correct polarity. Connect power source

### Mounting light sensor 907 0 415

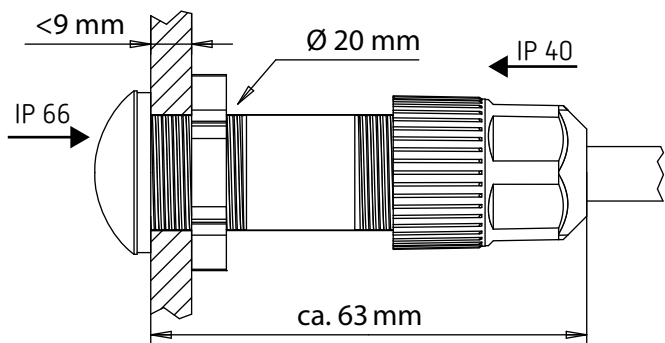
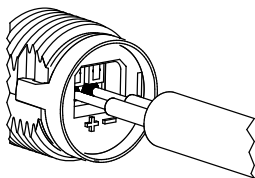
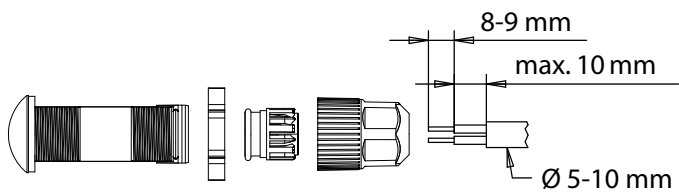
- Mounting light sensor: 0.5-2.5 mm<sup>2</sup>, strip cable by 10 mm (max. 11 mm)



### Installing light sensor 907 0 456

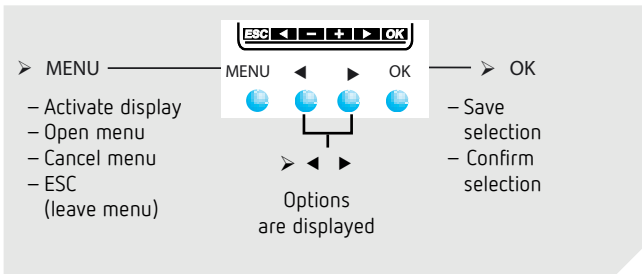
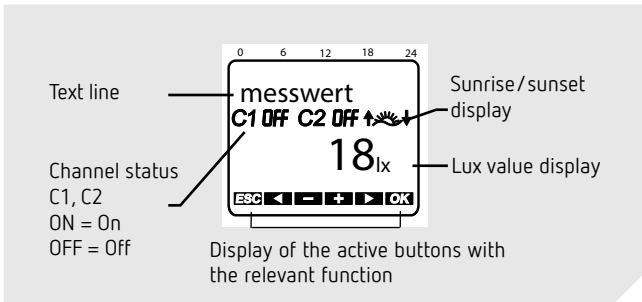
- Installing light sensor: 0.25-1.5 mm<sup>2</sup>, strip cable by 8 mm (max. 9 mm)



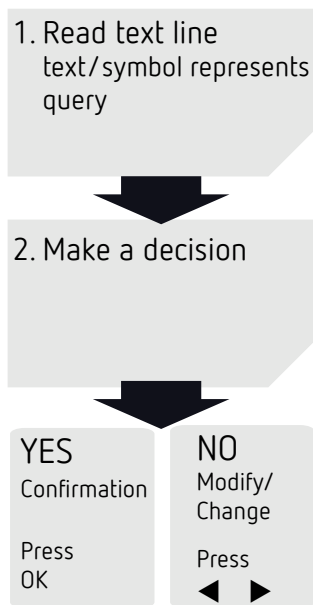


## 4. Device description

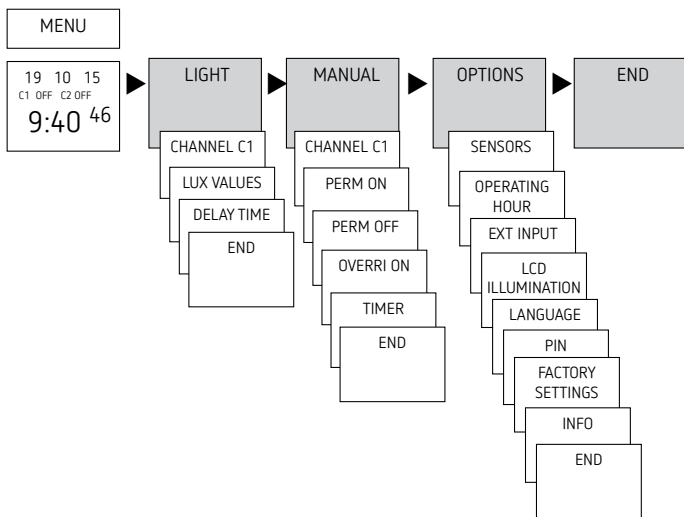
### Display & buttons



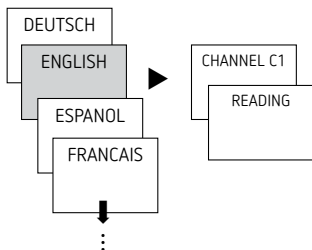
# Operating instructions



# Overview of navigation menu



## Initial operation

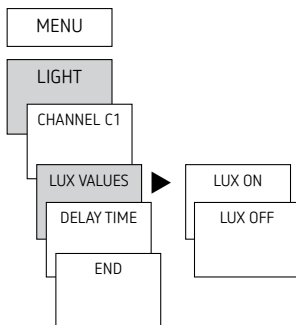


- Set language, press OK to confirm
- Press any button and display follows on screen (see figure)

- ① If all settings are performed, the screen alternately shows the automatic display and READING
- ① If a sensor is connected, the measured lux value appears on screen (only during mains operation).

## 5. Settings and functions

### Set lux values

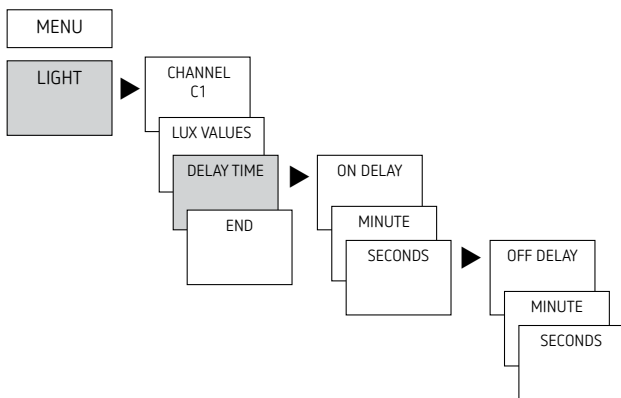


- ① The device has been preset at 15 lx for the switch on/switch off level
- Press MENU
- Select LIGHT and press OK to confirm
- Select CHANNEL C1 or C2, confirm with OK
- Select LUX VALUE and press OK to confirm
- Select LUX ON and press OK to confirm
- Set LUX VALUE, confirm with OK

## Typical brightness values

Daylight (bright)	80.000 lx
Office accommodation	500 lx
Hallways and stairs	100–150 lx
Street lighting	15 lx
Full moon	ca. 0,3 lx

## Set delay

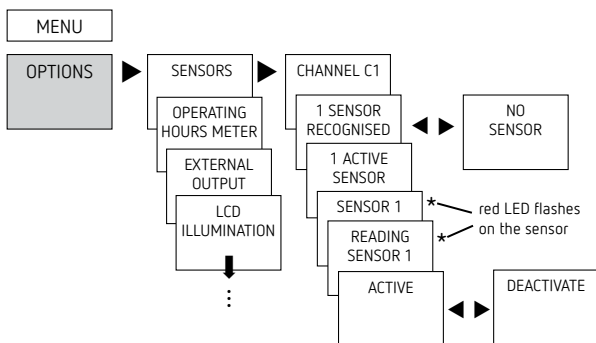


① An on/off delay of 1 minute is preset to avoid faulty operation caused by lightning, car headlights etc. When the delay ends the channel status will flash ON/OFF.

- Press MENU
- Select LIGHT and press OK to confirm
- Select CHANNEL C1 or C2, confirm with OK
- Select DELAY TIME, confirm with OK
- Select ON DELAY, confirm with OK
- MODIFY HOUR, use the + or – buttons to change minute and confirm with OK.

## Allocate sensors

① The SENSORS are allocated in the menu under OPTIONS



➤ Press MENU (see fig.)

### Connection options:

- 1 LUNA + max. 4 light sensors
- 10 LUNA + 1 light sensors
- $\Sigma$  max. 16 devices (LUNA + light sensors)

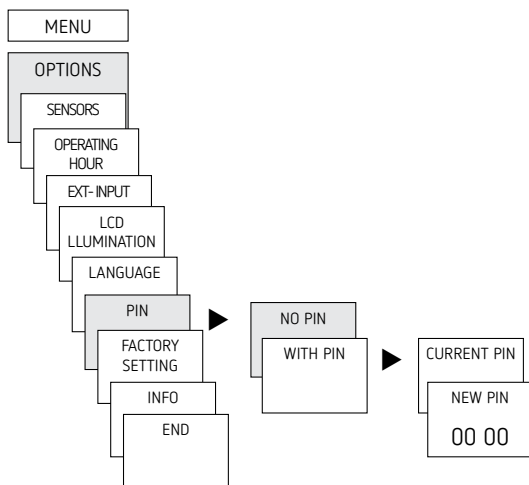
① **Presetting:** all connected sensors are active for all channels. The sensor that sends the lowest lux value is active

## Activating PIN code

The PIN code is set in OPTIONS via the menu.

① If you have forgotten your PIN, call the Theben Hotline.

① Have the serial number ready.

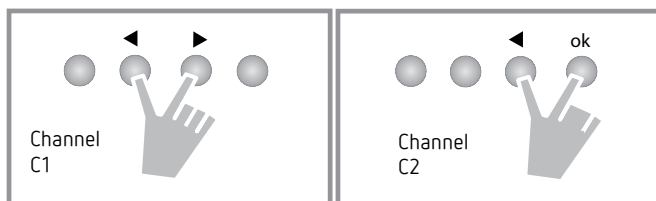


## Setting manual or permanent switching

Manual or permanent switching can be set via the menu in MANUAL or (in the automatic screen) by button combination (see picture).

- Manual control:  
Reversing the channel status to the next automatic or programmed switching.
- Permanent switching:  
As long as a permanent switching (on or off) is activated, the programmed switching times and switching thresholds are ineffective





## Activating manual control

- Briefly press both buttons simultaneously

## Activating permanent switching

- Press both buttons simultaneously for 2 seconds

## Cancelling manual/permanent switching

- Press both buttons simultaneously

## Set external input

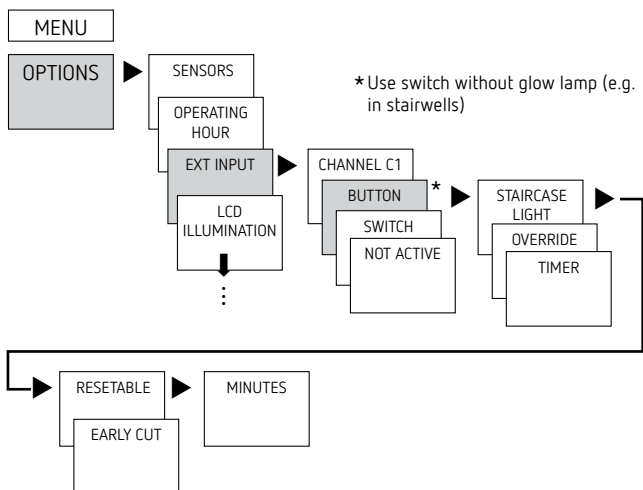
For the channel, an EXTERNAL INPUT (see figure) can be set with different functions.

3 sub-menus can be selected: Inactive, push button (function), switch (function)

- NOT ACTIVE: The external input has no function
- BUTTON: Manual (manual control), Timer (countdown timer) are selectable
- SWITCH: Permanent On, permanent Off are selectable

- ① If a function is activated via an external push button or switch, EXTERNAL is displayed.





- Press MENU, with ► select EXT INPUT and follow the indications on the display.

## Hour counter

The operating hours of the channel (relay) are displayed and deleted in the OPTIONS menu. If the number of operating hours exceeds the value set in the Service menu, SERVICE will appear in the display.

Example: Replace a lamp after after 5,000 h.

- Delete operating hours or set a higher value in Service (e.g. to 10,000 h)

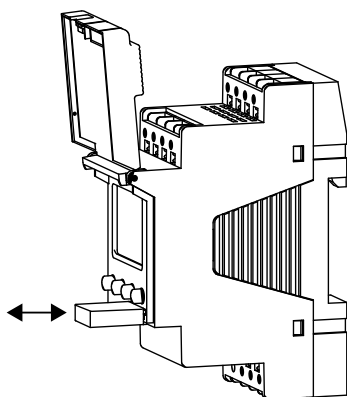
## Using the OBELISK top2 memory card

All functions can also be set on the PC using the OBELISK software and transferred to the device via the memory card.

- Insert memory card in the twilight switch
- Read in/out saved switching times and device setups in the time switch or start Obelisk program
- Remove memory card after copying etc.

**⚠** Avoid mechanical overload and contamination during storage/transport

① PC software OBELISK top2 available at [www.theben.de](http://www.theben.de)



## Copying OBELISK → LUNA

This copies the switching program and optionally all time switch settings (e.g. external input, time format etc.) from the memory card in the twilight switch.

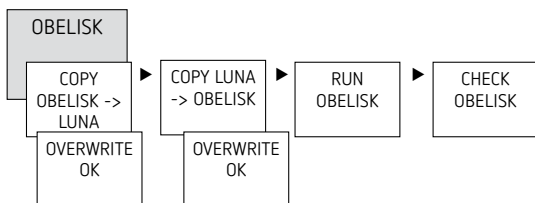
## Copying LUNA → OBELISK

This copies all switch programmes and settings from the twilight switch to the memory card.

## Starting OBELISK program

Takes on the switching times and the threshold values that are programmed on the memory card.

As soon as the memory card is removed, the switching times of the twilight switch are re-activated.



## Resetting the twilight switch

- Press the 4 buttons simultaneously
  - You can choose between KEEP PROGRAM and DELETE PROGRAM

## 6. Technical data

Operating voltage:	230–240 V~(LUNA 111 top2 RC) / 100–240 V~ (LUNA 112 top2 RC), +10 % / -15 %
Frequency:	50–60 Hz
Brightness range:	1–99,000 lx
On/off switch delay:	0–59 min
Power consumption Luna 121 / Luna 122:	1,8 W / 2,2 W
Switch output:	phase-independent (zero-crossover switching)
Contact:	$\mu$ -contact, two way switch
Switching capacity:	16 A / 250 V~ $\cos \varphi = 1$
Fluorescent lamp switching capacity:	10 AX
Switching capacity min.:	10 mA / 250 V AC 100 mA / 12 V AC/DC
Glow lamp load:	2600 W
Halogen lamp load:	2600 W
Fluorescent lamps KVG: uncorrected: series-corrected: parallel-corrected: Lead-lag circuit (duo):	2300 VA 2300 VA 800 VA (80 $\mu$ F) 2300 VA
Fluorescent lamps (EVG – Electronic series devices):	650 W
Compact fluorescent tubes (EVG):	170 W
LED lamps (< 2 W):	30 W
LED lamps (2 W – 8 W):	100 W
LED-lamps (> 8 W):	120 W
Permissible ambient temperature:	–30 °C ... +55 °C, –40 °C ... +70 °C (sensor)
Protection class:	II (light sensors III) if correctly mounted



Protection rating: device	IP 20
Mounted light sensor	IP 55
Installation light sensor	IP 66 (frontside) IP 40 (backside)

## 7. Contact

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