theben

LUNA
LUNA 120 top2

120 0 100
120 0 200

Installation and operating instructions
Twilight switch

| D | GB | F | I |
| E | P | NL | PL |
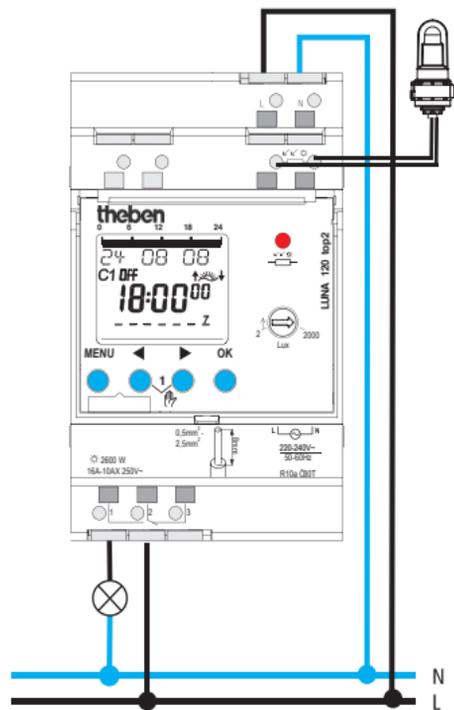
LUNA 120 top2

⚠ Correct connection required for smooth zero crossing switch operation (see connection diagram)!

Contents

Basic advice

⚠ **WARNING**

Danger of death through electric shock or fire!
➢ Installation should only be carried out by a professional electrician!

- The device is designed for installation on DIN top hat rails (in accordance with EN 50022)
- Power reserve (10 years) is reduced if memory card is inserted (in battery operation)
- OBELISK top2 memory card: Avoid mechanical stress or contamination caused by other storage/ Transport vermeiden (available if required)

Designated use
- The digital twilight switch is used for lighting equipment (streets), external stairways, display windows, entrances etc.
- Only use in enclosed dry spaces (equipment); sensor is installed in the open-air

Disposal
Dispose of equipment in an environmentally-friendly manner

Screen display and keys

Programmed ON switching times

Date display

Channel status ON OFF

Time display

Days of the week from 1 to 7

Display of active keys with relevant function

Operating instructions

1. Read text line
Flashing text/symbol represents query

2. Make a decision

YES	NO
Confirmation	Alter/ change
Press	Press
OK	◄ ►

> *MENU*

– Activate screen
– Open menu
– Cancel menu
– ESC (leave menu)

> *OK*

– Store selection
– Confirm selection

> ◄ ►

Selection options are displayed

Overview of menu selection

MENU

```
19 10 08        LIGHT       PROGRAM      TIME/DATE     MANUAL        OPTIONS         END
 OFF
9:40 46
                ON DELAY    FREE 56       TIME         PERMANENT     OPERATING
                                                       ON            HOURS METER

                ON DELAY    NEW           DATE         PERMANENT     LCD
                                                       OFF           ILLUMINATION

                END         VIEW          SUMMER--     MANUAL ON     LANGUAGE
                                          WINTER

                            CHANGE        WEEKDAY      TIMER         PIN

                            DELETE        DATE         HOLIDAY       FACTORY-
                                          FORMAT                     SETTINGS

                            END           DATEFORMAT   END           INFO

                                          END                        END
```

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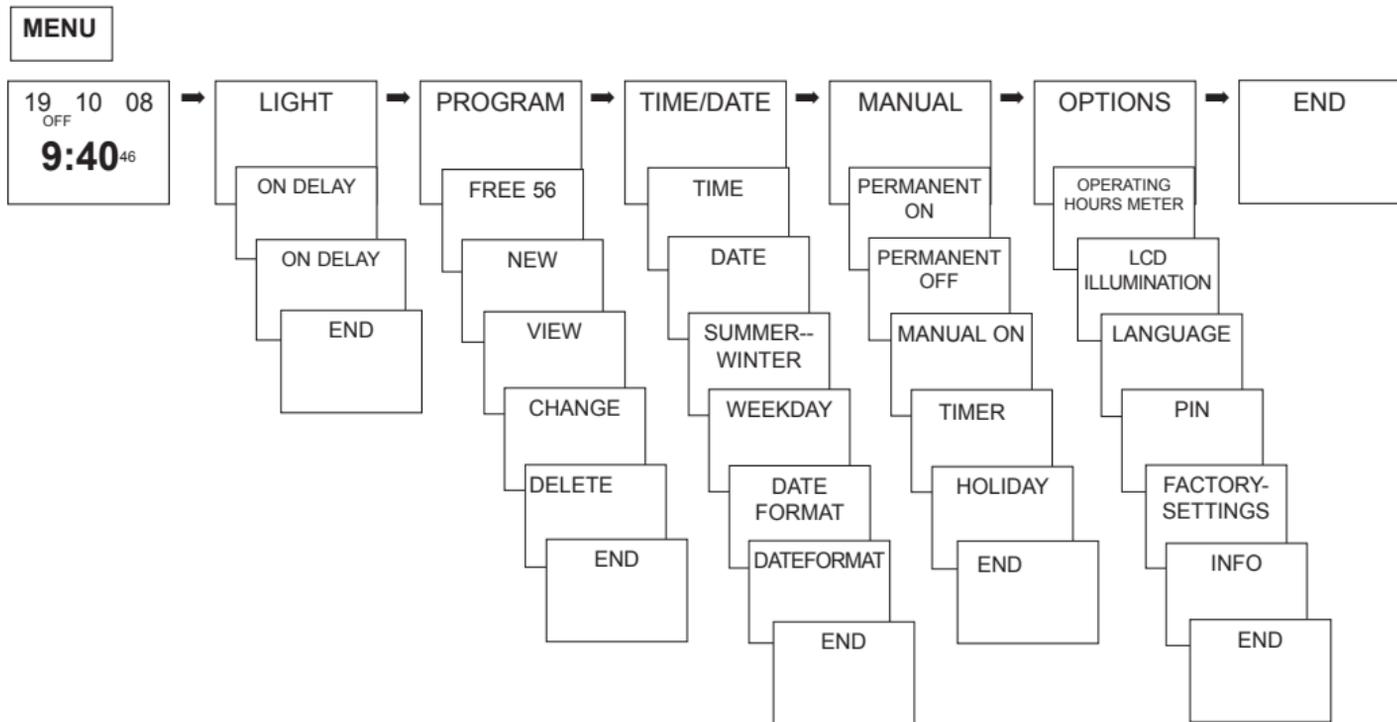
Connection/installation

Warning, danger of death through electric shock!
- ➢ Must be installed by a professional electrician!
- ➢ Connect power source!
- ➢ Cover or shield any adjacent live components live components.
- ➢ Ensure device cannot be switched on!
- ➢ Check power supply is disconnected!
- ➢ Earth and bypass!

Connect cable

- ➢ Strip cable by 8 mm (max. 9).
- ➢ Insert cable at 45° in the open terminal (2 cables per terminal position possible).
- ➢ Press screwdriver downwards to open spring screwless terminal.

45° cable

Spring screwless terminal

Spring screwless terminal NC contact

Test tap

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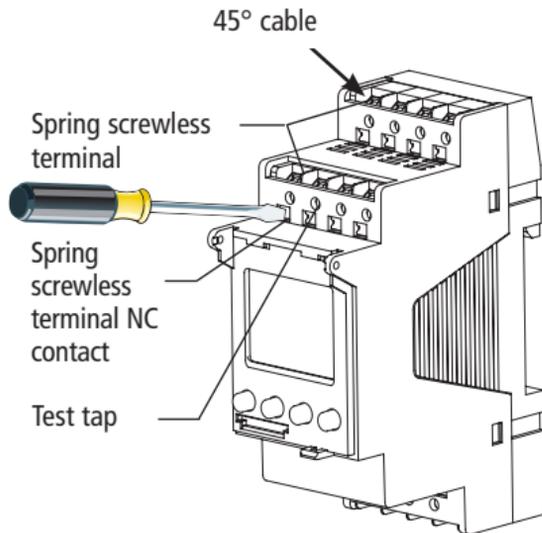
Connection/installation of light sensor

- ➢ Take length of connection cable into account
  max. 100 m 2 x 1,5 mm², max. 50 m 2 x 0,75 mm²
- ➢ Avoid running sensor wiring wiring parallel to
- ➢ mains power cables. 0,5–2,5 mm², strip cable by 10 mm
  (max. 11 mm).
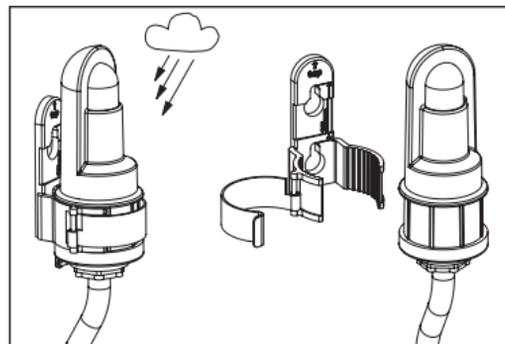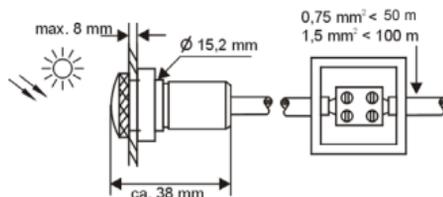
907 0 011	907 0 416	Installing light sensor	Mounting light sensor
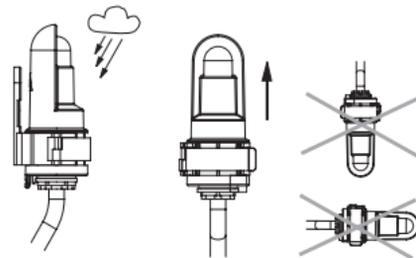
Installing light sensor: max. 8 mm, Ø 15,2 mm, 0,75 mm² < 50 m, 1,5 mm² < 100 m, ca. 38 mm

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Initial start-up

Set language, date, time as well as summer/ winter time

➢ Press required key and display follows on screen (see fig).

GERMAN

KEEP PROGRAM

DATE FORMAT

YEAR

MONTH

DAY

TIME FORMAT

HOUR

MINUTE

SUMMER-WINTER EUROPE

or ➡

SUMMER-WINTER GB/ IRL/P

SUMMER-WINTER FIN/GR/TR

SUMMER-WINTER CDN

SUMMER-WINTER USA 07

SUMMER-WINTER IRAN

SUMMER-WINTER FREE RULE

SUMMER-WINTER FIXED DATE

WITHOUT SUMMER-WINTER

ok ➡

28 02 08
ON
9:4046
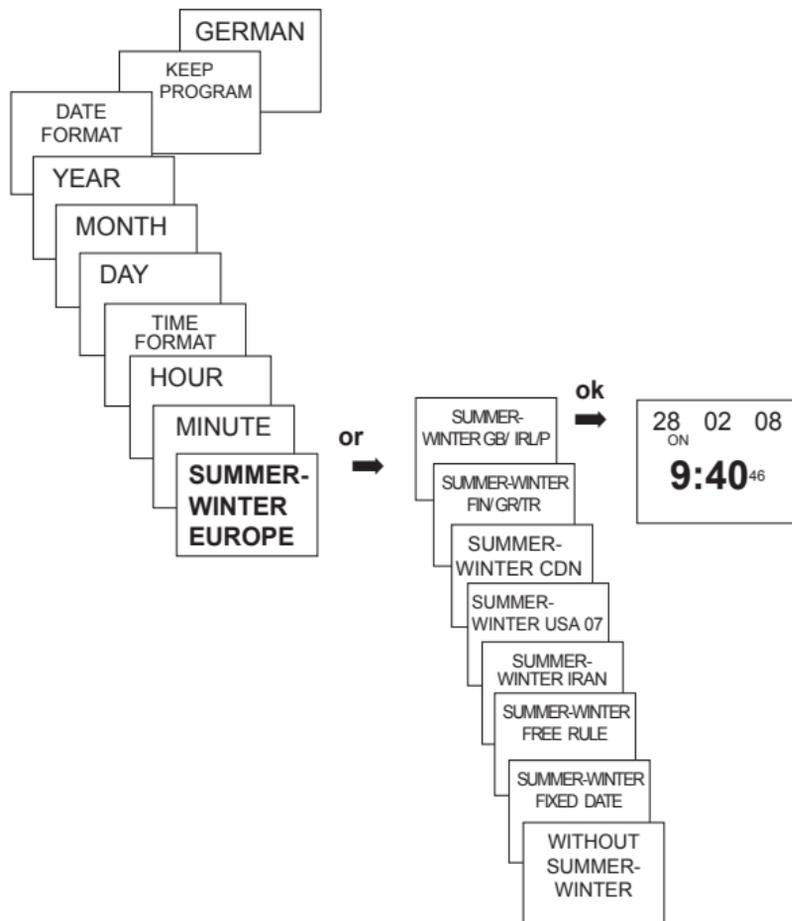
Set lux values

The twilight switch with external light sensor controls lighting equipment for streets, stairways, enrances etc.

➢ Set desired range from I-V with a screw tab a screw-driver on the potentiometer ② setting (see fig).
  The red LED lights up as soon as the set Lux value falls below the ambient brightness level.
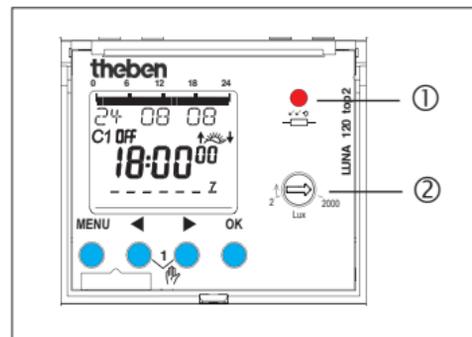
Brightness values

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

② Potentiometer for setting brightness: 2–2000 lx
① Red LED for the instantaneous display of switching status

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Set delay

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** (see fig.).

```
┌─────────┐
│ LIGHT   │
│   ┌─────────┐        or      ┌─────────┐
│   │ ON DELAY│      ➡         │ ON DELAY│
└───│   ┌─────────┐            │   ┌─────────┐
    │   │ MINUTE  │            └───│ MINUTE  │
    └───│   ┌─────────┐            │   ┌─────────┐
        │   │ SECONDS │            └───│ SECONDS │
        └───│         │                │         │
            └─────────┘                └─────────┘
```
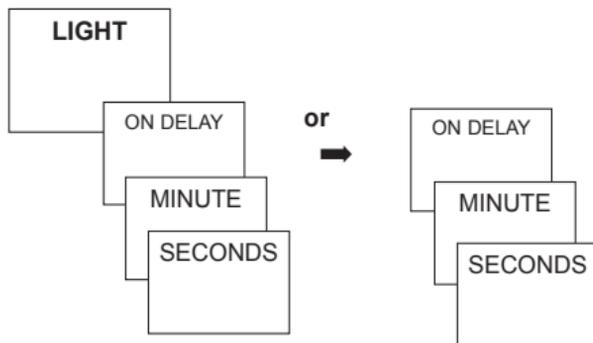
Set switching time

(e.g. with a night switch off
at theweekend 23:00–05:00 Uhr)

➢ Press **MENU** (see fig.).

There are 56 available memory
cells.

```
PROGRAM   --ok-->   NEW   --ok-->   NIGHTSWITCH
                    VIEW                HOUR
                    CHANGE              MINUTE
                    DELETE              MONDAY
                    END                 LASTS
                                        UNTIL
```

Switching time
for one day

same switching time for
several days = block

```
COPY        SAVE
PLUS TUESDAY
SAVE
```

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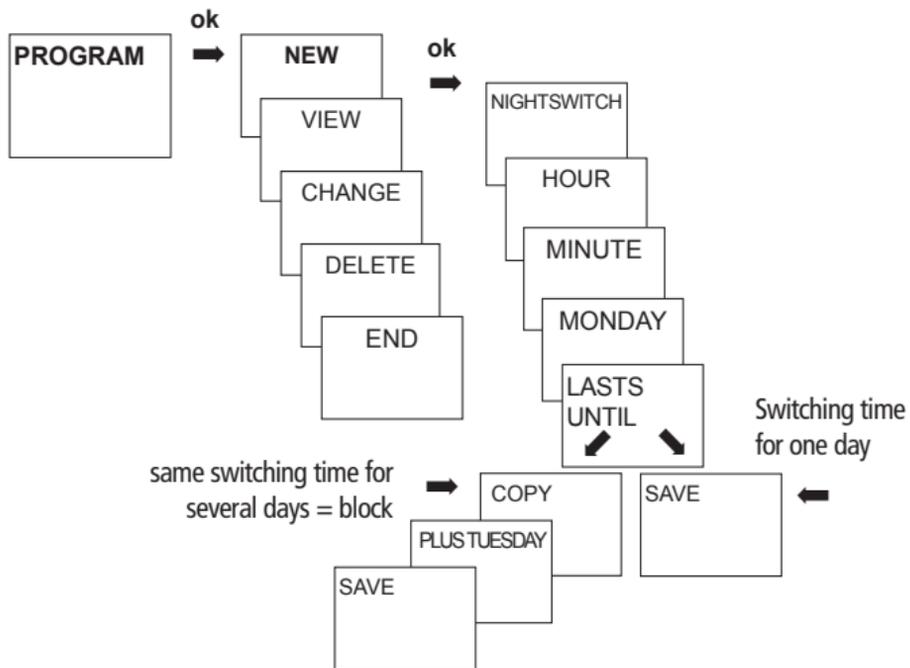
Manual and permanent switching

Manual and permanent switching can be set using the menu in **MANUAL** or (in the automatic screen) by key combination (see fig).
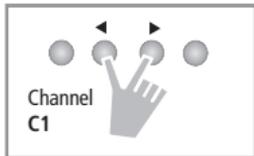
Activate manual switching
➢ Briefly press both keys simultaneously.

Activate permanent switching
➢ Simultaneously press both keys for 2 seconds.

Cancelling manual/permanent switching
➢ Press both keys simultaneously.

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 are ineffective.

Enter PIN code

The **PIN-Code** is set via the menu in **OPTIONS** (see picture).
If you have forgotten the PIN please call the Theben Hotline.
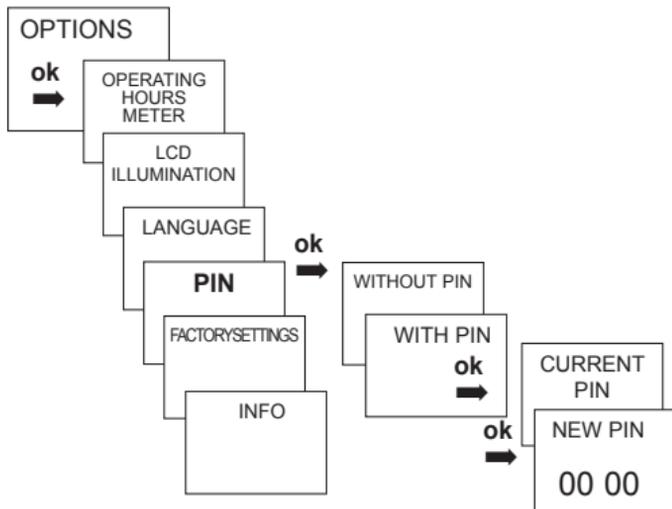
OBELISK top2 memory card (available if required)

Using memory card

➢ Insert memory card in the timer.

➢Request savedswitch timings, read to/from the timer or start Obelisk program.

➢ Remove OBELISK top2 memory card (no. 907 0 404) after programming etc. and store in cover.
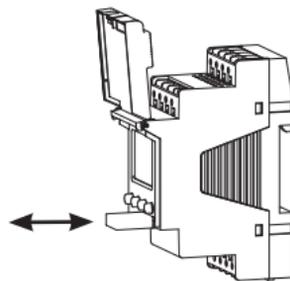
Technical data

Nominal voltage:	220–240 V~, +10 %/-15 %
Frequency:	50–60 Hz
Brightness range:	2–2.000 lx
On/off switch delay:	0–59 min
Power consumption:	type 3 VA
Switching output:	phase-independent (zero-crossover switching)
Contact:	two way switch
Contact material:	AgSnO$_2$
Switching capacity:	16 A/250 V~ cos φ = 1
	10 A/250 V~ cos φ = 0,6
Fluorescent lamps:	10 AX
Switching capacity min.:	10 mA/230 V AC
	100 mA/12 V AC/DC
Glow lamp load:	2600 W
Halogen lamp load:	2600 W

Fluorescent lamps (VVG – low-loss series devices):
uncorrected:	2300 VA
series-corrected:	2300 VA
parallel-corrected:	800 VA (80µF)
Lead-lag circuit (duo):	2300 VA

Fluorescent lamps (EVG – Electronic series devices):
	650 VA

Mercury and sodium vapour lamps:
parallel-corrected:	800 VA (80µF)

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Compact fluorescent tubes (EVG):	22x7 W, 18x11 W, 16x15 W, 16x20 W, 14x23 W
Permissible ambient temperature:	–30 °C ... +55 °C (device)
	–40 °C ... +70 °C (sensor)
Protection class:	II (light sensors III) in accordance with EN 60730-1 if correctly
Protection rating:	IP 20, IP 55 (Mounted light sensor), IP 65 (Installation light sensor) in accordance with EN 60529

Service address/Hotline
Service address

Theben AG
Hohenbergstr. 32
72401 Haigerloch
GERMANY
Telephone +49 (0) 74 74 6 92 0
Fax: +49 (0) 74 74 6 92 150

Hotline
Telephone +49 (0) 74 74 6 92 369
Fax +49 (0) 74 74 6 92 207
hotline@theben.de
Addresses, telephone numbers etc.
www.theben.de