theben

TR

TR 608 top2 S	6080101
TR 609 top2 S S	6090101

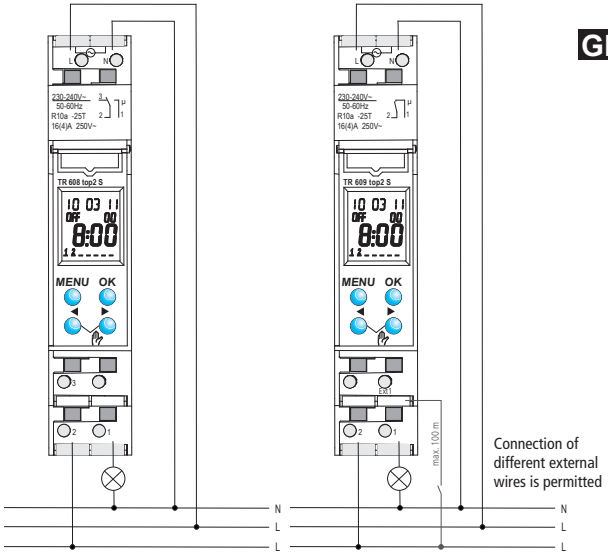
Installation and operating instructions

Digital time switch

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I E NL

309364

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TR 608 top2 S **TR 609 top2 S**

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Basic safety instructions



⚠ 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)
- Corresponds to type 1 BSTU in accordance with IEC/EN 60730-2-7 / IEC/EN 60730-1
- Power reserve (10 years) is reduced if memory card is inserted (in battery operation)

Designated use

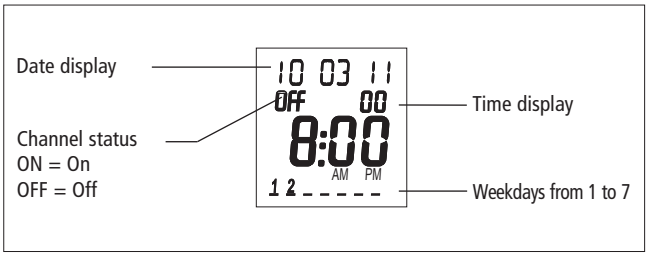
- The time switch can be used for lighting, bell systems, ventilation etc.
- Only use in enclosed dry spaces

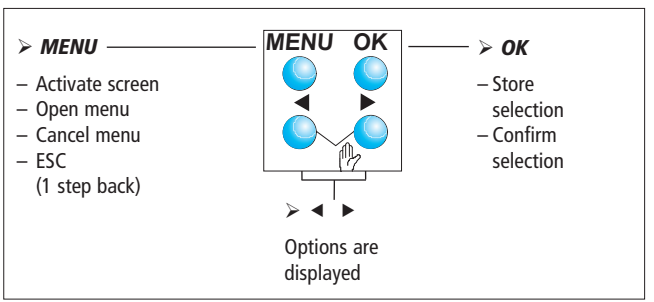
  Do not use on safety devices, e.g. escape route doors, fire safety equipment etc.

Disposal

Dispose of device and batteries separately in an environmentally sound manner

Screen and keys





Operating instructions

1. Read text lines
Text represents query

2. Make a decision

YES
Confirmation

Press
OK

NO
Amend/ change

Press
◄ ►

Connection/installation

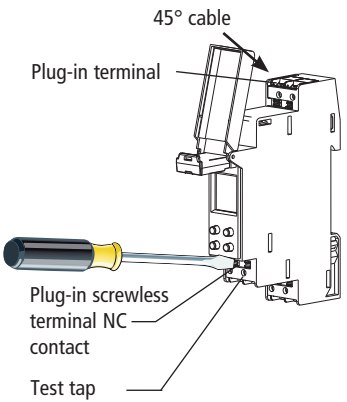
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⚠ WARNING



Warning, danger of death through electric shock!

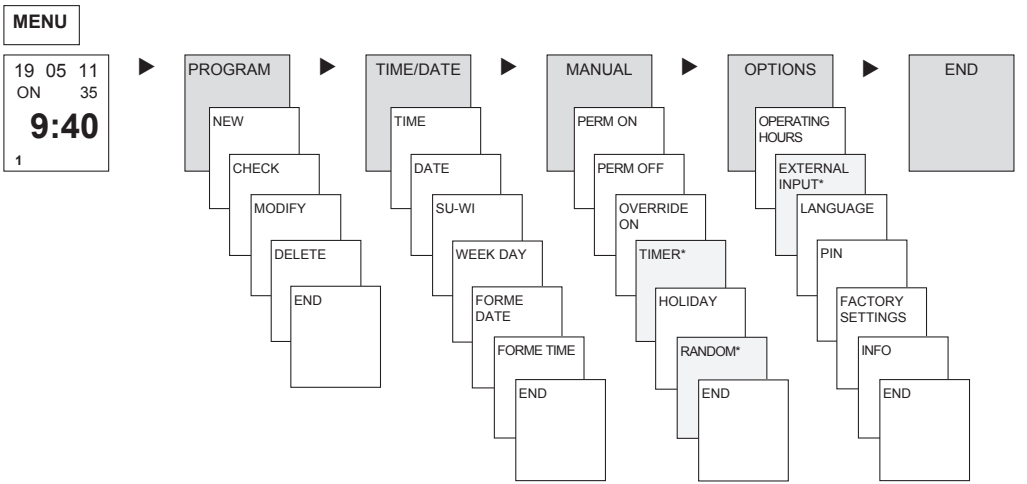
- Must be installed by qualified electrician!
- Disconnect power source.
- Cover or shield any adjacent live components.
- Ensure device cannot be switched on!
- Check power supply is disconnected.
- Earth and bypass.



Connect cable

- Strip cable by 8 mm (max. 9 mm).
- Insert cable at 45° in the open terminal (2 cables per terminal position possible).
- Only with flexible wires: To open the plug-in screwless terminal, press screwdriver downwards.

Overview of menu selection



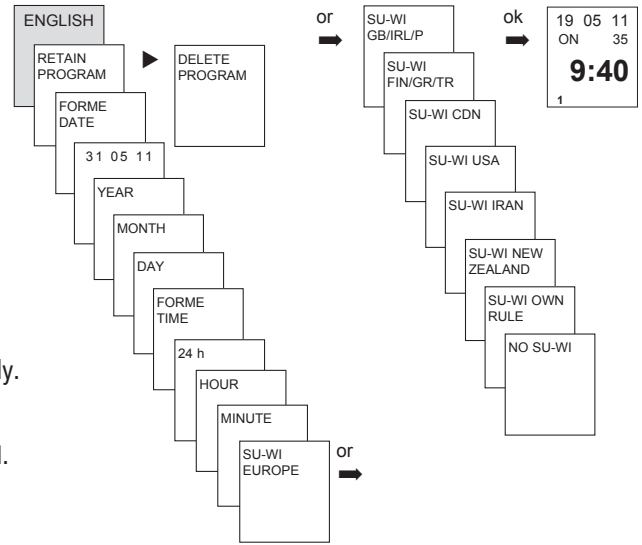
* only with TR 609 top2 S

Initial start-up

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Set date, time and summer/ winter time rule

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



RESET

➢ Press the 4 buttons simultaneously.

You can choose between **RETAIN PROGRAM** and **DELETE PROGRAM**.

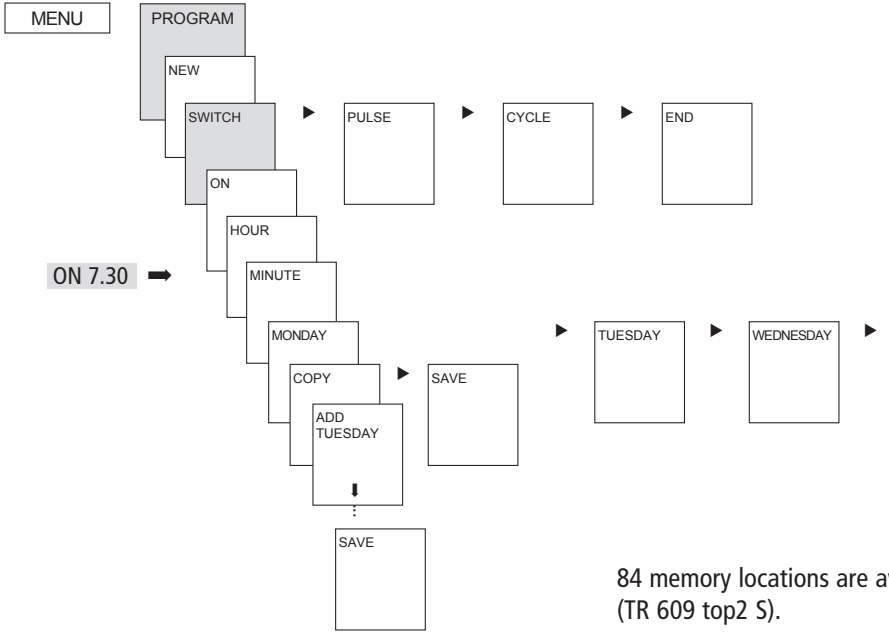
PROGRAM

Program switching time

Example: Switch on sports hall lighting from Mon–Fri, 7:30 to 12:00 hrs

- Press **MENU**. **PROGRAM** is displayed.
- Confirm by pressing **OK**. **NEW** is displayed.
- Confirm by pressing **OK**. **SWITCH** is displayed.
- Confirm by pressing **OK**. Select **ON** (for switch-on times).
- Confirm by pressing **OK**. The display shows **HOUR**.
- Use the + or – keys to enter hour, minute, (07:30) and confirm by pressing **OK**. **MONDAY** is displayed.
- Confirm by pressing **OK**. **COPY** is displayed.
- Confirm by pressing **OK**. **ADD TUESDAY** is displayed.
- Confirm by pressing **OK** and also confirm the days Wed, Thurs, Fri by pressing **OK**.
- Continue with ▶ to **SAVE** is displayed. Confirm by pressing **OK**.

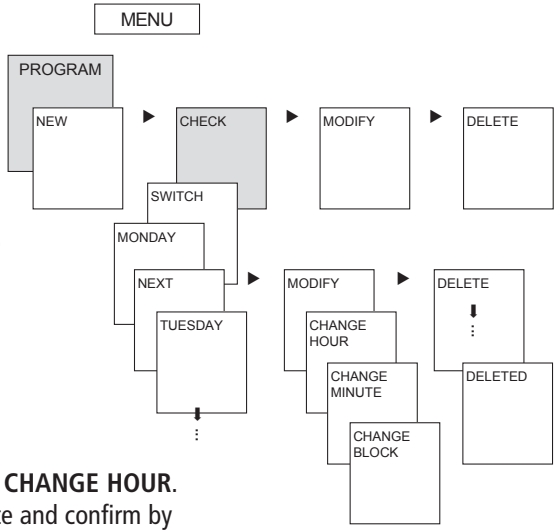
Repeat all steps for the switch-off time however instead of selecting ON with ▶ select OFF and enter 12:00 for hour and minute.



84 memory locations are available (TR 609 top2 S).

Check/modify switching time

- Press **MENU**. **PROGRAM** is displayed.
- Confirm by pressing **OK**. **NEW** is displayed.
- Use ▶ to select **CHECK.**
- Confirm by pressing **OK**.
- Confirm **SWITCH** by pressing **OK**. The first of the entered switching times is displayed.
- Confirm by pressing **OK**. **NEXT** is displayed.



Change individual switching times

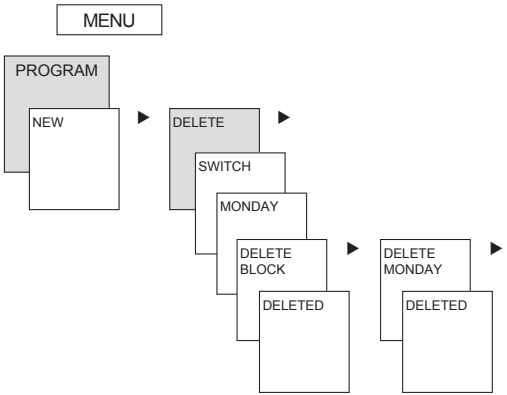
- Press ▶ to select **MODIFY.**
- Confirm by pressing **OK**. The display shows **SWITCH**.
- Confirm by pressing **OK**. The display shows the first time switch **MONDAY**.
- Confirm by pressing **OK**. The display shows **CHANGE HOUR**.
- Use the+ or – keys to enter hour and minute and confirm by pressing **OK**.

Delete switching time

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- Press **MENU**.
  PROGRAM is displayed.
- Confirm by pressing **OK**. **NEW** is displayed.
- Press ▶ to select **DELETE.**
- Confirm by pressing **OK**. The display shows **SWITCH**.
- Confirm by pressing **OK**.
  MONDAY is displayed.
- Confirm by pressing **OK**. The display shows **DELETE BLOCK.**
- Confirm by pressing **OK**. The display shows **DELETED** .

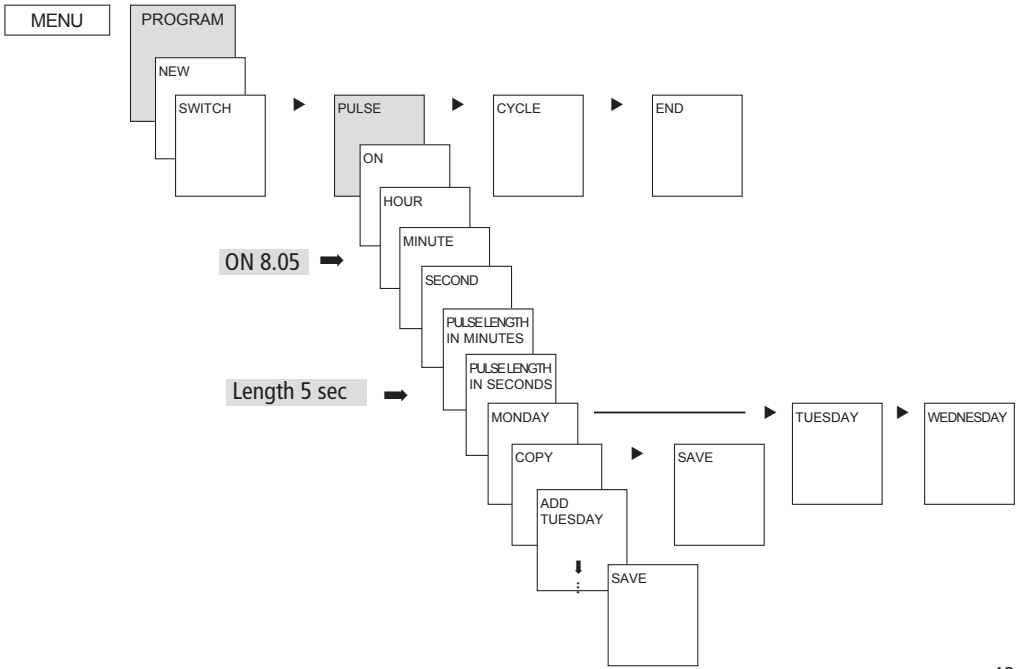
With ▶ **CLEAR MONDAY** etc. individual days can also be cleared.



Pulse time programming (only with TR 609 top2 S)

Example: Switch on pause signal on Monday 8:05 hrs for 5 sec

- Press **MENU**. **PROGRAM** is displayed.
- Confirm by pressing **OK**. **NEW** is displayed.
- Confirm by pressing **OK**. **SWITCH** is displayed.
- Select **PULSE** by pressing ▶.
- Confirm by pressing **OK**. **ON** is displayed.
- Confirm by pressing **OK**. The display shows **HOUR**.
- Use the + or – keys to enter hour, minute, second (8:05) and confirm by pressing **OK**. **PULSE LENGTH** is displayed.
- Use the + or – keys to enter the duration of the pulse in minutes and seconds (5 sec).
- Confirm by pressing **OK**. **MONDAY** is displayed.
- Confirm by pressing **OK**. **COPY** is displayed.
- Press ▶ to select **SAVE**.
- Confirm by pressing **OK**.


MENU
PROGRAM
NEW
SWITCH
PULSE
CYCLE
END
ON
HOUR
MINUTE
ON 8.05
SECOND
PULSE LENGTH IN MINUTES
PULSE LENGTH IN SECONDS
Length 5 sec
MONDAY
TUESDAY
WEDNESDAY
COPY
SAVE
ADD TUESDAY
SAVE

Cycle time programming (only with TR 609 top2 S)

In addition to switch-on and switch-off times (switching time) and short time pulses (pulse) cycle times (cycle) can also be programmed. The pulse length (+ pulse pause) is limited to 17 hrs, 59 min, 59 sec

- Cycle times refers to cyclically repetitive time functions such as fan controls, urinal rinses etc.

  Example: Switch on water rinsing Monday from 8:00 to 20:30 hrs every 15 min for 20 sec ($8:00^{00}$–$8:00^{20}$ On; $8:15^{00}$–$8:15^{20}$ On; $8:30^{00}$–$8:30^{20}$ On etc.)

  Cycle programming
  – Start cycle: Monday 8:00 hrs
  – Pulse length: 20 sec
  – Pause length: 14 min 40 sec
  – Cycle end: Monday 20:30:00 hrs

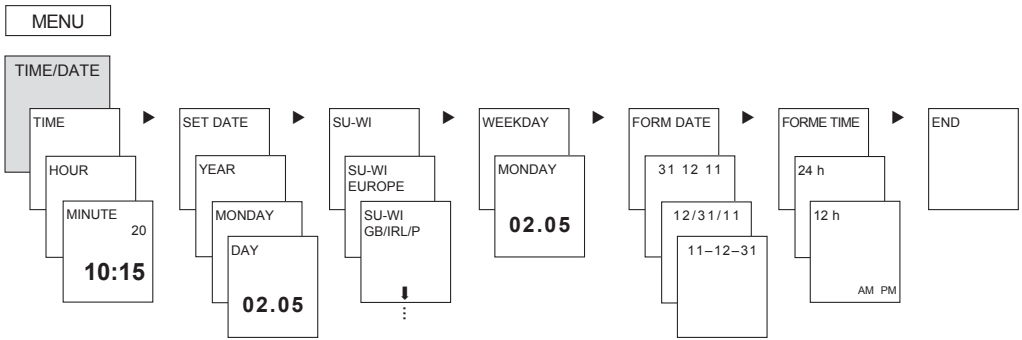
➢ Observe the number of maximum electrical switching cycles when using the ‚cycle' function.

TIME/DATE

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In the menu TIME/DATE the TIME, DATE, SUMMER WINTER RULE, WEEKDAY etc. can be entered/changed in the submenus.

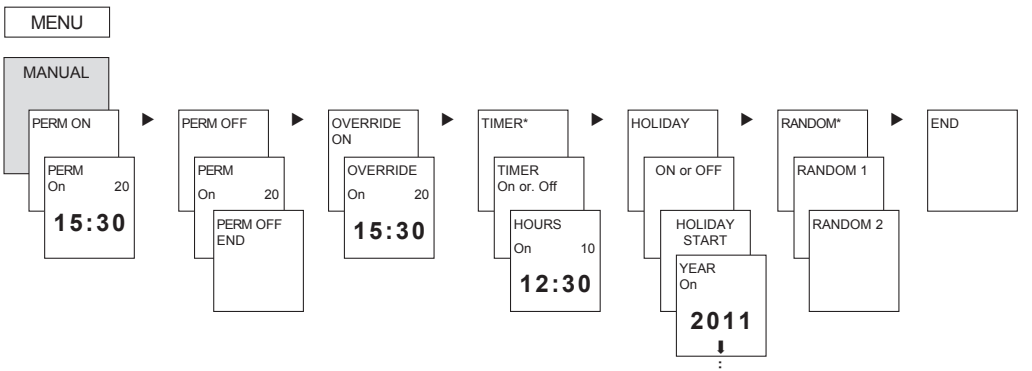
➢ Press **MENU** using ▶ select **DATE/TIME** and follow the indications on the display.



MANUAL

In the MANUAL menu manual switch functions are applied. In the submenus MANUAL, PERMANENT ON/OFF, TIMER*, HOLIDAY, RANDOM the manual switching can be activated/programmed.

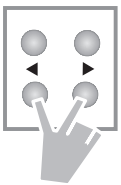
➢ Press **MENU** using ▶ select **MANUAL** and follow the indications on the display.



* only with TR 609 top2 S

Override and permanent switching

Override and permanent switching can be set using the menu in **MANUAL** or in normal mode (automatic screen) by direct keystroke (see figures).



Activate override

➢ Briefly press key.

Activate permanent switching

➢ Press key for 2 sec.

Cancel override/permanent switching

➢ Briefly press key again.

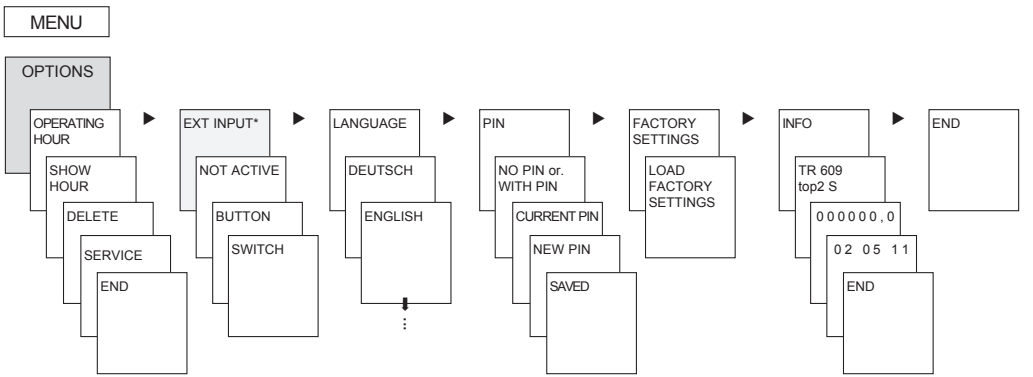
Override
Reversing the channel status to the next automatic or programmed switching.

Permanent switching
As long as a permanent switching (on or off) is activated, the programmed switching times are ineffective.

OPTIONS

In the menu OPTIONS the submenus OPERATING HOUR, LANGUAGE, PIN, EXTERNAL INPUT, FACTORY SETTINGS as well as INFO can be requested.

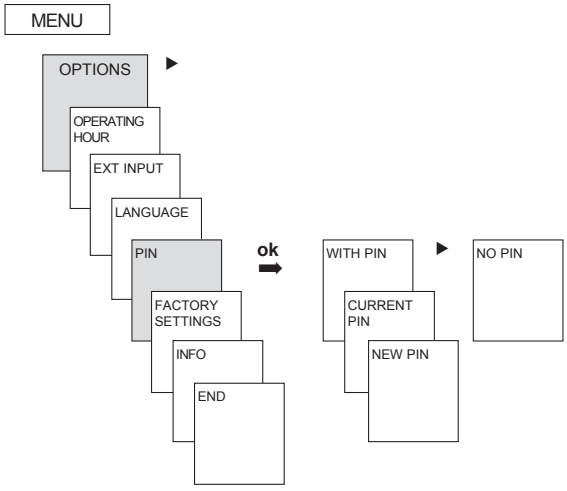
➢ Press **MENU** using ▶ select **OPTIONS** and follow the indications on the display.



* only with TR 609 top2 S

Enter PIN code

The **PIN-Code** is set in **OPTIONS** via the menu. If you have forgotten your PIN call the Theben Hotline.



External Input (only with TR 609 top2 S)

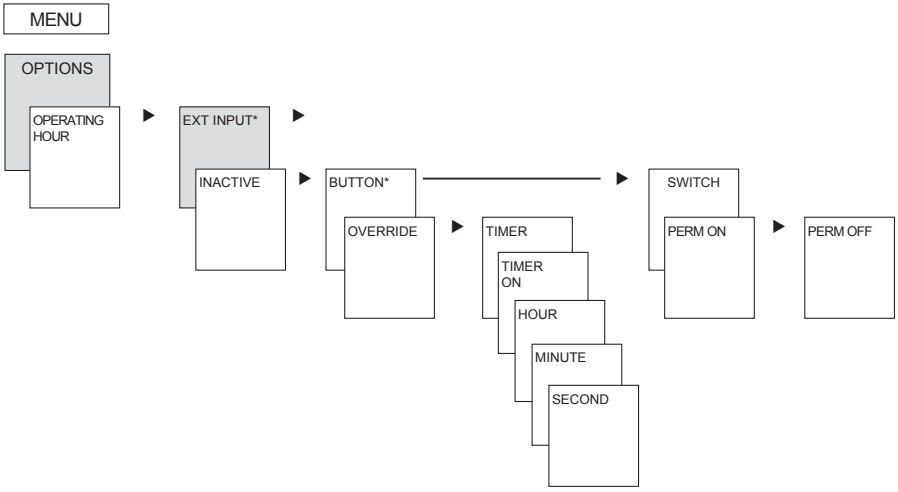
For the channel an **EXTERNAL INPUT** (see figure) can be set with different functions.

➢ Press **MENU** using ▶ select **EXT INPUT** and follow the indications on the display.

3 submenus can be selected: Inactive, push button (function), switch (function)

– **INACTIVE**: The external input has no function
– **PUSH BUTTON**: Override (manual switching), timer (Countdown timer) can be selected.
– **SWITCH**: Permanently on, permanently off can be selected.

Note:
If a function is activated via an external push button or switch, **EXTERNAL** is displayed.

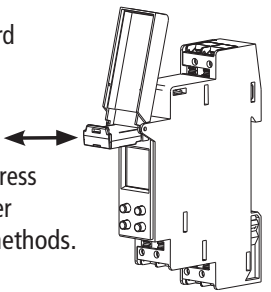


* Use push button without glow lamp

OBELISK top2 memory card

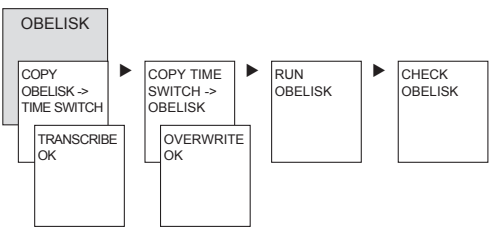
Use memory card (see fig.)

- Insert memory card in the time switch.
- Read / read out saved switching times and device settings in the time switch or start Obelisk program.
- Remove memory card OBELISK top2 (No. 9070404) after copying.
- Avoid mechanical stress or dirtying with other storage/transport methods.



Copy OBELISK → Time switch
This copies the switching program (all standard and special programs) and optionally all time switch (e.g. Position, offset, external input, time format etc..) from the memory card in the time switch.

Copy TIME SWITCH → OBELISK
This copies all switching programs and settings from the time switch to the memory card



Technical data

- Operating voltage: 230–240 V~, +10 %/-15 %
- Frequency: 50–60 Hz
- Power consumption: ca. 0,4 W
- Standby min.: ca. 0,4 W
- Switch output: switching of choice of external wires is permitted
- Contact: two way switch (TR 609 top2 S: NO contact)
- Gap: <3 mm (μ)
- Contact material: $AgSnO_2$
- Max switching capacity: 16 A, 250 V~, cos φ = 1; 4 A, 250 V~, cos φ = 0,6
- Min. switching capacity: 10 mA/230 V AC 100 mA/12 V AC/DC
- Incandescent lamp load: 1000 W (TR 609 top2 S: 2000 W)
- Halogen lamp load: 1000 W (TR 609 top2 S: 2000 W)
- Fluorescent lamp load: uncorrected + series corrected 1000 W (TR 609 top2 S: 2000 W) parallel correction 80 W (14μF) (TR 609 top2 S: 1300 W (140 μF))
- Compact fluorescent lamps: 30 W (TR 609 top2 S: 300 W)
- LED lamps (<2W): 6 W (TR 609 top2 S: 55 W)
  LED lamps (>2 W < 8 W): 20 W (TR 609 top2 S: 180 W)
- Permissible ambient temperature: –25 °C ... +55 °C
- Protection class: II in accordance with EN 60730-1 subject to designated installation
- Protection rating: IP 20 nach EN 60529
- Time accuracy: ≤ ±0,25 s/day at 25 °C
- Power reserve: 10 years (lithium cell) at +20 °C
- Pollution degree: 2
- Rated impulse withstand voltage: 4 kV
- Max. switching cycles with 16 A resistive load: 50,000

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Service address/Hotline

Service address

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The current OBELISK top2 PC software and the online version of the operating manual are available at
www.theben.de