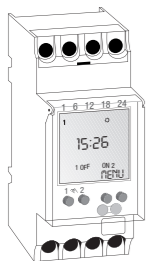


talento 471/472 pro, talento 881/882 pro
talento 791/792 pro

EN Operating manual



www.grasslin.de
Fax: +49 (0) 7724 / 933-240
Phone: +49 (0) 7724 / 933-0
Germany
Bundesstraße 36
Georgien

Grasslin GmbH

Technical data

Dimensions Hx W x D (mm) 45 x 35 x 60
Weight g (approx.) 220
Main voltage See rating plate
Protection class II
Power consumption 1 VA
Switching capacity
- Ohmic load (VDE, IEC) 16 A / 250 V AC
- Inductive load cos φ 0.6 10 A / 250 V AC
- Incandescent-/Halogen lamp load 2600 W
- Fluorescent lamp 1000 W
- Rated load AC1 / AC15 3700 W / 750 W
Switching contacts Change-over contact
Ambient temperature -10°C ... + 55°C
Accuracy Type ± 0,3 sec./day at +20°C
Shortest switching interval 1 sec..
Switching state display Yes
Sealable Yes



Installation and mounting

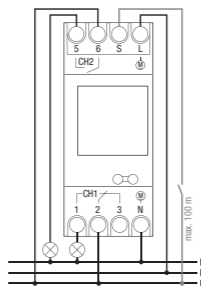


Danger! Risk of electric shock!

Installation must be carried out by a professional electrician!

Mounting on DIN rail

Put the device slightly inclined on top of the rail. Then push it backwards until it engages.



Connection diagram

CH1 = channel 1
CH2 = channel 2¹⁾
S = external input
A momentary action push-button can be assigned to remotely operate one of the channels. See separate section headed EXT I/P.



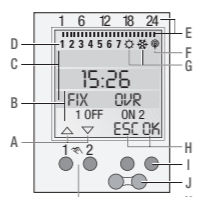
Operation and configuration

Display and function keys

- Switch-off commands have a higher priority than switch-on commands.
- The central line of the display, in which the adjusted values and selected menu items are displayed, is displayed larger.
- Flashing means that an entry is required. If you do not enter anything within two minutes, the timer switches back to automatic operation.
- "MAINSOFF" appears on the display when the device is not supplied with power.
- "LOW BATT" appears on the display when a battery change is required within the next two weeks.
- The programs are retained after a reset, although you will need to readjust date and time. Press all 4 buttons at the same time to reset the device.

Display

- A** Function displays of the two left keys
- B** Switching state displays (ON/OFF/OVR/FIX)
- C** 3 display lines
- D** Weekdays
- The assignment can be changed in the **DATETIME** menu, for example to 1 = Sunday. Default setting 1 = Monday
- E** Programmed switching times
- F** Radio antenna
- G** Display of summer/winter time
- H** Function displays of the two right keys



Keys/Interfaces

- I** Right keys
- J** Infrared interface
- K** Left keys with manual switch function in Automatic mode

Function displays of the two left keys:

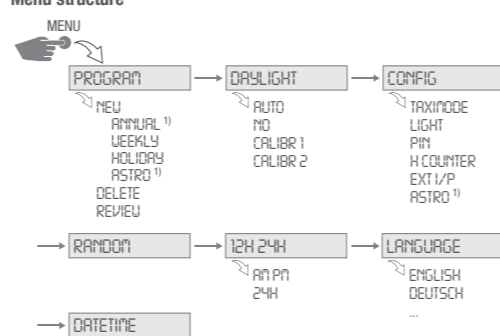
- △ Scroll upwards in the menu
- ▽ Scroll downwards in the menu
- ✓ Accept selection/proposal
- + Brief key press = +1 / long key press (about 2 sec) = fast forward
- Brief key press = -1 / long key press (about 2 sec) = fast backward

Function displays of the two right keys:

- MENU** Leaves Automatic mode and enters Programming mode
- ESC** Brief key press = one step backward
Long key press (about 2 sec) = Back to Automatic mode
- OK** Make a selection and accept
- EDT** Change programs in "Read mode"
- NO** Do not execute command
- YES** Execute command
- DEL** Delete

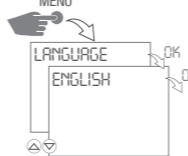
¹⁾ Function not available for all products.

Menu structure

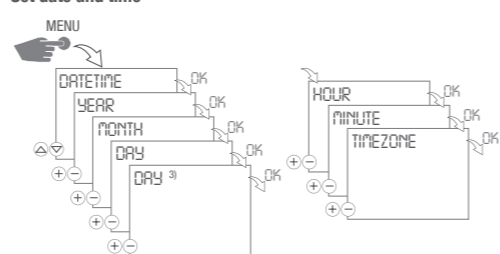


Select menu language

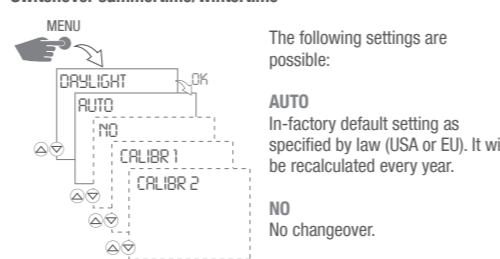
When delivered, the timer is in automatic mode with preset time, date (CET) and menu in English. Press the Menu button to make settings. Then select the desired setting.



Set date and time



Switchover summertime/wintertime



The following settings are possible:

AUTO
In-factory default setting as specified by law (USA or EU). It will be recalculated every year.

NO
No changeover.

CALIBR 1 (AUTO)

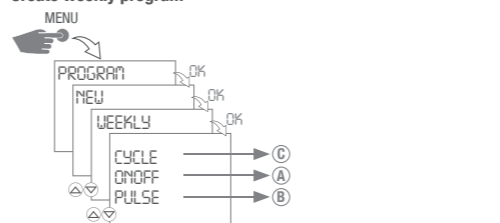
Manual Programming. The programmed summer/winter time will be recalculated automatically for each year.

- The change-over always takes place on the first Sunday of the selected month, if the entered date lies between 1. and 15.
- The change-over always takes place on the last Sunday of the selected month, if the entered date lies between 16. and 31.
- The time change-over (summertime/wintertime) occurs on the respective Sunday at 1 o'clock UTC (Coordinated Universal Time).

CALIBR 2 (FIX)

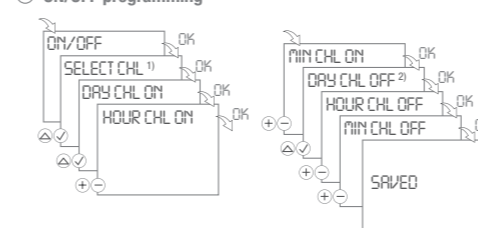
Manual Programming. The change-over takes place every year always on the same date.

Create weekly program



²⁾ Available only if individual days have been selected for the ON command.
³⁾ Set the weekday in accordance with the current date.
⁴⁾ Only appears when the Astro-settings are not set.

ON/OFF programming



- Confirm **ON/OFF** by pressing **OK**.
▷ Free memory locations are briefly displayed.
- When prompted, select channels △ and confirm by pressing **✓** → **OK**
▷ The weekday display is flashing.

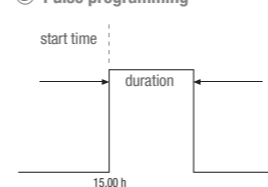
ON command:

- Select the desired days △ and confirm by pressing **✓** → **OK**
- Enter hour (+/-) → **OK**
- Enter minutes (+/-) → **OK**

OFF command:

- When prompted, select desired days △ and confirm by pressing **✓** → **OK**
- Enter hour (+/-) → **OK**
- Enter minutes (+/-) → **OK**
▷ The program is saved.

Pulse programming

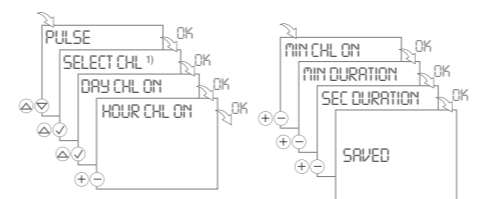


A pulse switching command consists of:

- Start time
- Duration = ON switching duration
shortest ON switching duration = 1 sec.
longest ON switching duration = 59 min., 59 sec.

Example:

ON command for channel 1 daily from Monday to Friday at 3.00 pm. ON switching duration 15 minutes.



- Confirm **PULSE** by pressing **OK**.
▷ Free memory locations are briefly displayed.
- When prompted, select channels △ and confirm by pressing **✓** → **OK**
▷ The weekday display is flashing.

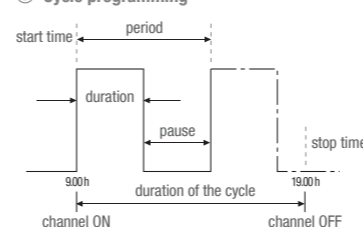
ON command:

- Select the desired days △ and confirm by pressing **✓** → **OK**
- Enter hour (+/-) → **OK**
- Enter minutes (+/-) → **OK**

Duration:

- Enter minutes or seconds (+/-) and confirm by pressing **OK**.
▷ The program is saved.

Cycle programming



The cycle duration must not be less than the period. No nesting of cycle programs is allowed.

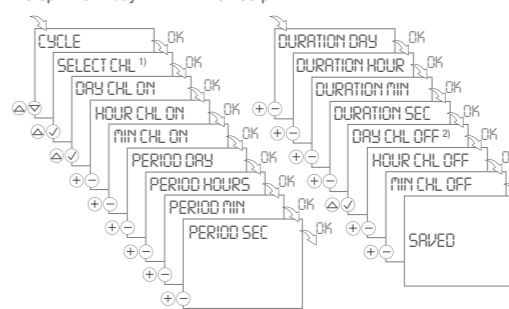
A cycle switching command consists of:

- Start time
- Duration = ON switching duration
- Period = ON switching duration + pause
- Cycle duration = time between channel ON and channel OFF
- Stop time

Example:

Channel 1 is switched on every 30 minutes for 10 minutes, starting on Monday 9.00 am. The stop time is Friday 7.00 pm.

Start time Monday 09.00 am
Duration 10 min.
Period 40 min.
Stop time Friday 07.00 pm



- Confirm **CYCLE** by pressing **OK**.
▷ Free memory locations are briefly displayed.
- When prompted, select channels △ and confirm by pressing **✓** → **OK**
▷ The weekday display is flashing.

ON command:

- Select the desired days △ and confirm by pressing **✓** → **OK**
- Enter hour (+/-) → **OK**
- Enter minutes (+/-) → **OK**

Period:

- Enter days, hours, minutes or seconds (+/-) and confirm by pressing **OK**.

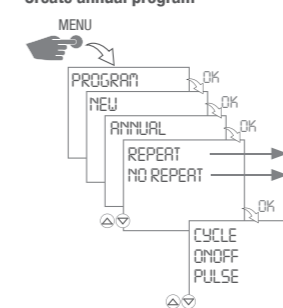
Duration:

- Enter days, hours, minutes or seconds (+/-) and confirm by pressing **OK**.

OFF command:

- When prompted, select desired days △ and confirm by pressing **✓** → **OK**
- Enter hour (+/-) → **OK**
- Enter minutes (+/-) → **OK**
▷ The program is saved.

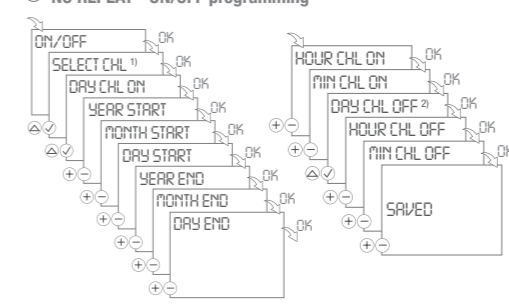
Create annual program¹⁾



A) NO REPEAT
Switching once. Start and stop date (year, month, day) are set by you.

B) REPEAT
Recurring program. This is done each year at the same time until you remove the program in the menu under **Program** → **Delete**.

A) NO REPEAT - ON/OFF programming



- Confirm **ON/OFF** by pressing **OK**.
▷ Free memory locations are briefly displayed.
- When prompted, select channels △ and confirm by pressing **✓** → **OK**
▷ The weekday display is flashing.

ON command:

- Select the desired days △ and confirm by pressing **✓** → **OK**
- Enter start date (year, month and day) in the relevant box (+/-) → **OK**
- Enter stop date (year, month and day) in the relevant box (+/-) → **OK**
- Enter hour (+/-) → **OK**
- Enter minutes (+/-) → **OK**

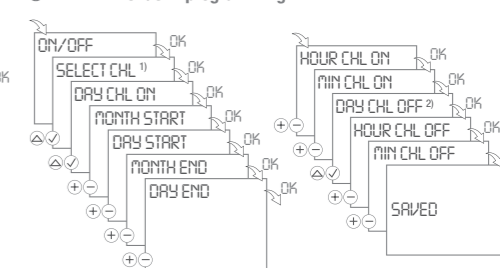
OFF command:

- When prompted, select desired days △ and confirm by pressing **✓** → **OK**
- Enter hour (+/-) → **OK**
- Enter minutes (+/-) → **OK**
▷ The program is saved.



For **CYCLE** and **PULSE**, you also have to set the duration and/or period. The procedure is the same as for creating a weekly program.

B) REPEAT - ON/OFF programming



- Confirm **ON/OFF** by pressing **OK**.
▷ Free memory locations are briefly displayed.
- When prompted, select channels △ and confirm by pressing **✓** → **OK**
▷ The weekday display is flashing.

ON command:

- Select the desired days △ and confirm by pressing **✓** → **OK**
- Enter start date (month and day) in the relevant box (+/-) → **OK**
- Enter stop date (month and day) in the relevant box (+/-) → **OK**
- Enter hour (+/-) → **OK**
- Enter minutes (+/-) → **OK**

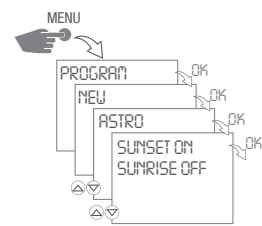
OFF command:

- When prompted, select desired days △ and confirm by pressing **✓** → **OK**
- Enter hour (+/-) → **OK**
- Enter minutes (+/-) → **OK**
▷ The program is saved.



For **CYCLE** and **PULSE**, you also have to set the duration and/or period. The procedure is the same as for creating a weekly program.

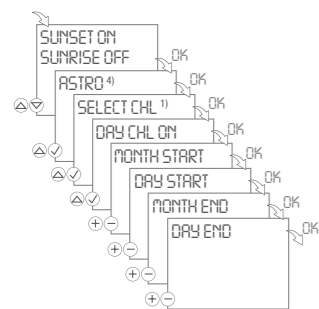
Creating an ASTRO program ¹⁾



The following settings are possible:

- SUNSET ON / SUNRISE OFF** The time switch switches ON at sunset and switches OFF at sunrise
- SUNSET OFF / SUNRISE ON** The time switch switches OFF at sunset and switches ON at sunrise
- SUNRISE PULSE** The time switch switches ON at sunrise for a certain time (pulse)
- SUNSET PULSE** The time switch switches ON at sunset for a certain time (pulse)
- SUNRISE SUNSET PULSE** The time switch switches ON at sunrise and sunset for a certain time (pulse)

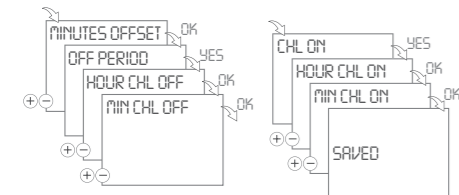
Sunset ON / Sunrise OFF



- Confirm **SUNSET ON / SUNRISE OFF** by pressing **OK**.
▷ Free memory locations are briefly displayed.
- When prompted, select Astro-settings.
- When prompted, select channels Δ and confirm by pressing \checkmark .
→ **OK**
▷ The weekday display is flashing.

ON command:

- Select the desired days Δ and confirm by pressing \checkmark → **OK**
- Enter start date (month and day) in the relevant box (+/-) → **OK**
- Enter stop date (month and day) in the relevant box (+/-) → **OK**



- Enter minutes for the **OFFSET (+/-)** → **OK**
Offset can be used to offset the ON and OFF switching times of the Astro program. This is done in order to adapt them to the local conditions.

Example SUNSET ON / SUNRISE OFF:

Offset = + 00:15 The time switch switches ON 15 minutes after the calculated sunset and switches OFF 15 minutes after the calculated sunrise.

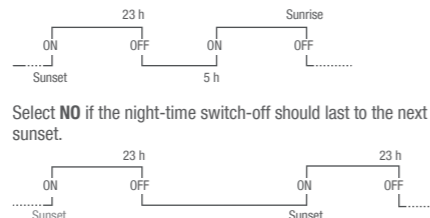
- Select the **OFF PERIOD: YES or NO**
 - ▶ Select **YES** to set the time period (hours and minutes) during which the time switch should switch off, e.g. night-time switch-off from 23 - 5 h.
 - ▶ Select **NO** to set no OFF period.

OFF period: YES

- Enter hour and minute for the OFF command (+/-) → **OK**
- When prompted, select desired days Δ and confirm by pressing \checkmark → **OK**

11. Select CHANNEL ON: YES or NO

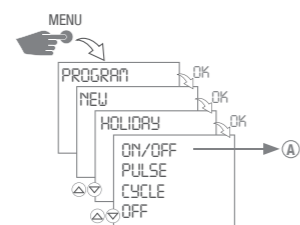
- ▶ Select **YES** to set the time period (hours and minutes) during which the time switch should switch on again.



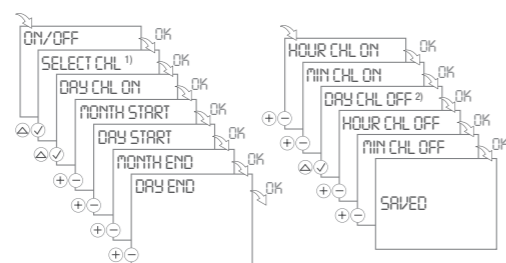
Channel ON: YES

- Enter hour and minute for the **ON** command (+/-) → **OK**
 - ▷ The program is saved.

Creating a holiday program



ON/OFF programming



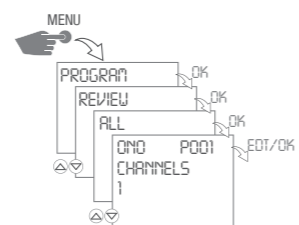
- For **CYCLE** and **PULSE**, you also have to set the duration and/or period.
- If **ON** is set, you can select the days of the week on which the time switch is switched off during holidays.

The procedure is the same as for creating a weekly program.

View and edit program

Weekly, yearly, holiday and astro programs can be viewed and edited separately.

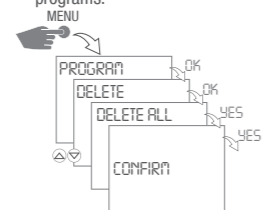
- Press Δ ∇ to scroll through the different program steps.
- Press **EDT** to edit a program. This procedure is similar to creating a new program.



Delete program

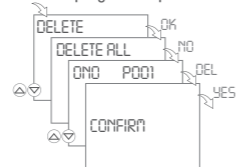
Delete all programs

- Press **YES** to delete all programs.
- Press **EDT** to delete individual programs.



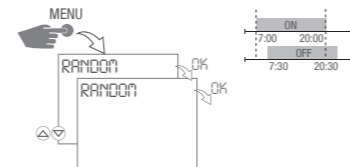
Delete individual programs

- Press Δ ∇ to scroll through the different program steps.



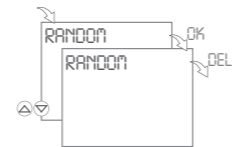
Random switching program ¹⁾

The programmed switching command is delayed by a variable (random) period of 0-30 minutes..



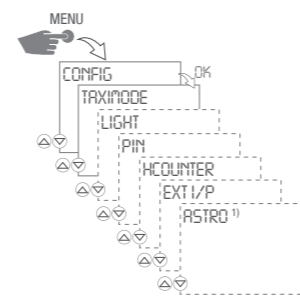
- Press **OK** to start the random switching program.
- ▷ **RANDOM** flashes.

Finish random switching program

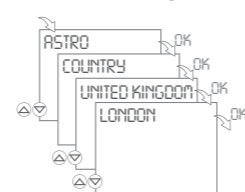


- Press **DEL** to finish the random switching program.
- ▷ The timer returns to Automatic mode.

Configuration



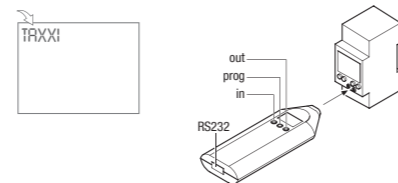
ASTRO – Astro settings ¹⁾



Click the **COUNTRY** menu item to select the desired country and city. The longitudes and latitudes are generated automatically. If the desired city is not included in the list, you can manually set the longitudes and latitudes via the **LAT/LON** menu item.

TAXIMODE – Transmission of programs

- A handheld programming device can be used to exchange programs via the IR interface. To do so, the device must be in the TAXIMODE and connected to power.
- Press **ESC** to finish the TAXIMODE..



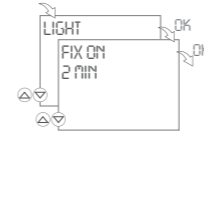
Operation of handheld programming device:

- Press **PROG** to select the program number.
- Press **IN** to read in a program. Press **OUT** to read out a program.
- Hold the handheld programming device vertically over the IR interface.
- Pressing **IN** or **OUT** again will start the transmission.

- A wrong transmission is shown by Er2. For further information, see the separate operating manual "handheld programming device".

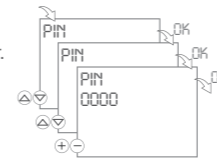
LIGHT – Background illumination

- Select **FIX ON** to set the background lighting permanently.
- Select **2 MIN** if you want the background lighting to be automatically switched off 2 minutes after your last input.



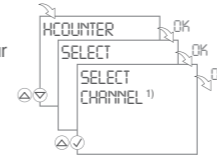
PIN – Set PIN

- Press **+ -** to set a numeric value.
- Press **OK** to set the next number.
- Select **NO PIN**, to remove the PIN.



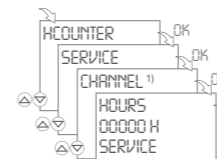
H/COUNTER – Set hour counter

- Press Δ \checkmark to select the channels.
- Select **REVIEW** to check the hour counter.
- Press Δ ∇ to scroll through the different program steps
- Press **RES** to reset the hour counter for this channel.



H/COUNTER – Set service counter

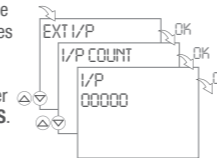
- You can set the number of operating hours after which a service message is to appear. It will be shown on the display as soon as the counter has reached the number of hours set by you.
- Press Δ ∇ to select the channels.
 - Press **+ -** to set a numeric value.



EXT I/P – External input

I/P COUNT – Pulse counter

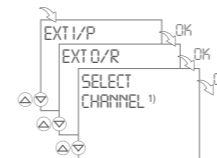
Select **I/P COUNT** to check the pulse counter. It will count how many times the external button was pressed.



Press **RES** to reset the pulse counter to zero and confirm by pressing **YES**.

EXT O/R – Manual switch

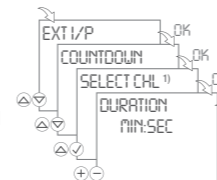
Select **EXT O/R** to assign a channel to an external button.



Upon pressing the button, an override switching command will be executed. It will be in effect until the next time the button is pressed or until the next automatic switching command.

COUNTDOWN – Countdown timer

Select **COUNTDOWN** to set the time for a countdown timer.



Upon pressing the button, an ON switching command will be carried out. It switches the selected channel ON for the set time. Pressing the button again will start the countdown timer again at the set time.

If a program is already running on the selected channel, no switching command will be executed! After the time has expired, the timer returns to Automatic mode.

Shortest ON switching duration: 30 seconds
Longest ON switching duration: 90 minutes

- Countdown timer and manual switch cannot be selected at the same time! The function selected last always applies.

Automatic/Manual mode

- Manual switch: Duration ON / Duration OFF / OVR / Automatic mode
- Left button = channel 1 / Right button = channel 2

Press 1x = FIX ON = Duration ON
Press 2x = FIX OFF = Duration OFF
Press 3x = OVR = Override mode
Press 4x = Automatic mode



Override mode

The Override function (temporary program overwrite) allows the user to switch ON or OFF early. This depends on the current channel status. The Override function applies only to the current program and remains active until the next program change. After that, the timer returns to Automatic mode.

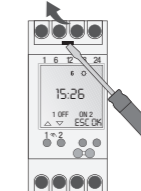


Maintenance and repair

Battery change

Before changing the battery, the device must be disconnected from the power supply! Date and time will be lost!

- Lift the battery compartment using a screwdriver.
- Take the battery out of the support.
- Insert new (Lithium battery type CR2450) battery into support. Observe polarity of the battery!
- Push battery support downward until it engages.
- Dispose of the battery in an environmentally friendly manner.



Disposal / Recycling

Dispose of the packing material correctly according to legal requirements and regulations.

Observe the following notes for disposing of defective system components or the system after its service life:

- Dispose of appropriately, i.e. separating the parts to be disposed of according to material groups.
- Do not throw electrical and electronic components in the bin. Bring these parts to the recycling centers.
- Always ensure the environmentally sound disposal conform to the state-of-the-art environment protection, recycling and disposal engineering.

¹⁾ Function not available for all products.

²⁾ Available only if individual days have been selected for the ON command.

⁴⁾ Only appears when the Astro-settings are not set.