ELKO EP, s.r.o.
Palackého 493
769 01 Holešov, Všetuly
Czech Republic
Tel.: +420 573 514 211
e-mail: elko@elkoep.com
www.elkoep.com

Made in Czech Republic

02-70/2023

EN

SOU-13/1 + SKS-200

Digital twilight/light switch with time switches + Wi-Fi connection

Characteristics

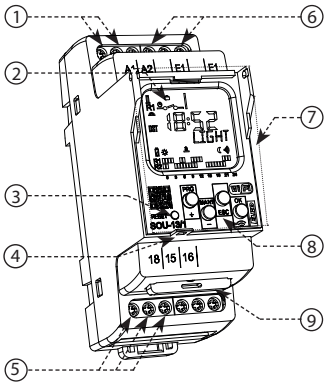
- Switching control based on measured ambient light intensity with built-in time switch, allowing daily, weekly, yearly and astronomic program. This way, the twilight switch function can be limited in real time as required.
- The twilight switch is subordinate to the time switch programs.
- Simple setting after the first start-up.
- External sensor is suitable for mounting on the wall/in panel (holder and sensor are part of the delivery).
- User replaceable battery to back up the set time during power outages.
- Built-in web server for setup and control via Wi-Fi connection.
- Time synchronization through NTP server (require internet connection for twilight/light switch).
- Possibility of permanent connection to the local network.
- WRC: web remote control and setup from anywhere (require internet connection for twilight/light switch).
- New well-arranged display with white backlight.
- ASTROnomic program: manual entry of coordinates or selecting from one of more then 500 preset cities. Selection of days of the week, astro interrupt function (night break) and high position accuracy.
- 1-channel design (with an operating hours counter).
- Pulse/cycle output mode.
- Transition of summer/winter time – AUTO or OFF.
- PIN code protection against unauthorized changes.
- Wireless firmware update - **current version 1.13**

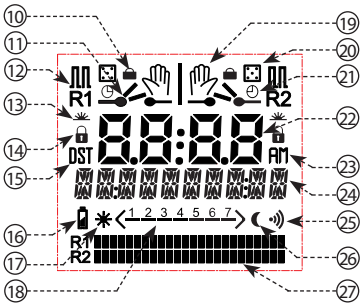
In the event of a mains power failure, the device will retain all the set values required for reliable switching after the power is restored. After installation, it does not require any special service or maintenance.

The astronomical program does not need any optical sensors or other external devices to function. Its operating principle is that during the year every day, based on an algorithm and real-time (set in the time switch), automatically controls switching on and off times of e.g. public lighting. This is because the sunrise and sunset times change throughout the year. With the offset (deviation) function, the turning ON and switching OFF times can be corrected within ± 300 minutes. The delay is fixed for each day.

- Operation modes of switching:
  - *LIGHT* (switches according to light settings - measured intensity by external sensor)
  - *HOLIDAYS / LIGHT* (switches according to the set holidays and light settings)
  - *TIME PROGRAM / LIGHT* (switches according to set time programs and light settings)
  - *HOLIDAYS / TIME PROGRAM / LIGHT* (switches according to set holidays, time programs and light settings)
  - *ASTRO / TIME PROGRAM / LIGHT* (switches according to astronomical program, time programs and light settings)
  - *HOLIDAYS / ASTRO / TIME PROGRAM / LIGHT* (switches according to set holidays, astronomical program, time programs and light settings)
  - *RANDOM PROGRAM* (switches randomly in an interval of 10-120 min)
  - *LOCKED – MANUAL* (fixed output state that cannot be changed other than through settings)
- Possibility to manually control the output contact at any time (outside the operation mode, *LOCKED – MANUAL*).
- The time switch can work in CLIENT and AP wireless communication mode independently of each other.
- 200 memory locations for time programs.
- Up to 30 memory locations for holidays.
- Programming using buttons can be done under power and in backup mode.
- Optional languages – CZ / EN
- Selection of summer/winter time transition:
  - AUTO (changes automatically according to the entered time zone)
  - OFF (permanently switched off winter/summer time transition)
- The time switch is backed up by a battery, which enables it to operate in backup mode in the event of a power failure. All settings and programs are saved in memory in the event of a power failure - they can thus be restored even in the event of a power failure and a discharged battery. However, a time correction will need to be made.

Description





1. Supply voltage terminals (A1-A2)
2. Backlight display
3. Reset
4. Lead-sealing spot
5. Output - 1. channel (18-15-16)
6. Sensor terminals (E1)
7. Transparent cover
8. Control buttons
9. PLUG-IN backup battery module
10. Holiday program
11. Output indication
12. Pulse/cycle mode
13. Astro program
14. Manual control locked
15. Summer time
16. Battery indication
17. Sunrise indication
18. Days in week
19. Manual control
20. Random program
21. Time program
22. Time
23. AM/PM
24. Text line
25. Wi-Fi connection
26. Sunset indication
27. Bargraph

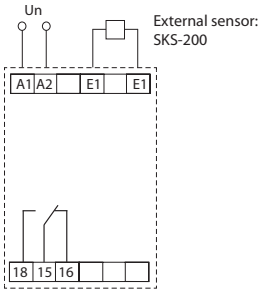
BATTERY POWER BEHAVIOUR

Powered: By default, the display is backlit for 90 seconds from the time of the last press of any button. The display still shows: light intensity, time, day of the week, state of contacts, and battery or the type of program in progress.

Backup/sleep mode: In the event of a power failure, the display will automatically switch to backup mode for 60 minutes, during which time the display will only flash: date, time, day of the week and battery status. After 60 minutes from the outage, the display switches to sleep mode, when only the text *POWER OFF* and battery status appears on the display. During both of the above modes, it is possible to wake up the timer at any time by pressing the OK button to the standard mode, e.g. to change settings or programs (without Wi-Fi functionality or output contacts) - however, take into account that in this case the battery drawn is significantly increased, which will affect its lifetime.

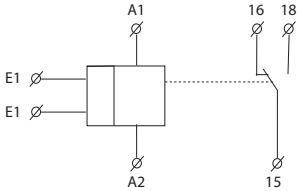
The time switch cannot be woken up to standard mode if the battery is discharged and its symbol on the display is flashing. Therefore, we recommend that you make changes in the settings primarily after connecting to the power supply, and only enter the standard mode when powered from the battery in an extreme emergency. If no button is pressed in the 20 s period, it will return to backup mode.

Connection



Prescribed minimum output protection: class B circuit breaker 10A.

Symbol



Technical parameters

	SOU-13/1
Supply terminals:	A1-A2
Supply voltage:	AC 100 – 240 V (50-60 Hz), DC 145 – 335 V
Consumption (max.):	Wi-Fi "OFF" 0.8 W/1.4 VA | "ZAP" 1.3 W/2.5 VA
Supply voltage tolerance:	–15 %; +10 %
Measuring circuit	
Measuring terminals:	E1-E1
Light intensity range:	1 .. 50.000 lx
Hysteresis (sensitivity):	adjustable, 1 .. 20 %
Offset (deviation):	adjustable, –50 .. +50 lx
Sensor failure indication:	displayed on LCD*
Output	
Contact type:	1× changeover ($AgSnO_2$)
Current rating:	AC 10 A/DC 5 A; PD. B300
Breaking capacity:	2500 VA/AC1, 150 W/DC1
Switching voltage:	AC 250 V/DC 30 V
Power dissipation (max.):	0.6 W
Mechanical life:	10.000.000 ops.
Electrical life (AC1):	100.000 ops.
Time circuit	
Accuracy:	max. ±0.5 s/day at 23°C (73.4 °F)**
Min. switching interval:	1 s
Data retention time:	min. 10 years
Set time backup:	up to half a year with 60 outages (CR 2032 - 3V)
Program circuit	
Number of memory locations:	200 - time programs, 30 - holidays
Program type:	daily, weekly, yearly, astro + light
Displayed data:	LCD display with white backlight
Settings via website:	by Wi-Fi (2.4 GHz)
Other information	
Operating temperature:	–20 .. +55 °C (–4 .. 131 °F)
Storage temperature:	–30 .. +70 °C (–22 .. 158 °F)
Dielectric strength:	
supply – output	AC 4 kV
supply – sensor	AC 3.5 kV
Operating position:	any
Mounting:	DIN rail EN 60715
Protection degree:	IP40 front panel/IP20 terminals
Overvoltage category:	III.
Pollution degree:	2
Cross-wire section; solid/ stranded with ferrule (max.):	1× 2.5 mm² (14 AWG), 2× 1.5 mm² (16 AWG)/ 1× 2.5 mm² (14 AWG), 2× 1.0 mm² (17 AWG)
Dimensions:	90 × 35 × 64 mm (3.5″ × 1.4″ × 2.5″)
Sensor dimensions SKS-200:	58 × Ø 24 mm (2.3″ × Ø 0.9″)
Weight:	120 g (4.2 oz) | SOU-13/1; 16 g (0.5 oz) | sensor SKS-200
Standards:	EN 61812-1, EN 18031-1, EN 300328

** SHORT - short circuit, NO SEN - sensor interruption*

*** If not synchronized through NTP server*

Warning

This device is constructed for connection in 1-phase network AC 100 – 240, DC 145 – 335 V and must be installed according to norms valid in the state of an application. Installation, connection, setting and servicing must be carried out by qualified electrician staff only, which have perfectly understood the instructions and functions of the device. This device contains protection against overvoltage peaks and disturbing impulses in the power supply network. For the correct function of the protection of this device, there must be suitable protections of higher degrees (A,B,C) installed in front of them and according to the standards, interference of switching devices must be securely eliminated (contactors, motors, inductive loads, etc.). Before installation, make sure that the device is de-energized and the main switch is in the "OFF" position. Don't install the device to sources of excessive electromagnetic interference. Ensure correct installation by perfect air circulation so that during continuous operation and a higher ambient temperature, the device does not exceed the maximum allowed operating temperature. For installation and setting use a screwdriver with a width of approx 2 mm. Keep in mind that this is a fully electronic device and approach accordingly with the installation. Non-problematic function of the device is also dependent on the previous method of transportation, storage, and handling. In case of any signs of damage, deformation, malfunction, or missing parts, don't install this device and claim it at the dealer. The product must be treated as electronic waste at the end of its life.

Control description

Device differs short and long button press.
In the manual marked as:
○ - short button press (< 1s)
● - long button press (> 1s)

After 120s of inactivity (from the last press of any button) the device will automatically return into the main screen.

DISPLAY BACKLIGHT CONTROL

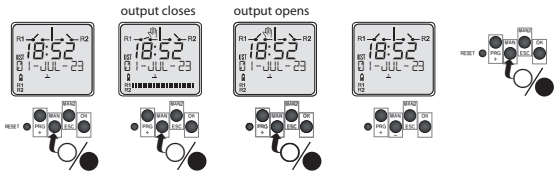
The backlight is permanently switched on/off by long press of MAN1, ESC, and OK buttons at the same time. When activating / deactivating the permanent backlight, the display will briefly flash twice.

NTP TIME SYNCHRONIZATION

If NTP synchronization or client connection was previously configured through the web server, the NTP synchronization can be launched on SOU-13 by long pressing the PRG and MAN1 buttons. The display will flash once.

PRG	entrance into programming menu pauses scrolling of information on the display (intensity, date, astro)
+ / −	browsing in menu
	setting of values
+ / −	quick shifting during setting of values
OK	entrance into required menu
	confirmation
	Wi-Fi activation/deactivation (on main screen)
ESC	a step back
ESC	back to the main screen

Manual output control



We have two types of manual controls available:

- Permanent - long press (symbol glows)
  The second highest priority of all control modes. The state of the output cannot then be changed other than by manual change (e.g. by switching to temporary manual control or by activating mode LOCKED - MANUAL, which has a higher priority). The last option is to deactivate this control mode.
- Temporary - short press (symbol flashing)
  Temporary manual control has the same priority as the previous, permanent one. However, it can be changed in the future, unlike permanent manual control, by one of the programs with a lower priority (if configured in the time switch). With power supply disconnection or when adding 1st time program, temporary manual control is deactivated.
- For manual control with delay, use the web interface - "Manual control" tab.

Modes priority

	symbol	mode/program
highest priority ➤➤➤➤➤		locked - manual control
➤➤➤➤		manual control (temporary | permanent)
➤➤➤		random
➤➤		holidays
lowest priority ➤		time
		astro
	E1	light

E1 (symbols flashes on the display)

ASTRO, TIME PROGRAM and LIGHT operation mode can work simultaneously on a single channel.

Photosensor SKS-200

The SKS-200 photosensor is connected to the E1 terminals. The sensor can be mounted in a panel (through a screwable transparent cover) into a hole with a diameter of 20 mm. The sensor includes a plastic holder, which can be used to place the sensor on a wall or other surface. The length of the wire to the sensor must not exceed 50 m. A two-core cable with a cross-section of: 0.2 - 0.75 mm2 / stranded + ferrule: 0.25 - 0.34 mm2 can be used as a conductor.

The sensor's protection is IP65. Conditions for maintaining this protection:

- the SKS-200 photosensor cover must be sealed with a rubber ring (part of the sensor)
- the cable insulation must be of circular cross-section
- the opening of the grommet must be tight enough for the cable used

Display indication

time program is active | time program is planned for future	
astro program is active | astro program is planned for future	
random program is active	
holiday is active | holiday is planned for future	
temporary | permanent manual control	

pulse program is active | cycle program is active	
the device is connected via Wi-Fi to the configuration PC/ phone/...	
the device has active Wi-Fi but is not connected to the configuration PC/phone/...	
battery is discharged | 50% of capacity | not inserted	
sunrise | sunset phase of astronomic program	
output contact closed/opened based on twilight switch (sensor)	

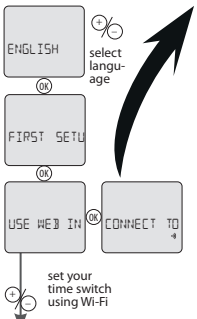
A pictogram with side lines indicates the flashing of the corresponding symbol on the SOU-13 display.
A pictogram without side lines indicates a constant glow of the symbol.

The indication can be found on the website in the "Overview" and "Manual control" menus.

THE BAR GRAPH reflects only time programs (ON/impuls/cycler) or permanent manual control! If the segment of the given time is lit, it means that there is a scheduled time program for switching the output for at least 1 s at the given hour. If the segment of the given time is not lit, it means that no time program for switching the output is scheduled at the given hour.

First setup

Always insert the module with the battery into the twilight switch first and then, if necessary, connect it to the circuit together with the product's supply voltage. The setup wizard will guide you through the steps (follow the instructions on the display). To set up the twilight switch you have two options (including canceling it), please follow the steps below.



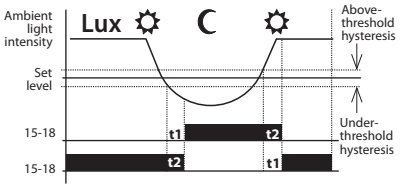
Now connect your configuration device (PC/Mobile/Tablet/....) to Wi-Fi (2.4 GHz) of the twilight switch.

SOU-13 Wi-Fi access data (default):
SSID hostname: SOU-13_barcode number
Password: elkoep13
Web address for configuration: 192.168.1.1

Setup wizard will guide you through each step after opening configurator (web address).
If you need advice on the individual steps of connection, follow the instructions in the Wi-Fi connection headline.

LIGHT SETTINGS:

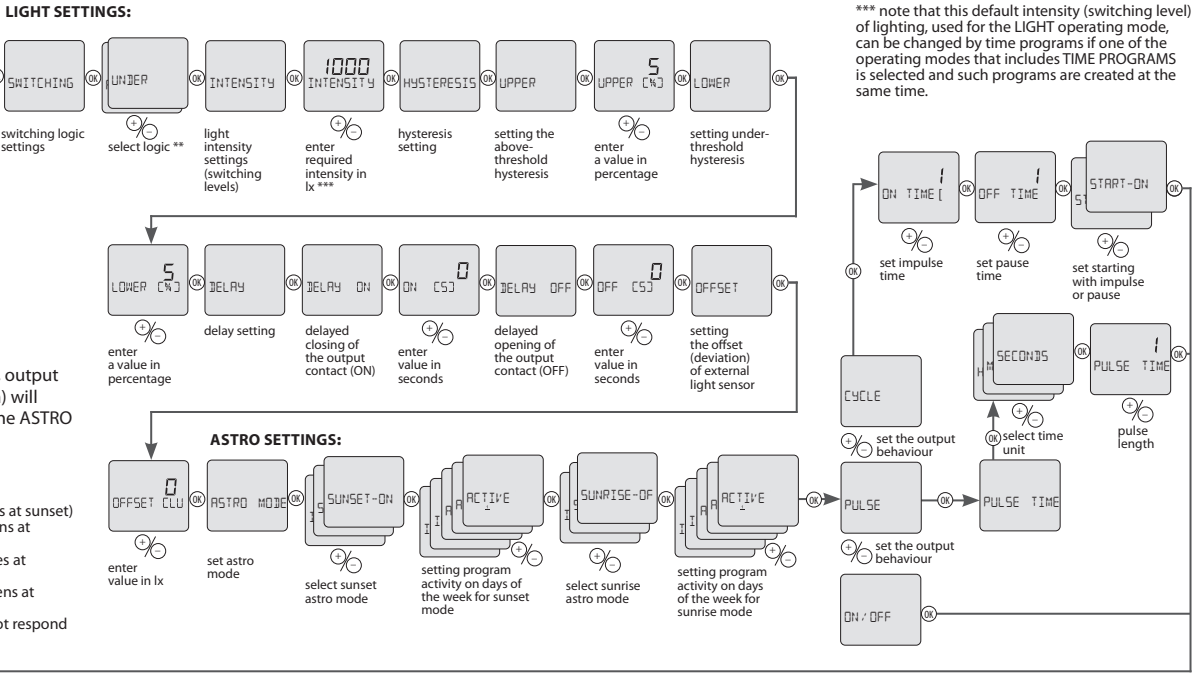
The menu for setting the light function parameters (logic, monitored light intensity via external sensor, hysteresis, delay and deviation) is always displayed, as it is an integral part of the correct operation of the twilight switch.



t1- time delay when the output contact is closed
t2 - time delay when the output contact is opened

** SWITCHING LOGIC:
ABOVE - when the set intensity (switching level) of the lighting is exceeded, the output contact closes
UNDER - when the set intensity (switching level) of the lighting is exceeded, the output contact opens

*** note that this default intensity (switching level) of lighting, used for the LIGHT operating mode, can be changed by time programs if one of the operating modes that includes TIME PROGRAMS is selected and such programs are created at the same time.



ASTRO SETTINGS:

Menu for ASTROnomical program (mode, output behaviour, astro interrupt, offset, location) will pop up only if you have selected one of the ASTRO programs as operation mode.

ASTRO MODES:
SUNSET-ON (output of the selected channel closes at sunset)
SUNSET-OFF (output of the selected channel opens at sunset)
SUNRISE-ON (output of the selected channel closes at sunrise)
SUNRISE-OFF (output of the selected channel opens at sunrise)
INACTIVE (output of the selected channel does not respond to sunrise or sunset)

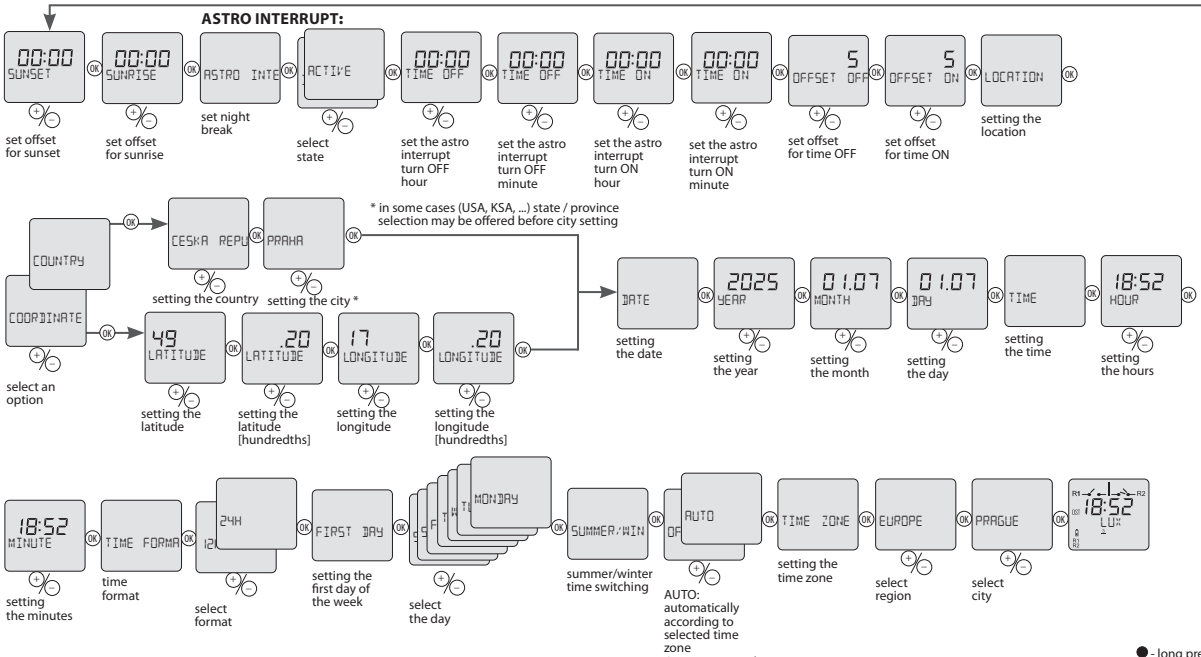
ASTRO INTERRUPT:

It works on a similar principle as a time program with the difference that the set OFF and ON times are compared by an algorithm with sunset and sunrise times. Possible offsets for the sunset and sunrise are counted together with a set offset for time OFF and ON in the astro interrupt submenu. In practice, it can be used e.g. for the so-called night break at set astro mode *SUNSET-ON*, *SUNRISE-OFF* (e.g. street light control).

With the above configuration, astro interrupt ensures that when the value for set time OFF + its offset is before sunset, the contact did not open. When the value for set time OFF + its offset is after sunset, the contact opened (night break start).

Likewise, astro interrupt takes care if configured like above that when the value for set time ON + its offset is after sunrise, the contact did not close. When the value for set time ON + its offset is before sunrise, the contact closed (night break end).

Astro interruption (night break) does not influence the functionality of the twilight switch (external sensor).



● - long press (>1s)
○ - short press (<1s)

Battery change

Safety warning – risk of electric shock:
The battery is galvanically connected to the mains supply potential – contact can lead to electric shock! Due to the possible occurrence of dangerous touch voltage on the battery and all connection terminals of the product, we recommend that the battery be replaced when the power supply is disconnected. Qualified or knowledgeable persons can also replace the battery under voltage in accordance with the principles of safe work under voltage.

When replacing the battery, the following three situations may occur:
a. The timer is connected to the mains supply = proceed according to steps #3 – 6.
b. The timer is not connected to the mains supply (battery supply) = proceed according to steps #1 – 6
c. The timer is connected to the mains supply with a discharged battery = proceed according to steps #2 - 6

1. Wake up the timer from the backup/sleep mode by short press of OK button, the main screen will appear.
2. Press and hold the PRG button on the main screen, use +/- to navigate to *OPTIONS*, short press OK, use +/- to navigate to *BATTERY CHANGE [30S]*, short press OK to confirm, this will bring you to the *START* option.

- If you are doing the replacement according to situation b., confirm the above *START* option again with the OK button. The display will show *CHANGE*. Time data has now been saved for the 30 seconds during which you replace the battery, continue with step #3.
- If you are doing the replacement according to situation c., confirm the above *START* option again with the OK button. The display will show *CHANGE*. You can disconnect in the next 2 minutes supply voltage from the mains. When the supply voltage is disconnected, time data are saved for 30 seconds, during which you replace the battery, continue with step #3.

NOTE: It is good to physically insert a new battery when the 30 second replacement interval is running out, in order to minimize the deviation of the set time.

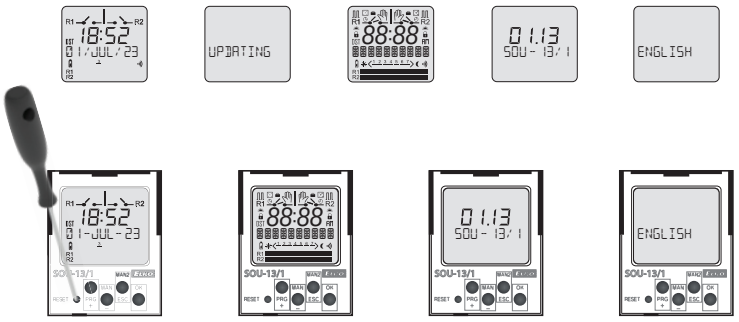
3. slide out the *plug-in module* with the battery
4. remove the original battery
5. insert the new battery into the plug-in module from above so that it is firmly seated, the polarity of the battery (-) will slightly protrude over the edge
6. insert the plug-in module into the device as far as it will go – pay attention to the polarity (- upwards)

If you did it right, the battery symbol on the display will go out after the replacement (if the battery is fully charged) and there will be no or only a minimal deviation in the time data. To achieve repeatable and long-term running accuracy, use time synchronization via Wi-Fi connection using the web interface in the Options tab.

Local network connection

• Go to the "service" tab using the drop-down menu
Activate the "Active" checkbox in the SOU-13 Wi-Fi (CLIENT) item and click the "Change" button. You will now be prompted to fill in the access data of your Wi-Fi network to which you want to connect the twilight switch.
If you understand the given configuration, you can also choose static IP assignment. Otherwise, we recommend choosing the DHCP client option. After filling in the data, click the "Save" button. Now your twilight switch should be connected to the local network. You can verify this by reloading the given website, when the newly added data should be displayed in this item.
For example: An IP address that you can use within the local network to set up/control the twilight switch instead of the default 192.168.1.1, which is used for a direct connection (configuration device > twilight switch).

Firmware update / factory reset / restart



• Firmware update:
The web interface itself will guide you through the update process. After connecting to Wi-Fi SOU-13 and opening the configurator in the browser, go to the Service menu, select the file with the new firmware and click the update button.
Do not disconnect the power supply/Wi-Fi during firmware update!
After FW update in OS Windows, clear your browser cache if it allows it. To do this, you can use the keyboard shortcuts CTRL + F5 when loading the web interface. In case you don't know how to do it, the browser usually deletes it automatically within 5 minutes after loading the web interface. If the power supply/Wi-Fi was disconnected during the firmware update, the device might not work properly and in that case please get in touch with our technical support.

The hidden RESET button has two functions depending on the length of the press:

• Factory reset:
It is performed by long pressing >5 with a blunt tip of the hidden RESET button (e.g. a pen or a screwdriver with a diameter of max. 2 mm).
The display briefly shows all display segments, then the device type and firmware version. The following is a setup guide - i.e. the same state in which you received the timer from the factory. Settings and all configured programs/holidays are erased by this step.

• Restart:
It is done by briefly pressing <1 with the blunt tip of the hidden RESET button. The display briefly shows all display segments, then the device type and firmware version. This is followed by a transition to the main screen - date, time, program activity, contact status, etc. This step will not result in the loss of settings or configured programs/holidays.

Web Remote Control (WRC)

Allows you to set up and control the device via the Internet, without the need for a public IP address, which would otherwise be necessary. This function requires connecting the time switch to a local network with Internet access - see the section "Local network connection".
• Go to the "service" tab using the clickable menu
Activate the "Active" checkbox in the Web Remote Control item and click the "Change" button. Now copy the generated 8-digit key. Then continue to the URL address https://wrc.elkoep.com. Registration is required to log in - you will be able to do so at the link above. After creating an account, log in to it. After logging in, click the "+" icon at the bottom right. You will be prompted to enter the device name (according to your preferences) and the 8-digit key you copied. Then click the "Save" button. This will add the device and display it on the "Device" list.
In the "Device" list you can find out the current status, change device name and more. If the device is active (connected to the power supply and has configured web remote control) the status icon will be green. In that case you can connect to it via the Internet using the icon ▶.
This way you can set up and control your device from anywhere via the Internet.

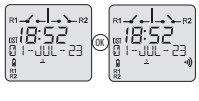
Wi-Fi connection

First, make sure that you have a configuration device (PC/phone/...) with Wi-Fi of 2.4 GHz band that supports a web browser and is close enough to SOU-13 that you want to connect.
The twilight switch does not support a 5 GHz band.

It is possible to connect directly to the web server for configuration via the Wi-Fi generated by the SOU-13 (no router or internet connection required). If the time is to be synchronized, an internet connection via a Wi-Fi router is necessary.

Activating the Wi-Fi of twilight switch:
After connecting the SOU-13 to the power supply, it is possible to activate/deactivate Wi-Fi by briefly pressing the OK button. If Wi-Fi is active and the configuration device is not connected, it will automatically turn off after 90 seconds.

NOTE.: Wi-Fi can be activated permanently through the settings, once the setup wizard is complete



active Wi-Fi (AP) is indicated by the symbol on the display

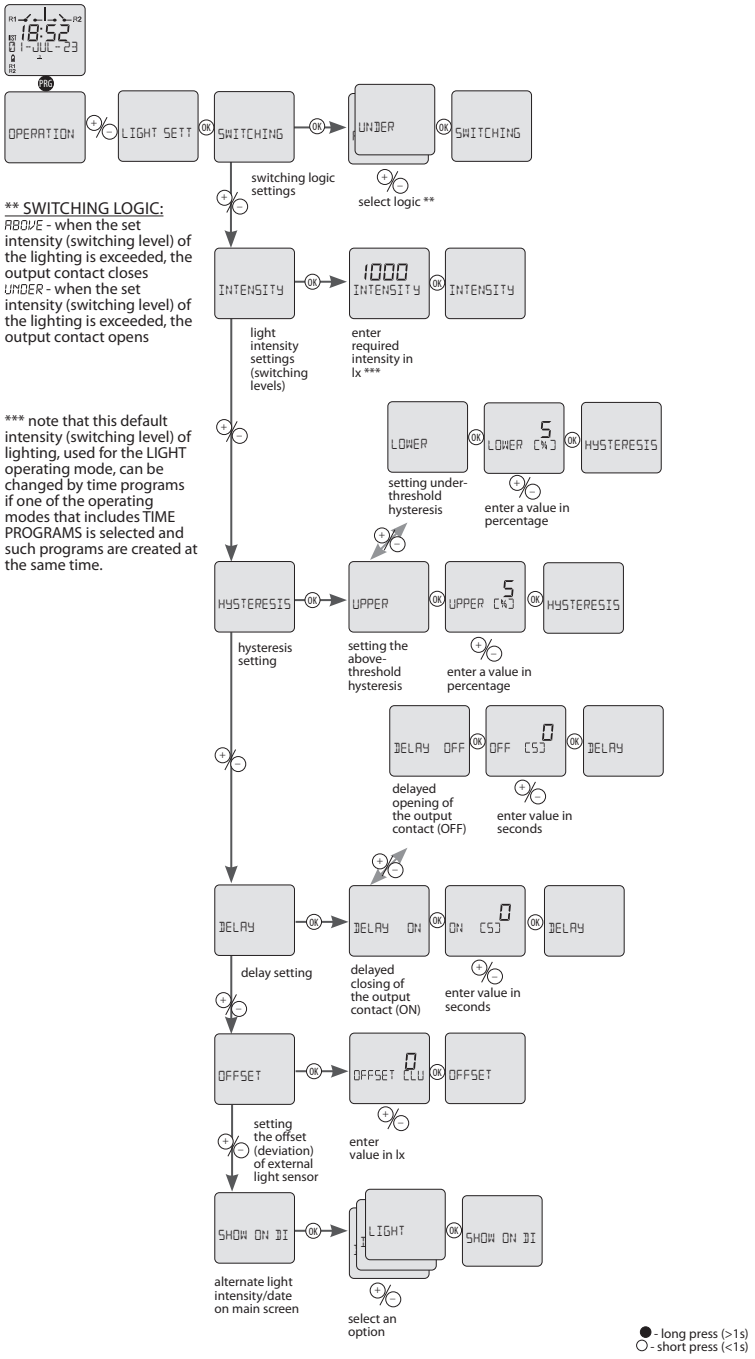
Now connect your configuration device to the Wi-Fi of the twilight switch (follow the instructions provided by the manufacturer of the configuration device).

SOU-13 Wi-Fi access data (default):
SSID hostname: SOU-13_barcode number
Password: elkoep13

After the connection is established, the Wi-Fi symbol starts flashing on the display.

Open the web browser of the configuration device and enter the IP address in the address bar: 192.168.1.1

Light settings

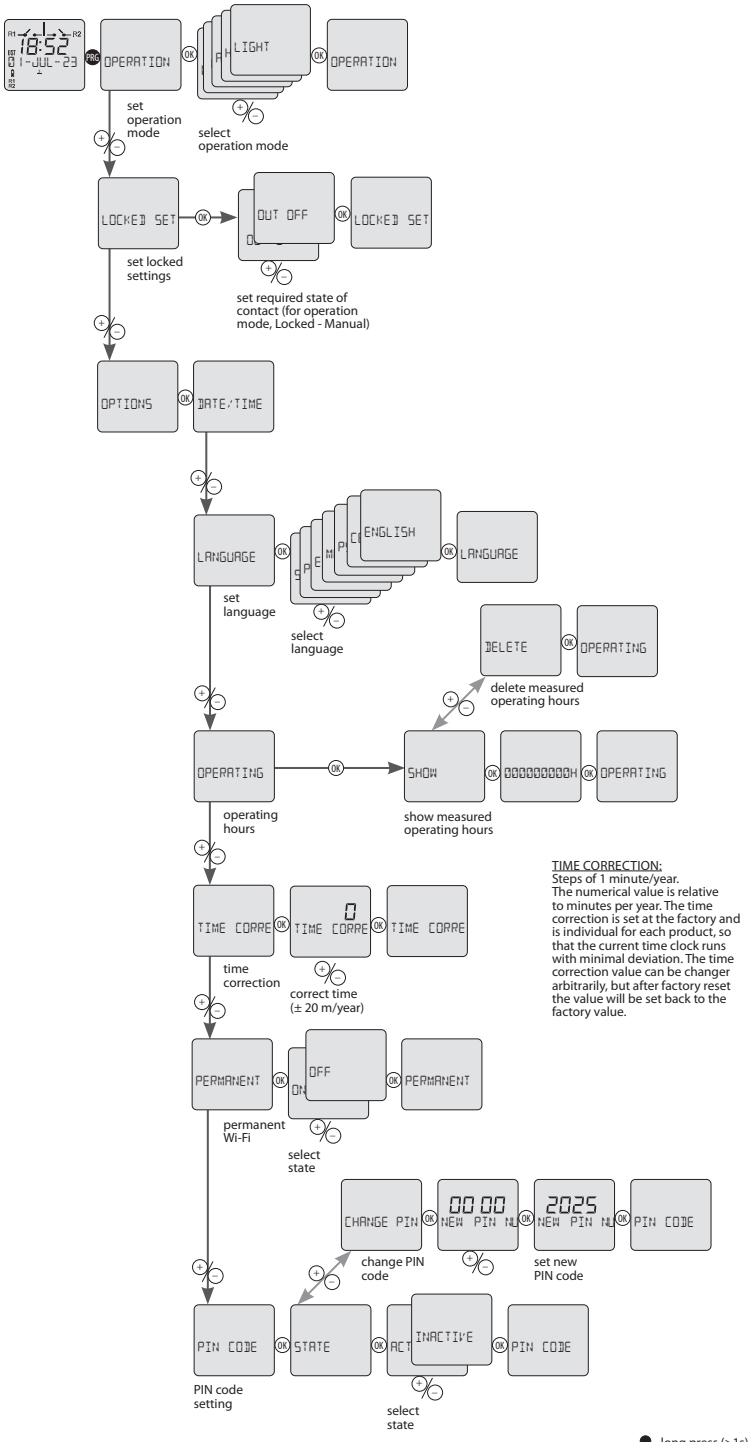


** SWITCHING LOGIC:
ABOVE - when the set intensity (switching level) of the lighting is exceeded, the output contact closes
UNDER - when the set intensity (switching level) of the lighting is exceeded, the output contact opens

*** note that this default intensity (switching level) of lighting, used for the LIGHT operating mode, can be changed by time programs if one of the operating modes that includes TIME PROGRAMS is selected and such programs are created at the same time.

● - long press (>1s)
○ - short press (<1s)

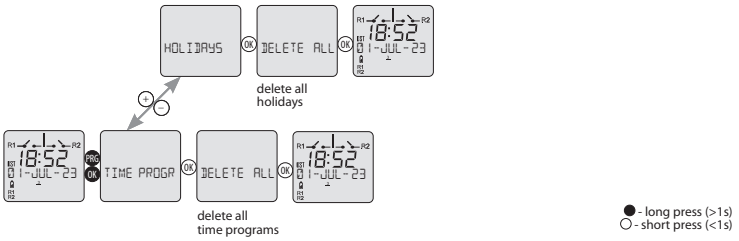
Other settings



TIME CORRECTION:
Steps of 1 minute/year.
The numerical value is relative to minutes per year. The time correction is set at the factory and is individual for each product, so that the current time clock runs with minimal deviation. The time correction value can be changer arbitrarily, but after factory reset the value will be set back to the factory value.

● - long press (>1s)
○ - short press (<1s)

Delete all (programs/holidays)



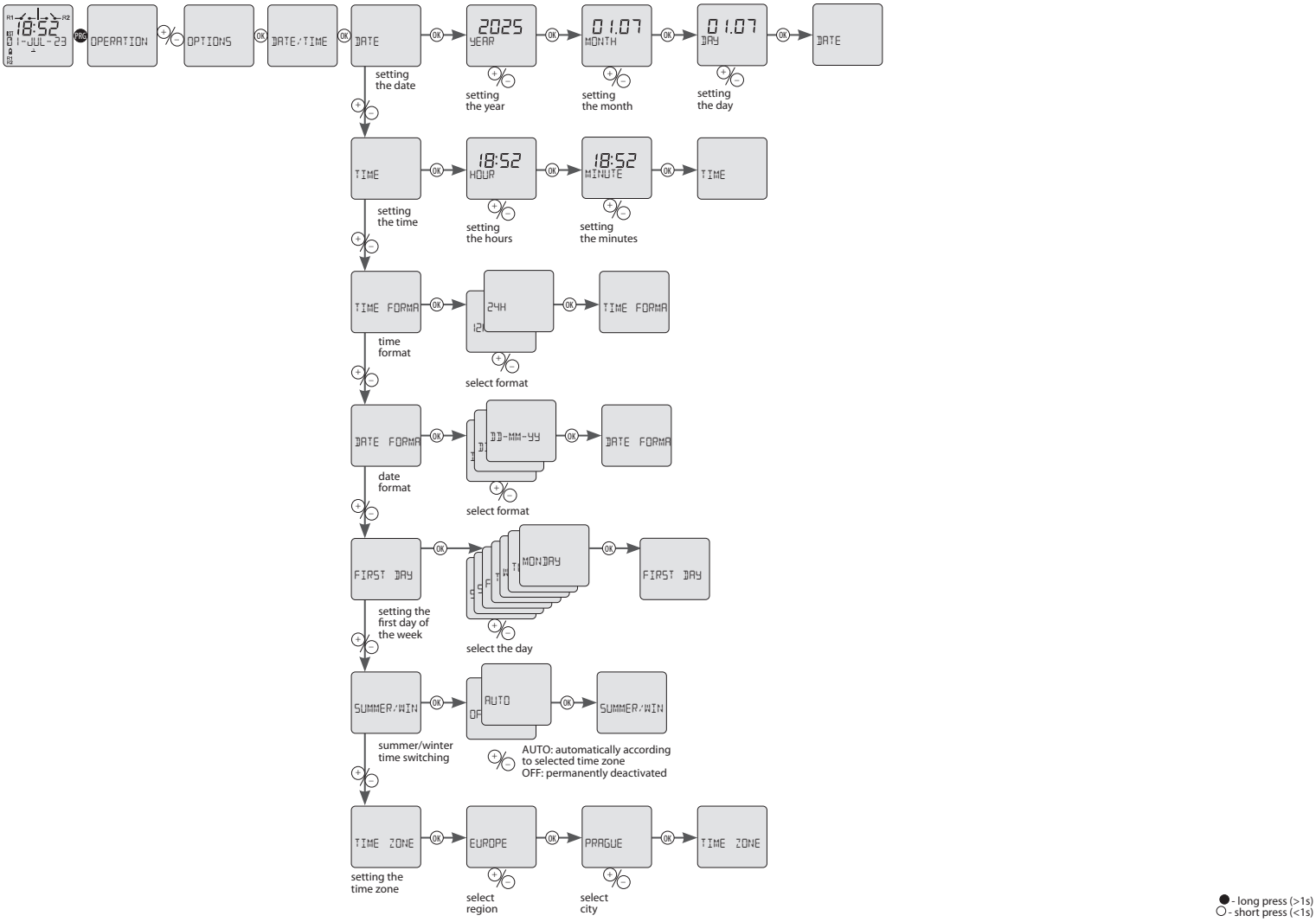
● - long press (>1s)
○ - short press (<1s)

To delete all time programs/holidays on a twilight switch simply press and hold the buttons as shown in the pictures above and follow the options.

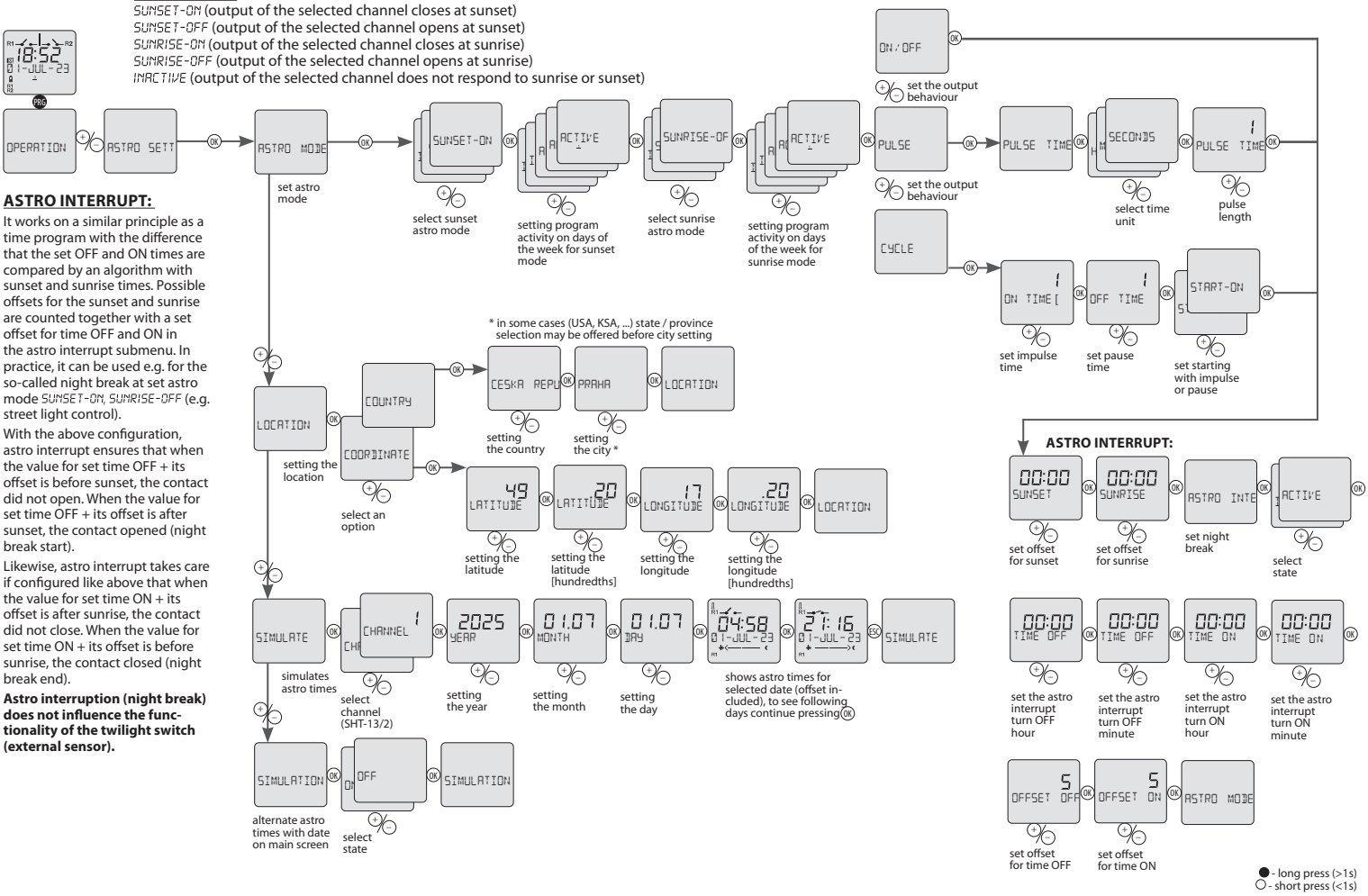
Product loadability

Type of load	cos φ ≥ 0.95 AC1	AC2	AC3	AC5a uncompensated	AC5a compensated	AC5b	AC6a	AC7b	AC12
Contact material $AgSnO_2$, 10A	250V / 10A	250V / 5A	250V / 4A	x	x	250W	250 / 4A	250V / 1A	250V / 1A
Type of load	AC13	AC14	AC15	DC1	DC3	DC5	DC12	DC13	DC14
Contact material $AgSnO_2$, 10A	x	250V / 4A	250V / 3A	24V / 5A	24V / 1.5A	24V / 1A	24V / 5A	24V / 1A	x

Date and time setting



Astro settings



ASTRO INTERRUPT:

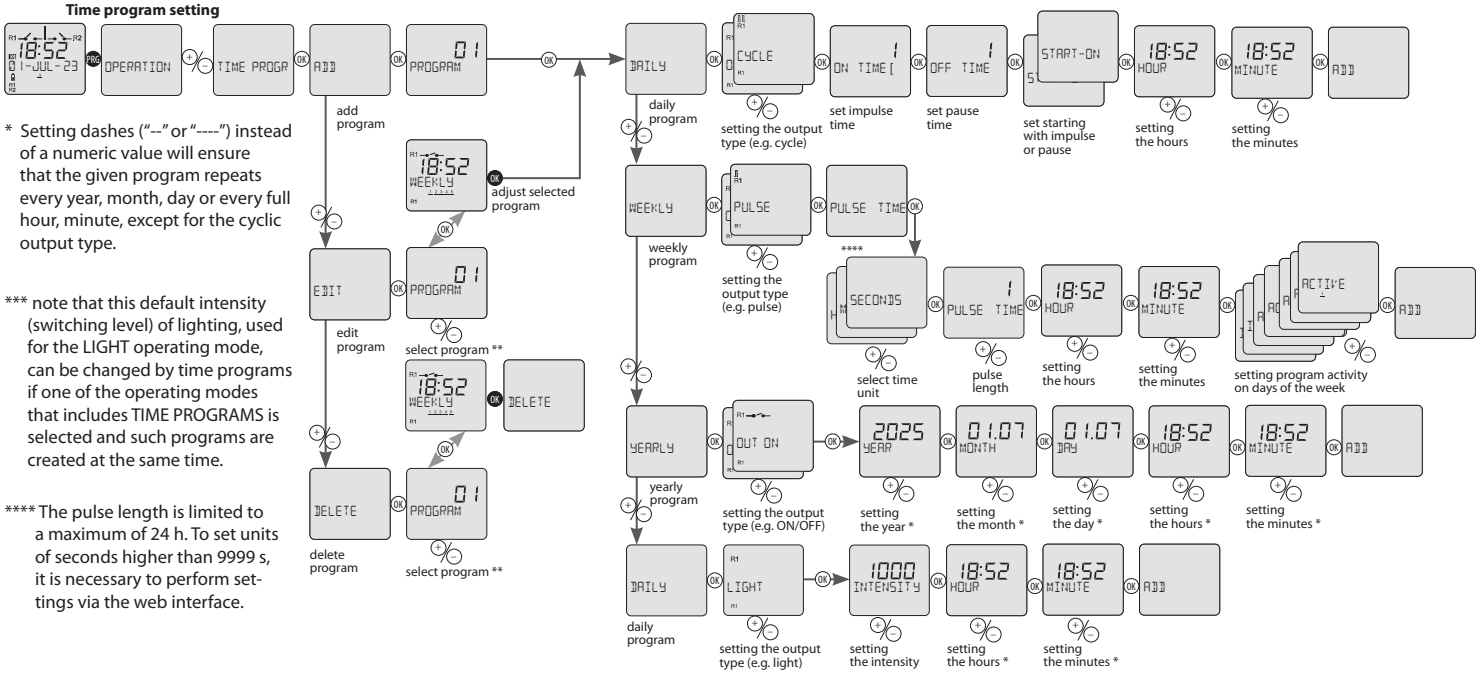
It works on a similar principle as a time program with the difference that the set OFF and ON times are compared by an algorithm with sunset and sunrise times. Possible offsets for the sunset and sunrise are counted together with a set offset for time OFF and ON in the astro interrupt submenu. In practice, it can be used e.g. for the so-called night break at set astro mode *SUNSET-ON, SUNRISE-OFF* (e.g. street light control).

With the above configuration, astro interrupt ensures that when the value for set time OFF + its offset is before sunset, the contact did not open. When the value for set time OFF + its offset is after sunset, the contact opened (night break start).

Likewise, astro interrupt takes care if configured like above that when the value for set time ON + its offset is after sunrise, the contact did not close. When the value for set time ON + its offset is before sunrise, the contact closed (night break end).

Astro interruption (night break) does not influence the functionality of the twilight switch (external sensor).

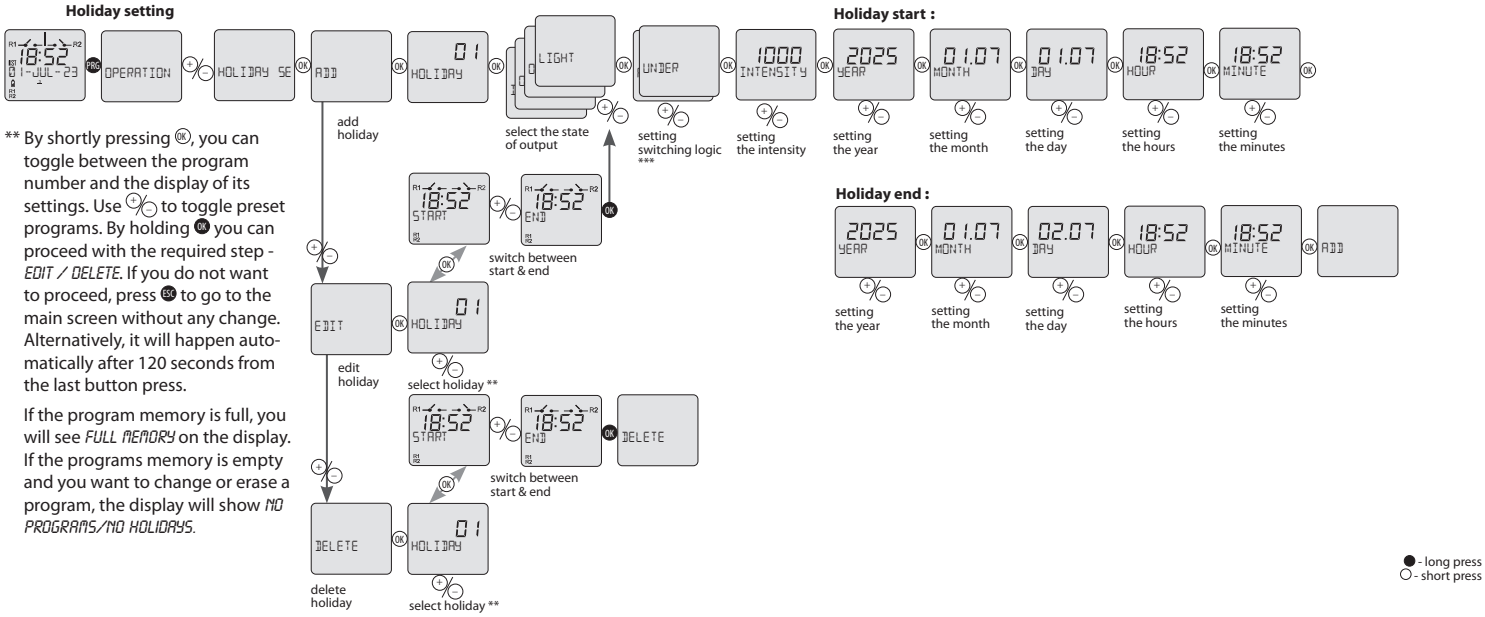
Time program/holiday setting



* Setting dashes ("--" or "----") instead of a numeric value will ensure that the given program repeats every year, month, day or every full hour, minute, except for the cyclic output type.

*** note that this default intensity (switching level) of lighting, used for the LIGHT operating mode, can be changed by time programs if one of the operating modes that includes TIME PROGRAMS is selected and such programs are created at the same time.

**** The pulse length is limited to a maximum of 24 h. To set units of seconds higher than 9999 s, it is necessary to perform settings via the web interface.



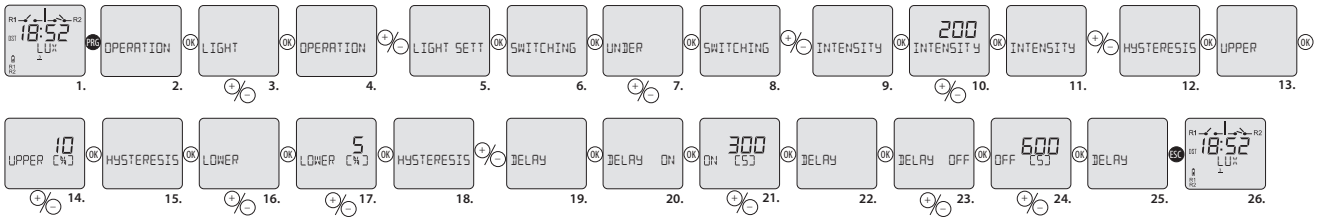
** By shortly pressing OK, you can toggle between the program number and the display of its settings. Use + / − to toggle preset programs. By holding OK you can proceed with the required step - *EDIT / DELETE*. If you do not want to proceed, press ESC to go to the main screen without any change. Alternatively, it will happen automatically after 120 seconds from the last button press.

If the program memory is full, you will see *FULL MEMORY* on the display. If the programs memory is empty and you want to change or erase a program, the display will show *NO PROGRAMS/NO HOLIDAYS*.

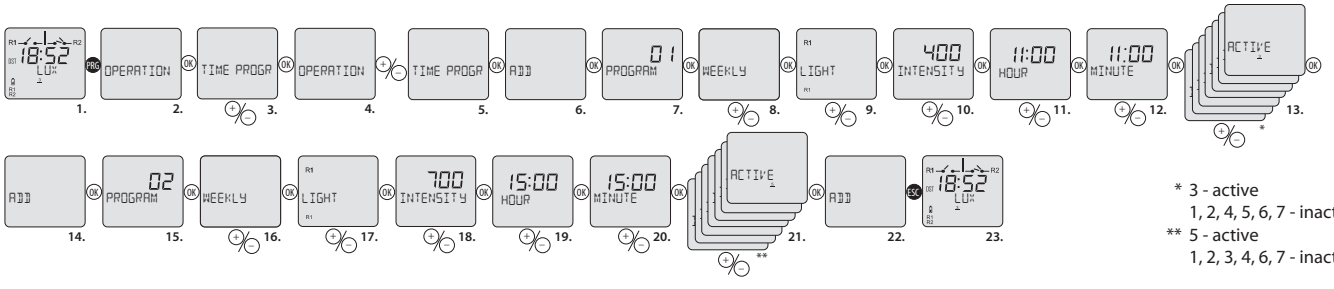
● - long press (>1s)
○ - short press (<1s)

SOU-13 programming example

Closing the channel when the monitored intensity (switching level) of the ambient light drops below the threshold of 200 lx. **This configuration does not respect any holidays and set time programs, changing the monitored intensity over time.** The twilight switch is controlled only by the setting and intensity value in the light setting, and this applies permanently. The above-threshold hysteresis is set to 10% and the under-threshold is set to 5%. The delay for contact closing is set to 5 minutes and for opening to 10 minutes.



Closing the channel when the monitored intensity (switching level) of the ambient light drops below the 400 lx threshold every Wednesday from 11:00 with a change in intensity to 700 lx every Friday from 15:00. **This configuration respects the set time programs, changing the monitored intensity over time, but still ignores the set holidays.** The twilight switch follows the setting and intensity value in the light settings until the monitored intensity is changed by the time program or another type of switching is set (e.g. ON/OFF). The hysteresis and delay values are retained from the previous example in this example for simplicity and will therefore not be part of the settings.



* 3 - active
1, 2, 4, 5, 6, 7 - inactive
** 5 - active
1, 2, 3, 4, 6, 7 - inactive

The second example can also be controlled by holidays and an astronomical program when the appropriate operation mode is selected.

● - long press (>1s)
○ - short press (<1s)