

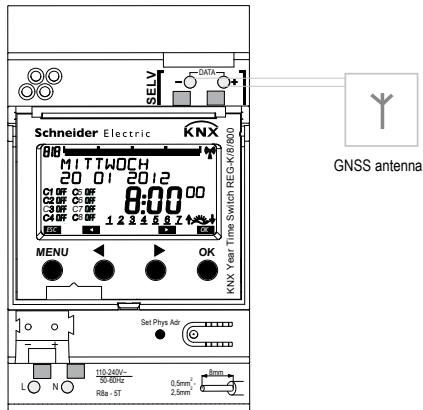
SpaceLogic KNX

Year Time Switch REG-K/8/800

Art. no. MTN6606-0008

Installation and operating instructions

Digital time switch with annual and astronomical program



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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 rails TH35 (in accordance with EN 60715) and corresponds to type 1 STU in accordance with IEC/EN 60730-2-7 resp. 60730-1
- The professional installation of bus lines and commissioning of devices requires compliance with the provisions of EN 50428 for switches or similar installation equipment for use in building construction technology. Tampering with, or making modifications to, the device invalidates the guarantee
- Safety clearance must be guaranteed as per DIN EN 60664-1. A distance of at least 4 mm must be maintained between individual cores of the 230 V cable and the bus line.

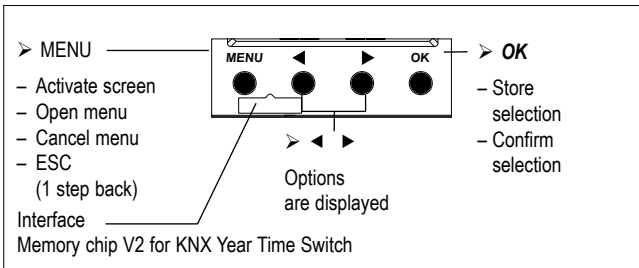
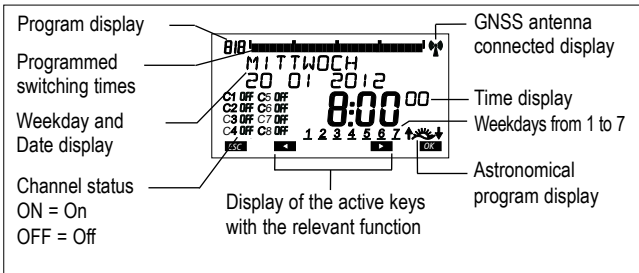
Designated use

- The time switch can be used for lighting, bell systems, ventilation etc.
- Only use in enclosed dry spaces (device); antenna is installed in the open-air

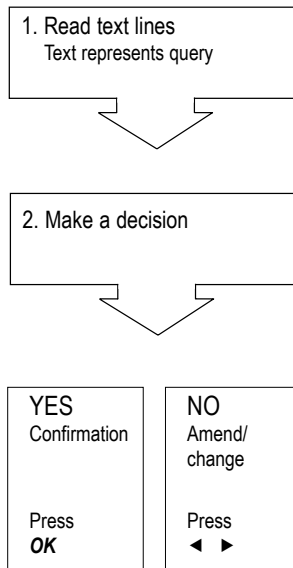
Disposal

Dispose of device and batteries separately in an environmentally sound manner

Screen and keys



Operating instructions



Connection/installation



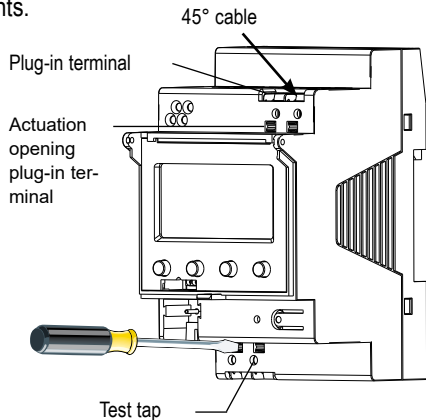
⚠ WARNING

Warning, danger of death through electric shock!

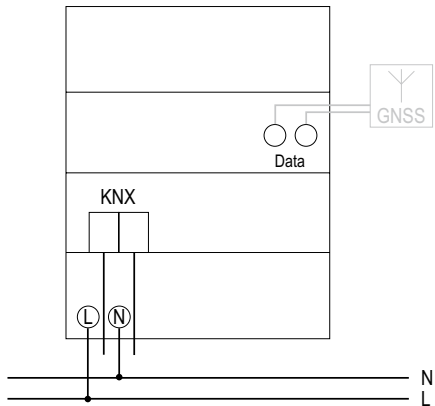
- Must be installed by qualified electrician!
- Disconnect power source.
- Cover or shield any adjacent live components.
- Ensure device cannot be switched on!
- Check power supply is disconnected.
- Earth and bypass.
- Observe SELV on data bus.

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.

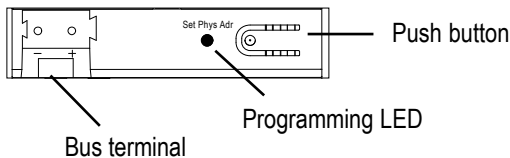


Connection



Bus connection

- Insert bus line in bus terminal on the front of the device.
- Ensure correct polarity.



Program physical address

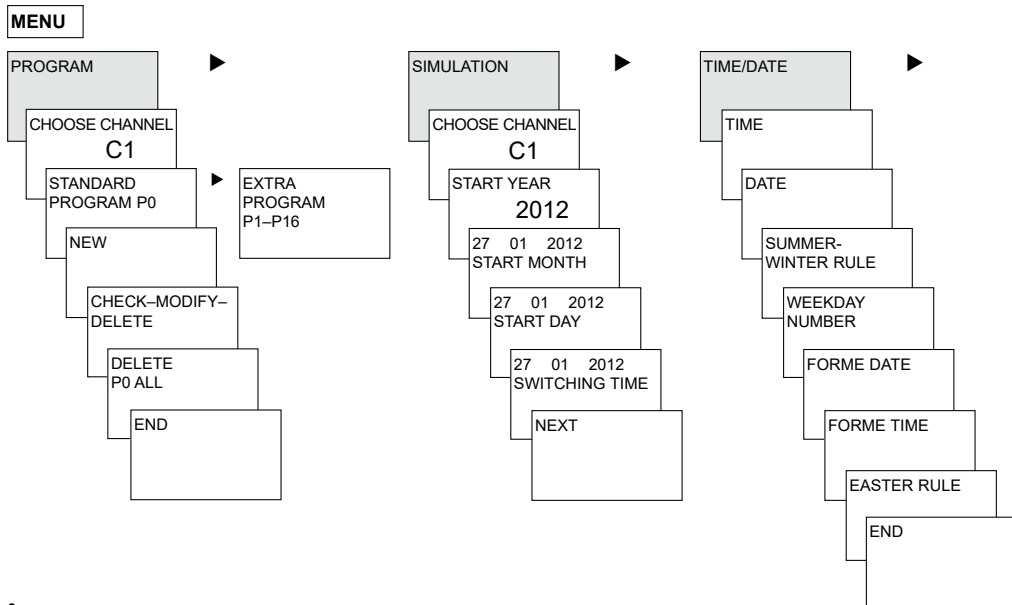
- Press push button on front of device.
 - The programming LED lights up.
 - The device is in program mode.

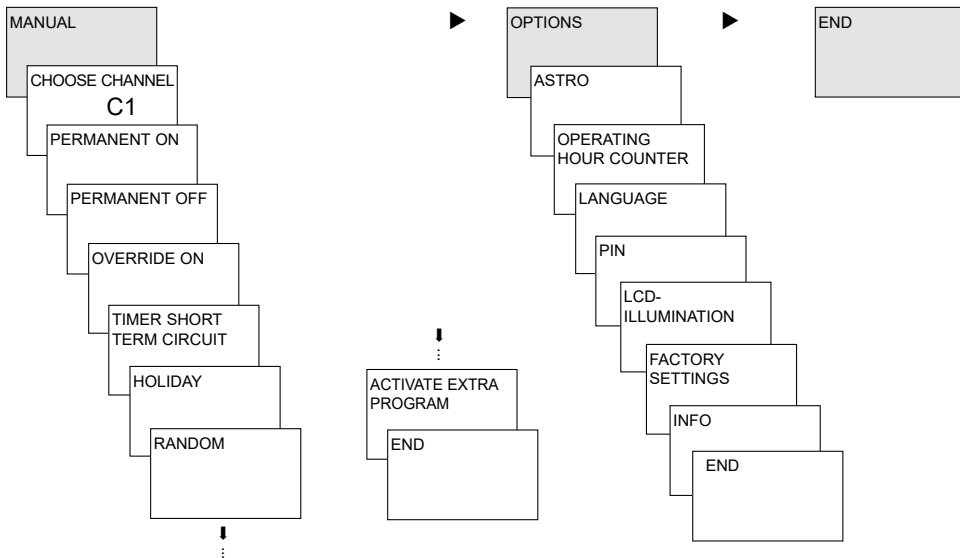
Start-up, diagnostics and configuration are handled by ETS (KNX Tool Software).

RESET

- Press the 4 keys simultaneously. ENGLISH is displayed.
- Then select KEEP PROGRAM or DELETE PROGRAM.

Overview of menu selection





Initial start-up

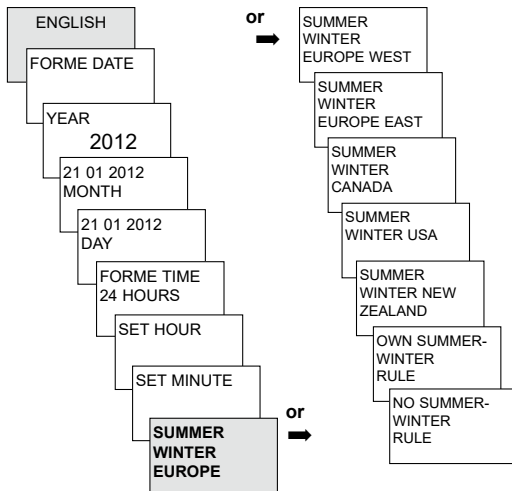
Set date, time and summer/
winter time rule

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

You can connect the GNSS antenna V2 (MTN6606-0073) in order to synchronise the time switch via the GNSS signal.

Settings must be made via the ETS if the antenna is connected. The settings can be activated via the ETS on the KNX bus.

Settings do not have to be made if the date and time were received via GNSS or the KNX bus.



Time switch programs, astronomical programs

With the digital yearly time switch the switching programs or astro programs can be programmed and switched optionally for each channel.

Time switch programs	Astro programs
<p>Time switch function</p> <ul style="list-style-type: none"> – 1 Standard program P0 (Weekly program with switching times, pulse and cycle times) – 16 Extra programs consisting of: <ul style="list-style-type: none"> 14 Extra programs P1–P14 (Weekly programs with switching times, pulse and cycle times with different adjustable date ranges (fixed date range, date dependent on Easter etc.), with extra program P15 (Fix ON) and extra program P16 (Fix Off) (with adjustable date ranges) 	<p>The astro function can be activated instead of the time switch function for each channel</p> <ul style="list-style-type: none"> – 1 Astro standard program P0 (with fixed on/off times, weekly program) – 16 Extra programs consisting of: <ul style="list-style-type: none"> 14 Astro extra programs P1–P14 (with fixed on/off times, weekly program) with different adjustable date ranges (fixed date range etc.), with extra program P15 (Fix ON) and extra program P16 (Fix Off) (with adjustable date ranges)

A channel can be defined as an astro channel in: MENU → Options → Astro → Astro settings → choose channel → change to astro program

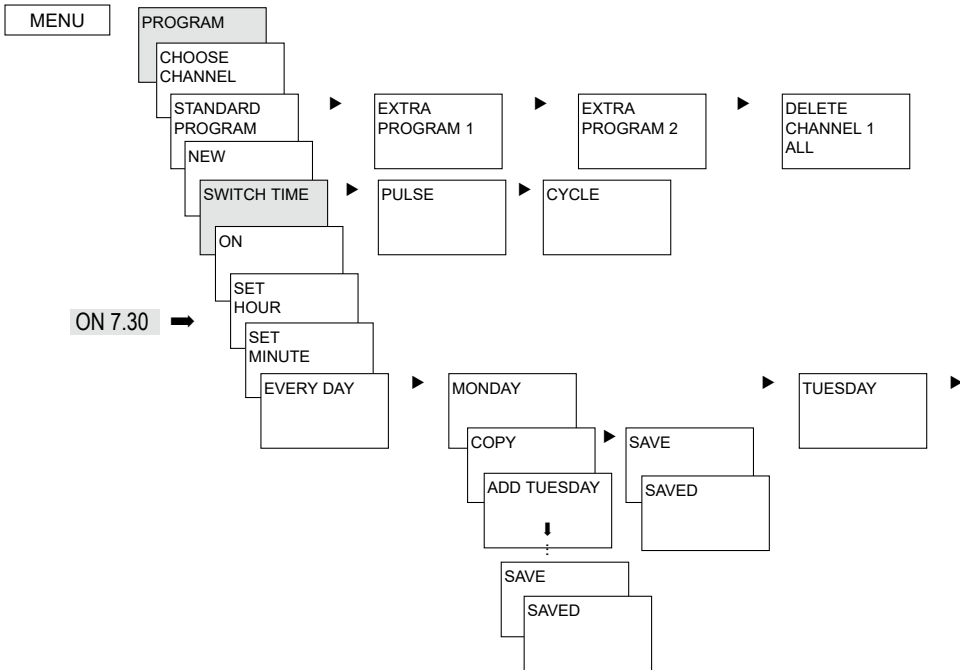
Time switch program

Program switching time in the standard program P0

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

- Press MENU. PROGRAM is displayed.
- Confirm by pressing OK. CHOOSE CHANNEL is displayed.
- Confirm CHANNEL 1 by pressing OK. STANDARD PROGRAM P0 is displayed.
- Confirm by pressing OK. NEW is displayed.
- Confirm by pressing OK. SWITCH TIME is displayed.
- Confirm by pressing OK. Select ON (for switch-on times).
- Confirm by pressing OK. The display shows SET HOUR.
- Use the + or – keys to enter hour, minute, (07:30) and confirm by pressing OK. EVERY DAY is displayed. Press ► to select MONDAY.
- 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.

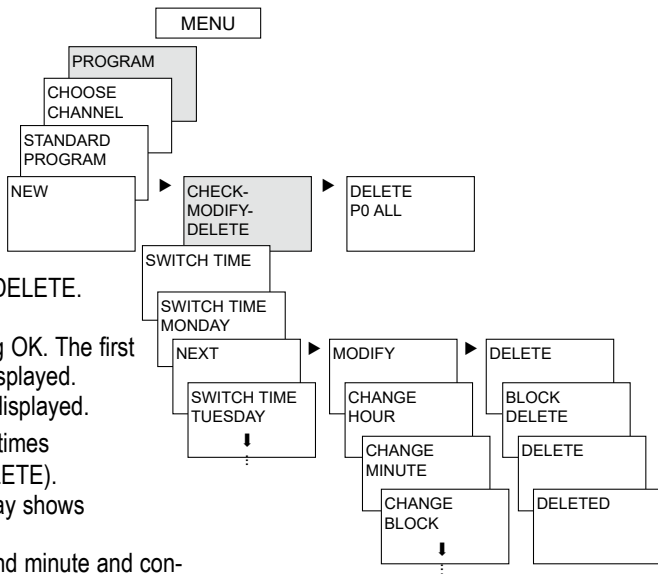


Request/change/delete switching time

- Press MENU. PROGRAM is displayed.
- Confirm by pressing OK.
- Confirm CHANNEL 1 by pressing OK.
- Confirm STANDARD PROGRAM P0 by pressing OK.
- Use ► to select CHECK-MODIFY-DELETE.
- Confirm by pressing OK.
- Confirm SWITCH TIME by pressing OK. The first of the entered switching times is displayed.
- Confirm by pressing OK. NEXT is displayed.

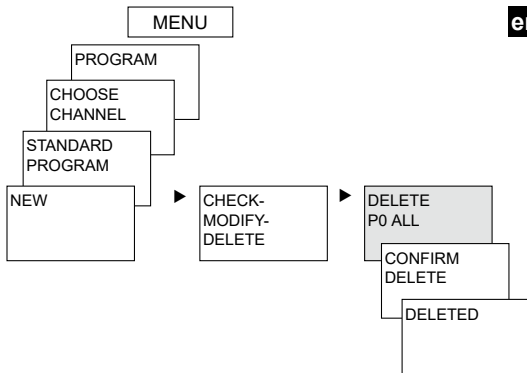
Change or delete individual switching times

- Press ► to select MODIFY (or DELETE).
- Confirm by pressing OK. The display shows CHANGE HOUR.
- Use the+ or – keys to enter hour and minute and confirm by pressing OK.



Delete all switching times in the standard program

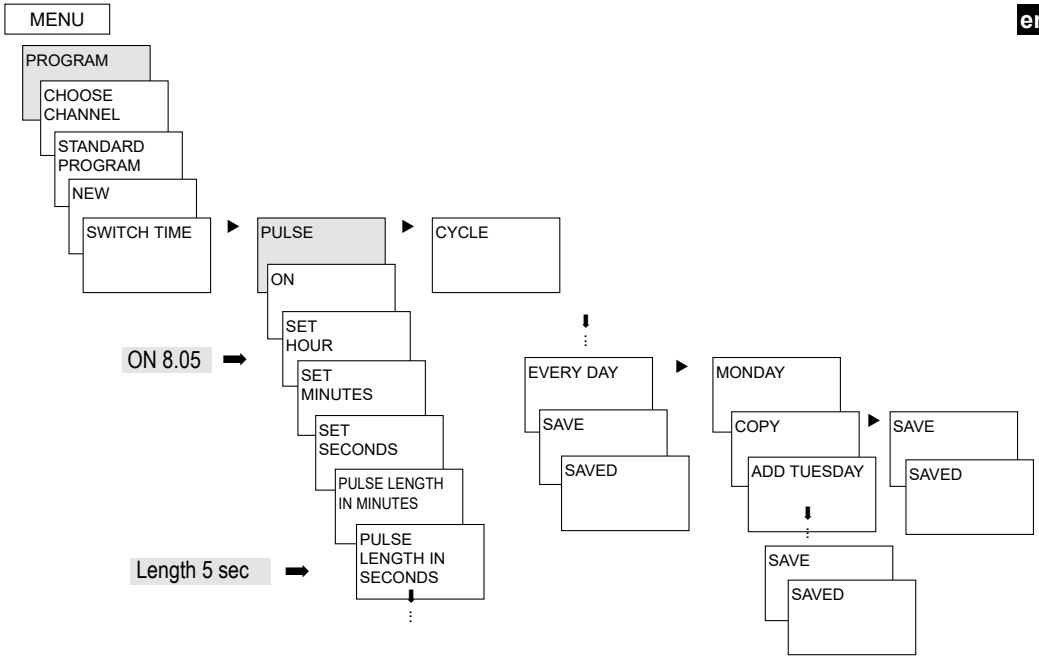
- Press MENU. PROGRAM is displayed.
- Confirm by pressing OK.
- Confirm CHANNEL 1 by pressing OK. STANDARD PROGRAM P0 is displayed.
- Confirm by pressing OK.
- Use ► to select DELETE P0 ALL.
- Confirm by pressing OK. The display shows CONFIRM DELETE.
- Confirm by pressing OK. The display shows DELETED.



Pulse time programming

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

- Press MENU. PROGRAM is displayed.
- Confirm by pressing OK. CHOOSE CHANNEL is displayed.
- Confirm CHANNEL 1 by pressing OK. STANDARD PROGRAM P0 is displayed.
- Confirm by pressing OK. NEW is displayed.
- Confirm by pressing OK. SWITCH TIME is displayed.
- Select PULSE by pressing ►.
- Confirm by pressing OK. ON is displayed.
- Confirm by pressing OK. The display shows SET 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). EVERY DAY is displayed. Press ► to select MONDAY.
- Confirm by pressing OK. EVERY DAY is displayed.
- Press ► to select MONDAY. Confirm by pressing OK.
- COPY is displayed. Press ► to select SAVE.
- Confirm by pressing OK.



Programme cycle time

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
(8:00⁰⁰–8:00²⁰ On; 8:15⁰⁰–8:15²⁰ On; 8:30⁰⁰–8:30²⁰ 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

Standard program and extra programs

- The standard program P0 (weekly program with switching times, pulse and cycle times or astronomical program) is always active however has the lowest priority and can be superimposed by the extra programmes P1–P16.
- In extra programs the following is valid: the higher the number the higher the priority. The extra program 16 has the highest, the extra program 1 the lowest priority.
- Each extra program has an arbitrary number of date ranges available. A extra program becomes active when at least one date range has been set and is not superimposed by another extra program with a higher priority during this period. At the start and end of each date range the hour can also be entered to ensure that the changeover to the respective extra program occurs on each complete hour.
- The following date ranges can be set in parallel:
 - Fixed date (once)
 - Fixed date each year
 - Easter rule or the Orthodox Church rule (81 days before ... 174 days after Easter)

- Chinese New Year (20 days before ... 20 days after the Chinese New Year)
- Date with serial pattern (Time limit series): Start and end are set and the start repeated according to an adjustable number of days (at the latest after 200 days)
- Weekday rule (e.g. every 3rd Wednesday in September)

Examples of calendar-dependent date ranges:

- Fixed date range:
Start on 02.04.2012 at 16:00 hrs, End on 24.04.2012 at 10:00 hrs
- Annually recurring date range
Christmas: Start every year on 24.12. at 18:00 hrs, End on 26.12. at 23:00 hrs
- Easter-dependent date range
Whit Sunday and Monday: Start every year: 49 days after Easter at 0:00 hrs,
End: 51 days after Easter at 0:00 hrs
- Date range dependent on the Chinese New Year
Start each year 1 day before the Chinese New Year. New Year, End 5 days after

- Date with serial pattern (Time limit series)
as from November 2012 to be carried out successively every 2nd week
Start on Monday 01.11.2012 at 0:00 hrs; End on Monday 08.11.2012 at 0:00 hrs,
repeat start after 14 days
- Date dependent on the weekday etc.
each month on the 1st weekend from Saturday 06:00 hrs to Sunday 18:00 hrs;
start 1st Sunday each month at 06:00 hrs, duration 36 hours
- Public holiday settings
With the help of the Tool Software V2 for KNX Year Time Switch the public holidays in a country in
the set can be set together, individually processed and transferred to the time switch with the memo-
ry chip V2 for the KNX Year Time Switch as date ranges.
- Extra program P1-14 Time switch channel
 - Active in the programmed date ranges
 - Switch timings, pulse and cycle times can be entered as week programs
- Extra program P1-14 Astronomical channel
 - Active in the programmed date ranges
 - Astronomical times are active (calculated sunrise and sunset times)

– Fixed switch-offs (e.g. nighttime interruption) and switch-ons can also be entered as weekly program in order to superimpose the astronomical times entirely or partially.

Example: The standard program switches on the street lighting in dependence of the astro times. A nighttime interruption is programmed from 23:00 hrs to 04:00 hrs.

Extra program 1 is active within the date range from April 30, 12:00 hrs until May 12:00 hrs. To ensure that the street lighting remains switched on all night no nighttime interruption is programmed in the extra program 1.

- Extra program P15
 - Function: Fix ON
 - Active in the programmed date ranges

- Extra program P16
 - Function: Fix OFF
 - Active in the programmed date ranges

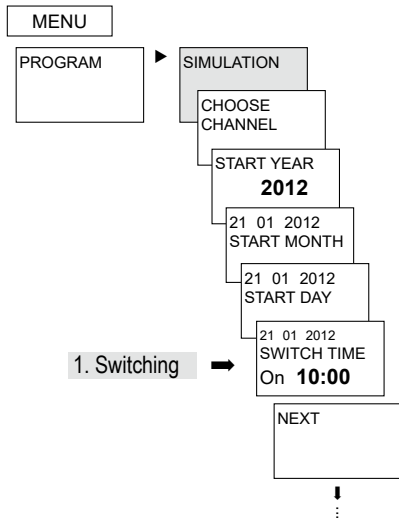
Example: The car park lighting is switched on and off at fixed times or Monday to Friday according to astro times. The extra program P 16 Permanently Off ensures that the car park lighting is not switched on on any public holidays.

SIMULATION

During the simulation it is a channel-related total request. All channel switching entered (standard and special program, switching times, pulse and cycle programs) are displayed in the time sequence in which they are applied.

In the case of an astronomical channel all astronomical switch-ons and fixed switch-ons / switch-offs are displayed in their time sequence.

- Press MENU using ► select SIMULATION and follow the indications on the display in order to request all the switchings applied (see figure).

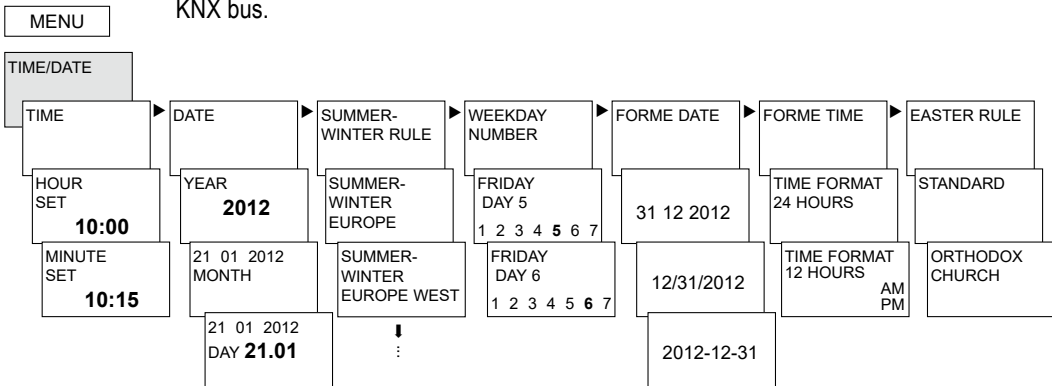


TIME/DATE

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

➤ Press MENU using ► select DATE/TIME and follow the indications on the display.

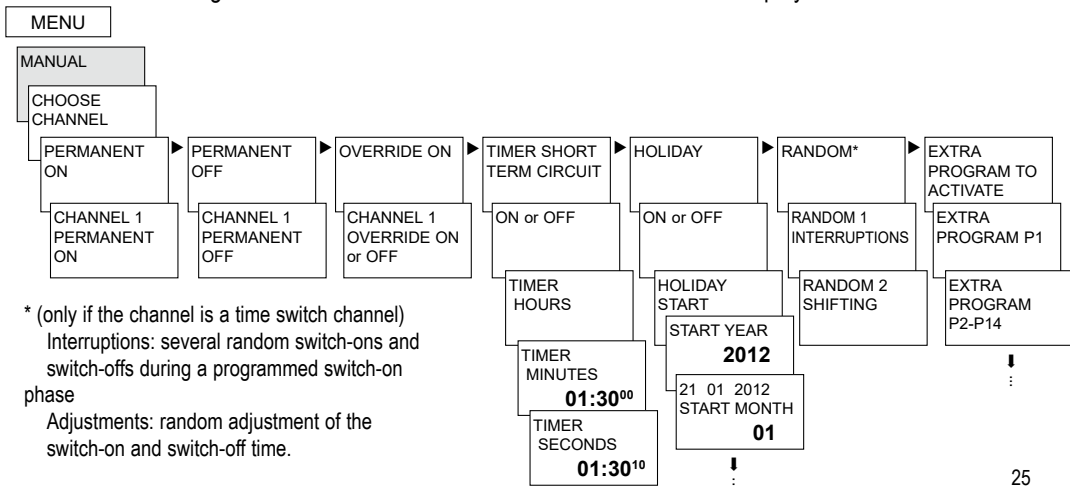
Settings do not have to be made if the date and time are received via GNSS or the KNX bus.



MANUAL

In the MANUAL menu manual switch functions are applied. In the submenus MANUAL, PERMANENT ON/OFF, TIMER SHORT TERM CIRCUIT, HOLIDAY, RANDOM as well as ACTIVATE EXTRA PROGRAM the manual switching can be activated/programmed.

➤ Press MENU using ► select MANUAL and follow the indications on the display.



Manual and permanent switching

Manual and permanent switching can be set using the menu in MANUAL.

Manual switching

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

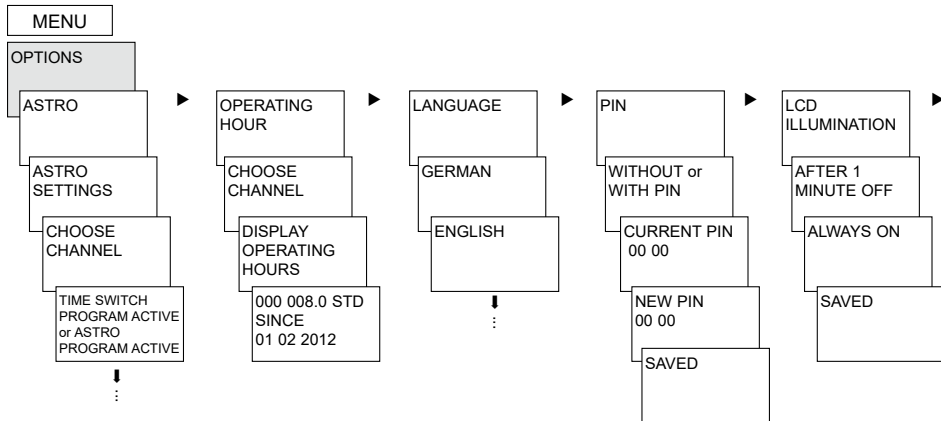
Permanent switching

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

OPTIONS

In the menu OPTIONS the submenus ASTRO, OPERATING HOUR, LANGUAGE, PIN, LCD ILLUMINATION, FACTORY SETTINGS as well as INFO can be requested.

➤ Press MENU using ► select OPTIONS and follow the indications on the display.



Set ASTRO program

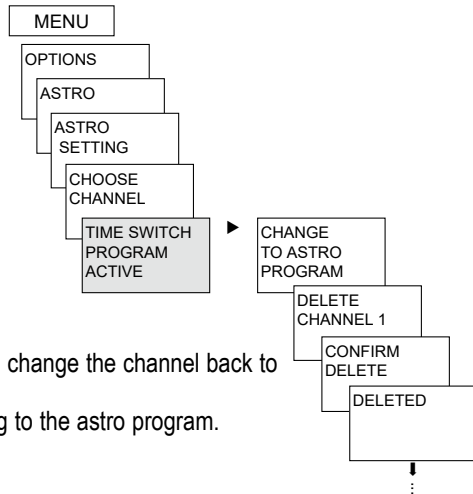
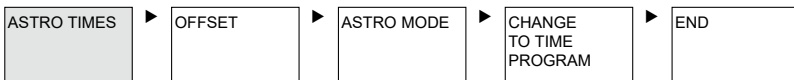
... if a time switch program is active.

- Press MENU using ► select OPTIONS and follow the instructions on the display.

You will automatically be taken to the setting for the POSITION data (COUNTRY or COORDINATES input) and the ASTRO SETTINGS (OFFSET and ASTRO MODE).

If an ASTRO program is activated on a channel you can change the channel back to the time switch program.
Programmed switching times are deleted when changing to the astro program.

... if astro times are active.



In the OPTIONS submenu ASTRO it is possible – after a channel has been changed to astro program – to request or change astro times, offset, astro mode as well as position (location). If a channel is set as an astro channel the symbol is displayed and the astro times are accessed after the channel selection.

- ASTRO TIMES

Astro time display (sun rise and sunset as well as offset) for the current day

- OFFSET

With the offset (adjustment value) the calculated astro times can be adjusted by max. +/- 2 hrs. This means that the astro on and off switching time can be adapted to local conditions (e.g. mountains, high buildings etc.) or to personal requirements.

- ASTRO MODE

– Evenings on, mornings off

At sunset it switches on, at sunrise it switches off (e.g.: street lighting)

– Evenings off, mornings on

At sunset it switches off, at sunrise it switches on (e.g.: Terrarium)

– Astro pulse: Evenings and mornings, only mornings or only evenings; pulse duration max. 59 min, 59 sec)

- POSITION

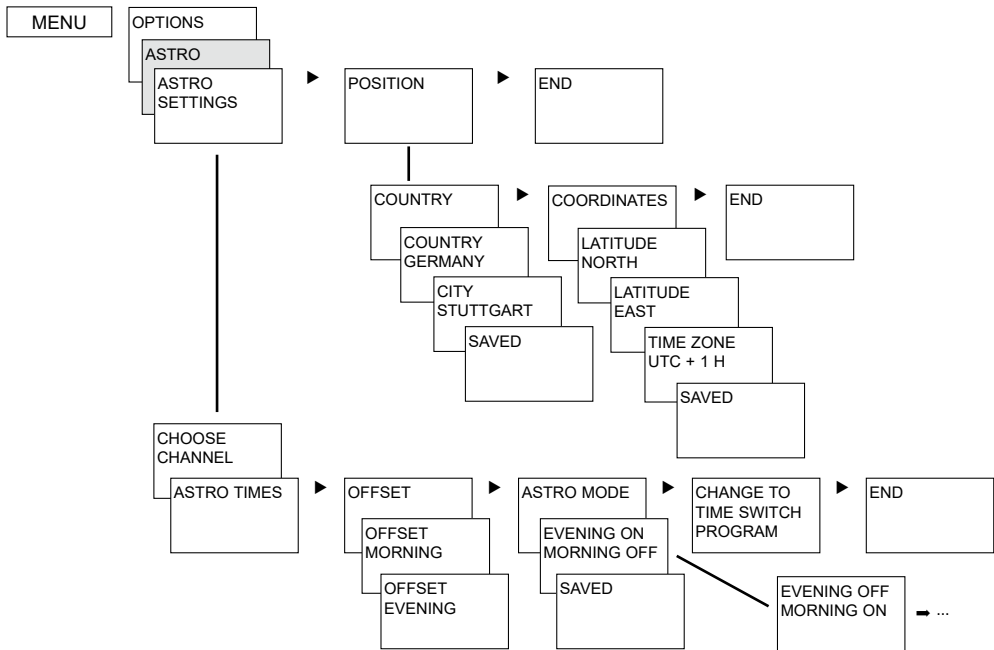
– setting of the location using coordinates (longitude/latitude, time zone) or country/city

– With the memory chip V2 for KNX Year Time

Switch up to 10 more cities (= Favourites) can be added

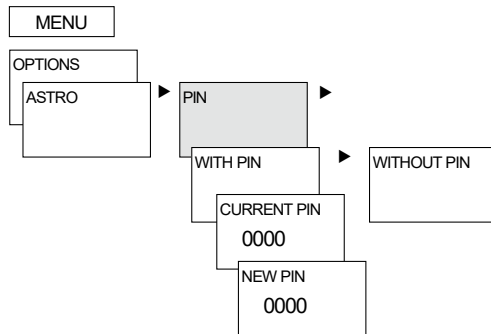
– Own Astro table (with Tool Software V2 for KNX Year Time Switch)

– Automatic setting if GPS antenna is connected (settings must be made via the ETS if the antenna is connected)



Enter PIN code

The PIN-Code is set in OPTIONS via the menu.
If you have lost your PIN please contact the
Customer Care Centre in your country.



Time signal received with GNSS antenna

- The time signal can be received via the antenna or the KNX bus. Settings must be made via the ETS if antennas are connected.
- Suitable antenna: GNSS antenna (art no. MTN6606-0073).
- By connecting the GNSS antenna the time switch can be automatically synchronised via the time signal. The time zone can be individually set. Upon receipt of GPS data the GPS coordinates are also transferred to the time switch.
- After connection to the power supply or resetting there is change to the automatic display after 70 sec, as soon as the GNSS time signal has been received.
- Follow advice in the GNSS antenna operating instructions.

- NOTE
- When connecting ensure correct polarity.
 - Observe maximum cable length of 100 m.
 - Align the radio antenna so that the green LED flashes once a second.
 - A maximum of 5 KNX Year Time Switches can be connected to one antenna.

Setting time zones

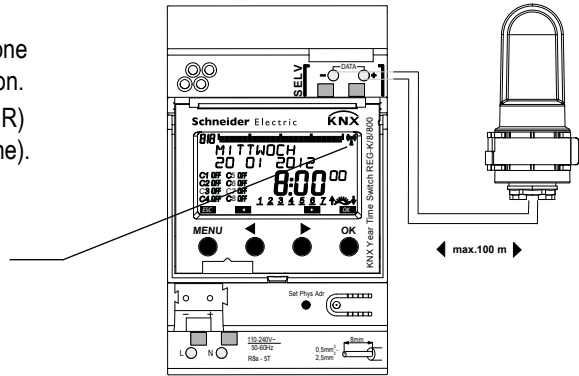
After successful synchronisation, the time zone can be altered in the TIME/DATE menu option.

- In the submenu TIME (display: SET HOUR) correct the applicable local time (time zone).

Reception of the GNSS time signal:
Display: RC (Radio Control) + Y

No reception of the GNSS time signal:
Display: Y

No connection to antenna:
Display: no RC, Y



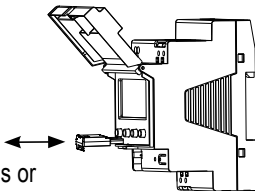
Memory chip V2 for KNX Year Time Switch (art. no. CCT15861)

Use memory chip (see fig.)

- Insert memory chip in the time switch.
- Read / read out saved switching times and device settings in the time switch or start Tool Software V2.

- Remove memory chip after copying and store in the cover.

Avoid mechanical stress or dirtying with other storage/transport methods.

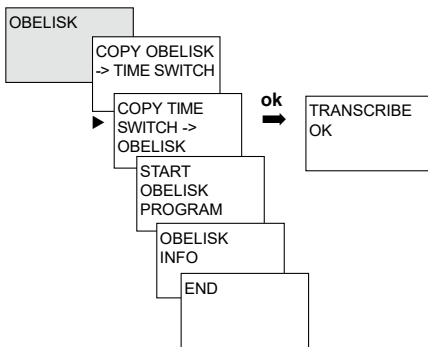


Copy OBELISK → TIME SWITCH

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 chip in the time switch.

Copy TIME SWITCH → OBELISK

This copies all switching programs and settings from the time switch to the memory chip



Technical data

- Operating voltage: 110–240 V AC, –15 %/+10 %
- Frequency: 50–60 Hz
- Power consumption: 2,5 W (+ 1 antenna)
- Standby min.: 0,2 W
- Protection class: II in accordance with EN 60730-1 subject to designated installation
- Power supply on the DATA bus: 100 mA (maximum power on the DATA bus: 500 mA)
- Rated impulse withstand voltage: 4 kV
- Data output: Safety Extra-Low Voltage (SELV) 15,6 V
- Ambient temperature
 - Operation: –5 °C ... +45 °C
 - Storage: –20 °C ... +80 °C
 - Transport: –20 °C ... +80 °C
- Protection rating: IP 20 in accordance with EN 60529
- Time accuracy: ≤ 0,5 s/day at 25 °C
- Power reserve: 8 years (lithium cell) at +20 °C
- Pollution degree: 2
- Max. cable cross-section: 2,5 mm²
- Operating voltage KNX: bus voltage ≤ 12 mA
- Cable length: 100 m (YCYM 2 x 2 x 0.8 mm 2 pairs for DATA bus)
50 m (YCYM 2 x 2 x 0.8 mm 1 pair each for KNX and DATA bus)



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If you have technical questions, please contact
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