Connection diagram

1 channel

2 channels

Directory

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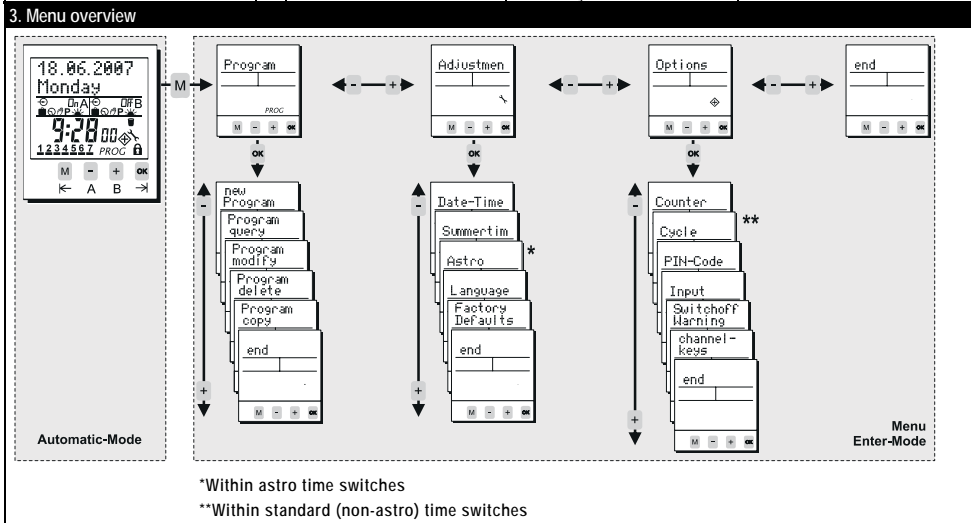20. Program modify
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1. Safety instructions

⚠ The installation and assembly of electrical equipment must be only carried out only by a skilled Person! Otherwise fire danger or danger of an electric shock exists!

⚠ Connect the supply voltage/frequency as stated on the product label!

⚠ Warranty void if housing opened by unauthorised person!

⚠ The electronic circuit is protected against a wide range of external influences. Incorrect operating may occur if external influences exceed certain limits!

2. Initial operation

■ The time switch is delivered in sleep-mode, the display is switched off.
■ Press OK-button for 1 second.
■ The current date and time is already programmed and European daylight savings time is activated.
■ Select the desired language by pressing ─+-buttons and confirm it by pressing OK. *(Remark: By pressing M you move one step backwards from the current position)*
■ If required, date, time and daylight savings time mode can be adjusted also by pressing ─+-buttons and a subsequent confirmation with OK.

Further adjustments when operating an astro time switch:

■ When using the astro function it is obligatory to enter the geographical position of the place of the installation of the device. Choose with ─+-buttons between „location" (pre-defined cities) and „position" (longitude and latitude). Confirm your choice again with OK. (The easiest way is choosing a pre-defined city within the „locations"-menu.)
■ Enter the nearest city or the geographical coordinates with ─+-buttons and confirm with OK

3. Menu overview

Program — Adjustmen — Options — end

new Program / Program query / Program modify / Program delete / Program copy / end

Date-Time / Summertim / Astro * / Language / Factory Defaults / end

Counter / Cycle ** / PIN-Code / Input / Switchoff Warning / channel-keys / end

Automatic-Mode

Menu Enter-Mode

*Within astro time switches

**Within standard (non-astro) time switches

4. Symbol legend

Symbol	Description
On	Channel is switched ON
Off	Channel is switched OFF
🛄	For the current date the "holiday program" / "permanent by date" is activated
☉	Standard programming step
✋	Current state is based on a manual over-ride. The state will be cancelled with the next programming step.
P	Current state is based on a manual over-ride. The state is permanent until terminated manually (7 / 17).
1234567	Days of the week Monday, Tuesday, ... Sunday; The underscores indicate if the program is active for the days above.
🗑	Element within sub-menu "program delete"
☀	*Astro function: Current state is based on a sunrise or sunset taking into account an optionally adjusted Offset (14 / 15).
⊓	**Current state is based on a switching time with pulse function
⊓⊔	**Current state is based on a switching time with cycle function
⊖	***Is displayed if the corresponding channel is activated by the external input.
🔒	The time switch is locked; to unlock the device the PIN has to be entered (19).

5. Key function

Key	Function
M / ←	1. To access the Enter-mode (program, adjustments, options) from the automatic-mode. 2. To revert to the beginning of the current (sub-) menu.
─+	1. To adjust the flashing digit. 2. To scroll through a choice
A B	1. Automatic-mode: To switch the channel ON or OFF until the next programming step occurs. 2. Automatic-mode: A push longer than 3 sec. = Permanent switching status (7).
OK / →	1. To activate the time switch when operated without power supply. 2. To confirm the selection or the entered data.

6. Handling advice

■ The time switch is programmable without external power supply after pressing the OK -button.
■ To revert one step or one level back while in the Enter-Mode press M.
■ After completion of a (sub-) menu confirming **end** will return the device into the automatic-mode.
■ With ─+ the choice changes from **end** to **continue**. By confirming **continue** the time switch returns to the beginning of the current (sub-) menu.
■ When confirming **end** before completion, the time switch returns to the automatic-mode without saving the entered data.
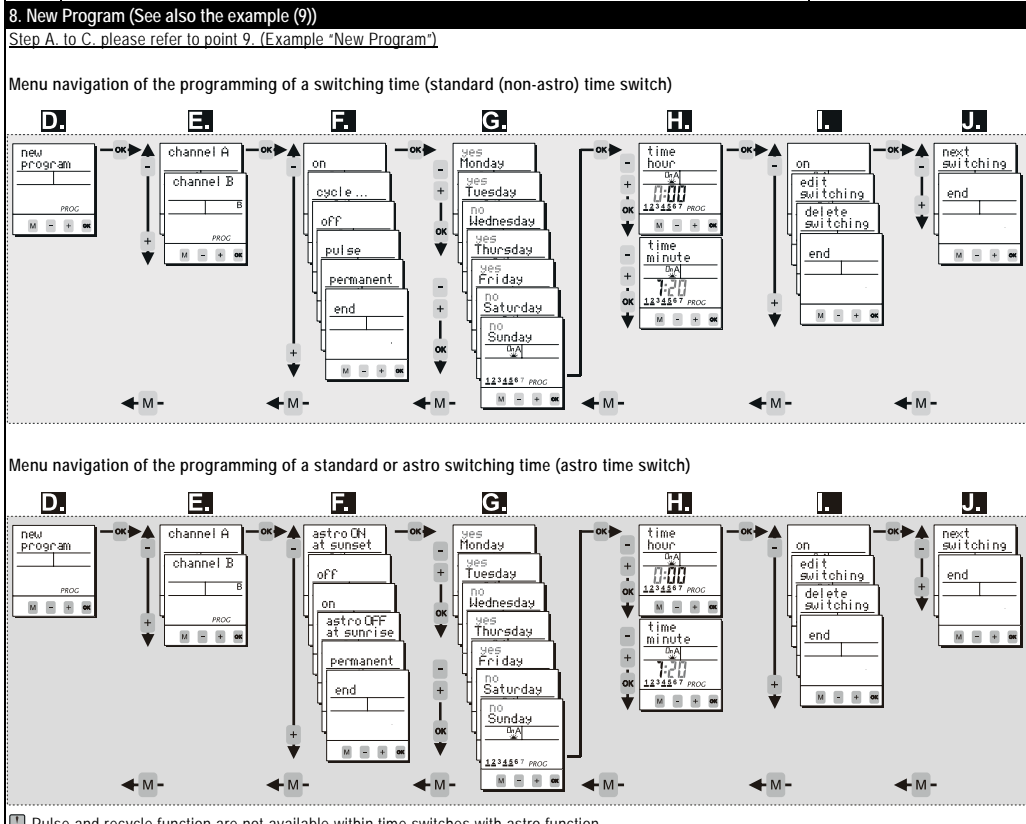
7. Channel ON OFF / Permanent P

Channel ON OFF
By pushing A B-buttons (─+-buttons) a manual switch of the channels take place. The resulting switching status is marked with the hand-symbol and remains until the next programming step occurs. (temporary over-ride)

Permanent switching status P
By pressing the corresponding channel button A B for more than 3 sec. the channel is permanently switched ON or OFF. The status remains until the next manual switching occurs (> 3 sec.). (permanent over-ride)

8. New Program (See also the example (9))

Step A. to C. please refer to point 9. (Example "New Program")

Menu navigation of the programming of a switching time (standard (non-astro) time switch)

D. new program — E. channel A / channel B — F. on / cycle... / off / pulse / permanent / end — G. yes Monday / Tuesday / Wednesday / Thursday / Friday / Saturday / Sunday — H. time hour / time minute — I. on / edit switching / delete switching / end — J. next switching / end

Menu navigation of the programming of a standard or astro switching time (astro time switch)

D. new program — E. channel A / channel B — F. astro ON at sunset / off / on / astro OFF at sunrise / permanent / end — G. Monday / Tuesday / Wednesday / Thursday / Friday / Saturday / Sunday — H. time hour / time minute — I. on / edit switching / delete switching / end — J. next switching / end

🔲 Pulse and recycle function are not available within time switches with astro function.

9. Example „New Program" (For a regular switching time)

A. If power supply is disconnected press OK for one second. The display appears in Automatic-Mode.
B. Press M, the time switch is now in the Enter-Mode.
C. Confirm **Program** with OK.
D. Confirm **new program** with OK.
E. Choose the desired channel with ─+ and confirm with OK.
F. For regular switching times choose **on** or **off** with ─+-buttons and confirm with OK. (The astro switching times **astro ON** or **astro OFF** please refer to point 14 / 15)
G. Within this level you activate the days of the week (1...7) on which the switching time should happen. With ─+ you activate "yes" or deactivate "no" the corresponding date. Confirm each day with OK.
H. Adjustment of the time: Hours ─+ and OK. Minutes ─+ and OK
I. Verify the entered switching time: If the flashing summary of the programming step is correct, verify **on** or **off** with OK. After verification you have the choice between **edit/delete** and **end** with ─+.
J. If you want to proceed with programming, confirm **next switching** with OK. To leave the programming menu confirm **end**.

🔲 Programming of a switching time with pulse function see point 11
🔲 Programming of a switching time with recycle function see point 12 / 13 (not within astro time switches)
🔲 Programming of a astro-switching time see point 14 / 15 (only within astro time switch)

10. Program permanent

Program -> **new program** -> **channel A/B** -> **permanent** -> ...

■ One permanent by date programming step (holiday function) for each channel is possible. During the desired period (The function is valid for the whole days) the channel can be switched off (**permanent off**) or on (**permanent on**).
■ The programming of this function is as described in (8 / 9).
■ The choice **permanent** will not be offered anymore within the menu **new program** when already in use. The switching time can be modified and deleted within **Program modify** (20) and **Program delete** (19) respectively.

11. Pulse

Program -> **New program** -> **Channel A/B** -> 🔲

The pulse function provides you the opportunity of programming a switching time with a defined duration. As soon as the pulse-duration has expired the time switch switches OFF automatically (the duration of the pulse is up to 59:59 mm:ss).
The programming is carried out like a standard switching time (see point 8 / 9) with following differences
■ Choose **Pulse** function (9F).
■ Define the duration of the pulse (**pulstime minute** / **pulstime second**).
■ Program the days of the week
■ Program the switching time (**time hour** / **time minute**)
■ Validation: Confirm the blinking summary of the pulse program

*Within astro time switches
**Within standard (non-astro) time switches
***One-channel version

12. Cycle**

`Program` -> `New program` -> `Channel A/B/C/D` -> `Cycle 1 - 4` -> ⏳

For the cycle function it is possibile to enter a periodic switching time. The time switch acts as a recycling timer and switches between pulse (ON) and pause (OFF). The max. value for pulse and pause is 9:59:59 h:mm:ss.

- The cycle is not offered in the menu **New program** if you haven't defined and activated a cycle. Once you have activated and defined at least one of the 4 different cycles within submenu **Cycle** of menu **Options** (point 13), a switching time with cycle function is programmable.
  After having defined and activated the cycle (point 13) please proceed with following programming instructions:
- Switch to main menu / Enter-mode and using the `-+`-buttons choose the **Program**-menu then confirm by pressing `OK`.
- Confirm sub-menu **New program** by pressing `OK`.
- By using the `-+`-buttons select the desired channel for switching and confirm by pressing `OK`.
- Pick the appropriate cycle using the `-+`-buttons and confirm by pressing `OK`.
- Using the `-+`-buttons select which day or days of the week the cycle will be activated by selecting „**Yes**" or „**No**", then confirm each day by pressing `OK`.
- Set the start time of the Cycle: Hours `-+` then confirm by pressing `OK`. Minutes `-+` then confirm by pressing `OK`.
- Verify the entered switching time: If the flashing summary of the programming step is correct, confirm this by pressing `OK`. After confirmation you have the choice between **edit/delete** and **end** which you select by pressing `-+`
- If you want to continue programming, confirm **next switching** by pressing `OK`.
  To leave the programming menu select **end**.
- **The selected cycle is terminated (over-ridden) by a standard switching time (ON, OFF, Pulse) or the subsequent switching time of another cycle.**

13. Cycle options**

`Options` -> `Cycle` -> `Cycle 1 - 4` -> ⏳

You have the possibility to define 4 different Cycles. For these purposes choose menu **Options** and sub-menu **Cycle**. The different cycles can be activated, defined or deactivated (the max. value for pulse or pause is 9:59:59 h:mm:ss):

- Choose menu **Options** and sub-menu **Cycle** and confirm with `OK`.
- Select with `-+` -buttons one out of the 4 cycles (**Cycle 1 – Cycle 4**) and confirm with `OK`
- Activate the cycle by changing **No** to **Yes** with `-+` -buttons and subsequent confirming with `OK`
- Define duration of the pulse „**on-time**" (`-+` -> `OK`…).
- Define duration of the pause „**off time**" (`-+` -> `OK`…).
- Confirm **End** with `OK`.

- ⚠ The cycle is now offered within the programming menu.
- ⚠ Further applications of the cycle function in combination with: External Input function (16) and/or Channel keys function (17)

14. Astro-function*

`Program` -> `new program` -> `channel A/or B` -> ⏳

The astro function allows you to switch the whole year through in relation to sunset and sunrise, e.g. for illumination purposes (**astro-ON** with sunset and **astro-OFF** with sunrise). The programming is made according to (8 / 9) with following difference:

- Choose astro function **astro ON** and **astro OFF** respectively (9F).
- While programming an astro program step there will be no time (hh:ss) suggested (8H / 9H). Instead of this you have the possibility to enter an **offset**. E.g. if you like to switch on the light 20 minutes before sunset would you enter an **offset** of minus 20 minutes while programming **astro ON**.

15. Astro-adjustments*

`Adjustment` -> `Astro` -> ⏳

The following options concerning the astro function are adjustable to satisfy your needs:
- **Position location:** Adjust your geographical position with pre-defined choice of regions/countries and cities.
- **Position coordinates:** Adjust your geographical position with longitude, latitude and time zone.
- **Block Sunrise:** Earliest possible point in time for the astro function (sunrise).
- **Block Sunset:** Latest possible point in time for the astro function (sunset), e.g. switching on the light not later than 10 p.m. even if sunset is later.

16. External Input ***

`Options` -> `Input` -> ⏳

The external input can be connected to a switched contact such as a push-button or light switch. Therefore you can activate and de-activate functions from a remote location or automatically from a control system
- ⚠ For 35mm-devices: The external input is only featured on the one channel version.
- ⚠ To connect an external switch or push-button: Phase L 230V~
- ⚠ The resulting operation of the output channel, depending on the status of the external input is defined within menu **Options** and submenu **Channel-keys**
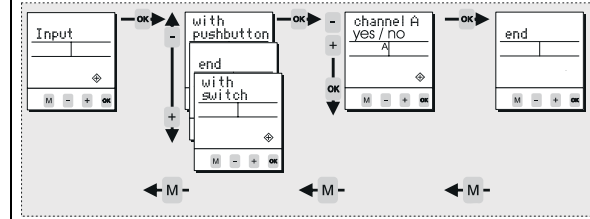
Functional options of the „external input":

Within menu **Options** and submenu **Input** you have to define if a switch or a push-button-signal will be applied to the external input. Furthermore you can choose the channel(s) which react to the external signal:
- Using the `-+` -buttons select if you are connecting a **pushbutton** or a **switch** and confirm by pressing `OK`.
- Select the channel(s) which will be controlled by the external signal with the `-+` buttons (**channel … yes**) and confirm by pressing `OK`. Channels which should not be controlled by the external signal remain deactivated, confirm **channel … no** then press `OK` to confirm

- ⚠ Define a response function within menu **Options** and submenu **Channel-keys** (point 17). This function will be performed by the output channel when the external input is activated!
- ⚠ The pre-defined (default) setting is the standard '**Change function**' which changes the switching status from **ON** to **OFF** and vice versa.
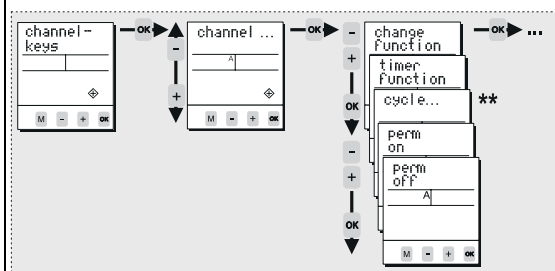

17. Channel keys

`Options` -> `channel-keys` -> ⏳

Within the **Options** menu you will find submenu **channel-keys**. Here you have the opportunity to assign different response functions to the output channels.

These response functions will only be carried out when using the channel-keys `A` `B` of the time switch (manual over-ride) or optionally when activating the channel with the external input. Thus, a programmed switching time will be executed as usual, independent of the settings within this channel-key-menu.

The correlation between the channel-keys and the channels is as follows:
- channel A => channel key **A** (push-button „A" of the device)
- channel B => channel key **B** (push-button „B" of the device)
- …

Overview „channel-keys" functions:

If you have assigned a specific response function to a channel, this switching function will occur if you push the channel-button on the front plate of the time switch (or if the external input for this channel is activated and a signal is applied to the input, as explained under point 16). For each channel one out of the following functions can be defined:

- **Change function** (default setting)**:** By pressing the channel key (or optionally using the external input) the switching status changes from **ON** to **OFF** or **OFF** to **ON**. This corresponds to a standard manual over-ride of the channel.
- **Timer function:** By pressing the channel key (or optionally using the external input) the Timer starts and the corresponding channel switches **ON**. After the expiry of the Timer-time the channel switches **OFF**. If the channel receives another signal before the expiry of time the time switch reacts as follows:
  - After pressing the channel-button = Timer stops and the channel switches **OFF.**
  - Signal on the external input = Timer restarts/ Staircase lighting timer -> Resettable.
- **Cycle 1 – 4:** By pressing the channel key (or optionally using the external input) the cycle function starts. Attention: This function is only available if the cycle is activated and defined in advance within menu **Options** and submenu **Cycle**. Astro time-switches do not have the cycle feature!!!
- **Perm on:** By pressing the channel key (or optionally using the external input) the channel switches permanently **ON**. This status remains active until the channel key of the device is pressed again.
- **Perm off:** By pressing the channel key (or optionally using the external input) the channel switches permanently **OFF**. This status remains active until the channel key of the device is pressed again.
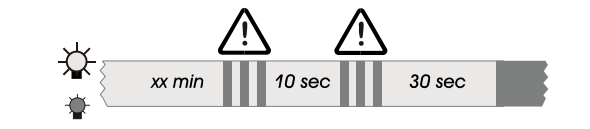
- ⚠ The Change function, Timer function and Cycle functions will be overridden by the regular switching program or by a manual over-ride!!!

18. Switchoff warning

`Options` -> `Switchoff warning` -> ⏳

Within menu **Options** and submenu **Switchoff warning** the early warning switch off function can be activated and deactivated:
- **Warning No**: The function remains inactive.
- **Warning Yes**: The function is activated and the switch off is signalled in advance (For illumination purposes the warning is signalled by the flashing of the light according DIN 18015-2 = warning to avoid sudden darkness).
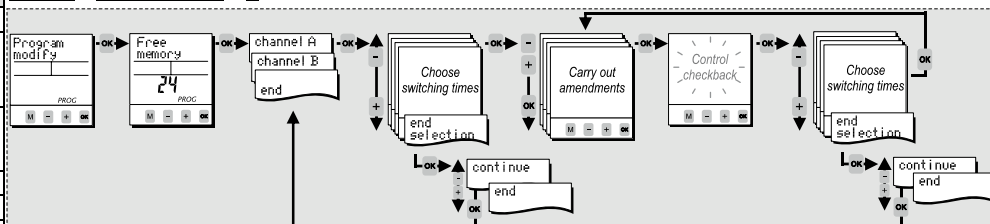- ⚠ An activated warning affects all channels and all OFF switching times

| | xx min | 10 sec | 30 sec |

19. Additional adjustments

Menu	Main menu	Application
Program query	Program	To query the programming steps and remaining memory locations
Program copy	Program	Copy from one channel to another. Memory of the channel won't be overwritten; the copied switching steps appear additionally. ⚠ Permanent by date function is not copied!
Program delete	Program	Deletion of switching time(s). The program for all channels, single channels and single programming steps within on channel can be deleted.
Date-Time	Adjustment	Adjustment of date and time
Summertime	Adjustment	Adjustment of the daylight saving time mode (ON/OFF)
Language	Adjustment	Choice of languages
Factory Defaults	Adjustment	Reset to the state of delivery. ⚠ Date, time and switching program will be lost!
Counter	Options	Displays the hour counter and pulse counter for each channel and the time switch itself.
PIN-Code	Options	The time switch can be locked with a 4-digit PIN-Code. The code can be adjusted, activated and deactivated. If you have forgotten the Code please call customer service.
Reset-Function		Press all front keys for 2 seconds. The time switch is reset. The values for date and time will be deleted and have to be re-entered! The switching program has not been deleted!

20. Program modify

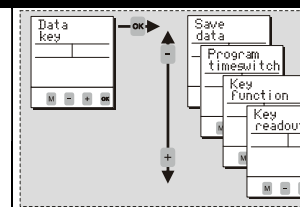`Program` -> `Program modify` -> ⏳

Within **Program modify** each single switching time can be modified.

21. Data-key

With a Data-key following activities are possible:
- **Save data**: Writes the data from the time switch into the memory of the Data-key.
- **Program timeswitch**: Writes the data located inside the Key into the memory.
- **Key function**: The time switch will solely apply programming steps from the Data-key. The switching program of the time switch is suppressed.
- **Key readout**: To query the switching program of the Data-key.

*Within astro time switches
**Within standard (non-astro) time switches
***One-channel version