

Programmable time switches

with digital display



Dimensions [see e-catalogue](#)

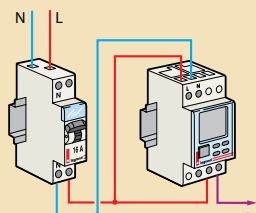
For switching an electric circuit (lighting, heating) ON or OFF at selected times during a pre-programmed time period
Temporary (automatic return) or permanent (forced switching ON or OFF) override on output

Pack	Cat.Nos	Standard - daily or weekly programme with 6 years clock working reserve	Pack	Cat.Nos	2 outputs multiple functions annual programme - 5 years clock working reserve
1	0 037 05	<p>Compatible with alternative renewable energy systems such as photovoltaic panels Automatic summer/winter changeover Clock precision: ± 1 sec per day Minimum programme setting: 1 min 28 programmes</p> <p>Power supply 120/230 V\sim - 50/60 Hz 1 output 16 A - 250 V\sim $\mu \cos \phi = 1$ per 1 inverter contact Low consumption: 0.1 W</p>	1	4 126 30	<p>Programme settings: on daily, weekly or yearly basis 15 languages A programme consists of a on and off time and their assignement to certain days Option to suspend the programme for a specific period to set-up with start and date Minimum programme setting: 1 s. High precision clock: ± 0.1 sec per day Programmed directly on keypad, or using program transfer key Cat.No 4 128 72</p> <p>Power supply 230 V\sim - 50/60 Hz 2 outputs - 230 V\sim - 50/60 Hz Astronomical function 2 x 3 x 28 = 168 programmes</p>
1	4 126 31	<p>Multiple functions - daily or weekly programme - 5 years clock working reserve Programme settings: on daily or weekly basis 15 languages A programme consists of a on and off time and their assignement to certain days Option to suspend the programme for a specific period to set-up with start and date Minimum programme setting: 1 s. High precision clock: ± 0.1 sec per day Particularly suited to irregular cycles: - security installations (access point, alarms, etc.), - industrial installations (pump stations, etc.) Programmed directly on keypad, or using program transfer key Cat.No 4 128 72 Additional functions including random (irregular cycles), hour counters</p>	1	0 047 70	<p>4 outputs multiple functions annual programme - 5 years clock working reserve 15 languages High precision clock: ± 0.2 sec per day For programming periods throughout the year 28 programmes per channel possible: - daily - weekly / astronomical programmes - yearly programmes - exceptional programmes Manual override (switch on and off) for every channel on the front of the switch Programmed directly on keypad, or using programme transfer key supplied</p>
1	4 126 41	<p>Power supply 230 V\sim - 50/60 Hz 2 output 16 A - 250 V\sim 2 x 28 programmes $\mu \cos \phi = 1$ per 2 inverters contacts</p>	1	0 047 82	<p>Annual programme 4 outputs - 120/230 V\sim - 50/60 Hz Astronomical function</p>
1	4 126 54	<p>1 output 16 A - 250 V\sim Astronomical function 56 programmes $\mu \cos \phi = 1$ per 1 inverter contact</p>	1	4 128 72	<p>Battery Working reserve 5 years for Cat.No 0 047 70</p> <p>Programming transfer key Can be used to store programme settings made: - Directly on a multifunction and multi-programme time switch Cat.Nos 4 126 30/31/32/33/41/54/57 (loading on device) - with the programming software installed on a PC running Windows (loading on data loader)</p>
1	4 126 57	<p>2 outputs 16 A - 250 V\sim Astronomical function 2 x 28 programmes $\mu \cos \phi = 1$ per 2 inverter contacts</p>	10	4 128 73	<p>Programming software Can be used to create, save and transfer program settings for multifunction and multi-program time switches, Cat.Nos 0 047 70, 4 126 30/31/32/33/41/54/57 Data is transferred to the program transfer key Cat.No 4 128 72, using the data loader connected to the USB port of the PC Kit comprising software on CD-ROM, data loader and transfer key Windows XP, Windows 7, Windows 8 compatible</p>
1	4 126 32	<p>1 output 16 A - 120 V\sim 56 programmes $\mu \cos \phi = 1$ per 1 inverter contact</p>	1		
1	4 126 33	<p>Power supply 24 V\sim - 50/60 Hz and = 1 output 16 A - 24 V\sim 56 programmes $\mu \cos \phi = 1$ per 1 inverter contact</p>	1		

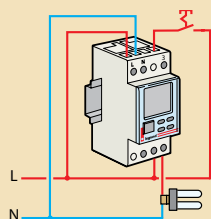
programmable time switches with analogue and digital dial

Diagrams

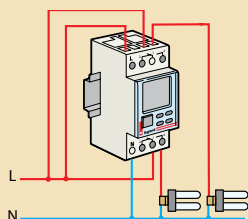
Cat.No 4126 31



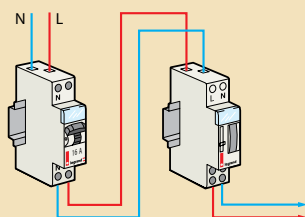
Cat.Nos 4126 54/34/29



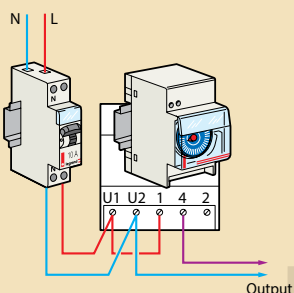
Cat.Nos 4126 57/41/30



Cat.Nos 4127 90/94



Cat.Nos 4128 12/13/14



Output closing and breaking times are calculated based on the date, the actual time when the device was switched and on geographical coordinates of the actual location

■ Technical specifications

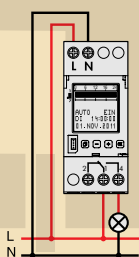
Type	AlphaRex ³ D21	AlphaRex ³ D22	AlphaRex ³ D21s	AlphaRex ³ D21 astro	AlphaRex ³ D22 astro	AlphaRex ³ DY21	AlphaRex ³ DY22
Nominal voltage	230 V 50/60 Hz						
Number of modules of 17.5 mm each	2	2	2	2	2	2	2
Number of channels	1	2	1	1	2	1	2
Switch output	1 changeover contact	2 changeover contacts	1 changeover contact	1 changeover contact	2 changeover contacts	1 changeover contact	2 changeover contacts
Zero-crossing switching	✓	✓	✓	✓	✓	✓	✓
Switching capacity							
• Ohmic 250 V± cos φ = 1	16 A ±	16 A ±	16 A ±	16 A ±	16 A ±	16 A ±	16 A ±
• Inductive 230 V± cos φ = 0.6	10 A ±	10 A ±	10 A ±	10 A ±	10 A ±	10 A ±	10 A ±
• Incandescent lamp load	2000 W	2000 W	2000 W	2000 W	2000 W	2000 W	2000 W
• Fluorescent lamp, series compensated	2000 VA	2000 VA	2000 VA	2000 VA	2000 VA	2000 VA	2000 VA
• Energy-saving lamp	1000 W	1000 W	1000 W	1000 W	1000 W	1000 W	1000 W
Programs ¹⁾	56	28 per channel	56	56	28 per channel	84	84 per channel
Control input with switch-off delay 0 s to 23 h 59 min 59 s			✓	✓		✓	
Cycle function (pulse time) min. 1 s, max. 1 h 59 min 59 s	✓	✓	✓	✓	✓	✓	✓
Clock precision (typical)	± 0.1 s/day ²⁾						
Running reserve	5 years						
Shortest switching step	1 s						
Operating temperature	-20 to +55 °C						
Degree of protection	IP20						

¹⁾ A program consists of a switch-on time, a switch-off time as well as days or day blocks which are assigned as "switched-on" or "switched-off"

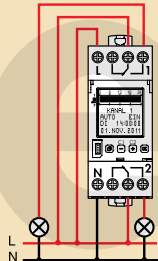
²⁾ Can be set to mains-synchronous operation

■ Connection diagram

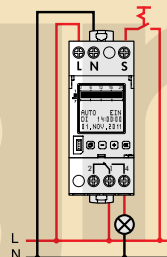
AlphaRex³ D21



AlphaRex³ D22
AlphaRex³ D22 astro
AlphaRex³ DY22



AlphaRex³ D21s
AlphaRex³ D21 astro
AlphaRex³ DY21



■ Functions

- Select menu, go back while in menu
Press > 1 sec. = operating display
- Confirm the selection or accept the parameter
- Select the menu item or set the parameter;
for 2-channel time switches, can be used to select the channel (channel 1 – channel 2)
-

■ Brief description of programming functions

Text guidance

Guides the user through programming and setup with plain text prompts. Each step can be read on the screen, and the function that is currently active flashes. An integrated display and button light makes operation easy even in poorly lit environments.

Set language

The language selection function can be accessed using the "MENU" button. The language is set to English by default. The following languages can be selected: German, English, French, Italian, Spanish, Dutch, Portuguese*, Swedish*, Norwegian*, Finnish*, Danish*, Polish*, Czech*, Russian*, Turkish*.

*) Excluding AstroRex DY64

Time, date, summer time (daylight saving time)

The time switch is preset at the factory to the current time and date. The time can be changed by selecting "MENU" + "SET".

Reset

Simultaneously pressing all buttons for more than 2 seconds deletes all data. Language, date/time, summer time (daylight saving time) and switch times must be set again.

■ Data key

If the supply voltage is switched on, the "KEY – READ – WRITE" menu item is automatically opened when a data key is inserted. "WRITE": Program data is written from the time switch to the key. Caution: Any data present on the key will be overwritten. "READ": Program data is written from the key to the time switch; any switching programs on the time switch are overwritten. Only one master switching program, which consists of multiple switching programs, can be saved on the time switch or on the key at a time. If the supply voltage is not connected, the "KEY – READ – WRITE" menu item is not automatically opened when a data key is inserted. The "KEY" function can still be selected from the menu even if the supply voltage is not connected.

■ PC programming

In addition to the easy, text-guided programming directly on the time switch, switching programs can also be created on a PC with the software program from Legrand and transferred to the time switch using a data key. A data transfer device (Cat.No : 4128 73) is required to transfer switching programs created on a PC to the data key. The device is connected to the PC using the USB plug. In addition to the data transfer device, we also offer a CD with the software and the necessary drivers. PC system requirements: USB port; Windows[®] XP, Windows[®] Vista, Windows[®] 7; approx. 40 MB of free memory.

■ Brief description of programming functions

Weekly programs

To create a weekly program, select "MENU", "PROGRAM", and then "CREATE" to easily enter programs which are repeated on a weekly basis. A weekly program consists of a switch-on/switch-off times and days which are assigned as "switched-on" or "switched-off". The following predefined blocks can be selected: "MONDAY – SUNDAY", "MONDAY – FRIDAY"¹⁾ or "SATURDAY – SUNDAY"¹⁾; the assigned days of the week are fixed. The switch-on/switch-off times must be entered. The user can also set custom day blocks. By selecting "CUSTOM", switch times can be freely assigned to any days of the week. This option also allows the user to set switch times at midnight.

¹⁾ Excluding AlphaRex³ DY, AstroRex DY64

Yearly programs [AlphaRex³ DY21, AlphaRex³ DY22]

This menu item allows the user to enter (additional) yearly programs, which are only executed within a defined validity period. They can overlap with one another and with the weekly programs on the same channel based on an "OR" connective. The validity period is defined by entering the start date (at 00:00:00) and the end date (at 24:00:00). The start date must be entered before the end date. With the "EVERY YEAR" option, the additional switch times have the same validity period each year (Christmas, national holidays, birthdays, etc.) Select the "ONCE" option when additional switch times are needed within a validity period (e.g. during holidays), but the start/end dates of the holiday period change from year to year.

Special programs (priority program) [AlphaRex³ DY21, AlphaRex³ DY22]

Weekly and yearly programs on the same channel are not executed during the validity period of a special program. However, other special programs can be executed during the validity period. Different special programs can overlap with each other based on an "OR" connective. With the "EVERY YEAR" option, the additional switch times have the same validity period each year (Christmas, national holidays, birthdays, etc.) Select the "ONCE" option when additional switch times are needed within a validity period (e.g. during holidays), but the start/end dates of the holiday period change from year to year. Additional options include "MON TO SUN"/"CUSTOM": the respective channel only switches according to the special program; "PROG ON"/"PROG OFF": the respective channel is switched on/off during this time period.

■ Basic functions for "astro"

Location (astro) [AlphaRex³ D21 astro, AlphaRex³ D22 astro, AlphaRex³ DY21, AlphaRex³ DY22]

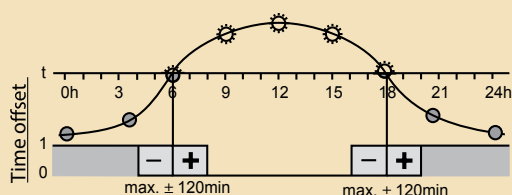
The sunrise/sunset times, which change daily, are calculated for the location programmed in the AlphaRex. The unit is delivered with the location set to "GERMANY – SOEST" by default. Enter the actual location for optimal operation. This can be done in two ways. Select "MENU", "SET" and "ASTRO" to access the two options "LOCATION" and "COORDINATES". "LOCATION": With this menu item, the user can select the country and city which is closest to the site of operation. "COORDINATES": Alternatively, the user can select this menu item to set the geographical coordinates of the location. The longitude and latitude values are entered in degrees or degrees and arcminutes²⁾ (precision can be set in expert mode). Information on coordinates and time zones can be found in the time zone map included with every time switch.

Offset

By selecting "MENU", "SET", "ASTRO" and "OFFSET", time differentials can be set for the calculated switch times. This can be done in two ways: time offset or angle offset.

In time offset, a time differential can be entered to shift the switch time by up to +/- 120 min relative to the sunrise/sunset times.

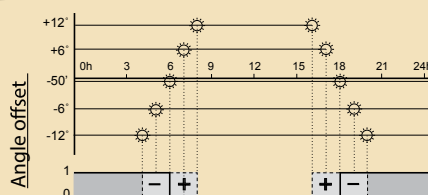
In angle offset²⁾, a value can be entered in degrees and arcminutes to shift the switch time by up to +/- 12° 00' relative to the sunrise/sunset times. The time differentials are set separately for sunrise and sunset using the menu items "SUNSET" (opens the screen for setting the sunset offset) and "SUNRISE" (opens the screen for setting the sunrise offset).



Example:

For a time differential of +30 min, the time switch switches 30 min. after sunrise and 30 min. after sunset.

For a time differential of -30 min, the time switch switches 30 min. before sunrise and 30 min. before sunset.



Note:

If the offset is set in degrees, the time switch always switches at points when the brightness is the same, despite the fact that the twilight duration changes over the course of the year. Sunrise and sunset correspond to -50' for the centre of the sun (the edge of the sun is visible on the horizon).

Offset correction function²⁾

Select "MENU", "SET", "ASTRO" and "CORRECTION" to set a time correction for the 6-month periods surrounding summer and winter. The time correction is set to 0 min. by default and can be set from 1 min. up to 30 min. The time correction for sunset is entered in the "SUNSET" menu item. The time correction for sunrise is set in the "SUNRISE" menu item. The correction function overlaps with the calculated astronomical switch times, including the offset settings.

Example:

Setting a time correction extends the daily switched-on time by up to 60 min. in the middle of the six winter months (switches off up to 30 min. later in the morning and switches on up to 30 min. earlier in the evening). In the middle of the six summer months, the time correction reduces the daily switched-on time by up to 60 min. (switches off up to 30 min. earlier in the morning and switches on up to 30 min. later in the evening). The time correction varies continuously between the two max. values during the rest of the year.

Basic settings using a PC and day key

All of the basic settings described above, with the exception of the current time and date, can be set up using the AlphaSoft software from Legrand and imported to the time switch using the data key.²⁾ Excluding AstroRex DY64

■ Additional functions

Relay function

The relay state can be changed by selecting "MENU" and "FUNCTIONS". The relay is preset to the "AUTO" function; the time switch switches at the programmed times. The following can also be selected: "ALWAYS ON", "ALWAYS OFF" and "EXTRA". If "EXTRA" is selected, the switching status specified by the program is inverted. The time switch resumes switching according to the programmed switch times after the next switch command.

Holiday program

In holiday program, the holiday period is set with a start and an end date. It can be activated with the "ACTIVE" program item and deactivated with "PASSIVE". If the holiday program is activated, the time switch does not carry out any programmed switch commands during this time period. Instead, it remains "ALWAYS OFF" or "ALWAYS ON" during the holiday period, as requested. When the holiday period has ended, the time switch resumes switching according to the programmed switch times.

1 h test

The "1 h TEST" function can be used for a switching simulation. If "1 h TEST" is activated, the switch outputs are switched for one hour. After the time has ended, the time switch resumes switching according to the programmed switch times.

PIN code

Input and programming can be locked using a four-digit "PIN CODE". The time switch can be unlocked using the "PIN CODE". The time switch can also be unlocked using the "RESET" function, which also deletes all settings and programs.

Operating hours counter

This function displays the time for which the relay has been switched on and the date of the last reset. Counting range: 65,535 h.

Contrast adjustment

This function allows the user to adjust the display contrast.

Expert mode*

Expert mode is activated by selecting "OPTIONS" and "EXPERT". After expert mode is activated, the following additional functions can be used: control input "extra" ¹⁾, control input "out" ¹⁾, cycle function, channel-switching function (2-channel time switches), mains-synchronous operation, offset correction function ²⁾, geographical coordinates in degrees and arcminutes ²⁾.

¹⁾ AlphaRex³ D21s, AlphaRex³ D21 astro, AlphaRex³ DY21 ²⁾ AlphaRex³ astro, AlphaRex³ DY

Control input with switch-off delay

Adjustable switch-off delay via control input. The control input enables an additional switching of the relay, parallel to the switching program. The switch-off delay can be set from 0 s to 23 h 59 min 59 s. The switch-off delay begins as soon as the voltage is removed from the control input.

Control input "extra"*

Override of switching state via control input. If the "EXTRA" function is activated, the switching state specified by the program is inverted. The time switch resumes switching according to the programmed switch times after the next switch command. The "EXTRA" function is ended prematurely if the button is pressed again or if a pulse is received at the control input.

Control input "off"*

Switch off via control input. Activating the "OFF" function causes the time switch to be switched off via the control input. The "OFF" function is ended if the button is pressed again or if a pulse is received at the control input. The time switch resumes switching on/off according to the programmed switch times.

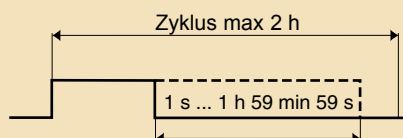
Pulse function

Programmable with precision to the second.

Cycle function

Function for cyclical switching. With this function, the time switch is switched on once within a defined time period and for a defined duration. The cycle time can be set between 2 s and 2 h. The switch-on time can be set between 1 s and 1 h 59 min 59 s.

	Min.	Max.
Cycle	2 s	2 h
Switch-on time	1 s	1 h 59 min 59 s



Random function

If the random function is activated, set switch times are randomly shifted within a range of +/- 15 minutes.

Channel-switching function*

With 2-channel time switches, this function can be activated so that the time switch regularly switches between the outputs assigned to the channels, in order to protect connected devices (for example lights/lamps) or so that two devices can be used simultaneously. The channel-switching function is activated by selecting "MENU", "OPTIONS" and "CHANNEL 1<>2". The time switch switches between the outputs according to whether the menu item "DAILY" (once per day at 12:00 p.m.) or "WEEKLY" (once per week on Sunday at 12:00 p.m.) is selected.

Mains-synchronous operation

Mains-synchronised clock precision. By activating the "SYNC" function and then "ACTIVE", the quartz-controlled time switch becomes a synchronous time switch.

*) Excluding AstroRex DY64

Rex analogue time switches

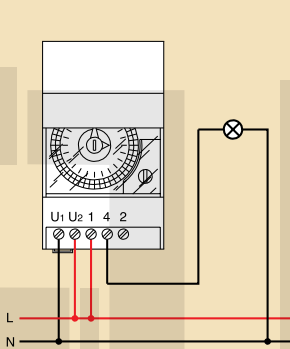
daily/weekly time switches

■ Technical specifications

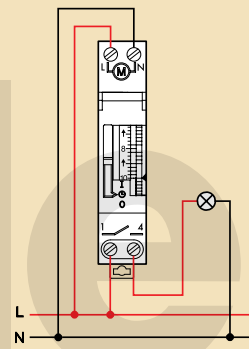
Type	MicroRex T31	MicroRex QT31	MicroRex W31	MicroRex QT11	MicroRex QW11
Number of modules of 17.5 mm each	3	1			
Number of channels	1	1	1	1	1
Drive type	synchronous	quartz	synchronous	quartz	quartz
Switching dial	24 h	24 h	7 days	24 h	7 days
Running reserve	none	100 h	none	100 h	100 h
Switching increment	15 min	15 min	2 h	15 min	2 h
Shortest switching step	30 min	30 min	4 h	15 min	2 h
Switching step	+/- 5 min	+/- 5 min	+/- 30 min	+/- 5 min	+/- 30 min
Clock precision	mains	2.5 s/day	mains	2.5 s/day	2.5 s/day
Switching capacity	synchronised				
• Ohmic 230 V± cos φ = 1	16 A ±				
• Incandescent lamp 230 V±	4 A ±				
• Inductive 230 V± cos φ = 0.6	12 A ±				
Switch output	1 changeover contact	1 changeover contact	1 changeover contact	1 normally open contact	1 normally open contact
Operating temperature	-10 to +55 °C				
Degree of protection	IP20				

■ Connection diagram

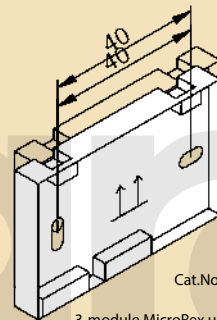
MicroRex - 3 modules



MicroRex - 1 module



Wall bracket - 3 modules

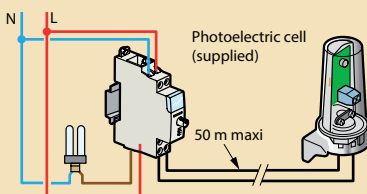


Cat.No 4128 59

3-module MicroRex units can be surface mounted using the wall bracket. A terminal cover is included with delivery.

■ Standard light sensitive switch (Cat.No 4126 23)

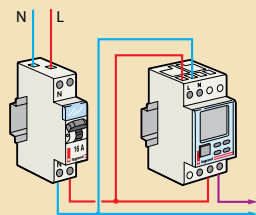
Switch "ON" and "OFF" defined by a light level threshold



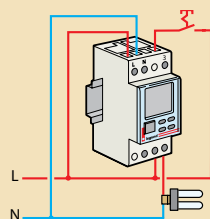
programmable time switches with analogue and digital dial

■ Diagrams

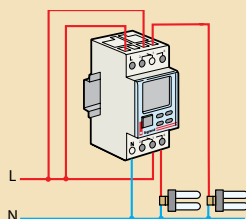
Cat.No 4126 31



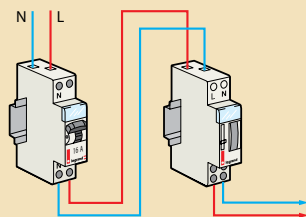
Cat.Nos 4126 54/34/29



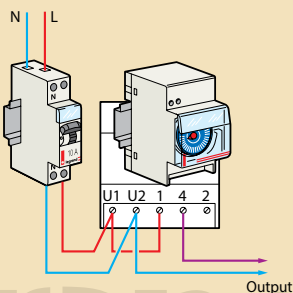
Cat.Nos 4126 57/41/30



Cat.Nos 4127 90/94

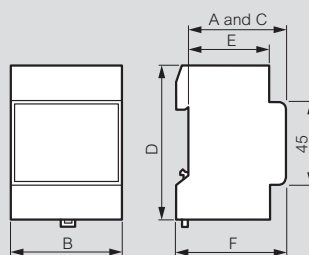
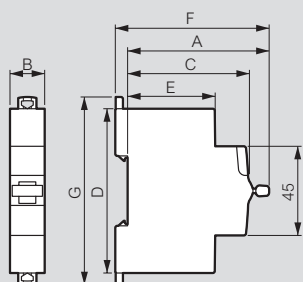


Cat.Nos 4128 12/13/14



Output closing and breaking times are calculated based on the date, the actual time when the device was switched and on geographical coordinates of the actual location

Dimensions of din-rail equipment



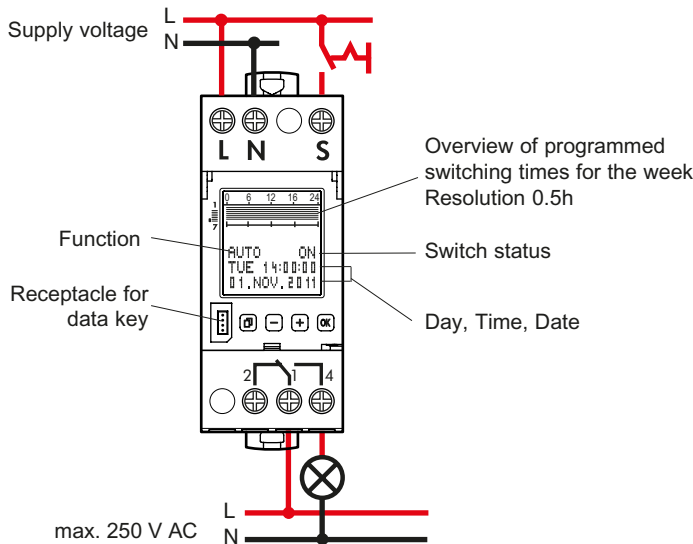
Product	A		B				C	D	E	F	G
	1P	1P+ N	2P	3P	4P						
RX³ MCBs	71.7	17.7	35.4	35.4	53.1	70.8	61	83	44	77.8	88.9
RX³ RCCBs	71.7			35.6		71.2	61	83	44	77.8	88.9
TX³ MCBs	71.7	17.7	35.4	35.4	53.1	70.8	61	83	44	77.8	88.9
TX³ RCCBs	71.7			35.6		71.2	61	83	44	77.8	88.9
Isolating switches DX³	71.7	17.8		17.8/ 35.4	35.6/ 53.1	70.8	61	83	44	77.8	94.8
Remote trip head isolating switches DX³ up to 63A - 1 mod/pole	71.7			35.4	53.1	70.8	61	83	44	77.9	94.8
Remote trip head isolating switches DX³ 100/125A - 1.5 mod/pole	73				80.1	106.8	61	96	47	79	104.3
DX³ RCCBs	71.7			35.6		71.2	61	83	44	77.8	94.8
1P DX³ RCBOs (up to 45A)	68	17.7					60	115	48	74	126.8
1P+N DX³ RCBOs (up to 40A) & 4P (up to 32A)	71.7		35.6			71.2	61	83	44	77.8	94.8
2P & 4P DX³ RCBOs (40A to 63A)	72			71.2		124.6	61	96	44	78.2	107.8
1P+N DX³ MCBs 1 mod	71.7		17.8				61	83	44	77.8	94.8
DX³ MCBs - 1 mod/pole	71.7	17.7	35.4	35.4	53.1	70.8	61	83	44	77.8	94.8
DX³ MCBs - 1,5 mod/pole	73.1	26.7		53.4	80.1	106.8	61	100	47	79	104.3
DX³ add-on modules up to 63A - 1 mod/pole	72			35.6	53.4	53.4	61	96	44	78.2	107.8
DX³ add-on modules up to 63A - 1.5 mod/pole	72			35.6	53.4	53.4	61	96	47	78.2	116.7
DX³ add-on modules 80 to 125A - 1.5 mod/pole	72			71.2	106.8	106.8	61	114	47	78.2	129
DX³ auxiliaries	71.5			8.8 / 17.7			61	83	44	77.7	84.5
DX³ remote control	74.3			17.7 / 35.4			61	83	44	80.5	98.8
DX³ Stop&Go automatic resetting	74.3			35.4			61	83	44	80.5	113.7
Change-over switches	68	17.7		35.6			60	83	44	74	94
CX³ latching relays	64	17.8		17.8	35.6	35.6	61	84.5	44	70.2	94.8
CX³ contactors up to 25A	66.3/ 61	17.8		17.8	35.6	35.6	61	84.5	44	72.6/ 67.3	94.8
CX³ contactors 40A & 63A	62			35.6	53.4	53.4	60	83	44	68	94
Auxiliaries for CX³ contactors and latching relays	61			9/17.8			61	84.5	44	67	84.5
Push-buttons / control switches	68			17.7			60	83	44	74	94
Indicators	68			17.7			60	83	44	69	94
Bells and buzzers	60			17.7			60	76	44	66	85
Light sensitive switches											
Cat.Nos 0 037 21, 4 126 23	60			35.6			60	85	37.5	66	70
Socket outlets	60			44.5			60	83	44	66	92
Time delay relays	60			17.7			60	83	44	66	94
Remote control dimmers											
Cat.No 0 036 58	60			36			60	83	44	66	94
Cat.No 0 036 60	60			72			60	83	44	66	94
Cat.No 0 036 71	60			108			60	83	44	66	94

Description	A	B	C	D	E	F
Programmable time switches						
0 037 05	60	17.8	60	83	44	66
4 127 80/90/94	60	17.8	60	83	44	66
4 127 95, 4 128 12/13	60	53	60	83	44	66
4 126 31/33/41	60	35.6	60	83	44	66
4 126 54/57	60	35.6	60	83	44	66
0 047 70	60	90	60	83	44	66
Transformers and power supplies						
0 042 10/30/31	60	72	60	83	44	66
4 130 91	60	35.8	60	83.5	44	66
4 130 92/93/96	60	71.5	60	83.5	44	66
4 130 98	60	89	60	94	44	66
0 047 91/92	60	105	60	95	44	66
4 131 05/06/07/08	60	89	60	95	44	66
0 047 93	60	70	60	95	44	66
Residual current relay						
0 260 88	60	35.5	60	89	44	66

⚠ Safety notes

This product should be installed in line with installation rules, preferably by a qualified electrician. Incorrect installation and use can lead to risk of electric shock or fire. Before carrying out the installation read the instructions and take account of the product's specific mounting location. Do not open up, dismantle, alter or modify the device except where specifically required to do so by the instructions. All Legrand products must be opened and repaired exclusively by personnel trained and approved by Legrand. Any unauthorised opening or repair completely cancels all liabilities and the rights to replacement and guarantees. Use only Legrand brand accessories.

The device contains a LiMnO₂ primary cell. When the product reaches the end of its life, this cell must be correctly removed and disposed of in accordance with national legislation and the requirements of environmental protection.



Operating principle: Typ 1.B. S. T.
 IEC/EN 60730-1, IEC/EN 60730-2-7
 Operation in a normal environment
 Montage: in distribution panel, Degree of contamination: 2
 Switch output, potential-free
 Rated impulse voltage: 4 kV

General information

- Start-up: after applying the supply voltage, the time switch starts automatically with the last selected function. The relay position is set by the current program.
- Battery backup
 - Backlighting not active
 - Data key READ/WRITE only via the menu

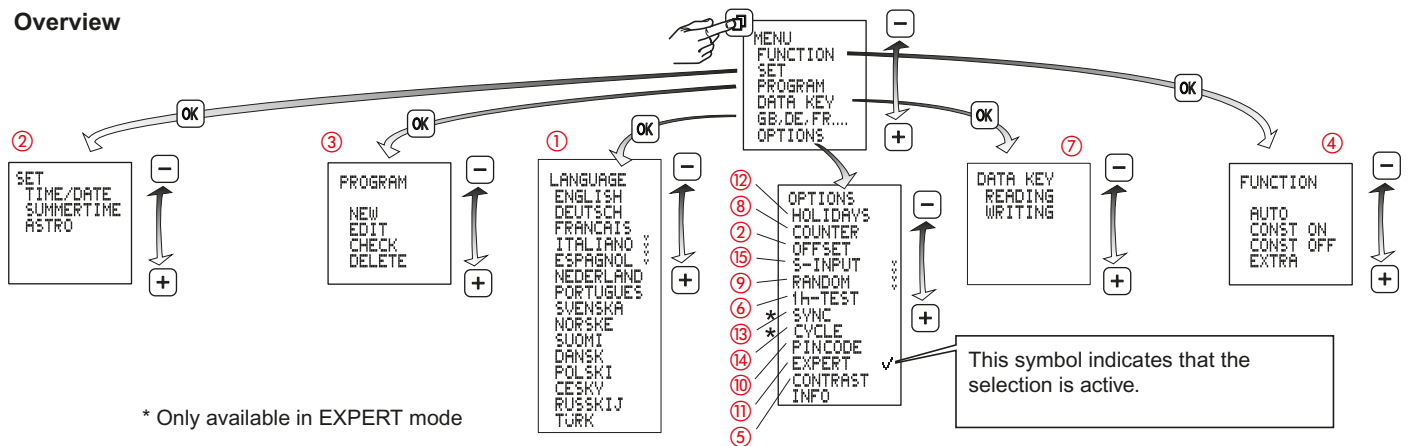
Select menu, back to main menu, Hold down > 1s = operating display

Confirm selection or load parameters

Select menu options or set parameters

4000W	2000VA	600W max. 70µF	2000W	1000W	2000VA	2000VA	2000VA	2000VA

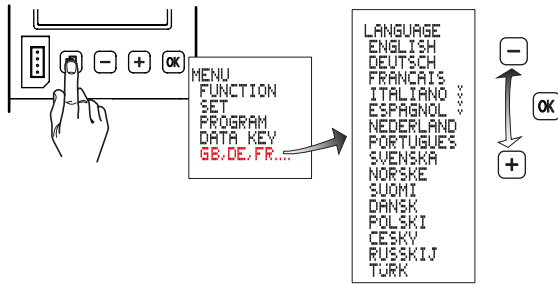
Overview



Technical data	4 126 54	4 126 55	4 126 56
	047 64	047 65	047 66
Supply voltage:	230V 50/60Hz	120V 50/60Hz	24V 50/60Hz
Power consumption:	1 W		
Relay outputs:	1 changeover contact 16A 250V~µ cos φ = 1		
Accuracy:	~ 0,1 s/day		
Wire cross-sections:	single-strand 1,5...4 mm ²	multi-strand 1,5...2,5 mm ²	
Programs	56 programs		

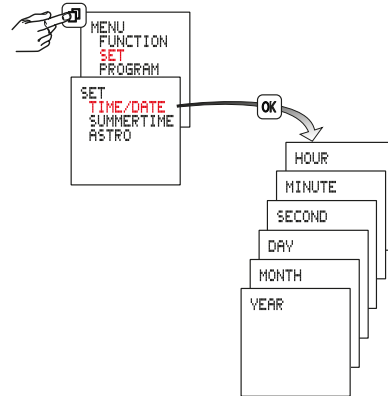
Control-cable length:	max. 50 m
Control signal:	230V AC/ 2mA, 120V AC/ 2mA, 24V AC/ 2mA
Control-pulse duration:	100...200ms
Delaytime:	0 ... 23 h 59 min 59 s
Local coordinates:	Resolution 1°/ 1' in EXPERT-Mode
Battery reserve:	5 years
Storage temperature:	- 20°C to +60°C
Operating temperature:	-20°C to +55°C

1 Set language

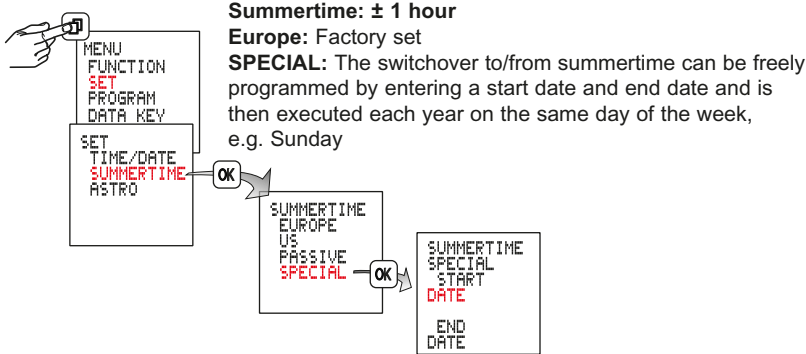


2 Set

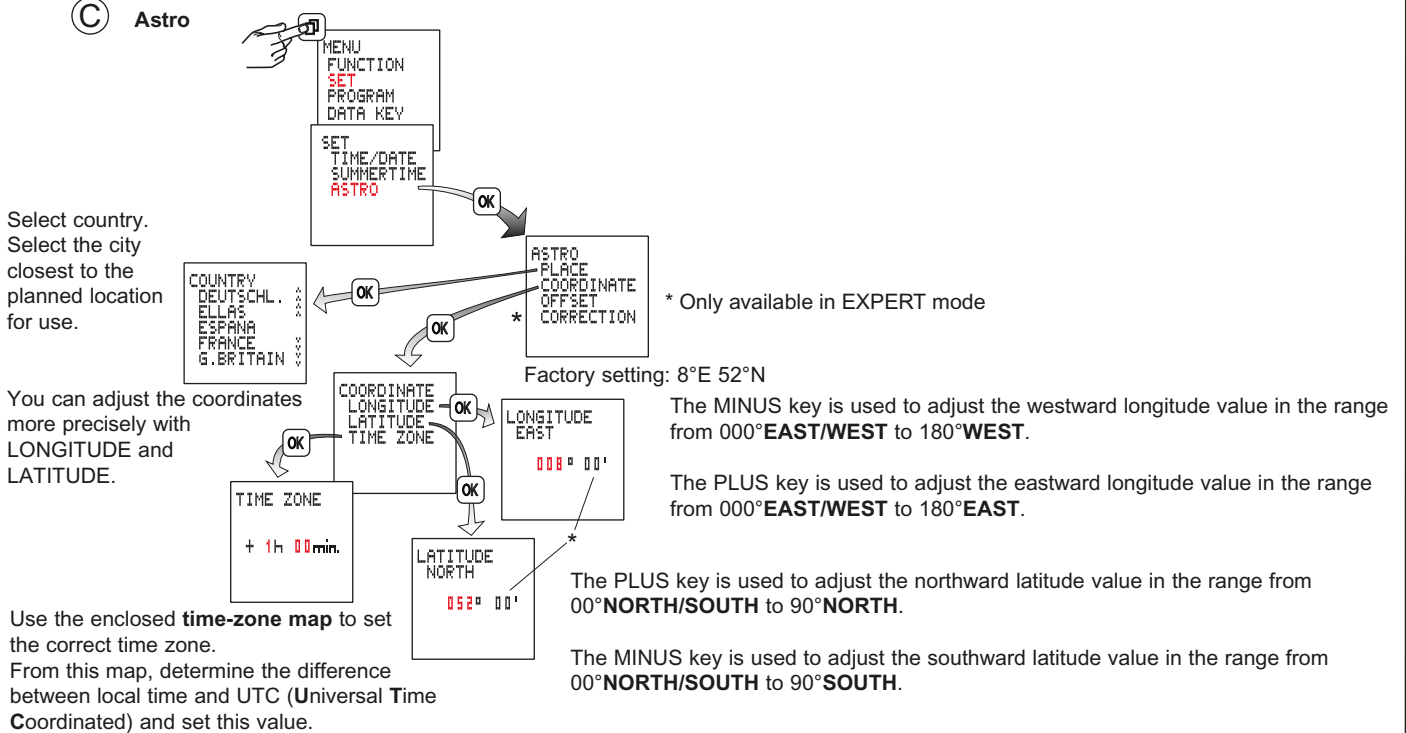
A Set time/date



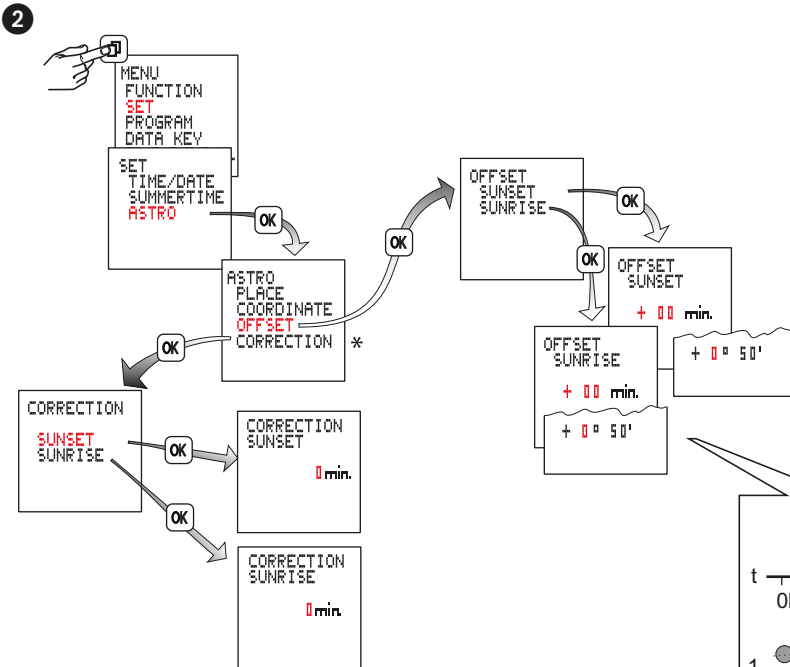
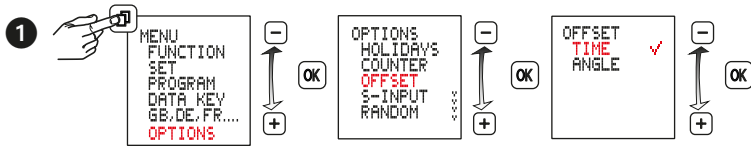
B Summertime



C Astro



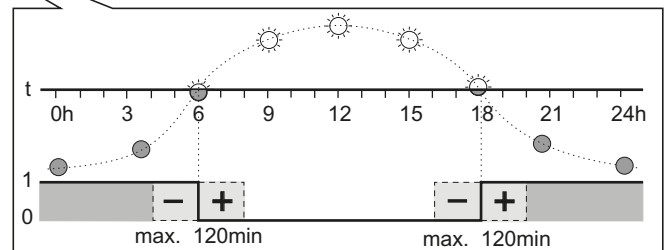
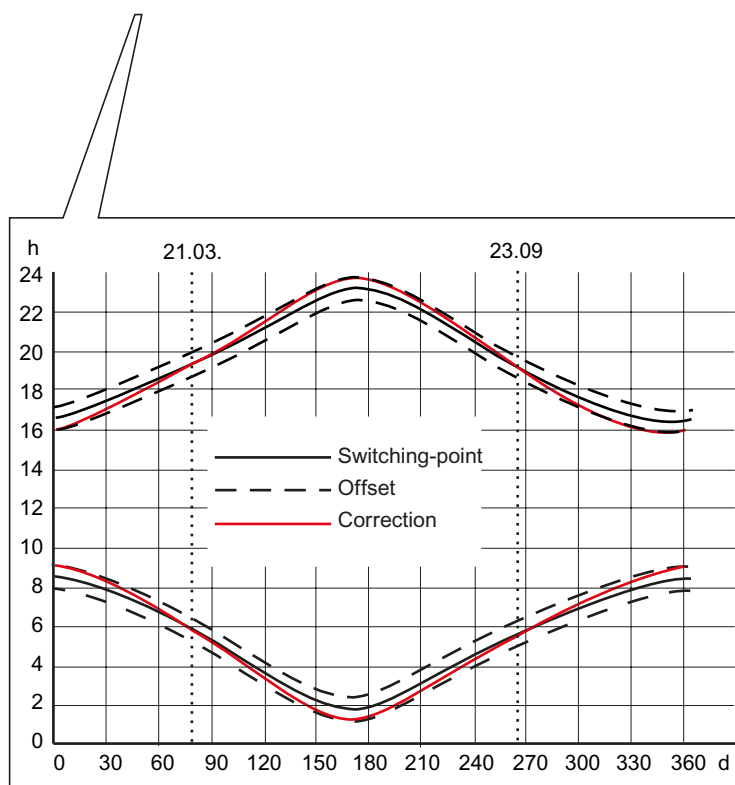
D Offset



* This function is available in Expert mode.

Setting the correction value (1...30 min.) extends the daily ON period in the middle of the winter season by up to 60 minutes (OFF up to 30 min. later in the morning, ON up to 30 min. earlier in the evening).

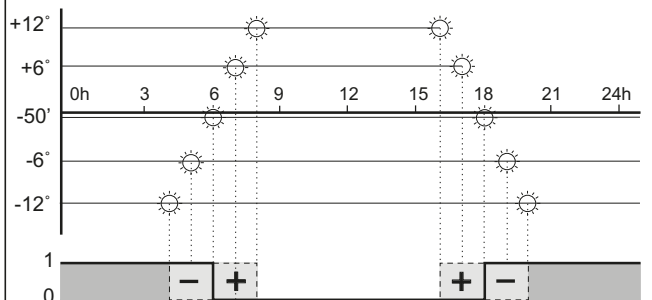
In the middle of the summer season, the correction setting reduces the daily ON period by up to 60 minutes (OFF up to 30 min. earlier in the morning, ON up to 30 min. later in the evening).



The time switch switches on at the calculated sunset time and off at the calculated sunrise time.

By setting an offset, you can shift the switching times by up to ± 120 minutes with respect to the calculated sunrise and sunset times.

Example: If you set the offset to +30 minutes, the time switch will switch 30 minutes after sunrise and 30 minutes after sunset. If you set the offset to -30 minutes, the time switch will switch 30 minutes before sunrise and 30 minutes before sunset.



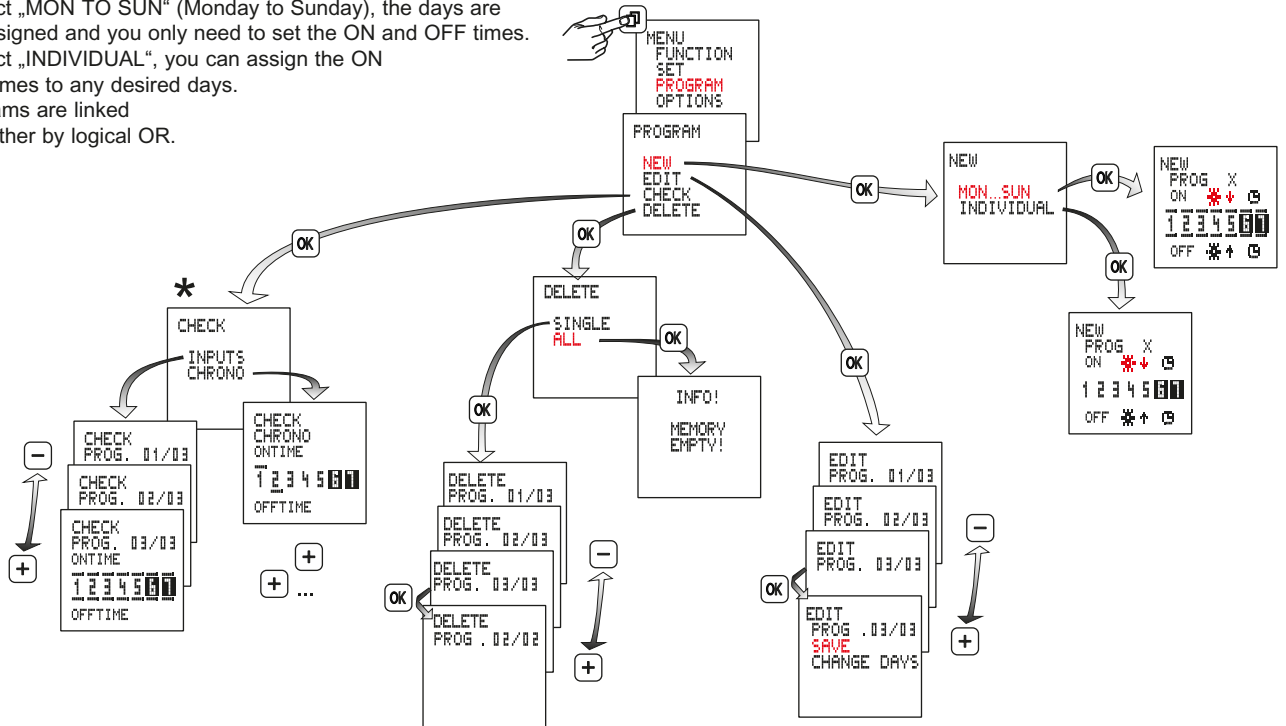
If the offset setting is in degrees the time switch switches on and off at times of equal brightness, despite the differences in twilight time lengths over the course of the year.

Sunrise and sunset correspond to $-50'$ for the centre of the sun (the edge of the sun is visible on the horizon).

3

Programming

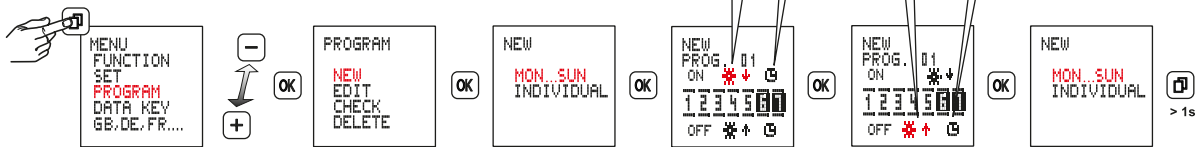
A program consists of an ON time, an OFF time and the associated ON and OFF days.
 If you select „MON TO SUN“ (Monday to Sunday), the days are already assigned and you only need to set the ON and OFF times.
 If you select „INDIVIDUAL“, you can assign the ON and OFF times to any desired days.
 The programs are linked to one another by logical OR.



*
 CHRONO = the switching times are indicated in chronological order during the week.
 INPUTS = programs are indicated in the order in which they are entered.

Programming examples

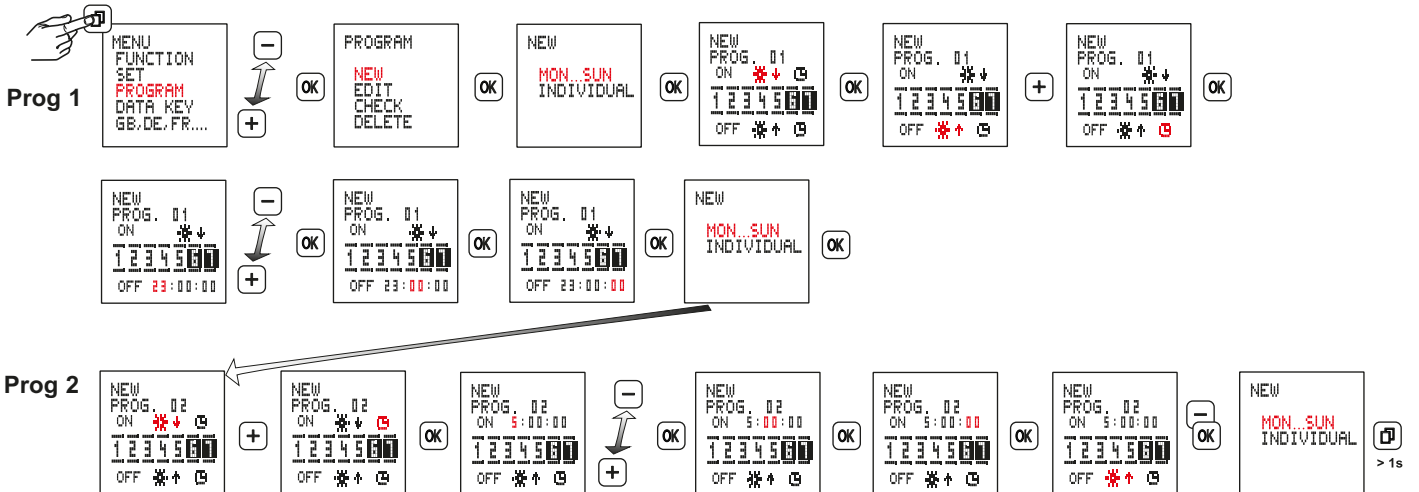
① The timer is to switch on at sunset on each day of the week and switch off at sunrise.



Select the appropriate symbol with the PLUS and MINUS keys:
 ☼ ↓ ON at sunset
 ☼ ↑ OFF at sunrise
 ☐ ON/OFF at programmed time

② The timer is to switch on at sunset on each day of the week and switch off at sunrise. In addition, it is to be switched off each night between 23:00h and 5:00h. This requires the use of two programs.

Program 1: ON at sunset and OFF at 23:00h
 Program 2: ON at 5:00h and OFF at sunrise.

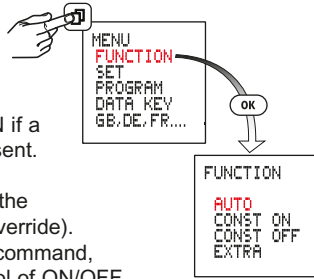


4 Modes

- **Auto** - Automatic operation
- **Constant ON**
- **Constant OFF**

Note: The output is switched ON if a control input signal is present.

- **Extra**
The switch status imposed by the program is inverted (manual override). With the next effective switch command, the time switch resumes control of ON/OFF switching.



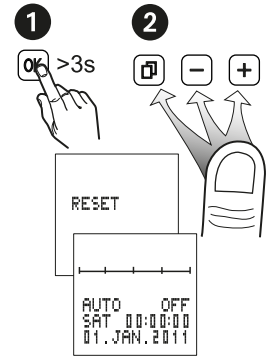
Reset

Warning!

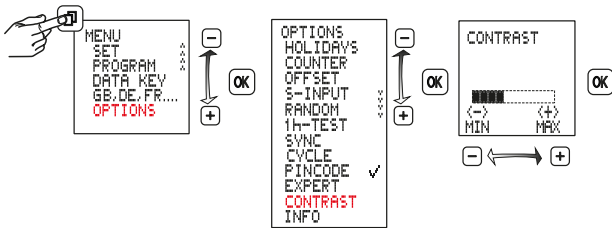
The memory will be cleared, and all set data will be lost.

Hold down **OK** for more than 3 seconds and at the same time press and release **□** **-** **+**.

The language, time, date, summertime/wintertime and switching times will have to be reentered.

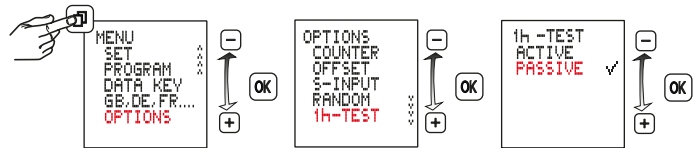


5 Contrast adjustment



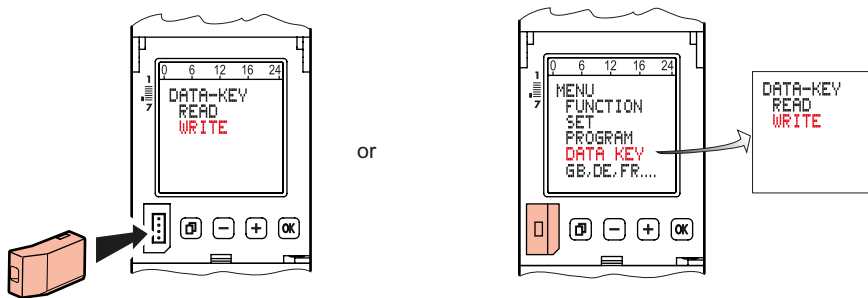
6 1 h-Test

When this function is activated, the output is switched ON for one hour.



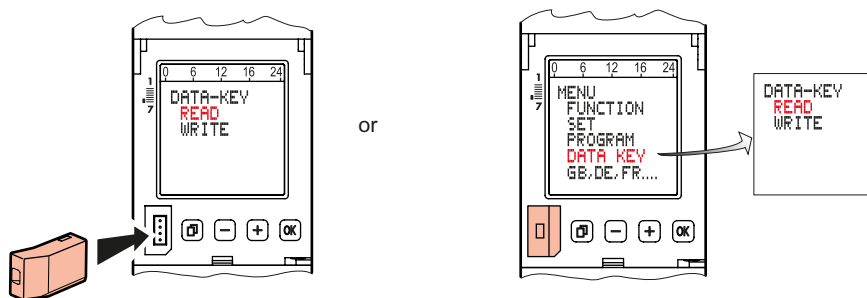
After one hour, the time switch returns automatically to the programmed mode.

7 Data key



Load the programs of the time switch on to a data key (WRITE KEY)

Warning! all programs stored on the data key will be overwritten.

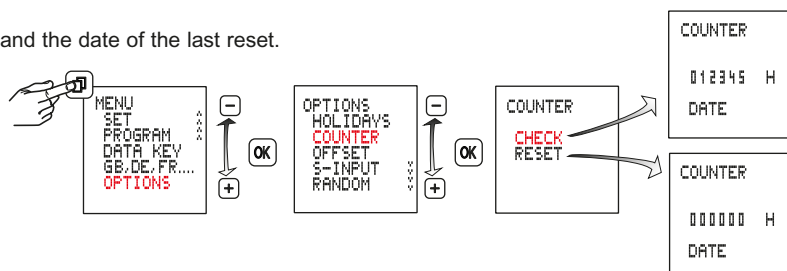


Load the programs from the data key to the time switch (READ KEY)

Warning! all programs stored in the time switch will be overwritten.

8 Hour counter

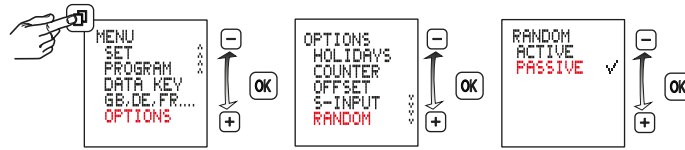
Displays the total relay ON time (0 to 65535 h) and the date of the last reset.



9 Random function

Function to simulate presence.

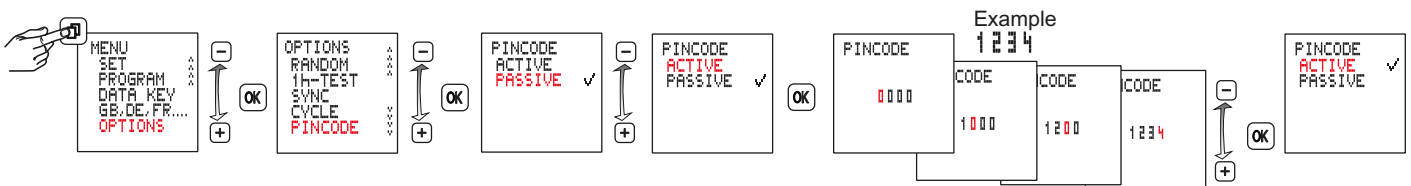
Function active: the programmed switching cycles are shifted at random within the range of ± 15 minutes.



10 Pincode

PIN CODE active: The menus of the time switch will not be accessible unless the PIN CODE has been entered. When the pin code is active, access to the button and key functions is disabled 1 minute after the last button press.

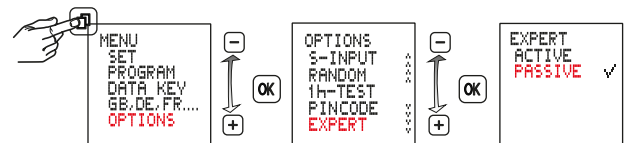
PIN free access can be re-enabled by selecting PASSIVE or by resetting the device.



11 Expert mode

Some additional functions are available in Expert mode:

- Power grid synchronisation to improve the accuracy
- Cycle function
- Summer / winter seasonal correction
- Control input Extra and Off

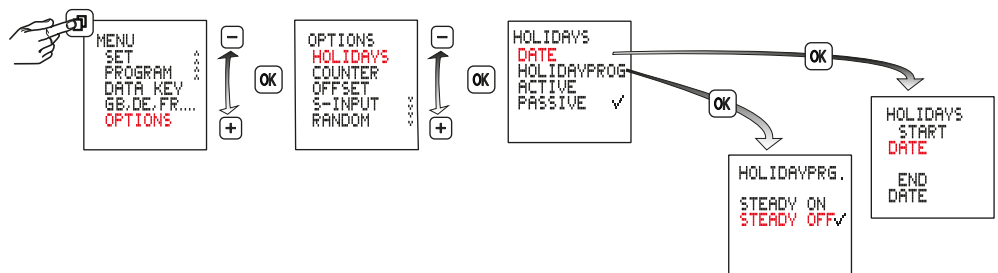


Note: Upon switching from ACTIVE to PASSIVE the additional menu items are hidden again and all the Expert mode settings are cancelled. After re-activating, Expert mode will operate again with the basic settings.

12 Holidays

After activation the holiday program is executed between 0:00h on the start date and 24:00h on the end date (Constant ON/OFF).

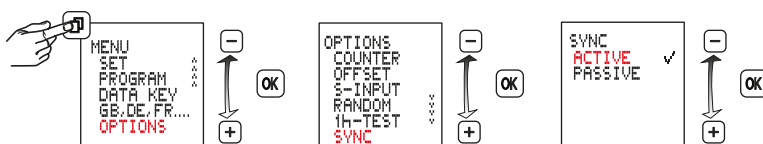
After the holiday program has run once, it must be reactivated.



13 Activating and deactivating grid synchronisation

Only available in EXPERT mode.

The default setting is PASSIVE. In order to improve the long-term accuracy, it is advisable to activate synchronisation if the time switch is supplied from a on 50/60 Hz grid with frequency adjustment.

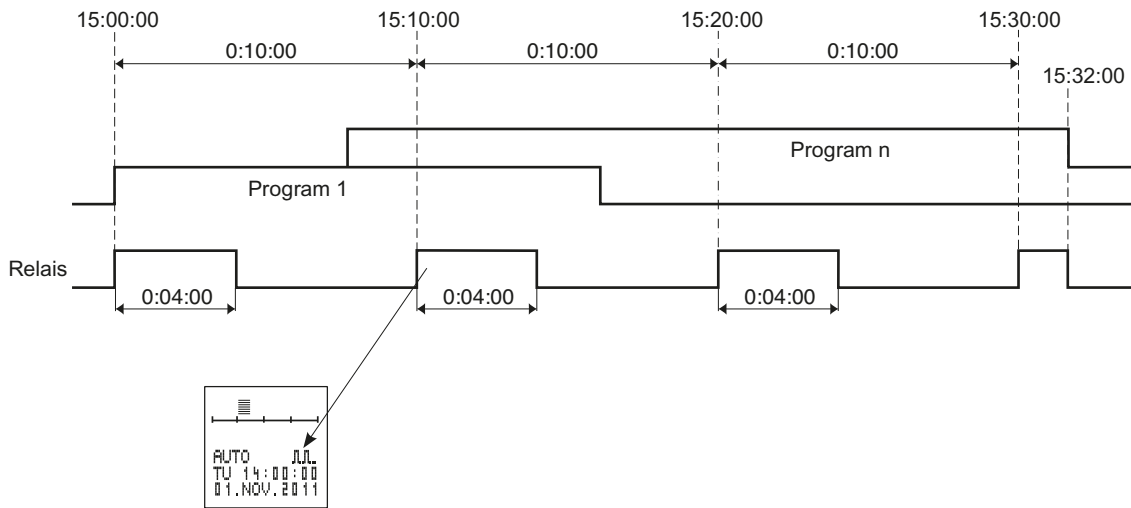
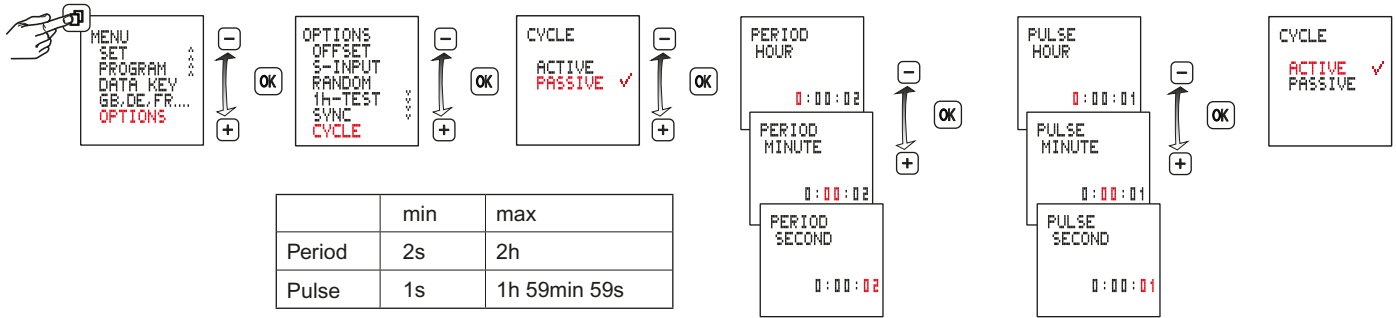


14 Cycle function

Only available in EXPERT mode

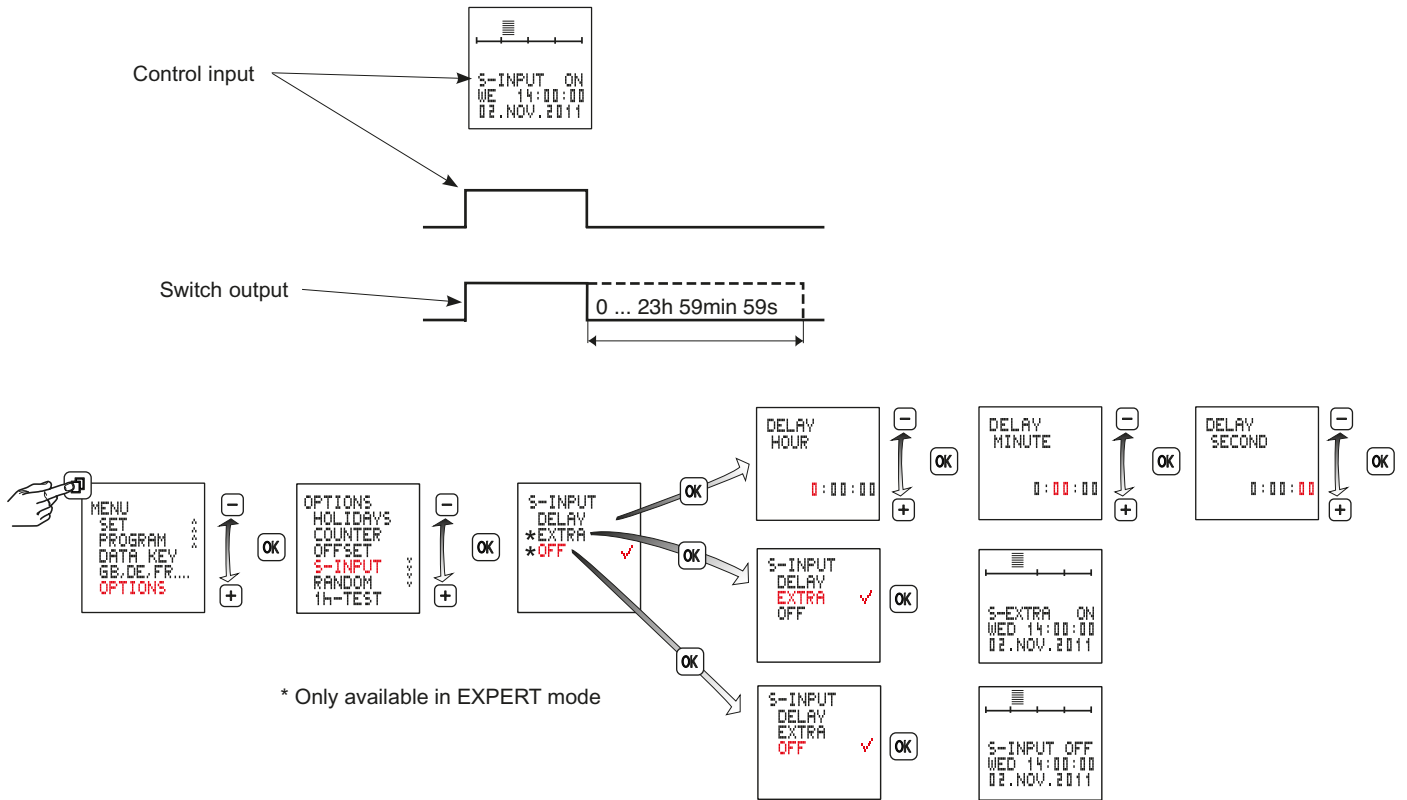
For cyclical switch commands the switching on time is set by logical "OR" of programs of all types. A fixed cycle of ON and OFF time then operates within those limits. The cycle always starts with the ON time.

The cycle duration and the ON time within the cycle have the same length for all switching times. The cycle duration and the ON time can be set independently in one-second increments. If the switching time is shorter than the cycle duration, the cycle will be shortened accordingly. The ON time will remain unchanged. If the switching time is actually shorter than the ON time, the ON time will be shortened accordingly.



15 Control input with delay time

A control signal is superimposed on all program commands. While this control signal is applied, the output is switched ON. When the control signal is switched off, the output is switched OFF after a delay time, unless an ON command is applied by a program.



DELAY

The output switches on when the control input is activated and remains switched on for the duration of the set delay time after the control input has been deactivated. Delay time setting range 0h 00min 00s ... 23h 59min 59s. The control input can be subsequently triggered within the delay time.

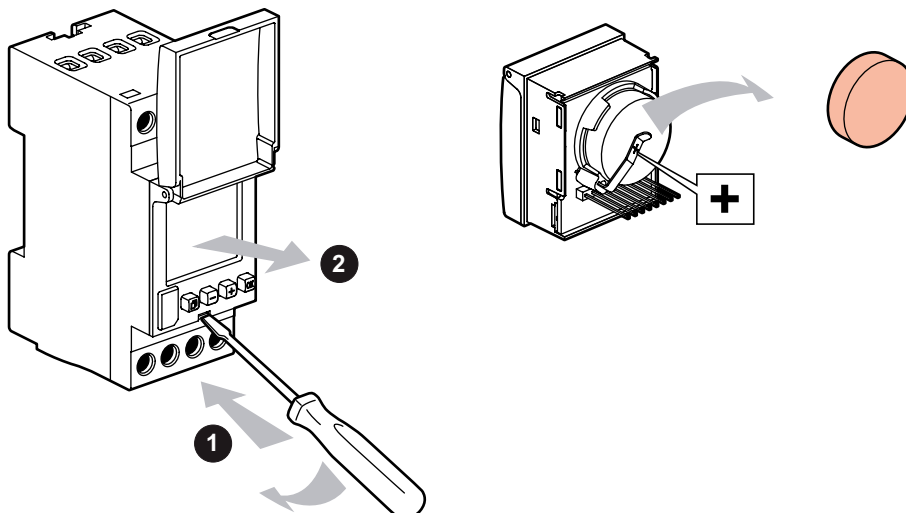
EXTRA

The control input signal inverts the switching state specified by the program. At the next valid switching command the time switch resumes switching ON and OFF.

OFF

The control input signal sets the switching state to OFF if the program specifies ON.

Warning: Electrical shock - Disconnect all power from the device before dismantling the module and replacing the battery. Always use a Li cell type battery (LiMnO₂) CR2477, 3V high temperature type min +85 °C



- Zeitzonekaart
- Carte des fuseaux horaires
- Time-of-day map
- Tijdszone kaart
- Carta dei fusi allegata
- Carta de husos horarios
- Time-of-day oversigt
- Aikavyöhykekarttaa
- Tidssonenkortet
- Tidzons kartan
- Carta de fusos horários
- ηώρα υψιαΩμ ατῶνξρμ
- Ajavöändite kaart
- Laika zonu karte
- Laiko juostų žemėlapis
- Mapa stref czasowych
- Zaman dilimleri kartı
- 时区图
- خريطة مناطق التوقيت

