

NEW TIMES



AlphaRex³/MicroRex
THE NEW GENERATION
OF PROGRAMMABLE TIME
SWITCH TECHNOLOGY

 **legrand**[®]

AlphaRex³ – The Next Generation

The AlphaRex³ family of programmable digital time switches make your life easier:

- Unified, simplified, brilliantly conceived – from the standardised design to the high-resolution display.
- One data key for all AlphaRex³ products for quick and easy transfer of programs to other time switches and/or for creating backup copies.
- **This allows you to work efficiently, conveniently and economically.**

The time switch technology of the AlphaRex³ series features first class performance that is suitable for everyday use.

- **Programming that is simple and precise to the second with extremely high clock precision.**

Legrand continues to distinguish itself in the areas of sustainability and resource conservation.



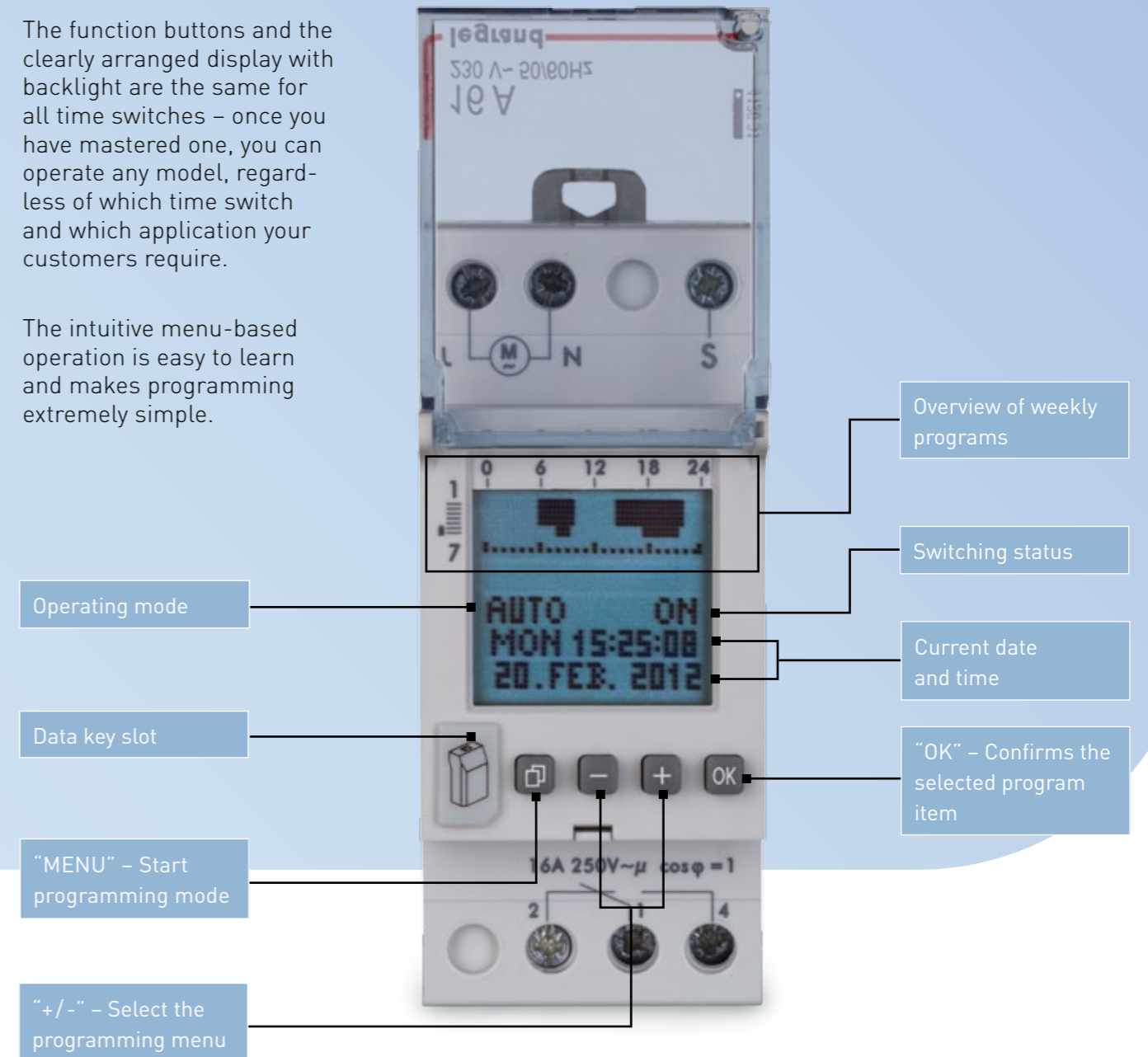
All components including contacts are
100% cadmium free



Design of the new AlphaRex³

The function buttons and the clearly arranged display with backlight are the same for all time switches – once you have mastered one, you can operate any model, regardless of which time switch and which application your customers require.

The intuitive menu-based operation is easy to learn and makes programming extremely simple.



One single data key for all AlphaRex³ programmable time switches

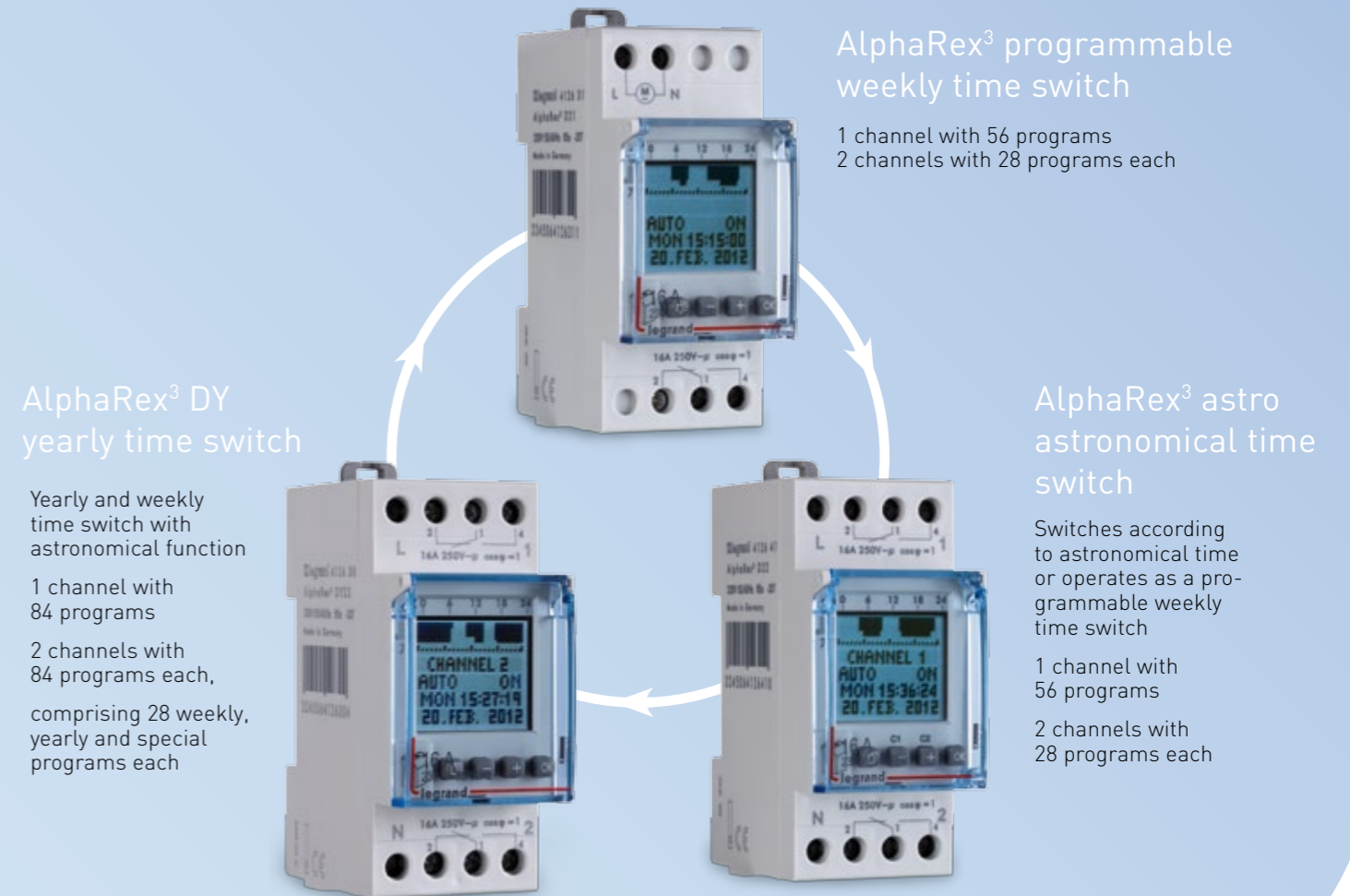
AlphaRex³ – The full product range

Advantages of working with the AlphaRex³ series:

- Same design as all AlphaRex³ time switches, new user-friendly button layout.
- High-resolution display with backlight.
- Standardised text-guided programming.
- Standard data key for all AlphaRex³ programmable time switches (transfer and/or backup programs quickly and easily).
- All time switches are equipped with PIN code lock and 1 h test.
- Programming with precision to the second – simple and precise programming directly on the time switch or outside the distribution board using a PC and the AlphaSoft programming software.
- Highest clock precision: +/- 0.1 s/day (with quartz or mains-synchronised in mains-synchronous operation).
- EEPROM memory for back up switching programs.
- Automatic switching for summer/winter time (daylight saving time).
- Changeover contact.
- Zero-crossing switching protects contacts, increases product life time and reduces costs and resource consumption.
- Barcode on unit.
- In accordance with DIN VDE 0631 Part 1 and Part 2-7, IEC 60730-1 and 60730-2-7, EN 60730-1 and 60730-2-7.



Overview of the Time Switches



The battery can be removed without uninstalling the AlphaRex³ from the distribution board.



Technical specifications:

Text-guided and PC-based programming, switching time: 1 s, blocks can be created in programs, automatic switching for summer/winter time (daylight saving time), changeover contact, zero-crossing switching, 5-year running reserve, 2 modules width.



Additional functions:

Holiday program, random function (e.g. for occupancy simulation), 1 h test program for immediate switching simulation, operating hours counter, relay function, PIN code input lock, contrast adjustment.



Expert mode:

Cycle program (for cyclical systems such as animal feed systems), control input, optional mains-synchronous operation, channel-switching function 1<->2 (all 2-channel time switches).



AlphaRex³ digital time switches

Weekly time switch



4 126 31

Additional technical specifications starting on page 8

With a text-guided programming concept, 15 different languages that can be selected with the language selection function, easy PC-based creation of programs using AlphaSoft software from Legrand, data key and PC adapter, optional program backup on the data key, EEPROM memory for back up switching programs, 5-year running reserve for date and time, automatic switching for summer/winter time (daylight saving time), clock precision of +/- 0.1 s/day, with zero-crossing switching

Packing units	Cat. no.	AlphaRex ³
		<ul style="list-style-type: none"> Daily and weekly time switch Quick and easy programming due to the option to select day blocks, day blocks can be individually set or selected from the blocks Mon-Sun, Mon-Fri or Sat-Sun Programming with precision to the second Switch times visible in weekly overview on display With the following additional functions for added convenience: <ul style="list-style-type: none"> Holiday program Random function Operating hours counter, counting range of up to 65,535 h Control input (1-channel time switch, cat. no.: 4 126 34), switch-off delay can be set from 0s to 23h 59min 59s 1h test PIN code input lock Expert mode for additional functions: <ul style="list-style-type: none"> Cycle function, switch-on time can be set between 1s and 1h 59min 59s Control input "extra" (1-channel time switch, cat. no.: 4 126 34) Control input "off" (1-channel time switch, cat. no.: 4 126 34) Channel-switching function (2-channel time switch) Mains-synchronous operation can be set Backlight Unit width: 2 modules of 17.5 mm each
1	4 126 31	AlphaRex³ D21, 1 channel - 230 V, 50/60 Hz - 1 changeover contact, 250 V/50 Hz, 16 A~ cos φ = 1 - 56 programs - Shortest switching step: 1 s
1	4 126 41	AlphaRex³ D22, 2 channels - 230 V, 50/60 Hz - 2 changeover contact, 250 V/50 Hz, 16 A~ cos φ = 1 - 56 programs (28 per channel) - Shortest switching step: 1 s
1	4 126 34	AlphaRex³ D21s, 1 channel - 230 V, 50/60 Hz - With control input - 1 changeover contact, 250 V/50 Hz, 16 A~ cos φ = 1 - 56 programs - Shortest switching step: 1 s

Special voltages

Type	230 V ~ 50/60 Hz	120 V ~ 50/60 Hz	24 V AC 50/60 Hz and DC
AlphaRex ³ D21	4 126 31	4 126 32	4 126 33
AlphaRex ³ D22	4 126 41	4 126 42	4 126 43
AlphaRex ³ D21s	4 126 34		
AlphaRex ³ D21 astro	4 126 54	4 126 55	4 126 56
AlphaRex ³ D22 astro	4 126 57	4 126 58	4 126 59
AlphaRex ³ DY21	4 126 29		
AlphaRex ³ DY22	4 126 30		

AlphaRex³ digital time switches

Astronomical time switch



4 126 57

Additional technical specifications starting on page 8

With a text-guided programming concept, 15 different languages that can be selected with the language selection function, easy PC-based creation of programs using AlphaSoft software from Legrand, data key and PC adapter, optional program backup on the data key, EEPROM memory for back up switching programs, 5-year running reserve for date and time, automatic switching for summer/winter time (daylight saving time), clock precision of +/- 0.1 s/day, with zero-crossing switching

Packing units	Cat. no.	AlphaRex ³ astro
		<ul style="list-style-type: none"> For switching on/off lights and other electric devices according to the rising/setting of the sun With combination function for creating switching programs in which the devices are switched according to astronomical time and/or fixed preset times Daily astronomical calculation of the sunrise/sunset times based on the entered location or location coordinates Offset for sunrise and sunset times can be adjusted up to +/- 120 min. These time differentials are set separately for sunrise and sunset Controlled directly by the distribution board, no separate light sensor required Quick and simple programming due to the option to select day blocks; day blocks can be individually set or selected from the blocks Mon-Sun, Mon-Fri or Sat-Sun Programming with precision to the second Switch times visible in weekly overview on display With the following additional functions for added convenience: <ul style="list-style-type: none"> Holiday program Random function Operating hours counter, counting range of up to 65,535 h Control input (1-channel time switch, cat. no.: 4 126 54), switch-off delay can be set from 0s to 23h 59min 59s 1h test PIN code input lock Expert mode for additional functions: <ul style="list-style-type: none"> Cycle function, switch-on time can be set between 1s and 1h 59min 59s Control input "extra" (1-channel time switch, cat. no.: 4 126 54) Control input "off" (1-channel time switch, cat. no.: 4 126 34) Mains-synchronous operation can be set Backlight Unit width: 2 modules of 17.5 mm each
1	4 126 54	AlphaRex³ D21 astro, 1 channel - 230 V, 50/60 Hz - With control input - 1 changeover contact, 250 V/50 Hz, 16 A~ cos φ = 1 - 56 programs - Shortest switching step: 1 s
1	4 126 57	AlphaRex³ D22 astro, 2 channels - 230 V, 50/60 Hz - 2 changeover contact, 250 V/50 Hz, 16 A~ cos φ = 1 - 56 programs (28 per channel) - Shortest switching step: 1 s

AlphaRex³ digital time switches

Yearly time switch



4 126 30

Additional technical specifications starting on page 8

With a text-guided programming concept, switch times visible in a weekly overview on the display with backlight, programming with precision to the second, 15 different languages can be selected with language selection function, easy PC-based creation of programs using AlphaSoft software from Legrand, data key and PC adapter, data key for quick and easy transfer of created programs to other time switches and/or for creating backup copies (cat. no.: 4 128 72), quick and easy programming due to the option to select day blocks, day blocks can be individually set or selected from preset block Mon - Sun, programs can be backed up on the data key, EEPROM memory for back up switching programs, 5-year running reserve for date and time, automatic switching for summer/winter time (daylight saving time), clock precision of +/- 0.1 s/day (+/- 0.2 s/day: cat. no. 0 047 70), with zero-crossing switching (AlphaRex³ DY)

Packing units	Cat. no.	AlphaRex ³ DY
		<ul style="list-style-type: none"> Yearly and weekly time switch with additional astronomical function for all channels 84 switching programs per channel, comprising: <ul style="list-style-type: none"> 28 weekly programs 28 yearly programs 28 special programs (priority program) With the following additional functions for added convenience: <ul style="list-style-type: none"> Astronomical function (sunrise/sunset times) can be combined with time switch function Offset can be set to either +/- 120 min or +/- 12°00' Random function Operating hours counter, counting range of up to 65,535 h Control input (1-channel time switch, cat. no.: 4 126 29), switch-off delay can be set from 0s to 23h 59min 59s 1h test PIN code input lock Expert mode for additional functions: <ul style="list-style-type: none"> Control input "extra" (1-channel time switch, cat. no.: 4 126 29) Control input "off" (1-channel time switch, cat. no.: 4 126 29) Cycle function, switch-on time can be set between 1s and 1h 59min 59s Channel-switching function (2-channel time switch) Mains-synchronous operation can be set Unit width: 2 modules of 17.5 mm each
1	4 126 29	AlphaRex³ DY21, 1 channel - 230 V, 50/60 Hz - With control input - 1 changeover contact, 250 V/50 Hz, 16 A~ cos φ = 1 - 84 programs - Shortest switching step: 1 s
1	4 126 30	AlphaRex³ DY22, 2 channels - 230 V, 50/60 Hz - 2 changeover contacts, 250 V/50 Hz, 16 A~ cos φ = 1 - 84 programs per channel - Shortest switching step: 1 s

Selection table

Type	Cat. no.	Switch channels	Daily program	Weekly program	Astronomical program	Yearly program	Special program	Holiday program	Random function	Operating hours counter	Relay function	Channel-switching function	Offset function	Pulse function	Cycle function	Control input	Synchronous operation can be set	1h test	PIN code	PC programming	Contrast adjustment	Backlight
AlphaRex ³ D21	4 126 31	1	✓	✓				✓	✓	✓	✓		✓ ¹⁾	✓		✓	✓	✓	✓	✓	✓	✓
AlphaRex ³ D22	4 126 41	2	✓	✓				✓	✓	✓	✓		✓ ¹⁾	✓		✓	✓	✓	✓	✓	✓	✓
AlphaRex ³ D21s	4 126 34	1	✓	✓				✓	✓	✓	✓		✓ ¹⁾	✓		✓	✓	✓	✓	✓	✓	✓
AlphaRex ³ D21 astro	4 126 54	1	✓	✓	✓			✓	✓	✓	✓		✓ ¹⁾	✓	✓	✓	✓	✓	✓	✓	✓	✓
AlphaRex ³ D22 astro	4 126 57	2	✓	✓	✓			✓	✓	✓	✓		✓ ¹⁾	✓	✓	✓	✓	✓	✓	✓	✓	✓
AlphaRex ³ DY21	4 126 29	1	✓	✓	✓	✓	✓		✓	✓	✓		✓ ¹⁾	✓	✓	✓	✓	✓	✓	✓	✓	✓
AlphaRex ³ DY22	4 126 30	2	✓	✓	✓	✓	✓		✓	✓	✓		✓ ¹⁾	✓	✓	✓	✓	✓	✓	✓	✓	✓
AstroRex DY64	0 047 70	4	✓	✓	✓	✓	✓		✓	✓	✓		✓ ¹⁾	✓	✓	✓	✓	✓	✓	✓	✓	✓

1) Pulse function can be programmed using input function with precision to the second

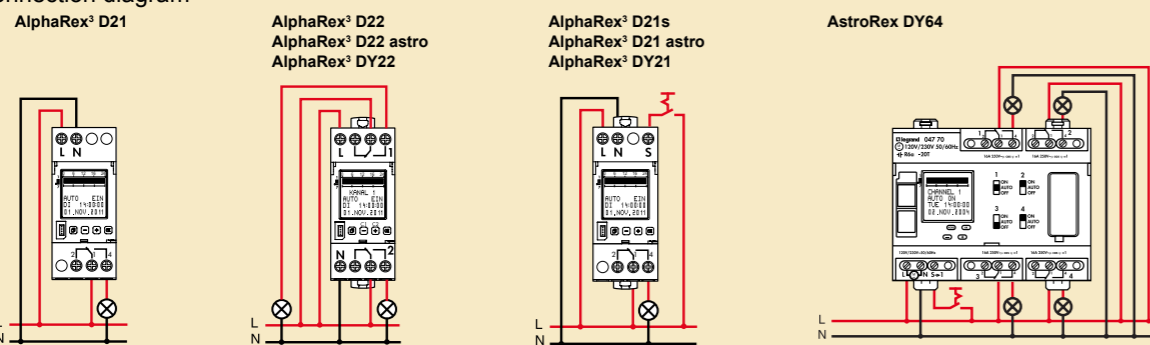
■ Technical specifications

Type	AlphaRex ³ D21	AlphaRex ³ D22	AlphaRex ³ D21s	AlphaRex ³ D21 astro	AlphaRex ³ D22 astro	AlphaRex ³ DY21	AlphaRex ³ DY22	AstroRex DY64	
Nominal voltage	230 V 50/60 Hz	4 126 31	4 126 41	4 126 34	4 126 54	4 126 57	4 126 29	4 126 30	0 047 70
	120 V 50/60 Hz	4 126 32	4 126 42		4 126 55	4 126 58			0 047 70
	24 V AC/DC	4 126 33	4 126 43		4 126 56	4 126 59			0 047 74
Number of modules of 17.5 mm each	2	2	2	2	2	2	2	6	
Number of channels	1	2	1	1	2	1	2	4	
Switch output	1 changeover contact	2 changeover contacts	1 changeover contact	1 changeover contact	2 changeover contacts	1 changeover contact	2 changeover contacts	4 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~	16 A~	
• Inductive 230 V~ cos φ = 0.6	10 A~	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	1800 W	
• Fluorescent lamp, series compensated	2000 VA	2000 VA	2000 VA	2000 VA	2000 VA	2000 VA	2000 VA	1400 VA	
• Energy-saving lamp	1000 W	1000 W	1000 W	1000 W	1000 W	1000 W	1000 W	100 W	
Programs¹⁾	56	28 per channel	56	56	28 per channel	84	84 per channel	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⁾			~ 0.2 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



■ 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.: 4 128 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, AstroRex DY64]

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, AstroRex DY64]

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"

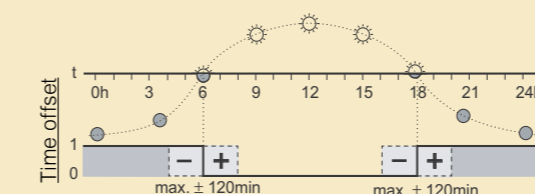
Location (astro) [AlphaRex³ D21 astro, AlphaRex³ D22 astro, AlphaRex³ DY21, AlphaRex³ DY22, AstroRex DY64]

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 offset**²⁾, 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.

Offset correction function²⁾

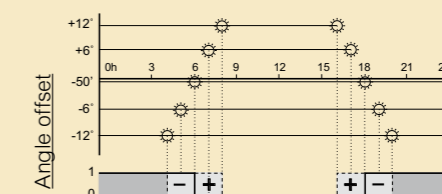
Select "MENU", "SET", "ASTRO" and "CORRECTION" to set a time correction for the 6-month periods surrounding summer and winter. The time correction is set to 0 min. by default and can be set from 1 min. up to 30 min. The time correction for sunset is entered in the "SUNSET" menu item. The time correction 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



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).

AlphaRex³ Digital Time Switches

Additional functions

(Type-dependent – see selection table on page 7)

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 function²⁾, geographical coordinates in degrees and arcminutes²⁾.

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"

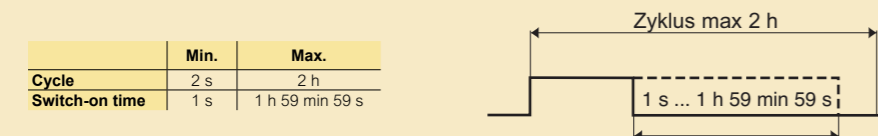
Switch off via control input. Activating the "OFF" function causes the time switch to be switched off via the control input. The "OFF" function is ended if the button is pressed again or if a pulse is received at the control input. The time switch resumes switching on/off according to the programmed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



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

EcoRex Digital Time Switch

Weekly time switch



0 037 05

In accordance with VDE 0631 Part 1 and Part 2-7, IEC 60730-1 and 60730-2-7, EN 60730-1 and 60730-2-7, single-module time switch for installation in a distribution board, the display is patterned after the dial of an analogue clock. Can be switched to battery operation (the programmed switch commands are executed). For stand-alone applications, e.g. power generation systems that control the power for lighting systems, alarm systems, signalling equipment or information systems.

Automatic switching for summer/winter time (daylight saving time), clock precision of +/- 1 s/day, sealable cover, IP20 degree of protection, -10°C to +55°C operating temperature, with the advantages of the Lexic system

Packing units	Cat. no.	EcoRex
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1	0 037 05	EcoRex D11, 1 channel - 120–230 V, 50/60 Hz - 1 changeover contact, 250 V/50 Hz, 16 A~ cos φ = 1 - 28 programs - Shortest switching step: 1 min
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EcoRex Digital Time Switch

Weekly time switch

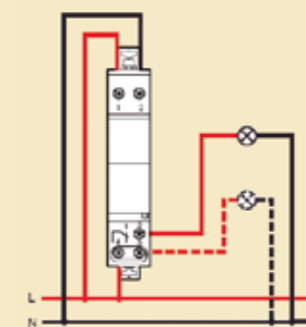
Technical specifications

Type	EcoRex D11	
Cat. no.	0 037 05	
Nominal voltage	230 V	120 V
	50/60 Hz	
Number of modules of 17.5 mm each	1	
Number of channels	1	
Running reserve	6 years ¹⁾	
Shortest switching step	1 min	
Clock precision	1 s/day	
Switching capacity		
• Ohmic 230 V~ cos φ = 1	16 A~	
• Inductive 230 V~ cos φ = 0.6	13 A~	
• Incandescent lamp load	1200 W	
• Fluorescent lamp series compensated	1400 VA	
• Energy-saving lamp	100 W	
Switch output	1 changeover contact	
Programs ¹⁾	28	
Operating temperature	-10°C to +55°C	
Degree of protection	IP20	

¹⁾ In line operation mode: V AC

Connection diagram

EcoRex D11



Rex Lighting Control Devices

Twilight switches



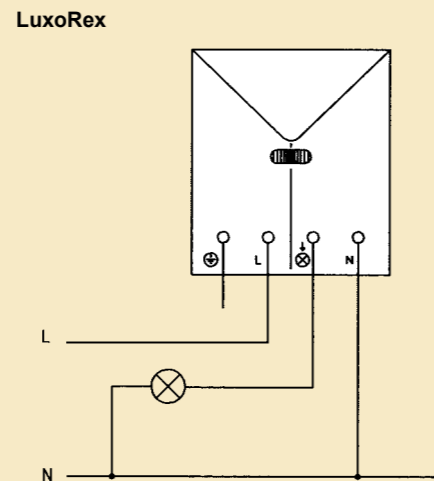
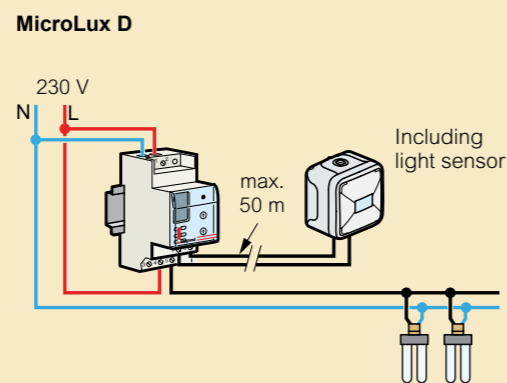
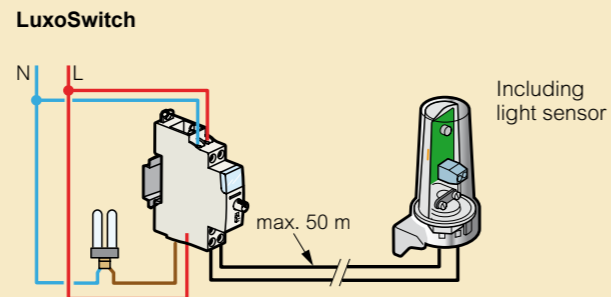
For switching lights and other devices on and off according to ambient brightness

Packing units	Cat. no.	Twilight switches
1	4 126 23	<ul style="list-style-type: none"> Including light sensor Wire for light sensor: 2 x 1.5 mm², maximum wire length: 50 m LED switching status indicator <p>LuxoSwitch</p> <ul style="list-style-type: none"> - 230 V, 50/60 Hz - 1 normally open contact 250 V/50 Hz, 16 A~ cos φ = 1 - With zero-crossing switching - 2000 W incandescent lamp load - 2000 W fluorescent lamps, series compensated - 1000 W parallel compensated max. 70 μF - 1000 W energy-saving lamps - 2000 W LV halogen lamps, electronic ballast Manual switch: on/automatic Switch-on/off delay: approx. 90 s Setting range: 1–100,000 lux Unit width: 1 module of 17.5 mm Degree of protection: IP20 (device), IP54 (light sensor) Including light sensor, cat. no.: 4 128 58
1	0 037 21	<p>MicroLux D, 1 channel</p> <ul style="list-style-type: none"> - Twilight switch with time switch - Automatic switching for summer/winter time (daylight saving time) - Setting range: 2 – 60,000 lux - Switch-on/off delay: approx. 60 s - Clock precision: +/- 2.5 s/day - 100 h running reserve - Quartz motor, 230 V, 50/60 Hz - 1 changeover contact, 250 V/50 Hz, 10 A~ cos φ = 1 - 8 programs - Shortest switching step: 1 min - Manual switching - Sealable cover Unit width: 1 module of 17.5 mm Degree of protection: IP20 (device), IP55 (light sensor) Including light sensor, cat. no.: 0 695 18
1	0 498 43	<p>Twilight switch – Wall-mounted</p> <p>LuxoRex</p> <ul style="list-style-type: none"> - Setting range: 0.2 – 200 lux - Switch-on/off delay: approx. 120 s - 230 V, 50/60 Hz - 1 normally open contact 250 V/50 Hz, 10 A~ cos φ = 1 - IP54 degree of protection
1	4 128 58	<p>Accessories</p> <p>Light sensor</p> <ul style="list-style-type: none"> - Replacement light sensor for cat. no. 4 126 23 - Photocell - IP54 degree of protection
1	0 695 18	<p>Plexo light sensor</p> <ul style="list-style-type: none"> - Replacement light sensor for cat. no. 0 037 21 - Photocell - IP55 degree of protection

Rex Lighting Control Devices

Twilight switches

■ Connection diagram



Rex staircase light time switch

RexPlus product range



In accordance with VDE 0632 Part 1, Part 2-1 and Part 2-3, IEC 60669-1, 60669-1-2 and 60669-2-3, EN 60669-1, 60669-2-1 and 60669-2-3, electronic, extremely quiet, IP 20 degree of protection, -10°C to +55°C operating temperature, with advantages of the Lexic system

Packing units	Cat. no.	Rex product range	Packing units	Cat. no.	Rex product range – Surface-mounted
1	4 126 02	<ul style="list-style-type: none"> Exact time setting Resettable at any time With zero-crossing switching Automatic 3 or 4-wire connection identification 100% continuous voltage stability Maximum neon lamp current: 50 mA Manual switch for switching from automatic light to constant light Unit width: 1 module of 17.5 mm <p>Rex800</p> <ul style="list-style-type: none"> - 230 V, 50/60 Hz - Time range: 0.5 – 12 min - 1 normally open contact 250 V, 50 Hz, 16 A~ cos φ = 1 - 2000 W incandescent lamp load/halogen lamps 230 V - 1000 VA fluorescent lamps, series compensated - 120 VA parallel compensated max. 14 μF 	1	0 497 83	<ul style="list-style-type: none"> For surface-mounting Resettable Only 3-wire connection For replacement in existing systems, not permitted in new systems Maximum neon lamp current: 50 mA Manual switch for switching from automatic light to constant light Dimensions (H x W): 112 x 72 mm <p>Rex600Plus</p> <ul style="list-style-type: none"> - 230 V, 50/60 Hz - Time range: 0.5 – 10 min - 1 normally open contact 250 V, 50 Hz, 10 A~ cos φ = 1 - 800 W incandescent lamp load - 2000 W LV halogen lamps, electronic ballast
1	0 047 04	<p>Rex800Multi</p> <ul style="list-style-type: none"> - 230 V, 50/60 Hz - With separate control voltage input 8 – 230 V AC/DC - Multi-function, the following functions can be set using selection switch on the side of the unit: <ul style="list-style-type: none"> - Staircase light time switch, standard - Staircase light time switch with pre-warning function in accordance with DIN 18015-2 - Staircase light time switch with 1 h extended time function - Staircase light time switch with pre-warning and 1 h extended time functions - Time switch can be switched off - Time switch with pre-warning function, can be switched off - Electronic relay - Time range: 0.5 – 12 min - 1 normally open contact 250 V, 50 Hz, 16 A~ cos φ = 1 - 2000 W incandescent lamp load/halogen lamps 230 V - 2000 W LV halogen lamps, electronic ballast - 1000 VA fluorescent lamps, series compensated - 1000 VA parallel compensated max. 100 μF - 1000 W energy-saving lamps 			

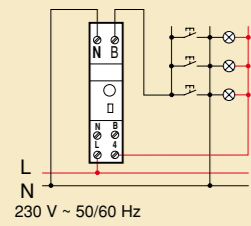
Rex staircase light time switch

Rex product range

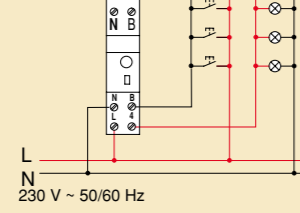
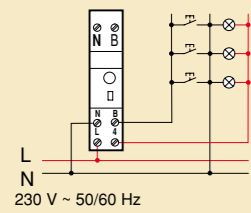
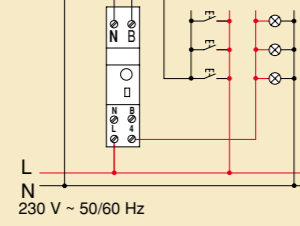
Connection diagram

Rex800

3-wire connection



4-wire connection



Pre-warning function in accordance with DIN 18015-2

The pre-warning function according to DIN 18015-2 is switched on by default (wiring diagram 2). The pre-warning function can be switched off using the selection switch on the side of the unit (wiring diagram 1).

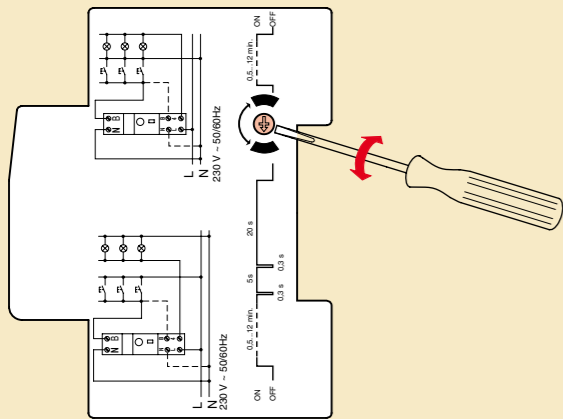


Diagram 1: without pre-warning

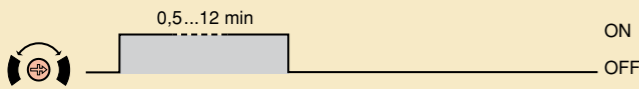
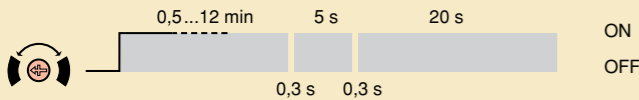


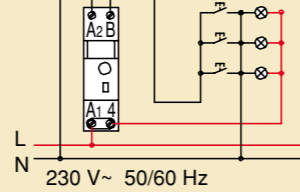
Diagram 2: with pre-warning



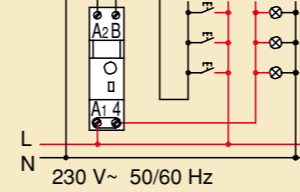
Connection diagram

Rex800 / Rex600Plus

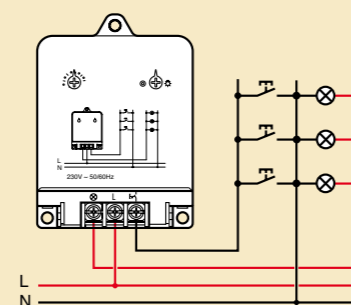
3-wire connection RexEM



4-wire connection RexEM



3-wire connection Rex600



3-wire connection

The 3-wire connection may only be installed in existing installations which were designed in accordance with VDE 0100/1265.

Pre-warning function in accordance with DIN 18015-2

Increased staircase security due to pre-warning according to DIN 18015-2. The staircase light time switches with pre-warning function emit a pre-warning signal sequence, in which the light switches off briefly (approx. 0.3 s) two times, approximately 25 seconds before the light is switched off. This gives the user with the chance to reach the light switch in enough time to switch the light back on. For systems that use fluorescent lamps and energy-saving lamps, the period of time when the light is switched off (approx. 0.3 s) will be longer due to the brief time delay when the lamp is switched back on.

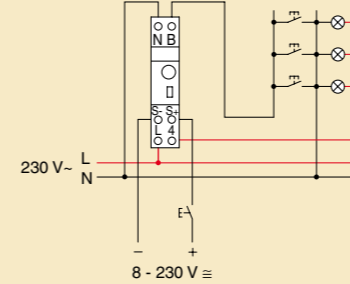
Rex staircase light time switch

Rex product range

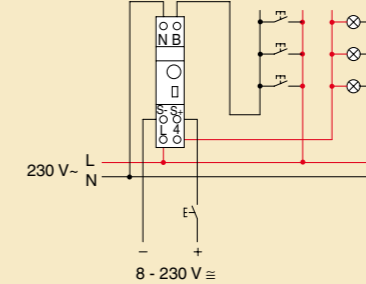
Connection diagram

Rex800Multi

3-wire connection



4-wire connection

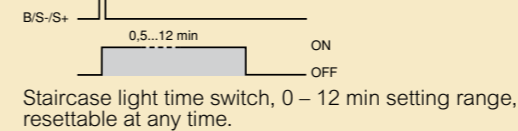


Notes: Function B is set by default.

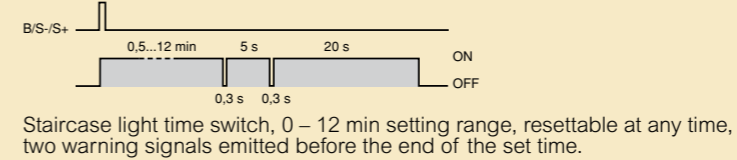
Functions E and F are not suitable for staircase light time switches in multi-family buildings.

Possible functions

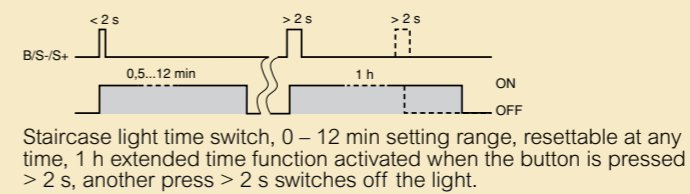
A



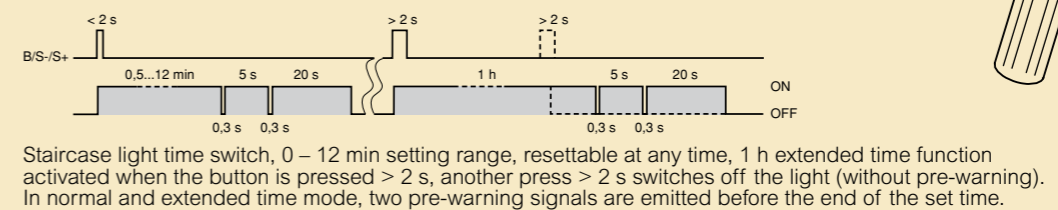
B



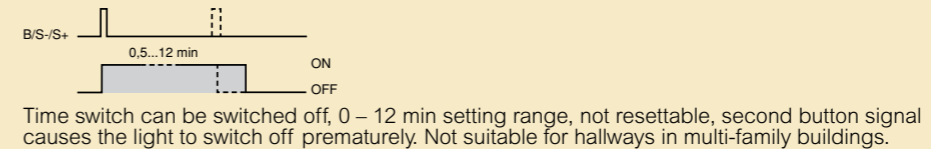
C



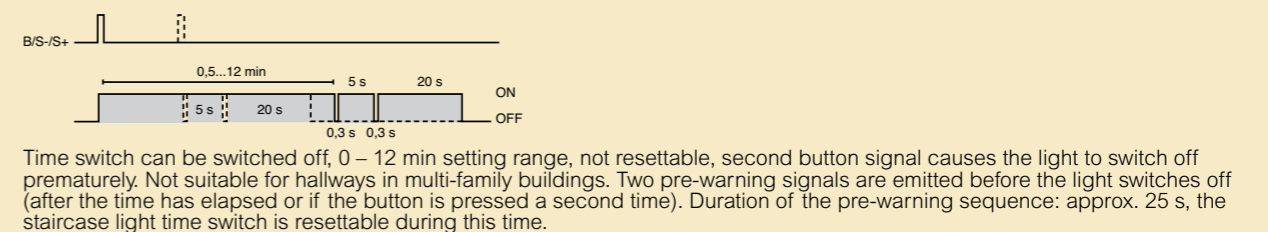
D



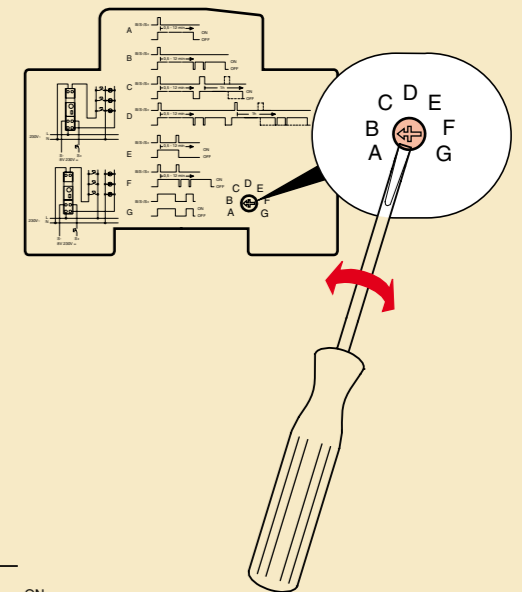
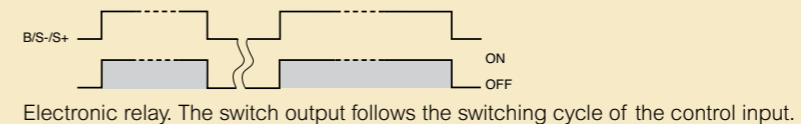
E



F



G



MicroRex – Analogue Time Switch Technology

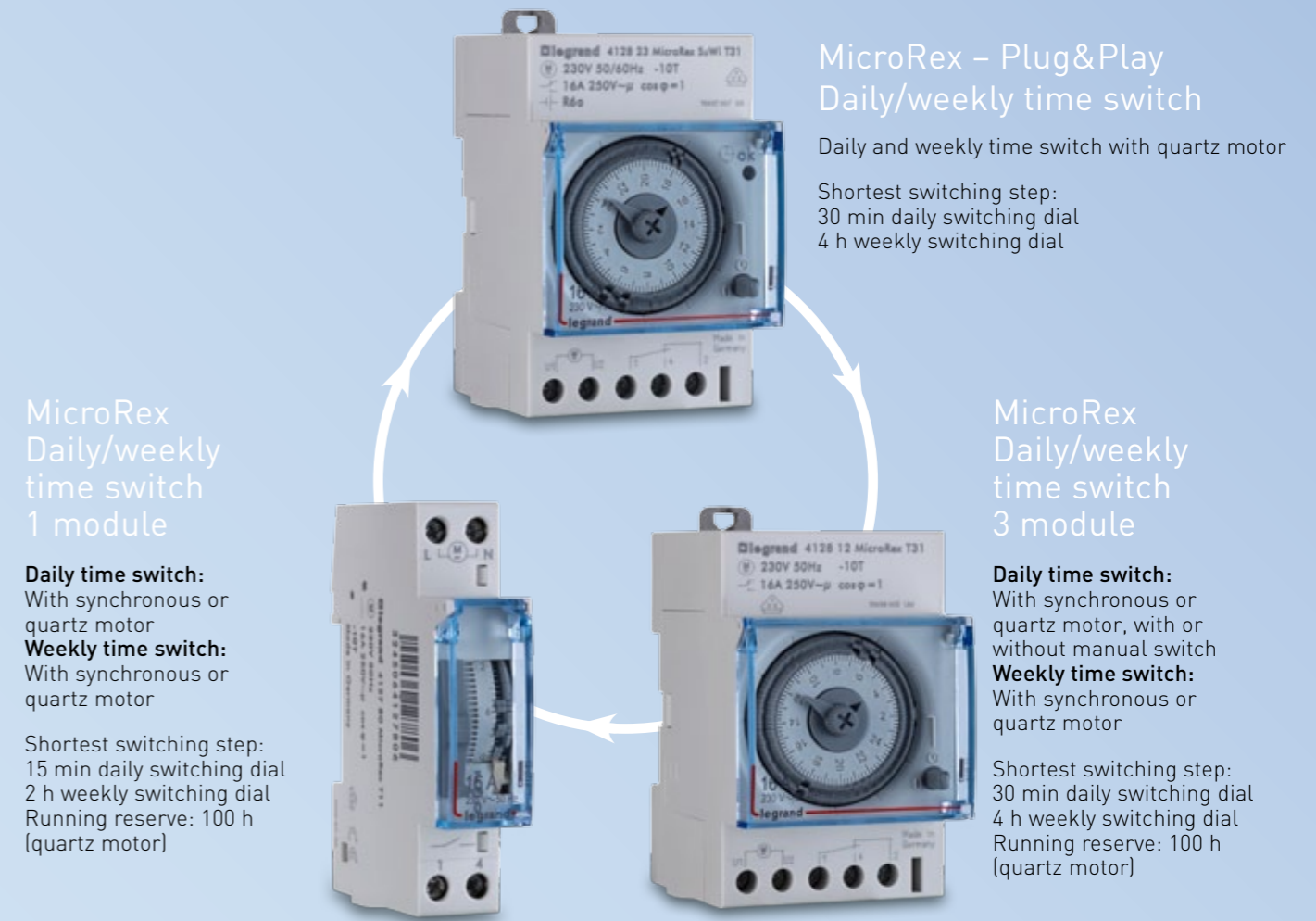
Tried and true analogue time switch technology from the Rex brand: The trusted MicroRex family offers easy operation and programming by setting the analogue switching dial. Automatic and immediate setting of the time during startup as well as automatic switching for summer/winter time (daylight saving time) – not to mention the extremely low clock precision.

MicroRex T31/W31 Su/Wi

- Extremely easy plug-and-play installation
- Automatic setting of the time using fast-run mode
- Automatic switching for summer/winter time (daylight saving time)
- LED status indicator
- Precision clockwork: +/- 0.2 s/day clock precision
- Captive switching segments
- Manual switching: ON/automatic/OFF
- Sealable cover
- Changeover contact as switch output
- Normally open contact as switch output (single-module time switches) ¹⁾
- Removable battery ¹⁾
- Barcode on unit
- In accordance with DIN VDE 0631 Part 1 and Part 2-7, IEC 60730-1 and 60730-2-7, EN 60730-1

¹⁾ Not for MicroRex T31/W31 Su/Wi

Overview of the Time Switches



MicroRex T31/W31 Su/Wi

- Automatic setting of the time during startup
- Automatic switching for summer/winter time (daylight saving time)
- Automatic time reset after a power failure.

With the highest clock precision and a running reserve of 6 years.

Installation:

Plug-and-play technology makes installation of the MicroRex Su/Wi time switch quick and easy: just unpack it, set the switching times, connect it and you're finished! The MicroRex Su/Wi time switch now automatically sets the correct time and day in fast-run mode.



Summer/winter time:

The automatic summer/winter time (daylight saving time) switching function is as reliable, convenient and practical as the startup. Using plug-and-play technology, the MicroRex time switch automatically sets itself to the current time.



Time reset:

As soon as the mains voltage returns after a power failure, the time switch resets itself to the correct time automatically and with quartz-controlled precision. The internal precision clockwork has a clock precision of +/- 0.2 s/day.



Rex Analogue Time Switches

Daily/weekly time switches



In accordance with VDE 0631 Part 1 and Part 2-7, IEC 60730-1 and 60730-2-7, EN 60730-1 and 60730-2-7, manual switching ON/automatic/OFF, hourly/daily/weekly switching dial with captive segments, clock precision: +/- 5 min for the daily time switch, +/- 30 min for the weekly time switch, sealable cover, IP20 degree of protection, -10°C to +55°C operating temperature, with the advantages of the Lexic system

Packing units	Cat. no.	MicroRex – plug & play – 3 modules
1	4 128 23	MicroRex T31 Su/Wi – Daily time switch - Quartz motor, 230 V, 50/60 Hz - 1 changeover contact, 250 V/50 Hz, 16 A~ cos φ = 1 - 15 min switching increments
1	4 128 28	MicroRex W31 Su/Wi – Weekly time switch - Quartz motor, 230 V, 50/60 Hz - 1 changeover contact, 250 V/50 Hz, 16 A~ cos φ = 1 - 2 h switching increments - Shortest switching step: 4 h
1	4 128 12	MicroRex T31 – Daily time switch - Synchronous motor, 230 V, 50 Hz - 1 changeover contact, 250 V/50 Hz, 16 A~ cos φ = 1 - 15 min switching increments - Shortest switching step: 30 min
1	4 128 09	MicroRex T31F – Daily time switch - Without manual switch - 1 changeover contact, 250 V/50 Hz, 16 A~ cos φ = 1 - 15 min switching increments - Shortest switching step: 30 min
1	4 128 13	MicroRex QT31 – Daily time switch - Quartz motor, 230 V, 50/60 Hz - 1 changeover contact, 250 V/50 Hz, 16 A~ cos φ = 1 - 15 min switching increments - Shortest switching step: 30 min
1	4 128 10	MicroRex QT31F – Daily time switch - Without manual switch - Quartz motor, 230 V, 50/60 Hz - 1 changeover contact, 250 V/50 Hz, 16 A~ cos φ = 1 - 15 min switching increments - Shortest switching step: 30 min
1	4 128 14	MicroRex W31 – Weekly time switch - Synchronous motor, 230 V, 50 Hz - 1 changeover contact, 250 V/50 Hz, 16 A~ cos φ = 1 - 2 h switching increments - Shortest switching step: 4 h
1	4 127 95	MicroRex QW31 – Weekly time switch - Quartz motor, 230 V, 50/60 Hz - 1 changeover contact, 250 V/50 Hz, 16 A~ cos φ = 1 - 2 h switching increments - Shortest switching step: 4 h

Packing units	Cat. no.	MicroRex – 1 module
1	4 127 80	MicroRex T11 – Daily time switch - Synchronous motor, 230 V, 50 Hz - 1 normally open contact 250 V/50 Hz, 16 A~ cos φ = 1 - 15 min switching increments - Shortest switching step: 15 min
1	4 127 90	MicroRex QT11 – Daily time switch - Quartz motor, 230 V, 50/60 Hz - 1 normally open contact 250 V/50 Hz, 16 A~ cos φ = 1 - 15 min switching increments - Shortest switching step: 15 min
1	4 127 83	MicroRex W11 – Weekly time switch - Synchronous motor, 230 V, 50 Hz - 1 normally open contact 250 V/50 Hz, 16 A~ cos φ = 1 - 2 h switching increments - Shortest switching step: 2 h
1	4 127 94	MicroRex QW11 – Weekly time switch - Quartz motor, 230 V, 50/60 Hz - 1 normally open contact 250 V/50 Hz, 16 A~ cos φ = 1 - 2 h switching increments - Shortest switching step: 2 h
1	4 128 59	Accessories Wall bracket - For surface-mounting - For 3-module MicroRex - Including terminal cover

Type	230 V ~ 50 Hz	230 V ~ 50/60 Hz	120 V ~ 60 Hz	120 V ~ 50 Hz	120 V ~ 50/60 Hz
MicroRex T31 Su/Wi	4 128 23				
MicroRex W31 Su/Wi	4 128 28				
MicroRex T31	4 128 12			4 128 16	
MicroRex QT31		4 128 13			4 128 11
MicroRex W31	4 128 14			4 128 17	
MicroRex QW31		4 127 95			4 128 18
MicroRex T11	4 127 80		4 127 81		
MicroRex QT11		4 127 90			4 127 91
MicroRex W11	4 127 83				
MicroRex QW11		4 127 94			4 127 96
Type	9 - 48 V, AC/DC				
MicroRex QT11	4 128 20				

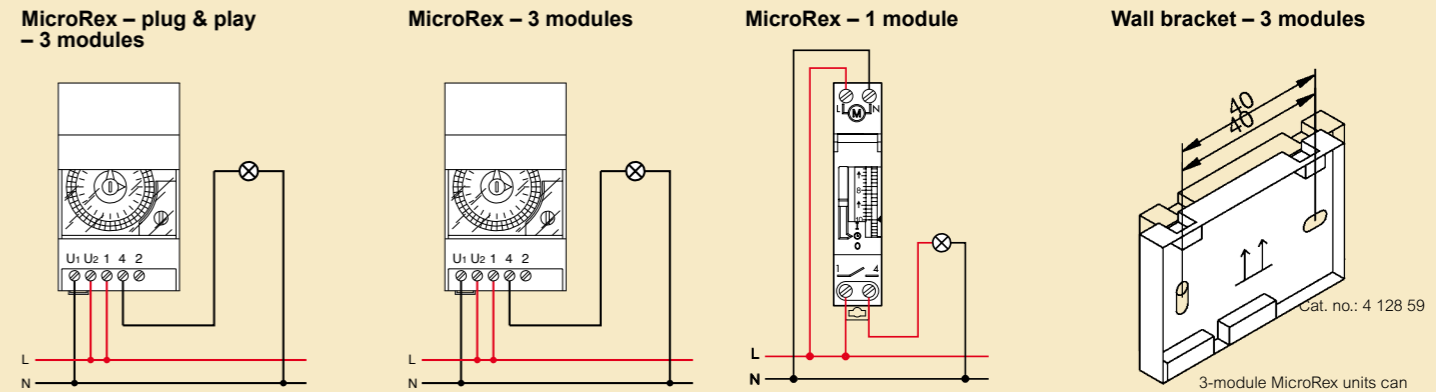
Rex Analogue Time Switches

Daily/weekly time switches

Technical specifications

Type	MicroRex T31 Su/Wi	MicroRex W31 Su/Wi	MicroRex T31	MicroRex QT31	MicroRex W31	MicroRex QW31	MicroRex T11	MicroRex QT11	MicroRex W11	MicroRex QW11
Number of modules of 17.5 mm each	3						1			
Number of channels	1	1	1	1	1	1	1	1	1	1
Drive type	quartz	quartz	synchronous	quartz	synchronous	quartz	synchronous	quartz	synchronous	quartz
Switching dial	24 h	7 days	24 h	24 h	7 days	7 days	24 h	24 h	7 days	7 days
Running reserve	6 years	6 years	none	100 h	none	100 h	none	100 h	none	100 h
Switching increment	15 min	2 h	15 min	15 min	2 h	2 h	15 min	15 min	2 h	2 h
Shortest switching step	30 min	4 h	30 min	30 min	4 h	4 h	15 min	15 min	2 h	2 h
Switching step	+/- 5 min	+/- 30 min	+/- 5 min	+/- 5 min	+/- 30 min	+/- 30 min	+/- 5 min	+/- 5 min	+/- 30 min	+/- 30 min
Clock precision	0.2 s/day	0.2 s/day	mains synchronised	2.5 s/day	mains synchronised	2.5 s/day	mains synchronised	2.5 s/day	mains synchronised	2.5 s/day
Switching capacity	16 A~									
• Ohmic 230 V~ cos φ = 1	4 A~									
• Incandescent lamp 230 V~	12 A~									
• Inductive 230 V~ cos φ = 0.6										
Switch output	1 changeover contact	1 changeover contact	1 changeover contact	1 changeover contact	1 changeover contact	1 changeover contact	1 normally open contact	1 normally open contact	1 normally open contact	1 normally open contact
Operating temperature	-10 to +55°C									
Degree of protection	IP20									

Connection diagram



Application notes

MicroRex – Plug & play

Automatic switching for summer/winter time (daylight saving time):

The switching dates programmed into the time switch are valid for Central Europe. The switches occur at 2:00 a.m. CET or 3:00 a.m. CEST. The time switch sets itself to the correct time in fast-run mode.

Automatic setting during startup:

When the mains voltage returns after a power failure, the time switch automatically sets itself to the current time. As with the automatic BST/DST switch, this setting is performed in fast-run mode.

Manual setting:

The time switch setting should not be changed while the power supply is connected or while the time switch is in fast-run mode. This could cause an incorrect time to be displayed later. The internal clock mechanism cannot be influenced by external forces in any way. If the clock hand is incorrectly positioned, this can be corrected manually while the supply voltage is connected and after the automatic setting process is completed (LED is on or flashing).

Switching program during fast-run mode:

In fast-run mode, the set switching program is executed at a significantly increased speed.

LED indicator

MicroRex – Plug & play

LED off

No supply voltage or, if the supply voltage is connected, the time switch is in automatic setting mode. No current time.

LED on

The automatic setting process is completed and the BST/DST switch is activated. The time can be corrected manually if it is incorrect.

LED flashes

The automatic BST/DST switch is permanently deactivated, e.g. due to damage to the internal electronics caused by overvoltage. The time switch can continue to be operated with quartz-controlled precision and no running reserve. The time switch can only be corrected and set manually.



AlphaRex³/MicroRex
THE NEW PROGRAMMABLE TIME
SWITCHES

