TIME SWITCHES AND MODULAR CONTROL DEVICES

EASILY PROGRAMMABLE IMPROVED PRODUCTIVITY AND ENERGY SAVINGS

CATALOGUE
PAGES
INSIDE

GLOBAL SPECIALIST
IN ELECTRICAL AND DIGITAL BUILDING INFRASTRUCTURES

L┐ legrand®

ALPHAREX³
THE FULL PRODUCT RANGE

THE ALPHAREX³ FAMILY OF PROGRAMMABLE DIGITAL TIME SWITCHES SAVES ENERGY, REDUCES ELECTRICAL COSTS AND TIME WITH THE EASE OF INSTALLATION.

One unique software and data key for all digital time switches, for quick and easy programming and transferring programs to other time switches, as well as creating backup copies and securing data in distribution boards for future reference.

Identical function buttons and display for all time switches. Once you have mastered one, you can operate any model, regardless of the time switch or application.

Simple programming precise to the second with digital clock precision ±0.2 sec per day.

Manufactured by
Legrand in Germany

ALPHAREX³ PROGRAMMABLE WEEKLY TIME SWITCHES

- 1 channel with 56 programs
- 2 channels with 28 programs per channel

ALPHAREX³ ASTRO ASTRONOMICAL TIME SWITCHES

- Switches according to astronomical time or operates as a programmable weekly time switch
- 1 output with 56 programs
- 2 output with 28 programs per channel
  (No need to install a photoelectric cell)

DIGITAL BLUETOOTH TIME SWITCH

- Directly programmable with APP via Bluetooth
- 1 or 2 channel option
- Daily, Weekly, Yearly programs

DIGITAL BLUETOOTH TIME SWITCH
DAILY, WEEKLY, YEARLY, ASTRO

- Available in 1 or 2 channels
- 2 modules wide
- Daily, Weekly, Yearly program options
- Native Bluetooth: Directly program from smartphone with no need to touch the timer. No accessories required
- Data can be exported to/imported from the timer within the Bluetooth time switch app
- Passwords, location, and other settings can also be controlled via the app
- Data can be copied from one timer to another, even on a different project
- High precision timer (0.1 sec)
- 2 Din Clip at the back for ease of installation
- 5 year reserve battery life
- Ability to program directly from the timer

Applications:

Commercial and Residential

Ideal for school bells, pool pumps, air cons, garden lighting and water systems.

Bluetooth communication is available with mains connected. BLE = Bluetooth Low Energy. *Legrand strongly recommend the installation of modular contactors with all time switches.

MICROREX
ANALOGUE TIME SWITCH

THE TRUSTED MICROREX
ANALOGUE TIME SWITCHES
OFFER EASY OPERATION AND
PROGRAMMING BY SETTING
THE ANALOGUE SWITCHING
DIAL FOR SIMPLE APPLICATIONS.

Manufactured by
Legrand in Germany

MICROREX
DAILY/WEEKLY TIME SWITCH
1 MODULE

Daily time switch:
With synchronous or quartz motor

Weekly time switch:
With synchronous or quartz motor

• 15 min switching dial segment (daily)

• ± 5 min accuracy (daily)

• 2h min switching dial segment (weekly)

• ± 30 min accuracy (weekly)

• With and without 100h battery reserve

MICROREX
DAILY/WEEKLY TIME SWITCH
3 MODULE

Daily time switch:
With synchronous or quartz motor

Weekly time switch:
With synchronous or quartz motor

• 15 min switching dial segment (daily)

• ± 5 min accuracy (daily)

• 2h min switching dial segment (weekly)

• ± 30 min accuracy (weekly)

• With and without 100h battery reserve

ADVANTAGES OF WORKING
## WITH THE MICROREX SERIES

- Easy installation and set up
- Precision clockwork:
  ±0.2 sec per day clock precision
- Changeover contact as switch
  output (horizontal)
- Normally open contact (vertical)
- With and without removable
  100h battery reserve

SEALABLE COVER

CAPTIVE SWITCHING
SEGMENTS

CHANGOVER CONTACT
(HORIZONTAL), NORMALLY
OPEN CONTACT (VERTICAL)
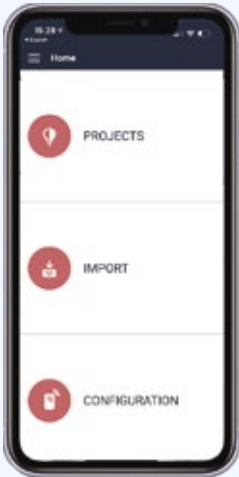
MANUAL SWITCHING:
ON/AUTOMATIC/OFF
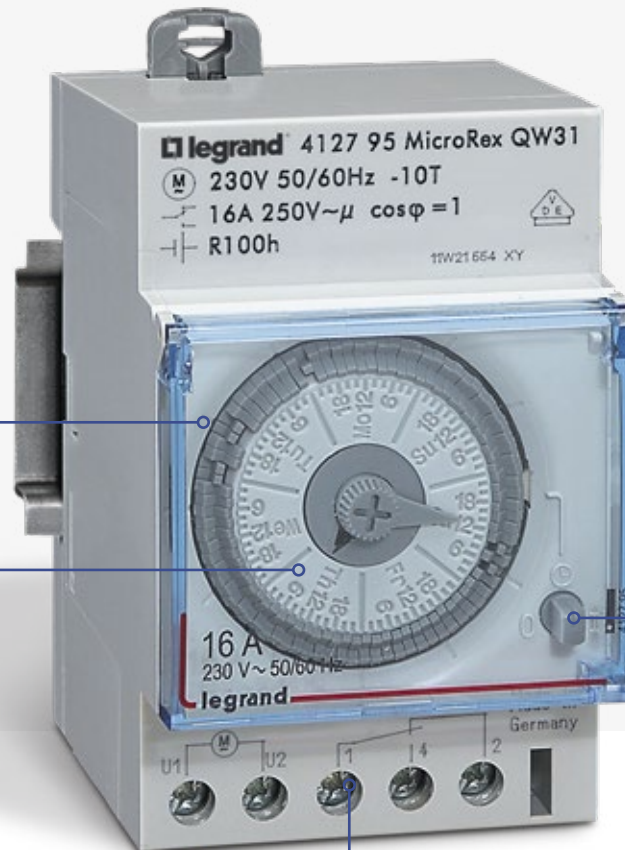
*Legrand strongly recommend the installation of modular contactors with all time switches.

HOW TO PROGRAM THE DIGITAL BLUETOOTH TIME SWITCH
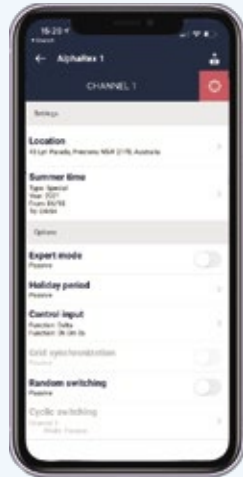
AlphaRex³ digital time switches with bluetooth

Weekly, yearly and astronomical time switches

| 412723 | 412724 | 412725 | 412726 |

All in 1 app

Advanced configuration
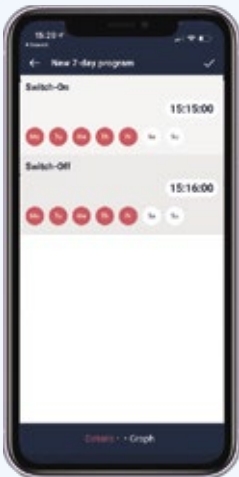
Daily, weekly and yearly programming

Upload data or import from existing timers

LEGRAND TIME SWITCH APP AVAILABLE NOW!

Download on the App Store

GET IT ON Google Play

Scan the QR code for more information

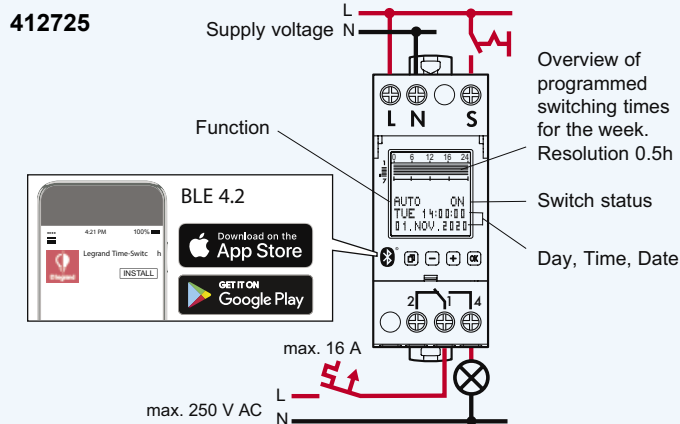| Pack	Cat. Nos	**AlphaRex³ Bluetooth low energy (BLE)**
		• Available in 1 or 2 channels
		• 2 modules wide
		• Daily, Weekly, Annual program options
		• Native Bluetooth: Directly program from smartphone with no need to touch the timer. No accessories required
		• Data can be exported to/imported from the timer within the Bluetooth time switch app
		• Passwords, location, and other settings can also be controlled via the app
		• Data can be copied from 1 timer to another, even on a different project
		• High precision timer (0.1 sec)
		• 2 Din Clip at the back for ease of installation
		• 5 Years battery in reserve
		• Screen on the timer in backup
1	412723	**AlphaRex³ D21 astro BLE** - 1 Channel - Weekly - Astro
1	412724	**AlphaRex³ D22 astro BLE** - 2 Channels - Weekly - Astro
1	412725	**AlphaRex³ DY21 BLE** - 1 Channel - Weekly; Yearly - Astro
1	412726	**AlphaRex³ DY22 BLE** - 2 Channels - Weekly; Yearly - Astro

AlphaRex³ digital time switches with bluetooth

Weekly, yearly and astronomical time switches

◼ Technical specifications

Type	AlphaRex³ BLE
Cat. no.	412723 / 412725
Nominal voltage	230V
	50/60Hz
Relay outputs	2 changeover contacts 16A 250V ~μ cos φ = 1
Accuracy	~0,1 s/day
Wire cross-sections	single-strand 1,5...4 mm² multi-strand 1,5...2,5 mm² max. 1,4Nm
Programs	56
Local coordinates	Resolution 1°/ 1' in EXPERT-Mode
Battery reserves	5 years
Storage temperature	-20°C to +60°C
Operating temperature	-20°C to +55°C
Transmission frequency	2400MHz...2483,5MHz
max. transmission power	1,58mW
Power consumption	ca. 1,5W

IP 20

◼ Technical specifications

Type	AlphaRex³ BLE
Cat. no.	412724 / 412726
Nominal voltage	230V
	50/60Hz
Relay outputs	1 changeover contacts 16A 250V ~μ cos φ = 1
Accuracy	~0,1 s/day
Wire cross-sections	single-strand 1,5...4 mm² multi-strand 1,5...2,5 mm² max. 1,4Nm
Programs	56
Local coordinates	Resolution 1°/ 1' in EXPERT-Mode
Control-cable length	max. 50m
Control signal	230V AC/ca. 2mA
Control-pulse duration	100...200ms
Delaytime	0min...23h 59min 59s
Battery reserves	5 years
Storage temperature	-20°C to +60°C
Operating temperature	-20°C to +55°C
Transmission frequency	2400MHz...2483,5MHz
max. transmission power	1,58mW
Power consumption	ca. 1W

IP 20

◼ Connection diagram

412725

Supply voltage L N

Function

BLE 4.2
Download on the App Store
GET IT ON Google Play
INSTALL

L N S

Overview of programmed switching times for the week. Resolution 0.5h

AUTO ON
TUE 14:00:00
01.NOV.2020

Switch status

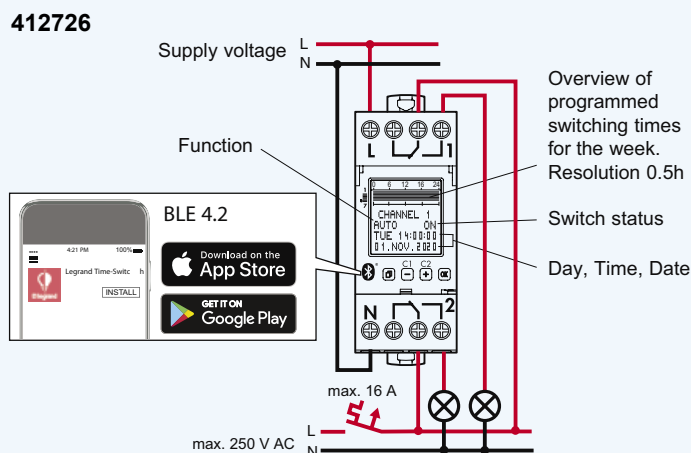Day, Time, Date

max. 16 A

max. 250 V AC   L N

Operating principle: Typ 1.B. S. T.
IEC/EN 60730-1, IEC/EN 60730-2-7
Montage: in distribution panel,

Degree of contamination: 2
Switch output, potential-free
Rated impulse voltage: 4 kV

◼ Connection diagram

412726

Supply voltage L N

Function

BLE 4.2
Download on the App Store
GET IT ON Google Play
INSTALL

L 1

CHANNEL 1
AUTO ON
TUE 14:00:00
01.NOV.2020

Overview of programmed switching times for the week. Resolution 0.5h

Switch status

Day, Time, Date

C1 C2

N 2

max. 16 A

max. 250 V AC   L N

Operating principle: Typ 1.B. S. T.
IEC/EN 60730-1, IEC/EN 60730-2-7
Montage: in distribution panel,

Degree of contamination: 2
Switch output, potential-free
Rated impulse voltage: 4 kV

Selection table

Type	Cat.No	Family Product	Channel number	Module number	Display	Button	Supply Voltage	Control Input	Timer Precision	with Bluetooth	Weekly	Astro	Yearly
							Hardware				**Software**		
AlphaRex³ Digital Time Switch 1 Channel Weekly Astro 230V Bluetooth	412723	Alpha³	1	2	yes	4	230 V	no	1s	yes	x	x	
AlphaRex³ Digital Time Switch 2 Channel Weekly Astro 230V Bluetooth	412724	Alpha³	2	2	yes	4	230 V	no	1s	yes	x	x	
AlphaRex³ Digital Time Switch 1 Channel Yearly Astro 230V Bluetooth	412725	Alpha³	1	2	yes	4	230 V	no	1s	yes	x	x	x
AlphaRex³ Digital Time Switch 2 Channel Yearly Astro 230V Bluetooth	412726	Alpha³	2	2	yes	4	230 V	no	1s	yes	x	x	x

AlphaRex³ digital time switches

Daily and weekly time switches

412631

Pack	Cat. Nos	**AlphaRex³**
		• 2 modules • 5-year clock working reserve • Li cell type battery (LiMnO$_2$) CR2477 • 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 • Switch times visible in weekly overview on display • With the following additional functions for added convenience: - Holiday program - Random function - Operating hours counter, counting range of up to 65,535h - 1h test - PIN code input lock • Expert mode for additional functions: - Cycle function, switch-on time can be set between 1s and 1h 59min 59s - Mains synchronous operation can be set • Backlight
1	412631	**AlphaRex³ D21, 1 channel** - Power supply 230V, 50/60 Hz - 1 Output contact, 250V a.c. 16A cos φ = 1 - 56 programs
1	412641	**AlphaRex³ D22, 2 channels** - Power supply 230V, 50/60 Hz - 2 Output contact, 250V a.c. 16A cos φ = 1 - 56 programs (28 per channel)

AlphaRex³ digital time switches

Astronomical time switches

412657

Pack	Cat. Nos	**AlphaRex³ Astro**
		• 2 modules • 5-year clock working reserve • Li cell type battery (LiMnO$_2$) CR2477 • Controlled directly by the distribution board, no separate light sensor required • For switching on/off lights and other electric devices according to the rising/setting of the sun • 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 • 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 • Switch times visible in weekly overview on display • With the following additional functions for added convenience: - Holiday program - Random function - Operating hours counter, counting range of Xp to 65,535 h - Control input (1-channel time switch, cat. no.: 412654), switch-off delay can be set from 0s to 23h 59min 59s - 1h test - PIN code input lock • Expert mode for additional functions: - Cycle function, switch-on time can be set between 1s and 1h 59min 59s - Control input "extra" (1-channel time switch, cat. no.: 412654) - Mains synchronous operation can be set • Backlight
1	412654	**AlphaRex³ D21 Astro, 1 channel** - Power supply 230V, 50/60 Hz - With control input - 1 Output contact, 250V a.c. 16A cos φ = 1 - 56 programs - Shortest switching step: 1s
1	412657	**AlphaRex³ D22 Astro, 2 channels** - Power supply 230V, 50/60 Hz - 2 Output contact, 250V a.c. 16A cos φ = 1 - 56 programs (28 per channel) - Shortest switching step: 1s

Scan the QR code
for more information

AlphaRex³ digital time switches

Yearly time switches

412872

412873

Pack	Cat. Nos	**Programming accessories**
1	412872	**Data key** - Import switching programs into the time switch, to do so select the "READ KEY" function on the time switch. - Transfer switching programs to the key using the "WRITE KEY" time switch function, this allows you to quickly and easily transfer programs to other time switches and/or to create backup copies
1	412873	**PC adapter for USB port** • Can be used to create, save and transfer program settings for multifunction and multi-program time switches, Cat. No. 31/41/54/57 • Data is transferred to the program transfer key Cat. No. 4128 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® Vista, Windows® XP, Windows® Vista, Windows® 7, Windows® 8

Selection table

Type	Cat. No	Output	Daily program	Weekly program	Astronomical program	Yearly program	Special program	Holiday program	Random function	Operating hours counter	Relay function	Channel-switching function	Offset correction function	Pulse function	Cycle function	Control input	Synchronous operation can be set	1 h test	PIN code	PC programming	Contrast adjustment	Backlight
AlphaRex³ D21	412631	1	✓	✓				✓	✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓
AlphaRex³ D22	412641	2	✓	✓				✓	✓	✓	✓	✓		✓	✓		✓	✓	✓	✓	✓	✓
AlphaRex³ D21 Astro	412654	1	✓	✓	✓			✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
AlphaRex³ D22 Astro	412657	2	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓

MicroRex Programmable digital time switch

Weekly time switch

003710

| Pack	Cat. Nos	**MicroRex DII**
		• Time-saving programming by selection of daily blocks, daily blocks individually adjustable or selection from preset blocks Mon-Fri and Mon-Sun • Permanent ON or OFF (Override) • Power reserve 3 years for date, time and switching program • Accuracy +/- 1 sec./Day
1	003710	**MicroRex D11, 1 channel** - 1 NO contact - 250 V/50 Hz 16 A - cos Ø = 1 - 28 programmes - Shortest switching-time 1 min - Number of modules: 1

MicroRex programmable time switches with digital display

Weekly time switch

■ Technical specifications

| Type	MicroRex D11
Cat. no.	003710
Nominal voltage	230V
	50/60Hz
Number of modules of 17.5mm each	1
Number of channels	1
Running reserve	3 years[1]
Shortest switching step	1 min
Clock precision	1 second
Switching capacity Ohmic 230V a.c. cos φ = 1	16A
Inductive 230V a.c. cos φ = 0.6 Incandescent lamp load	1200W
Fluorescent lamp	1400VA
series compensated Energy-saving lamp	100W
Switch output	1 changeover contact
Programs	28
Operating temperature	-10°C to +55°C
Degree of protection	IP20 (mounted in distribution board)
Power consumption	0.9W

■ Connection diagram
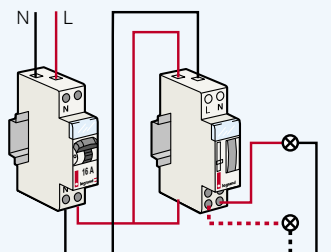
MicroRex Analogue time switches

Daily and weekly time switches

412790   412795
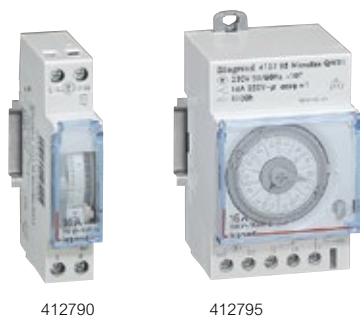
Programmed via captive segment
1-module device: min. 1 segment
3-module device: min. 2 segments
Power supply: 230V a.c. - 50/60 Hz
3-position override switch "ON-AUTO-OFF" on front panel
Manual changeover to summer/winter time
1 outlet 16A - 250V a.c. - μ cos φ = 1

Pack	Cat. No.	**Daily programme**	
		1 segment = 15 minutes Accuracy: ± 5 minutes	
		Vertical dial	
		Minimum switching time: 15 minutes N/O contact	Number of modules
1	412780	Without battery reserve	1
1	412790	With 100h battery reserve	1
		Horizontal dial	
		Minimum switching time: 15 minutes Changeover switch	
1	412812	Without battery reserve	3
1	412813	With 100h battery reserve	3

Pack	Cat. No.	**Weekly programme**	
		1 segment = 2 hours Accuracy: ± 30 minutes	
		Vertical dial	
		Minimum switching time: 2 hour N/O contact	Number of modules
1	412794	With 100h battery reserve	1
		Horizontal dial	
		Minimum switching time: 4 hour changeover switch	
1	412795	With 100h battery reserve	3

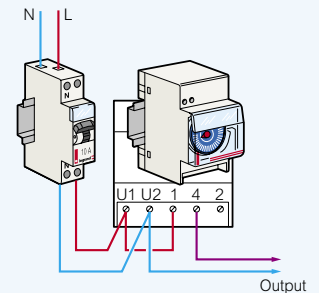# Programmable time switches

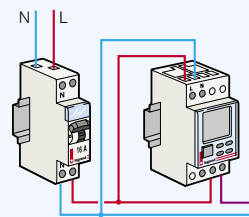## Analogue and digital wiring
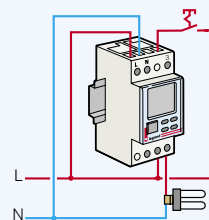
■ Diagrams

Cat. No. 412780/90/94
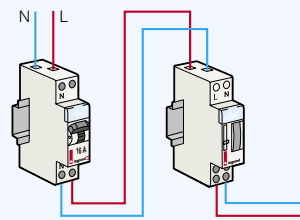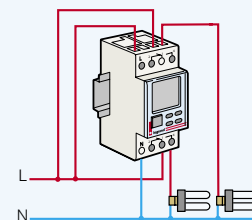
Cat. No. 412812/13 and 412795

Output

Cat. No. 412631

Cat. No. 412654

Cat. No. 412657

*Legrand strongly recommend the installation of modular contactors with all time switches.

■ Digital time switches characteristics

Cat. No.	Prog. time	Min. programme settings	Working reserve	Summer/ winter time	Outputs 16A	Nb of prog.	Nb of modules
003710	7 d	1 min	6 years	auto	1	28	1
412631	24 h/7 d	1 s	5 years	auto	1	56	2
412641	24 h/7 d	1 s	5 years	auto	2	2 x 28	2

■ Analogue time switches characteristics

Cat. No.	Programme	Segment	Min. switching time	Working reserve	16A output via contact		Nb of modules
					N/O	Chang. S.	
412812	24 h	15 min	30 min	without	-	1	3
412813	24 h	15 min	30 min	100 h	-	1	3
412780	24 h	15 min	15 min	without	1	-	1
412790	24 h	15 min	15 min	100 h	1	-	1
412794	7 d	2 h	2 h	100 h	1	-	1
412795	7 d	2 h	4 h	100 h	-	1	3

Scan the QR code for more information

Analogue time switches

Daily/Weekly programme

| 6 499 14 | 0 499 26 | 049756 | 0499 83 | 0495 94 |

Power supply 230 V∿
Override switching "ON" or "OFF" in front face
1 output via changeover contact
(2 changeover contacts for Cat.No 0 499 26)

Pack	Cat. Nos	**Daily programme**
1	6 499 14 🌱	**20 A - 250 V∿ - µ cos φ = 1** Shortest switching time : 30 minutes (1 segment = 10 minutes) Switching accuracy: + 5 minutes
1	649917	No reserve **20 A - 250 V± - µ cos ø = 1 1** Shortest switching time: 30 minutes (1 segment = 10 minutes) Switching accuracy : + 5 minutes

Pack	Cat. Nos	**Defrosting time switch**
1	0 499 26 🌱	Time switch for short periods for control of defrosting, regularly repeated switching of pumps, feed conveyors, sprinkler systems, periodic lubrication of machines 16 A - 250 V∿ µ cos φ = 1 IP 30 Daily programme The timer can repeat one or two settable short programmes within 24 hours Shortest switching sequence 2.5 hours - up to 9 times 1 switching step = 1 segment = 30 min. 50 Hz Defrosting time from 1 to 60 minutes per contact

MaxiRex

Conform to EN 60730-1 and EN 60730-2-7
Supply voltage: 230 V∿ ±10%
3 position changeover switch
With manual override
Voltage free contacts
Mounting options:
- can be surface mounted
- can be panel mounted using Cat. No. 0498 32
- can be clipped to DIN rail ⌐ using Cat. No. 0044 09
With 72 x 72 mm display to DIN EN 60715 Part C

24 hour programme
- Programmable for 30 minutes minimum at 10 minute intervals
- Accuracy : ±5 minutues per day

Pack	Cat. Nos	
1	0497 50 🌱	**MaxiRex T** - Without working reserve – 50 Hz
1	0497 54 🌱	**MaxiRex QT** With 100 hr working reserve – 50/60 Hz

7 day programme
- Programmable for 3 hours minimum at 1 hour intervals
- Accuracy : ±30 minutes per day

Pack	Cat. Nos	**Weekly programme**
1	0 497 56 🌱	**16 A - 250 V∿ - µ cos φ = 1** - Shortest switching time : 3 hours - (1 segment = 1 hour) - Switching accuracy : + 20 minutes - Working reserve : 500 h with quartz controlled motor
1	0 044 09	- Adaptor for fixing time switch on rail EN 50022 ⌐

Pack	Cat. Nos	**EconoRex MT**
		Conforms to EN 60730-1 and EN 60730-2-7 Supply voltage : 230 V∿ 50 Hz Mounting options: - can be surface mounted using Cat. No. 0495 94 - can be panel mounted
1	0499 83 🌱	**EconoRex MT** BTAP without working reserve 20 A output Shortest switching step : 20 minutes Switching accuracy : ±5 minutes

| Pack	Cat. Nos	**Fixing accessories**
1	0495 94	Support frame for surface mounting
5	0498 32	Clip-on support frame for panel mounting
5	0044 09	DIN rail ⌐ adaptor

Analogue time switches

## Daily/Weekly programme

■ Technical information

Type Cat. No.	MaxiRex T 0497 50	MaxiRex QT 0497 54	EconoRex MT 0499 83
Supply voltage	230 V∿ +10% −15%		
Frequency	50 Hz	50/60 Hz	50 Hz
Switching capacity : cos = 1 cos = 0□6 incand. lamp	16 A 10 A 1 000 W		16 A 8 A 1 000 W
Contact	1 c/o SPDT	1 c/o SPDT	1 c/o
Working reserve	None	100 hrs	None
Min. switching time	30 mins		15 mins
Interval	10 mins		15 mins
IP rating	IP 30		
Storage temp.	−10 °C to +60 °C		
Operating temp.	0 °C to +55 °C		

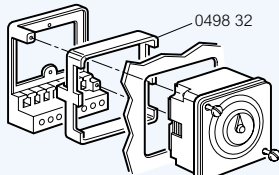## ■ Dimensions (mm)
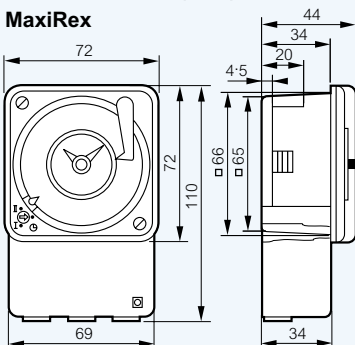
MaxiRex

■ MaxiRex mounting
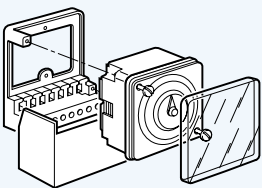
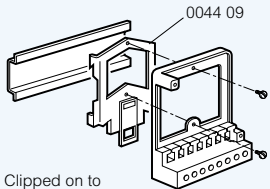### Wall mounting

Panel mounting

0498 32

Panel mounting with support
Cat. No. 0498 32
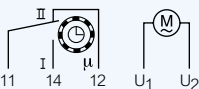to be ordered separately

DIN rail mounting

0044 09

Clipped on to
DIN rail EN 60715 ⌐
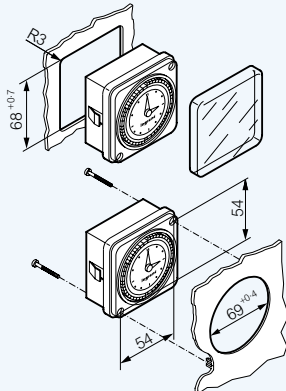Adaptor to be ordered
separately (Cat. No. 0044 09)

■ Wiring diagrams

MaxiRex and EconoRex

■ EconoRex mounting

Panel mounting

■ Dimensions

Cat.No 6 499 14
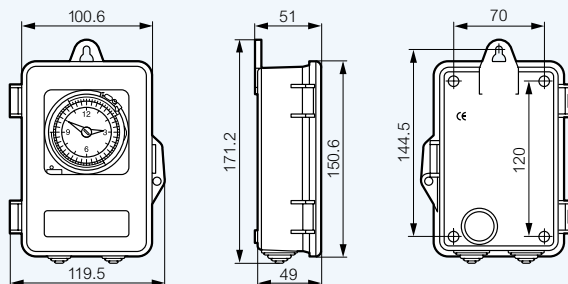
Cat.No 0 497 56
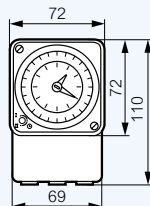
■ Technical Characteristics

Analogue time switches 20 A
Conform to EN 50022, EN 55014-1, EN 55014-2, IEC 60730-1,
IEC 60730-2-7, VDE 0631-1 and VDE 0631-2-7

For special applications with heavy loads like controlling:
- the lighting of commercial boards / sign boards
- water heaters
- air conditioners
- hydrochlorinators
- heating / ventilation systems
- street lighting
- blowers
- pool heaters
- electric fences
- filters, pumps and conveyers

CX³ modular contactors with handle

from 16A to 63A

412544

412556

412548

412551

Conform to IEC/EN 61095
Power supply busbar on top (up to 25A)

Power contactors with 24V a.c. coil and handle

Manual override for test and repair function, carried out via the handle
Permanent "ON" or "OFF" without automatic reset

2 pole - 250V a.c.

Pack	Cat. No.	I max	Connection	Type of contact	Number of modules
1	412514	25A	24V	2 N/O	1
1	412515	40A		2 N/O	2
1	412516	63A		2 N/O	2

4 pole - 400V a.c.

Pack	Cat. No.	I max	Connection	Type of contact	Number of modules
1	412517	25A	24V	4 N/O	2
1	412518	40A		4 N/O	3
1	412519	63A		4 N/O	3

Low noise power contactors with 230V a.c. coil and handle

2 pole - 250V a.c.

Pack	Cat. No.	I max	Connection	Type of contact	Number of modules
1	412558	25A	230V	2 N/O	1
1	412559	40A		2 N/O	2
1	412560	63A		2 N/O	2

4 pole - 400V a.c.

Pack	Cat. No.	I max	Connection	Type of contact	Number of modules
1	412561	25A	230V	4 N/O	1
1	412562	40A		4 N/O	2
1	412563	63A		4 N/O	2

Power contactors with 230V a.c. coil and handle

Manual override for test and repair function, carried out via the handle
Permanent "ON" or "OFF" without automatic closing of the contactor

2 pole - 250V a.c.

Pack	Cat. No.	I max	Connection	Type of contact	Number of modules
4	412544	25A	230V	2 N/O	1
1	412545	40A		2 N/O	2
1	412547	63A		2 N/O	2
1	412548	63A	230V	2 N/C	2

3 pole - 400V a.c.

Pack	Cat. No.	I max	Connection	Type of contact	Number of modules
1	412549	40A	230V	3 N/O	3
1	412550	63A		3 N/O	3

4 pole - 400V a.c.

Pack	Cat. No.	I max	Connection	Type of contact	Number of modules
2	412551	25A	230V	4 N/O	2
1	412553	40A		4 N/O	3
1	412556	63A		4 N/O	3
1	412557	63A	230V	4 N/C	3

Scan the QR code
for more information

CX³ modular contactors without handle
from 16A to 63A

412523   412535

Auxiliaries
for CX³ modular contactors

412429   412431

Conform to IEC/EN 61095
Space for power supply busbar on top (up to 25A)

Power contactors with 230V a.c. coil

2 pole - 250V a.c.

Pack	Cat. No.	I max	Connection	Type of contact	Number of modules
4	412521	16A	230V	N/C + N/O	1
10	412523	25A	230V	2 N/O	1
1	412527	63A		2 N/O	2
1	412524	25A	230V	2 N/C	1

4 pole - 400V a.c.

Pack	Cat. No.	I max	Connection	Type of contact	Number of modules
5	412535	25A	230V	4 N/O	2
1	412541	63A		4 N/O	3
1	412536	25A	230V	4 N/C	2
1	412533	25A	230V	2 N/C + 2 N/O	2

Signalling auxiliaries for contactors

Auxiliary changeover switch
Used to signal the position status of the contacts on the product to which it is connected

For 1 module contactors 16A to 25A

Pack	Cat. No.	I max	Voltage	contact	Number of modules
1	412429	5A	250V a.c.	N/C + N/O	0.5

For 2 module contactors 25A

Maximum 2 auxiliary devices per contactor
Fitted on left-hand side of contactor

1	412430	5A	250V a.c.	N/C + N/O	0.5

For 40 and 63A contactors

Maximum 1 auxiliary device per contactor
Fitted on left-hand side of contactor

1	412431	5A	250V a.c.	N/C + N/O	0.5

Scan the QR code
for more information

Power contactors CX[3]

■ Technical characteristics

- Rated impulse withstand voltage (Uimp): 4 kV
- Mechanical endurance (no. of operating cycles): 10^6 cycles
- Operating temperatures: - 25 °C to + 40 °C
- Storage temperatures: - 40 °C to + 70 °C

Contactor protection against short circuits according to standard EN 61095, conditional short-circuit current:
- Iq = 6 kA for 16 to 25 A contactors
- Iq = 3 kA for 40 to 63 A contactors
Circuit breaker or gG fuse rated:
- ≤ 16 A for 16 A rating
- ≤ 40 A for 40 A rating
- ≤ 25 A for 25 A rating
- ≤ 63 A for 63 A rating

• Consumption of a contactor control coil

	16 A and 25 A power contactors				
Coil voltage	24 V∼		230 V∼ low noise	230 V∼	
Current	16 A and 25 A	25 A	25 A	16 A and 25 A	16 A and 25 A
Type of contact	NC + NO 2 NO	4 NO	2 NO	NC + NO 2 NO 2 NC	2 NC + 2 NO 4 NO 4 NC
Dimensions	1 mod.	2 mod.	1 mod.	1 mod.	2 mod.
Holding current	200 mA	300 mA	12 mA	20 mA	20 mA
Inrush current	970 mA	2500 mA	60 mA	90 mA	200 mA

	40 A and 63 A power contactors			
Coil voltage	24 V∼		230 V∼	
Current	40 A and 63 A	40 A and 63 A	40 A and 63 A	40 A and 63 A
Type of contact	2 NO	4 NO	2 NO 2 NC	3 NO 4 NO 4 NC
Dimensions	2 mod.	3 mod.	2 mod.	3 mod.
Holding current	250 mA	270 mA	15 mA	30 mA
Inrush current	1750 mA	1500 mA	150 mA	200 mA

• Recommendations
Insert a spacing module (Cat.No 4 063 07 p. 73):
- every two contactors when the ambient temperature is below 40 °C
- every contactor when the ambient temperature is between 40 and 60 °C

Contactor rating	40 °C	50 °C	60 °C
Ie = 16 A	16 A	14 A	12 A
Ie = 25 A	25 A	22 A	20 A
Ie = 40 A	40 A	36 A	32 A
Ie = 63 A	63 A	57 A	50 A

• Max. connection cross-section in mm²

Conductor type	Ratings ≤ 25 A	Ratings 40 & 63 A
Rigid	6^2 or 2×2.5^2	25^2 or 2×10^2
Flexible	6^2 or 2×2.5^2	25^2 or 2×10^2
Flexible with single end cap	6^2	16^2
Flexible with double end cap	2×4^2	2×16^2

■ Contactor selection charts (number of lamps per contactor)

• Incandescent lamps

	Tungsten and halogen filaments 230 V∼							
Nominal wattage	40 W	60 W	75 W	100 W	150 W	200 W	500 W	1000 W
16 A	45	30	24	19	13	10	4	2
25 A	60	48	38	30	20	15	6	3
40 A	96	77	61	48	32	24	10	5
63 A	154	123	97	77	51	38	15	8

	ELV halogen bulbs with ferromagnetic ballast						ELV halogen bulbs with electronic ballast					
Nominal wattage	20 W	35 W	50 W	75 W	100 W	150 W	20 W	35 W	50 W	75 W	100 W	150 W
16 A	32	20	15	12	9	6	60	40	28	18	14	9
25 A	52	30	24	16	12	8	80	50	40	26	20	13
40 A	68	39	31	21	16	10	112	70	56	36	28	18
63 A	88	51	41	27	20	14	157	98	78	51	39	25

■ Contactor selection charts (number of lamps per contactor)(continued)

• LED lamps

Nominal wattage	Non-dimmable LED lamps (without driver)									
	2 W	5 W	7 W	9 W	12 W	18 W	22 W	30 W	40 W	50 W
16A	16	16	16	16	16	15	14	12	10	9
25A	30	30	30	30	30	27	25	22	18	15
40A	90	90	85	85	85	80	75	65	50	37
63A	150	150	140	140	140	115	100	80	70	55

Nominal wattage	Dimmable LED lamps (equipped with driver)									
	2 W	5 W	7 W	9 W	12 W	18 W	22 W	30 W	40 W	50 W
16A	40	40	40	35	35	33	30	27	23	20
25A	65	65	65	60	60	56	51	45	33	30
40A	170	170	170	162	162	129	113	95	77	65
63A	265	265	265	260	260	214	176	139	121	105

• Fluorescent tubes with electronic ballast

Nominal wattage	Single fluorescent				Double fluorescent		
	18 W	30 W	36 W	58 W	2 x 18 W	2 x 36 W	2 x 58 W
16 A	72	42	36	22	36	20	12
25 A	110	68	58	36	56	30	19
40 A	165	102	87	54	84	45	29
63 A	248	153	131	81	126	68	43

Nominal wattage	Triple fluorescent (series compensated)		Quadruple fluorescent (series compensated)	
	3 x 14 W	3 x 18 W	4 x 14 W	4 x 18 W
16 A	34	26	26	20
25 A	46	38	37	28
40 A	62	51	52	39
63 A	84	69	73	55

Nominal wattage	Compact fluorescent with built-in electronic power supply				
	7 W	11 W	15 W	20 W	23 W
16 A	120	80	64	50	43
25 A	200	125	90	70	60
40 A	280	175	126	98	84
63 A	392	245	176	137	118

• Discharge lamps with compensation

Nominal wattage	Metal halogenide						Low pressure sodium vapour					
	35 W	70 W	100 W	150 W	250 W	400 W	18 W	35 W	55 W	90 W	135 W	180 W
16 A	10	6	5	3	2	1	12	6	5	3	2	2
25 A	15	9	7	5	3	2	20	10	7	5	3	3
40 A	23	14	11	8	5	3	30	15	11	8	5	5
63 A	34	20	16	11	7	5	45	23	16	11	7	7

Nominal wattage	High pressure sodium vapour					High pressure mercury vapour				
	70 W	150 W	250 W	400 W	1000 W	50 W	80 W	125 W	250 W	400 W
16 A	8	7	5	3	1	11	8	6	3	2
25 A	10	9	6	4	2	15	10	8	4	3
40 A	15	14	9	6	3	21	14	11	6	4
63 A	23	20	14	9	5	29	20	16	8	6

Nominal wattage	High pressure mixed			
	100 W	160 W	250 W	400 W
16 A	9	6	4	2
25 A	11	7	5	3
40 A	14	9	7	4
63 A	19	12	8	5

Fluorescent lamps with ferromagnetic ballast, **please consult us**

Delay Timers

12 to 230V a.c. and d.c.

| 004740 | 004741 | 004742 | 004700 | 004743 | 004745 | 004744 |
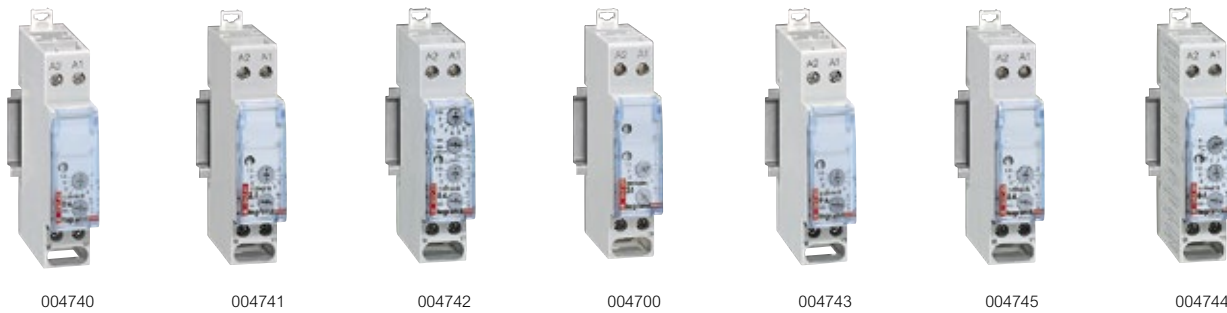
For controlling the switching ON or OFF of a circuit (lighting, ventilation, automation, signalling) in operation for a specific time from 0.1sec to 100hrs
Supply voltage: 12 to 230V a.c. (50/60 Hz) and ⎓
Output: 8A - 250 V a.c. - μ cos φ = 1 per inverter contact

Pack	Cat. No.	Delay timers	Number of modules
1	004740	**ON delay** Delays load switch-on (alarm, lighting, contactor)	1
		The time period starts when the relay is switched ON. At the end of the time period (T), the load is switched ON	
1	004741	**OFF delay** Delays load switch-off (ventilation, etc.)	1
		The time period (T) starts with the opening of the non-illuminated switch or pushbutton At the end of the time period, the load is switched OFF	
1	004742	**Flashing** For switching ON and OFF a load (lighting, sounder) for different times and cyclically	1
1	004700	**Motor start (star / delta)** For starting a load (motor) in 2 steps Double star-delta timing	1

Pack	Cat. No.	Delay timers	Number of modules
1	004743	**Timer (pulse)** For switching a load ON for a specific time (contactor)	1
		The time period (T) starts with the closing of the non-illuminated switch or pushbutton At the end of the time period, the load is switched OFF	
1	004745	**Wipe contact flick contactor** For switching a load ON for a specific time	1
		The time period (T) starts when the relay is switched ON At the end of the time period (T), the load is switched OFF	
1	004744	**Multifunction** • ON delay • OFF delay • ON/OFF delay • Timer (pulse) • Timer and passing contact • Flashing • Totaliser on delay • Totaliser delay on power-up	1

Scan the QR code
for more information

AlphaRex³ digital time switches

BLUETOOTH SET UP

■ Pincode

The factory setting for pin code entry is PASSIVE.If the pin code is set to ACTIVE, the access code is preset to 123123. This is unless the pin code was changed in the Legrand Time-Switch app.

- The Legrand Time-Switch app can be used to change the access code.
- A maximum of 8 smartphones/tablets can be simultaneously paired with a timer.
- If more smartphones/tablets need to be paired, the oldest pairing will be deleted.
- The standard time switch name (AlphaRex) can be changed using the Legrand Time-Switch app.

If PASSIVE is selected, or after a reset, the access lock is removed. The access code set remains unchanged.
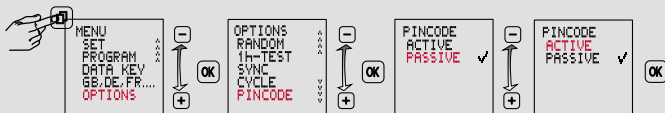
■ Connecting smartphones and AlphaRex³ BLE

Below are the basic instructions for pairing a smartphone with an AlphaRex³ BLE timer.

1. First install the Legrand Time-Switch app.
2. Go to the Bluetooth section of your smartphone; this is usually under Settings. Make sure Bluetooth is switched on.
3. Location services on the smartphone must be enabled; GPS does not have to be activated.
4. The AlphaRex³ BLE timer must be supplied with mains voltage.
5. Devices are now displayed within the Legrand Time-Switch app, both when uploading and when importing.
6. Select the AlphaRex³ BLE timer from the list of devices.
7. The access code is 123123.
8. Enter the access code.
9. The AlphaRex³ BLE is now paired.

■ Importing projects

⚠ **Note! At the start of and during Bluetooth communication, the relay outputs are put into an idle state.**

1. Select the AlphaRex³ model from which the project is to be imported.
2. The transfer will start automatically
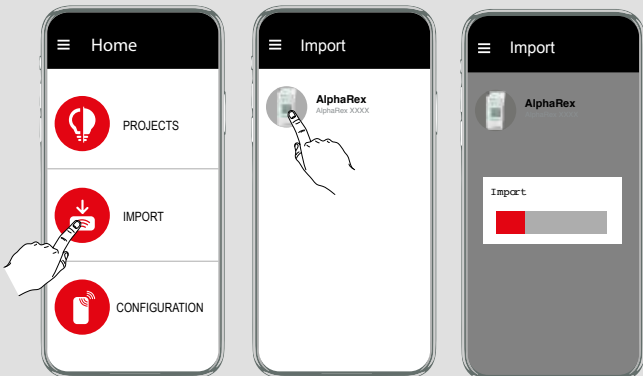
■ Uploading projects

⚠ **Note! At the start of and during Bluetooth communication, the relay outputs are put into an idle state.**

1. Make sure your smartphone has Bluetooth and positioning turned on.
2. Select a project.
3. Press the key ⬆
4. Select the AlphaRex type to which the project is to be transferred.
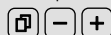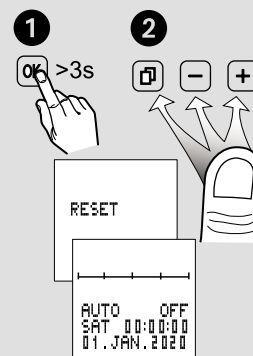5. The transfer starts automatically.
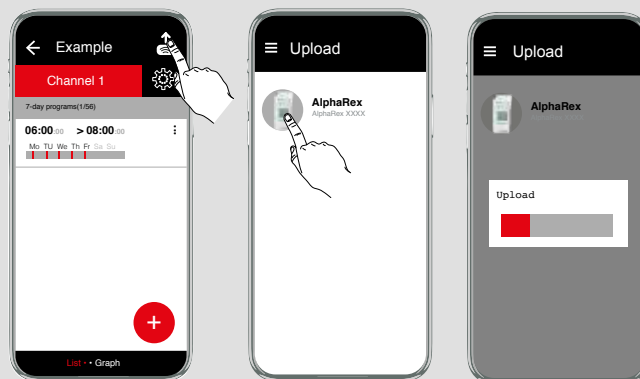
Reset
Warning!
The memory is deleted and all saved data is lost. Pin code entry is set to PASSIVE. The access code set remains unchanged.

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.

Warning!
Elektrical shock - Disconnect all power from the device before dismantling the module and replacing the battery.

Always use a Li cell type battery (LiMnO$_2$) CR2477, 3V high temperature type min +85 °C.
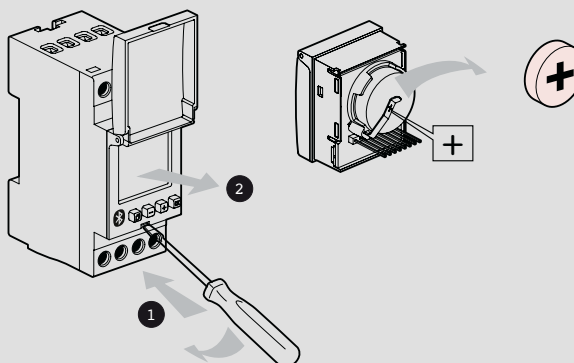
AlphaRex³ digital time switches

■ Technical specifications

Type	AlphaRex³ D21	AlphaRex³ D22	AlphaRex³ D21 astro	AlphaRex³ D22 astro
Nominal voltage 230V 50/60 Hz	412631	412641	412654	412657
Number of modules of 17.5mm each	2	2	2	2
Number of channels	1	2	1	2
Output	1	2	1	2
Zero-crossing switching	✓	✓	✓	✓
Switching capacity				
• **Ohmic 250V a.c. cos φ = 1**	16A	16A	16A	16A
• **Inductive 230V a.c. cos φ = 0.6**	10A	10A	10A	10A
• **Incandescent lamp load**	2000W	2000W	2000W	2000W
• **Fluorescent lamp, series compensated**	2000VA	2000VA	2000VA	2000VA
• **Energy-saving lamp**	1000W	1000W	1000W	1000W
Programs[1]	56	56	56	56
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 (mounted in distribution board)			

[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"
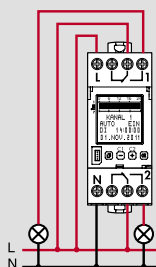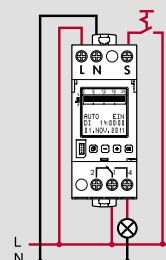[2] Can be set to mains synchronous operation

■ Connection diagram

AlphaRex³ D21
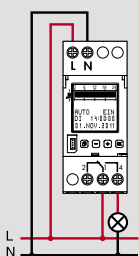
AlphaRex³ D22 astro
AlphaRex³ DY22

AlphaRex³ D21 astro

■ Functions

Select menu, go back while in menu Press > 1 sec. = operating display
OK	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.: 412873) 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.

AlphaRex³ digital time switches

■ 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" or "SATURDAY – SUNDAY"; 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.

Yearly programs
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)
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)
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 arcminutes (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, 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).
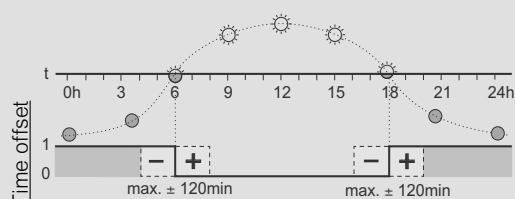
Example:
For a time differential of +30 min, the time switch switches 30 min. after sunrise and 30 min. after sunset.
For a time differential of -30 min, the time switch switches 30 min. before sunrise and 30 min. before sunset.

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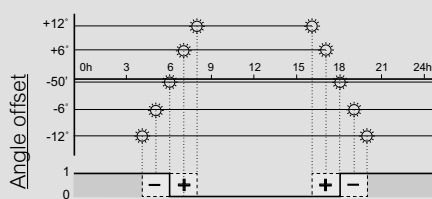
Offset correction function
Select "MENU", "SET", "ASTRO" and "CORRECTION" to set a time correction for the 6-month periods surrounding summer and winter. The time correction is set to 0 min. by default and can be set from 1 min. up to 30 min. The time correction for sunset is entered in the "SUNSET"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

■ **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 function, geographical coordinates in degrees and arcminutes.
[1] AlphaRex³ D21s, AlphaRex³ D21 astro, AlphaRex³ DY21

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

max 2 h

1 s ... 1 h 59 min 59 s
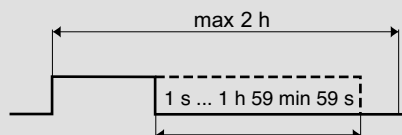
Random function
If the random function is activated, set switch times are randomly shifted within a range of +/- 15 minutes.

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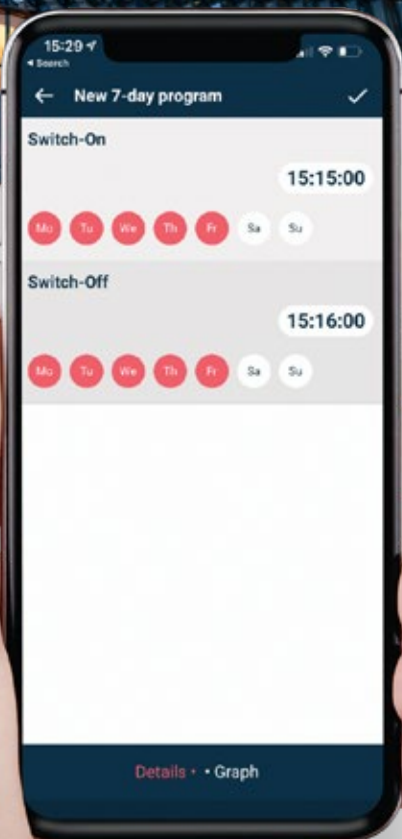
Mains synchronous operation
Mains synchronised clock precision. By activating the "SYNC" function and then "ACTIVE", the quartz-controlled time switch becomes a synchronous time switch.

NEW

BLUETOOTH TIME SWITCHES
MULTI FUNCTION PROGRAMMABLE TIME SWITCH

ASTRONOMICAL
TIME SWITCH WITH
DAILY, WEEKLY AND
YEARLY PROGRAMS

USER FRIENDLY APP
AND QUICK SET UP

DIRECT PROGRAMMING
FROM SMARTPHONE

LEGRAND TIME
SWITCH APP
AVAILABLE NOW!

Download on the App Store

GET IT ON Google Play

NOTES

L legrand®