Rex BACO® CONTROLS

Welcome to Rex Time Switches

Started in **1951**, Rex, located in Soest, Germany, is a global leader in the manufacture of time switches with sales in over **60** countries worldwide.

Known for their high quality and precision, these time switches are now available in the U.S. through Baco Controls, Inc.

Located in Cazenovia, NY since **1980**, Baco Controls offers a complete line of 22mm and 30mm pushbuttons, rotary Cam Switches, and Disconnect Switches.

Together we offer:

- Innovative solutions
- Energy Savings
- Easy programming
- Easy installation
- Reliable support and service

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Analog Hour Counters

Rex - digital time switches
AlphaRex

NEW

A40 101

A40 107

A40 108

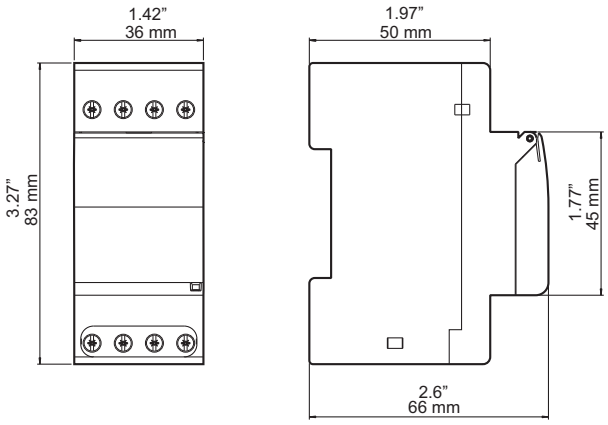
Reference	
	AlphaRex D21 weekly time switch, 1 channel
A40 101	230 V, 50/60 Hz
A40 130	120 V, 50/60 Hz
A40 102	24 V, AC/DC
	AlphaRex D22 weekly time switch, 2 channels
A40 105	230 V, 50/60 Hz
A40 131	120 V, 50/60 Hz
A40 106	24 V, AC/DC
	AlphaRex D21s weekly time switch, 1 channel with control input and delay
A40 103	230 V, 50/60 Hz
A40 132	120 V, 50/60 Hz
A40 104	24 V, AC/DC

According to UL 60730-1, UL 60730-2-7, VDE 631-1 and 631-2-7, IEC 60 730-1 and 60 730-2-7, EN 60 730-1 and 60 730-2-7

- with text based programming concept
- selectable languages: English, German, French, Italian, Spanish and Dutch
- fast programming due to selection of pre-set groups of days Mo-Su, Mo-Fr, Sa-Su and individual selection of days
- easy programming with PC using Rex software and data key
- a program consists of an ON and OFF time and their assignment to certain days
- backup on data key possible
- with additional functions:
  - holiday program
  - random function
  - pulse function (only 1 channel) with pulse duration of 1 sec up to 59 min., 59 sec. and 84 start times (NOT D22 and D21s)
  - hour counter for max. 65,535 hours.
- background lighting for display and buttons
- running reserve of 6 years for date and time
- programs are stored in a EEPROM
- programs are shown as a weekly matrix on the display
- automatic summer-/wintertime change (daylight saving)
- precision +/– 0.2 sec/day
- manual switching
- lead sealable cover, even with inserted data key

Reference	
	Accessory
A40 107	Data key (NOT for 04770 and 04774) • with the data key, it is possible to transfer programs into the time switch. select the data key function on “READ” on the time switch • the data key can be programmed on a PC • using the data key function “WRITE”, programs can be transferred to the data key. It allows to easily copy programs from one time switch to another one. It can also be used as a backup. • one data key allows to save 1 complete time switch program (56 ON/OFF)
A40 108	USB-adapter • to read and write data keys on a PC • software included • connection via USB-port • system requirements: Windows®2000, Windows®ME, Windows®XP and Windows®98 second Edition, 10 MB free disc space • serial adapter on demand

Dimensions



Rex - digital time switches

AlphaRex

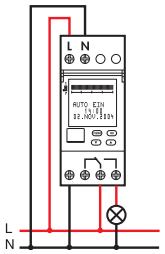
Technical data

Type	AlphaRex D21	AlphaRex D22	AlphaRex D21s
No. of modules (17.5 mm)	2		
Channels	1	2	1
Running reserve	6 Years		
Switching step	1 min		
Min. switching time	1 min		
Accuracy	0.2 sec/ day		
Switching capacity			
• Resistive 230 V~cos φ =1	16 A~		
• Incandescent lamp 230 V	8 A~		
• Inductive 230 V~cos φ =0.6	10 A~		
Contact	1 SPDT	2 SPDT	1 SPDT
Programs [1]	56	28/channel	56
Impulse starting times	84	-	-
Impulse duration (D21) Control input (D21s)	min 1 sec max 59 min, 59 sec	-	min 1 sec max 59 min, 59 sec
Operating temperature	-20 °C……+55 °C		
Protection	IP20		

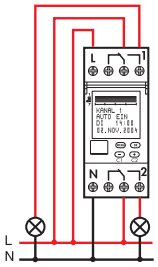
[1] A program consists of an ON and OFF time and the assigned day(s).

Wiring diagrams

AlphaRex D21



AlphaRex D22



Functions

MENU Menu selection, one step back, press and hold for more than 1 second to return to main display

OK Confirmation of selection and parameters

– **+** Selection in the menu, adjusting parameter and selection of the channel (2 channel version only!)

Brief description of the programming possibilities

- **Text based programming**
  The AlphaRex uses clear text to guide you through the options and the programming. Every step is clearly displayed and the selected function is flashing.
  The integrated background lighting for display and buttons allows easy programming even at bad lighting conditions.

- **Language and Time/Date selection**
  The language can be selected via the "MENU" button. English is set on delivery.
  The time switch is set to the actual time and date by the manufacturer, as well as to the summer / winter time applicable in Europe. Times can be changed via "MENU" + "SET".

- **Programming**
  A program consists of an ON and OFF time and the assigned day(s). Before setting the ON and OFF times, the requested days have to be selected:
  MONDAY-SUNDAY, MONDAY-FRIDAY, SATURDAY-SUNDAY or INDIVIDUAL.
  The INDIVIDUAL mode allows to select every single day of the week. It is also possible to program over midnight.

- **Relay function**
  With “MENU” and “FUNCTION” it is possible to change the relay position. By default it is “AUTO”, the time switch switches at the programmed times.
  Additional selections are: “CONST ON”, “CONST OFF” and “EXTRA”. With choosing “EXTRA” the stored program will be inverted.
  When the next programmed switching time has been reached, the time switch returns to normal mode.

- **Holiday**
  Selection the “HOLIDAY” function allows to set the start- and end date of the holidays and has to be activated by selecting “ACTIVE”, or deactivate it by selecting “PASSIVE”. When the “HOLIDAY” function is activated, the stored program will be ignored during the selected days and replaced by “CONST ON” or “CONST OFF”. When holiday is over, the AlphaRex return to default mode.

- **Data key**
  When the time switch is connected to the power supply, the data key activates automatically the “DATA KEY” menu with the options “READ” and “WRITE”.
  “WRITE”: programs stored in the time switch will be copied into the data key. Eventually stored programs on the data key will be overwritten!
  “READ”: programs stored on the data key will be copied into the time switch. Eventually stored programs on the time switch will be overwritten.
  It is only possible to save 1 “time switch program” which consist of max. 56 ON/OFF (1 channel) or max. 84 ON (1 channel pulse) or max. 2 x 28 ON/OFF (2 channel) on the time switch and the data key.
  When inserting the data key without the time switch being connected to the supply, the “DATA KEY” menu will not appear automatically, but has to be selected manually!

- **Programming on the PC**
  Next to the easy and text based programming directly on the time switch, it is also possible to do it on your PC by using the Rex software and to transfer the program with the data key to the time switch. To save the PC-created programs on the data key, the USB-adapter has to be installed.
  System requirements: USB-port; Windows®98 second edition; Windows®2000; Windows®ME or Windows®XP, 10MB free disc space

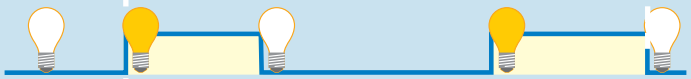
- **Reset**
  Pressing simultaneously on all 4 buttons for more than 2 seconds, will cause a deletion of all stored data. Language, time/date, summer / winter time and switching programs will need to be reinstalled.

Rex astronomical time switches

Easy control of light based on the calculation of sunrise and sunset, with no need of installing a light sensor!

A45 195

Comfort and safety
The time switch calculates the daily times of sunset and sunrise.
At sunset the AstroRex will switch the lights ON and at sunrise the AstroRex will turn the lights OFF.



Energy saving on request
To save energy, it is possible to program an OFF and an ON time at night.

As flexible as you need it
Even when the lights are OFF due to a OFF-program at night, it is possible to turn the lights on by using the control entry.

Examples for typical applications

> **Shop window illumination**

> **Illumination of private and public buildings**

> **Billboard illumination**

Reference	
	AlphaRex D21 Astro weekly time switch, 1 channel
A45 195	230 V, 50/60 Hz
A45 178	120 V, 50/60 Hz
A45 196	24 V, 50/60 Hz
	AlphaRex D22 Astro weekly time switch, 2 channels
A45 197	230 V, 50/60 Hz
A45 179	120 V, 50/60 Hz
A45 198	24 V, 50/60 Hz

According to UL 60730-1, UL 60730-2-7, VDE 631-1 and 631-2-7, IEC 60 730-1 and 60 730-2-7, EN 60 730-1 and 60 730-2-7

- with text based programming concept
- selectable languages: English, German, French, Italian, Spanish and Dutch
- fast programming due to selection of pre-set groups of days Mo-Su, Mo-Fr, Sa-Su and individual selection of days
- easy programming with PC using Rex software and data key
- a program consists of an ON and OFF time and their assignment to certain days
- backup on data key possible
- with additional functions:
  - holiday program
  - hour counter for max. 65,535 hours.
- background lighting for display and buttons
- running reserve of 6 years for date and time
- programs are stored in a EEPROM
- programs are shown as a weekly matrix on the display
- automatic summer-/wintertime change (daylight saving)
- precision +/– 0.2 sec/day
- manual switching
- lead sealable cover, even with inserted data key
- calculation of sunrise and sunset by programming date, time and local coordinates.
- no light sensor needed!
- to save energy, a switching off at night is programmable.
- the switching On and OFF times can be adjusted asymmetrically for +/- 120 minutes.
- the control input enables the activation of the time switch irrespective to the program. (NOT D22 Astro!)

Note:
You can program the AlphaRex Astro using the data key A40 107 and the Rex programming software AlphaSoft!
(see page 4)

Rex-light controllers

AlphaRex-Astro time switch

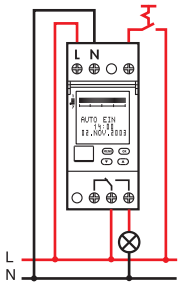
Technical data

Type	AstroRex D21	AstroRex D22
No. of modules (17.5 mm)	2	
Number of channels	1	2
Power reserve	6 years	
Switching increment	1 min	
Shortest switching time	1 min	
Accuracy	0.2 s/day	
Switching capacity		
• Resistive 230 V~cos j =1	16 A~	
• Incandescent lamp 230 V	8 A~	
• Inductive 230 V~cos j =0.6	10 A~	
Switch output	1 SPDT	2 SPDT
Programs[1)]	28	2 x 14
Control input with delay-time	0 min – 23 h 59 min	–
Operating temperature	–20 °C……+55 °C	
Protection	IP20	

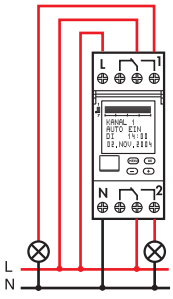
[1)] Each program comprises a switch-on and switch-off time and the associated on and off days or day blocks.

Wiring diagrams

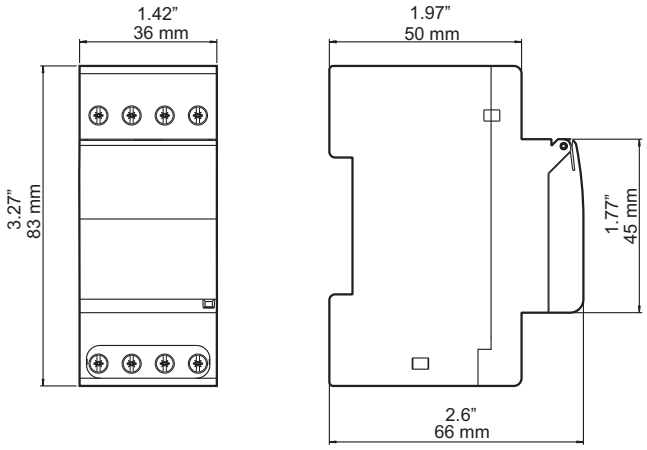
AstroRex D21



AstroRex D22



Dimensions



Functions

MENU Menu selection, one step back, press and hold for more than 1 second to return to main display

OK Confirmation of selection and parameters

– **+** Selection in the menu, adjusting parameter and selection of the channel (2 channel version only!)

Basic settings

- **Menu guidance**

The AstroRex guides the user through the programming and setup in plain English. Every step can be read off on the display; the momentarily active function is indicated by a flashing light. Integrated display and push-button illumination makes operation easier even in poor visibility.

- **Language and Time/Date selection**

The language can be selected via the "MENU" button. English is set on delivery.
The time switch is set to the actual time and date by the manufacturer, as well as to the summer / winter time applicable in Europe. Times can be changed via "MENU" + "SET".

- **Position (astro)**

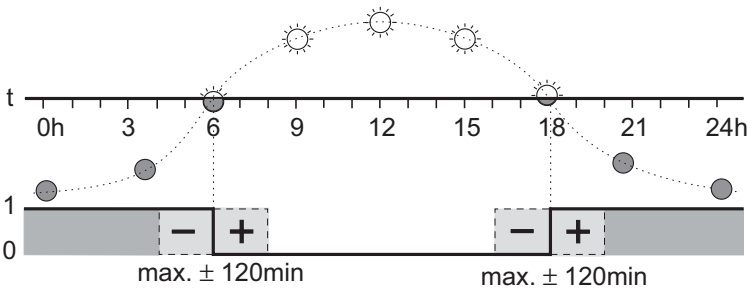
The different daily sunrise and sunset times are calculated for the position programmed in the AstroRex. "GERMANY - SOEST" is set on delivery. The actual position should be entered for optimum operation. This can be done in two ways: via "MENU", "SET" and "ASTRO" to the two options "POSITION" and "COORDINATES".

"POSITION": The town and country closest to the position of use can be selected via this menu item.

"COORDINATES": The coordinates of the actual location can be entered in this menu item if desired. Information on coordinates and time zones can be found in the time zone map enclosed with every time switch or can be found on the internet.

- **Offset**

Time differences in relation to the calculated switching times can be set via "MENU", "SET", "ASTRO" and "OFFSET". The actual switching time can be offset by up to +/- 120 minutes in relation to the sunrise and sunset times by entering a time difference. This time is set separately for sunrise and sunset.



Example:
If an offset of +30 minutes is entered, the time switch switches 30 minutes after sunrise and 30 minutes after sunset.

If an offset of -30 minutes is entered, the time switch switches 30 minutes before sunrise and 30 minutes before sunset.

Basic setting via PC and data key
All the basic settings described above, except the actual time and date, can be programmed with the Rex software AlphaSoft and transferred to the time switch with the data key Order No. A40 107.

Rex-light controllers
AlphaRex-Astro time switch

Deluxe and special functions

- **Relay functions**

The relay setting can be changed via "MENU" and "FUNCTIONS". The default function is "AUTO", i.e. the time switch switches at the programmed times. Other options available are: "CONST ON", "CONST OFF" and "EXTRA". If "EXTRA" is selected, the switch status specified by the program is reversed. Switch-on and switch-off are controlled by the programmed switching times with the next switching command.

- **Holiday time**

The start and end time of the holiday period are set in the holiday program and activated with the program item "ACTIVE" or deactivated with the program item "PASSIVE". If the holiday program is active, the time switch will not execute any programmed switch commands during the corresponding period, but remains "CONST ON" or "CONST OFF" as preferred during the holiday period. Upon expiry of the holiday period, the time switch automatically switches in accordance with the programmed switching times.

- **1 hour test**

The function "1H-TEST" can be used to simulate switching. When the "1H-TEST" is activated, the switch outputs are switched for one hour. At the end of this time, the time switch automatically switches in accordance with the programmed switching times.

- **PIN code**

Input and programming can be disabled via a four-digit "PIN code". The inhibit can also be cancelled with the "PIN code". The inhibit can additionally be cancelled via the "RESET" function; in this case, all settings and programs are also deleted.

- **Operating hours counter**

The relay ON time and date of the last reset are displayed.

- **Contrast**

The display contrast can be adjusted via this function.

- **Delay-time (1-channel AstroRex)**

The 1-channel AstroRex has a control input with variable delay-time. The control input permits additional switching by the relay in parallel to the switching program. Variable delay-time 0 min - 23 h 59 min; the delay-time begins as soon as the voltage at the control input drops.

Data key

The menu item "KEY - READ - WRITE" is automatically activated if a data key is inserted when the power supply is connected.
"WRITE": Program data are transferred from the time switch to the data key.
Important: Data already saved on the data key are overwritten.
"READ": Program data are transferred from the data key to the time switch. Any switching programs already saved in the time switch are overwritten.
The number of programs in the time switch and the basic settings can be saved in the time switch and on the data key. Example: AstroRex D21 maximum 28 programs plus basic settings.
When working without power supply connected, the menu item "KEY - READ - WRITE" is not activated automatically when a data key is inserted. The "KEY" function must be selected via the menu and the required function can then also be executed without a power supply.

PC programming

In addition to simple, menu-based programming directly on the time switch, switching programs and basic settings for the AstroRex can also be compiled on a personal computer with the Rex software AlphaSoft and transferred to the time switch with a data key. A read/write device (part number 047 73) is needed to transfer switching programs and settings compiled on the personal computer to the data key. The device is connected to the personal computer via the USB port. The read/write device is supplied together with a CD-ROM containing the AlphaSoft program and the necessary driver. System requirements for the personal computer: USB port, Windows® 98 second edition, Windows® 2000 or Windows® XP, 40 MB free memory capacity on the system drive.

Reset

Pressing simultaneously on all 4 buttons for more than 2 seconds, will cause a deletion of all stored data. Language, date/time, summer / winter time and switching programs will need to be reinstalled.

Rex - digital time switches
AlphaRex DY64

NEW

A41 163

Reference	
	AlphaRex DY64 annual time switch, 4 channels
A41 163 **A41 164**	120/230 V, 50/60 Hz 24 V, AC/DC
	Accessories
A40 125 **A40 126**	Data key for DY64 (NOT identical to A40 107!) Replacement battery

According to UL 60730-1, UL 60730-2-7, VDE 631-1 and 631-2-7, IEC 60 730-1 and 60 730-2-7, EN 60 730-1 and 60 730-2-7

- with text based programming concept
- selectable languages: English, German, French, Italian, Spanish and Dutch
- fast programming due to selection of pre-set groups of days Mo-Su, Mo-Fr, Sa-Su and individual selection of days
- easy programming with PC using Rex software and data key
- a program consists of an ON and OFF time and their assignment to certain days
- backup on data key possible
- 84 programs per channel possible:
  - 28 weekly/astronomical programs
  - 28 yearly programs
  - 28 exceptional programs
- shortest possible program: 1sec
- background lighting for display and buttons
- running reserve of 5 years for date and time
- programs are stored in a EEPROM
- programs are shown as a weekly matrix on the display
- automatic summer-/wintertime change (daylight saving)
- precision +/– 0.2 sec/day or according to frequency
- manual override switches (ON/OFF/AUTO) for every channel on the front of switch
- manual switching
- lead sealable cover, even with inserted data key
- calculation of sunrise and sunset by programming date, time and local coordinates.
- no light sensor needed!
- the switching ON and OFF times (astro function)can be adjusted asymmetrically for +/- 120 minutes.
- the control input enables the activation of the time switch irrespective to the program. (only for channel 1)
- possible to create a cyclical repetitive program. (only for channel 1)

The AlphaRex DY64 offers 3 different types of programming:

Weekly Program

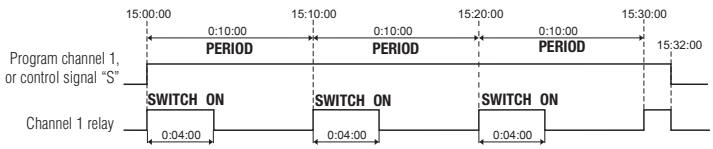
This menu item is provided for the simple input of programs which are to be repeated weekly (such as switching of lights and boilers). A weekly program consists of an ON time, an OFF time and the associated ON and OFF days.

- MON TO SUN: the days of the week are already assigned and you only need to set the ON and OFF times. This is used where the same program is to be executed on every day of the week.
- INDIVIDUAL: you can assign the ON and OFF times to any desired days. This is used where the same program is to be executed only on certain days of the week or different programs are to be executed on the various days.

Yearly Program

This menu item permits the input of (additional) annual programs which are to be executed only during a specified period. These programs and the weekly programs of the same channel are programmed together as described above. The period during which a program is to be executed is defined by entering a start date and an end date.

- The option EVERY YEAR should be selected if the additional program is to be executed during the same period of each year (e.g. Christmas, national holidays, birthdays, etc.).
- The option ONCE should be selected if the additional program is to be executed only during a single period (e.g. vacation period), but the start and end dates of this period are different in each year.



Rex - digital time switches
AlphaRex DY64

Exceptional Program
The weekly and annual programs defined for a channel are not executed as long as an extra program is active. However, other exception programs will be executed while an exception program is active. The various exception programs are programmed together as described above. (see OR function 3a)

- The option EVERY YEAR should be selected if the exception program is to be activated for the same period in each year (e.g. Christmas, national holidays, birthdays, etc.).
- The option ONCE should be selected if the exception program is to be activated only during a single period (e.g. vacation period), but the start and end dates of this period are different in each year.
- Option MON TO SUN: the exception program is active from 00:00 hours on the start date to 24:00 hours on the end date. During this period, the output of the related channel switches only as defined in the exception program.
- Option INDIVIDUAL: the exception program is active from 00:00 hours on the start date to 24:00 hours on the end date. During this period, the output of the related channel switches only as defined in the exception program.
- Option PROG ON: the exception program is active from the ON time on the start date to OFF time on the end date. During this period, the output of the channel is permanently on.
- Option PROG OFF: the exception program is active from the ON time on the start date to OFF time on the end date. During this period, the output of the channel is permanently off.

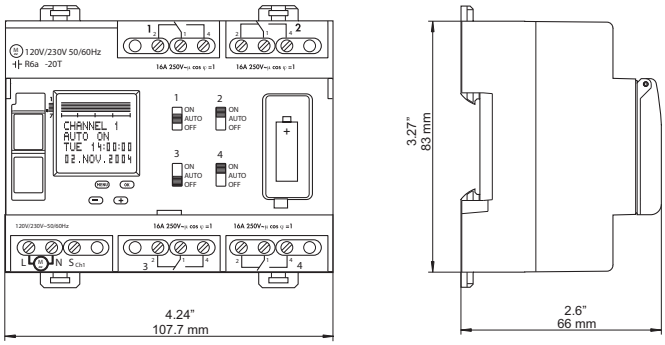
Cycle function for channel 1
Instead of its STANDARD function, the output of channel 1 can be switched on and off cyclically. The available parameters are the PERIOD and the
SWITCH ON time within this period.

Technical data

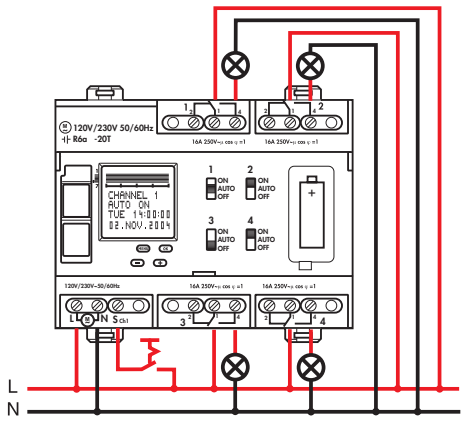
Type	AlphaRex DY64
No. of pitch units of 17.5 mm	6
Number of channels	4
Power reserve	5 years
Switching increment	1 sec
Shortest switching time	1 sec
Accuracy	0.2 sec/day/ or frequency
Switching capacity • Resistive 230 V~cos j =1 • Incandescent lamp 230 V • Inductive 230 V~cos j =0.6	 16 A~ 8 A~ 10 A~
Switch output	4 SPDT
Programs[1)]	3 x 4 x 28 (336)
Control input with delay-time	0 min – 23 h 59 min
Operating temperature	20 °C……+55 °C
Protection	IP20

[1)] Each program comprises a switch-on and switch-off time and the associated on and off days or day blocks.

Dimensions



Wiring diagram



Rex - digital time switches

MicroRex / MicroRex *Plus*

NEW

944 108

A44 190

Reference

	MicroRex D21 Plus
	1 channel
A44 190	230 V, 50/60Hz
A44 194	120 V, 50/60Hz
A44 191	24 V, AC/DC
	MicroRex D22 Plus
	2 channels
A44 192	230 V, 50/60Hz
A44 195	120 V, 50/60Hz
A44 193	24 V, AC/DC
	MicroRex D11
	1 channel, 1 module
944 108	230 V, 50/60 Hz
A44 112	120 V, 50/60 Hz

According to UL 60730-1, UL 60730-2-7, EN 60730-1 and EN 60730-2-7

Digital weekly DIN rail mounting time switch
1 program consists of 1 ON and 1 OFF time and the allocation of any day of the week or a combination of days and the selected channel (2 channel version).

example:

1. prog.: ON 07:00h	OFF 08:15h	Mo-Fr	CH1
2. prog.: ON 16:00h	OFF 20:15h	Mo-Su	CH2
3. prog.: ON 10:00h	OFF 15:15h	Fr	CH1+2

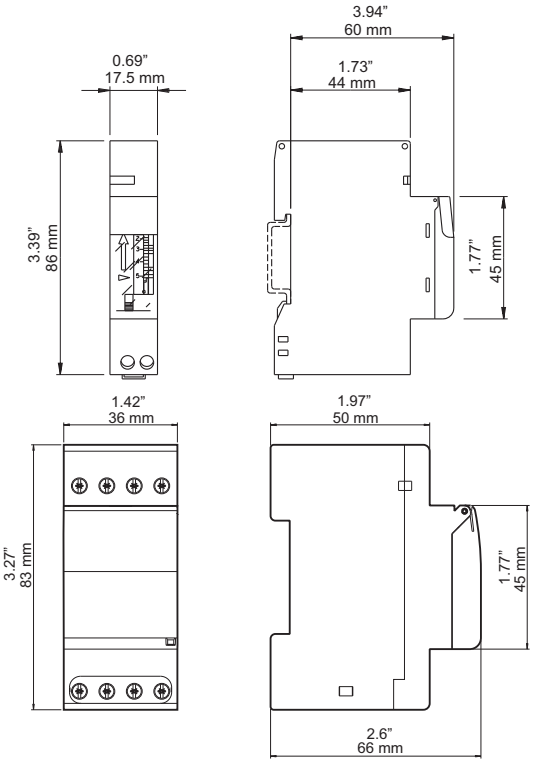
Additional features:

- manual override (ON/OFF): permanent ON or OFF
- automatic override (ON/OFF): actual program will be inverted (ON->OFF, OFF->ON) until next programmed ON time
- automatic changing of summer/winter time (daylight saving)
- running reserve of 6 years

Technical data

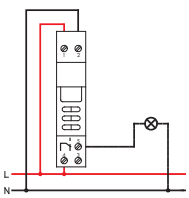
Type	MicroRex D11	MicroRex D21 plus	MicroRex D22 plus
No. of modules (17.5 mm)	1	2	2
Channels	1	1	2
Running reserve	>100 h	6 years	
Switching step	1 min		
Shortest switching step	1 min		
Accuracy	2.5 sec/day	1 sec/day	
Switching capacity			
• Resistive 230 V~ cos φ =1	16 A~		
• Incandescent lamps 230 V~	5 A~		
• inductive 230 V~ cos φ =0.6	10 A~		
Contacts	1 SPDT	1 SPDT	2 SPDT
No. of programs	8	28	14/channel
Operating temperature	-10....+55 °C		
Protection	IP20		

Dimensions

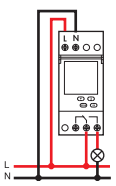


Wiring diagrams

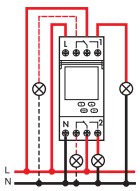
MicroRex D11



MicroRex D21 *Plus*



MicroRex D22 *Plus*



Rex - digital time switches

Front panel and wall mounting

MaxiRex *Plus*

NEW

A44 210

Reference

	MaxiRex D72/1 *Plus*
	1 channel
A44 210	230 V, 50/60 Hz
A44 215	120 V, 50/60 Hz
A44 211	24 V, 50/60 Hz
	MaxiRex D72/2 *Plus*
	2 channels
A44 212	230 V, 50/60 Hz
A44 216	120 V, 50/60 Hz
A44 213	24 V, 50/60 Hz

According to UL 60730-1, UL 60730-2-7, IEC 730-1, EN 60730-1, VDE 0631-1, IEC 730-2-7, EN 60730-2-7, VDE 0631-2-7

Weekly time switch for front panel installation or surface mounting

1 program consists of 1 ON and 1 OFF time and the allocation of any day of the week or a combination of days and the selected channel. (2 channel version)

Example:

1. prog.:	ON 07:00h	OFF 08:15h	Mo-Fr	CH1
2. prog.:	ON 16:00h	OFF 20:15h	Mo-Su	CH2
2. prog.:	ON 10:00h	OFF 15:15h	Fr	CH1+2

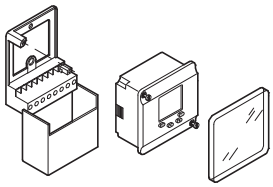
Additional features:

- manual override (ON/OFF): permanent ON or OFF
- automatic override (ON/OFF): actual program will be inverted (ON -> OFF, OFF -ON) until next programmed on time.
- automatic changing of summer/winter time (daylight saving)
- running reserve: 6 years

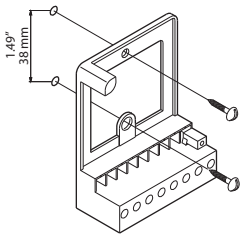
Technical data

Type	MaxiRex D72/1 *Plus*	MaxiRex D72/2 *Plus*
Channels	1	2
Running reserve	6 Years	
Switching step	1 min	
Shortest switching step	1 min	
Accuracy	1 sec/day	
Switching capacity		
• resistive 230 V~ cos φ =1	16 A~	
• Incandescent lamps 230 V~	5 A~	
• inductive 230 V~ cos φ =0.6	10 A~	
Contacts	1 Channel	2 Channel
No. of programs	28	14/channel
Operating temperature	-20....+55 °C	
Protection	IP20	

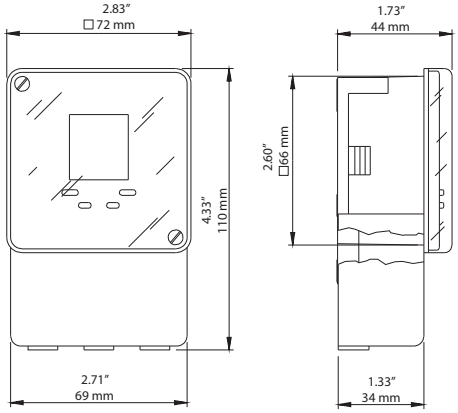
Overview



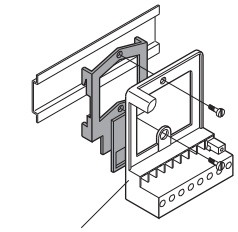
Wall mounting



Dimensions

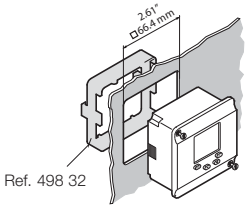


DIN-rail



Ref. 044 09

Front panel



Ref. 498 32

Rex - analog time switches
MicroRex - 3 modules for DIN rail mounting

926 428

Reference	
	MicroRex T31 24 hour program, synchronous motor
925 429 **A25 446**	230 V, 50 Hz 120 V, 60 Hz
	MicroRex W31 7 day program, synchronous motor
925 112 **A25 114**	230 V, 50 Hz 120 V, 60 Hz
	MicroRex QT31 24 hour program, quartz controlled motor (with running reserve)
926 428 **A26 448** **926 420**	230 V, 50/60 Hz 120 V, 50/60 Hz 9-48 V, AC/DC
	MicroRex QW31 7 day program, quartz controlled motor (with running reserve)
926 116 **A26 126** **926 113**	230 V, 50/60 Hz 120 V, 50/60 Hz 9-48 V, AC/DC
	Accessory
037 49	Kit for wall mounting, including base plate and terminal cover

According to UL 60730-1, UL 60730-2-7, IEC 730-1, EN 60730-1, VDE 0631 part 1, IEC 730-2-7, EN 60730-2-7, VDE 0631part 2-7

Analog 24 hour and 7 day time switches for DIN rail.
Hour and minute hands can be turned clockwise or counter-clockwise, providing easy and quick change of summer to winter time and vice versa.
- manual override switch

Rex - analog time switches
MicroRex - 1 module for DIN rail mounting

A10 415

Reference	
	MicroRex T11 24 hour program, synchronous motor
910 402 **A10 415**	230 V, 50 Hz 120 V,60 Hz
	MicroRex QT11 24 hour program, quartz controlled motor (with running reserve)
916 402 **A16 418**	230 V, 50/60 Hz 120 V, 50/60 Hz
	MicroRex W11 7 day program, synchronous motor
910 103 **A10 104**	230 V, 50 Hz 120 V, 60 Hz
	MicroRex QW11 7 day program, quartz controlled motor (with running reserve)
916 102 **A16 103**	230 V, 50/60 Hz 120 V, 50/60 Hz

According to UL 60730-1, UL 60730-2-7, IEC 730-1, EN 60730-1, VDE 0631 part 1, IEC 730-2-7, EN 60730-2-7, VDE 0631 part 2-7

Analog 24 hour and 7 day time switches for DIN rail.
- manual override switch

Rex - analog time switches

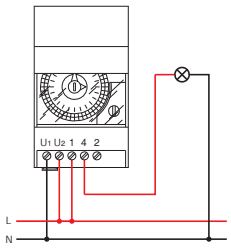
MicroRex

Technical data analogue MicroRex

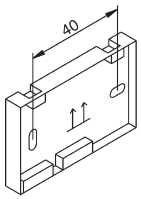
Type	MicroRex T11	MicroRex QT11	MicroRex W11	MicroRex QW11	MicroRex T31	MicroRex QT31	MicroRex W31	MicroRex QW31
No. of modules (17.5 mm)	1					3		
Motor	synchron	quartz	synchron	quartz	synchron	quartz	synchron	quartz
Switching dial	24 h	24 h	7 d	7 f	24 h	24 h	7 d	7 d
Running reserve	none	>100 h	none	>100 h	none	>100 h	none	>100 h
Switching step	15 min	15 min	2 h	2 h	15 min	15 min	2 h	2 h
Min. switching step	15 min	15 min	2 h	2 h	30 min	30 min	4 h	4 h
Switching accuracy	+/-5 min	+/-5 min	+/-30 min	+/-30 min	+/-5 min	+/-5 min	+/-30 min	+/-30 min
Accuracy	according to frequency	+/- 2.5 sec a day	according to frequency	+/- 2.5 sec a day	according to frequency	+/- 2.5 sec a day	according to frequency	+/- 2.5 sec a day
Switching capacity								
• Resistive 230 V~ cos j =1	16 A~							
• Incandescent lamp 230 V~	4 A~							
• inductive 230 V~ cos j =0.6	12 A~							
Contact	1 SPST	1 SPST	1 SPST	1 SPST	1 SPDT	1 SPDT	1 SPDT	1 SPDT
Operating temperature	-10....+55 °C							
Protection	IP20							

Wiring diagrams

MicroRex-3 modules

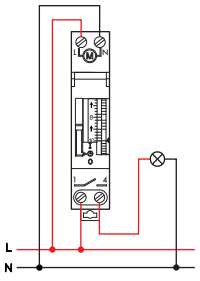


Wall mounting plate for MicroRex 31

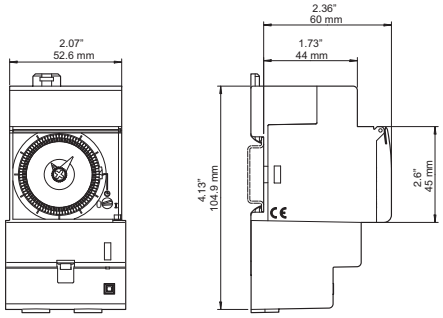


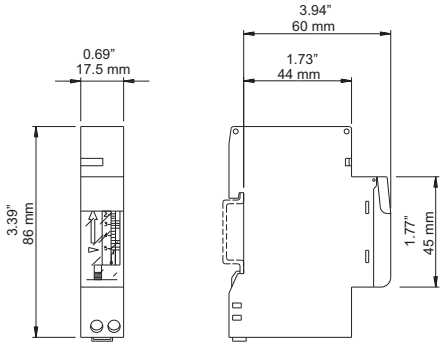
Ref. no. 03749
including terminal cover

MicroRex-1 module



Dimensions





Rex - analog time switches

Front panel and wall mounting

EconoRex M

912 441

Reference

Time switch modules with flat plugs for panel mounting (without accessories)

EconoRex MT
24 h, without running reserve

912 441 230 V, 50 Hz
A12 463 120 V, 60 Hz

EconoRex MQT
24 h, with running reserve

912 427 230 V, 50/60 Hz
A12 464 120 V, 50/60 Hz

EconoRex MW
7 day, without running reserve

912 445 230 V, 50 Hz
A12 465 120 V, 60 Hz

EconoRex MQW
7 day, with running reserve

912 447 230 V, 50/60 Hz
A12 466 120 V, 50/60 Hz

Accessories

A00 020 Wall mounting kit for EconoRex M includes base plate with terminals and terminal cover
A00 021 Adapter for DIN rail mounting

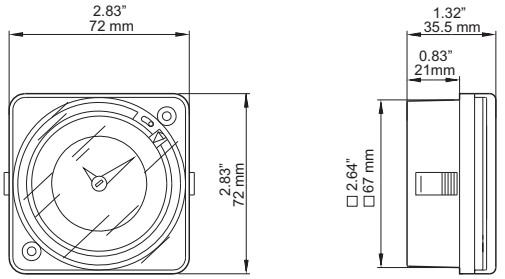
According to UL 60730-1, UL 60730-2-7, IEC 730-1, EN 60730-1, VDE 0631-1, IEC 730-2-7, EN 60730-2-7, VDE 0631-2-7

Compact analog daily or weekly time switch for front panels and surface mounting
- with manual override
- with 72 x 72 mm display conform to DIN EN 50 022 part C

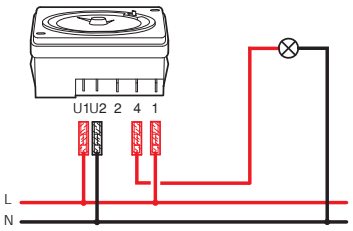
Technical data

Type	EconoRex MT	EconoRex MQT	EconoRex MW	EconoRex MQW
Motor	synchron	quartz	synchron	quartz
Switching dial	24 h		7 d	
Running reserve	none	>100 h	none	>100 h
Switching step	10 min		1 h	
Min. switching time	20 min		2 h	
Switching accuracy	+/-5 min		+/-30 min	
Accuracy	according to frequency	+/-2.5 sec a day	according to frequency	+/-2.5 sec a day
Switching capacity				
• Resistive 230 V~ cos φ =1	20 A~	16 A~	20 A~	16 A~
• Incandescent lamps 230 V~	4 A~		4 A~	
• Inductive 230 V~ cos φ =0.6	12 A~		12 A~	
Contacts	1 SPDT			
Operating temperature	-10....+55 °C			
Protection	IP30			

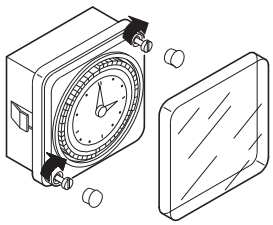
Dimensions



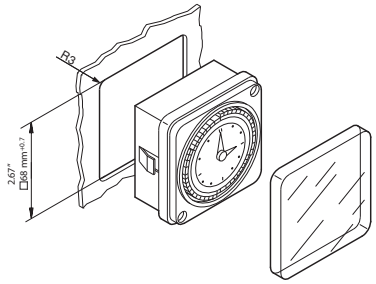
Wiring diagram



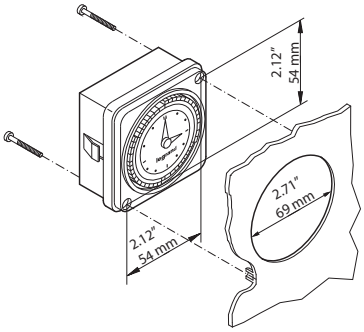
Overview



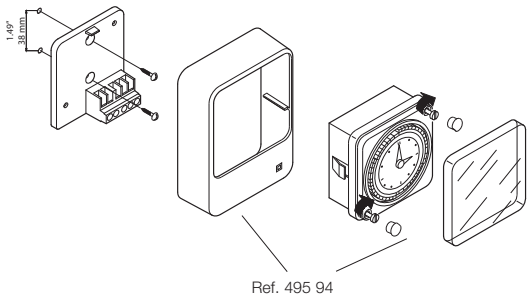
Front panel



Rear panel



Wall mounting



Rex - analog time switches

MaxiRex 30A

NEW

A23 460

Reference	
	MaxiRex T 30A
	Daily time switch, without running reserve
A23 460	120V, 60Hz
	MaxiRex QT 30A
	Daily time switch, with 100h running reserve
A24 460	230V, 50/60Hz
A24 461	120V, 50/60Hz
	MaxiRex W 30A
	Weekly time switch, without running reserve
A23 160	120V, 60Hz
	MaxiRex QW 30A
	Weekly time switch, with 100h running reserve
A24 160	230V, 50/60Hz
A24 161	120V, 50/60Hz
	Accessory
A000 27	Terminal cover

Technical data

Type	T	W	QT	QW
Motor	synchronous		quartz controlled	
Switching dial	24 h		7 d	
Running reserve	none		100h	
Switching step	10 min	1 h	10 min	1 h
Min. switching time	20 min	2 h	20 min	2 h
Switching accuracy	+/- 5 min/d		+/- 30 min/d	
Accuracy	acc. to frequency		+/- 1sec/day	
Switching capacity				
• Resistive 230 V~ cos j =1	30 A			
• Incandescent lamps 230 V~	1800 W			
• Inductive 230 V~ cos j =0.6	20 A			
Contacts	1 SPST			
Operating temperature	-10° C... +55° C			
Protection	IP20			

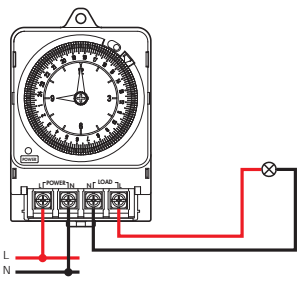
According to UL 60730-1, UL 60730-2-7, EN 50022, EN 55014-1, EN 55014-2, IEC 60730-1, EN 60730-1, VDE 0631-1, IEC 60730-2-7, EN 60730-2-7, VDE 0631-2-7.

Robust analog daily and weekly time switch with REAL 30 Amp switching capacity, for DIN rail mounting and wall mounting.

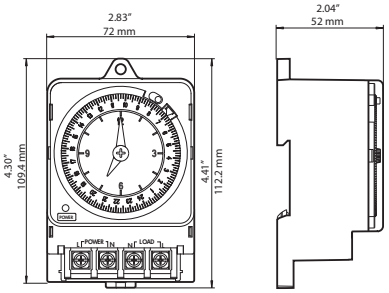
The MaxiRex 30A is our perfect solution to control your special applications with heavy loads like:

- the lighting of commercial billboards / sign boards
- water heaters
- hydrochlorinators
- heating / ventilation systems
- post lights
- blowers
- pool heaters
- electric fences
- filters, pumps and conveyers

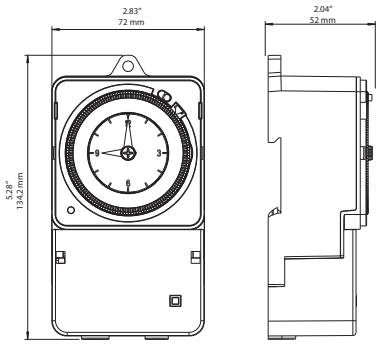
Wiring diagram



Dimensions without terminal cover



Dimensions with terminal cover



Rex - analog time switches
defrost time switches
PolarRex

A13 469

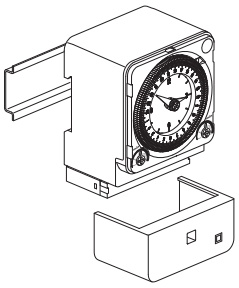
Reference	
	Defrost time switches without running reserve
	PolarRex KT 24 hour, 1 channel
A13 469	230V, 50Hz
	PolarRex KKT 24 hour, 2 channel
A13 470 **A13 475**	230V, 50Hz 120V, 60Hz
	Defrost time switches with running reserve
	PolarRex QKT 24 hour, 1 channel
A19 450	230V, 50/60 Hz
	PolarRex QKKT 24 hour, 2 channels
A19 447 **A19 448**	230V, 50/60Hz 120V, 50/60Hz

According UL 60730-1, UL 60730-2-7, IEC 730-1, EN 60730-1, VDE 0631-1, IEC 730-2-7, EN 60730-2-7, VDE 0631-2-7.

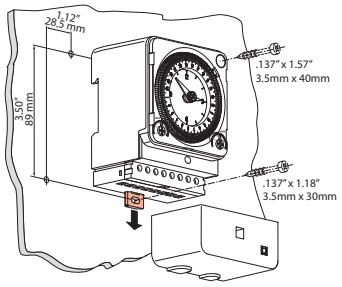
The time switch has a 24h dial and one (1 channel) or two (2 channel) continuously adjustable short time programs, which can repeated several times in 24h. The program's duration has to be adjusted with a button which is dedicated to a specific channel. The start of the program has to be set on the dial by pulling a segment on the desired time. The shortest duration between 2 programs is 30 min. The short time program can be repeated up to 48 times in 24h. The beginning, the duration and the number of the programs can be changed easily without any accessories.

Different types of mounting:
- DIN rail
- wall

DIN-rail



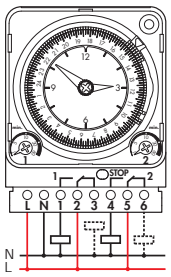
Wall mounting



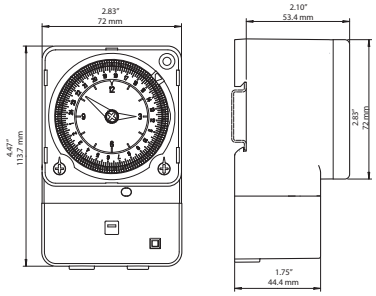
Technical data

Type	PolarRex KT	PolarRex QKT	PolarRex KKT	PolarRex QKKT
Motor	synchronous	quartz	synchronous	quartz
Switching dial	24 h			
Running reserve	none	>100 h	none	>100 h
Switching step	30 min			
Min. switching time	1-60 min			
Switching accuracy (switching dial)	+/-5 min			
Accuracy	according to frequency	+/-1 sec a day	according to frequency	+/-1 sec a day
Switching capacity				
• Resistive 230 V~ cos φ =1	16 A~			
• Inductive 230 V~ cos φ =0.6	used as NO: 4 A~/used as NC 12 A~			
Contacts	1 SPDT		2 SPDT	
Operating temperature	-10....+55 °C			
Protection	IP 30			

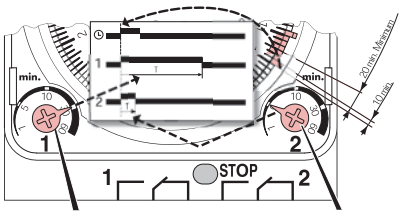
Wiring diagram



Dimensions (mm)



Programming

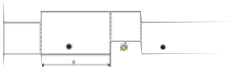
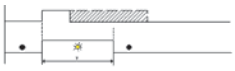


Programming the defrost times and visualization of the working status with 2 green LED's

Rex - analog time relays

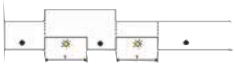
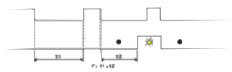
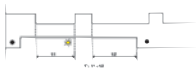
A63 207

A63 206

Reference		
A63 222	Star-Delta relay	
A63 205	ON-delay relay	Control input Y1 Contact 
A63 204	OFF-delay relay	Control input Y1 Contact 
A63 209	Clock generator relay (impulse starting)	Control input Y1 Contact 
A63 207	Impulse former relay	Control input Y1 Contact 
A63 206	Flashing relay	Control input Y1 Contact 

According to UL 60730-1, UL 60730-2-7, VDE 0631-1 and 0631-2-7, EN 60 730-1 and 60 730-2-7

Application:
To control single timer functions like:
illumination, ventilation, automation, control systems . . .
- sealable cover
- supply voltage: 12 V...230 V AC

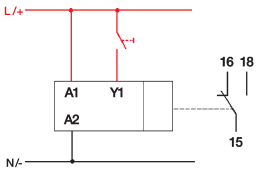
Reference		
A63 208	Multi-function relay In addition to the afore mentioned functions (except the flashing relay) the multifunctional relay offers you the following functions:	
	ON/OFF delay	Control input Y1 Contact 
	Flasher (impulse starting)	Control input Y1 Contact 
	Flasher (off-time starting)	Control input Y1 Contact 
	Passing contact	Control input Y1 Contact 
	Additive ON delay	Control input Y1 Contact 
	Additive fleeting ON	Control input Y1 Contact 

Rex - analog time relays

Technical data

	Time relays
No. of modules (17.5 mm)	1
Supply voltage	12....230 V AC/DC
Power consumption	ca. 2 W
Precision of const. parameters	+/- 0.2% of adjusted value
Setting accuracy	+/-5% at 25 °C
Switching capacity	
• Resistive 230 V cos φ =1	8 A~
• Incandescent lamps 230 V	2 A~
• Inductive 230 V cos φ =0.6	4 A~
Contacts	1 Channel
No. of cycles	10^5 switching at 2000 VA 10^7 mechanical switching
Max. admissible length of control wire	20 m
Operating temperature	-20....+60 °C
Protection	IP20

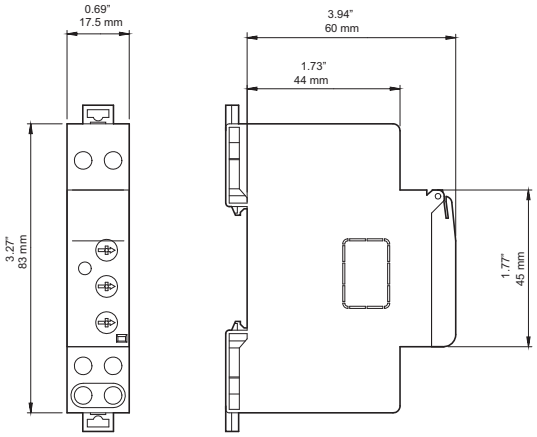
Wiring diagram



7 domains of time:

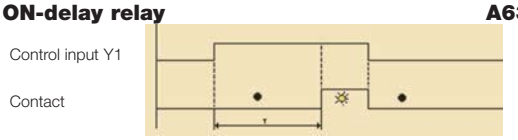
min.		max.
0,1 s	–	1 s
1 s	–	10 s
10 s	–	100 s
1 min.	–	10 min.
10 min.	–	100 min.
1 h	–	10 h
10 h	–	100 h

Dimensions

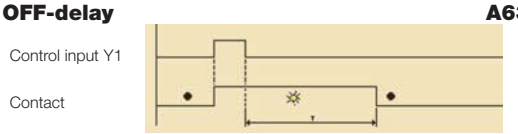


Functions and switching diagrams

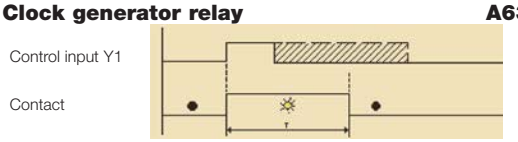
ON-delay relay — A63 205



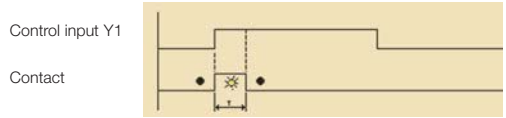
OFF-delay — A63 204



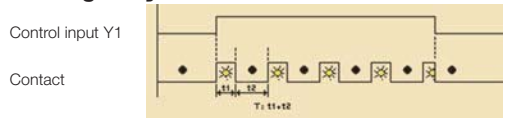
Clock generator relay — A63 209



Impulse former relay — A63 207



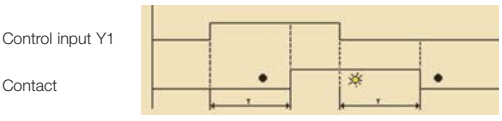
Flashing relay — A63 206



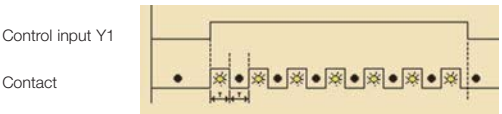
Multifunctional relay (A63 208)

additionally to the previous mentioned functions, (except flashing relay) the multifunctional relay offer the following functions:

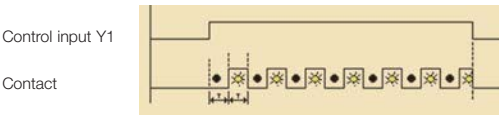
ON/OFF delay



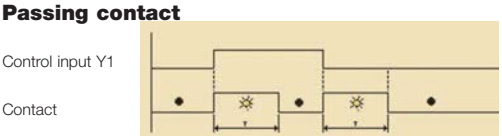
Flasher (impulse starting



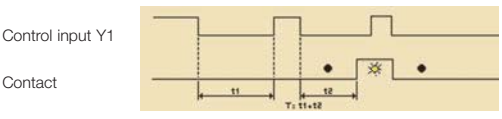
Flasher (OFF-time starting)



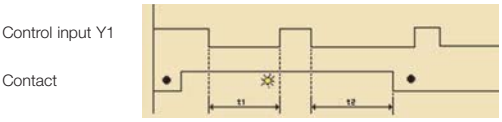
Passing contact



Additive ON delay



Additive fleeting ON



Hour counters

Front panel, Din-rail, flush-mounting

ContaRex

495 54

908 106

907 239

Reference

ContaRex 48 x 48 front panel

495 54	120 V, 60 Hz
495 57	230 V, 60 Hz
495 60	10 - 80 V, DC

ContaRex 36 x 24 front panel

907 239	230 V, 60 Hz

According to UL 863, cUL C22.2, IEC 1010-1, EN 61010-1, VDE 0411 part 1

- square 48 x 48 mm, IP 40
- 55 x 55 adapter included (48 x 48 mm version)
- AC-version: = 0 to 99999.99 h
- DC-version: = 0 to 999999.9 h
- front panel mounting

Reference

ContaRex round, Ø 80 mm

495 63	10...80 V ±10%	DC

Accessories

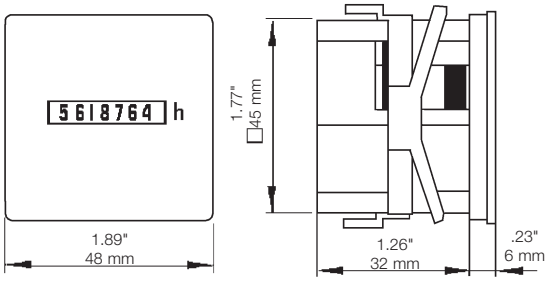
908 105	Frame 72 x 72 mm
908 106	Frame 55 x 55 mm

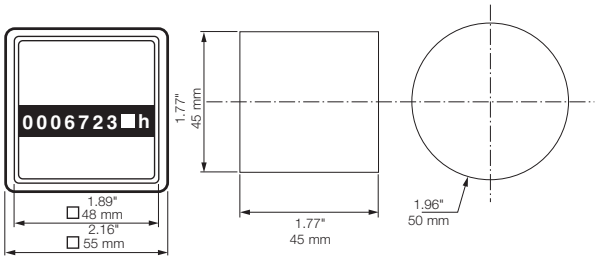
According to UL 863, cUL C22.2, IEC 1010-1, EN 61010-1, VDE 0411 part 1

- round, Ø 80 mm, IP 67
- protected against vibrations by a rubber buffer ring
- DC-version: 0 to 99999.9 h
- front panel mounting

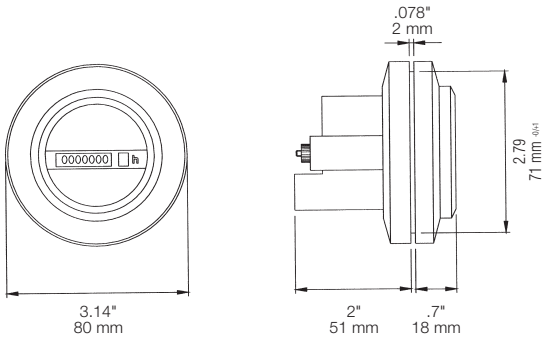
Dimensions

ContaRex 48x48

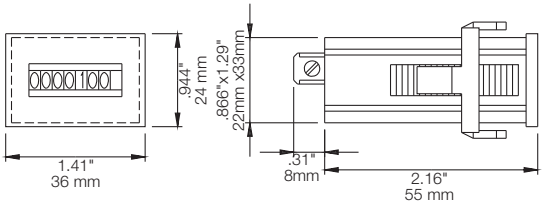




ContaRex ø 80mm



ContaRex 36x24



Hour counters
Din-rail mount
Rex 2000 HC2

961 103

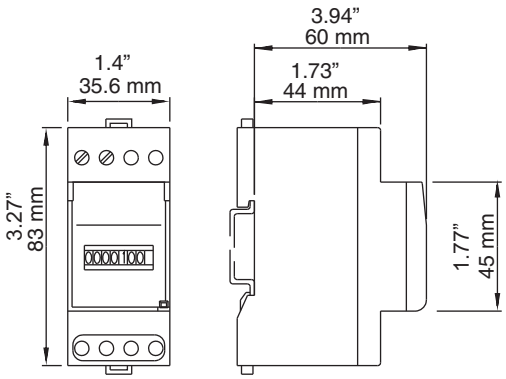
Reference

	Rex2000 HC2
961 102	230 V, 60 Hz
961 103	120 V, 60 Hz
961 104	24 V, 50 Hz
A61 108	12-36 V DC

According to UL 863, cUL C22.2, IEC 1010-1, EN 61010-1, VDE 0411 part 1
Analog modular hour run indicator in for DIN rail mounting

- easy and quick mounting on DIN rail by using the 2 locking clamps
- sealable cover

Dimensions



Notes

Save Energy
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