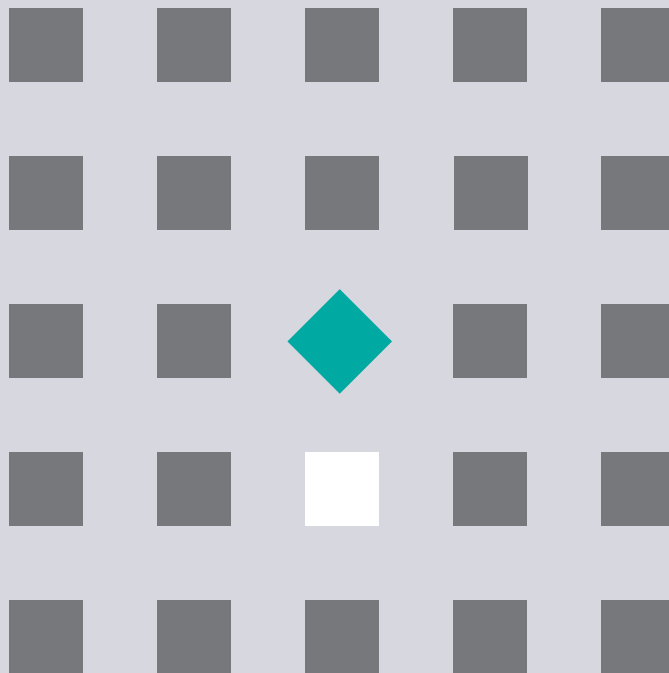


# Time Switches



## Time switches and twilight switches selection chart

Analogue time switches  
(din rail mounted) :



Width in 1 ■ :  
EH 010, EH 011

Width in 2 ■ :  
EH 209, EH210, EH 211, EH271

Width in 3 ■ :  
EH 110, EH 111, EH 171

Width in 5 ■ :  
EH 191

Analogue time switches  
(72 x 72mm) :

EH 710, EH 711, EH 770, EH 771,  
EH 712, EH 715, EH 716

	Analogue time switches (din rail mounted)										Analogue time switches (72 x 72mm)						
Technical characteristics	EH010	EH011	EH209	EH210	EH211	EH271	EH110	EH111	EH171	EH191	EH710	EH711	EH770	EH771	EH712	EH715	EH716
Width in ■ 17.5mm	1	1	2	2	2	2	3	3	3	5	-	-	-	-	-	-	-
Voltage supply	230V AC	230V AC	110/ 230V AC	110/ 230V AC	230V AC	230V AC	110/ 230V AC	230V AC	230V AC	230V AC	230V AC	230V AC	230V AC	230V AC	230V AC	48V DC 110-240VAC	
Operating cycle	24 hrs.	24 hrs.	24 hrs.	24 hrs.	24 hrs.	7 days	24 hrs.	24 hrs.	7 days	24 hrs./ 7 days	24 hrs.	24 hrs.	7 days	7 days	24 hrs.	24 hrs.	24 hrs.
Minimum switching	15 min	15 min	30 min	30 min	30 min	3 hrs. 30 min	15 min	15 min	2 hrs.	15 min/ 2 hrs.	20 min	20 min	2 hrs.	2 hrs.	20 min	20 min	20 min
Supply failure reserve	-	200 hrs.	-	-	200 hrs.	200 hrs.	-	200 hrs.	200 hrs.	200 hrs.	-	200 hrs.	-	200 hrs.	-	-	200 hrs.
Manual override	auto/ on	auto/ on	auto/ on/off	auto/ on/off	auto/ on/off	auto/ on/off	auto/ on/off	auto/ on/off	auto/ on/off	auto/ on/off	on/off	on/off	on/off	on/off	on/off	on/off	on/off

Digital time switches  
(din rail mounted) :



Width in 1 ■ :  
EG 010,  
EG 071



Width in 3 ■ :  
EG 110, EG 170,  
EG 171, EG 172,  
EG 210, EG 270

Twilight switches  
(din rail mounted) :



EE 170



EE 701

Twilight switch  
(surface mounted) :

	Digital time switches (din rail mounted)										Twilight switches (din rail mounted)							Twilight switch (surface mounted)	
Technical Characteristics	EG010	EG071	EG110	EG170	EG172	EG210	EG270	EG293B	EG403E	EG493E	EE100	EE101	EE110	EE170	EE171	EE002	EE003	EE701	EE702
Width in ■ 17.5mm	1	1	3	3	3	3	3	4	4	4	3	3	5	3	3	-	-	-	-
Operating cycles	24hrs	7days	24hrs	7days	7days	24hrs	7days	Yearly	Weekly	Yearly	-	-	24hrs	7days	7days	-	-	-	-
Program steps	5	20	20	20	20	20	20	300	300	300	-	-	15min	1min	1min	-	-	-	-
Voltage supply	230V	230V	230V	230V	12VAC	110/ & DC	110/ 230V	230V	230V	230V	Surf.	Flush	Surf.	Surf.	Surf.	Flush	Surf.	-	-
N° of channels	1	1	1	1	1	2	2	2	4	4	1	1	2	2	2	-	-	-	-

# Electromechanical time switches

<b>Description</b> Electromechanical time switches 1 channel for daily or weekly programming. To control lighting, heating, household appliances, shop windows etc... To improve comfort and save energy.	<b>Technical data</b> - programming by captive segments. - manual override : On 1 module devices : - automatic - permanent ON On 2, 3 and 5 module devices : - automatic - permanent ON - permanent OFF	<b>Minimum switching time:</b> - 15 min for daily versions (1 and 3 module) - 2 hours for weekly versions - 30 min for daily versions (2 module) - 3 hours 30 mins for weekly version (2 module) - 15 min and 2 hours on the daily+weekly version
<b>Applications</b> Domestic, commercial and industrial premises.	<b>Voltage supply :</b> 110 / 230 VAC 50/60Hz for EH111, EH 209, EH 210 230VAC 50/60Hz for others	<b>Connection capacity :</b> 1 to 4□
DIN rail mounting		<input type="checkbox"/> For technical information see pages T.39 - T.41
Complies with EN60730		



EH 010



EH 111



EH 211

Designation	Characteristics	Width in 17.5mm	Pack qty.	Cat. ref.
1 channel Daily dial without battery reserve	Output : 1N/O 16A - 250V AC1	1	1	EH 010
	Changeover 16A - 250V AC1	3	1	EH 110
1 channel Daily dial with battery reserve	Output : 1N/O 16A - 250V AC1	1	1	EH 011
Reserve : 200 hours after being connected for 120 hours	Changeover 16A - 250V AC1	3	1	EH 111
1 channel Weekly dial with battery reserve	Output : 1 changeover 16A - 250V AC1	3	1	EH 171
Reserve : 200 hours after being connected for 120 hours				
1 channel Daily + weekly dial with battery reserve	Output : 1 changeover 16A - 250V AC1	5	1	EH 191
Reserve : 200 hours after being connected for 120 hours				
1 channel Daily cycle without battery reserve	Output : Changeover 16A - 250V AC1 Without clockhands	2	1	EH 209
	Changeover 16A - 250V AC1	2	1	EH 210
1 channel Daily cycle Reserve : 200 hours after being connected for 120 hours	Output : Changeover 16A - 250V AC1	2	1	EH 211
1 channel Weekly cycle Reserve : 200 hours after being connected for 120 hours	Output : Changeover 16A - 250V AC1	2	1	EH 271

## Analogue time switches 72 x 72 mm

### Description

For daily or weekly programming.  
1 channel for the control of lighting, heating, household appliances, shop windows etc..  
To improve comfort and save energy.

### Applications

Domestic, commercial and industrial premises.

Complies with EN60730

### Technical data

- suitable for surface, flush or din rail mounting
- programming by captive segments
- manual override with automatic return to programme
- operating reserve : 200 hours after being connected for 120 hours
- output : voltage free changeover contact 16A/250V

### Daily version :

Programming in steps of 10 minutes.  
Minimum time between 2 switching intervals : 20 min

### Weekly version :

Programming in steps of one hour.  
- minimum time between 2 switching intervals : 2 hours  
- switching accuracy : 10 min

☐ For technical information see pages T.39 - T.41



EH 711



EH 771

Designation	Characteristics	Pack qty.	Cat. ref.
1 channel daily cycle	Supply : 230V 50/60Hz		
Without battery reserve		1	EH 710
With battery reserve		1	EH 711
Economy version		1	EH 712
1 channel weekly cycle	Supply : 230V 50/60Hz		
Without battery reserve		1	EH 770
With battery reserve		1	EH 771
1 channel daily cycle	Supply : 110V to 240V 50/60Hz 48V DC		
Without battery reserve		1	EH 715
With battery reserve		1	EH 716

# In-wall time

Saving energy with changing your simple switch to a walltimer

## Daily version

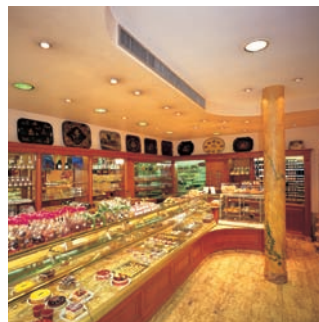
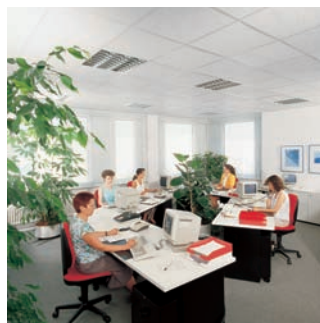
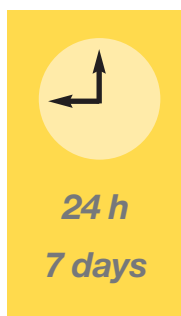
A single program repeated each day

- 15 min. programming interval
- Changeover accuracy : 1 min 30 seconds

## Weekly version

A different program every day for 1 week

- 2 hour programming interval
- Changeover accuracy : 10 minutes



2 - unloosable white screws are delivered to install the timer on the wall

Can easily integrate each environment, thanks to its discreet front plate



## In-wall timer

Designed for the time control of immersion heating boilers, lighting, watering systems, etc... in home and business appliques

- User friendly
- Time setting by ergonomic unloosable segments
- Blue zone behind segments is masked in OFF state and visible in ON state
- Manual control ON/OFF/AUTO used as override switch
- Adapted UL type wall box
- Multi-tension 110/230V 50/60Hz

- Easy to wire (work with 3 wires)
- EN 60-730 all models
- Power consumption less than 0.5 VA
- Quartz accuracy

**Technical data**  
**Supply voltage:**  
 120/230 V  $\pm$  10 % 50/60 Hz

**Accuracy:**  
 1 sec/ 24h

**Contact rating:**  
 16 A/ 230V AC1

Control an incandescent halogen lamp up to 1000W, compensated or uncompensated fluorescent lamp up to 400 W (C = 44 $\mu$ F) and compact fluorescent lamp up to 10 x 20 W.

**Operating temperature:**  
 0 °C to + 50 °C

**Storage temperature:**  
 -20 °C to + 60 °C

**Insulation class:**  
 II

**Protection class:**  
 IP30

**Degree of pollution:**  
 Standard

**Daily version :**  
 A single program repeated each day

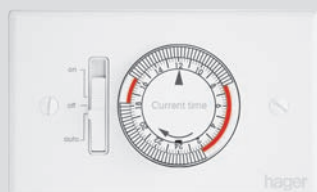
- 15 min. programming internal
- Changover accuracy: 1 min 30 seconds

**Weekly version :**  
 A different program everyday for 1 week

- 2 hour programming internal
- Changover accuracy: 10 minutes

☐ For technical information see pages T.39 - T.41

Designation	Position	Contact	Pack qty.	Cat. ref.
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EH810

24 hours, 3 terminals	Horizontal	16A SPST supplied	1	EH 810
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EH 870

7 days, 3 terminals	Horizontal	16A SPST supplied	1	EH 870
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## Digital time switches

### Description

For the control of lighting, school bells (EG 171), pumps, heating, household appliances, shop windows, etc...  
To improve comfort and save energy.

### Applications :

domestic, schools, colleges, commercial and industrial premises

Complies with EN60730

### Technical data

- 1, 2 or 4 channel :
- programming in 1 minute increments
- easy programming
- display and control of the program
- possibility to override the output (permanent or temporary)

### Operating reserve :

- lithium battery total of three years.
- output : changeover contacts 16A - 250V AC1
- sealable front cover

### Connection capacity :

1 to 4□

□ For technical information see pages T.39 - T.41



EG 071

Designation	Characteristics	Width in 17.5mm	Pack qty.	Cat. ref.
1 channel daily cycle	5 adjustable pre-recorded programs :  - 6 commutations per day - 230V 50/60Hz  Capacity : - 20 program steps - 230V 50/60Hz	1   3	1   1	EG 010   EG 110
1 channel weekly cycle	Capacity : - 20 program steps - 230V 50/60Hz	1	1	EG 071
1 channel weekly cycle	Capacity : - 20 program steps - 12V AC/DC	3	1	EG 172
1 channel weekly cycle	Capacity : - 20 program steps - 230V 50/60Hz	3	1	EG 170
1 channel weekly cycle	Capacity : - 20 program steps - 110V 50/60Hz	3	1	EG 270





# Compact and flexible...

The new Hager digital time switches have been developed and adapted to suit today's expectations of contractors and those of his customers.

## Many convenient functions...

- Automatic change of Summer / Winter time,
- 56 programs steps,
- Programming per day or group of days,
- Easy manual programming or via interface and PC programming software EG003,
- Permanent override with the programming key,
- Override : permanent / temporary,
- 5 years of operating reserve with lithium battery,
- Bar graph for visualization of the daily profile,
- Quick copy and saving of the program with the EG005 key,
- Programmable without mains supply,
- Reduced width : 2 modules

## ... and complementary : digital time switches EG103E, EG203E and EG103V

- Programming of pulses from 1sec. to 30min.
- remote temporary overrides (only EG103E),
- Holiday mode : ON or OFF overrides between 2 dates
- Occupancy simulation,
- Back light display.

## Programming key EG005

This key has 2 advantages :

- copy and saving of the programs,
- permanent overrides.

When the programming key is inserted in the time switch the key's program will run without changing the one which has been set in the time switch originally. As soon as the key is removed the time switch's program will start again.

## Locking key EG004

It locks the keyboard in order to avoid any non desirable handling.

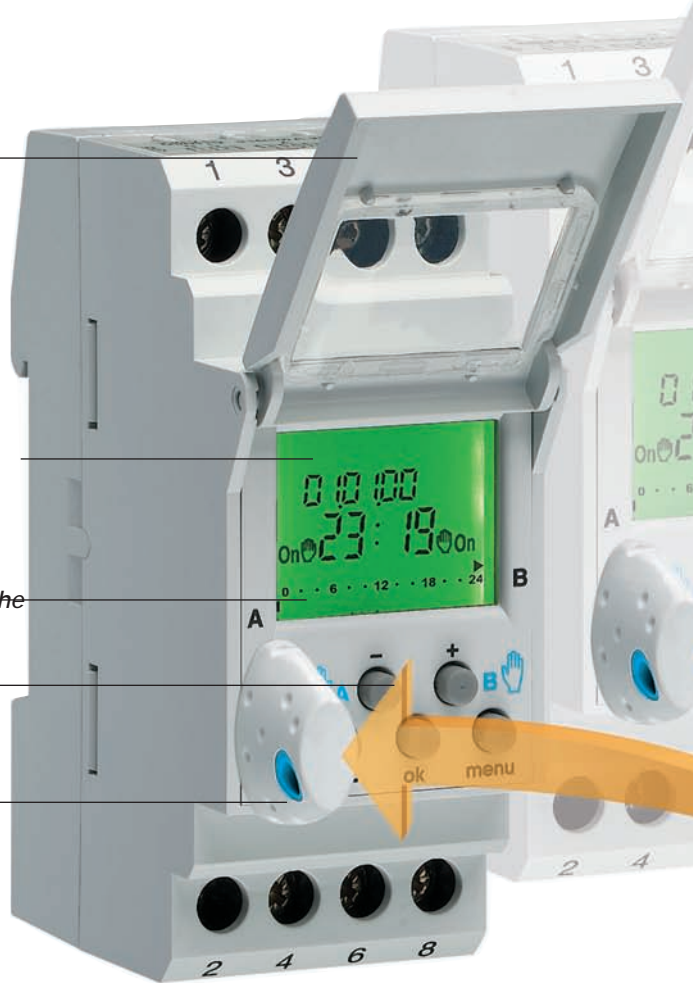
Display and buttons are protected with a cover.

Back light display for an easier use (EG103E, EG203E).

Bar graph for visualization of the daily profile.

Reduced number of programming and navigation buttons.

Direct programming key or via an interface EG003 with his programming software on PC.



## Hager digital time switches

1 and 2 channels, width 2			Width in I	Pack qty
EG103E	1 channel digital time switch weekly cycle, evolution		2 I	1
EG103V	1 channel digital time switch weekly cycle		2 I	1
EG203E	2 channels digital time switch weekly cycle, evolution		2 I	1
<b>Accessories :</b>				
EG003U	USB Interface and PC programming software			1
EG004	Locking jey for time switches 1 and 2 channels			1
EG005	Programmig key for time switches 1 and 2 channels			1
EG006	Storage module for 3 programming keys EG004/EG005		1 I	1
<b>4 channels, width 4 I</b>				
EG493E	4 channels yearly time switch, 102 program steps		4 I	1
<b>Accessories :</b>				
EG002	programming key for EG400			1
EG003U	USB Interface and PC programming software			1
L147	storage module for 1 key EG002		1 I	10



# ... and with a software for a quick and easy programming

The new 1 and 2 channels digital time switches, as well as the yearly EG493E programmers, can also be programmed via the interface or via the PC programming software EG003.

## A clear display

All the screen is available to display the information in coloured graphics. The programming is visualised at a glance.

## Flexibility of use

The program saving by project name makes it easier to research and modify the programs.



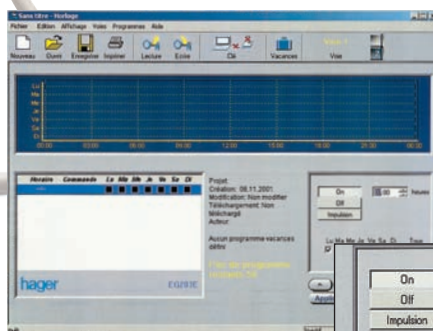
## 1. Select the hager digital time switch type



Software extract

## 2. Select type of commutation (ON/OFF/Pulse) as well as times and days of programming ...

nothing easier !



## Quick programming

A few clicks on your mouse and you are quicker than with manual programming !



Program steps are immediately visualised by graphs.

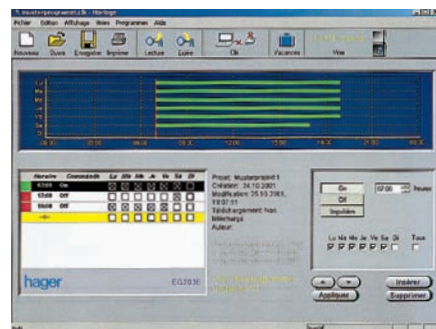
## Evolutionary

Your customer can use different keys to adapt the programs to his lifestyle.

## Always well-informed

You can print a personalised file for your customers. Thus all the project and programming information can be kept in the electrical distribution board.

In addition, the "evolution" range offers to your customer new functionalities, like programming of a holiday period or occupancy simulation.




A double - click on a program step is enough to modify quickly the programming. The program can be saved on PC and / or be transferred on the EG005/EG002 key via the EG003 interface.

## Digital time switches

For use in homes or business premises. These devices are designed to manage the operation on loads, such as lighting, heating, domestic appliances, windows, etc...in order to improve comfort and save energy.

**EG 103E and EG 203E**  
"advanced" version :  
same basic functions as those of EG 103B and EG 203B above, plus additional features :

- holidays mode : ON or OFF  overrides set between two dates
- presence simulation
- backlighted screen
- impulse programming (1 sec to 30 min)

**EG403E, EG293B, EG493E**

- 300 program steps
- Programmable ON, OFF, Impulse or Cyclic output
- Input for external override
- Hours run counter per output on EG293B and EG493E

**Connection capacity :**  
EG 071 : 0,5 to 4<sup>□</sup>,  
EG 103E and EG 203E :  
1 to 6<sup>□</sup> flex-wire,  
1,5 to 10<sup>□</sup> rigid wire,  
Quick connect terminals  
(EG403E, EG293B, EG493E)  
0.75 to 2.5°

**Power supply :**  
230 V ~ 50/60 Hz

☐ For technical information  
see pages T.42



Designation	Characteristics	Width in I 17.5mm	Pack qty.	Cat. ref.
Electronic switch clock 1 channel over 7 days "advanced" evolution	Output : 1 reverse contact μ 16 A - 250 V ~ AC 1 • supplied with 1 blank key EG 005	2	1	EG 103E
Electronic switch clock 1 channel over 7 days "advanced" evolution	Output : 1 reverse contact μ 16 A - 250 V ~ AC 1 • supplied with 1 blank key EG 005	2	1	EG 203E
Interface and software	• for PC via USB link • with software on CD	-	1	EG 003U
locking key (yellow colour)	• prevents inadvertent use of EG clocks (except EG 071 and EG 400)	-	1	EG 004
Blank programming key (grey colour)	• for switch clocks EG 103B, EG 203B, EG 103E, EG 203E  • for programmer EG 400	- -	1 1	EG 005 EG 002
Storage module	• for 3 keys EG 005 or EG 004	1	1	EG 006
4-channel annual cycle	Outputs: 2 changeover volt-free contacts + 2NO 10A 250V~ AC1 • supplied with 1 programming key EG007	4	1	EG 493E
2 channel annual cycle	Outputs: 2 changeover volt-free contacts 10A 250V~ AC1	4	1	EG 293B
4 channel weekly cycle	Outputs: 2 changeover volt-free contacts + 2NO 10A 250V~ AC1 • supplied with 1 programming key EG007	4	1	EG 403E



## Time lag switches

These devices are designed to save energy and ensure safety. For example : for building staircase or cellar lighting, ventilation, pumping, etc...

For impulse control of lamps circuit with automatic opening after preset time period.

The device includes a 2-position override switch for permanent or time-switched lighting. Automatic recognition of connection type (3 or 4 wires). Time delay is set by means of a potentiometer located on the front face.

**Features :**

- long service life
- quiet operation
- high quiescent current for control by lighted pushbutton (100mA)

(see technical characteristics)

**Conform to standards :**

NFC 61-113  
IEC 60-669  
EN 55014




☐ For technical information see pages T.45



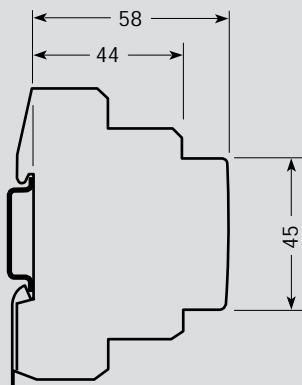
EMN 003



EPS 450

Designation	Type	Characteristics	Width in 17.5mm	Pack qty.	Cat. ref.
<b>Double time delay time-switch</b>   30 sec. to 10 min. adjustable with recycling possible	1 NO	Power supply voltage : 230 V ~ 50/60 Hz  16 A - 250 V ~ AC1 2300 W incandescent	1	6	EMN 001
<b>Double time delay time-switch</b>   Short press 30 sec. to 10 min. adjustable with recycling possible   Long press (> 3 s) fixed 1 hour with interruption possible	1 NO	Power supply voltage : 230 V ~ 50/60 Hz  16 A - 250 V ~ AC1 2300 W incandescent	1	6	EMN 003
<b>Remote-controlled time-switch</b>  Serves as an interruptible time-switch  Adjustable : 5 min. to 1 h with adjustment possible permanent latching-relay	1 NO	Power supply voltage : 230 V ~ 50 / 60 Hz or 8 to 24 V AC / DC  16 A - 250 V ~ AC1 1000 W incandescent  Indicator light of status display	1	1	EPS 450

## Delay timers



### Description

To provide all types of automatic control i.e. lighting, ventilation, watering, machine pre-heating, automatic door and visual audible indication, cycle control etc.

### Applications

For timing and automation in domestic and commercial premises. The input signal can be via various switching devices (pushbutton, latching switch, timeclock etc.) and the timed output used to control the application.

### Technical data

Voltage range :  
12 & 24 to 48V DC  
12 & 24 to 230V AC  
Adjustable: time delay from 0.1s to 10hrs.  
Led indicator

Complies with EN 60669-2-1

### Connection capacity :

6<sup>□</sup> max rigid  
1.5 - 10<sup>□</sup> flexible

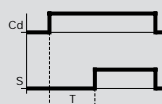
☐ For technical information see pages T.43-44



EZN 001

Designation	Characteristics	Width in 17.5mm	Pack qty.	Cat. ref.
-------------	-----------------	-----------------	-----------	-----------

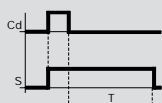
### Delay on



1 c/o contact  
10A / 230V~ AC  
Time delay T : 0.1s to 10hr

1 1 EZN 001

### Delay off



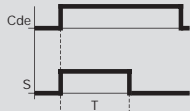
1 c/o contact  
10A / 230V~ AC  
Time delay T : 0.1s to 10hr

1 1 EZN 002



EZN 003

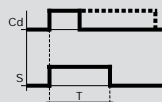
### Adjustable time on



1 c/o contact  
10A / 230V~ AC  
time delay T : 0.1s to 10hr

1 1 EZN 003

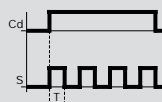
### Timer



1 c/o contact  
10A / 230V~ AC  
time delay T : 0.1s to 10hr

1 1 EZN 004

### Symetrical flasher



1 c/o contact  
10A / 230V~ AC  
time delay T : 0.1s to 10hr

1 1 EZN 005



EZN 006

### Multifunction

6 individual functions including :  
delay on  
delay off  
timer

1 c/o contact  
10A / 230V~ AC  
time delay T : 0.1s to 10hr

1 1 EZN 006

## Time switches for incorporation 72 x 72 mm



ref.: 16001



ref.: 16701

### Features

- Programming by unlosable segments. A red zone is unmasked by the segment when put into the ON state; in the OFF, state this red zone is masked.
- Indication of time by clock hands allowing time setting in both directions by simple rotation. Summer/winter time corrections are easily carried out.
- Manual instant override control with automatic return to normal sequence of program.
- Display of contact.
- Fitting:
  - flush fitting on facade, fixation clamp from front type BR6 or clipped clamp from the rear type BR7, connection by flat connectors of 6.35 mm.
- Attachment without accessories:
  - on surface mounted base,
  - on printed circuit.

### Functional characteristics

#### Daily version:

- Programming in steps of 10 min.
- Minimum interval between 2 switchings: 20 minutes.
- 72 switchings per day.
- Accuracy of switching: 1 min. 30 sec.

#### Weekly version:

- Programming in steps of 1 hour.
- Minimum interval between 2 switchings: 2 hours.
- 84 switchings per week.
- Accuracy of switching: 10 min.

### Technical characteristics

Supply voltage	6 to 24V AC/DC or 48V DC/ 110-230V or 230V +10% -15%
Frequency	50/60 Hz
Power consumption	approx. 0,5 VA
Changeover contact voltage free	Resistive load 16 A 250 V incandescent lamps (cos $\phi$ = 0.6) 3 A 250 V incandescent lamps 1000 W 250 V squirrel-cage motor 350 W 250 V
Time base	quartz
Accuracy of operation	1 s/24 h
Operating temperature	-10°C to +50°C
Storage temperature	-20°C to +60°C
Insulation class (flush fitting)	II
Protection index (flush fitting)	IP 20/IK 03
Conformity to standard EN 60.730	yes

Performances indicated for an ambient temperature of 20°C

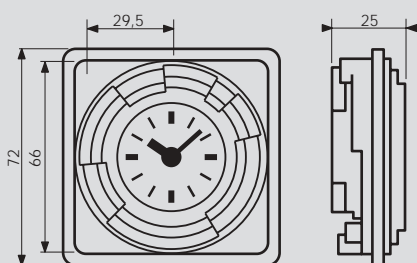
### References

Ref. 230V	24 V AC/DC	100-250 VAC 48 VDC	Cycle	Power reserve	Type of fixation	Contact
16001	16205		24 h	200 h	BR6-BR7	16 (3) A
	16203	16009	24 h		BR6-BR7	16 (3) A
16701	16504		7 d	200 h	BR6-BR7	16 (3) A
	16503	16710	7 d		BR6-BR7	16 (3) A
16061			24 h	200 h	BR7	16 (3) A
		16062	24 h		BR7	16 (3) A
16761			7 d	200 h	BR7	16 (3) A
		16762	7 d		BR7	16 (3) A

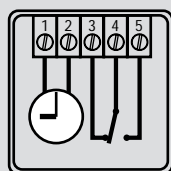
BR6-BR7: front face with 2 holes for fixing screw

BR7: front face without holes

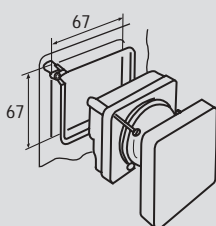
### Dimensions



### Electrical connections

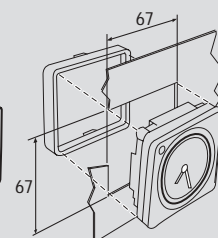


### Mounting BR6 ref. 95583

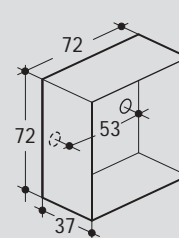


2 mounting holes present for BR6 - BR7 versions

### BR7 ref. 95588



### Box ref. 95585



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