

# Energy and lighting control

Energy and lighting control product range, like automatic management of lighting, timers, dimmers and time switches allow to optimise energy consumption while increasing comfort in residential and commercial premises.



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### Motion detectors

#### Wall mounting

##### Wiring accessories

180°

2 wires

**WE050<sup>(1)</sup>**  
page 15.32



**WS050<sup>(2)</sup>**  
page 15.10



3 wires

**WE051<sup>(1)</sup>**  
page 15.32



**WS051<sup>(2)</sup>**  
page 15.10



##### Standard IP55

140°

**EE820**  
white  
page 16.10



**EE821**  
anthracite  
page 16.10



200°

**EE830**  
white  
page 16.10



**EE831**  
anthracite  
page 16.10



360°

**EE840**  
white  
page 16.10



**EE841**  
anthracite  
page 16.10



##### Enhanced IP55

140°

**EE850**  
white  
page 16.10



**EE851**  
anthracite  
page 16.10



220°

**EE860**  
white  
page 16.10



**EE861**  
anthracite  
page 16.10



### Accessories

#### Ceiling mounting accessories

**EE827**  
white  
page 16.10



**EE828**  
anthracite  
page 16.10



#### Remote control

**EE806**  
white  
page 16.11



**EE806**  
white  
page 16.11



Recommended for commercial application

(1) essensya mechanism references.  
Plates sold separately.

(2) systo mechanism references.  
Plates and support frames sold separately.

#### Corner mounting accessories

**EE825**  
white  
page 16.10



**EE826**  
anthracite  
page 16.10



#### Corner mounting accessories

**EE855**  
white  
page 16.10



**EE856**  
anthracite  
page 16.10



**Motion detectors**

Wall mounting

Enhanced IP55

IP55 wireless

220/230°

**EE870**  
white  
page 16.10



**EE871**  
anthracite  
page 16.10



tebis range

**TRE700**  
white  
page 17.8



**TRE521 / 531**  
anthracite  
page 17.8



**TRE520 / 530**  
white  
page 17.8



Ceiling

Flush

Surface

360°

**EE883**  
HF IP54  
page 16.11



**EE880**  
corridor  
page 16.11



**Presence detectors**

Ceiling

Flush

Half-flush

360°

**EE805A**  
white  
page 16.11



**EE815**  
1 channel  
page 16.12



**EE816**  
DALI/DSI  
page 16.12



**EE804A**  
white  
page 16.11



**EE810**  
1 channel  
page 16.12



**EE811**  
2 channels  
page 16.12



**EE812**  
1/10 V  
page 16.12



**Accessoires**

Remote control

**EE806**  
white  
page 16.11



Remote control

**EE807**  
installer  
page 16.13



**EE808**  
user  
page 16.13



Corner mounting accessories

**EE825**  
white  
page 16.10



**EE826**  
anthracite  
page 16.10



### Lighting with and without integrated motion detector

#### Wall mounting with LED lamp

Deco lamp LED  
1100 Lumen

140°

EE610  
white  
page 16.15



Floodlight LED  
3400 Lumen

220/360°

EE600  
white  
page 16.15



#### Wall mounting with LED lamp

Floodlight LED  
700 Lumen

140°

EE631  
white  
page 16.14



EE635  
white  
page 16.14



Floodlight LED  
1200 Lumen

140°

EE632  
white  
page 16.14



EE636  
white  
page 16.14



Floodlight LED  
2000 Lumen

140°

EE633  
white  
page 16.14



EE637  
white  
page 16.14



Floodlight LED  
3000 Lumen

140°

EE634  
white  
page 16.14



EE638  
white  
page 16.14



EE641  
black  
page 16.14



EE645  
black  
page 16.14



EE642  
black  
page 16.14



EE646  
black  
page 16.14



EE643  
black  
page 16.14



EE647  
black  
page 16.14



EE644  
black  
page 16.14



EE648  
black  
page 16.14



tebis range



TRE600  
white  
page 17.8



### Accessories

#### Remote control

EE806  
white  
page 16.15



**Time lag switch**

**Dimmer**

**Modular**

**Wiring accessories**

**Modular**



**EMN001**  
simple delay  
page 16.16



**EMN005**  
multifunction  
page 16.16



rotary button

push button

Universal  
275 W +  
CFL, LED

Universal  
300 W +  
CFL, LED

Universal  
500 W +  
CFL, LED

Universal  
1000 W

Pilote  
1/10 V

**WE060<sup>(2)</sup>**  
page 15.32



**WS060<sup>(3)</sup>**  
page 15.10



**WE061<sup>(2)</sup>**  
page 15.32



**WS061<sup>(3)</sup>**  
page 15.10



**EVN011**  
page 16.17



**EVN012**  
comfort  
page 16.17



**EVN002**  
page 16.17



**EVN004**  
comfort  
page 16.17



**EV100**  
page 16.17



**EV102**  
advanced  
page 16.17



**EV106**  
page 16.18



**EV108**  
advanced  
page 16.18



■ Recommended for commercial application

- (1) essensya mechanism references.  
Plates sold separately
- (2) systo mechanism references.  
Plates and support frame sold separately.

### Light sensitive switch

### Astronomical time switch

**Flush  
230 V**

**Modular  
230 V**

**Modular  
230 V**

1 channel

1 channel

2 channels

1 channel

1 channel

2 channels

Non prog.

Non programmable

Daily

Weekly

Weekly

Integrated  
cell

Cellule  
delivered

Cellule in  
option

Cellule  
delivered

Cellule  
delivered

Cellule  
delivered

**EE701**  
basic  
page 16.20



**EE702**  
enhanced  
page 16.20



**EEN100**  
surface cell  
page 16.20



**EEN101**  
flush cell  
page 16.20



**EE200**  
2 channels  
page 16.20



**EE202**  
2 channels  
+ 2 inputs  
page 16.21



**EE201**  
2 channels  
page 16.20



**EE203**  
2 channels  
page 16.21



**EE110**  
analogique  
page 16.20



**EE171**  
digital  
page 16.20



**EE180**  
1 channel  
page 16.21



**EE181**  
2 channels  
page 16.21



Recommended for commercial application

### Accessories

#### Cells

**EE002**  
flush  
page 16.21



**EE003**  
surface  
page 16.21



Softwares  
and interfaces via USB link












**EG003G**  
page 16.23



**Digital time switch**

**230 V**

**12 to 24 V**

1 channel			2 channels		4 channels		1 channel
Daily	Weekly		Weekly	Yearly	Weekly	Yearly	Weekly
1 module	1 module	2 modules	2 modules	4 modules	2 modules	4 modules	2 modules
<b>EG010<sup>(1)</sup></b> 5 prog. page 16.22 	<b>EG071<sup>(1)</sup></b> free prog. page 16.22 	<b>EG103B<sup>(2)</sup></b> base page 16.22 	<b>EG203B<sup>(2)</sup></b> basic page 16.22 	<b>EG293B<sup>(2)</sup></b> basic page 16.23 			
		<b>EG103E</b> enhanced page 16.22 	<b>EG203E</b> enhanced page 16.22 		<b>EG403E</b> enhanced page 16.23 	<b>EG493E</b> enhanced page 16.23 	
		<b>EG103D</b> wireless page 16.22 					<b>EG103V</b> VLV page 16.22 

Energy / lighting management

**Accessories**

**EG006**  
page 16.23



storage module:  
space for 3 keys

**EG003G**  
page 16.23



Software and  
interface via  
USB link

locking key

**EG004**  
page 16.23



programming key

**EG005**  
page 16.23



DCF wireless antenna

**EG001**  
page 16.23



Only for EG103D

programming key

**EG007**  
page 16.23



DCF wireless antenna

**EG001**  
page 16.23



prog. key

**EG005**  
page 16.23



(1) no key  
(2) key in option



**Analogue time switch**

230 V

1 channel

Daily

Weekly

1 module

2 modules

3 modules

box 72x72

1 module

2 modules

3 modules

5 modules

box 72x72

**EH209**  
without reserve  
page 16.24



**EH010**  
without reserve  
page 16.24



**EH210**  
without reserve  
page 16.24



**EH110**  
without reserve  
page 16.24



**EH710**  
without reserve  
page 16.25



**EH011**  
reserve  
200 h  
page 16.24



**EH211**  
reserve  
200 h  
page 16.24



**EH111**  
reserve  
200 h  
page 16.24



**EH711**  
reserve  
200 h  
page 16.25



**EH071**  
reserve  
200 h  
page 16.24



**EH271**  
reserve  
200 h  
page 16.24



**EH171**  
reserve  
200 h  
page 16.24



**EH191**  
reserve  
200 h  
page 16.24



**EH770**  
without reserve  
page 16.25



**EH771**  
reserve  
200 h  
page 16.25



**Analogue time switch**

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**6 to 24 V**

---

1 channel

---

Daily

---

Weekly

---

3 modules

---

box 72x72

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**EH110A**  
without reserve  
page 16.24



**EH111A**  
reserve  
200 h  
page 16.24



**EH171A**  
reserve  
200 h  
page 16.24



Our range of movement detectors help switch On/Off according to human movement and available daylight, for indoor and outdoor use.

Matching with different detection and installation specifications, the detectors are available with a mounting set for wall, ceiling and corners.

The enhanced models of this range can be configured and controlled with an IR remote control. These detectors can also be used to increase comfort, safety, security and energy saving in commercial, residential and industrial premises.



EE820

### Standard motion detectors IP55

- 230V AC (50/60 Hz)
  - output: 10A AC1 relay
  - for indoor or outdoor use
  - can be mounted on walls, in corners or to ceilings utilising the relevant mounting accessory
- time and lux are achieved locally, via potentiometers

Description	Cat. ref.
140° white	<b>EE820</b>
140° anthracite	<b>EE821</b>
200° white	<b>EE830</b>
200° anthracite	<b>EE831</b>
360° white	<b>EE840</b>
360° anthracite	<b>EE841</b>



EE840



EE825

### Mounting accessories for standard motion detectors

Description	Cat. ref.
<b>Corner fixing</b>	
white, for EE82X et EE83X	<b>EE825</b>
anthracite, for EE82X et EE83X	<b>EE826</b>
<b>Ceiling fixing</b>	
white, for EE82X et EE83X	<b>EE827</b>
anthracite, for EE2X et EE83X	<b>EE828</b>



EE860

### Comfort motion detectors IP55

- 230V AC (50/60 Hz)
  - output: 10A AC1 relay
  - can be mounted on walls, in corners or to ceilings utilising the relevant mounting accessory
  - allows automatic control of a light source for a defined length of time when a movement is detected in the surveillance zone
- settings set by the remote control to switch the light automatically for a given time

Description	Cat. ref.
140° white	<b>EE850</b>
140° anthracite	<b>EE851</b>
200° white	<b>EE860</b>
200° anthracite	<b>EE861</b>
220/360° white	<b>EE870</b>
220/360° anthracite	<b>EE871</b>



EE855

### Mounting accessories for comfort motion detectors

Description	Cat. ref.
<b>Corner fixing</b>	
white, for EE84X, EE85X, EE86X and EE87X	<b>EE855</b>
anthracite, for EE84X, EE85X, EE86X and EE87X	<b>EE856</b>

**IR remote control**

- to adjust : time delay, sensivity, brightness, detection of angles (220°- 360° version), keypad lock, ON / OFF, test mode.



Description

IR remote control for EE85x, EE86x and EE87x

Cat. ref.

**EE806** EE806

**Presence and motion detectors IP21**

- automatic switching of electric loads depending on heat motion and ambient brightness
- combination of presence and motion detector with enhanced detection sensitivity in the central

- presence-detection area
- response brightness and delay time adjustable



Description

360° surface mounting, white

360° flush mounting, white

Cat. ref.

**EE804A**

**EE805A**

EE804A

**Motion detector for corridor IP54**

- 1 way, 10 A AC1
- 4 m x 20 m
- for surface mounting on wall or ceiling

- sensitive to infrared radiation emitted as heat from a moving body
- specially designed to meet the needs of corridors



Description

360° surface mounting, white

Cat. ref.

**EE880**

EE880

**HF motion detector (hyper frequency) IP54**

- 1 way, 10 A AC1
- detection distance from 1 to 8 m
- for surface mounting on wall or ceiling
- employs Hyper Frequency technology and reacts to movements regardless of the temperature

- can detect movements through doors, windows and even non-metallic low-thickness partitions



Description

surface mounting, white

Cat. ref.

**EE883**

EE883

**Protection basket**

- Ø 178 mm



Description

compatible with EE804, EE805, EE883, white

Cat. ref.

**EEK006**

EEK006

Our range of presence detectors detect infra-red radiation and ambient light levels to provide simple and cost effective means of lighting control.

In addition, the energy cost will also be reduced thanks to the low consumption technologies used to build the electronic parts of these sensors.

This presence detectors range can be used in premises (offices, conference rooms, hotel rooms, classrooms, public building, homes etc) or in passage areas, where they increase comfort and reduce drastically the energy costs of the lighting. The new sensors come with embedded DALI standard and DSI protocol.



### Presence detector 1 channel

- supply voltage: 230V AC, 50Hz
- S1 output contact : 16A, AC1 / 230V AC
- S2 slave output for association with EE811 / EE812 - Lux OFF

EE810

Description

Cat. ref.

360° white

**EE810**



### Presence detector 2 channels

- supply voltage: 230V AC, 50Hz
- input slave / override
- slave maximum distance: 50m
- S1 control of lighting output contact : 16A, AC1 / 230V AC
- S2 control of presence output contact
- lighting output S1 time delay: from 1 to 30 min
- presence output S2 time delay: from 30s to 60 min

EE811

Description

Cat. ref.

360° white

**EE811**



### Presence detector 1/10V

- supply voltage: 230V AC, 50Hz
- S1 control of lighting output contact : 10A AC1 / 230V AC
- 1/10V output used to control an electronic ballast or dimmers EV100/EV102
- 1/10V output : 50mA max
- 3 operating modes: ON/OFF/AUTO
- input slave / override
- slave maximum distance: 50m
- lighting output S1 time delay: from 1 to 30 min

EE812

Description

Cat. ref.

360° white

**EE812**



### Presence detector flush mounting

- switched phase 16A AC1 230V
- power supply: 230V AC
- ON/OFF with remote control

EE815

Description

Cat. ref.

360° white

**EE815**



### Presence detector DALI/DSI for lighting regulation

- DALI/DSI bus
- power supply: 230V AC

EE816

Description

Cat. ref.

360° white

**EE816**

**Infra-red remote control**

- for EE81x and TCC52x detectors

Description

Cat. ref.

for the installer (settings)

**EE807**

for the customer (lighting control)

**EE808**



EE807

EE808

**Accessories**

Description

Cat. ref.

**Mounting box**

white, for EE810, EE811, EE812

**EE813**



EE813

**Backboxes**

white, for EE815, EE816 and TCC5xx

**EEK005**

black, for EE815, EE816 and TCC5xx

**EEK005B**



EEK005

**Protection basket**

white, for EE810, EE811, EE812

**EEK006**



EEK006

Our new range of floodlights is the easy solution for your outdoor lighting. Easy to install and configure, it also offers you high performances, due to its advanced technology sensors and reflectors. The built-in LED lamp ensures energy efficiency, with a low energy consumption. These detectors are available in versions with or without detector.



EE631

### LED floodlights with sensor

- IP55

Description Cat. ref.

#### 700 lumen

white **EE631**

black **EE641**

#### 1200 lumen

white **EE632**

black **EE642**

#### 2000 lumen

white **EE633**

black **EE643**

#### 3000 lumen

white **EE634**

black **EE644**



EE643



EE636

### LED floodlights without sensor

- IP55

Description Cat. ref.

#### 700 lumen

white **EE635**

black **EE645**

#### 1200 lumen

white **EE636**

black **EE646**

#### 2000 lumen

white **EE637**

black **EE647**

#### 3000 lumen

white **EE638**

black **EE648**



EE648

LED or halogen floodlights are equipped with an IR motion detector which allows an automatic control of the light when a movement is detected in the surveillance zone.  
They permit also to control the several receivers like detectors or IP55 receivers.

**LED lamp floodlight with PIR**

- IP55
- 3400 lumen

Description  
220°/360° white

Cat. ref.

**EE600**



EE600

**LED deco lamp with PIR**

- IP55
- 1100 lumen

Description  
140° white

Cat. ref.

**EE610**



EE610

**IR remote control**

- for EE600 and EE610

Description  
settings and lighting control

Cat. ref.

**EE806**



EE806



Time lag switches are designed to save energy and ensure safety. For example: for building stair-case or cellar lighting, ventilation, pumping, etc... these devices provide control of lighting circuits with automatic switch-off after a pre-set time (e.g. for staircase, corridors lighting).

Compact design with a 2 position switch permanent/timed lighting implementation facility.

- consumption: 1VA
- time delay: 30 s to 10 min
- protection degree: IP20
- current limiting: 100mA EMN001
- connection capacity:
  - 6mm<sup>2</sup> flexible
  - 10mm<sup>2</sup> rigid

Complies with EN 60 669.

### Technical data

- supply voltage: 230V 50/60Hz
- cut-off power: 16A - 250V AC1

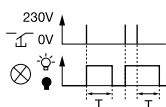


EMN001

### Standard stair case time lag switch

- press shortly a push button to switch ON the light
- after an adjustable time "T", the light switch OFF automatically

Description	Width in modules	Pack qty.	Cat. ref.
standard stair case time lag switch	1	6	<b>EMN001</b>

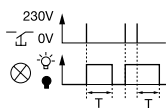


EMN005

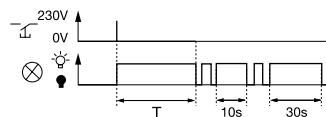
### Multifunction stair case time lag switch

Description	Width in modules	Pack qty.	Cat. ref.
multifunction stair case time lag switch 4 functions:	1	1	<b>EMN005</b>

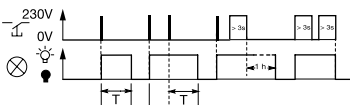
- basic mode



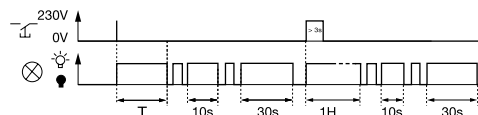
- prewarning mode



- double delay mode



- double delay + prewarning mode



Our dimmers control the lighting level of all types of lighting source: incandescent, LV halogen, VLV halogen with electronic or ferromagnetic transformer, LED VLV lamps with electronic transformer, fluorescent with electronic ballast. The new generation of EVN dimmers 300W and 500W also allows the lighting level adjustment for dimmable CFL and dimmable LED lamps.

Dimming controlled by push button :  
- start / stop by short press  
- increasing / decreasing by maintaining pressure

**Common characteristics**

- universal dimmers with automatic load recognition
- Softstart (progressive start) to increase the working life of lamps
- memorisation of last dimming level
- protection against overheating.

**Dimmer 1000 W**

Several lamps with up to 1000W power can be driven with the same control by associating EV102 (master) with up to 30 EV102 or EV100 (slave), that represents a total power of 30kW.

**Dimmers 1-10V**

The lamps equipped with a 1-10V dimmable input, whatever their power, can be driven by EV106 or EV108. A dimmer can drive up to 30 ballasts: the total power depends on the lamps power.

Connection capacity  
rigid 10 mm<sup>2</sup>  
flexible 6 mm<sup>2</sup>

Complies with EN50082-1 and CEI669-2

**Universal dimmers 300 W**

- compatible with dimmable CFL and LED (60W)
- 3 modes for load learning: auto, advanced, expert (comfort version)
- can replace a latching relay, with lighting level function
- push button (phase or neutral)
- very low consumption)

Description	Width in modules	Pack qty.	Cat. ref.
standard version	1	1	<b>EVN011</b>
comfort version - expert mode - scene by 2 short double presses on the remote push button (progressive switchoff, night light, 100%, no function)	1	1	<b>EVN012</b>



EVN011

**Universal dimmers 500 W**

- compatible CFL and LED
- 3 modes for load learning: auto, advanced, expert (comfort version)
- very low consumption

Description	Width in modules	Pack qty.	Cat. ref.
standard version	2	1	<b>EVN002</b>
comfort version - expert mode - 100% via 2 short presses on the dim input push button - 1 scene push button (scene, time delayed scene, progressively delayed scene, progressive switch-off, night light) - multi-voltage dim delayed scene, progressive	2	1	<b>EVN004</b>



EVN004

**Universal dimmers 1000 W**

- mode selection switch:  
"local": autonomous operating,  
"slave": 1/10V input,  
"master" (EV102 only): 1/10V output
- min. and max. dim level

Description	Width in modules	Pack qty.	Cat. ref.
standard version	5	1	<b>EV100</b>
advanced version - 2 scene push button (scene or override) - dimming level display - adjustable parameters (min. and max. dim level, dimming rise time, rise time when switching on and off)	5	1	<b>EV102</b>



EV100



EV108

### 1/10V pilot dimmers

- to control electronic ballast or EV100/EV102 dimmers (max. 30)
- dim level display
- adjustable parameters (min. and max. dim level, dimming rise time, rise time when switching on and off)

Description	Width in modules	Pack qty.	Cat. ref.
standard version	4	1	<b>EV106</b>
advanced version - 2 scene push button (scene or override)	4	1	<b>EV108</b>



LZ060

### Heat dissipation insert

Description	Width in modules	Pack qty.	Cat. ref.
heat dissipation insert	0.5	12	<b>LZ060</b>

### Modular analogue time switches



width in 1 **■** :  
EH010, EH011, EH071



width in 5 **■** :  
EH191

Technical characteristics	EH010	EH011	EH071	EH209	EH110	EH210	EH111	EH211	EH171	EH271	EH191	EH110A	EH111A	EH171A
width in <b>■</b> 17,5mm	1	1	1	2	3	2	3	2	3	2	5	3	3	3
voltage	230V~	230V~	230V~	110-230V~	110-230V~	110-230V~	230V~	230V~	230V~	230V~	230V~	6 to 24V AC/DC	6 to 24V AC/DC	6 to 24V AC/DC
operating cycle	24 h	24 h	7 days	24 h	24 h	24 h	24 h	24 h	7 days	7 days	24 h / 7 days	24 h	24 h	7 days
minimum switching	30 min	30 min	3 h 30	30 min	30 min	30 min	30 min	30 min	3 h 30	3 h 30	15 min / 2 h	30 min	30 min	4 h
supply failure reserve	-	200 h	200 h	-	-	-	200 h	200 h	200 h	200 h	200 h	-	200 h	200 h
manual override	auto / on	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	auto / on / off	auto / on / off	auto / on / off
AC1 contact type	1NO - 16A	1NO - 16A	1NO - 16A	1 c/o - 16A	1 c/o - 16A	1 c/o - 16A	1 c/o - 16A	1 c/o - 16A	1 c/o - 16A	1 c/o - 16A	1 c/o - 16A	1 c/o - 16A	1 c/o - 16A	1 c/o - 16A

c/o: changeover contact

### Analogue time switches (72 x 72mm)



EH710, EH710A, EH711, EH770,  
EH771, EH712, EH715, EH716

Technical characteristics	EH710	EH710A	EH711	EH770	EH771	EH712	EH715	EH716
voltage supply	230V~	6 to 24V AC/DC	230V~	230V~	230V~	230V~	48V DC 110-240V AC	
operating cycles	24 h	24 h	24 h	7 days	7 days	24 h	24 h	24 h
minimum switching	20 min	20 min	20 min	2 h	2 h	20 min	20 min	20 min
supply failure reserve	-	-	200 h	-	200 h	-	-	200 h
manual override	on/off	on/off	on/off	on/off	on/off	on/off	on/off	on/off

### Modular digital time twilight switches



width in 1 **■** :  
EG010, EG071



width in 4 **■** :  
EG403E



EE171

Technical characteristics	Digital time switches (din rail mounted)								Twilight switches	
	EG010	EG103B EG071	EG203B EG103E	EG203E	EG403E	EG293B	EG493E	EEN101	EEN100 EE100	EE170 EE171
width in <b>■</b>	1	1	2	2	4	4	4	3	5	3
operating cycle	24 h	7 days	7 days	7 days	7 days	1 year	1 year	-	24 h	7 days
program steps	5	20	56	56	300	300	300	-	15 min	1 min
supply failure reserve	230V~	230V~	230V~	230V~	230V~	230V~	230V~	230V~	230V~	230V~
manual override	1	1	1	2	4	2	4	-	1	1

There are 3 solutions to control automatic lighting for night lighting such as neon signs, showcase, exterior surroundings, public lighting (streets, monuments):

- modular twilight switches,
- surface mounting compact twilight switches,
- astronomical time switches.

The twilight switches control light systems according to natural illumination. A photoelectric cell measures the light level and in conjunction with the relay provides ON/OFF control of a circuit. Astronomical time switches are electronic weekly programming clocks designed to control various loads automatically according to sunrise and sunset times to optimized the energy saving.

### Technical data

- supply voltage: 230V AC  $\pm 15\%$
- frequency: 50/60Hz
- maximum load: 16A / 250V AC1,
- loads: incandescent, halogen, and fluorescent lamps,
- max length between 2 modular devices: max. 50 m.

Connection capacity:  
rigid: 1.5 to 10mm<sup>2</sup>  
flexible: 1 to 6mm<sup>2</sup>

Complies with IEC 60669-1, IEC 60669-2-1, IEC 60730-2-7



EEN100

### Twilight switches 1 channel

- light sensitive switch with photoelectric cell with 2 ranges of sensitivity 5 to 100 lux and 50 to 2000 lux

Description	Width in modules	Pack qty.	Cat. ref.
with surface mounting photoelectric cell EEN003	1	1	<b>EEN100</b>
with flush mounting photoelectric cell EEN002	1	1	<b>EEN101</b>



EE110

### Programmable twilight switches with surface cell 1 channel

Description	Width in modules	Pack qty.	Cat. ref.
daily cycle, electromechanical switch	1	1	<b>EE110</b>
weekly cycle, electronic program free setting	1	1	<b>EE171</b>



EE702

### Compact light switches

- IP55 integrated cell

Description	Pack qty.	Cat. ref.
basic 8A (without settings) - 1000W incandescent - fix lux: 10...30 lux - fix ON delay: 40s/OFF delay: 120s	1	<b>EE701</b>
enhanced 16A (with settings) - 2300W incandescent - adjustable lux: 2 to 1000 lux - time settings: from 1s to 120s	1	<b>EE702</b>



EE200

### 2 channels light sensitive switches

- the output is switched on/off according to the pre-defined lux level
- for each channel: threshold setting, state indication led, 4 positions selection switch, delivered without cell, can be associated

Description	Width in modules	Pack qty.	Cat. ref.
2 channels light sensitive switch	4	1	<b>EE200</b>
kit 2 channels light sensitive switch + surface cell EE003	4	1	<b>EE201</b>

**2 channels light sensitive switches for cascading**

- like EE200, it integrates 2 inputs for 2 operating modes
- the selected mode always applies to both outputs

Description	Width in modules	Pack qty.	Cat. ref.
2 channels light sensitive switches for cascading	4	1	<b>EE202</b>
kit 2 channels light sensitive switch for cascading + surface cell EE003	4	1	<b>EE203</b>



EE202

**Accessories**

- max length between cell and modular device: 50 m

Description	Pack qty.	Cat. ref.
<b>Flush cells IP54</b>		
for EEN100 and EEN101	1	<b>EEN002</b>
for EE200, EE202, EE110 and EE170	1	<b>EE002</b>
<b>Surface cells IP54</b>		
for EEN100 and EEN101	1	<b>EEN003</b>
for EE200, EE202, EE110 and EE170	1	<b>EE003</b>
<b>Programming key</b>		
for EE180 and EE181	1	<b>EG005</b>



EEN003



EE002

**Astronomical time switches (weekly cycle) 1 and 2 channels**

- delivered with key EG005
- operating reserve lithium battery 5 years
- running accuracy:  $\pm 1.5\text{sec}/24\text{hr}$
- time accuracy:  $\pm 1$  minutes
- programming capacity: 56 steps.
- automatic change of the winter/ summer time

Description	Width in modules	Pack qty.	Cat. ref.
1 channel, 1 changeover contact	1	1	<b>EE180</b>
2 channels, 2 changeover contacts	1	1	<b>EE181</b>



EE180

Time switches allow you to manage the operation of loads such as lighting, water pumps, and domestic machines giving improved comfort and saving energy. These products enable a daily (24 h), weekly (7 days) or annual (365 days) schedule on 1, 2 or 4 channels. The power reserve is powered by a lithium battery.

### Technical data

- supply voltage: 230V AC, 50Hz
- cycles: 24h, 7 days, 1 year
- IP degree: IP20
- accuracy: +/- 1second pre day
- output: 16A and 10A AC1, 250V AC

### Basic version

- product set at current time and date when delivered
- automatic change of summer or winter time
- programming per day or group of days
- permanent On/Off overrides
- temporary On/Off overrides
- bar graph showing the daily profile

### Evolution version

- Same characteristics as basic version plus:
- holidays mode: forcing ON or OFF between two dates
  - random switching
  - backlighted screen
  - impulse programming capability (1s to 30min)

### Wireless control version

Same characteristics as evolution version without backlighted screen plus more radio synchronization CDF77 long wave time signal.

### VLV version (Very Low Voltage)

same characteristics as evolution version without backlighted screen plus more

Connection capacity  
1.5 to 10mm<sup>2</sup> max rigid  
4 to 6mm<sup>2</sup> max flexible

Complies with IEC 60730-2-7



EG010

### 1 channel daily cycle time switch

- 5 adjustable pre-recorded programs: 6 commutations max per day (3 ON and 3 OFF) 230V 50/60 Hz
- 16A / 250V AC1 changeover contact
- not compatible with programming key

Description	Width in modules	Pack qty.	Cat. ref.
1 channel daily cycle time switch	1	1	<b>EG010</b>



EG071

### 1 channel weekly cycle time switches

- 16A / 250V AC1 changeover contact

Description	Width in modules	Pack qty.	Cat. ref.
basic version compact size - capacity: 20 program steps - power supply: 230V AC 50/60 Hz - not compatible with programming key	1	1	<b>EG071</b>
basic version - capacity: 56 program steps - power supply: 230V AC 50/60 Hz - programming key included	2	1	<b>EG103B</b>
evolution version - capacity: 56 program steps - power supply: 230V AC 50/60 Hz - programming key included	2	1	<b>EG103E</b>
radio control version - capacity: 56 program steps - power supply: 230V AC 50/60 Hz - programming key included - CDF77 radio synchronisation (aerial as option)	2	1	<b>EG103D</b>
VLV version - capacity: 56 program steps - power supply: 12/24V AC/DC 50/60Hz - programming key included	2	1	<b>EG103V</b>



EG103V

### 2 channels weekly cycle time switches

- 16A / 250V AC1 changeover contact

Description	Width in modules	Pack qty.	Cat. ref.
evolution version - capacity: 56 program steps - power supply: 230V AC 50/60 Hz - programming key not included	2	1	<b>EG203B</b>
evolution version - capacity: 56 program steps - power supply: 230V AC 50/60 Hz - EG005 programming key included	2	1	<b>EG203E</b>



EG203E

### 4 channels yearly cycle time switch

- 2 changeover contacts 10A / 250V AC1

Description	Width in modules	Pack qty.	Cat. ref.
basic version - capacity: 300 program steps - power supply: 230V AC 50/60 Hz - EG007 programming key not included	4	1	<b>EG293B</b>



EG293B

### 4 channels weekly cycle time switch

- 2 NO contacts + 2 changeover contacts 10A / 250V AC1

Description	Width in modules	Pack qty.	Cat. ref.
evolution version - capacity: 300 program steps - power supply: 230V AC 50/60 Hz - EG007 programming key not included - DCF77 radio synchronization (aerial as an option)	4	1	<b>EG403E</b>



EG403E

### 4 channels yearly cycle time switch

- 2 NO contacts + 2 changeover contacts 10A / 250V AC1

Description	Width in modules	Pack qty.	Cat. ref.
evolution version - capacity: 300 program steps - power supply: 230V AC 50/60 Hz - EG007 programming key not included - DCF77 radio synchronization (aerial as an option)	4	1	<b>EG493E</b>



EG493E

### Wireless control antenna

- power supply by the time 1 EG001 switch can radio-synchronized with DCF77 longwave time signal

- the aerial is dedicated to radio control the following time switches: EG493E, EG103D, EG403E using the DCF77 longwave time signal

Description	Pack qty.	Cat. ref.
wireless control antenna	1	<b>EG001</b>



EG001

### Programming keys

Description	Pack qty.	Cat. ref.
for EG403E, EG293B, EG493E	1	<b>EG007</b>
for EG103 / EG203	1	<b>EG005</b>
clock key	1	<b>EG004</b>
storage module for programming key	1	<b>EG006</b>



EG007



EG006

### Interface and software

Description	Pack qty.	Cat. ref.
interface and software with USB	1	<b>EG003G</b>



EG003G



In domestic and commercial premises, electromechanical time switches 1 channel for daily or weekly programming are used to control lighting, heating, household appliances, shop windows etc and also to improve comfort and save energy.

Connection capacity  
1.5 mm<sup>2</sup> max rigid  
Complies with IEC 60730-2-7

### Technical data

- supply voltage: 230V AC and 6 to 24V AC/DC
- battery reserve: 24h and 7 days versions
- output: voltage free changeover contact 16A, 250V AC1
- programming by captive segments
- manual override on 1 module devices: automatic and permanent ON
- manual override on 3 and 5 module devices: automatic, permanent ON and permanent OFF



EH071

### Modular analogue time switches compact

- modular and compact version
- 1 NO contact 16A - 250V AC1
- 230 V 50 Hz

Description	Width in modules	Cat. ref.
24h cycle, without battery reserve	1	<b>EH010</b>
24h cycle, reserve: 200h	1	<b>EH011</b>
7 days cycle, reserve: 200h	1	<b>EH071</b>



EH209

### Modular analogue time switches

- standard modular version
- 1 NO changeover 16A - 250V AC1

Description	Width in modules	Cat. ref.
<b>230V 50Hz</b>		
24h cycle, without hand without battery reserve	2	<b>EH209</b>
24h cycle, without battery reserve	3	<b>EH110</b>
	2	<b>EH210</b>
24h cycle, reserve: 200h	3	<b>EH111</b>
	2	<b>EH211</b>
7 day cycle, reserve: 200h	3	<b>EH171</b>
	2	<b>EH271</b>
24h + 7 day cycle, reserve: 200h	5	<b>EH191</b>
<b>6 to 24V AC/DC</b>		
24h cycle, without battery reserve	3	<b>EH110A</b>
24h cycle, reserve: 200h	3	<b>EH111A</b>
7 day cycle, reserve: 200h	3	<b>EH171A</b>



EH110A

### Accessories for 3 modules width time switches

Description	Cat. ref.
wall mounting kit	<b>EH902</b>

**72 x 72 mm analogue time switches**

- flush or surface mounting version, 72 x 72mm
- 1 changeover contact 16 A - 250 V AC1

Description	Width in modules	Cat. ref.
<b>230V AC 50/60Hz</b>		
24h cycle, without battery reserve	1	<b>EH710</b>
24h cycle, reserve: 200h	1	<b>EH711</b>
7 day cycle, without battery reserve	1	<b>EH770</b>
24h cycle, reserve: 200h	1	<b>EH771</b>
<b>6 to 24V AC/DC</b>		
24h cycle, without battery reserve	3	<b>EH710A</b>



EH711

**Flush mounting kit**

Description	Cat. ref.
for 72 x 72 mm time switches	<b>EH900</b>



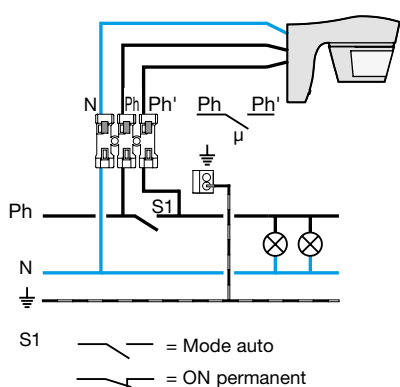
EH900

### Technical characteristics

	<b>EE820 EE830 EE840</b>	<b>EE850 EE860 EE870</b>	<b>EE804A EE805A</b>	<b>EE880</b>	<b>EE883</b>
Voltage supply	230 V AC	230 V AC	230 V AC	230 V AC	230 V AC
Frequency	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz
Brightness level	5 to 1000 lux	5 to 1000 lux	5 to 1000 lux	2 to 2000 lux	2 to 2000 lux
Lighting output operating time	5 s to 15 min	5s to 15 min or 30 min with remote control	5 s. to 30 min	5 s. to 15 min	5 s. to 15 min
Output	phase output (EE820 - EE830) NO contact (EE840)	NO contact	NO contact with zero crossing switching	NO contact	NO contact
Breaking capacity AC1	10A	10A	10A	10A	10A
- incandescent	1500 W	2300 W	2300 W	2300 W	2300 W
- halogen 230 V	1500 W	2300 W	2300 W	2300 W	2300 W
- halogen ELV via ferro.transfo.	1500 VA	1500 VA	1500 VA	1500 VA	1500 VA
- halogen ELV via electro.transfo.	1500 VA	1500 VA	1500 W	1500 VA	1500 VA
- non compensated fluorescent tubes	1000 W	1000 W	-	1200 W	1200 W
- compensated fluorescent tubes	290 W - C = 32 µF	400 W - C = 45 µF	1000 W	-	-
- electronic ballast	580 W	580 W	1000 W	580 W	580 W
- fluocompact	10 x 20 W	20 x 20 W	20 x 20 W	20 x 20 W	20 x 20 W
Terminal capacity	1 to 1.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	1 to 2.5 mm <sup>2</sup>	1 to 2.5 mm <sup>2</sup>	1 to 2.5 mm <sup>2</sup>
IP	IP 55/ IK 04	IP 55/ IK 06	IP 21/ IK 04	IP 54/ IK 04	IP 54/ IK 04
Working temperature	-20°C to + 55°C	-20°C to + 55°C	-5°C to + 45°C	-20°C to + 50°C	-20°C to + 50°C
HF frequency	-	-	-	-	5,8 GHz, emission < 1 mW
Dimensions (L x l x h)	140° and 200° 127 x 83 x 97 mm 360° 153 x 91 x 139 mm	153 x 91 x 139 mm	surface Ø 100 x p.50 mm flush Ø 90 x p.61 mm	surface Ø 125.5 x d.65 mm	surface Ø 125.5 x d.51 mm

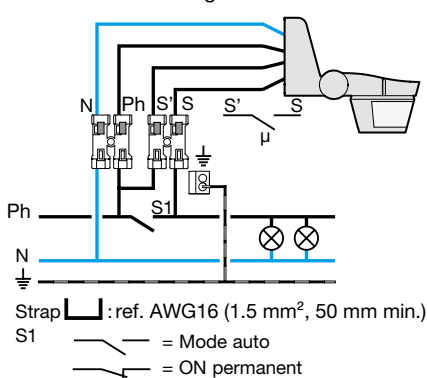
### Connection

#### EE820 - EE830

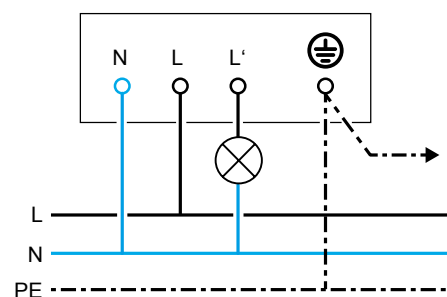


#### EE840 - EE850 - EE860 - EE870

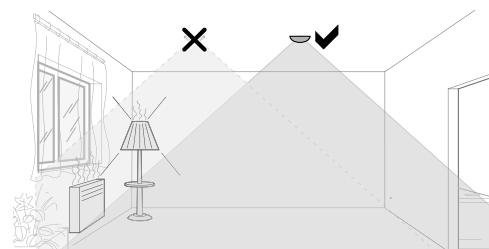
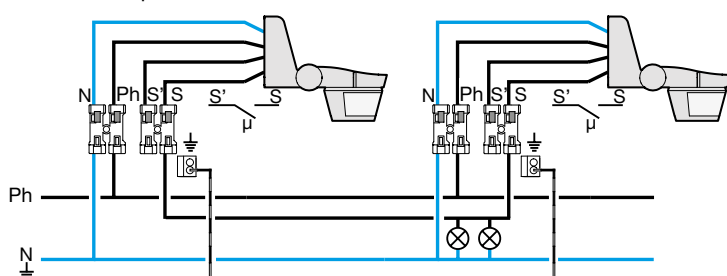
Auto/On functioning



#### EE804A - EE805A

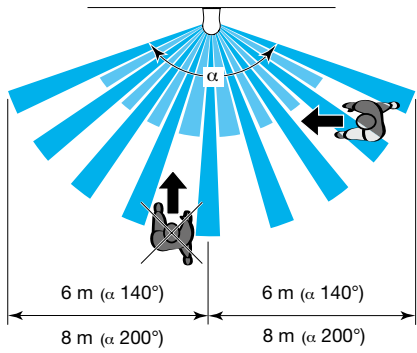
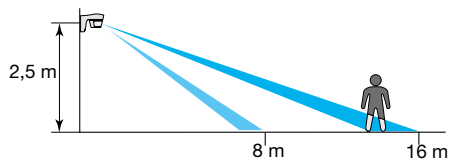


#### Detectors in parallel

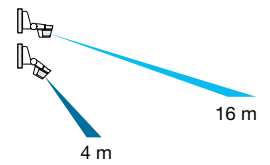
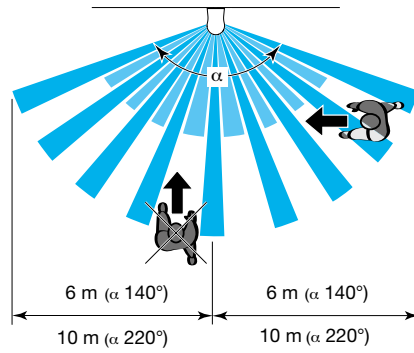
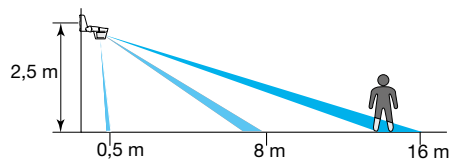


Detection area

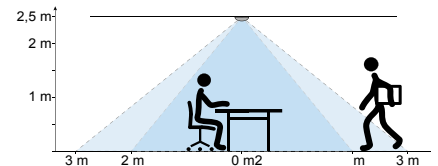
EE820 - EE830



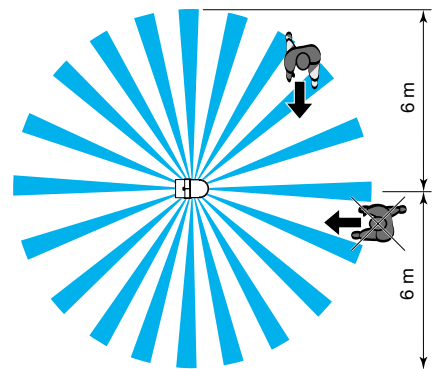
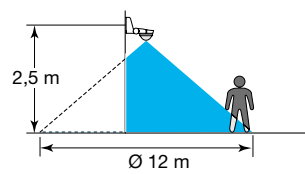
EE850 - EE860



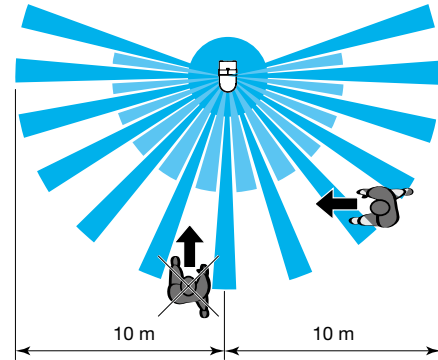
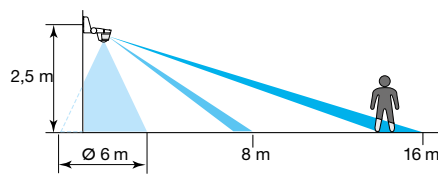
EE804A  
EE805A



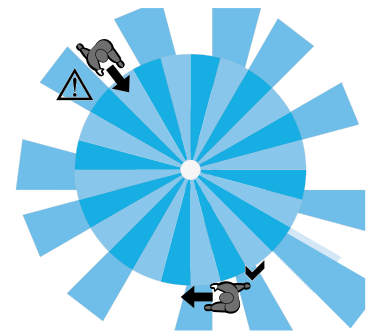
EE840



EE870

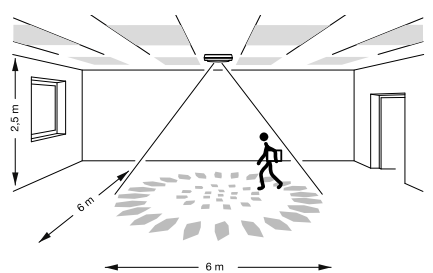


EE804A  
EE805A

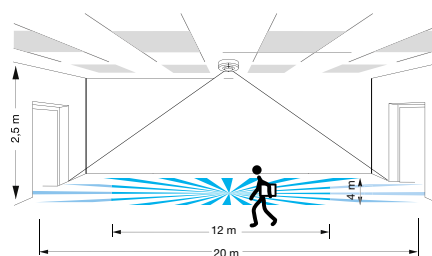


Energy / lighting management

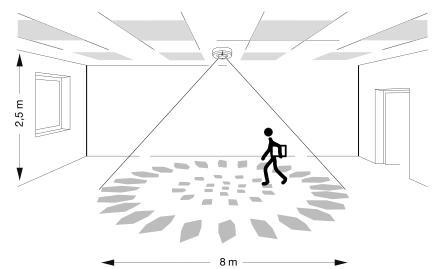
EE804A - EE805A



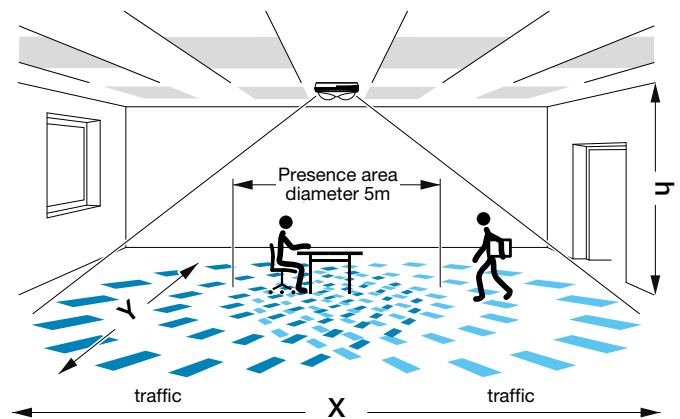
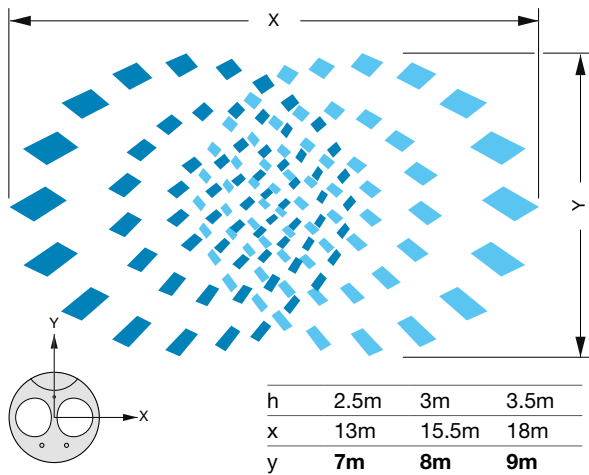
EE880



EE883

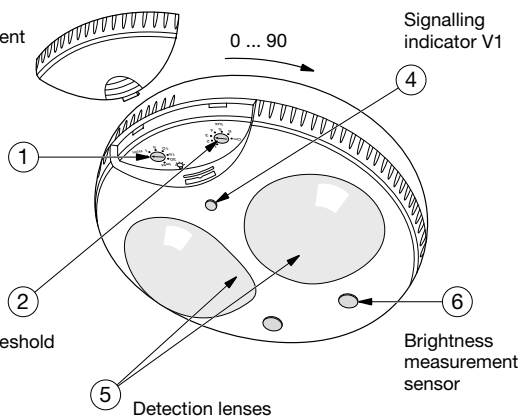


**EE810/EE811/EE812**  
Detection area



**Description**

Lighting time delay adjustment potentiometer



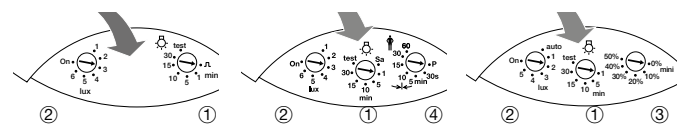
Brightness threshold adjustment potentiometer

**Adjustment potentiometers**

**EE810**

**EE811**

**EE812**



- ① on delay ② light regulation
- ③ residual lighting ④ time delay with the interlocking (output 2)
- mode 1** : potentiometer > 10 s = time delay with the interlocking 15 min (use : correction of the setpoint, heating, etc.)
- mode 2** : potentiometer ≤ 10 s = time delay with the interlocking 15 s (use : ventilation/ventilation, synoptic lighting, ...)

**Technical characteristics**

References	EE810	EE811	EE812
<b>Type</b>	1 channel presence detector	2 channels presence detector	1/10 V presence detector
<b>Supply voltage</b>	230 V~ +10 %/-15 %/50 Hz		
<b>Settings</b>	potentiometer: auto (400 Lux), 5 to 1200 Lux, OFF		
output brightness 1/3	potentiometer: 1 – 30 min, test, impulsions (EE810)		
output temporisation 1	potentiometer: 30 s – 1 h		
output temporisation 2/3	-		
<b>Residual brightness</b>	-	-	potentiometer 0 - 50%
<b>Breaking capacity</b>	output 1 (lighting) 16 A AC+, incandescent lamps, halogen: 1500 W, with fluo compact 580W for EE810 and 1000W for EE811 fluo parallel compensated: 290 W/32mF		
output 2 (presence)	-	2 A AC 1	-
output 3 (brightness setting)	-	-	1 - 10V current: 50mA
<b>Input command</b> 50m max.	-	230 V commutation	230 V commutation / dimming
<b>LED</b>	OFF: auto, ON: movement/test		
<b>Power consumption</b>	1.2 W	1.1 W	1 W
<b>Ingress protection</b>	IP41		
<b>Connection</b>	1 – 4 mm <sup>2</sup>		
<b>Storage temperature</b>	-10 °C to +60 °C		
<b>Working temperature</b>	0 °C to +45 °C		

**Test mode :**

this mode makes it possible to validate the detection area :

- potentiometer ① in position "test"
- indicator V1 - ④ will indicate any detection by lighting for one second if the level of illumination is lower than the preset threshold. This lighting output S1 is not controlled in this mode, the time settings will remain ignored.

**Instances of lighting levels**

Position of potentiometer	Lux value	Application
1	5	-
2	100	corridor
3	200	corridor, WC
4	100	VDU work
5	500	offices
6	800-1200	classrooms laboratory
ON	measurement of brightness inhibited	

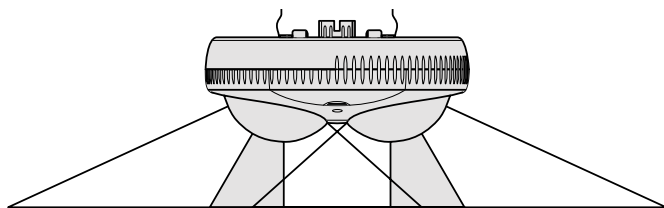
regulation set point is set at 400 Lux

**Lighting measurement**

In addition to one density of higher detection, the difference between one presence detector and a conventional detector of movements reside at the level of their principle of detection. The detector of movements will be activated in the event of detection of movements in the darkness. If the latter is transformed into lighting during the capture, the detector of movements will not extinguish however the light. One presence detector must be able to fill of such tasks and to make the difference between the natural and artificial light. The measurement of lighting carried out since the ceiling can be different from the measured lighting, because it will be influenced by the provision of the windows, the form and the reflective properties of the walls and the pieces of furniture, etc measurement moreover will be delayed in order to avoid inopportune commutations.

**Presence detection**

Based on a solution patented by Hager, the optical part presence detection rests on a double lens making it possible to obtain a zone of rectangular capture of form. The head of the detector can also swivel to adjust the detection zone. The latter is subdivided in two sections equipped with a density higher than the center and a density to reduce in the direction length. in the offices, these detectors should thus be assembled directly above the places of work, resp. in the direction length for an installation in corridors (zones of circulation).



movement detection	presence detection	movement detection
13 x 7 m (installation max. high 2.5 m)		

**Detection zone**

Covering a rectangular detection zone of 13 x 7m, the Hager presence detectors represent an ideal solution for the offices, classrooms, toilets, corridors, markets and garages. In the event of assembly of two detectors in order to increase the range of detection, it is then recommended to respect a zone of covering of approximately a meter. Only two detectors will be thus necessary to cover a 25m length market. A possibility of circuit Master/Slave exists for the commutation of only one group of lights. The presence detector principal one (Master : EE812 or EE811) measurement the lighting and the presence, then commutates and controls the electric devices. Auxiliary presence detectors (Slave : EE810) detect only the presence and will presence detector announce this one to principal, which will carry out commutation then by taking account of the lighting. The diagrams of wiring are illustrated in the respective instructions.

**Assembly**

The behavior of commutation will be determined by the passage of people in the zone of capture of the detector. In exceptional cases, an inopportune commutation can be caused by various influences. The sources of potential parasites should already be evaluated during the study of the project, resp. eliminated before the assembly.

Obstacles decreasing the range of the detector :

- the partition walls, plants of racks, etc can limit the range of detection.

Simulated movements :

- the presence detectors capture fast modifications of temperature in the environment of the detector as being movements, for example at the time of or the stop starting of lowers with hot air, ventilators etc when the flow of air is directed directly on the lenses or of the objects near the zone of capture of the detector.
- objects being heated slowly do not have a negative influence and do not cause inopportune commutation.

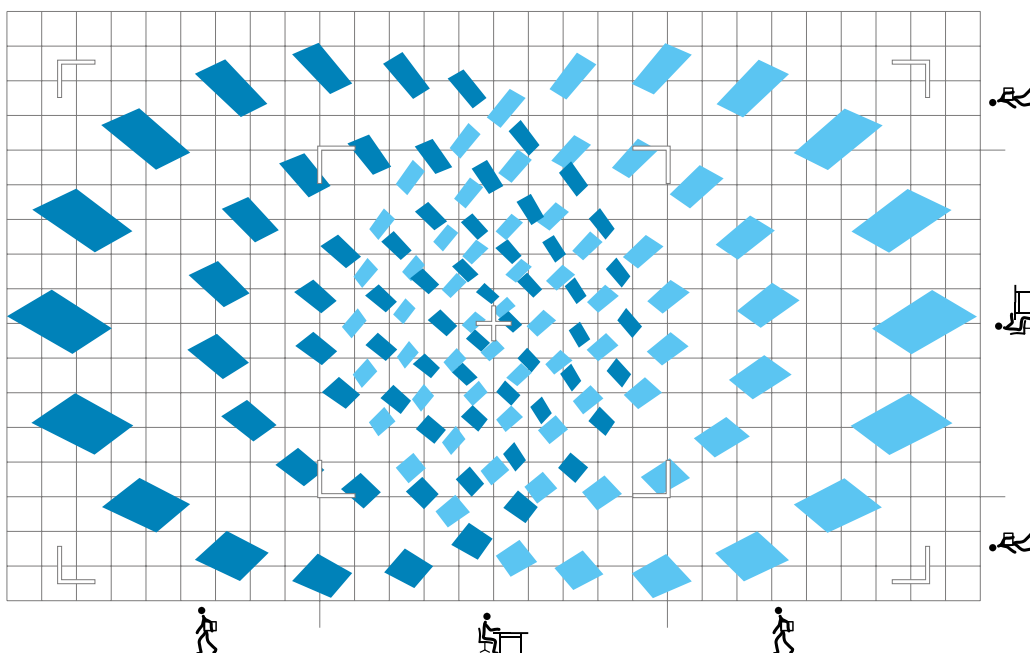
A side distance > 0,5m should however be respected.

Proximity of the conduits of heating and the bodies of radiators.

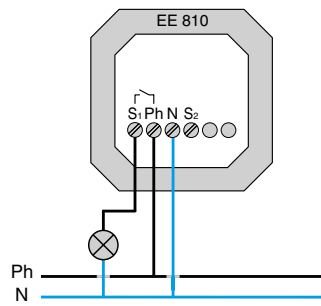
- luminaries switching on themselves and dying out near the zone of detection can simulate a displacement (p e.g of the lamps incandescence or halogen located at a distance < 1m).
- objects moving such as mobile machines, robots, posters can also cause an inopportune detection.

Detection zone - scale 1:100

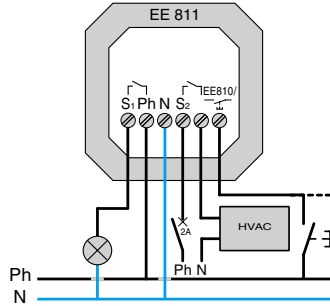
assembly height 2.5 m



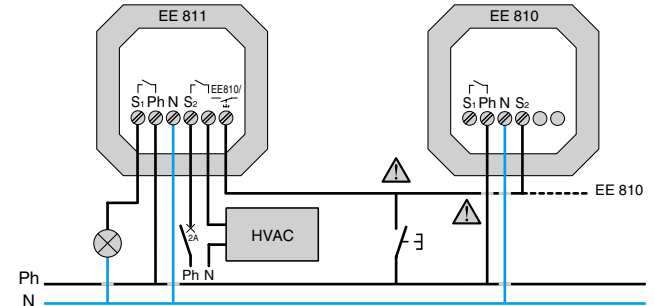
EE810



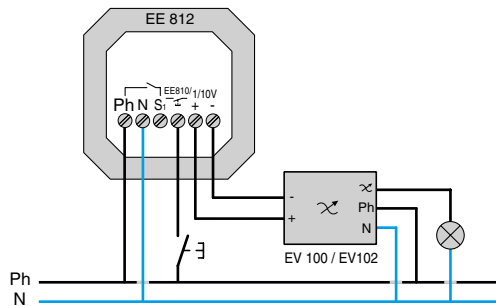
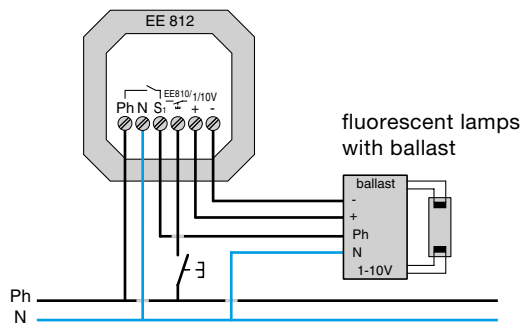
EE811



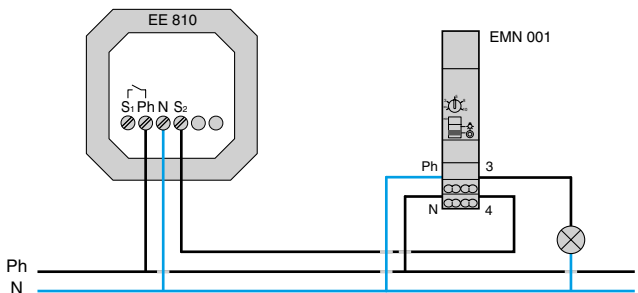
EE811 Master + EE810 Slave



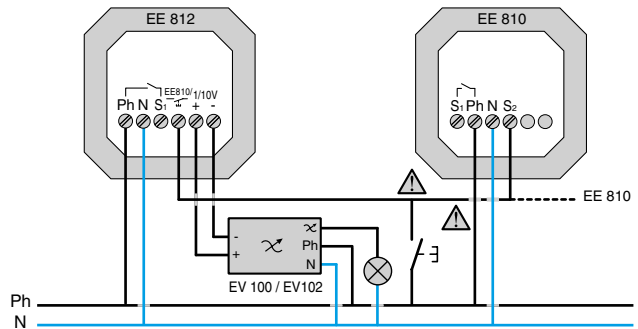
EE812 + ballast, EE812 + EV100/EV102



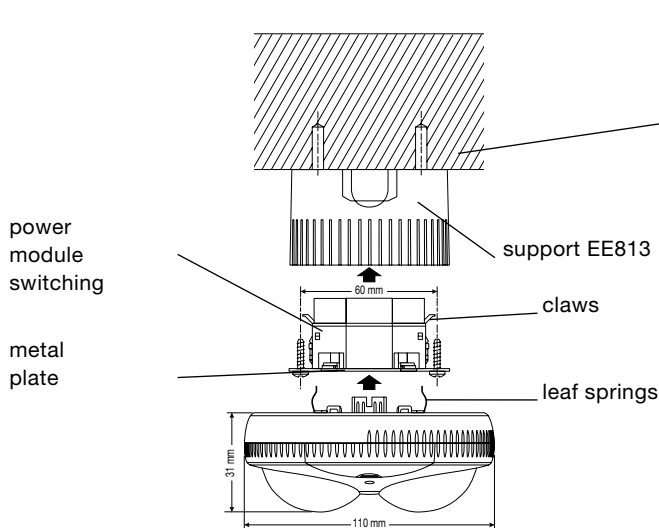
EE810 + EMN001/EMS003



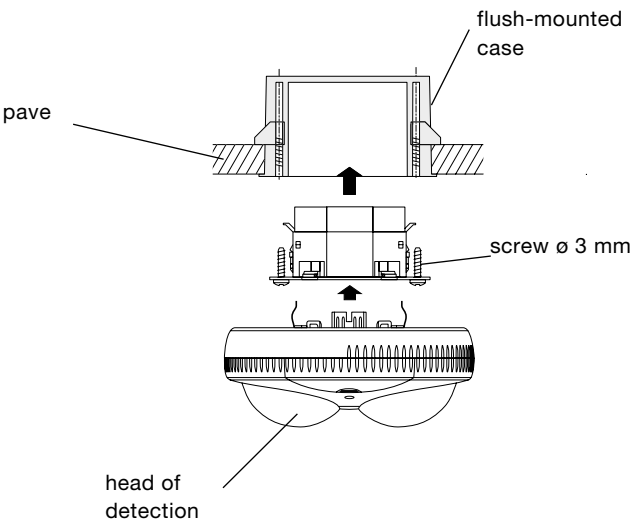
EE812 master + EE810 slave



Apparent assembly



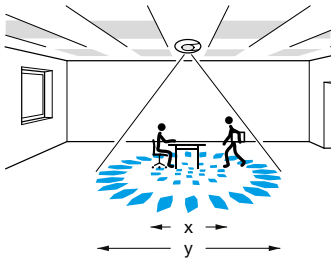
Flush-mounted assembly



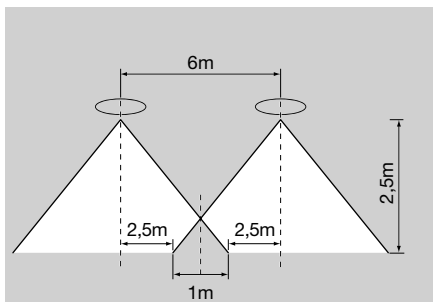
Technical characteristics

	EE815	EE816
Detection range	motion area: diameter 7m (product installed at 2.5m height) presence area: diameter 5m (product installed at 2.5m height)	
Supply voltage	230 V AC + 10 % - 15 %	
Frequency	50/60 Hz	
Local lux threshold setting	5 to 1000 Lux	3 modes available
Local time setting	1 min to 1 hr	
Commissioning via installer remote control	EE807 for power up, absence / presence mode, timer, active / passive cell	
Control with IR user remote control	EE808 for ON/OFF override	EE808 for ON/OFF override and dimming up/ down
Output	16A AC1 relay output (cut live): - 2300W incandescent or 230V halogen: > 26000 cycles - 1500W VLV halogen lamps with ferromagnetic or electronic transformer: > 35000 cycles - 1000 W/130 µF parallel compensated fluo tubes: > 50000 cycles - 23 x 23W fluo-compact with electronic ballast: > 20 000 cycles	14V / 50mA (for a DALI bus with 24 ballasts) - No isolation between the mains and the DALI bus !
Push button input	phase input for absence / presence detection (semi-automatic / automatic mode) same phase as power supply	to dim up / down and absence / presence detection (semi-automatic / automatic mode) same phase as power supply
Terminals	for 1.5 mm <sup>2</sup> rigid / flexible wires	
Power dissipation	300 mW	60 mW
Isolation class	II	
Protection	IP41 / IK03	
Operating temperature	-10°C to +45°C	
Storage temperature	-20°C to +60°C	
Standards	IEC 60669-1, IEC 60669-2-1	

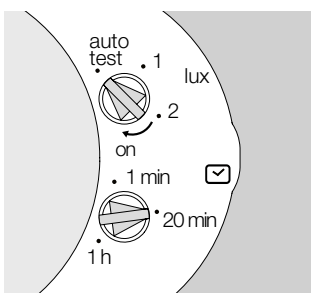
Detection areas



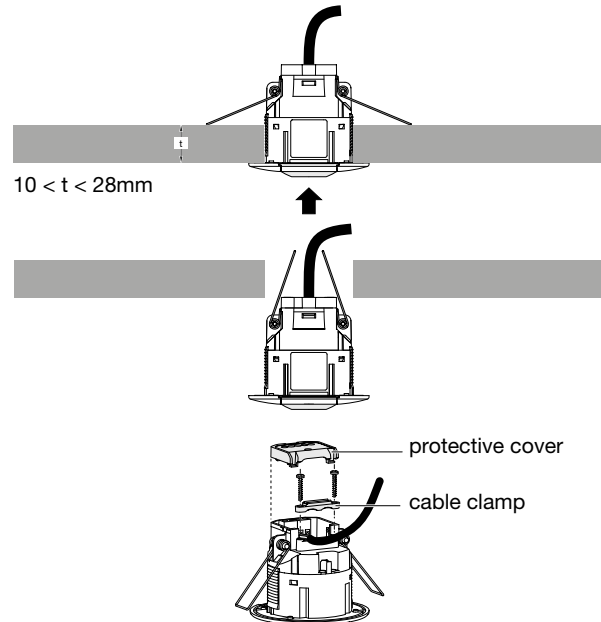
h	2.5m	3m	3.5m
x	5m	5m	5m
y	7m	8m	9m



Settings EE815 / EE816

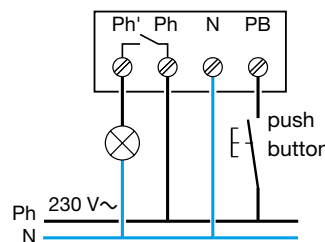


Mounting

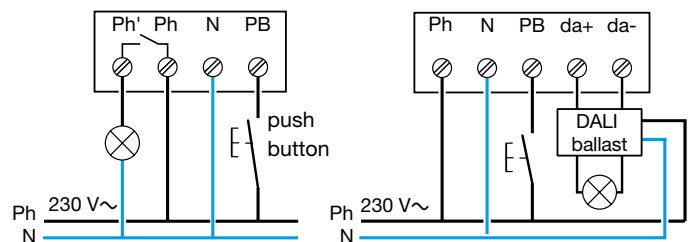


Energy / lighting  
management

Wiring diagram EE815



Wiring diagram EE816



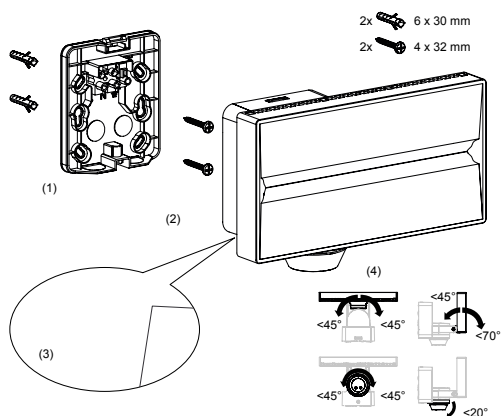


## Technical characteristics

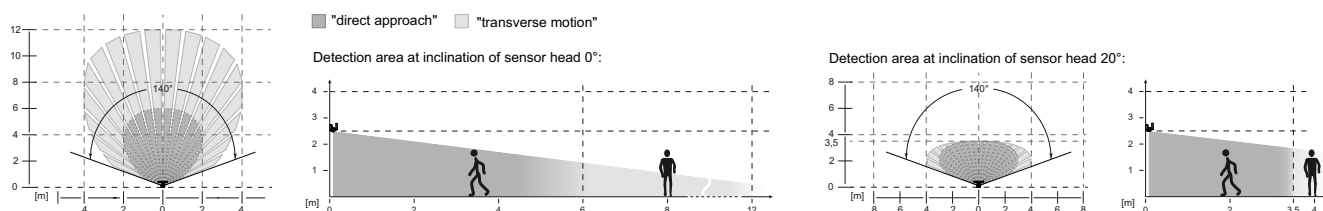
	LED floodlight					
References	EE631 - EE641 EE635 - EE645	EE610	EE632 - EE642 EE636 - EE646	EE633 - EE643 EE637 - EE647	EE634 - EE644 EE638 - EE648	EE600
Lumens	700 lm	1100 lm	1200 lm	2000 lm	3000 lm	3400 lm
Light color (kelvin)			4000 K			5700 K
Efficiency per watt	88 lm/W	73 lm/W	100 lm/W	100 lm/W	100 lm/W	57 lm/W
Power Supply	230/240V					
Frequency	50/60 Hz					
Operating (watt)	8	15	12	20	30	60
Angle Detection *	140°					220°
Operating duration setting *	30 s ... 15min	5 s ... 15min	30 s ... 15min		5 s ... 15 min	
Twilight threshold setting *	10 ... 1000 lux	5 ... 1000 lux	10... 1000 lux		5 ... 1000 lux	
Cage terminal maximum wire size	2 x 2.5mm <sup>2</sup>					
Stockage temperature °C	-30 ... +70 °C					-20 ... +60 °C
Operating temperature °C	-20 ... +50 °C	-25 ... +50 °C	-20 ... +50 °C		-20 ... +45 °C	
Operating Humidity	90% RH Max					
Salt air resistant	Yes	-	Yes		-	
Insulation class	Class II					
Ingress protection	IP55/IK04					
Product Dimension (LxWxD) mm	100x127x140	201x145x179	100x127x140	164x127x140	226x136x141	257x322x150
Performance specified for an ambient temperature of 20° C and a height of 2.5m						

\* product equipped with sensor

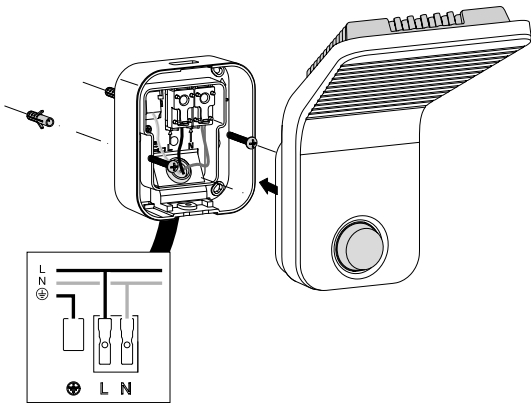
## Floodlight 700 - 1200 - 2000 - 3000 lumens



## EE63x - EE64x Detection Zone

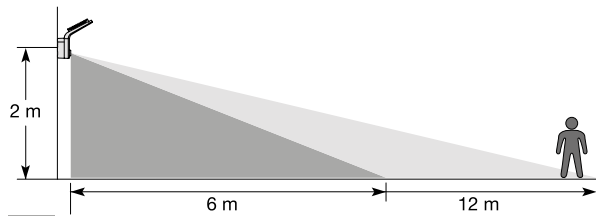


**Floodlight 1100 lumen**

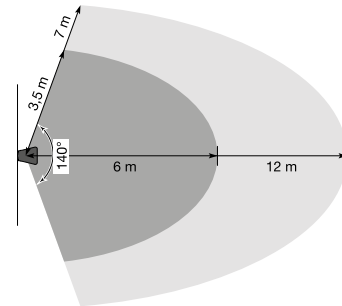


**EE610 Detection Zone**

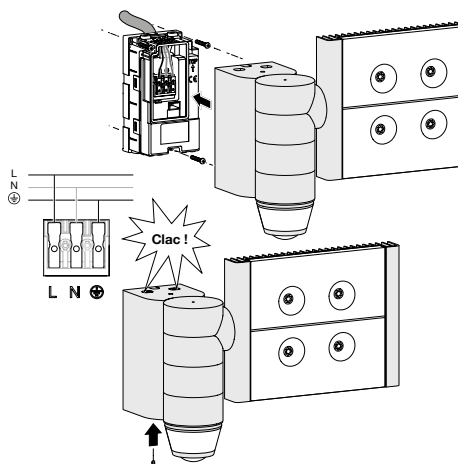
Optimal installation height is 2 m.  
The detection zone shall remain free of obstacle.



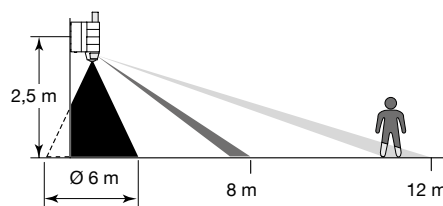
- D default detection area (set at factory)
- R remotely adjustable maximum detection area (EE806 /52900)



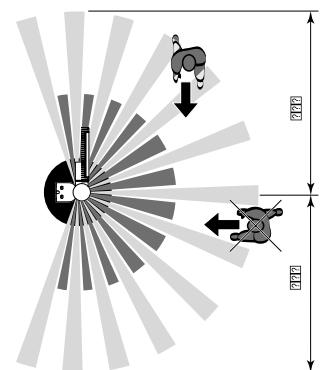
**Floodlight 3400 lumen**



**Detection zones**



Optimal installation height is 2.5m.  
The detection zone shall remain free of obstacle.



### Time lag switches

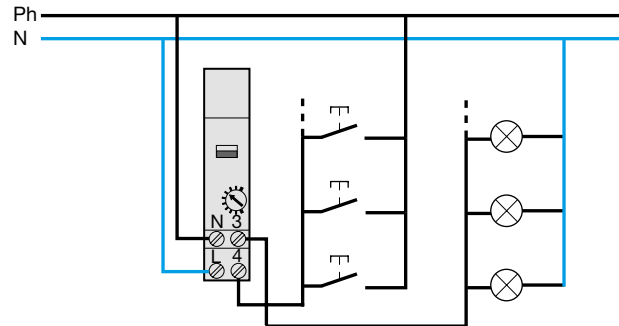
Common areas where time delay devices are used are stairways and corridors in multi occupancy buildings where they provide a level of energy efficiency. The EMN001 device provides basic time lag control.

### Technical specification

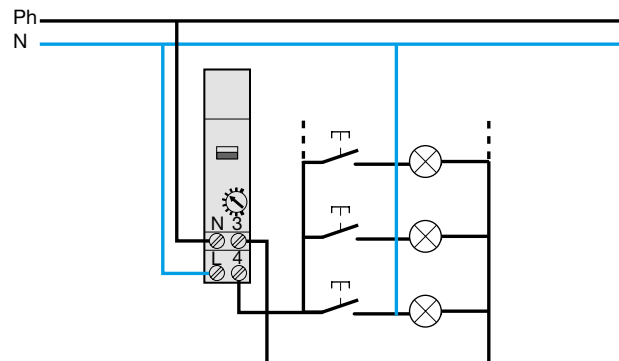
	EMN001 EMN005
<b>Electrical characteristics</b>	
supply voltage	230V +10/-15% 50/60 Hz
consumption	1VA
size (nb of I)	1
<b>Breaking capacity</b>	
AC1	16A 230V AC
incandescent	2300W
halogen 230V	2300W
ferromagnetic transformer	1600W
parallel compensated	capacitor 112µF
fluorescent lamps	1000W
series compensated	3600W
electronic transformer	2300W
compact fluorescent lamps with electronic ballast	60 x 7W or 40 x 11W or 32 x 15W or 20 x 23W
with conventional ballast	23000W
monitoring voltage	-
<b>Functional characteristics</b>	
time delay	30s to 10min
retrigger	yes
max. current in rest position	100mA
automatic 3/4 recognition	yes
local command	automatic / override on
<b>Environment</b>	
working temperature	-10 to +55°C
storage temperature	-20 to +60°C
<b>Connection</b>	
flexible	1 to 6mm <sup>2</sup>
rigid	1,5 to 10mm <sup>2</sup>

### Wiring diagrams EMN001

#### 4-wire



#### 3-wire

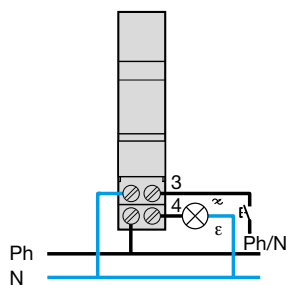


Technical characteristics

	EVN011	EVN012	EVN002	EVN004	EV100	EV102	EV106	EV108
Supply voltage	230 V +/- 10 %							
Frequency	50/60 Hz				50 Hz			
Load consumption	0,2 W				3 W			
Load control type	direct						through dimmer	
Remote power	300 W		500 W		20 to 1000 W		contact 10 A - 230 V	
Compatible load types :								
- incandescent 230 V	300 W		500 W		1000 W		-	
- halogen 230 V	300 W		500 W		1000 W		-	
- VLV halogen with transformer	300 VA		500 VA		1000 VA		-	
- dimmable fluocompact	60 W		100 W		-		-	
- fluocompact and LED not dimmable	-		-		-		-	
- dimmable LED 230 V	60 W		100 W		-		-	
1/10 V control	-				1 input	1 input/ output	1 output	
1/10 V control status	-				slave	slav./mast.	master	
I max. authorized for PB light	5 mA		-	5 mA	-			
max. PB-dimmers distance or 1-10 V control	50 m							
dim PB and ON/OFF on module	no		yes					
Number of preset lighting levels	-			1	-	2	-	3
Preset lighting levels control entry	-			1	-	2	-	2
Min. and max. dim lighting setting	-				yes			
On/Off status indication output	-					1 NO contact	-	
Values digital display	-					yes		
Max. power dissipation	2.1 W		4.5 W		15 W		6 W	
IP	IP 20							
Operating temperature	- 10°C to + 45°C							
Storage temperature	- 25°C to + 70°C				- 20°C to + 60°C			
Rigid connection	1.5 to 6 mm <sup>2</sup>				1.5 to 10 mm <sup>2</sup>			
Flexible connection	1 to 6 mm <sup>2</sup>				1 to 6 mm <sup>2</sup>			

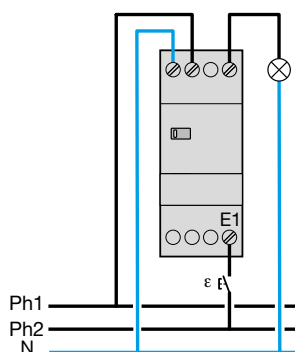
Wiring diagrams

EVN011 - EVN012

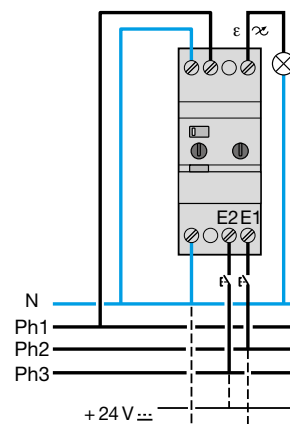


Use the same phase for control and supply.

EVN002



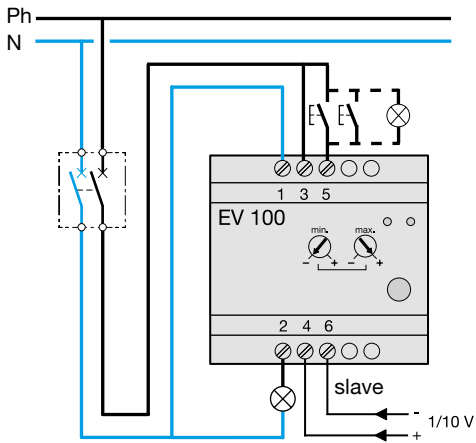
EVN004



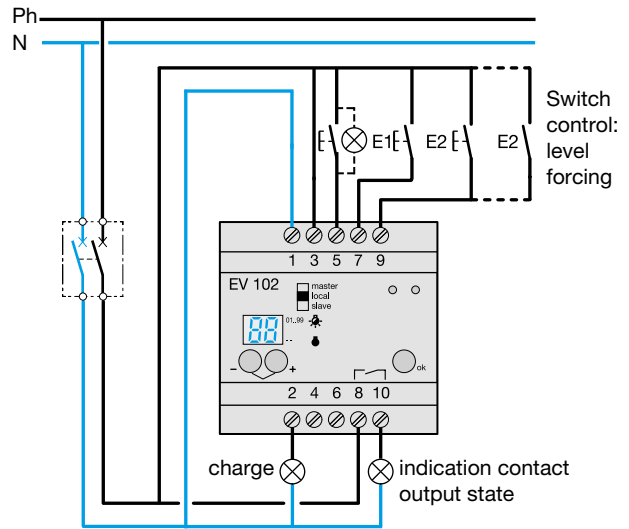
Do not forget to connect the 2 neutral points.

Wiring diagrams

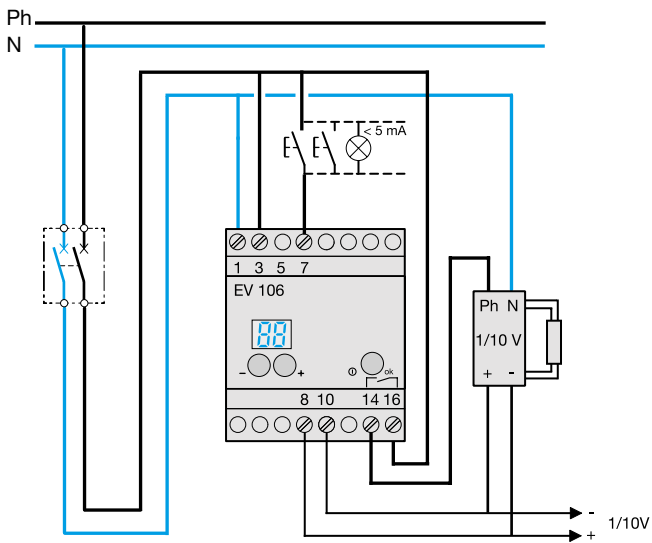
EV100



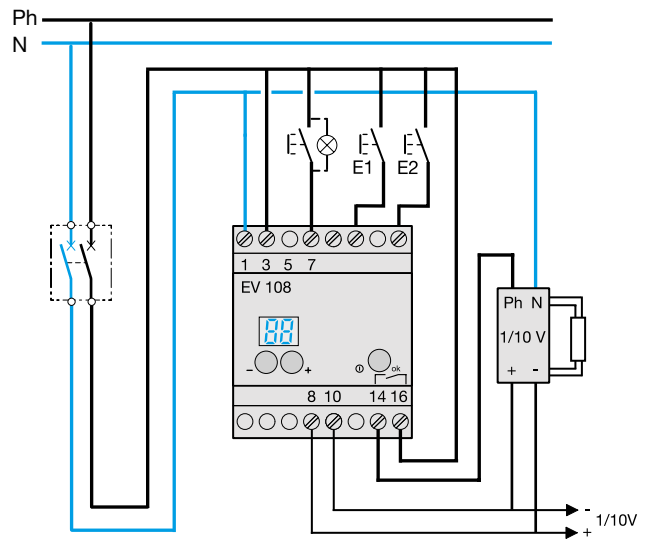
EV102



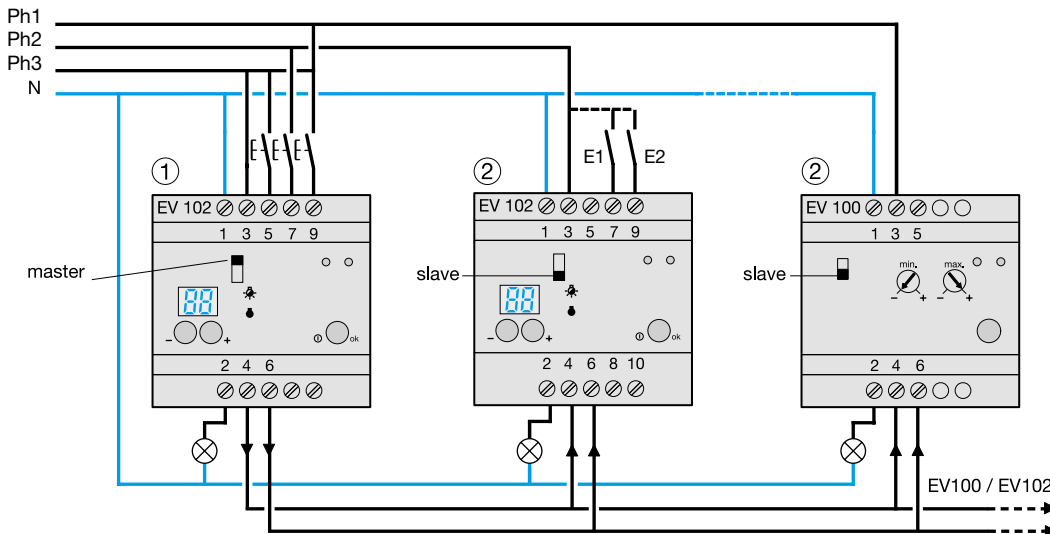
EV106



EV108



Association of dimmer EV102 with EV100

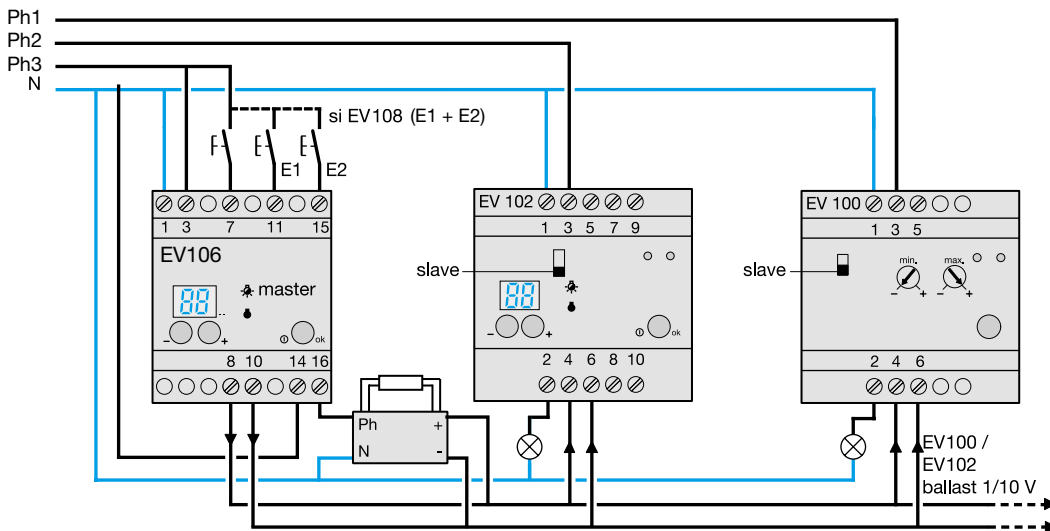


- ① mode switch in position “master” = output 1/10 V.
- ② mode switch in position “slave” = input 1/10V (in this position only priority settings with E1 and E2 are available)

**Remark:** it is possible to extract temporarily a product from system by switching from “slave” to “local”.

**Use of input E1 and E2**

(call of set up levels)  
Inputs E1 and E2 allow to call 2 or 3 set up lighting ambient levels. Call of levels can be done normally with push button (impulse  $\leq 400$  ms) or by priority setting with switch or automation (maintained contact). Setup mode 1 or 2 allows to discriminate behaviour of dimmer by cancellation of priority setting.



- **mode 1** (by default), corresponds to normal use.
  - Control by push button, called level is applied out of respect of set up transition. Dimmer still reacts to the other controls applied.
  - Switch control, called level is applied by priority setting out of respect of set up transition. By cancellation of priority setting, lighting remains at the same level as long as no other control is given.
- **mode 2**, particularly adapted for priority setting. Same behaviour as above by call of level. By desactivation of priority setting, dimmer set back to the preceding state. In that mode, when the 2 entries are simultaneously active, a 3rd level becomes available in priority setting ( $E1+E2 = E3$ ).

### Twilight switches (DIN rail mounted)

	EEN100	EEN101	EE110	EE171
<b>Width in</b>	1	1	5	3
<b>Electrical characteristics</b>				
voltage supply	230V 50/60Hz			
consumption	300 mW maximum		1.5 VA	
output	1 voltage free changeover contacts			
<b>Maximum switching capacity</b>				
AC1	16A / 250V			
incandescent lamps	1500W	1500W	2000W	
230V halogen lamps	1500W	1500W	1000W	
fluorescent tubes connected in parallel	200W			
fluorescent tubes non compensated	1000W			
compact fluorescent	20 x 20W			
LED	20 x 20W			
fluorescent tubes with ferromagnetic or electronic ballasts	-			
halogen lamps with ferromagnetic or electronic ballasts	-			
<b>Functional characteristics</b>				
lighting level : 2 ranges	5 to 100 lux and 50 to 2000 lux			
ON and OFF delay	60 seconds		15 to 60 seconds	
mounting of cell	surface	flush* or surface	surface	
programmable	-		yes	yes, free prog.
technology	-		electromechan.	
cycle	-		24 hours	7 days
programming setting	-		15 min.	1 min
accuracy	-		+/- 6min/year	
operating reserve	-		accu 200h after beeing connected for 120h	lithium battery total of 3 years of supply failure
<b>Environment</b>				
working temperature	0 to +45°C		-30°C to +60°C (cell) -10°C to +50°C (mod. device)	
storage temperature	-25°C to +70°C		-20°C to +60°C	
<b>Connection</b>				
maximum length between cell and modular device	50 meters			
capacity (modular device)	1.5 to 6mm <sup>2</sup>		0.5 to 4mm <sup>2</sup>	
capacity (cell)	-	-	0.75 to 4mm <sup>2</sup>	

Note : \* delivered with a 1m cable (2x0.75mm<sup>2</sup>)

#### Mounting the cell

To ensure correct operation of the light sensitive switch, the cell must not be influenced by artificial light or direct solar radiation and should be sheltered from dust and humidity. In case of disconnection of the link between the cell and the light sensitive switch, the output of the device will be switched on. Make sure the light sensitive switch is unplugged before connecting the cell.

#### Adjustment of the working level

The test position of the override selector 1 makes setting the preset level easier by removing the ON and OFF delay.

Select the sensitivity range which suits your application (selector 1)  
5 to 100 lux (low light level) application examples; public lighting, shop windows, signals...

50 to 2000 lux (high light level) application examples; controls of shades.

At the appropriate moment of the day, put the selector 1 in test position; turn the potentiometer 2 up to the switching point (the indicator 4 lights); put the selector back to position "auto" the normal operating mode of the device.

Cells	EEN002	EEN003
Type	flush mounting	surface mounting
Dimension (mm)	89x48x32	25x25x20 hole Ø 2,5mm
Connection	cable 1m 2x0.75mm <sup>2</sup>	0.75 to 4mm <sup>2</sup>
Ingress protection	IP54	
Working temperature	-30°C to +60°C	
Storage temperature	-25°C to +70°C	

**Light sensitive switches**

Using light sensitive switches can prevent the unnecessary use of lighting circuits where sufficient daylight exists. The benefit of modular devices is the facility to set the ambient lighting level at which the device will operate, and as the device is fitted at the distribution point prevent unauthorised tampering. The remote photocell unit can be mounted up to a distance of 50 metres from the device. Two devices are available the standard EE100 light sensitive switch and an enhanced programmable version the EE171 that also allows time clock control.

**Principle of operation**

Both devices control lighting systems according to natural illumination;

- The user sets the working level;
- The photo cell measures the external light level

The output of the EE100 is:

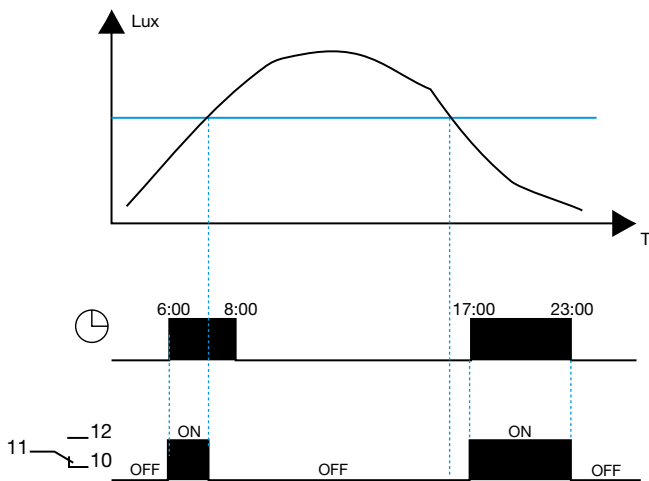
- ON, when the measured level is lower than the pre-set light level
- OFF, when the measured level is higher than the pre-set light level

The output of the EE171 during the programmed ON time period is:

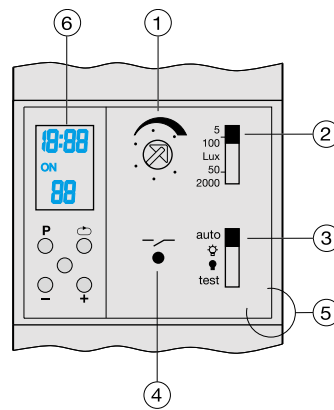
- ON, when the measured level is lower than the pre-set light level
- OFF, when the measured level is higher than the pre-set light level

The output of the EE171 during the programmed off time period is:

- OFF, regardless of the lighting level



**Description**



The programmable light sensitive switch EE171 has two main functions:

- Light sensitive switch comprising:
  - 1- override selector switch to allow permanent ON or OFF, auto or test mode
  - 2 - lighting range selector
  - 3 - potentiometer to set light level
  - 4 - indicator to show output switching status
- A programmer to establish the automatic operating cycle.
 

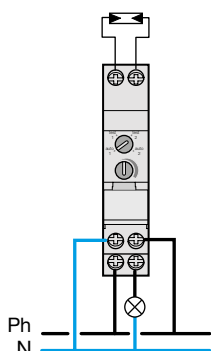
The programmer comprises 4 keys:

  - 5 - ON / OFF to choose whether the circuit is on or off
  - 6 - prog to set the program and scroll program steps
  - 7 - reset
  - 8 - + and - to change settings

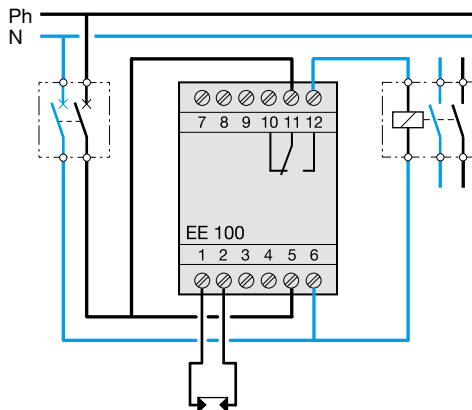
The light sensitive switches include a built in time delay which avoids unnecessary switching due to temporary factors such as car headlight beams etc...

**Wiring diagram**

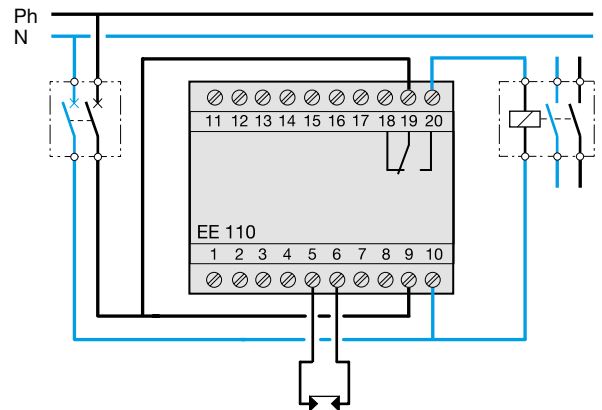
**EEN100, EEN101**



**EE171**



**EE110**

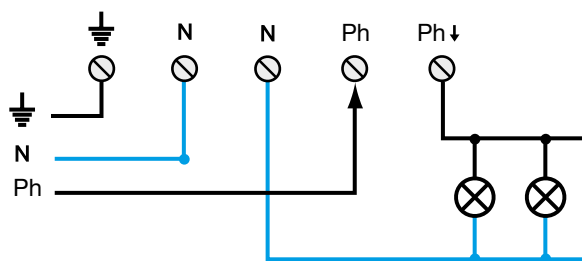




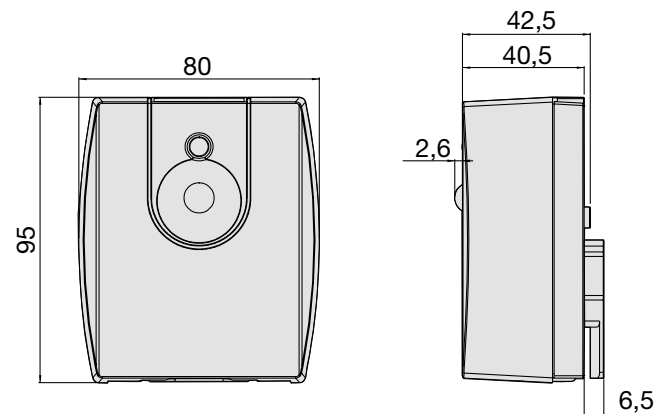
### Twilight switches (surface mounted)

	EE701	EE702
<b>Description</b>	Compact light switch basic 10A	Compact light switch enhanced 16A
<b>Dimensions</b>	80 x 40.5 x 95 mm	
<b>Supply voltage</b>	230V AC (+10%/-15%), 50Hz	
<b>Characteristics of relay</b>	NO contact 8A AC1	NO contact 16A AC1
incandescent	1000W	2300W
halogen ELV (12 or 24V) via ferromagnetic or electronic transformer	750 VA	1500 VA
non compensated fluorescent tubes	12x20W	20x20W
compact fluorescents	1000W	2000W
electronic ballast	8x58W	16x58W
<b>Connection</b>		
flexible	1 to 6mm <sup>2</sup>	
rigid	1.5 to 10mm <sup>2</sup>	
<b>Environment</b>		
storage temperature	-30°C to +60°C	
operating temperature	-25°C to +45°C	
IP / IK	IP55 / IK03	
isolation class	II	
<b>Standards</b>	NFC 15 100 - IEC 60364-1-EN 60669-2-1	
<b>Functional characteristics</b>		
lighting switching-on level	Fixed (lighting switching-on level : 10 lux / lighting switching-off level : 30 lux	Setting by potentiometer from 2 to 1000 lux hysteresis 10%
setting delay	40 seconds	Setting by potentiometer from
tripping delay	120 seconds	1 to 120 seconds
mounting	on wall / on round box / on pillar	

#### Electrical connections



#### Dimensions



References	EE200	EE202
<b>Electrical characteristics</b>		
supply voltage	230 V AC +10/-15% 50 Hz	
<b>Consumption</b>	1.5 VA max	
outputs	2 NC	
maximum switching capacity	16 A 250 VM AC1	
incandescent lamps	2300 W	
230 V halogen lamps	2300 W	
halogen VLV via ferromagnetic transformer	1500 VA	
halogen VLV via electronic transformer	2300 W	
fluorescent lamps in series	3600 W	
compensated fluorescent lamps //	1000 W capacity 112 µF	
compact fluorescents with electronic ballast	450 W	
compact fluorescents with traditionnel ballast	2300 W	
state indicator led	1 red led per channel	
2 sensitivity ranges	2 to 200 lux 200 to 20 000 lux	
ON and OFF delay	30s	
switch of operating mode auto / test	auto = normal operating mode test = to test light level, 30s delay does not apply in this operating mode	
switch of operating mode auto / semi-auto with time delay	no	yes, automatic or semi-automatic
delay in semi-automatic mode	-	from 1 min to 2 hours
association of products	slave, can only be associated with EE202	master or slave, can be associated with max. 10 products
<b>Connection</b>		
max. length between cell and switch	50 m, input signal voltage 0 or 230 V	
lmax. length between 2 switches	unpolarised connection 2 wires 1 to 6 mm <sup>2</sup> , max. 50 m	
flexible	1 to 6 mm <sup>2</sup>	
rigid	1.5 to 10 mm <sup>2</sup>	
<b>Environment</b>		
working temperature	0°C to +45°C	
storage temperature	-20°C to +60°C	

**Functions of EE202**

**Automatic mode :**

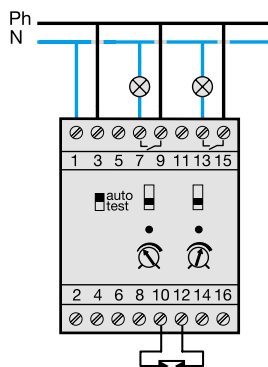
(potentiometer ⑤ is set to mode 1 position)  
In this mode, the light sensitive switch controls outputs when the brightness level is too low, provided E1 input is activated (230V voltage is present).  
An override push button is connected to E2 input and makes it possible to reverse the state of lighting areas.  
Lighting is automatically switched off as soon as E1 is deactivated (0V) or the brightness level is sufficient.

**Semi-automatic mode (mode 2) :**

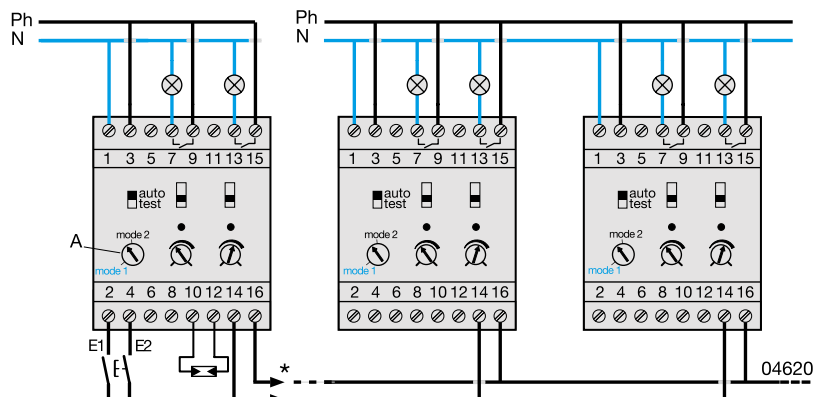
In this mode, the E1 input is used to define authorization periods (230V voltage is present on the lighting input E1).  
A push button connected to the input E2 is used to switch the light ON/OFF.  
Except in authorization periods, the lighting time is delayed.  
The potentiometer is used to adjust the delay.  
During periods of authorization, a push button is used to switch on lighting. Then, the control of lighting in the area depends on thresholds of brightness associated with each output.

**Wiring diagram**

**EE200**



**EE202**



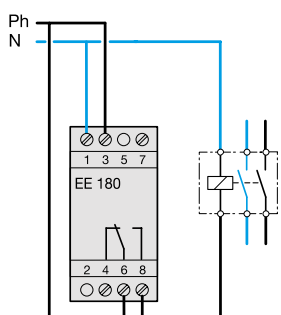
\* the link of EE202/EE203 chaining can be used to transmit the lighting level information to several products and extend the number of thresholds and controlled circuits.

### Astronomical time switches

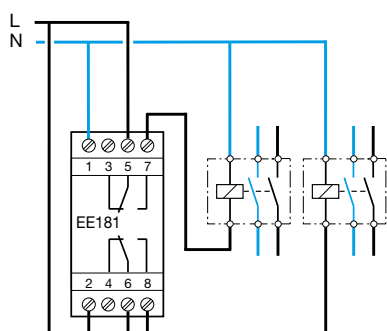
	EE180 (1 channel)	EE181 (2 channels)
<b>Width in</b> ■ 17.5mm	2	2
<b>Supply voltage</b>	230V AC (+10% / -15%), 50/60Hz	
<b>Number of output</b>	1	2
<b>Characteristics of relay</b>	change over contact 16A AC1 250V /10A cos φ = 0.6	
incandescent	2300W	
230V-halogen	2300W	
Connection	terminal n° 5	
flexible	1 to 6mm <sup>2</sup>	
rigid	1.5 to 10mm <sup>2</sup>	
<b>Environment</b>		
storage temperature	-20°C to +60°C	
working temperature	-10°C to +55°C	
IP and IK	IP 20 IK 3	
<b>Standards</b>	CE + CTICK and CEI 60-669	
<b>Functional characteristics</b>		
display LCD	without backlighted screen	
operating reserve	Lithium battery 5 years	
precision	+/- 1.5s/day	
programming key	yes	
automatic change of winter/summer time	yes	
functions available in free programming	weekly programming / permanent override / temporary override	
<b>Astro functions</b>		
astro mode	yes	independent programming for each channel
programming of the lighting interruption	15 / 30 / 60min.	
maintained ON	yes (if channel ASTRO)	
anticipation ON	adjustment common to the 2 channels	

### Electrical connection

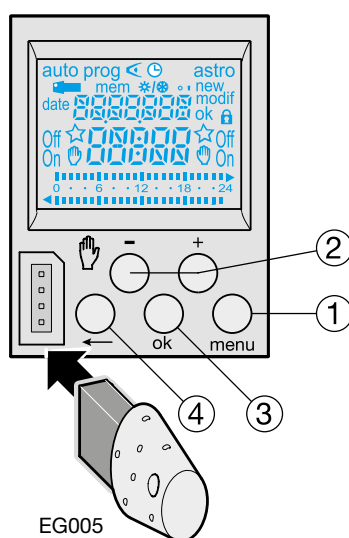
#### EE180 : 1 channel



#### EE181 : 2 channels



### Presentation



#### Keys:

- ① **menu** : selection of operating mode
- auto** : mode of running according to the program selected.
- prog** : new for programming mode.
- prog** : modify to modify an existing program.
- ⏪ : checking of the program.
- ⌚ : modification of time, date and selection of the winter / summer time change mode
- astro** : astronomical mode ⚙️/⚙️
- ☆ : indicates that the channel is in astronomical mode
- ② **+ and -** : navigation or setting of values.
- A** (hand icon) : in auto mode, selection of overrides,
- B** (hand icon) : or waivers.
- ③ **ok** : to validate flashing information on display.
- ④ ← : to return to the previous step.

You may return into auto mode at any moment using **menu**.

If no action is taken for 1 min, the switch returns into auto mode.

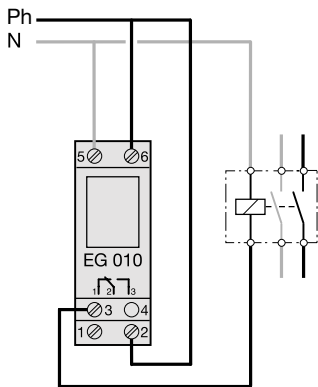
## Digital time switches

	EG010	EG110	EG210	EG071	EG170	EG270	EG470
<b>Width in ■ 17.5mm</b>	1	3	3	1	3	3	5
<b>Version</b>	daily	daily	daily	weekly	weekly	weekly	weekly
<b>Electrical characteristics</b>							
voltage supply	230V +15/-15% 50/60Hz		230V +15/-15% 50/60Hz	230V +15/-15% 50/60Hz		230V +15/-15% 50/60Hz	230V +15/-15% 50/60Hz
consumption	1VA						20VA
output	changeover contact						
<b>Switching capacity</b>							
AC1	16A/250V						
inductive load (cos φ = 0.6)	3A/250V						
incandescent lamps	1000W						
<b>Characteristics</b>							
accuracy	+/- 1 sec per day						
supply failure reserve	Lithium battery total of three years						
manual override	permanent ON/OFF	permanent ON/OFF temporary ON/OFF		permanent ON/OFF	permanent ON/OFF temporary ON/OFF		
<b>Environment</b>							
ingress protection	IP20						
working temperature	-10 to +50°C						
storage temperature	-10 to +50°C						
connection	0.5 to 4mm <sup>2</sup>						

	EG103B/E	EG203B/E	EG493E	EG293B	EG403E
<b>Width in ■ 17.5mm</b>	2	2	4	4	4
<b>Cycle</b>	weekly	weekly	yearly	yearly	weekly
<b>Channels</b>	1	2	4	2	4
<b>Program step</b>	56	56	300	300	300
<b>Min. switching time</b>	1 min		1 min		
<b>Electrical characteristics</b>					
voltage supply	230V +15%/-15% 50/60Hz		230V +15%/-15% 50/60Hz		
consumption	max 6VA		< 2VA		
output	changeover contact		2 changeover 2 NO contacts	2 changeover	2 changeover 2 NO contacts
<b>Switching capacity</b>					
AC1	μ16A/250V		μ10A/250V		
inductive load (cos φ = 0.6)	μ10A/250V				
incandescent lamps	2300W		1500W		
halogen lighting 230V	2300W		1500W		
compensated fluo. tubes //	400W, C=45μF		400W, C=45μF		
non compensated fluo. tubes	1000W		800W		
compact fluorescent tubes	500W		400W		
min. load switching	100mA/250V		100mA/250V		
<b>Characteristics</b>					
accuracy	± 1.5 second per day		+ 0.2 second per day		
supply failure reserve	lithium battery : 5 years				
manual override	permanent ON/OFF temporary ON/OFF				
<b>Environment</b>					
ingress protection	IP20		IP20		
working temperature	-5 to 45°C		-10 to +45°C		
storage temperature	-20 to +70°C		-20 to +70°C		
<b>Connection</b>	flexible: 1 to 6mm <sup>2</sup> rigid: 1.5 to 10mm <sup>2</sup>		0.75 to 2.5mm <sup>2</sup>		

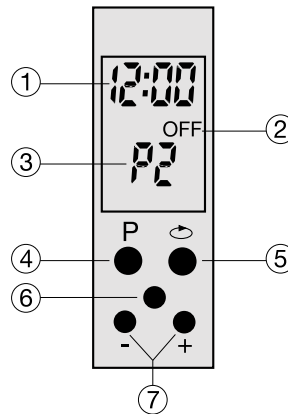
### Electrical connections

#### EG010



#### 5 pre-registered programs:

P	Prog
P0	OFF
P1	ON
P2	6,00 — 23,00
P3	6,00 8,00 17,00 23,00
P4	6,00 8,00 11,00 13,00 17,00 23,00



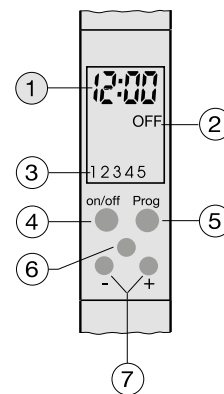
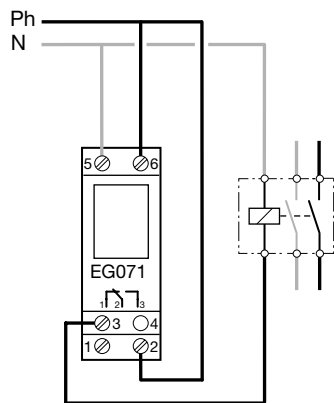
#### Display :

1. Time
2. Output contact (ON or OFF)
3. Program selected

#### Buttons :

4. To select the program to apply
5. To scroll program steps
6. Reset
7. + and - : change time settings

#### EG071



#### Display :

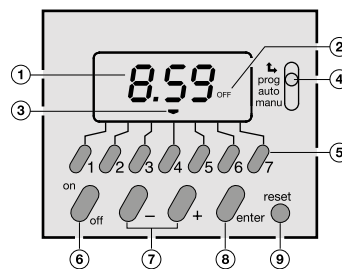
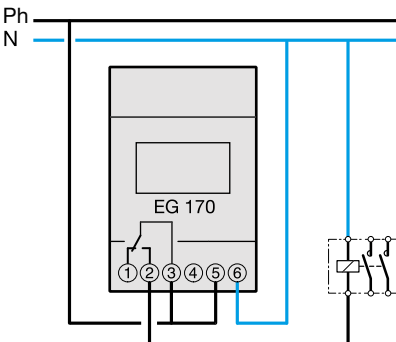
1. Time
2. Circuit status
3. Days

#### Buttons :

4. To select the program to apply
5. To scroll program steps
6. Reset
7. + and - : change time settings

	EG010	EG071
<b>Electrical characteristics</b>		
voltage supply	230V ±10% 50/60Hz	
consumption	1 VA	
output	1 changeover contact, 16A - 250V AC, 3A - 250V cos φ = 0.6, 1000W incandescent lighting	
<b>Functional characteristics</b>		
number of programs	5 adjustable pre-recorded programs	20 program steps (each program step can be applied to one of several days)
accuracy	± 6 min per year	
supply failure reserve	total of 3 years	
<b>Environment</b>		
working temperature	-10°C to +50°C	
storage temperature	-10°C to +60°C	
<b>Cable capacity</b>	1 to 4mm <sup>2</sup>	
<b>Main characteristics</b>	5 programs are pre-recorded. The user just has to select the program which corresponds to its use and modify time switches if necessary	

#### EG170



#### Display :

1. Time
2. Circuit status (ON or OFF)
3. Day of the week (1=Monday, 2= Tuesday,...)

#### Buttons :

4. Mode selector : to select one of the following modes :
  - time setting
  - programming
  - running mode
  - manual override
5. "1" to "7" : selection of the days
6. "ON/OFF" : chooses whether the circuits is ON or OFF.
7. "+" and "-" : changes settings
8. "enter" : to confirm selection
9. "reset"

**Technical specifications**

**Electrical characteristics**

- supply : 230 V AC ±15 %
- frequency : 50/60 Hz
- consumption : max. 6 VA at 50 Hz
- output: 1 changeover contact voltage free (EG103B and EG103E)  
2 changeover contacts voltage free (EG203B and EG203E)
- max. breaking capacity :  
AC1 : μ16A 250 V~  
DC1 : μ4A 12 V ...  
Cos φ = 0.6 : μ10A 250 V~  
incandescent lamps: 2300 W  
halogen lamps : 230 V : 2300 W  
compensated fluorescent lamps // (max. 45μF) : 400 W  
non compensated fluorescent lamps, compensated in series :  
1000 W fluo compact lamps : 500 W
- min. breaking capacity :  
AC1: 100 mA 250 V~  
DC1: 100 mA 12 V ...
- galvanic insulation between supply and output

**Functional characteristics**

- programming capacity : 56 steps shared on the 2 channels for EG203B and EG203E
- min. time between 2 steps : 1 minute
- accuracy : ± 1,5 sec / 24h
- supply failure reserve : lithium battery total of 5 years of supply failure
- the product switches to watching state (display lighted of) after 1 min without power. It returns into Auto mode at return of power or by push on a button
- ingress protection : IP20

**Environment**

- working temperature: -5 to +45 °C
- storage temperature: -20 to +70 °C

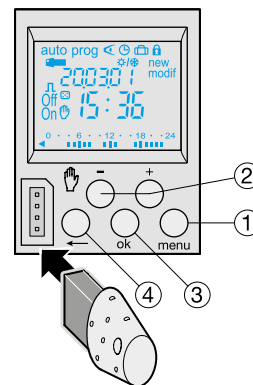
**Connection by cage terminals**

- flexible: 1 to 6mm<sup>2</sup>
- rigid: 1.5 to 10mm<sup>2</sup>

**Main characteristics**

- product delivered and updated to current date
- automatic change of time schedule summer: winter ☀ / ❄
- programming key: for temporary override for the copy or the saving of the program
- programming per day or group of days
- 56 program steps ON, OFF or impulse : 1 sec to 30 mn. (EG103E and EG203E)
- permanent priority ON or OFF ( fixes),
- temporary overrides ON or OFF ( blinking),
- holidays mode : priority setting ON or OFF between two dates (EG103E and EG203E) ,
- presence simulation (EG103E and EG203E)
- bargraph with daily profile display,
- possibility of locking the keyboard
- programmable power off
- backlighted screen (EG103E and EG203E),
- remote controlled temporary overrides (EG103E).

**Product presentation**



- ① menu: selection of the operating mode  
auto: functioning according to the established program  
prog: new for the programming  
prog: modif to modify an existing program  
◀: checking of the program  
⏪: modification of the hour, the date and the choice of the mode of change of the time schedule summer/winter ☀ / ❄
- ② : holidays (EG103E and EG203E)  
 + and - : navigation or adjustment of the values in Auto mode, selection of priority settings, overrides or of random functioning (EG103E and EG203E)
- ③ ok: to validate the blinking info
- ④ ←: return at the preceding step

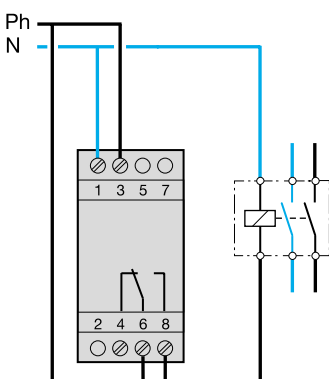
You can return in Auto mode at any time with the menu key. If no action is made during 1 min, the switch returns into Auto mode.

**Reset :**

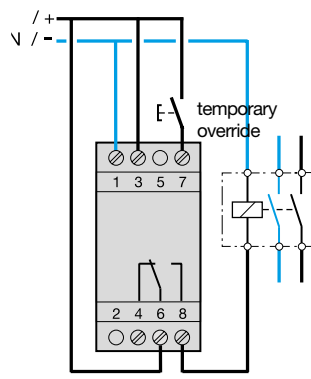
- of program : it can be completely delated by simultaneous push on the 3 following keys : menu, ok and ← . the hour and the date are maintained
- Total : by simultaneous push on menu and ok keys and ← , the whole content of the product is removed. After a total reset, it is necessary to redefine the hour and the date.

**Electrical connection**

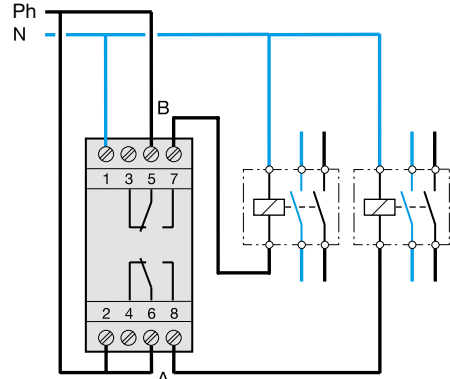
**EG103B**



**EG103E**



**EG203E / EG203B**



### EG493E yearly programmer

#### Electrical characteristics

- supply: 230 V +10 -15% 50/60 Hz
- consumption <2 VA
- output: 2 changeover switches and 2 normally open contact  
μ 10 A - 250 V~ AC1

#### Functional characteristics

- annual cycle
- programming capacity : 300 program steps
- functioning rate accuracy : ± 0.2 sec / day

#### Environment

- working temperature: -10 at +45 °C
- storage temperature: -20 at +70 °C

#### Connection capacity:

0.75 to 2.5mm<sup>2</sup>

### Main characteristics

#### Programming

- Large display with programming instructions.
- 300 program steps (Basic weekly program, 9 sub-programs, specific program step, additional program step.).
- Advanced functions :
  - Easter function : the clock calculates each year the new date of events linked to easter.
  - Day of the week function : the clock calculates each year the new date in order to match the day of the week (ex : 2nd Sunday of March)

#### Automatic change summer / winter

pre-defined or customized settings

#### Programming key (copy, save, override)

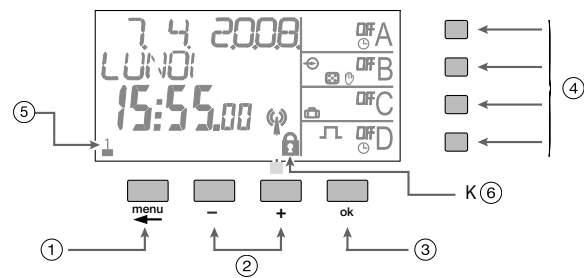
#### Additional characteristics

- The output can be defined as ON, OFF, impulse or Cyclic operating.
- Hours counter on each output
- Key board locking via PIN code
- 1 button per channel for manual override (permanent, temporary or random)
- 1 input for external override (changeover, permanent ON or OFF, random, time limited..)

#### Casing

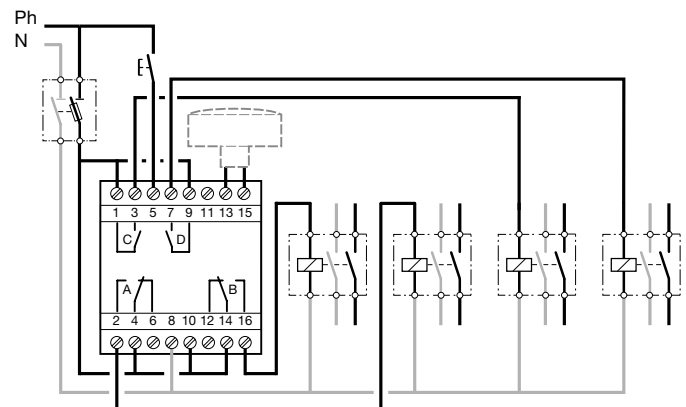
- 4 modules
- Connection with **quickconnect** terminals.
- 2 changeover and 2 NO contacts (10A-AC1)

### Presentation



- ① enter in program mode and return to previous step
- ② navigation and value setting
- ③ validation
- ④ manual override:
  - auto
  - random
  - temporary override
  - permanent override
- ⑤ selection of the days of the week:
  - 1 = monday
  - 2 = tuesday
  - ...
  - 7 = sunday
- ⑥ PIN number locking

### Electrical connection

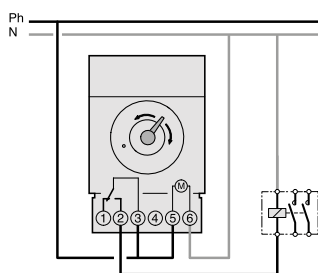


Modular analogue time switches

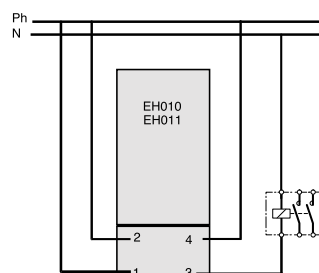
		EH0xx		EH1xx		EH7xx	
operating cycle		24 h	7 j	24 h	7 j	24 h	7 j
switching dial		15 min	1 h 45	15 min	2 h	10 min	1 h
min. switching		15 min	1 h 45	30 min	4 h	20 min	2 h
max. number of switching		96	96	48	42	72	84
accuracy		2 min 30	15 min	1 min 30	10 min	1 min 30	10 min
voltage supply		230 V ± 10 %		6 to 24 VAC/DC or 230 V ± 10 %		6 to 24 VAC/DC or 230 V +10/-15 %	
frequency		50/60 Hz		50/60 Hz		50/60 Hz	
consumption		0.5 VA		0.5 VA		0.5 VA	
changeover contacts potential free or NO contact	resistive load	16 A / 250 V AC 1		16 A / 250 V AC 1		16 A / 250 V AC 1	
	inductive load (cos φ = 0.6)	4 A / 250 V		3 A / 250 V		3 A / 250 V	
	incandescent lamps	-		900 W 250 V		1000 W 250 V	
	cage motor	-		350 W 250 V		350 W 250 V	
accuracy		1 s / 24 h		1 s / 24 h		1 s / 24 h	
working temperature		-10°C to +55°C		-10°C to +55°C		-10°C to +50°C	
storage temperature		-20°C to +65°C		with working reserve -10°C to +55°C without working reserve -20°C to +70°C		-20°C to +60°C	
connection		1 to 6 mm <sup>2</sup>		1 to 6 mm <sup>2</sup>		1 to 6 mm <sup>2</sup>	
insulation class		II (under box cover) IP		II (under box cover) IP		II	
ingress protection		20 (under box cover)		20 (under box cover)		IP 20/IK 03	
complies with EN 60.730		yes		yes		yes	

indicated performances for an ambient temperature of 20°C

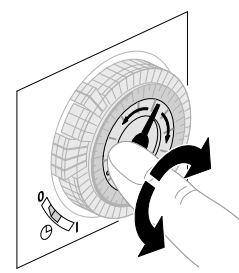
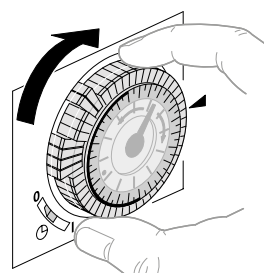
	EH209	EH210	EH211	EH271	EH110A	EH111A	EH171A
<b>Width in ■ 17.5mm</b>	2	2	2	2	3	3	3
<b>Version</b>	daily	daily	daily	weekly	daily	daily	weekly
<b>Electrical characteristics</b>							
voltage supply	110-230V +10/-15%		230V +10/-15%		6 to 24V AC/DC		
frequency	50/60Hz				50/60 Hz		
consumption	0.5 VA				0.5 VA		
output	1NO changeover				1NO changeover		
<b>Switching capacity</b>							
AC1	16A/230V				16A/230V		
inductive load (cos w = 0.6)	4A/230V				4A/230V		
incandescent lamps	1000W				900W		
<b>Characteristics</b>							
technology	quartz				quartz		
dial	24 h			7 days	24 h		7 days
switching dial	15 min			1 h 45	15 min		2 h
min. switching	30 min			3 h 30	30 min		4 h
max. number of switching	48				48		
accuracy	+/- 1 sec per day				± 6 min per year		
supply failure reserve	-	-	200 h	200 h	-	72 h	72 h
reached in	-	-	120 h	120 h	-	120 h	120 h
manual override	auto/ON/OFF				auto/ON/OFF		
<b>Environment</b>							
ingress protection	IP20				IP20		
working temperature	-10° to +55°C				-10° to +55°C		
storage temperature	-20° to +70°C				-20° to +70°C		-10° to +55°C
connection	1.5 to 6mm <sup>2</sup>				1 to 4mm <sup>2</sup>		



EH110 connection



EH010, EH011 connection



Simple setting and programming thanks to bidirectional switching dial