

## Features

### Range of electronic staircase timers

- 17.5 mm wide
- Time setting from 30 s to 20 min
- "Zero crossing" load switching
- "Switch-off early warning" - model 14.01
- Suitable for 3 or 4 wire systems, with automatic recognition (14.01 and 14.71) or via "pushbutton configuration" (14.81)
- LED status indicators (14.01 and 14.71)
- Cadmium free contact material
- Can be used with illuminated push - buttons
- "Blade + cross" - both flat blade and cross head screw drivers can be used to adjust the function selector, the timing trimmer, and to disengage the 35 mm rail mounting clip
- European Patent

**14.01**

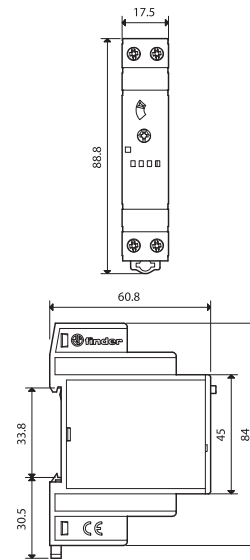
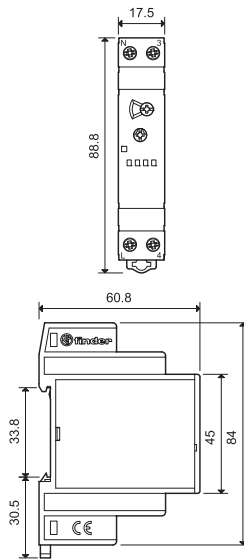


- Multi-function
- 1 NO (SPST-NO)
- 35 mm rail (EN 60715) mount

**14.71**



- Mono-function
- 1 NO (SPST-NO)
- 35 mm rail (EN 60715) mount



<b>Contact specification</b>			
Contact configuration		1 NO (SPST-NO)	1 NO (SPST-NO)
Rated current/Maximum peak current	A	16/30 (120 A - 5 ms)	16/30 (120 A - 5 ms)
Rated voltage/Maximum switching voltage V AC		230/—	230/—
Rated load AC1	VA	3,700	3,700
Rated load AC15 (230 V AC)	VA	750	750
Nominal lamp rating: incandescent (230 V)	W	3,000	3,000
compensated fluorescent (230 V)	W	1,000	1,000
uncompensated fluorescent (230 V)	W	1,000	1,000
halogen (230 V)	W	3,000	3,000
Minimum switching load	mW (V/mA)	1,000 (10/10)	1,000 (10/10)
Standard contact material		AgSnO <sub>2</sub>	AgSnO <sub>2</sub>
<b>Supply specification</b>			
Nominal voltage (U <sub>N</sub> )	V AC (50/60 Hz)	230	230
	V DC	—	—
Rated power	VA (50 Hz)/W	3/1.2	3/1.2
Operating range	AC (50 Hz)	(0.8...1.1)U <sub>N</sub>	(0.8...1.1)U <sub>N</sub>
	DC	—	—
<b>Technical data</b>			
Electrical life at rated load in AC1	cycles	100 · 10 <sup>3</sup>	100 · 10 <sup>3</sup>
Delay setting	min	0.5...20	0.5...20
Max no. of illuminated push-button (≤ 1 mA)		30	30
Maximum impulse duration		continuous	continuous
Ambient temperature range	°C	-10...+60	-10...+60
Protection category		IP 20	IP 20
<b>Approvals</b> (according to type)			

## Features

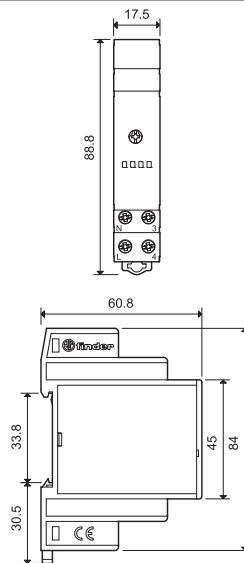
### Range of electronic staircase timers

- 17.5 mm wide
- Time setting from 30 s to 20 min
- "Zero crossing" load switching
- Types 14.81 and 14.91: wiring compatible with mechanical versions and with old type (low emission) illuminated pushbuttons
- Suitable for 3 or 4 wire systems, with automatic recognition (14.01 and 14.71) or via "pushbutton configuration" (14.81)
- Cadmium free contact material
- Can be used with illuminated push - buttons
- "Blade + cross" - both flat blade and cross head screw drivers can be used to adjust the function selector, the timing trimmer, and to disengage the 35 mm rail mounting clip

### 14.81



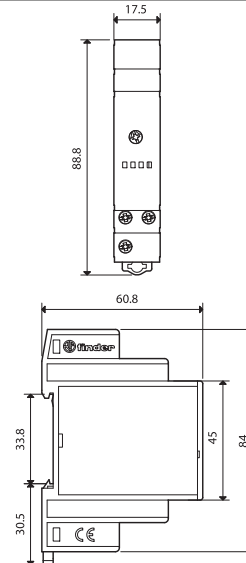
- Mono-function
- 1 NO (SPST-NO)
- 35 mm rail (EN 60715) mount
- All terminals on same side



### 14.91



- Mono-function
- 1 NO (SPST-NO)
- 35 mm rail (EN 60715) mount
- 3 terminals, on same side



Contact specification		14.81	14.91
Contact configuration		1 NO (SPST-NO)	1 NO (SPST-NO)
Rated current/Maximum peak current	A	16/30 (120 A - 5 ms)	16/30 (120 A - 5 ms)
Rated voltage/Maximum switching voltage V AC		230/—	230/—
Rated load AC1	VA	3,700	3,700
Rated load AC15 (230 V AC)	VA	750	750
Nominal lamp rating:incandescent (230 V)	W	3,000	3,000
compensated fluorescent (230 V)	W	1,000	1,000
uncompensated fluorescent (230 V)	W	1,000	1,000
halogen (230 V)	W	3,000	3,000
Minimum switching load	mW (V/mA)	1,000 (10/10)	1,000 (10/10)
Standard contact material		AgSnO <sub>2</sub>	AgSnO <sub>2</sub>
Supply specification		14.81	14.91
Nominal voltage (U <sub>N</sub> )	V AC (50/60 Hz)	230	230
	V DC	—	—
Rated power	VA (50 Hz)/W	3/1.2	3/1.2
Operating range	AC (50 Hz)	(0.8...1.1)U <sub>N</sub>	(0.8...1.1)U <sub>N</sub>
	DC	—	—
Technical data		14.81	14.91
Electrical life at rated load in AC1	cycles	100 · 10 <sup>3</sup>	100 · 10 <sup>3</sup>
Delay setting	min	0.5...20	0.5...20
Max no. of illuminated push-button (≤ 1 mA)		25	25
Maximum impulse duration		continuous	continuous
Ambient temperature range	°C	-10...+60	-10...+60
Protection category		IP 20	IP 20
Approvals (according to type)		CE PG NY NF A	CE

## Ordering information

Example: 14 series multi-function relay, single phase switch 1 NO (SPDT-NO) 16 A contact, supply rated at 230 V AC.

**1 4 . 0 1 . 8 . 2 3 0 . 0 0 0 0**

**Series**

**Type**

- 0 = 35 mm rail (EN 60715) mount, multi-function
- 7 = 35 mm rail (EN 60715) mount, mono-function
- 8 = 35 mm rail (EN 60715) mount mono-function, all terminals on same side
- 9 = 35 mm rail (EN 60715) mount, mono-function, 3 terminals

**No. of poles**

- 1 = Single phase switch, 16 A

**Supply voltage**

230 = 230 V

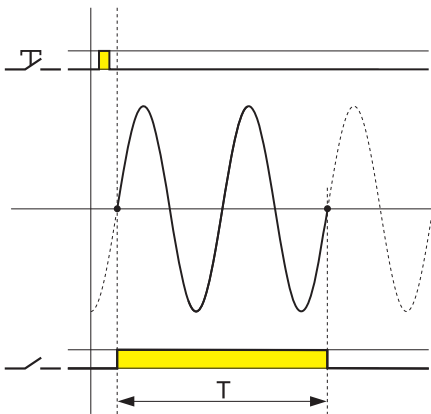
**Supply version**

8 = AC (50/60 Hz)

## Technical data

Insulation			
Dielectric strength between open contacts	V AC	1,000	
Other data			
Power lost to the environment			
	without contact current	W	1.2
	with rated current	W	2
Maximum cable length for push-button connection	m	200	
⊕ Screw torque	Nm	0.8	
Max. wire size		solid cable	stranded cable
	mm <sup>2</sup>	1x6 / 2x4	1x4 / 2x2.5
	AWG	1x10 / 2x12	1x12 / 2x14

## Zero crossing switching



1. Lower inrush current protects and increases lamp life
2. Lower inrush current reduces the possibility of contact welding
3. The current at switch-off is also lower, reducing stress and wear on the contacts

Note

Using the type 14.91, the lamps are switch on direct by the pushbutton

## Accessories



020.01

Adaptor for panel mounting, 17.5 mm wide

020.01



060.72

Sheet of marker tags, plastic, 72 tags, 6x12 mm

060.72

## Wiring diagrams

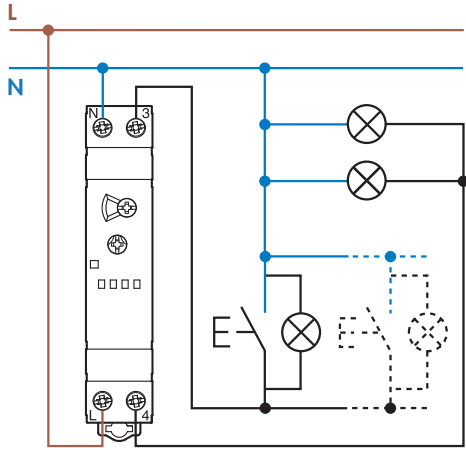
### Type 14.01

14.71

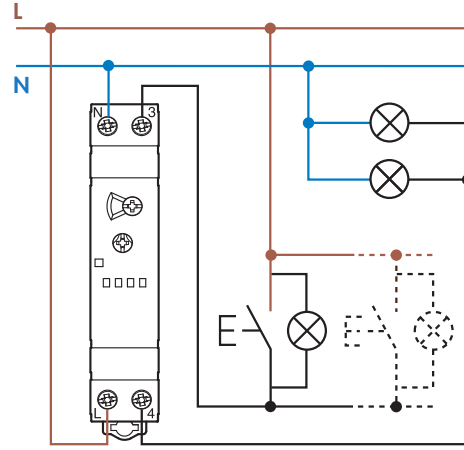
Red LED indication:

Continuous = relay ON

Blinking = relay OFF

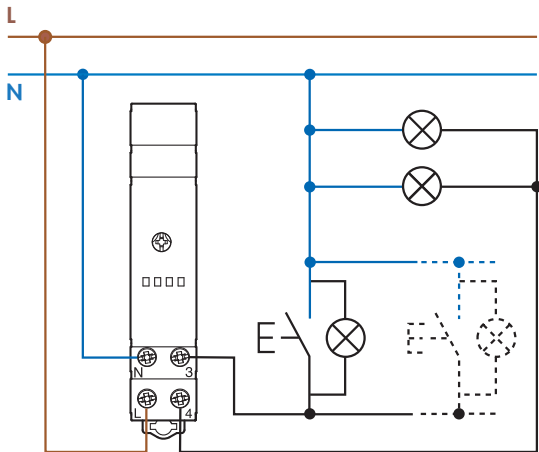


3 wire connection

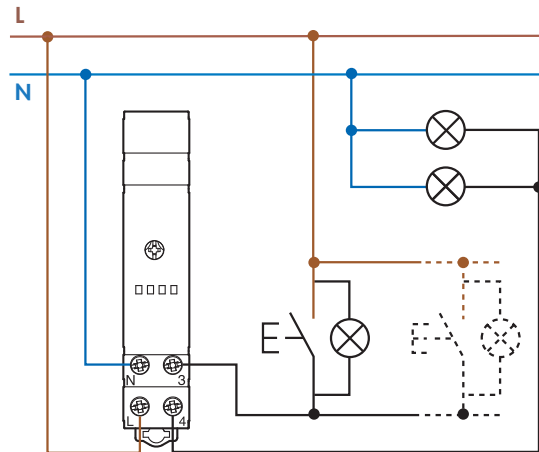


4 wire connection

### Type 14.81 (pushbutton configuration required as per the Installation manual)

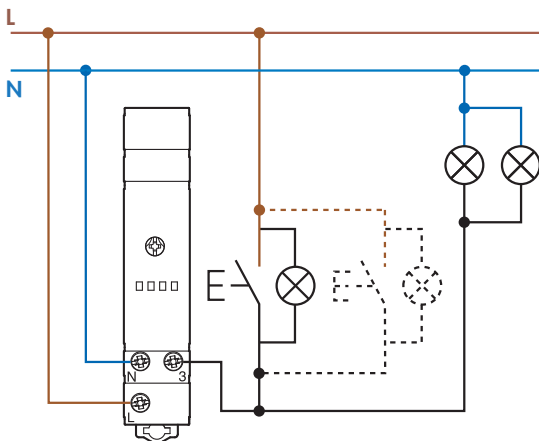


3 wire connection



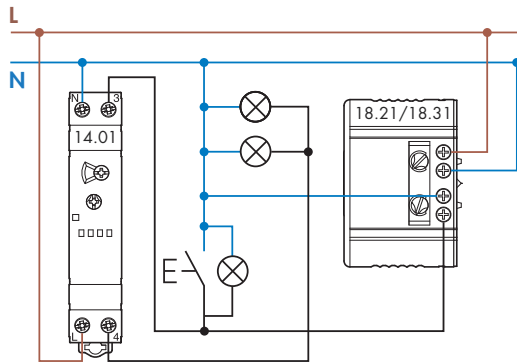
4 wire connection

### Type 14.91 (the push-buttons must be rated for the load current)

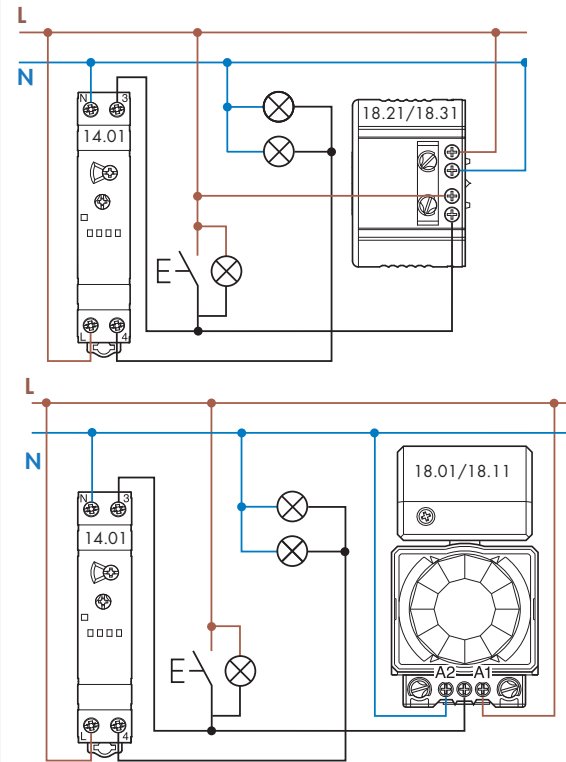


**Wiring diagrams** Possibility of connection of 14.01 with PIR movement detectors (18 series)

**3 wire connection** (with 18.21.8.230.0300 or 18.31.8.230.0300 only)

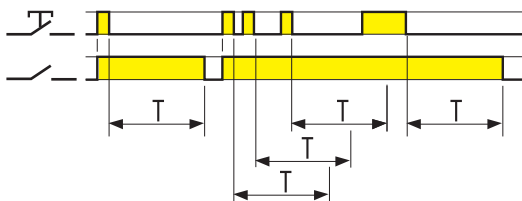


**4 wire connection** (with 18.01.8.230.0000, 18.11.8.230.0000, 18.21.8.230.0300 or 18.31.8.230.0300)



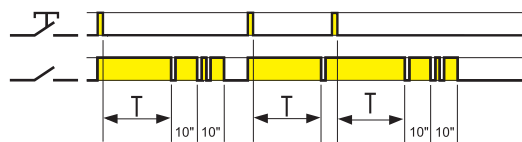
**Functions**

**Type 14.01** Functions selectable with front rotary selector



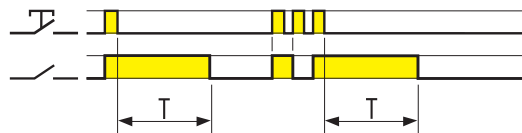
**(BE) Staircase relay**

On initial impulse the output contact closes and timing starts for the pre-set duration; subsequent impulses during the timing period will extend the timing period by the full pre-set value. On expiry of the time delay, the output contact opens.



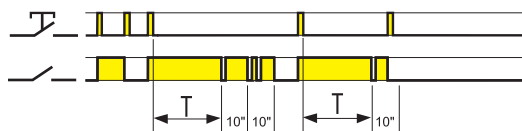
**(BP) Staircase relay with early warning**

On initial impulse the output contact closes and the timing starts for the pre-set duration. After the timing period, the output contact blinks off once; 10secs later the contact blinks off twice, and after a further 10secs the contact opens. During the pre-set and 20 second warning time, it is possible, by a further impulse, to extend the time by the full pre-set value.



**(IT) Timing step relay**

On initial impulse the output contact closes and timing starts for the pre-set duration; On expiry of the time delay, the output contact opens. During the timing period it is possible to immediately open the contact with a further impulse.



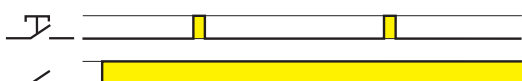
**(IP) Timing step relay with early warning**

On initial impulse the output contact closes and timing starts for the pre-set duration; After the timing period, the output contact blinks off once; 10 secs later the contact blinks off twice, and after a further 10 secs the contact opens. During the pre-set and 20 second warning time, it is possible to immediately open the output contact by a further impulse.



**(RI) Step relay**

After every impulse, the output contact changes state - alternately switching from open to closed and vice versa.



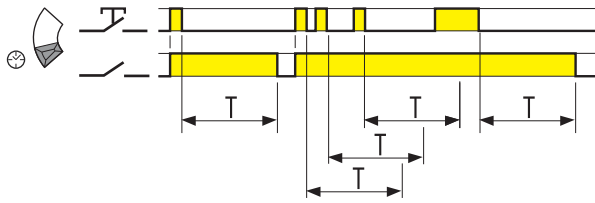
**Light ON**

With this function set - the output contact stays permanently closed.

NOTE: The blinking within the Early Warning functions (BP and IP) could cause re-start problems for fluorescent lamps with electromagnetic chokes (both conventional and compact types); We consequently suggest not to use such lamps with these functions.

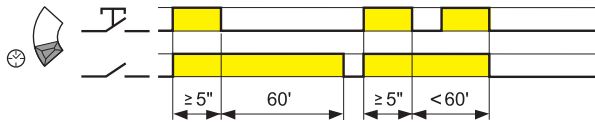
## Functions

### Type 14.71 Functions selectable with front selector



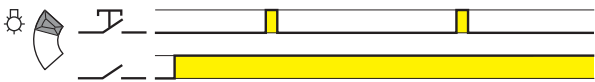
#### Staircase relay

On initial impulse the output contact closes and timing starts for the pre-set duration; subsequent impulses during the timing period will extend the timing period by the full pre-set value. On expiry of the time delay, the output contact opens.



#### "Staircase maintenance" function

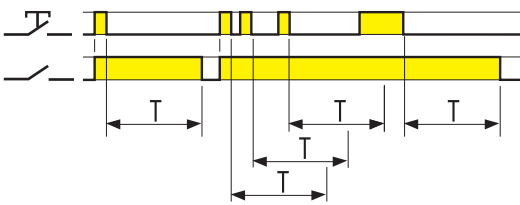
An impulse of  $\geq 5$  seconds will close the output contact for 60 minutes, after which time the contact will open. Ideal for maintenance or cleaning activities. The 60' timing can be interrupted by a further impulse of  $\geq 5$  seconds, the output contact opens.



#### Light ON

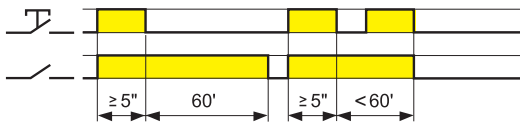
With this function set - the output contact stays permanently closed.

### Type 14.81



#### Staircase relay

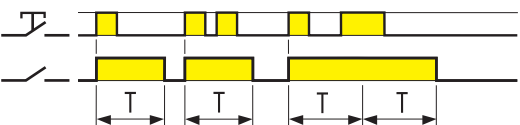
On initial impulse the output contact closes and timing starts for the pre-set duration; subsequent impulses during the timing period will extend the timing period by the full pre-set value. On expiry of the time delay, the output contact opens.



#### "Staircase maintenance" function

An impulse of  $\geq 5$  seconds will close the output contact for 60 minutes, after which time the contact will open. Ideal for maintenance or cleaning activities. The 60' timing can be interrupted by a further impulse of  $\geq 5$  seconds, which will re-establish the staircase timer function; so on expiry of the staircase time delay, the output contact opens.

### Type 14.91



#### Signal ON pulse

On initial impulse the output contact closes, and remain so for the duration of the preset delay. On expiry of the time delay, the output contact opens.