

# Electronic staircase timers 10 - 16 A



Staircase  
light control



14  
SERIES



**Multi-function electronic staircase timers**

- Time setting from 30 seconds to 20 minutes
- "Zero crossing" load switching
- Suitable for 3 or 4 wire systems, with automatic recognition
- Compatible with movement detectors 18 series - (only 14.01 with Staircase timer function)
- LED status indicators
- 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
- 35 mm rail (EN 60715) mount

14.01/14.11  
Box clamp



For outline drawing see page 14

**Contact specification**

|   |           |                      |                      |
|---|-----------|----------------------|----------------------|
| 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/<br>Maximum switching voltage         | V AC      | 230/—                | 250/400              |
| Rated load AC1                                      | VA        | 3700                 | 4000                 |
| Rated load AC15 (230 V AC)                          | VA        | 750                  | 750                  |
| Nominal lamp rating:                                |           |                      |                      |
| 230 V incandescent/halogen W                        |           | 3000                 | 3000                 |
| fluorescent tubes with<br>electronic ballast W      |           | 1500                 | 1500                 |
| fluorescent tubes with<br>electromagnetic ballast W |           | 1000                 | 1000                 |
| CFL W   |           | 600                  | 600                  |
| 230 V LED W   |           | 600                  | 600                  |
| LV halogen or LED with<br>electronic ballast W      |           | 600                  | 600                  |
| LV halogen or LED with<br>electromagnetic ballast W |           | 1500                 | 1500                 |
| Minimum switching load                              | mW (V/mA) | 1000 (10/10)         | 1000 (10/10)         |
| Standard contact material                           |           | AgSnO <sub>2</sub>   | AgSnO <sub>2</sub>   |

**Supply specification**

|                                   |                 |                           |                          |
|-----------------------------------|-----------------|---------------------------|--------------------------|
| Nominal voltage (U <sub>N</sub> ) | V AC (50/60 Hz) | 230                       | 110...240                |
|                                   | V DC            | —                         | —                        |
| Rated power                       | VA (50 Hz)/W    | 3/1.2                     | 3.2/1                    |
| Operating range                   | AC (50 Hz)      | (0.8...1.1)U <sub>N</sub> | (90...264)U <sub>N</sub> |
|                                   | DC              | —                         | —                        |
| Reset time (s)                    |                 | —                         | 3                        |

**Technical data**

|   |        |                       |                       |
|---|--------|-----------------------|-----------------------|
| 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                    | 45                    |
| Maximum impulse duration                    |        | Continuous            | Continuous            |
| Dielectric strength between:                |        |                       |                       |
| open contacts V AC                          |        | 1000                  | 1000                  |
| supply - contacts V AC                      |        | —                     | 2000                  |
| Ambient temperature range                   | °C     | -10...+60             | -10...+60             |
| Protection category                         |        | IP 20                 | IP 20                 |

**Approvals** (according to type)



**14.01**



- 8 functions:
  - Staircase timer
  - Staircase timer + maintenance function
  - Staircase timer with early warning
  - Staircase timer with early warning + maintenance function
  - Timing step relay
  - Timing step relay with early warning
  - Step relay
  - Light ON

**14.11**



- for centralised switch off
- 4 functions:
  - Step relay
  - Timing Step relay
  - Staircase timer
  - Light ON

**Multi-function electronic staircase timers**

- Time setting from 30 seconds to 20 minutes
- Suitable for 3 or 4 wire systems, with automatic recognition
- Compatible with movement detectors 18 series - (only with Staircase timer function)
- "Zero crossing" load switching
- 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
- 35 mm rail (EN 60715) mount

14.61  
Push-in terminal

14.71  
Box clamp



For outline drawing see page 14

**Contact specification**

| Contact configuration                            |           | 14.61              | 14.71                |
|--|-----------|--------------------|----------------------|
| Contact configuration                            |           | 1 NO (SPST-NO)     | 1 NO (SPST-NO)       |
| Rated current/Maximum peak current               | A         | 10 /—              | 16/30 (120 A - 5 ms) |
| Rated voltage/<br>Maximum switching voltage      | V AC      | 230/—              | 230/—                |
| Rated load AC1                                   | VA        | 2300               | 3700                 |
| Rated load AC15 (230 V AC)                       | VA        | 450                | 750                  |
| Nominal lamp rating:                             |           |                    |                      |
| 230 V incandescent/halogen W                     |           | 1000               | 3000                 |
| fluorescent tubes with electronic ballast W      |           | 1500               | 1500                 |
| fluorescent tubes with electromagnetic ballast W |           | 500                | 1000                 |
| CFL W  |           | 300                | 600                  |
| 230 V LED W                                      |           | 300                | 600                  |
| LV halogen or LED with electronic ballast W      |           | 600                | 600                  |
| LV halogen or LED with electromagnetic ballast W |           | 1500               | 1500                 |
| Minimum switching load                           | mW (V/mA) | 1000 (10/10)       | 1000 (10/10)         |
| Standard contact material                        |           | AgSnO <sub>2</sub> | AgSnO <sub>2</sub>   |

**Supply specification**

|                                   |                 |                           |                           |
|-----------------------------------|-----------------|---------------------------|---------------------------|
| 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**

|   |                        |                       |                       |
|---|------------------------|-----------------------|-----------------------|
| 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            |
| Dielectric strength between:                | open contacts V AC     | 1000                  | 1000                  |
|   | supply - contacts V AC | —                     | —                     |
| Ambient temperature range                   | °C                     | -10...+60             | -10...+60             |
| Protection category                         |                        | IP 20                 | IP 20                 |

**Approvals** (according to type)



**14.61**



- 3 functions:
  - Staircase timer with early warning + Staircase maintenance
  - Light ON
  - Staircase timer
- Push-In terminals

**14.71**



- 3 functions:
  - Staircase timer
  - Staircase timer + maintenance function
  - Light ON
- LED status indicators

**Mono-function electronic staircase timers**

- Time setting from 30 seconds to 20 minutes
- "Zero crossing" load switching
- Wiring compatible with mechanical versions and with old type (low emission) illuminated push-buttons (14.91)
- Suitable for 3 or 4 wire systems, via "push-button configuration" (14.81)
- 110...125 V AC supply version available (14.81)
- All terminal on same side
- 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
- 35 mm rail (EN 60715) mount

14.81/14.91  
Box clamp



For outline drawing see page 14

**Contact specification**

|   |                 |                           |                           |
|---|-----------------|---------------------------|---------------------------|
| 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/<br>Maximum switching voltage         | V AC            | 230/—                     | 230/—                     |
| Rated load AC1                                      | VA              | 3700                      | 3700                      |
| Rated load AC15 (230 V AC)                          | VA              | 750                       | 750                       |
| Nominal lamp rating:                                |                 |                           |                           |
| 230 V incandescent/halogen W                        |                 | 3000                      | 3000                      |
| fluorescent tubes with<br>electronic ballast W      |                 | 1500                      | 1500                      |
| fluorescent tubes with<br>electromagnetic ballast W |                 | 1000                      | 1000                      |
| CFL W   |                 | 600                       | 600                       |
| 230 V LED W   |                 | 600                       | 600                       |
| LV halogen or LED with<br>electronic ballast W      |                 | 600                       | 600                       |
| LV halogen or LED with<br>electromagnetic ballast W |                 | 1500                      | 1500                      |
| Minimum switching load                              | mW (V/mA)       | 1000 (10/10)              | 1000 (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) | 110...125/230             | 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)         |                 | 45                        | 25                        |
| 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)                |                 | CE UK EAC                 | CE UK EAC                 |

**14.81**



- Mono-function:  
- Staircase timer + maintenance function

**14.91**



- Mono-function:  
- Signal ON pulse timer

### Ordering information

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



**Series** ————  
**Type** ————  
0 = 35 mm rail (EN 60715) mount, 8 functions  
1 = 35 mm rail (EN 60715) mount, with reset, 4 functions  
6 = 35 mm rail (EN 60715) mount, 3 functions  
7 = 35 mm rail (EN 60715) mount, 3 functions  
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

**Supply voltage**  
120 = 110...125 V AC (14.81 only)  
230 = 230 V AC

**Supply version**  
8 = AC (50/60 Hz)

**No. of poles**  
1 = 1 NO (SPST-NO) 16 A contact

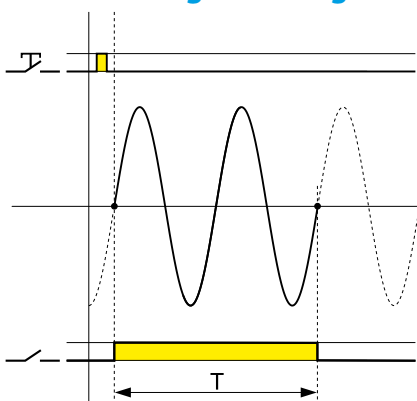
**Contact circuit**  
0 = Standard  
3 = NO (SPST) - voltage free (only 14.11)

**Options**  
0 = Standard  
P = Push-in terminals (only 14.61)

### Technical data

| Insulation                                      |                         |                 |                   |
|---|-------------------------|-----------------|-------------------|
| Dielectric strength between open contacts       | V AC                    | 1000            |                   |
| 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             |                   |
| Terminals                                       |                         | Box clamp       | Push-in terminal  |
| Wire strip length                               | mm                      | 10              | 10                |
| Screw torque                                    | Nm                      | 0.8             | —                 |
| Min. wire size                                  |                         | solid cable     | solid cable       |
|   | mm <sup>2</sup>         | 0.5             | 0.75              |
|   | AWG                     | 20              | 18                |
| Max. wire size                                  |                         | solid cable     | solid cable       |
|   | mm <sup>2</sup>         | 1 x 4 / 2 x 2.5 | 1 x 2.5 / 2 x 2.5 |
|   | AWG                     | 1 x 12 / 2 x 14 | 1 x 14 / 2 x 14   |
| Min. wire size                                  |                         | stranded cable  | stranded cable    |
|   | mm <sup>2</sup>         | 0.5             | 0.75              |
|   | AWG                     | 20              | 18                |
| Max. wire size                                  |                         | stranded cable  | stranded cable    |
|   | mm <sup>2</sup>         | 1 x 4 / 2 x 2.5 | 1 x 2.5 / 2 x 2.5 |
|   | AWG                     | 1 x 12 / 2 x 14 | 1 x 14 / 2 x 14   |

### 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

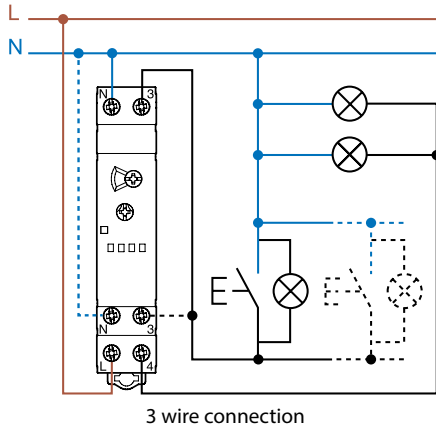
**Note**

Using the type 14.91, the lamps are switched on directly by the push-button

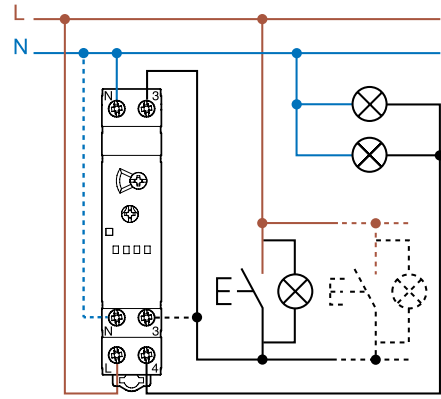
### Wiring diagrams

**Red LED indication:** (with power supply) Continuous = relay ON; Blinking = relay OFF

#### Type 14.01/14.71



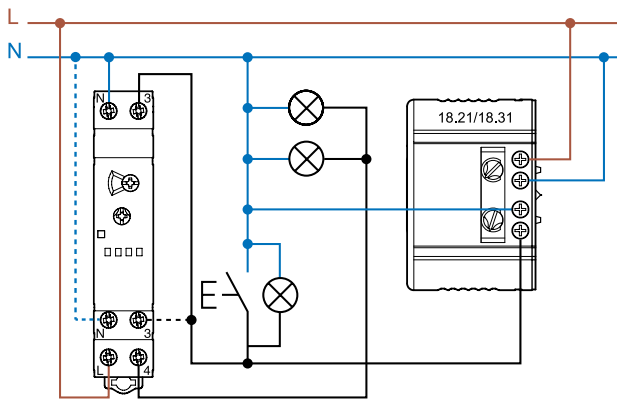
3 wire connection



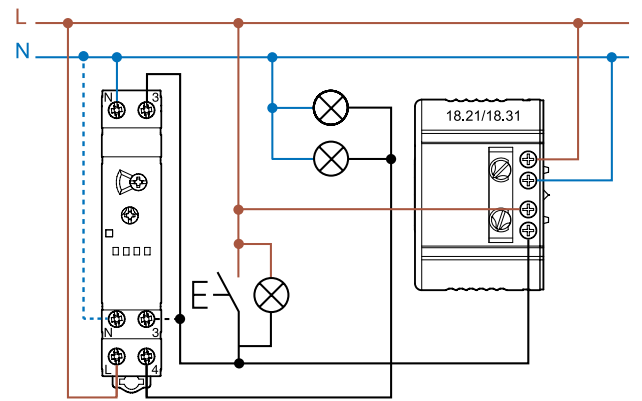
4 wire connection

#### Type 14.01, 14.61 or 14.71

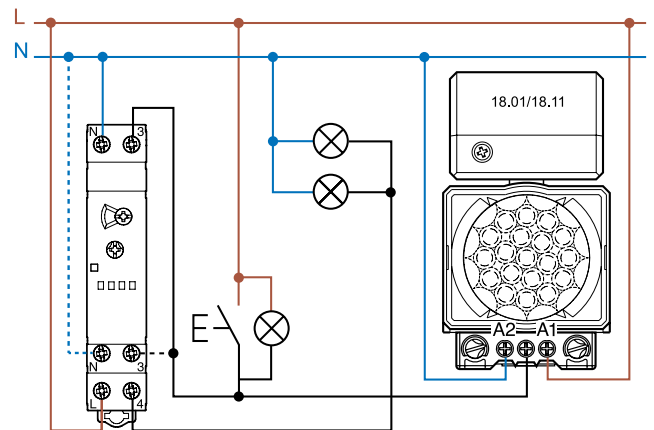
Without Staircase maintenance function, triggered by PIR movement detector (18 series).



3 wire connection (with 18.21.8.230.0300 or 18.31.8.230.0300 only)



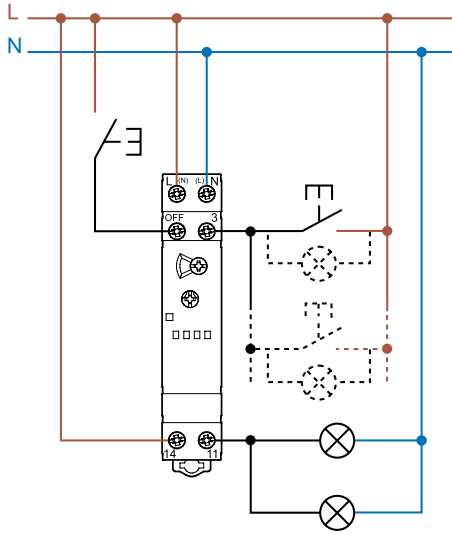
4 wire connection (with 18.21.8.230.0300 or 18.31.8.230.0300 only)



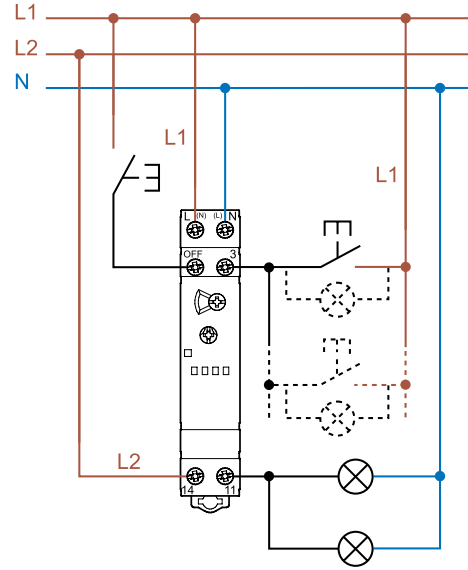
4 wire connection (with 18.01.8.230.0000 or 18.11.8.230.0000 only)

Wiring diagrams

**Type 14.11**  
Staircase light connection and load with the same phase

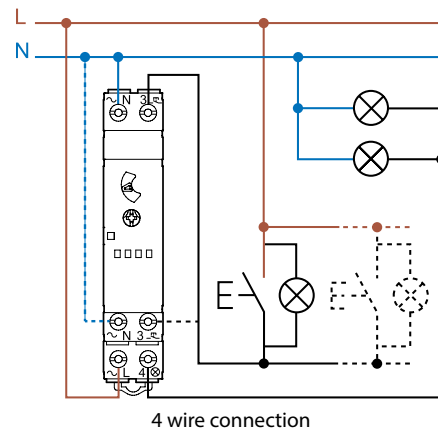
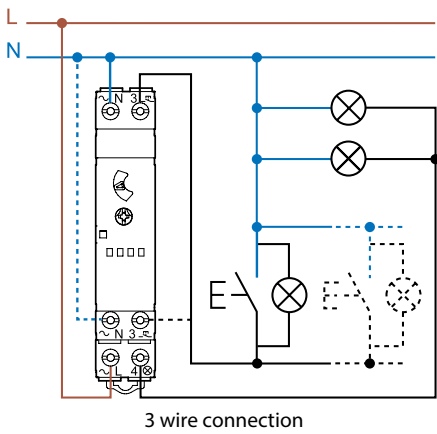


**Type 14.11**  
Staircase light connection and load with different phases

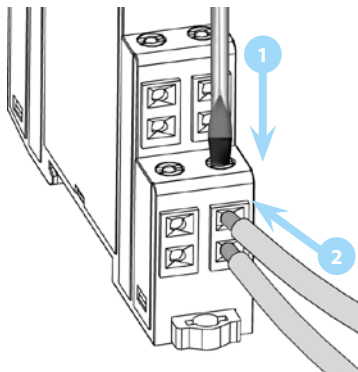


**Note:** If the load is powered by a phase other than the one that powers staircase light 14.11, a 50% reduction in the nominal lamp load must be applied.

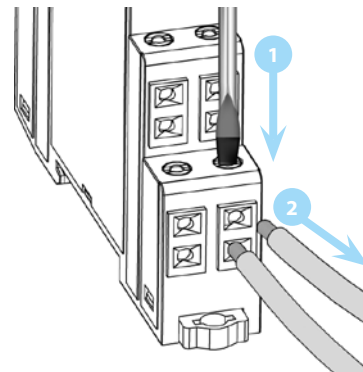
**Type 14.61**



**Terminal Push-in connection**



Connection with stranded wire (without screwdriver in case of solid wire)

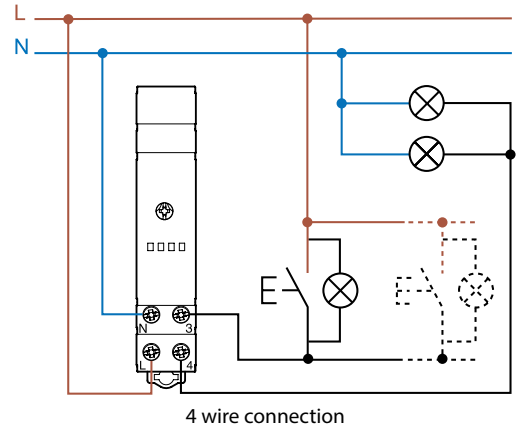
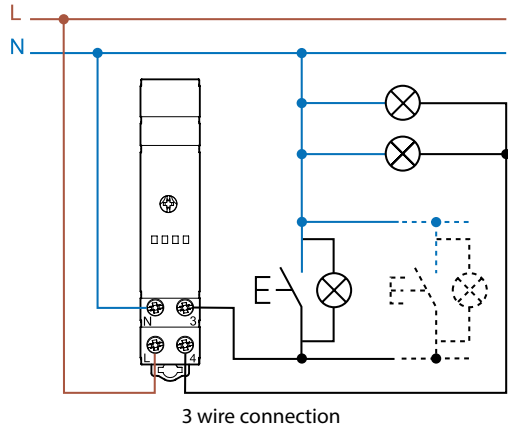


Disconnection of the electrical connection

## Wiring diagrams

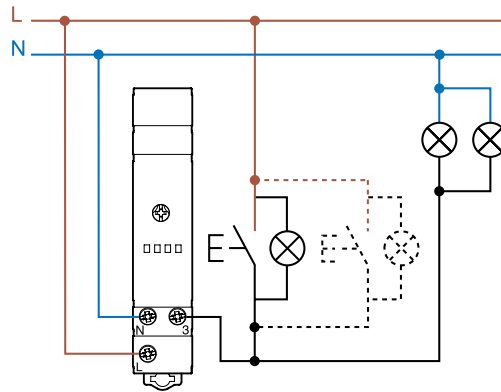
### Type 14.81

Push-button configuration procedure, as per the Installation manual



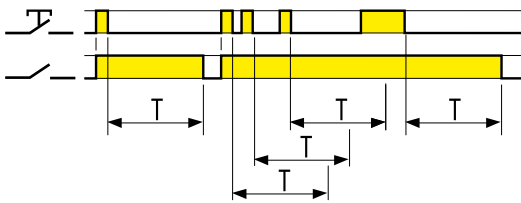
### Type 14.91

The push-buttons must be rated for the load current



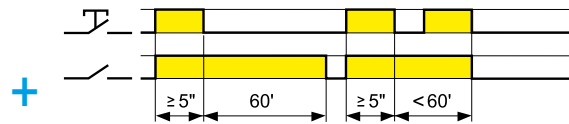
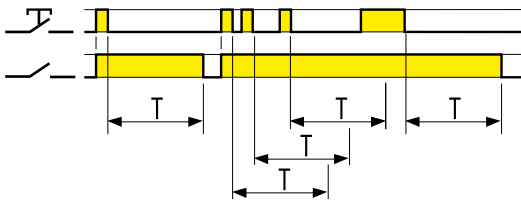
## Functions

### Type 14.01 Functions selectable with front rotary selector



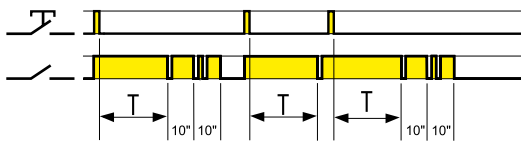
#### (BE) Staircase timer

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.



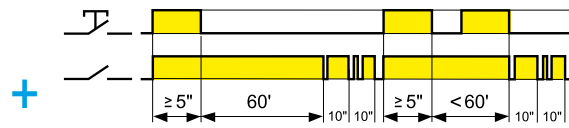
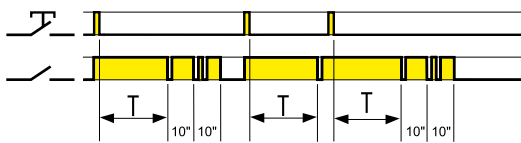
#### (ME) Staircase timer + Staircase maintenance (BE + ⚙)

In addition to the Staircase timer function (BE), 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 minute timing can be interrupted by a further impulse of  $\geq 5$  seconds, and the output contact then opens



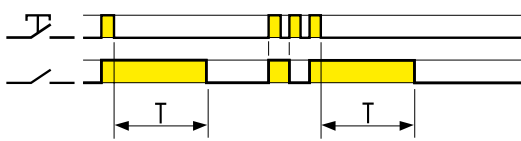
#### (BP) Staircase timer with early warning

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.



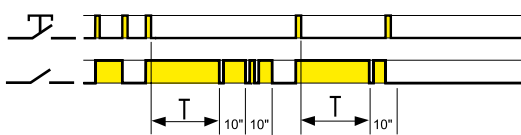
#### (MP) Staircase timer with early warning + Staircase maintenance (BP + ⚙)

In addition to the Staircase timer function (BP), 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 minute timing can be interrupted by a further impulse of  $\geq 5$  seconds, and the output contact then opens



#### (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.



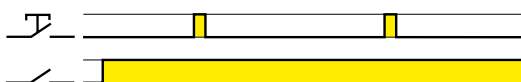
#### (IP) Timing step relay with early warning

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.

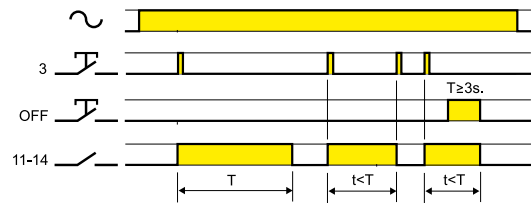
## Functions

### Type 14.11 Functions selectable with front rotary selector



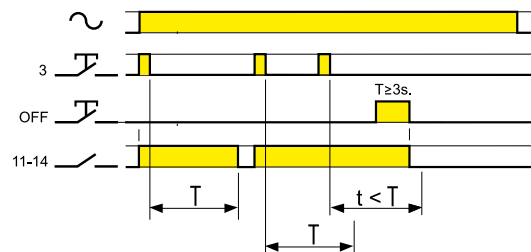
#### (RI) Step relay

The device works like a classic step relay: the output changes state each time push-button (3) is pressed. Pressing OFF for more than 3 seconds forces the output to the off state.



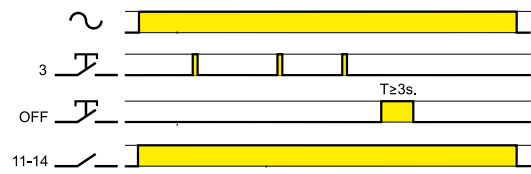
#### (IT) Timing step relay

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. Pressing OFF for more than 3 seconds forces the output to the off state.



#### (BE) Staircase timer

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. Pressing OFF for more than 3 seconds forces the output to the off state.



#### Light ON

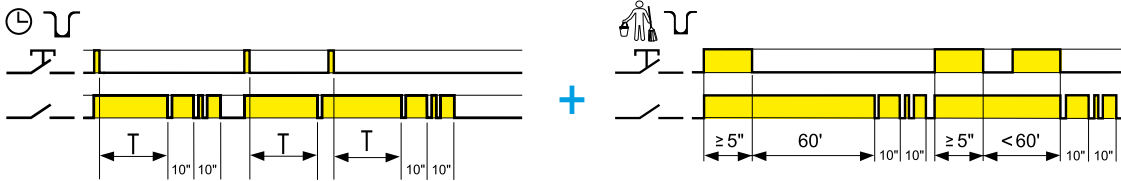
With this function set - the output contact stays permanently closed.

## Functions

### Type 14.61 Functions selectable with front selector

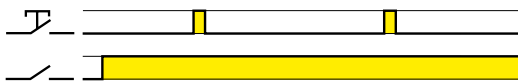
#### 3-function front selector

|  |  |
|--|--|
|  | ⊖ Staircase relay with early warning +  Staircase maintenance    |
|  | ⊙ Light ON   |
|  | ⊖ Staircase timer (compatible with 18 series movement detectors) |



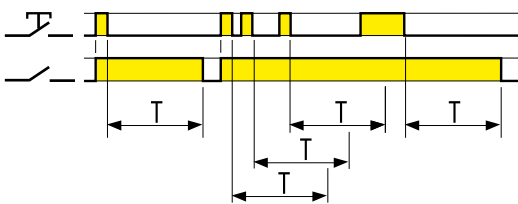
#### Staircase relay with early warning + Staircase maintenance

In addition to the Staircase relay function (BP), 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 minute timing can be interrupted by a further impulse of  $\geq 5$  seconds, and the output contact then opens.



#### ⊙ Light ON

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



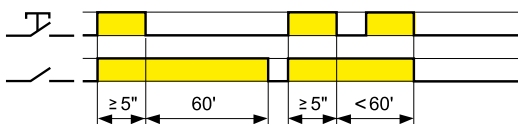
#### ⊖ Staircase timer

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

### Type 14.71 Functions selectable with front selector

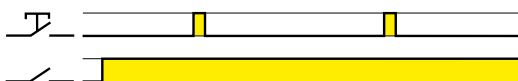
#### 3-function front selector

|  |  |
|--|--|
|  | ⊖ Staircase timer +  Staircase maintenance                       |
|  | ⊙ Light ON   |
|  | ⊖ Staircase timer (compatible with 18 series movement detectors) |



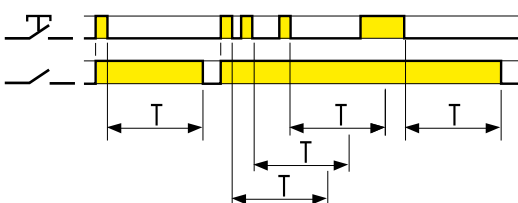
#### Staircase maintenance

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.

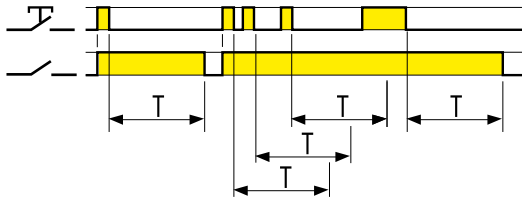


#### ⊖ Staircase timer

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.

## Functions

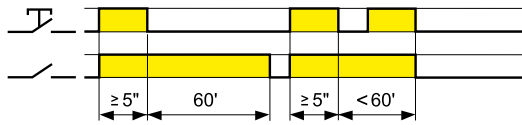
### Type 14.81



#### Staircase timer

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.

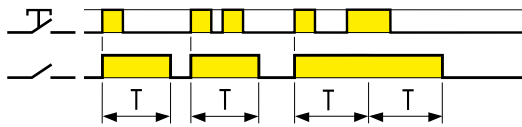
On expiry of the time delay, the output contact opens.



#### “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

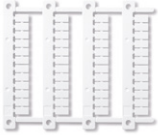
On initial impulse the output contact closes, and remain so for the duration of the preset delay. On expiry of the time delay, the output contact opens.

Accessories



020.01

|  |        |
|--|--------|
| Adaptor for panel mounting, 17.5 mm wide | 020.01 |
|--|--------|

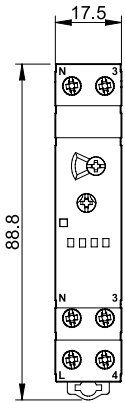


060.48

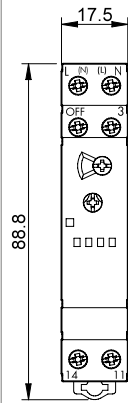
|  |        |
|--|--------|
| Sheet of marker tags (CEMBRE Thermal transfer printers), plastic, 48 tags, 6 x 12 mm | 060.48 |
|--|--------|

Outline drawings

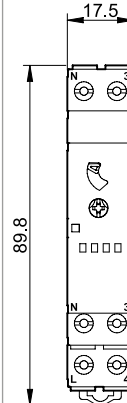
Type 14.01  
Box clamp



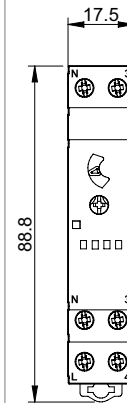
Type 14.11  
Box clamp



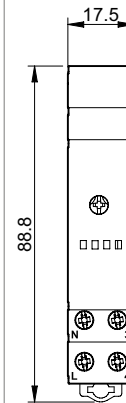
Type 14.61  
Push-in terminal



Type 14.71  
Box clamp



Type 14.81  
Box clamp



Type 14.91  
Box clamp

