**Multi-function electronic staircase timers**
**1 NO 16 A 17.5 mm wide**

**Type 14.01**
- 8 functions
- Switch-off "early warning" options

**Type 14.71**
- 3 functions

- Time setting from 30 seconds to 20 minutes
- "Zero crossing" load switching
- "Switch-off early warning" - model 14.01
- Suitable for 3 or 4 wire systems, with automatic recognition
- Compatible with movement detectors (18 series)
- 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
- European Patent

14.01/71
Screw terminal



For outline drawing see page 8

| | 14.01 | 14.71 |
|---|---|---|
| |  |  |
| | • 8 functions:<br>- Staircase timer<br>- Staircase timer + maintenance function<br>- Staircase timer with early warning<br>- Staircase timer with early warning + maintenance function<br>- Timing step relay<br>- Timing step relay with early warning<br>- Step relay<br>- Light ON | • 3 functions:<br>- Staircase timer<br>- Staircase timer + maintenance function<br>- Light ON |

| | | | |
|---|---|---|---|
| **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/ 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 electronic ballast | W | 1500 | 1500 |
| fluorescent tubes with electromagnetic ballast | W | 1000 | 1000 |
| CFL | W | 600 | 600 |
| 230 V LED | W | 600 | 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 | | $AgSnO_2$ | $AgSnO_2$ |
| **Supply specification** | | | |
| Nominal voltage ($U_N$) | 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) | $(0.8…1.1)U_N$ | $(0.8…1.1)U_N$ |
| | DC | — | — |
| **Technical data** | | | |
| Electrical life at rated load in AC1 | cycles | $100 \cdot 10^3$ | $100 \cdot 10^3$ |
| 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 |
| **Approvals** (according to type) | | | |

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**Mono-function electronic staircase timers**
**1 NO 16 A 17.5 mm wide**

**Type 14.81**
- Staircase timer + maintenance function

**Type 14.91**
- Signal ON pulse timer

- Time setting from 30 seconds to 20 minutes
- "Zero crossing" load switching
- Wiring compatible with mechanical versions and with old type (low emission) illuminated pushbuttons
- Suitable for 3 or 4 wire systems, via "pushbutton configuration"
- 110…125 V AC supply version available (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
- 35 mm rail (EN 60715) mount

14.81/91
Screw terminal



For outline drawing see page 8

**14.81**



- Mono-function:
  - Staircase timer + maintenance function
- All 4 terminal on same side

**14.91**



- Mono-function:
  - Signal ON pulse timer
- All 3 terminal on same side

| | | | |
|---|---|---|---|
| **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/ 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 electronic ballast | W | 1500 | 1500 |
| fluorescent tubes with electromagnetic ballast | W | 1000 | 1000 |
| CFL | W | 600 | 600 |
| 230 V LED | W | 600 | 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 | | $AgSnO_2$ | $AgSnO_2$ |
| **Supply specification** | | | |
| Nominal voltage ($U_N$) | 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) | $(0.8…1.1)U_N$ | $(0.8…1.1)U_N$ |
| | DC | — | — |
| **Technical data** | | | |
| Electrical life at rated load in AC1 | cycles | $100 \cdot 10^3$ | $100 \cdot 10^3$ |
| 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 EAC PG | CE EAC PG |

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## Ordering information

Example: 14 series multi-function timer, 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, 8 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

**No. of poles**
1 = 1 NO 16 A contact

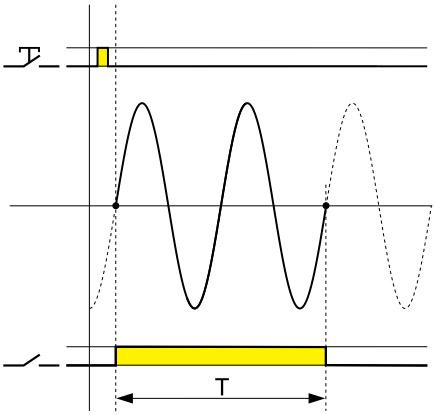
**Supply voltage**
120 = 110…125 V AC (14.81 only)
230 = 230 V

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

## 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 | |
| Screw torque | | Nm | 0.8 | |
| Max. wire size | | | solid cable | stranded cable |
| | | mm² | 1 x 6 / 2 x 4 | 1 x 4 / 2 x 2.5 |
| | | AWG | 1 x 10 / 2 x 12 | 1 x 12 / 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

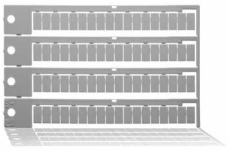
Note
Using the type 14.91, the lamps are switched on directly by the push-button

## Accessories



**020.01**

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



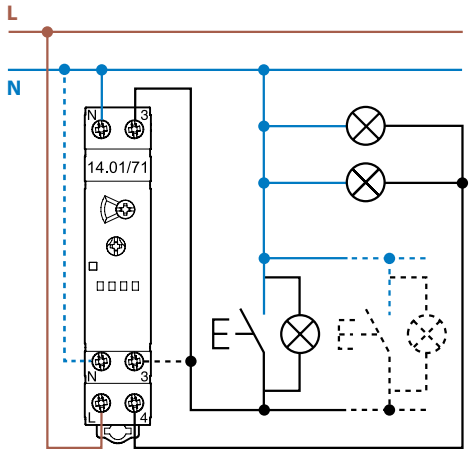
**060.72**

| | |
|---|---|
| **Sheet of marker tags,** plastic, 72 tags, 6 x 12 mm | 060.72 |

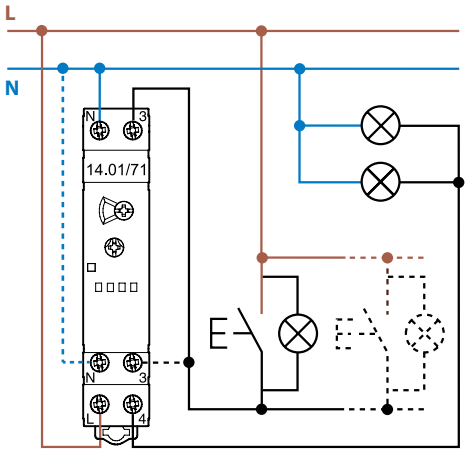
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## Wiring diagrams

**Type 14.01**
**14.71**
Red LED indication:
Continuous = relay ON
Blinking = relay OFF

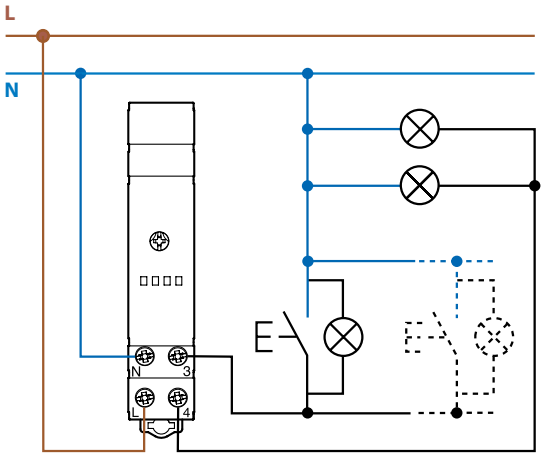



3 wire connection

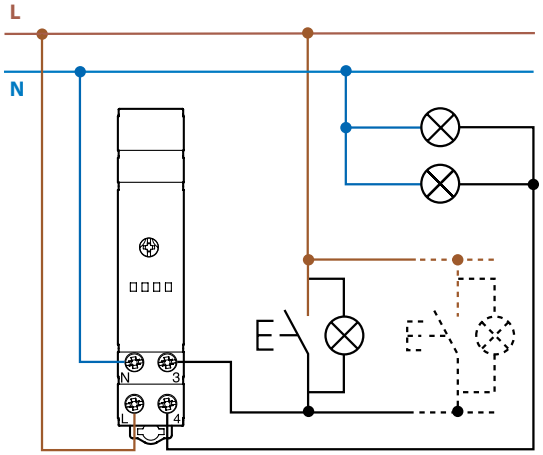



4 wire connection

**Type 14.81** (push-button configuration procedure, as per the Installation manual)

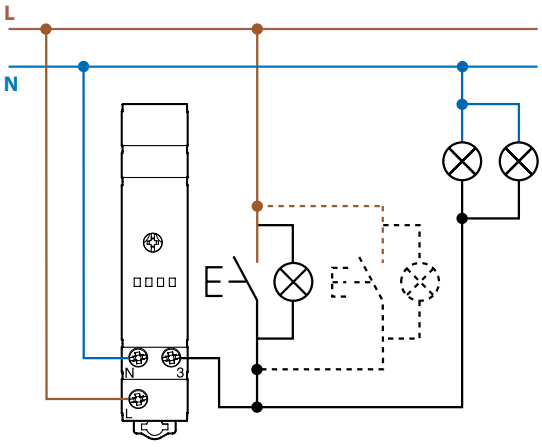



3 wire connection




4 wire connection

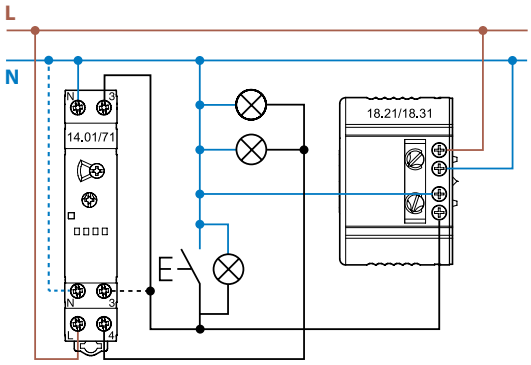
**Type 14.91** (the push-buttons must be rated for the load current)



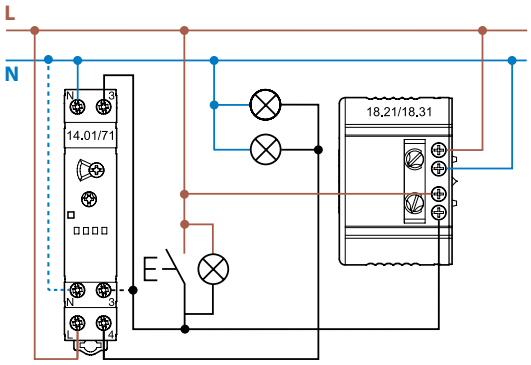

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## Wiring diagrams - 14.01 or 14.71 without Staircase maintenance function, triggered by PIR movement detector (18 series).

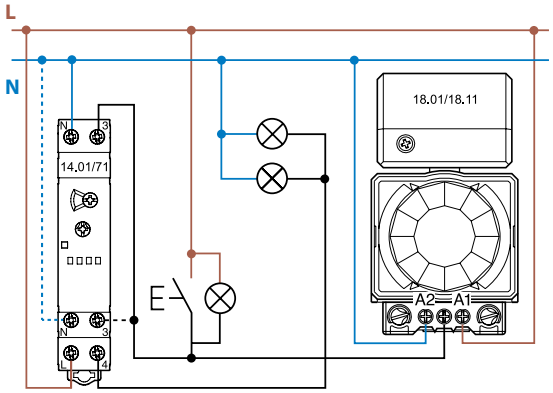
**3 wire connection** (with 18.21.8.230.0300 or 18.31.8.230.0300 only)




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

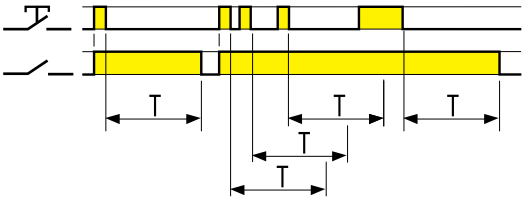



**4 wire connection** (with 18.01.8.230.0000 or 18.11.8.230.0000 only)

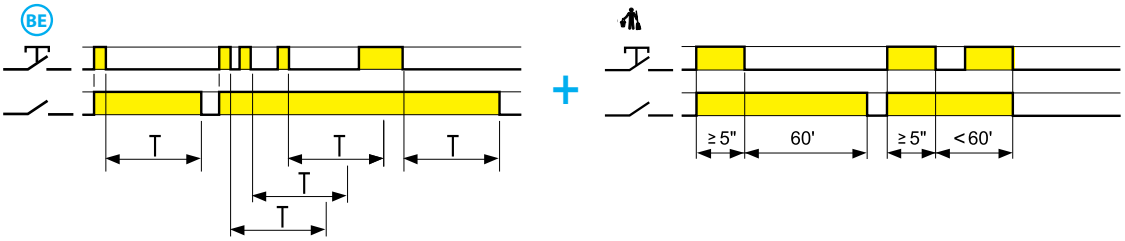


## Functions

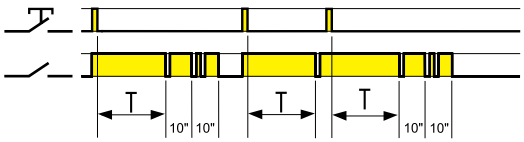
**Type 14.01** Functions selectable with front rotary selector



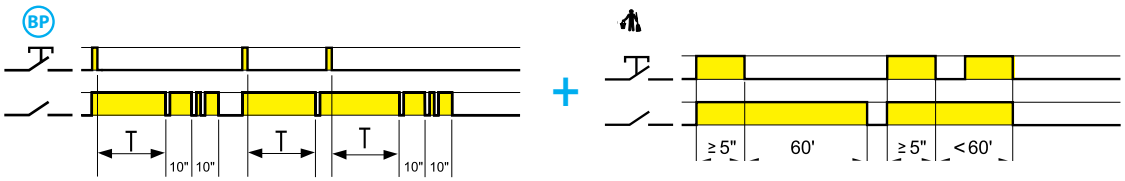

**(BE) Staircase timer**
On initial impulse the output contact closes and timing starts for the pre-set duration; subsequent impulses during the timing period will extend the timing period by the full pre-set value.
On expiry of the time delay, the output contact opens.



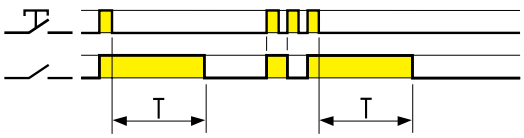

**(ME) Staircase timer + Staircase maintenance**
In addition to the Staircase timer function (BE), an impulse of ≥ 5 seconds will close the output contact for 60 minutes, after which time the contact will open. Ideal for maintenance or cleaning activities. The 60 minute timing can be interrupted by a further impulse of ≥ 5 seconds, and the output contact then opens



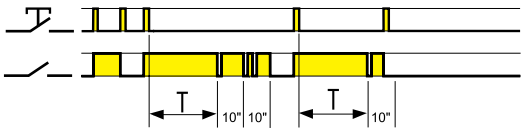

**(BP) Staircase timer with early warning**
On initial impulse the output contact closes and the timing starts for the pre-set duration.
After the timing period, the output contact blinks off once; 10secs later the contact blinks off twice, and after a further 10secs the contact opens.
During the pre-set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



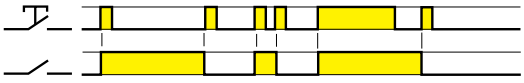

**(MP) Staircase timer with early warning + Staircase maintenance**
In addition to the Staircase timer function (BP), an impulse of ≥ 5 seconds will close the output contact for 60 minutes, after which time the contact will open. Ideal for maintenance or cleaning activities. The 60 minute timing can be interrupted by a further impulse of ≥ 5 seconds, and the output contact then opens



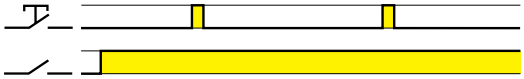

**(IT) Timing step relay**
On initial impulse the output contact closes and timing starts for the pre-set duration; On expiry of the time delay, the output contact opens.
During the timing period it is possible to immediately open the contact with a further impulse.




**(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.

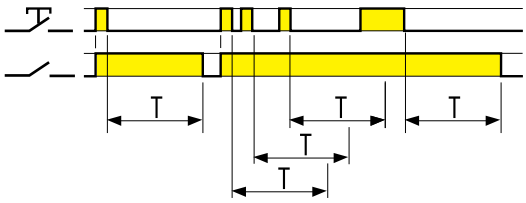
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## Functions

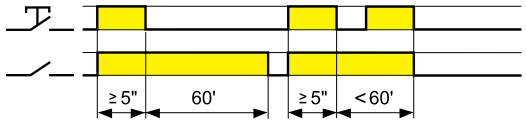
**Type 14.71** Functions selectable with front selector

**3-function front selector**

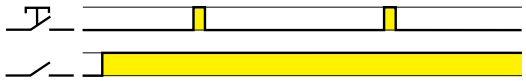
| | |
|---|---|
|  | Staircase timer + Staircase maintenance |
|  | Light ON |
|  | Staircase timer (compatible with 18 series movement detectors) |




**Staircase 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.

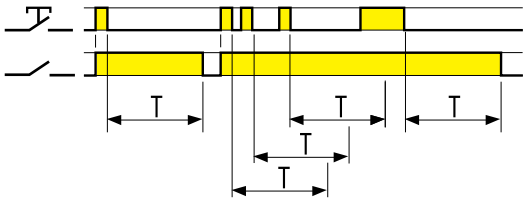



**Staircase maintenance**
An impulse of ≥ 5 seconds will close the output contact for 60 minutes, after which time the contact will open. Ideal for maintenance or cleaning activities.
The 60' timing can be interrupted by a further impulse of ≥ 5 seconds, the output contact opens.

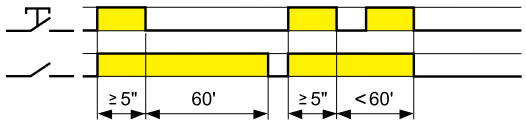


**Light ON**
With this function set - the output contact stays permanently closed.

**Type 14.81**

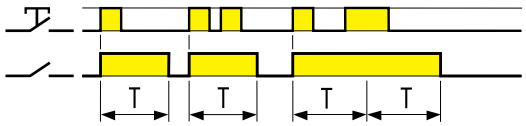



**Staircase timer**
On initial impulse the output contact closes and timing starts for the pre-set duration; subsequent impulses during the timing period will extend the timing period by the full pre-set value.
On expiry of the time delay, the output contact opens.




**"Staircase maintenance" function**
An impulse of ≥ 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 ≥ 5 seconds, which will re-establish the staircase timer function; so on expiry of the staircase time delay, the output contact opens.

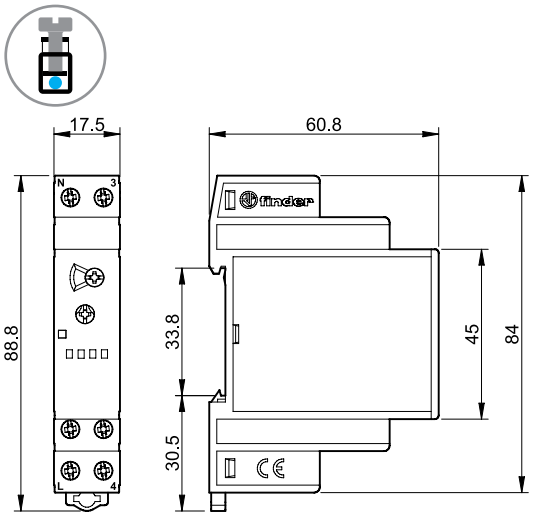
**Type 14.91**



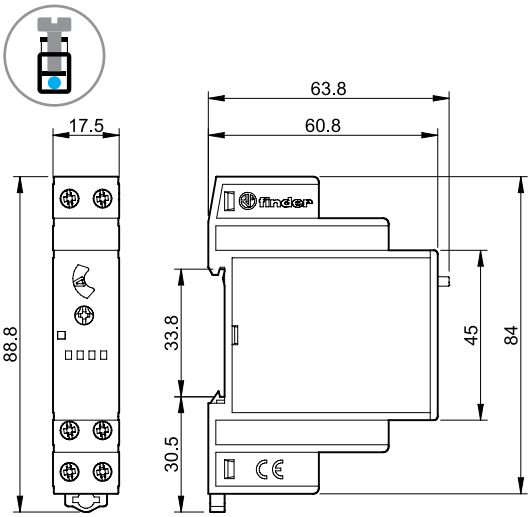

**Signal ON pulse**
On initial impulse the output contact closes, and remain so for the duration of the preset delay. On expiry of the time delay, the output contact opens.

## Outline drawings

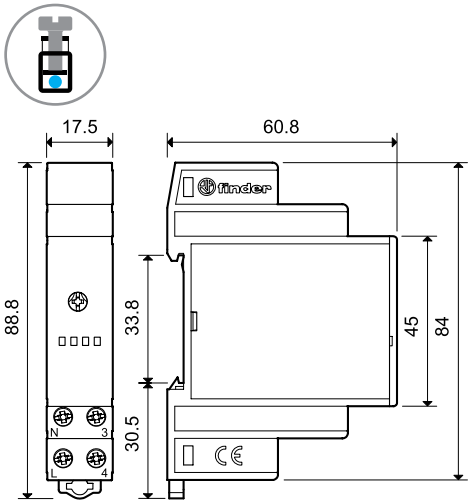
14.01
Screw terminal



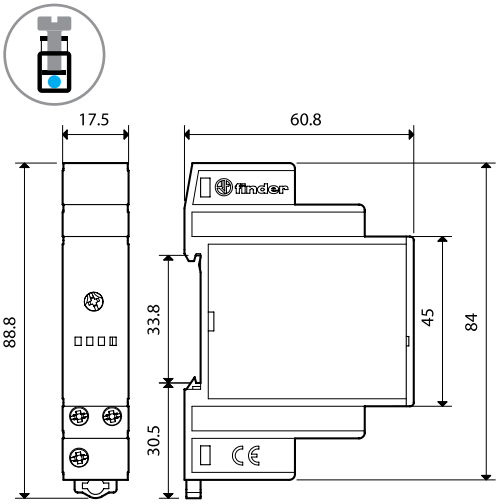

14.71
Screw terminal




14.81
Screw terminal




14.91
Screw terminal




I



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22.32.0.120.4320 60.12.9.024.0040 55.34.9.024.0040 12.81.8.230.0000 46.61.9.024.0040 20.22.9.024.4000 94.74 11.31.8.230.0000 30.22.7.012.0020 77.11.9.024.8250 60.13.8.024.0040 55.13.9.024.0000 7T.81.0.000.2301 7T.81.0.000.2403 41.52.9.024.0000 56.34.9.012.0000 60.12.8.110.0040 553492200040 850382400000 55.34.9.012.0040 48.52.8.230.0060SPA 48.62.7.012.0050SPA 22.32.0.012.4320 39.81.0.012.0060 55.34.9.024.0000 39.31.3.125.0060 55.34.8.048.0040 95.51 55.34.9.024.5040 40.51.9.012.0000