

# Timed socket for 34 series

93  
SERIES



Hoists and cranes



Packaging  
machines



Traffic light  
controls



Bottling plant



Carousel  
warehouses



Control panels



Panels for electrical  
distribution



Labelling  
machines





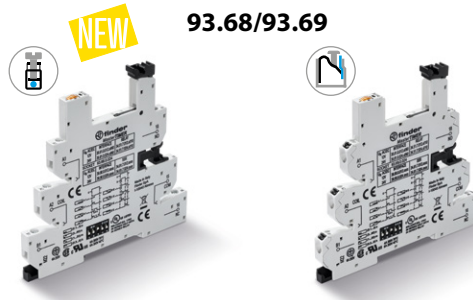
### Slim timed sockets for 34 series, 6.2 mm wide

- Timer adjustment via top mounted rotary knob accessible after assembly
- Control signal terminal
- DIP-switch for selection of 4 time scales and 8 functions
- Output with fuse module option
- EMR and SSR: 12 to 24 V AC/DC supply
- Screw terminal and push-in terminal

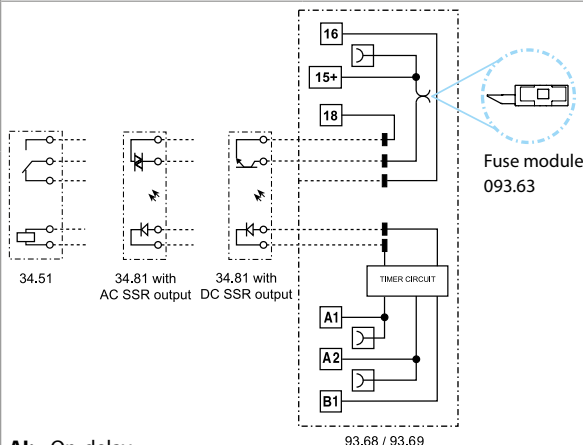
93.68  
Screw terminals



93.69  
Push-in terminal



- Time scale: from 0.1 s to 6 h
- Multi-function
- For use with 34.51 (EMR) and 34.81 (SSR) relays
- Screw terminal and push-in terminal



- AI:** On-delay  
**DI:** Interval  
**GI:** Pulse (0.5 s) delayed  
**SW:** Symmetrical flasher (starting pulse on)  
**BE:** Off-delay with control signal  
**CE:** On- and off-delay with control signal  
**DE:** Interval with control signal on  
**EE:** Interval with control signal off

For outline drawing see page 5

### Contact specification

|                                             |           |
|---------------------------------------------|-----------|
| Contact configuration                       |           |
| Rated current/Maximum peak current          | A         |
| Rated voltage/<br>Maximum switching voltage | V AC      |
| Rated load AC1                              | VA        |
| Rated load AC15 (230 V AC)                  | VA        |
| Single phase motor rating (230 V AC)        | kW        |
| Breaking capacity DC1: 30/110/220 V         | A         |
| Minimum switching load                      | mW (V/mA) |
| Standard contact material                   |           |

### Supply specification

|                                   |                    |
|-----------------------------------|--------------------|
| Nominal voltage (U <sub>N</sub> ) | V AC (50/60 Hz)/DC |
| Rated power AC/DC                 | VA/W               |
| Operating range                   | V AC (50/60 Hz)/DC |

### Technical data

|                                      |        |
|--------------------------------------|--------|
| Specified time range                 |        |
| Repeatability                        | %      |
| Recovery time                        | ms     |
| Setting accuracy - full range        | %      |
| Electrical life at rated load in AC1 | cycles |
| Ambient temperature range            | °C     |
| Protection category                  |        |

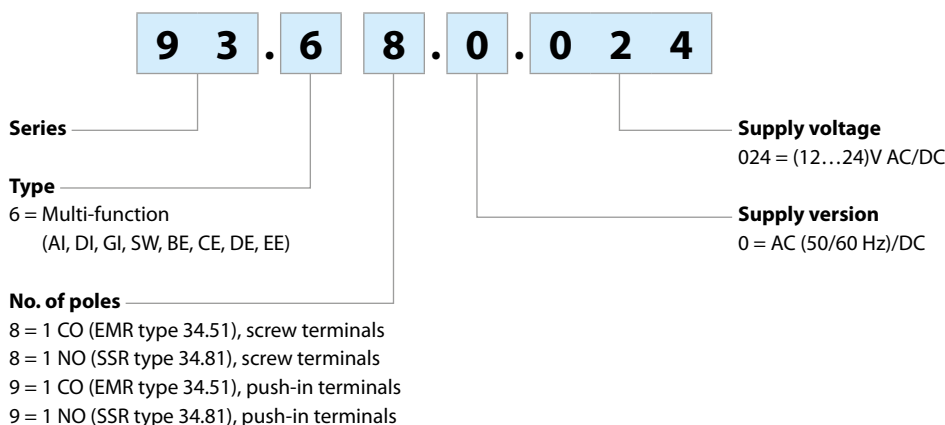
See 34.51 and 34.81 relays

### Approvals (according to type)



## Ordering information

Example: type 93.68 multi-function timer module for 34 series relay, screw terminals, (12...24)V AC/DC supply voltage.



## Combinations

| Output                                   | Supply voltage | Type of relay    | Type of socket, screw terminals   |
|------------------------------------------|----------------|------------------|-----------------------------------|
| 1 pole 6 A, electromechanical relay      | 12 V AC/DC     | 34.51.7.012.0010 | 93.68.0.024                       |
| 1 pole 6 A, electromechanical relay      | 24 V AC/DC     | 34.51.7.024.0010 | 93.68.0.024                       |
| 1 output 6 A/24 V DC, solid state relay  | 12 V AC/DC     | 34.81.7.012.9024 | 93.68.0.024                       |
| 1 output 2 A/240 V AC, solid state relay | 12 V AC/DC     | 34.81.7.012.8240 | 93.68.0.024                       |
| 1 output 6 A/24 V DC, solid state relay  | 24 V AC/DC     | 34.81.7.024.9024 | 93.68.0.024                       |
| 1 output 2 A/240 V AC, solid state relay | 24 V AC/DC     | 34.81.7.024.8240 | 93.68.0.024                       |
| Output                                   | Supply voltage | Type of relay    | Type of socket, push-in terminals |
| 1 pole 6 A, electromechanical relay      | 12 V AC/DC     | 34.51.7.012.0010 | 93.69.0.024                       |
| 1 pole 6 A, electromechanical relay      | 24 V AC/DC     | 34.51.7.024.0010 | 93.69.0.024                       |
| 1 output 6 A 24 V DC, solid state relay  | 12 V AC/DC     | 34.81.7.012.9024 | 93.69.0.024                       |
| 1 output 2 A 240 V AC, solid state relay | 12 V AC/DC     | 34.81.7.012.8240 | 93.69.0.024                       |
| 1 output 6 A 24 V DC, solid state relay  | 24 V AC/DC     | 34.81.7.024.9024 | 93.69.0.024                       |
| 1 output 2 A 240 V AC, solid state relay | 24 V AC/DC     | 34.81.7.024.8240 | 93.69.0.024                       |

Note: Although the timer socket covers both 12 and 24 V supplies, it must be combined with the appropriate 12 V or 24 V relay; resulting in a combination suitable for just a single supply voltage.

## H

## Technical data

### EMC specifications

| Type of test                                              | Reference standard          |              |         |
|-----------------------------------------------------------|-----------------------------|--------------|---------|
| Electrostatic discharge                                   | contact discharge           | EN 61000-4-2 | 4 kV    |
|                                                           | air discharge               | EN 61000-4-2 | 8 kV    |
| Radio-frequency electromagnetic field                     | (80 ÷ 1000 MHz)             | EN 61000-4-3 | 10 V/m  |
|                                                           | (1400 ÷ 2700 MHz)           | EN 61000-4-3 | 10 V/m  |
| Fast transients (burst) (5-50 ns, 5 and 100 kHz)          | on Supply terminals         | EN 61000-4-4 | 4 kV    |
|                                                           | on control signal terminals | EN 61000-4-4 | 4 kV    |
| Surges (1.2/50 µs) on supply and control signal terminals | common mode                 | EN 61000-4-5 | 2 kV    |
|                                                           | differential mode           | EN 61000-4-5 | 0.8 kV  |
| Radio-frequency common mode (0.15 ÷ 80 MHz)               | on Supply terminals         | EN 61000-4-6 | 10 V    |
|                                                           | on control signal terminals | EN 61000-4-6 | 3 V     |
| Radiated and conducted emission                           |                             | EN 55022     | class B |

### Other data

|                                               |                         |                             |
|-----------------------------------------------|-------------------------|-----------------------------|
| Current absorption on signal control (B1)     | mA                      | < 1.7 (12 V) - < 3.5 (24 V) |
| Bounce time (EMR) : NO/NC                     | ms                      | 1/6                         |
| Vibration resistance (EMR, 10...55 Hz): NO/NC | g                       | 10/5                        |
| Power lost to the environment                 | without contact current | W 0.3                       |
|                                               | with rated current      | W 0.8                       |

| Terminals                                                                                       | Solid and stranded cable |                   |                   |
|-------------------------------------------------------------------------------------------------|--------------------------|-------------------|-------------------|
|                                                                                                 | Screw terminals          |                   | Push-in terminals |
| Wire strip length                                                                               | mm                       | 10                | 8                 |
|  Screw torque | Nm                       | 0.5               | —                 |
| Max. wire size                                                                                  | mm²                      | 1 x 2.5 / 2 x 1.5 | 1 x 2.5           |
|                                                                                                 | AWG                      | 1 x 14 / 2 x 16   | 1 x 14            |
| Min. wire size                                                                                  | mm²                      | 1 x 0.5           | 1 x 0.5           |
|                                                                                                 | AWG                      | 1 x 21            | 1 x 21            |

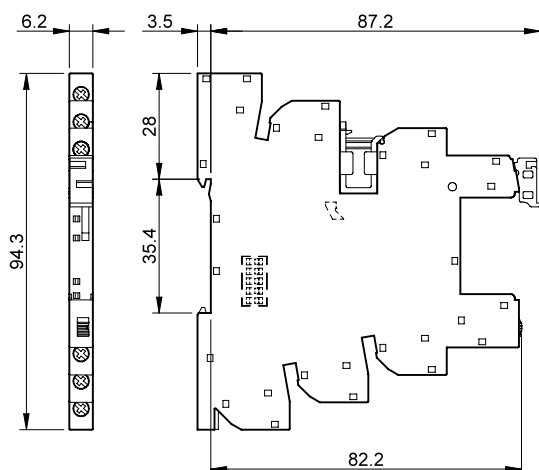
## Input specifications

### Input data AC/DC timer

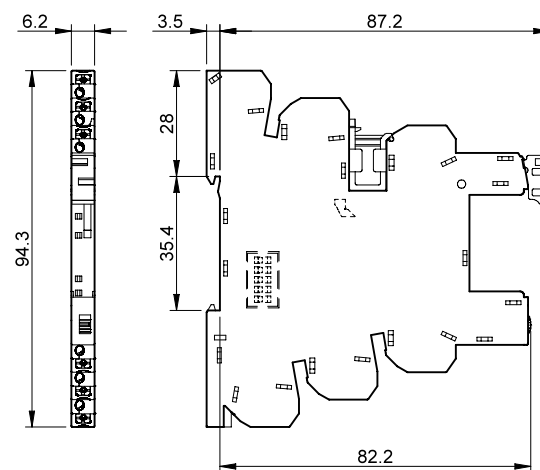
| Nominal voltage<br>$U_N$ | Operating range (AC/DC) |           | Must drop-out voltage<br>$U_r$ | Rated input current at $U_N$ |    | Rated power at $U_N$ |         |
|--------------------------|-------------------------|-----------|--------------------------------|------------------------------|----|----------------------|---------|
|                          | $U_{min}$               | $U_{max}$ |                                | DC                           | AC | DC                   | AC      |
| V                        | V                       | V         | V                              | mA                           | mA | mA                   | mA      |
| 12                       | 9.6                     | 13.2      | 1.2                            | 15                           | 23 | 0.2                  | 0.3/0.2 |
| 24                       | 19.2                    | 26.4      | 2.4                            | 11                           | 19 | 0.25                 | 0.4/0.3 |

## Outline drawing

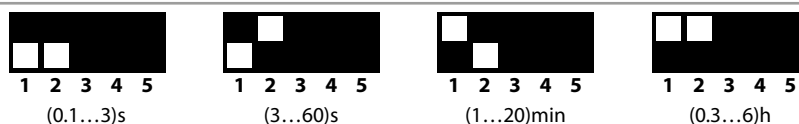
Type 93.68  
Screw terminals



Type 93.69  
Push-in terminal



## Times scales



## Functions

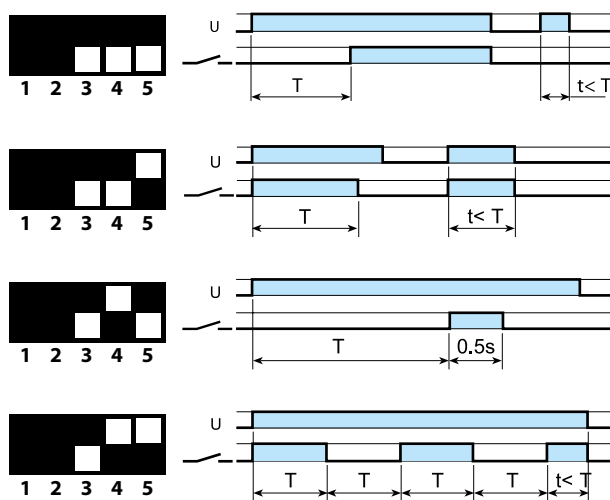
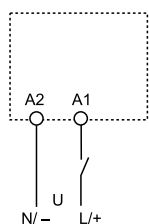
| LED | Supply voltage | NO contact/output                  |
|-----|----------------|------------------------------------|
|     | OFF            | Open                               |
|     | ON             | Open                               |
|     | ON             | Open (timing to close in progress) |
|     | ON             | Closed                             |

## Wiring diagram

U = Supply voltage

S = Signal switch

= Output Contact

**(AI) On-delay.**

Apply power to timer.  
Output contacts transfer after preset time has elapsed.  
Reset occurs when power is removed.

**(DI) Interval.**

Apply power to timer.  
Output contacts transfer immediately.  
After the preset time has elapsed, contacts reset.

**(GI) Pulse (0.5 s) delayed.**

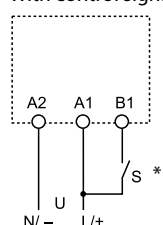
Apply power to timer.  
Output contacts transfer after preset time has elapsed.  
Reset occurs after a fixed time of 0.5 s.

**(SW) Symmetrical flasher (starting pulse on).**

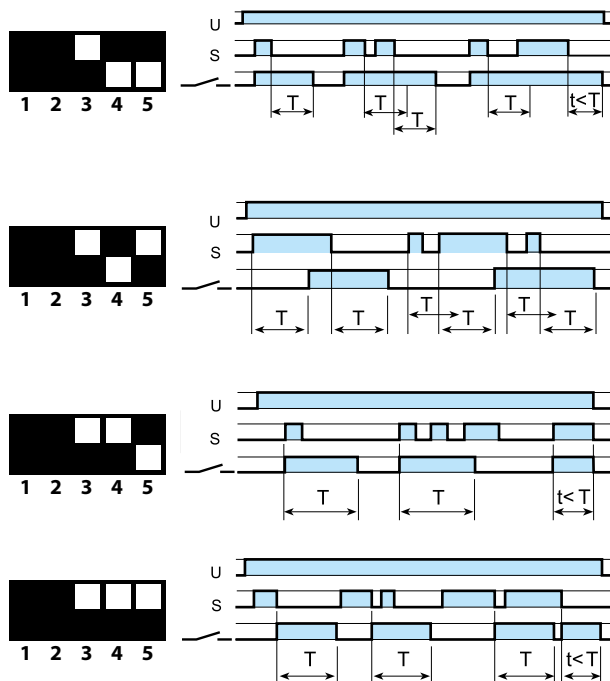
Apply power to timer.  
Output contacts transfer immediately and cycle between ON and OFF for as long as power is applied.  
The ratio is 1:1 (time on = time off).

H

With control signal



\* With DC supply, positive polarity has to be connected to B1 terminal (according to EN 60204-1).

**(BE) Off-delay with control signal.**

Power is permanently applied to the timer. The output contacts transfer immediately on closure of the Signal Switch (S). Opening the Signal Switch initiates the preset delay, after which time the output contacts reset.

**(CE) On- and off-delay with control signal.**

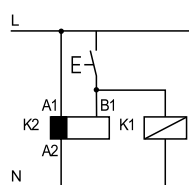
Power is permanently applied to the timer. Closing the Signal Switch (S) initiates the preset delay, after which time the output contacts transfer. Opening the Signal Switch initiates the same preset delay, after which time the output contacts reset.

**(DE) Interval with control signal on.**

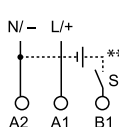
Power is permanently applied to the timer. On momentary or maintained closure of Signal Switch (S), the output contacts transfer, and remain so for the duration of the preset delay, after which they reset.

**(EE) Interval with control signal off.**

Power is permanently applied to the timer. On opening of the Signal Switch (S) the output contacts transfer, and remain so for the duration of the preset delay, after which they reset.

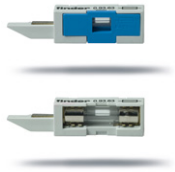


• Possible to control an external load, such as another relay coil or timer, connected to the control signal terminal B1.



\*\* A voltage other than the supply voltage can be applied to the command Start (B1), example:  
A1 - A2 = 24 V AC  
B1 - A2 = 12 V DC

## Accessories



**093.63**

Approvals  
(according to type):



### Output fuse module

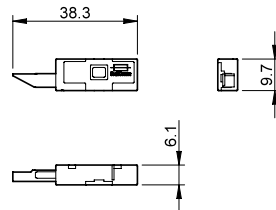
093.63

- For 5 x 20 mm fuses up to 6 A, 250 V
- Easy visibility of the fuse condition through the window
- Quick connection to socket

#### Notes

**Safety:** Because the output circuit can be reinstated, even with the fuse removed, it is important not to consider the removal of the fuse as a "safety disconnect". Always isolate elsewhere before working on the circuit.

**UL:** According to UL508A, the fuse module cannot be installed in power circuits (in which it is mandatory that a fuse certified according to UL category JDDZ be fitted). However, where the MasterInterface is connected as an output interface to a PLC no such restrictions apply, and the fuse module can be usefully employed.



**093.16**



**093.16.0**



**093.16.1**

Approvals  
(according to type):



### 16-way jumper link

093.16 (blue)

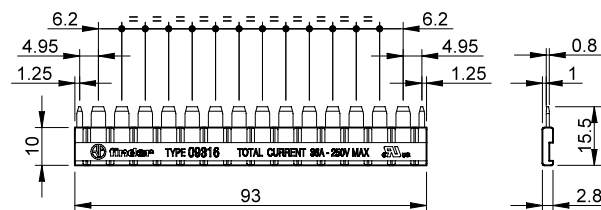
093.16.0 (black)

093.16.1 (red)

Rated values

6 A - 250 V

Possibility of multiple connection, side by side



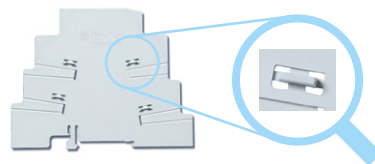
**093.60**



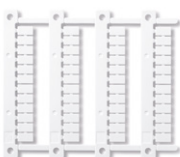
### Dual-purpose plastic separator (1.8 mm or 6.2 mm separation)

093.60

1. By breaking off the protruding ribs (by hand), the separator becomes only 1.8 mm thick; useful for the visual separation of different groups of interfaces, or necessary for the protective separation of different voltages of neighbouring interfaces, or for the protection of cut ends of jumper links.



2. Leaving the ribs in place provides 6.2 mm separation. Simply cutting (with scissors) the relevant segment(s) permits the interconnection across the separator of 2 different groups of interface relays, using the standard jumper link.



**060.48**

### Sheet of marker tags, plastic, 48 tags, 6 x 12 mm, for CEMBRE thermal transfer printers

060.48

## Accessories



093.62

|                                                   |                 |                                 |
|---------------------------------------------------|-----------------|---------------------------------|
| <b>Terminal doubler</b> (for socket Push-in only) |                 | 093.62                          |
| Total load                                        |                 | 6 A - 300 V                     |
| Max. wire size                                    |                 | <b>Solid and stranded cable</b> |
|                                                   | mm <sup>2</sup> | 2 x 1.5                         |
|                                                   | AWG             | 2 x 16                          |



093.68.14.1

Approvals  
(according to type):



|                      |             |
|----------------------|-------------|
| <b>MasterADAPTER</b> | 093.68.14.1 |
|----------------------|-------------|

The **MasterADAPTER** permits the easy connection of A1/A2 terminals of up to **MasterINTERFACE** modules to PLC outputs via a 14-Pole ribbon cable, plus simple 2-wire power supply connection.

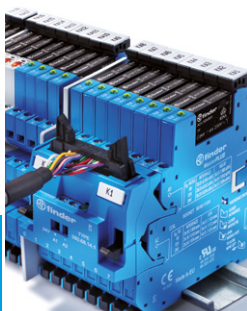
|                                   |      |                            |
|-----------------------------------|------|----------------------------|
| <b>Technical data</b>             |      |                            |
| Rated current (per signal path)   | A    | 1                          |
| Minimum required supply power     | W    | 3                          |
| Nominal voltage (U <sub>N</sub> ) | V DC | 24                         |
| Operating range                   |      | (0.8...1.1)U <sub>N</sub>  |
| Control logic                     |      | Positive switching (to A1) |
| Power supply status indication    |      | Green LED                  |
| Ambient temperature range         | °C   | -40...+70                  |

|                                         |  |  |
|-----------------------------------------|--|--|
| <b>Terminals for 24 V control logic</b> |  |  |
|-----------------------------------------|--|--|

|                   |                                    |  |
|-------------------|------------------------------------|--|
| Type of connector | 14 pole, according to IEC 60603-13 |  |
|-------------------|------------------------------------|--|

|                                        |  |  |
|----------------------------------------|--|--|
| <b>Terminals for 24 V power supply</b> |  |  |
|----------------------------------------|--|--|

|                                                                                                  |               |                                   |
|--------------------------------------------------------------------------------------------------|---------------|-----------------------------------|
| Wire strip length                                                                                | mm            | 9.5                               |
|  Screw torque | Nm            | 0.5                               |
| Max. wire size                                                                                   | solid wire    | mm <sup>2</sup> 1 x 4 / 2 x 1.5   |
|                                                                                                  |               | AWG 1 x 12 / 2 x 16               |
|                                                                                                  | stranded wire | mm <sup>2</sup> 1 x 2.5 / 2 x 1.5 |
|                                                                                                  |               | AWG 1 x 14 / 2 x 16               |



Connected  
**MasterADAPTER**

H