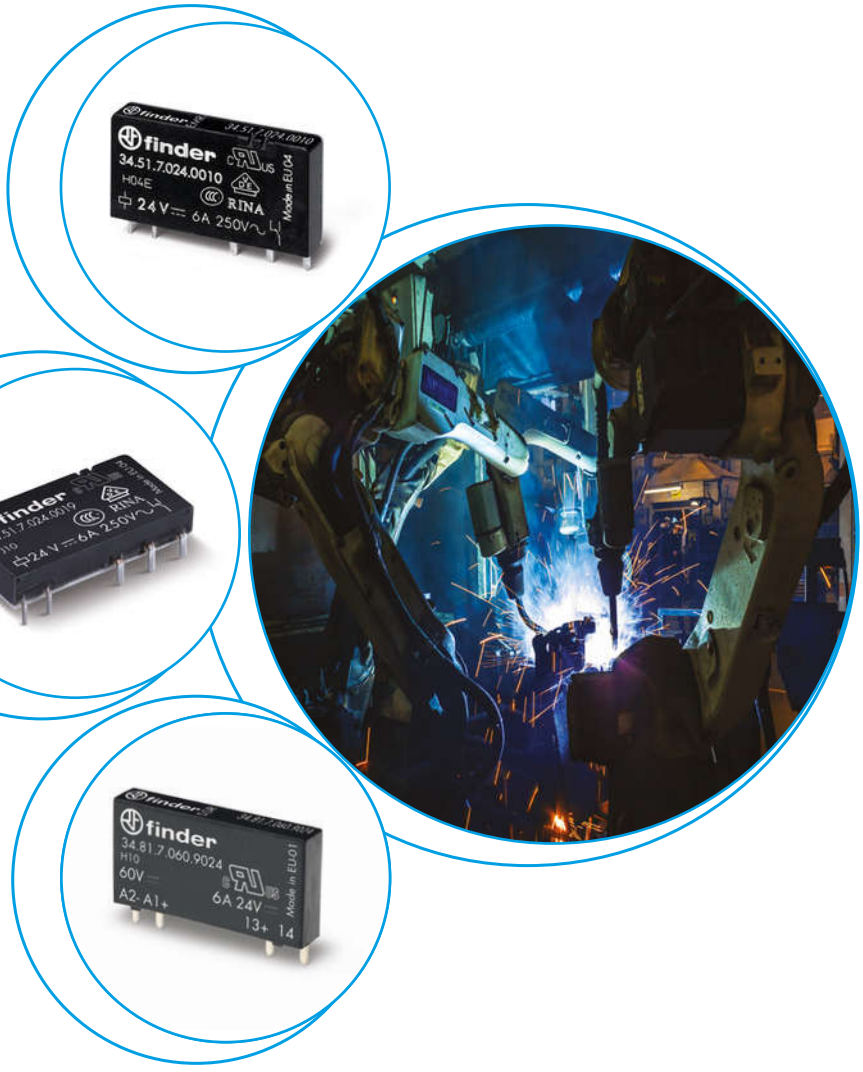
finder
SWITCH TO THE FUTURE

34
SERIES

# Ultra-slim PCB Relays (EMR or SSR) 0.1 - 0.2 - 2 - 6 A

- Bottling plant
- Packaging machines
- Labelling machines
- Road / tunnel lighting
- Burners, boilers and furnaces
- Timers and lighting controls
- Electronic circuit boards
- Programmable controllers



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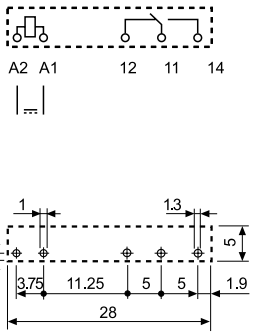
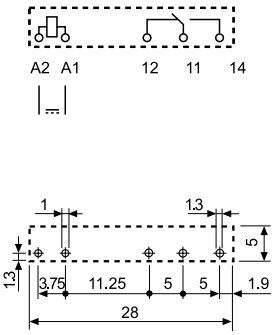
**Ultra-slim 1 Pole - 6 A relay**

**Printed circuit mount**
**- direct or via PCB socket**
**35 mm rail mount**
**- via screw, screwless or push-in terminal sockets**

- 1 Pole changeover contacts or 1 Pole normally open contact
- Ultra slim (5 mm), package
- Sensitive DC coil - 170 mW (Dual AC/DC coil drive possible using 93 series sockets)
- UL Listing (certain relay/socket combinations)
- Cadmium Free contact materials
- 8/8 mm clearance/creepage distance
- 6 kV (1.2/50 µs) insulation, coil-contacts

| | **34.51** | **34.51-5010** |
|---|---|---|
| |  |  |
| | • 5 mm wide<br>• Low coil power<br>• PCB or 93 series sockets | • 5 mm wide<br>• Low coil power<br>• PCB or 93 series sockets<br>• Contact AgNi + Au |
| |  |  |

*For UL ratings see:*
*"General technical information" page* V

| | | | |
|---|---|---|---|
| For outline drawing see page 9 | | Copper side view | Copper side view |
| **Contact specification** | | | |
| Contact configuration | | 1 CO (SPDT) | 1 CO (SPDT) |
| Rated current/ Maximum peak current | A | 6/10 | 6/10 |
| Rated voltage/ Maximum switching voltage | V AC | 250/400 | 250/400 |
| Rated load AC1 | VA | 1500 | 1500 |
| Rated load AC15 (230 V AC) | VA | 300 | 300 |
| Single phase motor rating (230 V AC) | kW | 0.185 | 0.185 |
| Breaking capacity DC1: 30/110/220 V | A | 6/0.2/0.12 | 6/0.2/0.12 |
| Minimum switching load | mW (V/mA) | 500 (12/10) | 50 (5/2) |
| Standard contact material | | AgNi | AgNi + Au |
| **Coil specification** | | | |
| Nominal voltage ($U_N$) | V AC (50/60 Hz) | — | — |
| | V DC | 5 - 12 - 24 - 48 - 60 | 5 - 12 - 24 - 48 - 60 |
| Rated power AC/DC | VA (50 Hz)/W | —/0.17 | —/0.17 |
| Operating range | AC | — | — |
| | DC | (0.7…1.5)$U_N$ | (0.7…1.5)$U_N$ |
| Holding voltage | AC/DC | —/0.4 $U_N$ | —/0.4 $U_N$ |
| Must drop-out voltage | AC/DC | —/0.05 $U_N$ | —/0.05 $U_N$ |
| **Technical data** | | | |
| Mechanical life AC/DC | cycles | —/10 · $10^6$ | —/10 · $10^6$ |
| Electrical life at rated load AC1 | cycles | 60 · $10^3$ | 60 · $10^3$ |
| Operate/release time | ms | 5/3 | 5/3 |
| Insulation between coil and contacts (1.2/50 µs) | kV | 6 (8 mm) | 6 (8 mm) |
| Dielectric strength between open contacts | V AC | 1000 | 1000 |
| Ambient temperature range | °C | –40…+85 | –40…+85 |
| Environmental protection | | RT II | RT II |
| **Approvals** (according to type) | | | |

A

**Ultra-slim Solid State Relays**

**Printed circuit mount**
**- direct or via PCB socket**
**35 mm rail mount**
**- via screw, screwless or push-in terminal sockets**

- Single circuit output switching options
  - 6 A, 24 V DC
  - 2 A, 240 V AC
- Silent, high speed switching with long electrical life
- Ultra slim (5 mm), package
- Sensitive DC Input circuits (Dual AC/DC input drive possible using 93 series sockets)
- UL Listing (certain relay/socket combinations)
- Wash tight: RT III
- 3000 V AC insulation, input-output

NEW **34.81.7.xxx.9024**

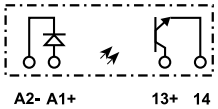


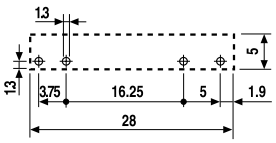
- 6 A, 24 V DC output switching
- PCB or 93 series sockets

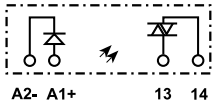
**34.81.7.xxx.8240**

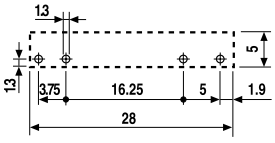


- 2 A, 240 V AC output switching
- Zero crossing switching
- PCB or 93 series sockets




For outline drawing see page 9

| | | Copper side view | | | | Copper side view | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Output circuit** | | | | | | | | | |
| Contact configuration | | 1 NO (SPST-NO) | | | | 1 NO (SPST-NO) | | | |
| Rated current/ Maximum peak current (10 ms) | A | 6/50 | | | | 2/80 | | | |
| Rated switching voltage | V | 24 DC | | | | 240 AC (50/60 Hz) | | | |
| Switching voltage range | V | (1.5…33)DC | | | | (12…275)AC | | | |
| Maximum blocking voltage | V | 33 | | | | — | | | |
| Repetitive peak off-state voltage | $V_{pk}$ | — | | | | 800 | | | |
| Rated load DC13 | W | 36 | | | | — | | | |
| Rated load AC15 | VA | — | | | | 300 | | | |
| Minimum switching current | mA | 1 | | | | 35 | | | |
| Max. "OFF-state" leakage current | mA | 0.001 | | | | 1.5 | | | |
| Max. "ON-state" voltage drop | V | 0.4 | | | | 1.6 | | | |
| **Supply specification** | | | | | | | | | |
| Nominal voltage ($U_N$) | V DC | 5 | 12 | 24 | 60 | 5 | 12 | 24 | 60 |
| Rated power | W | 0.035 | 0.085 | 0.17 | 0.21 | 0.06 | 0.085 | 0.17 | 0.21 |
| Operating range | V DC | 3.5…12 | 8…17 | 16…30 | 35…72 | 3.5…10 | 8…17 | 16…30 | 35…72 |
| Control current | mA | 7 | 7 | 7 | 3.5 | 12 | 7 | 7 | 3.5 |
| Release voltage | V DC | 4 | 4 | 10 | 20 | 1 | 4 | 10 | 20 |
| **Technical data** | | | | | | | | | |
| Electrical life at rated load | cycles | > $10^6$ | | | | > $10^6$ | | | |
| Operate/release time | ms | 0.02/0.2 | | | | 11/11 | | | |
| Insulation between input and output (1.2/50µs) | kV | 4 | | | | 4 | | | |
| Ambient temperature range | °C | –20…+70* | | | | –20…+50* | | | |
| Environmental protection | | RT III | | | | RT III | | | |
| **Approvals** (according to type) | | CE cULus | | | | | | | |

* Note: all technical data relates to using the relay directly on PCB or PCB socket type 93.11.
If the relay is used with 35 mm rail socket types 93.01 and 93.51, refer to the technical data of 38 Series; if used with types 93.60, 93.61, 93.62, 93.63, 93.64, 93.65, 93.66, 93.67,93.68 and 93.69, refer to the technical data of the *Master**INTERFACE*** 39 Series. See L34 diagrams page 8



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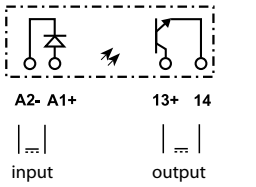
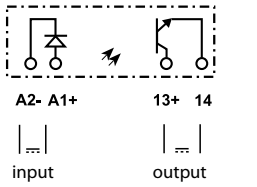
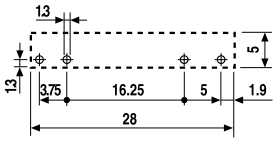
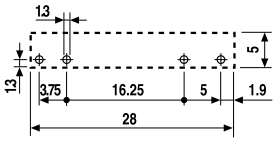
**Ultra-slim Solid State Relays**

**Printed circuit mount**
**- direct or via PCB socket**
**35 mm rail mount**
**- via screw, screwless or push-in terminal sockets**

- Single circuit output switching options
  - 0.1 A, 48 V DC
  - 0.2 A, 220 V DC
- Silent, high speed switching with long electrical life
- Ultra slim (5 mm), package
- Sensitive DC Input circuits (Dual AC/DC input drive possible using 93 series sockets)
- UL Listing (certain relay/socket combinations)
- Wash tight: RT III
- 3000 V AC insulation, input-output

| | **34.81.7.xxx.7048** | **NEW 34.81.7.xxx.7220** |
|---|---|---|
| |  |  |
| | • 100 mA, 48 V DC output switching<br>• PCB or 93 series sockets | • 200 mA, 110/220 V DC output switching<br>• PCB or 93 series sockets |
| |  |  |
| |  |  |
| For outline drawing see page 9 | Copper side view | Copper side view |

| | | | | | |
|---|---|---|---|---|---|
| **Output circuit** | | | | | |
| Contact configuration | | 1 NO (SPST-NO) | | 1 NO (SPST-NO) | |
| Rated current/<br>Maximum peak current (10 ms) | A | 0.1/0.5 | | 0.2/10 | |
| Rated switching voltage | V | 48 DC | | 220 DC | |
| Switching voltage range | V | (1.5…53)DC | | (90…256)DC | |
| Maximum blocking voltage | V | 53 | | 256 | |
| Rated load DC13 | W | 2.4 | | 44 | |
| Minimum switching current | mA | 0.05 | | 0.05 | |
| Max. "OFF-state" leakage current | mA | 0.001 | | 0.001 | |
| Max. "ON-state" voltage drop | V | 1 | | 0.4 | |
| **Supply specification** | | | | | |
| Nominal voltage ($U_N$) | V DC | 24 | 60 | 24 | 60 |
| Rated power | W | 0.17 | 0.21 | 0.17 | 0.21 |
| Operating range | V DC | 16…30 | 35…72 | 16…30 | 35…72 |
| Control current | mA | 7 | 3.5 | 7 | 3.5 |
| Release voltage | V DC | 10 | 20 | 10 | 20 |
| **Technical data** | | | | | |
| Electrical life at rated load | cycles | > $10^6$ | | > $10^6$ | |
| Operate/release time | ms | 0.03/0.6 | | 0.4/2.2 | |
| Insulation between input and output (1.2/50µs) | kV | 4 | | 4 | |
| Ambient temperature range | °C | –20…+70* | | –20…+70* | |
| Environmental protection | | RT III | | RT III | |
| **Approvals** (according to type) | | CE cULus | | | |

* Note: all technical data relates to using the relay directly on PCB or PCB socket type 93.11.
If the relay is used with 35 mm rail socket types 93.01 and 93.51, refer to the technical data of 38 Series; if used with types 93.60, 93.61, 93.62, 93.63, 93.64, 93.65, 93.66, 93.67,93.68 and 93.69, refer to the technical data of the *Master**INTERFACE*** 39 Series.

## Ordering information

A

***Electromechanical relay (EMR)***

Example: 34 series Ultra-Slim electromechanical relay, 1 CO (SPDT) 6 A contacts, 24 V sensitive DC coil.

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | A | B | C | D | |
| 3 | 4 | . | 5 | 1 | . | 7 | . | 0 | 2 | 4 | . | 0 | 0 | 1 | 0 |

**Series**

**Type**
5 = Electromechanical type

**No. of poles**
1 = 1 pole, 6 A

**Coil version**
7 = Sensitive DC

**Coil voltage**
See coil specifications

**A: Contact material**
0 = Standard AgNi
4 = $AgSnO_2$
5 = AgNi + Au

**B: Contact circuit**
0 = CO (SPDT)
3 = NO (SPST)

**C: Options**
1 = None

**D: Special versions**
0 = Flux proof (RT II)
9 = Flat version

**Selecting features and options: only combinations in the same row are possible.**
Preferred selections for best availability are shown in **bold**.

| Type | Coil version | A | B | C | D |
|---|---|---|---|---|---|
| 34.51 | sens. DC | **0** - 4 - 5 | **0** - 3 | **1** | **0** |
| 34.51 | sens. DC | 0 - 4 - 5 | 0 | 1 | 9 |

***Solid state relay (SSR)***

Example: 34 series solid state relay, 6 A 24 V DC output, 24 V DC supply.

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 4 | . | 8 | 1 | . | 7 | . | 0 | 2 | 4 | . | 9 | 0 | 2 | 4 |

**Series**

**Type**
8 = SSR type

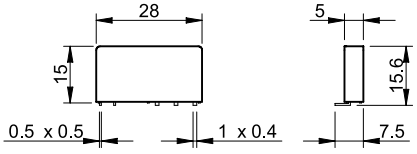
**Output**
1 = 1 NO (SPST-NO)

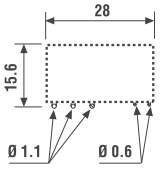
**Input circuit**
See input specifications

**Output circuit**
9024 = 6 A - 24 V DC
7048 = 0.1 A - 48 V DC
7220 = 0.2 A - 220 V DC
8240 = 2 A - 240 V AC

## Flat pack version



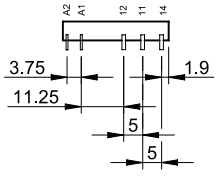



Copper side view

Option = 34.51.7xxx.x019

Environmental protection RT I

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## *Electromechanical relay*

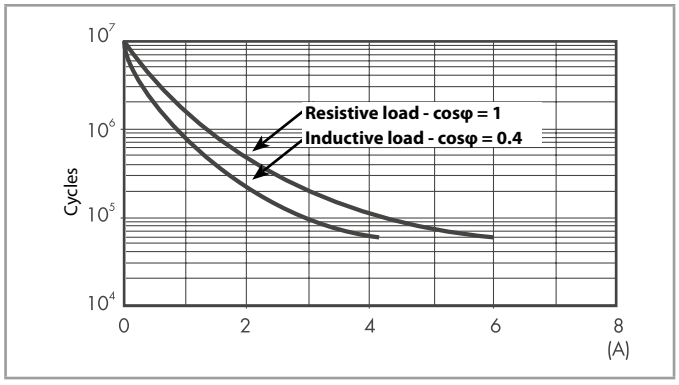


## Technical data

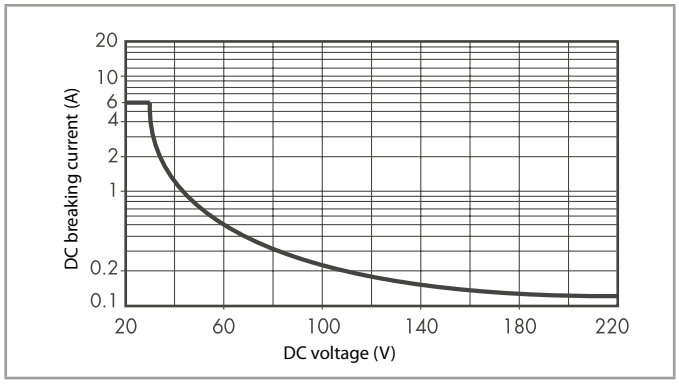
| | | | | |
|---|---|---|---|---|
| **Insulation according to EN 61810-1** | | | | |
| Nominal voltage of supply system | | V AC | 230/400 | |
| Rated insulation voltage | | V AC | 250 | 400 |
| Pollution degree | | | 3 | 2 |
| **Insulation between coil and contact set** | | | | |
| Type of insulation | | | Reinforced | |
| Overvoltage category | | | III | |
| Rated impulse voltage | | kV (1.2/50 µs) | 6 | |
| Dielectric strength | | V AC | 4000 | |
| **Insulation between open contacts** | | | | |
| Type of disconnection | | | Micro-disconnection | |
| Dielectric strength | | V AC/kV (1.2/50 µs) | 1000/1.5 | |
| **Insulation between coil terminals** | | | | |
| Rated impulse voltage (surge) differential mode (according to EN 61000-4-5) | | kV (1.2/50 µs) | 2 | |
| **Other data** | | | | |
| Bounce time: NO/NC | | ms | 1/6 | |
| Vibration resistance (5…55)Hz: NO/NC | | g | 10/5 | |
| Shock resistance | | g | 20/14 | |
| Power lost to the environment | without contact current | W | 0.2 | |
| | with rated current | W | 0.5 | |
| Recommended distance between relays mounted on PCB | | mm | ≥ 5 | |

## Contact specification

**F 34 - Electrical life (AC) v contact current**




**H 34 - Maximum DC1 breaking capacity**



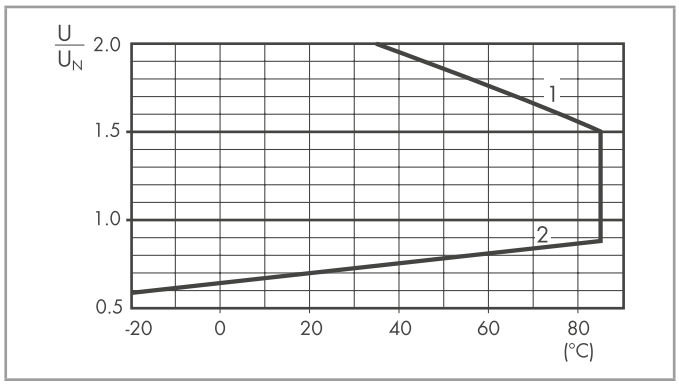

- When switching a resistive load (DC1) having voltage and current values under the curve, an electrical life of ≥ $60 \cdot 10^3$ can be expected.
- In the case of DC13 loads, the connection of a diode in parallel with the load will permit a similar electrical life as for a DC1 load.
  Note: the release time for the load will be increased.

## Coil specifications

**DC coil data**

| Nominal voltage $U_N$ | Coil code | Operating range $U_{min}$ | Operating range $U_{max}$ | Resistance R | Rated coil consumption I at $U_N$ |
|---|---|---|---|---|---|
| V | | V | V | Ω | mA |
| 5 | **7**.005 | 3.5 | 7.5 | 130 | 38.4 |
| 12 | **7**.012 | 8.4 | 18 | 840 | 14.2 |
| 24 | **7**.024 | 16.8 | 36 | 3350 | 7.1 |
| 48 | **7**.048 | 33.6 | 72 | 12300 | 3.9 |
| 60 | **7**.060 | 42 | 90 | 19700 | 3 |

**R 34 - DC coil operating range v ambient temperature**




**1 -** Max. permitted coil voltage.
**2 -** Min. pick-up voltage with coil at ambient temperature.

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## *Solid state relay*

A

## Technical data

| Insulation | | | Dielectric strength | Impulse (1.2/50 µs) |
|---|---|---|---|---|
| Between input and output | | | 3000 V AC | 4 kV |
| **EMC specifications** | | **Reference standard** | | |
| Electrostatic discharge | contact discharge | EN 61000-4-2 | 4 kV | |
| | air discharge | EN 61000-4-2 | 8 kV | |
| Radiated electromagnetic field (80…1000 MHz) | | EN 61000-4-3 | 10 V/m | |
| Fast transients on supply terminals (burst 5/50 ns, 5 and 100 kHz) | | EN 61000-4-4 | 2 kV | |
| Voltage pulses on supply terminals (surge 1.2/50 µs) | common mode | EN 61000-4-5 | 0.7 kV | |
| | differential mode | EN 61000-4-5 | 0.7 kV* | |
| Radio-frequency common mode voltage (0.15…230 MHz) | | EN 61000-4-6 | 10 V | |
| **Other data** | | | | |
| Power lost to the environment | without output current | W | 0.15 | |
| | with rated current | W | 0.4 | |

* For 34.81.7.005…= 0.3 kV ; for 34.81.7.012…= 0.5 kV

## Input specification

**Input data - DC types**

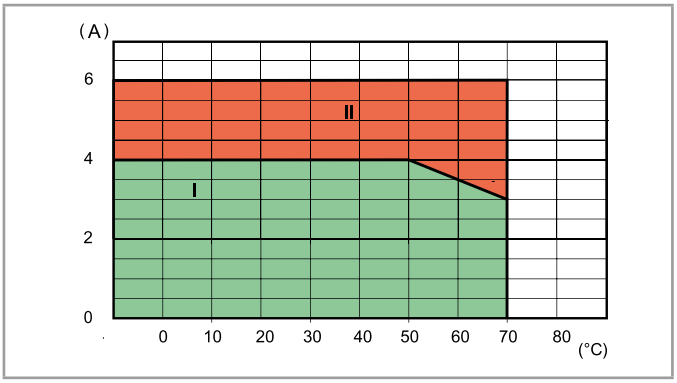
| Nominal voltage $U_N$ | Input code | Operating range $U_{min}$ | Operating range $U_{max}$ | Release voltage | Impedance | Control current I at $U_N$ |
|---|---|---|---|---|---|---|
| V | | V | V | V | Ω | mA |
| 5 | **7**.005 | 3.5 | 12* | 1 | 715 | 7* |
| 12 | **7**.012 | 8 | 17 | 4 | 1715 | 7 |
| 24 | **7**.024 | 16 | 30 | 10 | 3430 | 7 |
| 60 | **7**.060 | 35 | 72 | 20 | 17000 | 3.5 |

* For 34.81.7.005.8240: $U_{MAX}$ = 10 V, I @ 5 V = 12 mA

## Output specification

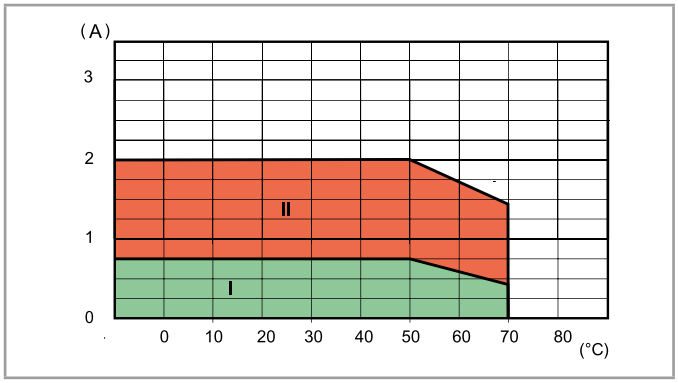
**L 34-1 - Output DC current v ambient temperature**

34.81.7…9024




**L 34 - Output AC current v ambient temperature**

34.81.7…8240




**I:** SSR installed on 93 series sockets as a group (without gap between sockets)
**II:** SSR installed individually in free air , or with a gap ≥ 9 mm, which implies a not significant influence from nearby components

**Max recommended switching frequency** (Cycles/Hour, with 50% Duty-cycle) at ambient temperature 50°C, single mounting

| Load | 34.81.7xxx.**9024** | 34.81.7xxx.**8240** | 34.81.7xxx.**7048** | 34.81.7xxx.**7220** |
|---|---|---|---|---|
| 24 V 6 A DC1 | 180 000 | — | — | — |
| 24 V 3 A DC L/R = 10 ms | 5000 | — | — | — |
| 24 V 2 A DC L/R = 40 ms | 3600 | — | — | — |
| 24 V 1 A DC L/R = 40 ms | 6500 | — | — | — |
| 24 V 0.8 A DC L/R = 40 ms | 9000 | — | — | — |
| 24 V 1.5 A DC L/R = 80 ms | 3250 | — | — | — |
| 230 V 2 A AC1 | — | 60 000 | — | — |
| 230 V 1.25 A AC15 | — | 3600 | — | — |
| 48 V 0.1 A DC1 | — | — | 60 000 | — |
| 220 V 0.2 A DC1 | — | — | — | 60 000 |

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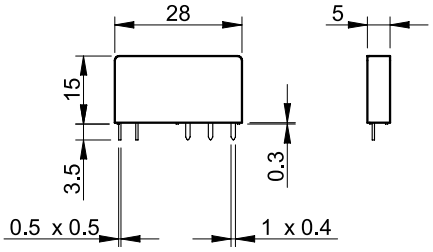
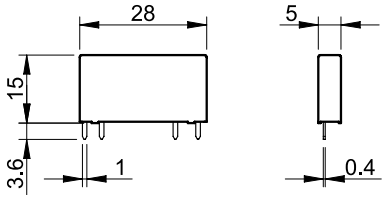
A

## Outline drawings

Type 34.51




Type 34.81

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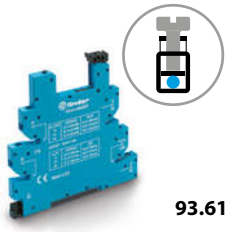
# 93 SERIES
## Sockets and accessories for 34 series relays

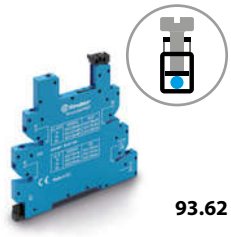



93.61

**Screw terminal socket** 35 mm rail mounting (EN 60715)

**Common features**
- Space saving 6.2 mm wide
- Connections for 16-way jumper link
- Integral coil indication and protection circuit
- Secure retention and easy ejection by plastic clip
- Dual screw head (blade+cross) terminals

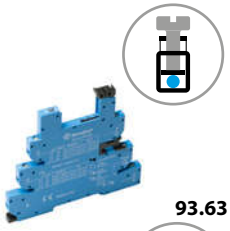
For technical data and supply versions, refer to the Master***INTERFACE* 39 Series** – "Relay interface module"

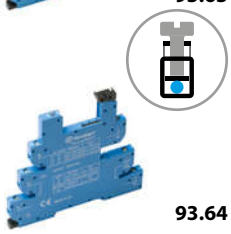

93.62

## Electromechanical Relay - EMR

| Supply voltage | Relay type | Socket type (reference with the 39 Series) | | | | |
|---|---|---|---|---|---|---|
| | | *Master**BASIC*** (39.11.....) | *Master**PLUS*** (39.31.....) | *Master**INPUT*** (39.41.....) | *Master**OUTPUT*** (39.21.....) | *Master**TIMER*** (39.81.....) |
| 6 V AC/DC | 34.51.7.005.xx10 | 93.61.7.024 | 93.63.7.024 | 93.64.7.024 | 93.62.7.024 | — |
| 12 V AC/DC | 34.51.7.012.xx10 | 93.61.7.024 | 93.63.7.024 | 93.64.7.024 | 93.62.7.024 | 93.68.0.024 |
| 24 V AC/DC | 34.51.7.024.xx10 | 93.61.7.024 | 93.63.7.024 | 93.64.7.024 | 93.62.7.024 | 93.68.0.024 |
| 60 V AC/DC | 34.51.7.060.xx10 | — | 93.63.7.060 | — | — | — |
| (110…125)V AC/DC* | 34.51.7.060.xx10 | — | 93.63.3.125 | — | — | — |
| (220…240)V AC* | 34.51.7.060.xx10 | — | 93.63.3.230 | — | — | — |
| (110…125)V AC/DC | 34.51.7.060.xx10 | 93.61.0.125 | 93.63.0.125 | 93.64.0.125 | 93.62.0.125 | — |
| (24…240)V AC/DC | 34.51.7.024.xx10 | — | 93.63.0.240 | — | — | — |
| (220…240)V AC | 34.51.7.060.xx10 | 93.61.8.230 | 93.63.8.230 | 93.64.8.230 | 93.62.8.230 | — |
| (110…125)V DC | 34.51.7.060.xx10 | — | 93.63.7.125 | — | — | — |
| 220 V DC | 34.51.7.060.xx10 | — | 93.63.7.220 | — | — | — |

* Leakage current suppression

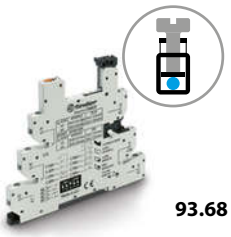

93.63


93.64

## Solid State Relay - SSR

| Supply voltage | Relay type | Socket type (reference with the 39 Series) | | | | |
|---|---|---|---|---|---|---|
| | | *Master**BASIC*** (39.10.....) | *Master**PLUS*** (39.30.....) | *Master**INPUT*** (39.40.....) | *Master**OUTPUT*** (39.20.....) | *Master**TIMER*** (39.80.....) |
| 12 V AC/DC | 34.81.7.012.xxxx | — | — | — | — | 93.68.0.024 |
| 24 V AC/DC | 34.81.7.024.xxxx | — | 93.63.0.024 | 93.64.0.024 | — | 93.68.0.024 |
| (110…125)V AC/DC* | 34.81.7.060.xxxx | — | 93.63.3.125 | — | — | — |
| (220…240)V AC* | 34.81.7.060.xxxx | — | 93.63.3.230 | — | — | — |
| (110…125)V AC/DC | 34.81.7.060.xxxx | 93.61.0.125 | 93.63.0.125 | 93.64.0.125 | 93.62.0.125 | — |
| (24…240)V AC/DC | 34.81.7.024.xxxx | — | 93.63.0.240 | — | — | — |
| (220…240)V AC | 34.81.7.060.xxxx | 93.61.8.230 | 93.63.8.230 | 93.64.8.230 | 93.62.8.230 | — |
| 6 V DC | 34.81.7.005.xxxx | 93.61.7.024 | 93.63.7.024 | 93.64.7.024 | 93.62.7.024 | — |
| 12 V DC | 34.81.7.012.xxxx | 93.61.7.024 | 93.63.7.024 | 93.64.7.024 | 93.62.7.024 | — |
| 24 V DC | 34.81.7.024.xxxx | 93.61.7.024 | 93.63.7.024 | 93.64.7.024 | 93.62.7.024 | — |
| 60 V DC | 34.81.7.060.xxxx | — | 93.63.7.060 | — | — | — |
| (110…125)V DC | 34.81.7.060.xxxx | — | 93.63.7.125 | — | — | — |
| 220 V DC | 34.81.7.060.xxxx | — | 93.63.7.220 | — | — | — |

* Leakage current suppression


93.68

Approvals
(according to type):

| **Accessories** | |
|---|---|
| 16-way jumper link | 093.16 (blue), 093.16.0 (black), 093.16.1 (red) |
| Dual-purpose plastic separator | 093.60 |
| Sheet of marker tags | 060.48 and 093.48 |

| **Technical data** | | |
|---|---|---|
| Rated values | | 6 A - 250 V |
| Dielectric strength | | 6 kV (1.2/50 µs) between coil and contacts |
| Protection category | | IP 20 |
| Ambient temperature | °C | –40…+70 |
| Screw torque | Nm | 0.5 |
| Wire strip length | mm | 10 |
| Max wire size | | Solid wire and stranded wire |
| | $mm^2$ | 1 x (0.5…2.5) / 2 x 1.5 |
| | AWG | 1 x (21…14) / 2 x 16 |

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93.60



93.65



93.66



93.67



93.69

Approvals
(according to type):

**Push-In terminal socket** 35 mm rail mounting (EN 60715)

**Common features**
- Space saving 6.2 mm wide
- Connections for 16-way jumper link
- Terminal doubler 093.62
- Integral coil indication and protection circuit
- Secure retention and easy ejection by plastic clip

For technical data and supply versions, refer to the Master***INTERFACE*** **39 Series** – "Relay interface module"

## Electromechanical Relay - EMR

| Supply voltage | Relay type | Socket type (reference with the 39 Series) | | | | |
|---|---|---|---|---|---|---|
| | | *Master**BASIC*** (39.01.....) | *Master**PLUS*** (39.61.....) | *Master**INPUT*** (39.71.....) | *Master**OUTPUT*** (39.51.....) | *Master**TIMER*** (39.91.....) |
| 6 V AC/DC | 34.51.7.005.xx10 | 93.60.7.024 | 93.66.7.024 | 93.67.7.024 | 93.65.7.024 | — |
| 12 V AC/DC | 34.51.7.012.xx10 | 93.60.7.024 | 93.66.7.024 | 93.67.7.024 | 93.65.7.024 | 93.69.0.024 |
| 24 V AC/DC | 34.51.7.024.xx10 | 93.60.7.024 | 93.66.7.024 | 93.67.7.024 | 93.65.7.024 | 93.69.0.024 |
| 60 V AC/DC | 34.51.7.060.xx10 | — | 93.66.7.060 | — | — | — |
| (110…125)V AC/DC* | 34.51.7.060.xx10 | — | 93.66.3.125 | — | — | — |
| (220…240)V AC* | 34.51.7.060.xx10 | — | 93.66.3.230 | — | — | — |
| (110…125)V AC/DC | 34.51.7.060.xx10 | 93.60.0.125 | 93.66.0.125 | 93.67.0.125 | 93.65.0.125 | — |
| (24…240)V AC/DC | 34.51.7.024.xx10 | — | 93.66.0.240 | — | — | — |
| (220…240)V AC | 34.51.7.060.xx10 | 93.60.8.230 | 93.66.8.230 | 93.67.8.230 | 93.65.8.230 | — |
| (110…125)V DC | 34.51.7.060.xx10 | — | 93.66.7.125 | — | — | — |
| 220 V DC | 34.51.7.060.xx10 | — | 93.66.7.220 | — | — | — |

* Leakage current suppression

## Solid State Relay - SSR

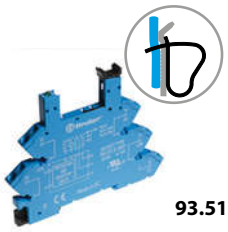
| Supply voltage | Relay type | Socket type (reference with the 39 Series) | | | | |
|---|---|---|---|---|---|---|
| | | *Master**BASIC*** (39.00.....) | *Master**PLUS*** (39.60.....) | *Master**INPUT*** (39.70.....) | *Master**OUTPUT*** (39.50.....) | *Master**TIMER*** (39.90.....) |
| 12 V AC/DC | 34.81.7.012.xxxx | — | — | — | — | 93.69.0.024 |
| 24 V AC/DC | 34.81.7.024.xxxx | — | 93.66.0.024 | 93.67.0.024 | — | 93.69.0.024 |
| (110…125)V AC/DC* | 34.81.7.060.xxxx | — | 93.66.3.125 | — | — | — |
| (220…240)V AC* | 34.81.7.060.xxxx | — | 93.66.3.230 | — | — | — |
| (110…125)V AC/DC | 34.81.7.060.xxxx | 93.60.0.125 | 93.66.0.125 | 93.67.0.125 | 93.65.0.125 | — |
| (24…240)V AC/DC | 34.81.7.024.xxxx | — | 93.66.0.240 | — | — | — |
| (220…240)V AC | 34.81.7.060.xxxx | 93.60.8.230 | 93.66.8.230 | 93.67.8.230 | 93.65.8.230 | — |
| 6 V DC | 34.81.7.005.xxxx | 93.60.7.024 | 93.66.7.024 | 93.67.7.024 | 93.65.7.024 | — |
| 12 V DC | 34.81.7.012.xxxx | 93.60.7.024 | 93.66.7.024 | 93.67.7.024 | 93.65.7.024 | — |
| 24 V DC | 34.81.7.024.xxxx | 93.60.7.024 | 93.66.7.024 | 93.67.7.024 | 93.65.7.024 | — |
| 60 V DC | 34.81.7.060.xxxx | — | 93.66.7.060 | — | — | — |
| (110…125)V DC | 34.81.7.060.xxxx | — | 93.66.7.125 | — | — | — |
| 220 V DC | 34.81.7.060.xxxx | — | 93.66.7.220 | — | — | — |

* Leakage current suppression

| **Accessories** | |
|---|---|
| 16-way jumper link | 093.16 (blue), 093.16.0 (black), 093.16.1 (red) |
| Dual-purpose plastic separator | 093.60 |
| Terminal doubler | 093.62 |
| Sheet of marker tags | 060.48 and 093.48 |
| **Technical data** | |
| Rated values | 6 A - 250 V |
| Dielectric strength | 6 kV (1.2/50 µs) between coil and contacts |
| Protection category | IP 20 |
| Ambient temperature | °C –40…+70 |
| Wire strip length | mm 8 |
| Max wire size | Solid wire and stranded wire |
| | $mm^2$ 1 x (0.5…2.5) |
| | AWG 1 x (21…14) |

# 93 SERIES
## Sockets and accessories for 34 series relays





93.51

Approvals (according to type):

Certain relay/socket combinations

**Screw less terminal socket** 35 mm rail mounting (EN 60715)

**Common features**
- Space saving 6.2 mm wide
- Connections for 20-way jumper link
- Integral coil indication and protection circuit
- Secure retention and easy ejection by plastic clip

For technical data and supply versions, refer to the **38 Series** – "Relay interface module"

## Electromechanical Relay - EMR and Solid State Relay - SSR

| Supply voltage | Relay type (reference with the 38 Series) | | Socket type |
|---|---|---|---|
| | Electromechnanical relay - EMR (38.61.....) | Solid State Relay - SSR (38.81.....) | |
| 12 V AC/DC | 34.51.7.012.xx10 | — | 93.51.0.024 |
| 24 V AC/DC | 34.51.7.024.xx10 | — | 93.51.0.024 |
| (110…125)V AC/DC | 34.51.7.060.xx10 | 34.81.7.060.xxxx | 93.51.0.125 |
| (220…240)V AC/DC | 34.51.7.060.xx10 | 34.81.7.060.xxxx | 93.51.0.240 |
| (110…125)V AC/DC* | 34.51.7.060.xx10 | 34.81.7.060.xxxx | 93.51.3.125 |
| (220…240)V AC* | 34.51.7.060.xx10 | 34.81.7.060.xxxx | 93.51.3.240 |
| (220…240)V AC | 34.51.7.060.xx10 | 34.81.7.060.xxxx | 93.51.8.240 |
| 12 V DC | 34.51.7.012.xx10 | 34.81.7.012.xxxx | 93.51.7.024 |
| 24 V DC | 34.51.7.024.xx10 | 34.81.7.024.xxxx | 93.51.7.024 |
| 60 V DC | 34.51.7.060.xx10 | 34.81.7.060.xxxx | 93.51.7.060 |

* Leakage current suppression

| Accessories | | |
|---|---|---|
| 20-way jumper link | | 093.20 |
| Plastic separator | | 093.01 |
| Sheet of marker tags | | 093.48 |
| **Technical data** | | |
| Rated values | | 6 A - 250 V |
| Dielectric strength | | 6 kV (1.2/50 µs) between coil and contacts |
| Protection category | | IP 20 |
| Ambient temperature ($U_N \leq 60$ V/> 60 V) | °C | –40…+70/–40…+55 |
| Wire strip length | mm | 10 |
| Max wire size | | Solid wire and stranded wire |
| | $mm^2$ | 1 x 2.5 / 2 x 1.5 |
| | AWG | 1 x 14 / 2 x 16 |



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**93.11**

Approvals (according to type):

| **PCB socket** with retaining and release clip | | **93.11 (blue)** |
|---|---|---|
| For relay type | | 34.51, 34.81 |
| **Technical data** | | |
| Rated values | | 6 A - 250 V |
| Dielectric strength | | ≥ 6 kV (1.2/50 µs) between coil and contacts |
| Protection category | | IP 20 |
| Ambient temperature | °C | –40…+70 |

***Retaining and release clip use:***

