

# Fast relay module 8 A



Power  
Plants



Panels for  
electrical  
distribution



Control  
panels



Control and  
management of  
electric power





### Fast relay module

**RR.14 35 mm rail (EN 60715) mount**

**RR.24 11 pin socket type 90.21 mount**

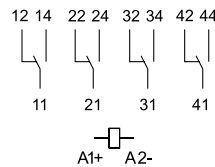
- 4 pole changeover or 3 NO + 1 changeover contacts
- DC voltage
- Operate time  $\leq 3$  ms
- LED command status indication
- 35 mm rail (EN 60715) mount
- 11 pin socket type 90.21 mount

RR.14/24

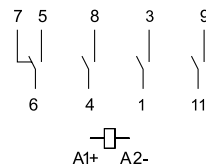
Screw terminal



### RR.14



### RR.24



For outline drawings see page 7

| Contact specification                                    |              |                                 |                              |
|----------------------------------------------------------|--------------|---------------------------------|------------------------------|
| Contact configuration                                    |              | 4 CO (4PDT)                     | 3 NO (SPST-NO) + 1 CO (SPDT) |
| Rated current/Maximum peak current                       | A            | 8/15                            | 8/15                         |
| Rated voltage/<br>Maximum switching voltage              | V AC         | 250/400                         | 250/400                      |
| Rated load AC1                                           | VA           | 2000                            | 2000                         |
| Rated load AC15                                          | VA           | 400                             | 400                          |
| Single phase motor rating (230 V AC)                     | kW           | 0.3                             | 0.3                          |
| Breaking capacity DC1: 30/110/220 V                      | A            | 8/0.3/0.12                      | 8/0.3/0.12                   |
| Minimum switching load                                   | mW (V/mA)    | 300 (5/5)                       | 300 (5/5)                    |
| Standard contact material                                |              | AgCdO                           | AgCdO                        |
| Coil specification                                       |              |                                 |                              |
| Nominal voltage ( $U_N$ )                                | V DC         | 24 - 48 - 110...125 - 220...250 | 24 - 110...125 - 220...250   |
| Rated power DC                                           | W            | < 5                             | < 3                          |
| Operating range                                          | V DC         | (0.8...1.1) $U_N$               | (0.8...1.1) $U_N$            |
| Technical data                                           |              |                                 |                              |
| Mechanical life DC                                       | cycles       | $10 \cdot 10^6$                 | $10 \cdot 10^6$              |
| Electrical life at rated load AC1                        | cycles       | $100 \cdot 10^3$                | $100 \cdot 10^3$             |
| Operate/release time                                     | ms           | 2.9/2.5                         | 3/5                          |
| Insulation between coil<br>and contacts (1.2/50 $\mu$ s) | kV           | 6 (8 mm)                        | 4 (8 mm)                     |
| Dielectric strength<br>between open contacts             | V AC         | 1000                            | 1000                         |
| Ambient temperature range                                | $^{\circ}$ C | -40...+55                       | -40...+55                    |
| Protection category                                      |              | IP 20                           | IP 20                        |
| Approvals relay (according to type)                      |              | CE EAC                          |                              |

## Ordering information

Example: RR series, fast relay module, 4 CO, 125 V DC coil, 35 mm rail (EN 60715) mount.

A

RR . 1 4 . 9 . 1 2 5 . 0 0 0 0

## Series

## Type

1 = Modular version

## No. of poles

4 = 4 CO

## Coil version

9 = DC

## Coil voltage

024 = 24 V DC

048 = 48 V DC

125 = 110...125 V DC

220 = 220 V DC

250 = 250 V DC

## Options

0000 = Modular version 35 mm rail (EN 60715)

## Codes/supply voltages

RR.14.9.024.0000

RR.14.9.048.0000

RR.14.9.125.0000

RR.14.9.220.0000

RR.14.9.250.0000

Example: RR series, fast relay module, 3 NO + 1 CO, 125 V DC coil, 11 pin socket type 90.21 mount.

RR . 2 4 . 9 . 1 2 5 . 9 0 2 1

## Series

## Type

2 = Plug-in version

## No. of poles

4 = 3 NO + 1 CO

## Coil version

9 = DC

## Coil voltage

024 = 24 V DC

125 = 110...125 V DC

250 = 220...250 V DC

## Options

9021 = Relay + 90.21 sockets

0000 = Only Relay

## Codes/supply voltages

RR.24.9.024.0000

RR.24.9.024.9021

RR.24.9.125.0000

RR.24.9.125.9021

RR.24.9.250.0000

RR.24.9.250.9021

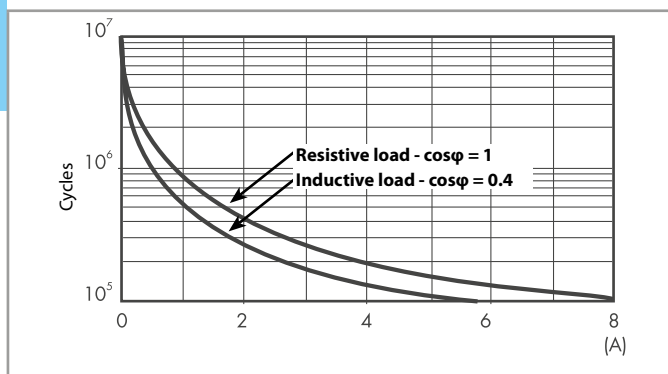
## Technical data

| Insulation according to EN 61810-1                                          |                     | RR.14                    | RR.24               |
|-----------------------------------------------------------------------------|---------------------|--------------------------|---------------------|
|                                                                             |                     | 4 CO                     | 3 NO + 1 CO         |
| Nominal voltage of supply system                                            | V AC                | 230/400                  | 230/400             |
| Rated insulation voltage                                                    | V AC                | 250                      | 250                 |
| Pollution degree                                                            |                     | 2                        | 2                   |
| Insulation between coil and contact set                                     |                     |                          |                     |
| Type of insulation                                                          |                     | Reinforced (8 mm)        | Reinforced (8 mm)   |
| Overvoltage category                                                        |                     | III                      | III                 |
| Rated impulse voltage                                                       | kV (1.2/50 µs)      | 6                        | 4                   |
| Dielectric strength                                                         | V AC                | 3500                     | 2000                |
| Insulation between adjacent contacts                                        |                     |                          |                     |
| Type of insulation                                                          |                     | Basic                    | Basic               |
| Overvoltage category                                                        |                     | II                       | II                  |
| Rated impulse voltage                                                       | kV (1.2/50 µs)      | 2.5                      | 2.5                 |
| Dielectric strength                                                         | V AC                | 2000                     | 2000                |
| Insulation between open contacts                                            |                     |                          |                     |
| Type of disconnection                                                       |                     | Micro-disconnection      | Micro-disconnection |
| Dielectric strength                                                         | V AC/kV (1.2/50 µs) | 1000/1.5                 | 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                  | 1.3/5.1                  |                     |
| Vibration resistance (5...55)Hz: NO/NC                                      | g                   | 15/3                     |                     |
| Shock resistance                                                            | g                   | 13                       |                     |
| Terminals                                                                   |                     | Screw terminal           |                     |
|                                                                             |                     | Solid and stranded cable |                     |
| Max. wire size                                                              | mm <sup>2</sup>     | 1 x 2.5 / 2 x 1.5        |                     |
|                                                                             | AWG                 | 1 x 14 / 2 x 16          |                     |

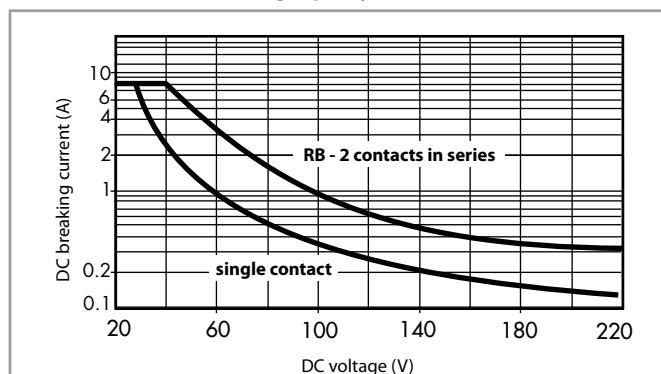
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## Contact specification

RR - Electrical life (AC) v contact current



RR - Maximum DC1 breaking capacity



- When switching a resistive load (DC1) having voltage and current values under the curve, an electrical life of  $\geq 100 \cdot 10^3$  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 - Type RR.14

DC coil data

| Nominal voltage | Coil code | Operating range |           | Holding voltage | Must drop-out voltage | Rated power | Rated coil consumption |
|-----------------|-----------|-----------------|-----------|-----------------|-----------------------|-------------|------------------------|
| $U_N$           |           | $U_{min}$       | $U_{max}$ |                 |                       |             | I at $U_N$             |
| V               |           | V               | V         | V               | V                     | W           | mA                     |
| 24              | 9.024     | 19.2            | 26.4      | 15              | 2.8                   | 4.8         | 200                    |
| 48              | 9.048     | 38.4            | 52.8      | 30              | 3                     | 3.8         | 80                     |
| 110...125       | 9.125     | 88              | 137.5     | 80              | 12                    | 3.8         | 30                     |
| 220             | 9.220     | 176             | 242       | 150             | 20                    | 4.0         | 18                     |
| 250             | 9.250     | 200             | 275       | 160             | 22                    | 3.8         | 15                     |

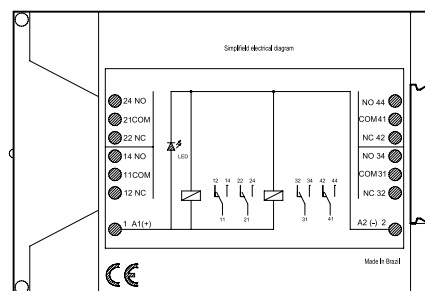
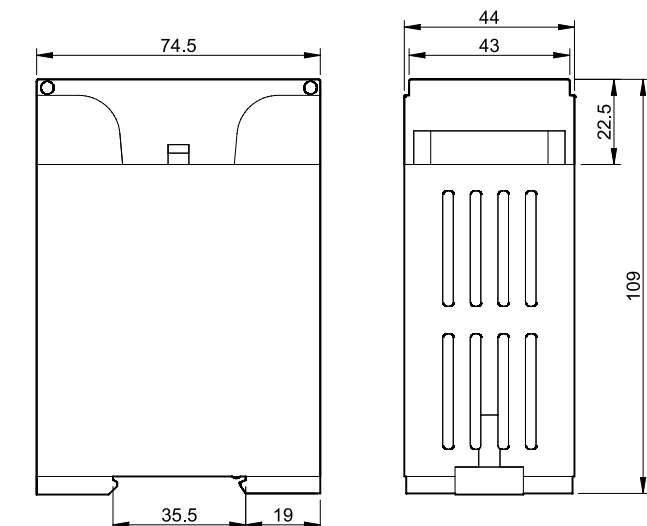
## Coil specifications - Type RR.24

DC coil data

| Nominal voltage | Coil code | Operating range |           | Holding voltage | Must drop-out voltage | Rated power | Rated coil consumption |
|-----------------|-----------|-----------------|-----------|-----------------|-----------------------|-------------|------------------------|
| $U_N$           |           | $U_{min}$       | $U_{max}$ |                 |                       |             | I at $U_N$             |
| V               |           | V               | V         | V               | V                     | W           | mA                     |
| 24              | 9.024     | 19.2            | 26.4      | 14              | 2.4                   | 2.9         | 120                    |
| 110...125       | 9.125     | 88              | 137.5     | 80              | 12                    | 2.5         | 20                     |
| 220...250       | 9.250     | 176             | 275       | 150             | 20                    | 1.8         | 8                      |

## Outline drawing

Type RR.14  
Screw terminal



Type RR.24  
Screw terminal

