

## Features

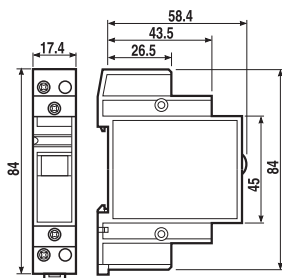
1 or 2 pole, 20 A relay  
for direct 35 mm rail (EN 60715) mounting

- 17.4 mm wide
- Test button
- Identification label
- AC coils and DC coils
- 35 mm rail (EN 60715) mount
- Cadmium free contact material

### 22.21



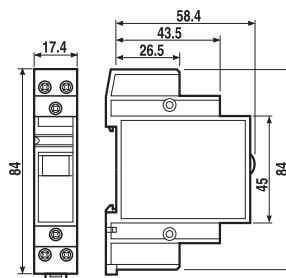
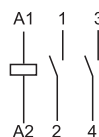
- Single phase switch 1 NO (SPST-NO)
- 35 mm rail (EN 60715) mount



### 22.22



- Double phase switch 2 NO (DPST-NO)
- 35 mm rail (EN 60715) mount



## Contact specification

|                                              |                    |                    |
|----------------------------------------------|--------------------|--------------------|
| Contact configuration                        | 1 NO (SPST-NO)     | 2 NO (DPST-NO)     |
| Rated current/Maximum peak current A         | 20/30              | 20/30              |
| Rated voltage/Maximum switching voltage V AC | 250/400            | 250/400            |
| Rated load AC1 VA                            | 5,000              | 5,000              |
| Rated load AC15 (230 V AC) VA                | 1,000              | 1,000              |
| Single phase motor rating (230 V AC) kW      | —                  | —                  |
| Breaking capacity DC1: 30/110/220 V A        | 20/0.3/0.12        | 20/0.3/0.12        |
| Minimum switching load mW (V/mA)             | 1,000 (10/10)      | 1,000 (10/10)      |
| Standard contact material                    | AgSnO <sub>2</sub> | AgSnO <sub>2</sub> |

## Coil specification

|                                   |                 |                                          |
|-----------------------------------|-----------------|------------------------------------------|
| Nominal voltage (U <sub>N</sub> ) | V AC (50/60 Hz) | 8 - 12 - 24 - 48 - 110 - 120 - 230 - 240 |
|                                   | V DC            | 12 - 24 - 48 - 110                       |
| Rated power AC/DC VA (50 Hz)/W    |                 | 3/1.25                                   |
| Operating range                   | AC (50 Hz)      | (0.85...1.1)U <sub>N</sub>               |
|                                   | DC              | (0.9...1.1)U <sub>N</sub>                |

## Technical data

|                                                     |        |                       |
|-----------------------------------------------------|--------|-----------------------|
| Mechanical life AC/DC                               | cycles | 500 · 10 <sup>3</sup> |
| Electrical life at rated load in AC1                | cycles | 50 · 10 <sup>3</sup>  |
| Operate/release time                                | ms     | 15/8                  |
| Maximum impulse duration                            |        | continuous            |
| Insulation between coil and contacts (1.2/50 µs) kV |        | 4                     |
| Ambient temperature range                           | °C     | -40...+40             |
| Protection category                                 |        | IP 20                 |

Approvals (according to type)



## Features

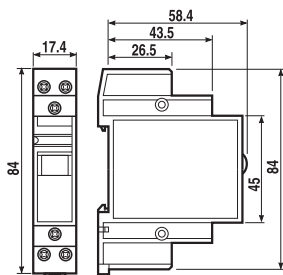
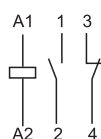
1 or 2 pole, 20 A relay  
for direct 35 mm rail (EN 60715) mounting

- 17.4 mm wide
- Test button
- Identification label
- AC coils and DC coils
- 35 mm rail (EN 60715) mount
- Cadmium free contact material

### 22.23



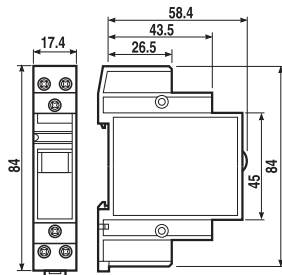
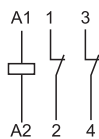
- Double phase switch  
1NO+1NC (SPST-NO+SPST-NC)
- 35 mm rail (EN 60715) mount



### 22.24



- Double phase switch 2 NC  
(DPST-NC)
- 35 mm rail (EN 60715) mount



## Contact specification

|                                              |                           |                    |
|----------------------------------------------|---------------------------|--------------------|
| Contact configuration                        | 1NO+1NC (SPST-NO+SPST-NC) | 2 NC (DPST-NC)     |
| Rated current/Maximum peak current           | A                         | 20/30              |
| Rated voltage/Maximum switching voltage V AC | 250/400                   | 250/400            |
| Rated load AC1                               | VA                        | 5,000              |
| Rated load AC15 (230 V AC)                   | VA                        | 1,000              |
| Single phase motor rating (230 V AC)         | kW                        | —                  |
| Breaking capacity DC1: 30/110/220 V          | A                         | 20/0.3/0.12        |
| Minimum switching load                       | mW (V/mA)                 | 1,000 (10/10)      |
| Standard contact material                    | AgSnO <sub>2</sub>        | AgSnO <sub>2</sub> |

## Coil specification

|                                   |                 |                                          |
|-----------------------------------|-----------------|------------------------------------------|
| Nominal voltage (U <sub>N</sub> ) | V AC (50/60 Hz) | 8 - 12 - 24 - 48 - 110 - 120 - 230 - 240 |
|                                   | V DC            | 12 - 24 - 48 - 110                       |
| Rated power AC/DC                 | VA (50 Hz)/W    | 3/1.25                                   |
| Operating range                   | AC (50 Hz)      | (0.85...1.1)U <sub>N</sub>               |
|                                   | DC              | (0.9...1.1)U <sub>N</sub>                |

## Technical data

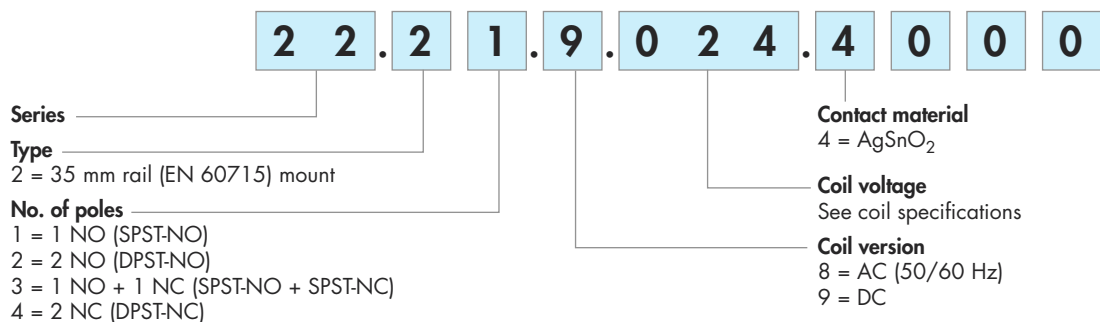
|                                                     |        |                       |                       |
|-----------------------------------------------------|--------|-----------------------|-----------------------|
| Mechanical life AC/DC                               | cycles | 500 · 10 <sup>3</sup> | 500 · 10 <sup>3</sup> |
| Electrical life at rated load in AC1                | cycles | 50 · 10 <sup>3</sup>  | 50 · 10 <sup>3</sup>  |
| Operate/release time                                | ms     | 15/8                  | 15/8                  |
| Maximum impulse duration                            |        | continuous            | continuous            |
| Insulation between coil and contacts (1.2/50 μs) kV |        | 4                     | 4                     |
| Ambient temperature range                           | °C     | -40...+40             | -40...+40             |
| Protection category                                 |        | IP 20                 | IP 20                 |

Approvals (according to type)



## Ordering information

Example: 22 series 35 mm rail mount relay, 1 NO (SPST-NO) 20 A contact, coil rated 24 V DC, contact material AgSnO<sub>2</sub>.



## Technical data

| Contact specifications                                                                           |      |                    |                |                    |                |
|--------------------------------------------------------------------------------------------------|------|--------------------|----------------|--------------------|----------------|
| Nominal rate lamps                                                                               |      |                    |                |                    |                |
| incandescent (230V)                                                                              | W    | 1,000              |                |                    |                |
| compensated fluorescent (230V)                                                                   | W    | 360                |                |                    |                |
| Insulation                                                                                       |      |                    |                |                    |                |
| Dielectric strength                                                                              |      |                    |                |                    |                |
| between supply and contacts                                                                      | V AC | 3,500              |                |                    |                |
| between open contacts                                                                            | V AC | 2,000              |                |                    |                |
| between adjacent contacts                                                                        | V AC | 2,000              |                |                    |                |
| Other data                                                                                       |      |                    |                |                    |                |
| Bounce time: NO / NC                                                                             | ms   | 5 / 10             |                |                    |                |
| Power lost to the environment                                                                    |      |                    |                |                    |                |
| without contact current                                                                          | W    | 1.2                |                |                    |                |
| with rated current                                                                               | W    | 3.2 (22.21, 22.23) |                | 5.2 (22.22, 22.24) |                |
|  Screw torque | Nm   | 0.8                |                | 0.8                |                |
| Max. wire size                                                                                   |      | Coil terminals     |                | Contact terminals  |                |
|                                                                                                  |      | solid cable        | stranded cable | solid cable        | stranded cable |
|                                                                                                  | mm²  | 1x4 / 2x2.5        | 1x2.5 / 2x2.5  | 1x6 / 2x6          | 1x6 / 2x4      |
|                                                                                                  | AWG  | 1x12 / 2x14        | 1x14 / 2x14    | 1x10 / 2x10        | 1x10 / 2x12    |

If the coil is operated for a prolonged period of time, adequate ventilation of the relays must be provided - suggested gap of 9 mm between adjacent relays.

## Coil specifications

### DC version data

| Nominal voltage<br>U <sub>N</sub> | Coil code | Operating range  |                  | Resistance<br>R | Consumption<br>I at U <sub>N</sub> |
|-----------------------------------|-----------|------------------|------------------|-----------------|------------------------------------|
|                                   |           | U <sub>min</sub> | U <sub>max</sub> |                 |                                    |
| V                                 |           | V                | V                | Ω               | mA                                 |
| 12                                | 9.012     | 10.8             | 13.2             | 115             | 104                                |
| 24                                | 9.024     | 21.6             | 26.4             | 460             | 52.2                               |
| 48                                | 9.048     | 43.2             | 52.8             | 1,850           | 25.9                               |
| 110                               | 9.110     | 99               | 121              | 9,700           | 11.3                               |

### AC version data

| Nominal voltage<br>U <sub>N</sub> | Coil code | Operating range  |                  | Resistance<br>R | Consumption<br>I at U <sub>N</sub><br>(50 Hz) |
|-----------------------------------|-----------|------------------|------------------|-----------------|-----------------------------------------------|
|                                   |           | U <sub>min</sub> | U <sub>max</sub> |                 |                                               |
| V                                 |           | V                | V                | Ω               | mA                                            |
| 8                                 | 8.008     | 6.8              | 8.8              | 6.5             | 360                                           |
| 12                                | 8.012     | 10.2             | 13.2             | 13.5            | 245                                           |
| 24                                | 8.024     | 20.4             | 26.4             | 41              | 135                                           |
| 48                                | 8.048     | 40.8             | 52.8             | 186             | 68                                            |
| 110                               | 8.110     | 93.5             | 121              | 970             | 26                                            |
| 120                               | 8.120     | 102              | 132              | 1,380           | 24                                            |
| 230                               | 8.230     | 196              | 253              | 4,200           | 12.5                                          |
| 240                               | 8.240     | 204              | 264              | 4,400           | 12                                            |

## Accessories



020.01

**Adaptor for panel mounting**, 17.5 mm wide

020.01



020.24

**Sheet of marker tags**, plastic, 24 tags, 9x17 mm

020.24