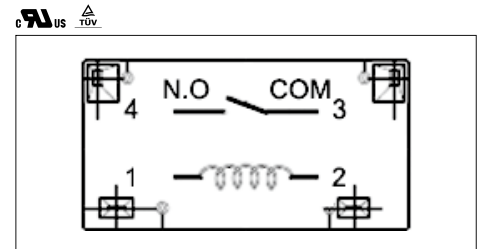


## RFL Power Relay

- 1 Form A
- Rated current: 20 to 25 A
- High capacity, high endurance
- Control switch has enough insulation distance
- Class F Coil
- Flux-proof type



RFL  
1 Form A, 20 A



### Technical parameters

| Coil data                       |                  |  |                                                                                  |
|---------------------------------|------------------|--|----------------------------------------------------------------------------------|
| Coil input voltage              |                  |  | 5/9/12/24 V DC                                                                   |
| Coil power                      |                  |  | 900 mW                                                                           |
| Response voltage                |                  |  | < 75% (Room temp.)                                                               |
| Drop out voltage                |                  |  | > 5% (Room temp.)                                                                |
| Operation time / Release time   |                  |  | Less than 20 ms / less than 10 ms                                                |
| Contact data                    |                  |  |                                                                                  |
| Contact numbers                 |                  |  | 1 Form A                                                                         |
| Contact material                |                  |  | Ag alloy                                                                         |
| Max. switching voltage          |                  |  | 277 V AC                                                                         |
| Max. switching power            |                  |  | 8,000 VA                                                                         |
| Contact ratings                 |                  |  | 20 A 250 V AC, 2HP 240 V AC, 20 A 277 V AC, 1-1/2HP 240 V AC                     |
| Contact resistance              |                  |  | Max. 100 mΩ (1 A / 6 V DC)                                                       |
| Mechanical service life         |                  |  | 1×10 <sup>6</sup> times                                                          |
| Electrical Service life         | AC1              |  | 1×10 <sup>5</sup> times                                                          |
| General data                    |                  |  |                                                                                  |
| Rated withstand impulse voltage | Coil / Contact   |  | 4.5 kV AC / 1 min                                                                |
|                                 | Between contacts |  | 1 kV AC / 1 min                                                                  |
| Surge voltage                   |                  |  | 10 kV AC (1.2/50 μs)                                                             |
| Insulation Resistance           |                  |  | 1,000 MΩ (500 V DC)                                                              |
| Vibration                       |                  |  | Malfunction 10~55 Hz (Amplitude 1.5 mm)<br>Endurance 10~55 Hz (Amplitude 1.5 mm) |
| Shock                           |                  |  | Malfunction 98 m/s <sup>2</sup> , Endurance 980 m/s <sup>2</sup>                 |
| Ambient temperature (Operation) |                  |  | -40~105 °C (No condensation)                                                     |
| Operating humidity              |                  |  | 20~85%                                                                           |
| Dimension L×W×H (mm)            |                  |  | 30.1×15.7×32.8                                                                   |
| Enclosure type                  |                  |  | Flux-proof, sealed                                                               |
| Mounting                        |                  |  | PCB & faston terminal                                                            |
| Weight (g)                      |                  |  | 30                                                                               |
| Compliance certification number |                  |  | cULus:E345228, TUV:R50194013                                                     |

### Type designation

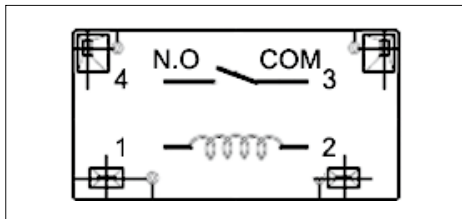
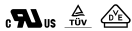
| Model designation | Enclosure type    | Number of poles | Coil voltage                               | Coil power | Contact configuration | Terminal                                                        | Contact material                                               | Insulation class             | Contact dimension                                                        | Special request                                                       |
|-------------------|-------------------|-----------------|--------------------------------------------|------------|-----------------------|-----------------------------------------------------------------|----------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------|-----------------------------------------------------------------------|
| RFL               | -SS               | -1              | 12                                         | D          | M                     | F                                                               | *                                                              | -F                           | -1                                                                       | -XXX                                                                  |
| RFL               | SS:<br>Flux-proof | 1: 1 pole       | 05: 5 V<br>09: 9 V<br>12: 12 V<br>24: 24 V | D: 900 mW  | M: 1 Form A           | Blank: Without<br>Faston terminal<br>F: With Faston<br>terminal | Blank: AgSnO <sub>2</sub><br>Other numbers:<br>other materials | Blank: class A<br>F: class F | 1: A type white<br>2: A type black<br>3: A type yellow<br>4: A type blue | 335: Stands<br>for product in<br>accordance with IEC<br>60335-1 (GWT) |



RFL

1 Form A, 25 A

| SSA approval rating        |        |            |  |            |       |            |
|----------------------------|--------|------------|--|------------|-------|------------|
| cULus                      |        |            |  | TUV        |       |            |
| 20A/250VAC (Resistive)     | 65 °C  | 100,000ops |  | 20A/250VAC | 85 °C | 100,000ops |
| 2HP/240VAC (HP)            | 65 °C  | 100,000ops |  | 25A/250VAC | 85 °C | 100,000ops |
| 20A/25A/250VAC (Resistive) | 85 °C  | 100,000ops |  | 32A/250VAC | 85 °C | 100,000ops |
| 20A/25A/277VAC (Resistive) | 85 °C  | 100,000ops |  | VDE        |       |            |
| 20A/25A/250VAC (Resistive) | 105 °C | 100,000ops |  | 25A/250VAC | 65 °C | 100,000ops |
| 20A/25A/277VAC (Resistive) | 105 °C | 100,000ops |  |            |       |            |
| 1-1/2HP/277VAC (HP)        | 105 °C | 100,000ops |  |            |       |            |



#### Technical parameters

5/9/12/24 V DC

900 mW

< 75% (Room temp.)

> 5% (Room temp.)

Less than 20 ms / less than 10 ms

1 Form A

Ag alloy

277 V AC

8,000 VA

25 A 250 V AC, 25 A 277 V AC, 2HP 240 V AC

Max. 100 mΩ (1 A / 6 V DC)

1×10<sup>6</sup> times

1×10<sup>5</sup> times

4.5 kV AC / 1 min

1 kV AC / 1 min

10 kV AC (1.2/50 μs)

1,000 MΩ (500 V DC)

Malfunction 10~55 Hz (Amplitude 1.5 mm)

Endurance 10~55 Hz (Amplitude 1.5 mm)

Malfunction 98 m/s<sup>2</sup>, Endurance 980 m/s<sup>2</sup>

-40~105 °C (No condensation)

20~85%

30.1×15.7×32.8

Flux-proof, sealed

PCB & faston terminal

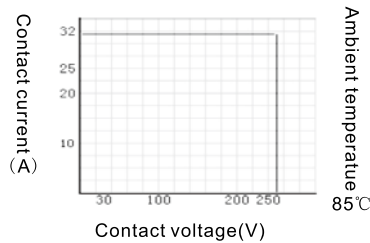
30

cULus:E345228, TUV:R50194013, VDE:40032929

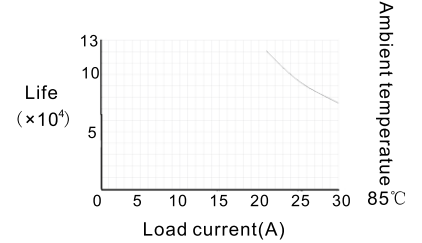
| Coil rating         |                    |                         |                      |                         |                       |
|---------------------|--------------------|-------------------------|----------------------|-------------------------|-----------------------|
| Rated voltage (VDC) | Rated current (mA) | Coil resistance (Ω±10%) | Operating power (mW) | Operating voltage (VDC) | Release voltage (VDC) |
| 5                   | 179                | 28                      | 900                  | ≤3.75                   | ≥0.25                 |
| 9                   | 100                | 90                      | 900                  | ≤6.75                   | ≥0.45                 |
| 12                  | 75                 | 160                     | 900                  | ≤9.00                   | ≥0.60                 |
| 24                  | 37.5               | 640                     | 900                  | ≤18.00                  | ≥1.80                 |

MAX. allowable coil voltage: 130% of rated coil voltage (Room temperature)

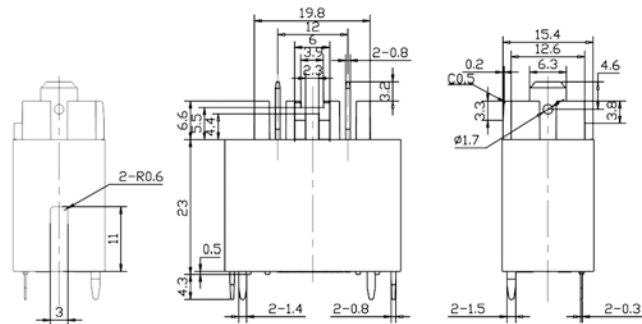
MAX.contact capacity



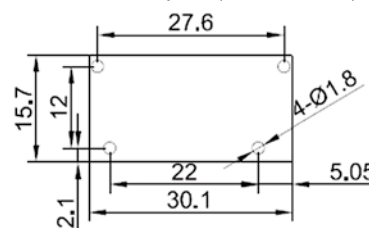
Life curve(25A)



Outline dimensions



PCB board layout (Bottom view)



Tolerance

| Outline dimension |        |
|-------------------|--------|
| <1mm              | ±0.2mm |
| 1~5mm             | ±0.3mm |
| >5mm              | ±0.4mm |

| PCB board layout |        |
|------------------|--------|
| Pitch-row        | ±0.1mm |
| Aperture         | +0.1mm |