

Power PCB Relay RP II/1

1 pole 8 / 12 / 16 A



F0146-B

Features

- 1 C/O or 1 N/O contact
- 4 kV / 8 mm coil-contact
- Pinning 3.5 or 5 mm (8 / 12 A) and 5 mm (16 A)
- PCB-sockets
- Versions with Ag, or AgNi 0.15 contact material: RoHS compliant (Directive 2002 / 95 / EC) as per product date code 0404

Applications

Power supplies, domestic appliances, heating control, installation



Technical data of approved types on request

Contact data

| | | | |
|--|--------------------------------|---------|---------|
| Configuration | 1 C/O contact or 1 N/O contact | | |
| Type of contact | single contact | | |
| Rated current | 8 A | 12 A | 16 A |
| Rated voltage / max. breaking voltage AC | 250 Vac / 440 Vac | | |
| Maximum breaking capacity AC | 2000 VA | 3000 VA | 4000 VA |
| Make current | 16 A | 20 A | 25 A |
| Contact material | AgNi 0.15 | AgCdO | AgCdO |

Contact ratings

| Type | Load | Operations | Standard |
|-------|---|---------------------|----------|
| RP410 | 12 A, 250 Vac, $\cos\phi=1$, 1200/h, 40% duty cycle | 1.1×10^5 | AC 1 |
| RP410 | 9.1 A, 220 Vac, $\cos\phi=1$, 360/h, 15% duty cycle | 2×10^5 | AC 1 |
| RP418 | 3.4 A ON, 0.42 A OFF, 220 Vac, $\cos\phi=0.6$ | $> 1.1 \times 10^6$ | |
| RP411 | 8 A, 250 Vac, $\cos\phi=1$, 50% duty cycle | 10^5 | AC 1 |
| RP412 | 8 A, 250 Vac, $\cos\phi=1$, 50% duty cycle | 10^5 | AC 1 |
| RP330 | 18.2 A, 250 Vac, $\cos\phi=1$, 600/h, 15% duty cycle | 1.1×10^5 | AC 1 |
| RP330 | 96 A ON, 16 A OFF, 250 Vac, $\cos\phi=0.6$, 450/h | $> 3 \times 10^4$ | VDE 0630 |

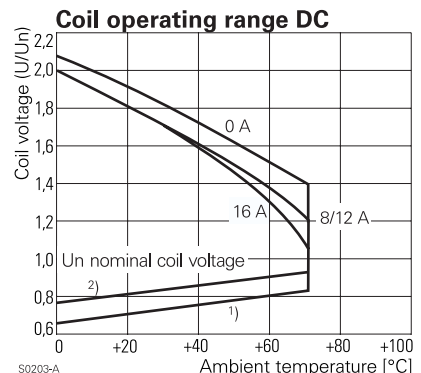
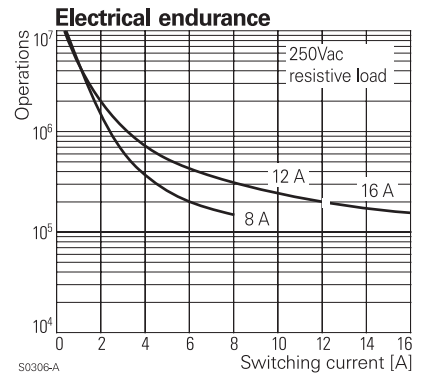
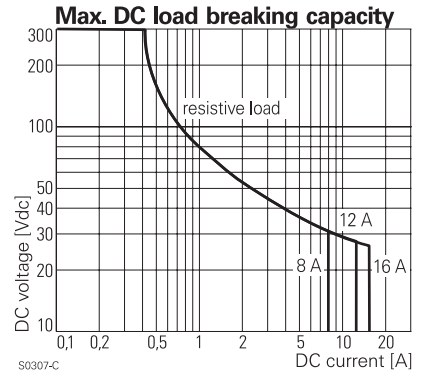
Coil data

| | |
|--------------------|-------------|
| Nominal voltage | 5...110 Vdc |
| Nominal coil power | 500 mW |
| Operate category | 2 / b |

Coil versions, DC-coil

| Coil code | Nominal voltage Vdc | Pull-in voltage Vdc | Release voltage Vdc | Maximum voltage Vdc | Coil resistance Ω | Coil current mA |
|-----------|---------------------|---------------------|---------------------|---------------------|--------------------------|-----------------|
| 005 | 5 | 3.5 | 0.5 | 9.0 | $54 \pm 10\%$ | 92.6 |
| 006 | 6 | 4.2 | 0.6 | 10.8 | $68 \pm 10\%$ | 88.2 |
| 012 | 12 | 8.4 | 1.2 | 21.6 | $270 \pm 10\%$ | 44.4 |
| 024 | 24 | 16.8 | 2.4 | 43.2 | $1100 \pm 15\%$ | 21.8 |
| 048 | 48 | 33.6 | 4.8 | 86.4 | $4400 \pm 15\%$ | 10.9 |
| 060 | 60 | 42.0 | 6.0 | 108.0 | $6540 \pm 15\%$ | 9.2 |
| 110 | 110 | 77.0 | 11.0 | 198.0 | $23100 \pm 15\%$ | 4.8 |

All figures are given for coil without preenergization, at ambient temperature +20°C
Other coil voltages on request



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Insulation

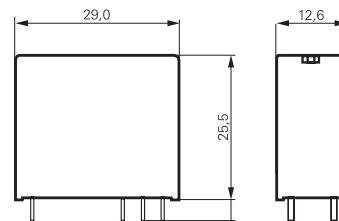
| | | |
|---|----------------------|-----------------------|
| Dielectric strength | coil-contacts | 4000 V _{rms} |
| | open contact circuit | 1000 V _{rms} |
| Clearance / creepage | | 8 / 8 mm |
| Insulation to IEC 60664 | | |
| Voltage rating | | 250 V |
| Pollution degree | | 3 |
| Overtoltage category | | III |
| Insulation to VDE 0110b (2/79) | | |
| Insulation category / reference voltage | | C / 250 |

Other data

| | |
|--|---|
| RoHS - Directive 2002 / 95 / EC | |
| versions with Ag, or AgNi 0.15 contacts: | compliant as per product date code 0404 |
| Ambient temperature | -40...+70 °C |
| Mechanical life | 30x10 ⁶ operations |
| Max. switching rate at rated- / minimum load | 10 min ⁻¹ / 1200 min ⁻¹ |
| Operate- / release time | typ. 8 / 2 ms |
| Bounce time N/O contact/N/C contact | typ. 2 / 4 ms |
| Vibration resistance N/O contact/N/C contact | >10 / 2 g, 30...300 Hz |
| Shock resistance (destruction) | 100 g |
| Category of protection (IEC 61810) | RT II - flux proof, RT III - wash tight |
| Relay weight | 18 g |
| Packaging unit | 20 / 500 pcs. |
| Accessories | see accessories RT and RT |

Dimensions

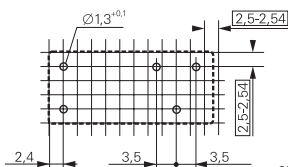
Dimensions in mm



S0273-AA

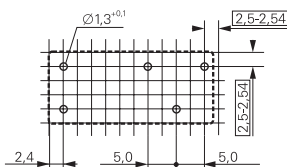
PCB layout / terminal assignment

8 / 12 A, pinning 3.5 mm



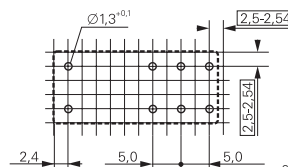
S0163-CQ

8 / 12 A, pinning 5 mm



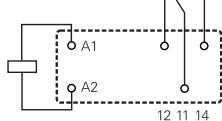
S0163-CP

16 A, pinning 5 mm



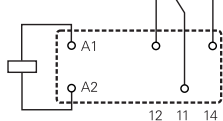
S0163-CO

1 C/O



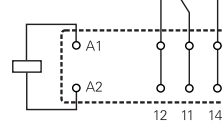
S0163-BG

1 C/O



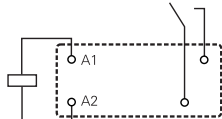
S0163-BC

1 C/O



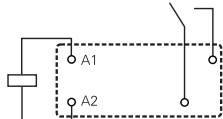
S0163-BE

1 N/O



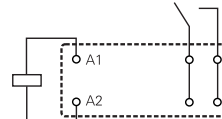
S0163-BH

1 N/O



S0163-BD

1 N/O



S0163-BF

Bottom view on solder pins

Dimensions in mm

Power PCB Relay RP II/1

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Product key



Type

Version

3 16 A, flux proof **7 16 A, wash tight**
4 8/12 A, flux proof **8 8/12 A, wash tight**

Contacts

1 1 C/O contact **3** 1 N/O contact

Contact material

0 AgCdO, 16 A or 12 A, pinning 5 mm **2 AgNi 0.15, 8 A, pinning 3.5 mm**
1 AgNi 0.15, 8 A, pinning 5 mm **8 AgCdO, 12 A, pinning 3.5 mm**

Coil

Coil code: please refer to coil versions table

Preferred types in bold print

| Product key | Version | Contacts | Contact material | Coil | Part number |
|-------------|------------|---------------|------------------|--------|-------------|
| RP310005 | 16 A | 1 C/O contact | AgCdO | 5 Vdc | 2-1393230-5 |
| RP310012 | flux proof | | pinning 5mm | 12 Vdc | 2-1393230-9 |
| RP310024 | | | | 24 Vdc | 3-1393230-2 |
| RP310048 | | | | 48 Vdc | 3-1393230-3 |
| RP330005 | | 1 N/O contact | | 5 Vdc | 4-1393230-5 |
| RP330012 | | | | 12 Vdc | 4-1393230-7 |
| RP330024 | | | | 24 Vdc | 4-1393230-9 |
| RP330048 | | | | 48 Vdc | 5-1393230-1 |
| RP410012 | 12 A | 1 C/O contact | AgCdO | 12 Vdc | 8-1393230-1 |
| RP410024 | flux proof | | pinning 5mm | 24 Vdc | 8-1393230-2 |
| RP411012 | 8 A | | AgNi 0.15 | 12 Vdc | 9-1393230-4 |
| RP411024 | flux proof | | pinning 5mm | 24 Vdc | 9-1393230-5 |
| RP412012 | | | AgNi 0.15 | 12 Vdc | 1-1393231-1 |
| RP412024 | | | pinning 3.5mm | 24 Vdc | 1-1393231-2 |
| RP418012 | 12 A | | AgCdO | 12 Vdc | 2-1393231-5 |
| RP418024 | flux proof | | pinning 3.5mm | 24 Vdc | 2-1393231-8 |
| RP438012 | | 1 N/O contact | | 12 Vdc | 5-1393231-0 |
| RP438024 | | | | 24 Vdc | 5-1393231-2 |
| RP710005 | 16 A | 1 C/O contact | AgCdO | 5 Vdc | 7-1393231-0 |
| RP710012 | wash tight | | pinning 5mm | 12 Vdc | 7-1393231-2 |
| RP710024 | | | | 24 Vdc | 7-1393231-5 |
| RP710048 | | | | 48 Vdc | 7-1393231-6 |
| RP730012 | | 1 N/O contact | | 12 Vdc | 8-1393231-2 |
| RP730024 | | | | 24 Vdc | 8-1393231-4 |
| RP812012 | 8 A | 1 C/O contact | AgNi 0.15 | 12 Vdc | 0-1393232-8 |
| RP812024 | wash tight | | pinning 3.5mm | 24 Vdc | 0-1393232-9 |
| RP818012 | 12 A | | AgCdO | 12 Vdc | 1-1393232-7 |
| RP818024 | wash tight | | pinning 3.5mm | 24 Vdc | 1-1393232-9 |
| RP838012 | | 1 N/O contact | | 12 Vdc | 2-1393232-6 |
| RP838024 | | | | 24 Vdc | 2-1393232-8 |