

Power PCB Relay RTH 105°C sensitive

1 pole 10 A, high-temperature version



Features

- 1 N/O contact
- Sensitive coil 250 mW
- 5 kV / 10 mm coil-contact
- Protection class II
- Ambient temperature 105°C at rated load
- Height 15.7 mm
- RoHS compliant (Directive 2002 / 95 / EC) as per product date code 0413

Applications

Domestic appliances, heating control

F0178-C



Technical data of approved types on request

Contact data

| | |
|-------------------------------------------|-------------------|
| Configuration | 1 N/O contact |
| Type of contact | single contact |
| Rated current | 10 A |
| Rated voltage / max.breaking voltage AC | 250 Vac / 440 Vac |
| Maximum breaking capacity AC | 2500 VA |
| Make current (max. 4 s at duty cycle 10%) | 15 A |
| Contact material | AgNi 90/10 |

Contact ratings

| Type | Load | Operations |
|-------|----------------------------------------|---------------------|
| RTH84 | 12 A, 250 Vac, 105 °C, dry switching | >5x10 ⁵ |
| RTH84 | 10 A, 250 Vac, cyclical heat 105/40 °C | 2x10 ⁵ |
| RTH84 | 10 A, 250 Vac, 105 °C | 1.5x10 ⁵ |

Coil data

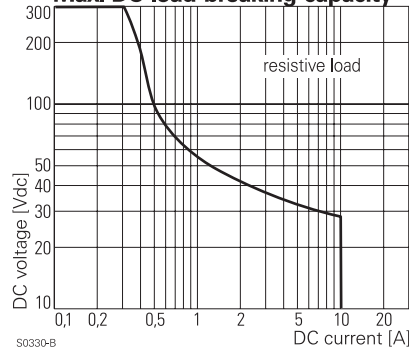
| | |
|--------------------|------------|
| Nominal voltage | 5...60 Vdc |
| Nominal coil power | 250 mW |
| Operate category | 2 / b |

Coil versions, sensitive DC-coil

| Coil code | Nominal voltage Vdc | Pull-in voltage Vdc | Release voltage Vdc | Maximum voltage Vdc | Coil resistance Ω | Coil current mA |
|-----------|---------------------|---------------------|---------------------|---------------------|-------------------|-----------------|
| 012 | 12 | 9.0 | 1.2 | 36.0 | 576±10% | 20.8 |
| 024 | 24 | 18.0 | 2.4 | 72.0 | 2304±10% | 10.4 |

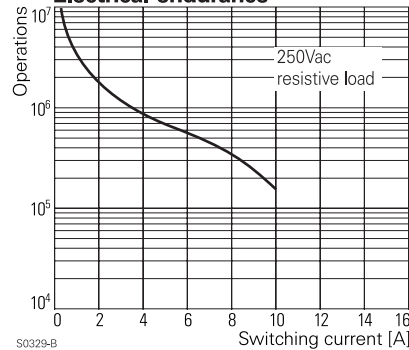
All figures are given for coil without preenergization, at ambient temperature +20°C
Other coil voltages on request

Max. DC load breaking capacity



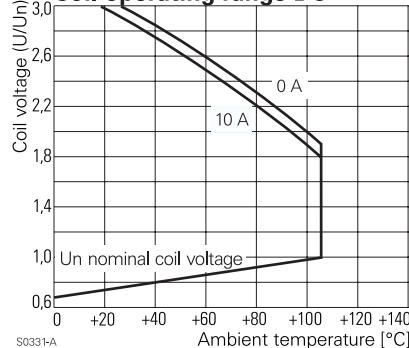
S0330-B

Electrical endurance



S0329-B

Coil operating range DC



S0331-A

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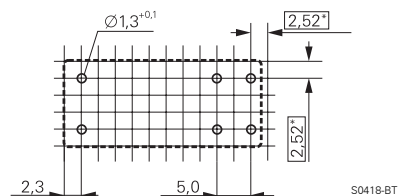
| Insulation | | |
|-----------------------------------------|----------------------|-----------------------|
| Dielectric strength | coil-contacts | 5000 V _{rms} |
| | open contact circuit | 1000 V _{rms} |
| Clearance / creepage | | 10 / 10 mm |
| Insulation to IEC 60664 | | |
| Voltage rating | | 250 V |
| Pollution degree | | 3 |
| Overvoltage category | | III |
| Insulation to VDE 0110b (2/79) | | |
| Insulation category / reference voltage | | C / 250 |

| Other data | | |
|----------------------------------------------|----------------------------------------------|--|
| RoHS - Directive 2002 / 95 / EC | compliant as per product date code 0413 | |
| Flammability class according to UL 94 | V-0 | |
| Coil insulation system according to UL 1446 | Class F | |
| Ambient temperature | -40...+105 °C | |
| Mechanical life | 10x10 ⁶ operations | |
| Max. switching rate at rated- / minimum load | 6 min ⁻¹ / 1200 min ⁻¹ | |
| Operate- / release time | typ. 8 / 3 ms | |
| Bounce time | typ. 2 ms | |
| Vibration resistance | 5 g, 30...150 Hz | |
| Shock resistance (destruction) | 100 g | |
| Category of protection (IEC 61810) | RT II - flux proof | |
| Relay weight | 14 g | |
| Packaging unit | 20 / 500 pcs. | |

PCB layout / terminal assignment

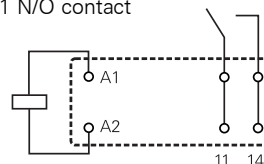
Bottom view on solder pins
Dimensions in mm

10 A, pinning 5 mm



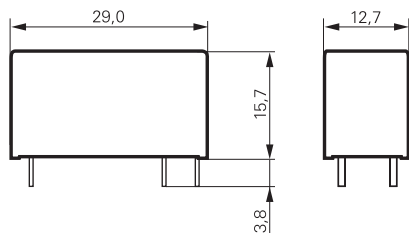
*) With the recommended PCB hole sizes a grid pattern from 2.5 mm to 2.54 mm can be used.

1 N/O contact



Dimensions

Dimensions in mm



Product key

Type

Version

H 10 A, pinning 5 mm, 105°C

Contacts

8 1 N/O contact

Contact material

4 AgNi 90/10

Coil

Coil code: please refer to coil versions table



| Product key | Version | Contacts | Contact material | Coil | Part number |
|-------------|-------------------|---------------|------------------|--------|-------------|
| RTH84012 | 10 A, 5 mm | 1 N/O contact | AgNi 90/10 | 12 Vdc | 9-1393238-2 |
| RTH84024 | 105°C, flux proof | | | 24 Vdc | 9-1393238-3 |

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