

Power PCB Relay RT1 sensitive

- 1 pole 10A, 1 form C (CO) or 1 form A (NO) contact
- Highly sensitive version, coil power 250mW
- 5kV/10mm coil-contact
- Reinforced insulation
- Ambient temperature 85°C

Typical applications
Domestic appliances, heating control.



Approvals

VDE Cert. No. 40007571, UL E214025, cCSAus 1142018
Technical data of approved types on request.

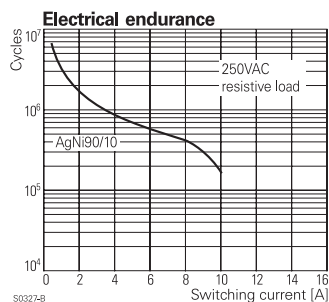
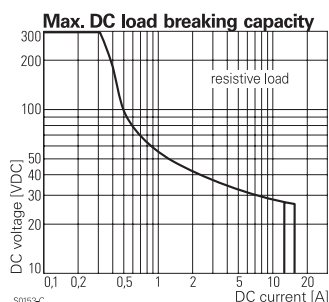
Contact Data

| | |
|---|--------------------------------|
| Contact arrangement | 1 form C (CO) or 1 form A (NO) |
| Rated voltage | 250VAC |
| Max. switching voltage | 400 VAC |
| Rated current | 10A |
| Limiting making current; max. 4s, duty factor 10% | 15A |
| Breaking capacity | 2500VA |
| Contact material | AgNi 90/10 |
| Frequency of operation; with/without load | 3000/72000h ⁻¹ |
| Operate/release time max. | 10/8ms |
| Bounce time max.; form A/form B | 4/9ms |

Contact ratings

| Type | Contact | Load | Cycles |
|------------------|-------------|------------------------------------|---------------------|
| IEC 61810 | | | |
| RT174 | A/B (NO/NC) | 10A, 250VAC resistive, 85°C | 100x10 ³ |
| UL 508 | | | |
| RT174 | C (CO) | 10A, 250VAC, general purpose, 85°C | 6x10 ³ |
| RT174 | A/B (NO/NC) | 10A, 250VAC, general purpose, 40°C | 30x10 ³ |
| RT174 | A/B (NO/NC) | B300, 40°C | 6x10 ³ |
| RT174 | A (NO) | R150, 40°C | 6x10 ³ |
| RT174 | B (NC) | 1/2hp, 240VAC, 40°C | 1x10 ³ |
| RT174 | A (NO) | 3/4hp, 240VAC, 40°C | 1x10 ³ |
| EN60730-1 | | | |
| RT174 | A (NO) | 6(4)A, 250VAC, 85°C | 100x10 ³ |

Mechanical endurance >30x10⁶ operations



Coil Data

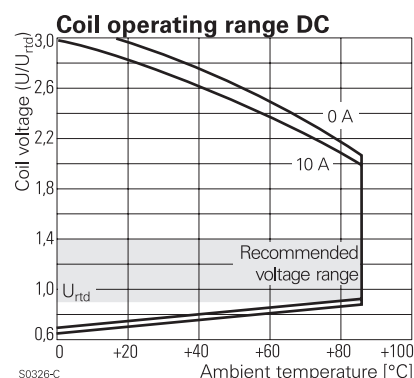
| | |
|-------------------------------------|------------|
| Coil voltage range | 5 to 60VDC |
| Operative range, IEC 61810 | 2 |
| Coil insulation system according UL | class F |

Coil versions, DC coil

| Coil code | Rated voltage VDC | Operate voltage VDC | Release voltage VDC | Coil resistance $\Omega \pm 10\%^{1)}$ | Rated coil power mW |
|-----------|-------------------|---------------------|---------------------|--|---------------------|
| 005 | 5 | 3.7 | 0.5 | 100 | 250 |
| 006 | 6 | 4.5 | 0.6 | 144 | 250 |
| 009 | 9 | 6.8 | 0.9 | 312 | 260 |
| 012 | 12 | 9.0 | 1.2 | 576 | 250 |
| 024 | 24 | 18.0 | 2.4 | 2304 | 250 |
| 048 | 48 | 36.0 | 4.8 | 9216 | 250 |
| 060 | 60 | 45.0 | 6.0 | 12857 ¹⁾ | 280 |

1) Coil resistance $\pm 12\%$.

All figures are given for coil without pre-energization, at ambient temperature +23°C.
Other coil voltages on request.



Insulation Data

| | |
|------------------------------------|---------------------|
| Initial dielectric strength | |
| between open contacts | 1000V _{ms} |
| between contact and coil | 5000V _{ms} |
| Clearance/creepage | |
| between contact and coil | ≥10/10mm |
| Material group of insulation parts | IIa |
| Tracking index of relay base | PTI 250V |

Power PCB Relay RT1 sensitive (Continued)

Other Data

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customer-support/rohssupportcenter

| | |
|---|---|
| Ambient temperature | -40 to 85°C |
| Category of environmental protection | IEC 61810 RTII - flux proof, RTIII - wash tight |
| Vibration resistance (functional), form A/form B contact, 30 to 500Hz | 20g/5g |
| Shock resistance (destructive) | 100g |
| Terminal type | PCB-THT, plug-in |
| Weight | 14g |
| Resistance to soldering heat THT, IEC 60068-2-20 | |
| RTII | 270°C/10s |
| RTIII | 260°C/5s |
| Packaging/unit | tube/20 pcs., box/500 pcs. |

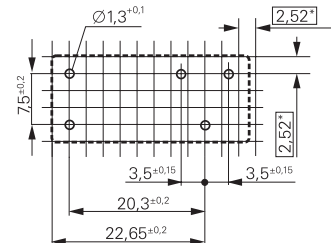
Accessories

For details see datasheet [Accessories Industrial Power Relay RT](#)
NOTE: indicated contact ratings and electrical endurance data for direct wiring of relays (according IEC 61810-1); for relays mounted on sockets deratings may apply.

PCB layout / terminal assignment

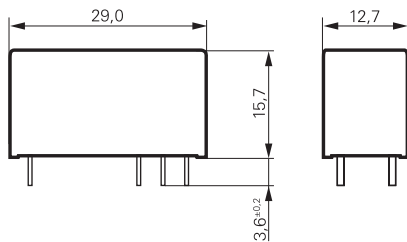
Bottom view on solder pins

10A, pinning 3.5mm

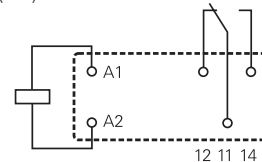


*) With the recommended PCB hole sizes a grid pattern from 2.5mm to 2.54mm can be used.

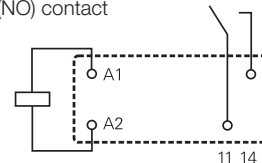
Dimensions



1 form C (CO) contact



1 form A (NO) contact



Product code structure

Typical product code **RT 1 7 4 012**

| | | | | |
|------------------------------|--|----------------------------------|--|--|
| Type | RT Power PCB Relay RT1 sensitive | | | |
| Version | 1 10A, pinning 3.5mm, flux proof | B 10A, pinning 3.5mm, wash tight | | |
| Contact configuration | 7 1 form C (CO) contact | 8 1 form A (NO) contact | | |
| Contact material | 4 AgNi 90/10 | | | |
| Coil | Coil code: please refer to coil versions table | | | |

| Product code | Version | Contacts | Contact material | Coil | Part number |
|--------------|------------|-----------------------|------------------|-------|-------------|
| RT174005 | Flux proof | 1 form C (CO) contact | AgNi 90/10 | 5VDC | 3-1393239-6 |
| RT174009 | | | | 9VDC | 9-1419143-5 |
| RT174012 | | | | 12VDC | 3-1393239-8 |
| RT174024 | | | | 24VDC | 3-1393239-9 |
| RT184005 | | 1 form A (NO) contact | | 5VDC | 4-1393239-5 |
| RTB84009 | Wash tight | | | 9VDC | 4-1393238-7 |

This list represents the most common types and does not show all variants covered by this datasheet.
Other types on request.