

## 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.

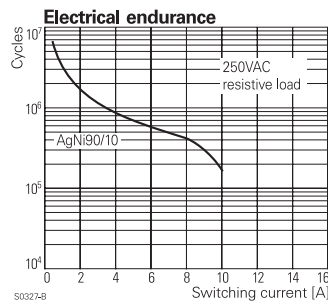
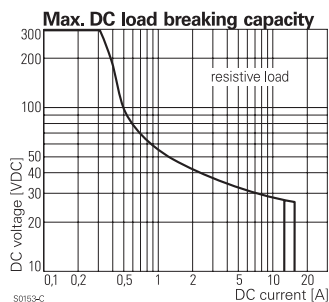
### Contact Data

|                                                   |                                |
|---------------------------------------------------|--------------------------------|
| 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 <sup>-1</sup>      |
| Operate/release time max.                         | 10/8ms                         |
| Bounce time max.; form A/form B                   | 4/9ms                          |

### Contact ratings

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

Mechanical endurance >30x10<sup>6</sup> operations



### Coil Data

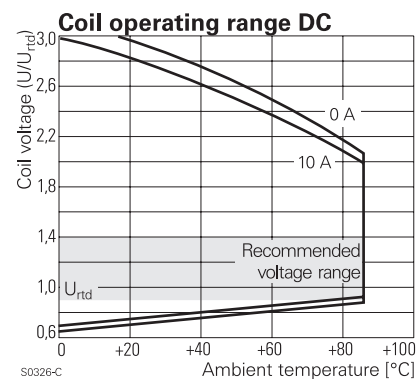
|                                     |            |
|-------------------------------------|------------|
| Coil voltage range                  | 5 to 60VDC |
| Operative range, IEC 61810          | 2          |
| Coil insulation system according UL | class F    |

### 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 <sup>1)</sup>                    | 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 <sub>ms</sub> |
| between contact and coil           | 5000V <sub>ms</sub> |
| Clearance/creepage                 |                     |
| between contact and coil           | ≥10/10mm            |
| Material group of insulation parts | IIla                |
| 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](http://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**

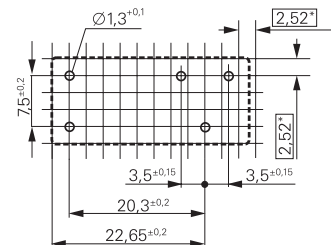
For details see datasheet [Accessories Industrial Power Relay RT](#)

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**

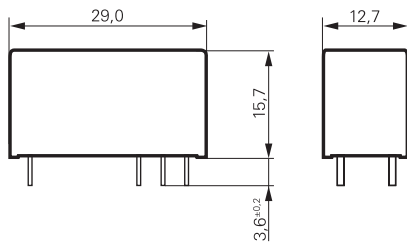
Bottom view on solder pins

10A, pinning 3.5mm

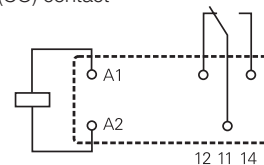


\*) With the recommended PCB hole sizes a grid pattern from 2.5mm to 2.54mm can be used.

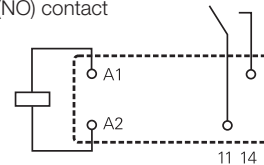
**Dimensions**



**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.

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