

## 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



F0145-C



### Approvals

VDE REG.-Nr. 6106, UL E214025, cCSAus 14385  
Technical data of approved types on request

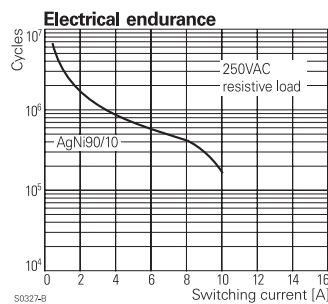
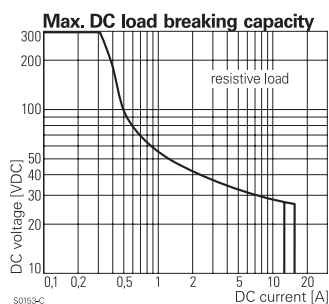
### Contact Data

|                                                   |                                |
|---------------------------------------------------|--------------------------------|
| 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

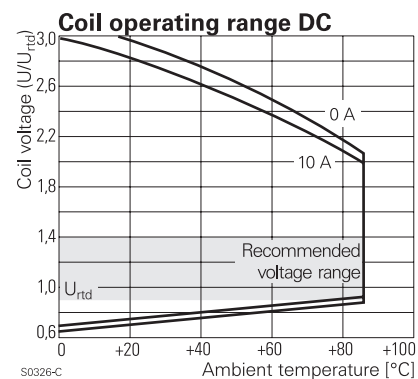
|                                     |            |
|-------------------------------------|------------|
| Coil voltage range                  | 5 to 60VDC |
| Operative range, IEC 61810          | 2          |
| Coil insulation system according UL | class F    |

### Coil versions, DC coil

| Coil code | Rated voltage VDC | Operate voltage VDC | Release voltage VDC | Coil resistance $\Omega \pm 10\%$ <sup>1)</sup> | 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>rms</sub> |
| between contact and coil           | 5000V <sub>rms</sub> |
| Clearance/creepage                 |                      |
| between contact and coil           | $\geq 10/10$ mm      |
| Material group of insulation parts | IIIa                 |
| 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/customersupport/rohssupportcenter](http://www.te.com/customersupport/rohssupportcenter)

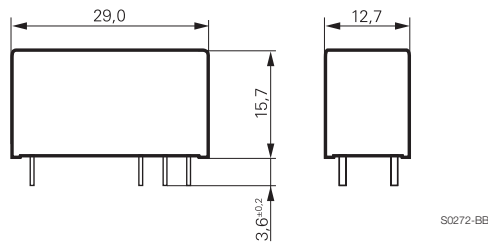
|                                                                       |                                       |
|-----------------------------------------------------------------------|---------------------------------------|
| Ambient temperature                                                   | -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.

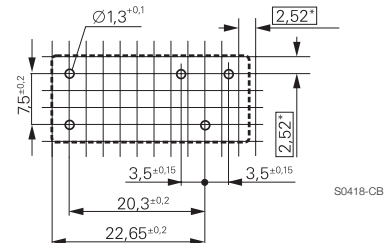
**Dimensions**



**PCB layout / terminal assignment**

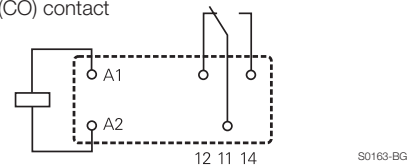
Bottom view on solder pins

10A, pinning 3.5mm

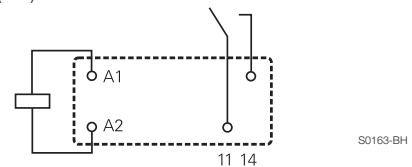


\*) With the recommended PCB hole sizes a grid pattern from 2.5mm to 2.54mm can be used.

**1 form C (CO) contact**



**1 form A (NO) contact**



**Product code structure**

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

|                              |                                                |                                  |  |  |
|------------------------------|------------------------------------------------|----------------------------------|--|--|
| <b>Type</b>                  | RT Power PCB Relay RT1 sensitive               |                                  |  |  |
| <b>Version</b>               | 1 10A, pinning 3.5mm, flux proof               | B 10A, pinning 3.5mm, wash tight |  |  |
| <b>Contact configuration</b> | 7 1 form C (CO) contact                        | 8 1 form A (NO) contact          |  |  |
| <b>Contact material</b>      | 4 AgNi 90/10                                   |                                  |  |  |
| <b>Coil</b>                  | 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