

**Power PCB Relay RT2 bistable**

- 2 pole 8A, 2 form C (CO) contacts
- Polarized bistable version with 1 or 2 coils
- 5kV/10mm coil-contact
- Reinforced insulation

Typical applications  
Battery powered equipment or applications with "memory function".



**Approvals**

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

**Contact Data**

|   |                          |
|---|--------------------------|
| Contact arrangement                               | 2 form C (CO)            |
| Rated voltage                                     | 250VAC                   |
| Max. switching voltage                            | 400VAC                   |
| Rated current                                     | 8A, UL: 10A              |
| Limiting continuous current                       | 8A, UL: 10A              |
| Limiting making current, max. 4s, duty factor 10% | 15A                      |
| Breaking capacity max.                            | 2000VA                   |
| Contact material                                  | AgNi 90/10               |
| Frequency of operation, with/without load         | 900/72000h <sup>-1</sup> |
| Operate/Reset time max.                           | 10/5ms                   |
| Bounce time max., form A/form B                   | 4/9ms                    |

**Contact ratings**

| Type             | Contact     | Load                               | Cycles              |
|------------------|-------------|------------------------------------|---------------------|
| <b>IEC 61810</b> |             |                                    |                     |
| RT444            | A (NO)      | 8A, 250VAC resistive, 85°C         | 100x10 <sup>3</sup> |
| RT424            | C (CO)      | 8A, 250VAC resistive, 85°C         | 30x10 <sup>3</sup>  |
| <b>UL 508</b>    |             |                                    |                     |
| RT424            | A/B (NO/NC) | 10A, 250VAC, general purpose, 85°C | 20x10 <sup>3</sup>  |
| RT424            | A/B (NO/NC) | 1/2hp, 240VAC, 85°C                | 1x10 <sup>3</sup>   |
| RT424            | A/B (NO/NC) | Pilot duty, B300, R300, 85°C       | 6x10 <sup>3</sup>   |

Mechanical endurance >2x10<sup>6</sup> operations

**Coil Data, bistable coils**

|   | 1 coil                        | 2 coils |
|---|-------------------------------|---------|
| Magnetic system                           | polarized, bistable           |         |
| Coil voltage range                        | 3 to 24VDC                    |         |
| Operative range, IEC 61810                | 2                             |         |
| Limiting voltage, % of rated coil voltage | 120%                          | 150%    |
| Min./Max. energization duration           | 30ms/1min at <10% duty factor |         |
| Coil insulation system according UL       | class F                       |         |

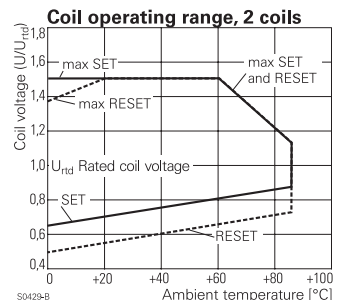
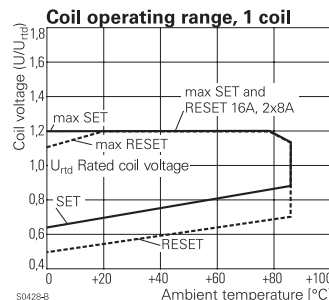
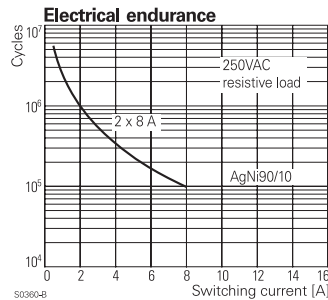
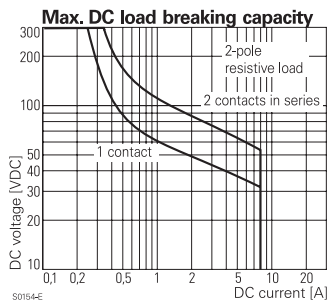
**Coil versions, bistable coil**

| Coil code               | Rated voltage VDC | Set voltage VDC | Reset voltage VDC | Coil resistance Ω±10% | Rated coil power mW |
|-------------------------|-------------------|-----------------|-------------------|-----------------------|---------------------|
| <b>bistable 1 coil</b>  |                   |                 |                   |                       |                     |
| A03                     | 3                 | 2.1             | 1.7               | 21                    | 429                 |
| A05                     | 5                 | 3.5             | 2.8               | 62                    | 403                 |
| A06                     | 6                 | 4.2             | 3.3               | 90                    | 400                 |
| A12                     | 12                | 8.4             | 6.6               | 360                   | 400                 |
| A24                     | 24                | 16.8            | 13.2              | 1440                  | 400                 |
| <b>bistable 2 coils</b> |                   |                 |                   |                       |                     |
| F03                     | 3                 | 2.1             | 1.7               | 15                    | 600                 |
| F05                     | 5                 | 3.5             | 2.8               | 42                    | 595                 |
| F06                     | 6                 | 4.2             | 3.3               | 55                    | 655                 |
| F12                     | 12                | 8.4             | 6.6               | 240                   | 600                 |
| F24                     | 24                | 16.8            | 13.2              | 886                   | 650                 |

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

**Bistable coils - operation**

| Version                                  | 1 coil |    | 2 coils |    |    |
|--|--------|----|---------|----|----|
| Coil terminals                           | A1     | A2 | A1      | A3 | A2 |
| Operate                                  | +      | -  | +       | +  | -  |
| Reset                                    | -      | +  | -       | +  | +  |
| Contact position not defined at delivery |        |    |         |    |    |



**Power PCB Relay RT2 bistable** (Continued)

**Insulation Data**

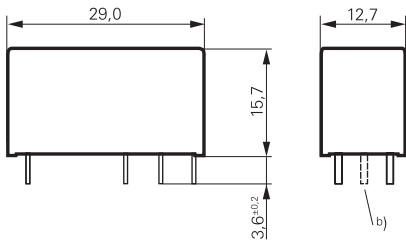
|                                    |                      |
|------------------------------------|----------------------|
| Initial dielectric strength        |                      |
| between open contacts              | 1000V <sub>rms</sub> |
| between contact and coil           | 5000V <sub>rms</sub> |
| between adjacent contacts          | 2500V <sub>rms</sub> |
| Clearance/creepage                 |                      |
| between contact and coil           | ≥10/10mm             |
| between adjacent contacts          | ≥ 3/4mm              |
| Material group of insulation parts |                      |
|                                    | IIIa                 |
| Tracking index of relay base       |                      |
|                                    | PTI 250V             |

**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                     |                   |
| bistable 1 coil                         | -10 to 85°C       |
| bistable 2 coils                        | -40 to 85°C       |
| Category of environmental protection    |                   |
| IEC 61810                               | RTII - flux proof |
| Vibration/shock resistance (functional) |                   |
| opening B contact                       | 3/5g              |
| opening closed A contact                | 6/15g             |
| Shock resistance (destructive)          |                   |
|   | 100g              |

**Dimensions**



a) Indicated contact position while or after coil energization with reset voltage.

b) for 2 coil version only

**Other Data** (continued)

|                                  |                                |
|----------------------------------|--------------------------------|
| Terminal type                    | PCB-THT, plug-in <sup>1)</sup> |
| Weight                           | 13g                            |
| Resistance to soldering heat THT |                                |
| IEC 60068-2-20                   | 270°C/10s                      |
| Packaging/unit                   | tube/20 pcs., box/500 pcs.     |

1) socket available for 1 coil version only, see Accessories.

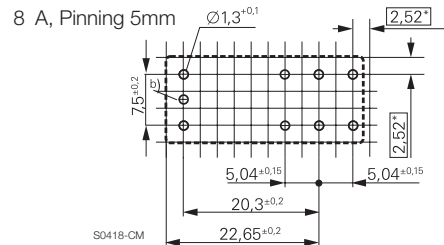
**Accessories**

For 1 coil version, 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**

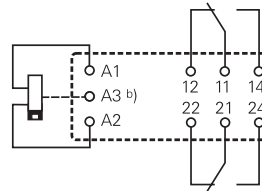
Bottom view on solder pins



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

2 form C (CO) contacts

a)



**Product code structure**

Typical product code **RT 4 2 4 F24**

|                              |  |                               |  |  |
|------------------------------|--|-------------------------------|--|--|
| <b>Type</b>                  | RT Power PCB Relay RT2 bistable                |                               |  |  |
| <b>Version</b>               | 4 8A, pinning 5mm, flux proof                  | E 8A, pinning 5mm, wash tight |  |  |
| <b>Contact configuration</b> | 2 2 form C (CO) contacts                       |                               |  |  |
| <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 version     | Coil  | Part number |
|--------------|---------------------------|------------------------|------------------|------------------|-------|-------------|
| RT424A05     | 8A,                       | 2 form C (CO) contacts | AgNi 90/10       | Bistable 1 coil  | 5VDC  | 4-1393243-4 |
| RT424A12     | pinning 5mm, flux proof   |                        |                  |                  | 12VDC | 4-1393243-6 |
| RT424F05     |                           |                        |                  | Bistable 2 coils | 5VDC  | 5-1393243-2 |
| RT424F12     |                           |                        |                  |                  | 12VDC | 5-1393243-4 |
| RT424F24     |                           |                        |                  |                  | 24VDC | 5-1393243-6 |
| RTE24F24     | 8A pinning 5mm wash tight | 2 form C (CO) contacts | AgNi 90/10       | Bistable 2 coils | 24VDC | 8-1415541-7 |

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