

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 ⁻¹ |
| Operate/Reset time max. | 10/5ms |
| Bounce time max., form A/form B | 4/9ms |

Contact ratings

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

Mechanical endurance >2x10⁶ 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 | |

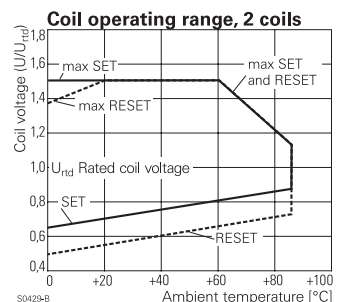
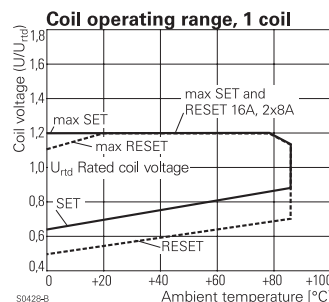
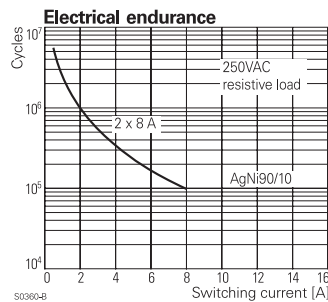
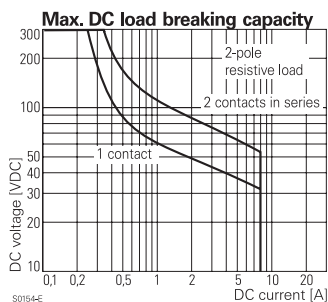
Coil versions, bistable coil

| Coil code | Rated voltage VDC | Set voltage VDC | Reset voltage VDC | Coil resistance Ω±10% | Rated coil power mW |
|-------------------------|-------------------|-----------------|-------------------|-----------------------|---------------------|
| bistable 1 coil | | | | | |
| 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 |
| bistable 2 coils | | | | | |
| 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

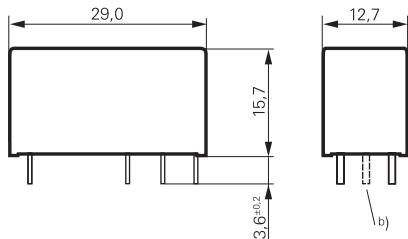
| | |
|------------------------------------|----------------------|
| Initial dielectric strength | |
| between open contacts | 1000V _{rms} |
| between contact and coil | 5000V _{rms} |
| between adjacent contacts | 2500V _{rms} |
| Clearance/creepage | |
| between contact and coil | ≥10/10mm |
| between 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/customer-support/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 ¹⁾ |
| 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.

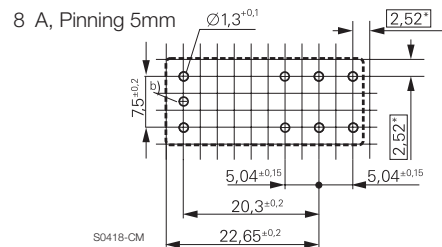
Accessories

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

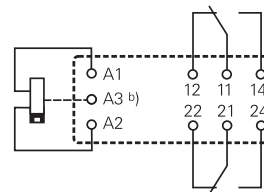
Bottom view on solder pins



*) 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**

| | | | | |
|------------------------------|--|-------------------------------|--|--|
| Type | RT Power PCB Relay RT2 bistable | | | |
| Version | 4 8A, pinning 5mm, flux proof | E 8A, pinning 5mm, wash tight | | |
| Contact configuration | 2 2 form C (CO) contacts | | | |
| Contact material | 4 AgNi 90/10 | | | |
| Coil | 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.