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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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Power PCB Relay RT1 bistable

- 1 pole 16A, 1 form C (CO) or 1 form A (NO) contact
- Polarized bistable version with 1 or 2 coils
- 5kV/10mm coil-contact
- Reinforced insulation

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



F0176-C



Approvals

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

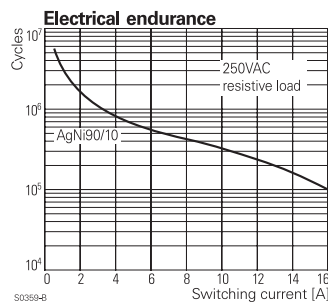
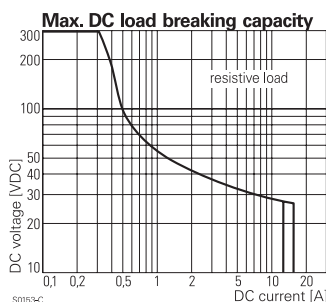
Contact Data

| | |
|---|--------------------------------|
| Contact arrangement | 1 form C (CO) or 1 form A (NO) |
| Rated voltage | 250VAC |
| Max. switching voltage | 400VAC |
| Rated current | 16A |
| Limiting continuous current | 16A, UL: 20A |
| Limiting making current, max. 4s, duty factor 10% | 30A |
| Breaking capacity max. | 4000VA |
| Contact material | AgNi 90/10 |
| Frequency of operation, with/without load | 360/72000h ⁻¹ |
| Operate/Reset time max. | 10/10ms |
| Bounce time max., form A/form B | 3/6ms |

Contact ratings

| Type | Contact | Load | Cycles |
|------------------|-------------|------------------------------------|--------------------|
| IEC 61810 | | | |
| RT314 | A (NO) | 16A, 250VAC resistive, 85°C | 30x10 ³ |
| RT314 | C (CO) | 16A, 250VAC resistive, 85°C | 10x10 ³ |
| UL 508 | | | |
| RT314 | A/B (NO/NC) | 20A, 250VAC, general purpose, 85°C | 6x10 ³ |
| RT334 | A (NO) | 16A, 250VAC, general purpose, 85°C | 50x10 ³ |
| RT314 | A (NO) | 1hp, 240VAC, 40°C | 1x10 ³ |

Mechanical endurance >5x10⁶ 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 UL1446 | class F | |

Coil versions, bistable coil

| Coil code | Rated voltage VDC | Set voltage VDC | Reset voltage VDC | Coil resistance Ω±10% | Rated 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 |

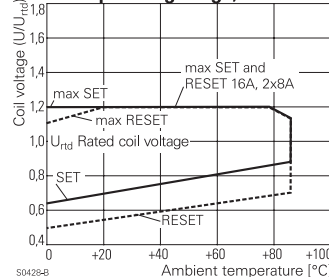
All figures are given for coil without pre-energization, at ambient temperature +23°C.
Other coil voltages on request.

Bistable coils - operation

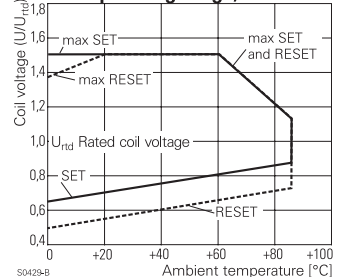
| Version | 1 coil | | 2 coils | | |
|----------------|--------|----|---------|----|----|
| Coil terminals | A1 | A2 | A1 | A3 | A2 |
| Operate | + | - | + | - | - |
| Reset | - | + | - | + | - |

Contact position not defined at delivery

Coil operating range, 1 coil



Coil operating range, 2 coils



Power PCB Relay RT1 bistable (Continued)

Insulation Data

| | |
|------------------------------------|----------------------|
| Initial dielectric strength | |
| between open contacts | 1000V _{rms} |
| between contact and coil | 5000V _{rms} |
| Clearance/creepage | |
| between contact and coil | ≥ 10/10mm |
| 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 | -40 to 85°C |
| Category of environmental protection | |
| IEC 61810 | RTII - flux proof, RTIII - wash tight |
| Vibration/shock resistance (functional), | |
| opening B contact | 3/5g |
| opening closed A contact | 6/15g |
| Shock resistance (destructive) | 100g |

Other Data (continued)

| | |
|------------------------------|--------------------------------|
| Terminal type | PCB-THT, plug-in ¹⁾ |
| Weight | 14g |
| Resistance to soldering heat | THT, IEC 60068-2-20 |
| RTII - flux proof | 270°C/10s |
| RTIII - wash tight | 260°C/5s |
| Packaging/unit | tube/20 pcs., box/500 pcs. |

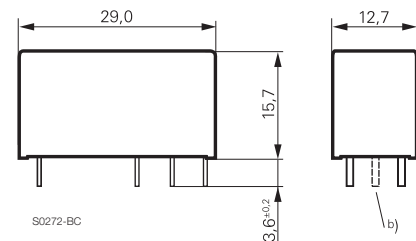
1) socket available for 1 coil version only, see Accessories.

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.

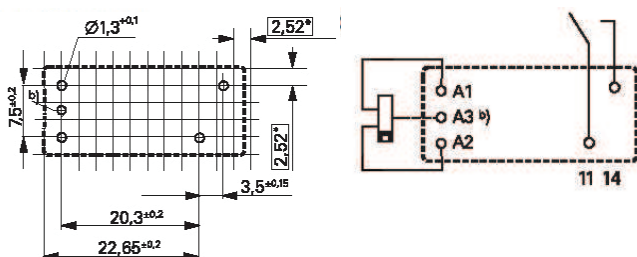
Dimensions



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

b) for 2 coil version only

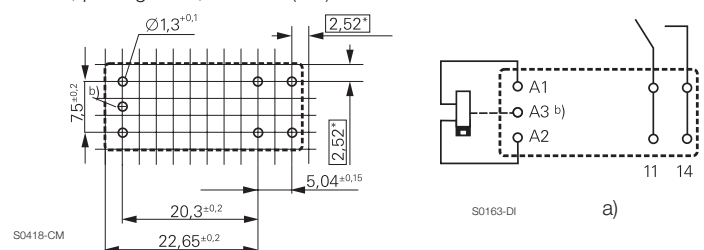
12A, pinning 3,5mm, 1 form A (NO) contact



PCB layout / terminal assignment

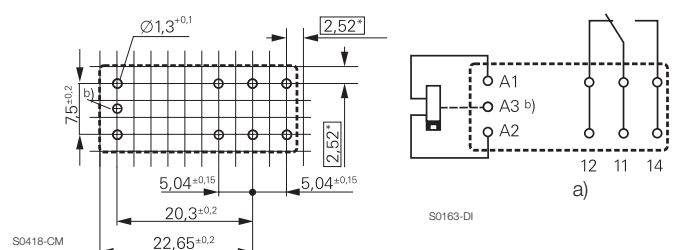
Bottom view on solder pins

16A, pinning 5mm, 1 form A (NO) contact



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

16A, pinning 5mm, 1 form C (CO) contact



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

Power PCB Relay RT1 bistable (Continued)

Product code structure

Typical product code **RT 3 1 4 F24**

| | | | |
|--|--------------------------------|----------|------------------------------|
| Type | | | |
| RT Power PCB Relay RT1 bistable | | | |
| Version | | | |
| 1 | 12A, pinning 3,5mm, flux proof | 3 | 16A, pinning 5mm, flux proof |
| | | D | 16A, pinning 5mm, wash tight |
| Contact configuration | | | |
| 1 | 1 form C (CO) contact | 3 | 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 version | Coil | Part number |
|--------------|--------------------------------------|--------------------------|------------------|------------------|-------|-------------|
| RT314A03 | 16A; | 1 form C (CO) | AgNi 90/10 | Bistable 1coil | 3VDC | 7-1393239-7 |
| RT314A05 | pinning 5mm, | contact | | | 5VDC | 7-1393239-8 |
| RT314A06 | flux proof | | | | 6VDC | 7-1393239-9 |
| RT314A12 | | | | | 12VDC | 8-1393239-0 |
| RT314F03 | | | | Bistable 2 coils | 3VDC | 8-1393239-4 |
| RT314F05 | | | | | 5VDC | 8-1393239-5 |
| RT314F06 | | | | | 6VDC | 8-1393239-6 |
| RT314F12 | | | | | 12VDC | 8-1393239-7 |
| RT314F24 | | | | | 24VDC | 8-1393239-8 |
| RT134F12 | 12A, pinning 3,5mm, flux proof | 1 form A (NO) contact | AgNi 90/10 | Bistable 2 coils | 12VDC | 4-1415382-1 |

Other types on request.

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