

## Power PCB Relay RT2

- 2 pole 8 A, 2 CO or 2 NO contacts
- DC- or AC-coil
- Sensitive coil 400 mW
- Reinforced insulation
- WG version: Product in accordance to IEC60335-1
- RoHS compliant (Directive 2002/95/EC)  
as per product date code 0413

### Applications

Domestic appliances, heating control, emergency lighting, modems



F0149-B

### Approvals

VDE REG.-Nr. 6106, **C** **UL** **us** E214025, **SP** **us** 14385, **BEAB** C0786  
Technical data of approved types on request

### Contact data

|                                                    |                                                        |
|----------------------------------------------------|--------------------------------------------------------|
| Contact configuration                              | 2 CO or 2 NO                                           |
| Contact set                                        | single contact                                         |
| Type of interruption                               | micro disconnection                                    |
| Rated current                                      | 8 A, UL: 10 A                                          |
| Rated voltage / max.switching voltage AC           | 250/400 VAC                                            |
| Limiting continuous current                        | UL: 10 A                                               |
| Maximum breaking capacity AC                       | 2000 VA                                                |
| Limiting making capacity, max 4 s, duty factor 10% | 15 A                                                   |
| Contact material                                   | AgNi 90/10, AgNi 90/10 gold plated, AgSnO <sub>2</sub> |
| Mechanical endurance DC coil                       | > 30 x 10 <sup>6</sup> cycles                          |
| AC coil                                            | > 5 x 10 <sup>6</sup> cycles                           |
| Rated frequency of operation with / without load   | 6 / 1200 min-1                                         |

### Contact ratings

| Type  | Load                                                    | Cycles              |
|-------|---------------------------------------------------------|---------------------|
| RT424 | 8 A, 250 VAC, NO contact, 70°C, EN61810-1               | 100x10 <sup>3</sup> |
| RT444 | 6(3) A, 250 VAC, NO contact, 85°C; EN60730-1            | 100x10 <sup>3</sup> |
| RT424 | 6(2) A, 250 VAC, NO/NC contact, 85°C; EN60730-1         | 100x10 <sup>3</sup> |
| RT424 | 10 A, 250 VAC, CO contact, 70°C; General purpose, UL508 | 30x10 <sup>3</sup>  |
| RT424 | 1/2hp @ 240 VAC, 1/4hp @ 120 VAC, UL508                 |                     |
| RT424 | Pilot duty B300, UL508                                  |                     |
| RT424 | 8 A, 30 VDC, General Purpose, UL508                     |                     |
| RT424 | 4 A, 230 VAC, cosφ=0.6, gas burner                      | 150x10 <sup>3</sup> |

### Coil data

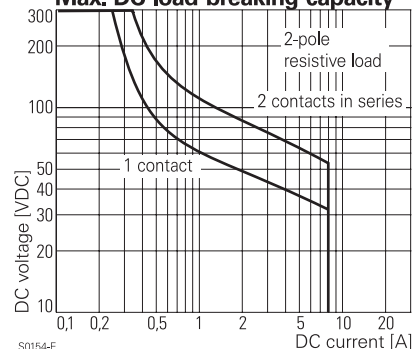
|                                         |              |
|-----------------------------------------|--------------|
| Rated coil voltage range DC coil        | 5...110 VDC  |
| AC coil                                 | 24...230 VAC |
| Coil power DC coil                      | typ 400 mW   |
| AC coil                                 | typ 0,75 VA  |
| Operative range                         | 2            |
| Coil insulation system according UL1446 | class F      |

### Coil versions, DC-coil

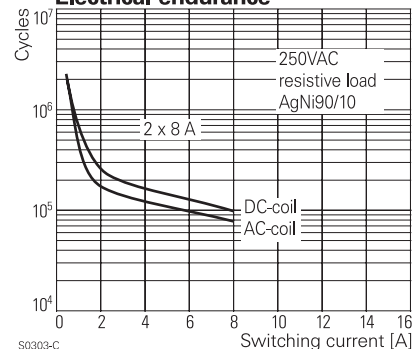
| Coil code | Rated voltage VDC | Operate voltage VDC | Release voltage VDC | Coil resistance Ω | Rated coil power mW |
|-----------|-------------------|---------------------|---------------------|-------------------|---------------------|
| 005       | 5                 | 3.5                 | 0.5                 | 62±10%            | 403                 |
| 006       | 6                 | 4.2                 | 0.6                 | 90±10%            | 400                 |
| 012       | 12                | 8.4                 | 1.2                 | 360±10%           | 400                 |
| 024       | 24                | 16.8                | 2.4                 | 1440±10%          | 400                 |
| 048       | 48                | 33.6                | 4.8                 | 5520±10%          | 417                 |
| 060       | 60                | 42.0                | 6.0                 | 8570±12%          | 420                 |
| 110       | 110               | 77.0                | 11.0                | 28800±12%         | 420                 |

All figures are given for coil without preenergization, at ambient temperature +23°C  
Other coil voltages on request

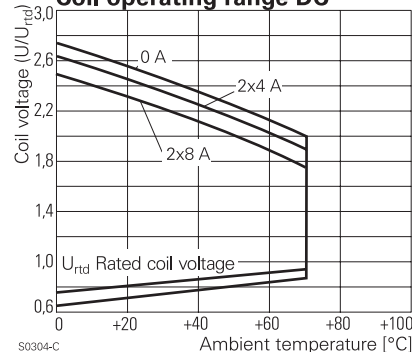
### Max. DC load breaking capacity



### Electrical endurance



### Coil operating range DC



## Power PCB Relay RT2 (Continued)

### Coil versions, AC-coil 50Hz

| Coil code | Rated voltage | Operate voltage 50 Hz | Release voltage 50 Hz | Coil resistance  | Rated coil power 50 Hz |
|-----------|---------------|-----------------------|-----------------------|------------------|------------------------|
|           | VAC           | VAC                   | VAC                   | $\Omega$         | VA                     |
| 524       | 24            | 18.0                  | 3.6                   | $350 \pm 10\%$   | 0.76                   |
| 615       | 115           | 86.3                  | 17.3                  | $8100 \pm 15\%$  | 0.76                   |
| 620       | 120           | 90.0                  | 18.0                  | $8800 \pm 15\%$  | 0.75                   |
| 700       | 200           | 150.0                 | 30.0                  | $24350 \pm 15\%$ | 0.76                   |
| 730       | 230           | 172.5                 | 34.5                  | $32500 \pm 15\%$ | 0.74                   |

All figures are given for coil without preenergization, at ambient temperature +23°C

### Insulation

|                                           |                       |
|-------------------------------------------|-----------------------|
| Dielectric strength coil-contact circuit  | 5000 V <sub>rms</sub> |
| open contact circuit                      | 1000 V <sub>rms</sub> |
| adjacent contact circuits                 | 2500 V <sub>rms</sub> |
| Clearance / creepage coil-contact circuit | $\geq 10 / 10$ mm     |
| adjacent contact circuits                 | $\geq 3 / 4$ mm       |
| Material group of insulation parts        | $\geq IIIa$           |
| Tracking index of relay base              | PTI 250 V             |
| Insulation to IEC 60664-1                 |                       |
| Type of insulation coil-contact circuit   | reinforced            |
| open contact circuit                      | functional            |
| adjacent contact circuits                 | basic                 |
| Rated insulation voltage                  | 250 V                 |
| Pollution degree                          | 3                     |
| Rated voltage system                      | 240 V                 |
| Overvoltage category                      | III                   |

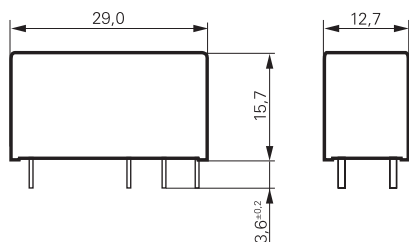
### Other data

|                                                      |                                         |
|------------------------------------------------------|-----------------------------------------|
| RoHS - Directive 2002/95/EC                          | compliant as per product date code 0413 |
| Flammability class according to UL94                 | V-0                                     |
| For WG version: GWFI to IEC 60335-1 (IEC 60695-2-12) | > 850 °C                                |
| GWIT to IEC 60335-1 (IEC 60695-2-13)                 | > 755 °C                                |
| Ambient temperature range                            | -40...+70°C                             |
| Operate- / release time DC coil                      | typ 7 / 2 ms                            |
| Bounce time DC coil NO / NC contact                  | typ 1 / 3 ms                            |
| Vibration resistance (function) NO / NC contact      | 20 / 5 g, 30 ... 300 Hz                 |
| Shock resistance (destruction)                       | 100 g                                   |
| Category of protection                               | RTII - flux proof, RTIII - wash tight   |
| Mounting                                             | pcb or on socket                        |
| Mounting distance DC / AC coils                      | 0 / 2.5 mm                              |
| Resistance to soldering heat flux-proof version      | 270°C / 10 s                            |
| wash-tight version                                   | 260°C / 5 s                             |
| Relay weight                                         | 13 g                                    |
| Packaging unit                                       | 20 / 500 pcs                            |

### Accessories

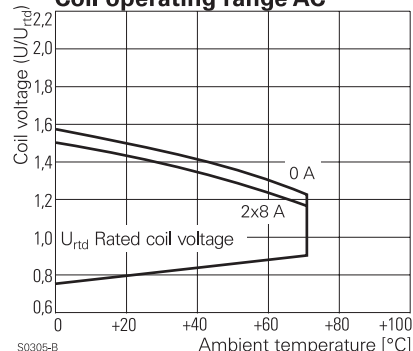
For details see datasheet accessories RT

### Dimensions



S0272-BA

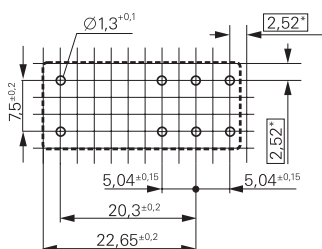
### Coil operating range AC



S0305-B

### PCB layout / terminal assignment

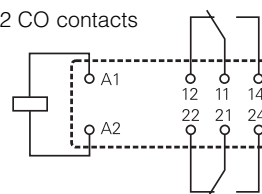
Bottom view on solder pins



S0418-CA

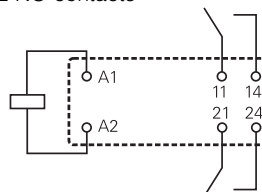
\*) With the recommended PCB hole sizes a grid pattern from 2.5 mm to 2.54 mm can be used.

### 2 CO contacts



S0163-BJ

### 2 NO contacts



S0163-BK

## Power PCB Relay RT2 (Continued)

### Product key

|   |   |   |  |  |  |  |  |
|---|---|---|--|--|--|--|--|
| R | T | 4 |  |  |  |  |  |
|---|---|---|--|--|--|--|--|

Type

Version

4 8 A, pinning 5 mm, flux proof

**E** 8 A, pinning 5 mm, wash tight

### Contact configuration

**2 2 CO contacts**

4 2 NO contacts

Contact material

**3**  $\text{AgSnO}_2$

4 AgNi 90/10

**5** AgNi 90/10 gold plated

Coil

Coil code: please refer to coil versions table

Version

**Blank** Standard version

|       |                                                              |
|-------|--------------------------------------------------------------|
| Blank | Standard version                                             |
| WG    | Product in accordance with IEC 60335-1 (domestic appliances) |

Preferred types in bold print

| Product key | Version                           | Contacts      | Cont. material            | Coil    | Coil        | Part number |
|-------------|-----------------------------------|---------------|---------------------------|---------|-------------|-------------|
| RT423012    | 8 A<br>pinning 5 mm<br>flux proof | 2 CO contacts | AgSnO                     | DC-coil | 12 VDC      | 4-1419136-3 |
| RT423024    |                                   |               | AgNi 90/10                |         | 24 VDC      | 4-1393243-2 |
| RT424005    |                                   |               |                           |         | 5 VDC       | 5-1393243-9 |
| RT424006    |                                   |               |                           |         | 6 VDC       | 6-1393243-1 |
| RT424012    |                                   |               |                           |         | 12 VDC      | 6-1393243-3 |
| RT424024    |                                   |               |                           | 24 VDC  | 6-1393243-8 |             |
| RT424048    |                                   |               |                           | 48 VDC  | 7-1393243-0 |             |
| RT424060    |                                   |               |                           | 60 VDC  | 7-1393243-3 |             |
| RT424110    |                                   |               |                           | 110 VDC | 7-1393243-5 |             |
| RT424524    |                                   |               |                           | AC-coil | 24 VAC      | 7-1393243-6 |
| RT424615    |                                   |               |                           |         | 115 VAC     | 7-1393243-8 |
| RT424730    |                                   |               | 230 VAC                   |         | 7-1393243-9 |             |
| RT425005    |                                   |               | AgNi 90/10<br>gold plated | DC-coil | 5 VDC       | 8-1393243-0 |
| RT425012    |                                   |               |                           |         | 12 VDC      | 8-1393243-2 |
| RT425024    |                                   |               |                           | AC-coil | 24 VDC      | 8-1393243-5 |
| RT425524    | 24 VAC                            | 9-1393243-1   |                           |         |             |             |
| RT425615    | 115 VAC                           | 9-1393243-2   |                           |         |             |             |
| RT425730    |                                   | 230 VAC       | 9-1393243-3               |         |             |             |
| RT444012    | 8 A<br>pinning 5 mm<br>wash tight | 2 NO contacts | AgNi 90/10                | DC-coil | 12 VDC      | 9-1393243-7 |
| RT444024    |                                   |               |                           |         | 24 VDC      | 9-1393243-9 |
| RTE24005    |                                   | 2 CO contacts |                           |         | 5 VDC       | 0-1393243-1 |
| RTE24006    |                                   |               |                           |         | 6 VDC       | 0-1393243-2 |
| RTE24012    |                                   |               |                           |         | 12 VDC      | 0-1393243-4 |
| RTE24024    |                                   |               |                           |         | 24 VDC      | 1-1393243-0 |
| RTE24048    |                                   |               |                           |         | 48 VDC      | 1-1393243-1 |
| RTE24060    |                                   |               |                           | 60 VDC  | 1-1393243-3 |             |
| RTE24110    |                                   |               |                           | 110 VDC | 1-1393243-4 |             |
| RTE24524    |                                   |               |                           | AC-coil | 24 VAC      | 1-1393243-5 |
| RTE24615    |                                   |               |                           |         | 115 VAC     | 1-1393243-7 |
| RTE24730    |                                   |               |                           |         | 230 VAC     | 1-1393243-8 |
| RTE25005    |                                   |               | AgNi 90/10<br>gold plated | DC-coil | 5 VDC       | 1-1393243-9 |
| RTE25012    |                                   |               |                           |         | 12 VDC      | 2-1393243-0 |
| RTE25024    |                                   |               |                           |         | 24 VDC      | 2-1393243-1 |

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