

Power PCB Relay RTH 105°C 16A

- 1 pole 16A, 1 form C (CO) or 1 form A (NO) contact
- Ambient temperature 105°C
- Sensitive coil 400mW
- 5kV/10mm coil-contact
- Reinforced insulation
- WG version: Product in accordance to IEC 60335-1



Typical applications
Oven control, cooking plate control.



Approvals

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

Contact Data

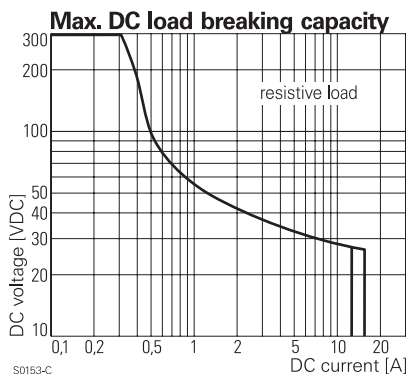
| | |
|--|--------------------------------|
| Contact arrangement | 1 form C (CO) or 1 form A (NO) |
| Rated voltage | 250VAC |
| Max. switching voltage | 400VAC |
| Rated current | 16A ¹⁾ |
| Limiting continuous current, form A/form B | 16 / 26A |
| Limiting making current (form A contact) max. 4 s, duty factor 10 % | 30A |
| Breaking capacity max. | 4000VA |
| Contact material | AgNi 90/10 |
| Frequency of operation, with/without load | 360/72000h ⁻¹ |
| Operate/release time max. | 8/6ms |
| Bounce time max., form A/form B | 4/6ms |

Contact ratings

| Type | Contact | Load | Cycles |
|------------------|-------------|-------------------------------------|---------------------|
| IEC 61810 | | | |
| RTH14 | A (NO) | 10A, 250VAC resistive, 105°C | 150x10 ³ |
| RTH14 | C (CO) | 16A, 250VAC resistive, 105°C | 10x10 ³ |
| RTH14 | B (NC) | 26A, 250VAC resistive, 85°C | 500 |
| RTH34 | A (NO) | 10A, 400VAC resistive, 105°C | 150x10 ³ |
| RTHH4 | A (NO) | 10A, 250VAC resistive, 105°C | 250x10 ³ |
| UL 508 | | | |
| RTH14 | A/B (NO/NC) | 16A, 250VAC, resistive, 105°C | 30x10 ³ |
| RTH34 | A (NO) | 20A, 250VAC, general purpose, 105°C | 6x10 ³ |

Mechanical endurance >30x10⁶ operations

1) Continuous thermal load >10A at 105°C requires reduction of coil power to 64% of rated power after 100ms.



Coil Data

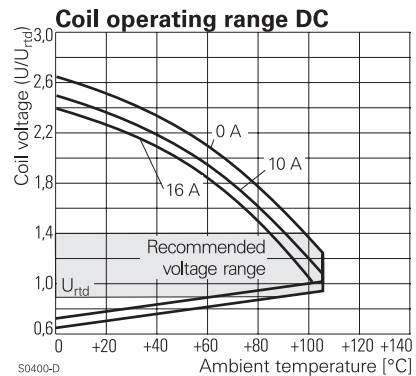
| | |
|---|----------------------------|
| Coil voltage range | 5 to 60VDC |
| Operative range, IEC 61810 | 90...110% U _{RTD} |
| Coil insulation system according UL1446 | class F |

Coil versions, DC coil

| Coil code | Rated voltage VDC | Operate voltage VDC | Release voltage VDC | Coil resistance Ω±10% | Rated coil power mW |
|-----------|-------------------|---------------------|---------------------|-----------------------|---------------------|
| 009 | 9 | 6.3 | 0.9 | 203 | 399 ¹⁾ |
| 012 | 12 | 8.4 | 1.2 | 360 | 400 ¹⁾ |
| 024 | 24 | 16.8 | 2.4 | 1440 | 400 ¹⁾ |

1) Continuous thermal load > 10 A at 105°C requires reduction of coil power to 64% of rated power after 100ms.

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 _{ms} |
| between contact and coil | 5000V _{ms} |
| Clearance/creepage | |
| between contact and coil | ≥10/10mm |
| Material group of insulation parts | IIla |
| Tracking index of relay base | PTI250V |

Power PCB Relay RTH 105°C 16A (Continued)

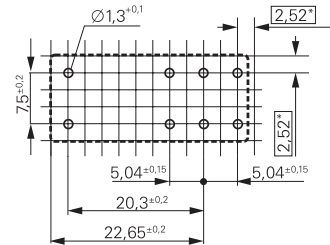
Other Data

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customersupport/rohssupportcenter

| | |
|--|------------------------------|
| Resistance to heat and fire | |
| WG version | according EN 60335-1, par.30 |
| Ambient temperature -40 to 105°C | |
| Category of environmental protection IEC 61810 | |
| | RTII - flux proof |
| Vibration resistance (functional) form A/form B contact, 30 to 150Hz | |
| | 20/5g |
| Shock resistance (destructive) | |
| | 100g |
| Terminal type | |
| | PCB-THT |
| Weight | |
| | 14g |
| Resistance to soldering heat THT | |
| | IEC 60068-2-20 270°C/10s |
| Packaging/unit | |
| | tube/20 pcs., box/500 pcs. |

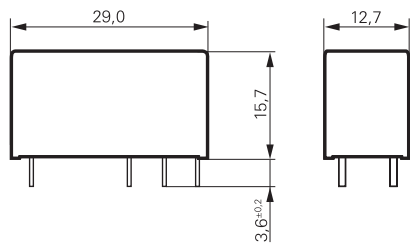
PCB layout / terminal assignment

16A, pinning 5mm

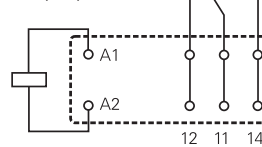


*) With the recommended PCB hole sizes a grid pattern from 2.5mm to 2.54mm can be used.

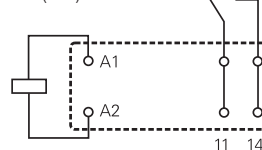
Dimensions



1 form C (CO) contact



1 form A (NO) contact



Product code structure

Typical product code **RT H 3 4 012 WG**

| | |
|------------------------------|---|
| Type | RT Power PCB Relay RTH 105°C 16A |
| Version | H 16A, pinning 5mm, 105°C |
| Contact configuration | 1 1 form C (CO) contact 3 1 form A (NO) contact H 1 form A (NO) contact „High Performance“ |
| Contact material | 4 AgNi 90/10 |
| Coil | Coil code: please refer to coil versions table |
| Version | Blank Standard version WG Product in accordance with IEC 60335-1 (domestic appliances) |

| Product code | Version | Contact configuration | Contact Material | Coil | Part number |
|--------------|---------------------------------|-----------------------|------------------|-------|-------------|
| RTH14012 | 16A, 105°C | 1 form C (CO) contact | AgNi 90/10 | 12VDC | 8-1415006-1 |
| RTH14012WG | | | | 24VDC | 1-1415538-1 |
| RTH14024WG | 16A, 105°C, High Performance | 1 form A (NO) contact | AgNi 90/10 | 12VDC | 9-1415535-4 |
| RTH34012 | | | | 12VDC | 9-1415006-1 |
| RTH34012WG | | | | 24VDC | 1-1415536-9 |
| RTH34024 | | | | 24VDC | 1415039-1 |
| RTH34024WG | 16A, 105°C, High Performance | 1 form A (NO) contact | AgNi 90/10 | 9VDC | 2-1415536-0 |
| RTHH4009WG | | | | 12VDC | 1-1415540-6 |
| RTHH4012 | | | | 12VDC | 8-1415047-1 |
| RTHH4012WG | | | | 24VDC | 4-1415536-2 |
| RTHH4024 | | | | 24VDC | 9-1415047-1 |

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

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