

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
CQC 18002197247 (monostable), CQC 20002275223 (China production),
CQC 08001027262 (China production)
Technical data of approved types on request.

Contact Data

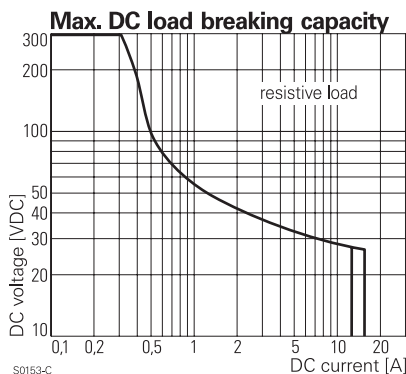
| | |
|--|--------------------------------|
| Contact arrangement | 1 form C (CO) or 1 form A (NO) |
| Rated voltage | 250VAC |
| Max. switching voltage | 400VAC |
| Rated current | 16A ¹⁾ |
| Limiting continuous current, form A/form B | 16 / 26A |
| Limiting making current (form A contact) max. 4 s, 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 61810-1 (former UL 508) | | | |
| RTH14 | A/B (NO/NC) | 16A, 250VAC, resistive, 105°C | 30x10 ³ |
| RTH34 | A (NO) | 20A, 250VAC, general purpose, 85°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

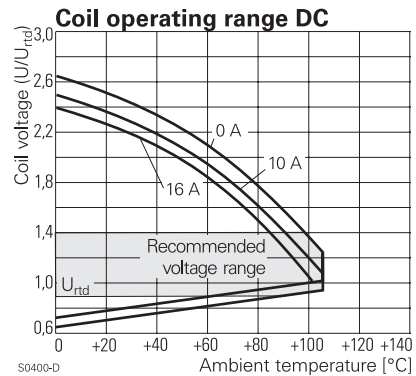
| | |
|---|----------------------------|
| Coil voltage range | 5 to 60VDC |
| Operative range, IEC 61810 | 90...110% U _{RTD} |
| Coil insulation system according UL1446 | class F |

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

| | |
|--|----------------------|
| Insulation resistance 1000MΩ (at 500VDC) | |
| 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 | PTI250V |

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

Other Data

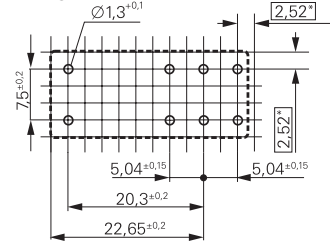
Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customersupport/rohssupportcenter

| | |
|--------------------------------------|------------------------------|
| 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 | RTH - 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 |

PCB layout / terminal assignment

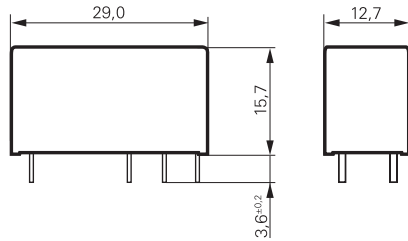
Bottom view on solder pins

16A, pinning 5mm

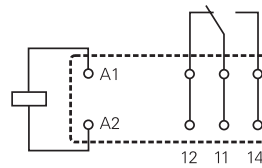


*) With the recommended PCB hole sizes a grid pattern from 2.5mm to 2.54mm can be used.

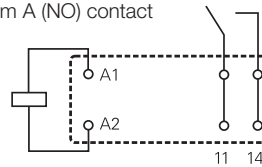
Dimensions



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 | Contacts | Contact material | Coil | Part Number | |
|--------------|---------------------------------|-----------------------|------------------|-------|-------------|-------------|
| | | | | | Austria | China |
| RTH14005 | 16A, 105°C | 1 form C (CO) contact | AgNi 90/10 | 5VDC | | 1649357-1 |
| RTH14012 | | | | 12VDC | 8-1415006-1 | 1649357-4 |
| RTH14012WG | | | | | 1-1415538-1 | 5-1833004-3 |
| RTH14024WG | | | | 24VDC | 9-1415535-4 | |
| RTH34012 | 16A, 105°C, High Performance | 1 form A (NO) contact | | 12VDC | | 1-1649357-3 |
| RTH34012WG | | | | | 1-1415536-9 | 5-1833004-0 |
| RTH34024 | | | | 24VDC | 1415039-1 | 1-1649357-5 |
| RTH34024WG | | | | | 2-1415536-0 | |
| RTHH4009WG | | | | 9VDC | 1-1415540-6 | |
| RTHH4012 | | | | 12VDC | 8-1415047-1 | |
| RTHH4012WG | | | | | 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.