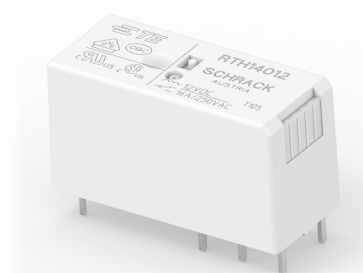


## Power PCB Relay RTH 105°C 16A

- 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
- 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

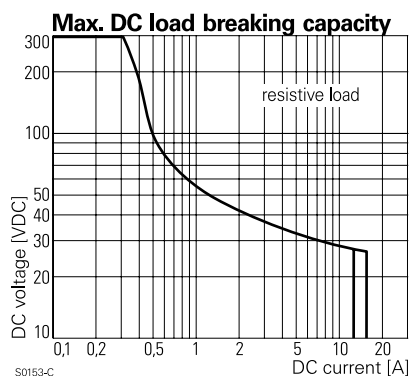
|                                                                        |                                |
|------------------------------------------------------------------------|--------------------------------|
| Contact arrangement                                                    | 1 form C (CO)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

### Contact ratings

| Type                              | Contact     | Load                               | Cycles              |
|-----------------------------------|-------------|------------------------------------|---------------------|
| <b>IEC 61810</b>                  |             |                                    |                     |
| RTH14                             | A (NO)      | 10A, 250VAC resistive, 105°C       | 150x10 <sup>3</sup> |
| RTH14                             | C (CO)      | 16A, 250VAC resistive, 105°C       | 10x10 <sup>3</sup>  |
| RTH14                             | B (NC)      | 26A, 250VAC resistive, 85°C        | 500                 |
| RTH34                             | A (NO)      | 10A, 400VAC resistive, 105°C       | 150x10 <sup>3</sup> |
| RTHH4                             | A (NO)      | 10A, 250VAC resistive, 105°C       | 250x10 <sup>3</sup> |
| <b>UL 61810-1 (former UL 508)</b> |             |                                    |                     |
| RTH14                             | A/B (NO/NC) | 16A, 250VAC, resistive, 105°C      | 30x10 <sup>3</sup>  |
| RTH34                             | A (NO)      | 20A, 250VAC, general purpose, 85°C | 6x10 <sup>3</sup>   |

Mechanical endurance >30x10<sup>6</sup> operations

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



### Coil Data

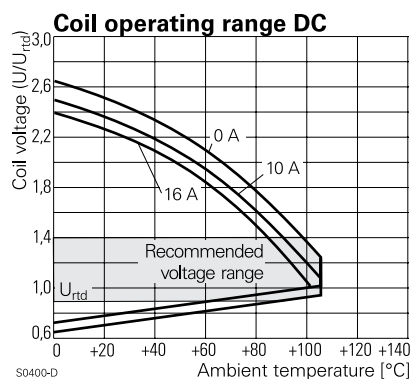
|                                         |                            |
|-----------------------------------------|----------------------------|
| Coil voltage range                      | 5 to 60VDC                 |
| Operative range, IEC 61810              | 90...110% U <sub>RTD</sub> |
| Coil insulation 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 <sup>1)</sup>   |
| 012       | 12                | 8.4                 | 1.2                 | 360                   | 400 <sup>1)</sup>   |
| 024       | 24                | 16.8                | 2.4                 | 1440                  | 400 <sup>1)</sup>   |

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 <sub>rms</sub> |
| between contact and coil | 5000V <sub>rms</sub> |

Clearance/creepage

|                          |          |
|--------------------------|----------|
| between contact and coil | ≥10/10mm |
|--------------------------|----------|

Material group of insulation parts

IIIa

Tracking index of relay base

PTI250V

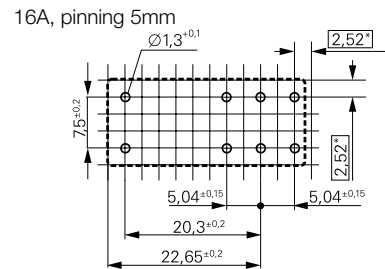
**Power PCB Relay RTH 105°C 16A (Continued)**

**Other Data**

|                                                                                                                                                                                                                                         |                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at <a href="http://www.te.com/customer-support/rohssupportcenter">www.te.com/customer-support/rohssupportcenter</a> |                              |
| Resistance to heat and fire                                                                                                                                                                                                             | according EN 60335-1, par.30 |
| Ambient temperature                                                                                                                                                                                                                     | -40 to 105°C                 |
| Category of environmental protection                                                                                                                                                                                                    | RTII - flux proof            |
| IEC 61810                                                                                                                                                                                                                               |                              |
| Vibration resistance (functional)                                                                                                                                                                                                       | 20/5g                        |
| form A/form B contact, 30 to 150Hz                                                                                                                                                                                                      |                              |
| Shock resistance (destructive)                                                                                                                                                                                                          | 100g                         |
| Terminal type                                                                                                                                                                                                                           | PCB-THT                      |
| Weight                                                                                                                                                                                                                                  | 14g                          |
| Resistance to soldering heat THT                                                                                                                                                                                                        |                              |
| IEC 60068-2-20                                                                                                                                                                                                                          | 270°C/10s                    |

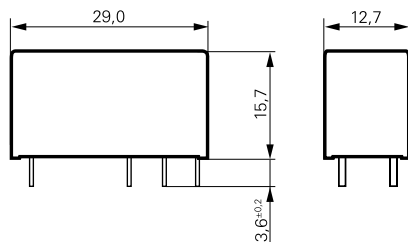
**PCB layout / terminal assignment**

Bottom view on solder pins

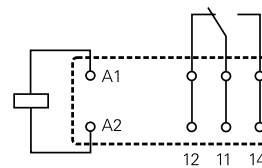


\*) With the recommended PCB hole sizes a grid pattern from 2.5mm to 2.54mm can be used.

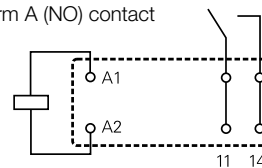
**Dimensions**



**1 form C (CO) contact**



**1 form A (NO) contact**



**Product code structure**

Typical product code

**RT H 3 4 012**

**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

| Product code | Version          | Contacts      | Contact material | Coil  | Part Number |             |
|--------------|------------------|---------------|------------------|-------|-------------|-------------|
|              |                  |               |                  |       | Austria     | China       |
| RTH14005     | 16A, 105°C       | 1 form C (CO) | AgNi 90/10       | 5VDC  |             | 1649357-1   |
| RTH14012     |                  | contact       |                  | 12VDC | 8-1415006-1 | 1649357-4   |
| RTH34012     |                  | 1 form A (NO) |                  | 12VDC | 9-1415006-1 | 1-1649357-3 |
| RTH34024     |                  | contact       |                  | 24VDC | 1415039-1   | 1-1649357-5 |
| RTHH4012     | 16A, 105°C,      |               |                  | 12VDC | 8-1415047-1 |             |
| RTHH4024     | High Performance |               |                  | 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.