

**Power Relay RF**

- 1 pole 16 A, 1 NO or 1 NC contact
- Switching capacity 4000 VA
- Coil power 400 mW
- Reinforced insulation (EN 61810, 60335, 60730)
- Ambient temperature up to 105°C
- Quick connect terminals for load side
- WG version: Materials in accordance to IEC 60335-1



F0273-BI

**Applications**

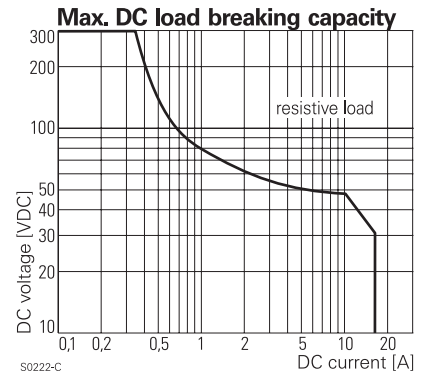
Oven control, electric heating, power supplies, air conditioning, microwares, hobs

**Approvals**

VDE REG.-Nr. A652, cULus E214025  
 Technical data of approved types on request

**Contact data**

|  |                            |
|--|----------------------------|
| Contact configuration                              | 1NO or 1NC                 |
| Contact set  | single contact             |
| Type of interruption                               | micro disconnection        |
| Rated voltage / max. switching voltage AC          | 250 / 400 VAC              |
| Rated current                                      | 16 A                       |
| Maximum breaking capacity AC                       | 4000 VA                    |
| Limiting making capacity, max 4 s, duty factor 10% | 25 A                       |
| Contact material                                   | AgNi90/10                  |
| Minimum contact load                               | 12VAC / 500mA              |
| Rated frequency of operation with / without load   | 6 / 1200 min <sup>-1</sup> |
| Operate- / release time                            | max. 11 / 7 ms             |
| Bounce time NO / NC contact                        | max. 4 / 4 ms              |



S0222-C

**Contact ratings**

| Type             | Contact | Load                    | Ambient temp. [°C] | Cycles              |
|------------------|---------|-------------------------|--------------------|---------------------|
| <b>IEC 61810</b> |         |                         |                    |                     |
| RF334; RFH34     | NO      | 16 A, 250 VAC, cosφ=1   | 85°C               | 100x10 <sup>3</sup> |
| RF334; RFH34     | NO      | 11 A, 250 VAC, cosφ=1   | 85°C               | 250x10 <sup>3</sup> |
| RF334; RFH34     | NO      | 20 A, 250 VAC, cosφ=1   | 85°C               | 25x10 <sup>3</sup>  |
| RF334; RFH34     | NO      | 25 A, 250 VAC, cosφ=1   | 70°C               | 15x10 <sup>3</sup>  |
| RF354; RFH54     | NC      | 16 A, 250 VAC, cosφ=1   | 85°C               | 100x10 <sup>3</sup> |
| RF354; RFH54     | NC      | 20 A, 250 VAC, cosφ=1   | 85°C               | 50x10 <sup>3</sup>  |
| RF354; RFH54     | NC      | 25 A, 250 VAC, cosφ=1   | 70°C               | 20x10 <sup>3</sup>  |
| RFH34            | NO      | 16 A, 250 VAC, cosφ=1   | 105°C              | 100x10 <sup>3</sup> |
| RFH34            | NO      | 11 A, 250 VAC, cosφ=1   | 105°C              | 250x10 <sup>3</sup> |
| RFH34            | NO      | 18.5 A, 250 VAC, cosφ=1 | 105°C              | 20x10 <sup>3</sup>  |
| RFH34            | NO      | 10 A, 400 VAC, cosφ=1   | 105°C              | 150x10 <sup>3</sup> |

**Coil data**

|   |            |
|---|------------|
| Rated coil voltage DC coil              | 5...60 VDC |
| Operative range to IEC 61810            | 2          |
| Coil insulation system according UL1446 | Class F    |

**Power Relay RF (Continued)**

**Coil versions, DC-coil**

| Coil code  | Rated voltage VDC | Operate voltage VDC | Release voltage VDC | Coil resistance Ohm | Rated coil power mW |
|------------|-------------------|---------------------|---------------------|---------------------|---------------------|
| 005        | 5                 | 3.5                 | 0.5                 | 62 ± 10%            | 403                 |
| 006        | 6                 | 4.2                 | 0.6                 | 90 ± 10%            | 400                 |
| 009        | 9                 | 6.3                 | 0.9                 | 203 ± 10%           | 399                 |
| <b>012</b> | <b>12</b>         | <b>8.4</b>          | <b>1.2</b>          | <b>360 ± 10%</b>    | <b>400</b>          |
| <b>024</b> | <b>24</b>         | <b>16.8</b>         | <b>2.4</b>          | <b>1440 ± 10%</b>   | <b>400</b>          |
| 048        | 48                | 33.6                | 4.8                 | 5520 ± 10%          | 417                 |
| 060        | 60                | 42.0                | 6.0                 | 8570 ± 10%          | 420                 |

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

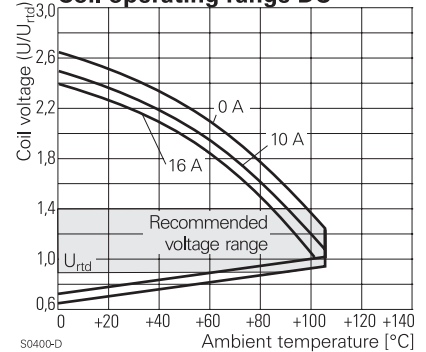
**Insulation**

|   |                       |
|---|-----------------------|
| Dielectric strength coil-contact circuit  | 4000 V <sub>rms</sub> |
| open contact circuit                      | 1000 V <sub>rms</sub> |
| Clearance / creepage coil-contact circuit | ≥ 8 / 8 mm            |
| Material group of insulation parts        | ≥ IIIa                |
| Tracking index of relay base              | PTI 250               |
| Insulation to IEC 60664-1                 |                       |
| Type of insulation coil-contact circuit   | reinforced            |
| open contact circuit                      | micro disconnection   |
| Rated insulation voltage                  | 250 V                 |
| Pollution degree                          | 3                     |
| Rated voltage system                      | 230 / 400 V           |
| Overvoltage category                      | III                   |

**Other data**

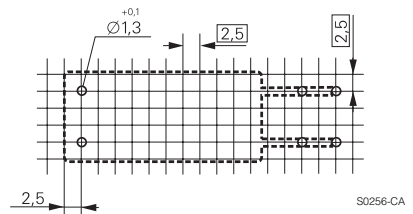
|  |                                       |
|--|---------------------------------------|
| Mechanical endurance                                       | 10x10 <sup>6</sup> cycles             |
| Material   |                                       |
| RoHS - Directive 2002/95/EC                                | compliant                             |
| Resistance to heat and fire, WG version                    | according EN60335-1, par.30           |
| Environment  |                                       |
| Ambient temperature range                                  | -40...+105°C                          |
| Vibration resistance (function) NO / NC cont. (55...500Hz) | 20 / 5 ms                             |
| Shock resistance (destruction)                             | 100 g                                 |
| Category of protection                                     | RTII - flux proof; RTIII - wash tight |
| Processing   |                                       |
| Mounting   | pcb                                   |
| Resistance to soldering heat flux-proof version            | 270°C / 10 s                          |
| wash-tight version   | 260°C / 5 s                           |
| Relay weight   | 20 g                                  |
| Packaging unit   | 150 / 300 pcs                         |

**Coil operating range DC**

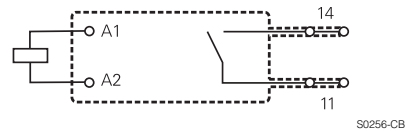


**PCB layout / terminal assignment**

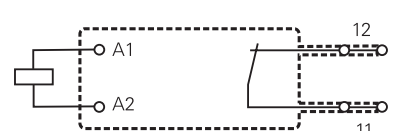
Bottom view on solder pins



**1 NO contact**

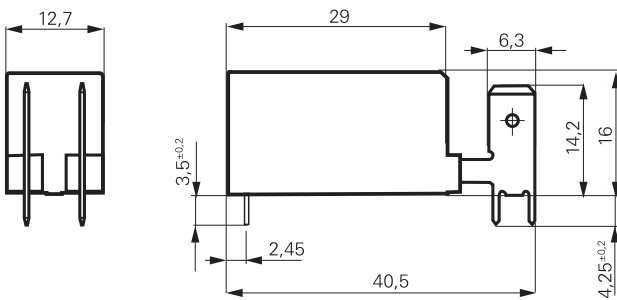


**1 NC contact**

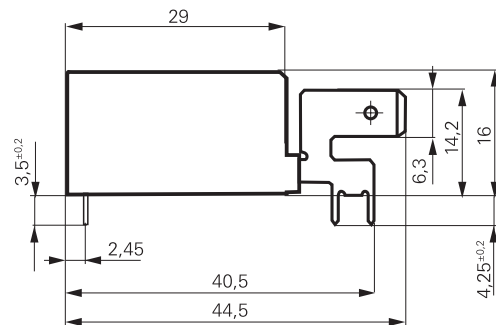


**Dimensions**

Quick connect terminals vertical



Quick connect terminals horizontal



**Power Relay RF (Continued)**

|                              |  |  |  |  |  |                      |          |          |          |            |           |
|------------------------------|--|--|--|--|--|----------------------|----------|----------|----------|------------|-----------|
| <b>Product key</b>           | Typical product key  |  |  |  |  | <b>RF</b>            | <b>3</b> | <b>3</b> | <b>4</b> | <b>012</b> | <b>WG</b> |
| <b>Type</b>                  | RF Power Relay RF  |  |  |  |  |                      |          |          |          |            |           |
| <b>Version</b>               | <b>3</b> 16 A, 85°C  |  |  |  |  | <b>H</b> 16 A, 105°C |          |          |          |            |           |
| <b>Contact configuration</b> | <b>3</b> 1 NO contact (1 form A), quick connect term. vertical<br><b>5</b> 1 NC contact (1 form B), quick connect term. vertical<br><b>D</b> 1 NO contact (1 form A), quick connect term. horizontal<br><b>F</b> 1 NC contact (1 form B), quick connect term. horizontal |  |  |  |  |                      |          |          |          |            |           |
| <b>Contact material</b>      | <b>4</b> AgNi 90/10  |  |  |  |  |                      |          |          |          |            |           |
| <b>Coil</b>                  | Coil code: please refer to coil versions table   |  |  |  |  |                      |          |          |          |            |           |
| <b>Version</b>               | <b>Blank</b> Standard version<br><b>WG</b> Product in accordance with IEC 60335-1 (domestic appliances)  |  |  |  |  |                      |          |          |          |            |           |

Wash tight version on request

| Product key | Version                         | Configuration                | Cont. material | Coil   | Part number |
|-------------|---------------------------------|------------------------------|----------------|--------|-------------|
| RF334006    | 16 A                            | 1 NO contact                 | AgNi 90/10     | 6 VDC  | 5-1415513-1 |
| RF334009    | 85°C                            | quick connect term. vertical |                | 9 VDC  | 7-1415513-1 |
| RF334012    |                                 |                              |                | 12 VDC | 8-1415513-1 |
| RF334024    |                                 |                              |                | 24 VDC | 9-1415513-1 |
| RF354006    |                                 | 1 NC contact                 |                | 6 VDC  | 2-1415514-1 |
| RF354009    |                                 | quick connect term. vertical |                | 9 VDC  | 3-1415514-1 |
| RF354012    |                                 |                              |                | 12 VDC | 4-1415514-1 |
| RF354024    |                                 |                              |                | 24 VDC | 5-1415514-1 |
| RFH34006    | 16 A                            | 1 NO contact                 |                | 6 VDC  | 8-1415510-1 |
| RFH34009    | 105°C                           | quick connect term. vertical |                | 9 VDC  | 9-1415510-1 |
| RFH34012    |                                 |                              |                | 12 VDC | 6-1415510-1 |
| RFH34024    |                                 |                              |                | 24 VDC | 1415511-1   |
| RFH54006    |                                 | 1 NC contact                 |                | 6 VDC  | 4-1415511-1 |
| RFH54009    |                                 | quick connect term. vertical |                | 9 VDC  | 5-1415511-1 |
| RFH54012    |                                 |                              |                | 12 VDC | 6-1415511-1 |
| RFH54024    |                                 |                              |                | 24 VDC | 7-1415511-1 |
| RF334006WG  | 16 A                            | 1 NO contact                 |                | 6 VDC  | 5-1415517-1 |
| RF334009WG  | 85°C                            | quick connect term. vertical |                | 9 VDC  | 6-1415517-1 |
| RF334012WG  | materials according IEC 60335-1 |                              |                | 12 VDC | 7-1415517-1 |
| RF334024WG  |                                 |                              |                | 24 VDC | 8-1415517-1 |
| RF354006WG  |                                 | 1 NC contact                 |                | 6 VDC  | 2-1415518-1 |
| RF354012WG  |                                 | quick connect term. vertical |                | 9 VDC  | 4-1415518-1 |
| RF354024WG  |                                 |                              |                | 12 VDC | 5-1415518-1 |
| RF354048WG  |                                 |                              |                | 24 VDC | 6-1415518-1 |
| RFH34006WG  | 16 A                            | 1 NO contact                 |                | 6 VDC  | 3-1415520-1 |
| RFH34009WG  | 105°C                           | quick connect term. vertical |                | 9 VDC  | 4-1415520-1 |
| RFH34012WG  | materials according IEC 60335-1 |                              |                | 12 VDC | 5-1415520-1 |
| RFH34024WG  |                                 |                              |                | 24 VDC | 6-1415520-1 |
| RFH54006WG  |                                 | 1 NC contact                 |                | 6 VDC  | 1415521-1   |
| RFH54009WG  |                                 | quick connect term. vertical |                | 9 VDC  | 1-1415521-1 |
| RFH54012WG  |                                 |                              |                | 12 VDC | 2-1415521-1 |
| RFH54024WG  |                                 |                              |                | 24 VDC | 3-1415521-1 |