

## Power PCB Relay RP11/1

- 1 pole 8/12/16A, 1 form C (CO) or 1 form A (NO) contact
- 4kV/8mm coil-contact
- Pinning 3.5 or 5mm (8/12A) and 5mm (16A)
- RoHS compliant (Directive 2011/65/EC)

### Typical applications

Power supplies, domestic appliances, heating control, installation



F0146-B

### Approvals

VDE Cert. No. 40025448, UL E214025 (VDE and UL for AgNi 90/10 in preparation)

Technical data of approved types on request

| Contact Data                              | 8A                             | 12A        | 16A        |
|-------------------------------------------|--------------------------------|------------|------------|
| Contact arrangement                       | 1 form C (CO) or 1 form A (NO) |            |            |
| Rated voltage                             | 250VAC                         |            |            |
| Max. switching voltage                    | 400VAC                         |            |            |
| Rated current                             | 8A                             | 12A        | 16A        |
| Limiting making current                   | 16A                            | 20A        | 25A        |
| Breaking capacity max.                    | 2000VA                         | 3000VA     | 4000VA     |
| Contact material                          | AgNi0.15                       | AgCdO,     | AgCdO,     |
|                                           |                                | AgNi 90/10 | AgNi 90/10 |
| Frequency of operation, with/without load | 600/72000h <sup>-1</sup>       |            |            |
| Operate/release time typ.                 | 8/2ms                          |            |            |
| Bounce time typ., form A/form B           | 2/4ms                          |            |            |

### Contact ratings

| Type            | Contact | Load                        | Cycles              |
|-----------------|---------|-----------------------------|---------------------|
| <b>IEC61810</b> |         |                             |                     |
| RP310           | A (NO)  | 16A, 250VAC resistive, 35°C | 100x10 <sup>3</sup> |
| RP410/418       | A (NO)  | 12A, 250VAC resistive, 35°C | 100x10 <sup>3</sup> |
| RP410/418       | C (CO)  | 10A, 250VAC resistive, 70°C | 100x10 <sup>3</sup> |
| RP411/418       | A (NO)  | 8A, 250VAC resistive, 35°C  | 100x10 <sup>3</sup> |

### Mechanical endurance

|                       |                                |
|-----------------------|--------------------------------|
| DC-coil version:      | >20x10 <sup>6</sup> operations |
| REM/bistable version: | >1x10 <sup>6</sup> operations  |

### Coil Data

|                            |             |
|----------------------------|-------------|
| Coil voltage range         | 5 to 110VDC |
| Operative range, IEC 61810 | 2           |

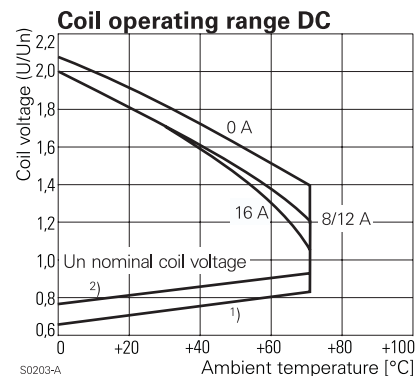
### Coil versions, DC coil

| Coil code | Rated voltage VDC | Operate voltage VDC | Release voltage VDC | Coil resistance $\Omega \pm 10\%^{(1)}$ | Rated coil power mW |
|-----------|-------------------|---------------------|---------------------|-----------------------------------------|---------------------|
| 005       | 5                 | 3.5                 | 0.5                 | 54                                      | 500                 |
| 006       | 6                 | 4.2                 | 0.6                 | 68                                      | 500                 |
| 012       | 12                | 8.4                 | 1.2                 | 270                                     | 500                 |
| 024       | 24                | 16.8                | 2.4                 | 1100 <sup>(1)</sup>                     | 500                 |
| 048       | 48                | 33.6                | 4.8                 | 4400 <sup>(1)</sup>                     | 500                 |
| 060       | 60                | 42.0                | 6.0                 | 6540 <sup>(1)</sup>                     | 500                 |
| 110       | 110               | 77.0                | 11.0                | 23100 <sup>(1)</sup>                    | 500                 |

1) Coil resistance  $\pm 15\%$ .

All figures are given for coil without pre-energization, at ambient temperature +20°C.

Other coil voltages on request.



### Insulation Data

|                                    |                      |
|------------------------------------|----------------------|
| Initial dielectric strength        |                      |
| between open contacts              | 1000V <sub>rms</sub> |
| between contact and coil           | 4000V <sub>rms</sub> |
| Clearance/creepage                 |                      |
| between contact and coil           | ≥8/8mm               |
| Material group of insulation parts | IIIa                 |

**Power PCB Relay RP11/1** (Continued)

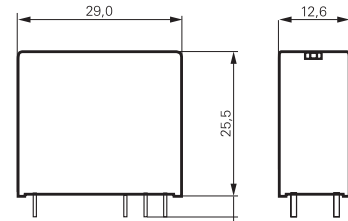
**Other Data**

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

|                                                               |                                       |
|---------------------------------------------------------------|---------------------------------------|
| Ambient temperature                                           | -40 to +70°C                          |
| Category of environmental protection                          | RTII - flux proof, RTIII - wash tight |
| IEC 61810                                                     |                                       |
| Vibration resistance (functional), form A/form B, 30 to 300Hz | 10/2g                                 |
| Shock resistance (destructive)                                | 100g                                  |
| Terminal type                                                 | PCB-THT                               |
| Weight                                                        | 18g                                   |
| Resistance to soldering heat THT, IEC 60068-2-20              |                                       |
| flux proof version                                            | 270°C/10s                             |
| wash tight version                                            | 260°C/5s                              |
| Packaging/unit                                                | tube/20 pcs., box/500 pcs.            |

**Dimensions**

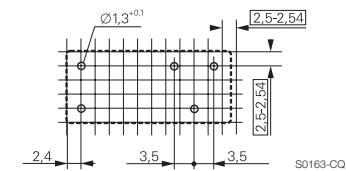
Dimensions in mm



S0273-AA

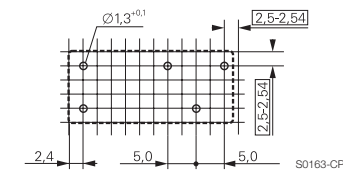
**PCB layout / terminal assignment**

8/12A, pinning 3.5 mm



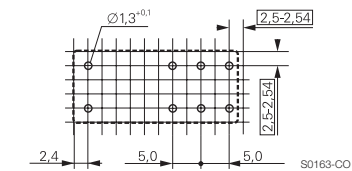
S0163-CQ

8/12A, pinning 5 mm



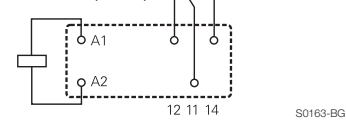
S0163-CP

16A, pinning 5 mm



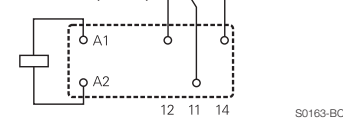
S0163-CO

1 form C (1 CO)



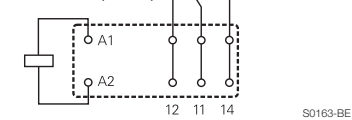
S0163-BG

1 form C (1 CO)



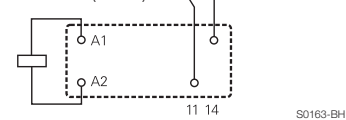
S0163-BC

1 form C (1 CO)



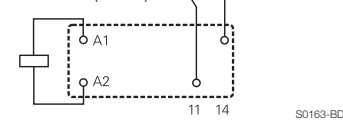
S0163-BE

1 form A (1 NO)



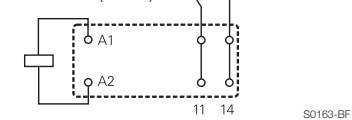
S0163-BH

1 form A (1 NO)



S0163-BD

1 form A (1 NO)



S0163-BF

**Product code structure**

Typical product code **RP 3 1 0 024**

**Type**

**RP** Power PCB Relay RP11/1

**Version**

|                            |                            |
|----------------------------|----------------------------|
| <b>3</b> 16A, flux proof   | <b>7</b> 16A, wash tight   |
| <b>4</b> 8/12A, flux proof | <b>8</b> 8/12A, wash tight |

**Contact arrangement**

|                                  |                                  |                                  |
|----------------------------------|----------------------------------|----------------------------------|
| <b>1</b> 1 form C contact (1 CO) | <b>3</b> 1 form A contact (1 NO) | <b>5</b> 1 form B contact (1 NC) |
|----------------------------------|----------------------------------|----------------------------------|

**Contact material and pinning**

|                                      |                                     |                                    |
|--------------------------------------|-------------------------------------|------------------------------------|
| <b>1</b> AgNi0.15, 8A, pinning 5mm   | <b>0</b> AgCdO, 12/16A, pinning 5mm | <b>4</b> AgNi 90/10, pinning 5mm   |
| <b>2</b> AgNi0.15, 8A, pinning 3.5mm | <b>8</b> AgCdO, 12A, pinning 3.5mm  | <b>N</b> AgNi 90/10, pinning 3.5mm |

**Coil**

Coil code: please refer to coil versions table

**Power PCB Relay RP11/1** (Continued)

| Product Code | Version         | Contacts              | Cont. Material | Pinning | Coil Version | Coil   | Part Number |
|--------------|-----------------|-----------------------|----------------|---------|--------------|--------|-------------|
| RP310012     | 16A, flux proof | 1 form C (CO) contact | AgCdO          | 5mm     | monostable   | 12VDC  | 2-1393230-9 |
| RP310024     |                 |                       |                |         |              | 24VDC  | 3-1393230-2 |
| RP310048     |                 |                       |                |         |              | 48VDC  | 3-1393230-3 |
| RP330012     |                 | 1 form A (NO) contact |                |         |              | 12VDC  | 4-1393230-7 |
| RP330024     |                 |                       |                |         |              | 24VDC  | 4-1393230-9 |
| RP330048     |                 |                       |                |         |              | 48VDC  | 5-1393230-1 |
| RP410024     | 12A, flux proof | 1 form C (CO) contact |                |         |              | 24VDC  | 8-1393230-2 |
| RP411024     | 8A, flux proof  |                       | AgNi0.15       |         |              | 24VDC  | 9-1393230-5 |
| RP412024     |                 |                       |                | 3,5mm   |              | 24VDC  | 1-1393231-2 |
| RP418012     | 12A, flux proof |                       | AgCdO          |         |              | 12VDC  | 2-1393231-5 |
| RP418024     |                 |                       |                |         |              | 24VDC  | 2-1393231-8 |
| RP438012     |                 | 1 form A (NO) contact |                |         |              | 12VDC  | 5-1393231-0 |
| RP710012     | 16A, wash tight | 1 form C (CO) contact |                | 5mm     |              | 12VDC  | 7-1393231-2 |
| RP710024     |                 |                       |                |         |              | 24VDC  | 7-1393231-5 |
| RP730012     |                 | 1 form A (NO) contact |                |         |              | 12VDC  | 8-1393231-2 |
| RP818012     | 12A, wash tight |                       |                | 3,5mm   |              | 12VDC  | 1-1393232-7 |
| RP314005     | 16A, flux proof | 1 form C (CO) contact | AgNi 90/10     | 5mm     |              | 5VDC   | 8-1415546-4 |
| RP314006     |                 |                       |                |         |              | 6VDC   | 8-1415546-5 |
| RP314010     |                 |                       |                |         |              | 10VDC  | 8-1415546-6 |
| RP314012     |                 |                       |                |         |              | 12VDC  | 8-1415546-7 |
| RP314024     |                 |                       |                |         |              | 24VDC  | 8-1415546-8 |
| RP314048     |                 |                       |                |         |              | 48VDC  | 8-1415546-9 |
| RP314110     |                 |                       |                |         |              | 110VDC | 9-1415546-0 |
| RP314F12     |                 |                       |                |         | REM II       | 12VDC  | 8-1415546-1 |
| RP314F24     |                 |                       |                |         |              | 24VDC  | 8-1415546-2 |
| RP334012     |                 | 1 form A (NO) contact |                |         | monostable   | 12VDC  | 9-1415546-1 |
| RP334024     |                 |                       |                |         |              | 24VDC  | 9-1415546-2 |
| RP334048     |                 |                       |                |         |              | 48VDC  | 9-1415546-4 |
| RP354012     |                 | 1 form B (NC) contact |                |         |              | 12VDC  | 9-1415546-5 |
| RP414012     | 12A, flux proof | 1 form C (CO) contact |                |         |              | 12VDC  | 1415546-4   |
| RP414024     |                 |                       |                |         |              | 24VDC  | 1415546-5   |
| RP414A24     |                 |                       |                |         | REM I        | 24VDC  | 9-1415546-6 |
| RP414F24     |                 |                       |                |         | REM II       | 24VDC  | 9-1415546-7 |
| RP434024     |                 | 1 form A (NO) contact |                |         | monostable   | 24VDC  | 9-1415546-3 |
| RP714006     | 16A, wash tight | 1 form C (CO) contact |                |         |              | 6VDC   | 9-1415546-8 |
| RP714012     |                 |                       |                |         |              | 12VDC  | 9-1415546-9 |
| RP714024     |                 |                       |                |         |              | 24VDC  | 1415546-1   |
| RP714048     |                 |                       |                |         |              | 48VDC  | 1415546-2   |
| RP734012     |                 | 1 form A (NO) contact |                |         |              | 12VDC  | 1415546-6   |
| RP734020     |                 |                       |                |         |              | 20VDC  | 1415546-7   |
| RP734024     |                 |                       |                |         |              | 24VDC  | 1415546-8   |
| RP734036     |                 |                       |                |         |              | 36VDC  | 1415546-9   |
| RP734A12     |                 |                       |                |         | REM I        | 12VDC  | 1415546-3   |
| RP814012     | 12A, wash tight | 1 form C (CO) contact |                |         | monostable   | 12VDC  | 1-1415547-0 |
| RP814024     |                 |                       |                |         |              | 24VDC  | 1-1415547-1 |
| RP814048     |                 |                       |                |         |              | 48VDC  | 1-1415547-2 |

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