

**Miniature PCB Relay PE**

- 1 pole 5 A, 1 form C (CO) or 1 form A (NO) contact
- Cadmium-free contacts
- Sensitive coil 200mW
- Ambient temperature 85°C
- Low height 10.0mm
- Plastic materials according to IEC 60335-1 (domestic appliances)



F0169-C



Typical applications  
Industrial electronics, white goods, measurement and control

**Approvals**

VDE Cert. No. 40011901, UL E214025  
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              | 5A                             |
| Breaking capacity max.     | 1250VA                         |
| Contact material           | AgNi 90/10, AgSnO <sub>2</sub> |
| Frequency of operation     |                                |
| with/without load          | 360/72000 ops/h                |
| Operate/release time       | typ. 8/8ms                     |
| Bounce time, form A/form B | typ. 4/6ms                     |

**Contact ratings**

| Type                          | Contact | Load                        | Cycles                          |
|-------------------------------|---------|-----------------------------|---------------------------------|
| <b>IEC 61810</b>              |         |                             |                                 |
| PE013                         | C (CO)  | 5A, 250VAC, cosφ=1, 85°C    | 30x10 <sup>3</sup>              |
| PE014/PE015                   | C (CO)  | 5A, 250VAC, cosφ=1, 85°C    | 100x10 <sup>3</sup>             |
| PE014                         | A (NO)  | 5A, 30VDC, 0ms, 85°C        | 100x10 <sup>3</sup>             |
| PE015                         | A (NO)  | 1,5A, 30VDC, 900/h, 50% DF  | 100x10 <sup>3</sup>             |
| PE034                         | A (NO)  | 6A, 250VAC, cosφ=1, 70°C    | 50x10 <sup>3</sup>              |
| <b>UL 508</b>                 |         |                             |                                 |
| PE013                         | C (CO)  | 5A, 240VAC, resistive, 85°C | 30x10 <sup>3</sup>              |
| PE014/PE015                   | C (CO)  | 5A, 240VAC, resistive, 85°C | 100x10 <sup>3</sup>             |
| PE014                         | A (NO)  | 5A, 30VDC, resistive, 85°C  | 100x10 <sup>3</sup>             |
| PE034                         | A (NO)  | 6A, 250VAC, resistive, 70°C | 100x10 <sup>3</sup>             |
| Mechanical endurance, DC coil |         |                             | >15x10 <sup>6</sup> operations. |

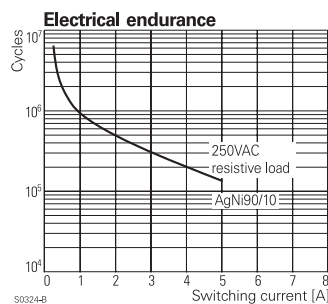
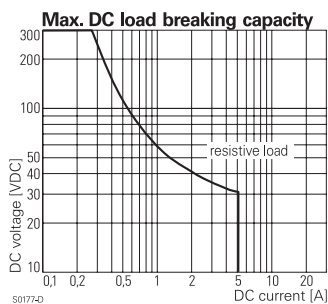
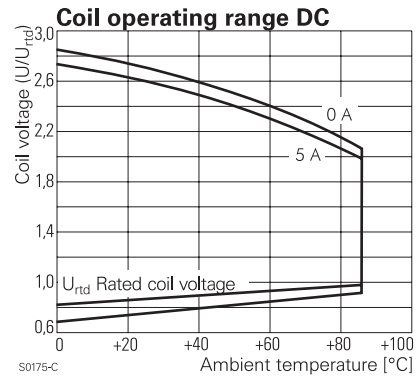
**Coil Data**

|                            |             |
|----------------------------|-------------|
| Coil voltage range         | 5 to 48 VDC |
| Operative range, IEC 61810 | 2           |

**Coil versions, DC coil**

| Coil code | Rated voltage VDC | Operate voltage VDC | Release voltage VDC | Coil resistance Ω±10% | Rated power mW |
|-----------|-------------------|---------------------|---------------------|-----------------------|----------------|
| 3         | 3                 | 2.25                | 0.3                 | 45                    | 200            |
| 5         | 5                 | 3.8                 | 0.5                 | 125                   | 200            |
| 6         | 6                 | 4.5                 | 0.6                 | 172                   | 209            |
| 9         | 9                 | 6.8                 | 0.9                 | 405                   | 200            |
| 12        | 12                | 9.0                 | 1.2                 | 685                   | 210            |
| 24        | 24                | 18.0                | 2.4                 | 2725                  | 211            |
| 48        | 48                | 36.0                | 4.8                 | 10970                 | 210            |

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 <sub>rms</sub>  |
| between contact and coil           | 4000V <sub>rms</sub>  |
| Initial insulation resistance      |                       |
| open contact circuit               | >10x10 <sup>9</sup> Ω |
| coil-contact circuit               | >10x10 <sup>9</sup> Ω |
| Clearance/creepage                 |                       |
| between contact and coil           | ≥3.2/4mm              |
| Material group of insulation parts | IIla                  |
| Tracking index of relay base       | PTI250V               |

**Miniature PCB Relay PE** (Continued)

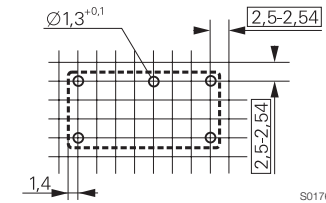
**Other Data**

|   |  |
|---|--|
| Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at <a href="http://www.te.com/customersupport/rohssupportcenter">www.te.com/customersupport/rohssupportcenter</a> |  |
| Resistance to heat and fire   | according EN60335, par.30                            |
| Ambient temperature   | -40 to 85°C  |
| Category of environmental protection, IEC 61810   | RTII - flux proof<br>(RTIII - wash tight on request) |
| Vibration resistance (functional), form A/form B  | >15/5g   |
| Shock resistance (destructive)  | >100g  |
| Terminal type   | PCB-THT  |
| Weight  | 5g   |
| Resistance to soldering heat THT  |  |
| IEC 60068-2-20  | 260°C/10s (flux proof version)                       |
| IEC 60068-2-20  | 250°C/5s (wash tight version)                        |
| Packaging/unit  | tube/25 pcs., box/500 pcs.                           |

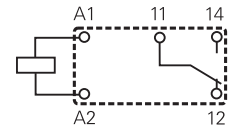
**PCB layout / terminal assignment**

Bottom view on solder pins

1 form C (CO) version

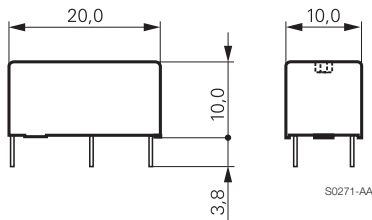


S0176-BA



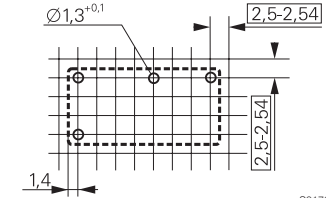
S0176-BB

**Dimensions**

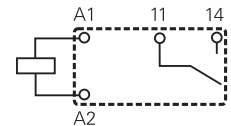


S0271-AA

1 form A (NO) version



S0176-BC



S0176-BD

**Product code structure**

Typical product code **PE 0 1 4 012**

|                            |  |                         |                          |  |
|----------------------------|--|-------------------------|--------------------------|--|
| <b>Type</b>                | PE Miniature PCB Relay PE                      |                         |                          |  |
| <b>Version</b>             | 0 Flux proof                                   | 5 Wash tight            |                          |  |
| <b>Contact arrangement</b> | 1 1 form C (CO) contact                        | 3 1 form A (NO) contact |                          |  |
| <b>Contact material</b>    | 4 AgNi 90/10                                   | 3 AgSnO <sub>2</sub>    | 5 AgNi 90/10 gold plated |  |
| <b>Coil</b>                | Coil code: please refer to coil versions table |                         |                          |  |

| Product code | Version    | Contacts     | Contact material | Coil  | Part number |
|--------------|------------|--------------|------------------|-------|-------------|
| PE014005     | flux proof | 1 form C     | AgNi 90/10       | 5VDC  | 1393219-3   |
| PE014006     |            |              | 1 CO contact     | 6VDC  | 1393219-4   |
| PE014012     |            |              |                  | 12VDC | 1393219-6   |
| PE014024     |            |              |                  | 24VDC | 1-1393219-0 |
| PE014048     |            |              |                  | 48VDC | 1-1393219-3 |
| PE015012     |            |              | AgNi 90/10       | 12VDC | 1-1393219-4 |
| PE015024     |            |              | gold plated      | 24VDC | 1-1393219-5 |
| PE034005     |            | 1 form A     | AgNi 90/10       | 5VDC  | 4-1415535-6 |
| PE034006     |            | 1 NO contact |                  | 6VDC  | 4-1415535-7 |
| PE034012     |            |              |                  | 12VDC | 4-1415535-9 |
| PE034024     |            |              |                  | 24VDC | 5-1415535-1 |
| PE034048     |            |              |                  | 48VDC | 5-1415535-2 |
| PE514012     | wash tight | 1 form C     | AgNi90/10        | 12VDC | 2-1393219-0 |
| PE514024     |            | 1CO contact  |                  | 24VDC | 2-1393219-2 |

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