

## Miniature Power PCB Relay PBH 105°C

- 1pole 6 A, 1 form C (CO) or 1 form A (NO) contact
- Environmentally-friendly cadmium-free contacts
- Class F coil system standard
- For ambient temperatures up to 105°C
- Product in accordance to IEC 60335-1



Typical applications  
White goods, domestic appliances.



### Approvals

VDE Cert. No. 40008364, UL E214025  
Technical data of approved types on request.

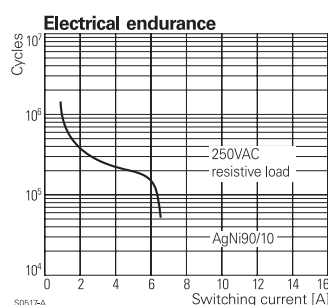
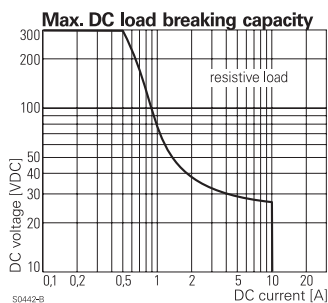
### Contact Data

|                                                   |                                |
|---------------------------------------------------|--------------------------------|
| Contact arrangement                               | 1 form C (CO) or 1 form A (NO) |
| Rated voltage                                     | 250VAC                         |
| Max. switching voltage                            | 400VAC                         |
| Rated current                                     | 6A                             |
| Limiting continuous current                       | 6.5 A                          |
| Limiting making current, max 4 s, duty factor 10% | 10A                            |
| Breaking capacity max.                            | 1500VA                         |
| Contact material                                  | AgNi 90/10                     |
| Frequency of operation, with/without load         | 360/36000h <sup>-1</sup>       |
| Operate/release time max.                         | 10/20ms                        |
| Bounce time max., form A/form B                   | 10/15ms                        |

### Contact ratings

| Type             | Contact | Load                         | Cycles              |
|------------------|---------|------------------------------|---------------------|
| <b>IEC 61810</b> |         |                              |                     |
| PBH14            | C (CO)  | 6.5A, 250VAC, cosφ=1, 105°C  | 10x10 <sup>3</sup>  |
| PBH34            | A (NO)  | 6.5A, 250VAC, cosφ=1, 105°C  | 100x10 <sup>3</sup> |
| PBH14            | A of C  | 6.5A, 250VAC, cosφ=1, 105°C  | 100x10 <sup>3</sup> |
| PBH34            | A (NO)  | 2A, 250VAC, cosφ=0.55, 105°C | 250x10 <sup>3</sup> |
| PBH14            | A of C  | 2A, 250VAC, cosφ=0.55, 105°C | 250x10 <sup>3</sup> |
| PBH34            | A (NO)  | 6.5A, 440VAC, cosφ=1, 105°C  | 50x10 <sup>3</sup>  |
| <b>UL 508</b>    |         |                              |                     |
| PBHx4            | A (NO)  | 6A, 415VAC, cosφ=1, 105°C    | 50x10 <sup>3</sup>  |

Mechanical endurance, DC coil 2x10<sup>6</sup> operations



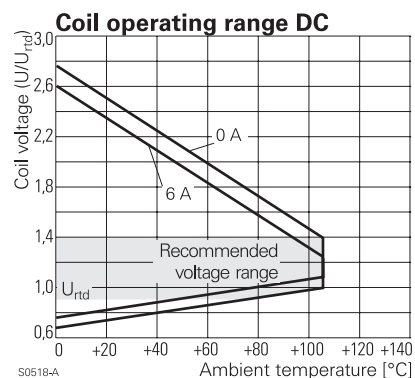
### Coil Data

|                                                  |             |
|--------------------------------------------------|-------------|
| Coil voltage range                               | 5 to 36 VDC |
| Operative voltage range, % of rated coil voltage | 90 to 100 % |

### Coil versions, DC coil

| Coil code | Rated voltage VDC | Operate voltage VDC | Release voltage VDC | Coil resistance Ω±10% | Rated coil power mW |
|-----------|-------------------|---------------------|---------------------|-----------------------|---------------------|
| 005       | 5                 | 3.75                | 0.5                 | 70                    | 357                 |
| 006       | 6                 | 4.50                | 0.6                 | 100                   | 360                 |
| 009       | 9                 | 6.75                | 0.9                 | 225                   | 360                 |
| 012       | 12                | 9.00                | 1.2                 | 400                   | 360                 |
| 018       | 18                | 13.50               | 1.8                 | 900                   | 360                 |
| 022       | 22                | 16.50               | 2.2                 | 1344                  | 360                 |
| 024       | 24                | 18.00               | 2.4                 | 1600                  | 360                 |
| 048       | 48                | 36.00               | 4.8                 | 6400                  | 360                 |

All figures are given for coil without pre-energization, at ambient temperature +23°C.  
Other coil voltages on request.



### Insulation Data

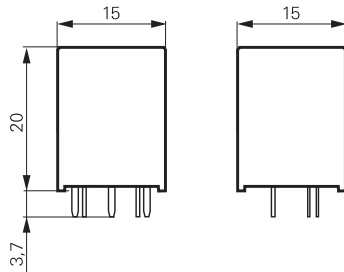
|                                    |                     |
|------------------------------------|---------------------|
| Initial dielectric strength        |                     |
| between open contacts              | 1000V <sub>ms</sub> |
| between contact and coil           | 2500V <sub>ms</sub> |
| Clearance/creepage                 |                     |
| between contact and coil           |                     |
| form C (CO) version                | ≥3/4mm              |
| form A (NO)                        | ≥4/5mm              |
| Material group of insulation parts | IIla                |
| Tracking index of relay base       | PTI250              |

**Miniature Power PCB Relay PBH 105°C** (Continued)

**Other Data**

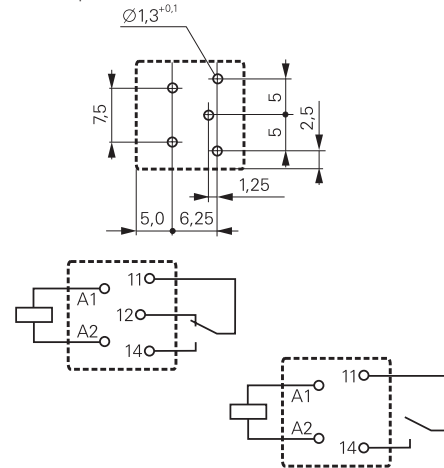
|                                                                                                                                                                                                                                         |                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| 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 EN60335, par.30   |
| Ambient temperature, DC coil                                                                                                                                                                                                            | -20 to +105°C               |
| Category of environmental protection                                                                                                                                                                                                    | IEC 61810                   |
|                                                                                                                                                                                                                                         | RTII - flux proof           |
| Vibration resistance (functional)                                                                                                                                                                                                       | form A/form B, 30 to 400Hz  |
|                                                                                                                                                                                                                                         | >10/4g                      |
| Shock resistance (destructive)                                                                                                                                                                                                          | >100g                       |
| Terminal type                                                                                                                                                                                                                           | PCB-THT                     |
| Weight                                                                                                                                                                                                                                  | 5.4g                        |
| Resistance to soldering heat THT                                                                                                                                                                                                        | IEC 60068-2-20              |
|                                                                                                                                                                                                                                         | 270°C/10s                   |
| Packaging/unit                                                                                                                                                                                                                          | tube/35 pcs., box/1050 pcs. |

**Dimensions**



**PCB layout<sup>1)</sup> / terminal assignment**

Bottom view on solder pins



**<sup>1)</sup> Layout note:**

No openings (e.g. holes, slots, cutouts, unused pins, open through connexions, etc.) allowed under the relay base. The relay base must be fully covered by the PCB, recommended minimum distance between the relay and the edge of the printed circuit board is 5 mm.

For more information, please contact our application support.

**Product code structure**

Typical product code **PB H 1 4 012**

**Type**

**PB** Miniature Power PCB Relay PB 105°C

**Version**

**H** High temperature version

**Contact configuration**

**1** 1 form C contact (1 CO) **3** 1 form A contact (1 NO)

**Contact material**

**4** AgNi 90/10

**Coil**

Coil code: please refer to coil versions table

Other types on request.

| Product code | Version                  | Contacts     | Contact material | Coil  | Part number |
|--------------|--------------------------|--------------|------------------|-------|-------------|
| PBH14005     | High temperature version | 1 form C     | AgNi 90/10       | 5VDC  | 9-1415356-1 |
| PBH14006     |                          | 1 CO contact |                  | 6VDC  | 8-1415356-1 |
| PBH14009     |                          |              |                  | 9VDC  | 7-1415356-1 |
| PBH14012     |                          |              |                  | 12VDC | 6-1415356-1 |
| PBH14018     |                          |              |                  | 18VDC | 6-1415357-1 |
| PBH14022     |                          |              |                  | 22VDC | 7-1415357-1 |
| PBH14024     |                          |              |                  | 24VDC | 6-1415355-1 |
| PBH14036     |                          |              |                  | 36VDC | 9-1415355-1 |
| PBH34005     |                          | 1 form A     |                  | 5VDC  | 5-1415356-1 |
| PBH34006     |                          | 1 NO contact |                  | 6VDC  | 4-1415356-1 |
| PBH34009     |                          |              |                  | 9VDC  | 3-1415356-1 |
| PBH34012     |                          |              |                  | 12VDC | 2-1415356-1 |
| PBH34018     |                          |              |                  | 18VDC | 8-1415357-1 |
| PBH34022     |                          |              |                  | 22VDC | 9-1415357-1 |
| PBH34024     |                          |              |                  | 24VDC | 1-1415356-1 |
| PBH34036     |                          |              |                  |       | 36VDC       |

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[2-1415356-1](#)