

## Miniature PCB Relay PCJ

- 1pole 3A/5A, 1 form A (NO) contact
- Sensitive coil 200mW
- Ambient temperature 85°C
- RoHS compliant (Directive 2002/95/EC)
- WG version : Product in accordance to IEC60335-1

Typical applications  
Home appliances



F0276-C



### Approvals

VDE 40009151, UL E58304, CSA LR48471-211, CQC 03001008593  
Technical data of approved types on request

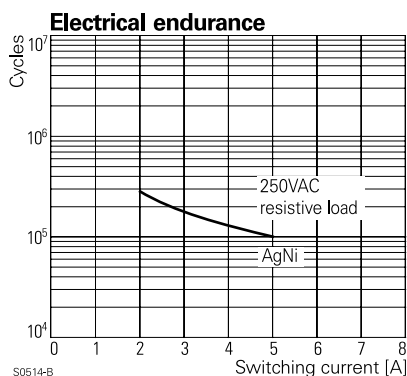
### Contact Data

|   |                           |
|---|---------------------------|
| Contact arrangement                       | 1 form A (NO)             |
| Rated voltage                             | 250VAC                    |
| Max. switching voltage                    | 30VDC, 250VAC             |
| Rated current                             | 3A/5A                     |
| Switching power                           | 1,250VA, 150W             |
| Contact material                          | AgNi                      |
| Min. recommended contact load             | 100mA, 5VDC               |
| Initial contact resistance                | 100mΩ at 1A, 6VDC         |
| Frequency of operation, with/without load | 1800/18000h <sup>-1</sup> |
| Operate/release time max.                 | 10/4ms                    |
| Electrical endurance                      |                           |
| 3A version: 250VAC, resistive,            | 100x10 <sup>3</sup> ops.  |
| 5A version: 250VAC, resistive,            | 100x10 <sup>3</sup> ops.  |

### Contact ratings

| Type             | Contact     | Load                          | Cycles              |
|------------------|-------------|-------------------------------|---------------------|
| <b>IEC 61810</b> |             |                               |                     |
| PCJ              | form A (NO) | 5A, 250VAC, cosφ=1, 85°C      | 100x10 <sup>3</sup> |
| PCJ              | form A (NO) | 2A, 250VAC, cosφ=1, 85°C      | 100x10 <sup>3</sup> |
| PCJ              | form A (NO) | 3A, 250VAC, cosφ=1, 105°C     | 100x10 <sup>3</sup> |
| <b>UL 508</b>    |             |                               |                     |
| PCJ              | form A (NO) | 5A, 250VAC, general use, 85°C | 6x10 <sup>3</sup>   |
| PCJ              | form A (NO) | 3A, 250VAC, cosφ=1, 85°C      | 100x10 <sup>3</sup> |
| PCJ              | form A (NO) | 3A, 250VAC, cosφ=1, 105°C     | 100x10 <sup>3</sup> |

Mechanical endurance >10x10<sup>6</sup> operations



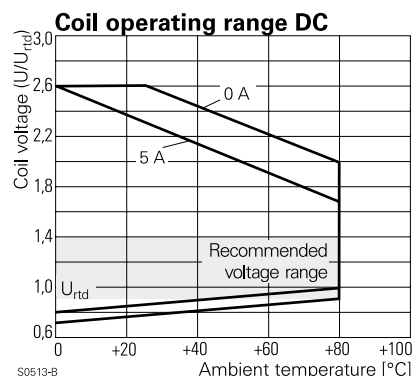
### Coil Data

|                                     |               |
|-------------------------------------|---------------|
| Coil voltage range                  | 3 to 24VDC    |
| Coil insulation system according UL |               |
| 3A version:                         | class 105 (A) |
| 5A version:                         | class 155 (F) |

### Coil versions, DC coil

| Coil code | Rated voltage VDC | Operate voltage VDC | Release voltage VDC | Coil resistance Ω±10% | Rated coil power mW |
|-----------|-------------------|---------------------|---------------------|-----------------------|---------------------|
| 03        | 3                 | 2.25                | 0.15                | 45                    | 200                 |
| 05        | 4                 | 3.75                | 0.25                | 125                   | 200                 |
| 06        | 6                 | 4.50                | 0.3                 | 180                   | 200                 |
| 09        | 9                 | 6.75                | 0.45                | 405                   | 200                 |
| 12        | 12                | 9.00                | 0.6                 | 720                   | 200                 |
| 24        | 24                | 18.00               | 1.2                 | 2880                  | 200                 |

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



### Insulation Data

|                                 |                      |
|---------------------------------|----------------------|
| Initial dielectric strength     |                      |
| between open contacts           | 750V <sub>rms</sub>  |
| between contact and coil        | 4000V <sub>rms</sub> |
| Initial surge withstand voltage |                      |
| between contact and coil        | 7000V                |
| Initial insulation resistance   | 1000MΩ               |
| Clearance/creepage              |                      |
| between contact and coil        | ≥ 5.5/8mm            |

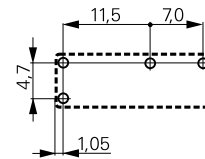
**Miniature PCB Relay PCJ** (Continued)

**Other Data**

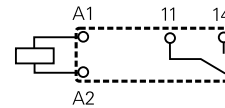
|   |  |
|---|--|
| Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at <a href="http://www.tycoelectronics.com/customersupport/rohssupportcenter">www.tycoelectronics.com/customersupport/rohssupportcenter</a> |  |
| Ambient temperature   | -40 to 85°C (105°C)                      |
| Category of environmental protection  | IEC 61810                                |
|   | RTII - flux proof,<br>RTIII - wash tight |
| Vibration resistance (functional)   | 10 to 50Hz, 1.5mm double amplitude       |
| Shock resistance (functional)   |  |
| IEC 60068-2-27 (half sine)  | 98m/s <sup>2</sup> , 11ms                |
| Terminal type   | PCB-THT                                  |
| Weight  | 4g                                       |
| Resistance to soldering heat THT  |  |
| IEC 60068-2-20  | 260°C/5s                                 |
| Packaging/unit  | box/1000 pcs.                            |

**PCB layout / terminal assignment**

Bottom view on solder pins

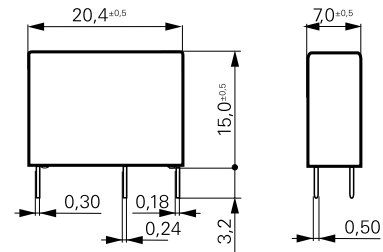


S-511-AA



S0511-AB

**Dimensions**



S0512-C

**Product code structure**

Typical product code

**PCJ 1 12 D 3 M 301**

|                            |  |
|----------------------------|--|
| <b>Type</b>                | <b>PCJ</b> Miniature PCB Relay PCJ   |
| <b>Version</b>             | <b>1</b> Single contact  |
| <b>Coil</b>                | Coil code: please refer to coil versions table   |
| <b>Coil power</b>          | <b>D</b> Standard 200mW  |
| <b>Contact material</b>    | <b>3</b> AgNi  |
| <b>Contact arrangement</b> | <b>M</b> 1 form A (NO) contact   |
| <b>Sealing</b>             | <b>Blank</b> Flux proof <b>H</b> Wash tight*   |
| <b>Suffix</b>              | <b>301</b> Standard version<br><b>WG</b> Product in accordance with IEC 60335-1 (domestic appliances)* |

\*) Wash tight WG version on request

**Miniature PCB Relay PCJ** (Continued)

| Product code    | Version | Contact       | Cont. material | Coil version | Coil  | Sealing    | Part number |
|-----------------|---------|---------------|----------------|--------------|-------|------------|-------------|
| PCJ-103D3M,301  | 3A      | 1 form A (NO) | AgNi           | 200mW        | 3VDC  | Flux proof | 1721081-1   |
| PCJ-105D3M,301  |         |               |                |              | 5VDC  |            | 1721081-2   |
| PCJ-106D3M,301  |         |               |                |              | 6VDC  |            | 1721081-3   |
| PCJ-109D3M,301  |         |               |                |              | 9VDC  |            | 1721081-4   |
| PCJ-112D3M,301  |         |               |                |              | 12VDC |            | 1721081-5   |
| PCJ-124D3M,301  |         |               |                |              | 24VDC |            | 1721081-7   |
| PCJ-103D3MH,301 |         |               |                |              | 3VDC  | Wash tight | 1721081-8   |
| PCJ-105D3MH,301 |         |               |                |              | 5VDC  |            | 1721081-9   |
| PCJ-106D3MH,301 |         |               |                |              | 6VDC  |            | 1-1721081-0 |
| PCJ-109D3MH,301 |         |               |                |              | 9VDC  |            | 1-1721081-1 |
| PCJ-112D3MH,301 |         |               |                |              | 12VDC |            | 1-1721081-2 |
| PCJ-124D3MH,301 |         |               |                |              | 24VDC |            | 1-1721081-4 |
| PCJ-103D3M-WG   | 5A      |               |                |              | 3VDC  | Flux proof | 1721547-1   |
| PCJ-105D3M-WG   |         |               |                |              | 5VDC  |            | 1721547-2   |
| PCJ-106D3M-WG   |         |               |                |              | 6VDC  |            | 1721547-3   |
| PCJ-109D3M-WG   |         |               |                |              | 9VDC  |            | 1721547-4   |
| PCJ-112D3M-WG   |         |               |                |              | 12VDC |            | 1721547-5   |
| PCJ-124D3M-WG   |         |               |                |              | 24VDC |            | 1721547-7   |
| PCJ-103D3MH-WG  |         |               |                |              | 3VDC  | Wash tight | 1721547-8   |
| PCJ-105D3MH-WG  |         |               |                |              | 5VDC  |            | 1721547-9   |
| PCJ-106D3MH-WG  |         |               |                |              | 6VDC  |            | 1-1721547-0 |
| PCJ-109D3MH-WG  |         |               |                |              | 9VDC  |            | 1-1721547-1 |
| PCJ-112D3MH-WG  |         |               |                |              | 12VDC |            | 1-1721547-2 |
| PCJ-124D3MH-WG  |         |               |                |              | 24VDC |            | 1-1721547-4 |