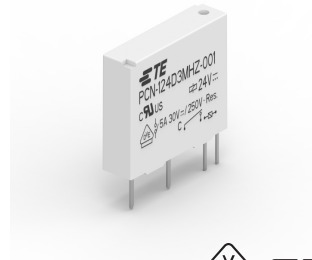


Slimline PCB Relay PCN

- 1 pole 3 A, 1 form A (NO) contact
- Only 5mm wide
- 3A switching current, load range 1mA up to 5A
- Sensitive coil 120mW
- Allows high function-/packing density
- Cadmium-free contacts
- Z type with reinforced insulation
- RoHS compliant (Directive 2002/95/EC)
- Haz. Loc. Version available

Typical applications
PLC, temperature control, I/O modules.



Approvals

VDE REG.-Nr.40001589, UL E82292, CQC 08001026045
Technical data of approved types on request.

Contact Data

| | |
|---|--------------------------|
| Contact arrangement | 1 from A (NO) |
| Rated voltage | 250VAC/30VDC |
| Max. switching voltage | 277VAC/125VDC |
| Rated current | 3A/5A |
| Limiting continuous current | 3A/5A |
| Breaking capacity max. | 750VA (3A), 1250VA(5A) |
| Contact material | AgNi, gold plated |
| Contact style | bifurcated contact |
| Min. recommended contact load (reference) | 5VDC, 100mA |
| Initial contact resistance | 30mΩ at 100mA, 6VDC |
| Frequency of operation, with/without load | 10/300min ⁻¹ |
| Electrical endurance | |
| 3A, 250VAC, resistive, +70°C | 100x10 ³ ops. |
| 5A, 250VAC, resistive, +85°C | 30x10 ³ ops. |

Contact ratings

| Load | Cycles |
|---------------------------------|---------------------|
| IEC 61810 | |
| 3A, 250VAC, cosφ=1, +70°C | 100x10 ³ |
| 3A/30VDC, L/R=0ms, +70°C | 100x10 ³ |
| 5A, 250VAC, cosφ=1, +85°C | 30x10 ³ |
| 5A 30VDC, L/R=0ms, +85°C | 70x10 ³ |
| UL 508 | |
| 3A, 250VAC, resistive, +25°C | 100x10 ³ |
| Pilot duty, B300, +25°C | 6x10 ³ |
| Pilot duty, R300, +25°C | 6x10 ³ |
| 9A LRA, 1.5A FLA, 240VAC, +45°C | 30x10 ³ |

Mechanical endurance, DC coil >10x10⁶ operations

Coil Data

| | |
|-------------------------------------|------------|
| Coil voltage range | 3 to 24VDC |
| Operative range, IEC 61810 | 1 |
| Coil insulation system according UL | Class A |
| Class F type available upon request | |

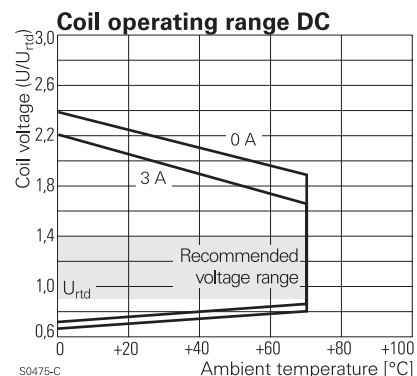
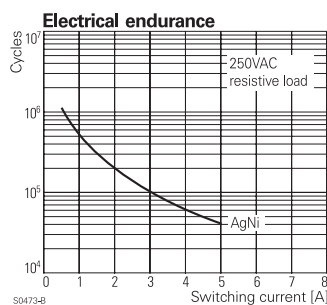
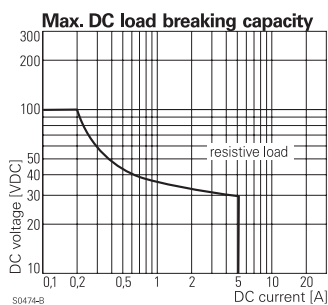
Standard D coil version (120mW), DC coil

| Coil code | Rated voltage VDC | Operate voltage VDC | Release voltage VDC | Coil resistance Ω±10% | Rated coil power mW |
|-----------|-------------------|---------------------|---------------------|-----------------------|---------------------|
| 03 | 3 | 2.1 | 0.3 | 75 | 120 |
| 04 | 4.5 | 3.15 | 0.45 | 169 | 120 |
| 05 | 5 | 3.5 | 0.5 | 208 | 120 |
| 06 | 6 | 4.2 | 0.6 | 300 | 120 |
| 09 | 9 | 6.3 | 0.9 | 675 | 120 |
| 12 | 12 | 8.4 | 1.2 | 1200 | 120 |
| 18 | 18 | 12.6 | 1.8 | 2700 | 120 |
| 23 | 23.5 | 16.45 | 2.35 | 4602 | 120 |
| 24 | 24 | 16.8 | 2.4 | 4800 | 120 |

Standard L coil version (100mW), DC coil

| Coil code | Rated voltage VDC | Operate voltage VDC | Release voltage VDC | Coil resistance Ω±10% | Rated coil power mW |
|-----------|-------------------|---------------------|---------------------|-----------------------|---------------------|
| 03 | 3 | 2.1 | 0.3 | 90 | 100 |
| 04 | 4.5 | 3.15 | 0.45 | 202 | 100 |
| 05 | 5 | 3.5 | 0.5 | 250 | 100 |
| 06 | 6 | 4.2 | 0.6 | 360 | 100 |
| 09 | 9 | 6.3 | 0.9 | 810 | 100 |
| 12 | 12 | 8.4 | 1.2 | 1440 | 100 |
| 18 | 18 | 12.6 | 1.8 | 3240 | 100 |
| 23 | 23.5 | 16.45 | 2.35 | 5522 | 100 |
| 24 | 24 | 16.8 | 2.4 | 5760 | 100 |

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



Slimline PCB Relay PCN (Continued)

Insulation Data

| | |
|---------------------------------|----------------------|
| Initial dielectric strength | |
| between open contacts | 750V |
| between contact and coil | 3000V _{rms} |
| Initial surge withstand voltage | |
| between contact and coil | 4000V |
| Clearance/creepage | |
| between contact and coil | >3.5mm |
| Tracking index of relay base | PTI600 |

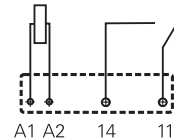
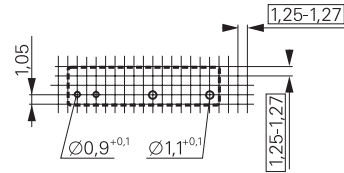
Other Data

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customer-support/rohssupportcenter

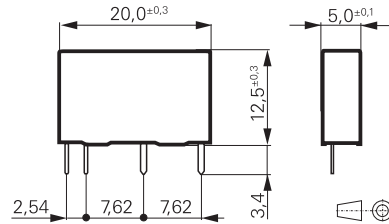
| | |
|--------------------------------------|--------------------------------|
| Ambient temperature | -40 to 85°C |
| Category of environmental protection | |
| IEC 61810 | RTIII - wash tight |
| Vibration resistance (functional) | 10 to 55Hz, 1.5mm |
| Vibration resistance (destructive) | 10 to 55Hz, 1.5mm |
| Shock resistance (functional) | |
| IEC 60068-2-27 (half sine) | min. 98m/s ² , 11ms |
| Shock resistance (destructive) | min. 980m/s ² , 6ms |
| Terminal type | PCB-THT |
| Resistance to soldering heat THT | |
| IEC 60068-2-20 | 260°C/5s |
| Packaging/unit | box/2000 pcs. |

PCB layout / terminal assignment

Bottom view on solder pins



Dimensions



Product code structure

Typical product code

PCN 1 05 D 3 M H Z ,001

| | |
|----------------------------|---|
| Type | PCN Small Slim Power PCB Relay PCN |
| Number of poles | 1 1pole |
| Coil | Coil code: please refer to coil versions table (e.g. 05=5VDC) |
| Coil version | D standard 120mW L high sensitivity 100mW |
| Contact material | 3 AgNi |
| Contact arrangement | M 1 form A, 1 NO contact |
| Enclosure | H RTIII - wash tight |
| Insulation | Z Reinforced insulation (tracking resistance of relay base, case PTI 600) |
| Version | 00000 3A model 00100 5A model -EX1 according to IEC60079-15 = 2010 |

| Product code | Contact | Coil voltage | Coil | Cont. material | Enclosure | Rating | Part number |
|-----------------------|---------|--------------|-------|----------------|--------------------|--------|-----------------|
| PCN-105D3MHZ,000 | 1-pole | 5VDC | 120mW | AgNi | RTIII - wash tight | 3A | 3-1461491-0 |
| PCN-106D3MHZ,000 | | 6VDC | | | | | 3-1461491-1 |
| PCN-112D3MHZ,000 | | 12VDC | | | | | 3-1461491-3 |
| PCN-124D3MHZ,000 | | 24VDC | | | | | 3-1461491-6 |
| PCN-124D3MHZ,001 | 12VDC | 12VDC | | | | 5A | 3-1461491-8 All |
| PCN-112D3MZ-EX1,00400 | | | | | | | 2071520-1 |

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

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