

Miniature Power Relay PTF

- 2 pole 15 A, 2 CO contacts
- DC or AC coil
- Plug-in version, PCB or chassis mount version
- RoHS compliant (Directive 2002/95/EC)

Applications

Panel boards, domestic appliances



F0281-A

Approvals

VDE REG.-Nr. A379, cULus E58304
Technical data of approved types on request

Contact data

| | |
|--|--|
| Contact configuration | 2 CO contacts |
| Contact set | single contact |
| Type of interruption | micro disconnection |
| Rated current | 10 A / 250 VAC 15 A / 120 VAC |
| Rated voltage / max.switching voltage AC | 240/400 VAC |
| Maximum breaking capacity AC | 2500 VA / 250 VAC 1800 VA / 120 VAC |
| Limiting making capacity, max 20 ms | 20 A / 250 VAC 30 A / 120 VAC |
| Contact material | AgNi90/10 |
| Minimum contact load | 5V/100mA |
| Mechanical endurance DC coil | 20x10 ⁶ cycles |
| AC coil | 15x10 ⁶ cycles |
| Rated frequency of operation with / without load | 6/600 min ⁻¹ |

Contact ratings

| Type | Load | Cycles |
|------|--------------------------------------|---|
| PTF2 | 15 A, 120 VAC, NO, DC coil / AC coil | 100x10 ³ / 50x10 ³ |
| PTF2 | 10 A, 250 VAC, NO, DC coil / AC coil | 200x10 ³ / 100x10 ³ |
| PTF2 | 10 A, 24 VDC, NO, DC coil / AC coil | 100x10 ³ / 50x10 ³ |

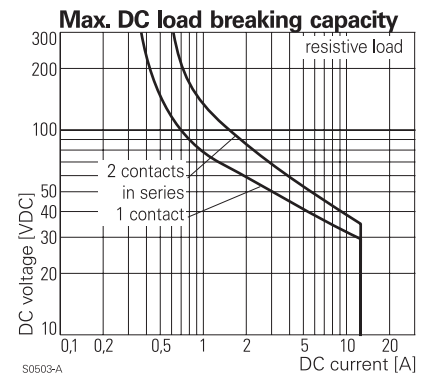
Coil data

| | |
|---|-------------|
| Rated coil voltage range DC coil | 6...220 VDC |
| AC coil | 6...230 VAC |
| Coil power DC coil | 0.75 W |
| AC coil | 1.0 VA |
| Operative range DC coil, AC-coil 50Hz | 2 |
| AC coil 60 Hz at 70°C, % of U _{rtid} | 90..110% |

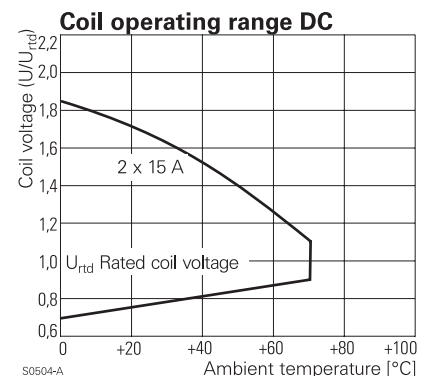
Coil versions, DC-coil

| Coil code | LED | Rated voltage | Operate voltage | Release voltage | Coil resistance | Rated coil power |
|------------|------------|---------------|-----------------|-----------------|-----------------|------------------|
| STD | bipolar | VDC | VDC | VDC | Ohm | mW |
| 006 | L06 | 6 | 4.5 | 0.6 | 48±10% | 750 |
| 012 | L12 | 12 | 9.0 | 1.2 | 192±10% | 750 |
| 024 | L24 | 24 | 18.0 | 2.4 | 777±10% | 741 |
| 048 | L48 | 48 | 36.0 | 4.8 | 3072±10% | 750 |
| 060 | L60 | 60 | 45.0 | 6.0 | 4845±12% | 743 |
| 110 | M10 | 110 | 82.5 | 11.0 | 16133±15% | 750 |
| 220 | N20 | 220 | 165.0 | 22.0 | 64533±15% | 750 |

All figures are given for coil without preenergization, at ambient temperature +23°C



S0503-A



S0504-A

Coil versions, AC-coil 50/60 Hz

| Coil code | LED | Rated voltage VAC | Operate voltage 50/60Hz VAC | Release voltage 50/60Hz VAC | Coil resistance Ohm | Rated coil power 50/60Hz VA |
|------------|------------|----------------------|-----------------------------------|-----------------------------------|------------------------|-----------------------------------|
| 506 | R06 | 6 | 4.8/5.4 | 1.8 | 11±10% | 1.0/0.85 |
| 512 | R12 | 12 | 9.6/10.8 | 3.6 | 48±10% | 1.0/0.85 |
| 524 | R24 | 24 | 19.2/21.6 | 7.2 | 192±10% | 1.0/0.79 |
| 548 | R48 | 48 | 38.4/43.2 | 14.4 | 777±10% | 1.0/0.87 |
| 560 | R60 | 60 | 48.0/54.0 | 18.0 | 1306±10% | 1.0/0.87 |
| 615 | S15 | 115 | 92.0/103.5 | 34.5 | 4845±12% | 1.0/0.86 |
| 730 | T30 | 230 | 184.0/207.0 | 69.0 | 19465±15% | 1.0/0.90 |

All figures are given for coil without preenergization, at ambient temperature +23°C

Insulation

| | |
|---|-----------------------|
| Dielectric strength coil-contact circuit | 2500 V _{rms} |
| open contact circuit | 1200 V _{rms} |
| adjacent contact circuits | 2500 V _{rms} |
| Clearance / creepage coil-contact circuit | ≥ 3.1/3.1 mm |
| adjacent contact circuits | ≥ 4.4/8.8 mm |
| Material group of insulation parts | ≥ IIIa |
| Insulation to IEC 60664-1 | |
| Type of insulation coil-contact circuit | basic |
| open contact circuit | functional |
| adjacent contact circuits | basic |
| Rated insulation voltage | 250 V |
| Pollution degree | 2 |
| Rated voltage system | 240/400 V |
| Overvoltage category | III |

Other data

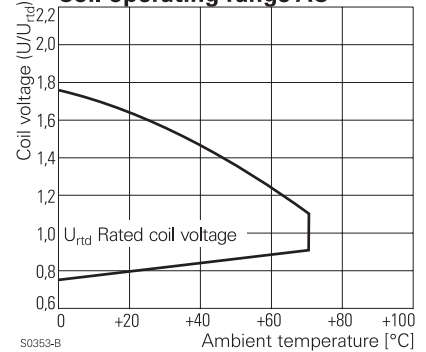
| | |
|---|-------------------|
| RoHS - Directive 2002/95/EC | compliant |
| Ambient temperature range | -40...+70°C |
| Operate- / release time | 15/10 ms |
| Bounce time NO / NC contact | 5 ms |
| Vibration resistance (function) NO / NC contact | 7/4 g |
| Shock resistance (function) NO / NC contact | 20/5 g |
| Category of protection | RTII - flux proof |
| Resistance to soldering heat | 270°C / 10 s |
| Relay weight | 30 g |
| Packaging unit | 20 pcs |

Accessories

For details see datasheet

Accessories Miniature Power Relay PTF

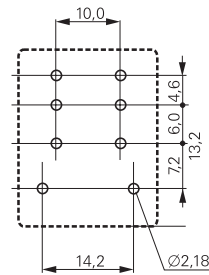
Coil operating range AC



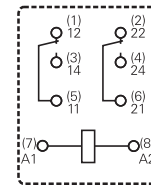
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PCB layout / terminal assignment

Bottom view on pins



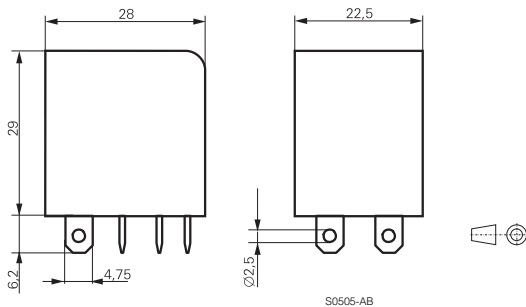
S0507-AA



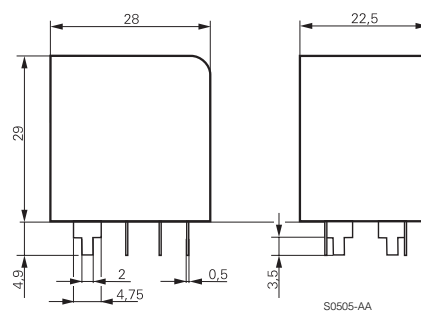
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Dimensions

Solder- and plug-in terminals (standard version)



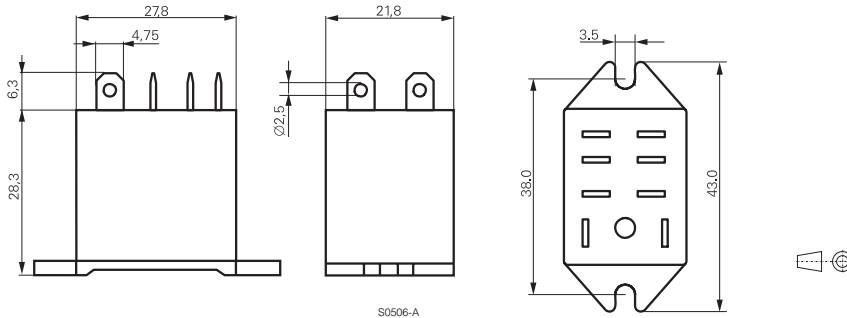
PCB version



Miniature Power Relay PTF (Continued)

Dimensions

Flange mount version



Product key



Type

Contact material

2 AgNi 90/10

Version

- 0** Quick connect terminals
- 1** PCB terminals
- 2** Flange mount cover

Coil

Coil code: please refer to coil versions table, preferred types in bold print

| Product key | Contacts | Cont. material | Terminal | Coil | Coil | Part number |
|-------------|----------|----------------|---------------------|----------|---------|-------------|
| PTF20024 | 2 CO | AgNi 90/10 | quick connect term. | DC-coil | 24 VDC | 0-1461937-3 |
| PTF21024 | contacts | | PCB | | | 1-1461937-0 |
| PTF20524 | | | quick connect term. | AC-coil | 24 VAC | 0-1461938-3 |
| PTF20615 | | | | | 115 VAC | 0-1461938-7 |
| PTF20730 | | | | | 230 VAC | 0-1461938-9 |
| PTF21524 | | | PCB | | 24 VAC | 1-1461938-2 |
| PTF21615 | | | | | 115 VAC | 1-1461938-6 |
| PTF21730 | | | | | 230 VAC | 1-1461938-8 |
| PTF20L24 | | | quick connect term. | DC + LED | 24 VDC | 0-1461944-3 |
| PTF20R24 | | | | AC + LED | 24 VAC | 0-1461945-3 |
| PTF20S15 | | | | | 115 VAC | 0-1461945-7 |
| PTF20T30 | | | | | 230 VAC | 0-1461945-9 |
| PTF22024 | | | flange mount | DC-coil | 24 VDC | 0-1721058-3 |
| PTF22524 | | | cover | AC-coil | 24 VAC | 1-1721058-0 |
| PTF22615 | | | | | 115 VAC | 1-1721058-4 |
| PTF22730 | | | | | 230 VAC | 1-1721058-6 |