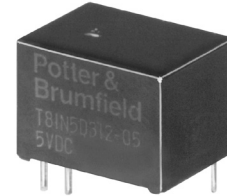


T81 Series Signal PCB Relay

- Au clad contacts in a 1 Form C (CO) arrangement
- Standard 0.1" (2.54mm) grid spacing in a DIP configuration
- Standard or sensitive DC coils through 24 volts
- High dielectric strength
- Wash tight case
- Quiet operation for security applications

Typical applications
Audio communications circuits, logic and process control, vending machines, thermostats, office automation



Approvals

UL E29244, CSA LR48471
Technical data of approved types on request

Contact Data

| | |
|-------------------------------|---|
| Contact arrangement | 1 form C (CO) |
| Rated voltage | 24VDC, 120VAC |
| Max. switching voltage | 60VDC, 125VAC |
| Rated current | 1A |
| Limiting continuous current | 2A |
| Switching power | 120VA, 30W |
| Contact material | Au overlay AgPd alloy |
| Contact style | single contact |
| Min. recommended contact load | 1mA at 1VDC |
| Initial contact resistance | 50mΩ at 100mA, 6VDC |
| Frequency of operation | 72000 ops/h |
| Operate/release time max. | |
| standard coil | 5/7ms |
| sensitive coil | 10/7ms |
| Electrical endurance | |
| 1A, 120VAC, resistive | 100x10 ³ ops. |
| 1A, 24VDC, resistive | 100x10 ³ ops. |
| Contact ratings | 1A, 120VAC/24VDC, resistive 2A, 125VAC/30VDC, resistive (NO) |
| Mechanical endurance | 10x10 ⁶ ops. |

Coil Data

| | |
|-----------------------|------------|
| Magnetic system | neutral |
| Coil voltage range | 5 to 24VDC |
| Max. coil temperature | 105°C |

Coil Data (continued)

Coil versions, DC coil

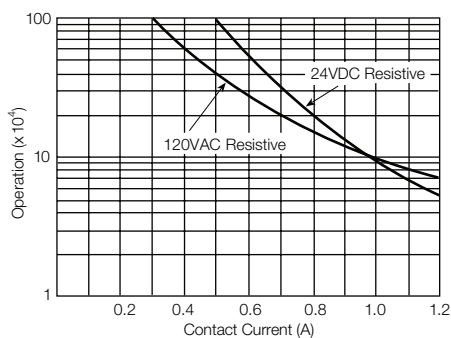
| Coil code | Rated voltage VDC | Operate voltage VDC | Release voltage VDC | Coil resistance Ω±10% | Rated coil power mW |
|------------------------------|-------------------|---------------------|---------------------|-----------------------|---------------------|
| Standard coil, 450mW | | | | | |
| 05 | 5 | 3.5 | 0.25 | 55 | 450 |
| 06 | 6 | 4.2 | 0.3 | 80 | 450 |
| 09 | 9 | 6.3 | 0.45 | 180 | 450 |
| 12 | 12 | 8.4 | 0.6 | 320 | 450 |
| 24 | 24 | 16.8 | 1.2 | 1280 | 450 |
| Sensitive coil, 200mW | | | | | |
| 05 | 5 | 3.75 | 0.5 | 125 | 200 |
| 06 | 6 | 4.5 | 0.6 | 180 | 200 |
| 09 | 9 | 6.75 | 0.9 | 400 | 200 |
| 12 | 12 | 9.0 | 1.2 | 700 | 200 |
| 24 | 24 | 18.0 | 2.4 | 2800 | 200 |

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

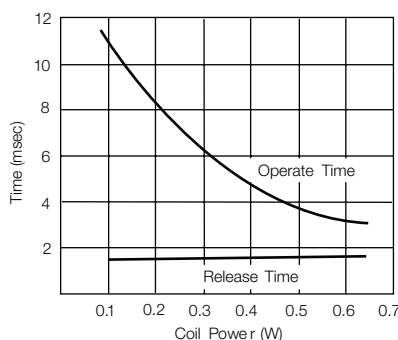
Insulation Data

| | |
|---------------------------------|---------------------------------|
| Initial dielectric strength | |
| between open contacts | 500V _{rms} |
| between contact and coil | 1000V _{rms} |
| Initial surge withstand voltage | 1500V _{rms} (10/160μs) |
| Initial insulation resistance | |
| between insulated elements | 10 ⁹ Ω |
| Clearance/creepage | |
| between contact and coil | 1.5/1.76mm |

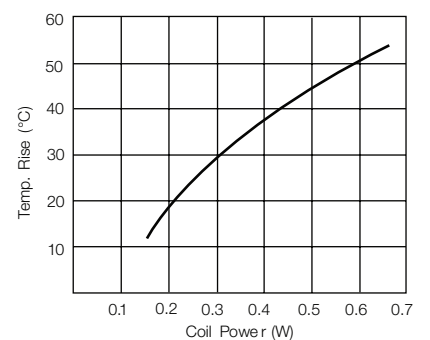
Electrical endurance



Operate time



Coil temperature rise



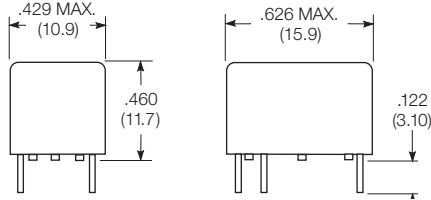
T81 Series Signal PCB Relay (Continued)

Other Data

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

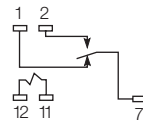
| | |
|--------------------------------------|---------------------------------|
| Ambient temperature | |
| standard coil | -30°C to 60°C |
| sensitive coil | -30°C to 70°C |
| Category of environmental protection | |
| IEC 61810 | RTIII - wash tight |
| Vibration resistance (functional) | 10-50Hz, 1.5mm double amplitude |
| Shock resistance (functional) | |
| IEC 60068-2-27 (half sine) | |
| standard coil | 98m/s ² , 11ms |
| sensitive coil | 65m/s ² , 11ms |
| Terminal type | PCB-THT |
| Weight | 3.5g |
| Resistance to soldering heat THT | |
| IEC 60068-2-20 | 260°C/5s |
| Packaging/unit | tube/25 pcs., box/2000pcs. |

Dimensions



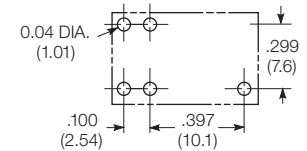
Terminal assignment

Bottom view on solder pins



PCB layout

Bottom view on solder pins



Product code structure

Typical product code **T81 H 5 D 3 1 2**

Type

T81 Signal PCB Relay T81

Coil sensitivity

N Standard coil (450mw) **H** Sensitive coil (200mw)

Contact arrangement

5 1 Form C (CO)

Coil input

D DC voltage

Dielectric strength

3 High dielectric strength

Contact rating

1 1A, 24VDC; 1A, 120VAC

Contact material

2 Au overlay AgPd alloy

Coil voltage

Coil code: please refer to coil versions table

| Product code | Contact material | Coil power | Coil voltage | Part number |
|--------------|-----------------------|------------------|--------------|-------------|
| T81H5D312-05 | Au overlay AgPd Alloy | Sensitive, 200mW | 5VDC | 5-1393779-5 |
| T81H5D312-06 | | | 6VDC | 5-1393779-6 |
| T81H5D312-09 | | | 9VDC | 5-1393779-7 |
| T81H5D312-12 | | | 12VDC | 5-1393779-8 |
| T81H5D312-24 | | | 24VDC | 5-1393779-9 |
| T81N5D312-05 | | Standard, 450mW | 5VDC | 6-1393779-9 |
| T81N5D312-09 | | | 9VDC | 7-1393779-0 |
| T81N5D312-12 | | | 12VDC | 7-1393779-1 |
| T81N5D312-24 | | | 24VDC | 7-1393779-2 |

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<http://moschip.ru/get-element>

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