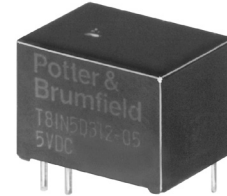


**T81 Series Signal PCB Relay**

- 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 <sup>3</sup> ops.
1A, 24VDC, resistive	100x10 <sup>3</sup> ops.
Contact ratings	1A, 120VAC/24VDC, resistive 2A, 125VAC/30VDC, resistive (NO)
Mechanical endurance	10x10 <sup>6</sup> ops.

**Coil Data**

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

**Coil Data (continued)**

**Coil versions, DC coil**

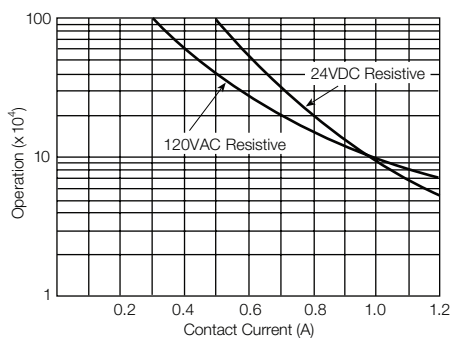
Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10%	Rated coil power mW
<b>Standard coil, 450mW</b>					
05	5	3.5	0.25	55	450
06	6	4.2	0.3	80	450
09	9	6.3	0.45	180	450
12	12	8.4	0.6	320	450
24	24	16.8	1.2	1280	450
<b>Sensitive coil, 200mW</b>					
05	5	3.75	0.5	125	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.

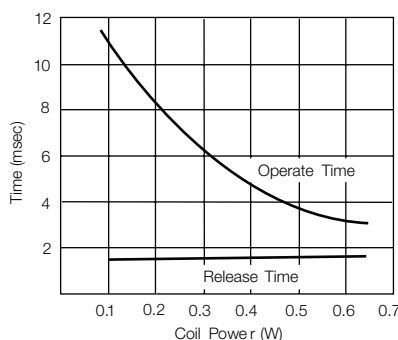
**Insulation Data**

Initial dielectric strength	
between open contacts	500V <sub>rms</sub>
between contact and coil	1000V <sub>rms</sub>
Initial surge withstand voltage	1500V <sub>rms</sub> (10/160μs)
Initial insulation resistance	
between insulated elements	10 <sup>9</sup> Ω
Clearance/creepage	
between contact and coil	1.5/1.76mm

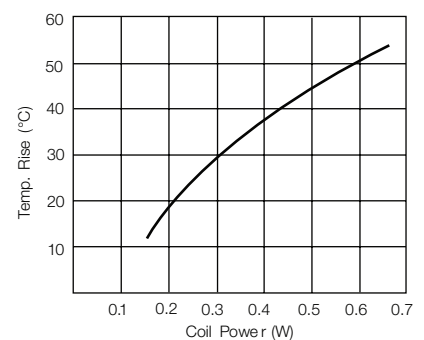
**Electrical endurance**



**Operate time**



**Coil temperature rise**



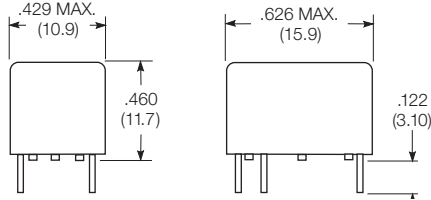
**T81 Series Signal PCB Relay** (Continued)

**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](http://www.te.com/customersupport/rohssupportcenter)

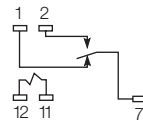
Ambient temperature	
standard coil	-30°C to 60°C
sensitive coil	-30°C to 70°C
Category of environmental protection	
IEC 61810	RTIII - wash tight
Vibration resistance (functional)	10-50Hz, 1.5mm double amplitude
Shock resistance (functional)	
IEC 60068-2-27 (half sine)	
standard coil	98m/s <sup>2</sup> , 11ms
sensitive coil	65m/s <sup>2</sup> , 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**



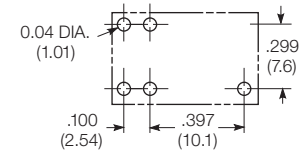
**Terminal assignment**

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