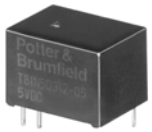


T81N/T81H series

Ultraminiature, High Density PC Board Relay

File E29244

File LR48471

Users should thoroughly review the technical data before selecting a product part number. It is recommended that user also seek out the pertinent approvals files of the agencies/laboratories and review them to ensure the product meets the requirements for a given application.

Features

- Gold clad contacts in a 1 Form C contact arrangement.
- Standard 0.1" x 0.3" grid spacing in a DIP configuration.
- Standard or sensitive DC coils through 24 volts.
- High dielectric strength.
- Well suited for audio communications circuits, logic and process control, vending machines, thermostats and office automation applications.
- Immersion cleanable, plastic sealed case.
- Quiet operation for security applications.

Contact Data @ 20°C

Arrangements: 1 Form C (SPDT).
Material: Gold overlay silver-palladium alloy.
Ratings: 1 amp @ 24VDC, resistive; 0.5 amp @ 120VAC, resistive.
Max. Switching Current: 2A
Max. Switching Power: 60VA/24W.
Max. Switching Voltage: 120VAC/60VDC.
Expected Mechanical Life: 10 million operations.
Expected Electrical Life: 150,000 ops. @ 1A, 24VDC, resistive.
100,000 ops. @ 1A, 120VAC, resistive.
Initial Contact Resistance: 50 milliohms, max., @ 100mA, 6VDC.
Surge Voltage:
Between Coil and Contacts (10 x 160μs): 1,500V: (FCC Part 68).

Initial Dielectric Strength

Between Open Contacts: 500V rms, 50/60 Hz., for 1 minute.
Contact to Coil: 1,000V rms, 50/60 Hz., for 1 minute.

Initial Insulation Resistance

Between Mutually Insulated Conductors: 10^8 ohms @ 500VDC, 20°C and 65% relative humidity.

Coil Data @ 20°C

Voltage: 3 through 24VDC.
Nom. Power (Approx.)**: Std. Coil:** 450 mW; **Sensitive Coil:** 200 mW.
Maximum Power: Std. Coil: 800 mW.;**Sensitive Coil:** 640 mW.
Temperature Rise: Std. Coil: 105°C per watt, typ.
Sensitive Coil: 125°C per watt, typ.
Maximum Coil Temperature: 105°C.
Duty Cycle: Continuous.

Coil Data @ 20°C

Standard Coils		Sensitive Coils	
Nominal Voltage (VDC)	Resistance ±10% (Ohms)	Nominal Voltage (VDC)	Resistance ±10% (Ohms)
3	20	3	45
5	55	5	125
6	80	6	180
9	180	9	400
12	320	12	700
24	1,280	24	2,800

Operate Data @ 20°C

Must Operate Voltage: 70% of nominal voltage or less.
Must Release Voltage: 5% of nominal voltage or more.
Operate Time (Excluding Bounce)†: Standard Coil : 5 ms, approx.
Sensitive Coil : 5 ms, approx.
Release Time (Excluding Bounce)†: All Models: 2 ms, approx.

† At or from Nominal Coil Voltage.

Environmental Data

Temperature Range: Standard Coil: -40°C to +55°C.
Sensitive Coil: -40°C to +75°C.
Vibration: 0.059" (1.5mm) max. excursions for 10-40 Hz.
Shock: Standard Coil: 10g for 11 ms.
Sensitive Coil: 6g for 11 ms.

Mechanical Data

Termination: Printed circuit terminals on 0.1" (2.54mm) centers.
Enclosure: Sealed PBT plastic case.
Weight: 0.14 oz. (4g) approximately.

Ordering Information

Typical Part Number ▶	T81	H	5	D	3	1	2	-12

1. Basic Series:
T81 = Ultraminiature, PC board relay.

2. Coil Sensitivity:
N = Standard coil.
H = Sensitive coil.

3. Contact Arrangement:
5 = 1 Form C (SPDT)

4. Coil Input:
D = DC Voltage.

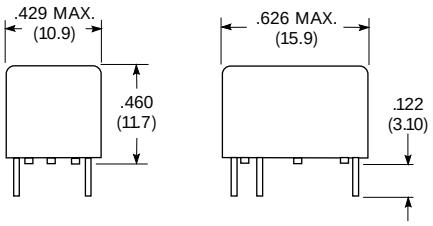
5. Dielectric Strength:
3 = High dielectric strength, UL recognized.

6. Contact Rating:
1 = 1A @ 24VDC; 0.5A @ 120VAC.

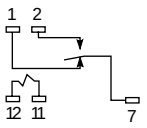
7. Contact Material:
2 = Gold overlay silver-palladium alloy.

8. Coil Voltage:
03 = 3VDC 06 = 6VDC 12 = 12VDC
05 = 5VDC 09 = 9VDC 24 = 24VDC

Outline Dimensions

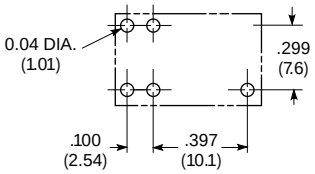


Wiring Diagram (Bottom View)



Terminals - #1 & 2
.023 (0.6) X .018 (0.45)
Terminals - #11 & 12
.023 (0.6) X .016 (0.40)
Terminal - #7
.008 (0.20) X .023 (0.6)

PC Board Layout (Bottom View)



Our authorized distributors are more likely to stock these items.

T81H5D312-05 T81H5D312-12 T81N5D312-05 T81N5D312-24
T81H5D312-06 T81H5D312-24 T81N5D312-12

Dimensions are shown for reference purposes only.

Dimensions are in inches over (millimeters) unless otherwise specified.

Specifications and availability subject to change.

www.tycoelectronics.com
Technical support:
Refer to inside back cover.