2970 Series Reed Relays for 125°C

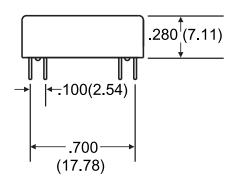


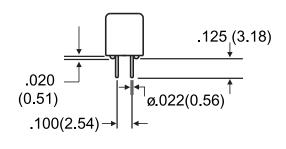
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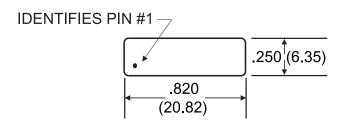
Ideally suited to the needs of Automated Test Equipment and RF requirements. The 2970 series offers a 1 Form A and 1 Form C coaxial relay for special 125°C testing environments. If your requirements differ, please consult your local representative or Coto's Factory.

2970 Series Features

- ♦ Very small (0.20 in²), high reliability reed relays.
- High Insulation Resistance.
- Hermetically sealed contacts for long life.
- Epoxy coated steel shell provides magnetic shielding.
- Coaxial Shield for 50 Ω impedance and switching of fast rise time digital pulses.
- ◆ 125°C Operating Temperature.



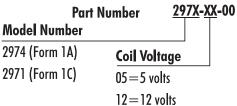




Top View

Dimensions in Inches (Millimeters)

Ordering Information



2970 Series Reed Relays for 125°C

| Model Number | | | 2974 ² | 2971 2 |
|--|--------------------------------------|----------------------------|-------------------|------------|
| Parameters | Test Conditions | Units | 1 Form A | 1 Form C |
| COIL RESISTANCE | | | | |
| Nom. Coil Voltage | | VDC | 5 12 | 5 12 |
| Coil Resistance | +/- 10%, 25° C | Ω | 230 1500 | 230 1500 |
| Operate Voltage | Must Operate by | VDC - Max. | 3.8 9.0 | 3.8 9.0 |
| Release Voltage | Must Release by | VDC - Min. | 0.4 1.0 | 0.4 1.0 |
| CONTACT RATING | | | | |
| Switching Voltage | Max DC/Peak AC Resist. | Volts | 200 | 150 |
| Switching Current | Max DC/Peak AC Resist. | Amps | 0.5 | 0.25 |
| Carry Current | Max DC/Peak AC Resist. | Amps | 1.5 | 1.0 |
| Contact Rating | Max DC/Peak AC Resist. | Watts | 10 | 3 |
| Life Expectancy-Typical 1 | Signal Level 1.0V, 10mA | x 10 ⁶ Ops. | 500 | 100 |
| Static Contact | | | | |
| Resistance (max. init.) | 50mV, 10mA | Ω | 0.100 | 0.150 |
| Dynamic Contact | 0.5V, 50mA | | 0.200 | 0.200 |
| Resistance (max. init.) | at 100 Hz, 1.5 msec | Ω | 0.200 | 0.200 |
| RELAY SPECIFICATIONS | | | | |
| Insulation Resistance | Between all Isolated Pins | | | |
| (minimum) | at 100V, 25°C, 40% RH | Ω | 10^{12} | 10^{11} |
| Capacitance - Typical | Shield Floating | | - | |
| Across Open Contacts | Shield Guarding | pF pF | 1.0 0.3 | 2.0 1.0 |
| Dielectric Strength | Between Contacts | VDC/peak AC | 350 | 200 |
| (minimum) | Contacts to Shield | VDC/peak AC VDC/peak AC | 350 | 200 |
| (mmmum) | Contacts/Shield to Coil | VDC/peak AC | 1500 | 1500 |
| Operate Time - including | At Nominal Coil Voltage, | V Be/peak / IC | 1500 | 1500 |
| bounce - Typical | 30 Hz Square Wave | msec. | 0.5 | 1.0 |
| Release Time - Typical | Zener-Diode Suppression ³ | msec. | 0.1 | 2.0 |
| Top View: Dot stamped on top of relay refers to pin #1 location Grid = .1"x.1" (2.54mm x 2.54mm) | | | 5 4 6 3 | 5 4 6 3 |
| | | | 7 0 2 | 7 2 |

Environmental Ratings:

Storage Temp: -35°C to +125°C; Operating Temp: -20°C to +125°C Solder Temp: 270°C max; 10 sec. max The operate and release voltage and the coil resistance are specified at 25°C. These values vary by approximately 0.4% / °C as the ambient temperature varies.

Vibration: 20 G's to 2000 Hz; Shock: 50 G's

Notes:

¹Consult factory for life expectancy at other switching loads.

³Consists of 56V Zener diode and 1N4148 diode in series, connected in parallel with coil.

² Pins #6 & #7 are tied to coaxial shield.