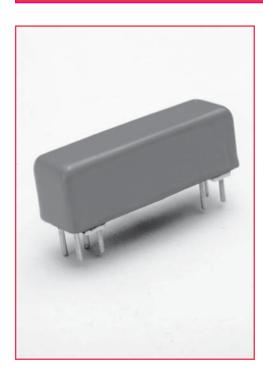
# **2900 Series Reed Relays**

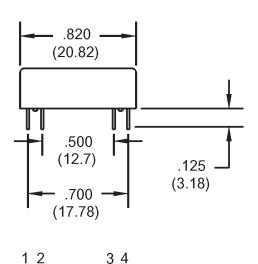


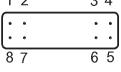
## 2900 Series Reed Relays

Ideally suited to the needs of Automated Test Equipment and RF requirements. The specification tables allow you to select the appropriate relay for your particular application. Slightly larger than the 2200 Series; these relays provide maximum versatility with options such as a Form C with electrostatic or co-axial shielding. If your requirements differ, please consult your local representative or Coto's Factory.

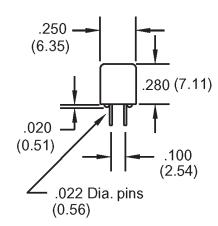
#### 2900 Series Features

- ♦ Very small (0.20 in²), high reliability reed relays
- High Insulation Resistance  $10^{12} \Omega$  offered on some models
- High speed switching compared to electromechanical relays
- Hermetically sealed contacts for long life
- Epoxy coated steel shell provides magnetic shielding
- Optional Electrostatic Shield for reducing capacitive coupling
- Optional Coaxial Shield for 50  $\Omega$  impedance and switching of fast rise time digital pulses



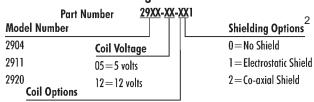


**Bottom View** 



Dimensions in Inches (Millimeters)

#### **Ordering Information**



1 = Use for Model #2920 (5 & 12 volt coil)

3=Use for Model #2904 (12 volt coil) and for Model #2911 (5 & 12 volt coil)

4=Use for Model #2904 (5 volt coil)

# **2900 Series Reed Relays**

Model Number			2904 <sup>2</sup>	2911 <sup>2</sup>	2920 <sup>2,3</sup>
Parameters	<b>Test Conditions</b>	Units	1 Form A	1 Form C	1 Form A Hg Wet
COIL RESISTANCE					
Nom. Coil Voltage		VDC	5 12	5 12	5 12
Coil Resistance	+/- 10%, 25° C	Ω	370 1500	230 1500	75 250
Operate Voltage	Must Operate by	VDC - Max.	3.8 9.0	3.8 9.0	3.8 9.0
Release Voltage	Must Release by	VDC - Min.	0.4 1.0	0.4 1.0	0.4 1.0
CONTACT RATING					
Switching Voltage	Max DC/Peak AC Resist.	Volts	200	150	500
Switching Current	Max DC/Peak AC Resist.	Amps	0.5	0.25	1.0
Carry Current	Max DC/Peak AC Resist.	Amps	1.5	1.0	2.0
Contact Rating	Max DC/Peak AC Resist.	Watts	10	3	50
Life Expectancy-Typical <sup>1</sup>	Signal Level 1.0V, 10mA	x 10 <sup>6</sup> Ops.	500	100	1000
Static Contact					
Resistance (max. init.)	50mV, 10mA	Ω	0.100	0.150	0.075
Dynamic Contact	0.5V, 50mA		0.200	0.200	0.100
Resistance (max. init.)	at 100 Hz, 1.5 msec	Ω	0.200	0.200	0.100
RELAY SPECIFICATIONS					
Insulation Resistance	Between all Isolated Pins				
(minimum)	at 100V, 25°C, 40% RH		$10^{12}$	$10^{11}$	10 <sup>10</sup>
` '		Ω			
Capacitance - Typical Across Open Contacts	Shield Floating Shield Guarding	pF	1.0	2.0	1.4
		pF	0.3	1.0	0.2
Dielectric Strength	Between Contacts Contacts to Shield	VDC/peak AC	350 350	200	1000
(minimum)	Contacts to Shield Contacts/Shield to Coil	VDC/peak AC VDC/peak AC	350 1500	200 1500	1000 1500
Operate Time - including	At Nominal Coil Voltage,	VDC/peak AC	1300	1300	1500
bounce - Typical	30 Hz Square Wave	msec.	0.5	1.0	1.5
• •	_	<b>***</b>	0.1	2.0	1.0
Release Time - Typical	Zener-Diode Suppression <sup>4</sup>	msec.	0.1	2.0	1.0
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 7 7 7 7 7 2	5 4 6 3	5 6 

#### Notes:

<sup>1</sup>Consult factory for life expectancy at other switching loads.

<sup>2</sup>Model 2904, 2911 and 2920, pin #7 is tied to optional electrostatic shield, pins #6 & #7 are tied to optional coaxial shield.

<sup>3</sup>Model 2920 has Hg wet contacts - position sensitive, must be mounted within 30° of vertical plane. See schematic. Hg Content per capsule: Form A, 0.04 grams.

<sup>4</sup>Consists of 56V Zener diode and 1N4148 diode in series, connected in parallel with coil.

## **Environmental Ratings:**

Storage Temp: -35°C to +100°C; Operating Temp: -20°C to +85°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