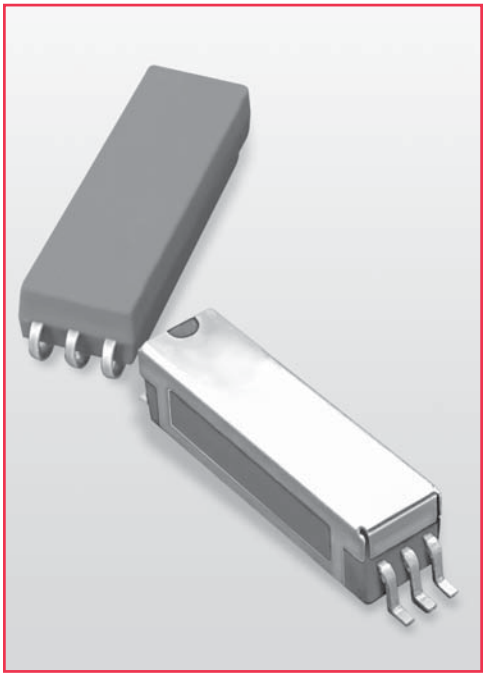
9200 Series/Surface Mount Reed Relays



Surface Mount Reed Relays

Ideally suited to the needs of Automated Test Equipment, Instrumentation and Telecommunications requirements, Coto's 9200 Series specification tables allow you to select the appropriate relay for your particular application. If your requirements differ, please consult your local representative or Coto's Factory to discuss a custom design.

Series Features

- High Insulation Resistance - 10^{12} Ω minimum (10^{13} Ω Typical)
- High reliability, hermetically sealed contacts for long life
- Molded thermoset body on integral lead frame design
- High speed switching compared to electromechanical relays

9200 Series

- Low profile - .190" height. Meets high board density requirements
- 50 Ω Coaxial Shield for RF and Fast Rise Time Pulse switching

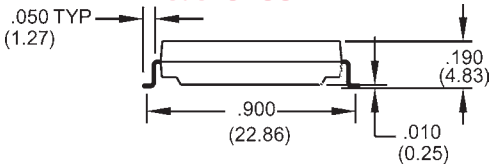
9290 Series

- Low profile - .193" (4.9mm) max height
- Minimum Footprint .140" Sq. (3.5mm Sq.)
- 50 Ω Co-axial Shield for RF and Fast Rise Time Pulse switching
- External Magnetic Shield
- UL Recognized
- Tape and Reel Available

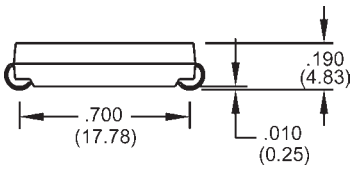
Dimensions in Inches (Millimeters)

Model 9200

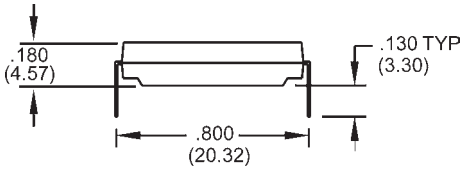
Gull Wing[2]



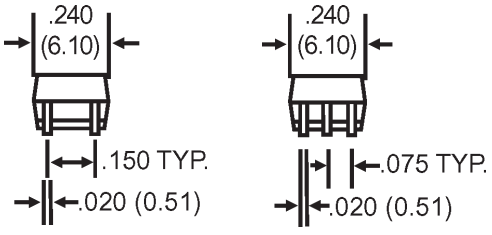
J-Lead[2]



Radial

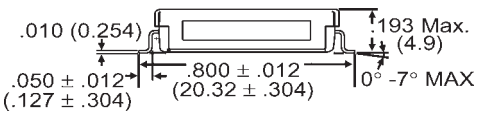


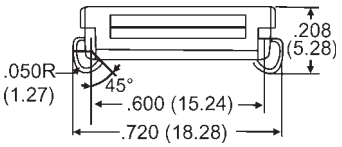
End Views

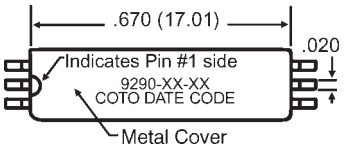


9201 9202

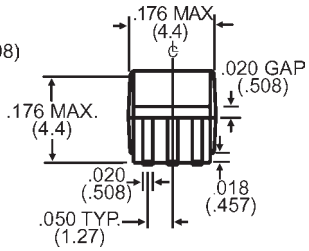
Model 9290







9290 Top View



9290 End View

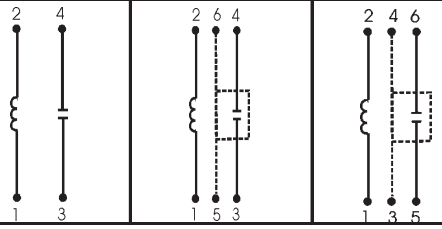
Ordering Information

Part Number	9XXX-XX-XX	
Model Number		Lead Style
9201 9202 9290		00=Gull Wing
Coil Voltage		20=J-Lead
05=5 volts		30=Radial (9290 N/A)
12=12 volts		

9200 Series/Surface Mount Reed Relays

Model Number			9201	9202	9290
Parameters	**Test Conditions**	**Units**	**1 Form A**	**1 Form A 50 Ω Coaxial**	**1 Form A 50 Ω Coaxial**
COIL SPECS.					
Nom. Coil Voltage		VDC	5 12	5 12	5 12
Max. Coil Voltage		VDC	6.5 15.0	6.5 15.0	6.5 15.0
Coil Resistance	+/- 10%, 25° C	Ω	250 650	150 650	160 600
Operate Voltage	Must Operate by	VDC - Max.	3.75 9.0	3.75 9.0	3.75 9.0
Release Voltage	Must Release by	VDC - Min.	0.4 1.0	0.4 1.0	0.4 1.0
CONTACT RATINGS					
Switching Voltage	Max DC/Peak AC Resist.	Volts	200	200	200
Switching Current	Max DC/Peak AC Resist.	Amps	0.5	0.5	0.5
Carry Current	Max DC/Peak AC Resist.	Amps	1.5	1.5	1.5
Contact Rating	Max DC/Peak AC Resist.	Watts	10	10	10
Life Expectancy-Typical [1]	Signal Level 1.0V,10mA	x 10^6 Ops.	1000	1000	1000
Static Contact Resistance (max. init.)	50mV, 10mA	Ω	0.150	0.150	0.150
Dynamic Contact Resistance (max. init.)	0.5V, 50mA at 100 Hz, 1.5 msec	Ω	0.200	0.200	0.200
RELAY SPECIFICATIONS					
Insulation Resistance (minimum)	Between all Isolated Pins at 100V, 25°C, 40% RH	Ω	10^{12}	10^{12}	10^{12}
Capacitance - Typical Across Open Contacts	No Shield	pF	0.7	-	
	Shield Floating	pF	-	0.8	1.0
	Shield Guarding	pF	-	0.1	0.2
Open Contact to Coil	No Shield	pF	1.4	-	
	Shield Floating	pF	-	1.4	2.0
	Shield Guarding	pF	-	0.2	0.4
Contact to Shield	Contacts Open, Shield Floating	pF	-	1.4	2
Dielectric Strength (minimum)	Between Contacts	VDC/peak AC	300	300	250
	Contacts to Shield	VDC/peak AC	-	1500	500
	Contacts/Shield to Coil	VDC/peak AC	1500	1500	500
Operate Time - including bounce - Typical	At Nominal Coil Voltage, 30 Hz Square Wave	msec.	0.40	0.40	0.40
Release Time - Typical	Zener-Diode Suppression [3]	msec.	0.10	0.10	0.10

Top View:
Dot stamped on top of relay refers to pin #1 location



Notes:

[1]Consult factory for life expectancy at other switching loads.
[2]Surface mount component processing temperature: 500°F / 260°C max for 1 minute dwell time. Temperature measured on leads where lead exits molded package.
[3]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
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