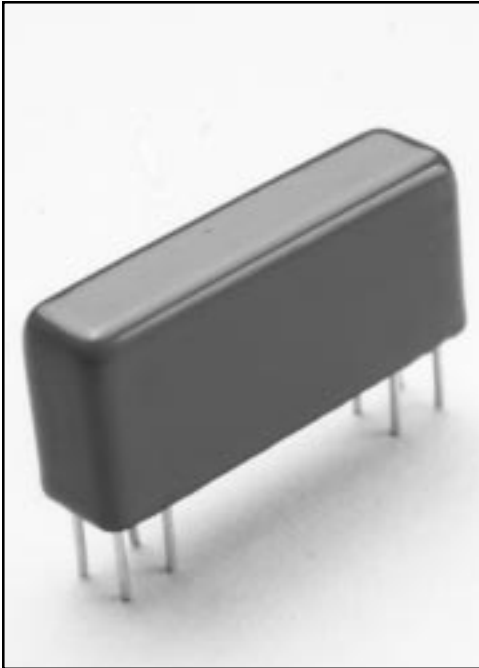


# 2300 Series/Microminiature Reed Relays

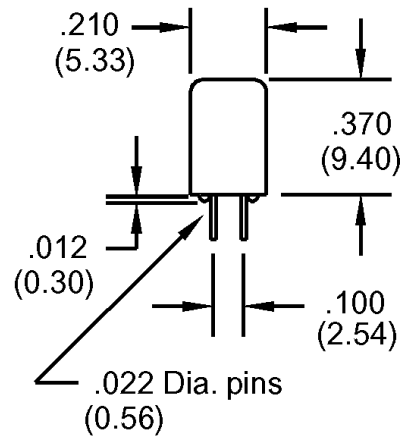
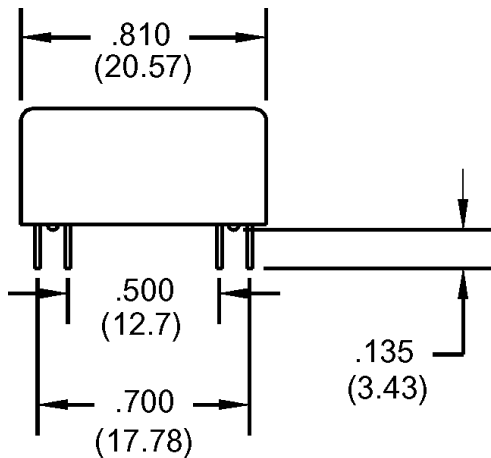


## MULTIPOLE MICROMINIATURE REED RELAYS

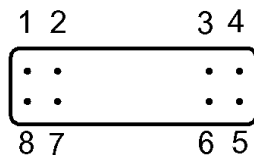
The Coto 2300 series was designed to offer the densest packaging available in a multipole reed relay. The size and footprint of the 2300 series compliment the 2200 and 2900 series microminiature relays. The 1 Form C model is constructed with individual switch capsules for the normally open and magnetically biased normally closed contacts which are more reliable than the spring actuated 1 Form C reed switches. Custom pin-outs as well as custom designs are available to meet particular applications. Special designs include 1 Form B, 2 Form B, latching, and high voltage relays.

## 2300 SERIES FEATURE

- ◆ Smallest Multipole Relay: 0.056 sq. inches/pole (3 pole relay)
- ◆ Up to 3 Form A or 2 Form C Contacts
- ◆ Hermetically Sealed Contacts
- ◆ Long Life / High Reliability
- ◆ Magnetically Shielding Steel Shell
- ◆ Optional Electrostatic Shield (on most models)



Dimensions in Inches (Millimeters)



Bottom View

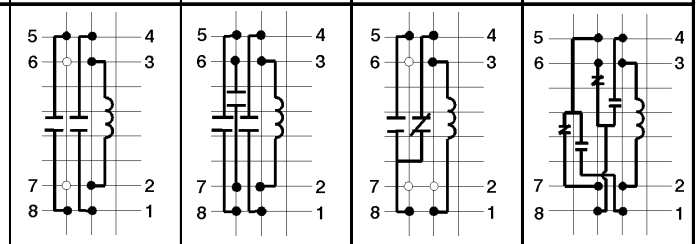
## Ordering Information

Part Number	23XX-XX-0X0	Shielding Options <sup>4</sup>
Model Number	Coil Voltage	2332 or 2341 only
2332 (2 Form A)	05=5 volts	0=No Shielding
2333 (3 Form A)	12=12 volts	1=Electrostatic Shield
2341 (1 Form C)		2=Coaxial Shield
2342 (2 Form C)		

# 2300 Series/Microminiature Reed Relays

Model Number			2332	2333	2341 <sup>3,5</sup>	2342
Parameters	Test Conditions	Units	2 Form A	3 Form A	1 Form C	2 Form C
<b>COIL SPECS.</b>						
Nom. Coil Voltage		VDC	5 12	5 12	5 12	5 12
Coil Resistance	+/- 10%, 25° C	Ω	175 1000	175 1000	230 1000	175 1000
Operate Voltage	Must Operate by	VDC - Max.	3.8 9.0	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	0.4 1.0
<b>CONTACT RATINGS</b>						
Switching Voltage	Max DC/Peak AC Resist.	Volts	200	200	200	100
Switching Current	Max DC/Peak AC Resist.	Amps	0.5	0.5	0.5	0.25
Carry Current	Max DC/Peak AC Resist.	Amps	1.5	1.5	1.5	0.5
Contact Rating	Max DC/Peak AC Resist.	Watts	10	10	10	3
Life Expectancy-Typical <sup>1</sup>	Signal Level 1.0V, 10mA	x 10 <sup>6</sup> Ops.	500	500	500	100
Static Contact Resistance (max. init.)	50mV, 10mA	Ω	0.150	0.150	0.150	0.200
Dynamic Contact Resistance (max. init.)	0.5V, 50mA at 100 Hz, 1.5 msec	Ω	0.200	0.200	0.200	0.250
<b>RELAY SPECIFICATIONS</b>						
Insulation Resistance (minimum)	Between all Isolated Pins at 100V, 25°C, 40% RH	Ω	10 <sup>12</sup>	10 <sup>12</sup>	10 <sup>12</sup>	10 <sup>9</sup>
Capacitance - Typical Across Open Contacts	No Shield Shield Guarded	pF pF	0.8 0.2	0.8 N/A	1.7 0.7	2.0 N/A
Dielectric Strength (minimum)	Between Contacts	VDC/peak AC	250	250	250	200
	Contacts to Shield	VDC/peak AC	1000	N/A	1000	N/A
	Contacts/Shield to Coil	VDC/peak AC	1000	1000	1000	1000
Operate Time - including bounce - Typical	At Nominal Coil Voltage, 30 Hz Square Wave	msec.	0.5	0.5	0.5	1.5
Release Time - Typical	Zener-Diode Suppression <sup>2</sup>	msec.	0.15	0.15	0.5	2.0

Top View<sup>4</sup>:  
Dot stamped on top of relay refers to pin #1 location  
Grid = .1"x.1" (2.54mm x 2.54mm)



## Notes:

- <sup>1</sup> Consult factory for life expectancy at other switching loads.
- <sup>2</sup> Release time is specified with a zener diode suppression circuit consisting of a 20 V zener diode in series with a 1N4148, connected in parallel with the coil.
- <sup>3</sup> Break-before-make action on Form C Model 2341 is not guaranteed. Consult factory if break-before-make is required.
- <sup>4</sup> Electrostatic shield is connected to pin #6. Coaxial shield is connected to pins #6 and #7.
- <sup>5</sup> This relay is polarity sensitive. Pin #3 MUST be positive.

## 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