

# 2300 SERIES MULTI-POLE REED RELAYS



## 2300 Series Multi-Pole Reed Relays

The Coto 2300 series is designed to offer the densest packaging available in a multi-pole reed relay. The size and footprint of the 2300 series complement the 2200 & 2900 series 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.

### 2300 Series Features

- ▶ Smallest Multi-pole 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 models 2332 & 2341)
- ▶ RoHS compliant

## DIMENSIONS

*in Inches (Millimeters)*



## Ordering Information

Part Number **23XX-XX-0X0**

### Model Number

2332 (2 Form A)  
 2333 (3 Form A)  
 2341 (1 Form C)  
 2342 (2 Form C)

### Coil Voltage

05=5 volts  
 12=12 volts

### Shielding Options<sup>3</sup>

2332 or 2341 only  
 0=No Shielding  
 1=Electrostatic Shield  
 2=Coaxial Shield

MODEL NUMBER			2332	2333	2341 <sup>2,4</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	pF	0.8	0.8	1.7	2.0
	Shield Guarding	pF	0.2	N/A	0.7	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		msec.	0.15	0.15	0.5	2.0

Top View<sup>3</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. Resistance >0.5Ω defines end of life or failure to open.
- <sup>2</sup> Break-before-make action on Form C Model 2341 is not guaranteed. Consult factory if break-before-make is required.
- <sup>3</sup> Electrostatic shield (2332 & 2341 only) is connected to pin #6. Coaxial shield is connected to pins #6 and #7.
- <sup>4</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  
All electrical parameters measured at 25°C unless otherwise specified.  
Vibration: 20 G's to 2000 Hz; Shock: 50 G's

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