# 8000 Series/DIP Reed Relays

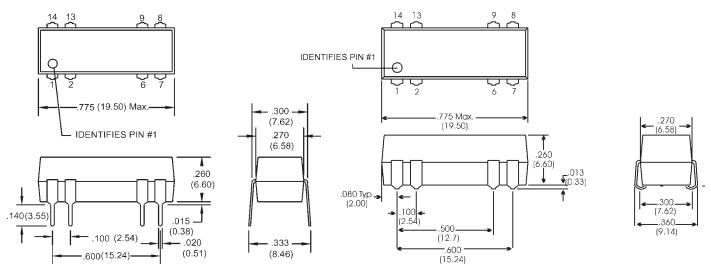


### **DIP Reed Relays**

The 8000 Series is ideally suited to the needs of Automated Test Equipment, Instrumentation, Data Acquisition, and Process Control requirements. The specification tables allow you to select the appropriate relay for your particular application. If your requirements differ from the selection options, please consult your local representative or Coto's Factory to discuss a custom reed relay.

### **8000 Series Features**

- ♦ 14-Pin DIP industry standard package
- High Insulation Resistance  $10^{12}$  Ω offered on most models
- High reliability, hermetically sealed contacts for long life (proven to 500 million operations)
- Contact forms; 1A, 2A, 1B and 1C available
- Surface mount version available
- Molded thermoset body on integral lead frame design
- Optional Electrostatic Shield for reducing capacitive coupling
- Coil suppression diode available
- High Voltage Breakdown versions available
- UL File # E67117



(For Model #'s 8001, 8002, 8021 & 8041)

(For Model #8061)

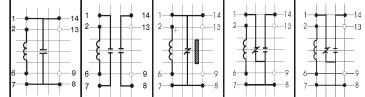
Dimensions in Inches (Millimeters)



## 8000 Series/DIP Reed Relays

Model Number			8001 <sup>2,3,4</sup>	8002 <sup>2,3,4</sup>	8021 <sup>2,3,4</sup>	8041 <sup>2,3,4</sup>	8061 <sup>2,3,4,5</sup>
Parameters	<b>Test Conditions</b>	Units	1 Form A	2 Form A	1 Form B	1 Form C	1 Form C SMD
COIL SPECS.							
Nom. Coil Voltage		VDC	5 12	5 12	5 12	5 12	5 12
Max. Coil Voltage		VDC	6.5 15	6.5 15	6.5 15	6.5 15	6.5 15
Coil Resistance	+/- 10%, 25° C	Ω	500 500	200 500	200 500	200 500	200 500
Operate Voltage	Must Operate by	VDC - Max.	3.8 9.6	3.8 9.6	3.8 9.6	3.8 9.6	3.8 9.6
Release Voltage	Must Release by	VDC - Min.	0.5 1.0	0.5 1.0	0.5 1.0	0.5 1.0	0.5 1.0
CONTACT RATINGS							
Switching Voltage	Max DC/Peak AC Resist.	Volts	200	200	200	100	100
Switching Current	Max DC/Peak AC Resist.	Amps	0.5	0.5	0.5	0.25	0.25
Carry Current	Max DC/Peak AC Resist.	Amps	1.0	1.0	1.0	0.5	0.5
Contact Rating	Max DC/Peak AC Resist.	Watts	10	10	10	3	3
Life Expectancy-Typical <sup>1</sup>	Signal Level 1.0V,10mA	x 10 <sup>6</sup> Ops.	500	500	500	100	100
Static Contact Resistance							
(max. init.)	50mV, 10mA	Ω	0.150	0.150	0.150	0.200	0.200
Dynamic Contact	0.5V, 50mA						
Resistance (max. init.)	at 100 Hz, 1.5 msec	Ω	0.200	0.200	0.200	0.250	0.250
RELAY							
SPECIFICATIONS							
Insulation Resistance	Between all Isolated Pins	0	12	12	12	10	10
(minimum)	at 100V, 25°C, 40% RH	Ω	$10^{12}$	$10^{12}$	$10^{12}$	$10^{10}$	$10^{10}$
Capacitance - Typical	No Shield	pF	0.5	0.5	0.5	1.5	1.5
Across Open Contacts	Shield Floating	pF	1.0	0.5	0.5	1.5	1.5
•	Shield Guarding	pF	0.5	0.2	0.2	1.0	1.0
Open Contact to Coil	No Shield	pF	1.5	1.5	2.5	1.5	1.5
	Shield Floating	pF	2.0	2.0	2.0	2.0	2.0
	Shield Guarding	pF	0.5	0.5	1.5	0.5	0.5
Contact to Shield	Contacts Open, Shield	pF	2.0	1.5	2.0	2.0	2.0
Dielectric Strength	Floating Between Contacts	VDC/peak AC	300	300	300	200	200
(minimum)	Contacts to Shield	VDC/peak AC VDC/peak AC	1500	1500	1500	1500	1500
(IIIIIIIIIII)	Contacts/Shield to Coil	VDC/peak AC	1500	1500	1500	1500	1500
Operate Time - including	At Nominal Coil Voltage,		0.5	0.5	0.5	1.0	1.0
bounce - Typical	30 Hz Square Wave	msec.	0.5	0.5	0.5	1.0	1.0
Release Time - Typical	Diode Suppression <sup>6</sup>	msec.	1.0	1.0	1.0	1.5	1.5
	No Suppression	msec.	0.5	0.5	0.5	1.0	1.0
			14	1 14	14	14 2 0 13	1 1 2
	7	Top View:	13	[ <del>-</del>	1 1 10		

Top View: 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> Molded depression on top of relay refers to pin #1 location.
- <sup>3</sup> Optional coil suppression diode across pins 2(+) and 6(-).
- <sup>4</sup> Optional ES Shield is tied to pin 9.
- <sup>5</sup> Surface mount processing temperature: 260°C max for 1 minute dwell time. Temperature measured on leads where lead exits molded package.
- <sup>6</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% /  $^{\circ}$ C as the ambient temperature varies.

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

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