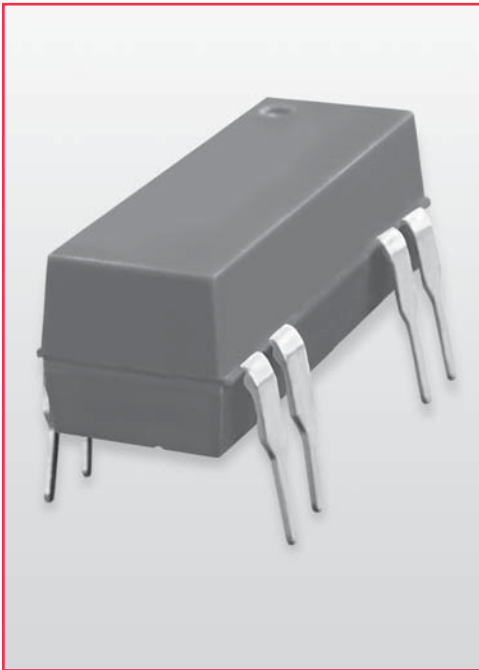


# 8000 Series/DIP Reed Relays

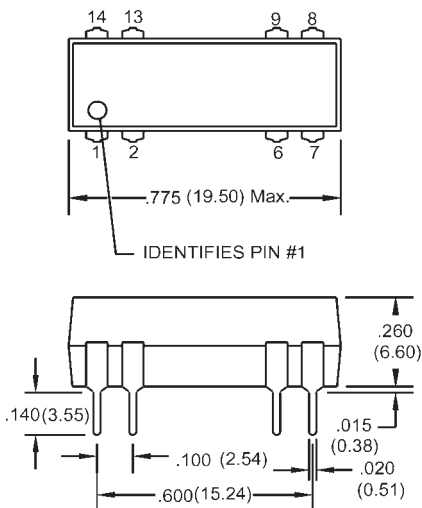


## DIP Reed Relays

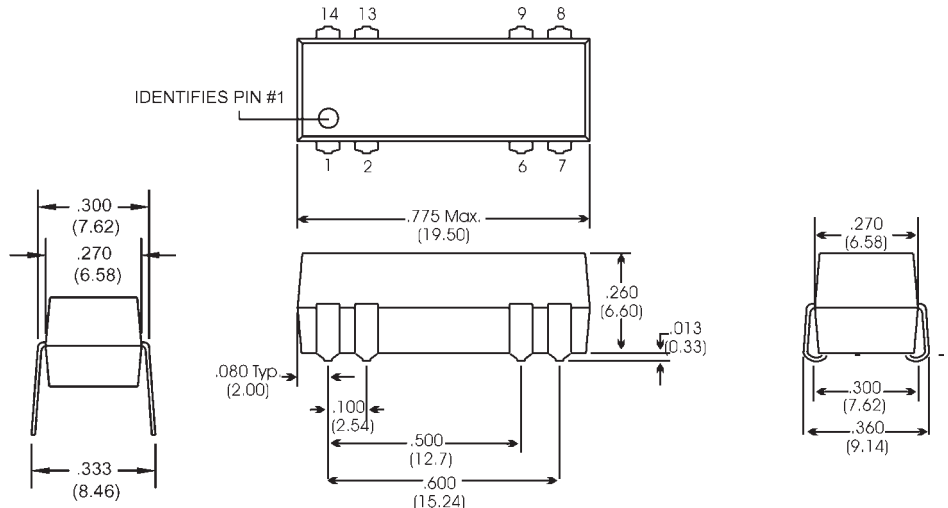
The 8000 Series is ideally suited to the needs of Automated Test Equipment, Instrumentation, Data Acquisition, and Process Control requirements. The specification tables allow you to select the appropriate relay for your particular application. If your requirements differ from the selection options, 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 -  $10^{12} \Omega$  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)*

## Ordering Information

<b>Part Number</b>	<b>80XX-XX-XX1</b>
<b>Model Number</b>	<b>Diode Option</b> <sup>3</sup>
8001 8041 8061	0=No Diode 1=Diode
<b>Coil Voltage</b>	<b>Shield Option</b> <sup>4</sup>
05=5 volts	0=No Shield
12=12 volts	1=Electrostatic Shield

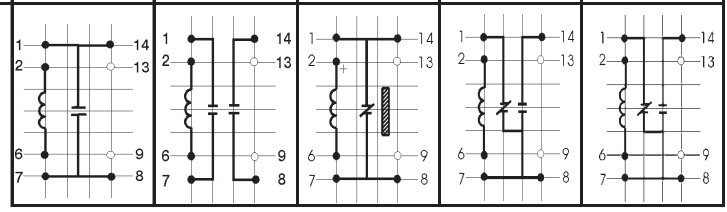
## Ordering Information

<b>Part Number</b>	<b>80XX-XX-XX</b>
<b>Model Number</b>	<b>Diode Option</b> <sup>3</sup>
8002 8021	0=No Diode 1=Diode
<b>Coil Voltage</b>	<b>Shield Option</b> <sup>4</sup>
05=5 volts	0=No Shield
12=12 volts	1=Electrostatic Shield

# 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	Test Conditions	Units	1 Form A	2 Form A	1 Form B	1 Form C	1 Form C SMD
<b>COIL SPECS.</b>							
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
<b>CONTACT RATINGS</b>							
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 Resistance (max. init.)	0.5V, 50mA at 100 Hz, 1.5 msec	Ω	0.200	0.200	0.200	0.250	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>10</sup>	10 <sup>10</sup>
Capacitance - Typical Across Open Contacts	No Shield	pF	0.5	0.5	0.5	1.5	1.5
	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 Floating	pF	2.0	1.5	2.0	2.0	2.0
	Between Contacts	VDC/peak AC	300	300	300	200	200
Dielectric Strength (minimum)	Contacts to Shield	VDC/peak AC	1500	1500	1500	1500	1500
	Contacts/Shield to Coil	VDC/peak AC	1500	1500	1500	1500	1500
Operate Time - including bounce - Typical	At Nominal Coil Voltage, 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

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% / °C as the ambient temperature varies.  
 Vibration: 20 G's to 2000 Hz; Shock: 50 G's