8000 Series/DIP Reed Relays

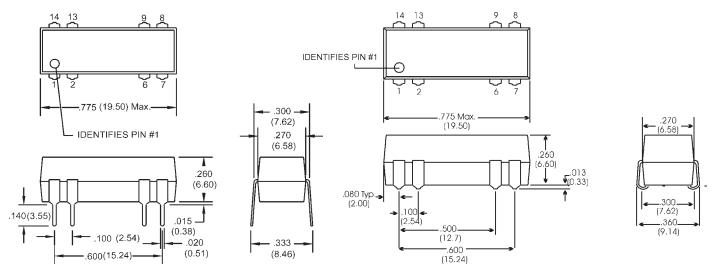


DIP Reed Relays

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)



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Model Number			8001 ^{2,3,4}	8002 ^{2,3,4}	8021 ^{2,3,4}	8041 ^{2,3,4}	8061 ^{2,3,4,5} 1 Form C SMD
Parameters	Test Conditions	Units	1 Form A	2 Form A	1 Form B	1 Form C	
COIL SPECS.							
Nom. Coil Voltage Max. Coil Voltage Coil Resistance	+/- 10%, 25° C	VDC VDC Ω	5 12 6.5 15 500 500	5 12 6.5 15 200 500			
Operate Voltage Release Voltage	Must Operate by Must Release by	VDC - Max. VDC - Min.	3.8 9.6 0.5 1.0				
Release voltage	Must Release by	VDC - Mill.	0.5 1.0	0.3 1.0	0.3 1.0	0.3 1.0	0.5 1.0
CONTACT RATINGS							
Switching Voltage Switching Current Carry Current Contact Rating	Max DC/Peak AC Resist. Max DC/Peak AC Resist. Max DC/Peak AC Resist. Max DC/Peak AC Resist.	Volts Amps Amps Watts	200 0.5 1.0 10	200 0.5 1.0 10	200 0.5 1.0 10	100 0.25 0.5 3	100 0.25 0.5 3
Life Expectancy-Typical 1	Signal Level 1.0V,10mA	x 10 ⁶ 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
RELAY SPECIFICATIONS							
Insulation Resistance (minimum)	Between all Isolated Pins at 100V, 25°C, 40% RH	Ω	10 ¹²	10 ¹²	10 ¹²	10 ¹⁰	10^{10}
Capacitance - Typical Across Open Contacts	No Shield Shield Floating Shield Guarding	pF pF pF	0.5 1.0 0.5	0.5 0.5 0.2	0.5 0.5 0.2	1.5 1.5 1.0	1.5 1.5 1.0
Open Contact to Coil	No Shield Shield Floating	pF pF	1.5 2.0	1.5 2.0	2.5 2.0	1.5 2.0	1.5 2.0
Contact to Shield	Shield Guarding Contacts Open, Shield Floating	pF pF	0.5 2.0	0.5 1.5	1.5 2.0	0.5 2.0	0.5 2.0
Dielectric Strength (minimum)	Between Contacts Contacts to Shield Contacts/Shield to Coil	VDC/peak AC VDC/peak AC VDC/peak AC	300 1500 1500	300 1500 1500	300 1500 1500	200 1500 1500	200 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 ⁶ No Suppression	msec.	1.0 0.5	1.0 0.5	1.0 0.5	1.5 1.0	1.5 1.0
		Top View:	14 2 13	14 2 13	14 2 13	14 2	1 2 1

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

Notes:

- ¹Consult factory for life expectancy at other switching loads.
- ² Molded depression on top of relay refers to pin #1 location.
- ³ Optional coil suppression diode across pins 2(+) and 6(-).
- ⁴ Optional ES Shield is tied to pin 9.
- ⁵ Surface mount processing temperature: 260°C max for 1 minute dwell time. Temperature measured on leads where lead exits molded package.
- ⁶ 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