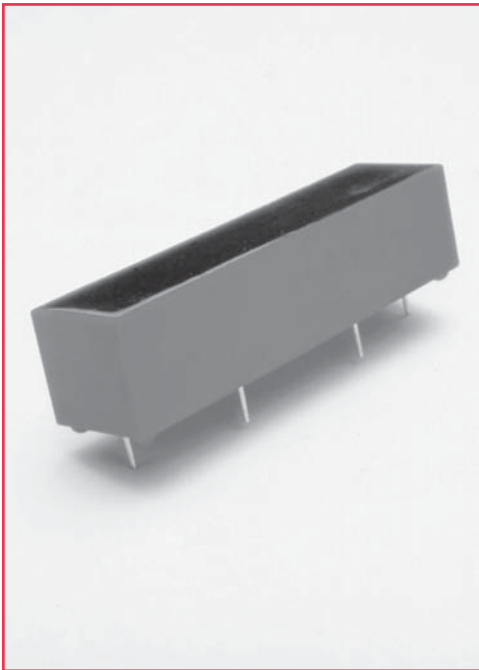


# 5500 Series/High Voltage Reed Relays

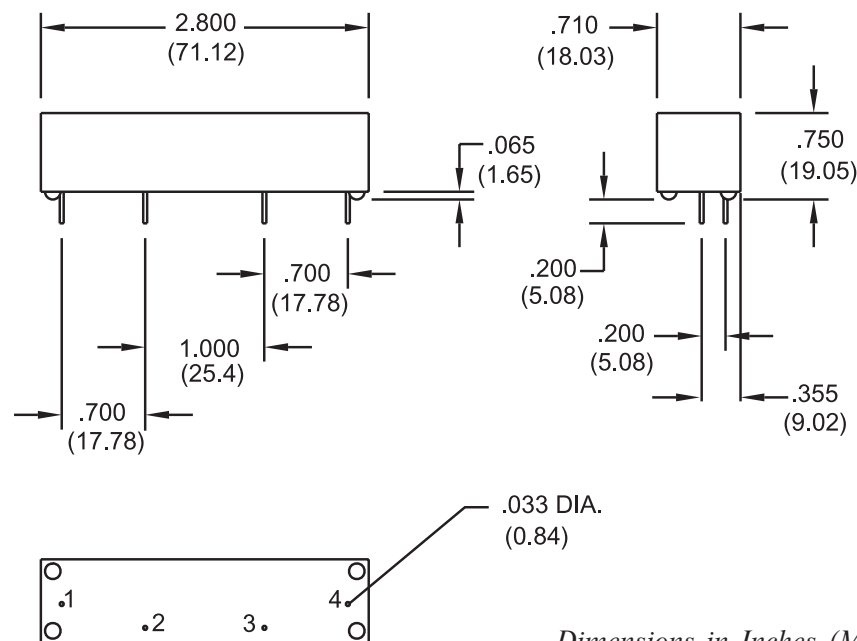


## High Voltage Reed Relays

The 5500 Series High Voltage Reed Relays are ideally suited to the needs of Instrumentation, Industrial Process Controls and General Purpose requirements. The specification tables allow you to select the appropriate relay for your particular application. Applications include medical and hipot test instruments, and cable test equipment. If your requirements differ, please consult your local representative or Coto's Factory.

## 5500 Series Features

- ◆ High Dielectric Strength - 10,000 Volts isolation across contacts
- ◆ High Contact Rating - 200 Watts
- ◆ Hermetically sealed Tungsten contacts for long life
- ◆ Magnetic Shield standard
- ◆ Custom lead terminations and packages available



**Bottom View**

*Dimensions in Inches (Millimeters)*

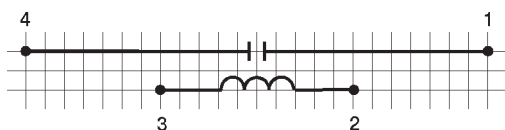
## Ordering Information

| Part Number  | XXXX-XX-1 | Coil Voltage  |
|--------------|-----------|---------------|
| Model Number |           |               |
| 5501 5502    |           | 05 = 5 volts  |
| 5503 5504    |           | 12 = 12 volts |
|              |           | 24 = 24 volts |

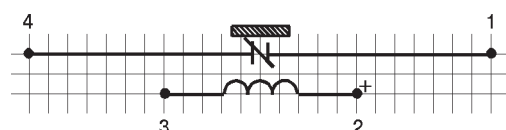
# 5500 Series/High Voltage Reed Relays

| Model Number                                  |                                                    |                            | 5501                                  | 5502 <sup>2</sup>                     | 5503                          | 5504 <sup>2</sup>             |
|-----------------------------------------------|----------------------------------------------------|----------------------------|---------------------------------------|---------------------------------------|-------------------------------|-------------------------------|
| Parameters                                    | Test Conditions                                    | Units                      | 1 Form A<br>High Voltage<br>Isolation | 1 Form B<br>High Voltage<br>Isolation | 1 Form A<br>Load<br>Switching | 1 Form B<br>Load<br>Switching |
| <b>COIL SPECS.</b>                            |                                                    |                            |                                       |                                       |                               |                               |
| Nom. Coil Voltage                             |                                                    | VDC                        | 5 12 24                               | 5 12 24                               | 5 12 24                       | 5 12 24                       |
| Max. Coil Voltage                             |                                                    | VDC                        | 6.5 15 30                             | 6.5 15 30                             | 6.5 15 30                     | 6.5 15 30                     |
| Coil Resistance                               | +/- 10%, 25° C                                     | Ω                          | 40 175 575                            | 40 175 575                            | 40 175 575                    | 40 175 575                    |
| Operate Voltage                               | Must Operate by                                    | VDC - Max.                 | 3.75 9.0 18.0                         | 3.75 9.0 18.0                         | 3.75 9.0 18.0                 | 3.75 9.0 18.0                 |
| Release Voltage                               | Must Release by                                    | VDC - Min.                 | 0.5 1.0 2.0                           | 0.5 1.0 2.0                           | 0.5 1.0 2.0                   | 0.5 1.0 2.0                   |
| <b>CONTACT RATINGS</b>                        |                                                    |                            |                                       |                                       |                               |                               |
| Switching Voltage                             | Max DC/Peak AC Resist.                             | Volts                      | 7500                                  | 7500                                  | 3500                          | 3500                          |
| Switching Current                             | Max DC/Peak AC Resist.                             | Amps                       | 3.0                                   | 3.0                                   | 3.0                           | 3.0                           |
| Carry Current                                 | Max DC/Peak AC Resist.                             | Amps                       | 5.0                                   | 5.0                                   | 5.0                           | 5.0                           |
| Contact Rating                                | Max DC/Peak AC Resist.                             | Watts                      | 50                                    | 50                                    | 200                           | 200                           |
| Life Expectancy-Typical <sup>1</sup>          | Signal Level 1.0V, 1mA                             | x 10 <sup>6</sup> Ops.     | 100                                   | 100                                   | 100                           | 100                           |
| Static Contact Resistance<br>(max. init.)     | 50mV, 10mA                                         | Ω                          | 0.080                                 | 0.080                                 | 0.200                         | 0.200                         |
| <b>RELAY SPECIFICATIONS</b>                   |                                                    |                            |                                       |                                       |                               |                               |
| Insulation Resistance<br>(minimum)            | Between all Isolated Pins<br>at 100V, 25°C, 40% RH | Ω                          | x 10 <sup>10</sup>                    | x 10 <sup>10</sup>                    | x 10 <sup>10</sup>            | x 10 <sup>10</sup>            |
| Capacitance - Typical<br>Across Open Contacts |                                                    | pF                         | 1.5                                   | 1.5                                   | 1.5                           | 1.5                           |
| Dielectric Strength<br>(minimum)              | Between Contacts<br>Contacts to Coil               | VDC/peak AC<br>VDC/peak AC | 10,000<br>10,000                      | 10,000<br>10,000                      | 7500<br>10,000                | 7500<br>10,000                |
| Operate Time - including<br>bounce - Typical  | At Nominal Coil Voltage,<br>30 Hz Square Wave      | msec.                      | 3.0                                   | 3.0                                   | 3.0                           | 3.0                           |
| Release Time - Typical                        | Zener-Diode Suppression <sup>3</sup>               | msec.                      | 3.0                                   | 3.0                                   | 3.0                           | 3.0                           |

Top View: Grid = .1"x.1" (2.54mm x 2.54mm)



**5501, 5503**



**5502, 5504**

## Notes:

<sup>1</sup>Consult factory for life expectancy at other switching loads.

<sup>2</sup>This relay contains a bias magnet. Correct coil polarity must be observed. Models 5502 and 5504 susceptible to magnetic interaction due to bias internal magnet.

<sup>3</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