

# 9007 SERIES/SPARTAN SIP REED RELAYS



## 9007 Series Economy SIP Reed Relays

The SIP relay is the industry choice for a wide variety of designs where economy, performance and a compact package are needed. The 9007 Spartan Series is a general purpose economy version of the 9001 for applications with less stringent requirements. These relays are well suited for applications in Security, Instrumentation and Modems. The specification tables allow you to select the appropriate relay for your application.

## 9007 Series Features

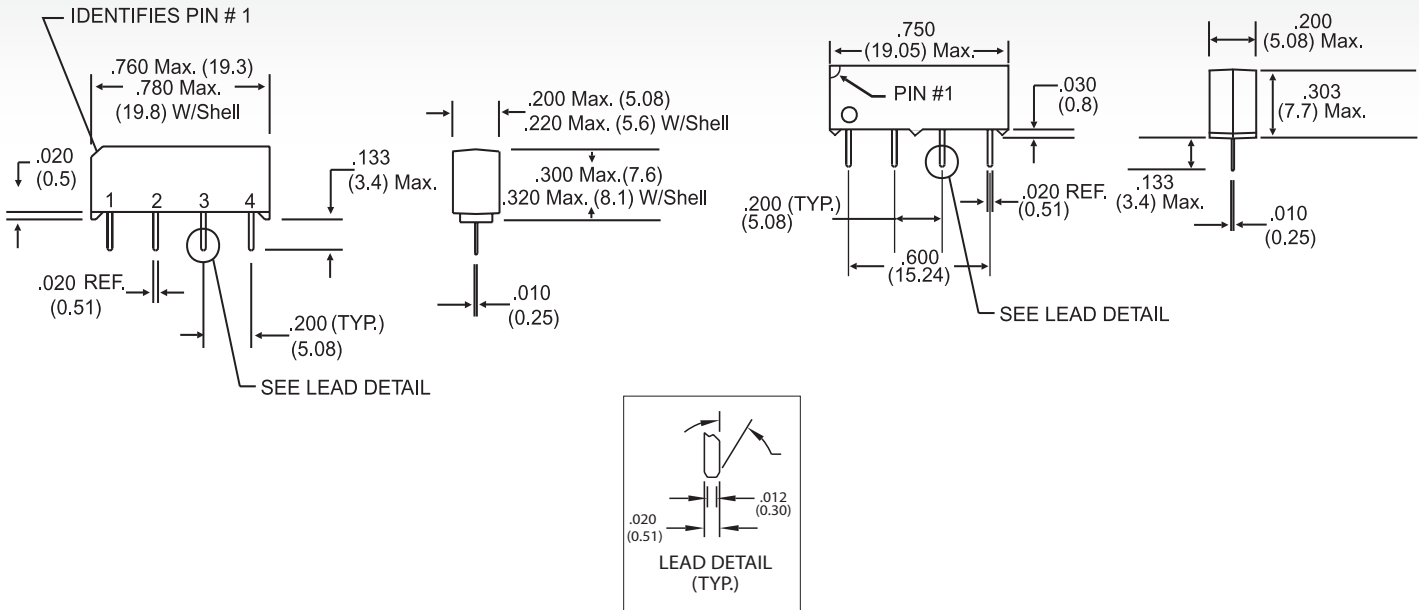
- ▶ Hermetically sealed contacts for long life
- ▶ High dielectric strength available, consult factory
- ▶ High speed switching compared to electromechanical relays
- ▶ Molded thermoset body on integral lead frame design
- ▶ Optional Coil Suppression Diode - protects coil drive circuits
- ▶ UL File #E67117, CSA File #028537 - Contact factory for details
- ▶ RoHS compliant

## DIMENSIONS

*in Inches (Millimeters)*

Model 9007

Model 9007 Alternate Package

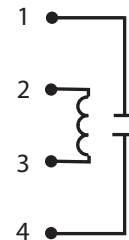


## Ordering Information

| Part Number            | 9007-XX-XX  | General Options                    |
|------------------------|---|------------------------------------|
| Model Number           | 9007  | 0=No Diode<br>1=Diode <sup>2</sup> |
| Coil Voltage           | 05=5 volts 12=12 volts<br>24 = 24 volts   |                                    |
| Magnetic Shield Option | 0= No Shield<br>1= Shield (External)<br>4= High-Sensitivity Coil w/Mag. Shield (5V & 12V only)<br>5 =High-Sensitivity Coil w/o Mag. Shield (12V only) |                                    |

| <b>MODELNUMBER</b>                            |  |                        | <b>9007<sup>2</sup></b> |                  |      |
|---|--|------------------------|-------------------------|------------------|------|
| <b>Parameters</b>                             | <b>Test Conditions</b>                             | <b>Units</b>           | <b>.2 -.2 -.2</b>       |                  |      |
| <b>COIL SPECS.</b>                            |  |                        |                         |                  |      |
| Nom. Coil Voltage                             |  | VDC                    | 5                       | 12               | 24   |
| Max. Coil Voltage                             |  | VDC                    | 6.5                     | 15.0             | 32.0 |
| Coil Resistance                               | +/- 10%, 25° C                                     | Ω                      | 500                     | 1000             | 2000 |
| Coil Resistance (hi-sensitivity)              |  | Ω                      | 1000                    | 2000             | ---- |
| Operate Voltage                               | Must Operate by                                    | VDC - Max.             | 3.75                    | 9.0              | 18.0 |
| Release Voltage                               | Must Release by                                    | VDC - Min.             | 0.4                     | 1.0              | 2.0  |
| <b>CONTACT RATINGS</b>                        |  |                        |                         |                  |      |
| Switching Voltage                             | Max DC/Peak AC Resist.                             | Volts                  |                         | 200              |      |
| Switching Current                             | Max DC/Peak AC Resist.                             | Amps                   |                         | 0.5              |      |
| Carry Current                                 | Max DC/Peak AC Resist.                             | Amps                   |                         | 1.0              |      |
| Contact Rating                                | Max DC/Peak AC Resist.                             | Watts                  |                         | 10               |      |
| Life Expectancy-Typical <sup>1</sup>          | Signal Level 1.0V, 10mA                            | x 10 <sup>6</sup> Ops. |                         | 100              |      |
| Static Contact Resistance (max. init.)        | 50mV, 10mA   | Ω                      |                         | 0.200            |      |
| Dynamic Contact Resistance (max. init.)       | 0.5V, 50mA<br>at 100 Hz, 1.5 msec                  | Ω                      |                         | N/A              |      |
| <b>RELAY SPECIFICATIONS</b>                   |  |                        |                         |                  |      |
| Insulation Resistance (minimum)               | Between all Isolated Pins<br>at 100V, 25°C, 40% RH | Ω                      |                         | 10 <sup>10</sup> |      |
| Capacitance - Typical<br>Across Open Contacts | No Shield  | pF                     |                         | 0.7              |      |
|   | Shield Floating                                    | pF                     |                         | -                |      |
|   | Shield Guarding                                    | pF                     |                         | -                |      |
| Open Contact to Coil                          | No Shield  | pF                     |                         | 1.4              |      |
|   | Shield Floating                                    | pF                     |                         | -                |      |
|   | Shield Guarding                                    | pF                     |                         | -                |      |
| Contact to Shield                             | Contacts Open, Shield Floating                     | pF                     |                         | -                |      |
| Dielectric Strength (minimum)                 | Between Contacts                                   | VDC/peak AC            |                         | 250              |      |
|   | Contacts to Shield                                 | VDC/peak AC            |                         | -                |      |
|   | Contacts/Shield to Coil                            | VDC/peak AC            |                         | 1500             |      |
| Operate Time - including bounce - Typical     | At Nominal Coil Voltage,<br>30 Hz Square Wave      | msec.                  |                         | 0.50             |      |
| Release Time - Typical                        |  | msec.                  |                         | 0.20             |      |

Top View:  
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> Optional diode is connected to pin #2(+) and pin #3(-). Correct coil polarity must be observed.

**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