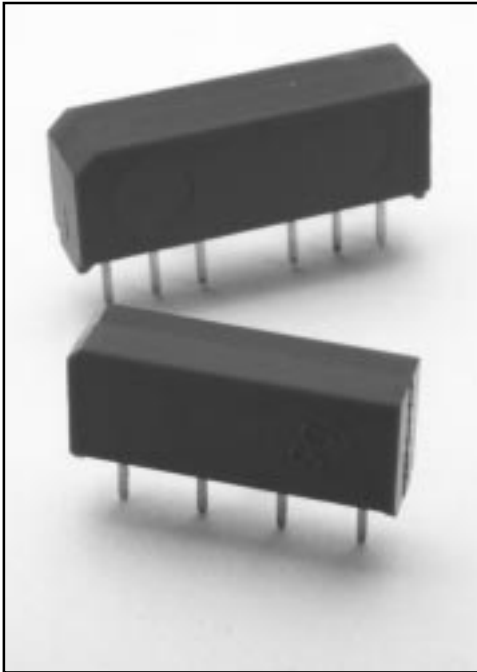


# 9000 Series/Spartan SIP Reed Relays



## ECONOMY SIP REED RELAYS

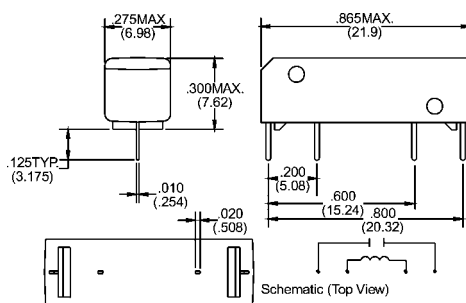
The SIP relay is the industry choice for a wide variety of designs where economy, performance and a compact package are needed. The 9007 Spartan Series is a general purpose economy version of the 9001 for applications with less stringent requirements. The 9081 Spartan Series is similar to the 9007, but with an alternate industry standard footprint of .2"x.4"x.2". These relays are well suited for applications in Security, Instrument and Modems. The specification tables allow you to select the appropriate relay for your application.

## SERIES FEATURES

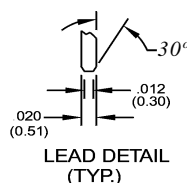
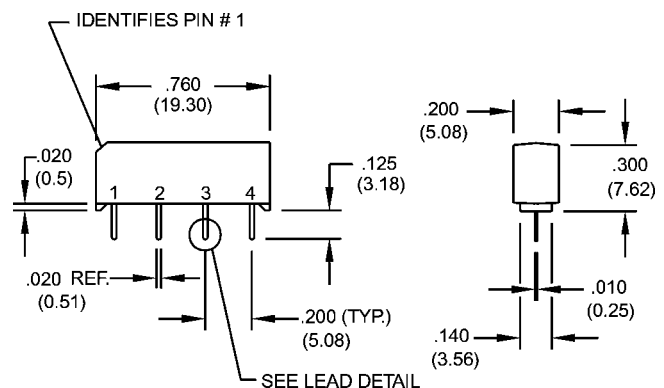
- ◆ Hermetically sealed contacts for long life
- ◆ High dielectric strength available, consult factory.
- ◆ High speed switching compared to electromechanical relays.
- ◆ Molded thermoset body on integral lead frame design.
- ◆ Two industry standard footprints.
- ◆ Optional Coil Suppression Diode - protects coil drive circuits.
- ◆ UL File # E67117, CSA File # LR 28537. 9081 Pending.

Dimensions in Inches (Millimeters)

### Model 9081



### Model 9007



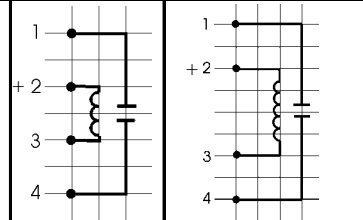
## Ordering Information

Part Number	90XX-XX-XX	General Options
Model Number	9007 9081	0=No Diode
Coil Voltage	05=5 volts 12=12 volts	1=Diode <sup>2</sup>
Magnetic Shield Option	0=No Shield	2=Form B Contacts (Normally Closed <sup>3</sup> )
	1=Magnetic Shield (External)	(Available on 5V only)

# 9000 Series/Spartan SIP Reed Relays



Model Number			9007 <sup>2</sup>		9081 <sup>2</sup>			
Parameters	Test Conditions	Units	.2.4.2 SIP					
COIL SPECS.								
Nom. Coil Voltage		VDC	5	12	5	12	24	
Max. Coil Voltage		VDC	6.5	15.0	6.5	15.0	32	
Coil Resistance	+/- 10%, 25° C	Ω	500	1000	500	1000	2000	
Operate Voltage	Must Operate by	VDC - Max.	3.75	9.1	3.75	9.1	18	
Release Voltage	Must Release by	VDC - Min.	0.4	1.0	0.4	1.0	2	
CONTACT RATINGS								
Switching Voltage	Max DC/Peak AC Resist.	Volts	200		200			
Switching Current	Max DC/Peak AC Resist.	Amps	0.5		0.5			
Carry Current	Max DC/Peak AC Resist.	Amps	1.0		1.0			
Contact Rating	Max DC/Peak AC Resist.	Watts	10		10			
Life Expectancy-Typical <sup>1</sup>	Signal Level 1.0V, 1.0mA	x 10 <sup>6</sup> Ops.	100		100			
Static Contact Resistance (max. init.)	50mV, 10mA	Ω	0.200		0.200			
Dynamic Contact Resistance (max. init.)	0.5V, 50mA at 100 Hz, 1.5 msec	Ω	N/A		N/A			
RELAY SPECIFICATIONS								
Insulation Resistance (minimum)	Between all Isolated Pins at 100V, 25°C, 40% RH	Ω	10 <sup>10</sup>		10 <sup>10</sup>			
Capacitance - Typical Across Open Contacts	No Shield	pF	0.7		0.7			
	Shield Floating	pF	-		-			
	Shield Guarding	pF	-		-			
Open Contact to Coil	No Shield	pF	1.4		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		250			
	Contacts to Shield	VDC/peak AC	-		-			
	Contacts/Shield to Coil	VDC/peak AC	1500		1500			
Operate Time - including bounce - Typical	At Nominal Coil Voltage, 30 Hz Square Wave	msec.	0.50		0.50			
Release Time - Typical	Zener-Diode Suppression <sup>4</sup>	msec.	0.20		0.20			
	Diode Suppression		-		-			



Top View:  
Dot stamped  
on relay refers  
to pin #1  
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.
- <sup>3</sup> These relays contain bias magnets. Correct coil polarity must be observed. Pin #2(+)
- <sup>4</sup> Consists of 20V Zener-diode and 1N1002 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