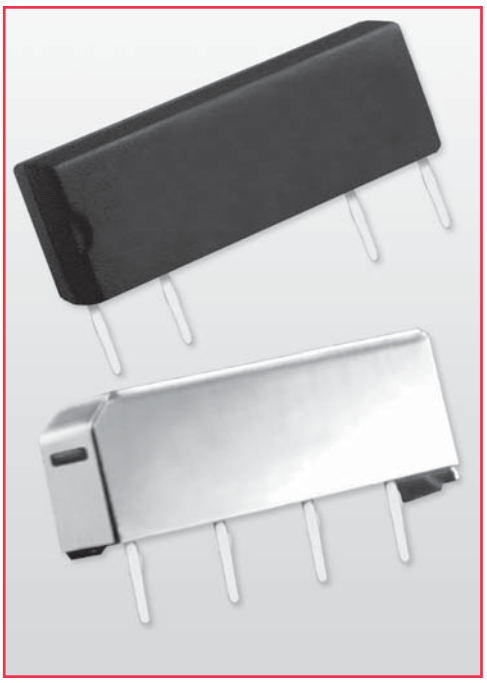
9000 Series/Spartan SIP Reed Relays



Economy SIP Reed Relays

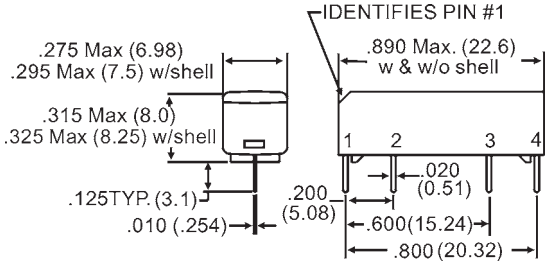
The SIP relay is the industry choice for a wide variety of designs where economy, performance and a compact package are needed. The 9007 Spartan Series is a general purpose economy version of the 9001 for applications with less stringent requirements. The 9081 Spartan Series is similar to the 9007, but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

Series Features

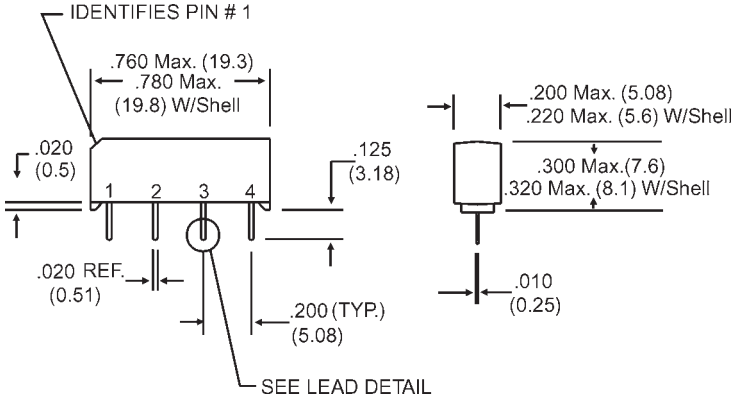
- Hermetically sealed contacts for long life
- High dielectric strength available, consult factory
- High speed switching compared to electromechanical relays
- Molded thermoset body on integral lead frame design
- Two industry standard footprints
- Optional Coil Suppression Diode - protects coil drive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

Dimensions in Inches (Millimeters)

Model 9081



Model 9007



Ordering Information

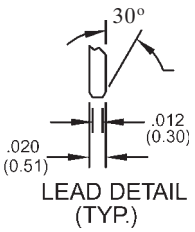
Part Number **90XX-XX-XX**

Model Number
9007 9081

Coil Voltage
05=5 volts 12=12 volts
24 = 24 volts

Magnetic Shield Option
0= No Shield
1= Shield (External)
4= High-Sensitivity Coil w/Mag. Shield (5V & 12V only)
5 =High-Sensitivity Coil w/o Mag. Shield (12V only)

General Options
0=No Diode
1=Diode [2] (N/A 9081)
2=Form B Contacts (Normally Closed [3])
(Available on 5V only)

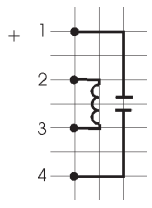


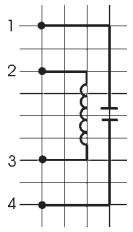
9000 Series/Spartan SIP Reed Relays

Model Number Parameters	Test Conditions	Units	9007[2] .2 -.2 -.2 SIP					9081[2] .2 -.4 -.2 SIP				
COIL SPECS.			Std.	Hi Sen.*	Std	Hi Sen.*	Std.	Std.	Hi Sen.*	Std	Hi Sen.*	Std.
Nom. Coil Voltage		VDC	5	5	12	12	24[5]	5	5	12	12	24[5]
Max. Coil Voltage		VDC	6.5	6.5	15.0	15.0	32	6.5	6.5	15.0	15.0	32
Coil Resistance	+/- 10%, 25° C	Ω	500	1000	1000	2000	2000	500	1000	1000	2000	2000
Operate Voltage	Must Operate by	VDC - Max.	3.75	3.75	9.0	9.0	18.0	3.75	3.75	9.0	9.0	18.0
Release Voltage	Must Release by	VDC - Min.	0.4	1.0	1.0	1.0	2	0.4	1.0	1.0	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[1]	Signal Level 1.0V, 1.0mA	x 10^6 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^{10}					10^{10}				
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[4]	msec.	0.20					0.20				
	Diode Suppression		-					-				

** Hi Sen. = High Sensitivity*

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





Notes:

[1] Consult factory for life expectancy at other switching loads.
[2] Optional diode is connected to pin #2 (+) and pin #3(-). Correct coil polarity must be observed.
[3] These relays contain bias magnets. Correct coil polarity must be observed. Pin #2(+)
[4] Consists of 20V Zener-diode and 1N1002 diode in series, connected in parallel with coil.
[5] For -40 and -50 models, 5V/1000 Ω or 12V/2000 Ω.

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