

### DESCRIPTION

SRC Devices' epoxy molded DIP 14 Series offers a variety of contacts and schematics to meet the needs of a wide range of applications. The MSS2 is a 1 form A relay equipped with the MYAD all-position mounting switch. With switching up to 50 Watts and a 4000V isolation option, the DIP 14 Series is a relay package that allows for automatic insertion directly on PCBs as well as insertion into standard 14 pin DIP sockets.

### FEATURES

- Stable contact resistance over life
- 4000 Vac input-output isolation
- Bounce free operation
- High insulation resistance
- Long life > 1 billion operation
- Epoxy molded for automatic board processing
- RoHS Compliant (PRMA only)

### APPLICATIONS

- Automatic test equipment
- Process control
- Industrial
- Telecom
- Datacom
- High-end security systems
- Signaling
- Metering

### SPECIFICATIONS

Parameters	Conditions	MSS2 Molded 8-pin All position Wetted contacts			MVS2 Molded 14-pin Wetted Contacts			Units
		Min	Typ	Max	Min	Typ	Max	
<b>Contact Ratings</b>								
Switching Voltage	Max DC/PeakAC Resistive			500			1000 <sup>1</sup>	Volts
Switching Current	Max DC/PeakAC Resistive			2			2	Amps
Carry Current	Max DC/PeakAC Resistive			3			3	Amps
Contact Rating	Max DC/PeakAC Resistive			50			50	Watts
Life Expectancy	Singnal Level 1V, 10mA 50V, 1A 500V, 100mA		200			2 50		x10 <sup>6</sup> x10 <sup>6</sup> x10 <sup>6</sup>
Static Contact Resistance	50mV, 10mA		40	100			100	mOhms
Contact Material	.		Hg			Hg		
Hg Content			16			40		mgrams
<b>Relay Specifications</b>								
Insulation Resistance	Between all isolated pins at 100V, 25°C, 40% RH	10 <sup>8</sup>	10 <sup>10</sup>		10 <sup>10</sup>	10 <sup>12</sup>		Ohms
Capacitance	Across Open Contacts		1.5	2		0.7	3	pF
	Upper Contact to Coil					1.2	4	pF
	Closed Contact to Coi					3.2		pF
Dielectric Strength	Open Contact to Coil	1400	3	4				pF
	Between Contacts	1400						VDC/PeakAC
	Open Contact				1400			VDC/PeakAC
	Contacts to Coil	1400			1400			VDC/PeakAC
Operate Time (including bounce, DSS7only)	At Nominal Coil Voltage 10Hz Square Wave		1.2	1.75		1.5	2.5	ms
Release Time	Zener-Diode Suppression		1	1.5		1	2.5	ms
<b>Enviromental Ratings</b>								
Storage Temperature		-40		+105	-40		+105	°C
Operating Temperature		-40		+80	-38		+85	°C
Soldering Temperature	Applied to pins, 5sec. max		+260				+260	°C
Vibration Resistance <sup>2</sup> (survival)	10Hz - 500Hz			20			10	Gs
Shock Resistance (survival)	11+/- 1ms, 1/2 Sine Wave			100			30	Gs
Weight			1.5			2.1		grams

<sup>1</sup> Current limited up 5mA, minimum 20 million operations; for further information consult factory.

<sup>2</sup> Use caution not to exceed vibration resistance limits while ultrasonically cleaning relays with DYAD switches.



### SPECIFICATIONS

Parameters	Conditions	PRMA Molded 8-pin Form A&B Dry Reed			PRMA Molded 8-pin Form C Dry Reed			Units
		Min	Typ	Max	Min	Typ	Max	
All parameters are at 25°C unless otherwise stated.								
<b>Contact Ratings</b>								
Switching Voltage	Max DC/PeakAC Resistive			200			100	Volts
Switching Current	Max DC/PeakAC Resistive			0.5			0.25	Amps
Carry Current	Max DC/PeakAC Resistive			2			0.4	Amps
Contact Rating	Max DC/PeakAC Resistive			10			3	Watts
Life Expectancy	Singnal Level 1V, 10mA	300	500			20		x10 <sup>6</sup>
Static Contact Resistance	50mV, 10mA			150			200	mOhms
Contact Material			Ru			Rh		
<b>Relay Specifications</b>								
Insulation Resistance	Between all isolated pins at 100V, 25°C, 40% RH	10 <sup>10</sup>	10 <sup>12</sup>		10 <sup>9</sup>	10 <sup>10</sup>		Ohms
Capacitance	Across Open Contacts		0.7	1		2.5	3	pF
	Open Contact to Coil		1.5	2		3	3	pF
Dielectric Strength	Between Contacts	250			250			VDC/PeakAC
	Contacts to Coil	1400			1400			VDC/PeakAC
Operate Time (including bounce, DSS7only)	At Nominal Coil Voltage 10Hz Square Wave		0.25	0.5		1.5	2	ms
Release Time	Zener-Diode Suppression		0.25	0.5		1.5	3	ms
<b>Enviromental Ratings</b>								
Storage Temperature		-40		+105	-40		+105	°C
Operating Temperature		-40		+80	-40		+80	°C
Soldering Temperature				+260		+260		°C
Vibration Resistance <sup>1</sup> (survival)	Applied to pins, 5sec. max 10Hz - 500Hz			20			10	Gs
Shock Resistance (survival)	11+/- 1ms, 1/2 Sine Wave			100			50	Gs
Weight			1.5			1.5		grams

<sup>1</sup> Use caution not to exceed vibration resistance limits while ultrasonically cleaning relays with DYAD switches.

### COIL SPECIFICATIONS

Part #	Contact Form	Coil Voltage			Coil Resistance			Operate Voltage			Release Voltage			Nominal Input Power		
		Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max
		Volts			Ohms			Volts			Volts			mW		
					+/- 10% (25°C)			Must operate by (25°C)			Must release by (25°C)					
		Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max
PRMA1A05	1 Form A	5	21	450	500	550	0.8		3.75	0.8	3.75		50			
PRMA1A12	1 Form A	12	30	900	1000	1100	1		9	1	9		144			
PRMA1A24	1 Form A	24	44	1935	2150	2365	2		18	2	18		268			
PRMA1B05	1 Form B	5	6	450	500	550	0.8		3.75	0.8	3.75		50			
PRMA1B12	1 Form B	12	14.5	900	1000	1100	1		9	1	9		288			
PRMA1B24	1 Form B	24	29	1935	2150	2365	2		18	2	18		268			
PRMA1C05	1 Form C	5	12	180	200	220	0.8		3.75	0.8	3.75		125			
PRMA1C12	1 Form C	12	18	450	500	550	1		9	1	9		288			
PRMA1C24	1 Form C	24	32	1935	2150	2365	2		18	2	18		268			
PRMA2A05	2 Form A	5	11	126	140	154	0.8		3.75	0.8	3.75		179			
PRMA2A12	2 Form A	12	21	450	500	550	1		9	1	9		288			
PRMA2A24	2 Form A	24	44	1935	2150	2365	2		18	2	18		268			
PRMA10037	1 Form A	5	15	342	380	418	0.8		3.75	0.8	3.75		66			
PRMA10038	1 Form A	12	19	477	530	583	1		9	1	9		272			
PRMA10039	1 Form A	24	32	1800	2000	2200	2		18	2	18		268			
MSS21A05	1 Form A	5	11	126	140	154	0.5		3.75	0.5	3.75		179			
MSS21A12	1 Form A	12	21	450	500	550	1		9	1	9		288			
MSS21A24	1 Form A	24	44	1935	2150	2365	2		18	2	18		268			
MVS21A05(A,B)	1 Form A	5	7	94.5	105	116	0.5		3.75	0.5	3.75		238			
MVS21A12(A,B)	1 Form A	12	15	450	500	550	1		9	1	9		288			
MVS21A24(A,B)	1 Form A	24	30	1935	2150	2365	2		18	2	18		268			

