DSS7/MSS7/MVS7

DIP 14 Series Reed Relays

www.cotorelay.com

DESCRIPTION

Coto Technology's epoxy molded DIP 14 Series offers a variety of contacts and schematics to meet the needs of a wide range of applications. It features the MVS7 models designed for high reliability. The MSS7 DIPs are 1 form A relays 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

- All position mercury contacts on some models
- Stable contact resistance over life
- 4000 Vac input-output isolation
- Bounce free operation
- High insulation resistance
- Switching speed of 300Hz
- Long life > 1 billion operations
- Epoxy molded for automatic board processing

APPLICATIONS

- ATE
- Process control
- Industrial
- Telecom
- Datacom
- High-end security systems
- Signaling
- Metering

SPECIFICATIONS

All parameters are at 25°C unless otherwise stated.

Parameters	Conditions	DSS7 Molded 4-pin Dry Reed Min	DSS7 Typ	DSS7 Max	MSS7 Molded 4-pin All position Wetted Contacts Min	MSS7 Typ	MSS7 Max	MVS7 High Dielectric Strength DIP Wetted Contacts Min	MVS7 Typ	MVS7 Max	Units
Contact Ratings											
Switching Voltage	Max DC/PeakAC Resistive			200			500			1000[1]	Volts
Switching Current	Max DC/PeakAC Resistive			0.5			2			2	Amps
Carry Current	Max DC/PeakAC Resistive			2			3			3	Amps
Contact Rating	Max DC/PeakAC Resistive			10			50			50	Watts
Life Expectancy	Singnal Level 1V, 10mA	300	500			200		1000			x106
	50V, 1A								2		x106
	500V, 100mA								5		x106
Static Contact Resistance	50mV, 10mA			150		40	100			100	mOhms
Contact Material	.		Ru			Hg			Hg		
Hg Content						16			40		mgrams
Relay Specifications											
Insulation Resistance	Between all isolated pins at 100V, 25°C, 40% RH	10^{10}	10^{12}		10^{8}	10^{10}		10^{10}	10^{12}		Ohms
Capacitance	Across Open Contacts		0.7	1		1.2	2		0.7		pF
	Upper Contact to Coil								1.5		pF
	Closed Contact to Coil								2.5		pF
	Open Contact to Coil		1.5	2		3	4				pF
Dielectric Strength	Between Contacts	250			2000						VDC/PeakAC
	Open Contacts							2000			VDC/PeakAC
	Contacts to Coil	5600			5600			5600			VDC/PeakAC
Operate Time	At Nominal Coil Voltage		0.25	0.5		1.2	1.75		1.5	2.5	ms
(including bounce, DSS7only)	10Hz Square Wave										
Release Time	Zener-Diode Suppression		0.25	0.5		1	1.5		1	2.5	ms
Enviromental Ratings											
Storage Temperature		-40		+105	-40		+105	-40		+105	°C
Operating Temperature		-38		+80	-38		+75	-38		+85	°C
Soldering Temperature	Applied to pins, 5sec. max			+260		+260				+260	°C
Vibration Resistance[2] (survival)	10Hz - 500Hz			20			10			10	Gs
Shock Resistance (survival)	11+/- 1ms, 1/2 Sine Wave			100			30			30	Gs
Weight			1.5			2.3			2.1		grams

[1] Current limited up to 5mA, minimum 20 million operations; for frurther information consult factory

2 Use caution not to exceed vibration resistance limits while ultrsonically cleaning relays with DYAD switches.

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COIL SPECIFICATIONS

	Contact Form	Coil Voltage			Coil Resistance			Operate Voltage						Nominal Input Power		
Units		Volts			Ohms			Volts			Volts			mW		
Conditions					+/- 10% (25°C)			Must operate by (25°C)			Must release by (25°C)					
Part #		Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max
DSS71A05	1 Form A		5	21	450	500	550	0.8		3.75	0.8		3.75		50	
DSS71A12	1 Form A		12	30	900	1000	1100	1		9	1		9		144	
DSS71A24	1 Form A		24	44	1935	2150	2365	2		18	2		18		268	
MSS71A05	1 Form A		5	11	126	140	154	0.5		3.75	0.5		3.75		179	
MSS71A12	1 Form A		12	21	450	500	550	1		9	1		9		288	
MSS71A24	1 Form A		24	43	1935	2150	2365	2		18	2		18		268	
MVS71A05(S)	1 Form A		5	7	94.5	105	116	0.5		3.75	0.5		3.75		238	
MVS71A12(S)	1 Form A		12	15	450	500	550	1		9	1		9		288	
MVS71A24(S	1 Form A		24	30	1935	2150	2365	2		18	2		18		268	

ORDERING INFORMATION

A complete part number is represented by the digits below

XXXX XX XX X

Series
DSS7
MSS7
MVS7

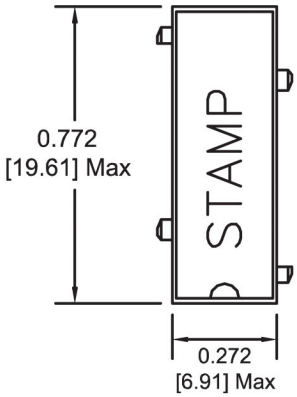
Contact Form
1A = 1 Form A (Normally open)

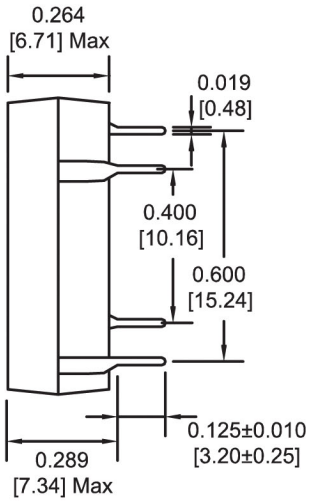
OPTIONS
A = ES Option
B = Diode Option
C = Shield & diode option
S = Modified pinout
(coil at 2&6, contact at 8 & 14)

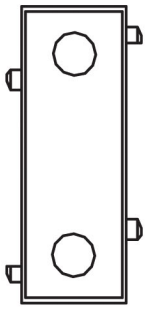
Coil Voltage
05 = 5V
12 = 12V
24 = 24V

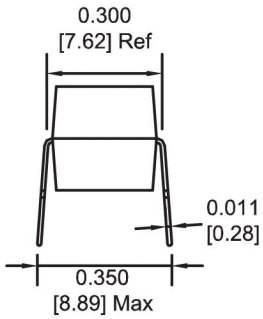
MECHANICAL DIMENSIONS

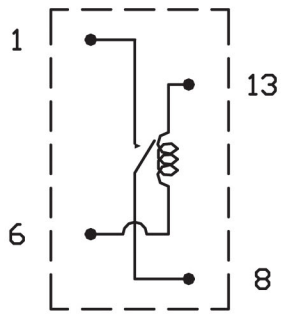
Dimensions in inches [mm]











WIRING DIAGRAM

MVS7 must be mounted veritcally. Pin #1 is up.

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