

OSA series

2 Pole Miniature Power PC Board Relay

Appliances, Audio Equipment, Office Machines

- UL File No. E82292
- CSA File No. LR48471
- SEMKO File No. 9452086 (available for DM5)
- TUV File No. R9551879 (available for DM5)

Features

- Meet UL TV-3 and CSA TV-4 rating available for DM5 type.
- 2 Form A contact arrangements.
- Immersion cleanable, sealed version available.
- Meet 3,000V dielectric voltage between coil and contacts.
- Meet 5,000V surge voltage between coil and contacts (1.2 / 50µs).

Contact Data @ 20°C

Arrangements: 2 Form A (DPST-NO).
Material: Ag-GS Alloy (DM3) and AgSnO (DM5).
Max. Switching Rate: 300 ops./min. (no load).
 30 ops./min. (rated load).
Expected Mechanical Life: 10 million operations (no load).
Expected Electrical Life: 100,000 operations (rated load).
Minimum Load:
 OSA-DM3: 1mA @ 1VDC.
 OSA-DM5: 100mA @ 5VDC.
Initial Contact Resistance: 50 milliohms @ 1A, 6VDC.

Contact Ratings

Ratings: OSA-DM3: 3A @ 120VAC resistive,
 3A @ 24VDC resistive,
 OSA-DM5: 5A @ 240VAC resistive,
 5A @ 30VDC resistive,
 TV-3 @ 120VAC Tungsten (UL),
 TV-4 @ 120VAC Tungsten (CSA).
Max. Switched Voltage:
 OSA-DM3: AC: 240V.DC: 50V.
 OSA-DM5: AC: 250V.DC: 30V.
Max. Switched Current: 5A
Max. Switched Power:
 OSA-DM3: 300VA.
 OSA-DM5: 1,100VA.

Initial Dielectric Strength

Between Open Contacts: 1,000VAC 50/60 Hz. (1 minute).
Between Coil and Contacts: 3,000VAC 50/60 Hz. (1 minute).
Surge Voltage Between Coil and Contacts: 5,000V (1.2 / 50µs).

Initial Insulation Resistance

Between Mutually Insulated Elements: 1,000M ohms min. @ 500VDCM.

Coil Data

Voltage: 3 to 48VDC.
Nominal Power: 540 mW
Coil Temperature Rise: 50°C max., at rated coil voltage.
Max. Coil Power: 130% of nominal.
Duty Cycle: Continuous.

Coil Data @ 20°C

OSA				
Rated Coil Voltage (VDC)	Nominal Current (mA)	Coil Resistance (ohms) ± 10%	Must Operate Voltage (VDC)	Must Release Voltage (VDC)
3	176.5	17	2.25	0.30
5	106.4	47	3.75	0.50
6	88.0	68	4.50	0.60
9	58.0	155	6.75	0.90
12	44.4	270	9.00	1.20
24	21.8	1,100	18.00	2.40
48	11.0	4,400	36.00	4.80

Operate Data

Must Operate Voltage: 75% of nominal voltage or less.
Must Release Voltage: 10% of nominal voltage or more.
Operate Time: 20 ms max.
Release Time: 10 ms max.

Environmental Data

Temperature Range:
Operating: -30°C to +60°C
Vibration, Mechanical: 10 to 55 Hz., 1.5mm double amplitude
Operational: 10 to 55 Hz., 1.5mm double amplitude.
Shock, Mechanical: 1,000m/s² (100G approximately).
Operational: 100m/s² (10G approximately).
Operating Humidity: 20 to 85% RH. (Non-condensing).

Mechanical Data

Termination: Printed circuit terminals.
Enclosure (94V-0 Flammability Ratings):
 OSA-SS: Vented (Flux-tight) plastic cover.
 OSA-SH: Sealed plastic case.
Weight: 0.46 oz (13g) approximately.

Ordering Information

Typical Part Number ▶

OSA

-SS

-2

24

D

M

3

1. Basic Series:

OSA = Miniature Power PC board relay.

2. Enclosure:

SS = Vent (Flux-tight)* plastic cover.
SH = Sealed, plastic case.

3. Termination:

2 = 2 pole

4. Coil Voltage:

03 = 3VDC 06 = 6VDC 12 = 12VDC 48 = 48VDC
05 = 5VDC 09 = 9VDC 24 = 24VDC

5. Coil Input:

D = Standard

6. Contact Arrangement:

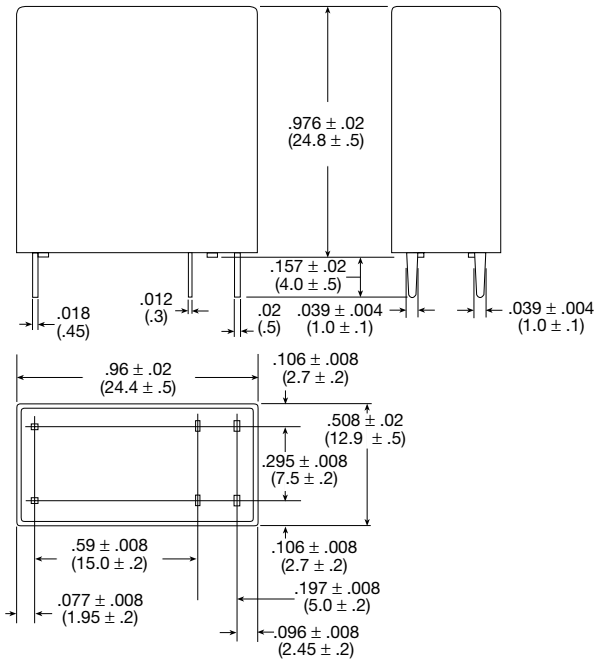
M = 2 Form A, DPST-NO

7. Contact Rating:

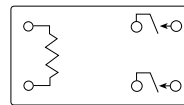
3 = 3A @ 120VAC resistive (DM3). 5 = 5A @ 240VAC resistive (DM5).

* Not suitable for immersion cleaning processes.

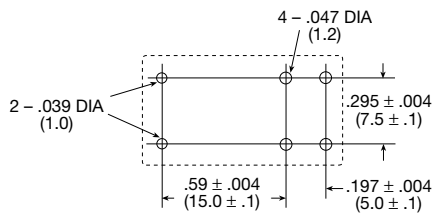
Outline Dimensions



Wiring Diagram (Bottom View)

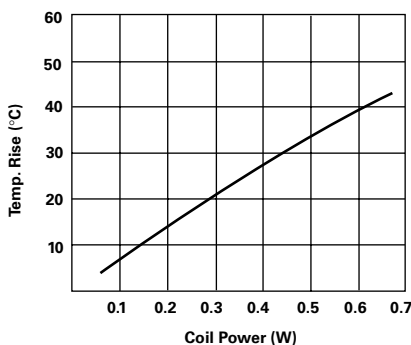


PC Board Layout (Bottom View)

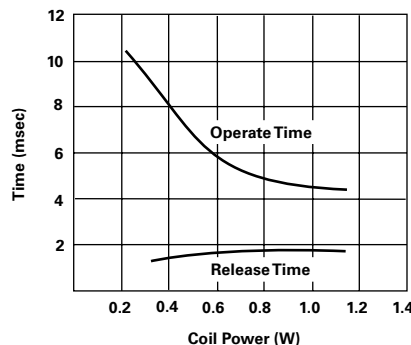


Reference Data

Coil Temperature Rise



Operate Time



Life Expectancy

