



OSZ series

1 Pole Miniature Power PC Board Relay

Appliances, HVAC, Office Machines

UL File No. E58304

CSA File No. LR48471

Features

- Meet UL Tungsten TV-5 and TV-8 rating.
- 1 Form A contact arrangements.
- Immersion cleanable, sealed version available.
- Meet 4,000V dielectric voltage between coil and contacts.
- Meet 7,000V surge voltage between coil and contacts (1.2 / 50μs).

Contact Data @ 20°C

Arrangements: 1 Form A (SPST-NO).

Material: AgSnO.

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: 100mA @ 5VDC.

Initial Contact Resistance: 100 milliohms @ 1A, 6VDC.

Contact Ratings

Ratings: OSZ-DM5: 10A @ 240VAC resistive,
10A @ 24VDC resistive,
TV-5 @ 120VAC Tungsten, 25,000ops.

OSZ-DM8: 16A @ 240VAC resistive,
16A @ 24VDC resistive,
TV-8 @ 120VAC Tungsten, 25,000ops.

Max. Switched Voltage: AC: 240V.
DC: 24V.

Max. Switched Current: 10A (DM5), 16A (DM8).

Max. Switched Power: 2,400VA, 380W.

Initial Dielectric Strength

Between Open Contacts: 1,000VAC 50/60 Hz. (1 minute).

Between Coil and Contacts: 4,000VAC 50/60 Hz. (1 minute).

Surge Voltage Between Coil and Contacts: 7,000V (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: 55°C max., at rated coil voltage.

Max. Coil Power: 130% of nominal.

Duty Cycle: Continuous.

Coil Data @ 20°C

OSZ				
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	0.15
5	106.4	47	3.75	0.25
6	88.0	68	4.50	0.30
9	58.0	155	6.75	0.45
12	44.4	270	9.00	0.60
24	21.8	1,100	18.00	1.20
48	11.0	4,400	36.00	2.40

Operate Data

Must Operate Voltage: 75% of nominal voltage or less.

Must Release Voltage: 5% of nominal voltage or more.

Operate Time: 20 ms max.

Release Time: 10 ms max.

Environmental Data

Temperature Range:

Operating: -30°C to +65°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):

OSZ-SS: Vented (Flux-tight) plastic cover.

OSZ-SH: Sealed plastic case.

Weight: 0.45 (13g) approximately.

Ordering Information

Typical Part Number ▶

OSZ

-SS

-1

12

D

M

8

1. Basic Series:

OSZ = Miniature Power PC board relay.

2. Enclosure:

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

3. Termination:

1 = 1 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:

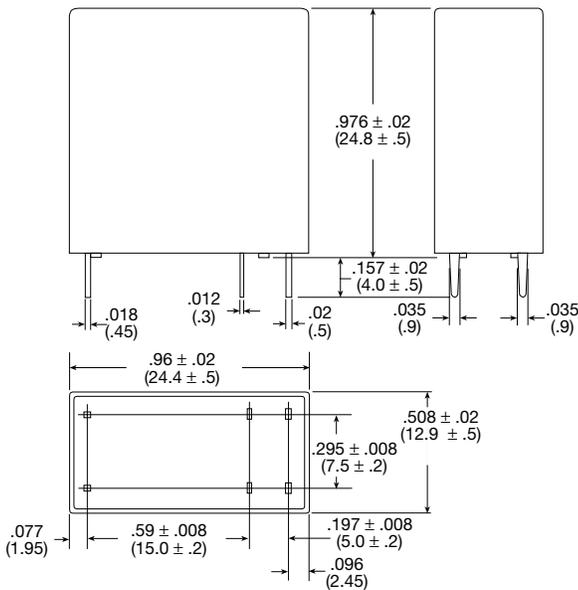
M = 1 Form A, SPST-NO.

7. Contact Rating:

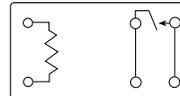
5 = TV-5 rating (DM5) 8 = TV-8 rating (DM8)

* Not suitable for immersion cleaning processes.

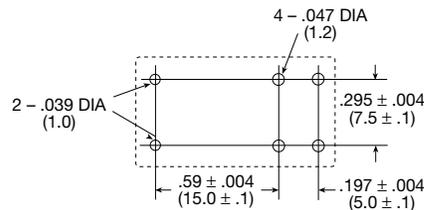
Outline Dimensions



Wiring Diagram (Bottom View)

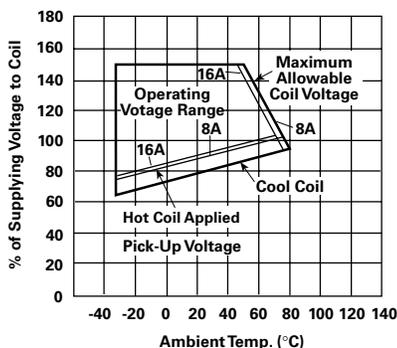


PC Board Layout (Bottom View)

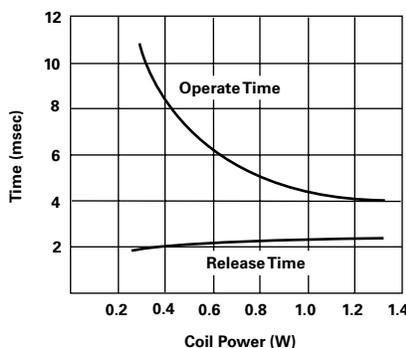


Reference Data

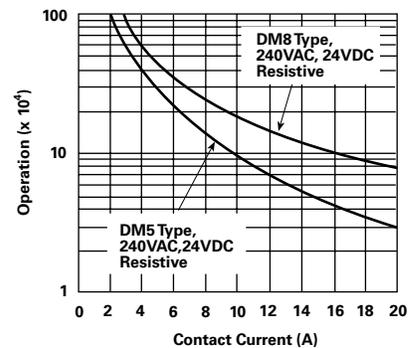
Coil Temperature Rise



Operate Time



Life Expectancy



Note: This data is based on the max. allowable temperature for E type insulation coil (115°C).