



# OSZ series

## 1 Pole Miniature Power PC Board Relay

Appliances, HVAC, Office Machines

UL File No. E58304

CSA File No. LR48471

Users should thoroughly review the technical data before selecting a product part number. It is recommended that user also seek out the pertinent approvals files of the agencies/laboratories and review them to ensure the product meets the requirements for a given application.

### Features

- Meet UL Tungsten 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:** 16A @ 240VAC resistive,  
16A @ 24VDC resistive,  
TV-8 @ 120VAC Tungsten, 25,000ops.

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

**Max. Switched Current:** 16A.

**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. @ 500VDC.

### Coil Data

**Voltage:** 5 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)
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/s<sup>2</sup> (100G approximately).

**Operational:** 100m/s<sup>2</sup> (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 ,000**

**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:**

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

**5. Coil Input:**

D = Standard

**6. Contact Arrangement:**

M = 1 Form A, SPST-NO.

**7. Contact Rating:**

8 = TV-8 rating

**8. Suffix:**

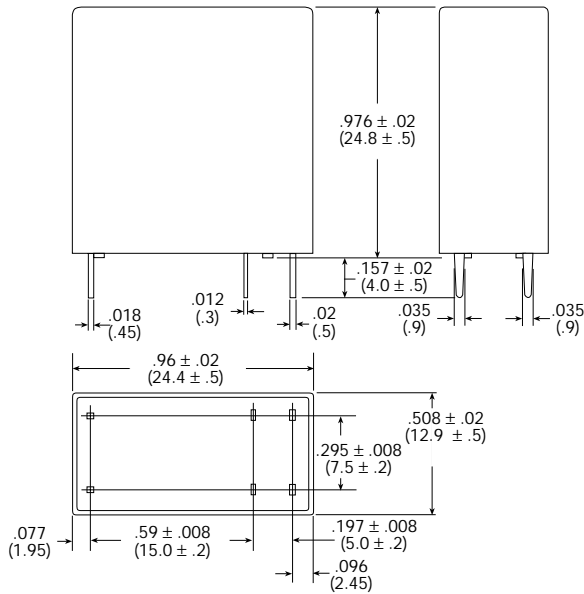
,000 = Standard model      Other Suffix = Custom model

\* Not suitable for immersion cleaning processes.

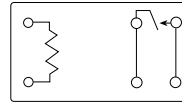
**Our authorized distributors are more likely to maintain the following items in stock for immediate delivery.**

None at present.

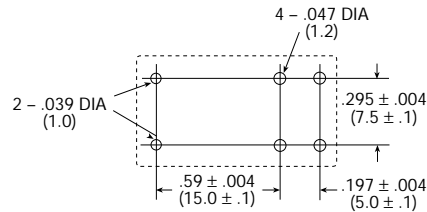
**Outline Dimensions**



**Wiring Diagram (Bottom View)**

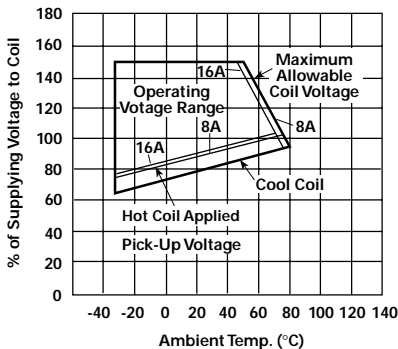


**PC Board Layout (Bottom View)**

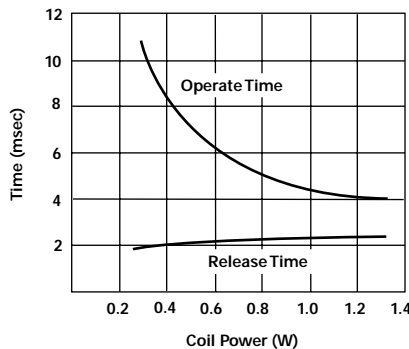


**Reference Data**

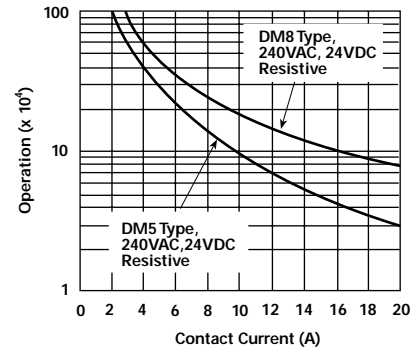
**Coil Temperature Rise**



**Operate Time**



**Life Expectancy**



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

Dimensions are shown for reference purposes only.

Dimensions are in inches over (millimeters) unless otherwise specified.

Specifications and availability subject to change.

www.tycoelectronics.com  
 Technical support:  
 Refer to inside back cover.