

# OMI 2 Pole series

## 2 Pole Miniature Power PC Board Relay

**Appliances, HVAC, Office Machines.**

UL File No. E58304

CSA File No. LR48471

VDE File No. 6678

SEMKO File No. 9517235

### Features

- Meet UL 508, VDE0435 and SEMKO requirements.
- 2 Form A and 2 Form C contact arrangements.
- Immersion cleanable, sealed version available.
- Meet 5,000V dielectric voltage between coil and contacts.
- Meet 10,000V surge voltage between coil and contacts (1.2 / 50µs).

### Contact Data @ 20°C

**Arrangements:** 2 Form A (DPST-NO) and 2 Form C (DPDT).

**Material:** Ag Alloy.

**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:** 5A @ 240VAC resistive,  
5A @ 120VAC resistive,  
5A @ 30VDC resistive,  
1/8 HP @ 250VAC.

1.5A @ 240VAC inductive (cosφ= 0.4),  
1.5A @ 120VAC inductive (cosφ= 0.4),  
1.5A @ 24VDC inductive (L/R=7msec).

**Max. Switched Voltage:** AC: 240V.  
DC: 30V.

**Max. Switched Current:** 5A.

**Max. Switched Power:** OMI: 1,200VA, 150W.

### Initial Dielectric Strength

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

**Between Coil and Contacts:** 5,000VAC 50/60 Hz. (1 minute).

**Surge Voltage Between Coil and Contacts:** 10,000V (1.2 / 50µs).

### Initial Insulation Resistance

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

### Coil Data

**Voltage:** 3 to 48VDC.

**Nominal Power:** 720mW (OMI-D), 540mW (OMI-L).

**Coil Temperature Rise:** 45°C max., at rated coil voltage.

**Max. Coil Power:** 130% of nominal.

**Duty Cycle:** Continuous.

### Coil Data @ 20°C

| OMI-L Sensitive          |                      |                              |                            |                            |
|--------------------------|----------------------|------------------------------|----------------------------|----------------------------|
| Rated Coil Voltage (VDC) | Nominal Current (mA) | Coil Resistance (ohms) ± 10% | Must Operate Voltage (VDC) | Must Release Voltage (VDC) |
| 3                        | 176.5                | 17                           | 2.40                       | 0.30                       |
| 5                        | 106.4                | 47                           | 4.00                       | 0.50                       |
| 6                        | 88.0                 | 68                           | 4.80                       | 0.60                       |
| 9                        | 58.0                 | 155                          | 7.20                       | 0.90                       |
| 12                       | 44.4                 | 270                          | 9.60                       | 1.20                       |
| 24                       | 21.8                 | 1,100                        | 19.20                      | 2.40                       |
| 48                       | 10.9                 | 4,400                        | 38.40                      | 4.80                       |
| OMI-D Standard           |                      |                              |                            |                            |
| Rated Coil Voltage (VDC) | Nominal Current (mA) | Coil Resistance (ohms) ± 10% | Must Operate Voltage (VDC) | Must Release Voltage (VDC) |
| 3                        | 240.0                | 12.5                         | 2.25                       | 0.30                       |
| 5                        | 138.9                | 36                           | 3.75                       | 0.50                       |
| 6                        | 120.0                | 50                           | 4.50                       | 0.60                       |
| 9                        | 78.3                 | 115                          | 6.75                       | 0.90                       |
| 12                       | 60.0                 | 200                          | 9.00                       | 1.20                       |
| 24                       | 29.3                 | 820                          | 18.00                      | 2.40                       |
| 48                       | 14.5                 | 3,300                        | 36.00                      | 4.80                       |

### Operate Data

**Must Operate Voltage:**

OMI-D: 75% of nominal voltage or less.

OMI-L: 80 % of nominal voltage or less.

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

**Operate Time:** OMI-D: 15 ms max.

OMI-L: 20 ms max.

**Release Time:** 8 ms max.

### Environmental Data

**Temperature Range:**

**Operating:** OMI-D:

-30°C to +55°C

OMI-L:

-30°C to +70 °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):**

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

OMI-SH: Sealed plastic case.

**Weight:** 0.46 oz (13g) approximately.

**Ordering Information**

Typical Part Number ▶

**OMI**

**-SS**

**-2**

**12**

**L**

**M**

**1. Basic Series:**

OMI = 2 Pole 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:**

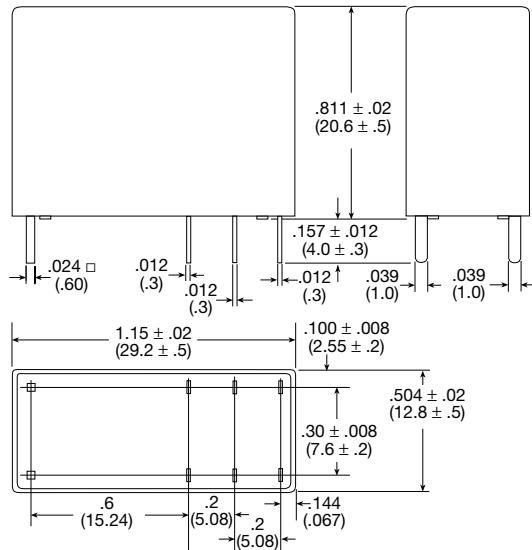
D = Standard (720mW)      L = Sensitive (540mW)

**6. Contact Arrangement:**

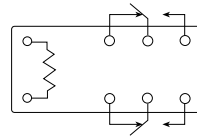
Blank = 2 Form C, DPDT      M = 2 Form A, DPST-NO

\* Not suitable for immersion cleaning processes.

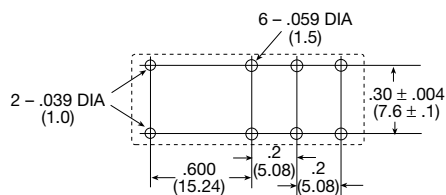
**Outline Dimensions**



**Wiring Diagram (Bottom View)**

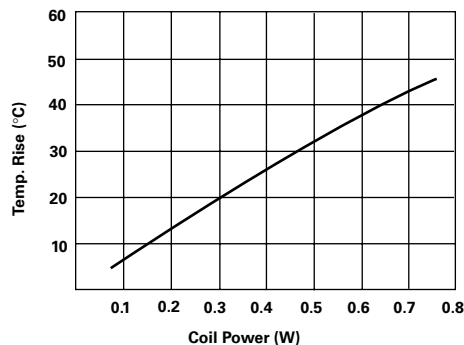


**PC Board Layout (Bottom View)**

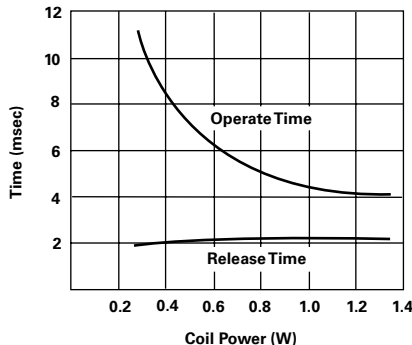


**Reference Data**

**Coil Temperature Rise**



**Operate Time**



**Life Expectancy**

