

OMIT series

10A Miniature Power PC Board Relay

Appliances, HVAC, Office Machines.

UL File No. E58304

CSA File No. LR48471

VDE File No. 6678

SEMKO File No. 8713114

SEV File No. 97550375

Features

- Meet UL 508, VDE0435, SEMKO and SEV requirements.
- 1 Form A contact arrangements.
- UL TV-5 rating available.
- 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: 1 Form A.

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: 10A @ 240VAC resistive,
TV-5 @ 120VAC tungsten 25,000ops.

Max. Switched Voltage: AC: 240V.

DC: 30V.

Max. Switched Current: 10A.

Max. Switched Power: 2,400VA, 300W.

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

Coil Temperature Rise: 45°C max., at rated coil voltage (OMI-D).
35°C max., at rated coil voltage (OMI-L).

Max. Coil Power: 130% of nominal.

Duty Cycle: Continuous.

Coil Data @ 20°C

OMIT-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	2.25	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	0.90
24	21.8	1,100	18.00	1.20
48	10.9	4,400	36.00	2.40
OMIT-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	2.10	0.15
5	138.9	36	3.50	0.25
6	120.0	50	4.20	0.30
9	78.3	115	6.30	0.45
12	60.0	200	8.40	0.90
24	29.3	820	16.80	1.20
48	14.5	3,300	33.60	2.40

Operate Data

Must Operate Voltage:

OMIT-D: 70% of nominal voltage or less.

OMIT-L: 75% of nominal voltage or less.

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

Operate Time: OMIT-D: 15 ms max.

OMIT-L: 20 ms max.

Release Time: 8 ms max.

Environmental Data

Temperature Range:

Operating: OMT-D:

-30°C to +55°C

OMT-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/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):

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

OMIT-SH: Sealed plastic case.

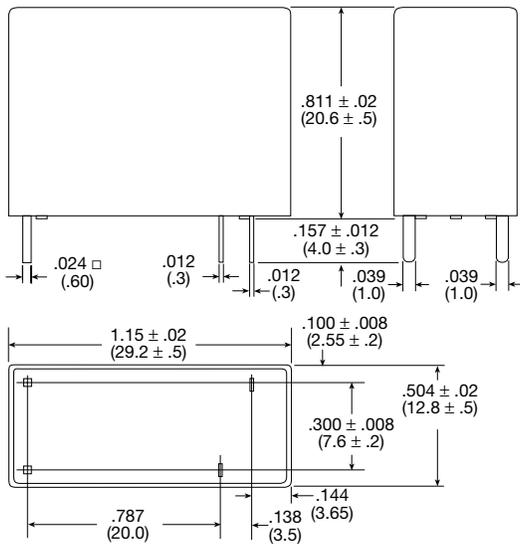
Weight: 0.46 oz (13g) approximately.

Ordering Information

Typical Part Number ▶	OMIT	-SS	-1	12	L	M
<p>1. Basic Series: OMIT = Miniature Sealed PC Board Relay</p> <p>2. Enclosure: SS = Vent (Flux-tight)* plastic cover. SH = Sealed, plastic case.</p> <p>3. Termination: 1 = 1 pole</p> <p>4. Coil Voltage: 03 = 3VDC 06 = 6VDC 12 = 12VDC 48 = 48VDC 05 = 5VDC 09 = 9VDC 24 = 24VDC</p> <p>5. Coil Input: D = Standard (720mW) L = Sensitive (540mW)</p> <p>6. Contact Arrangement: Blank = 1 Form C, SPDT M = 1 Form A, SPST-NO</p>						

* Not suitable for immersion cleaning processes.

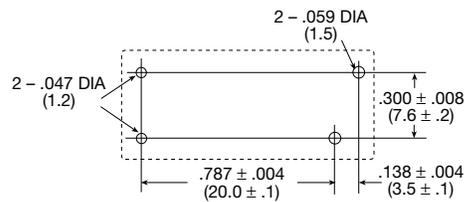
Outline Dimensions



Wiring Diagram (Bottom View)

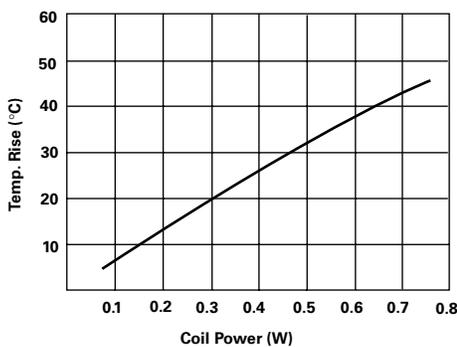


PC Board Layout (Bottom View)

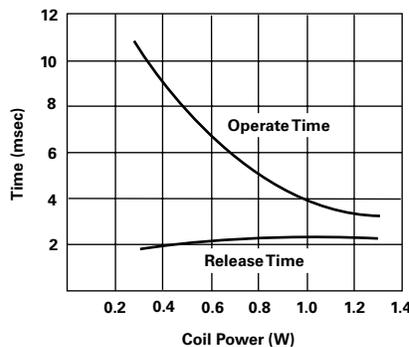


Reference Data

Coil Temperature Rise



Operate Time



Life Expectancy

