

OZ/OZF series

16A Miniature Power PC Board Relay

Appliances, HVAC, Office Machines.

UL File No. E82292

CSA File No. LR48471

TUV File No. R85447

Features

- Meet UL 508, CSA and TUV requirements.
- 1 Form A and 1 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).
- Quick Connect Terminal type available (OZF).
- UL TV-8 rating available (OZT).

Contact Data @ 20°C

Arrangements: 1 Form A (SPST-NO) and 1 Form C (SPDT).

Material: Ag Alloy (1 Form C) and AgSnO (1 Form A).

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: OZ/OZF: 20A @ 120VAC resistive,
16A @ 240VAC resistive,
5A @ 120VAC inductive (cosφ= 0.4),
5A @ 24VDC inductive (L/R= 7msec).

OZT: 8A @ 240VAC resistive,
TV-8 @ 120VAC tungsten, 25,000ops.

Max. Switched Voltage: AC: 240V.

DC: 110V.

Max. Switched Current: 16A (OZ/OZF), 8A (OZT).

Max. Switched Power: 3,850VA, 600W.

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 (OZ-D), 540mW (OZ-L).

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

Max. Coil Power: 130% of nominal.

Duty Cycle: Continuous.

Coil Data @ 20°C

OZ-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	0.60
24	21.8	1,100	18.00	1.20
48	10.9	4,400	36.00	2.40

OZ-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:

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

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

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

Operate Time: OZ-D: 15 ms max.

OZ-L: 20 ms max.

Release Time: 8 ms max.

Environmental Data

Temperature Range:

Operating: OZ-D: -30°C to +55°C

OZ-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):

OZ-S: Vented (Flux-tight) plastic cover.

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

OZ-SH: Sealed plastic case.

Weight: 0.46 oz (13g) approximately.

Ordering Information

Typical Part Number ▶

OZ **-SS** **-1** **24** **L** **M** **1**

1. Basic Series:

OZ = 16A PC Board Terminals
OZF = Quick Connect Terminals
OZT = TV-8 Rating PC Board Terminals

2. Enclosure:

S = Vent (Flux-tight)* plastic cover (only available with OZF)
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 (720mW) L = Sensitive (540mW)

6. Contact Arrangement:

Blank = 1 Form C, SPDT M = 1 Form A, SPST-NO

7. Contact Material:

Blank = AgCdO (1 Form C) 1 = AgSnO (1 Form A, only available with OZ....LM1 or DM1)

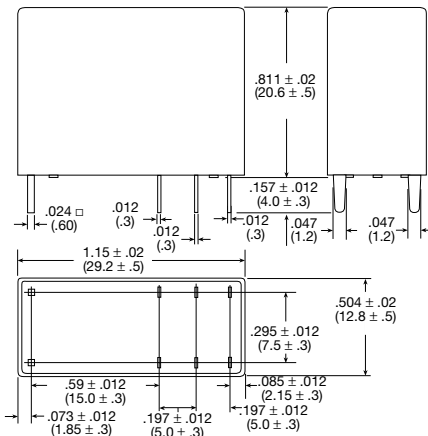
8. Mounting and Termination:

Blank = PC Board Terminals P = PC Board and Quick Connect Terminals (only available only with OZF-S-1..LM1P).

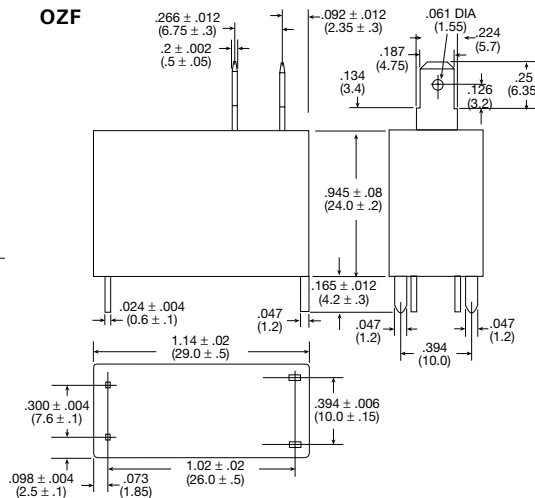
* Not suitable for immersion cleaning processes.

Outline Dimensions

OZ

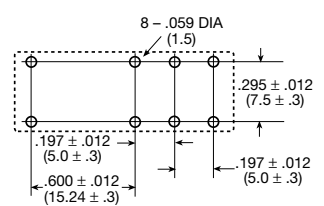


OZF

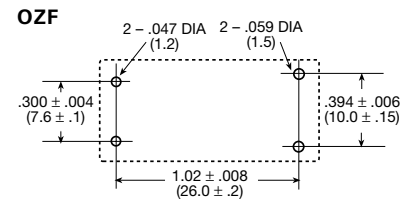


PC Board Layouts (Bottom View)

OZ

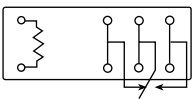


OZF



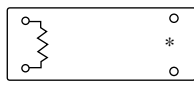
Wiring Diagrams

OZ



(Bottom View)

OZF



(Bottom View)

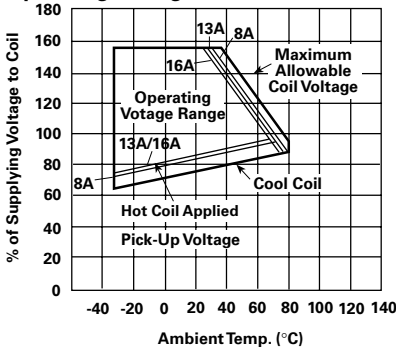


(Top View)

* No electrical connection, for board attachment only.

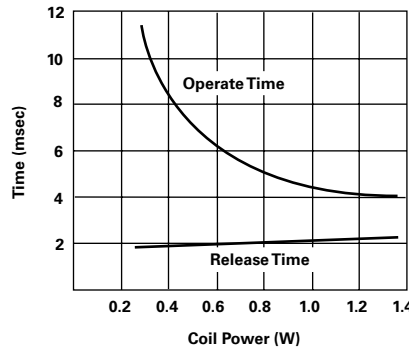
Reference Data

Operating Voltage



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

Operate Time



Life Expectancy

