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

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 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 (cosø= 0.4),
5A @ 24VDC inductive (L/R= 7msec).
1/2 HP @ 120VAC, 70°C.
1 HP @ 240VAC.
20A @ 120VAC, general use.
16A @ 240VAC, general use, N.O. only, @ 105°C*.
16A @ 240VAC, general use, carry only, N.C. only, @ 105°C*.

* Rating applicable only to models with Class F (155°C) insulation system.

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. @ 500VDC.

Coil Data

Voltage: 5 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)**
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)**
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, Class A (105°C) Insulation:
OZ-D: -30°C to +55°C
OZ-L: -30°C to +70°C.
Operating, Class F (155°C) Insulation:
OZ-D: -30°C to +85°C
OZ-L: -30°C to +105°C.
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	-SH	-1	24	L	M	1	F	,294

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

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).

9. Insulation System:
Blank = Class A (105°C) Insulation F= Class F (155°C) Insulation

10. Suffix:
,200 = Standard model for "SS" enclosure on OZ and OZT ,000 = Standard model for coil input "D" on OZF Other Suffix = Custom model
,294 = Standard model for "SH" enclosure on OZ and OZT ,300 = Standard model for coil input "L" on OZF

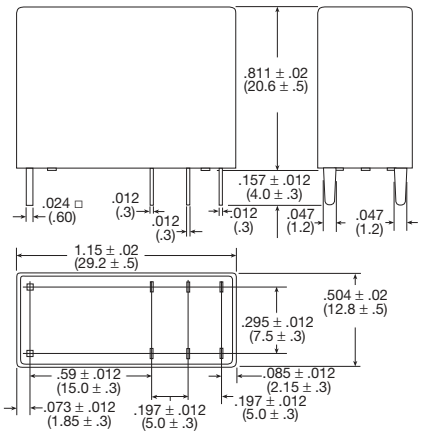
* Not suitable for immersion cleaning processes.

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

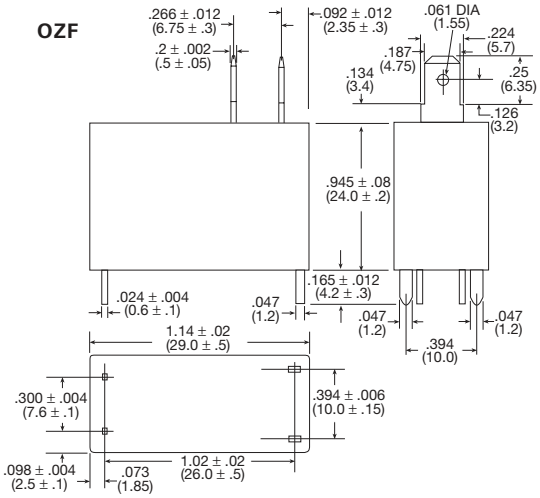
OZ-SH-105D,294 OZ-SH-124D,294 OZ-SH-112LM1,294 OZ-SH-105L,294 OZ-SH-124L,294
OZ-SH-112D,294 OZ-SH-105LM1,294 OZ-SH-124LM1,294 OZ-SH-112L,294

Outline Dimensions

OZ

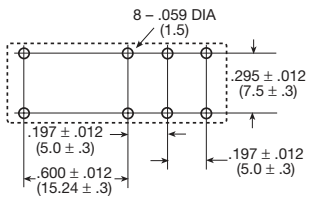


OZF

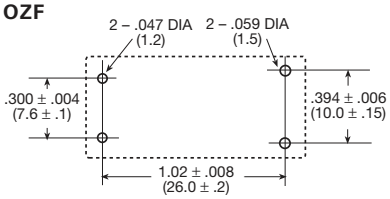


PC Board Layouts (Bottom View)

OZ

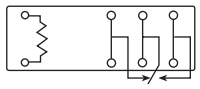


OZF



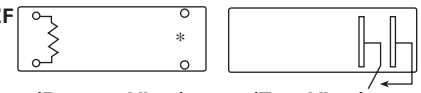
Wiring Diagrams

OZ



(Bottom View)

OZF

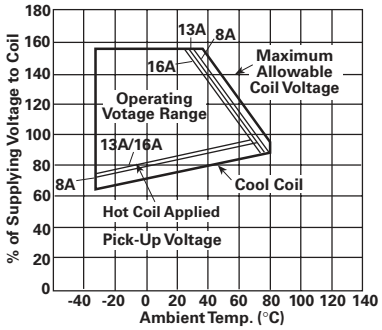


(Bottom View) (Top View)

* No electrical connection, for board attachment only.

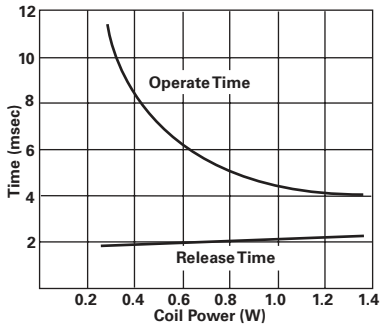
Reference Data

Operating Voltage



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

Operate Time



Life Expectancy