

OU DHseries

10 Amp Miniature, Sealed PC Board Relay

Appliances, HVAC, Office Machines.

UL File No. E58304

CSA File No. LR48471

Features

- Low profile miniature power relay
- High density available on PC board due to small size.
- 450mW coil available.
- Meets 2kV dielectric between coil and contacts.
- Meets 5kV surge voltage.
- Immersion cleanable, sealed version available.

Contact Data @ 20°C

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

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: 10A @ 120VAC resistive,
10A @ 28VDC resistive,
1/4 HP @ 120VAC.

3A @ 120VAC inductive ($\cos\phi = 0.4$),
3A @ 28VDC inductive (L/R = 7msec).

Max. Switched Voltage: AC: 240V.
DC: 110V.

Max. Switched Current: 10A.

Max. Switched Power: 1,200VA, 300W.

Initial Dielectric Strength

Between Open Contacts: 750VAC 50/60 Hz. (1 minute).

Between Coil and Contacts: 2,000VAC 50/60 Hz. (1 minute).

Surge Voltage Between Coil and Contacts: 5,000V (1.2/50μs).

Initial Insulation Resistance

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

Coil Data

Voltage: 3 to 48VDC.

Nominal Power: 450mW except 48VDC coil (660mW)

Coil Temperature Rise: 60°C max., at rated coil voltage.

Max. Coil Power: 130% of nominal.

Duty Cycle: Continuous.

Coil Data @ 20°C

OU DH				
Rated Coil Voltage (VDC)	Nominal Current (mA)	Coil Resistance (ohms) $\pm 10\%$	Must Operate Voltage (VDC)	Must Release Voltage (VDC)
3	150.0	20	2.25	0.30
6	75.0	80	4.50	0.60
9	50.0	180	6.75	0.90
12	37.5	320	9.00	1.20
24	20.9	1,280	18.00	2.40
48	13.7	3,500	36.00	4.80

Operate Data

Must Operate Voltage: 75% of nominal voltage or less.

Must Release Voltage: 10% of nominal voltage or more.

Operate Time: 10 ms max.

Release Time: 5 ms max.

Environmental Data

Temperature Range:

Operating: -30°C to +60°C

(no water condensation and no water drop.)

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.

Mechanical Data

Termination: Printed circuit terminals.

Enclosure (94V-0 Flammability Ratings):

OU DH-SS: Vented (Flux-tight), plastic cover.

OU DH-SH: Sealed, plastic case.

Weight: 10g approximately.

Ordering Information

Typical Part Number ►

ODDH

-SH

-1

12

D

M

1. Basic Series:

OULDH = Miniature, sealed PC board relay.

2. Enclosure:

SS = Vented (Flux-tight)* plastic cover.

SH = Sealed, plastic case.

3. Termination:

1 = 1 pole

4. Coil Voltage:

03 = 3VDC

09 = 9VDC

24 = 24VDC

06 = 6VDC

12 = 12VDC

48 = 48VDC

5. Coil Input:

D = Standard

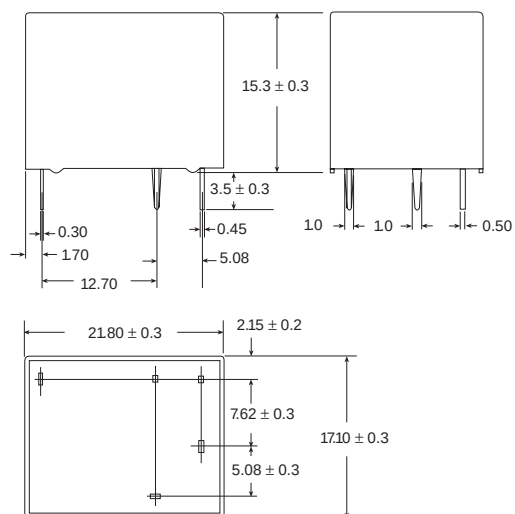
6. Contact Arrangement:

Blank = 1 Form C, SPDT

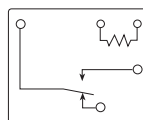
M = 1 Form A. SPST-NO

* Not suitable for immersion cleaning processes.

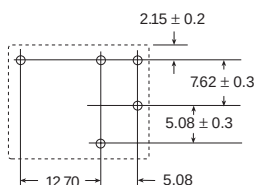
Outline Dimensions



Wiring Diagram (Bottom View)

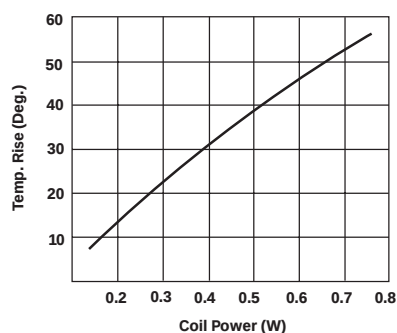


PC Board Layout (Bottom View)

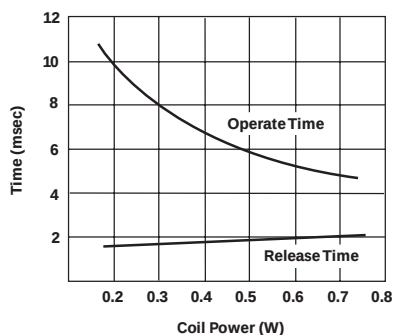


Reference Data

Coil Temperature Rise



Operate Time



Life Expectancy

