PCF series

25A Miniature Power PC Board Relay

Appliances, HVAC, Office Machines.

UL File No. E58304
CSA File No. LR48471
TUV File No. R9551880

Features

- Meet UL 508, CSA, TUV requirements.
- 1 Form A contact arrangements.
- Quick Connect Terminal type.
- 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: 25A @ 250VAC resistive.
23A @ 277VAC resistive.

20A @ 250VAC inductive (cosø= 0.4).

Max. Switched Voltage: **AC:** 250V.
DC: 110V.
Max. Switched Current: 25A.
Max. Switched Power: 6,370VA.

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: 8,000V (1.2 / 50μs).

Initial Insulation Resistance

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

Coil Data

Voltage: 3 to 48VDC.
Nominal Power: 900 mW.
Coil Temperature Rise: 55°C max., at rated coil voltage.
Max. Coil Power: 130% of nominal.
Duty Cycle: Continuous.

Coil Data @ 20°C

PCF				
Rated Coil Voltage (VDC)	**Nominal Current (mA)**	**Coil Resistance (ohms) ± 10%**	**Must Operate Voltage (VDC)**	**Must Release Voltage (VDC)**
06	150.0	40	4.50	0.30
09	100.0	90	6.75	0.45
12	75.0	160	9.00	0.60
24	37.5	640	18.00	1.20
48	18.8	2,560	36.00	2.40

Operate Data

Must Operate Voltage: 75% of nominal voltage or less.
Must Release Voltage: 5% of nominal voltage or more.
Operate Time: 20 ms max.
Release Time: 10 ms max.

Environmental Data

Temperature Range:
Operating: -30°C to +55°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 with quick connect terminals.
Enclosure (94V-0 Flammability Ratings):
PCF: Vented (Flux-tight) plastic cover.
Weight: 28g approximately.

Ordering Information

Typical Part Number ►	PCF	-1	24	D	1	M

1. Basic Series:
PCF = 25A PC Board Terminals

2. Enclosure:
1 = 1 pole

3. Coil Voltage:
06 = 6VDC 12 = 12VDC 48 = 48VDC
09 = 9VDC 24 = 24VDC

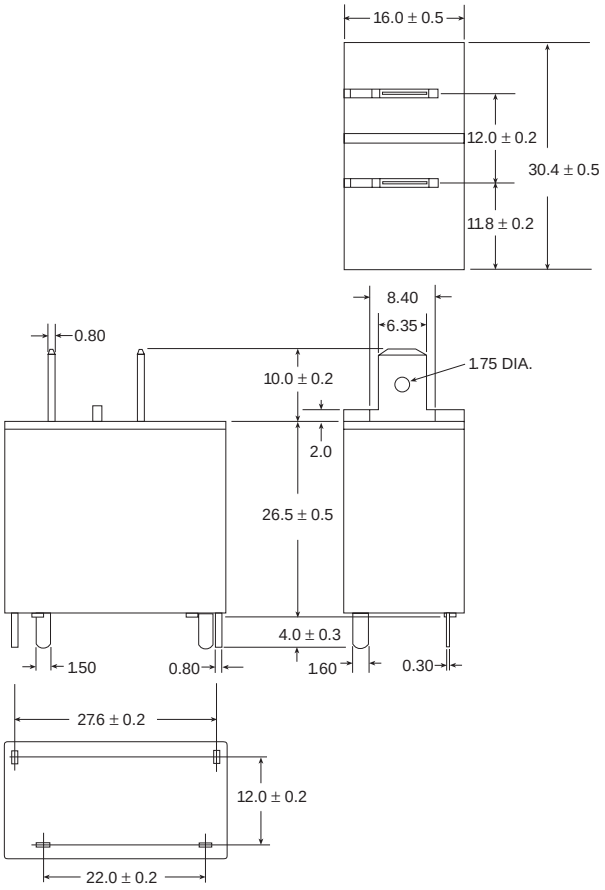
4. Coil Input:
D = Standard

5. Contact Material:
1 = AgSnO

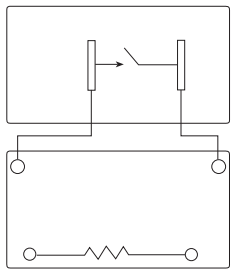
6. Contact Arrangement:
M = 1 Form A, SPST-NO

* Not suitable for immersion cleaning processes.

Outline Dimensions



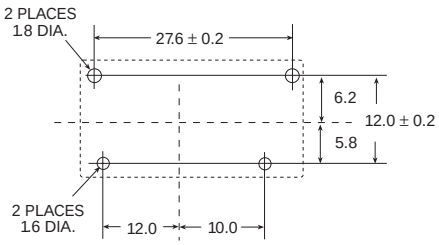
Wiring Diagram



(Top View)

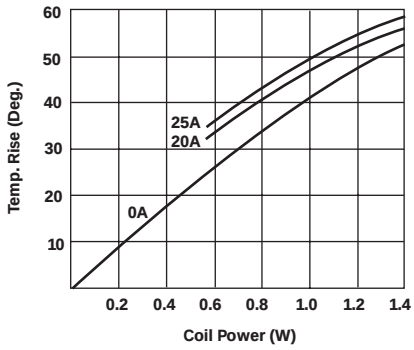
(Bottom View)

PC Board Layout (Bottom View)

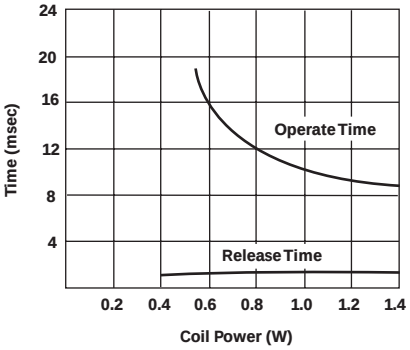


Reference Data

Coil Temperature Rise



Operate Time



Life Expectancy