PCE series

10 Amp Miniature Power PC Board Relay

Appliances, HVAC, Office Machines

UL File No. E82292
CSA File No. LR48471
VDE File No. 6175

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

- Small, low profile package, 10 Amp switching capacity.
- 1 Form A and 1 Form C contact arrangements.
- UL Class F (155°C) insulation system standard
- Immersion cleanable, sealed version available.
- Applications include appliance, HVAC, security system, garage opener control, emergency lighting.

Contact Data @ 20°C

Arrangements: 1 Form A (SPST-NO) and 1 Form C (SPDT).
Material: Ag Alloy, 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 @ 250VAC resistive,
10A @ 120VAC resistive,
10A @ 28VDC resistive.

3A @ 250VAC inductive (cosø= 0.4),
3A @ 120VAC inductive (cosø= 0.4),
3A @ 28VDC inductive (L/R=7msec).

Max. Switched Voltage: **AC:** 250V.
DC: 28V.
Max. Switched Current: 10A.
Max. Switched Power: 2,500VA, 280W.

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: 4,000V (1.2 / 50µs).

Initial Insulation Resistance

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

Coil Data

Voltage: 6 to 48VDC.
Nominal Power: 360 mW
Coil Temperature Rise: 35°C max., at rated coil voltage.
Max. Coil Power: 130% of nominal.
Duty Cycle: Continuous.

Coil Data @ 20°C

PCE				
Rated Coil Voltage (VDC)	**Nominal Current (mA)**	**Coil Resistance (ohms) ± 10%**	**Must Operate Voltage (VDC)**	**Must Release Voltage (VDC)**
6	60	100	4.50	0.30
9	40	225	6.75	0.45
12	30	400	9.00	0.60
24	15	1,600	18.00	1.20
48	7	6,400	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: 10 ms max.
Release Time: 5 ms max.

Environmental Data

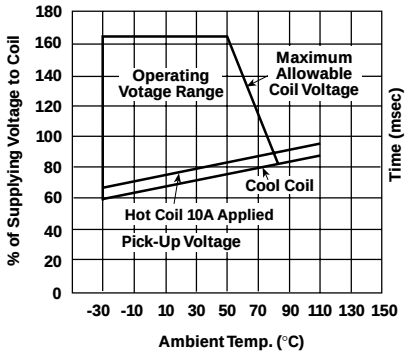
Temperature Range:
Operating: -30°C to +70°C
Vibration, Mechanical: 10 to 55 Hz., 1.5mm double amplitude
Operational: 10 to 55 Hz., 1.5mm double amplitude.
Shock, Mechanical: 1,000m/s² (100G approximately).
Operational: 100m/s² (10G approximately).
Operating Humidity: 20 to 85% RH. (Non-condensing).

Mechanical Data

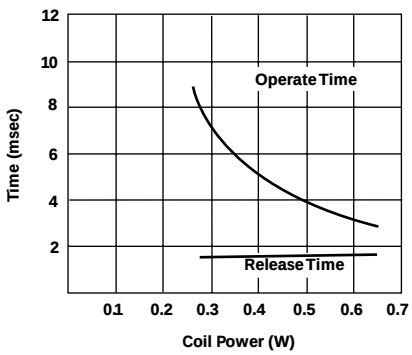
Termination: Printed circuit terminals.
Enclosure (94V-0 Flammability Ratings):
PCE: Sealed plastic case with knock-off nib for ventilation
Weight: 0.32 oz (11g) approximately.

Reference Data

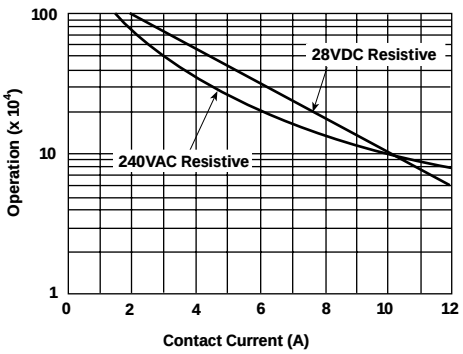
Coil Temperature Rise



Operate Time



Life Expectancy



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

Ordering Information

Typical Part Number ►	PCE	-1	24	D	1	M		,000

1. Basic Series:
PCE = Miniature Power PC board relay.

2. Termination:
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 = AgCdO 2 = AgSnO

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

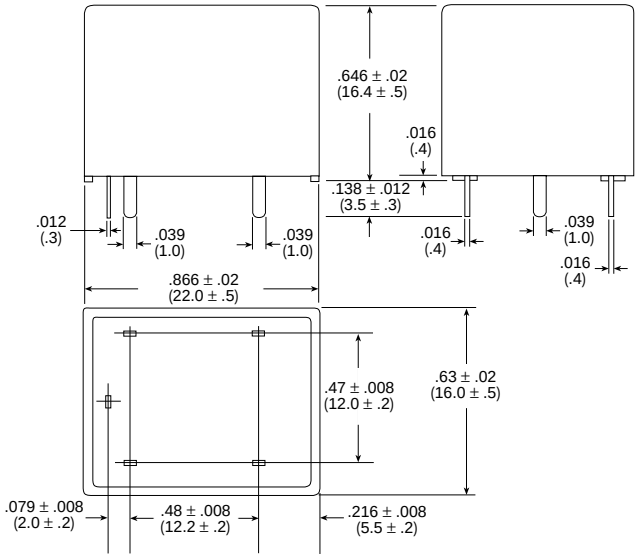
7. Enclosure:
Blank = Flux-tight plastic case. H = Sealed plastic case with knock-off nib for ventilation

8. Suffix:
,000 = Standard model Other Suffix = Custom model

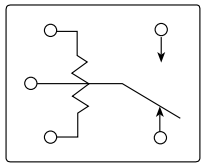
Our authorized distributors are more likely to maintain the following items in stock for immediate delivery.

PCE-112D1MH,000
PCE-124D1MH,000
PCE-112D1H,000
PCE-124D1H,000

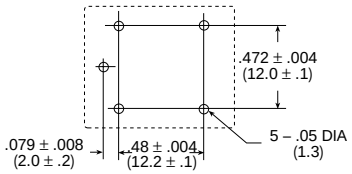
Outline Dimensions



Wiring Diagram (Bottom View)



PC Board Layout (Bottom View)



Socket

27E1064 socket is rated 10A @ 300VAC. UL Recognized for US and Canada. Designed to fit same suggested board layout as relay.