



PCH series

5 Amp Miniature 1 Form C Power PC Board Relay

Air Conditioners, Refrigerators, Microwave Ovens

UL File No. E82292

CSA File No. LR48471

VDE File No. 119568

Features

- 1 Form C, 5A relay.
- Compact size 20L x 10W x 15.2H (mm).
- High surge voltage of 8000V.
- Cadmium-free contacts.
- UL, CSA, VDE approval.

Contact Data @ 20°C

Arrangements: 1 Form C (SPDT).

Material: AgSnO.

Max. Switching Rate: 300ops./ min. (no load).
20ops./ min. (rated load).

Expected Mechanical Life: 5 million ops (no load).

Expected Electrical Life: 100,000ops (rated load).

Minimum Load: 100mA @ 5VDC.

Initial Contact Resistance: 100 milliohms @ 1A, 6VDC.

Contact Ratings

Ratings(NO/NC): 5A/3A @ 30VDC resistive.

5A/3A @ 277VAC resistive.

Max. Switched Voltage: AC: 277V.

DC: 30V.

Max. Switched Current: 5A (NO) / 3A(NC).

Max. Switched Power: 1385VA, 150W.

Initial Dielectric Strength

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

Between Contacts and Coil: 4,000VAC, 50/60 Hz. (1 min.).

Surge Voltage Between Coil and Contacts: 8,000V (1.2/50µs).

Initial Insulation Resistance

Between Mutually Insulated Conductors: 1000Mohm @ 500VDCM.

Coil Data

Voltage: 3 to 48VDC.

Duty Cycle: Continuous.

Nominal Power: 400mW.

Max. Coil Power: 130% of nominal.

Coil Data @ 20°C

PCH				
Rated Coil Voltage (VDC)	Nominal Current (mA)	Coil Resistance (ohms) ± 10%	Must Operate Voltage (VDC)	Must Release Voltage (VDC)
3	133.3	22.5	2.25	0.15
5	80.0	62.5	3.75	0.25
6	66.7	90.0	4.50	0.30
9	44.4	202.5	6.75	0.45
12	33.3	360.0	9.00	0.60
18	22.2	810.0	13.50	0.90
24	11.1	1,440.0	18.00	1.20
48	5.6	5,760.0	36.00	2.40

Operate Data @ 20°C

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

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

Operate Time: 10ms max.

Release Time: 5ms max.

Environmental Data

Temperature Range:

Operating: -30°C to + 70°C.

Vibration, Mechanical: 10 to 55Hz., 1.5mm double amplitude.

Operational: 10 to 55Hz., 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.

Weight: 0.25 oz (7g) approximately.

Ordering Information

Typical Part Number ▶

PCH

-1

12

D

2

H

1. Basic Series:

PCH = Miniature 1 Form C relay

2. Termination:

1 = 1 pole

3. Coil Voltage:

03 = 3VDC 06 = 6VDC 12 = 12VDC 48 = 48VDC
05 = 5VDC 09 = 9VDC 24 = 24VDC

4. Coil Input:

D = Standard 400mW

5. Contact Material:

2 = AgSnO

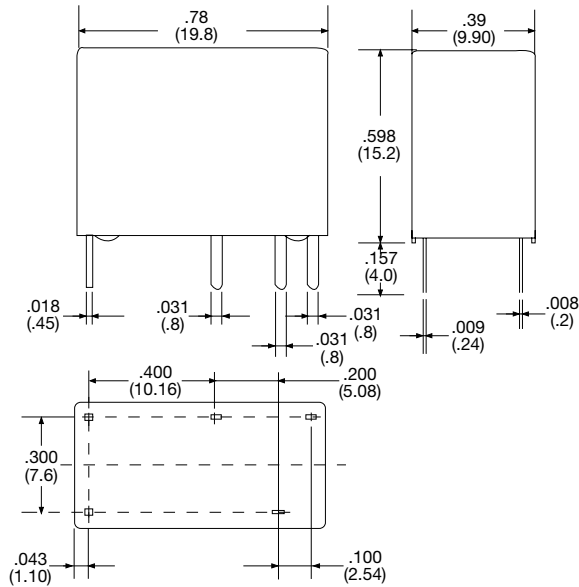
6. Enclosure:

Blank = Vented (Flux-tight) cover H = Sealed plastic case

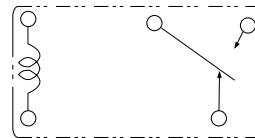
7. Insulation class:

Blank = Class 155(F) system A = Class 105(A) system

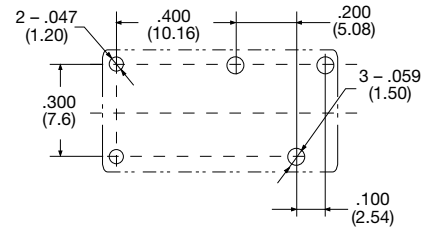
Outline Dimensions



Wiring Diagram (Bottom View)

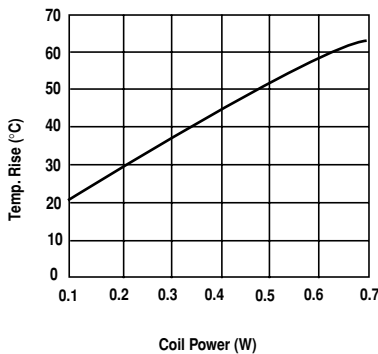


PC Board Layout (Bottom View)

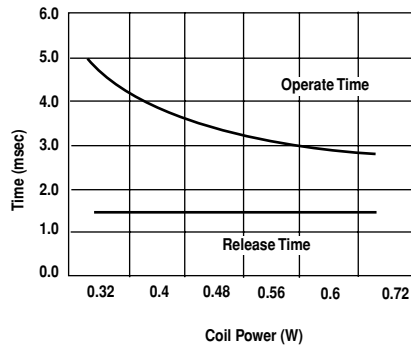


Reference Data

Coil Temperature Rise



Operate Time



Life Expectancy

