



# 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/s<sup>2</sup> (100G approximately).

**Operational:** 100m/s<sup>2</sup> (10G approximately).

**Operating Humidity:** 20 to 85% RH. (Non-condensing).

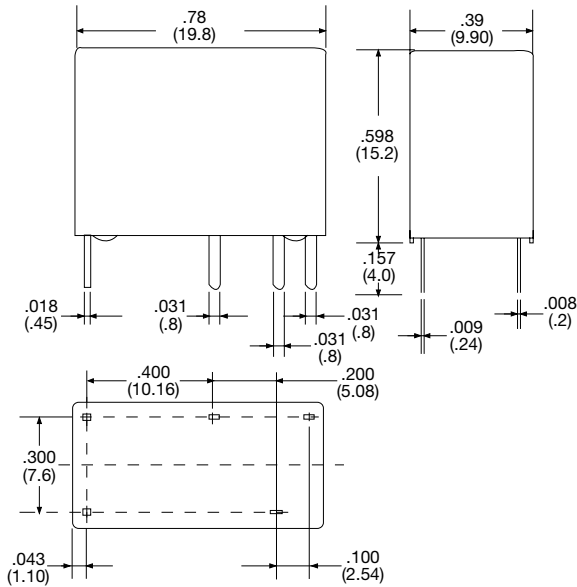
### Mechanical Data

**Termination:** Printed circuit terminals.

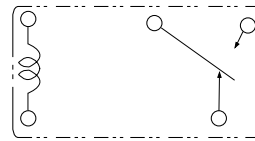
**Weight:** 0.25 oz (7g) approximately.

<b>Ordering Information</b>	<b>Typical Part Number</b> ▶	<b>PCH</b>	<b>-1</b>	<b>12</b>	<b>D</b>	<b>2</b>	<b>H</b>
<b>1. Basic Series:</b> PCH = Miniature 1 Form C relay							
<b>2. Termination:</b> 1 = 1 pole							
<b>3. Coil Voltage:</b> 03 = 3VDC      06 = 6VDC      12 = 12VDC      48 = 48VDC 05 = 5VDC      09 = 9VDC      24 = 24VDC							
<b>4. Coil Input:</b> D = Standard 400mW							
<b>5. Contact Material:</b> 2 = AgSnO							
<b>6. Enclosure:</b> Blank = Vented (Flux-tight) cover      H = Sealed plastic case							
<b>7. Insulation class:</b> Blank = Class 155(F) system      A = Class 105(A) system							

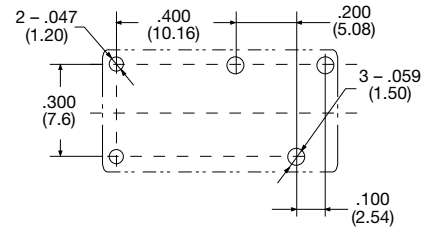
**Outline Dimensions**



**Wiring Diagram (Bottom View)**

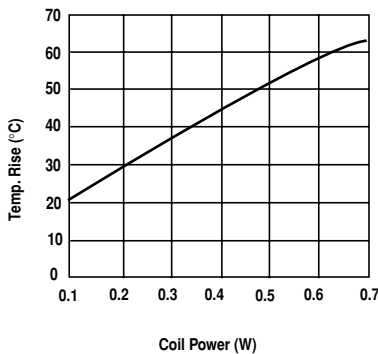


**PC Board Layout (Bottom View)**

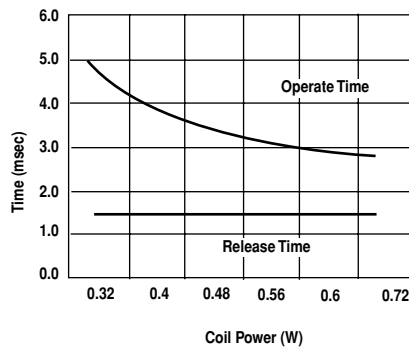


**Reference Data**

**Coil Temperature Rise**



**Operate Time**



**Life Expectancy**

