



# PCG series

## 2 Pole Miniature Power PC Board Relay

**Appliances, Audio Equipment, Office Machines**

- UL File No. E82292
- CSA File No. LR48471
- SEMKO File No. 8744066
- SEV File No. 98110096

### Features

- Meet UL Tungsten TV-5 rating.
- 2 Form A contact arrangements.
- Meet UL, CSA, SEMKO and SEV requirements.
- Meet 4,000V dielectric voltage between coil and contacts.
- Meet 10,000V surge voltage between coil and contacts (1.2 / 50µs).

### Contact Data @ 20°C

- Arrangements:** 2 Form A (DPST-NO).
- 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:** 5A @ 250VAC resistive, 100,000ops.
- 8A @ 250VDC resistive, 50,000ops.
- TV-5 @ 120VAC Tungsten, 25,000ops.

- Max. Switched Voltage:** AC: 277V.  
DC: 30V.
- Max. Switched Current:** 10A.
- Max. Switched Power:** 1,250VA, 380W.

### Initial Dielectric Strength

- Between Open Contacts:** 1,000VAC 50/60 Hz. (1 minute).
- Between Coil and Contacts:** 4,000VAC 50/60 Hz. (1 minute).
- Surge Voltage Between Coil and Contacts:** 10,000V (1.2 / 50µs).
- Surge Voltage Between Contact and other Pole:** 6,000V (1.2 / 50µs).

### Initial Insulation Resistance

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

### Coil Data

- Voltage:** 3 to 48VDC.
- Nominal Power:** 540 mW
- Coil Temperature Rise:** 50°C max., at rated coil voltage.
- Max. Coil Power:** 130% of nominal.
- Duty Cycle:** Continuous.

### Coil Data @ 20°C

Rated Coil Voltage (VDC)	Nominal Current (mA)	PCG		
		Coil Resistance (ohms) ± 10%	Must Operate Voltage (VDC)	Must Release Voltage (VDC)
3	176.5	17	2.40	0.15
5	106.4	47	4.00	0.25
6	88.0	68	4.80	0.30
9	58.0	155	7.20	0.45
12	44.4	270	9.60	0.60
24	21.8	1,100	19.20	1.20
48	11.0	4,400	38.40	2.40

### Operate Data

- Must Operate Voltage:** 80% of nominal voltage or less.
- Must Release Voltage:** 5% of nominal voltage or more.
- Operate Time:** 15 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/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.
- Enclosure (94V-0 Flammability Ratings):**  
**PCG-N:** Vented (Flux-tight) snap-on cover.
- Weight:** 0.63 oz (18g) approximately.

**Ordering Information**

Typical Part Number ▶

**PCG**

**-2**

**24**

**D**

**2**

**M**

**N**

**1. Basic Series:**

PCG = Miniature Power PC board relay.

**2. Termination:**

2 = 2 pole.

**3. Coil Voltage:**

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

**4. Coil Input:**

D = Standard

**5. Contact Material:**

2 = AgSnO

**6. Contact Arrangement:**

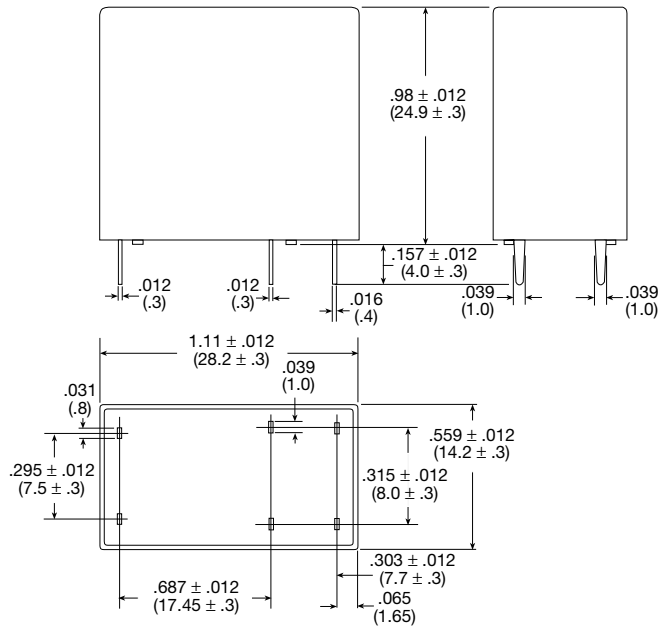
M = 2 Form A, DPST-NO.

**7. Contact Rating:**

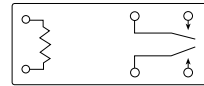
N = Vented (Flux-tight)\* snap-on cover.

\* Not suitable for immersion cleaning processes.

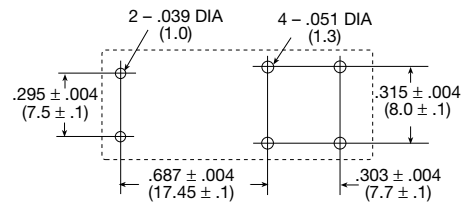
**Outline Dimensions**



**Wiring Diagram (Bottom View)**

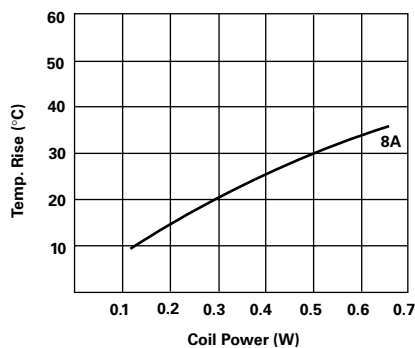


**PC Board Layout (Bottom View)**

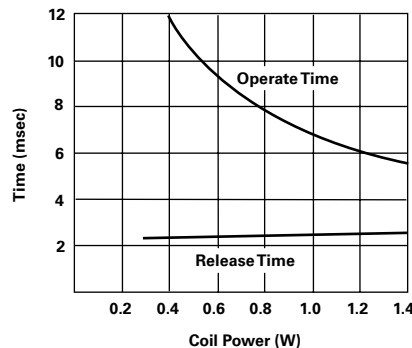


**Reference Data**

**Coil Temperature Rise**



**Operate Time**



**Life Expectancy**

