





PCH series

5Amp Compact And High Capacity

PC Board Mount, Cd-free, Pb-free, RoHS Compliant

Air Conditioners, Refrigerators, Microwave Ovens

	File No.	E82292
	File No.	LR48471 (400mW standard type)
	Reg.-Nr.	119568
	File No.	08001023449

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

- Rated Current : 5A
- Dielectric Strength : row coil power : 200mW

Contact Data @ 23°C

Contact Arrangements: 1a (1FormA), 1c (1FormC)
 Contact Material: AgSnO₂
 Max. Switching Rate: 300 ops./min. (no load)
 20 ops./min. (rated load)
 Expected Mechanical Life: 10,000,000 ops. (no load)
 Expected Electrical Life: 100,000 ops. (rated load)
 Min. Contact Load : 100mA,5VDC (reference data)
 Initial Contact Resistance : 100milliohms @ 1A ,6VDC

Contact Ratings

Ratings :

1a,400mW	5A 277VAC (resistive load)
	5A 30VDC (resistive load)
	10A 125VDC (resistive load)
	TV-3 (NO contact)
1c,400mW	5A(NO contact),3A(NC contact) 277VAC(resistive load)
	5A(NO contact),3A(NC contact) 30VDC(resistive load)
	TV-3 (NO contact)
1a,200mW	5A 277VAC (resistive load)
	5A 30VDC (resistive load)
	10A 125VAC (resistive load)

Max. Switching Voltage : 277VAC,30VDC
 Max. Switching Current : 10A(NO contact),3A(NC contact)
 Max. Switching Power : 1,385VA(AC), 150W(DC)(NO contact)
 831VA(AC), 90W(DC)(NC contact)

Initial Dielectric Strength

Between Open Contacts : 750VAC 50/60Hz (1min.)
 Between Coil and Contacts : 4,000VAC 50/60Hz(1min.)
 Surge Voltage Between Coil and Contacts : 8,000V(1.2/50μs)

Initial Contact Resistance

Between Mutually Insulated Conductors : 1,000 milliohms @ 500VDC

Coil Data @ 23°C

Rated Voltage : 5-48*VDC (* Not prepared 48Vdc / 200mW type)
 Rated Power : 400mW(standard type),
 200mW(High Sensitive Type)
 Limiting Voltage: 130% of nominal.

Coil Data @23°C

400mW(Standard type)				
Rated Coil Voltage (VDC)	Rated Current (mA)	Coil Resistance (ohms)±10%	Operate Voltage (VDC)	Release Voltage (VDC)
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	9.0	0.6
18	22.2	810	13.5	0.9
24	11.1	1440	18.0	1.2
48	5.6	5760	36.0	2.4

Coil Data @23°C

200mW(High Sensitive Type)*				
Rated Coil Voltage (VDC)	Rated Current (mA)	Coil Resistance (ohms)±10%	Operate Voltage (VDC)	Release Voltage (VDC)
5	40.0	125	3.75	0.25
6	30.0	180	4.50	0.30
9	22.5	400	6.75	0.45
12	16.7	720	9.0	0.6
24	8.6	2880	18.0	1.2

*Not prepared 1 Form C / 200mW type

Operate Data

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

Environmental Data

Temperature Range : -40°C~70°C
 (on conditions without freezing and dew condensation)

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

Shock, Mechanical : 980m/s² (Half -Sine wave of 6ms)

Operational : 98m/s²

(Half -Sine wave of 11ms, permitted duration 1ms)

Operating Humidity : 20~85%RH (Non-condensing)

Mechanical Data

Termination : PC board terminals

Enclosure : blank ; Flux Proof

H ; Wash Tight

Weight : Approx. 7g

Ordering Information for Relays

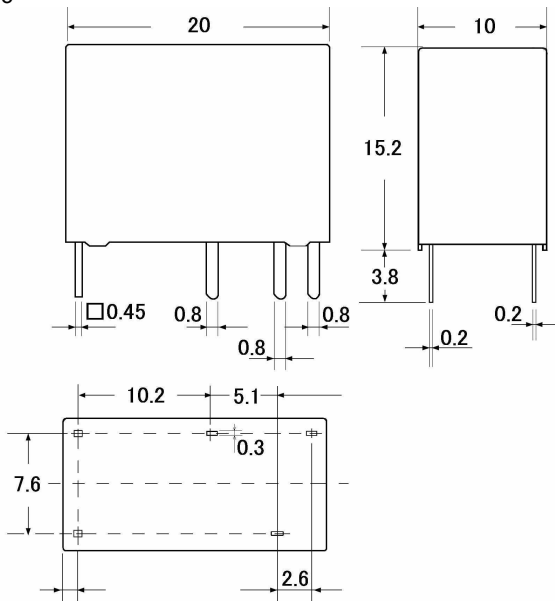
Example Part No. PCH -1 12 D 2 M H ,000

- | | | | | |
|------------------------|----------|------------------------|------|--------|
| 1. Basic Series | PCH = | Compact PCB mount type | | |
| 2. Poles | 1 = | 1pole | | |
| 3. Coil Voltage | 05 = | 5VDC | 12 = | 12VDC |
| | 06 = | 6VDC | 24 = | 24VDC |
| | 09 = | 9VDC | 48 = | 48VDC* |
| 4. Coil Power | D = | 400mW (1a,1c) | | |
| | L = | 200mW (1a) | | |
| 5. Contact Material | 2 = | AgSnO ₂ | | |
| 6. Contact Arrangement | blank = | 1c | | |
| | M = | 1a | | |
| 7. Enclosure | blank = | Flux Proof | | |
| | H = | Wash Tight | | |
| 8. Suffix | ,000 = | Standard model | | |
| | Other | | | |
| | Suffix = | Custom model | | |

*Coil voltage: 48VDC only can chose 400mW type.

Outline Dimensions (mm)

1c*



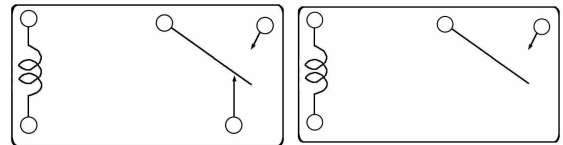
*1a Outline dimensions is omitted.

Tolerance: 0.99mm Max.: +/-0.1mm, 1-2.99mm: +/-0.2mm, 3mm Min.: +/-0.3mm

Wiring Diagram (Bottom View)

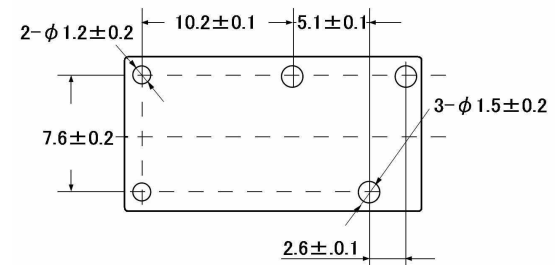
1c

1a

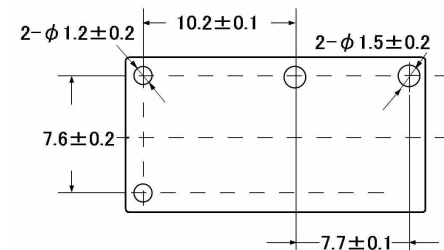


PC Board Layout (mm) (Bottom View)

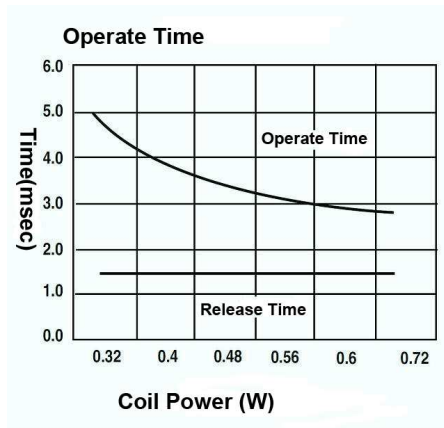
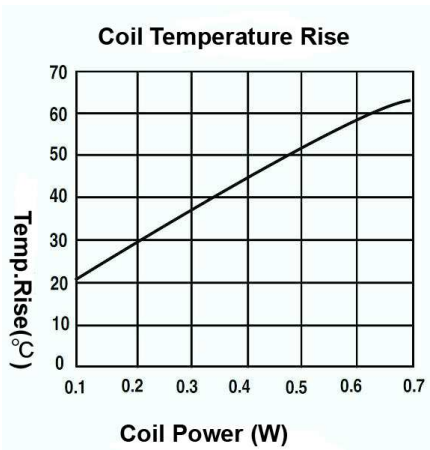
1c



1a



Reference Data



*Above reference data is apply for 1 Form C / NO contact side, rated voltage: 277Vac / Coil power: 400mW.
 *Please contact with us about the graph of expected electrical life.