



# PCL/PCLH series

## 3A, 5A, 10A, 15A General Purpose Miniature Relay

Factory Automation, Process Controls,  
Electrical Panels, etc.

UL File No. E58304

CSA File No. LR48471

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 size, 3A, 5A, 10A and 15A switching capacity.
- Meets UL and CSA requirements.
- 1 pole, 2 poles and 4 poles contact arrangements.
- AC and DC coils with UL Class F (155°C) coil insulation system standard.
- Optional flange mount case.
- Plug-in terminals or PCB terminals.

### Contact Data @ 20°C

**Arrangements:** 1 Form A (SPST-NO), 1 Form C (SPDT),  
2 Form A (DPST-NO), 2 Form C (DPDT),  
4 Form A (4PST-NO), 4 Form C (4PDT).

**Material:** Ag, Ag Alloy.

**Max.Switching Rate:** 300ops./min.(Mechanical).  
30ops./min.(Electrical).

**Expected Mechanical Life:** 100 million operations (no load).

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

**Minimum Load:** 100mA @ 5VDC.

**Initial Contact Resistance:** 50milliohms @ DC6V,1A.

### Contact Ratings

**Ratings:** PCL-4 3A @ AC250V/DC24V resistive.  
PCL-2 5A @ AC250V/DC24V resistive.  
PCLH-2 15A @ AC120V resistive.  
10A @ AC250V/DC24V resistive.  
PCLH-1 15A @ AC250V/DC24V resistive.

**Max. Switched Current:** PCL-4 3A.  
PCL-2 5A.  
PCLH-2 15A.  
PCLH-1 15A.

**Max. Switched Power:** PCL-4 660VA, 72W.  
PCL-2 1,100VA, 120W.  
PCLH-2 3,168VA, 240W.  
PCLH-1 3,300VA, 360W.

### Initial Dielectric Strength

**Between Open Contacts:** 1,000VAC 1minute.

**Between Adjacent Contact Terminals:** 1,500VAC 1minute.

**Between Contacts and Coil:** 2,000VAC 1minute.

**Surge Voltage (Coil-Contact):** 3,000V(1.2/50μs).

### Initial Insulation Resistance

**Between Open Contacts:** 1,000Mohms @ 500VDC.

**Between Adjacent Contact Terminals:** 1,000Mohms @ 500VDC.

**Between Contacts and Coil:** 1,000Mohms @ 500VDC.

### Coil Data

**Voltage:** AC 6 - 240V.  
DC 6 - 110V.

**Nominal Power:** AC abt. 1.4VA/1.2VA (50Hz/60Hz).  
DC abt. 0.9W.

**Coil Temperature Rise:** AC 60°C max.  
DC 50°C max.

**Max. Coil Power:** 110% of nominal voltage.

### Coil Data@ 20°C

| PCL AC Coil                                             |                                                              |                            |                            |                         |
|---------------------------------------------------------|--------------------------------------------------------------|----------------------------|----------------------------|-------------------------|
| Rated Coil Voltage (VAC)                                | Coil Resistance (ohms)±10%                                   | Must Operate Voltage (VAC) | Must Release Voltage (VAC) | Nominal Coil Power (VA) |
| 6<br>12<br>24<br>48<br>100<br>110/120<br>200<br>220/240 | 10<br>40<br>160<br>600<br>2,800<br>3,400<br>11,000<br>13,600 | 80% max.                   | 30% min.                   | abt. 1.4                |
|                                                         |                                                              |                            |                            |                         |
|                                                         |                                                              |                            |                            |                         |
|                                                         |                                                              |                            |                            |                         |
|                                                         |                                                              |                            |                            |                         |
|                                                         |                                                              |                            |                            |                         |
|                                                         |                                                              |                            |                            |                         |
|                                                         |                                                              |                            |                            |                         |
| PCL DC Coil                                             |                                                              |                            |                            |                         |
| Rated Coil Voltage (VDC)                                | Coil Resistance (ohms)±10%                                   | Must Operate Voltage (VDC) | Must Release Voltage (VDC) | Nominal Coil Power (W)  |
| 6<br>12<br>24<br>48<br>100/110                          | 40<br>160<br>650<br>2,600<br>11,000                          | 80% max.                   | 10% min.                   | abt. 0.9                |
|                                                         |                                                              |                            |                            | abt. 1.1                |
|                                                         |                                                              |                            |                            |                         |
|                                                         |                                                              |                            |                            |                         |
|                                                         |                                                              |                            |                            |                         |

### Operate Data @ 20°C

**Must Operate Voltage:** AC 80% of nominal voltage or less.  
DC 80% of nominal voltage or less.

**Must Release Voltage:** AC 30% of nominal voltage or more.  
DC 10% of nominal voltage or more.

**Operate Time:** AC 20ms max.  
DC 15ms max.

**Release Time:** AC 20ms max.  
DC 8ms max.

### Environmental Data

**Temperature Range:**

**Operating:** -10°C to +55°C.

**Humidity:** 45 to 85%. (Non-condensing).

**Vibration, Operational:** 10 to 55Hz 1.0mm double amplitude.

**Mechanical:** 10 to 55Hz 1.0mm double amplitude.

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

**Mechanical:** 1,000m/s<sup>2</sup> (abt. 100G).

### Mechanical Data

**Termination:** Plug-in, PCB.

**Enclosure:** Snap-on cover.

**Weight:** 1.26 oz (32g) approximately.

## Ordering Information

Typical Part Number

PCL

-2

02A

1

S

,000

### 1. Basic Series:

PCL = 3A, 5A type PCLH = 10A,15A type

### 2. Number of Poles:

1 = 1 pole (PCLH only) 2 = 2 pole 4 = 4 pole (PCL only)

### 3. Coil Voltage:

|            |                |            |                |
|------------|----------------|------------|----------------|
| 01A=6VAC   | 02A=12VAC      | 03A=24VAC  | 04A=48VAC      |
| 05A=100VAC | 06A=110/120VAC | 07A=200VAC | 08A=220/240VAC |
| 01D=6VDC   | 02D=12VDC      | 03D=24VDC  | 04D=48VDC      |
|            |                |            | 05D=100/110VDC |

### 4. Contact Material:

Blank = Ag (only available on 4 pole model) 1 = Ag Alloy (available with all versions)

### 5. Contact Arrangement:

Blank = Form C M = Form A

### 6. Case Type:

S = Standard (Smoke color) F = Flange mount (Smoke color)

### 7. Terminal Type:

Blank = Plug-in P = PCB

### 8. Indicator Lamp:

Blank = None L = Indicator Lamp

### 9. Option:

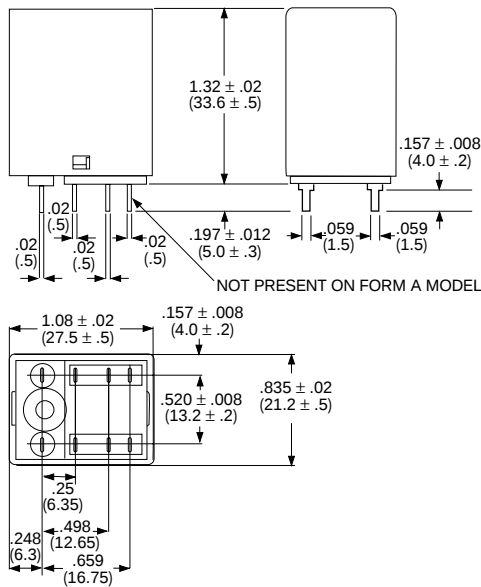
,000 = Standard model Other suffix = Custom model.

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

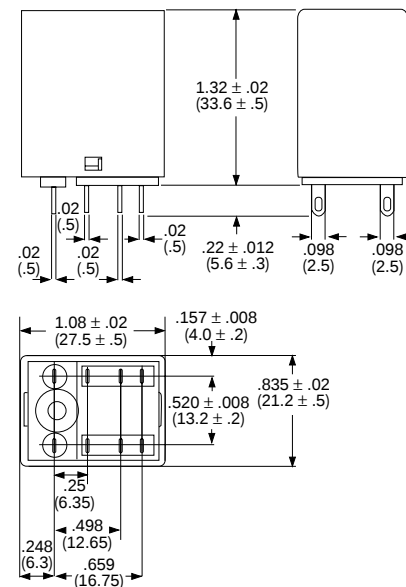
PCLH-202A1S,000  
PCLH-203A1S,000  
PCLH-206A1S,000  
PCLH-208A1S,000  
PCLH-202D1S,000  
PCLH-203D1S,000  
PCLH-204D1S,000  
PCLH-205D1S,000  
PCLH-206A1SP,000  
PCLH-202D1SP,000  
PCLH-203D1SP,000  
PCLH-205D1SP,000

## Outline Dimensions

**PCL 2c, 2a type (PCB Terminal)**

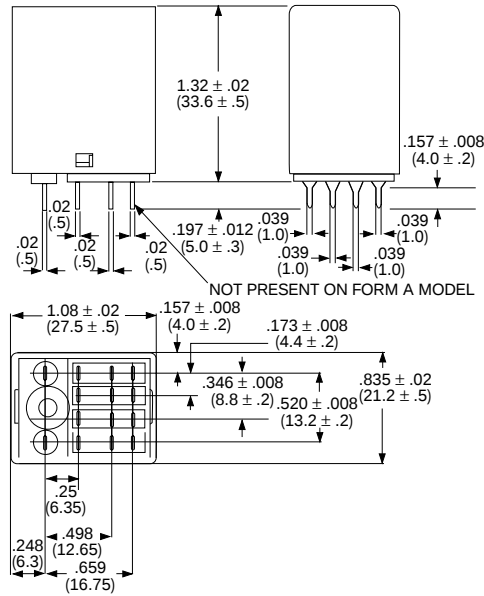


**PCL 2c, 2a type (Plug-in Terminal)**

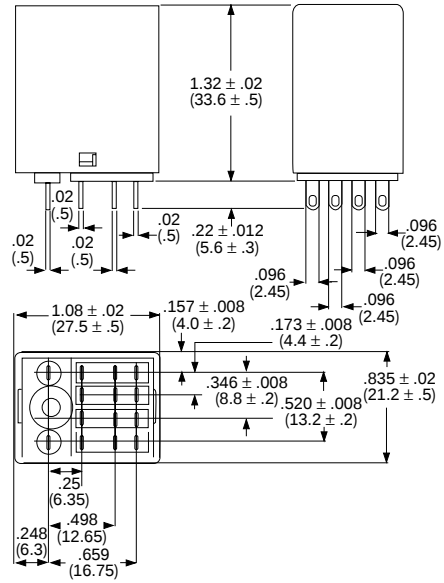


**Outline Dimensions (continued)**

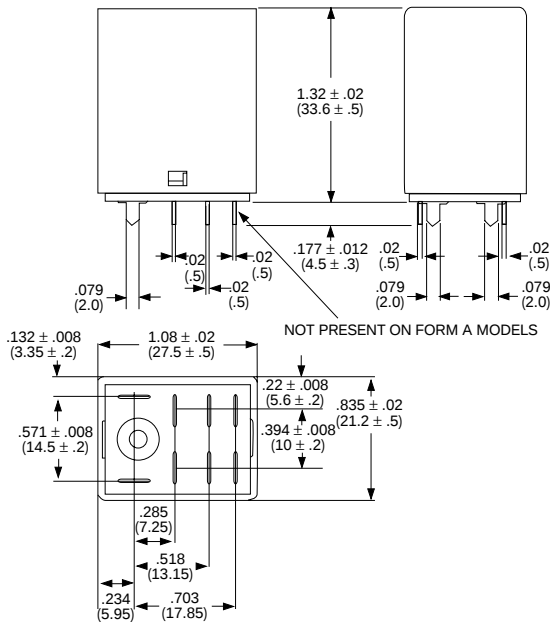
**PCL 4c, 4a type (PCB Terminal)**



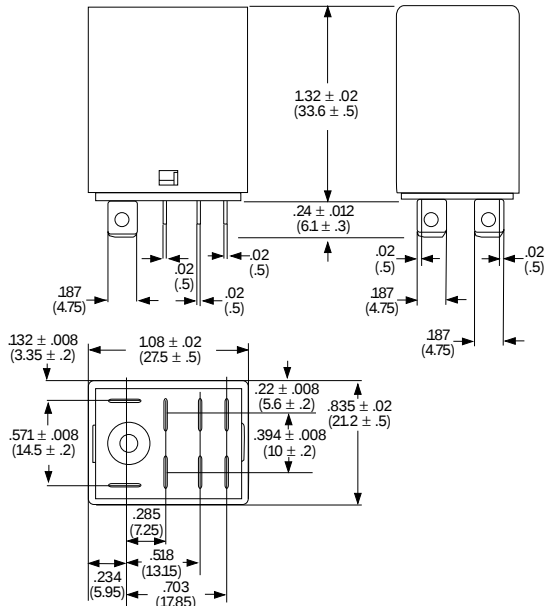
**PCL 4c, 4a type (Plug-in Terminal)**



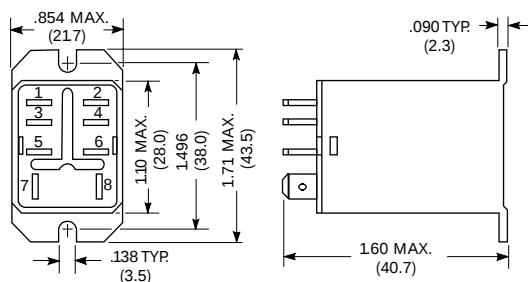
**PCLH type (PCB Terminal)**



**PCLH type (Plug-in Terminal)**

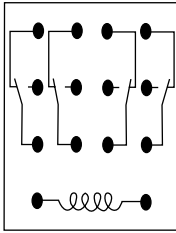


**PCLH type (Flange Mount Case)**

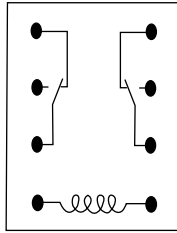


## Wiring Diagrams (Bottom Views)

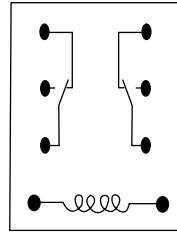
**PCL 4c type**



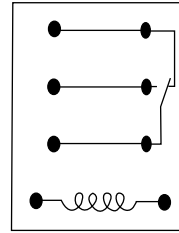
**PCL 2c type**



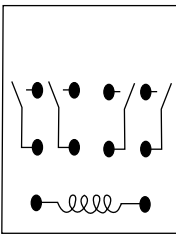
**PCLH 2c type**



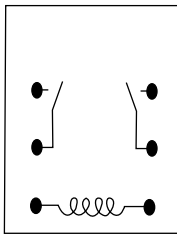
**PCLH 1c type**



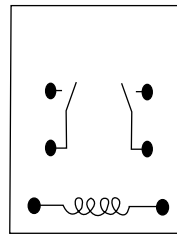
**PCL 4a type**



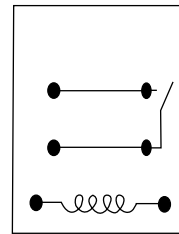
**PCL 2a type**



**PCLH 2a type**

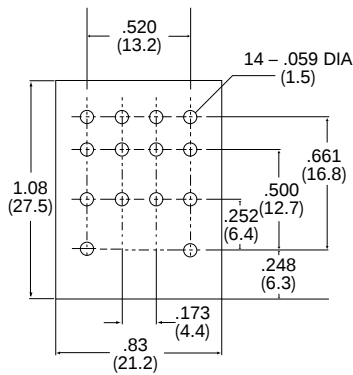


**PCLH 1a type**

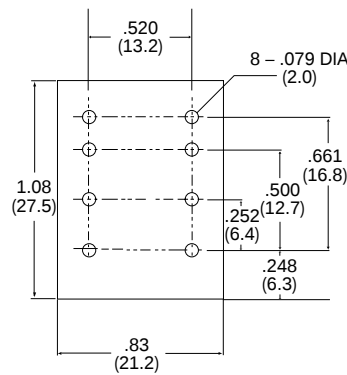


## PC Board Layouts (Bottom Views)

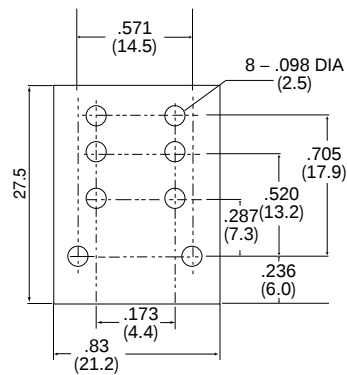
**PCL 4pole type**



**PCL 4pole type**

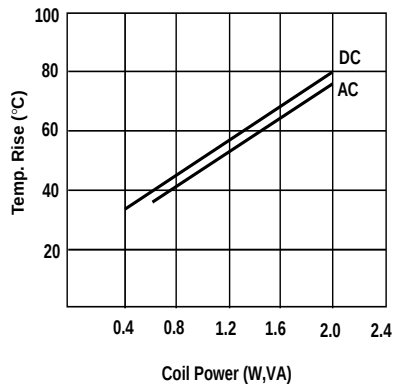


**PCLH type**

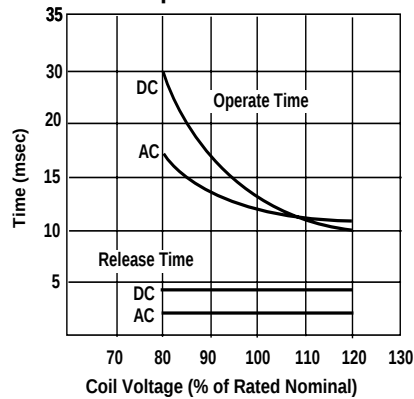


## Reference Data

**Coil Temperature Rise**



**Operate Time**



## Sockets

For PCL socket information refer to KH series sockets (page 712).

For PCLH socket information refer to K10 series sockets (page 722).

## Данный компонент на территории Российской Федерации

**Вы можете приобрести в компании MosChip.**

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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