# 10 Amp Subminiature PCB Power Relay — PC415


## FEATURES

- 10 Amp Continuous Contact Capacity
- 1 Form A, 1 Form B and 1 Form C Contact Forms
- Most Popular Package and Footprint
- Class “B” Insulation Standard
- Class “F” Insulation Available
- Popular “Sugar Cube” Footprint
- Sealed, Immersion Cleanable
- Lead Free and RoHS Compliant
- Production Line Fully Automated

## UL / CUL Ratings

c UL us E86876

| Load Type | All Forms, All Contacts |
|---|---|
| Resistive | 10 Amps @ 120 VAC & 28 VDC<br>7 Amps @ 240 VAC<br>5 Amps @ 277 VAC<br>20 Amps @ 14 VDC |
| General Purpose | 10 Amps @ 120 VAC & 28 VDC<br>7 Amps @ 240 VAC<br>5 Amps @ 277 VAC<br>20 Amps @ 14 VDC |
| Motor | 1/3 HP @ 125 VAC / 277 VAC |

## CONTACT DATA

| | | |
|---|---|---|
| Max Switching Power | | 420 W, 2500 VA |
| Max. Switching Voltage | | 110 VDC, 380 VAC |
| Max Switching Current | | 20 A |
| Material | | AgCdO (Silver Cadmium Oxide) |
| Initial Contact Resistance | | 100 milliohms max @ 0.1 A, 6 VDC |
| Service Life | Mechanical | 1 X $10^7$ Operations |
| | Electrical | 1 X $10^5$ Operations |

## CHARACTERISTICS

| | |
|---|---|
| Operate Time | Less than 10 ms |
| Release Time | Less than 5 ms |
| Insulation Resistance | 1,000 megohms min, at 500 VDC, 50% RH |
| Dielectric Strength | 1500 Vrms, 1 min. between coil and contacts<br>750 Vrms, 1 min. between open contacts |
| Shock Resistance | 10 g, 11 ms, functional; 100 g, destructive |

| | |
|---|---|
| Vibration Resistance | DA 1.5 mm, 10 - 55 Hz |
| Terminal Strenght | 5N |
| Solderability | 235 ºC for 3 seconds |
| Operating Temperature | -55 to 85 ºC |
| Relative Humidity | 93% (at 40°C) |
| Weight | 9.5 grams |

## ORDERING INFORMATION

| Example: | PC415 | -1A | -12 | Nil | S | F | -X | T |
|---|---|---|---|---|---|---|---|---|

Model: **PC415**

Contact Form: **1A**, **1B**, **1C**

Coil Voltage: **3, 5, 6, 9, 12, 24, 48**

Coil Sensitivity: **Nil**: 360 mW, **B**: 450 mW, **L:** 800 mW

Enclosure: **S**: Sealed; **C:** Dust Cover

Insulation System: **Nil**: Class B, **F**: Class F

RoHS Compliant: **-X**

Contact Material: **Nil**: AgCdO, **T**: AgSnO, **G**: AgCdO + Gold Plate

Box Quantity: 2,000; Inner Box 1,000

PICKER® 14680 James Road, Rogers, MN 55374 USA
Sales: (763) 535-2339
www.PickerComponents.com
e-mail: sales@pickercomponents.com

Dimensions are listed for reference purposes only.

Specifications and Availability subject to change without notice.

## COIL DATA

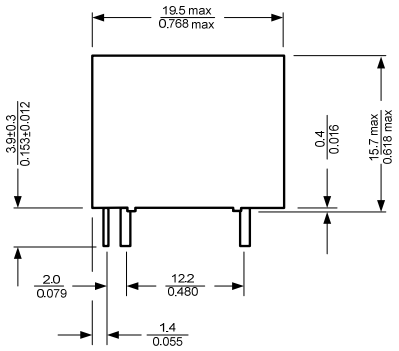
| Coil Voltage (VDC) | | Coil Power Resistance ohms ± 10% | | | Must Operate Voltage Max. (VDC) | Must Release Voltage Min. (VDC) |
|---|---|---|---|---|---|---|
| Rated | Max | 360 mW | 450 mW | 800 mW | | |
| 3 | 3.9 | 25 | 20 | 11 | 2.1 | 0.3 |
| 5 | 6.5 | 70 | 55.6 | 31 | 3.5 | 0.5 |
| 6 | 7.8 | 100 | 80 | 45 | 4.2 | 0.6 |
| 9 | 11.7 | 225 | 180 | 101 | 6.3 | 0.9 |
| 12 | 15.6 | 400 | 320 | 180 | 8.40 | 1.2 |
| 24 | 31.2 | 1600 | 1280 | 720 | 16.8 | 2.4 |
| 48 | 62.4 | 6400 | 5120 | 2880 | 33.60 | 4.8 |

### NOTES:

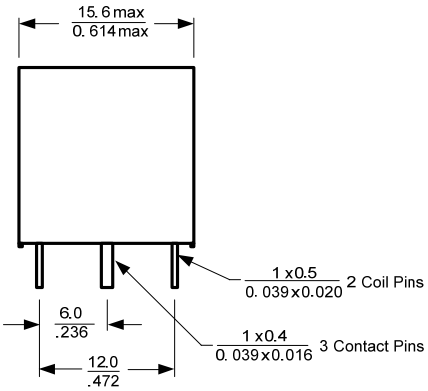
The use of any coil voltage less than the rated voltage will compromise the operation of the relays. Must Operate Voltage is listed for test purposes only and is not to be used as design criteria. Pickup and release voltages are for test purposes only and are not to be used as design criteria.

## DIMENSIONS (mm/inches)

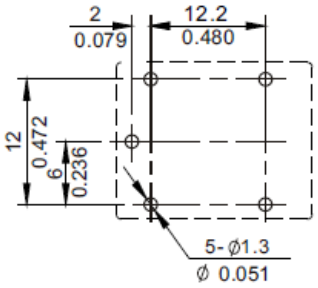
### Side View



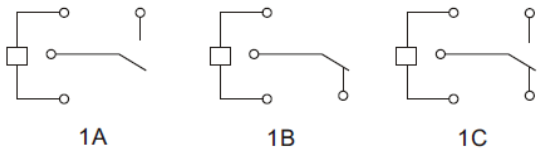

### End View



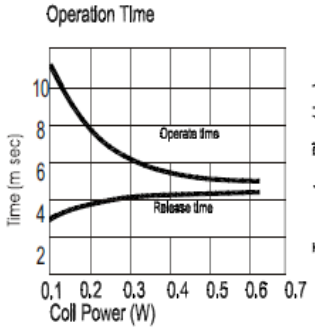

### Bottom View PC Board Layout

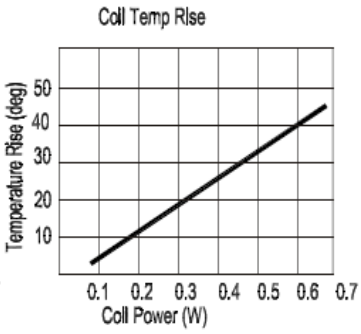


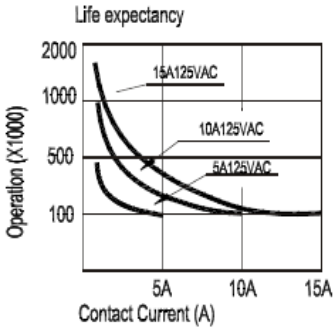

### Wiring Diagram

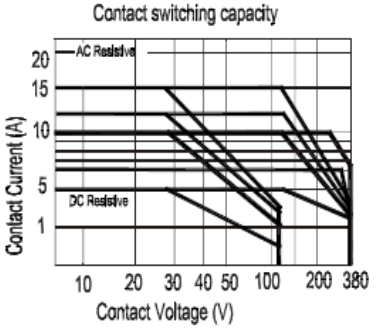



Notes: Contact Form C shown
On Contact Forms A & B Unused Pins are Omitted
Tolerances ± .010 unless otherwise noted

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