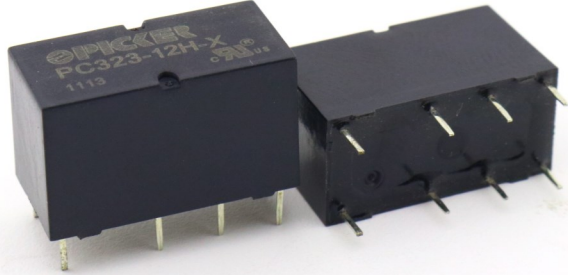


# 1 Amp Subminiature PCB Telecom Relay With Bifurcated Contacts PC323



### FEATURES

- Subminiature Design
- Bifurcated Crossbar Contacts
- 0.300" 16 Pin DIL Package
- Contact Capacity from 1 mA to 1 A
- Meets FCC part 68 Voltage Surge
- Class "B" Insulation Standard
- Three Coil Sensitivities Available
- RoHS Compliant:

### UL / CUL Ratings cULus E86876

|                        |   |
|------------------------|---|
| Contact Form           | 2 Form C, DPDT(B-M) (Bifurcated Crossbar) |
| Rated Load             | 1A 24 VDC; 0.5A 120 VAC                   |
| Max. Switching Power   | 60W 125 VA                                |
| Max. Switching Voltage | 220 VDC 250 VAC                           |
| Max. Switching Current | 2 A                                       |
| Min. Switching Load    | 0.01 mA @10mV                             |

### CONTACT DATA

|                            |                                |                                |
|----------------------------|--------------------------------|--------------------------------|
| Material                   | AgNi+Au (Clad); AgPd+Au (Clad) |                                |
| Initial Contact Resistance | 50 mΩ max                      |                                |
| Service Life               | Mechanical                     | 2 X 10 <sup>5</sup> Operations |
|                            | Electrical                     | 1 X 10 <sup>8</sup> Operations |

### CHARACTERISTICS

|                         |   |
|-------------------------|---|
| Operate Time            | 4.5 ms. Max.                                |
| Release Time            | 1.5 ms. Max.                                |
| Insulation Resistance   | 1,000 MΩ min, at 500 VDC                    |
| Dielectric Strength     | 1,000 VAC, 1 min, Between Open Contacts     |
|                         | 1,000 VAC, 1 min, Between Coil and Contacts |
|                         | 1,000 VAC, 1 min, Between Contacts Poles    |
| Surge Withstand Voltage | 1,500 V, Between Open Contacts              |
|                         | 1,500 V, Between Coil and Contacts          |
|                         | 1,500 V, Between Contacts Poles             |
| Power Consumption       | 150 mW, 200 mW, 450 mW                      |

|                      |  |                                       |
|----------------------|--|---------------------------------------|
| Shock Resistance     | Functional   | 100 m/s <sup>2</sup> 11 ms            |
|                      | Survival   | 1,000 m/s <sup>2</sup> 6 ms           |
| Vibration Resistance | Functional   | 10 Hz - 55 Hz Double Amplitude 1.5 mm |
|                      | Survival   | 10 Hz - 55 Hz Double Amplitude 5 mm   |
| Terminal Strength    | 5N   |                                       |
| Solderability        | 260°C for 5 seconds  |                                       |
| Temperature Range    | - 40°C ~ 90°C (-40° F ~ 194° F)<br>(- 40°C ~ 80°C for 0.3 W , 0.45 W Coil) |                                       |
| Weight               | 4.5 gr   |                                       |

### ORDERING INFORMATION

|                   |   |     |   |    |
|-------------------|---|-----|---|----|
| Example:          | PC323   | -12 | L | -X |
| Model:            | <b>PC323</b>                                  |     |   |    |
| Coil Voltage:     | <b>5, 6, 9, 12, 24, 48</b>                    |     |   |    |
| Contact Material: | <b>Nil: AgNi+Au (Clad); P: AgPd+Au (Clad)</b> |     |   |    |
| Coil Sensitivity: | <b>Nil: 450 mW; L: 150 mW; H: 200 mW :</b>    |     |   |    |
| RoHS Compliant:   | <b>-X</b>                                     |     |   |    |

Box Quantity: 4000; Inner Box: 1000

**COIL DATA**

| Coil Voltage (VDC) |      | Resistance ohms ± 10% | Must Operate Voltage Max (VDC) | Must Release Voltage Min. (VDC) | Coil Power |
|--------------------|------|-----------------------|--------------------------------|---------------------------------|------------|
| Rated              | Max  |                       |                                |                                 |            |
| 3                  | 7.5  | 60                    | 2.1                            | 0.15                            | 150 mW     |
| 5                  | 12.5 | 167                   | 3.5                            | 0.25                            | 150 mW     |
| 6                  | 15.0 | 240                   | 4.2                            | 0.3                             | 150 mW     |
| 9                  | 22.5 | 540                   | 6.3                            | 0.45                            | 150 mW     |
| 12                 | 30.0 | 960                   | 8.4                            | 0.6                             | 150 mW     |
| 18                 | 40.0 | 1620                  | 12.6                           | 0.9                             | 200 mW     |
| 24                 | 52.9 | 2880                  | 16.8                           | 1.2                             | 200 mW     |
| 48                 | 84.9 | 7680                  | 33.6                           | 2.4                             | 300 mW     |

|    |       |       |      |     |        |
|----|-------|-------|------|-----|--------|
| 3  | 6.5   | 45    | 2.1  | 0.3 | 200 mW |
| 5  | 10.8  | 125   | 3.5  | 0.5 | 200 mW |
| 6  | 13.0  | 180   | 4.2  | 0.6 | 200 mW |
| 9  | 19.5  | 405   | 6.3  | 0.9 | 200 mW |
| 12 | 26.5  | 720   | 8.4  | 1.2 | 200 mW |
| 24 | 52.9  | 2880  | 16.8 | 2.4 | 200 mW |
| 48 | 103.9 | 11520 | 33.6 | 4.8 | 200 mW |

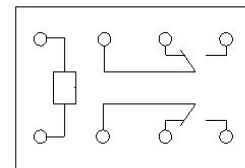
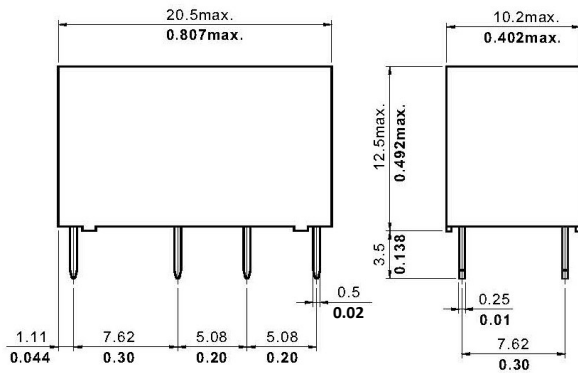
|    |      |      |      |     |        |
|----|------|------|------|-----|--------|
| 5  | 7.7  | 56   | 3.3  | 0.5 | 450 mW |
| 6  | 9.2  | 80   | 4.0  | 0.6 | 450 mW |
| 9  | 13.7 | 180  | 6.0  | 0.9 | 450 mW |
| 12 | 18.3 | 320  | 8.0  | 1.2 | 450 mW |
| 18 | 27.5 | 720  | 12.0 | 1.8 | 450 mW |
| 24 | 36.7 | 1280 | 15.9 | 2.4 | 450 mW |
| 48 | 72.5 | 5000 | 33.0 | 4.8 | 450 mW |

**NOTES:**

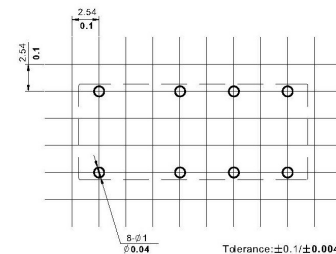
The use of any coil voltage less than the rated voltage will compromise the operation of the relays. Must Operate Voltage is listed for test purposes only and is not to be used as design criteria. Pickup and release voltages are for test purposes only and are not to be used as design criteria.

Dimensions are in mm, Inches are listed for reference only.

**DIMENSIONS (mm/inches)**



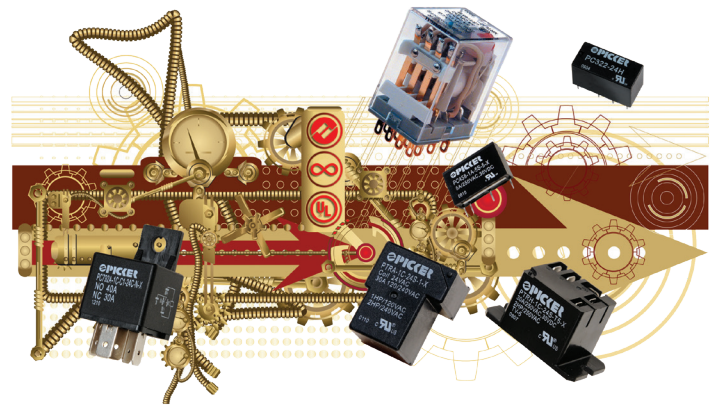
Wire Diagram



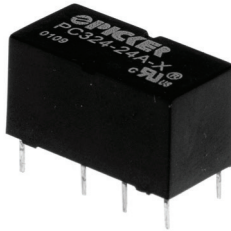
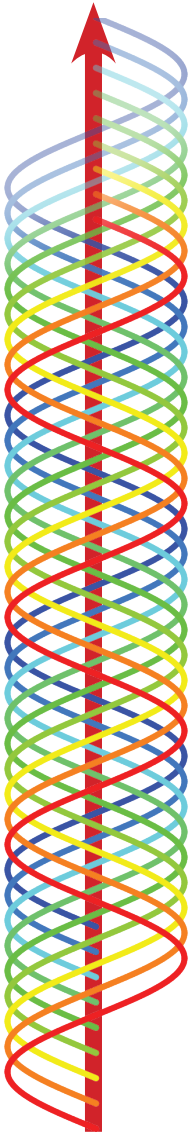
PC Board Layout

# PICKER

## Signal Relays

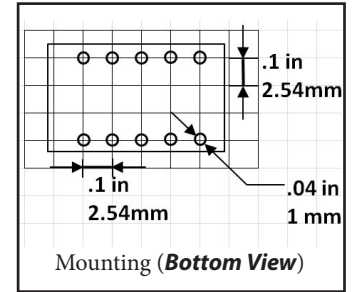


### Signal Relays In Applications From Dry Contacts to 5 Amps

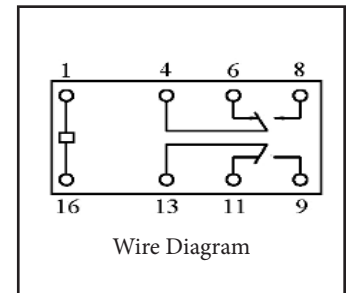


### Subminiature Signal Relays

| Current Rating At 30 VDC | Series | Coil Power Options in milliWatts |     |     |     |     |     |     |
|--------------------------|--------|----------------------------------|-----|-----|-----|-----|-----|-----|
|                          |        | 150                              | 200 | 360 | 400 | 450 | 510 | 560 |
| 1 Amp                    | PC324  |                                  |     |     | X   |     |     | X   |
| 1 Amp                    | PC323  | X                                | X   |     |     | X   |     |     |
| 1 Amps                   | PC322  |                                  | X   |     |     |     |     |     |
| 2 Amps                   | PC324S |                                  |     |     | X   |     |     | X   |
| 3 Amps                   | PC332  | X                                | X   |     |     |     |     |     |

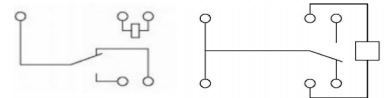


- 0.300" 16 Pin DIL Socket Footprint
- 2 Form C - DPDT (B-M)
- Gold Clad Bifurcated Contacts
- Meets FCC Part 68 Voltage Surge



| Current Rating At 30 VDC | Series | Coil Power Options in milliWatts |     |     |
|--------------------------|--------|----------------------------------|-----|-----|
|                          |        | 200                              | 360 | 450 |
| 3/5 Amps                 | PC312  | X                                | X   | X   |
| 3/5 Amps                 | PC312B | X                                | X   | X   |

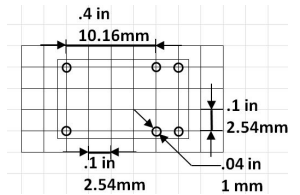
PC312 differs from the PC312B with a different pin configuration



PC312B Wiring Diagrams (see PC312B Data Sheet)

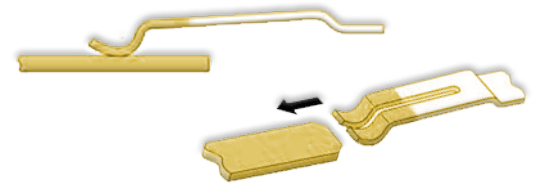
Wiring Diagrams (Bottom View)

- 0.300" 12 Pin DIL Socket Footprint
- 2 Form 1A - SPST OR 1C SPDT
- Meets FCC Part 68 Voltage Surge



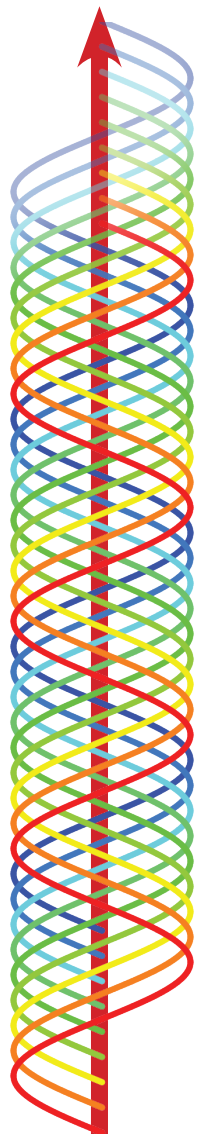
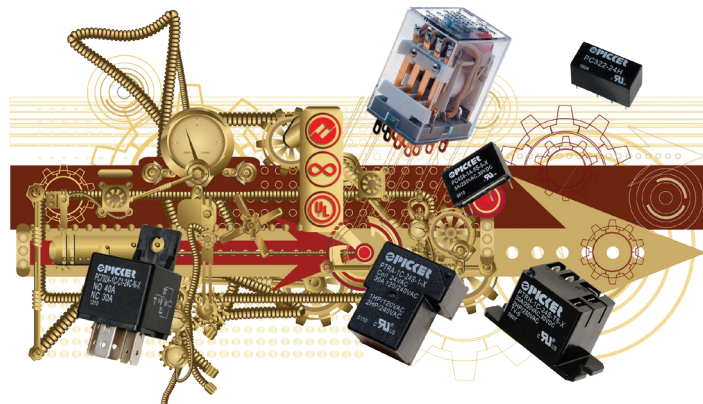
### Gold Clad Bifurcated Contacts

- Where noted, these relays utilize *Gold Clad Bifurcated Contacts*.
- These are forked contacts making a connection at two parallel contact points. This adds to the reliability of the relay by reducing the contact resistance.
- Gold is used because it does not oxidize like copper or silver which is most important in dry contact applications.

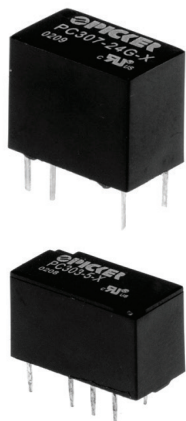


# PICKER

## Signal Relays

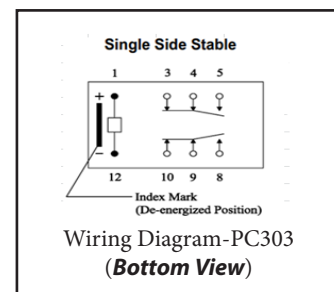
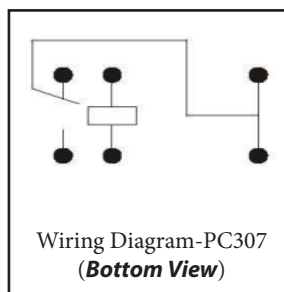
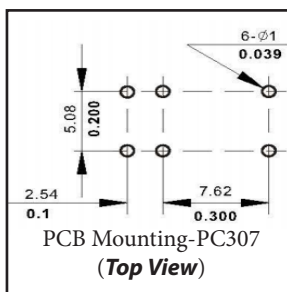
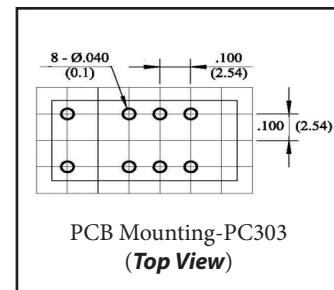


### Ultraminiature Signal Relays

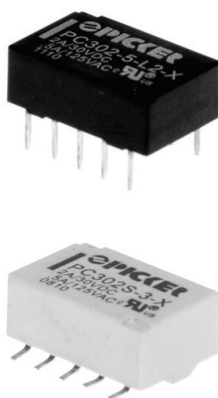


| Current Rating At 30 VDC | Series | Coil Power Options in milliWatts |     |     | Contact Configuration | Optional Latching |
|--------------------------|--------|----------------------------------|-----|-----|-----------------------|-------------------|
|                          |        | 140                              | 150 | 200 |                       |                   |
| 1 Amps                   | PC307  |                                  | X   | X   | Form 1C SPST          | X                 |
| 2 Amps                   | PC303  | X                                |     |     | Form 2C DPDT (8-M)    | Single Coil       |

- 0.200" 10 Pin DIL Socket Footprint
- Gold Plated Bifurcated Contacts
- Meet FCC Part 68 Voltage Surge



### Microminiature Signal Relays



| Current Rating At 30 VDC | Series  | Coil Power Options in milliWatts |     |     | Optional Latching       |
|--------------------------|---------|----------------------------------|-----|-----|-------------------------|
|                          |         | 140                              | 150 | 200 |                         |
| 2 Amps                   | PC302   | X                                |     |     | Single & Dual Coil      |
| 2 Amps                   | PC302S* | X                                |     |     | Single Coil Side Stable |

\* PC 302S is the Surface Mount Version

- 0.300" 10 Pin DIL Socket Footprint
- Low 5mm Profile
- Gold Plated Bifurcated Contacts
- Meet FCC Part 68 Voltage Surge
- Latching - Single and Dual Coil Latching Options

