

# Subminiature PCB Telecom Relay

PC312



## FEATURES

- Subminiature Design
- PC Terminals on 0.1" Grid Pattern
- Contact Capacity from 50 mA to 5 A
- Meets FCC Part 68 Voltage Surge
- Class "B" Insulation Standard
- Three Coil Sensitivities Available
- Sealed, Immersion Cleanable
- 0.300" 12 Pin DIL Socket Footprint
- RoHS Compliant:

## UL / CUL Ratings

 **E86876**

| Contact Form | 1 Form C<br>SPDT |               |               |
|--------------|------------------|---------------|---------------|
| Rated Load   | Voltage          | Amps* (3 Amp) | Amps* (5 Amp) |
| Resistive    | 14 VDC           | 0.05 - 3 A    | 0.05 - 5 A    |
| Resistive    | 125 VAC          | 0.05 - 3 A    | 0.05 - 5 A    |
| Resistive    | 30 VDC           | 0.05 - 3 A    | 0.05 - 5 A    |

\*Minimum Switching Condition for Gold Plated Contacts is 50 mA at 6 VDC

## CHARACTERISTIC

|                       |   |
|-----------------------|---|
| Operate Time          | 5.0 ms. Max.                                  |
| Release Time          | 5.0 ms. Max.                                  |
| Insulation Resistance | 100 MΩ min, at 500 VDC                        |
| Dielectric Strength   | Meets FCC Part 68.302 1,500 V Lightning Surge |
|                       | Meets FCC Part 68.304 1,000 V Dielectric      |
|                       | 500 V 50 Hz, Between Contacts                 |
| Coil Power            | 200 mW, 360 mW, 450 mW                        |

## CONTACT DATA

|                            |                |                                |
|----------------------------|----------------|--------------------------------|
| Max. Switching Power       | 90 W 375 VA    | 150 W 625 VA                   |
| Max. Switching Voltage     | 60 VDC 220 VAC |                                |
| Max. Switching Current     | 3 A            | 5 A                            |
| Material                   | AgNi+Au (Clad) |                                |
| Initial Contact Resistance | 50 mΩ max      |                                |
| Service Life               | Mechanical     | 1 X 10 <sup>7</sup> Operations |
|                            | Electrical     | 1 X 10 <sup>5</sup> Operations |

## CHARACTERISTIC Continued

|                      |                                       |
|----------------------|---------------------------------------|
| Shock Resistance     | 100 m/s <sup>2</sup> 11 ms            |
| Vibration Resistance | 10 Hz - 70 Hz Double Amplitude 1.5 mm |
| Terminal Strength    | 5N                                    |
| Solderability        | 260°C for 5 seconds                   |
| Temperature Range    | - 25°C ~ 70°C                         |
| Weight               | 3.5 grams                             |

## ORDERING INFORMATION

|                   |   |     |   |    |
|-------------------|---|-----|---|----|
| Example:          | PC312   | -12 | H | -X |
| Model:            | <b>PC312</b>                                      |     |   |    |
| Contact Form:     | <b>Nil: 1C</b>                                    |     |   |    |
| Coil Voltage:     | <b>3, 5, 6, 9, 12, 18, 24</b>                     |     |   |    |
| Contact Material: | <b>Nil: AgNi + Au</b>                             |     |   |    |
| Sensitivity:      | <b>Nil: Standard 360 mW; B: 450 mW; H: 200 mW</b> |     |   |    |
| Current Rating:   | <b>Nil: Standard, 3 A; S: 5 A</b>                 |     |   |    |
| RoHS Compliant:   | <b>-X</b>   |     |   |    |

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

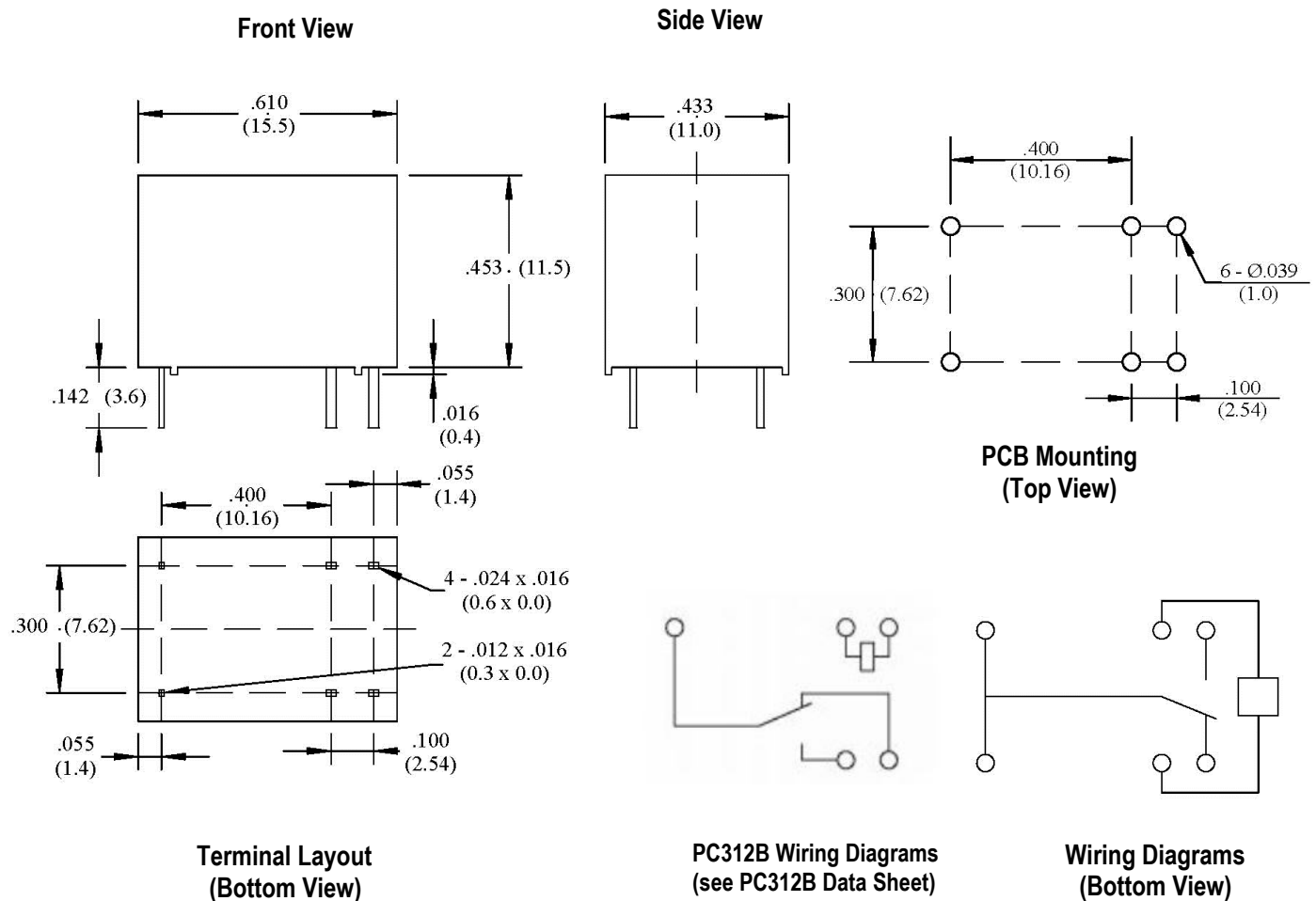
## COIL DATA

| Coil Voltage<br>(VDC) |      | Coil Power            |        |        | Must Operate<br>Voltage Max.<br>(VDC) | Must Release<br>Voltage Min.<br>(VDC) |
|-----------------------|------|-----------------------|--------|--------|---------------------------------------|---------------------------------------|
|                       |      | Resistance ohms ± 10% |        |        |                                       |                                       |
| Rated                 | Max  | 200 mW                | 360 mW | 450 mW |                                       |                                       |
| 3                     | 3.3  | 45                    | 25     | 20     | 2.25                                  | 0.3                                   |
| 5                     | 5.5  | 125                   | 75     | 56     | 3.75                                  | 0.5                                   |
| 6                     | 6.6  | 180                   | 100    | 80     | 4.50                                  | 0.6                                   |
| 9                     | 9.9  | 405                   | 225    | 180    | 6.75                                  | 0.9                                   |
| 12                    | 13.2 | 720                   | 400    | 320    | 9.00                                  | 1.2                                   |
| 18                    | 19.8 | 1,620                 | 900    | 720    | 13.5                                  | 1.8                                   |
| 24                    | 26.5 | 2,880                 | 1,600  | 1,280  | 18.0                                  | 2.4                                   |

## Notes:

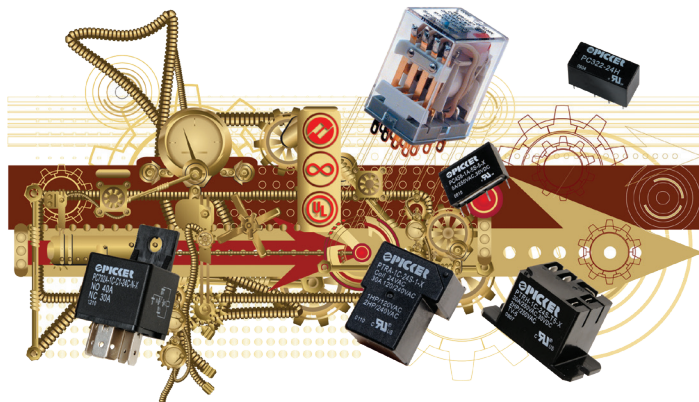
The use of any coil voltage less than the rated voltage will compromise the operation of the relay. Must Operate Voltage is listed for test purposes only and is not to be used as design criteria. Pickup and release voltages are for test purposes only and are not to be used as design criteria.

## Relay DIMENSIONS Inches/mm



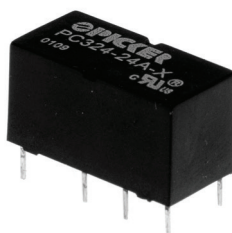
# PICKER

## Signal Relays

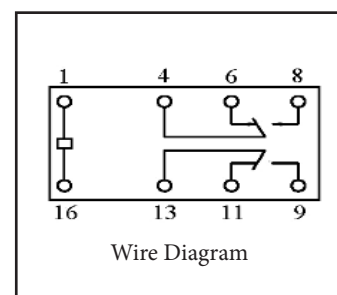
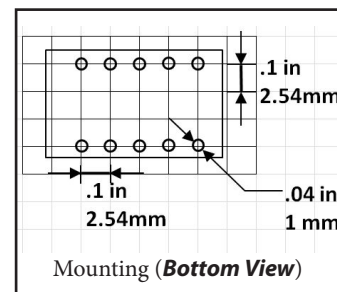


Signal Relays In Applications  
From Dry Contacts to 5 Amps

### 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   | X   |     |     | X   |     |
| 2 Amps                   | PC324S |                                  |     |     | X   |     |     | X   |
| 3 Amps                   | PC332  | X                                | X   |     |     |     |     |     |

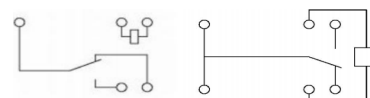


- 0.300" 16 Pin DIL Socket Footprint
- 2 Form C - DPDT (B-M)
- Gold Clad Bifurcated Contacts
- Meets FCC Part 68 Voltage Surge

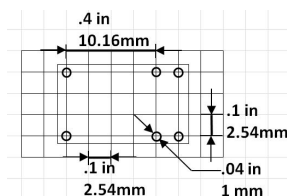


| Current Rating At 30 VDC | Series | Coil Power Options in milliWatts |     |     |
|--------------------------|--------|----------------------------------|-----|-----|
|                          |        | 200                              | 360 | 450 |
| 3/5 Amps                 | PC312  | X      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

PC312 differs from the PC312B with a different pin configuration

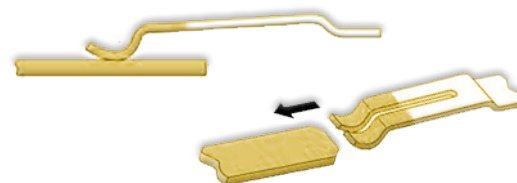


- 0.300" 12 Pin DIL Socket Footprint
- 2 Form 1A - SPST OR 1C SPDT
- Meets FCC Part 68 Voltage Surge



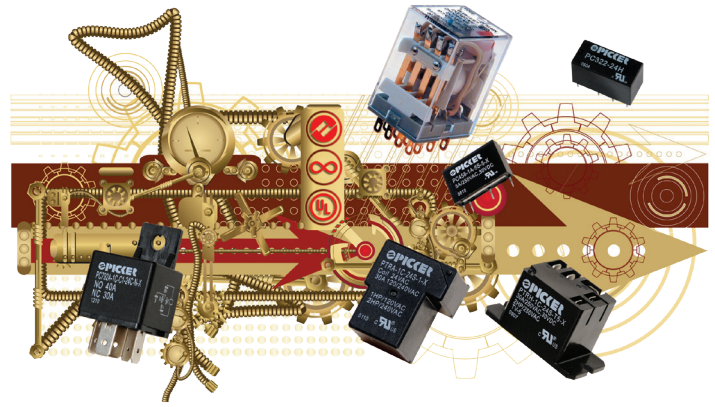
### Gold Clad Bifurcated Contacts

- 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

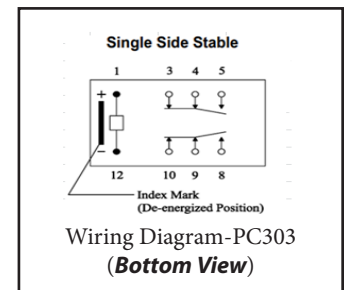
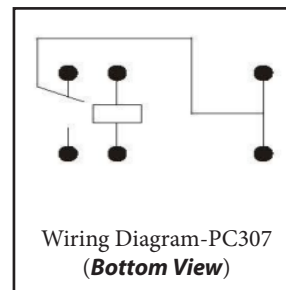
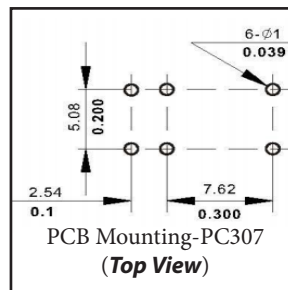
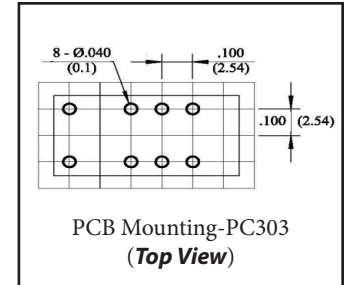
## Signal Relays



### 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

