

Ultraminiature 30 Amp Automotive PCB-Mounted Relay

PC537



FEATURES

- Ultra Miniature Design
- 1 A (SPST NO) and 1 C (SPDT) Contacts Forms Available
- Contact Switching Capacity Up to 100 A
- Sealed, Immersion Cleanable
- -40°C to 105°C Operation Temperature
- RoHS Compliant
- See PC537B for 20 Amp Version
- Available as a Dual See PC549

CONTACT RATING 14 VDC @ 25°C**

| | | | |
|------------------------|---------------------------------------|-----------------|----|
| Contact | 1 Form A (SPST-NO) or 1 Form C (SPDT) | | |
| | Normally Open | Normally Closed | |
| Rated Load (Resistive) | 30 A | 25 A | |
| Max. Switching Current | Make 100 A* | | |
| | Break 40 A | | |
| Max. Switching Voltage | 28 VDC | | |
| Max. Carry Current | 20°C | 40 A for 2 min | NA |
| | | 30 A For 1 Hour | NA |
| | 85°C | 35 A for 2 min | NA |
| | | 25 A for 1 Hour | NA |
| Max. Switching Power | 420 W | | |
| Minimum Load | 0.5 A @ 12 VDC | | |

*Peak Inrush Cold Filament, 5 ms maximum

**See PC537B for 20 Amp Version

CHARACTERISTICS

| | |
|-----------------------|--|
| Operate Time | 4 ms max. |
| Release Time | 1.5 ms max |
| Insulation Resistance | 1,000 MΩ min, at 500 VDC |
| Dielectric Strength | 500 V 50 Hz between Coil and Contacts |
| | 500 V 50 Hz between Contacts |
| Shock Resistance | 300 m/s ² 6ms |
| Vibration Resistance | 10 Hz - 500 Hz, DA 1.27 mm 60 m/s ² |
| Power Consumption | 0.55 W, 0.57 W |

ORDERING INFORMATION

| | | | | | | | |
|-------------------|---|-----|-----|---|-----|----|----|
| Example: | PC537 | -1C | -12 | S | 800 | -N | -X |
| Model: | PC537 | | | | | | |
| Contact Form: | 1A: 1 Form A (SPST-NO) 1C: 1 Form C (SPDT) | | | | | | |
| Coil Voltage: | 10, 12, 24 | | | | | | |
| Case Style: | C: Dust Cover; S: Sealed, S1: Flux Tight ⁽¹⁾ | | | | | | |
| Pin Width: | Nil: Pins 3 & 5 are 0.039 x 0.012 W: Pins 3,4 & 5 are 0.039 x 0.024 | | | | | | |
| Coil Power: | Nil: 570 mW (Standard) 800: 800 mW | | | | | | |
| Contact Material: | Nil: AgSnO ₂ ; N: AgNi; G: AgSnO ₂ + Au (Clad) | | | | | | |
| RoHS Compliant: | -X | | | | | | |

(1) Flux Tight relays are constructed such that Flux will not enter the relay in an automated soldering process, they are NOT suitable for water wash cleaning.

CONTACT RATING 28 VDC @ 25°C

| | | |
|-------------------------|---------------------------------------|-----------------|
| Contact | 1 Form A (SPST-NO) or 1 Form C (SPDT) | |
| | Normally Open | Normally Closed |
| Rated Load (Resistive) | 15 A | 12.5 A |
| Max. Switching Current | Make 50 A* | |
| | Break 20 A | |
| Max. Switching Voltage | 28 VDC | |
| Max. Continuous Current | 15 A | 12.5 A |
| Max. Switching Power | 420 W | |
| Minimum Load | 0.5 A @ 12 VDC | |

CROSS REFERENCE

| | |
|-------------------|---|
| TE Connectivity: | V23086 series |
| Example: | V23086-C1001-A403 Crosses to PC537-1C-12S-X |
| American Zettler: | AZ9871 and AZ987 series |
| Example: | AZ987-1C-12DET Crosses to PC537-1C-12S-X |

CHARACTERISTICS Continued

| | |
|-------------------------------|---------------------|
| Terminal Strength | 10N |
| Solderability | 260°C for 5 seconds |
| Operating Temperature Class F | -40°C to 105°C |
| Storage Temperature | -40°C to 155°C |
| Relative Humidity | 85% at 20°C |
| Weight | 4 grams |

COIL DATA

| Coil Voltage (VDC) (1) | | Coil Resistance ohms ± 10% | Must Operate Voltage Max. (VDC) (2) | Must Release Voltage Min. (VDC) (2) | Coil Power Consumption (W) |
|------------------------|------|----------------------------|-------------------------------------|-------------------------------------|----------------------------|
| Rated | Max | | | | |
| 10 | 12 | 181 | 5.7 | 1.25 | 0.55 |
| 12 | 14.4 | 254 | 6.9 | 1.5 | 0.57 |
| 24 | 28.8 | 1,010 | 13.8 | 3 | 0.57 |

CONTACT DATA

| | | |
|----------------------------|------------|---|
| Material | | AgSnO ₂ , AgNi, AgSnO ₂ +Au |
| Initial Contact Resistance | | 100 mΩ max @ 0.1 A, 6 VDC |
| Service Life | Mechanical | 1 X 10 ⁷ Operations |
| | Electrical | 1 X 10 ⁵ Operations |

NOTES:

- (1)The use of any coil voltage less than the rated voltage will compromise the operation of the relays.
- (2)Must Operate Voltage and Release Voltages are for test purposes only and are not to be used as design criteria.

DIMENSIONS (mm/inches)

