

30 AMP Power PCB Relay

PTRH



FEATURES

- Most popular power PCB relay
- Up to 30 amp switching capacity
- Up to 2 horsepower rating
- Gold flashed contacts available
- UL Class B insulation standard
- UL Class F insulation available
- Available with UL 873 spacing
- Epoxy sealed, immersion cleanable
- **Now available Lead Free & RoHS Compliant**



File # E93379

UL/CSA RATINGS

| Load Type | Voltage | 1 Form A (SPST-NO) | 1 Form B (SPST-NC) | 1 Form C (SPDT) | |
|---|---------|--------------------|--------------------|-----------------|------|
| | | | | NO | NC |
| General Purpose | 120 VAC | 30 A | 20 A | 30 A | 20 A |
| | 250 VAC | 30 A | 20 A | 30 A | 20 A |
| | 30 VDC | 30 A | 20 A | 30 A | 20 A |
| Resistive (100,000 cycles) | 120 VAC | 30 A | 20 A | 30 A | 20 A |
| | 250 VAC | 30 A | 20 A | 30 A | 20 A |
| Motor (30,000 cycles) | 250 VAC | 2 HP | — | 2 HP | — |
| | 120 VAC | 1 HP | — | 1 HP | — |
| LRA/FLA (locked rotor amps/full load amps) | 250 VAC | 80 A/30 A | — | 80 A/30 A | — |
| | 120 VAC | 96 A/30 A | — | 96 A/30 A | — |

CONTACT DATA

| | | |
|-----------------------------------|-------------------|--|
| Material | | AgCdO (Silver Cadmium Oxide), AgSnOInO (Silver Tin Oxide Indium Oxide) |
| Initial Contact Resistance | | 50 milliohms max @ 0.1A, 6VDC |
| Service Life | Mechanical | 1 X 10 ⁷ Operations |
| | Electrical | 1 X 10 ⁵ Operations |

CHARACTERISTICS

| | |
|----------------------------------|---|
| Operate Time | Less than 15 ms. |
| Release Time | Less than 10 ms. |
| Insulation Resistance | 1,000 megohms min, at 500VDC, 50%RH |
| Dielectric Strength | 1500 Vrms, 1 min. between open contacts 1500 Vrms, 1 min. between coil and contacts (2500 Vrms for -1) |
| Shock Resistance | 10 g, 11ms, functional; 100 g, destructive |
| Vibration Resistance | DA 1.5mm, 10-55 Hz |
| Power Consumption | 0.9W, approx. |
| Ambient Temperature Range | -55 degrees C to 85 degrees C operating for class B, -40 to 130 degrees C storage |
| Weight | 30 grams approx. |

PTRH Rev D 3-25-04

ORDERING INFORMATION

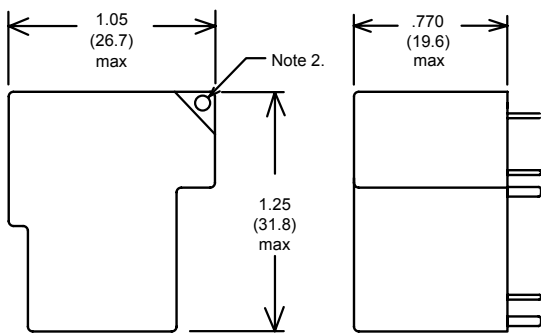
| | | | | | | | | |
|--|------|-----|-----|---|---|---|----|----|
| Example: | PTRH | -1C | -12 | S | F | T | -1 | -X |
| Model | | | | | | | | |
| Contact Form | | | | | | | | |
| 1A, 1B, or 1C | | | | | | | | |
| Coil Voltage | | | | | | | | |
| Configuration | | | | | | | | |
| Nil: Open Frame; S: Sealed plastic case; C: Dust Cover | | | | | | | | |
| Insulation Material | | | | | | | | |
| Nil: UL Class B; F: UL Class F | | | | | | | | |
| Contact Material | | | | | | | | |
| Nil: AgCdO; T: AgSnOInO; G: AgCdO+Au | | | | | | | | |
| Spacing | | | | | | | | |
| Nil: UL 508; -1: UL 873 (Pin # 6 omitted) | | | | | | | | |
| Nil: Standard; -X ROHS Compliant | | | | | | | | |

COIL DATA

| Coil Voltage | Resistance ohms $\pm 10\%$ | Must Operate Voltage Max. (VDC) | Must Release Voltage Min. (VDC) | Continuous Voltage Max. (VDC) |
|--------------|-------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|
| 5 | 27 | 3.75 | 0.5 | 5.5 |
| 6 | 40 | 4.50 | 0.6 | 6.6 |
| 9 | 97 | 6.75 | 0.9 | 9.9 |
| 12 | 155 | 9.00 | 1.2 | 13.2 |
| 24 | 660 | 18.00 | 2.4 | 26.4 |
| 48 | 2560 | 36.00 | 4.8 | 52.8 |
| 110 | 10330 | 82.50 | 11.0 | 121.0 |

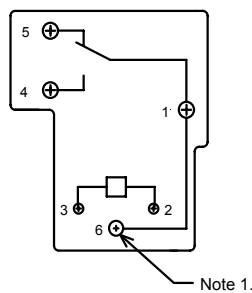
Note: Custom coil voltages within the ranges shown are available on special order.

Overall Dimensions
Inches (millimeters)

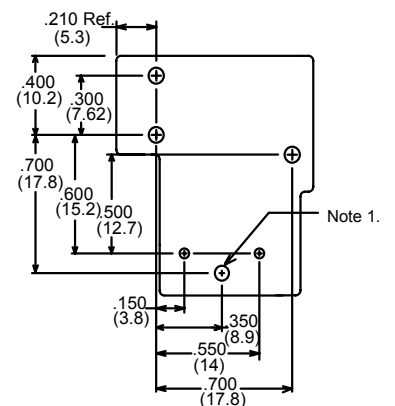


- Notes:**
 1. This pin omitted for UL 873 version.
 2. Breakable nib may be removed after flux removal.

Schematic



Pin Layout
Bottom View



Tolerances $\pm .010$ unless otherwise noted
 Holes for load term. $.081 \pm .005$ Dia. ($2.06 \pm .13$)
 Holes for Coil term. $.043 \pm .003$ Dia. ($1.09 \pm .08$)



3220 Commander Drive, Suite 102, Carrollton, Texas 75006

Sales: Call Toll Free (888) 997-3933 Fax (818) 342-5296 email: pickerwest@sbcglobal.net URL: pickercomponents.com