

# 30 AMP Panel Mount or PCB Power Relay

# PTRH-T



## FEATURES

- Panel or PC mount with QC terminals for the load
- 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
- UL 873 spacing standard
- Epoxy sealed, immersion cleanable



File # E93379



Certificate # LR 109231

## UL/CSA RATINGS

| Load Type                                     | Voltage | 1 Form A<br>(SPST-NO) | 1 Form B<br>(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<br>(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), AgCdO+Au (Silver Cadmium Oxide with Gold flash) |
| Initial Contact Resistance |            | 50 milliohms max @ 0.1A, 6VDC                                                 |
| Service Life               | Mechanical | 1 X 10 <sup>7</sup> Operations                                                |
|                            | Electrical | 1 X 10 <sup>5</sup> Operations                                                |

## CHARACTERISTICS

|                           |                                                                                   |
|---------------------------|-----------------------------------------------------------------------------------|
| Operate Time              | 15 ms. typical                                                                    |
| Release Time              | 10 ms. typical                                                                    |
| 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                                       |
| 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-T Rev D 3-25-04

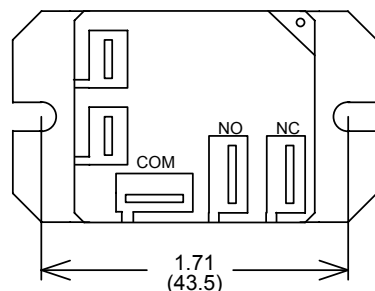
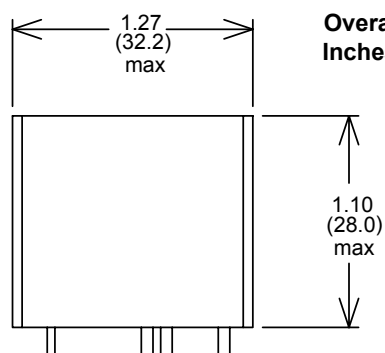
## ORDERING INFORMATION

|                                                                                      |      |     |     |   |   |   |     |
|--------------------------------------------------------------------------------------|------|-----|-----|---|---|---|-----|
| Example:                                                                             | PTRH | -1C | -12 | S | G | F | -T5 |
| Model                                                                                |      |     |     |   |   |   |     |
| Contact Form                                                                         |      |     |     |   |   |   |     |
| 1A, 1B, or 1C                                                                        |      |     |     |   |   |   |     |
| Coil Voltage                                                                         |      |     |     |   |   |   |     |
| Configuration                                                                        |      |     |     |   |   |   |     |
| Nil: Open Frame; C: Dust Cover S: Sealed plastic case                                |      |     |     |   |   |   |     |
| Contact Material                                                                     |      |     |     |   |   |   |     |
| Nil: AgCdO; T: AgSnO; G: AgCdO+Au                                                    |      |     |     |   |   |   |     |
| Insulation Material                                                                  |      |     |     |   |   |   |     |
| Nil: UL Class B; F: UL Class F                                                       |      |     |     |   |   |   |     |
| Mounting Type                                                                        |      |     |     |   |   |   |     |
| T2: Form 1A PCB & QC, T3: Form 1C PCB & QC, T4: 1A Panel all QC, T5: 1C Panel all QC |      |     |     |   |   |   |     |

## COIL DATA

| Coil Voltage | Resistance<br>ohms $\pm 10\%$ | Must Operate<br>Voltage Max.<br>(VDC) | Must Release<br>Voltage Min.<br>(VDC) | Continuous<br>Voltage Max.<br>(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                               |

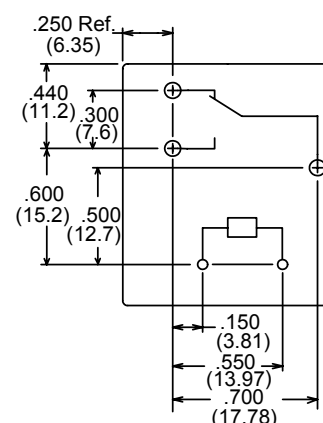
Note: Custom coil voltages within the ranges shown are available on special order.



## Notes:

Breakable nib may be removed after flux removal.  
 PC mount has .250 male QC terminals for load.  
 Panel mount has .250 male QC terminals for the load  
 and .187 male QC terminals for the coil.  
 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. ( $1.09 \pm .08$ )

### Pin Layout Bottom View Including Schematic



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