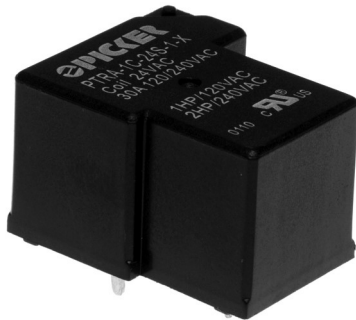


# 40 Amp Power Relay with AC Coils & Low Case Profile QC Terminals

PTRA



## FEATURES

- Power PCB Relay with AC Coils
- 40 Amp 240 VAC Resistive UL Rating
- 2 HP 250 VAC Rating
- UL Class F Insulation Standard
- Meets UL 508 and UL 873 Spacing
- RoHS Compliant

## USE93379

| Load Type                               | Voltage | 1 Form A  | 1 Form B<br>(SPDT-NC) | 1 Form C |        |
|---|---------|-----------|-----------------------|----------|--------|
|   |         |           |                       | NO       | NC     |
| General Purpose                         | 120 VAC | 40 A      | 30 A                  | 40 A     | 30 A   |
|   | 240 VAC | 30 A      | 20 A                  | 30 A     | 20 A   |
|   | 277 VAC | 30 A      | 20 A                  | 30 A     | 20 A   |
|   | 280 VAC | 5 A       | 5 A                   | 5 A      | 5 A    |
|   | 30 VDC  | 40 A      | 30 A                  | 40 A     | 30 A   |
| Resistive<br>250K Cycles<br>100K Cycles | 240 VAC | 40 A      | 30 A                  | 40 A     | 30 A   |
|   | 240 VAC | 20 A      | —                     | 20 A     | —      |
|   | 277 VAC | 25 A      | —                     | 25 A     | —      |
|   | 30 VDC  | 40 A      | 30 A                  | 40 A     | 30 A   |
| Motor                                   | 250 VAC | 2 HP      | 1.5 HP                | 2 HP     | 1.5 HP |
|   | 120 VAC | 1 HP      | —                     | 1 HP     | —      |
| Ballast                                 | 280 VAC | 5 A       | 5 A                   | 5 A      | 5 A    |
| Lamp Load TV-5                          | 120 VAC | 5 A       | —                     | 5 A      | —      |
| LRA/FLA                                 | 240 VAC | 80 A/30 A | —                     | 80 A/30  | —      |
|   | 120 VAC | 96 A/30 A | —                     | 96 A/30  | —      |

## CONTACT DATA

|                            |            |  |
|----------------------------|------------|--|
| Material                   |            | AgCdO, AgSnO <sub>2</sub> In <sub>2</sub> O <sub>3</sub> |
| Initial Contact Resistance |            | 30 mΩ Max. @ 1 A, 6 VDC                                  |
| Maximum Switching Voltage  |            | 110 VDC, 300 VAC   |
| Maximum Switching Current  |            | 40 A   |
| Maximum Switching Power    |            | 1,200 W, 10,000 VA                                       |
| Service Life               | Mechanical | 1 x 10 <sup>7</sup> Operations                           |
|                            | Electrical | 1 x 10 <sup>5</sup> Operations                           |

Meets UL 508 and UL 873 Spacing - 3.18 mm Through Air, 6.36 mm Over Surface.

## ORDERING INFORMATION

Example: PTRA -1C -12 S -1 -X

Model: **PTRA**

Contact Form: **1A, 1B, 1C**

Coil Voltage: **12, 24, 110, 120, 220, 240, 277**

Enclosure: **Nil**: Open Frame; **S**: Sealed Plastic Case

Insulation Material: **Nil**: Class F

Contact Material: **Nil**: AgCdO; **T**: AgSnO<sub>2</sub>In<sub>2</sub>O<sub>3</sub>

Spacing: **1**: UL 508 and UL 873 (Pin #6 Omitted)

RoHS Compliant: **-X**

Box Quantity: 600; Inner Box 300

Lake-View Electronics Corp. 1054 Pioneer Rd. Grafton, WI Ph: 262-377-8250 Fax: 262-375-0109

## COIL DATA

| Coil Voltage (VAC) |       | Resistance (Ohms $\pm 10\%$ ) | Must Operate Voltage Max (VAC) | Must Release Voltage Min (VAC) | Rated Current (mA) | Coil Power (VA) |
|--------------------|-------|-------------------------------|--------------------------------|--------------------------------|--------------------|-----------------|
| Rated              | Max   |                               |                                |                                |                    |                 |
| 12                 | 15.6  | 27                            | 9.0                            | 3.6                            | 166.6              | 2.0             |
| 24                 | 31.2  | 120                           | 18.0                           | 7.2                            | 83.3               |                 |
| 110                | 143   | 2360                          | 82.5                           | 33.0                           | 18.1               |                 |
| 120                | 156   | 3040                          | 90.0                           | 36.0                           | 16.6               |                 |
| 220                | 286   | 13490                         | 165.0                          | 86.0                           | 9.1                |                 |
| 240                | 312   | 15740                         | 180.0                          | 72.0                           | 8.3                |                 |
| 277                | 360.1 | 20300                         | 207.75                         | 83.1                           | 7.2                |                 |

## NOTES:

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

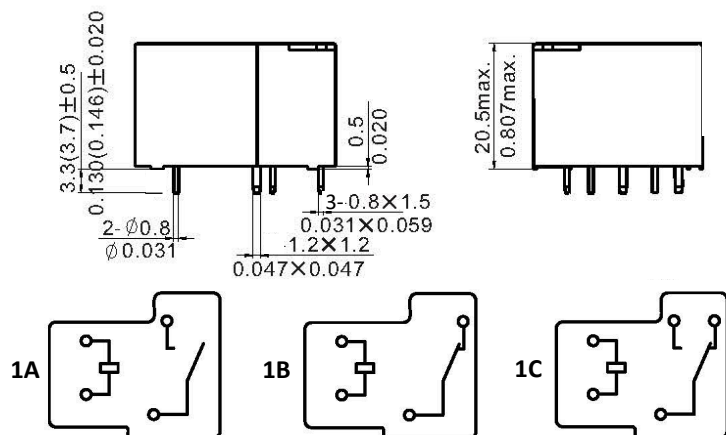
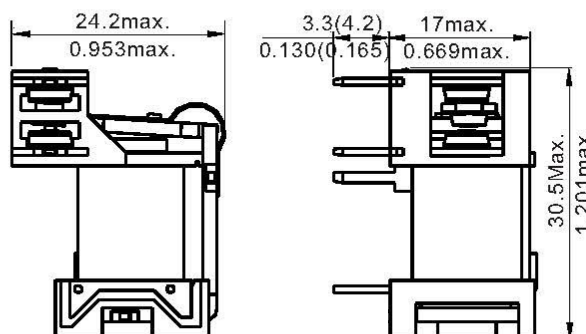
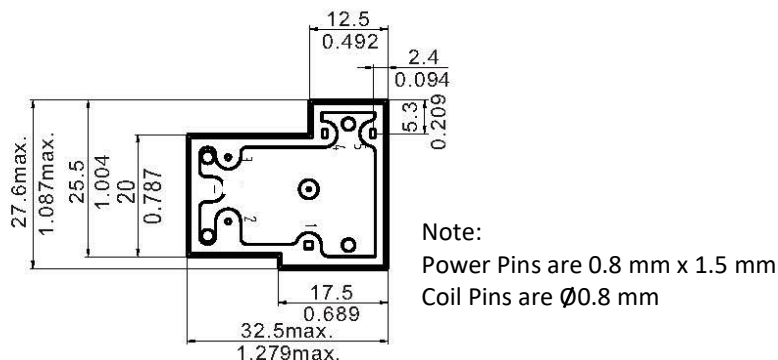
## CHARACTERISTIC

|                       |   |
|-----------------------|---|
| Operate Time          | 15 ms max.                              |
| Release Time          | 10 ms max.                              |
| Insulation Resistance | 1,000 M $\Omega$ min, at 500 V          |
| Power Consumption     | 2.0 VA                                  |
| Dielectric Strength   | 50 Hz 1,500 V Between Open Contacts     |
|                       | 50 Hz 2,500 V Between Contacts and Coil |
| Shock Resistance      | 200 m/s <sup>2</sup>                    |
| Vibration Resistance  | 10 Hz - 55 Hz Double Amplitude 1.5 mm   |

|                       |                         |
|-----------------------|-------------------------|
| Terminal Strength     | 10N                     |
| Solderability         | 235 °C for 3 secs       |
| Operating Temp. Range | - 55°C to 125°C         |
| Relative Humidity     | 85% (at 40°C)           |
| Weight                | 31 grams                |
| Material Compliant To | EU RoHS V2, EU REACH V3 |

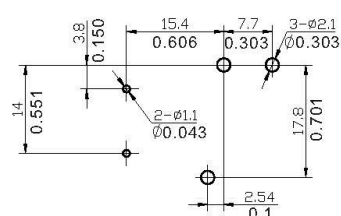
## MOUNTING TYPE (mm/inches)

Knock off, on top corner, nib for ventilation after soldering and water wash.



Wiring diagram(Bottom view)

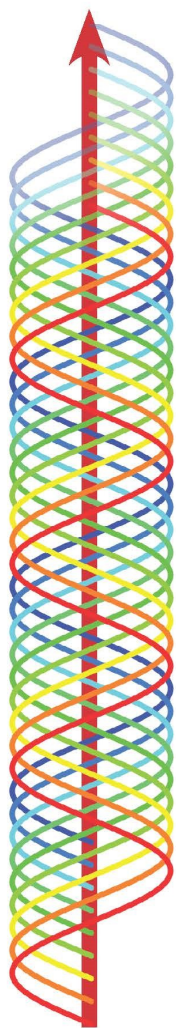
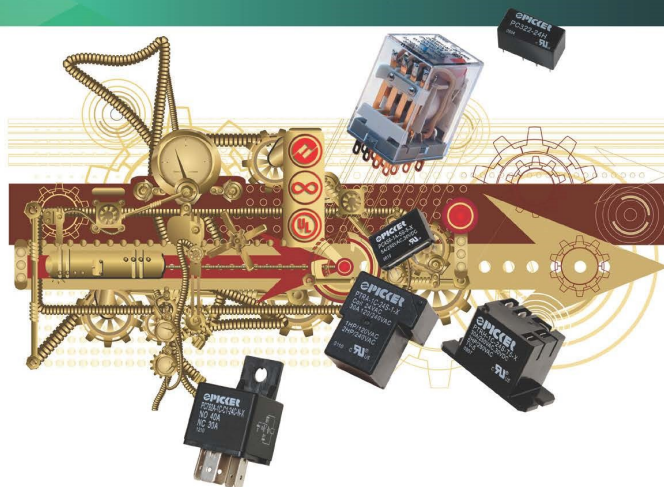
Open type



Mounting (Bottom view)



## T90 Style Relays



50 Amp

### **PTRE 50/35 Amp 1,500 W, 12,000 VA**

- Larger Contacts than PTRD/PTRDE
- **Braided Copper Wire Added to Dissipate Heat from Contacts to the Coil Frame and PCB Pins**
- 50 Amp 240 VAC 10,000 Cycle UL Resistive Rating
- Class F Material -40° to 125° C Standard



40+ Amp

### **PTRDE 40/30 Amp 1,200 W, 10,000 VA**

- **Braided Copper Wire Added to Dissipate Heat from Contacts to the Coil Frame and PCB Pins**
- 40 Amp 240 VAC 50,000 Cycle UL Resistive Rating
- Class F Material -40° to 125° C Standard

40 Amp

### **PTRD 40/30 Amp 1,200 W, 10,000 VA** **PTRA AC Coil Options from 12 to 277 VAC**

- Larger Contacts than PTRH
- 40 Amp 240VAC UL Resistive Rating
- 25 Amp 277 VAC 100K Cycles UL Resistive Rating
- Class F Material -40° to 125° C Standard

30 Amp

### **PTRH 30/20 Amp 900 W, 7,500 VA**

- 30 Amp 277 VAC UL General Purpose Rating
- 30 Amp 250 VAC 100K Cycle UL Resistive Rating
- Class B -40° to 100° C Standard, Optional Class F



### Packaging Options (i.e. PTRH-T)



Dust Cover or Sealed  
with Scratch off Nib



-T (T2 & T3) with PC  
Pins and Contact QC



-T (T4 & T5) w/QC Tabs  
& Mounting Ears



-OT (OT2 & OT3) with PC  
Pins and Contact QC



-OT (OT4 & OT5) w/QC  
Tabs & Mounting Ears

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