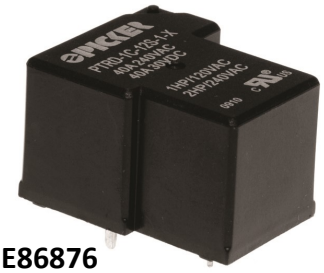
40 Amp Power PCB Relay — PTRD



c UL us E86876

FEATURES

- Popular Power PCB Relay Footprint - T90
- 40 Amp 240 VAC General Purpose UL Rating
- 2 HP 250 VAC Rating
- UL Class F Insulation Standard
  Meets UL 508 and UL 873 Spacing with Pin 6 Omitted
- RoHS Compliant

Load Type	Voltage	1 Form A (SPST-NO)	1 Form B (SPDT-NC)	1 Form C (SPDT)	
				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	240 VAC	40 A	30 A	40 A	30 A
250K Cycles	240 VAC	20 A	——	20 A	——
100K Cycles	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	5A
LRA/FLA	240 VAC	80 A/30 A	——	80 A/30	——
	120 VAC	96 A/30 A	——	96 A/30	——

CONTACT DATA

Material		AgCdO, $AgSnO_2In_2O_3$, AgCdO+AU
Initial Contact Resistance		50 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 10^7 Operations
	Electrical	5 x 10^4 Operations

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

CHARACTERISTIC

Operate Time	Less than 15 ms.
Release Time	Less than 10 ms
Insulation Resistance	1,000 MΩ min, at 500 V
Power Consumption	0.6 W, 0.9 W, 1.1 W

CHARACTERISTIC Continued

Dielectric Strength	50 Hz 1,500 V Between Open Contacts
	50 Hz 2,500 V Between Contacts and Coil
Shock Resistance	200 m/s^2 11 ms
Vibration Resistance	10 Hz - 55 Hz Double Amplitude 1.5 mm
Terminal Strength	10N
Solderability	255 °C for 3 secs
Operating Temp. Range	- 55°C to 125°C
Relative Humidity	85% (at 40°C)
Weight	30 grams, 27 grams Open
Material Compliant To	EU RoHS V2, EU REACH V3

ORDERING INFORMATION

Example: PTRD -1C -12 S G -1 -X -

Model: **PTRD**

Contact Form: **1A**: 1 Form A (SPST-NO)
1B: 1 Form B (SPST-NC)
1C: 1 Form C (SPDT)

Coil Voltage: **3**, **5**, **6**, **9**, **12**, **15**, **18**, **24**, **48**, **110**

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

Insulation Material: **Nil**: Class F

Contact Material: **Nil**: AgCdO; **T**: $AgSnO_2In_2O_3$; **G**: AgCdO+Au

Spacing: **Nil**: UL508; **-1**: UL 508 and UL 873 (Pin #6 Omitted)

RoHS/Dielectric: **X**: RoHS Compliant; **H**: RoHS plus 4 kv Dielectric

Coil Sensitivity: **Nil**: 0.9 W *(1)*; **0.6**: 0.6 W; **1.1**: 1.1 W (*0.9 is Industry Standard)

Box Quantity: 600; Inner Box 300

(1) 0.9 W is Industry Standard

3220 Commander Drive, Suite 102 Carrollton, TX 75006 www.PickerComponents.com
Sales: (972) 713-6272 (888) 997-3933 Fax: (972)735-0964 e-mail: sales@pickercomponents.com

Dimensions are listed for reference purposes only. Specifications and Availability subject to change without notice.

COIL DATA

Coil Voltage (VDC) *(2)*		Coil Power (W) Resistance (Ohms ± 10%)			Coil Power (W) Must Operate Voltage Max (VDC)		Must Release Voltage Min (VDC) *(3)*
Rated	**Max**	**0.6 W**	**0.9 W** *(1)*	**1.1 W**	**0.6 W & 0.9 W** *(2)*	**1.1 W**	
3	3.9	15	10	——	2.25	——	0.3
5	6.5	42	28	——	3.75	——	0.5
6	7.8	60	40	33	4.50	4.8	0.6
9	11.7	135	90	——	6.75	——	0.9
12	15.6	240	150	131	9.00	9.6	1.2
15	19.5	375	260	——	10.25	——	1.5
18	23.4	540	380	——	13.50	——	1.8
24	31.2	960	640	524	18.00	19.2	2.4
48	62.4	3840	2560	2095	36.00	38.4	4.8
110	143	20167	13445	——	82.50	——	11.0

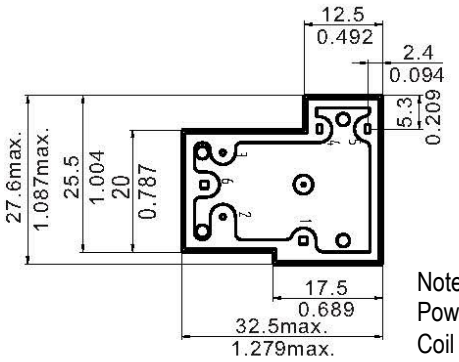
NOTES:

(1) 0.9 W is Industry Standard

*(2)*The use of any coil voltage less that the rated voltage will compromise the operation of the relays.

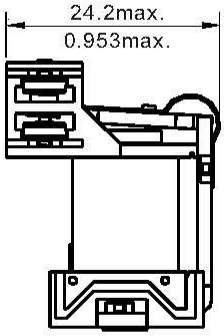
*(3)*Must Operate Voltage and Must Release Voltages are for test purposes only and are not to be used as design criteria.

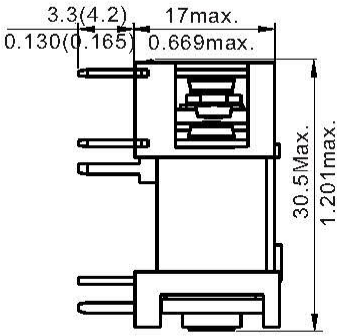
DIMENSIONS (mm/inches)

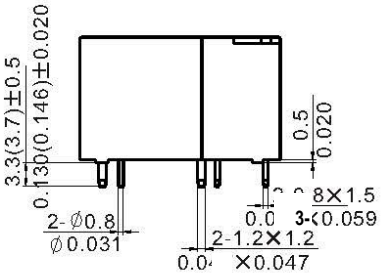


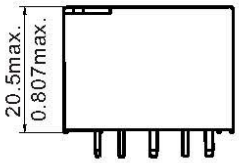
Note:
Power Pins are 0.8 mm x 1.5 mm
Coil Pins are Ø0.8 mm

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

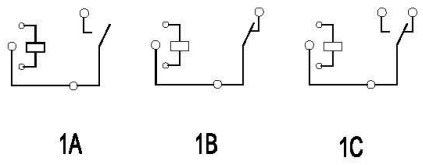






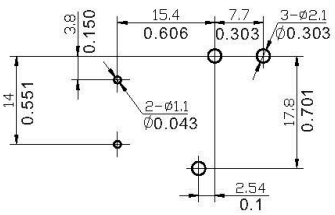


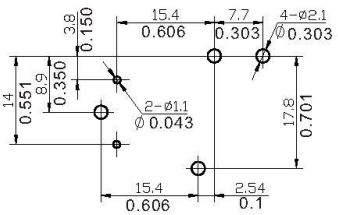
Open type



Wiring diagram(Bottom view)

-1 with Pin 6 Omitted





Mounting (Bottom view)

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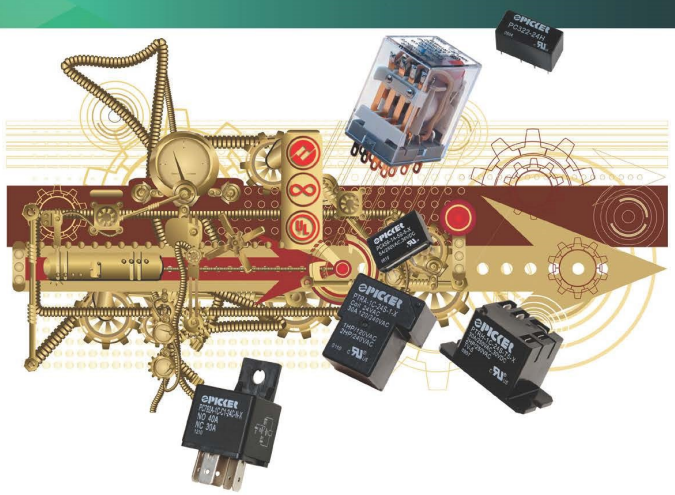
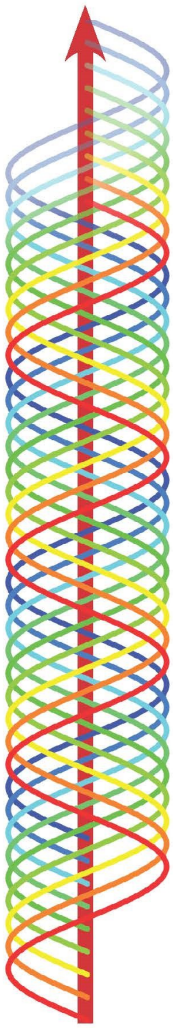
PICKER COMPONENTS

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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