30 Amp Power PCB Relay — PTRH-OT



OT2 & OT3



OT4 & OT5

c UL us E86876

Load Type	Voltage	1 Form A (SPST-NO)	1 Form B (SPDT-NC)	1 Form C	
				NO	NC
General Purpose	277 VAC*	30 A	20 A	30 A	20 A
	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)	240 VAC	2 HP	——	2 HP	——
	120 VAC	1 HP	——	1 HP	——
LRA/FLA	240 VAC	80 A/30 A	——	80 A/30	——
	120 VAC	96 A/30 A	——	96 A/30	——

*UL Approved

CHARACTERISTIC

Operate Time	Less than 15 ms
Release Time	Less than 10 ms
Insulation Resistance	1,000 MΩ min, at 500 VDC, 50% RH
Dielectric Strength	50 Hz 2,500 V 1 Min Between Coil and Contacts 4,000 V without Pin 6 50 Hz 1,500 V 1 min. Between Contacts
Power Consumption	0.9 W, 0.6 W

FEATURES

- Popular Power PCB Relay Footprint - T91
- 30 Amp 250 VAC General Purpose UL Rating
- 2 HP 250 VAC Rating
- Two Versions:
  - OT2 (1A), OT3 (1C) PC Pins & QC Pins
  - OT4 (1A), OT5 (1C) QC Pins with Mounting Tabs
- UL Class F Insulation Optional
- Meets UL 508 and UL 873 Spacing
- RoHS Compliant

CONTACT DATA

Material		AgCdO, $AgSnO_2$, AgCdO+Au
Initial Contact Resistance		50 mΩ Max. @ 1 A, 6 VDC
Maximum Switching Voltage		110 VDC, 300 VAC
Maximum Switching Current		30 A
Maximum Switching Power		900 W, 7,500 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 Continued

Shock Resistance	200 m/s, 11 ms
Vibration Resistance	10 - 55 Hz Double Amplitude
Terminal Strength	10N
Solderability	235 ºC for 3 secs
Operating Temperature Range	- 55°C to 100°C Class B
Operating Temperature Range	- 55°C to 125°C Class F
Relative Humidity	85% (at 40°C)
Weight	13.5 gr Approximately
Material Compliant To	EU RoHS V2. EU REACH V3

ORDERING INFORMATION

Example: PTRH -1C -12 S T F -OT5 -X

Model: **PTRH (PTRH-OT)**

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

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

Enclosure: OT2 & OT3: **C**: Dust Cover; **S**: Sealed;

OT4 & OT5: **S**: Covered, not Washable

Insulation Material: **Nil**: Class B; **F**: Class F

Contact Material: **Nil**: AgCdO; **T**: $AgSnO_2$; **G**: AgCdO+Au

Mounting Type: **OT2**: 1 Form A PCB & QC; **OT3**; 1 Form C PCB & QC:
OT4: 1 Form 1A Panel all QC; **OT5**: 1 Form C Panel all QC

RoHS Compliant: **-X**

Pinout: **A:** Alternate Quick Connect Pinout (OT2 & OT3 Only)

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

OT2 & OT3 Box Quantity: 600; Inner Box 300, OT4 & OT5 Box Quantity: 400; Inner Box:100

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		Coil Power (W) Resistance (Ohms ± 10%)		Must Operate Voltage Max (VDC)	Must Release Voltage Min (VDC)
Rated	Max	0.6 W	0.9 W		
3	3.9	15	10	2.25	0.3
5	6.5	42	28	3.75	0.5
6	7.8	60	40	4.50	0.6
9	11.7	135	90	6.75	0.9
12	15.6	240	150	9.00	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	18.00	2.4
28	36.4	1307	871	21.0	2.8
48	62.4	3840	2560	36.00	4.8
110	143	20167	13445	82.50	11.0

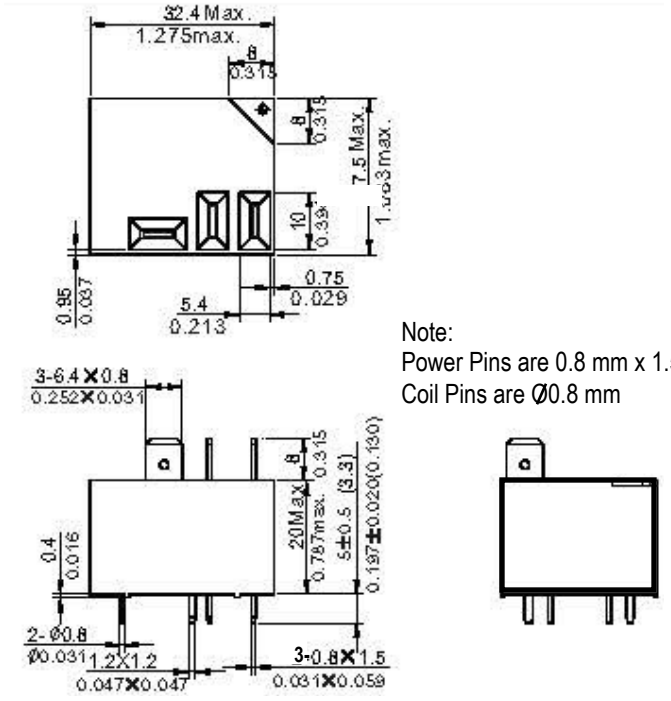
*0.9 W is Industry Standard

NOTES:

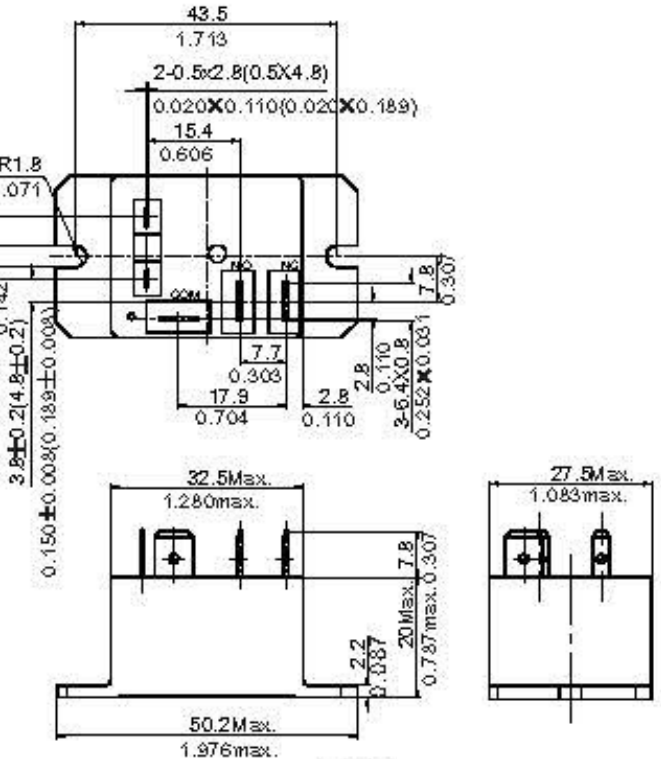
The use of any coil voltage less that the rated voltage will compromise the operation of the relays. Must Operate and Must Release Voltages are for test purposes only and are not to be used as design criteria.

MOUNTING TYPE (mm/inches)

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



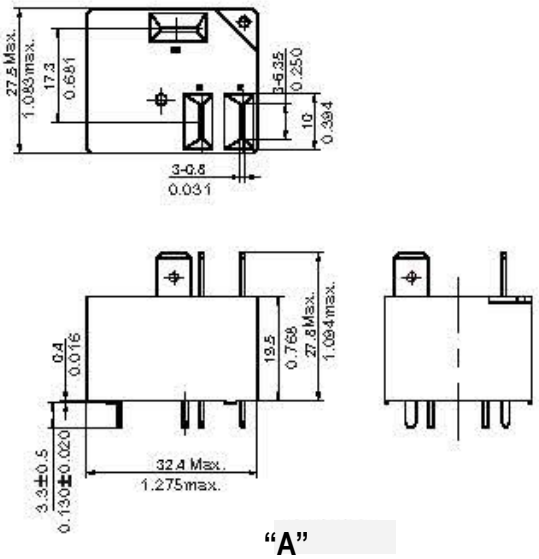
Note:
Power Pins are 0.8 mm x 1.5 mm
Coil Pins are Ø0.8 mm



"OT2" & "OT3" **"OT4" & "OT5"**

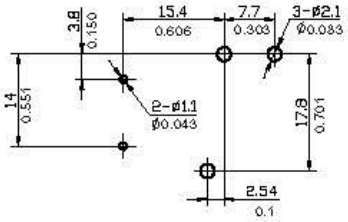
ALTERNATE MOUNTING TYPE (mm/inches)

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



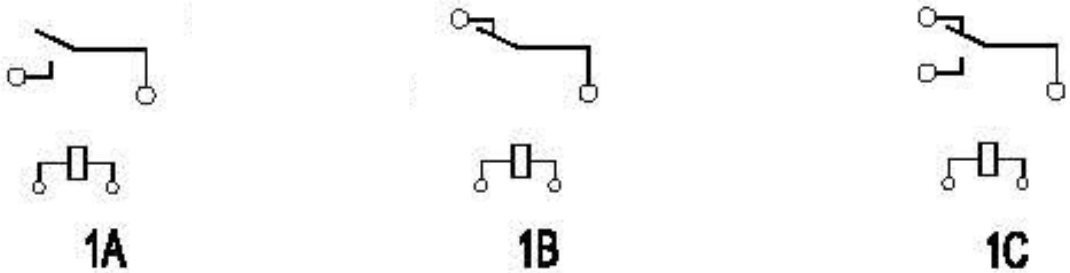
"A"
OT2 & OT3

PRINTED CIRCUIT BOARD LAYOUT



(Bottom View)

CONTACT FORMS

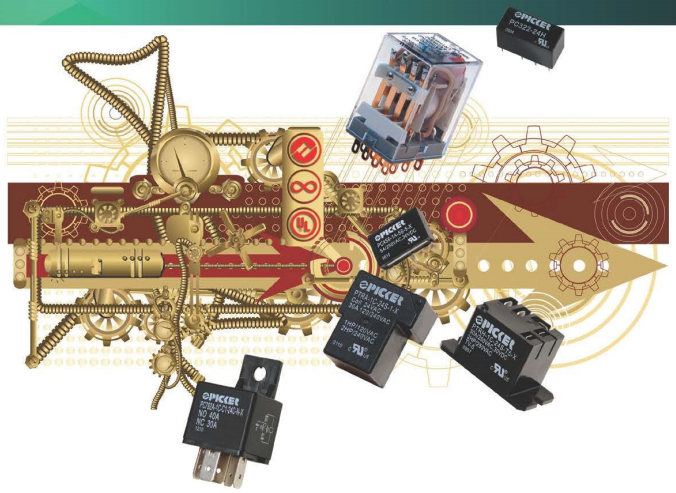


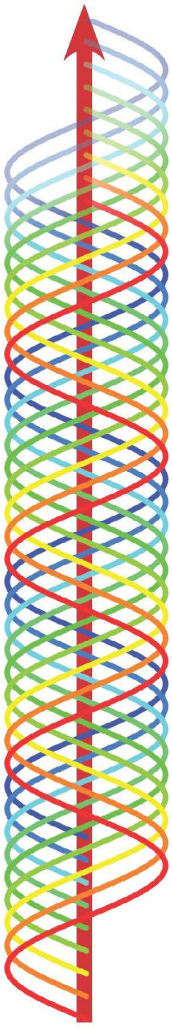
1A **1B** **1C**

(Bottom View)

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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