

Features

- Carbon element
- Ganging up to 8 sections available
- Knurled and flatted shaft styles
- Audio taper option
- Tracking error within 3 dB
- RoHS compliant*



PTD90 Series - 9 mm Multi-Ganged Potentiometer

Electrical Characteristics

Standard Resistance Range 1 K ohms to 1 M ohms
 Total Resistance Tolerance ±10 % or ±20 %
 Standard Tapers Linear & audio
 Maximum Operating Voltage 150 VAC, 20 VDC
 Rated Power
 Linear Taper 0.05 watts
 Audio Taper 0.025 watts
 Noise 100 mV max.
 Insulation Resistance @ 250 VDC 100 M ohms
 Dielectric Withstanding Voltage 300 VAC
 End Resistance 20 ohms max.
 Tracking Error (-40 dB to 0 dB) ±3 dB

Environmental Characteristics

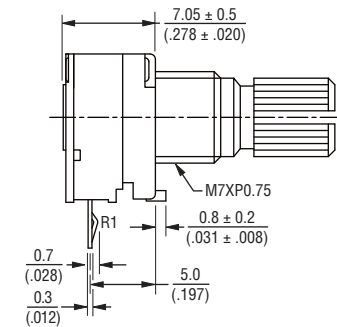
Operating Temperature -10 °C to +50 °C
 Rotational Life 15,000 cycles
 IP Rating IP 40
 Moisture Sensitivity Level 1
 ESD Classification (HBM) N/A

Mechanical Characteristics

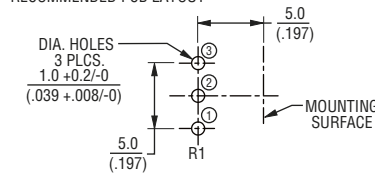
Mechanical Angle 300 ° ±10 °
 Running Torque 10 to 250 g-cm
 Stop Strength 4.0 kg-cm
 Shaft Push/Pull Strength 5.0 kgf min.
 Shaft Wobble 0.6 x L/20 mm p-p max.
 Mounting Torque 7.0 kg-cm min.
 Soldering Condition
 Manual Soldering
 96.5 Sn/3.0 Ag/0.5 Cu solid wire
 or no-clean rosin cored wire
 270 °C max. for 3 seconds
 Wave Soldering
 96.5 Sn/3.0 Ag/0.5 Cu solder
 with no-clean flux
 260 °C max. for 5 seconds
 Wash Process Not recommended
 Mounting Hardware One flat washer
 and one mounting nut supplied
 per potentiometer

Product Dimensions

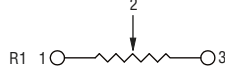
PTD901



RECOMMENDED PCB LAYOUT

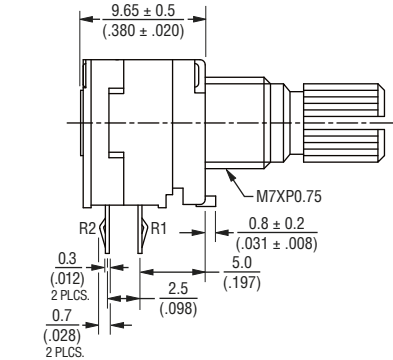


SCHEMATIC

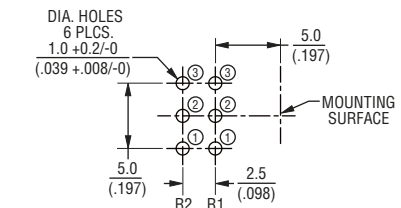


DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

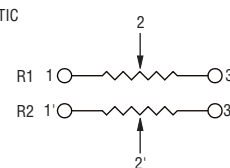
PTD902



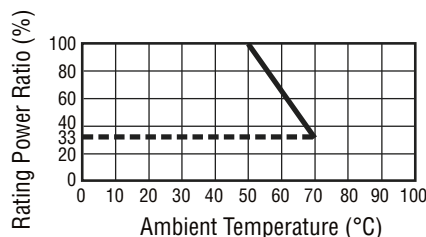
RECOMMENDED PCB LAYOUT



SCHEMATIC



Derating Curve



Standard Resistance Table

| Resistance (Ohms) | Resistance Code |
|-------------------|-----------------|
| 1,000 | 102 |
| 2,000 | 202 |
| 5,000 | 502 |
| 10,000 | 103 |
| 20,000 | 203 |
| 50,000 | 503 |
| 100,000 | 104 |
| 200,000 | 204 |
| 500,000 | 504 |
| 1,000,000 | 105 |



WARNING Cancer and Reproductive Harm
www.P65Warnings.ca.gov

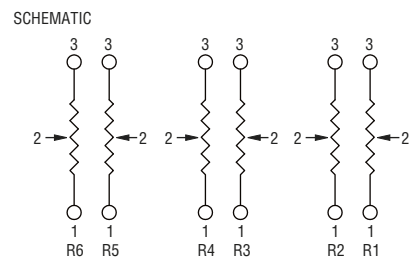
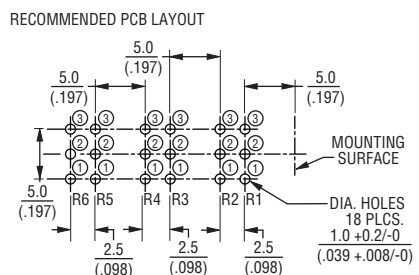
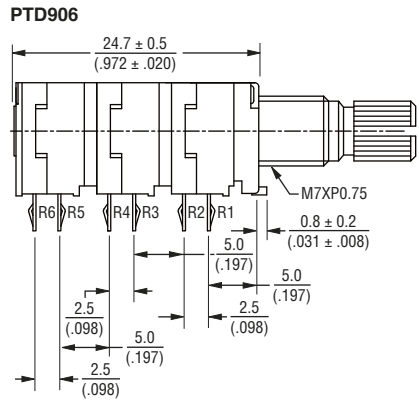
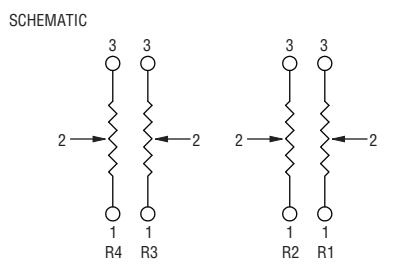
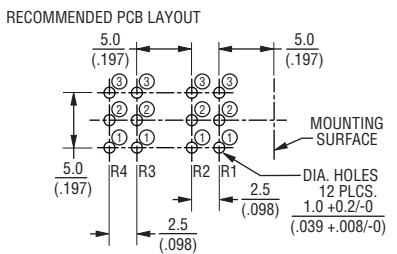
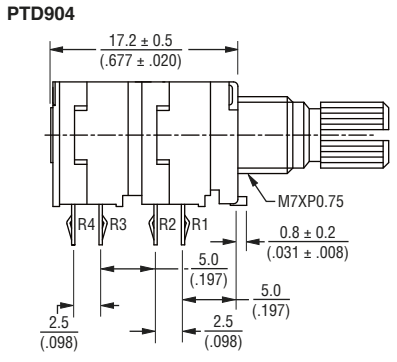
*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011. Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

Applications

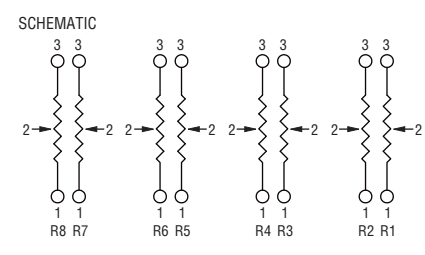
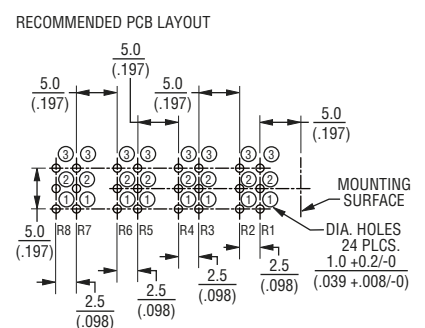
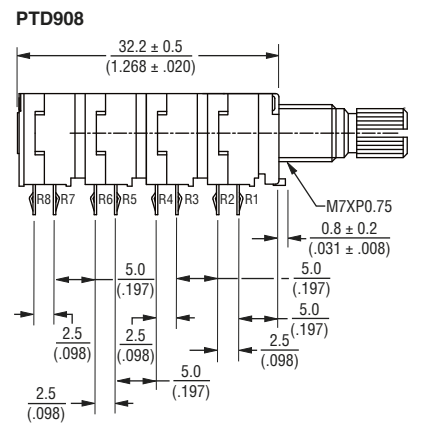
- Audio/TV sets
- Amplifiers/mixers/drum machines/synthesizers/DJ equipment
- Multimedia sound systems
- Portable electronics

PTD90 Series - 9 mm Multi-Ganged Potentiometer **BOURNS®**

Product Dimensions



DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$



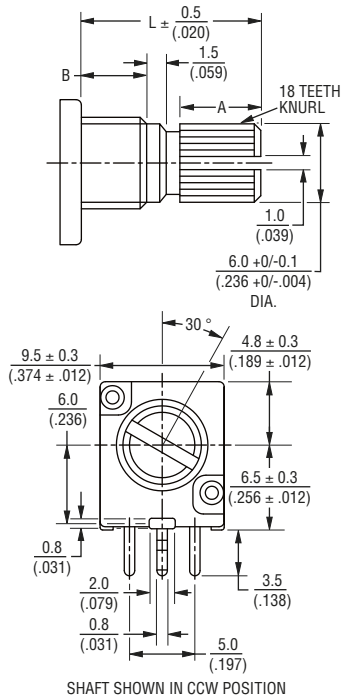
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PTD90 Series - 9 mm Multi-Ganged Potentiometer

BOURNS®

Product Dimensions

SHAFT STYLE "K"

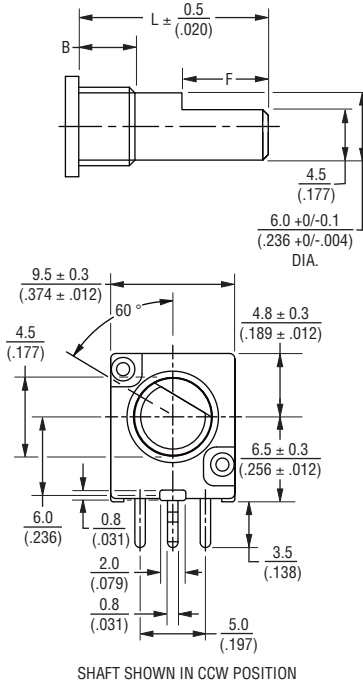


SHAFT SHOWN IN CCW POSITION

| | | | |
|---|--------------|--------------|--------------|
| L | 15 (.591) | 20 (.787) | 25 (.984) |
| B | 5 (.197) | 7 (.276) | 10 (.394) |
| A | 6 (.236) | 10 (.394) | 12 (.472) |

DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

SHAFT STYLE "F"



SHAFT SHOWN IN CCW POSITION

| | | | |
|---|--------------|--------------|--------------|
| L | 15 (.591) | 20 (.787) | 25 (.984) |
| B | 5 (.197) | 7 (.276) | 10 (.394) |
| F | 7 (.276) | 12 (.472) | 12 (.472) |

How To Order

PTD90 1 - 2 0 20 K - B 203

Model _____
 • PTD90 =
 No Switch

No. of Sections _____
 • 1 = 1 Section
 • 2 = 2 Sections
 • 3 = 3 Sections
 • 4 = 4 Sections
 • 5 = 5 Sections
 • 6 = 6 Sections
 • 8 = 8 Sections

Pin Style _____
 • 1 = PC Pins vertical/
 down facing
 and $\pm 10\%$
 Total Resistance
 Tolerance
 • 2 = PC Pins vertical/
 down facing
 and $\pm 20\%$
 Total Resistance
 Tolerance

Center Detent Option _____
 • 0 = No Detent
 • 2 = Center Detent

Standard Shaft Length _____
 • 15 = 15 mm
 • 20 = 20 mm
 • 25 = 25 mm

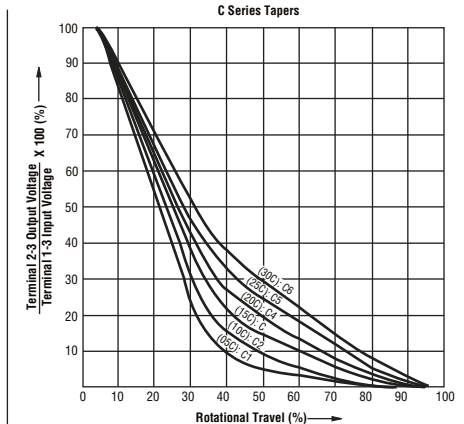
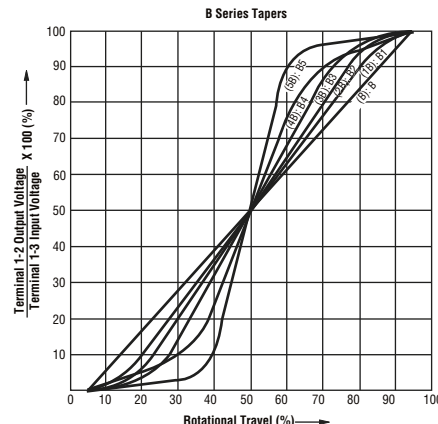
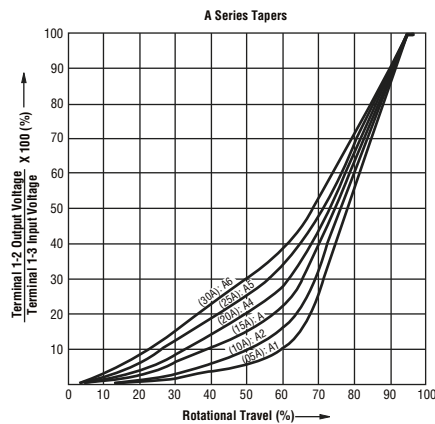
Shaft Styles _____
 • K = Knurled Type Shaft (Metal)
 18 Toothed Serration Type
 • F = Flatted Metal Shaft

Resistance Taper (See Taper Charts) _____
 Taper Series followed by Curve Number

Resistance Code (See Table) _____

Other shaft styles available.

Tapers



REV. 11/18

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Users should verify actual device performance in their specific applications.

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