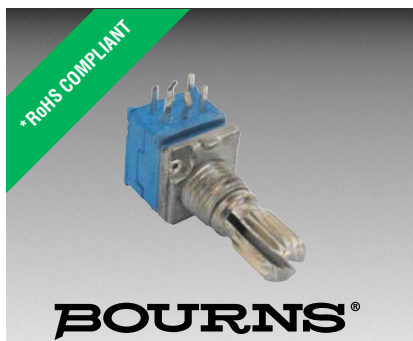




Features

- 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
..... $\pm 10\%$ or $\pm 20\%$
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

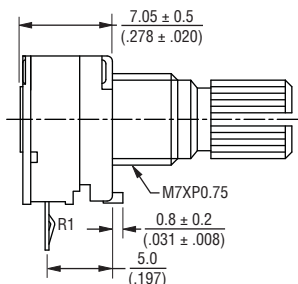
Operating Temperature
..... -10°C to $+50^{\circ}\text{C}$
Rotational Life 15,000 cycles
IP Rating IP 40

Mechanical Characteristics

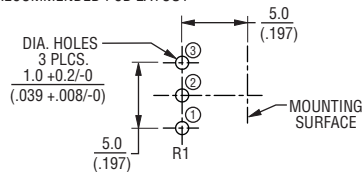
Mechanical Angle $300^{\circ} \pm 10^{\circ}$
Running Torque 10 to 250 g-cm
Stop Strength 4.0 kg-cm
Shaft Push/Pull Strength 5.0 kgf min.
Shaft Wobble $0.6 \times L/20$ mm p-p max.
Mounting Torque 7.0 kg-cm min.
Soldering Condition
Manual Soldering
..... 96.5 Sn/3.0 Ag/0.5 Cu solid wire
or no-clean rosin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

Product Dimensions

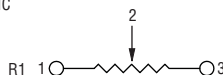
PTD901



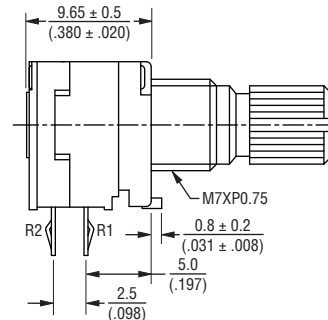
RECOMMENDED PCB LAYOUT



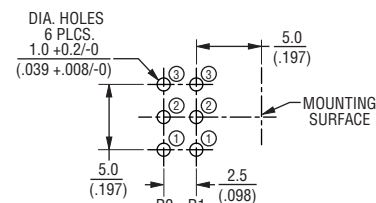
SCHEMATIC



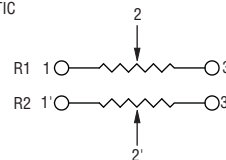
PTD902



RECOMMENDED PCB LAYOUT

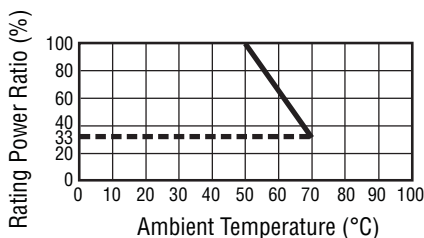


SCHEMATIC



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

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

*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

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Applications

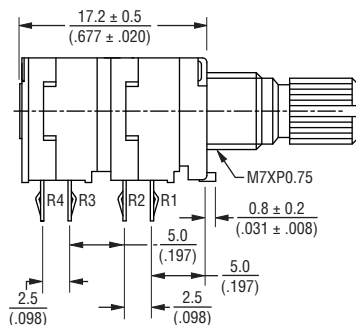
- Audio/TV sets
- Automotive sound systems
- Amplifiers/mixers/drum machines/synthesizers/DJ equipment
- Multimedia sound systems
- Portable electronics

PTD90 Series - 9 mm Multi-Ganged Potentiometer

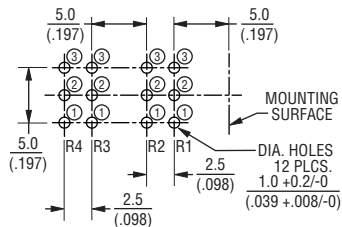
BOURNS®

Product Dimensions

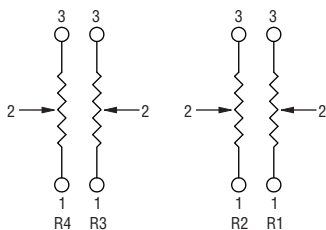
PTD904



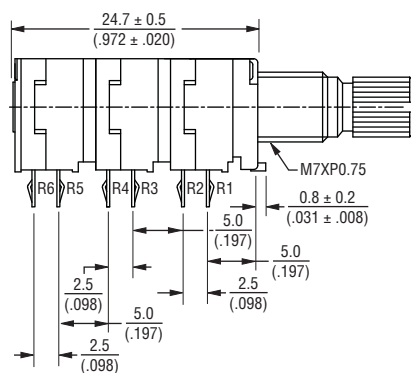
RECOMMENDED PCB LAYOUT



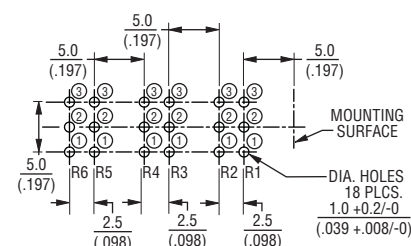
SCHEMATIC



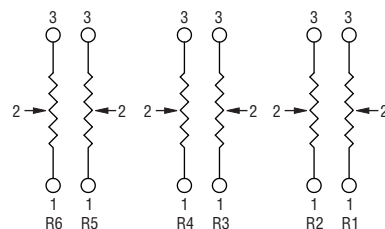
PTD906



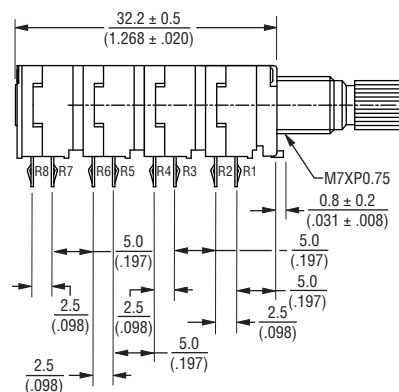
RECOMMENDED PCB LAYOUT



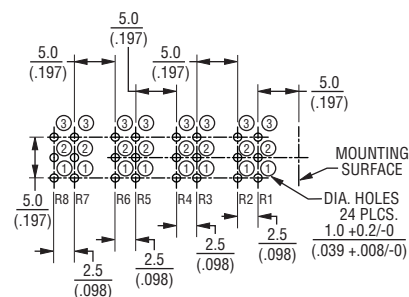
SCHEMATIC



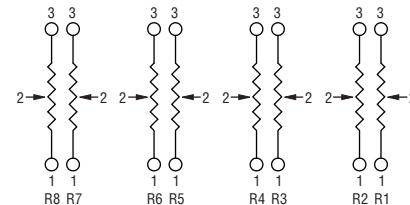
PTD908



RECOMMENDED PCB LAYOUT



SCHEMATIC



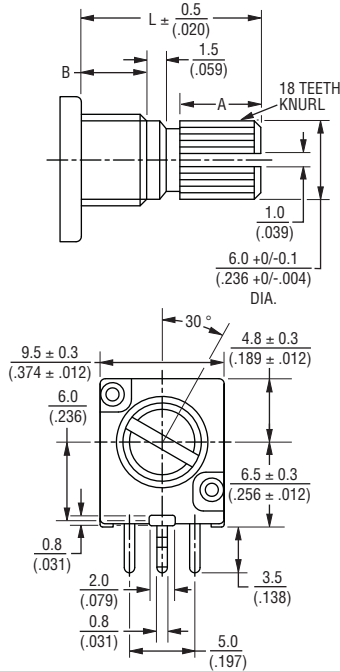
DIMENSIONS: $\frac{\text{MM}}{(\text{INCHES})}$

PTD90 Series - 9 mm Multi-Ganged Potentiometer

BOURNS®

Product Dimensions

SHAFT STYLE "K"

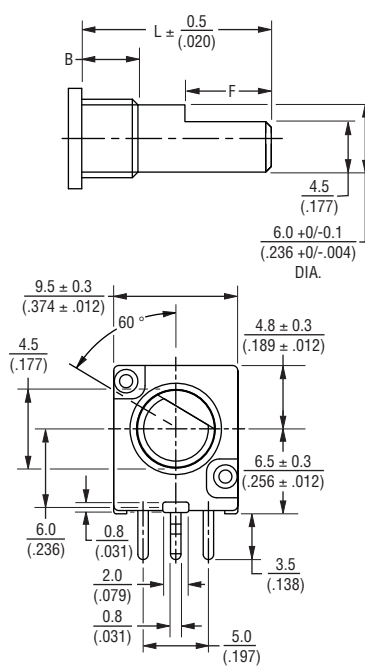


SHAFT SHOWN IN CCW POSITION

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

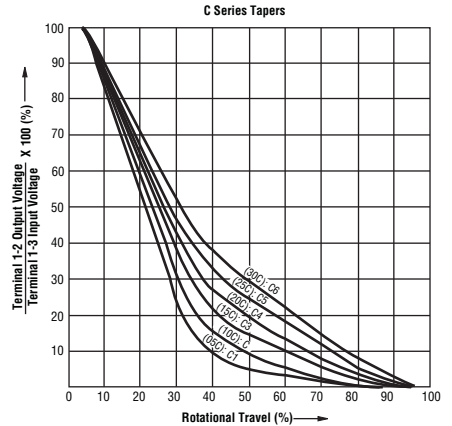
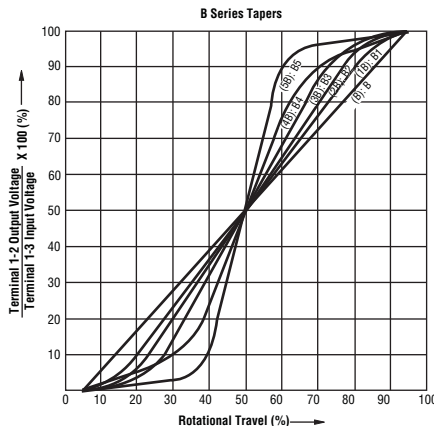
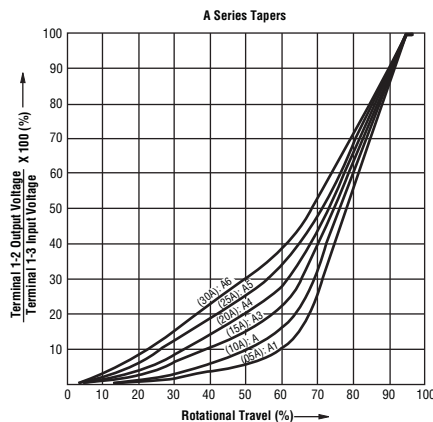
Shaft Styles
• K = Knurled Type Shaft (Metal)
18 Toothed Serration Type
• F = Flatted Metal Shaft

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

Resistance Code (See Table)

Other shaft styles available.

Tapers



REV. 01/14

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