

## 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

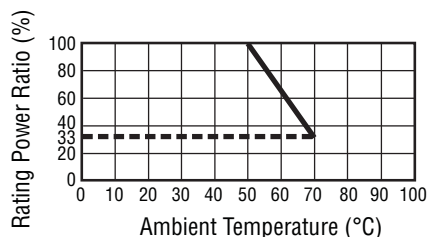
### Environmental Characteristics

Operating Temperature	..... -10 °C to +50 °C
Rotational Life	..... 15,000 cycles
IP Rating	..... IP 40

### Mechanical Characteristics

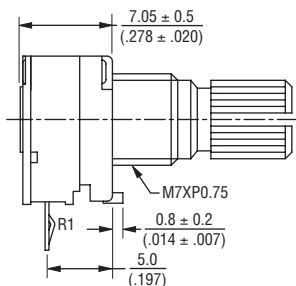
Mechanical Angle	..... 300 ° ±10 °
Running Torque	..... 10 to 250 g-cm
Stop Strength	..... 4.0 kg-cm
Shaft Push/Pull Strength	..... 5.0 kgf min.
Shaft Wobble	..... 0.6 x L/20 mm p-p max.
Mounting Torque	..... 7.0 kg-cm min.
Soldering Condition	
Manual Soldering	
..... 96.5 Sn/3.0 Ag/0.5 Cu solid wire	
..... 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

### Derating Curve

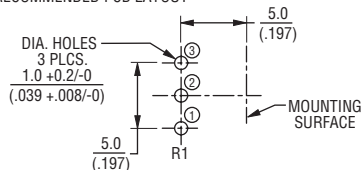


### Product Dimensions

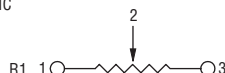
PTD901



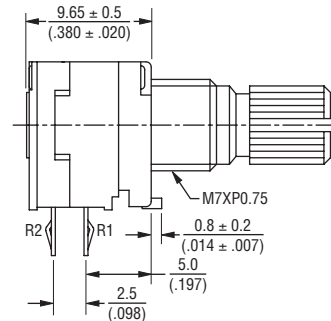
RECOMMENDED PCB LAYOUT



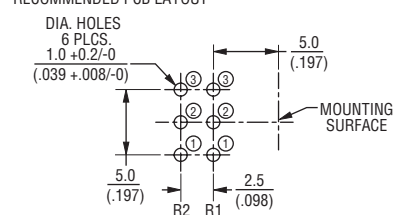
SCHEMATIC



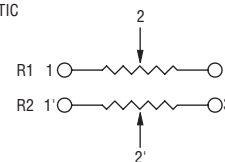
PTD902



RECOMMENDED PCB LAYOUT



SCHEMATIC



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

\*RoHS Directive 2002/95/EC Jan 27 2003 including Annex Specifications are subject to change without notice. Customers should verify actual device performance in their specific applications.

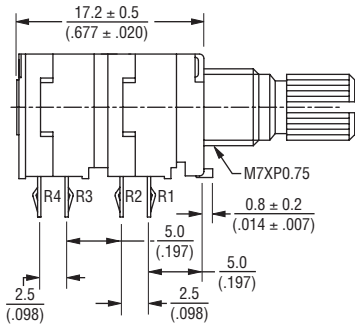
# Applications

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

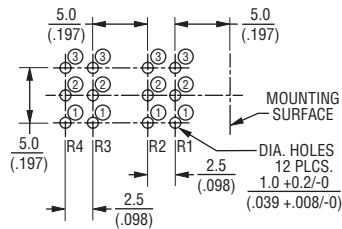
## PTD90 Series - 9 mm Multi-Ganged Potentiometer BOURNS®

### Product Dimensions

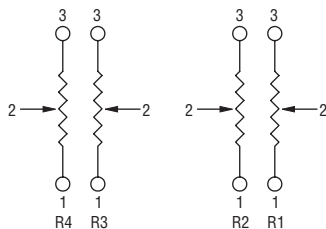
**PTD904**



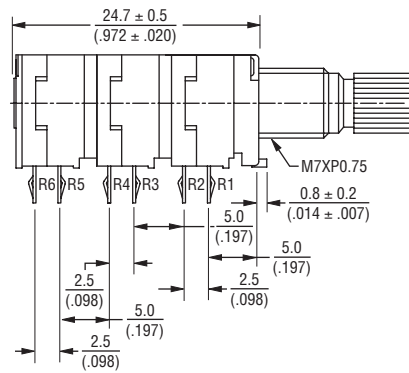
RECOMMENDED PCB LAYOUT



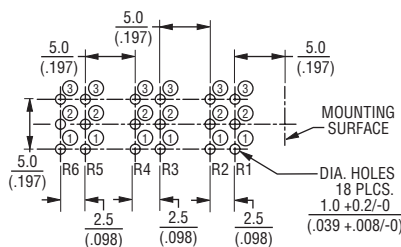
SCHEMATIC



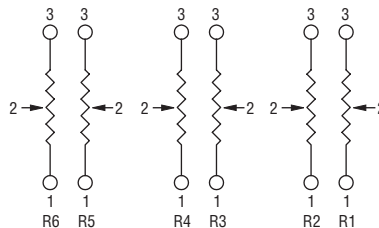
**PTD906**



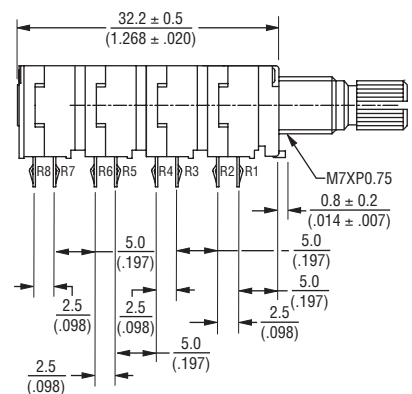
RECOMMENDED PCB LAYOUT



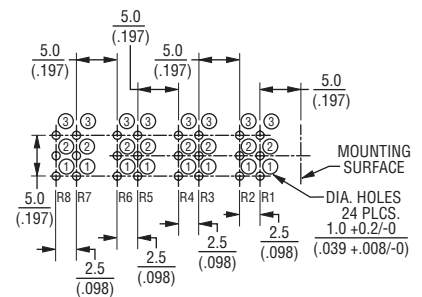
SCHEMATIC



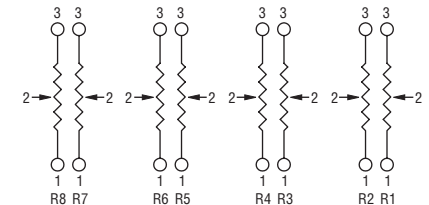
**PTD908**



RECOMMENDED PCB LAYOUT



SCHEMATIC



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

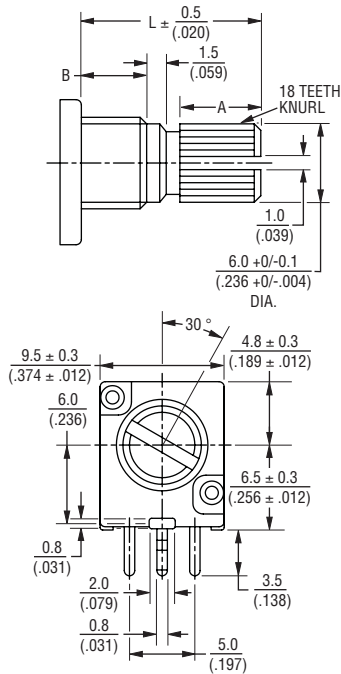
Specifications are subject to change without notice.  
Customers should verify actual device performance in their specific applications.

# PTD90 Series - 9 mm Multi-Ganged Potentiometer

# BOURNS®

## Product Dimensions

### SHAFT STYLE "K"

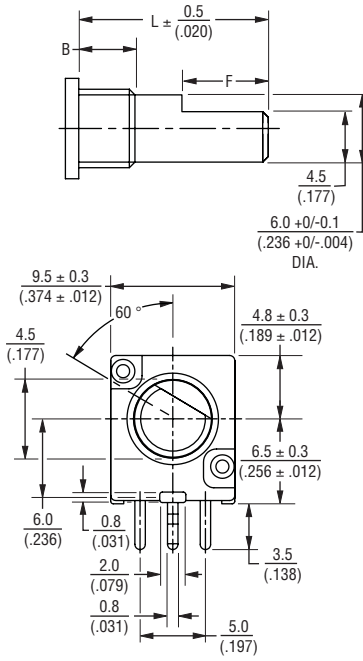


SHAFT SHOWN IN CCW POSITION

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 \_\_\_\_\_
- A = Audio Taper
  - B = Linear Taper
- Resistance Code (See Table) \_\_\_\_\_
- Other taper and shaft styles available.

## 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

REV. 05/10

Specifications are subject to change without notice.  
Customers should verify actual device performance in their specific applications.