

**BOURNS®**

**Features**

- Carbon element
- Ganging up to 8 potentiometers available
- Assorted metal shaft styles
- Assortment of resistance tapers
- Tracking error within 3 dB
- Switch option

**Applications**

- Audio/TV sets
- Car radio
- Amplifiers/mixers/drum machines/synthesizers
- PCs/monitors
- Appliances

**PTD90/PTR90 - 9 mm Multi-Ganged Potentiometer**

**Electrical Characteristics**

Taper .....Linear, audio  
 Standard Resistance Range  
 .....1 K ohms to 1 M ohms  
 Standard Resistance Tolerance  
 .....±10 % or ±20 %  
 Switch Contact Resistance  
 .....0.3 ohms max.  
 Switch Rating .....3 A @ 16 V DC

**Environmental Characteristics**

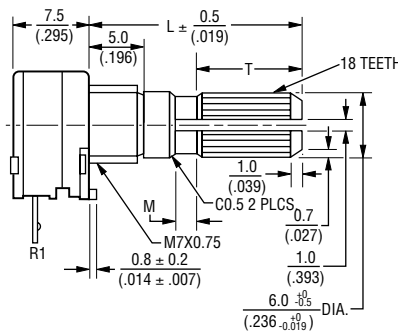
Power Rating .....0.05 watt  
 Maximum Operating Voltage  
 .....50 V AC, 10 V DC  
 Sliding Noise .....100 mV max.  
 Tracking Error  
 .....at 50 % angle max. ±3 dB

**Mechanical Characteristics**

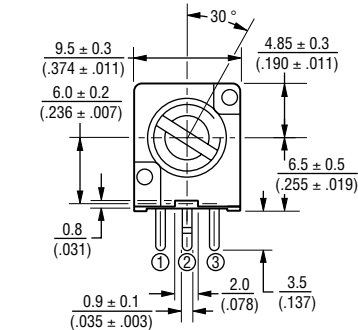
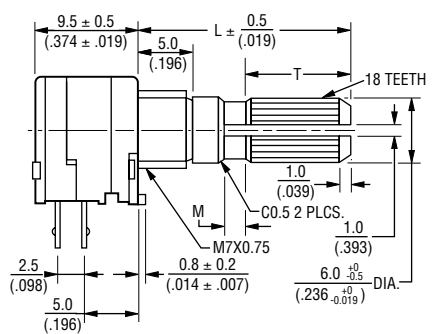
Mechanical Angle .....300 ° ±5 °  
 Rotational Torque .....20 to 200 g-cm  
 Detent Torque.....250 gf.cm max.  
 Switch Torque .....500 gf.cm max.  
 Stop Strength.....4 kg-cm min.  
 Rotational Life .....10,000 cycles  
 Soldering Condition  
 .....300 °C max. within 3 seconds  
 Hardware .....One flat washer and  
 mounting nut supplied per  
 potentiometer with bushing.

**Product Dimensions**

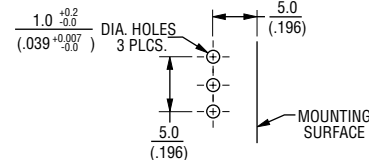
**PTD901**



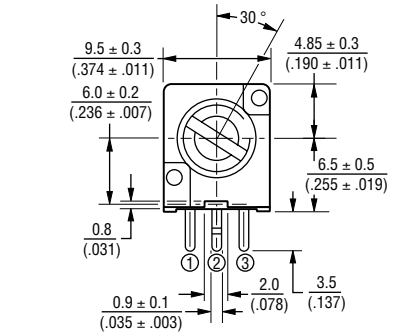
**PTD902**



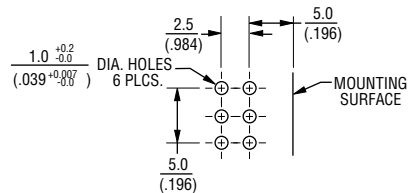
**RECOMMENDED PCB LAYOUT**



SHAFT SHOWN IN CCW POSITION



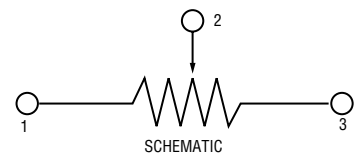
**RECOMMENDED PCB LAYOUT**



SHAFT SHOWN IN CCW POSITION

**PTD90 Dimensions**

L	15	20	25
	(.590)	(.787)	(.984)
T	6	10	12
	(.236)	(.393)	(.472)
M	1.5	2	4
	(.059)	(.078)	(.157)



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

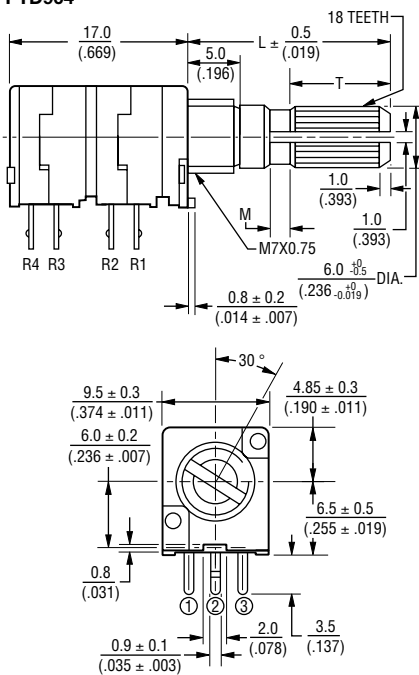
Specifications are subject to change without notice. Customers should verify actual device performance in their specific applications.

# PTD90/PTR90 - 9 mm Multi-Ganged Potentiometer

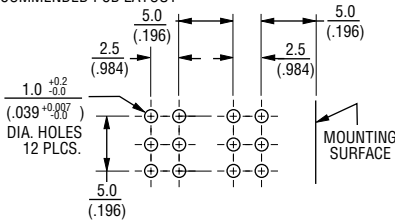
**BOURNS®**

## Product Dimensions

### PTD904

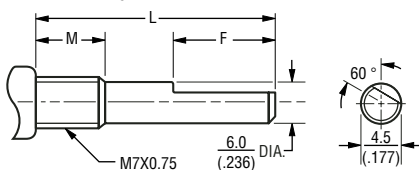


### RECOMMENDED PCB LAYOUT



SHAFT SHOWN IN CCW POSITION

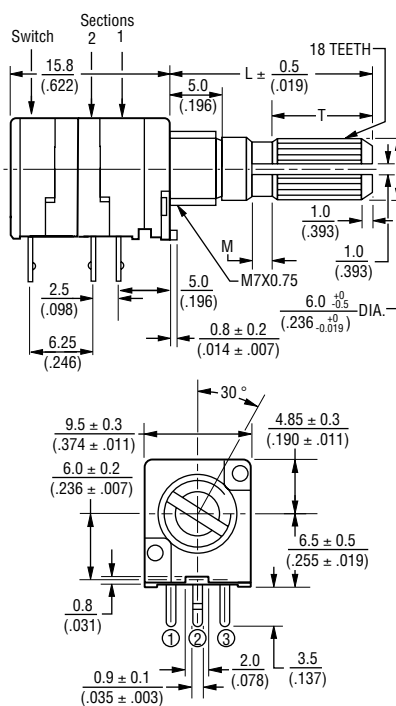
### FLATTED METAL SHAFT



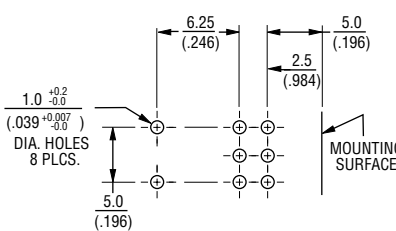
SHAFT SHOWN IN CCW POSITION

L	15	20	25	30
	(.591)	(.787)	(.984)	(1.181)
F	7	12	12	12
	(.275)	(.472)	(.472)	(.472)

### PTR902



### RECOMMENDED PCB LAYOUT



SHAFT SHOWN IN CCW POSITION

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

## How To Order

### PTD90 1 - 2 0 20 K - B 203

Model PTD90

- PTD90 = No Switch
- PTR90 = With Rotary Switch

No. of Sections 1

- 1 = 1 Section
- 2 = 2 Sections
- 3 = 3 Sections
- 4 = 4 Sections
- 5 = 5 Sections
- 6 = 6 Sections
- 8 = 8 Sections\*

Pin Style 1

- 1 = PC Pins vertical/down facing and ±10 % Total Resistance Tolerance
- 2 = PC Pins vertical/down facing and ±20 % Total Resistance Tolerance

Center Detent Option 0

- 0 = No Detent
- 2 = Center Detent

Standard Shaft Length 20

- 15 = 15 mm
- 20 = 20 mm
- 25 = 25 mm
- 30 = 30 mm

Shaft Styles K

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

Resistance Taper B

- A = Audio Taper
- B = Linear Taper

Resistance Code (See Table) 203

Other styles available.

\*8 gang version available in PTD90 only.

## 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. 06/04

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