

Features

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



PTR90 Series - 9 mm Multi-Ganged Potentiometer w/Rotary Switch

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

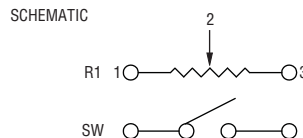
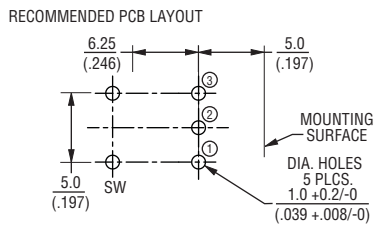
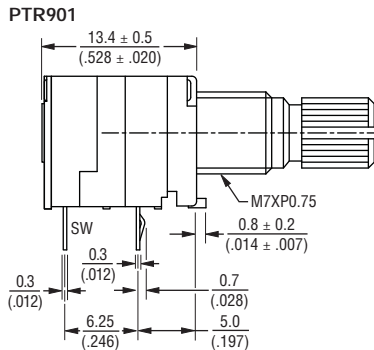
Switch Characteristics

Contact Resistance 50 milliohms max.
 Rated Power 3 A @ 16 VDC
 Detent Torque 400 g-cm max.
 Switch Activation Angle 50 ° max.

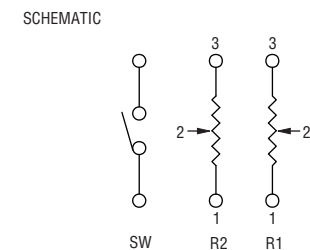
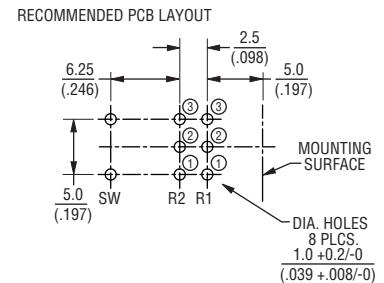
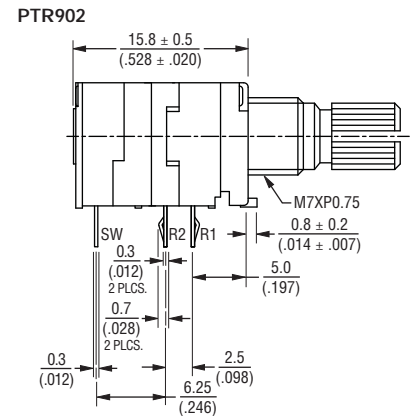
Mechanical Characteristics

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

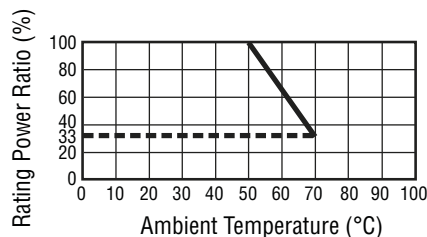
Product Dimensions



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



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

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

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Applications

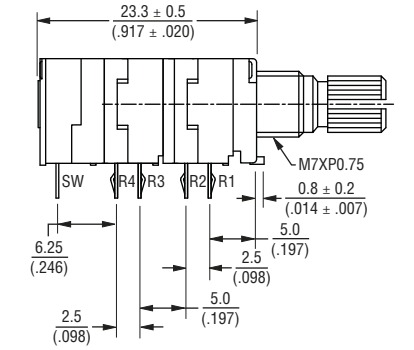
- Audio/TV sets
- Amplifiers/mixers/drum machines/synthesizers/DJ equipment
- Multimedia sound systems
- Portable electronics

PTR90 Series - 9 mm Multi-Ganged Potentiometer w/Rotary Switch

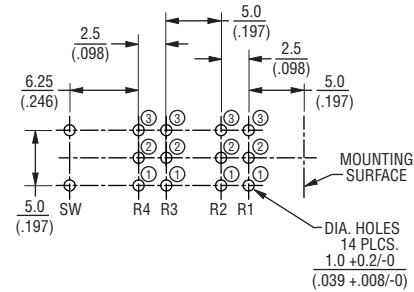


Product Dimensions

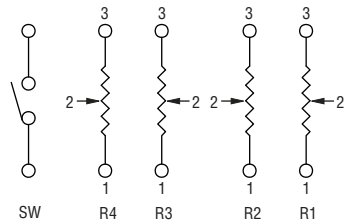
PTR904



RECOMMENDED PCB LAYOUT

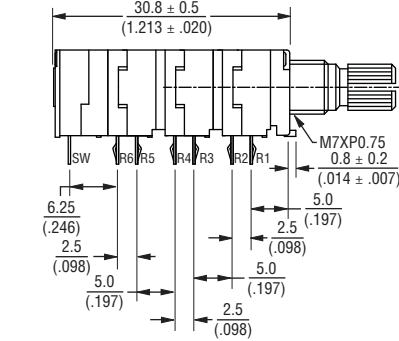


SCHEMATIC

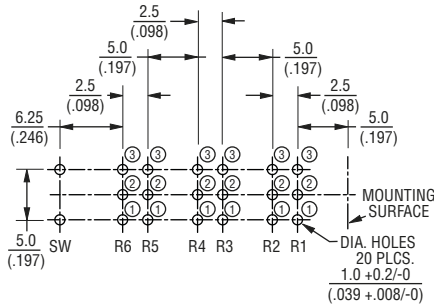


DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

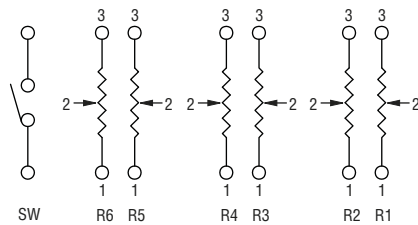
PTR906



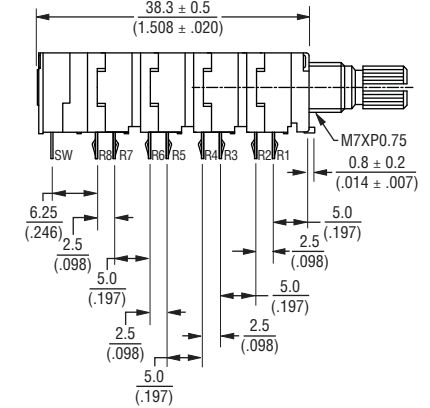
RECOMMENDED PCB LAYOUT



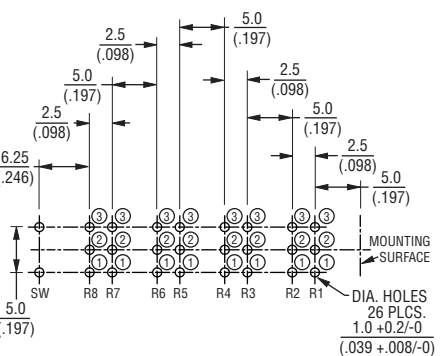
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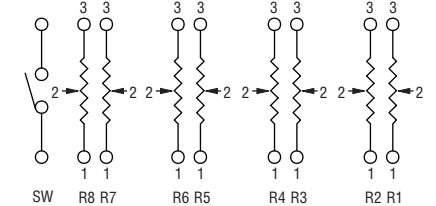
PTR908



RECOMMENDED PCB LAYOUT



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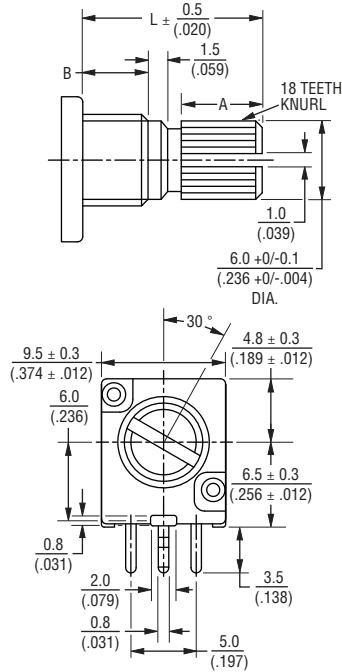
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PTR90 Series - 9 mm Multi-Ganged Potentiometer w/Rotary Switch

BOURNS®

Product Dimensions

SHAFT STYLE "K"

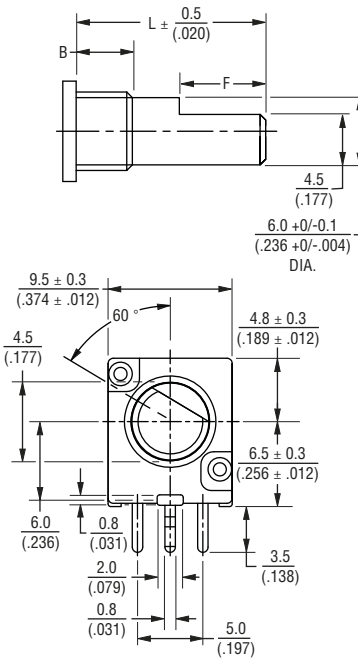


SHAFT SHOWN IN CCW POSITION

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

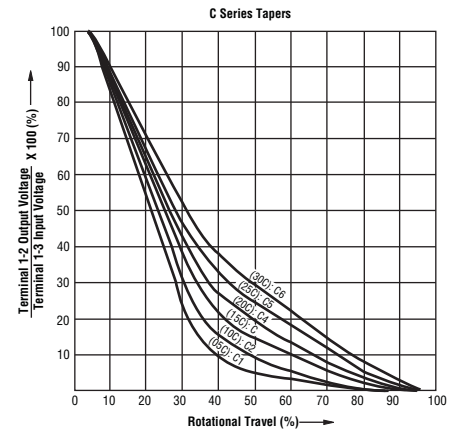
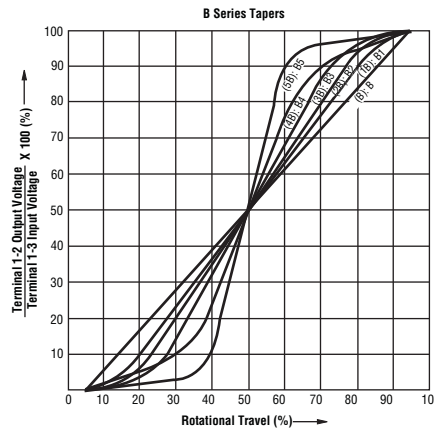
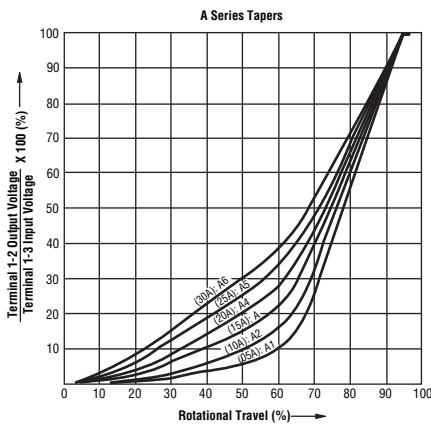
L	15 (.591)	20 (.787)	25 (.984)
B	5 (.197)	7 (.276)	10 (.394)
F	7 (.276)	12 (.472)	12 (.472)

How To Order

PTR90 1 - 2 0 20 K - B 203

- Model
- PTR90 = With Rotary 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



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REV. 10/19

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