

## Features

- Carbon element
- Insulated shaft
- Wide variety of mounting styles
- Center detent option
- RoHS compliant\*



## PTV09 Series - 9 mm Potentiometer

### Electrical Characteristics

Taper.....Linear, audio  
 Standard Resistance Range  
 ..... 1 K ohms to 1 M ohms  
 Standard Resistance Tolerance.....±20 %  
 Residual Resistance  
 .....500 ohms or ±1 % max.

### Environmental Characteristics

Operating Temperature....-10 °C to +50 °C  
 Power Rating  
 (Linear and Audio).....0.05 watt  
 Maximum Operating Voltage  
 (Linear and Audio)..... 20 VDC, 50 VAC  
 Sliding Noise ..... 100 mV max.

### Mechanical Characteristics

Mechanical Angle .....280 ° ±10 °  
 Rotational Torque ..... 10 to 100 g-cm  
 Detent Torque .....20 to 200 gf-cm  
 Stop Strength ..... 2 kg-cm min.  
 Rotational Life ..... 10,000 cycles  
 Soldering Condition  
 .....300 °C max. within 3 seconds  
 Hardware ..... One flat washer and one  
 hex nut supplied with bushing version

### How To Order

**PTV09A - 2 0 20 F - B 203**

Model \_\_\_\_\_

Terminal Configuration (Pin Layout) \_\_\_\_\_

1 = Horizontal/Rear Mount w/Sleeve Bushing  
 2 = Vertical/Side Mount, Bushingless, 10 mm Height  
 3 = Vertical/Side Mount, Bushingless, 6.5 mm Height  
 4 = Horizontal/Rear Mount, Bushingless  
 5 = Horizontal/Rear Mount w/Plastic Plain Bushing  
 6 = Horizontal/Rear Mount w/Metal Threaded Bushing  
 7 = Vertical/Side Mount w/Sleeve Bushing, 6.5 mm Height  
 8 = Vertical/Side Mount w/Sleeve Bushing, 10 mm height

Option \_\_\_\_\_

0 = No Detent    2 = Center

Standard Shaft Length \_\_\_\_\_

15 = 15 mm\*\*    25 = 25 mm  
 20 = 20 mm    30 = 30 mm

Shaft Style \_\_\_\_\_

F = Flat Type Insulated Shaft  
 S = Insulated Knurled (18 Teeth)  
 U = Insulated Knurled (40 Teeth)

Resistance Taper \_\_\_\_\_

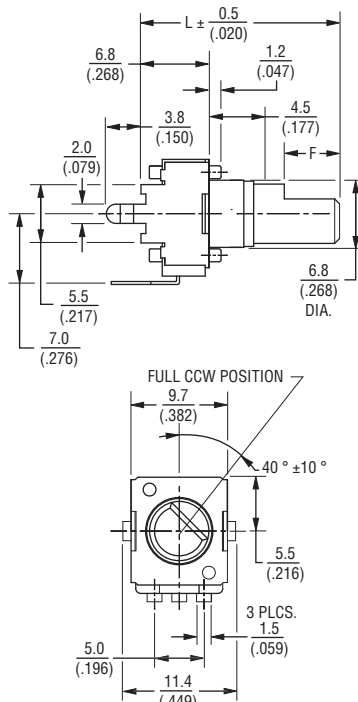
Taper Series followed by Curve Number

Resistance Code (See Table) \_\_\_\_\_

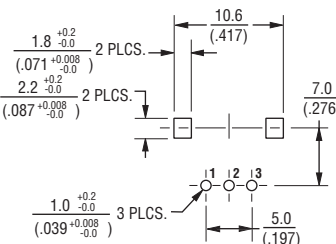
Other styles available.  
 \*\* Bushingless version only.

### Product Dimensions

**PTV09A-1**  
 (Horizontal/Rear Mount w/Sleeve Bushing)

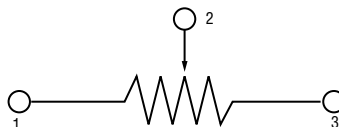


RECOMMENDED PCB LAYOUT  
 (HORIZONTAL/REAR MOUNT)

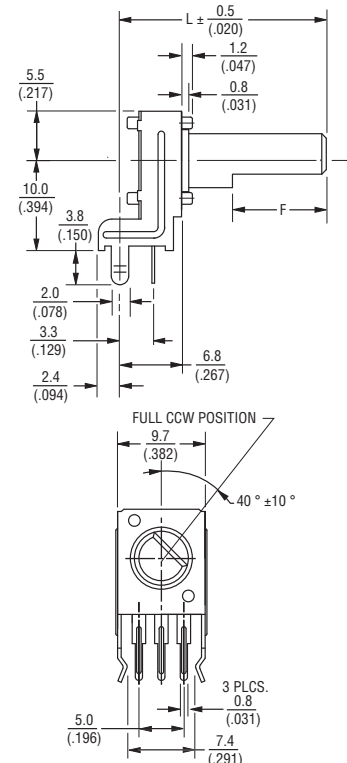


DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

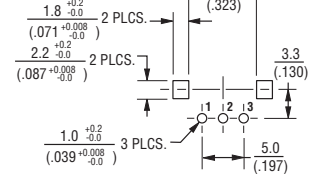
### Schematic



**PTV09A-2**  
 (Vertical/Side Mount,  
 Bushingless, 10 mm Height)



RECOMMENDED PCB LAYOUT  
 (VERTICAL/SIDE MOUNT)



### 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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The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

## Applications

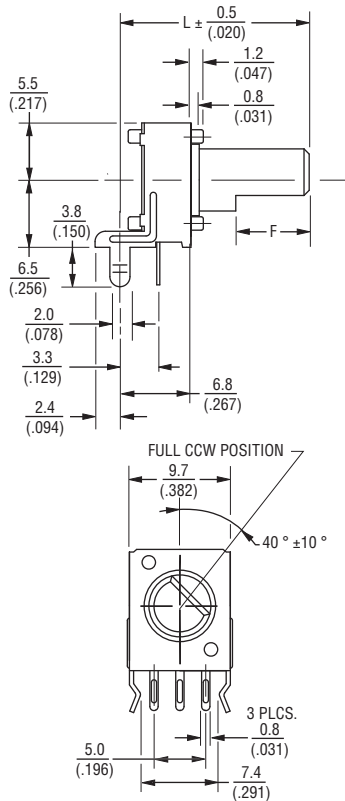
- Commercial communications equipment
- Portable electronics
- Amplifiers/mixers/drum machines/synthesizers
- Consumer goods
- Commercial appliances

# PTV09 Series - 9 mm Potentiometer

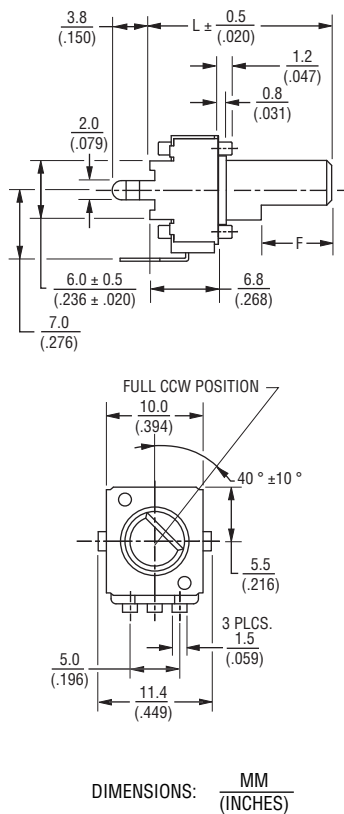
# BOURNS®

## Product Dimensions (Continued)

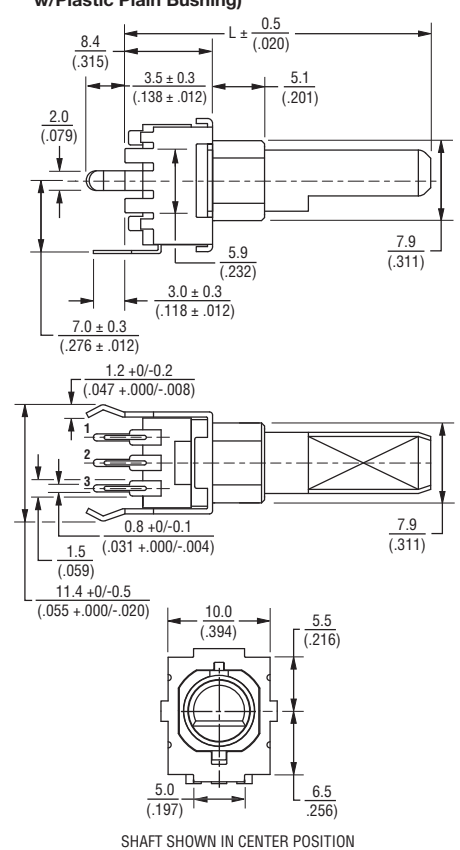
**PTV09A-3**  
(Vertical/Side Mount,  
Bushings, 6.5 mm Height)



**PTV09A-4**  
(Horizontal/Rear Mount, Bushingless)

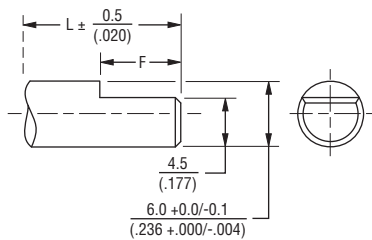


**PTV09A-5**  
(Horizontal/Rear Mount  
w/Plastic Plain Bushing)



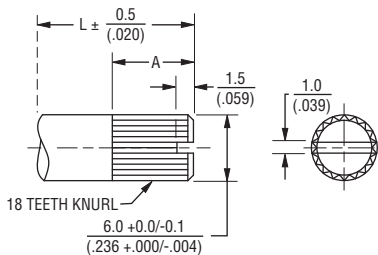
## Shaft Styles

**F-Type**



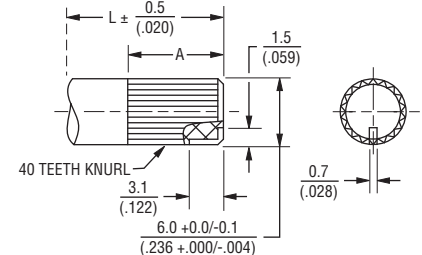
L	15 (.591)	20 (.787)	25 (.984)	30 (1.181)
F	6 (.236)	7 (.275)	12 (.472)	12 (.472)

**S-Type**



L	15 (.591)	20 (.787)	25 (.984)	30 (1.181)
A	7 (.275)	7 (.275)	7 (.275)	7 (.275)

**U-Type**



L	15 (.591)	20 (.787)	25 (.984)	30 (1.181)
A	6 (.236)	7 (.275)	7 (.275)	7 (.275)

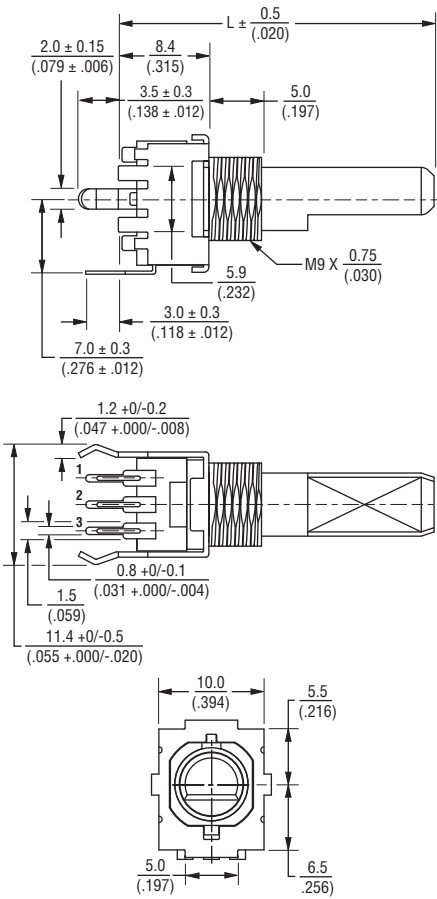
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# PTV09 Series - 9 mm Potentiometer

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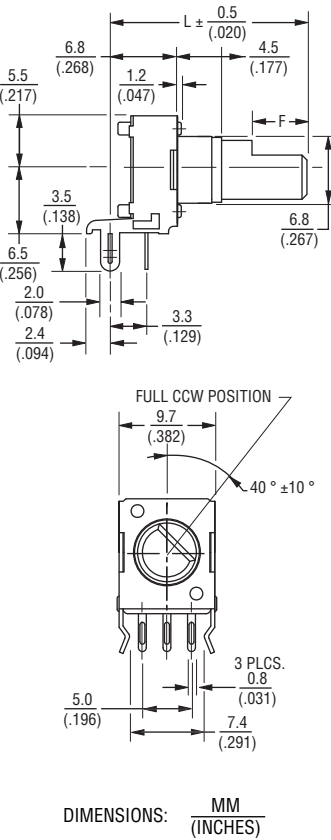
## Product Dimensions (Continued)

**PTV09A-6**  
(Horizontal/Rear Mount  
w/Metal Threaded Bushing)



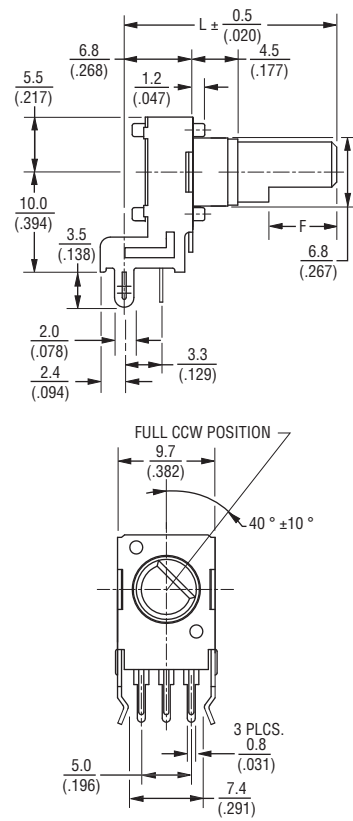
SHAFT SHOWN IN CENTER POSITION

**PTV09A-7**  
(Vertical/Side Mount  
w/Sleeve Bushing, 6.5 mm Height)

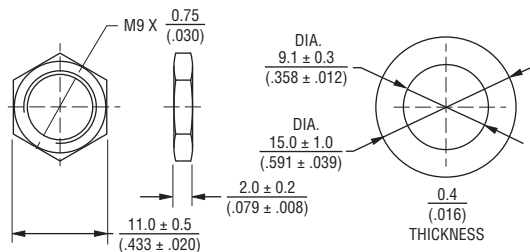


DIMENSIONS:  $\frac{MM}{(INCHES)}$

**PTV09A-8**  
(Vertical/Side Mount  
w/Sleeve Bushing, 10 mm Height)



## Mounting Hardware

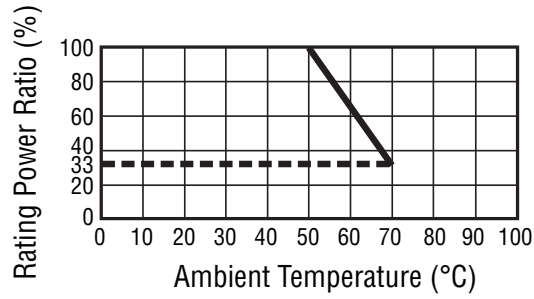


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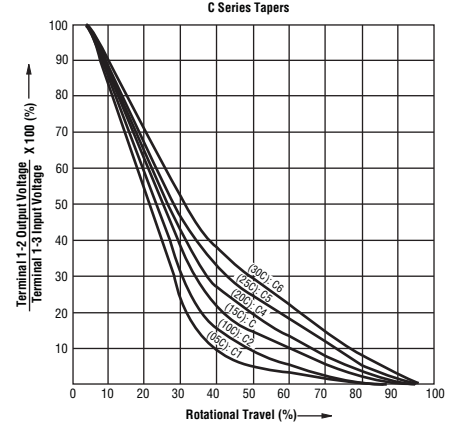
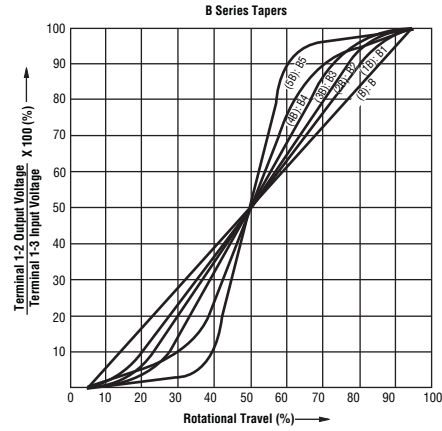
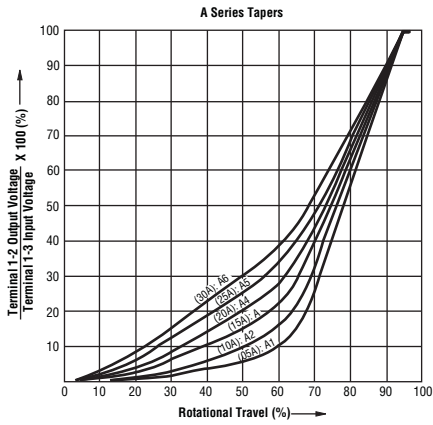
# PTV09 Series - 9 mm Potentiometer

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## Derating Curve



## Tapers



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REV. 08/13

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