

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..... $\pm 20\%$
Residual Resistance
..... 500 ohms or $\pm 1\%$ max.

Environmental Characteristics

Operating Temperature..... -10°C to $+50^\circ\text{C}$
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 $280^\circ \pm 10^\circ$
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)

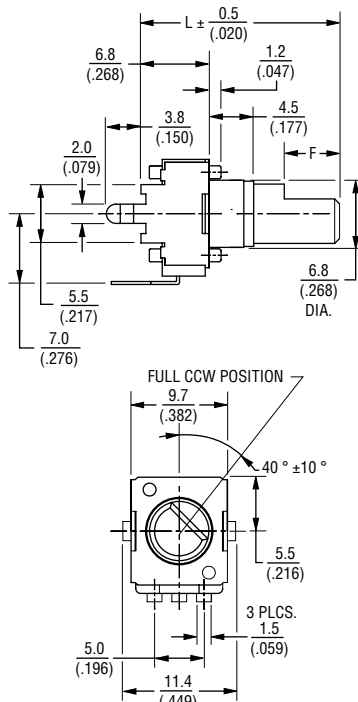
Resistance Taper _____
Taper Series followed by Curve Number

Resistance Code (See Table) _____

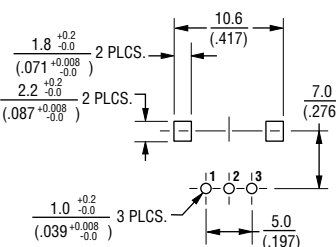
Other styles available.
** Bushingless version only.

Product Dimensions

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

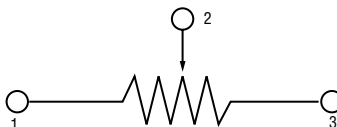


RECOMMENDED PCB LAYOUT
(HORIZONTAL/REAR MOUNT)

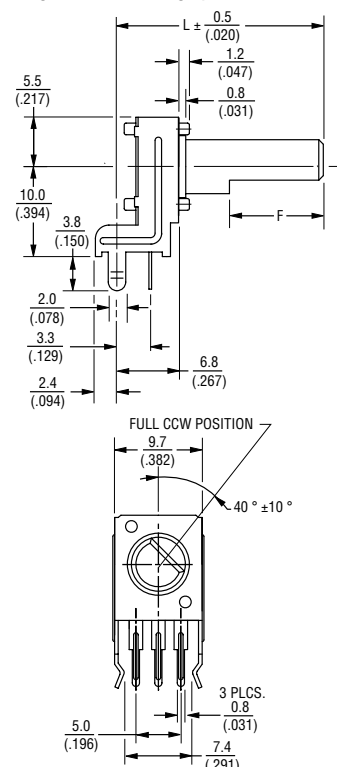


DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

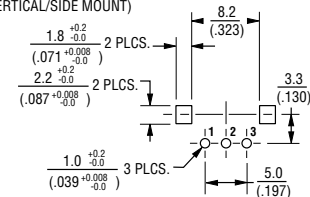
Schematic



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.

Specifications are subject to change without notice.

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

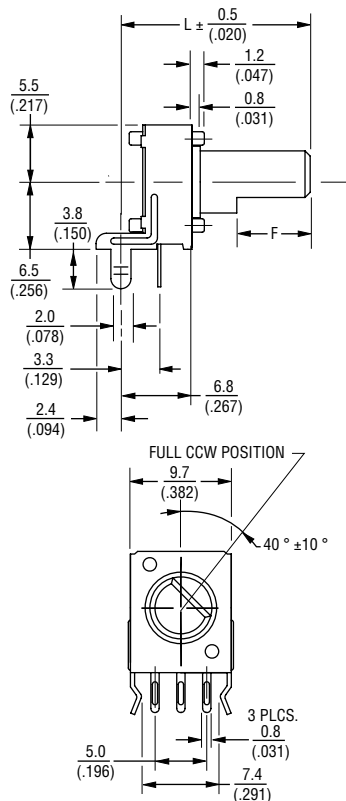
- Commercial communications equipment
- Portable electronics
- Amplifiers/mixers/drum machines/synthesizers
- Consumer goods
- Commercial appliances

PTV09 Series - 9 mm Potentiometer

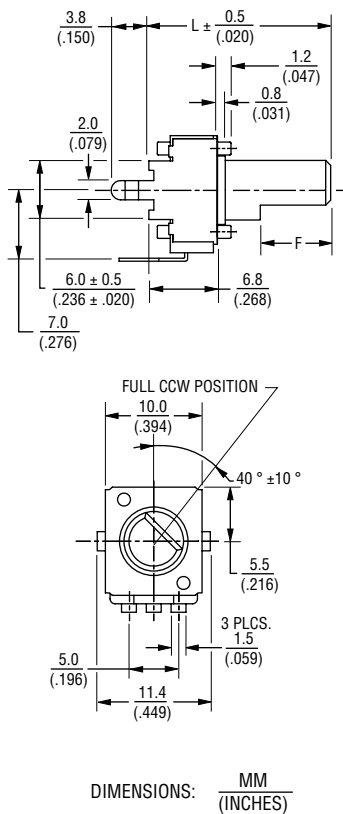
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Product Dimensions (Continued)

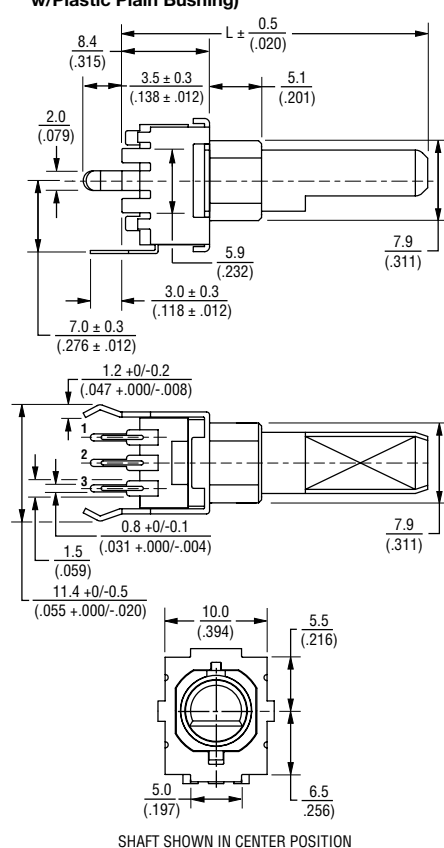
PTV09A-3
(Vertical/Side Mount,
Bushings, 6.5 mm Height)



PTV09A-4
(Horizontal/Rear Mount, Bushingless)

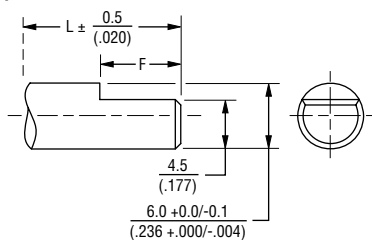


PTV09A-5
(Horizontal/Rear Mount
w/Plastic Plain Bushing)



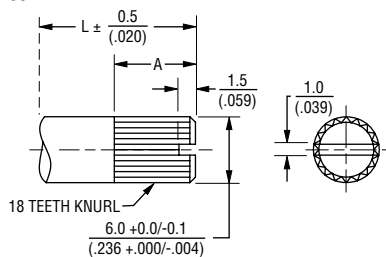
Shaft Styles

F-Type



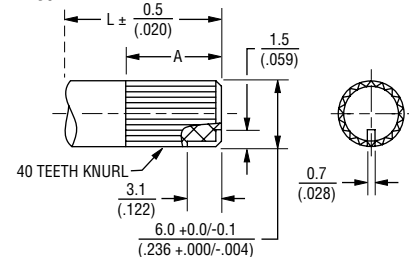
| | | | | |
|---|--------------|--------------|--------------|---------------|
| L | 15 (.591) | 20 (.787) | 25 (.984) | 30 (1.181) |
| F | 6 (.236) | 7 (.275) | 12 (.472) | 12 (.472) |

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) |

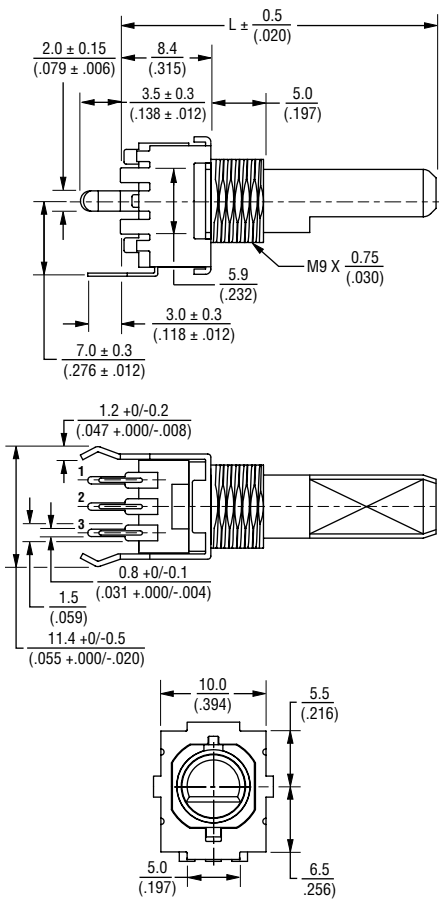
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Users should verify actual device performance in their specific applications.

PTV09 Series - 9 mm Potentiometer

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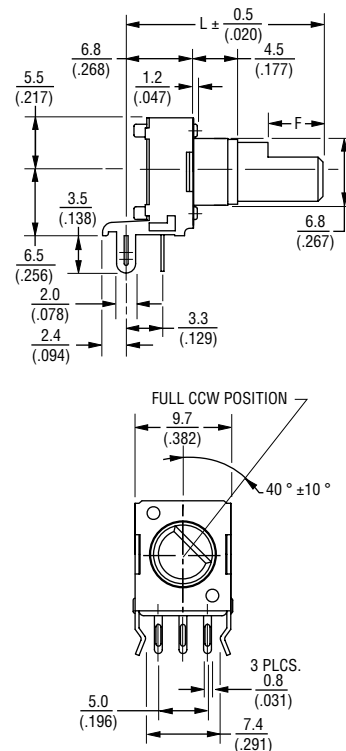
Product Dimensions (Continued)

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



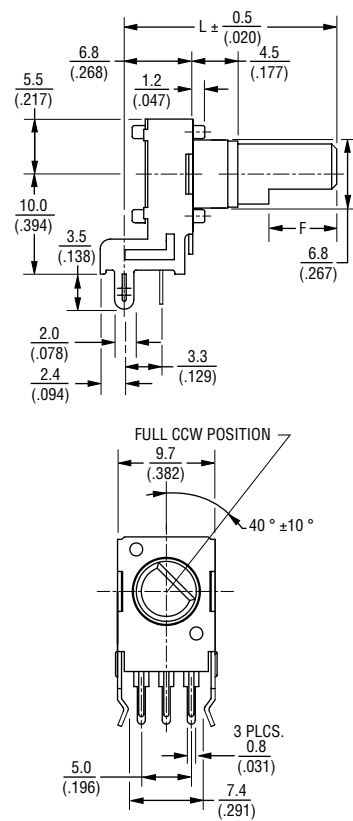
SHAFT SHOWN IN CENTER POSITION

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

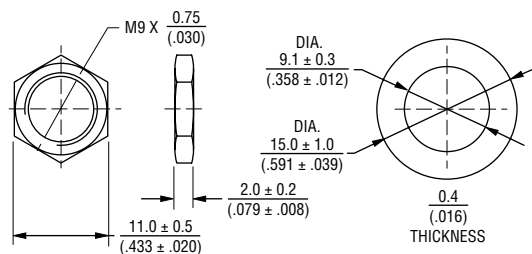


DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

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



Mounting Hardware



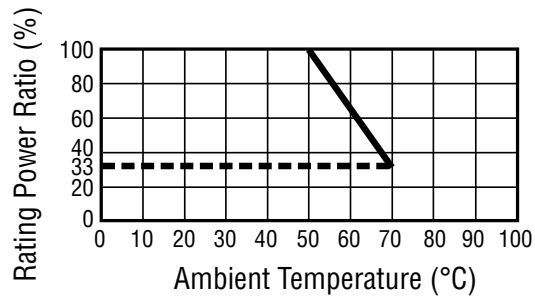
Specifications are subject to change without notice.

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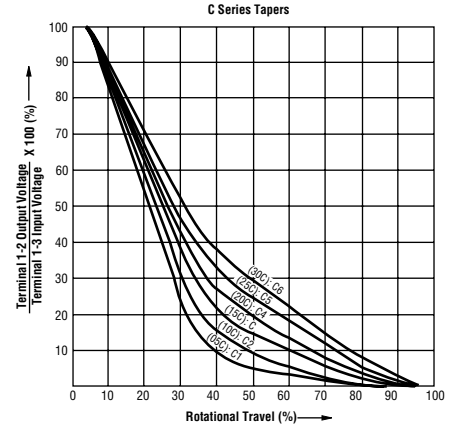
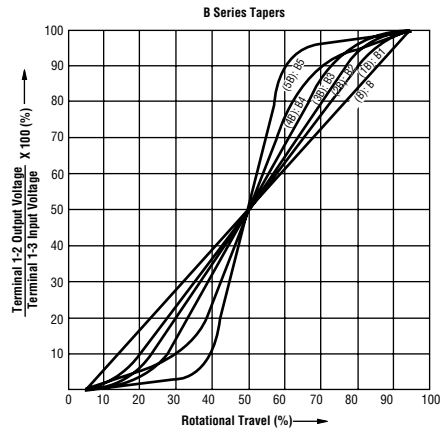
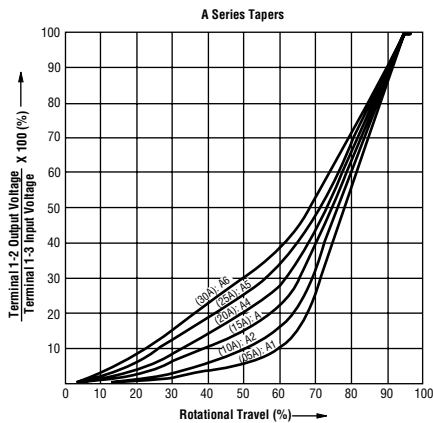
PTV09 Series - 9 mm Potentiometer

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Derating Curve



Tapers



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REV. 01/17

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Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Bourns:

| | | | | |
|--|--|--|--|--|
| <u>PTV09A-4020F-B203</u> | <u>PTV09A-4025F-B103</u> | <u>PTV09A-4025F-B503</u> | <u>PTV09A-4020U-B104</u> | <u>PTV09A-2025F-B103</u> |
| <u>PTV09A-2020U-A102</u> | <u>PTV09A-4015U-B103</u> | <u>PTV09A-4020U-B103</u> | <u>PTV09A-4025U-B103</u> | <u>PTV09A-4220U-B103</u> |
| <u>PTV09A-2015F-B103</u> | <u>PTV09A-2015F-B502</u> | <u>PTV09A-2015F-B503</u> | <u>PTV09A-2015F-B504</u> | <u>PTV09A-2020F-A102</u> |
| <u>PTV09A-2020F-A103</u> | <u>PTV09A-2020F-A104</u> | <u>PTV09A-2020F-A203</u> | <u>PTV09A-2020F-A502</u> | <u>PTV09A-2020F-A503</u> |
| <u>PTV09A-2020F-B102</u> | <u>PTV09A-2020F-B103</u> | <u>PTV09A-2020F-B104</u> | <u>PTV09A-2020F-B502</u> | <u>PTV09A-2020F-B503</u> |
| <u>PTV09A-2025U-A104</u> | <u>PTV09A-4015F-A103</u> | <u>PTV09A-4015F-B102</u> | <u>PTV09A-4015F-B103</u> | <u>PTV09A-4015F-B104</u> |
| <u>PTV09A-4015F-B502</u> | <u>PTV09A-4015U-A204</u> | <u>PTV09A-4020F-A103</u> | <u>PTV09A-4020F-A203</u> | <u>PTV09A-4020F-A502</u> |
| <u>PTV09A-4020F-A504</u> | <u>PTV09A-4020F-B102</u> | <u>PTV09A-4020F-B103</u> | <u>PTV09A-4020F-B104</u> | <u>PTV09A-4020F-B202</u> |
| <u>PTV09A-4020F-B502</u> | <u>PTV09A-4020F-B503</u> | <u>PTV09A-4025F-A203</u> | <u>PTV09A-4025F-B102</u> | <u>PTV09A-4030U-A204</u> |
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| <u>PTV09A-40AAJ-B502</u> | <u>PTV09A-40ACF-B503</u> | <u>PTV09A-40CAA-B503</u> | <u>PTV09A-40CCB-B503</u> | <u>PTV09A-40CFF-B503</u> |
| <u>PTV09A-4220F-B103</u> | <u>PTV09A-4220F-B502</u> | <u>PTV09A-4225F-A503</u> | <u>PTV09A-4225F-B102</u> | <u>PTV09A-4225F-B103</u> |
| <u>PTV09A-4225F-B104</u> | <u>PTV09A-4225F-B203</u> | <u>PTV09A-4225F-B502</u> | <u>PTV09A-4225K-A103</u> | <u>PTV09A-4225U-B103</u> |
| <u>PTV09A-4230U-B502</u> | <u>PTV09A-4015F-B503</u> | <u>PTV09A-4020U-A503</u> | <u>PTV09A-4030U-A503</u> | <u>PTV09A-4025U-A104</u> |
| <u>PTV09A-4020U-B102</u> | <u>PTV09A-2030U-B102</u> | <u>PTV09A-2030U-B104</u> | <u>PTV09A-2015S-B253</u> | <u>PTV09A-2025U-A102</u> |
| <u>PTV09A-2215S-A103</u> | <u>PTV09A-4030F-A104</u> | <u>PTV09A-4030S-A102</u> | <u>PTV09A-2020S-B502</u> | <u>PTV09A-4020S-A105</u> |
| <u>PTV09A-4020U-B203</u> | <u>PTV09A-1020F-A203</u> | <u>PTV09A-4030F-B103</u> | <u>PTV09A-4020S-B504</u> | <u>PTV09A-2015S-B102</u> |
| <u>PTV09A-3020F-B104</u> | <u>PTV09A-4020S-B503</u> | <u>PTV09A-4020F-B105</u> | <u>PTV09A-4020S-A104</u> | <u>PTV09A-2015F-A503</u> |
| <u>PTV09A-3020S-B103</u> | <u>PTV09A-4015F-B203</u> | <u>PTV09A-4015F-B204</u> | <u>PTV09A-2015S-A105</u> | <u>PTV09A-4025F-A105</u> |
| <u>PTV09A-2030U-A102</u> | <u>PTV09A-8020F-B203</u> | <u>PTV09A-2015S-B254</u> | <u>PTV09A-4030F-B503</u> | <u>PTV09A-7020F-B203</u> |