

**BOURNS®**

## Features

- Carbon element
- Insulated shaft
- Snap-in clip
- Center detent
- Center tap option
- Assorted pin layouts

- Dual gang option
- Various taper options

## PTV/PTT Series - 12 mm Potentiometer

### Additional Information

Click these links for more information:



### Electrical Characteristics

Taper ..... Linear, audio  
 Standard Resistance Range ..... 1 K ohms to 1 M ohms  
 Standard Resistance Tolerance .....  $\pm 20\%$   
 Residual Resistance ..... 1 % max.

### Environmental Characteristics

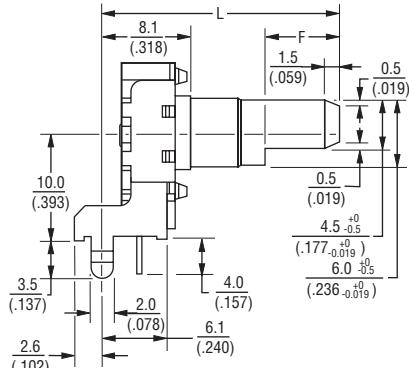
Operating Temperature ..... -10 °C to +50 °C  
 Power Rating ..... 0.05 Watt  
 Maximum Operating Voltage ..... 50 VAC, 20 VDC  
 Sliding Noise ..... 100 mV max.

### Mechanical Characteristics

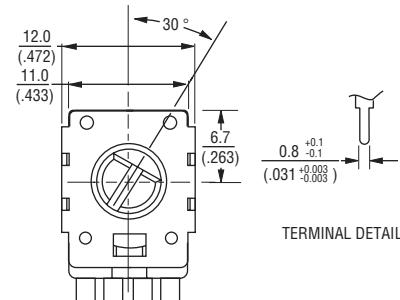
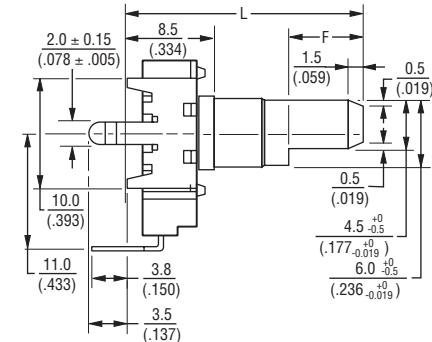
Mechanical Angle ..... 300 °  $\pm 5\%$   
 Rotational Torque ..... 20 to 200 g-cm  
 Detent Torque ..... 30 to 300 g-cm  
 Stop Strength  
   no bushing ..... 3 kg-cm min.  
   with bushing ..... 3 kg-cm min.  
 Rotational Life ..... 15,000 cycles  
 Soldering Condition ..... 300 °C max. within 3 seconds  
 Hardware ..... One flat washer and mounting nut supplied per potentiometer with bushing

### Product Dimensions

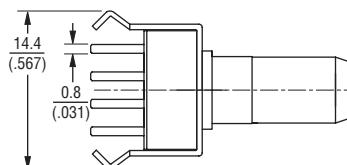
PTV111-2



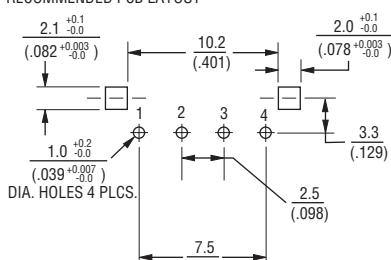
PTV111-4



TERMINAL DETAIL

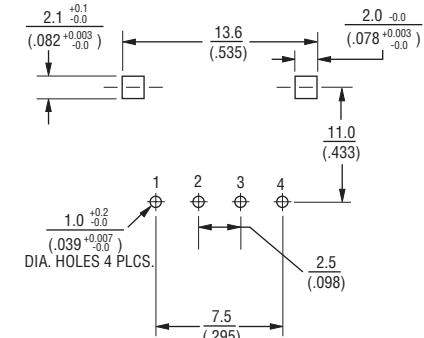


RECOMMENDED PCB LAYOUT



SHAFT SHOWN IN CCW POSITION

RECOMMENDED PCB LAYOUT



SHAFT SHOWN IN CCW POSITION



**WARNING Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*RoHS Directive 2015/863, Mar 31, 2015 and Annex. Specifications are subject to change without notice. Users should verify actual device performance in their specific applications.

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### Dimensions Without Bushing

L	15 (.591)	20 (.787)	22.5 (.886)	25 (.984)	27.5 (1.083)
F	4.5 (.177)	7 (.276)	7 (.276)	12 (.472)	12 (.472)

DIMENSIONS: **MM**  
**(INCHES)**

## Applications

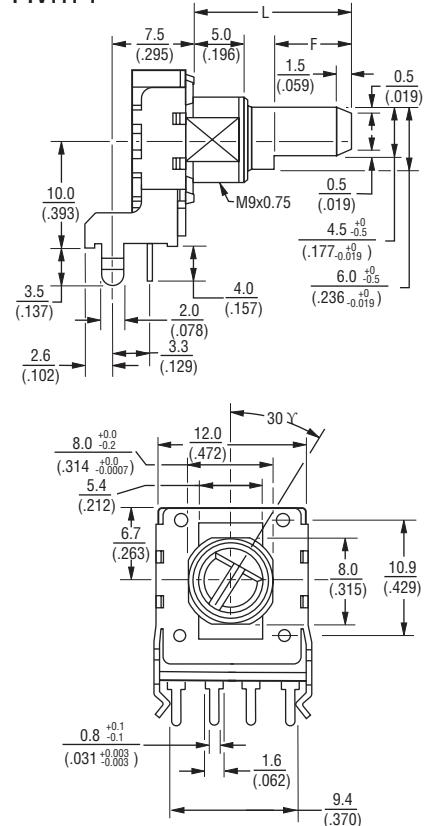
- Audio/TV sets
- Amplifiers/mixers/drum machines/synthesizers
- PCs/monitors
- Appliances

## PTV/PTT Series - 12 mm Potentiometer

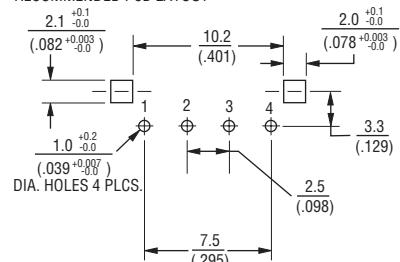
**BOURNS®**

### Product Dimensions

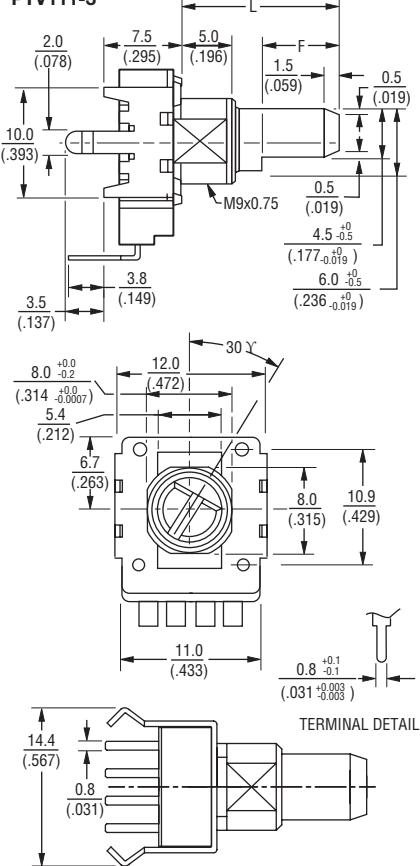
PTV111-1



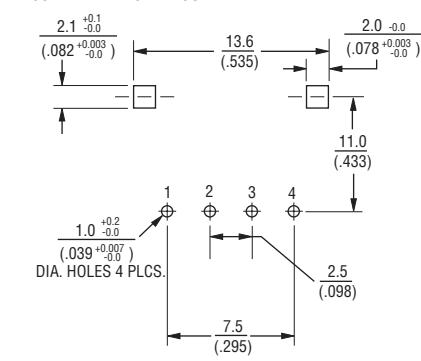
RECOMMENDED PCB LAYOUT



PTV111-3



RECOMMENDED PCB LAYOUT



### Dimensions With Bushing

L	12.5 (.492)	15 (.591)	17.5 (.689)	20 (.787)
F	7 (.276)	7 (.276)	12 (.472)	12 (.472)

DIMENSIONS: MM  
(INCHES)

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

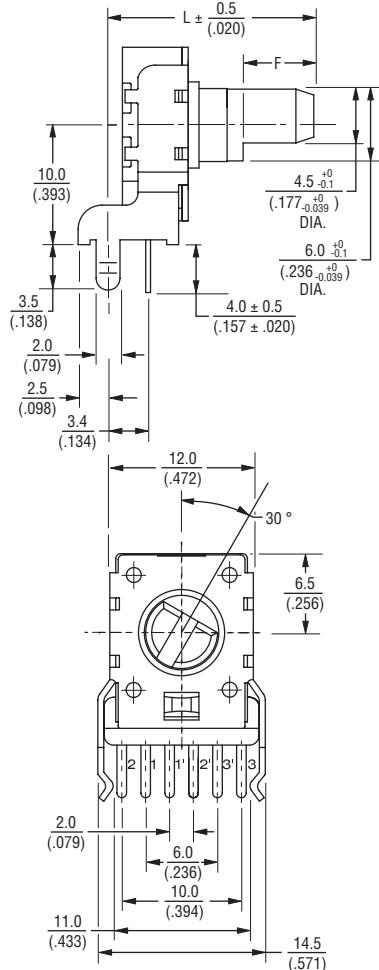
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## **PTV/PTT Series - 12 mm Potentiometer**

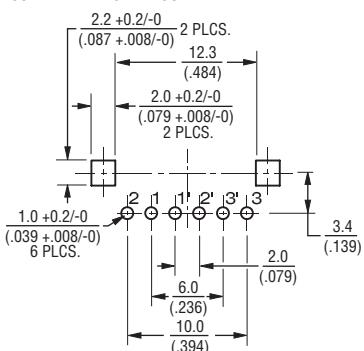
**BOURNS®**

## Product Dimensions

PTV112-2 DUAL GANG

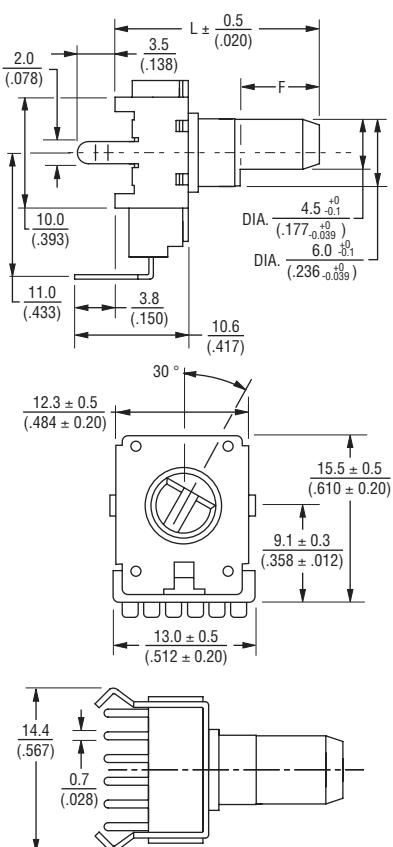


## RECOMMENDED PCB LAYOUT

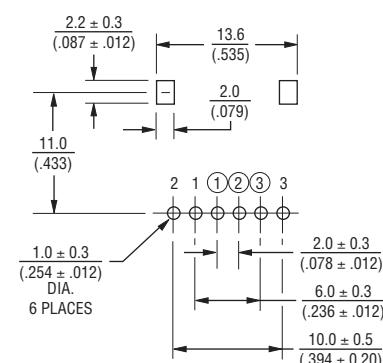


SHAFT SHOWN IN CCW POSITION

PTV112-4 DUAL GANG



RECOMMENDED PCB LAYOUT



SHAFT SHOWN IN CCW POSITION

### **Dimensions Without Bushing**

L	$\frac{15}{(.591)}$	$\frac{20}{(.787)}$	$\frac{22.5}{(.886)}$	$\frac{25}{(.984)}$	$\frac{27.5}{(1.083)}$
F	$\frac{4.5}{(.177)}$	$\frac{7}{(.276)}$	$\frac{7}{(.276)}$	$\frac{12}{(.472)}$	$\frac{12}{(.472)}$

DIMENSIONS: MM  
(INCHES)

Specifications are subject to change without notice.

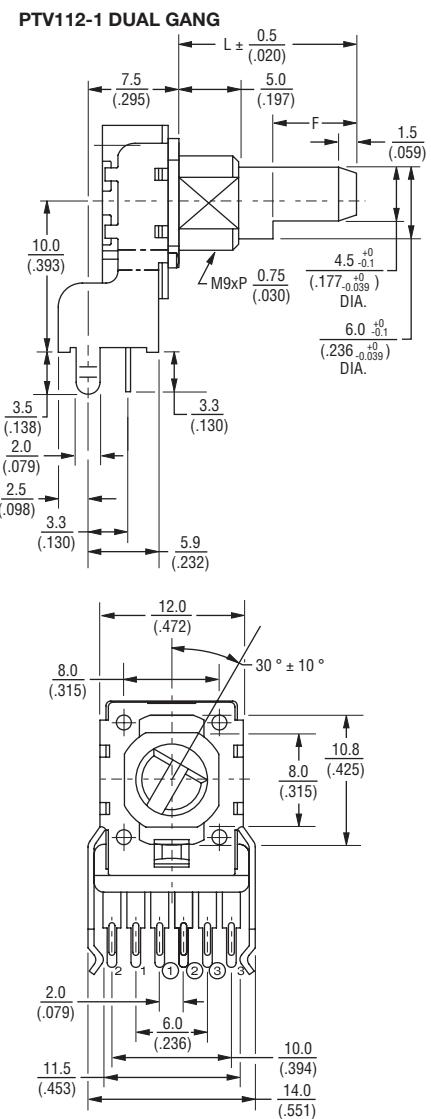
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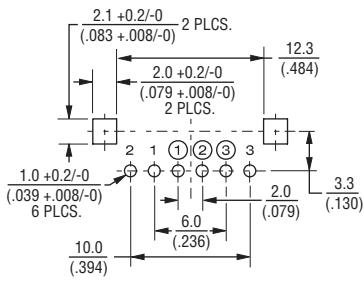
## **PTV/PTT Series - 12 mm Potentiometer**

**BOURNS®**

## Product Dimensions

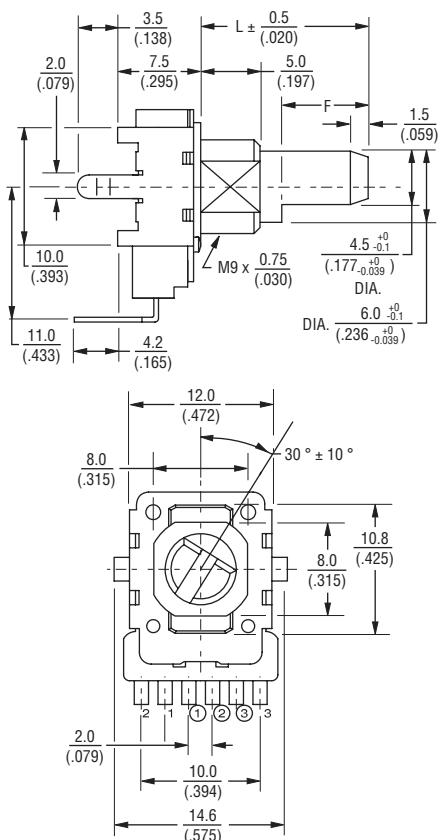


## RECOMMENDED PCB LAYOUT

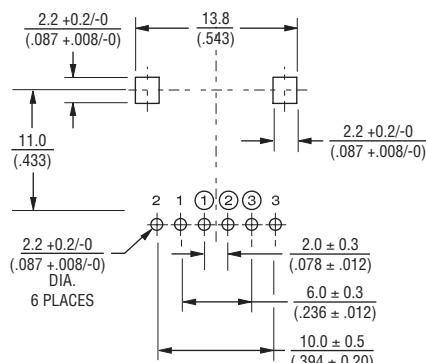


**SHAFT SHOWN IN CCW POSITION**

PTV112-3 DUAL GANG



RECOMMENDED PCB LAYOUT



**SHAFT SHOWN IN CCW POSITION**

## Dimensions With Bushing

L	$\frac{12.5}{(.492)}$	$\frac{15}{(.591)}$	$\frac{17.5}{(.689)}$	$\frac{20}{(.787)}$
F	$\frac{7}{(.276)}$	$\frac{7}{(.276)}$	$\frac{12}{(.472)}$	$\frac{12}{(.472)}$

DIMENSIONS: MM  
(INCHES)

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# PTV/PTT Series - 12 mm Potentiometer

**BOURNS®**

## How To Order

PTV111 - 2 4 20 A - A1 104

Model \_\_\_\_\_

(See Diagrams)

- PTV111 Standard
- PTT111 With Tap
- PTV112 Dual Gang

Pin Style \_\_\_\_\_

PC Pins vertical/  
Down Facing:

- 1 = With Bushing
- 2 = No Bushing

PC Pins horizontal/  
Rear Facing:

- 3 = With Bushing
- 4 = No Bushing

Center Detent Option

- 4 = No Detent
- 2 = Center Detent

Standard Shaft Length

- 12 = 12.5 mm\*
- 15 = 15 mm
- 17 = 17.5 mm\*
- 20 = 20 mm
- 22 = 22.5 mm\*\*
- 25 = 25 mm\*\*
- 27 = 27.5 mm\*\*

Shaft Styles

- A = Flat Type Insulated Shaft

Resistance Taper (See Taper Chart)

Taper Series followed by Curve Number

Resistance Code (See Table)

Other styles available.

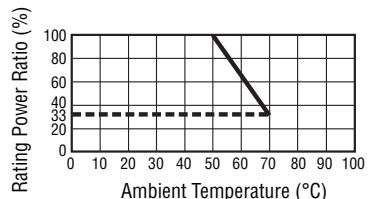
\* Available with Pin Styles 1 & 3 only.

\*\*Available with Pin Styles 2 & 4 only.

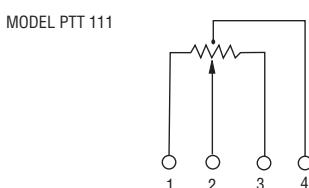
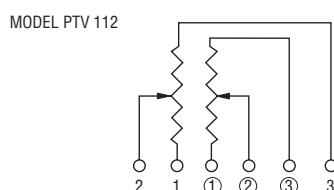
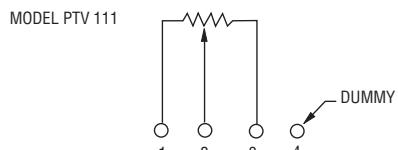
## Standard Resistance Table

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

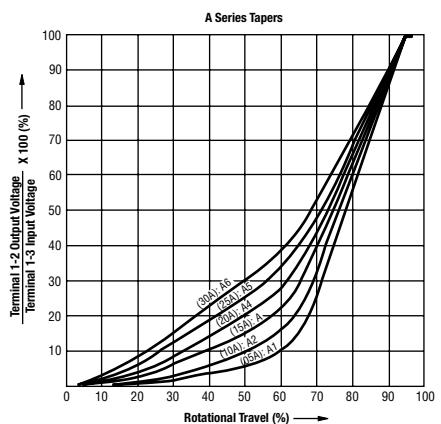
## Derating Curve



## Electrical Diagrams



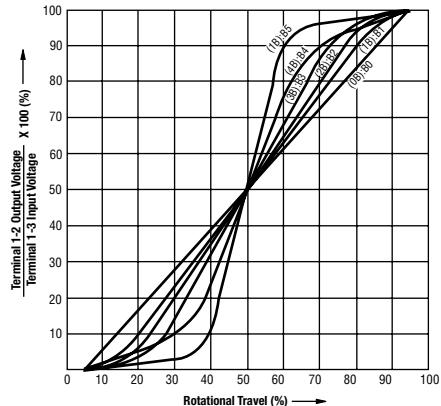
## Tapers



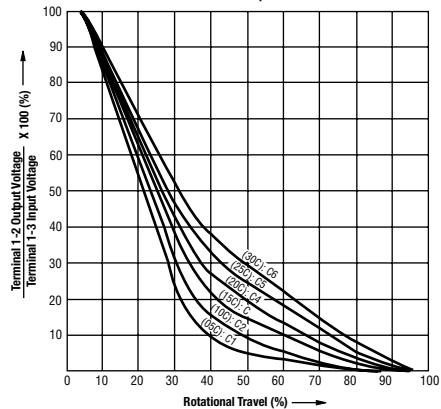
**B Series Tapers**

PTV111 Standard and PTT111: Linear taper "B" represents (OB) B0 in taper chart.

PTV112 Dual Gang: Linear taper "B" represents (3B) B3 in taper chart.



**C Series Tapers**



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