

\*RoHS COMPLIANT



**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**

**Electrical Characteristics**

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

**Environmental Characteristics**

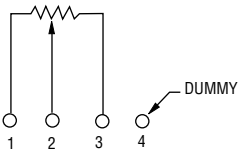
Operating Temperature ..... -10 °C to +50 °C  
 Power Rating..... 0.05 Watt  
 Maximum Operating Voltage ..... 50 V AC, 20 V DC  
 Sliding Noise ..... 100 mV max.

**Mechanical Characteristics**

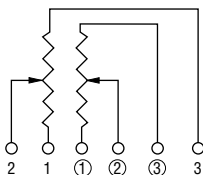
Mechanical Angle..... 300 ° ±5 °  
 Rotational Torque ..... 20 to 200 g-cm  
 Detent Torque..... 30 to 300 g-cm  
 Stop Strength  
 no bushing ..... 3 kg-cm min.  
 with bushing..... 3 kg-cm min.  
 Rotational Life ..... 15,000 cycles  
 Soldering Condition  
 ..... 300 °C max. within 3 seconds  
 Hardware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

**Electrical Diagrams**

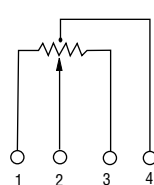
MODEL PTV 111



MODEL PTV 112

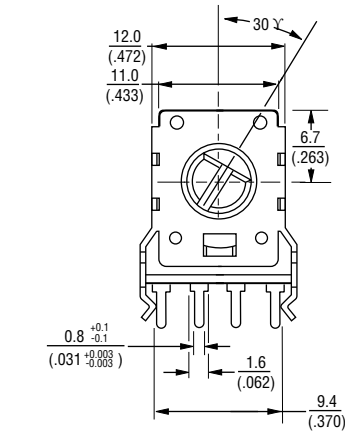
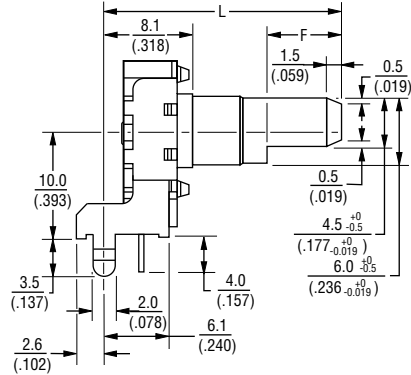


MODEL PTT 111

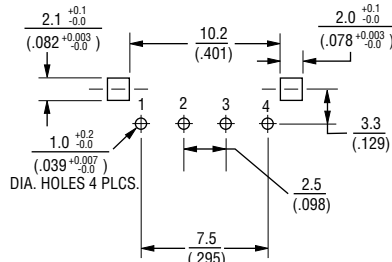


**Product Dimensions**

PTV111-2



RECOMMENDED PCB LAYOUT

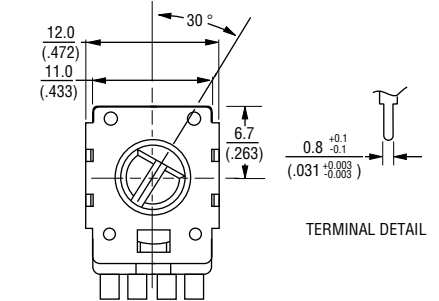
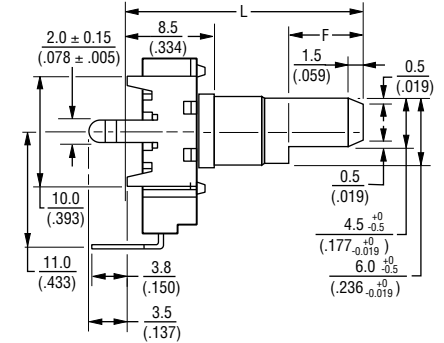


SHAFT SHOWN IN CCW POSITION

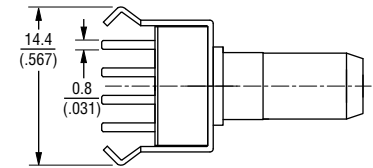
**Dimensions Without Bushing**

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)

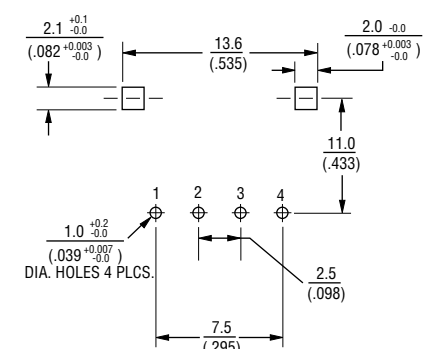
PTV111-4



TERMINAL DETAIL



RECOMMENDED PCB LAYOUT



SHAFT SHOWN IN CCW POSITION

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



**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. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at [www.bourns.com/docs/legal/disclaimer.pdf](http://www.bourns.com/docs/legal/disclaimer.pdf)

## Applications

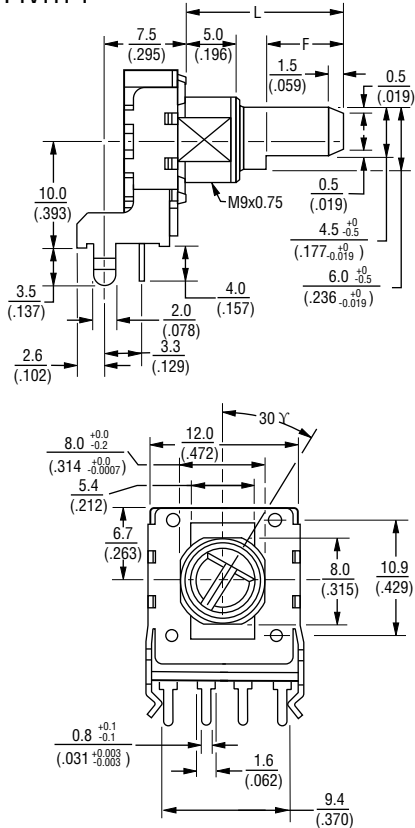
- Audio/TV sets
- Amplifiers/mixers/drum machines/synthesizers
- PCs/monitors
- Appliances

# PTV/PTT Series - 12 mm Potentiometer

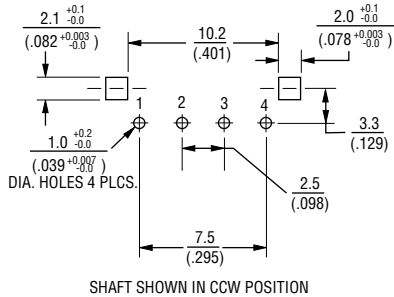
# BOURNS®

### Product Dimensions

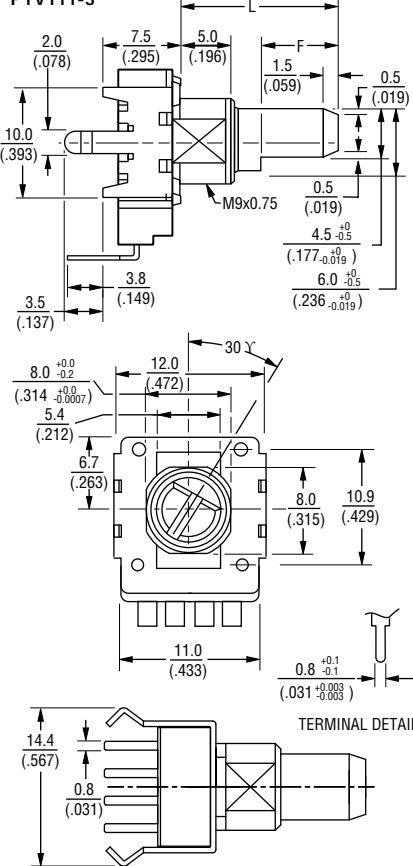
PTV111-1



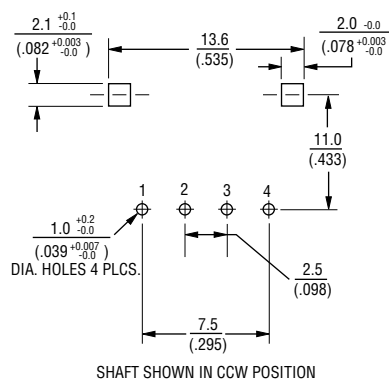
#### RECOMMENDED PCB LAYOUT



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

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# PTV/PTT Series - 12 mm Potentiometer

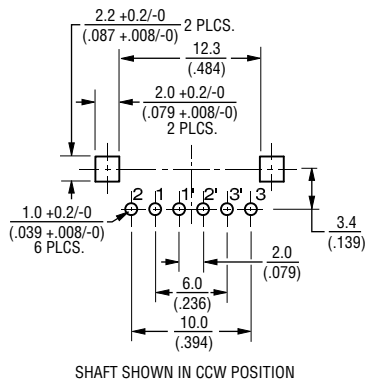
**BOURNS®**

## Product Dimensions

### PTV112-2 DUAL GANG

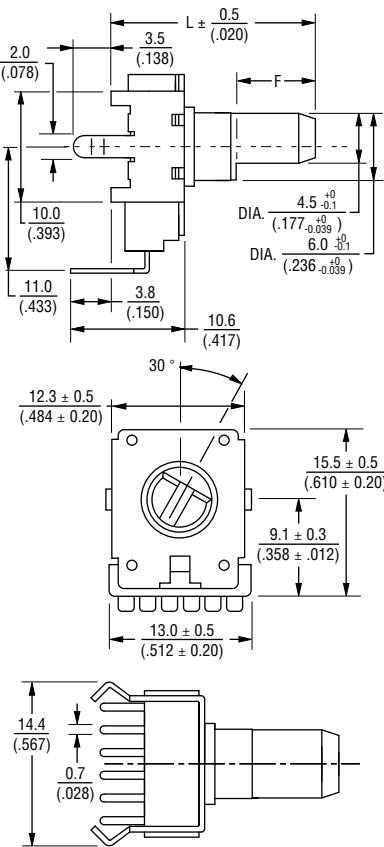


### RECOMMENDED PCB LAYOUT

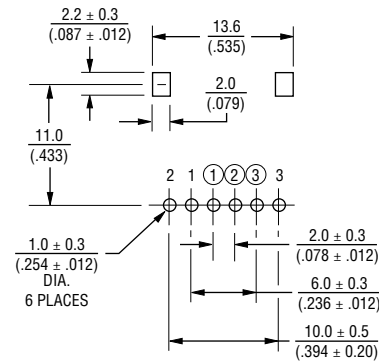


SHAFT SHOWN IN CCW POSITION

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

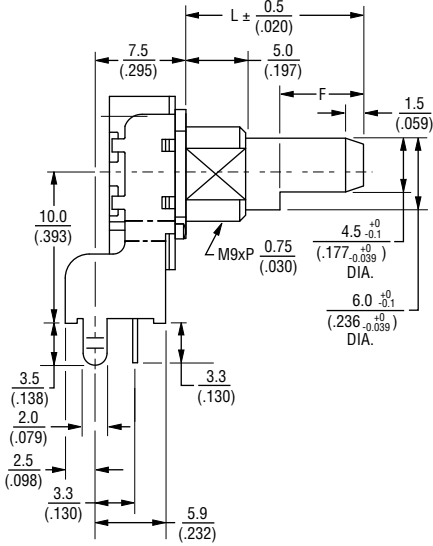
# PTV/PTT Series - 12 mm Potentiometer

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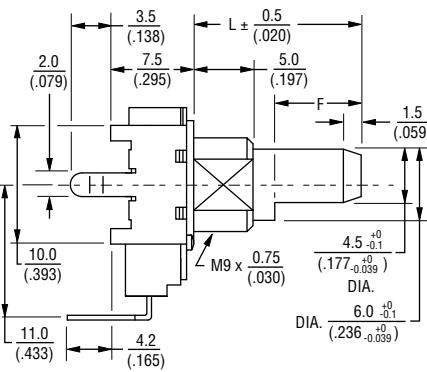
## Product Dimensions

## Dimensions With Bushing

PTV112-1 DUAL GANG

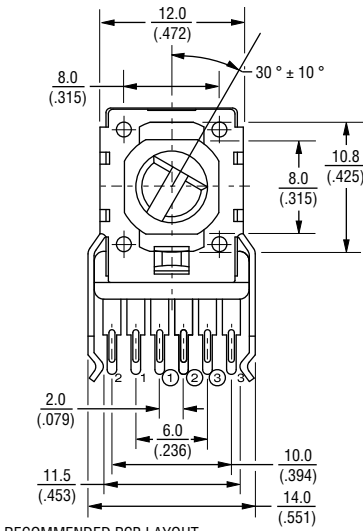


PTV112-3 DUAL GANG

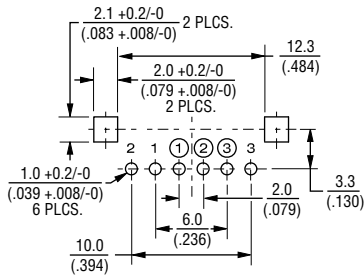


L	$\frac{12.5}{(.492)}$	$\frac{15}{(.591)}$	$\frac{17.5}{(.689)}$	$\frac{20}{(.787)}$
F	$\frac{7}{(.276)}$	$\frac{7}{(.276)}$	$\frac{12}{(.472)}$	$\frac{12}{(.472)}$

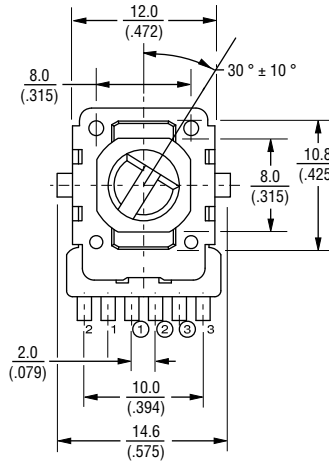
DIMENSIONS:  $\frac{\text{MM}}{\text{INCHES}}$



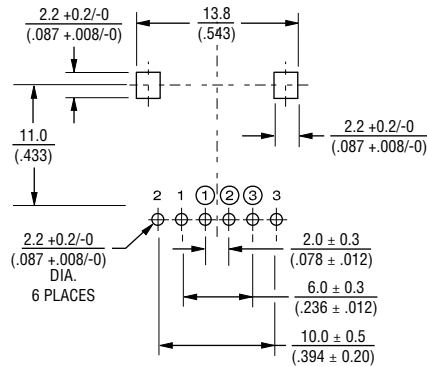
RECOMMENDED PCB LAYOUT



SHAFT SHOWN IN CCW POSITION



RECOMMENDED PCB LAYOUT



SHAFT SHOWN IN CCW POSITION

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# PTV/PTT Series - 12 mm Potentiometer



## 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.

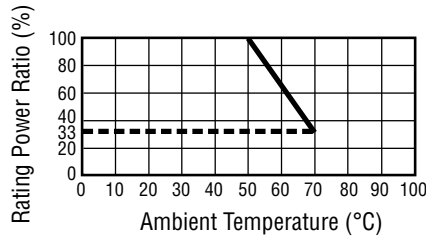
\* Available with Pin Styles 1 & 3 only.

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

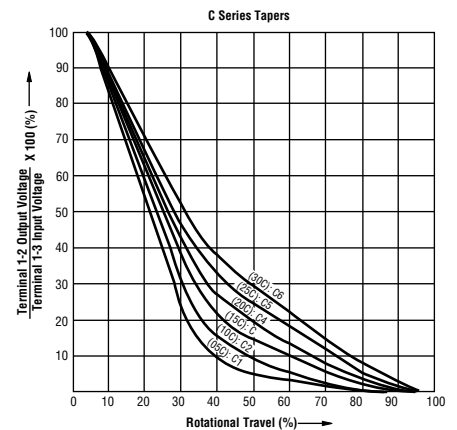
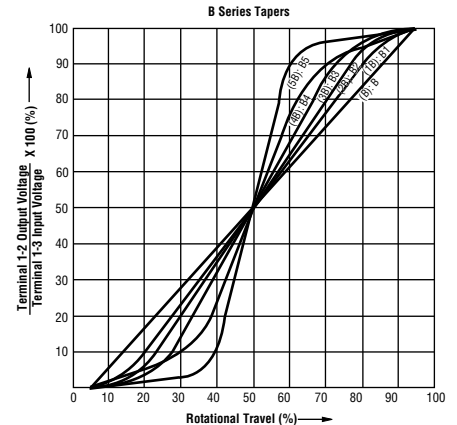
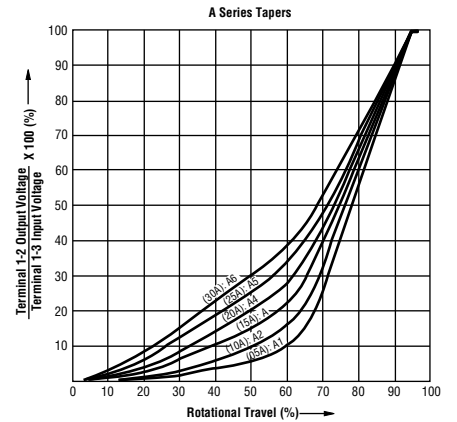
## Standard Resistance Table

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



## Tapers



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REV. 10/19

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