

\*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

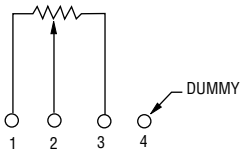
Operating Temperature ..... -10 °C to +50 °C  
 Power Rating..... 0.05 Watt  
 Maximum Operating Voltage ..... 50 V AC, 20 V DC  
 Sliding Noise ..... 100 mV max.

### Mechanical Characteristics

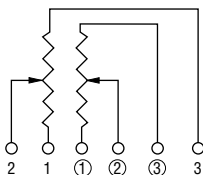
Mechanical Angle..... 300 ° ±5 °  
 Rotational Torque ..... 20 to 200 g-cm  
 Detent Torque..... 30 to 300 g-cm  
 Stop Strength  
 no bushing ..... 3 kg-cm min.  
 with bushing..... 3 kg-cm min.  
 Rotational Life ..... 15,000 cycles  
 Soldering Condition  
 ..... 300 °C max. within 3 seconds  
 Hardware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

### Electrical Diagrams

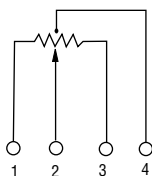
MODEL PTV 111



MODEL PTV 112

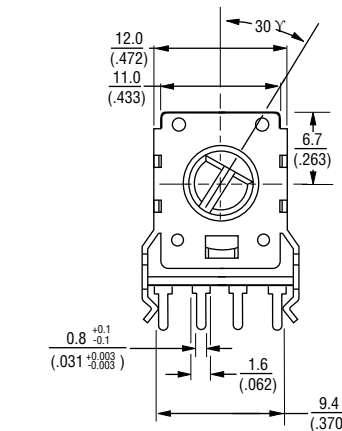
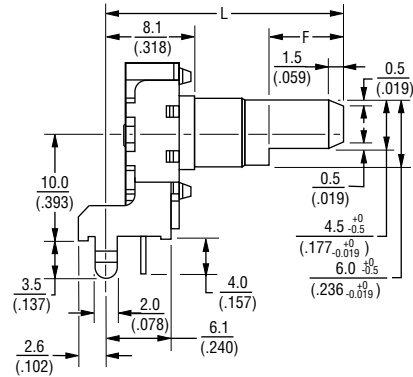


MODEL PTT 111

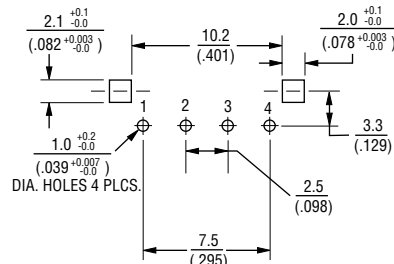


### Product Dimensions

PTV111-2



RECOMMENDED PCB LAYOUT

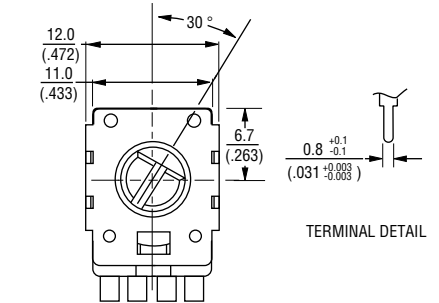
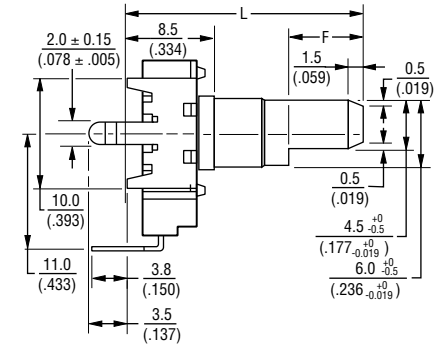


SHAFT SHOWN IN CCW POSITION

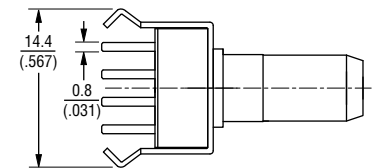
### Dimensions Without Bushing

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)

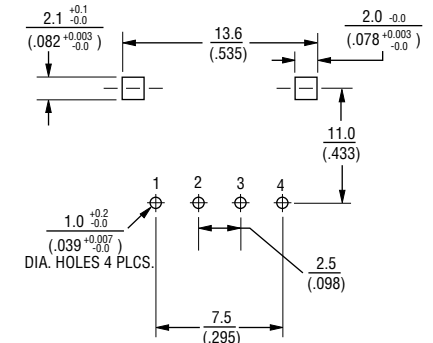
PTV111-4



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.  
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## Applications

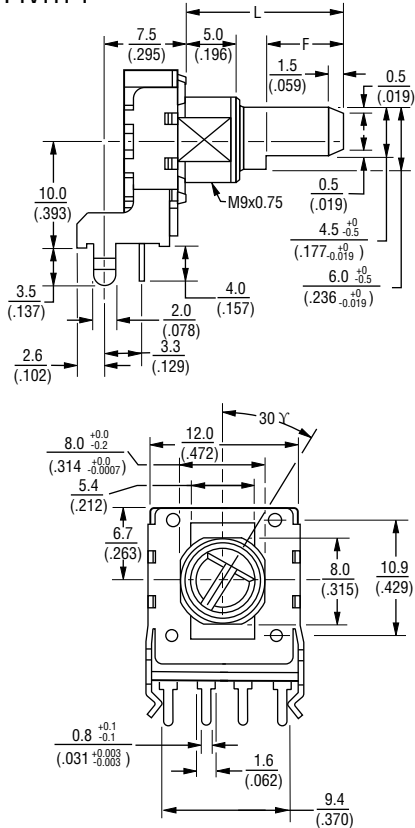
- Audio/TV sets
- Amplifiers/mixers/drum machines/synthesizers
- PCs/monitors
- Appliances

# PTV/PTT Series - 12 mm Potentiometer

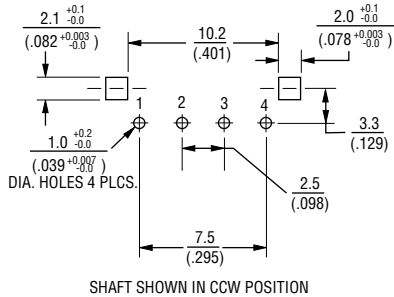
# BOURNS®

### Product Dimensions

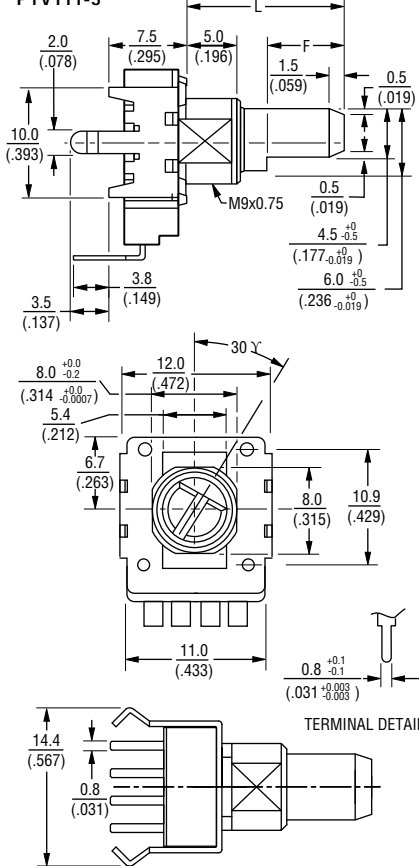
PTV111-1



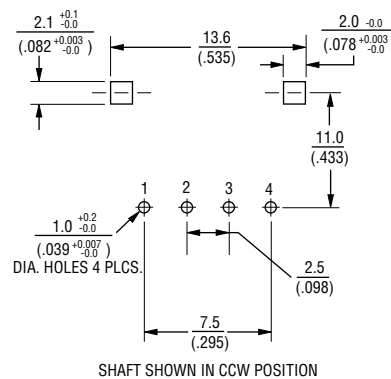
#### RECOMMENDED PCB LAYOUT



PTV111-3



#### RECOMMENDED PCB LAYOUT



### Dimensions With Bushing

	12.5 (.492)	15 (.591)	17.5 (.689)	20 (.787)
L				
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

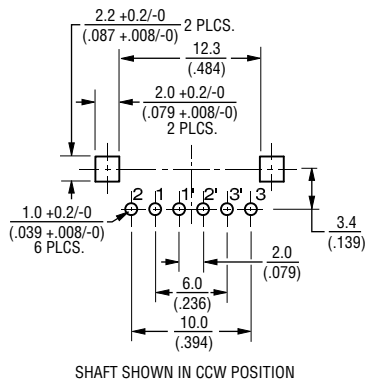
**BOURNS®**

## Product Dimensions

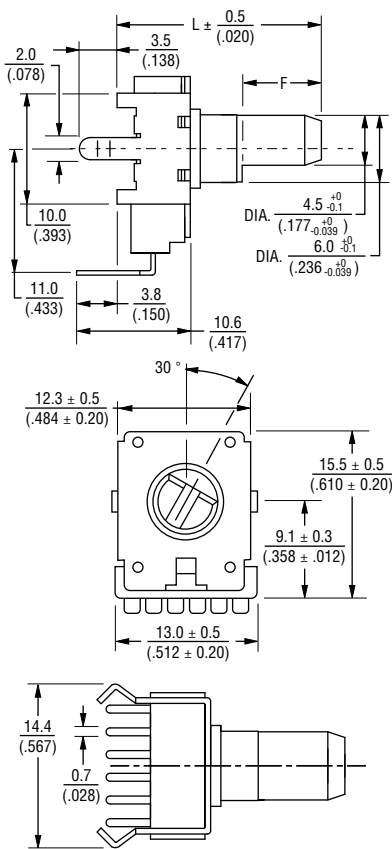
### PTV112-2 DUAL GANG



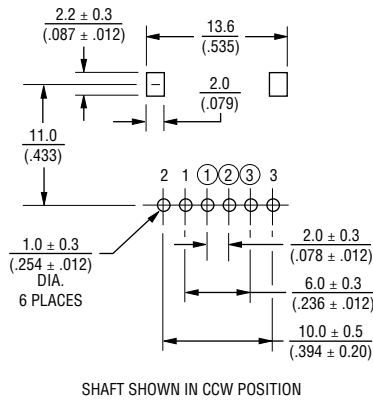
### RECOMMENDED PCB LAYOUT



### PTV112-4 DUAL GANG



### RECOMMENDED PCB LAYOUT



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

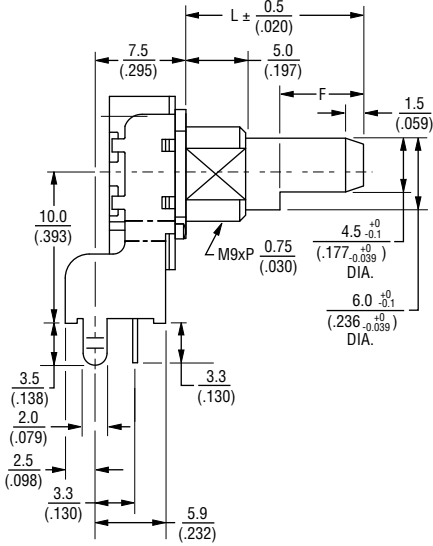
# PTV/PTT Series - 12 mm Potentiometer

**BOURNS®**

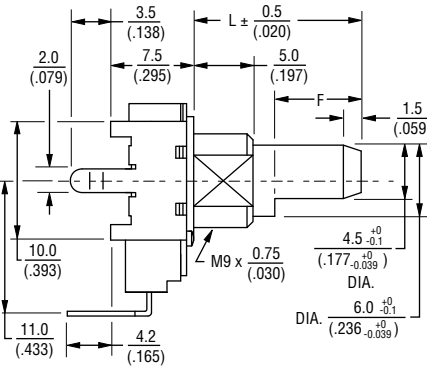
## Product Dimensions

## Dimensions With Bushing

PTV112-1 DUAL GANG

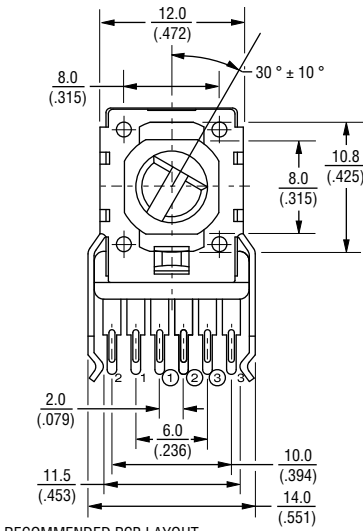


PTV112-3 DUAL GANG

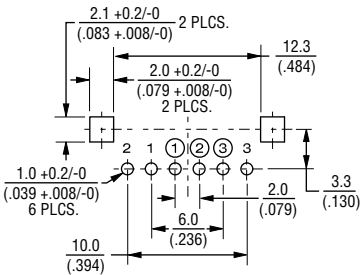


L	$\frac{12.5}{(.492)}$	$\frac{15}{(.591)}$	$\frac{17.5}{(.689)}$	$\frac{20}{(.787)}$
F	$\frac{7}{(.276)}$	$\frac{7}{(.276)}$	$\frac{12}{(.472)}$	$\frac{12}{(.472)}$

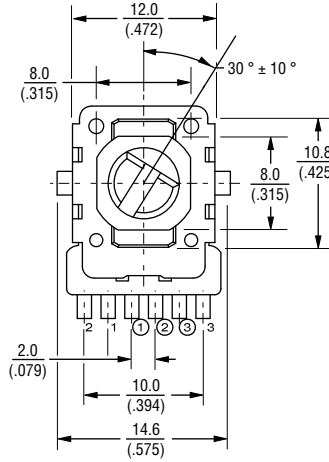
DIMENSIONS:  $\frac{\text{MM}}{\text{INCHES}}$



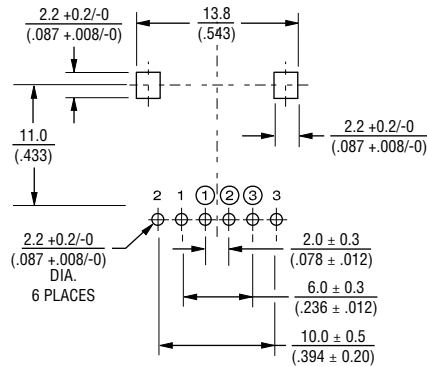
RECOMMENDED PCB LAYOUT



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.

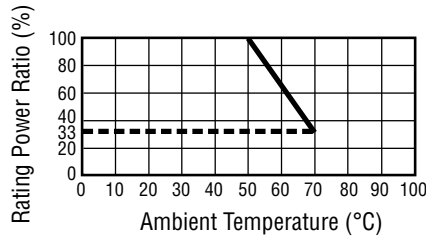
\* Available with Pin Styles 1 & 3 only.

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

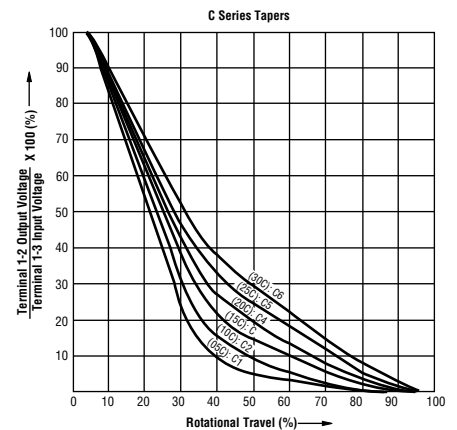
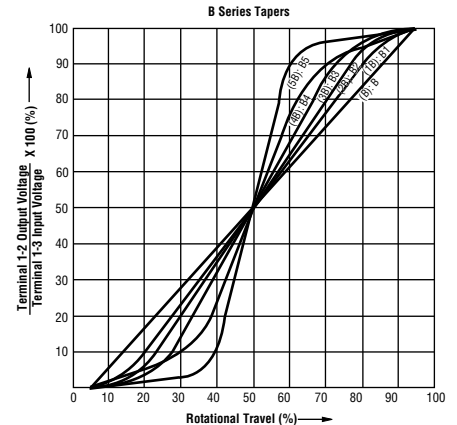
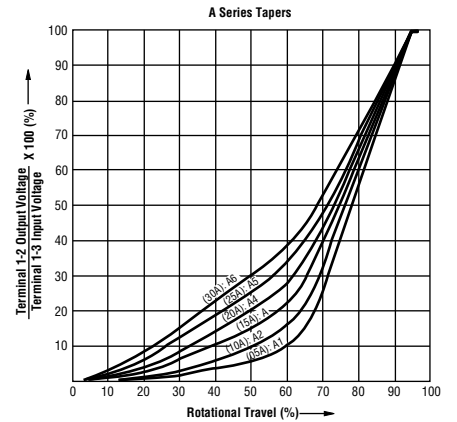
## Standard Resistance Table

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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[PTV111-2425A-B104](#) [PTV111-2415A-B103](#) [PTV111-2420A-B203](#) [PTV111-1225A-B102](#) [PTV111-1415A-A105](#)  
[PTV111-1415A-A1105](#) [PTV111-2415A-A105](#) [PTV111-2425A-B103](#) [PTV111-3420A-B203](#) [PTV111-1215A-B1503](#)  
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