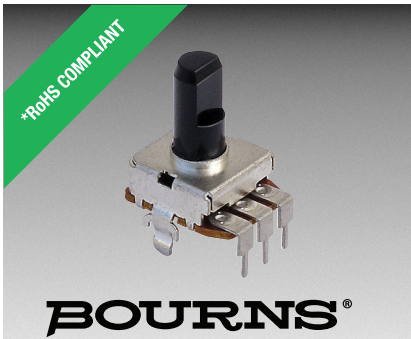




**THE DATASHEET OF  
PDB12-H2251-502BF**





## Features

- Single gang panel control
- RoHS compliant\*
- Carbon element
- Center detent option
- Wide range of resistance tapers
- Insulated shaft styles
- Assortment of pin layouts

## Additional Information

Click these links for more information:



# PDB12 Series - 12 mm Rotary Potentiometer

### Electrical Characteristics

Taper..... Linear, audio  
 Standard Resistance Range  
 ..... 1K ohms to 1M ohms  
 Standard Resistance Tolerance  
 $R \leq 1 \text{ K}\Omega$  .....  $\pm 30\%$   
 $1 \text{ K}\Omega < R < 1 \text{ M}\Omega$  .....  $\pm 20\%$   
 $\geq 1 \text{ M}\Omega$  .....  $\pm 30\%$   
 Residual Resistance ..... 10 ohms max.

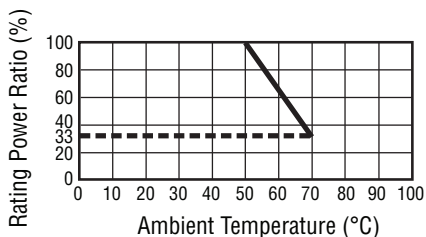
### Environmental Characteristics

Power Rating  
 Linear ..... 0.08 watt  
 Audio ..... 0.04 watt  
 Maximum Operating Voltage  
 Linear ..... 150 V  
 Audio ..... 100 V  
 Sliding Noise ..... 47 mV max.  
 Operating Temperature.. -10 °C to +70 °C

### Mechanical Characteristics

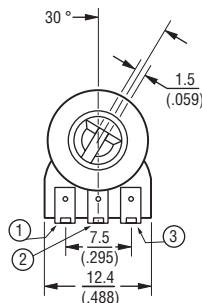
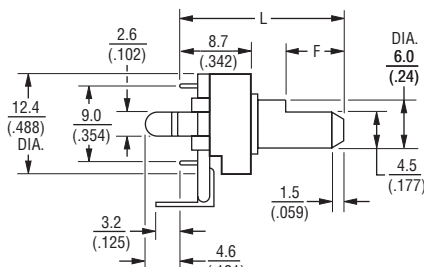
Mechanical Angle .....  $300^\circ \pm 5^\circ$   
 Rotational Torque ..... 20 to 200 g-cm  
 Stop Strength ..... 3 kg-cm min.  
 Rotational Life ..... 15,000 cycles  
 Soldering Condition  
 ..... 300 °C max. within 3 seconds  
 Hardware ..... No hardware supplied

### Derating Curve

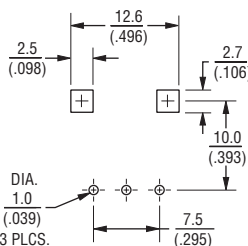


### Product Dimensions

#### PDB12-H



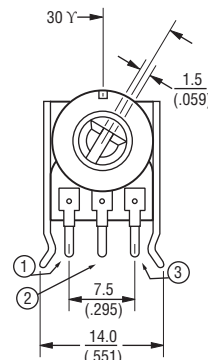
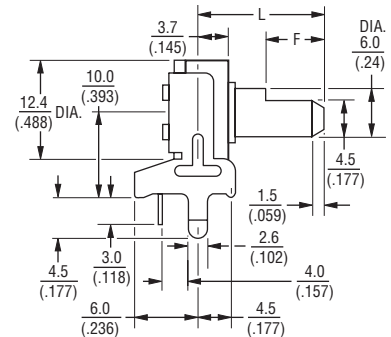
#### RECOMMENDED PCB LAYOUT



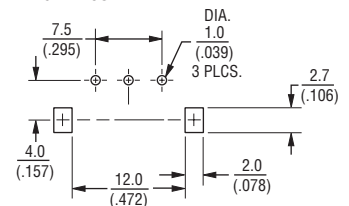
SHAFT SHOWN IN CCW POSITION

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

#### PDB12-G



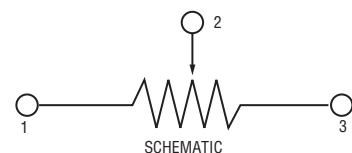
#### RECOMMENDED PCB LAYOUT



SHAFT SHOWN IN CCW POSITION

### PDB12 Dimensions

L	15 (.591)	20 (.787)	25 (.984)	30 (1.181)
F	7 (.276)	7 (.276)	12 (.472)	12 (.472)



**CALIFORNIA WARNING** Can expose you to lead, a carcinogen and reproductive toxicant.  
 See [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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## Applications

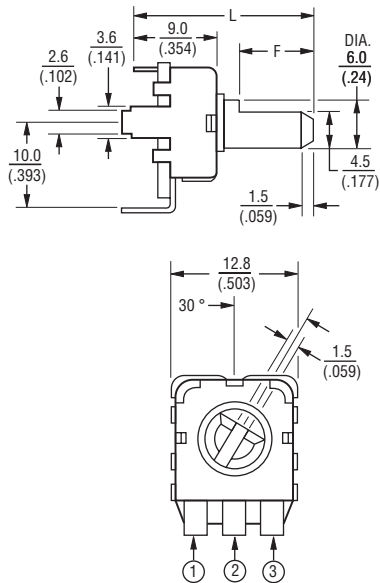
- Audio/TV sets
- Car radio
- Amplifiers/mixers/drum machines/synthesizers
- PCs/monitors
- Appliances

# PDB12 Series - 12 mm Rotary Potentiometer

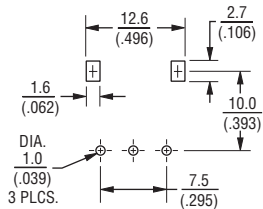
# BOURNS®

### Product Dimensions

#### PDB12-M



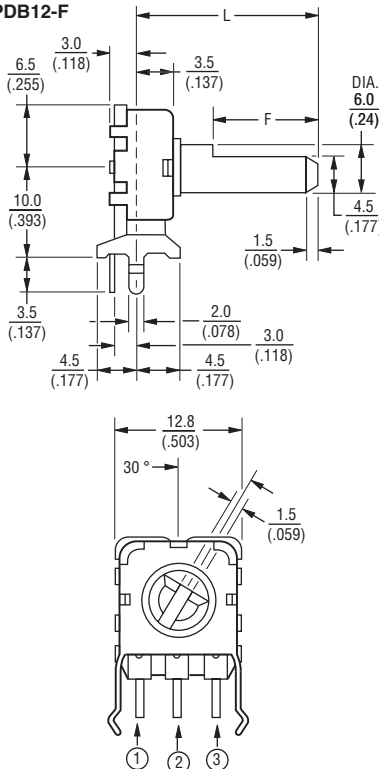
#### RECOMMENDED PCB LAYOUT



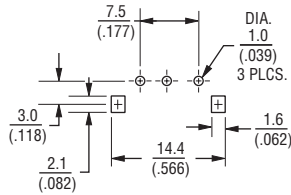
SHAFT SHOWN IN CCW POSITION

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

#### PDB12-F



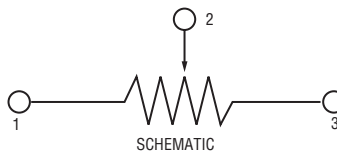
#### RECOMMENDED PCB LAYOUT



SHAFT SHOWN IN CCW POSITION

### PDB12 Dimensions

L	15 (.591)	20 (.787)	25 (.984)	30 (1.181)
F	7 (.276)	7 (.276)	12 (.472)	12 (.472)



### How To Order

**PDB12 - H 4 20 1 - 103 A F**

Model \_\_\_\_\_

Terminal Config. \_\_\_\_\_  
(see individual drawings)

H = PC pins, rear facing  
snap mount

G = PC pins, vertical/  
down facing/  
snap mount

M = PC pins, rear facing

F = PC pins, vertical/  
down facing/  
snap mount

Option \_\_\_\_\_

- 2 = Center Detent
- 4 = No Detent

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

- 15 = 15 mm
- 20 = 20 mm
- 25 = 25 mm
- 30 = 30 mm

Number of Gangs \_\_\_\_\_

- 1 = Single Gang

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

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

- A = Audio Taper
- B = Linear Taper

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

- F = Flat Type Insulated Shaft

Other styles available.

### 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

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