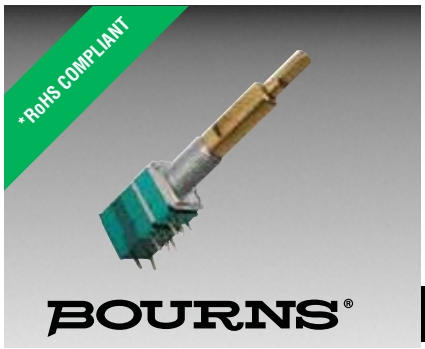


Features

- Carbon element
- Assortment of resistance tapers
- Variety of shaft lengths
- Dual gang element
- Flatted, slotted and knurled shaft styles
- Center detent option
- Rotary switch option

This series is currently available but not recommended for new designs.

PTH90 Series Dual Concentric Shaft Panel Control w/Rotary Switch

Electrical Characteristics

Standard Resistance Range ..... 1K ohms to 1 megohm
Standard Resistance Tolerance
R < 250K ohms ..... ±20 %
R ≥ 250K ohms ..... ±30 %
End Resistance
R < 50K ohms ..... 30 ohms max.
R ≥ 50K ohms ..... 0.1 % of TR max.
Insulation Resistance @ 250 VDC ..... 100 megohms min.
Dielectric Withstanding Voltage ..... 300 VAC
Standard Taper ..... Linear, Audio
Power Rating
Linear ..... 0.05 watt
Audio ..... 0.05 watt
Slider Noise ..... 100 mV max.
Operating Voltage ..... 50 VAC / 10 VDC

Environmental Characteristics

Operational Life ..... 15,000 cycles
TR Shift ..... ±15 %
Operating Temperature Range ..... -10 °C to +55 °C
Resistance to Solder Heat ..... ±5 %
IP Rating ..... IP 40

Mechanical Characteristics

Mechanical Angle ..... 300 ° ±3 °
Operating Torque ..... 20~250 gf-cm
Stop Strength ..... 5 kgf-cm max.
Mounting Torque ..... 10 kgf-cm max.
Shaft Push/Pull Strength ..... 10 kgf max.
Soldering Condition
Manual ..... 300 °C ±5 °C for 3 sec.
Wave ..... 260 °C ±5 °C for 5 sec.
Wash ..... Not recommended
Hardware ..... One flat washer and one mounting nut supplied with each potentiometer

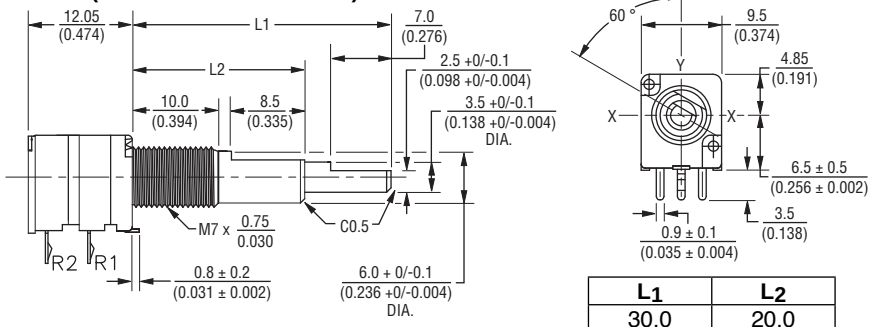
Switch Characteristics

Power Rating ..... 3 A @ 16 VDC
Contact Resistance ..... 100 milliohms
Dielectric Strength
Bushing to Terminals ..... 300 VAC
Switch Terminals ..... 50 VAC
Insulation Resistance
Bushing to Terminals @ 250 VAC ..... 100 megohms
Switch Terminals @ 50 VAC ..... 10 megohms
Switch Type ..... Rotary
Contact Arrangement ..... SPST
Switching Angle ..... 50 ° max.
Detent Torque ..... 500 kgf-cm
Operating Life ..... 10,000 cycles

WARNING Cancer and Reproductive Harm
www.P65Warnings.ca.gov

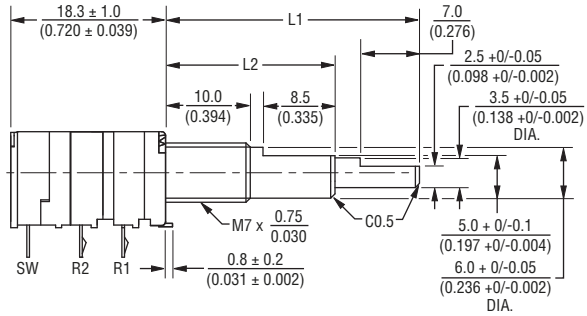
Product Dimensions

PTH901 (Shown with Flatted Shaft)



L1	L2
30.0 (1.181)	20.0 (.787)
35.0 (1.378)	25.0 (.984)

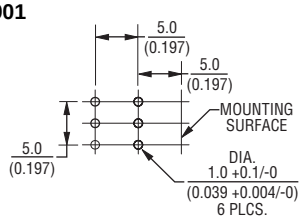
PTH902 (Shown with Flatted Shaft)



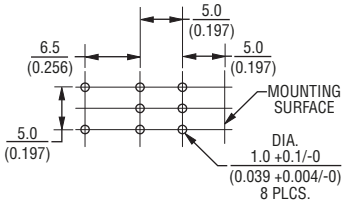
L1	L2
30.0 (1.181)	20.0 (.787)
35.0 (1.378)	25.0 (.984)

Mounting Hole Detail

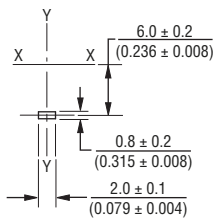
PTH901



PTH902

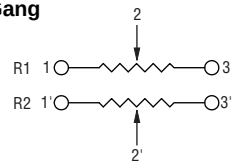


Locating Lug Detail



Schematic

Dual Gang



Switch Circuit



*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

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Applications

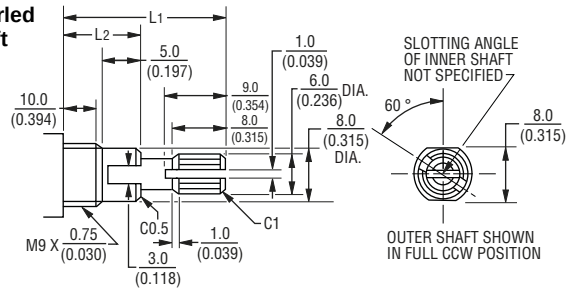
- Multimedia sound systems
- Mixers / drums / DJ equipment
- Portable electronics
- Portable appliances

PTH90 Series Dual Concentric Shaft Panel Control w/Rotary Switch

BOURNS®

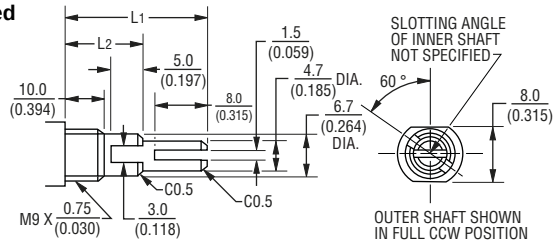
Additional Shaft Styles

Knurled Shaft



L_1	L_2
30.0 (1.181)	20.0 (.787)
35.0 (1.378)	25.0 (.984)

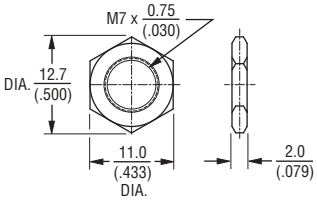
Slotted Shaft



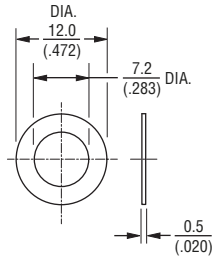
L_1	L_2
30.0 (1.181)	20.0 (.787)
35.0 (1.378)	25.0 (.984)
40.0 (1.575)	25.0 (.984)

Hardware

Nut



Washer



DIMENSIONS: MM (INCHES)

How To Order

PTH90 2 - 0 30 F - 103 B2

Model Number Designator
PTH90 = Dual Concentric Shaft Panel Control

Number of Sections
1 = Dual Gang, No Switch
2 = Dual Gang w/Rotary Switch

Center Detent
0 = No Detent
1 = Center Detent

Shaft Length (FMS)
30 = 30 mm
35 = 35 mm
40 = 40 mm

Shaft Style
F = Flatted Metal
S = Slotted Metal
K = Knurled (18 tooth serrated)

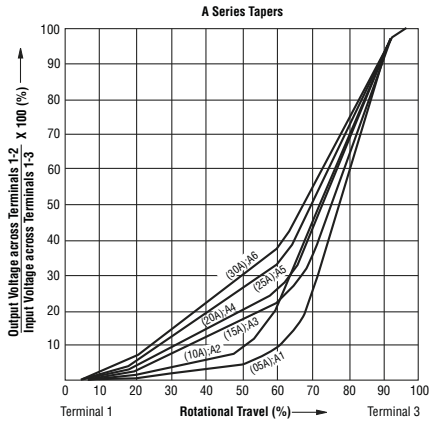
Resistance Code
(See Standard Resistance Table)

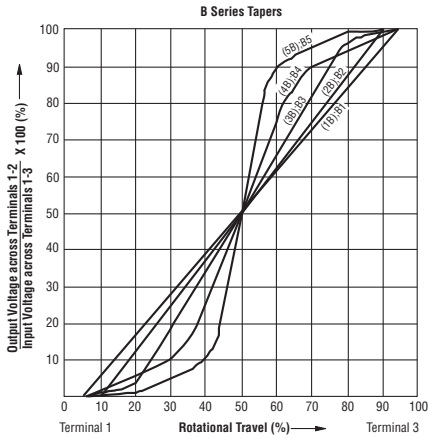
Resistance Taper (See Taper Charts)
Taper Series followed by Curve Number

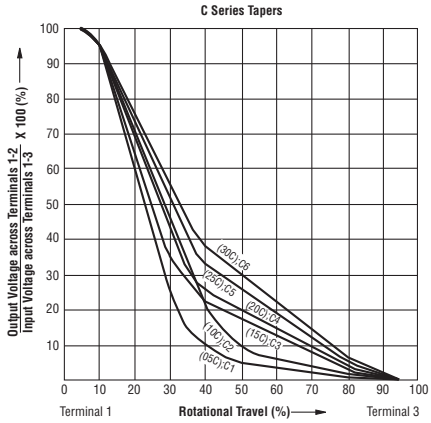
Standard Resistance Table

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

Tapers







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