



Features

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



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

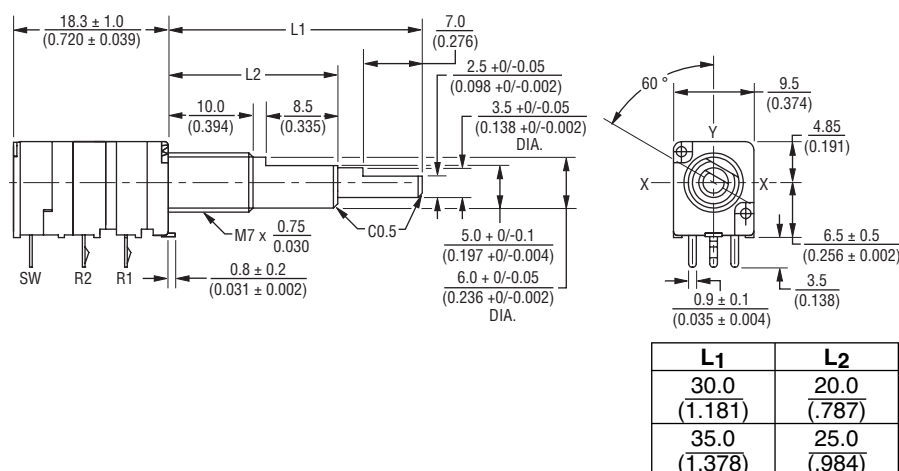
Mechanical Angle	 300 ° ±3 °
Operating Torque	 20~250 gf-cm
Stop Strength	 10 kgf-cm min.
Mounting Torque	 10 kgf-cm max.
Shaft Push/Pull Strength	 10 kgf max.
Soldering Condition	
Manual	 300 °C ±5 °C for 3 sec.
Wave	 260 °C ±5 °C for 5 sec.
Wash	 Not recommended
Hardware	 One flat washer and one mounting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

Switch Characteristics

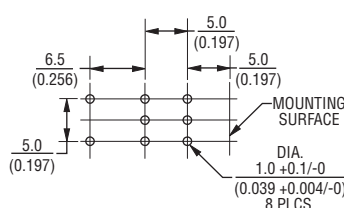
Power Rating	 3 A @ 16 VDC
Contact Resistance	 100 milliohms
Dielectric Strength	
Bushing to Terminals	 300 VAC
Switch Terminals	 50 VAC
Insulation Resistance	
Bushing to Terminals @ 250 VAC	 100 megohms
Switch Terminals @ 50 VAC	 10 megohms
Switch Type	 Rotary
Contact Arrangement	 SPST
Switching Angle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

Product Dimensions

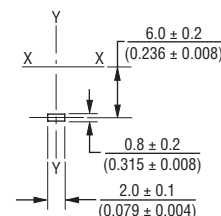
(Shown with Flatted Shaft)



Mounting Hole Detail

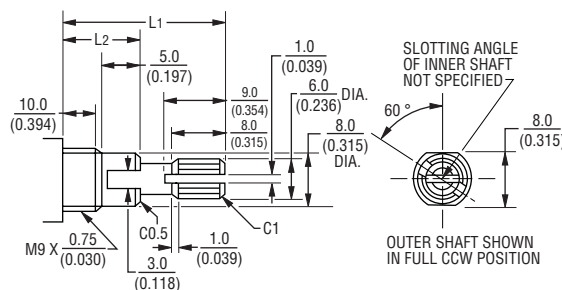


Locating Lug Detail



Additional Shaft Styles

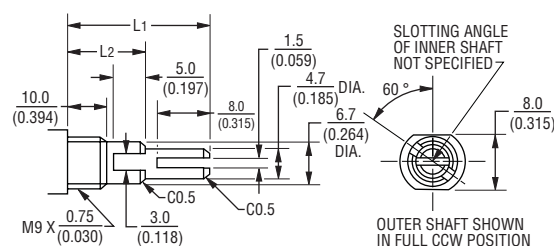
Knurled Shaft



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

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

Slotted Shaft



L1	L2
35.0 (1.378)	21.0 (.827)
40.0 (1.575)	26.0 (1.024)

*RoHS Directive 2002/95/EC Jan 27, 2003 including Annex.
Specifications are subject to change without notice.
Customers should verify actual device performance in their specific applications.

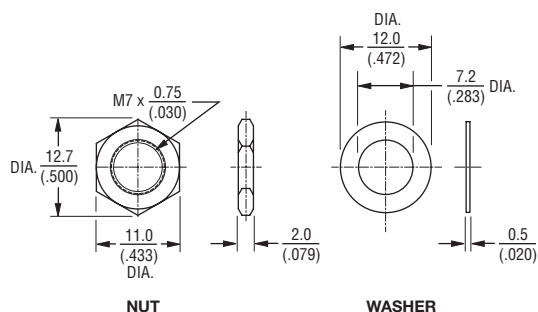
Applications

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

PTH90 Series Dual Concentric Shaft Panel Control w/Rotary Switch

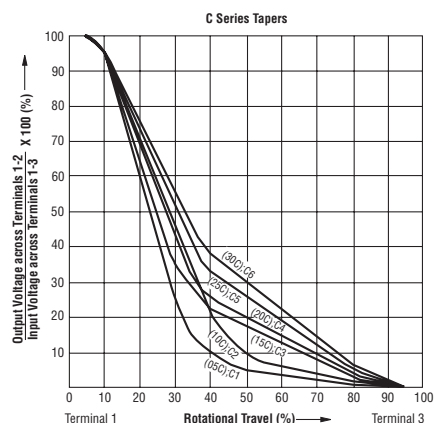
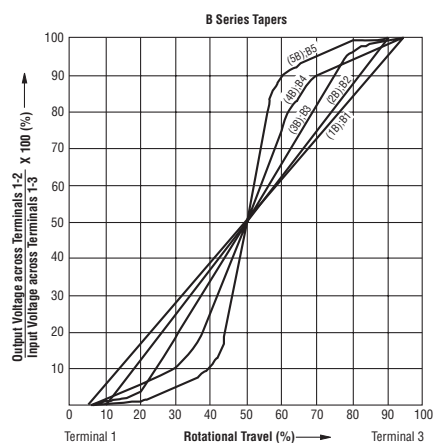
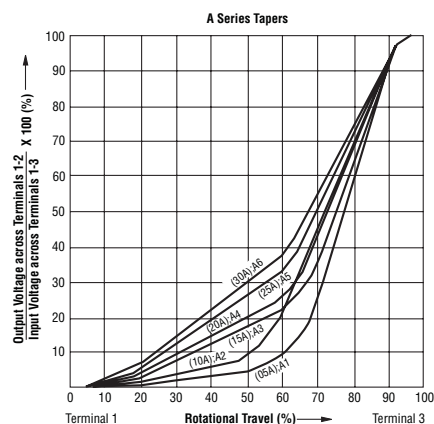
BOURNS®

Hardware



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

Tapers



How To Order

PTH90 2 - 0 30 F - 103 B2

Model Number
Designator
PTH90 = Dual
Concentric Shaft Panel
Control w/Rotary Switch

Number of Sections
2 = Dual Gang

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

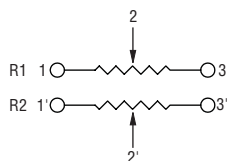
*Flatted and knurled shafts only.

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

Schematic

Dual Gang



Switch Circuit



REV. 10/11

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