



- 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



PTH90 Series Dual Concentric Shaft Panel Control w/Rotary Switch

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

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 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

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



Specifications are subject to change without notice. Users should verify actual device performance in their specific applications.

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[illegible]

Technical drawing of a mechanical part with dimensions and a table of L1 and L2 values.

Dimensions (mm):

- 18.3 ± 1.0 (0.720 ± 0.039)
- L1
- 7.0 (0.276)
- L2
- 10.0 (0.394)
- 8.5 (0.335)
- 2.5 +0/-0.05 (0.098 +0/-0.002)
- 3.5 +0/-0.05 (0.138 +0/-0.002) DIA.
- M7 x 0.75 / 0.030
- C0.5
- 0.8 ± 0.2 (0.031 ± 0.002)
- 5.0 +0/-0.1 (0.197 +0/-0.004)
- 6.0 +0/-0.05 (0.236 +0/-0.002) DIA.

Table of L1 and L2 values:

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

6.5
(0.256)

5.0
(0.197)

5.0
(0.197)

5.0
(0.197)

MOUNTING SURFACE

DIA. 1.0 +0.1/-0
(0.039 + 0.004/-0)
8 PLCS.

Gang

R1 1 — [resistor] — 3

R2 1' — [resistor] — 3'

2

2'

1

Applications

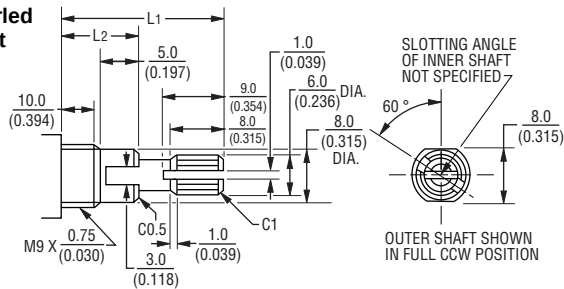
- Multimedia sound systems
- Mixers / drums / DJ equipment
- Portable electronics
- Portable appliances

PTH90 Series Dual Concentric Shaft Panel Control w/Rotary Switch

BOURNS®

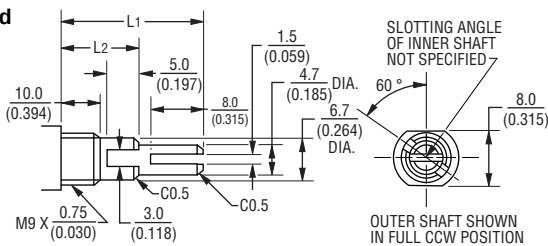
Additional Shaft Styles

Knurled Shaft



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

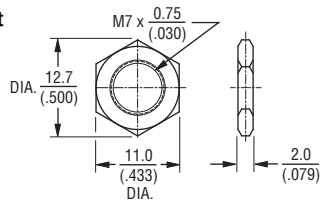
Slotted Shaft



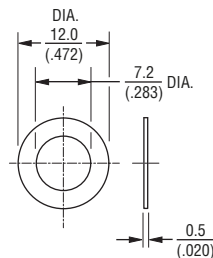
L1	L2
30.0 (1.181)	20.0 (.787)
35.0 (1.378)	25.0 (.984)
40.0 (1.575)	25.0 (.984)

Hardware

Nut



Washer



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

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)

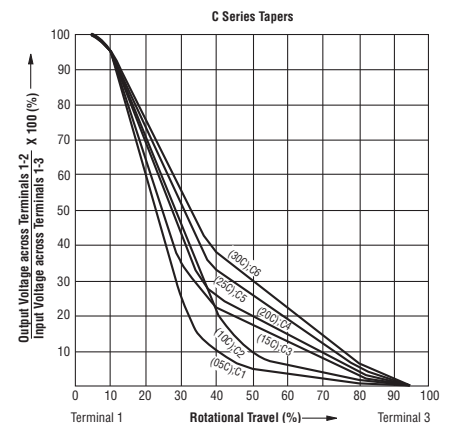
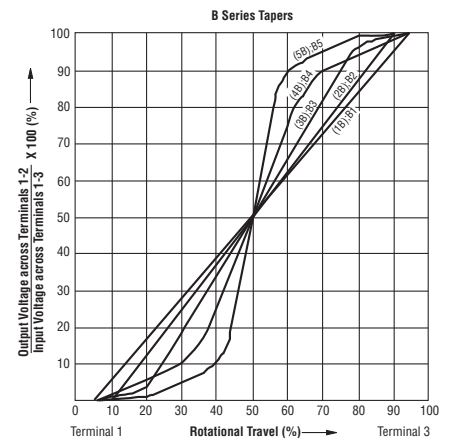
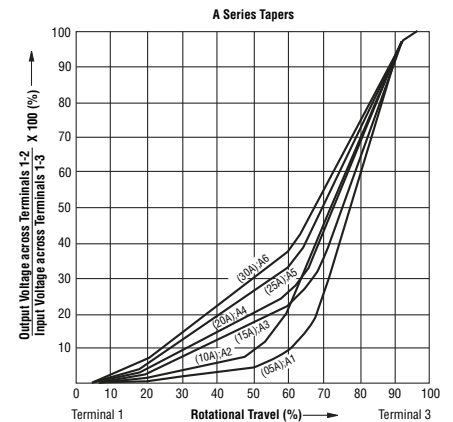
Resistance Code
(See Standard Resistance Table)

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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