

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

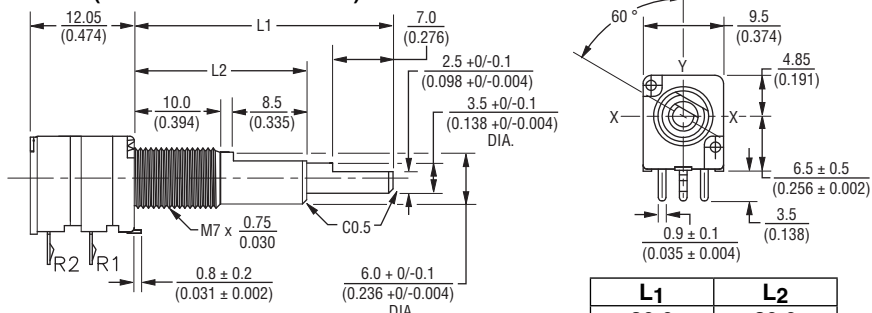
Operational Life 15,000 cycles
TR Shift $\pm 15\%$
Operating Temperature Range
..... -10°C to $+55^{\circ}\text{C}$
Resistance to Solder Heat $\pm 5\%$
IP Rating IP 40

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

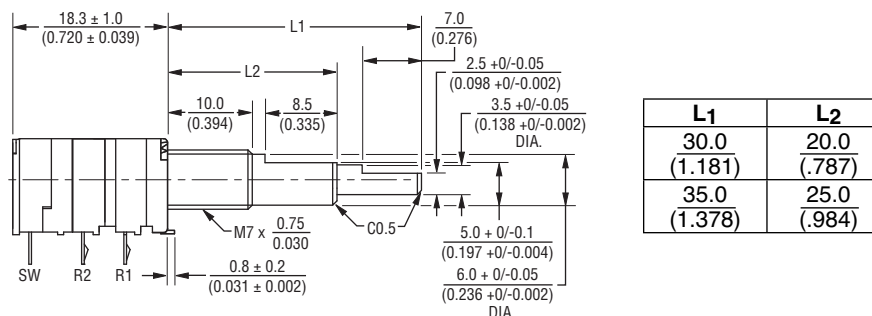
*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.
Specifications are subject to change without notice.
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Users should verify actual device performance in their specific applications.

PTH901 (Shown with Flatted Shaft)



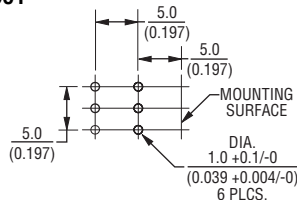
L1	L2
$\frac{30.0}{(1.181)}$	$\frac{20.0}{(.787)}$
$\frac{35.0}{(1.378)}$	$\frac{25.0}{(.984)}$

PTH902 (Shown with Flatted Shaft)



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

PTH901



PTH902

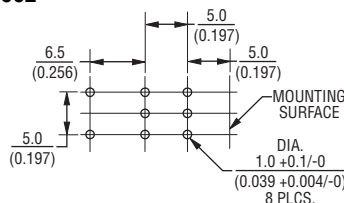
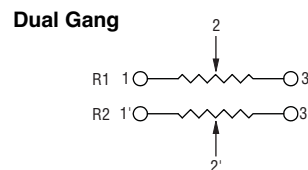


Figure 1: Schematic diagram of the test specimen. The diagram shows a cross-section of a specimen with a central vertical axis labeled 'Y' and a horizontal axis labeled 'X'. The specimen has a central rectangular hole. Dimensions are given in millimeters with tolerances. The top flange has a thickness of 6.0 ± 0.2 mm. The middle section has a height of 0.8 ± 0.2 mm. The bottom flange has a thickness of 2.0 ± 0.1 mm. The total height of the specimen is 0.236 ± 0.008 mm. The width of the specimen is 0.315 ± 0.008 mm. The width of the central hole is 0.079 ± 0.004 mm.

Schematic



Switch Circuit



Applications

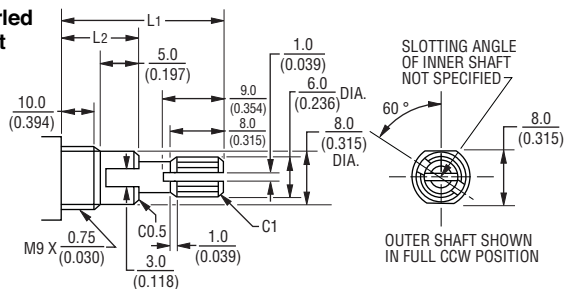
- Multimedia sound systems
- Mixers / drums / DJ equipment
- Automotive sound systems
- Portable electronics
- Portable appliances

PTH90 Series Dual Concentric Shaft Panel Control w/Rotary Switch

BOURNS®

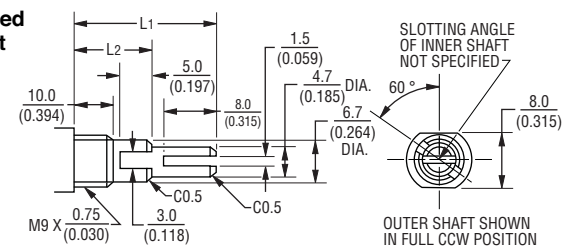
Additional Shaft Styles

Knurled Shaft



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

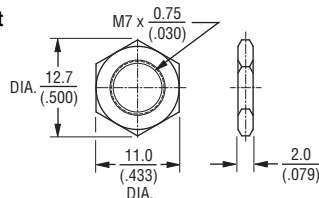
Slotted Shaft



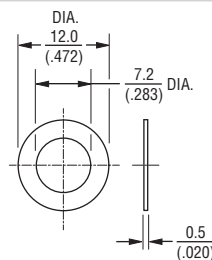
L1	L2
30.0 (1.181)	20.0 (.787)
35.0 (1.378)	25.0 (.984)
40.0 (1.575)	25.0 (.984)

Hardware

Nut



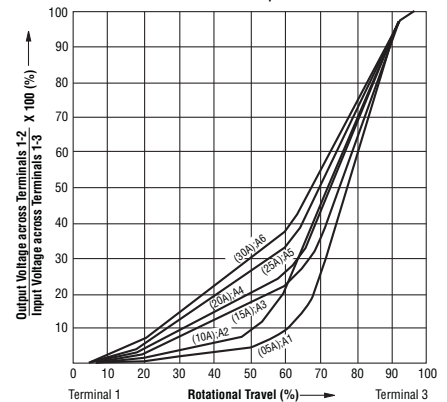
Washer



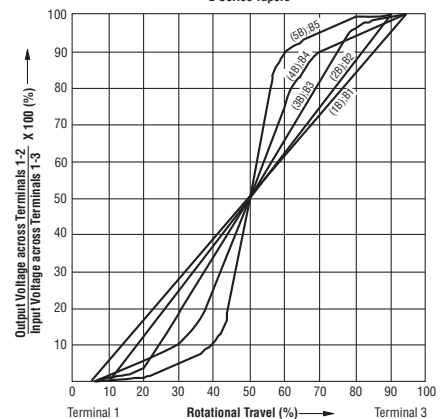
DIMENSIONS: $\frac{\text{MM}}{(\text{INCHES})}$

Tapers

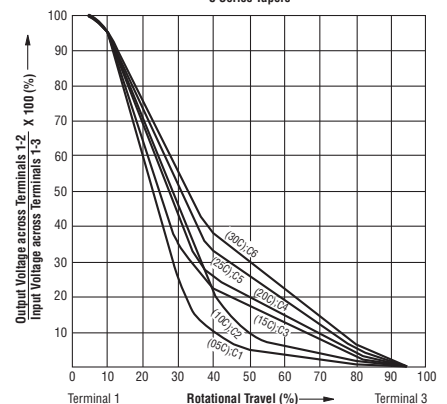
A Series Tapers



B Series Tapers



C Series Tapers



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

REV. 04/15

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