



- Carbon element
- Assortment of resistance tapers
- Dual gang element
- Center detent option



PTJ90 Series Dual Concentric Shaft Panel Control w/Push-Push 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	0.025 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	Push on - Push off
Contact Arrangement.....	SPDT
Switch Stroke.....	1.5 ± 0.1 mm
Operating Force.....	2 kgf max.
Operating Life.....	10,000 cycles

Technical drawing of the 1000 Series Switch Assembly, showing side and front views with dimensions in inches and millimeters.

Side View Dimensions:

- Overall length: 25.8 (1.016)
- Distance from front face to start of switch travel: 30.0 ± 1.0 (1.181 ± 0.039)
- Switch travel distance: 1.5 ± 0.5 (0.059 ± 0.020)
- Distance from front face to center of switch travel: 8.2 (0.323)
- Distance from front face to center of switch travel (alternative): 20.0 (0.787)
- Distance from front face to center of switch travel (alternative): 10.0 (0.394)
- Distance from front face to center of switch travel (alternative): 8.5 (0.335)
- Distance from front face to center of switch travel (alternative): 7.0 (0.276)
- Distance from front face to center of switch travel (alternative): 3.5 ± 0.05 (0.138 ± 0.002) DIA.
- Distance from front face to center of switch travel (alternative): 5.0 ± 0.1 (0.197 ± 0.004)
- Distance from front face to center of switch travel (alternative): 6.0 ± 0.05 (0.236 ± 0.002) DIA.
- Distance from front face to center of switch travel (alternative): 2.5 ± 0.1 (0.098 ± 0.004)
- Distance from front face to center of switch travel (alternative): 0.8 ± 0.2 (0.031 ± 0.002)
- Distance from front face to center of switch travel (alternative): 0.9 ± 0.1 (0.035 ± 0.004)
- Distance from front face to center of switch travel (alternative): 3.5 (0.138)

Front View Dimensions:

- Overall width: 9.5 (0.374)
- Distance from center to side face: 4.85 (0.191)
- Distance from center to side face (alternative): 6.5 ± 0.5 (0.256 ± 0.002)
- Distance from center to side face (alternative): 0.9 ± 0.1 (0.035 ± 0.004)
- Distance from center to side face (alternative): 3.5 (0.138)

Other Dimensions:

- Thread: M9 x 0.75 (0.030)
- Radius: R2, R1
- Radius: C0.5
- Angle: 60°

Technical drawing of the 1000 Series Switch Assembly, showing side and front views with dimensions in mm and inches.

Side View Dimensions:

- Overall length: 25.8 (1.016)
- Distance from front face to start of switch travel: 30.0 ± 1.0 (1.181 ± 0.039)
- Switch travel distance: 1.5 ± 0.5 (0.059 ± 0.020)
- Distance from front face to center of switch travel: 8.0 (0.315)
- Distance from front face to center of switch travel (alternative): 20.0 (0.787)
- Distance from front face to center of switch travel (alternative): 5.0 (0.197)
- Distance from front face to center of switch travel (alternative): 10.0 (0.394)
- Distance from front face to center of switch travel (alternative): 3.0 ± 0.1/-0 (0.118 ± 0.004/-0)
- Distance from front face to center of switch travel (alternative): 6.7 ± 0/-0.05 (0.264 ± 0/-0.002) DIA.
- Distance from front face to center of switch travel (alternative): 4.7 ± 0/-0.05 (0.185 ± 0/-0.002) DIA.
- Distance from front face to center of switch travel (alternative): 1.5 ± 0.1 (0.059 ± 0.004)
- Distance from front face to center of switch travel (alternative): 0.9 ± 0.1 (0.035 ± 0.004)
- Distance from front face to center of switch travel (alternative): 3.5 (0.138)
- Distance from front face to center of switch travel (alternative): 4.85 (0.191)
- Distance from front face to center of switch travel (alternative): 9.5 (0.374)
- Distance from front face to center of switch travel (alternative): 6.5 ± 0.5 (0.256 ± 0.002)
- Distance from front face to center of switch travel (alternative): 3.0 ± 0.1/-0 (0.118 ± 0.004/-0)
- Distance from front face to center of switch travel (alternative): 5.0 (0.197)
- Distance from front face to center of switch travel (alternative): 8.0 (0.315)
- Distance from front face to center of switch travel (alternative): 20.0 (0.787)
- Distance from front face to center of switch travel (alternative): 30.0 ± 1.0 (1.181 ± 0.039)
- Distance from front face to center of switch travel (alternative): 25.8 (1.016)

Front View Dimensions:

- Overall width: 9.5 (0.374)
- Distance from center to outer shaft: 4.85 (0.191)
- Distance from center to outer shaft (alternative): 6.5 ± 0.5 (0.256 ± 0.002)
- Distance from center to outer shaft (alternative): 3.5 (0.138)
- Distance from center to outer shaft (alternative): 0.9 ± 0.1 (0.035 ± 0.004)
- Distance from center to outer shaft (alternative): 1.5 ± 0.1 (0.059 ± 0.004)
- Distance from center to outer shaft (alternative): 4.7 ± 0/-0.05 (0.185 ± 0/-0.002) DIA.
- Distance from center to outer shaft (alternative): 6.7 ± 0/-0.05 (0.264 ± 0/-0.002) DIA.
- Distance from center to outer shaft (alternative): 5.0 (0.197)
- Distance from center to outer shaft (alternative): 8.0 (0.315)
- Distance from center to outer shaft (alternative): 20.0 (0.787)
- Distance from center to outer shaft (alternative): 30.0 ± 1.0 (1.181 ± 0.039)
- Distance from center to outer shaft (alternative): 25.8 (1.016)

Dimensions:

MM	(INCHES)
25.8	(1.016)
30.0 ± 1.0	(1.181 ± 0.039)
1.5 ± 0.5	(0.059 ± 0.020)
8.0	(0.315)
20.0	(0.787)
5.0	(0.197)
10.0	(0.394)
3.0 ± 0.1/-0	(0.118 ± 0.004/-0)
6.7 ± 0/-0.05	(0.264 ± 0/-0.002) DIA.
4.7 ± 0/-0.05	(0.185 ± 0/-0.002) DIA.
1.5 ± 0.1	(0.059 ± 0.004)
0.9 ± 0.1	(0.035 ± 0.004)
3.5	(0.138)
4.85	(0.191)
9.5	(0.374)
6.5 ± 0.5	(0.256 ± 0.002)

Inner and Outer Shaft Shown in CCW Position

6.8
(0.268)

5.0
(0.197)

4.0
(0.157)

5.0
(0.197)

A C

D F

MOUNTING SURFACE

DIA. 1.0+0.1/-0
(0.039+0.004/-0)
10 PLS.



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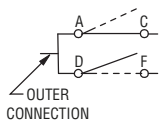
Applications

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

PTJ90 Series Dual Concentric Shaft Panel Control w/Push-Push Switch

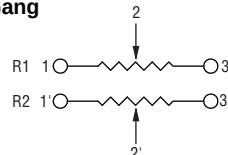
BOURNS®

Switch Circuit



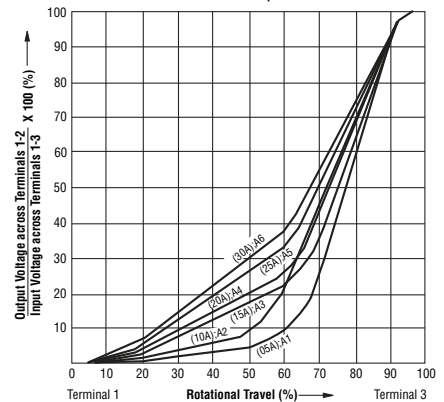
Schematic

Dual Gang

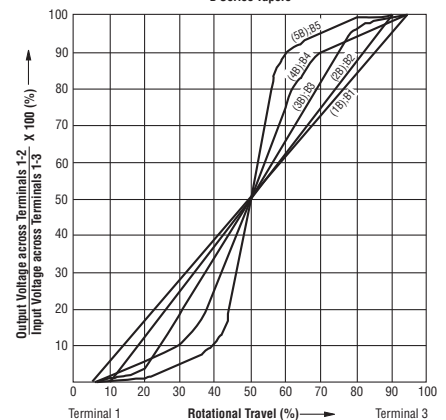


Tapers

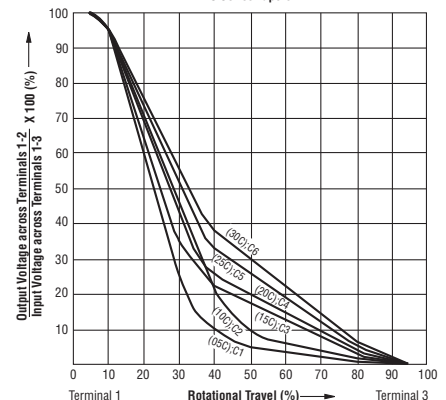
A Series Tapers



B Series Tapers



C Series Tapers



How To Order

PTJ90 2 - 0 30 F - 103 B2

Model Number
Designator
PTJ90 = Dual
Concentric Shaft Panel
Control w/Push-Push
Switch
Number of Sections
2 = Dual Gang
Center Detent
0 = No Detent
1 = Center Detent
Shaft Length (FMS)
30 = 30 mm
Shaft Style
F = Flatted Metal
S = Slotted Metal
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

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REV. 10/19

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