

BOURNS® Precision Potentiometers

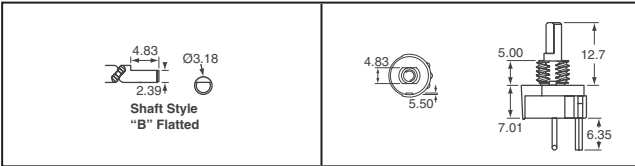
SERIES 39 — 1/2" (12.5mm) Single-Turn Conductive Plastic



Characteristics:
 • Total Resistance Tolerance: ±20% • End Resistance: 20Ω maximum • Effective Electrical Angle: Momentary Push Switch Type (Bushing Type "L") 201±5% • Contact Resistance Variation: 3% maximum • Dielectric Withstanding Voltage: 750 VRMS minimum • Insulation Resistance: 100MΩ minimum • Power Rating @ 70°C Linear Taper: 0.25 watt

Momentary Push Switch Type (SPST N.O.):
 • Power Rating (Resistive Load): 250mA @ 12VDC • Contact Resistance @ 10mA (with 500gm Shaft Load): 50Ω maximum • Contact Bounce: 5 milliseconds • Actuation Force: 500 ±100 grams

Environmental Characteristics:
 • Rotation Life (No Load): 50,000 Cycles; Momentary Push Switch Type: 50,000 cycles



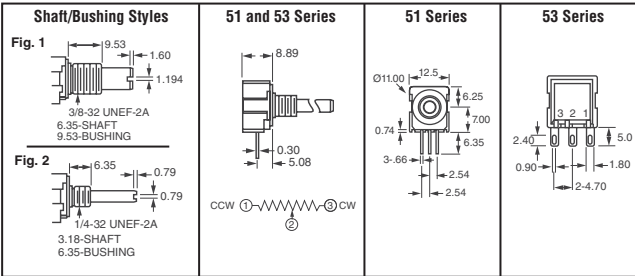
Shaft Style	Ω	Shaft Dia. x Length	Switch Type	Digi-Key Part No.	Price Each		
					1	25	50
B	10K	1/8" x 1/2"	Momentary Push	39LB-1PB-103-ND	6.57	4.47	4.21

SERIES 50 — Sealed 1/2" (12.5mm) Square Control



Characteristics: • Effective Electrical Angle: 270° ±5° • Contact Resistance Variation: 2.0% • Dielectric Withstanding Voltage: Sea Level: 1,500VAC minimum; 70,000 Feet: 500VAC minimum • Insulation Resistance: 1,000MΩ minimum **Mounting hardware included**

Dim. in mm



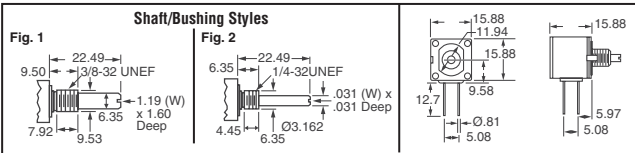
Bush. Fig.	Taper	Resistance Tolerance	Ω	Watts	Element Material	Digi-Key Part No.	Price Each			
							1	25	50	100
2	Linear	±10%	1K	1	Cermet	51CAD-E28-A10L-ND	6.10	4.75	3.89	3.29
2	Linear	±10%	5K	1	Cermet	51CAD-E28-A13L-ND	6.10	4.75	3.89	3.29
1	Audio	±20%	10K	1/4	Conductive Plastic	51AAD-B28-D15L-ND	6.58	5.13	4.19	3.55
2	Audio	±20%	10K	1/4	Conductive Plastic	51CAD-E28-D15L-ND	6.58	5.13	4.19	3.55
2	Linear	±20%	10K	1/2	Conductive Plastic	51CAD-E24-B15L-ND	6.10	4.75	3.89	3.29
1	Linear	±10%	10K	1	Cermet	51AAD-B24-A15L-ND	6.10	4.75	3.89	3.29
2	Linear	±10%	10K	1	Cermet	51CAD-E24-A15L-ND	6.10	4.75	3.89	3.29
2	Linear	±10%	100K	1	Cermet	51CAD-E28-A20L-ND	6.10	4.75	3.89	3.29
1	Linear	±20%	10K	1/2	Conductive Plastic	53AAA-B28-B15L-ND	7.03	5.48	4.48	3.79

SERIES 81 — 2 Watt Cermet - 5/8" Square Single-Turn



• Resistance Tolerance: ±10% • Continuity: Maintained for full mechanical angle • Effective Electrical Angle: 240° ±6° • Contact Resistance Variation: ±1% or 3Ω (whichever is greater) • Theoretical Resolution: Essentially Infinite • Dielectric Withstanding Voltage: MIL-STD-202, Method 301 (Sea Level: 1500VAC minimum; 70,000 Feet: 500VAC minimum) • Insulation Resistance (500 VDC): 1,000MΩ minimum **Mounting hardware included**

Dim. in mm

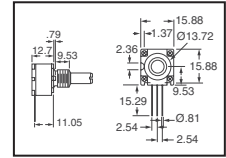


Bushing Fig.	Ω	Digi-Key Part No.	Price Each			
			1	25	50	100
1	1K	81A1A-B28-A10L-ND	7.45	5.80	4.75	4.01
1	5K	81A1A-B28-A13L-ND	7.45	5.80	4.75	4.01
2	5K	81C1A-E28-A13L-ND	7.45	5.80	4.75	4.01
1	10K	81A1A-B28-A15L-ND	7.45	5.80	4.75	4.01
2	10K	81C1A-E28-A15L-ND	7.45	5.80	4.75	4.01
2	100K	81C1A-E28-A20L-ND	7.45	5.80	4.75	4.01

SERIES 91 — 5/8" Square Single-Turn Conductive Plastic - Bushing Mount



• Resistance Tolerance: ±20%
 • Continuity: Maintained for full mechanical angle
 • Effective Electrical Angle: Linear Tapers: 240° ±5°, Audio Tapers: 225° ±5°
 • Contact Resistance Variation: ±1%
 • Dielectric Withstanding Voltage: MIL-STD-202, Method 301 (Sea Level: 1,500VAC min.; 70,000 Feet: 500VAC min.)
 • Insulation Resistance (500 VDC): 1,000MΩ min.
 • Theoretical Resolution: Essentially infinite



Mounting hardware included

Taper	Ω	Watts	Shaft Length From Mtg. Surface Inches (mm)	Digi-Key Part No.	Price Each			
					1	25	50	100
Linear	1K	1/2	7/8" (22.23)	91A1A-B28-B10L-ND	3.92	3.05	2.49	2.11
Linear	5K	1/2	3/4" (19.05)	91A1A-B24-B13L-ND	3.92	3.05	2.49	2.11
Linear	5K	1/2	7/8" (22.23)	91A1A-B28-B13L-ND	3.92	3.05	2.49	2.11
Audio	10K	1/4	3/4" (19.05)	91A1A-B24-D15L-ND	4.44	3.46	2.83	2.39
Linear	10K	1/2	3/4" (19.05)	91A1A-B24-B15L-ND	3.92	3.05	2.49	2.11
Linear	10K	1/2	7/8" (22.23)	91A1A-B28-B15L-ND	3.92	3.05	2.49	2.11
Linear	10K	1/2	3/4" (19.05)	91A1A-G24-B15L-ND	5.47	4.27	3.48	2.95
Linear	10K	1/2	7/8" (22.23)	91A1A-G28-B15L-ND	5.47	4.27	3.48	2.95
Linear	10K	1/2	7/8" (22.23)	91A1A-H28-B15L-ND	6.53	5.09	4.15	3.52
Linear	10K	1/2	22 mm	91R1A-J22-B15L-ND	5.47	4.27	3.48	2.95

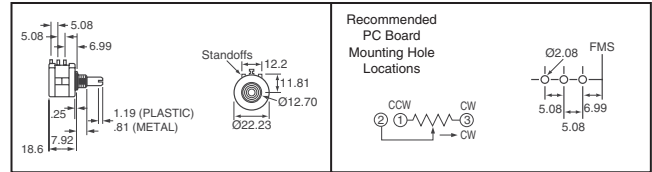
SERIES 3590 — 2 Watt - 10 Turn Wirewound



• Resistance Tolerance: ±5%
 • Effective Electrical Angle: 3600° +10°, -0°
 • Dielectric Withstanding Voltage: MIL-STD-202, Method 301 (Sea Level: 2,000VAC minimum)
 • Insulation Resistance (500 VDC): 1,000MΩ minimum

Mounting hardware included

Dim. in mm

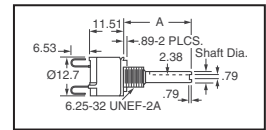


Ω	Resolution %	Bushing Type & Dim.	Shaft Diameter Inches (mm)	Digi-Key Part No.	Price Each			
					1	25	100	500
2K	.023	3/8" x 5/16" Plastic	.2480" (6.30) Plastic	3590S-1-202L-ND	8.28	6.71	6.13	5.80
5K	.025	3/8" x 5/16" Plastic	.2480" (6.30) Plastic	3590S-1-502L-ND	8.28	6.71	6.13	5.80
20K	.016	3/8" x 5/16" Plastic	.2480" (6.30) Plastic	3590S-1-203L-ND	8.28	6.71	6.13	5.80
50K	.013	3/8" x 5/16" Plastic	.2480" (6.30) Plastic	3590S-1-503L-ND	10.00	8.10	7.40	7.00
100K	.009	3/8" x 5/16" Plastic	.2480" (6.30) Plastic	3590S-1-104L-ND	10.72	8.69	7.94	7.51
500	.033	3/8" x 5/16" Metal	.2497" (6.34) Metal	3590S-2-501L-ND	8.28	6.71	6.13	5.80
1K	.029	3/8" x 5/16" Metal	.2497" (6.34) Metal	3590S-2-102L-ND	8.28	6.71	6.13	5.80
2K	.023	3/8" x 5/16" Metal	.2497" (6.34) Metal	3590S-2-202L-ND	8.28	6.71	6.13	5.80
5K	.025	3/8" x 5/16" Metal	.2497" (6.34) Metal	3590S-2-502L-ND	8.28	6.71	6.13	5.80
10K	.020	3/8" x 5/16" Metal	.2497" (6.34) Metal	3590S-2-103L-ND	8.28	6.71	6.13	5.80
20K	.016	3/8" x 5/16" Metal	.2497" (6.34) Metal	3590S-2-203L-ND	8.28	6.71	6.13	5.80
50K	.013	3/8" x 5/16" Metal	.2497" (6.34) Metal	3590S-2-503L-ND	10.00	8.10	7.40	7.00
100K	.009	3/8" x 5/16" Metal	.2497" (6.34) Metal	3590S-2-104L-ND	10.72	8.69	7.94	7.51

SERIES 3862 — 1 Watt Cermet 1/2" Diameter Single-Turn Panel Control



• Resistance Tolerance: ±10%
 • Continuity: Maintained for full mechanical angle
 • Effective Electrical Angle: 260° ±10°
 • Contact Resistance Variation: ±3% of total resistance
 • Theoretical Resolution: Essentially infinite
 • Dielectric Withstanding Voltage: MIL-STD-202, Method 301 (Sea Level: 750VAC min.; 70,000 Feet: 350VAC min.)
 • Insulation Resistance (500 VDC): 1,000MΩ min.



Mounting hardware included

Ω	Dim. A (mm)	Shaft Dia. (mm)	Digi-Key Part No.	Price Each				
				1	25	50	100	250
10K	12.7	3.18	3862C-162-103AL-ND	12.14	9.46	7.72	6.53	6.08
	22.20	3.18	3862C-282-103AL-ND	12.14	9.46	7.72	6.53	6.08

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