



Features

- Small diameter
- Wide resistance range
- Good resolution
- Linear tapers

BOURNS®

3862 - 1/2" Diameter Single-Turn Panel Control

Initial Electrical Characteristics¹

Standard resistance Range (A & H Tapers).....	100 ohm to 5 megohms
Resistance Tolerance	(A Taper) ±10%
	(H Taper) ±5%
Independent Linearity.....	±5%
Absolute Minimum Resistance	2 ohms maximum
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.....	750 VAC minimum
70,000 Feet.....	350 VAC minimum
Insulation Resistance (500 VDC).....	1,000 megohms minimum
Power Rating (Voltage Limited by Power Dissipation or 350 VAC, Whichever is Less)	
+70°C1 watt
+125°C0 watt

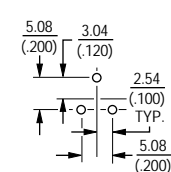
Environmental Characteristics¹

Operating Temperature	-1°C to +125°C
Storage Temperature Range	-65°C to +125°C
Temperature Coefficient Over Temperature Range	±150 ppm/°C
Vibration20G
Total Resistance Shift	±2% maximum
Voltage Ratio Shift	±6% maximum
Shock50G
Total Resistance Shift	±2% maximum
Voltage Ratio Shift	±6% maximum
Load Life	1,000 hours
Total Resistance Shift	±3% maximum
Rotational Life (C & N Bushing) (No Load).....	50,000 cycles
Total Resistance Shift	±5% maximum
Moisture Resistance	MIL-STD-202, Method 106, Condition B
Total Resistance Shift	±2% maximum
Insulation Resistance (500 VDC)	100 megohms minimum
Salt Spray.....	MIL-STD-202, Method 101, Condition A

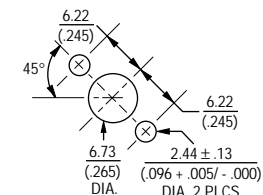
Mechanical Characteristics¹

Shaft Torque5 oz.-in. (3.53 Ncm) maximum
Shaft Locking Torque with Locking Bushings20 oz.-in. (14.12 Ncm)
Mechanical Angle	295° ±3°
Weight25 grams maximum
Terminals.....	Printed circuit pins or J-Hooks
Markings.....	Mfr's. trademark, wiring diagram, date code, resistance, manufacturer's part number
Stop Strength.....	.3 in.-lb. maximum

PCB LAYOUT

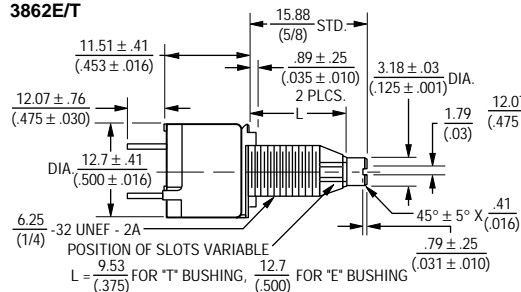


PANEL LAYOUT

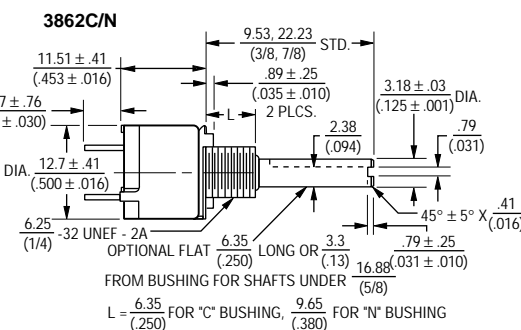


¹AT ROOM AMBIENT: +25°C NOMINAL AND 50% RELATIVE HUMIDITY NOMINAL, EXCEPT AS NOTED.

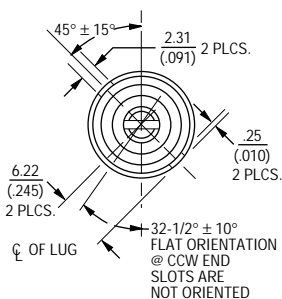
3862E/T



3862C/N



Shaft End Detail 3862



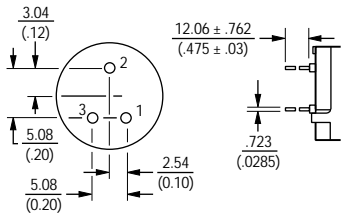
DIMENSIONS ARE: METRIC (INCHES)

3800 Series Dimensions and Tolerances

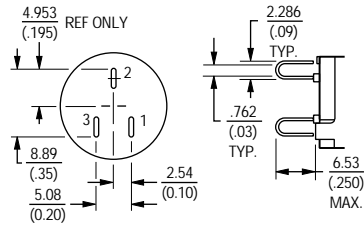


Dimensional Drawings And Tolerances

PC PIN TERMINAL



J-HOOK TERMINAL



DIMENSIONS ARE: METRIC (INCHES)

How To Order

3852 A 28 2 103 A

	SHAFT TYPE (FMS) & DIAMETER	AVAILABLE ONLY IN	
		MODELS	BUSHINGS
12	3/8" (9.53mm) L X 1/8" (3.18mm) D	3851, 3852, 3862	C
16	1/2" (12.7mm) L X 1/8" (3.18mm) D	3851, 3852, 3862	C, E C
20	5/8" (15.88mm) L X 1/4" (6.35mm) D	3851, 3852	A, B
28	7/8" (22.20mm) L X 1/4" (6.35mm) D	3851, 3852, 3856	A, B A

Consult factory for lengths not shown.

BUSHING	APPLICABLE MODELS
A Plain 3/8" (9.53mm) D x 3/8" (9.53mm) L	3851, 3852, 3856
C Plain 1/4" (6.35mm) D x 1/4" (6.35mm) L	3851, 3852, 3862

RESISTANCE CODE/VALUE (IN OHMS)	
Models 3851, 3852, 3856, 3862	
(102)	1K
(502)	5K
(103)	10K
(503)	50K
(104)	100K

MODEL	
3852	3/4" (19.05mm) D Single-Turn Cermet
3862	1/2" (12.7mm) D Single-Turn Cermet

TERMINAL STYLE AND SHAFT TYPE	
2	Solder Lugs*, Slotted End
6	PC Pins, Slotted End

*Model 3862 comes with J-hook solder lugs.

ELEMENT TAPER/TOLERANCE		APPLICABLE MODELS
A	Linear ±10%	3852, 3856, 3862

*The maximum resistance range for audio tapers is 1000 ohms to 2.5 megohms.