

BOURNS

7/8", 1-1/16", 2" DIAMETER/SINGLE-TURN WIREWOUND

- Servo mount
- Gangable
- Shaft support front and rear by precision ball bearings
- High temperature, moisture resistant, thermosetting plastic housing
- Outstanding vibration and shock performance
- Non-standard features and specifications available

FOR ORDERING INFORMATION SEE PAGE 43

Models 3585/3485/3465

Bourns® Precision Potentiometers

	Model 3585 7/8" Diameter	Model 3485 1-1/16" Diameter	Model 3465 2" Diameter
Electrical Characteristics¹			
Standard Resistance Range	25 to 20KΩ	50 to 50KΩ	50 to 100KΩ
Resistance Tolerance	±3%	±3%	±3%
Independent Linearity	±0.5%	±0.5%	±0.3%
Resolution	See ordering information	See ordering information	See ordering information
Effective Electrical Angle	350° ±2°	350° ±2°	350° ±2°
Absolute Minimum Resistance	1Ω or 0.1% (whichever is greater)	1Ω or 0.1% (whichever is greater)	1Ω or 0.1% (whichever is greater)
Noise	100Ω ENR max.	100Ω ENR max.	100Ω ENR max.
Power Rating +70°C	1 watt	1.5 watts	4 watts
+125°C	0 watt	0 watt	0 watt
Dielectric Strength			
Sea Level	1,000 VAC min.	1,000 VAC min.	1,000 VAC min.
70,000 Feet	300 VAC min.	300 VAC min.	250 VAC min.
Insulation Resistance (500 VDC)	1,000 megohms minimum	1,000 megohms minimum	1,000 megohms minimum

Environmental Characteristics¹

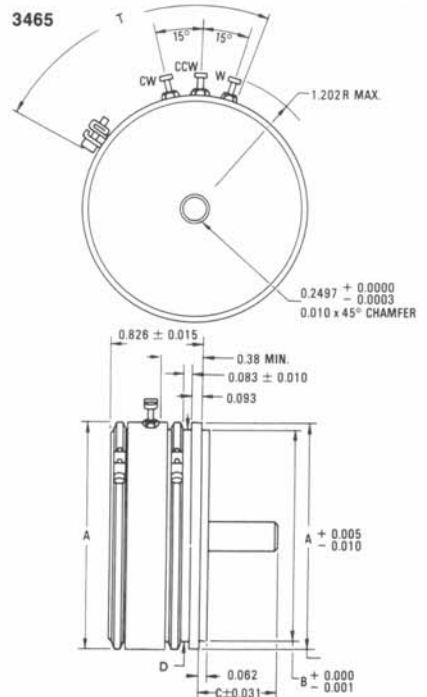
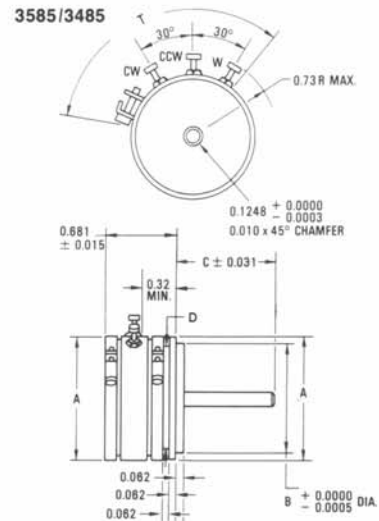
Operating Temperature Range	-65°C to +125°C	-65°C to +125°C	-65°C to +125°C
Temperature Coefficient²	±20ppm/°C max.	±20ppm/°C max.	±20ppm/°C max.
Humidity	MIL-R-12934	MIL-R-12934	MIL-R-12934
	Humidity cycling	Humidity cycling	Humidity cycling
Vibration	MIL-R-12934, 15G	MIL-R-12934, 15G	MIL-R-12934, 15G
Wiper Bounce	0.1 millisecond maximum	0.1 millisecond maximum	0.1 millisecond maximum
Wiper Shift	1.0% maximum	1.0% maximum	1.0% maximum
Shock	MIL-R-12934, 50G	MIL-R-12934, 50G	MIL-R-12934, 50G
Wiper Bounce	Same as Vibration	Same as Vibration	Same as Vibration
Load Life	1,000 hours	1,000 hours	1,000 hours
Resistance Shift	2.0% maximum	2.0% maximum	2.0% maximum

Mechanical Characteristics¹

Mechanical Angle	Continuous	Continuous	Continuous
Shaft Runout	0.001 in. T.I.R.	0.001 in. T.I.R.	0.001 in. T.I.R.
Shaft End Play	0.003 in. T.I.R.	0.003 in. T.I.R.	0.003 in. T.I.R.
Shaft Radial Play	0.002 in. T.I.R.	0.002 in. T.I.R.	0.0015 in. T.I.R.
Lateral Runout	0.002 in. T.I.R.	0.002 in. T.I.R.	0.003 in. T.I.R.
Pilot Diameter Runout	0.0015 in. T.I.R.	0.0015 in. T.I.R.	0.002 in. T.I.R.
Rotational Life	2,000,000 shaft revolutions	2,000,000 shaft revolutions	1,000,000 shaft revolutions
Torque (Starting)	0.1 oz-in. max.	0.1 oz-in. max.	1.0 oz-in. max.
Torque (Running)	0.1 oz-in. max.	0.1 oz-in. max.	0.6 oz-in. max.
Moment of Inertia	0.1g cm ²	0.12g cm ²	1.67g cm ²
Ganging	8 cups maximum	8 cups maximum	8 cups maximum
Weight	Approx. 17g	Approx. 20g	Approx. 85g
Terminals	Gold-plated turrets	Gold-plated turrets	Gold-plated turrets
Markings	Manufacturer's name and part number, resistance value and tolerance, linearity tolerance, wiring diagram, date code		

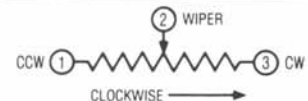
¹At room ambient: +25°C nominal and 50% relative humidity nominal, except as noted.

²Consult factory for complete specification details.



TOLERANCES: EXCEPT WHERE NOTED

DECIMALS: .XX ± .010, .XXX ± .005



Specifications are subject to change without notice.

DIMENSIONS (INCH)

Model	φ A	φ B	C	φ D	T	Add for each additional cup
3585	0.875	0.7500	0.500	.700	145° ± 0 - 20°	0.405
3485	1.062	0.9688	0.875	.937	130° ± 0 - 15°	0.405
3465	2.000	1.8750	0.625	1.875	90° ± 0 - 20°	0.500