

For technical assistance use the Sensors/
Controls Products number on the back cover.



BOURNS®

Features

- Bushing mount
- Optional ± 0.05 linearity option
- Excellent wiper stability
- High stop strength
- Sealable

3400 - Precision Potentiometer

Electrical Characteristics¹

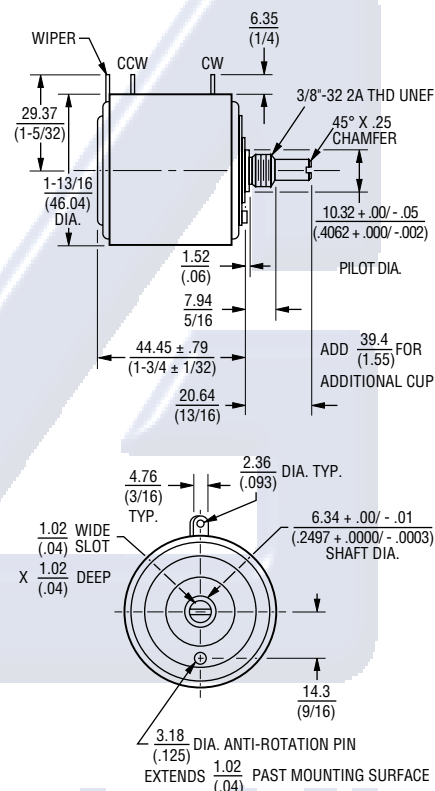
Standard Resistance Range	100 to 500K ohms
Resistance Tolerance.....	$\pm 3\%$
Independent Linearity	$\pm 0.15\%$
Resolution	See recommended part number
Effective Electrical Angle	$3600^\circ + 4^\circ, -0^\circ$
Absolute Minimum Resistance	1 ohm or 0.15% maximum (whichever is greater)
Noise	100 ohms ENR maximum
Power Rating (Voltage Limited By Power Dissipation, or	(40°C) 5 watts
1,000 VAC, Whichever Is Less)	(125°C) 0 watt
Dielectric Withstanding Voltage	MIL-STD-202, Method 301
Sea Level.....	1,000 VAC minimum
80,000 Feet	300 VAC minimum
Insulation Resistance (500 VDC)	1,000 megohms minimum

Environmental Characteristics¹

Operating Temperature	-65°C to $+125^\circ\text{C}$
Static Operation Temperature Range.....	$+1^\circ\text{C}$ to $+125^\circ\text{C}$
Dynamic Temperature Range.....	$\pm 20\text{ppm}/^\circ\text{C}$ maximum/unit
Temperature Coefficient ²	MIL-STD-202, Method 103, Condition B
Moisture Resistance.....	$\pm 2\%$ maximum
Total Resistance Shift.....	$\pm 2\%$ maximum
Vibration.....	10G
Wiper Bounce	0.1 millisecond maximum
Total Resistance Shift	$\pm 2\%$ maximum
Voltage Ratio Shift	$\pm 0.1\%$ maximum
Shock.....	50G
Wiper Bounce	0.1 millisecond maximum
Total Resistance Shift.....	$\pm 2\%$ maximum
Voltage Ratio Shift	$\pm 0.1\%$ maximum
Load Life	1,000 hours, 5 watts
Total Resistance Shift	$\pm 2\%$ maximum
Rotational Life (No Load)	2,000,000 shaft revolutions ²
Total Resistance Shift.....	$\pm 5\%$ maximum

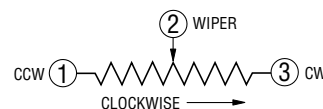
Mechanical Characteristics¹

Mechanical Angle	$3600^\circ + 4^\circ, -0^\circ$
Shaft Runout.....	0.002 in. (0.05mm) T.I.R.
Shaft End Play	0.005 in. (0.13mm) T.I.R.
Shaft Radial Play	0.0025 in. (0.06mm) T.I.R.
Pilot Diameter Runout	0.002 in. (0.05mm) T.I.R.
Lateral Runout	0.005 in. (0.13mm) T.I.R.
Stop Strength	.550 oz.-in. (388 Ncm) minimum
Torque (Starting & Running)	2.0 oz.-in. (1.4 Ncm) maximum
Backlash.....	1.0° maximum
Weight.....	Approximately 110G
Terminals.....	Gold-plated solder lugs
Markings.....	Manufacturer's name and part number, resistance value and tolerance, linearity tolerance, wiring diagram, date code
Ganging	2 cups maximum



NOTE: LOCKWASHER AND HEX NUT TO BE SUPPLIED WITH EACH UNIT.

TOLERANCES: EXCEPT WHERE NOTED
DECIMALS: XX $\pm .25$ (.010), XXX $\pm .13$ (.005)
FRACTIONS: $\pm 1/64$
DIMENSIONS: MM (IN.)



Recommended Part Numbers

Part Number	Resistance	Resolution
3400S-1-102	1,000	.020
3400S-1-502	5,000	.013
3400S-1-103	10,000	.010

BOLD-FACE LISTINGS ARE IN STOCK AND READILY AVAILABLE THROUGH DISTRIBUTION.

FOR OTHER OPTIONS CONSULT FACTORY.

¹At room ambient: $+25^\circ\text{C}$ nominal and 50% relative humidity nominal, except as noted.

²Consult manufacturer for complete specification details for resistances below 500 ohms and above 100K ohms.