

Features

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

3400 - Precision Potentiometer

Electrical Characteristics¹

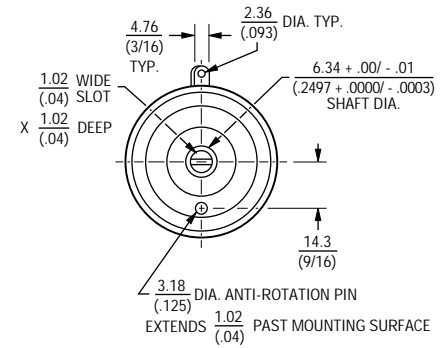
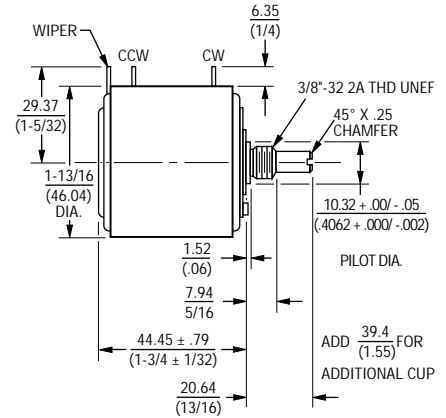
Standard Resistance Range	100 to 500K ohms
Resistance Tolerance	$\pm 3\%$
Independent Linearity	$\pm 0.15\%$
Resolution	See recommended part number
Effective Electrical Angle	$3600^\circ + 4^\circ, -0^\circ$
Absolute Minimum Resistance	1 ohm or 0.15% maximum (whichever is greater)
Noise	100 ohms ENR maximum
Power Rating (Voltage Limited By Power Dissipation, or 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	
Static Operation Temperature Range	-65°C to $+125^\circ\text{C}$
Dynamic Temperature Range	$+1^\circ\text{C}$ to $+125^\circ\text{C}$
Temperature Coefficient ²	$\pm 20\text{ppm}/^\circ\text{C}$ maximum/unit
Moisture Resistance	MIL-STD-202, Method 103, Condition B
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



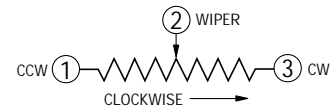
NOTE: LOCKWASHER AND HEX NUT TO BE SUPPLIED WITH EACH UNIT.

TOLERANCES: EXCEPT WHERE NOTED

DECIMALS: .XX \pm .25 (0.010), .XXX \pm .13 (0.005)

FRACTIONS: $\pm 1/64$

DIMENSIONS: $\frac{\text{MM}}{\text{(IN.)}}$



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.