



Features

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



Model 3400 is currently available, although not recommended for new designs. **Model 3500** is preferred.

3400 - Precision Potentiometer

Electrical Characteristics¹

Standard Resistance Range	100 to 500 K ohms
Total Resistance Tolerance.....	$\pm 3\%$
Independent Linearity.....	$\pm 0.15\%$
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
Dielectric Withstanding Voltage.....	MIL-STD-202, Method 301
Sea Level	1,000 VAC minimum
80,000 Feet	300 VAC minimum
Power Rating (Voltage Limited By Power Dissipation, or	(40 °C) 5 watts
1,000 VAC, Whichever Is Less).....	(125 °C) 0 watt
Insulation Resistance (500 VDC).....	1,000 megohms minimum
Resolution.....	See recommended part number

Environmental Characteristics¹

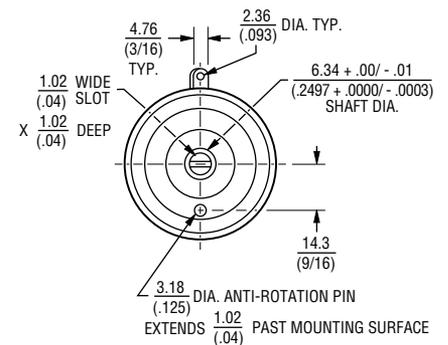
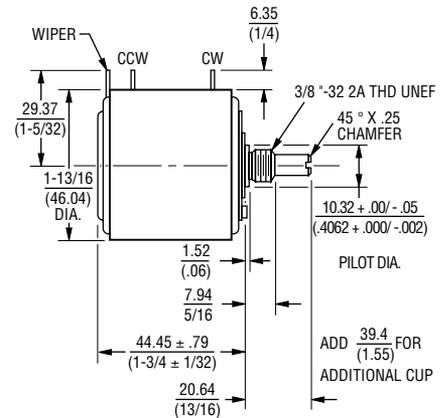
Operating Temperature Range.....	$+1^\circ\text{C}$ to $+125^\circ\text{C}$
Storage Temperature Range.....	-65°C to $+125^\circ\text{C}$
Temperature Coefficient Over Storage Temperature Range ²	± 20 ppm/ $^\circ\text{C}$ maximum/unit
Vibration	10 G
Wiper Bounce.....	0.1 millisecond maximum
Total Resistance Shift	$\pm 2\%$ maximum
Voltage Ratio Shift	$\pm 0.1\%$ maximum
Shock	50 G
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
Moisture Resistance (MIL-STD-202, Method 103, Condition B)	
Total Resistance Shift	$\pm 2\%$ maximum
IP Rating	IP 40

Mechanical Characteristics¹

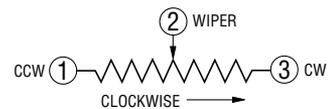
Stop Strength.....	388 N-cm (550 oz.-in.) minimum
Mechanical Angle	$3600^\circ + 4^\circ, -0^\circ$
Torque (Starting & Running)	1.4 N-cm (2.0 oz.-in.) maximum
Mounting	170-200 N-cm (15-18 lb.-in.) maximum
Shaft Runout	0.05 mm (0.002 in.) T.I.R.
Lateral Runout	0.13 mm (0.005 in.) T.I.R.
Shaft End Play	0.13 mm (0.005 in.) T.I.R.
Shaft Radial Play.....	0.06 mm (0.0025 in.) T.I.R.
Pilot Diameter Runout.....	0.05 mm (0.002 in.) T.I.R.
Backlash	1.0° maximum
Weight.....	Approximately 110 gm
Terminals	Gold-plated solder lugs
Soldering Condition	Recommended hand soldering using Sn95/Ag5 no clean solder, 0.025" wire diameter. Maximum temperature 399 °C (750 °F) for 3 seconds. No wash process to be used with no clean flux.
Markings.....	Manufacturer's name and part number, resistance value and tolerance, linearity tolerance, wiring diagram, date code
Gang (Multiple Section Potentiometers)	2 cups maximum
Hardware	One lockwasher (H-37-2) and one mounting nut (H-38-2) is shipped with each potentiometer.

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 100 K ohms.



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-1-102L	1,000	.020
3400S-1-502L	5,000	.013
3400S-1-103L	10,000	.010

BOLDFACE LISTINGS ARE IN STOCK AND READILY AVAILABLE THROUGH DISTRIBUTION.

FOR OTHER OPTIONS CONSULT FACTORY.

TERMINALS:
 L = RoHS COMPLIANT
 BLANK = STANDARD