



BOURNS®

Features

- 27 mm (1-1/16 ") diameter, single-turn wirewound
- Bushing mount
- Gangable to 8 cups
- Outstanding vibration and shock performance

- Shaft supported front and rear by precision sleeve bearings
- High temperature, moisture resistant, thermosetting plastic housing
- Non-standard features and specifications available

3435 - Precision Potentiometer

Electrical Characteristics¹

Standard Resistance Range	50 to 20 K ohms
Total Resistance Tolerance	±3 %
Independent Linearity	±0.5 %
Effective Electrical Angle	350 ° ±2 °
Noise	100 ohms ENR maximum
Absolute Minimum Resistance	1 ohm or 0.1 % (whichever is greater)
Dielectric Withstanding Voltage	
Sea Level	1,000 VAC minimum
Power Rating	
+70 °C	1.5 watts
+125 °C	0 watt
Insulation Resistance (500 VDC)	1,000 megohms minimum
Resolution	See ordering information

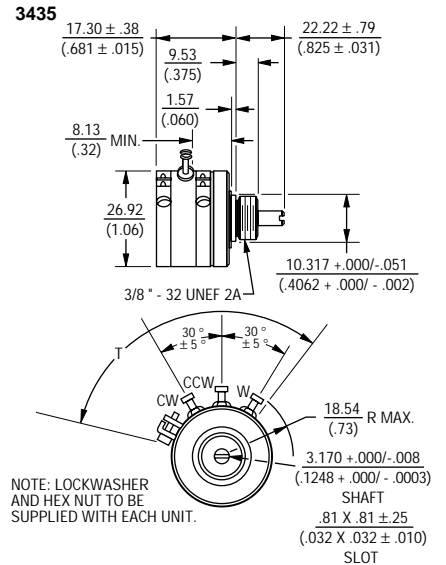
Environmental Characteristics¹

Operating Temperature Range	+1 °C to 125 °C
Storage Temperature Range	-65 °C to +125 °C
Temperature Coefficient Over Storage Temperature Range ²	±20 ppm/°C max.
Vibration (MIL-R-12934)	15 G
Wiper Bounce	0.1 millisecond maximum
Total Resistance Shift	±5 % maximum
Voltage Ratio Shift	±1 % maximum
Shock (MIL-R-12934)	50 G
Wiper Bounce	0.1 millisecond maximum
Total Resistance Shift	±5 % maximum
Voltage Ratio Shift	±1 % maximum
Load Life	1,000 hours
Total Resistance Shift	2.0 % maximum
Rotational Life (No Load)	1,000,000 shaft revolutions
Total Resistance Shift	±5 % maximum
Moisture Resistance (MIL-STD-202, Method 106)	
Total Resistance Shift	±5 % maximum
Humidity	MIL-R-12934 humidity cycling
Total Resistance Shift	±5 % maximum
IP Rating	IP 40

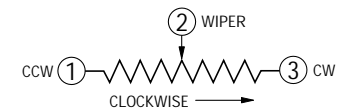
Mechanical Characteristics¹

Mechanical Angle	Continuous
Torque	
Starting	0.18 N-cm (0.25 oz.-in.) maximum
Running	0.18 N-cm (0.25 oz.-in.) maximum
Additional Cups	Add 75 % each
Mounting	170-200 N-cm (15-18 lb.-in.) maximum
Shaft Runout	0.025 mm (0.001 in.) T.I.R.
Shaft End Play	0.08 mm (0.003 in.) T.I.R.
Shaft Radial Play	0.08 mm (0.003 in.) T.I.R.
Backlash	0.25 ° maximum
Weight	Approximately 23 gm
Terminals	Gold-plated turret type
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.
Marking	Manufacturer's name and part number, resistance value and tolerance, linearity tolerance, wiring diagram, date code
Ganging (Multiple Section Potentiometers)	8 cups maximum
Hardware	One lockwasher (H-37-2) and one mounting nut (H-38-2) is shipped with each potentiometer.

Product Dimensions



TOLERANCES: EXCEPT WHERE NOTED
 DECIMALS: XX ± .51 (.020), .XXX ± .13 (.005)
 FRACTIONS: ±1/64
 DIMENSIONS: MM (IN.)



Recommended Part Numbers

Part Number	Resistance (Ω)	Resolution (%)
3435S-1-102	1,000	.208
3435S-1-202	2,000	.178
3435S-1-502	5,000	.135
3435S-1-103	10,000	.107
3435S-1-503	50,000	.057

¹At room ambient: +25 °C nominal and 50 % relative humidity nominal, except as noted.
²Consult factory for complete specification details.