



Features

- Bushing mount
- Optional AR pin feature
- Non-standard features and specifications available
- Gangable

BOURNS®

3543/3545 - Precision Potentiometer

	3543 3-Turn	3545 5-Turn
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Electrical Characteristics ¹		
Standard Resistance Range	20 to 50K ohms	50 to 50K ohms
Resistance Tolerance	±5%	±5%
Independent Linearity	±0.25%	±0.25%
Resolution	See recommended part numbers	See recommended part numbers
Effective Electrical Angle	1080° +10°, -0°	1800° +10°, -0°
Absolute Minimum Resistance/	1 ohm or 0.1% maximum	1 ohm or 0.1% maximum
Minimum Voltage	(whichever is greater)	(whichever is greater)
Noise	100 ohms ENR maximum	100 ohms ENR maximum
Power Rating (Voltage Limited)		
By Power Dissipation or		
224 VAC [3543] or 273 VAC		
[3545], Whichever Is Less		
+70°C	1 watt	1.5 watt
+125°C	0 watt	0 watt
Dielectric Withstanding Voltage	MIL-STD-202, Method 301	MIL-STD-202, Method 301
Sea Level	1,000 VAC minimum	1,000 VAC minimum
Insulation Resistance		
(500 VDC)	1,000 megohms minimum	1,000 megohms minimum

Environmental Characteristics ¹		
Operating Temperature		
Static Operation Temp Range	-55°C to +125°C	-55°C to +125°C
Dynamic Temp Range	+1°C to +125°C	+1°C to +125°C
Temperature Coefficient ²	±50ppm/°C maximum/unit	±50ppm/°C maximum/unit
Vibration	15G	15G
Wiper Bounce	0.1 millisecond maximum	0.1 millisecond maximum
Shock	50G	50G
Wiper Bounce	0.1 millisecond maximum	0.1 millisecond maximum
Load Life	1,000 hours, 1 watt	1,000 hours, 1.5 watts
Total Resistance Shift	±2% maximum	±2% maximum
Rotational Life (No Load)	300,000 shaft revolutions	500,000 shaft revolutions
Total Resistance Shift	±5% maximum	±5% maximum
Moisture Resistance	MIL-STD-202, Method 103, Condition B	MIL-STD-202, Method 103, Condition B
Total Resistance Shift	±2% maximum	±2% maximum

Mechanical Characteristics ¹		
Mechanical Angle	1080° +10°, -0°	1800° +10°, -0°
Shaft Runout	0.003 in. (0.08mm) T.I.R.	0.003 in. (0.08mm) T.I.R.
Lateral Runout	0.005 in. (0.13mm) T.I.R.	0.005 in. (0.13mm) T.I.R.
Pilot Diameter Runout	0.003 in. (0.08mm) T.I.R.	0.003 in. (0.08mm) T.I.R.
Shaft End Play	0.010 in. (0.25mm) T.I.R.	0.010 in. (0.25mm) T.I.R.
Shaft Radial Play	0.003 in. (0.08mm) T.I.R.	0.003 in. (0.08mm) T.I.R.
Stop Strength	75 oz.-in. (53 Ncm) min.	75 oz.-in. (53 Ncm) min.
Torque (Starting & Running)	0.5 oz.-in. (0.35 Ncm) max.	0.5 oz.-in. (0.35 Ncm) max.
Weight	Approximately 21G	Approximately 21G
Terminals	Gold-plated solder lugs	Gold-plated solder lugs
Backlash	1.0° maximum	1.0° maximum
Ganging	2 cups maximum	2 cups maximum

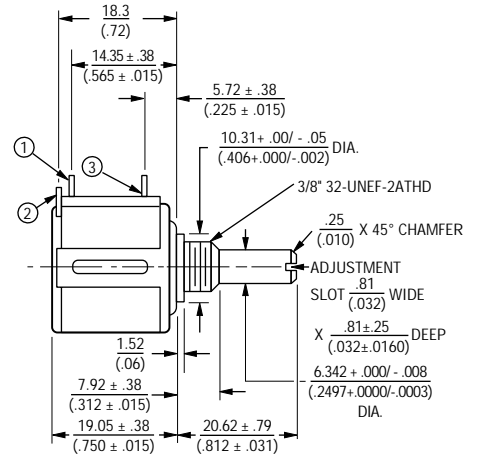
¹At room ambient: +25°C nominal and 50% relative humidity nominal, except as noted.
²Consult manufacturer for complete specification details.

Recommended Part Numbers

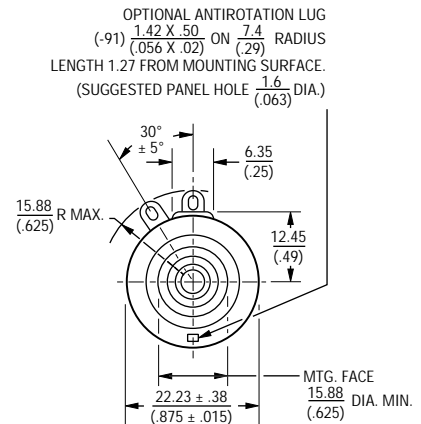
Part Number*	Resistance (Ω)	Resolution (%)
3543S-1-102	1,000	.063
3543S-1-202	2,000	.062
3543S-1-502	5,000	.047
3543S-1-103	10,000	.040

Part Number	Resistance (Ω)	Resolution (%)
3545S-1-102	1,000	.043
3545S-1-202	2,000	.036
3545S-1-502	5,000	.038
3545S-1-103	10,000	.027

3543S-1/3545S-1



NOTE: LOCKWASHER AND MOUNTING NUTS SUPPLIED.
 ADD .75 (19MM) FOR ADDITIONAL CUPS.



OPTIONAL ANTIROTATION LUG
 (-91) 1.42 X .50 ON 7/4 RADIUS
 (.056 X .02) (.29)
 LENGTH 1.27 FROM MOUNTING SURFACE.
 (SUGGESTED PANEL HOLE 1.6 (0.63) DIA.)

TOLERANCES: EXCEPT WHERE NOTED
 DECIMALS: XX ± .25 (0.010), XXX ± .13 (0.005)
 FRACTIONS: ±1/64
 DIMENSIONS: MM (IN.)

