



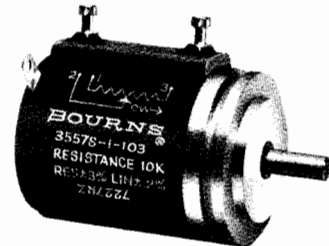
**Model 3557**  
**7/8" Diameter 10-Turn Servo Mount**  
**Wirewound Element**

**OBSOLETE 1982**

## FEATURES

- 0.20% linearity (standard).
- 20% longer resistance element in a compact housing only 1.172" long.
- Extended temperature range —65 to +125°C.
- Housing high temperature, moisture resistant thermosetting plastic.
- Shaft supported front and rear by precision ball bearings.
- SILVERWELD® termination eliminates vulnerable single wire termination.
- Performance of Model 3557 is guaranteed by the Bourns Reliability Assurance Program which includes individual inspection to published electrical and physical characteristics.
- Custom design capability is available to satisfy your most demanding and difficult special requirements.

Actual Size



## STANDARD RESISTANCES

Resistance (ohms)	Part Number*	Resolution (percent)
50	3557S-1-500	.049
100	3557S-1-101	.045
200	3557S-1-201	.037
500	3557S-1-501	.028
1,000	3557S-1-102	.022
2,000	3557S-1-202	.019
5,000	3557S-1-502	.014
10,000	3557S-1-103	.016
20,000	3557S-1-203	.013

Resistance (ohms)	Part Number*	Resolution (percent)
30,000	3557S-1-303	.010
50,000	3557S-1-503	.009
75,000	3557S-1-753	.008
100,000	3557S-1-104	.007
125,000	3557S-1-1253	.007
150,000	3557S-1-154	.007
200,000	3557S-1-204	.006
250,000	3557S-1-254	.006
500,000	3557S-1-504	.005

\* The last three or four digits of the part number represent the resistance in standard code.

# BOURNS Wirewound Precision Potentiometer Model 3557

## STANDARD SPECIFICATIONS

THE SPECIFICATIONS LISTED BELOW ARE FOR THE STANDARD MODEL. MODIFICATIONS OF ALL TYPES (MECHANICAL, ELECTRICAL AND ENVIRONMENTAL) CAN BE CUSTOM ENGINEERED TO YOUR SPECIFIC REQUIREMENTS.

### ELECTRICAL CHARACTERISTICS

Resistance Range .....	50 ohms to 500K ohms
Resistance Tolerance* .....	±3%
Linearity (Independent)* .....	±0.20%
Resolution .....	See Standard Resistance Table
Effective Electrical Angle* .....	3600° (+10°/-0°)
Absolute Minimum Resistance* .....	1.0 ohm or 0.1%, whichever is greater
Noise* .....	100 ohms ENR maximum
Power Rating .....	
70°C .....	2.0 watts
125°C .....	0 watt
Dielectric Strength .....	MIL-R-12934
Room Conditions .....	1500 volts AC minimum
70,000 feet (0.8" hg.) .....	400 volts AC minimum
Insulation Resistance 500 volts DC* .....	1000 megohms minimum

### ENVIRONMENTAL CHARACTERISTICS

Operating Temperature Range .....	-65 to +125°C
Temperature Coefficient of Wire① .....	20 ppm/°C maximum
Humidity .....	MIL-R-12934 humidity cycling
Vibration .....	MIL-R-12934, 20G
Wiper Bounce .....	0.1 millisecond maximum
Wiper Shift .....	0.1% maximum
Shock .....	MIL-R-12934, 100G
Wiper Bounce and Wiper Shift .....	Same as Vibration
Load Life .....	MIL-R-12934, 1000 hours
Resistance Shift .....	2.0% maximum

Sand and Dust .....	MIL-E-5272
Fungus .....	MIL-E-5272
Salt Spray .....	MIL-R-12934

### MECHANICAL AND PHYSICAL CHARACTERISTICS

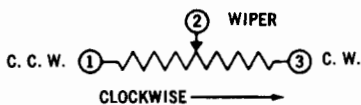
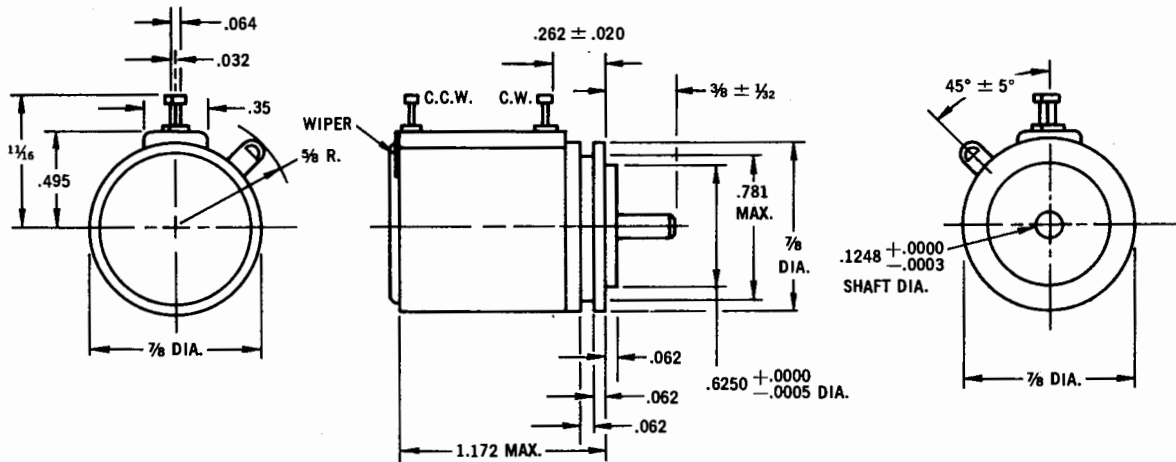
Mechanical Angle* .....	3600° (+10°/-0°)
Shaft Runout .....	.001 in. T.I.R.
Lateral Runout .....	.003 in. T.I.R.
Pilot Diameter Runout .....	.0015 in. T.I.R.
Shaft End Play .....	.003 in. T.I.R.
Shaft Radial Play .....	.002 in. T.I.R.
Rotational Life ① .....	2,000,000 shaft revolutions
Stop Strength .....	96 oz.-in. maximum
Ganging .....	N/A
Torque* .....	0.4 oz.-in. maximum (starting) 0.3 oz.-in. maximum (running)
Weight .....	Approximately 1.0 oz.
Terminals .....	2 Gold-plated turret type/1 Gold-plated solder lug
Marking* .....	Manufacturer's name and part number, resistance value and tolerance, linearity tolerance, wiring diagram, and date code.

### NOTES:

- \*100% or statistical sampling inspection performed to insure highest quality.
- ① Consult manufacturer for complete specification details for resistance below 200 ohms and above 125K ohms.

Specifications are subject to change without notice.

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TOLERANCES: EXCEPT WHERE NOTED  
 DECIMALS: .XX ± .010, .XXX ± .005  
 FRACTIONS: ± 1/64

