



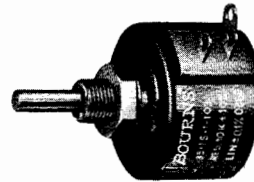
Model 3511
7/8" Diameter 3-Turn Bushing Mount
Conductive Plastic Element

OBSOLETE 1995

FEATURES

- Unique INFINITRON® conductive plastic element provides essentially infinite resolution.
- Rotational life: 10,000,000 shaft revolutions.
- Standard linearity 1.0% — special linearities available.
- Output smoothness: 0.1% standard.
- Outstanding resistance to humidity — exceeds moisture resistance requirements of MIL-R-39023
- Exclusive termination technique insures low end resistance and definite effective electrical angle.
- Temperature coefficient: ± 200 ppm/°C.
- Custom design capability is available to satisfy your most demanding and difficult special requirements.

Actual Size



STANDARD RESISTANCES

Resistance (Ohms)	Part Number*
1,000	3511S-1-102
2,000	3511S-1-202
5,000	3511S-1-502
10,000	3511S-1-103

Resistance (Ohms)	Part Number*
20,000	3511S-1-203
50,000	3511S-1-503
100,000	3511S-1-104
200,000	3511S-1-204

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

Model 3511 Conductive Plastic Element Potentiometer

STANDARD SPECIFICATIONS

SPECIFICATIONS LISTED BELOW ARE FOR STANDARD MODEL, MODIFICATIONS OF ALL TYPES (MECHANICAL, ELECTRICAL, ENVIRONMENTAL) CAN BE CUSTOMIZED TO YOUR SPECIAL REQUIREMENTS.

ELECTRICAL CHARACTERISTICS

Resistance Range	1000 ohms to 200K ohms
Resistance Tolerance*	±10%
Linearity (Independent) Standard①	1.0% maximum
Repeatability	0.01%
Resolution	Essentially infinite
Effective Electrical Angle*	1080° (+10°, - 2°)
Minimum Voltage	0.1% maximum
Output Smoothness	0.1% maximum
Noise	100 ohms or 1% ENR maximum available as 3511S-14-(RC).

Power Rating (325 Volts Maximum)	
70°C	1.0 watt
105°C	0 watt

Dielectric Strength	MIL-R-39023
Sea Level	1000 volts AC minimum
80,000 feet	300 volts AC minimum

Insulation Resistance, 500 volts DC*	1000 megohms minimum
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ENVIRONMENTAL CHARACTERISTICS

Operating Temperature Range	- 55 to +105°C
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Temperature Coefficient:
Specific temperature coefficient limits vary depending on the resistance value of the potentiometer and the temperature range in which it will be used. In general, the temperature coefficient value of Bourns INFINITRON® conductive plastic potentiometers is within ±200 ppm/°C.

When requesting exact values, please specify the resistance value of the potentiometer to be used and the temperature range required for your application.

(When potentiometers are used as voltage dividers, the resistance change due to temperature coefficient does not affect the wiper output as a ratio of the total applied voltage. Therefore, temperature coefficient should not be considered a major or significant specification in this type application.)

Humidity	MIL-R-39023 Moisture Resistance
Vibration	MIL-R-39023, 20G
Wiper Bounce	0.1 millisecond maximum
Wiper Shift	0.1% maximum
Shock	MIL-R-39023, 100G
Wiper Bounce and Wiper Shift	Same as Vibration
Load Life	MIL-R-39023, 1000 hours
Sand and Dust	MIL-E-5272
Fungus	MIL-E-5272
Salt Spray	MIL-R-39023

MECHANICAL AND PHYSICAL CHARACTERISTICS

Mechanical Angle*	1080° (+10°, - 0°)
Shaft Runout*002 in. T.I.R.
Shaft End Play*005 in. T.I.R.
Shaft Radial Play*003 in. T.I.R.
Rotational Life	10,000,000 shaft revolutions**
Stop Strength	96 oz.-in. minimum
Torque*	
Starting and Running	0.6 oz.-in. maximum
Weight	Approximately 0.7 oz.
Terminals	Gold-plated solder lugs
Markings*	Manufacturer's name and part number, resistance value and tolerance, linearity tolerance, wiring diagram, and date code.

NOTES

*100% or statistical sample inspection performed to insure highest quality.

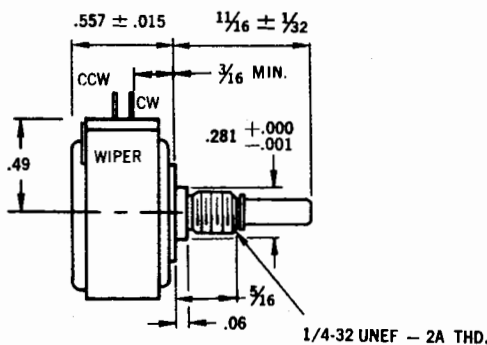
**No side loading.

①From 1% to 99% VR Output.

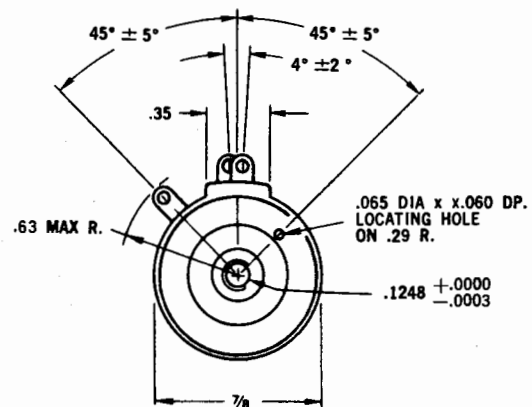
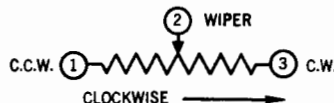
Specifications are subject to change without notice.

Terminals shown are for relative position only and do not represent the actual shape or exact position.

3511



LOCKWASHER AND MOUNTING NUT SUPPLIED WITH EACH UNIT



TOLERANCES: EXCEPT WHERE NOTED
DECIMALS: .XX ± .010, XXX ± .005
FRACTIONS: ± 1/4

