



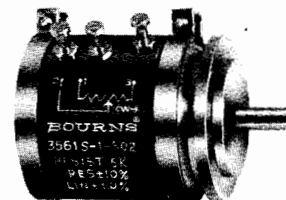
Model 3561
BOURNS® Potentiometer
 7/8" Diameter 3-Turn Servo Mount
 Conductive Plastic Element

OBSOLETE 2002

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.
- Custom design capability is available to satisfy your most demanding and difficult special requirements.

Actual Size



STANDARD RESISTANCES

Resistance (Ohms)	Part Number*
1,000	3561S-1-102
2,000	3561S-1-202
5,000	3561S-1-502
10,000	3561S-1-103

Resistance (Ohms)	Part Number*
20,000	3561S-1-203
50,000	3561S-1-503
100,000	3561S-1-104
200,000	3561S-1-204

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

Model 3561 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 3561S-14-(RC).
Power Rating (325 Volts Maximum)	
70°C	1.0 watt
125°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

ENVIRONMENTAL CHARACTERISTICS

Operating Temperature Range -55 to +125°C

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 ±400 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

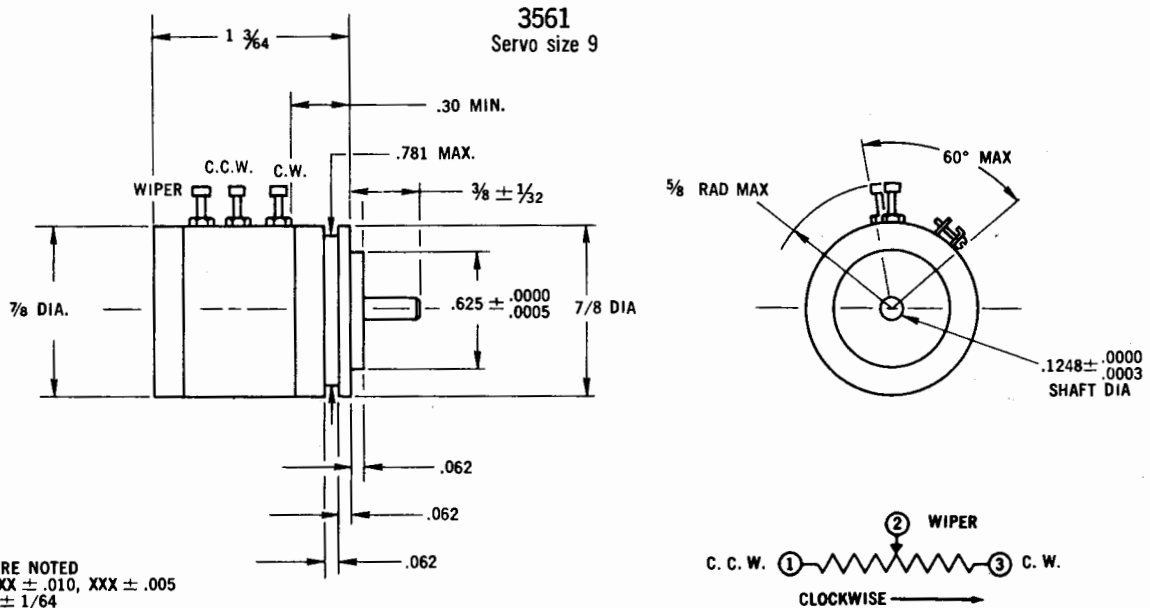
Mechanical Angle*	1080° (+10°, -0°)
Shaft Runout*001 in. T.I.R.
Shaft End Play*003 in. T.I.R.
Shaft Radial Play*002 in. T.I.R.
Pilot Diameter Runout*0015 in. T.I.R.
Lateral Runout*003 in. T.I.R.
Rotational Life	10,000,000 shaft revolutions
Stop Strength	96 oz.-in. minimum
Torque*	
Starting and Running	0.4 oz.-in. maximum
Weight	Approximately 0.7 oz.
Terminals	Gold-plated turret type
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.

①From 1% to 99% VR Output.

Specifications are subject to change without notice.



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

