

MODEL 6120 - 6127
Single Turn Position Sensor
Non-Contacting, Hall Effect
7/8" Diameter



For more information about this product, visit our website at:
www.potentiometers.com

Model Styles

6121	1/8" Shaft, 1/4" Bushing
6124	6mm Shaft, 3/8" Bushing
6126	1/8" Shaft, 3/8" Bushing
6127	1/4" Shaft, 3/8" Bushing
6120-XXXX	Custom Models are available

Electrical Specifications¹

Output Voltage	0.2 Vdc (4%) to 4.8 Vdc (96%) Typical (see table)
Output Overvoltage Limits	10 Vdc to -0.3 Vdc; output may be shorted to ground or supply without damage
Output Current	±8 mA Max.
Output Load	1 kΩ Min., 10 kΩ Typical
Operating Input Voltage Range	4.5 to 5.5 Vdc
Supply Voltage Absolute Limits	20 Vdc Max., -10 Vdc Min.
Independent Linearity ²	± 0.5% (0.25% Available)
Hysteresis	0.2% Max.
Resolution	0.088° for 360° travel, 0.011° for 45° travel
Supply current	8.5 mA Typical, 12 mA maximum
Dielectric Strength	750 V rms
Insulation Resistance	1,000 Megohms Minimum
Electrostatic Discharge (ESD)	Passes 2 kV human body model and 15 kV air discharge
Bulk Current Injection (BCI)	Passes 2-500 MHz at 200 mA
Actual Electrical Travel, Nominal	360° Typical (see table)
Temperature Coefficient of Output Voltage	± 20 ppm/C°

Mechanical Specifications

Total Mechanical Travel	360° Continuous (320° with stop feature)
Bearing	Bearing Bronze Bushing
Weight	0.6 oz. Typical
Static Stop Strength	40 in. oz.
Panel Nut Tightening Torque	25 in. lb. Maximum
Rotational Speed	500 RPM Maximum

¹ Specifications subject to change without notice.
² Linearity is measured between 1% and 99% of output voltage.

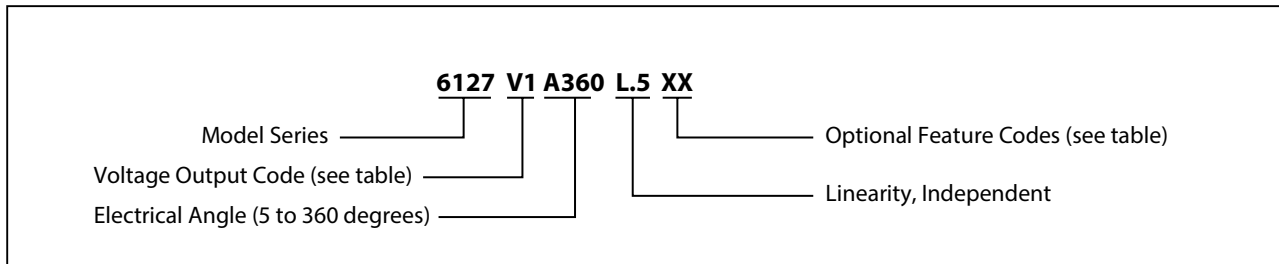


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Environmental (MIL-R-12934)

Operating Temperature Range	-40°C to +125°C
Shock	Per MIL R-39023, 6 ms Saw-tooth 100G's
Vibration	Per MIL R-39023, 10G's, 100 to 500 Hz
Moisture Resistance, Powered	Per MIL 202G, Method 106G
Rotational Life	10 million shaft revolutions with up to 8 oz sideload
Storage Temperature Range	-55°C to +125°C
Ingress Protection Rating (IP Code)	IP50, IP66 available as option (feature code ES)

Ordering Information

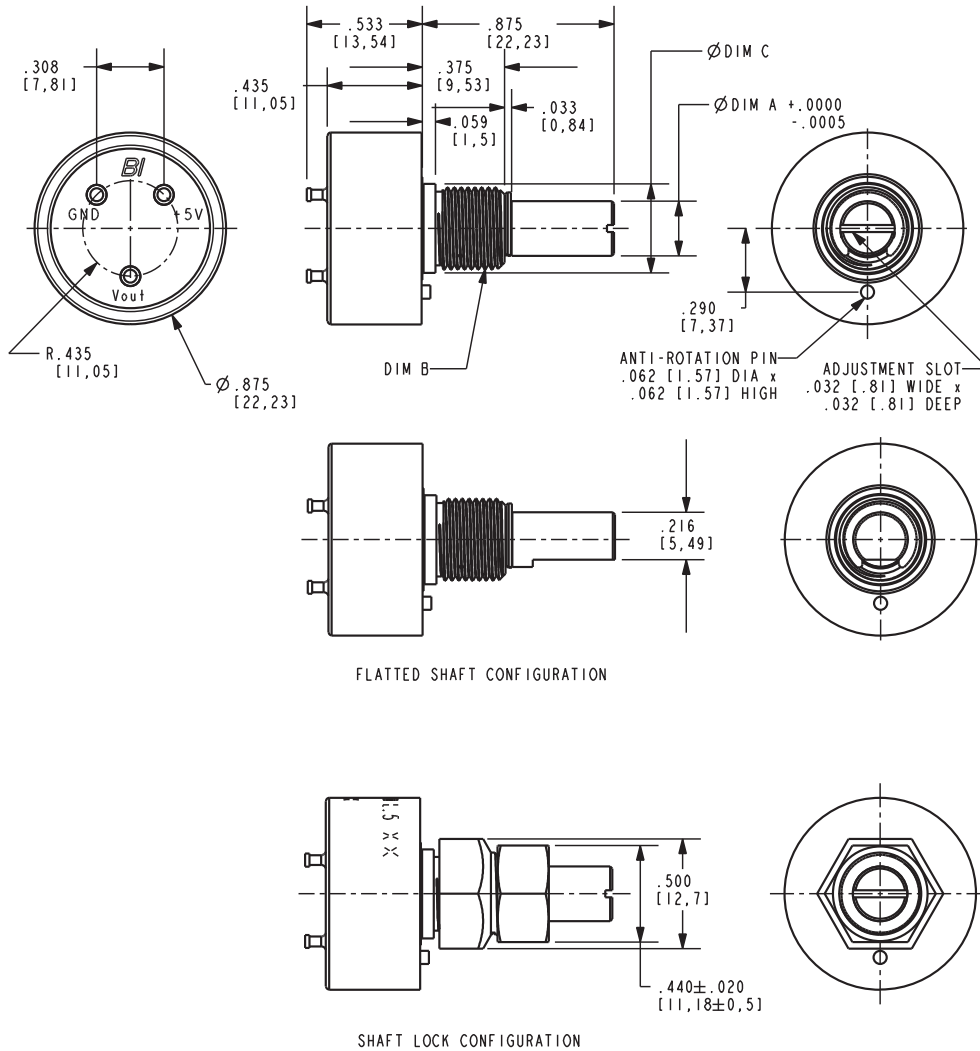


Special Feature Codes

Voltage Output Codes		Special Feature Codes	
V0	≤ 3% to ≥ 96%	Stop (320 degree)	ST
V1	4% to 96%	Flatted Shaft (Slot standard)	FS
V2	5% to 95%	Linearity Data	LT
V3	10% to 90%	Shaft Lock	SL
V4	15% to 85%	Reverse Direction	CW
V5	20% to 80%	Seal (IP66) 6124 or 6127 only	ES

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Outline Dimensions (Inch/mm)



DIM	6121	6124	6126	6127
A	.1248	6 mm	.1248	.2497
B	1/4-32 UNEF	3/8-32 UNEF	3/8-32 UNEF	3/8-32 UNEF
C	.281	.406	.406	.406

- NOTES:
1. UNIT SHIPS WITH NUT AND WASHER (NOT SHOWN).
 2. FOR SLOTTED OR FLATTED SHAFT, OUTPUT IS AT 50% IN POSITION SHOWN.
 3. DIMENSIONS: INCHES [mm].
 4. TOLERANCES: $\pm .015$ [.38] UNLESS NOTED.

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 36 State Route 10, STE 6 • East Hanover, NJ 07936-0436
 973-887-2550 • Toll Free 1-800-631-8083 • Fax 973-887-1940
<http://www.potentiometers.com>