Model 6130 series

Low Profile 7/8" Diameter **Single Turn Conductive Plastic Bronze Bearing Position Sensor Precision Potentiometer**



MODEL STYLES AVAILABLE

6134		6 mm Shaft, 3/8" Bushing
6137		1/4" Shaft, 3/8" Bushing
6138 for heavy side load applications		1/4" Shaft, 3/8" Bushing

6130-XXX

Custom models are available; Contact Customer Service for special features or tolerances

ELECTRICAL¹

Resistance Range	1K to 100K Ohms	
Standard Resistance Tolerance	±20%	
Independent Linearity ²	±1% (±2% for values greater than 20K Ohms)	
Minimum Practical Independent Linearity	±0.5%	
Input Voltage	400 VDC maximum, not to exceed power rating	
Power Rating	1.0 Watt at 70°C, derating to 0 at 125°C	
Dielectric Strength	750 V rms	
Insulation Resistance	1,000 Megohms minimum	
Output smoothness	0.1% maximum	
Actual Electrical Travel	340° ±3° (300° ±3° with stop feature)	
Electrical Continuity Travel	$350^{\circ} \pm 3^{\circ} (343^{\circ} \pm 3^{\circ} \text{ with stop feature})$	
End Voltage	maximum 0.5% of input voltage	
Resolution	essentially infinite	
Temperature Coefficient of Resistance	-400 ppm/°C typical	
Temperature Coefficient of Output Voltage ³	±10 ppm/°C typical	

MECHANICAL

Total Mechanical Travel	360° continuous (343° with stop feature)
Weight	0.6 oz. typical
Backlash	1° maximum
Static Stop Strength	40 inoz. maximum
Start/Run Torque	0.5 inoz. maximum
Panel Nut Tightening Torque	25 in. lb. Max.
Construction	zinc die cast housing, stainless steel shaft, bronze bearing
Hazardous Materials	Pb free, E.U. RoHS compliant, no REACH SVHC's

¹ Specifications subject to change without notice.





4200 Bonita Place, Fullerton, CA 92835 USA

Phone: 714 447 2345 Website: www.bitechnologies.com

May 21, 2014

Model 6130 page 1 of 3



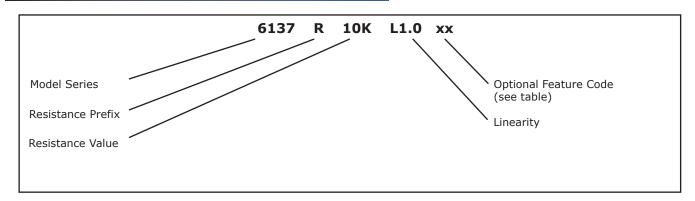
Linearity is measured between 1% and 99% of input voltage.
Measured with 10 VDC CW to CCW and slider at 50% of electrical travel

Model 6130

ENVIRONMENTAL (MIL-PRF-39023)

Operating Temperature Range	-25°C to +125°C
Temperature Cycling (static)	5 cycles, -40°C to +125°C, maximum 15% ΔR
Shock	6 ms sawtooth, 100 G's, 0.1 ms maximum discontinuity
Vibration	10 G's, 10 to 500 Hz, maximum 5% ΔR, 0.1 ms maximum discontinuity
Moisture Resistance	five 24 hour cycles, maximum 25% ΔR
High Temperature Exposure	1,000 hours at 125°C, maximum 0.5% ΔR
Rotational Life (model 6137)	5 million shaft revolutions with no sideload
Rotational Life (model 6138)	10 million shaft revolutions with up to 16 oz sideload at 90 RPM
Ingress Protection Rating (IP Code)	IP50

ORDERING INFORMATION

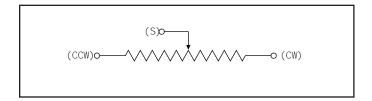


FEATURE CODES

Center Tap	СТ
Stop	ST
Flatted Shaft (slotted is standard)	FS

When multiple Optional Feature codes are used the P/N shall be in the same sequence as listed in this table (top to bottom).

CIRCUIT DIAGRAM



STANDARD RESISTANCE VALUES

1K	5K	20K	100K
2K	10K	50K	

BI Technologies Corporation

4200 Bonita Place, Fullerton, CA 92835 USA

Phone: 714 447 2345 Website: <u>www.bitechnologies.com</u>

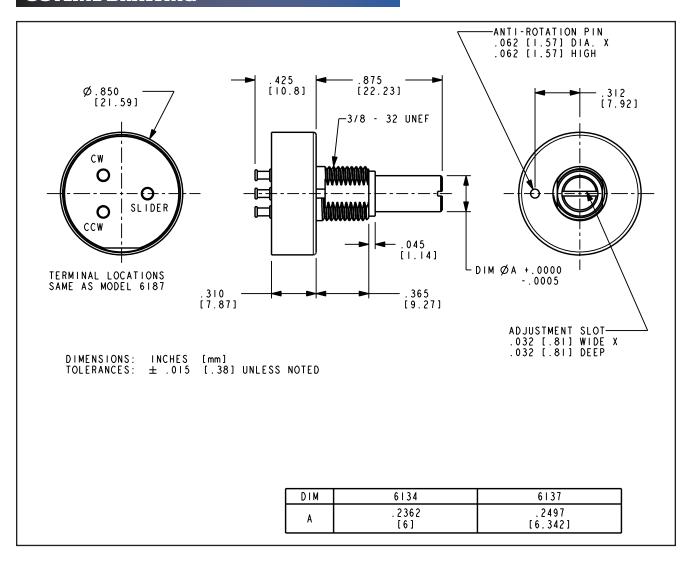
May 21, 2014

Model 6130 page 2 of 3



Model 6130

OUTLINE DRAWING



4200 Bonita Place, Fullerton, CA 92835 USA

Phone: 714 447 2345 Website: <u>www.bitechnologies.com</u>

May 21, 2014



Model 6130 page 3 of 3