

Model 6150 Series

7/8" Diameter Single Turn Non-contacting Position Sensor



MODEL STYLES AVAILABLE

6153	1/8" Shaft, dual ball bearing
615x-XXXX	Custom models are available; Contact Customer Service for special features

ELECTRICAL¹

Output Voltage	0.2 Vdc (4%) to 4.8 Vdc (96%) Typical (see Feature Codes table)
Output Overvoltage Limits	10 Vdc to -0.3 Vdc; output may be shorted to ground or supply without damage
Output Current	±8 mA maximum
Output Load	1 kΩ minimum, 10 kΩ typical
Input Voltage	4.5 to 5.5 Vdc
Supply Voltage Absolute Limits	20 Vdc maximum, -10 Vdc minimum
Independent Linearity ²	±0.5% (0.25% available)
Hysteresis	0.2% maximum
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	360° typical (see Ordering Information)
Temperature Coefficient of Output Voltage ³	± 20 ppm/°C

MECHANICAL

Total Mechanical Travel	360° continuous
Number of Gangs	1 maximum
Weight	0.4 oz. nominal
Shaft Runout	maximum T.I.R. 0.003"
Pilot Diameter Runout	maximum T.I.R. 0.003"
Lateral Runout	maximum T.I.R. 0.003"
Shaft Radial Play	maximum 0.005"
Start/Run Torque	maximum 0.5 oz.-in.
Rotational Speed	maximum 1,000 RPM

¹ Specifications subject to change without notice.

² Linearity is measured between 1% and 99% of input voltage.

³ Measured with 5 VDC supply and 50% of electrical travel

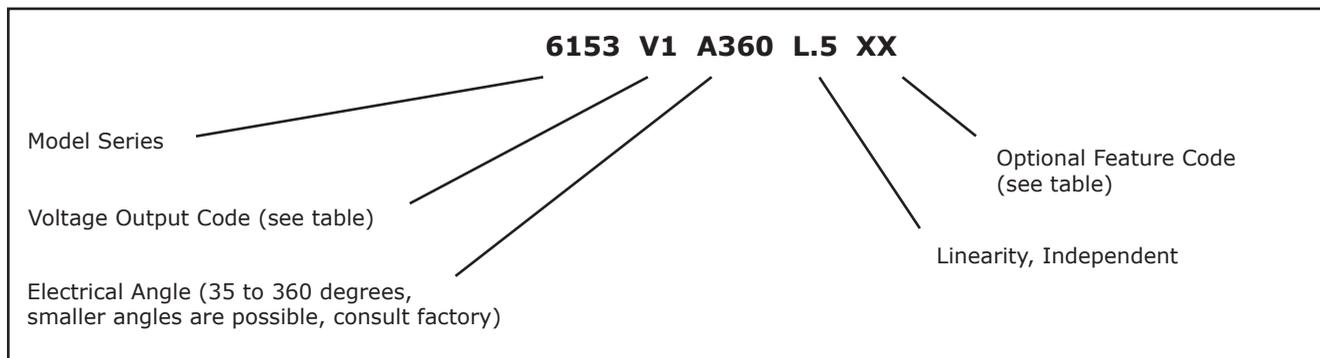


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ENVIRONMENTAL

Operating Temperature Range	-40°C to +125°C
Shock	Per MIL R-39023, 6 ms Saw-tooth 100 G's
Vibration	Per MIL R-39023, 10 G's, 100 to 500 Hz
Moisture Resistance, Powered	Per MIL 202G, Method 106G
Rotational Life	50 million shaft revolutions with side load < 0.33 lb, 100 million with side load < 0.25 lb
Storage Temperature Range	-55°C to +125°C
Ingress Protection Rating (IP Code)	IP50

ORDERING INFORMATION



FEATURE CODES

Voltage Output Codes	
V0	≤ 3% to ≥ 96%
V1	4% to 96%
V2	5% to 95%
V3	10% to 90%
V4	15% to 85%
V5	20% to 80%

When V0 is used the angle specified is the theoretical angle over which the output would vary if the output could actually reach 0% and 100% of Vcc.

Optional Feature Codes	
FS	Flatted Shaft
SS	Slotted Shaft
LT	Linearity Data
CW	Reverse Direction

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

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OUTLINE DRAWING

