Model 6150 Series

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

MODEL STYLES AVAILABLE

6153	1/8” Shaft, Ball Bearing
6154	1/8” Shaft, Bronze Sleeve Bushing
615x-XXXX	Custom models are available; Contact Customer Service for special features

ELECTRICAL[1]

Output Voltage	0.25 Vdc to 4.75 Vdc 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.

[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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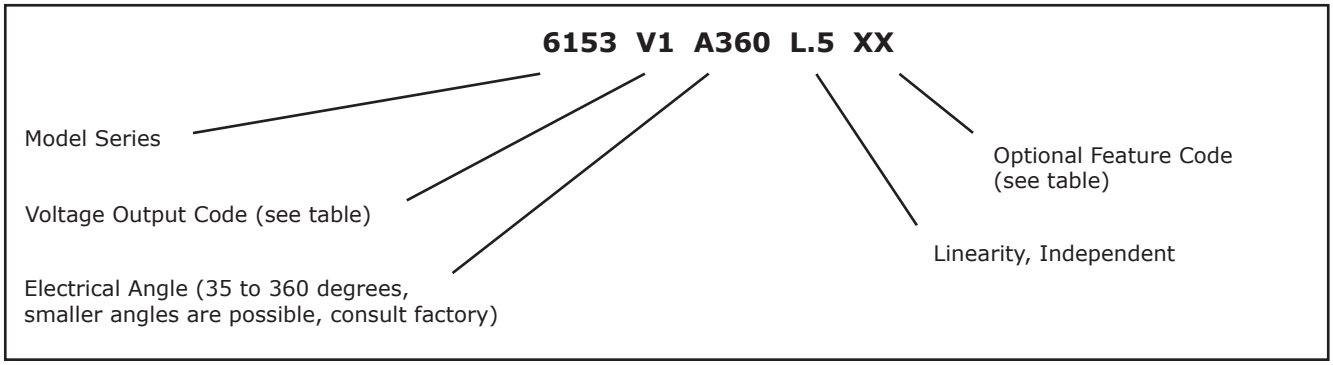
ENVIRONMENTAL

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 < 0.25 lb
Storage Temperature Range	-55°C to +125°C

ORDERING INFORMATION



FEATURE CODES

Voltage Output Codes		Optional Feature Codes	
V0	≤ 0.15 Vdc to ≥ 4.8 Vdc	FS	Flatted Shaft
V1	0.2 Vdc to 4.8 Vdc	SS	Slotted Shaft
V2	0.25 Vdc to 4.75 Vdc	LT	Linearity Data
V3	0.5 Vdc to 4.5 Vdc	CW	Reverse Direction
V4	0.75 Vdc to 4.25 Vdc		
V5	1 Vdc to 4 Vdc		

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.

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OUTLINE DRAWING

Model 6153