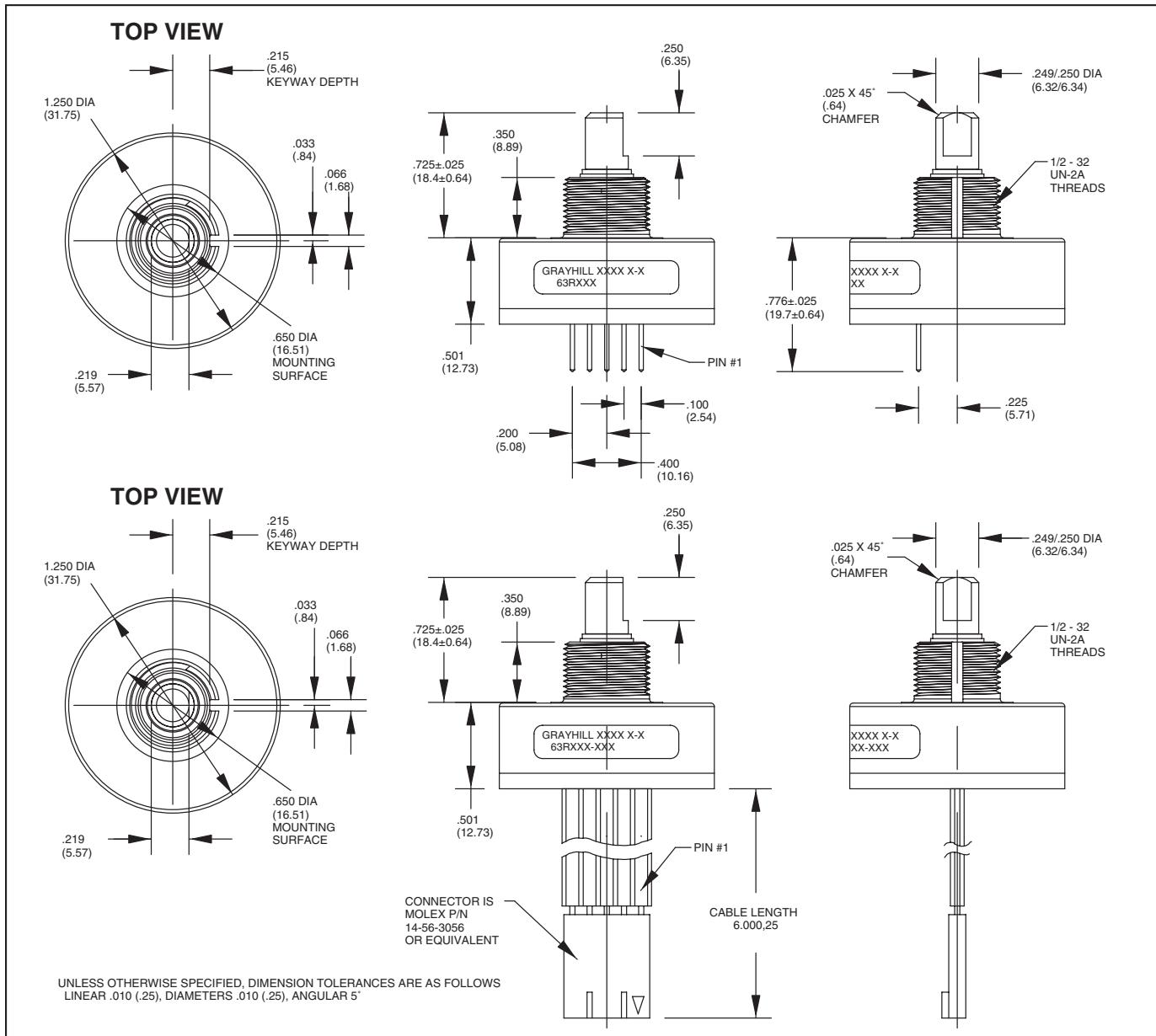


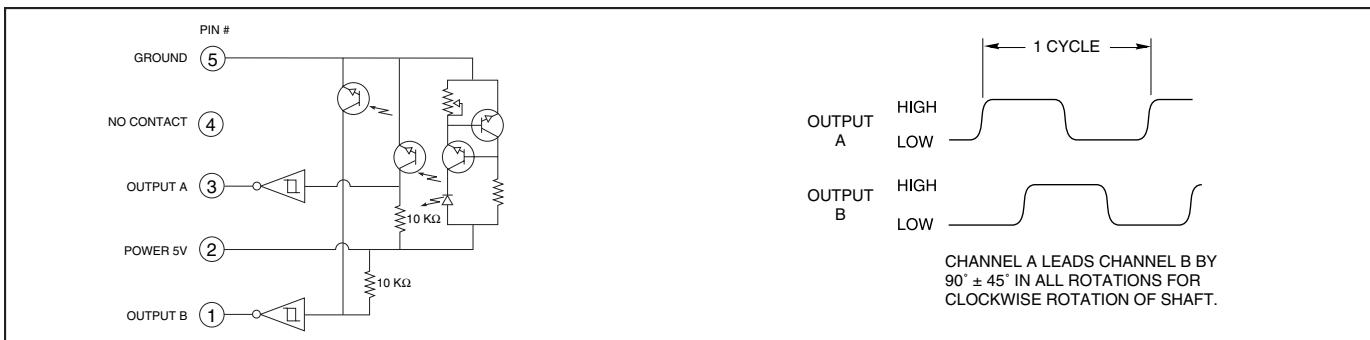
SERIES 63R

**High Resolution, Ball Bearing,
5-pin (Polarized Connection)**

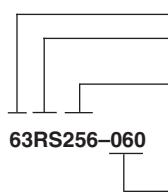
FEATURES

- 25, 32, 50, 64, 100, 128 and 256 Cycles per Revolution Available
- Sealed Version Available
- Rugged Construction
- Cable or Pin Versions
- 300 Million Rotational Cycles
- 5000 RPM Shaft Rotation
- Index Pulse Available

**DIMENSIONS** In Inches (and millimeters)

CIRCUITRY AND WAVEFORM: Standard Quadrature 2-Bit Code**SPECIFICATIONS****Electrical Ratings****Operating Voltage:** 5 ±.25 Vdc**Supply Current:** 30 mA maximum at 5 Vdc**Logic Output Characteristics:**Output Type: Open collector with integrated Schmitt Trigger and 10 KW pull-up resistor
Maximum Sink Current: 16 mA at .40 volts**Power Consumption:** 150 mW maximum**Optical Rise Time:** 500 nS typical**Optical Fall Time:** 14 nS typical**Mechanical Ratings****Mechanical Life:** 300 million revolutions**Time Life:** Guaranteed for 10 years of continuous operation (calculated from emitter degradation data)**Mounting Torque:** 20 in-lbs maximum**Terminal Strength:** 5 lbs terminal pull-out force minimum**Solderability:** 95% free of pin holes and voids**Externally Applied Shaft Force:**

Axial:15 lbs maximum; Radial:15 lbs maximum

Operating Torque: 0.5 in-oz maximum (no detents) for unsealed versions**Environmental Ratings****Operating Temperature Range:** -40°C to 85°C**Storage Temperature Range:** -55°C to 100°C**Relative Humidity:** 90-95% at 40°C for 96 hours**Vibration Resistance:** Harmonic motion with amplitude of 15g, within a varied 10 to 2000 Hz frequency for 12 hours per MIL-STD-202, Method 204**Shock Resistance:** Test 1: 100g for 6 mS, half-sine wave with velocity change of 12.3 ft/s. Test 2: 100g for 6 mS, sawtooth wave with velocity change of 9.7 ft/s.**Materials and Finishes****Bushing:** Zinc diecast**Housing:** Zytel FR-50**Shaft:** Stainless steel insert molded into nylon rotor support**Code Rotor and Aperture:** Chemically etched stainless steel/electroformed nickel**Printed Circuit Board:** NEMA Grade FR-4. Five microinches minimum gold over 100 microinches minimum nickel over copper**Optical Barrier:** Polyphenylene sulfide, 94 V-0**Backplate:** Polyester**Header:** Phosphor bronze, 200 microinches tin over 50 microinches nickel (pin version only)**Infrared Emitter:** Gallium aluminum arsenide**Photo IC:** Planar silicon**Retaining Ring:** Stainless steel**Cable:** 26 AWG, stranded/tinned wire, PVC coated on .100 (2,54) centers (cable version only)**Connector:** Glass-filled PCT, UL94V-0**Bearing Subassembly****Bearing:** NSK ABEC 5 (stainless steel)**Preload Collar:** 303 stainless steel**Spacer:** 303 stainless steel**Bellville Spring:** spring steel (stainless)**ORDERING INFORMATION****Series****Style:** R = Standard, 5-pin, high resolution

RS = Sealed, 5-pin, high resolution

Cycles: per channel per revolution = 25, 32, 50, 64, 100, 128, 256**Termination:**

Blank (no dash or numbers): pins as described in drawing.

Cable Termination: 060 = 6.0in. Cable is terminated with Molex Connector P/N 14-56-3056

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