

SERIES 61Z

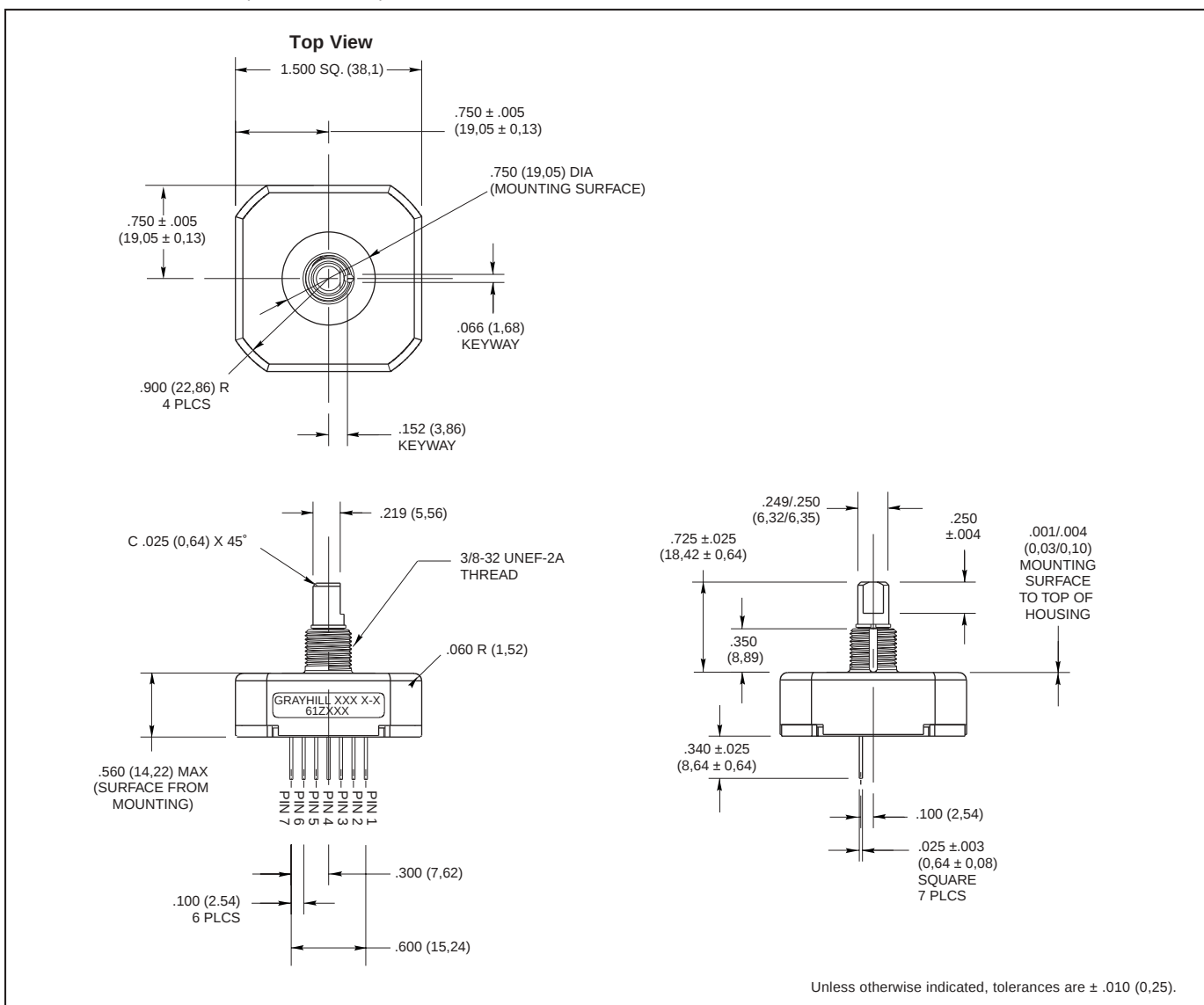
High Resolution, Redundant
Circuitry, 7-Pin

FEATURES

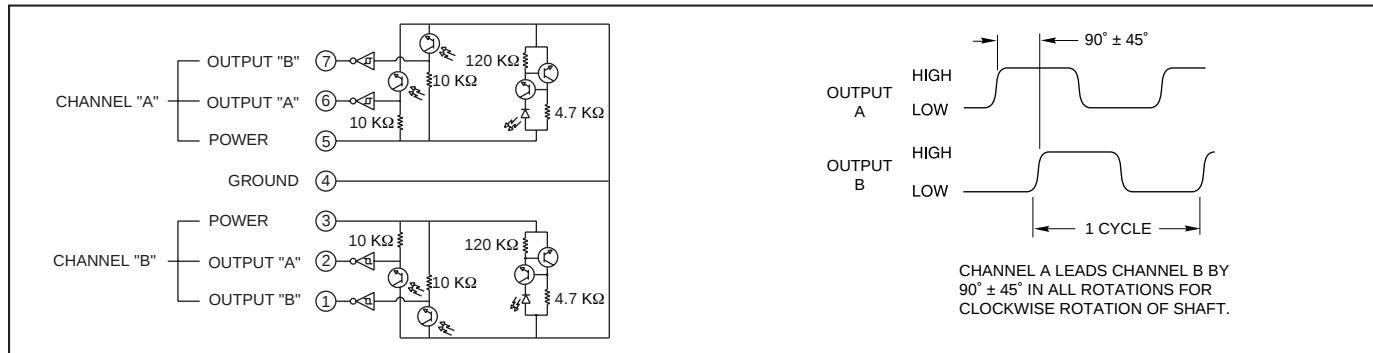
- 25, 32, 50, 64, 100, 128 and 256 Cycles per Revolution
- Rugged Construction
- 10 Million Life Cycles
- 300 RPM Shaft Rotation
- Shaft and Panel Seals Available
- Custom Cable Versions



DIMENSIONS In inches (and millimeters)



CIRCUITRY AND WAVEFORM: Standard Redundant Quadrature 2-Bit Code



SPECIFICATIONS

Electrical Ratings

Operating Voltage: 5.0 ± .25 Vdc

Supply Current: 50 mA maximum at 5 Vdc

Logic Output Characteristics:

Output Type: Open collector and 10 KΩ pull-up resistor with integrated Schmitt Trigger

Maximum Sink Current: 16 mA at .40V

Power Consumption: 250 mW maximum at 5 Vdc

Optical Rise Time: 500 nS typical

Optical Fall Time: 16 nS typical

Mechanical Ratings

Mechanical Life: 10 million revolutions

Time Life: Guaranteed for 10 years of continuous operation (calculated from emitter degradation data)

Mounting Torque: 20 in-lbs maximum

Shaft Push Out Force: 100 lbs

Terminal Strength: 5 lbs terminal pull-out force minimum

Solderability: 95% free of pin holes and voids

Operating Torque: 1.5 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: 6262-T9 aluminum alloy

Housing: Hiloy 610B

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: Polyphthalamide (PPA)

Backplate: Polyester

Pin 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

ORDERING INFORMATION



Series

Style: Z = Standard, high resolution, redundant circuitry, 7-pin

 ZS = Sealed, high resolution, redundant circuitry, 7-pin

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

61ZS256

For Accessories see page I-41 for details. Control knobs available, see page I-57.

Available from your local Grayhill Distributor. For prices and discounts, contact a local Sales Office, an authorized local Distributor or Grayhill.