SERIES 62S

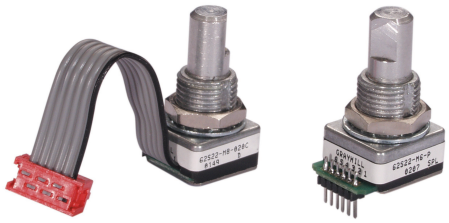
Compact 1/2" Package

FEATURES

- Compact Size
- Requires Minimal Behind Panel Space
- 1 Million Rotational Cycles for Low and Medium Torque, 1/2 Million for High
- 3 Million Rotations for Non-Detent Styles
- Optional Integral Pushbutton
- Choices of Cable Length and Terminations

APPLICATIONS

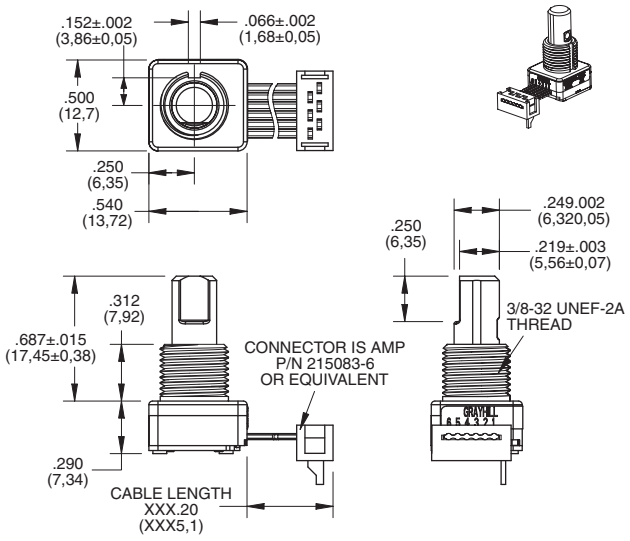
- Global Positioning/Driver Information Systems
- Medical Equipment



DIMENSIONS in inches (and millimeters)

Unless otherwise specified, standard tolerance is ±.010 (0,25)

Termination: -C



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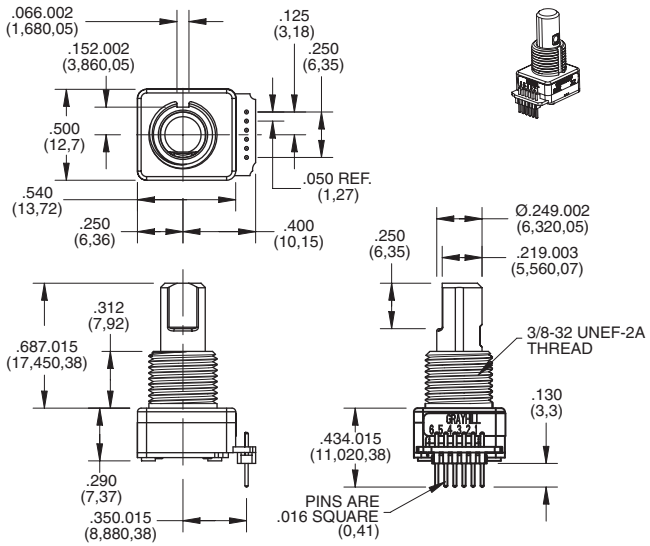

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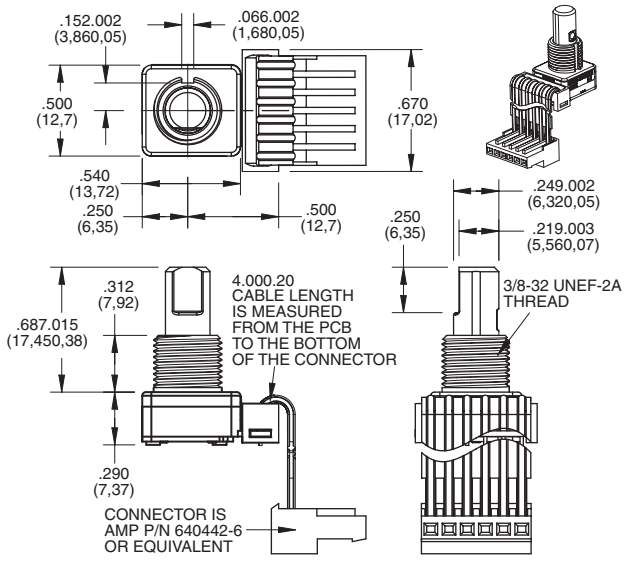
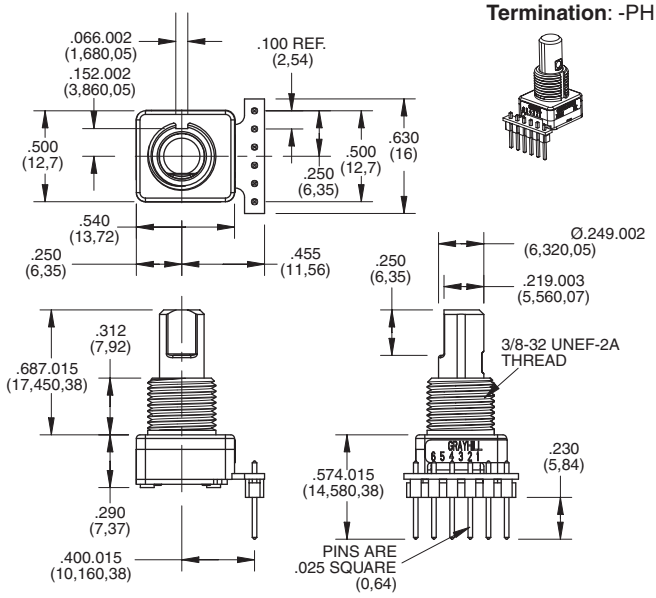
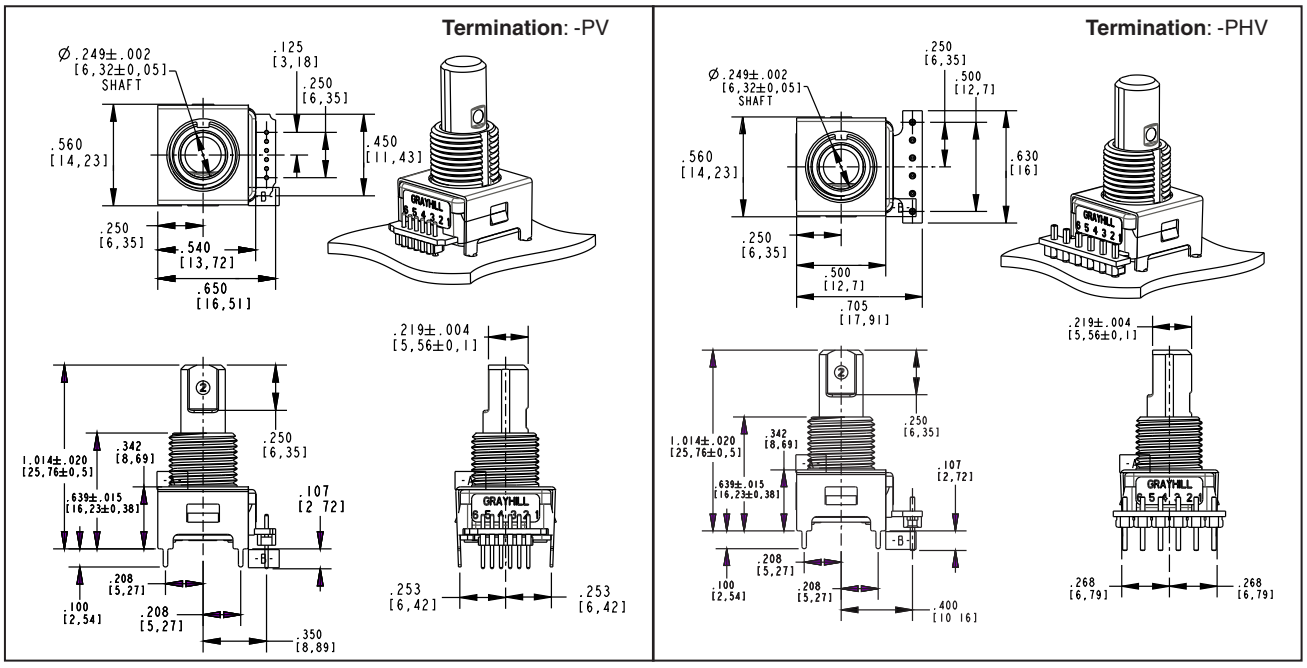


Termination: -PH





SPECIFICATIONS

Environmental Specifications

Operating Temp. Range: -40°C to 85°C
Storage Temp. Range: -55°C to 100°C
Humidity: 96 Hours at 90–95% humidity at 40°C
Mechanical Vibration: Harmonic motion with amplitude of 15G's, within a varied frequency of 10 to 2000 Hz
Mechanical Shock: Test 1: 100G for 6 mS, half sine wave with a velocity change of 12.3 ft/s; Test 2: 100G for 6 mS, sawtooth wave with a velocity change of 9.7 ft/s

Rotary Electrical and Mechanical Specifications

Operating Voltage: 5.00 ±0.25 Vdc
Supply Current: 25mA max at 5.25Vdc
Output: Open collector phototransistor, external pull up resistors are required
Output Code: 2-Bit quadrature, channel A leads channel B by 90° electrically during clockwise rotation of the shaft
Logic Output Characteristics:
Logic High shall be no less than 3.8 Vdc
Logic Low shall be no greater than 0.8Vdc
Minimum Sink Current: 2.0 mA
Power Consumption: 132mW maximum (includes power in 2 pull-up resistors)
Mechanical Life:

Non-Detent	3 Million Cycles
Low & Medium	1 Million Cycles
High	1/2 Million Cycles

1 cycle is a rotation through all positions and a full return
Torque shall be within 50% of initial value throughout life
Mounting Torque: 15 in-lbs maximum
Shaft Push-Out Force: 45 lbs minimum
Shaft Pull-Out Force: 45 lbs minimum
Terminal Strength: 15 lbs minimum terminal pull-out force for cable or header termination
Solderability: 95% free of pin holes and voids

Pushbutton Electrical & Mechanical Specifications

Rating: 10 mA at 5 Vdc
Contact Resistance: <10Ω
Life: 3 million actuations minimum
Contact Bounce: <4 ms Make, <10 ms Break
Actuation Force: 9-950±150 grams, 5-510±150 grams, 4-400±100 grams, 3-300±90 grams, 2-200±75 grams
Shaft Travel: .025±.010 inch

Materials and Finishes

Bushing: Zamak 2
Shaft: Aluminum or Zamak 2
Cable: Copper stranded with topcoat in PVC insulation (Cable version only)
Connector (.050 Center): PA4.6 with tin over nickel plated phosphor bronze
Connector (.100 Center): Nylon UL94V-2, tin plated copper alloy
Solder: Sn/Ag/Cu, Lead-Free, No Clean
Hex Nut: Nickel, plated with brass
Lockwasher: Zinc Plated Spring Steel with Clear Trivalent Chromate Finish
Header: Hi-Temp glass filled thermoplastic UL94V-0, phoshor bronze (pin versions only)
Strain Relief: Glass filled thermoplastic (.100 center cable versions only)

This product series is ROHS Compliant.

OPTIONS

Contact Grayhill for custom terminations, shaft and bushing configurations, rotational torque pushbutton force, and code output.