SERIES 62F

1/2" Package, Lighted Shaft

FEATURES

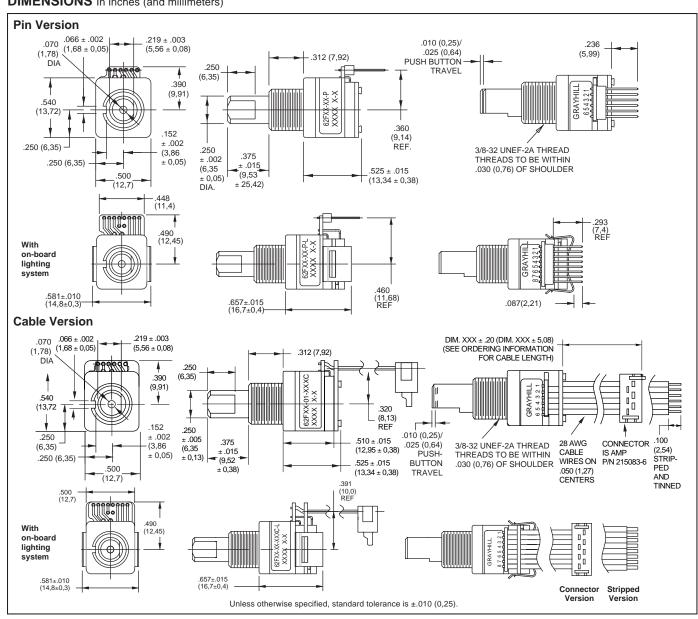
- Integrated Self-Lighting System for Knob Illumination
- 1 Million Rotational Cycles
- 1/2" Package
- Compatible with CMOS, TTL and **HCMOS** Logic
- Optional Integral Pushbutton
- · Choices of Cable Length and **Terminations**
- Other Customized Solutions Available

APPLICATIONS

- Global Positioning/Driver Information Systems
- Medical Equipment
- Cockpit Controls
- Mixing Boards

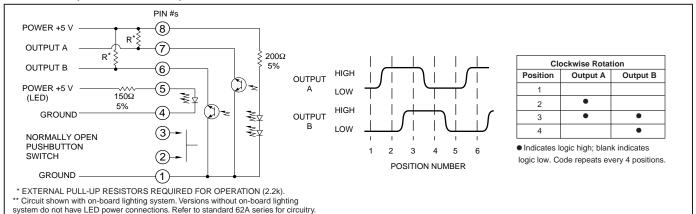


DIMENSIONS In inches (and millimeters)





CIRCUITRY, TRUTH TABLE, AND WAVEFORM Standard Quadrature 2-Bit Code



SPECIFICATIONS

Pushbutton Switch Ratings

Rating: 5 Vdc, 10 mA, resistive Contact Resistance: less than 10 ohms (TTL or CMOS compatible)

Pushbutton Life: 3 million actuations

minimum

Contact Bounce: less than 4 mS at make and less than 10 mS at break Actuation Force: 500 ±300 grams Pushbutton Travel: .010/.025 inch

Switch Ratings

Coding: 2-bit quadrature coded output Operating Voltage: 5.0 ±.25 Vdc Voltage Breakdown: 250 Vac between

mutually insulated parts

Supply Current: 30 mA maximum **Logic Output Characterisitics:** Logic High: 3.8 Vdc minimum Logic Low: 0.8 Vdc maximum Rotational Life: 1,000,000 cycles minimum

(One cycle is a rotation through all positions and a full return)

Minimum Sink Current: 2.0 mA Power Consumption: 150mW maximum Optical Rise and Fall Times: less than 30 mS maximum

Operating Torque:

Detent: 2.0 ±1.4 in-oz initially Non-detent: less than 1.5 in-oz initially Shaft Push Out Force: 45 lbs minimum Mounting Torque: 15 in-lbs maximum Terminal Strength: 15 lbs cable pull-out force

Operating Speed: 100 RPM maximum Axial Shaft Play: .010 maximum

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's, within a varied 10 to 2000 Hz frequency for 12 hours per MIL-STD-202, Method 204

Mechanical Shock: Test 1: 100G for 6 mS, half sine, 12.3 ft/s; Test 2: 100G for 6 mS, sawtooth, 9.7 ft/s

Materials and Finishes

Code Housing: Reinforced thermoplastic

Shaft: Aluminum Bushing: Zinc casting

Shaft Retaining Ring: Stainless steel Detent Spring: Stainless steel

Printed Circuit Boards: NEMA grade FR-4

gold over nickel or palladium Terminals: Brass, tin-plated

Mounting Hardware: One brass, nickel-plated nut and stainless steel lockwasher supplied with each switch. Nut is 0.094 inches thick by

0.562 inches across flats Rotor: Thermoplastic

Code Housing: Thermoplastic Pushbutton Dome: Stainless steel Dome Retaining Disk: Thermoplastic Pushbutton Housing: Thermoplastic Phototransistor: Planar Silicon NPN Pushbutton Contact: Brass, nickel-plated Flex Cable: 28 AWG, stranded/top coated wire, PVC coated on .050 or .100" centers (cabled version)

Header Pins: Phospher bronze, tin-plated

Spacer: ABS

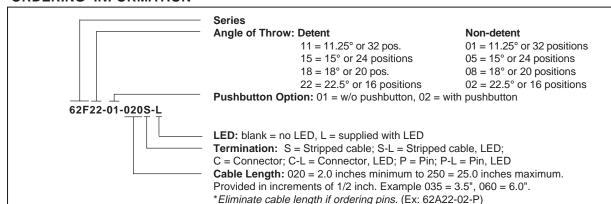
Backplate/Strain Relief: Stainless steel

Lockwasher: Stainless steel Light Pipe: Thermoplastic **LED Housing:** Thermoplastic

OPTIONS

Contact Grayhill for custom terminations, shaft and bushing configurations, and resolutions. Control knobs are also available.

ORDERING INFORMATION



Custom materials, styles, colors, and markings are available. Control knobs available.

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

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