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
- · Customized Solutions Available

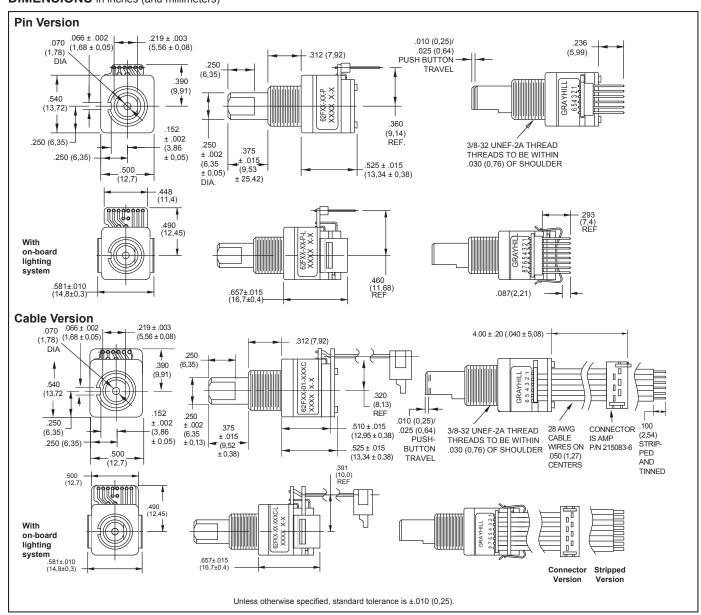
APPLICATIONS

 Global Positioning/Driver Information Systems

- Medical Equipment
- Cockpit Controls
- · Mixing Boards

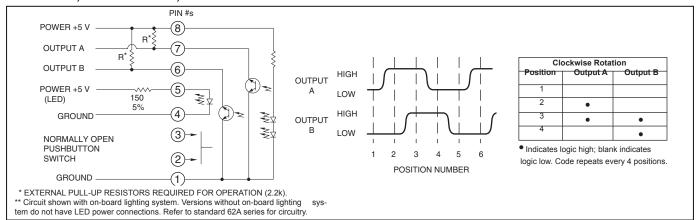


DIMENSIONS in inches (and millimeters)





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: 1000 ± 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 zinc-plated spring steel with clear trivalent chromate finish lockwasher supplied with each switch. (Nut is 0.094 inches thick by 0.433 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

Non-detent

 $01 = 11.25^{\circ} \text{ or } 32 \text{ positions}$

 $05 = 15^{\circ}$ or 24 positions

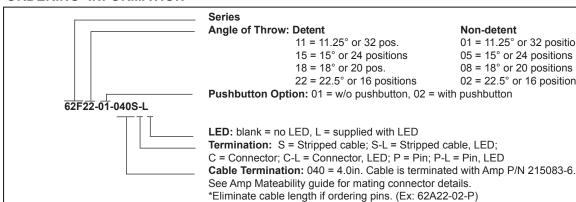
 $08 = 18^{\circ}$ or 20 positions

 $02 = 22.5^{\circ}$ or 16 positions

Backplate/Strain Relief: Stainless steel

Light Pipe: Thermoplastic **LED Housing:** Thermoplastic

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.