

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

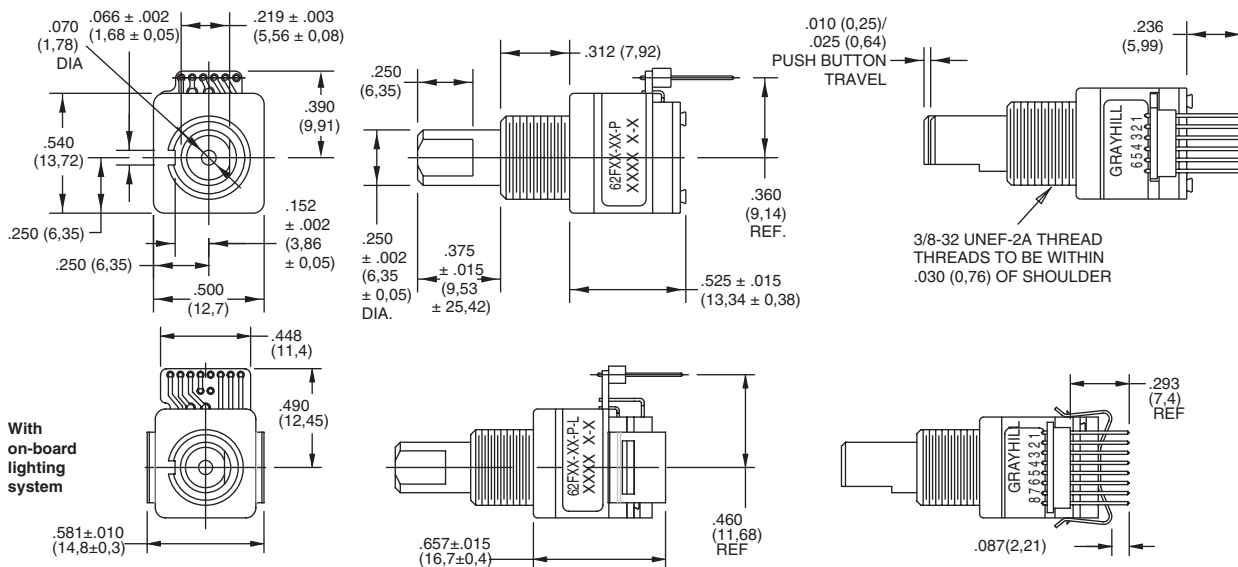
APPLICATIONS

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

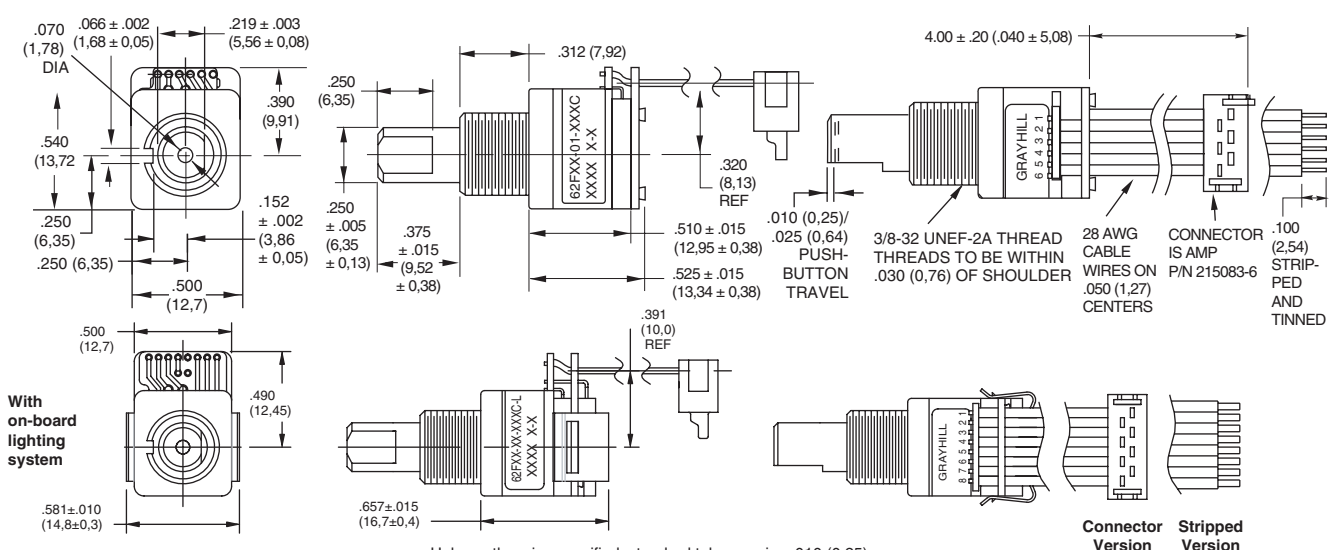


DIMENSIONS In inches (and millimeters)

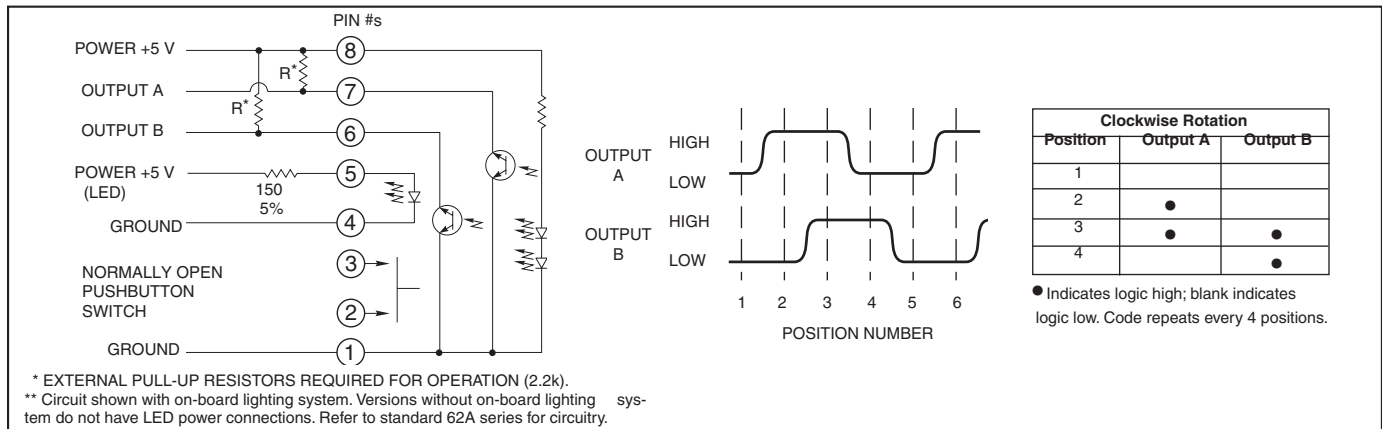
Pin Version



Cable Version



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 Characteristics:

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 minimum

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 0.433 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: Phosphor bronze, tin-plated

Spacer: ABS

Backplate/Strain Relief: Stainless steel

Lockwasher: Stainless steel

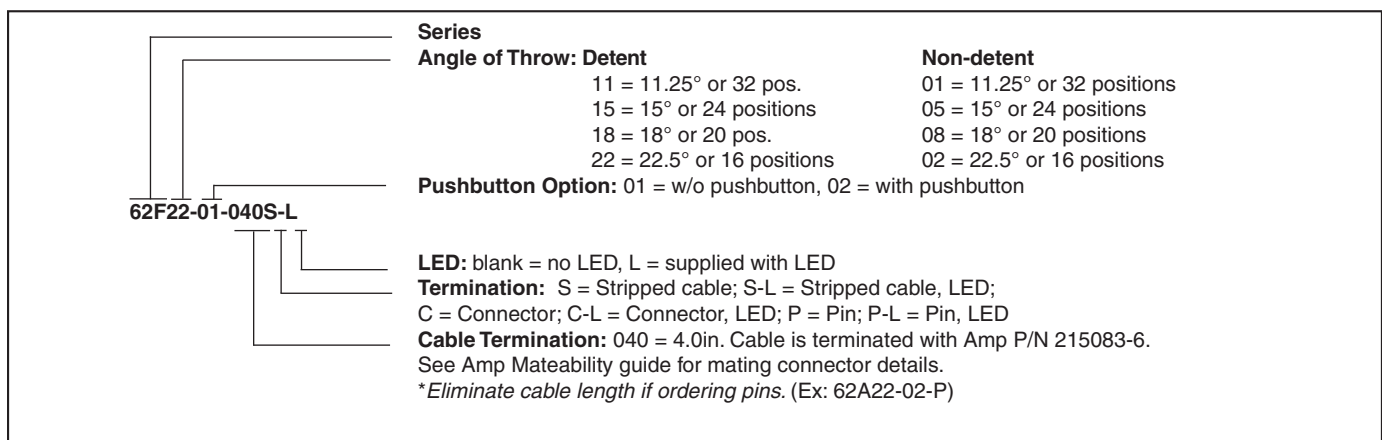
Light Pipe: Thermoplastic

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.