

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

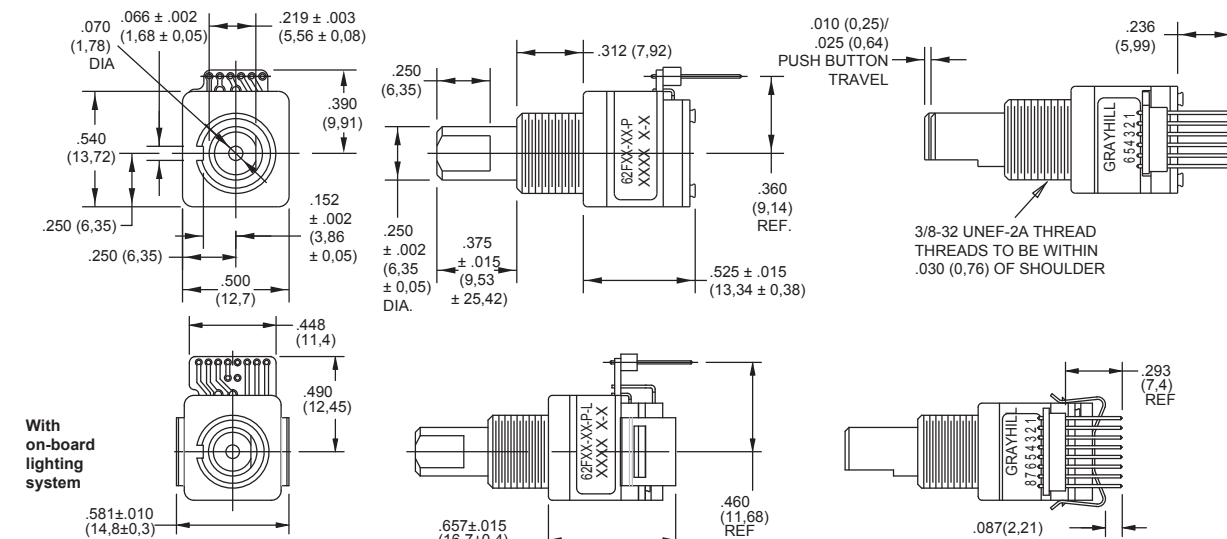
APPLICATIONS

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

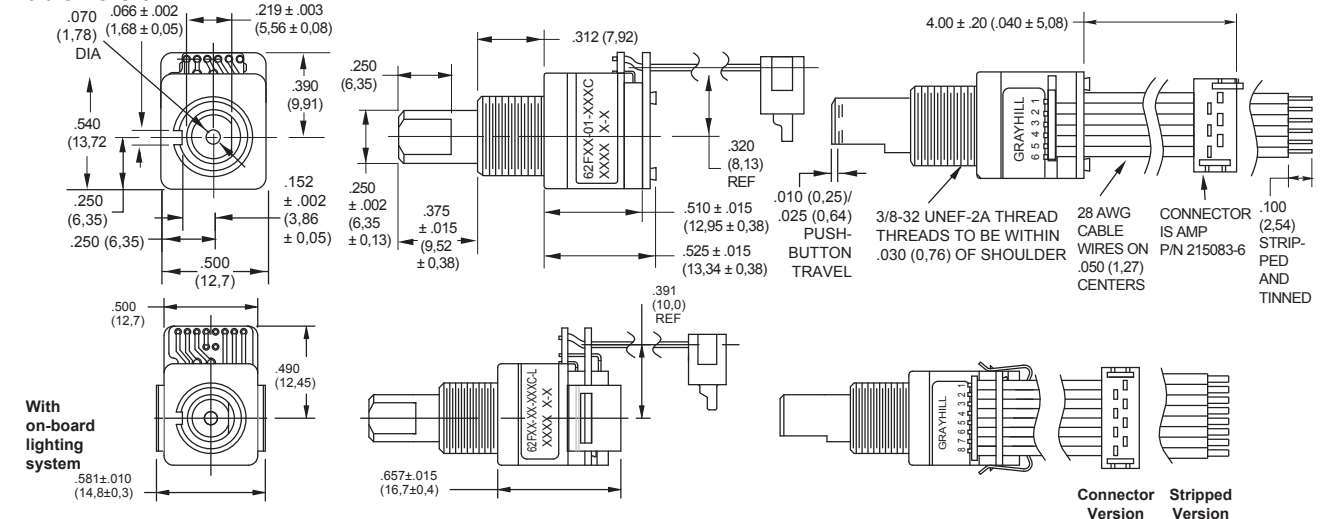


DIMENSIONS in inches (and millimeters)

Pin Version

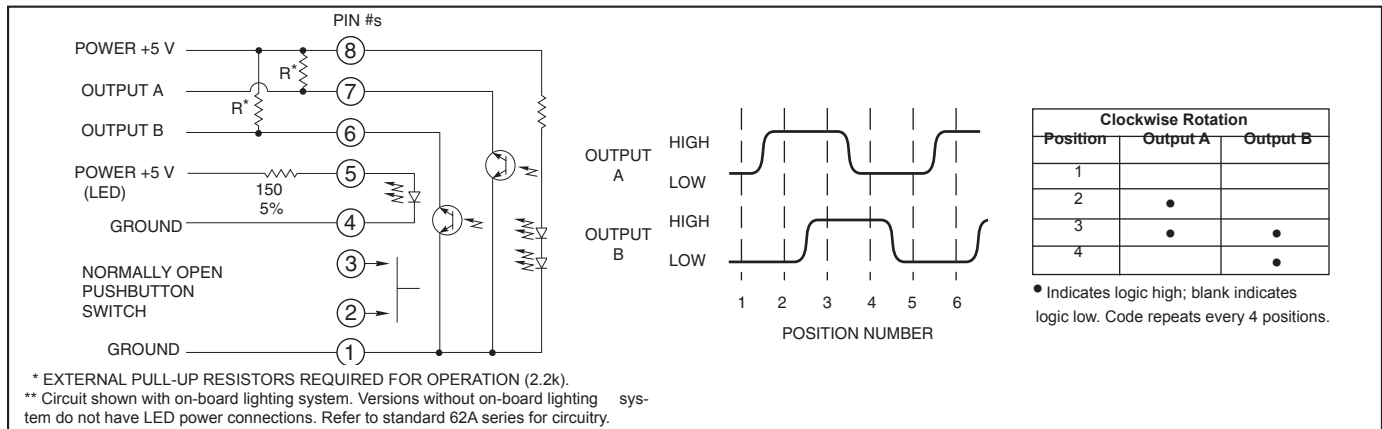


Cable Version



Unless otherwise specified, standard tolerance is ± 0.10 (0.25).

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 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 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: Phosphor bronze, tin-plated

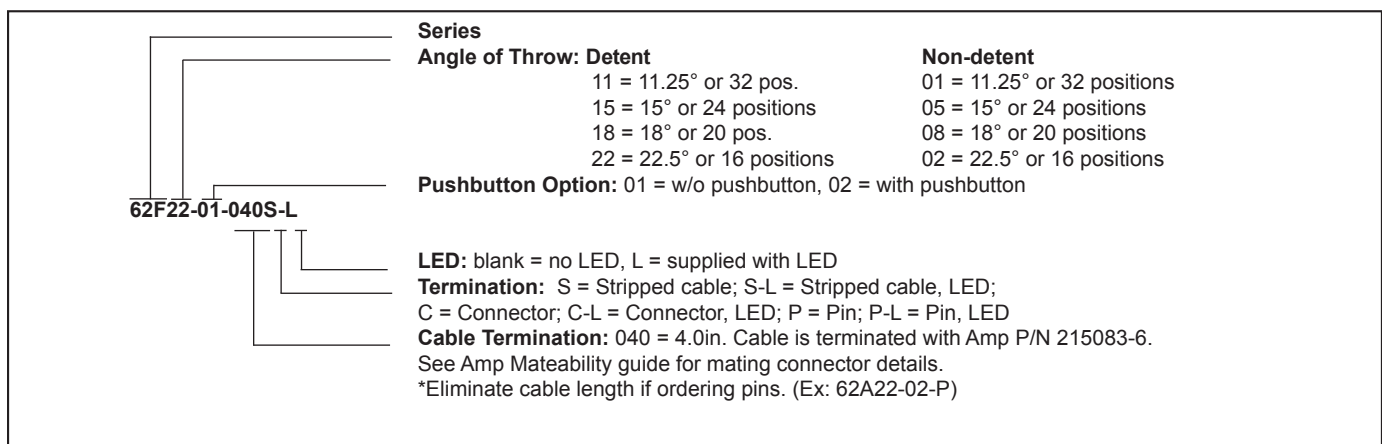
Spacer: ABS

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.