



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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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

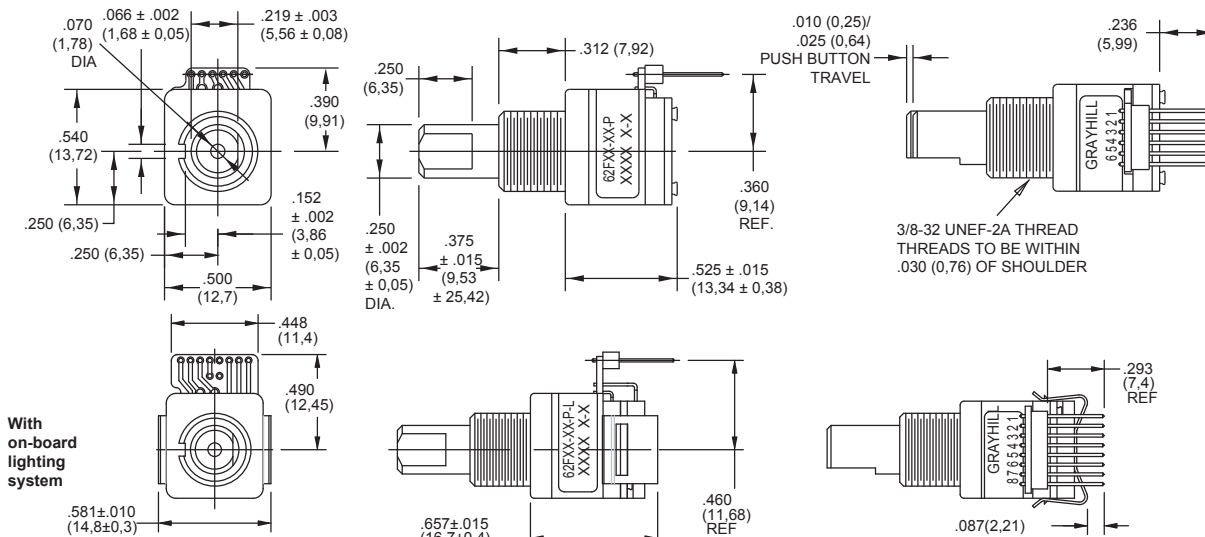
APPLICATIONS

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

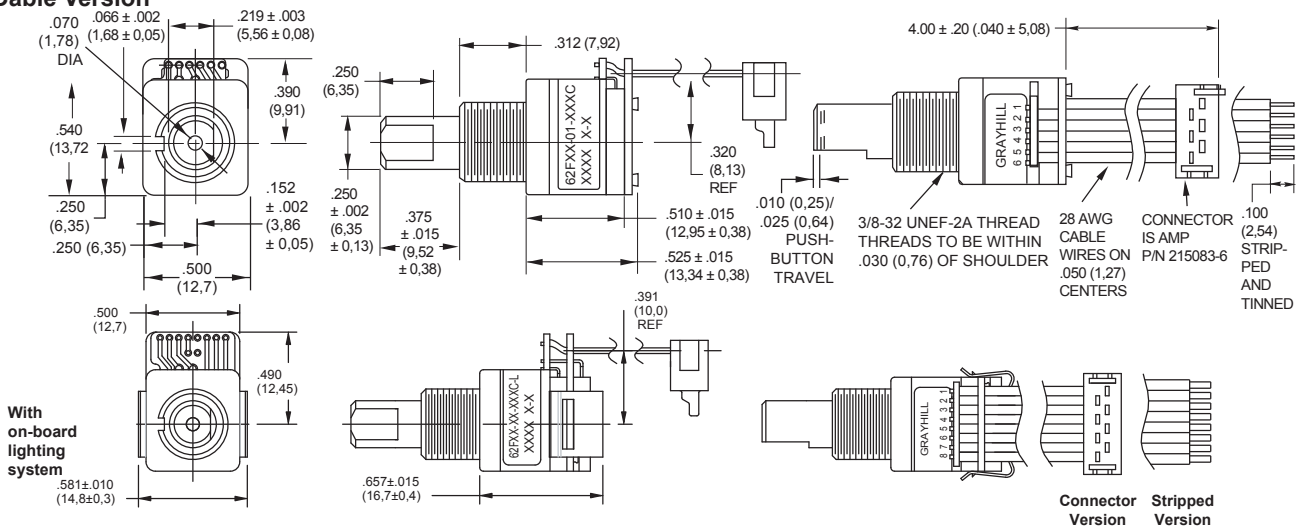


DIMENSIONS in inches (and millimeters)

Pin Version



Cable Version



Unless otherwise specified, standard tolerance is ± 0.10 (0,25).

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

Position	Output A	Output B
1		
2	•	
3	•	•
4		•

• Indicates logic high; blank indicates logic low. Code repeats every 4 positions.

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

62F22-01-040S-L

Series	Series
Angle of Throw: Detent	Non-detent
11 = 11.25° or 32 pos.	01 = 11.25° or 32 positions
15 = 15° or 24 positions	05 = 15° or 24 positions
18 = 18° or 20 pos.	08 = 18° or 20 positions
22 = 22.5° or 16 positions	02 = 22.5° or 16 positions

Pushbutton Option: 01 = w/o pushbutton, 02 = with pushbutton

LED: blank = no LED, L = supplied with LED

Termination: S = Stripped cable; S-L = Stripped cable, LED; C = Connector; C-L = Connector, LED; P = Pin; P-L = Pin, LED

Cable Termination: 040 = 4.0in. Cable is terminated with Amp P/N 215083-6. See Amp Mateability guide for mating connector details.

*Eliminate cable length if ordering pins. (Ex: 62A22-02-P)

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.