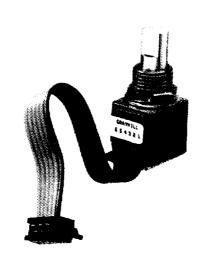


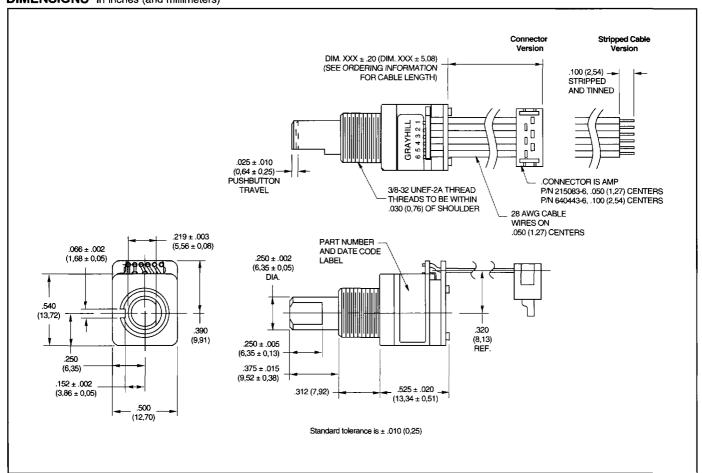
# SERIES 62A Compact, 1/2" Package

### **FEATURES**

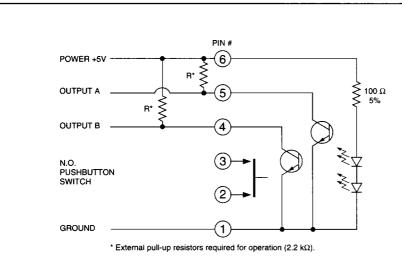
- Low Cost
- Long Life
- Economical Size
- Optically Coupled for More than a Million Cycles
- With or Without Integral Pushbutton
- Compatible with CMOS, TTL and HCMOS Logic
- Available in 16, 24 and 32 Detent Positions
- Choices of Cable Length and Terminations
- Used to Set Radio Frequency, Drill Depth, RPM, Menu Select, etc.



# **DIMENSIONS** In inches (and millimeters)

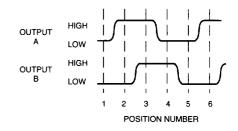


### CIRCUITRY, TRUTH TABLE, AND WAVEFORM: Standard Quadrature 2-Bit Code



Clockwise Rotation		
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: at 5 Vdc, 10 mA, resistive

Contact Resistance: <  $10\Omega$  (TTL or CMOS

compatible).

Voltage Breakdown: 250 Vac between mutually

insulated parts.

Contact Bounce: Less than 4 milliseconds at make and less than 10 milliseconds at break Actuation Life: 3,000,000 operations Actuation Force: 725 ± 150 grams

## **Rotary Encoder Ratings**

Coding: 2 bit quadrature coded output Operating Voltage: 5V ± .25 Vdc

Supply Current: 30 mA maximum @ 5 Vdc

Logic High: 3.8V minimum Logic Low: 0.8V maximum Logic Rise and Fall Times: < 30 ms Operating Torque: 1.9 in-oz ± .6 in-oz initially Rotational Life: > 1,000,000 cycles of operation (cycle is rotation through all positions and return)

Shaft Push Out Force: 45 lbs minimum Mounting Torque: 15 in-lb maximum Operating Speed: 100 RPM maximum

### **Environmental**

Operating Temperature Range: -40°C to 85°C Storage Temperature Range: -55°C to 100°C Vibration Resistance: Tested at 10-2000 Hz at 15g or 0.060" double amplitude

**Mechanical Shock:** Tested at 100 g's, 6 ms, half sine, 12.3 ft/s and 100 g's, 6 ms, sawtooth, 9.7 ft/s

**Humidity:** 90–95% relative humidity @ 40°C for 96 hrs

#### **Materials and Finishes**

**Bushing:** Zinc casting **Shaft:** Zinc casting or plastic

Shaft Retaining Ring: Stainless steel Detent Spring: Stainless steel PC Boards: NEMA grade FR-4 Terminals: Brass. Tin plated

**Rotor:** Reinforced thermoplastic (glass filled nylon)

nylon

**Mounting Hardware:** One brass, nickel plated nut and lockwasher supplied with each switch. Nut is 0.092 inches thick by 0.436 inches across flats

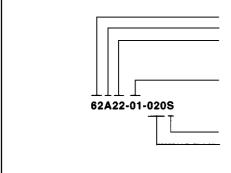
Code Housing: Reinforced thermoplastic Pushbutton Dome: Stainless steel Pushbutton Housing: Thermoplastic Pushbutton Contact: Brass, nickel plated Dome Retaining Disk: Thermoplastic

Strain Relief: Stainless steel

Cable: 28 AWG, stranded/ top coated wire,

PVC coated on .050 centers

## **ORDERING INFORMATION**



#### Series

Style: A = Standard, AP = Standard with plastic shaft

Angle of Throw:  $11 = 11.25^{\circ}$  or 32 positions  $15 = 15^{\circ}$  or 24 positions

22 = 22.25° or 16 positions

Pushbutton Option: 01 = without pushbutton, 02 = with pushbutton

**Termination:** S = stripped cable, .050" centers; C = connector, .050" centers;

CH = connector, 100" centers

**Cable Length:** 020 = 2.0 inches minimum to 240 = 24.0 inches maximum. Provided in increments of 1/2 inch. Example 035 = 3.5", 060 = 6.0 inches.

These switches have Quadrature 2-Bit Code output and an optional shaft actuated pushbutton switch. Contact Grayhill for lower input voltage requirements.

**Available from your local Grayhill distributor** For prices and discounts, contact a local sales office, an authorized local distributor, or Grayhill.