



SERIES 62C

Concentric Shaft

FEATURES

- Economical size
- Combined functionality
- Optically coupled for more than a million cycles of operations
- Optional integral pushbutton
- Compatible with CMOS, TTL, and HCMOS logic
- Available with 16, 24, and 32 detent positions for Deck A
- Available with 12, 16, 24, and 32 detent positions for Deck B
- Choices of Cable Length and Terminations
- Available in 3.3 volt input (contact Grayhill)

APPLICATIONS

Used to set:

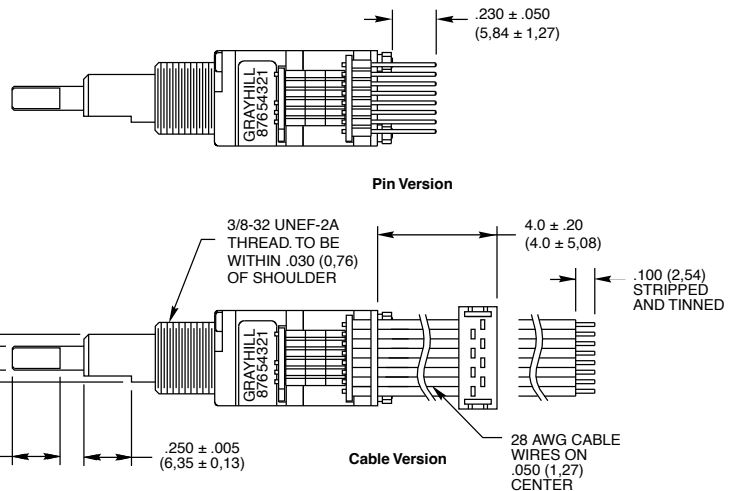
- Radio frequency
- Drill depth
- RPM
- Menu selection
- Parameter selection for patient monitoring devices



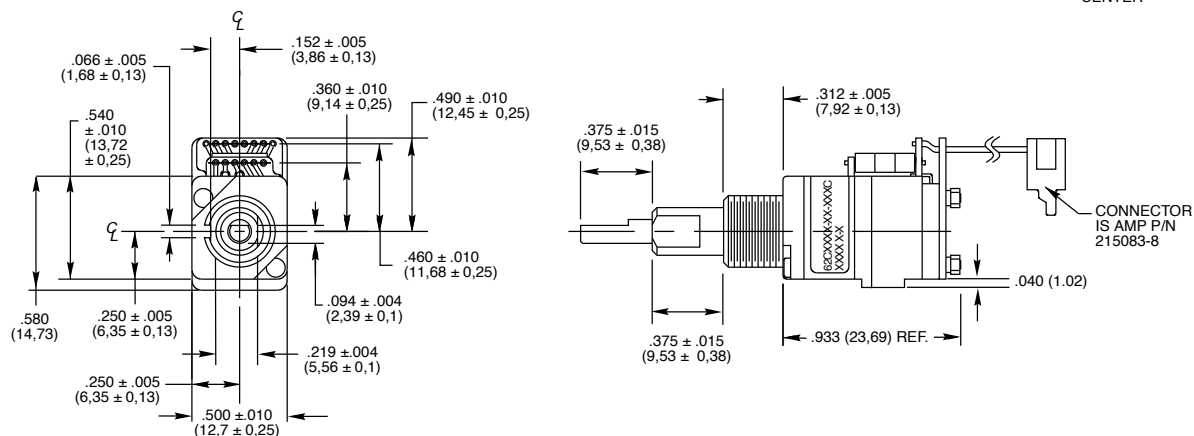
DIMENSIONS in inches (and millimeters)

Unless otherwise specified, standard tolerance are:

Linear $\pm .025$
Diameter $\pm .010$
Angle $\pm 2.0^\circ$

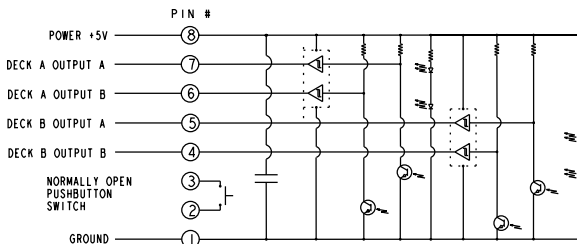


Deck A: 0.250 (6,35) shaft
Deck B: 0.125 (3,18) shaft



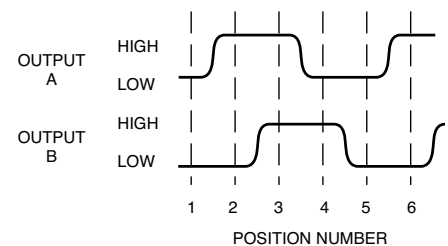


CIRCUITRY, TRUTH TABLE AND WAVEFORM: Standard Quadrature 2-Bit Code



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: 5 Vdc, 10 mA, resistive
Contact Resistance: less than 10 ohms (TTL or CMOS compatible)
Voltage Breakdown: 250 Vac between mutually insulated parts
Contact Bounce: less than 4 mS at make, less than 10 mS at break
Actuation Life: 3,000,000 operations
Actuation Force: 1000 ± 300 grams
Pushbutton Travel: .010 / .025 inch

Encoder Ratings

Coding: 2-bit quadrature coded output
Operating Voltage: 5 ± .25 Vdc
Supply Current: 50 mA maximum at 5 Vdc
Logic High: $V_{OH} = 4.5$ Vdc min at $I_{OH} = -8.0$ mA & $V_- = 5.00$ Vdc
Logic Low: $V_{OL} = 0.5$ Vdc max at $I_{OL} = -8.0$ mA
Logic Rise and Fall Times: less than 30 mS
Operating Torque: 2.0 in-oz ± 1.4 in-oz initially

Rotational Life: more than 1,000,000 cycles of operation (1 cycle = 360° rotation)
Shaft Push Out Force: 45 lbs minimum
Mounting Torque: 15 in-lbs maximum
Operating Speed: 100 RPM maximum
Axial Shaft Play: 0.015 max. for each shaft

Environmental Ratings

Operating Temp. Range: -40°C to 85°C
Storage Temp. Range: -40°C to 85°C
Relative Humidity: 90–95% at 40°C, 96 hrs.
Vibration Resistance: Harmonic motion with amplitude of 15g, within a varied 10 to 2000 Hz frequency for 12 hours per MIL-STD-202, Method 204
Shock Resistance: Test 1: Tested at 100g for 6 mS, half sine, 12.3 ft/s Test 2: 100g for 6 mS, sawtooth, 9.7 ft/s

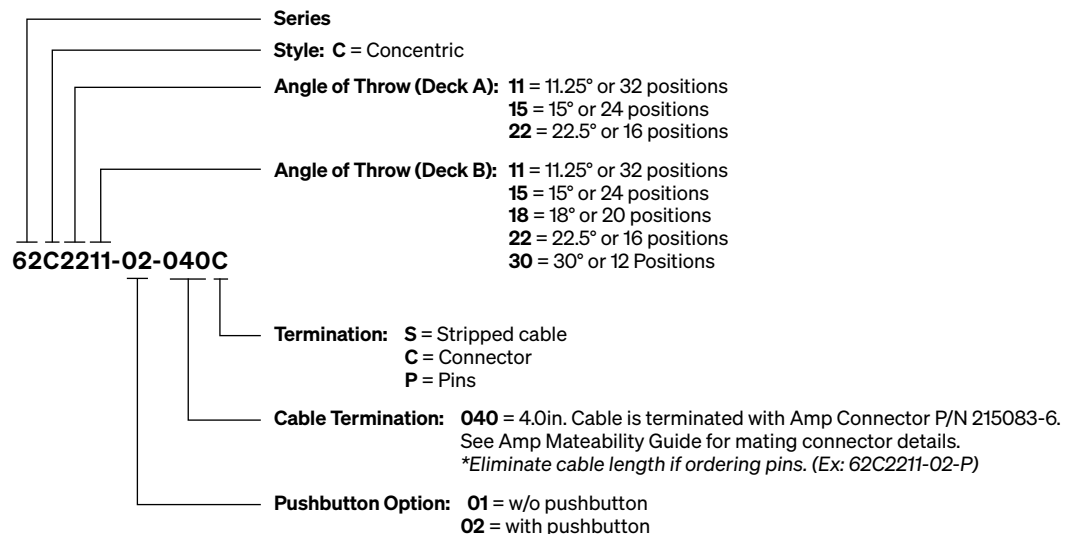
Materials and Finishes

Bushing: Zinc casting
Shaft: Aluminum

Shaft Retaining Ring: Stainless steel
Detent Spring: Stainless steel
Printed Circuit Board: NEMA grade FR-4
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: 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 (cable version)
Header Pins: Phosphor bronze, tin-plated
Insulator: Glass-filled polyester
Spacer: Zinc casting

ORDERING INFORMATION

Custom shaft, pushbutton actuation force and termination options are available.



Available from your local Grayhill Distributor. For prices and discounts, contact a local Sales Office, an authorized local Distributor or Grayhill.