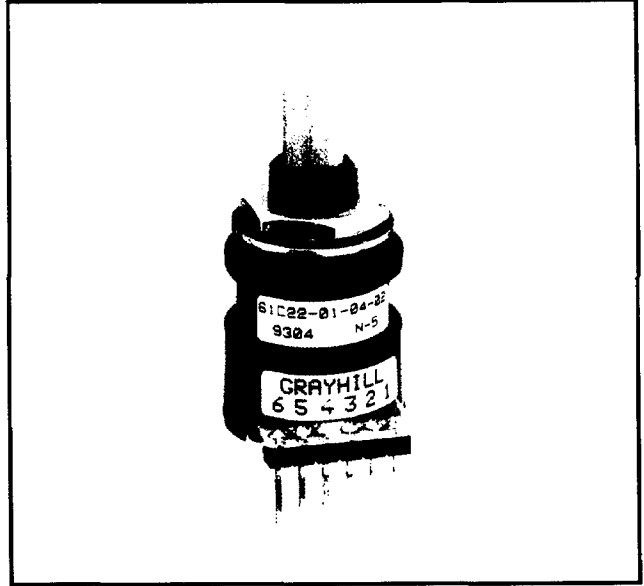


SERIES 6IC

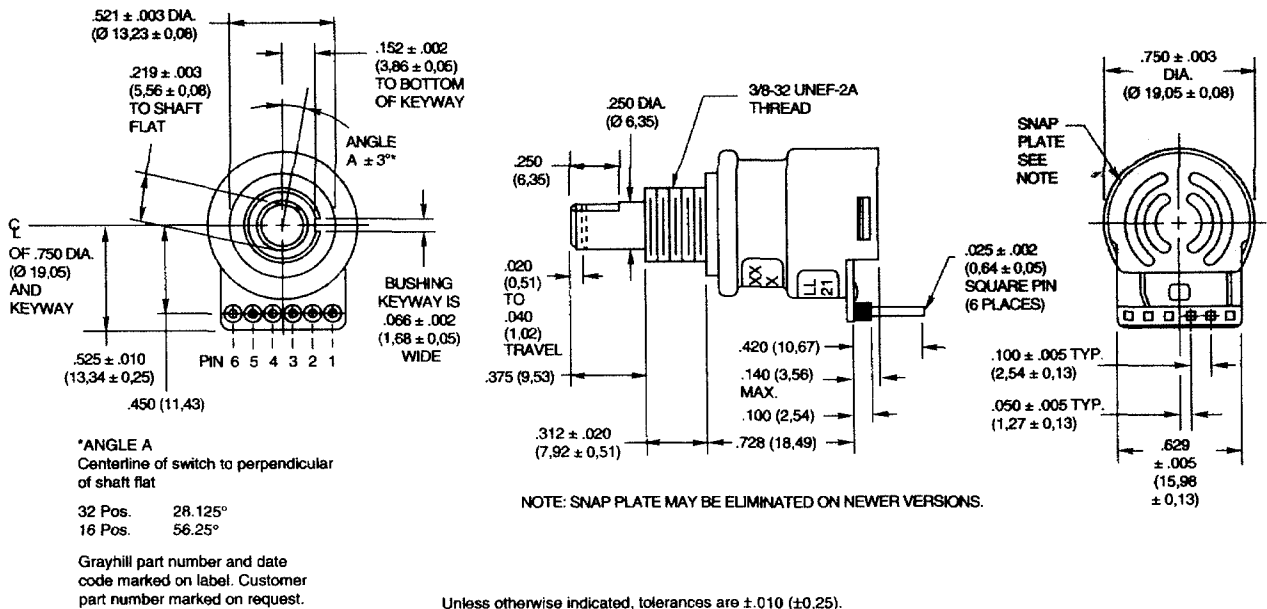
16 OR 32 POSITION WITH INTEGRAL PUSHBUTTON

FEATURES

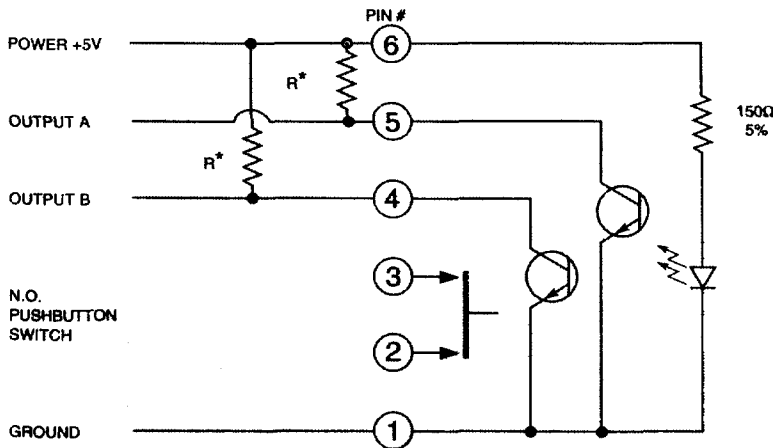
- ✓ Competitively Priced to Similar Electromechanical Switches
- ✓ Optically Coupled For More Than a Million Trouble-Free Rotations
- ✓ Has Data Entry Pushbutton Switch Activated By Switch Shaft
- ✓ Compatible With CMOS, TTL, and HCMOS Logic
- ✓ Operationally Used to Move Display Icon and Input Data
- ✓ Used to Set Radio Frequency, Drill Depth, RPM Etc.



DIMENSIONS In Inches (and millimeters)



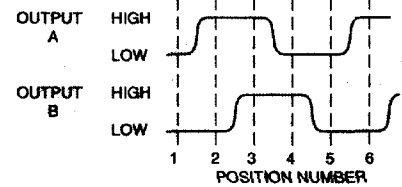
CIRCUITRY, TRUTH TABLE, AND WAVEFORM Standard Quadrature 2-Bit Code



*External pull up resistors required for operation.
8.2kΩ is suggested for TTL; 3.3kΩ is suggested for CMOS.

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 (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: Maximum actuation force of 450 grams and a minimum actuation force of 300 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 for CMOS and 2.7V for TTL minimum.
Logic Low: 0.8V Maximum
Logic Rise and Fall Times: Rise Time < 30 ms @ 16.6 rpm. Fall Time < 30 ms @ 16.6 rpm.
Operating Torque: 1.5 in-oz ± 50% initial (1.0 in-oz 50% after life for 32 position only)
Rotational Life: >1,000,000 cycles of operation (1 cycle is rotation through all positions and return)
Shaft Push Out Force: 20 lbs min.
Mounting Torque: 10 in-lb max.

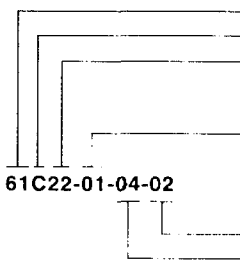
Environmental

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: Reinforced thermoplastic
Shaft: Reinforced thermoplastic
Detent Balls: Steel, nickel plated
Detent and Pushbutton Springs: Tinned music wire
PC Boards: NEMA grade FR-4
Pushbutton Contact: Stainless steel, gold plated
Board Terminals: Phosphor bronze, tin plated
Mounting Hardware: One brass, cadmium plated nut and lockwasher supplied with each switch. Nut is 0.094 inches thick by 0.562 inches across flats.
Rotor: Reinforced thermoplastic
Aperture: Brass, black oxide finish

ORDERING INFORMATION



Series: C = Standard
Style: C = Standard
Angle of Throw: 00 = No detent
 11 = 11.25° or 32 Positions
 22 = 22.25° or 16 Positions
Coding: 01 = Quadrature

Pushbutton Option: 01 = Without pushbutton, 02 = With pushbutton
Number of Changes per Revolution: 04, 08

ACCESSORIES

See page 16.

These switches have Quadrature 2-Bit Code output and a shaft actuated pushbutton switch.

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