

SERIES 61A

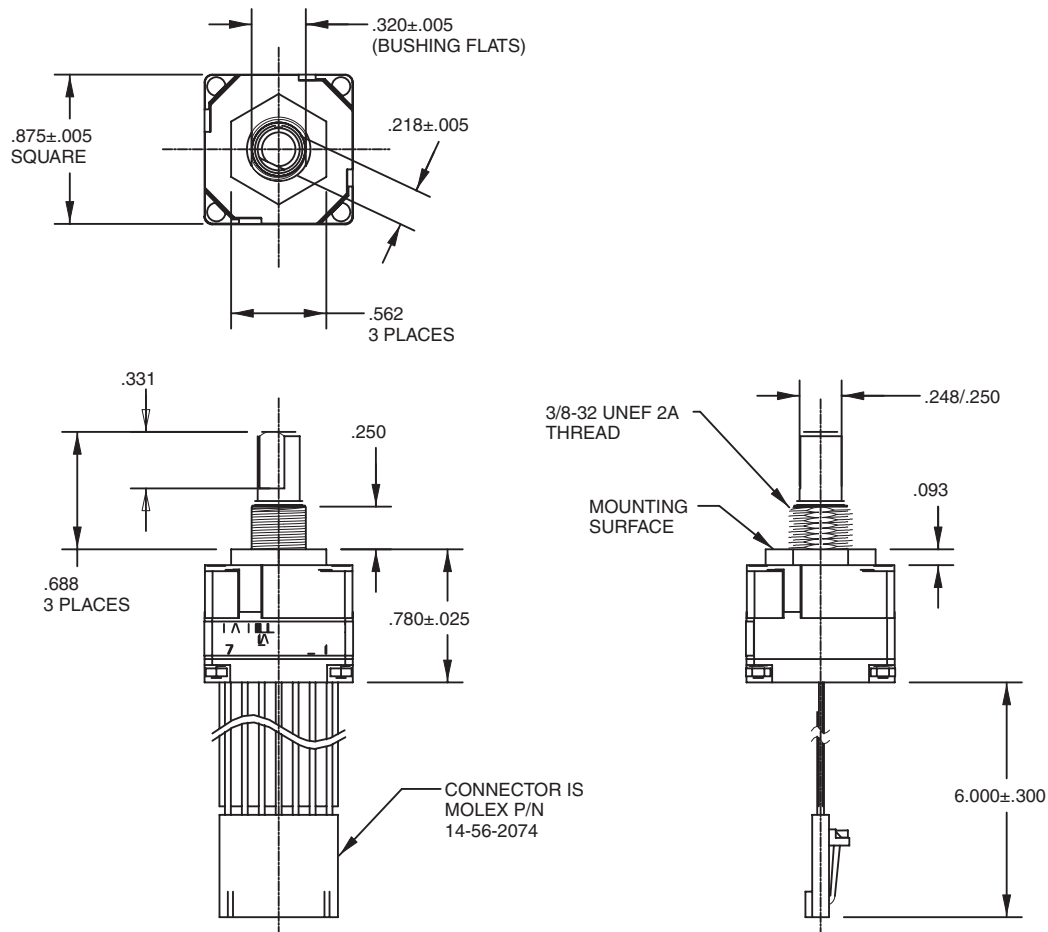
Custom, Absolute

FEATURES

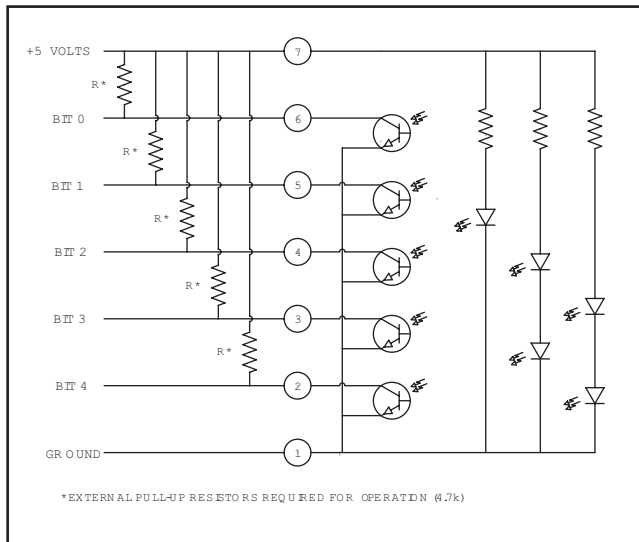
- Absolute Position Sensing
- 3, 4, or 5-Bit Custom Output Coding
- Available in 8, 16 and 32 detent positions
- Fixed Stops Only
- Angles of Throw to 45° (Design Specifications Will Dictate the Angle of Throw)



DIMENSIONS in inches (and millimeters)



CIRCUITRY



TRUTH TABLE

3 BIT, 8 POSITION

Position	B2	B3	B4
1			
2			•
3		•	•
4		•	
5	•		
6	•	•	•
7	•		•
8	•		

• INDICATES LOGIC HIGH
BLANK INDICATES LOGIC LOW

4 BIT, 16 POSITION

Position	B1	B2	B3	B4
1				
2				•
3			•	•
4			•	
5		•		
6		•	•	•
7		•	•	
8		•		
9	•	•		
10	•	•	•	•
11	•	•	•	
12	•	•	•	
13	•		•	•
14	•		•	
15	•			•
16	•			

• INDICATES LOGIC HIGH
BLANK INDICATES LOGIC LOW

5 BIT, 32 POSITION

Position	B0	B1	B2	B3	B4
1					
2					•
3				•	•
4				•	
5			•	•	
6			•	•	•
7			•	•	•
8			•		
9		•	•		
10		•	•	•	•
11		•	•	•	
12		•	•	•	
13		•		•	•
14		•		•	•
15		•			•
16		•			
17	•	•			
18	•	•			•
19	•	•		•	•
20	•	•		•	
21	•	•	•	•	
22	•	•	•	•	•
23	•	•	•	•	•
24	•	•	•		
25	•		•		
26	•		•		•
27	•		•	•	•
28	•		•	•	
29	•			•	•
30	•			•	
31	•				•
32	•				

• INDICATES LOGIC HIGH
BLANK INDICATES LOGIC LOW

SPECIFICATIONS

Ratings

Operating Voltage: 5 ±.25V DC

Supply Current: 85 mA maximum at 5V DC

Life: 1 million cycles of operation; 1 cycle is rotation through all positions and a full return

Rotational Torque: 12 ±4 in-oz (initial)

Output High: 3.8V minimum for CMOS & HCMOS; 2.7V minimum for TTL

Output Low: 0.8V maximum

Shaft Push Out Force: 25 lbs.

Mounting Torque: 10 in-lb maximum

Load Current: 5 mA maximum per channel

Logic Rise and Fall Times: 30 mSec typical

Environmental

Operating Temp. Range: -40°C to +85°C

Storage Temp. Range: -55°C to +100°C

Vibration: MIL-STD 202, method 204, cond. B

Mechanical Shock: 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 at 40°C for 96 hrs.

Materials and Finishes

Detent Housing: Stainless Steel

Bushing: Brass, tin/zinc plated

Shaft: Stainless steel

Detent Balls: Steel, nickel-plated

Code Housings: Nylon 6/10

Backplate: Nylon 6/10

Aperture: Chemically etched stainless steel with black oxide finish

Rotor: Electroformed nickel and chemically etched stainless steel with black oxide finish

Detent Springs: Tinned music wire

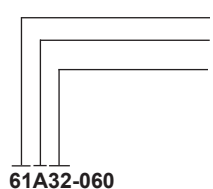
PC Boards: NEMA grade FR-4

Through Bolts: Stainless steel, unplated

Through Bolt Nuts: Stainless steel

Mounting Hardware: One brass, tin/zinc-plated nut and one stainless steel, zinc-plated lockwasher supplied with each switch. Nut is 0.094 inch thick by 0.562 inch across flats.

ORDERING INFORMATION



Series

Style: A = Absolute position sensing

Number of positions: 32 = 32 positions with 10° of throw
16 = 16 positions with 18° of throw
8 = 8 positions with 36° of throw

61A32-060

Termination: 060 = 6.0 inches cable terminated with Molex connector P/N 14-56-2074.

Available from your local Grayhill Component Distributor.

For prices and discounts, contact a local sales office, an authorized local distributor, or Grayhill direct.