

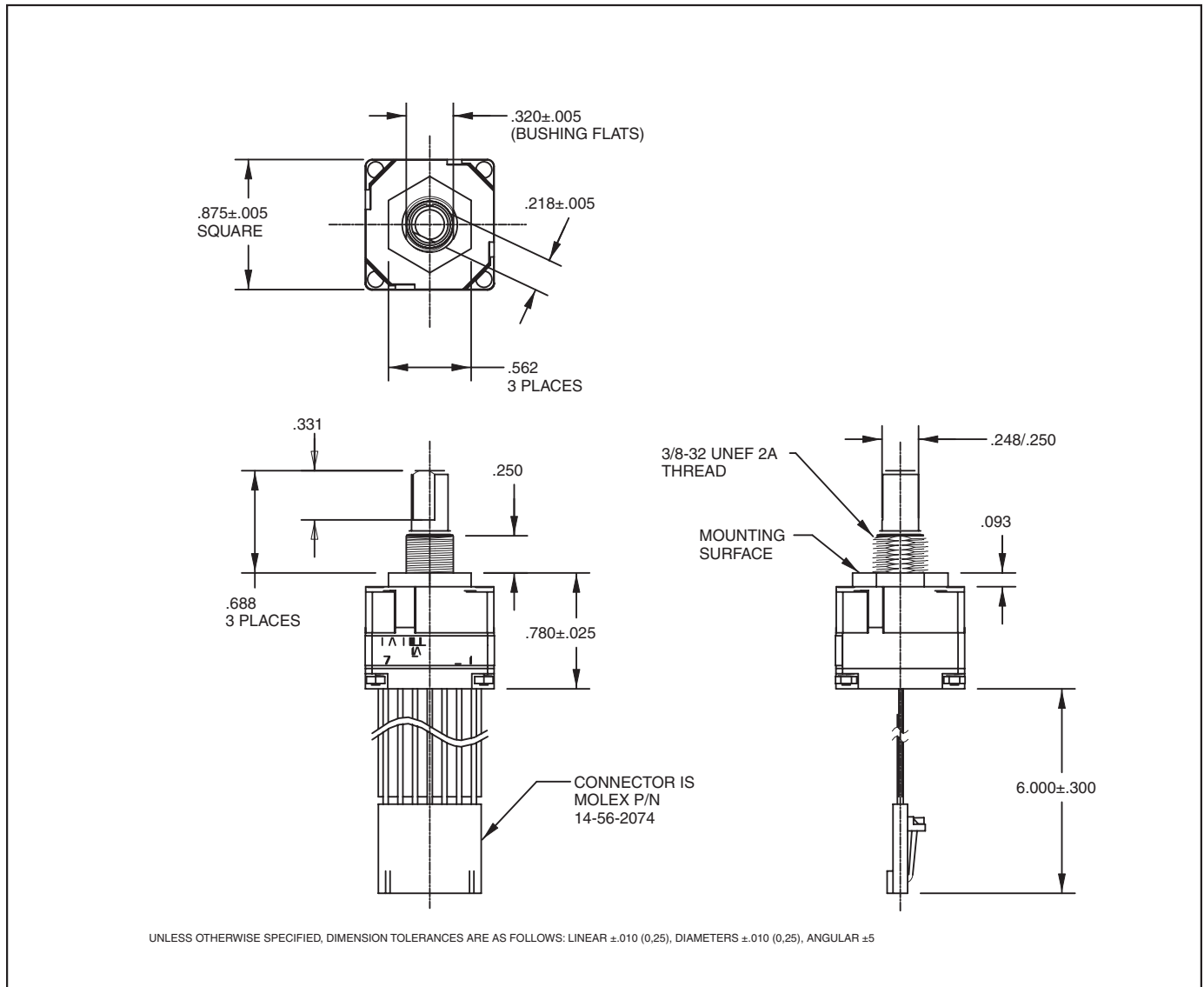
SERIES 61A
Custom, Absolute

FEATURES

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

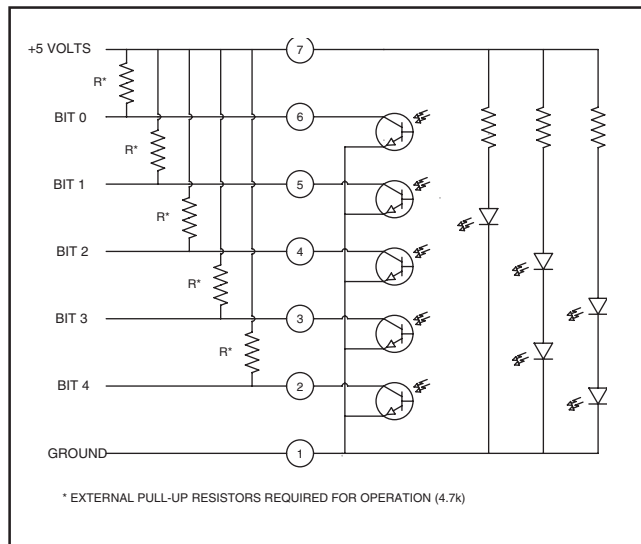


DIMENSIONS In inches (and millimeters)



Optical and Mechanical Encoders

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 AND 24 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:** 1.5 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 Temperature Range:** -40°C to +85°C
- Storage Temperature Range:** -55°C to +100°C
- Vibration:** MIL-STD 202, method 204, condition 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 inches thick by 0.562 inches across flats.

ORDERING INFORMATION

Series

Style: A = unsealed

Number of positions: 32 = 32 positions with 10" of throw
16 = 16 positions with 18" of throw
8 = 8 positions with 26" of throw

Termination: Cable Termination: 060=6.0 inches. Cable is 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.