



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



SERIES 62H

High Torque, Concentric Shaft

FEATURES

- High Rotational Torque Provides Positive Tactile Feedback
- Optically Coupled for More than a Million Cycles
- Optional Integral Pushbutton
- Compatible with CMOS, TTL and HCMOS Logic

- Available in 8, 12 and 16 Detent Positions
- Choice of Cable Length and Terminations

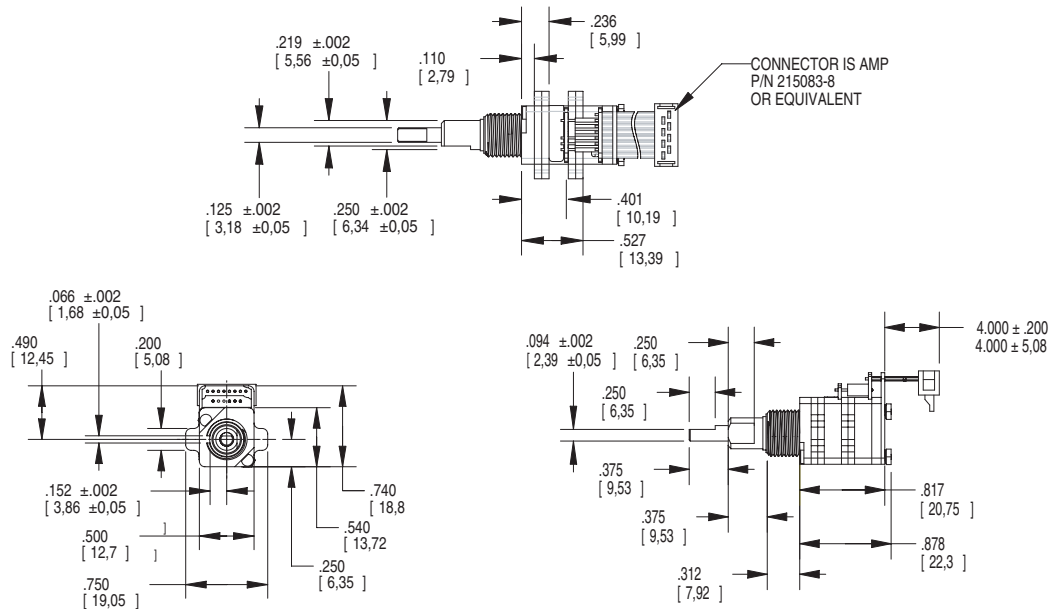
APPLICATIONS

- Avionics

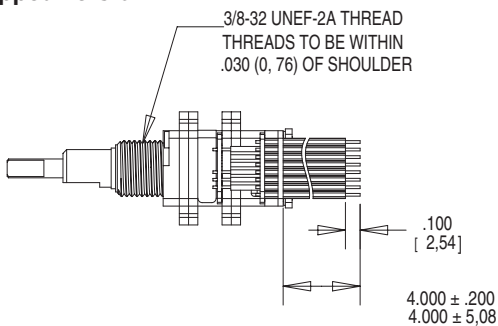


DIMENSIONS in inches (and millimeters)

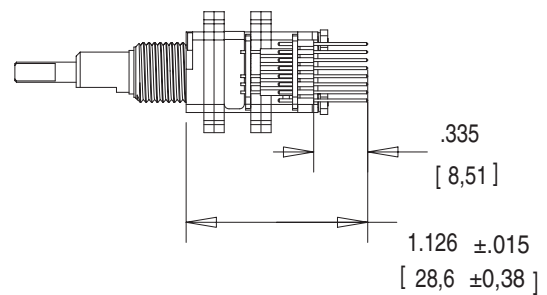
Cable Version



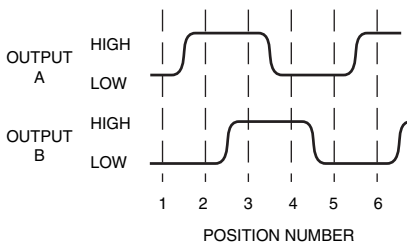
Stripped Version



Pin Version



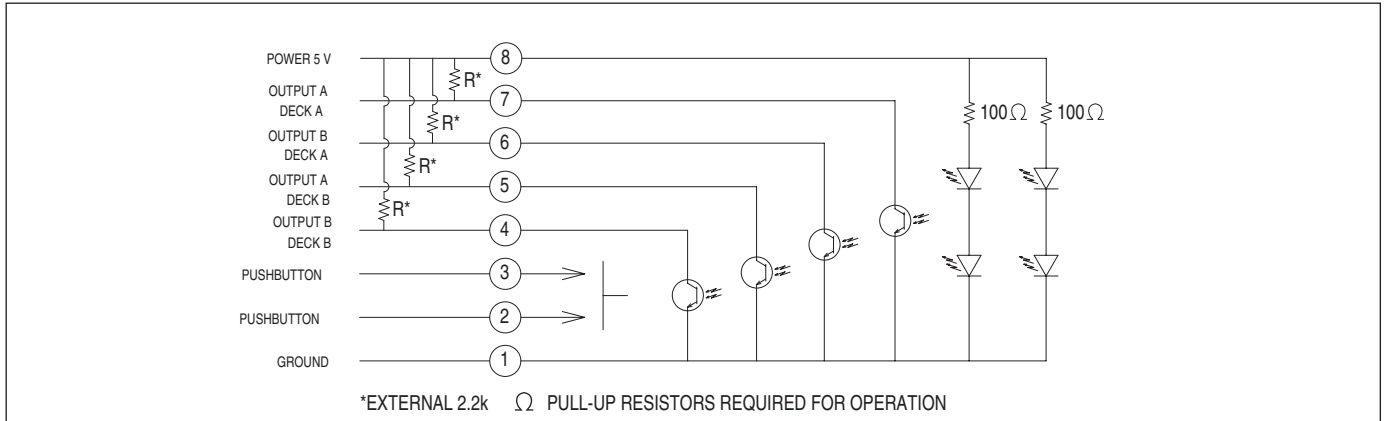
WAVEFORM AND TRUTH TABLE



Clockwise Rotation		
Position	Output A	Output B
1		
2	●	
3	●	●
4		●

● Indicates logic high; blank indicates logic low. Code repeats every 4 positions.

CIRCUITRY



SPECIFICATIONS

Pushbutton Switch Ratings

- Rating:** at 5 Vdc, 10 mA, resistive
- Contact Resistance:** less than 10 ohms (TTL or CMOS compatible)
- Pushbutton Life:** 3 million actuations minimum
- Voltage Breakdown:** 250 Vac between mutually insulated parts
- Contact Bounce:** less than 4 mS at make and less than 10 mS at break
- Actuation Force:** 1100 \pm 300g
- Shaft Travel:** .020 \pm .010 inch

Encoder Ratings

- Coding:** 2-bit quadrature coded output
- Operating Voltage:** 5.0 \pm .25 Vdc
- Supply Current:** 50 mA maximum@5.0 Vdc
- Logic Output Characteristics:**
 - Logic High:** 3.0 Vdc minimum
 - Logic Low:** 1.0 Vdc maximum
- Mechanical Life:** 1,000,000 cycles minimum (One cycle is a rotation through all positions and a full return)
- Minimum Sink Current:** 2.0 mA for 5 Vdc
- Power Consumption:** 150mW maximum
- Output:** open collector phototransistor
- Logic Rise and Fall Times:** less than 30 mS maximum

- Operating Torque:** 5.0 in-oz +/- 1.5 in-oz initial
- Shaft Push Out Force:** 45 lbs minimum
- Mounting Torque:** 15 in-lbs maximum
- Terminal Strength:** 15 lbs cable pull-out force minimum
- Operating Speed:** 100 RPM maximum

Environmental Ratings

- Operating Temperature Range:** -40°C to 85°C
- Storage Temperature Range:** -55°C to 100°C
- Vibration Resistance:** Harmonic motion with amplitude of 15G, within a varied 10 to 2000 Hz frequency for 12 hours
- Mechanical Shock:** Test 1: 100G, 6 mS, half sine, 12.3 ft/s; Test 2: 100G, 6 mS, sawtooth, 9.7 ft/s
- Relative Humidity:** 90–95% at 40°C for 96 hours

Materials and Finishes

- Code Housing:** Reinforced thermoplastic
- Shafts:** Stainless Steel

- Bushing:** Zinc casting
- Pushbutton Actuator:** Zytel 70G33L
- Shaft Retaining Rings:** Stainless steel
- Detent Spring:** Stainless steel
- Detent Ball:** Stainless steel
- Detent Section:** Hiloy 610
- Printed Circuit Boards:** NEMA grade FR-4 gold over nickel or palladium
- 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
- Pushbutton Dome:** Stainless steel
- Phototransistor:** Planar Silicon NPN
- Infrared Emitter:** Gallium aluminum arsenide
- Flex Cable:** 28 AWG, stranded/top coated wire, PVC coated on .050 or .100" centers (cabled version)
- Header Pins:** Brass, tin-plated
- Spacer:** Hiloy 610
- Shim:** Stainless Steel
- Backplate/Strain Relief:** Stainless steel
- Lockwashers:** Stainless steel
- Hex Nuts:** Stainless steel
- Studs:** Stainless steel

ORDERING INFORMATION

Series
Style: H = High Torque, Concentric
Angle of Throw (Deck A): 45 = 45° or 8 positions, 30 = 30° or 12 positions, 22 = 22.5° or 16 positions
Angle of Throw (Deck B): 45 = 45° or 8 positions, 30 = 30° or 12 positions, 22 = 22.5° or 16 positions

Termination: S = stripped cable, C = connector, P = pins
Cable Termination: 040 = 4.0in. Cable is terminated with Amp Connector P/N 215083-8. See Amp Mateability Guide for mating connector details.
**Eliminate cable length if ordering pins. (Ex: 62H2222-H9-P)*

Pushbutton Option: 0 = w/o pushbutton, 9 = 1100g pushbutton

Rotational Torque: H = High Torque

Optical and Mechanical Encoders