



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!



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SERIES 62B Push-Pull, High Torque

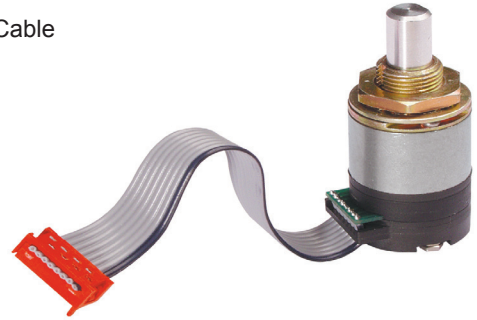
FEATURES

- Multiple Switching Functions Available in One Compact Device
- Push and Pull Travel Options
- Pull Shaft Resists Accidental Actuation
- High Rotational Torque for Positive Detent Feel and Superior Tactile Feedback
- Long Life, High Reliability
- CMOS, HCMOS, and TTL Compatible

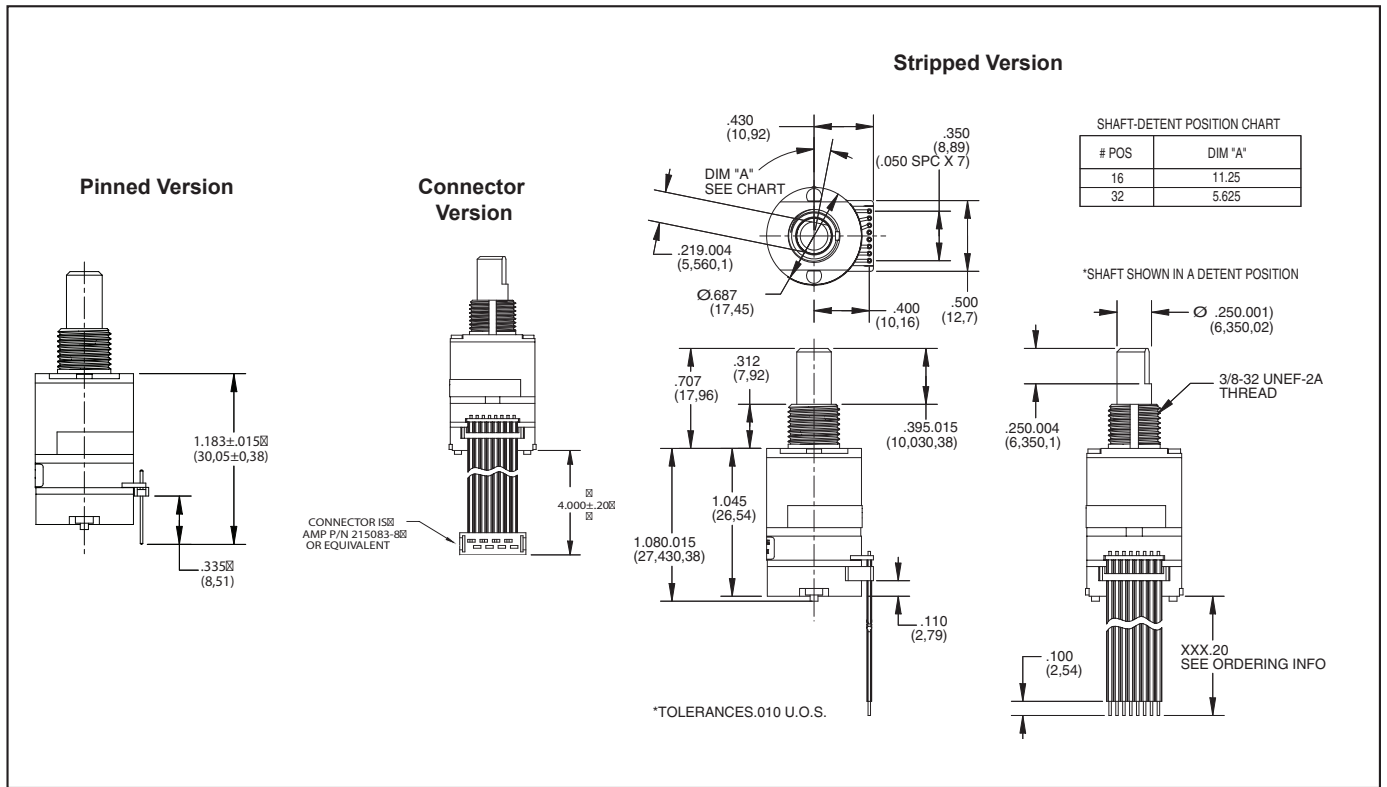
- Pin, Cable and Connector with Cable Termination Options
- Custom Modifications Available

APPLICATIONS

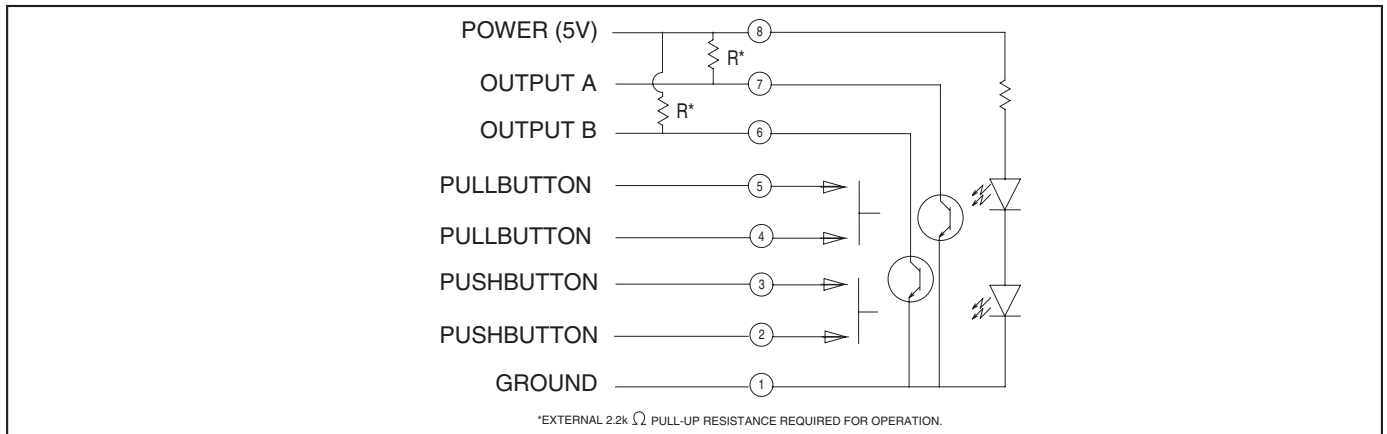
- Use for Menu Scrolling or Function Selection
- Avionics
- Industrial
- Medical



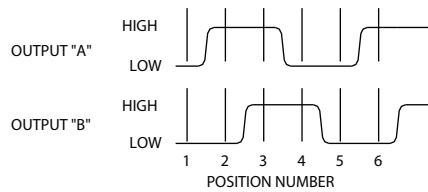
DIMENSIONS in inches (and millimeters)



SWITCH SCHEMATIC, WAVEFORM, AND TRUTH TABLE



Optical and Mechanical Encoders

WAVEFORM AND TRUTH TABLE 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
Environmental Specifications

Operating Temperature Range: -40° C to 85° C

Storage Temperature Range: -55° C to 100° C

Humidity: 96 hours at 90-95% humidity at 40° C

Mechanical Vibration: Harmonic motion with amplitude of 15 g, within a varied frequency of 10 to 2000 Hz

Mechanical Shock:

Test 1: 100 g for 6 ms half-sine wave with a velocity change of 12.3 ft/sec
Test 2: 100 g for 6 ms sawtooth wave with a velocity change of 9.7 ft/sec

Rotary Electrical and
Mechanical Specifications

Operating Voltage: 5.00±.25 Vdc

Supply Current: 30 mA maximum at 5 Vdc

Output: Open collector phototransistor, external pull-up resistors are required

Output Code: Two-bit quadrature, channel A leads channel B by 90° electrically during clockwise rotation of the shaft

Logic Output Characteristics:

Logic high signal shall be no less than 3.0 Vdc

Logic low signal shall be no greater than 1.0 Vdc

Minimum Sink Current: 2.0 mA

Power Consumption: 150 mW maximum

Mechanical Life: 1 million rotational cycles of operation. One cycle is a rotation through all positions and a full return

Average Rotational Torque: 16 position: 5.0 ± 1.5 in-oz, 32-position: 2.5 ± 1.5 in-oz. Torque shall be within 50% of initial value throughout life

Mounting Torque: 15 in-oz maximum

Shaft Push-Out Force: 45 lbs minimum

Shaft Pull-Out Force: 20 lbs minimum

Terminal Strength: 15 lbs minimum terminal pull-out force for cable or header termination

Solderability: 95% free of pin holes and voids

Pull-Button/Push-Button Electrical and Mechanical Specifications

Rating: 10 mA at 5 Vdc

Contact Resistance: <10 ohms

Life: 3 million actuations minimum

Contact Bounce: <4 ms make, <10 ms break

Actuation Force: 1700±450 g for both push and pull-button

Shaft Travel: .030±.010 standard travel. .050±.010 long travel

Materials and Finishes

Bushing: Zinc Diecast, Cadmium Plated per QQP-416, Class II, Type II

Shaft: Aluminum

Detent Cover: Powdered Metal per SS-316N1-25

Through Bolts: 305 Stainless Steel

Through Bolts Nuts: 305 Stainless Steel

Shaft Travel Springs: Carbon Steel, Oil Dip Finish

Detent Ball: Stainless Steel

Detent Spring: Tinned Music Wire

Spacer/Push Dome Retainer: Ryton R-4

Push Actuator: Zytel 70G33L

Snap Dome: Stainless Steel

Printed Circuit Boards: Nema Grade FR4, Double Clad with Copper, Plated with Gold

over Nickel

Infrared Light Emitting Diode Chips: Gallium Aluminum Arsenide

Silicon Phototransistor Chips: Gold and Aluminum Alloys

Resistor: Metal Oxide on Ceramic Substrate

Solder Pins: Brass, Plated with Tin

Code Rotor: Delrin 100

Code Housing: Hiloy-610

Pull Dome Retainer: Ryton R-4

Pull Actuator: Polyurethane, Isoplast 101 LGF40 Blk

Cover: Ryton R-4

Cable: Copper Standard with Topcoat in PVC Insulation (Cabled Versions Only)

Connector: PA4.6 with Tin over Nickel Plated Phosphor Bronze (Cable/Connector Versions)

Label: TT406 Thermal Transfer Cast Film

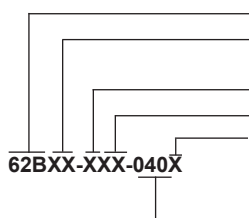
Solder: Sn/Ag/Cu, lead-free, no clean

Lubricating Grease: Nye Nyogel 774L

Mounting Hex Nut: Tin/Zinc Over 1/2 Hard Brass

Lockwasher: 8-18 Stainless Steel, Passivate Finish

Pin Header: Hi-Temp Glass Filled Thermoplastic UL94V-0, Phosphor Bronze (Pinned Versions Only)

ORDERING INFORMATION

Series

Angle of Throw: 22 = 22.5° For Code Change and 16 Detent Positions.

11 = 11.25° For Code Change and 32 Detent Positions.

Push/Pull-Button Travel: S = Standard Travel (.030" Both Directions). L = Long Travel (.050" Both Directions)

Push/Pull Option: P = Pull-Button Only. PP = Push and Pull-Button

Termination: C = .050" Pitch Ribbon Cable with Connector

S = .050" Pitch Ribbon Cable with Stripped End

P = .050" Pitch Pin Header

Cable Termination: 040 = 4.0in. Cable is terminated with Amp Connector P/N 215083-6.

See Amp Mateability Guide for mating connector details.

*Eliminate cable length if ordering pins (Ex: 62B22-SP-P)