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

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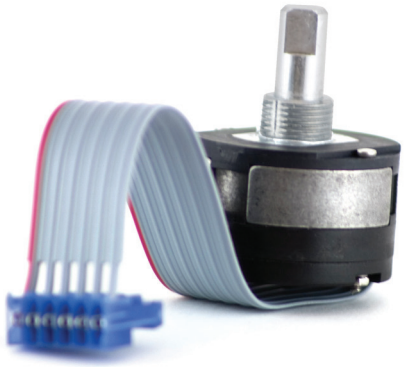
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

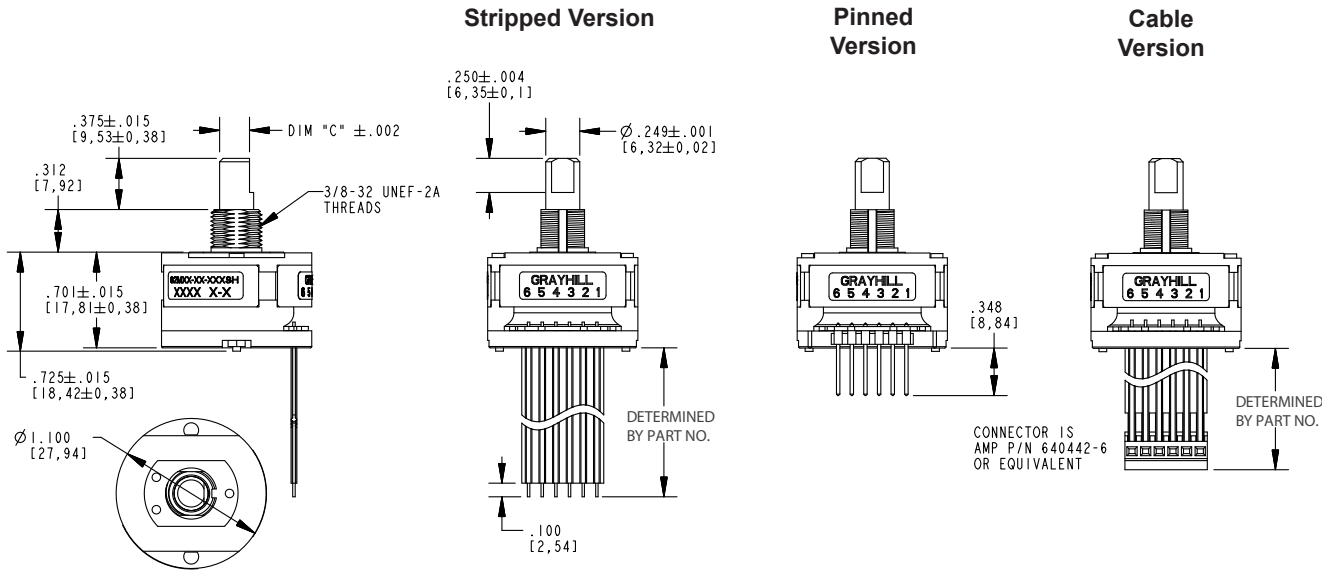
SERIES 62M
Magnetic Detent

FEATURES
- Ultra Smooth Magnetic Detent
- 3 Million Rotational Cycles, Ten Times the Life of a Mechanical Detent System
- Optional Integrated Pushbutton
- Available in 24 Positions
- Choice of Cable Lengths

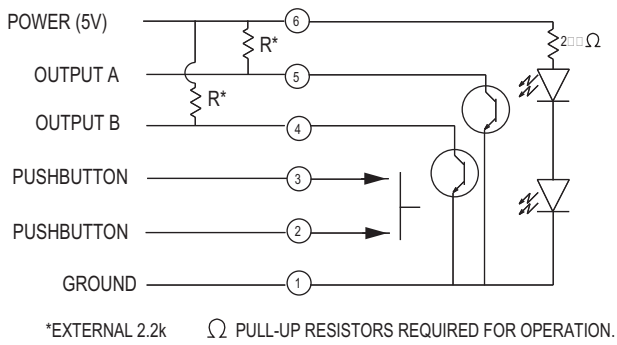
Applications
- Medical
- Audio
- Instrumentation



DIMENSIONS in inches (and millimeters)

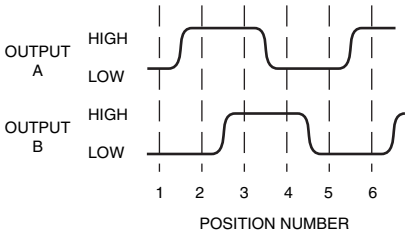


SWITCH SCHEMATIC



*EXTERNAL 2.2k Ω PULL-UP RESISTORS REQUIRED FOR OPERATION.

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.

SPECIFICATIONS

Environmental Specifications

Operating Temperature Range: -40^0 C to 85^0 C
Storage Temperature Range: -55^0 C to 100^0 C
Humidity: 96 hours at 90-95% humidity at 40^0 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

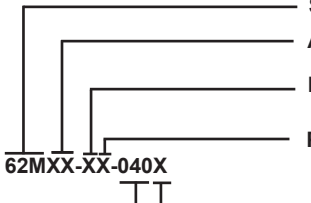
Operating Voltage: 5.00±.25 Vdc
Supply Current: 30 mA maximum at 5 Vdc
Output: Open collector phototransistor, external pull-up resistors are required.
Output Code: Two-bit quadrature, channel A leads channel B by 90^0 electrically during clockwise rotation of the shaft
Logic Output Characteristics:
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: 3 million rotational cycles of operation. One cycle is a rotation through all positions and a full return
Rotational Torque: H=1.70 ± 1.00 in-oz, M=1.25 ± 0.75 in-oz, L=0.75 ± 0.5 in-oz
Mounting Torque: 15 in-lb maximum
Shaft Pull-Out Force: 45 lbs minimum
Shaft Push-Out Force: 45 lbs minimum
Terminal Strength: 15 lbs minimum terminal pull-out force for cable or header termination
Solderability: 95% free of pin holes and voids

Pushbutton 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: 2=200±75 grams, 3=300±90 grams, 4=510±150 grams
Shaft Travel: .025 ± .010 inches

Materials and Finishes

Bushing: Zinc Diecast, Cadmium Plated per QQP-416, Class II, Type II
Insert Molded into 25% Glass Reinforced Nylon Zytel FR-50
Shaft: NdFeB XE-3594 over Aluminum
Stator: Powdered Metal per F-0000-20
Through Bolts: 305 Stainless Steel
Through Bolts Nuts: Stainless Steel
Spacer Washer: Brass
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: Acetal (Delrin 100)
Code Housing: Polyamide Polymer (Nylon 6/10 Alloy)
Backplate Strain Relief: Polyamide Polymer (Nylon 6/10 Alloy - Hiloy-610)
Cable: Copper Standard with Topcoat in PVC Insulation (Cabled Versions Only)
Connector: PA4.6 with Tin Plated Copper Alloy (Cable/Connector Versions)
Label: TT406 Thermal Transfer Cast Film
Solder: Sn/Ag/Cu, Lead Free, No Clean
Mounting Hex Nut: Cadmium over 1/2 Hard Brass
Lockwasher: 8-18 Stainless Steel, Passivate Finish
Pin Header: Hi-Temp Glass Filled Thermo-plastic UL94V-0, Phosphor Bronze (Pinned Versions Only)



Series
Angle of Throw: 15 = 15^0 for code change and 24 detent positions
Rotational Torque: H=High Torque (1.70 in-oz), M=Medium Torque (1.25 in-oz), L=Low Torque (0.75 in-oz)
Pushbutton Option: 0=Non-Pushbutton, 2 = 200 grams, 3 = 300 grams, 4 = 510 grams
Termination: CH =.100 Cable with Connector, SH = Cable with Stripped-End, PH = Pin Header
Cable Termination: 040 = 4.0in. Cable is terminated with Amp Connector P/N 3-640442-6. See Amp Mateability Guide for mating connector details.
**Eliminate cable length if ordering pins (Ex: 62M22-42-PH)*