

SERIES 62AG

Price Competitive Solution

FEATURES

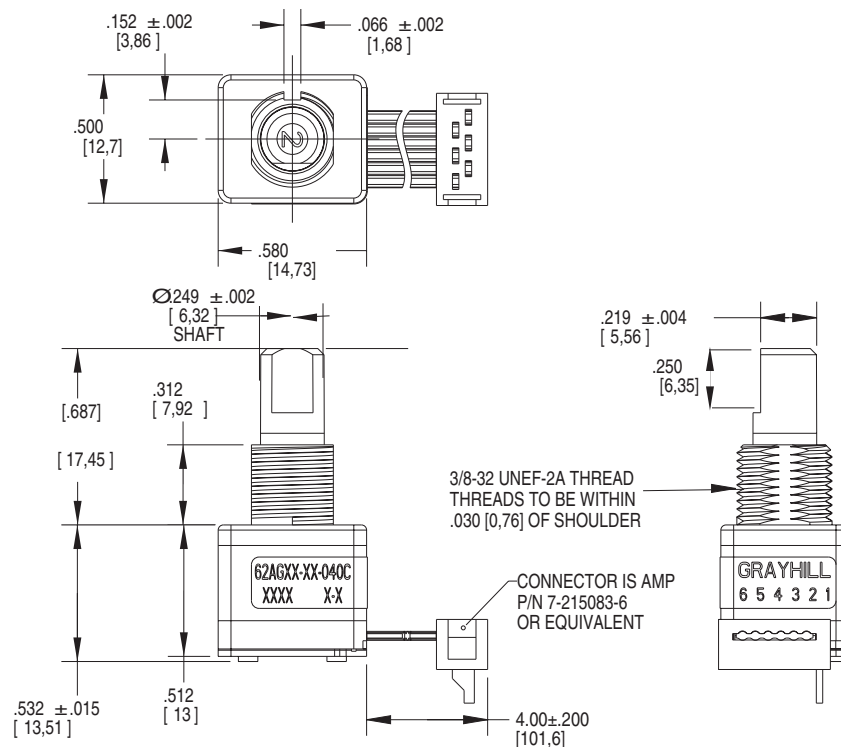
- Over 1 million rotational cycles
- 2-bit gray code output
- Quadrature coding
- Available in 16 detent positions
- 4 inch cable/connector assembly
- RoHS compliant
- Optional integrated pushbutton
- Patented light pipe technology
- Cost competitive with mechanical encoders at higher volumes

APPLICATIONS

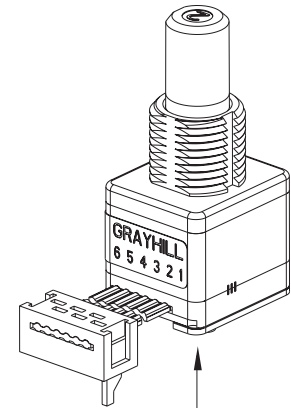
- Automotive
 - audio systems
 - navigation systems
- Medical
 - patient monitoring systems
- Test & Measurement
 - analyzers
 - oscilloscopes
- Audio & Video
 - consumer electronics
 - professional editing equipment



DIMENSIONS in inches (and millimeters)

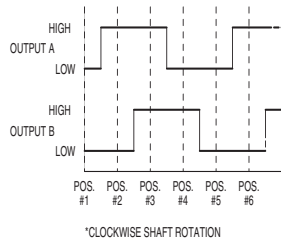
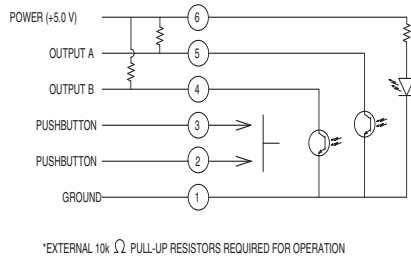


Unless otherwise specified, standard tolerances are:
 Linear $\pm .025$
 Diameter $\pm .010$
 Angle $\pm 2.0^\circ$



NOTE: GRAYHILL ALLOWS MULTIPLE ORIENTATIONS FOR THE GRAYHILL TEXT ON THE BACKPLATE.

WAVEFORM AND TRUTH TABLE



POSITION	OUTPUT A	OUTPUT B
#1		
#2	●	
#3	●	●
#4		●

● INDICATES LOGIC HIGH; BLANK INDICATES LOGIC LOW.
CODE REPEATS EVERY FOUR POSITIONS.

SPECIFICATIONS

Environmental Specifications

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

Storage Temperature: -40°C to 85°C

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

Mechanical Vibration: Harmonic motion with amplitude of 15g within a varied frequency of 10 to 2000 Hz for 12 hours
Mechanical Shock

Test 1: 100g for 6 ms half-sine wave with a velocity change of 12.3 ft/s.

Test 2: 100g for 6 ms sawtooth wave with a velocity change of 9.7 ft/s.

Rotary Electrical and Mechanical Specifications

Operating Voltage: 5.00±0.25 Vdc

Supply Current: 30 mA maximum at 5 Vdc.

Logic Output Characteristics:

Logic high shall be no less than 3.0 Vdc
Logic low shall be no greater than 1.0 Vdc

Minimum sink current: 0.5 mA for 5 Vdc. (Preliminary)

Power Consumption: 150 mW maximum for 5 Vdc

Output: Open Collector Phototransistor

Optical Rise Time: 30ms maximum.

Optical Fall Time: 30ms maximum.

Average Rotational Torque:

Low = 2.0±1.4 in-oz initially.

High = 3.5±1.4 in-oz initially.

50% of initial value after 1 million cycles.

Mechanical Life: 1,000,000 cycles of operation. 1 cycle is a rotation through all positions and a full return.

Mounting Torque: 15in-lbs. maximum

Shaft Pushout Force: 45 lbs. minimum

Terminal Strength: 15 lbs. Cable pull out force minimum

Solderability: 95% free of pin holes and voids

Maximum rotational speed: 100 rpm.

Pushbutton Electrical and Mechanical Specifications

Rating: 10 mA @ 5 Vdc

Contact Resistance: <10 Ω (Compatible with CMOS or TTL)

Life: 1 million actuations minimum

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

Actuation Force: 510±150 grams

Shaft Travel: .017 ± .008 INCH

Materials and Finishes

Bushing: Zamak 2

Shaft: Zamak 2

Detent Rotor: Reinforced Nylon Zytel 70G33L UL 94

Detent Spring: 303 Stainless Steel

Housing, Upper: Nylon 6/6 25% glass reinforced. Zytel FR-50

Light Pipe: Lexan, GE

Code Rotor: Delrin 100

Housing, Lower: Nylon 6/6 25% glass reinforced. Zytel FR-50

Pushbutton Actuator: Reinforced nylon. Zytel 70G33L UL 94

Pushbutton Dome: Stainless Steel

Printed Circuit Board: NEMA Grade FR4, Double clad with copper, Plated with gold over nickel

Infrared Emitting Diode: Gallium Arsenide

Phototransistor Diode: NPN Silicon

Resistor: Metal oxide on ceramic substrate

Spacer: Pet plastic

Backplate: Stainless Steel

Label: TT406 thermal transfer cast film.

Solder: 96.5% tin / 3% silver / 0.5% copper. No clean.

Hex Nut: Brass, Plated with nickel

Lockwasher: Stainless steel

Cable: Copper Stranded with topcoat in PVC insulation

Connector (.050 center): PA4.6 with tin/nickel plated phosphor bronze.

Optical and Mechanical Encoders



Series

Angle of Throw: 22 = 22.5° for code change and 16 detent positions
18 = 18° for code change and 20 detent positions

Rotational Torque Option: L = Low Torque, H = High Torque

Pushbutton Option: 0 = No pushbutton, 5 = 510 grams, 9 = 950 grams

Termination:

C = .050 Center Ribbon Cable with connector, S = .050 Center Ribbon Cable with .100 stripped end,
P = .050 Center Pins with 0.185 inch length

Cable Length:

020 = 2.0 inch cable, 030 = 3.0 inch cable, 040 = 4.0 inch cable, 050 = 5.0 inch cable, 060 = 6.0 inch cable

Available from your local Grayhill Distributor. For prices and discounts, contact a local sales office, an authorized distributor, or Grayhill.

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9