

SERIES 62A,V,D 1/2" Package

FEATURES

- Low Cost
- Long Life
- Available in 3.3 or 5.0 Vdc Operating Voltages
- High Torque Version to Emphasize Rotational Feel
- Economical Size
- Optically Coupled for More than a Million Cycles
- Optional Integral Pushbutton
- Compatible with CMOS, TTL and HCMOS Logic Levels
- Available in 12,16, 20, 24 and 32 Detent Positions (Non-detent also available)
- Choice of Cable Lengths and Terminations

APPLICATIONS

- Global Positioning/Driver Information Systems
- Medical Equipment



DIMENSIONS in inches (and millimeters)

Cable Version



DIMENSIONS in inches (and millimeters)



Optical and Mechanical Encoders

SUPPLY CURRENT & LOGIC OUTPUT CHARACTERISTICS

		A & D STYLE	V STYLE
OPERATING VOLTAGE:		5.00 ± .25 Vdc.	3.30 ± .125 Vdc.
SUPPLY CURRENT:		30 mA MAXIMUM.	50 mA MAXIMUM.
LOGIC OUTPUT CHARACTERISTICS:	PUSH-PULL OUTPUTS COMPATIBLE WITH CMOS, TTL AND HCMOS LOGIC.		
	SMT OPTICS	LOGIC HIGH: $V_{OH} = 4.5$ Vdc MIN AT $I_{OH} = -8.0$ mA & $V_{CC} = 5.00$ Vdc.	N/A
		LOGIC LOW: $V_{OL} = 0.5$ Vdc MAX AT $I_{OL} = 8.0$ mA.	N/A
	OPEN COLLECTOR PHOTOTRANSISTOR OUTPUT.		
	WIREBOND OPTICS	LOGIC HIGH: $V_{OH} = 3.8$ Vdc MIN at $V_{CC} = 5.00$ Vdc WITH 2.2K Ω PULL-UP RESISTOR.	LOGIC HIGH: $V_{OH} = 2.3$ Vdc MIN at $V_{CC} = 3.30$ Vdc WITH 2.2K Ω PULL-UP RESISTOR.
		LOGIC LOW: $V_{OL} = 0.8$ Vdc MAX AT $I_{OL} = 2.0$ mA WITH 2.2K Ω PULL-UP RESISTOR.	LOGIC LOW: $V_{OL} = 0.8$ Vdc MAX AT $I_{OL} = 1.0$ mA WITH 2.2K Ω PULL-UP RESISTOR.

WAVEFORM AND TRUTH TABLE Standard Quadrature 2-Bit Code



CIRCUITRY: SURFACE MOUNT OPTICS Pushpull Outputs (62A22, 62A15, 62A11)



Optical and Mechanical Encoders

CIRCUITRY: WIREBOND OPTICS Open Collector Outputs (All Others)



SPECIFICATIONS

Electrical and Mechanical Ratings

Pushbutton Rating: 5 Vdc, 10 mA, resistive
Pushbutton Contact Resistance: less than 10 ohms (TTL or CMOS compatible)
Pushbutton Life: 3 million actuations min.
Pushbutton Contact Bounce: less than 4 mS at make and less than 10 mS at break
Pushbutton Actuation Force: 1000 ±300 grams
Pushbutton Travel: .010/.025 inch
Coding: 2-bit quadrature coded output
Voltage Breakdown: 250 Vac between mutually insulated parts
Rotational Life: 1,000,000 cycles minimum (One cycle is a rotation through all positions and a full return)
Optical Rise and Fall Times: less than 30 mS maximum
Operating Torque:
 Style A and V: 2.0 ±1.4 in-oz. initially
 Style D: 3.5 ±1.4 in-oz initially
 Non-detent: less than 1.5 in-oz initially
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
Axial Shaft Play: .010 maximum

Environmental Ratings

Operating Temperature Range: -40°C to 85°C
Storage Temperature Range: -55°C to 100°C
Relative Humidity: 90–95% at 40°C for 96 hours
Vibration Resistance: Harmonic motion with amplitude of 15G, within a varied 10 to 2000 Hz frequency for 12 hours per MIL-STD-202, Method 204
Mechanical Shock: Test 1: 100G for 6 mS, half sine, 12.3 ft/s; Test 2: 100G for 6 mS, sawtooth, 9.7 ft/s

Materials and Finishes

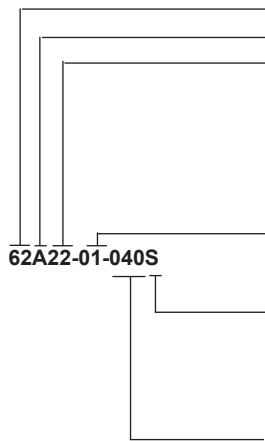
Code Housing: Reinforced thermoplastic
Shaft: Zinc or aluminum
Bushing: Zinc casting
Shaft Retaining Ring: Stainless steel
Detent Spring: Stainless steel
Printed Circuit Boards: NEMA grade FR-4 gold over nickel or palladium
Terminals: Brass, tin-plated
Mounting Hardware: One brass, nickel-plated nut and zinc-plated spring steel with clear trivalent chromate finish lockwasher supplied with each switch. Nut is 0.094 inches thick by

0.435 inches across flats.

Rotor: Thermoplastic
Code Housing: Thermoplastic
Pushbutton Dome: Stainless steel
Dome Retaining Disk: Thermoplastic
Pushbutton Housing: Thermoplastic
Phototransistor: Planar Silicon NPN
Infrared Emitter: Gallium aluminum arsenide
Pushbutton Contact: Brass, nickel-plated
Flex Cable: 28AWG, stranded/top coated wire, PVC coated on .050 or .100" centers (cabled version)
Header Pins: Phosphor bronze, tin-plated
Spacer: ABS
Backplate/Strain Relief: Stainless steel

Optical and Mechanical Encoders

ORDERING INFORMATION



Series

Style: A = 1/2" package, 5.0 Vdc Input, D = high torque w/5.0 Vdc input, V = 3.3 Vdc input

Angle of Throw:

Detent

11 = 11.25° or 32 positions
 15 = 15° or 24 positions
 18 = 18° or 20 positions
 22 = 22.5° or 16 positions
 30 = 30° or 12 positions

Non-detent (Styles A&V only)

01 = 11.25° or 32 positions
 05 = 15° or 24 positions
 08 = 18° or 20 positions
 02 = 22.5° or 16 positions
 03 = 30° or 12 positions

Pushbutton Option: 01 = w/o pushbutton, 02 = with pushbutton

Termination:

S = Stripped cable; .050" centers
 SH = Stripped cable; .100" centers
 C = Connector; .050" centers
 CH = Connector; .100" centers
 P = Pin; .100" centers

Cable Length: Cable Termination: 040 = 4.0in. Cable is terminated with Amp P/N 215083-6. See Amp Mateability Guide for Mating Connector details.

*Eliminate cable length if ordering pins. (Ex: 62A22-02-P).

These switches have Quadrature 2-bit code output and an optional shaft actuated pushbutton switch.

Custom materials, styles, colors, and markings are available. Control knobs available.

Available from your local Grayhill Component Distributor.

For prices and discounts, contact a local Sales Office, an authorized local Distributor, or Grayhill.

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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