

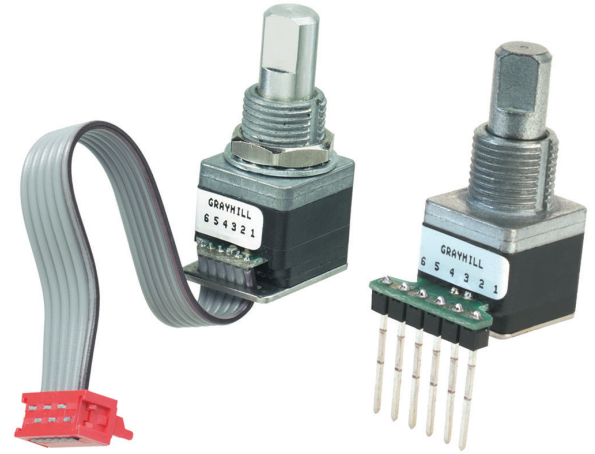
## SERIES 62A, V, D 1/2" Package

### 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

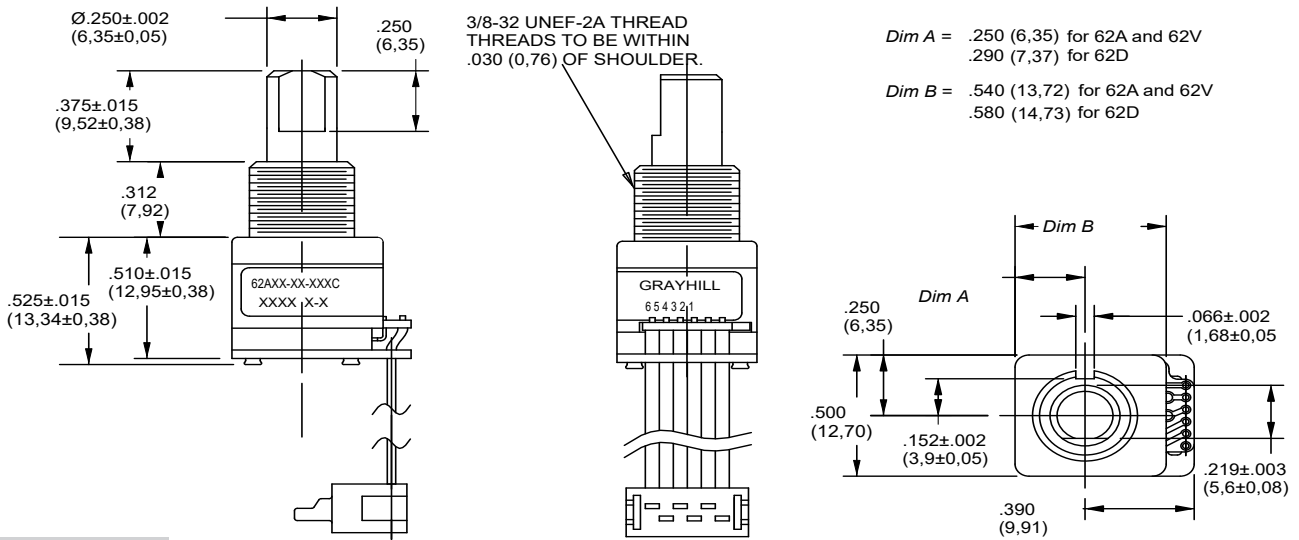
### APPLICATIONS

- Global Positioning/Driver Information Systems

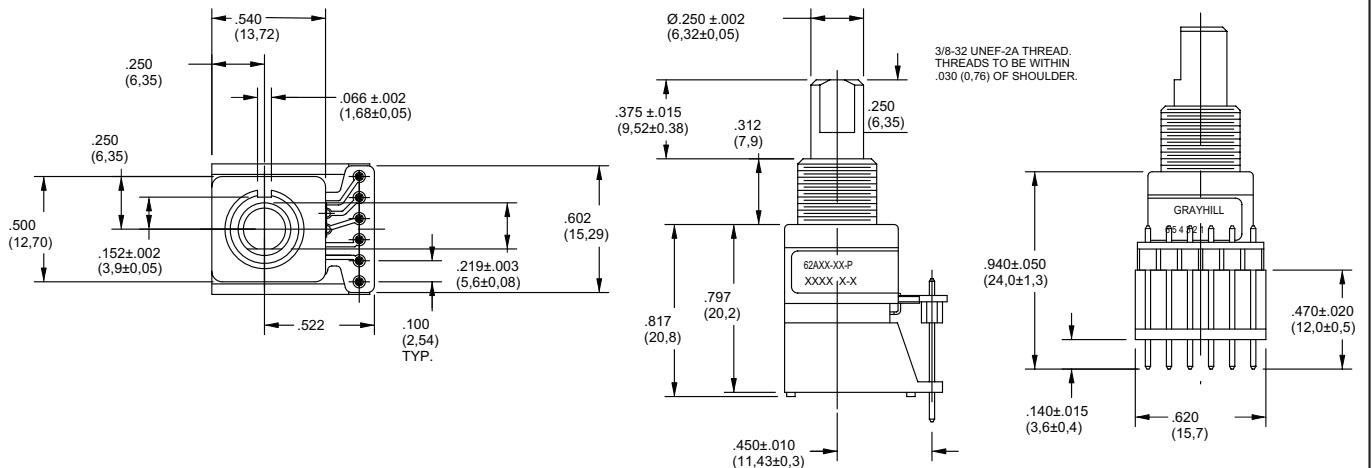


### DIMENSIONS in inches (and millimeters)

#### Cable Version



#### Pin Version



TERMINATION OPTIONS

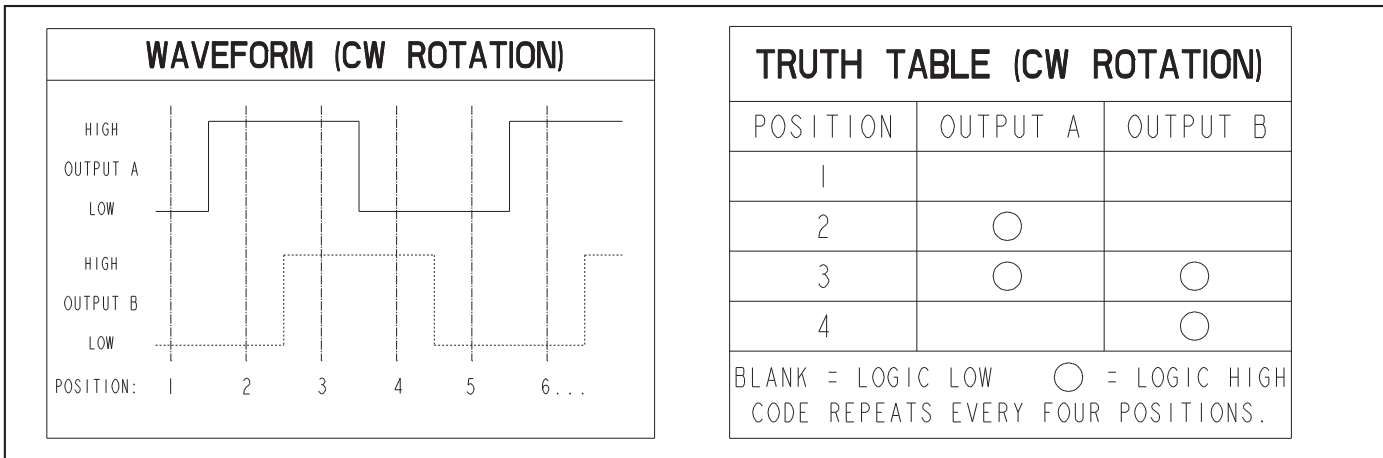


Optical and Mechanical Encoders

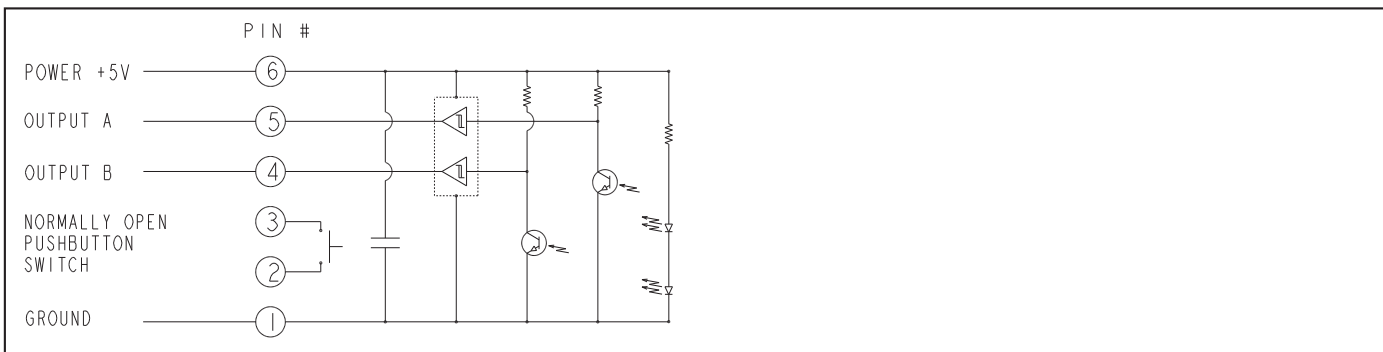
**SUPPLY CURRENT & LOGIC OUTPUT CHARACTERISTICS**

|  |  |  |                |
|--|--|--|----------------|
|  |  | 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:  | SMT OPTICS   | PUSH-PULL OUTPUTS COMPATIBLE WITH CMOS, TTL AND HCMOS LOGIC.   |                |
|  |  | LOGIC HIGH: $V_{OH} = 4.5 \text{ Vdc MIN AT } I_{OH} = -8.0 \text{ mA \& } V_{CC} = 5.00 \text{ Vdc.}$                     | N/A            |
|  | LOGIC LOW: $V_{OL} = 0.5 \text{ Vdc MAX AT } I_{OL} = 8.0 \text{ mA.}$ | N/A  |                |
|  | WIREBOND OPTICS  | OPEN COLLECTOR PHOTOTRANSISTOR OUTPUT.   |                |
| LOGIC HIGH: $V_{OH} = 3.8 \text{ Vdc MIN at } V_{CC} = 5.00 \text{ Vdc WITH } 2.2\text{k}\Omega \text{ PULL-UP RESISTOR.}$ |  | LOGIC HIGH: $V_{OH} = 2.3 \text{ Vdc MIN at } V_{CC} = 3.30 \text{ Vdc WITH } 2.2\text{k}\Omega \text{ PULL-UP RESISTOR.}$ |                |
| LOGIC LOW: $V_{OL} = 0.8 \text{ Vdc MAX AT } I_{OL} = 2.0 \text{ mA WITH } 2.2\text{k}\Omega \text{ PULL-UP RESISTOR.}$    |  | LOGIC LOW: $V_{OL} = 0.8 \text{ Vdc MAX AT } I_{OL} = 1.0 \text{ mA WITH } 2.2\text{k}\Omega \text{ PULL-UP RESISTOR.}$    |                |

**WAVEFORM AND TRUTH TABLE** Standard Quadrature 2-Bit Code



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



**CIRCUITRY: WIREBOND OPTICS** Open Collector Outputs (All Others)



Optical and Mechanical Encoders