

**SERIES 62P**  
Low Cost, PC Mount

**FEATURES**

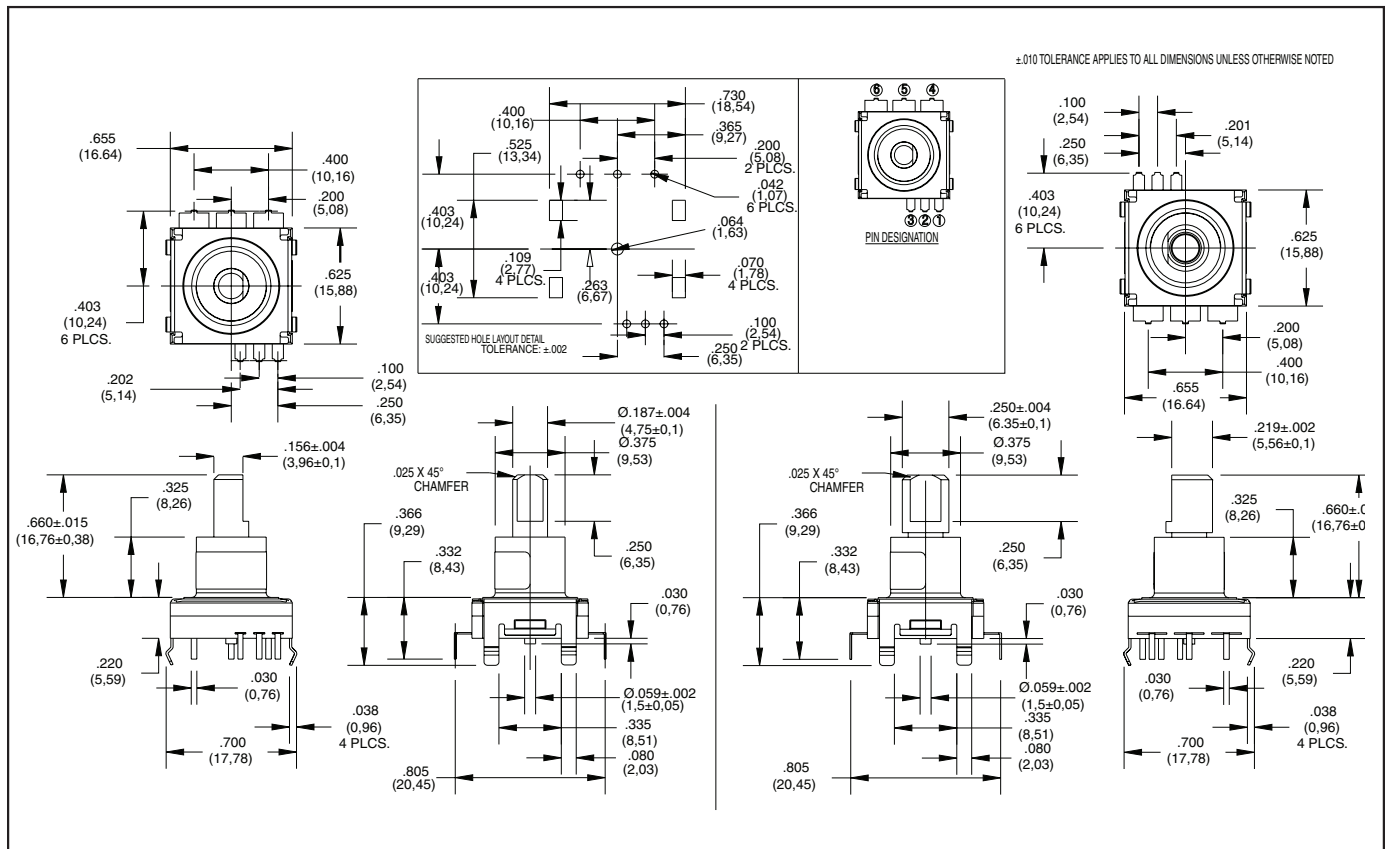
- Low Cost
- Compact Size
- PC Mount
- No De-Bouncing Required
- Reliable, Up to 2 Million Cycles
- Choice of Detent and Pushbutton Force
- Available in 16 Positions
- Quadrature Output

**APPLICATION**

- Automotive Controls
- White Goods
- Audio

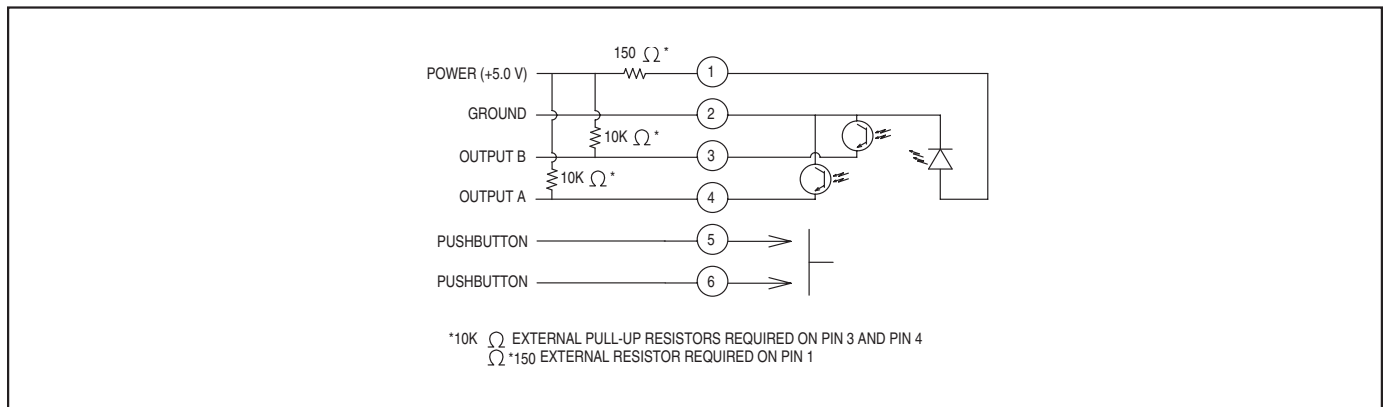


**DIMENSIONS** In inches (and millimeters)

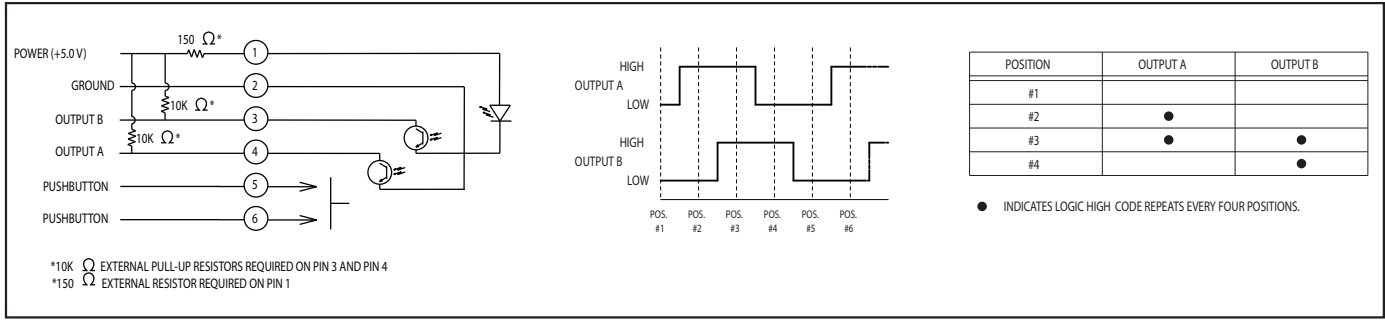


Optical and Mechanical Encoders

**CIRCUITRY**



## WAVEFORM AND TRUTH TABLE Standard Quadrature 2-bit Code



### SPECIFICATIONS

#### Electrical Ratings

- Operating Voltage:** 5 Vdc +/- .25 Vdc
- Supply Current:** 30mA maximum at 5 Vdc
- Logic High:** 3.0V minimum
- Logic Low:** 1.0V maximum
- Logic Rise and Fall:** less than 30 ms

#### Pushbutton Switch Ratings

- Rating:** 5.0 Vdc at 10mA resistive
- Contact Resistance:** less than 10 ohms (TTL or CMOS compatible)
- Voltage Breakdown:** 250 Vac between mutually insulated parts
- Contact Bounce:** less than 4 ms at make and less than 10 ms at break
- Actuation Life:** 3,000,000 operations
- Actuation Force:** 6: 600 +/- 200 grams  
4: 450 +/- 150 grams
- Shaft Travel:** .015 ± .010 inch

#### Mechanical Ratings

- Operating Torque:**  
H: 1.4 in-oz +/- 0.6 in-oz initial  
L: 0.6 in-oz +/- 0.3 in-oz initial  
N: < 0.5 in-oz initial
- Rotational Life:**  
H&L: 500,000 cycles  
N: 2 million cycles  
(1 cycle = 360 degree rotation and return)
- Shaft Push Out Force:** 20 lbs 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 Resistance:**  
Test 1: Tested at 100g for 6mS, half sine, 12.3 ft/s.

Test 2: 100g for 6mS, Sawtooth, 9.7 ft/s

#### Materials and Finishes

- Code/Pushbutton Housing:** Thermoplastic
- Shaft:** Thermoplastic
- Code/Detent Rotor:** Reinforced Thermoplastic
- Bushing:** Thermoplastic
- Terminal Pins:** Brass, Tin plated
- Detent Spring:** Stainless Steel
- Dome:** Stainless Steel
- Pushbutton Contact:** Nickel plated brass
- Phototransistor:** Planar Silicon
- Detent Balls:** .0625 dia. Stainless Steel
- Infrared Emitter:** Gallium Aluminum Arsenide
- Label:** White Thermal Transfer Cast Film. Adhesive Coated
- Bracket:** Stainless Steel, Tin plated

### ORDERING INFORMATION

