

Optical Encoders

Series 62P Low Cost, PC Mount



FEATURES

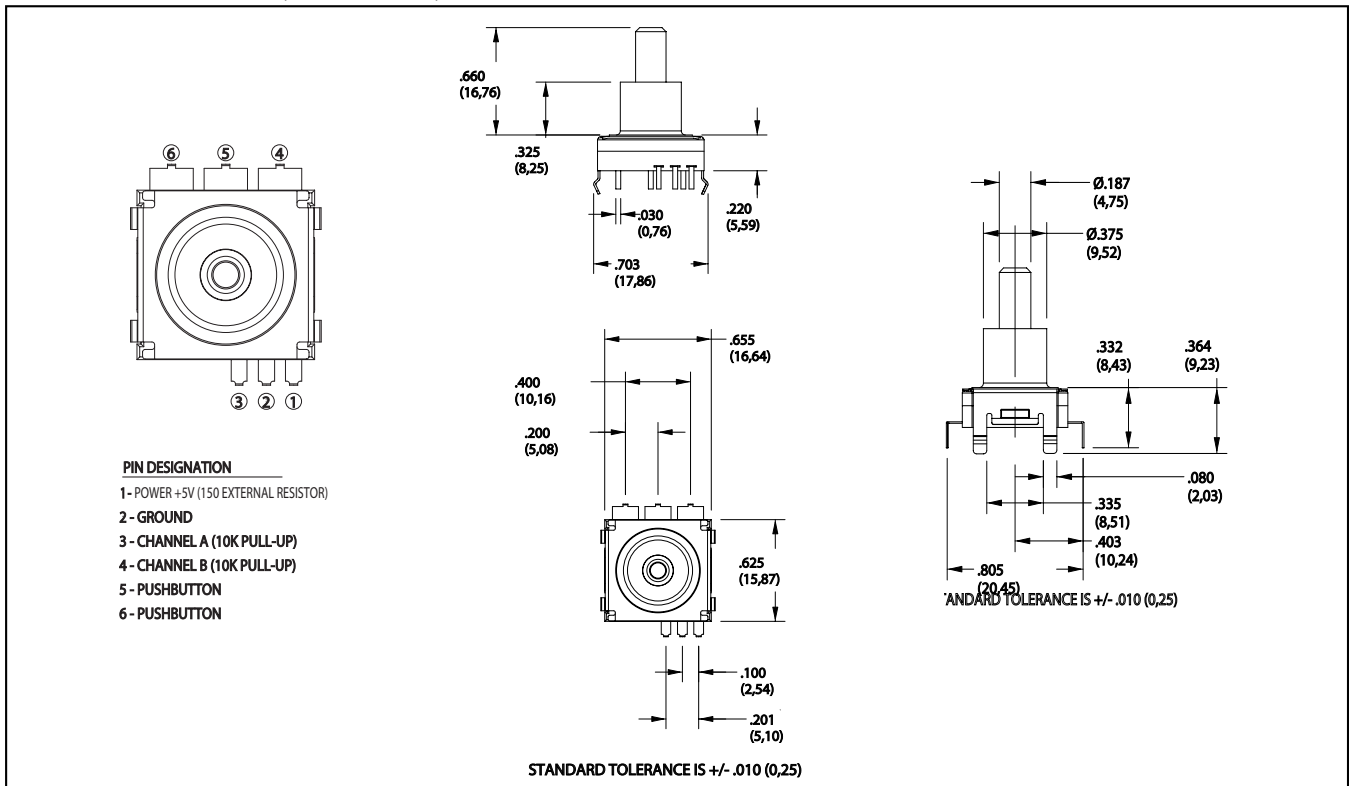
- Low Cost
- Compact Size
- PC Mount
- No De-Bouncing Required
- Reliable, Up to 2 Million Cycles
- Choice of Detent and Pushbutton Force
- Available in 16 Positions
- Quadrature Output

APPLICATIONS

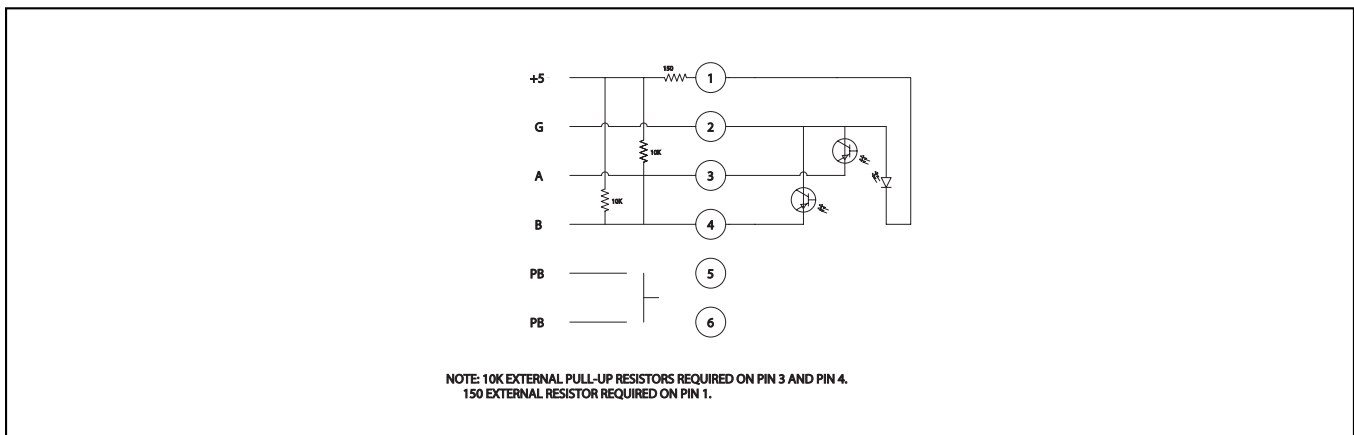
- Automotive Controls
- White Goods
- Audio



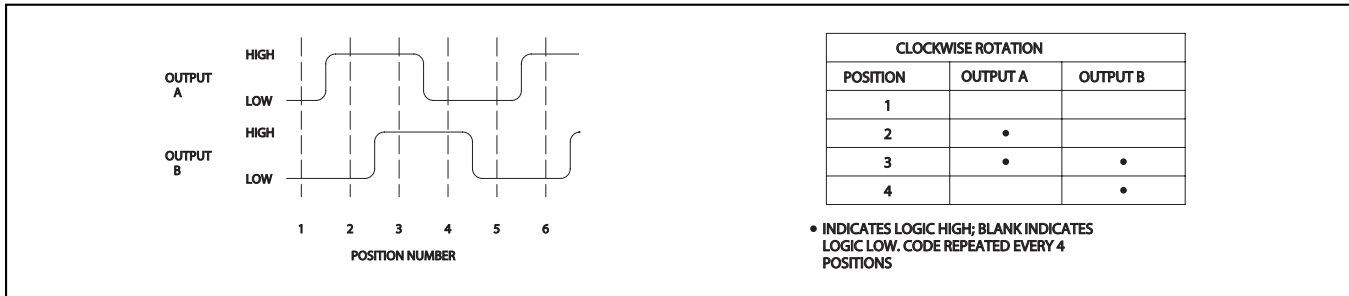
DIMENSIONS In inches (and millimeters)



CIRCUITRY AND JOYSTICK OPERATION Standard Quadrature 2-Bit Code



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

Mechanical Ratings

Operating Torque:
 H: 1.4 in-oz +/- 0.6 in-oz initial
 L: 0.6 in-oz +/- 0.3 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

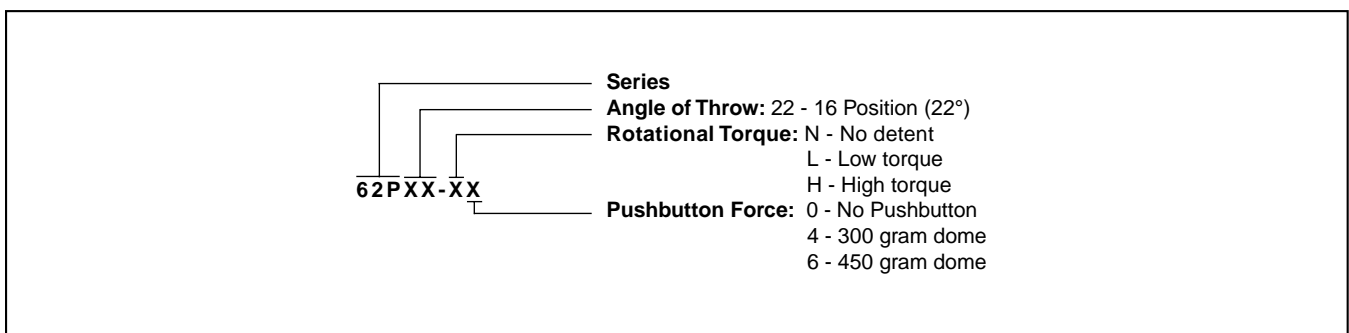
Environmental Ratings

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
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



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