



Optical Encoders

SERIES 62T
Thumbwheel with Pushbutton

FEATURES

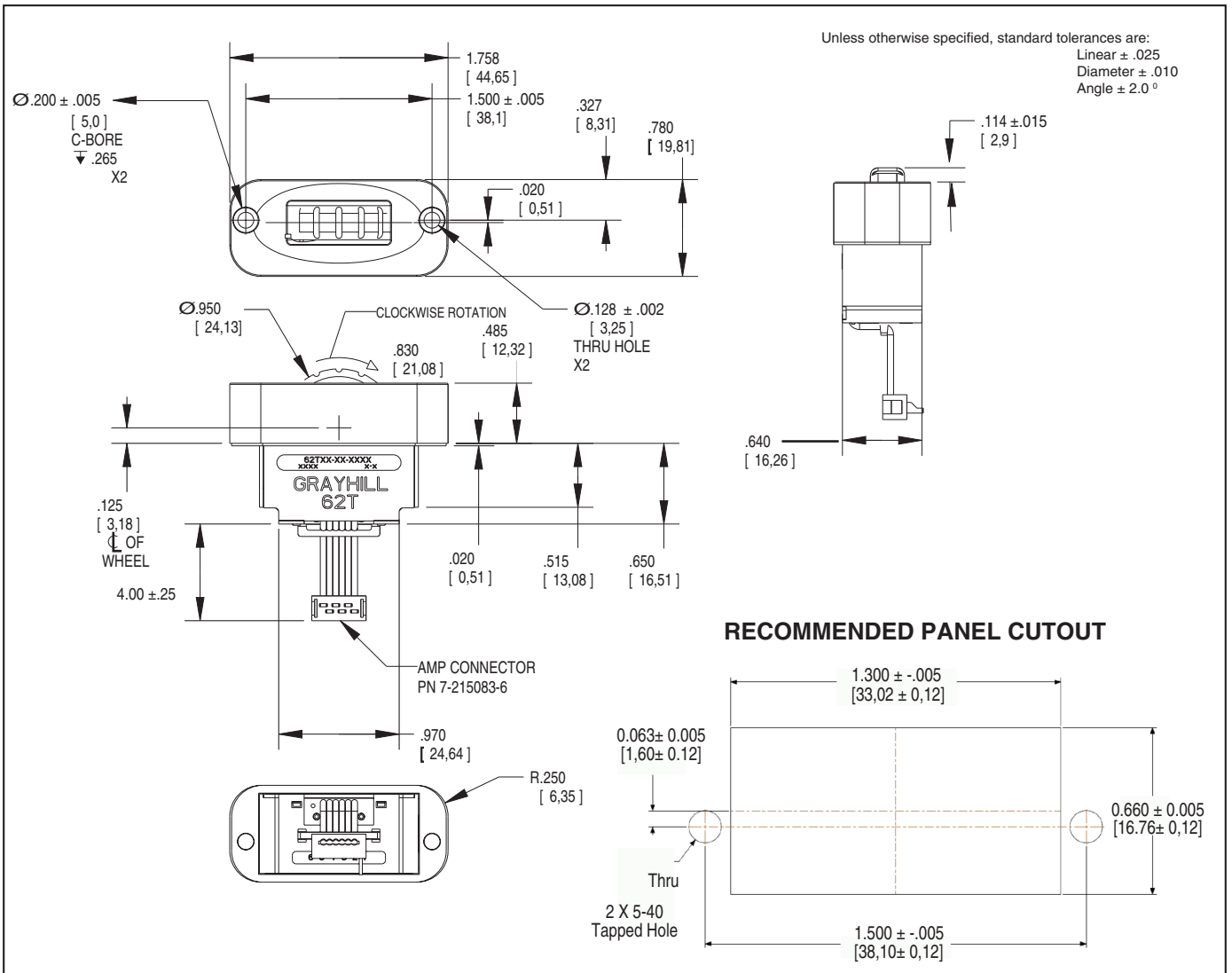
- Scroll and select functions
- Sealed against dust and particles
- Custom bezels that will blend with HMI grips and control panels
- Optional integrated pushbutton with over three million actuations
- MIL-STD-202 and MIL-STD-810F Compliant
- Standard panel seal
- Choice of cable length and termination

APPLICATIONS

- Scroll & select equipment in industrial and non-automotive transportation applications
- Display selectors
- Hand-grip joysticks

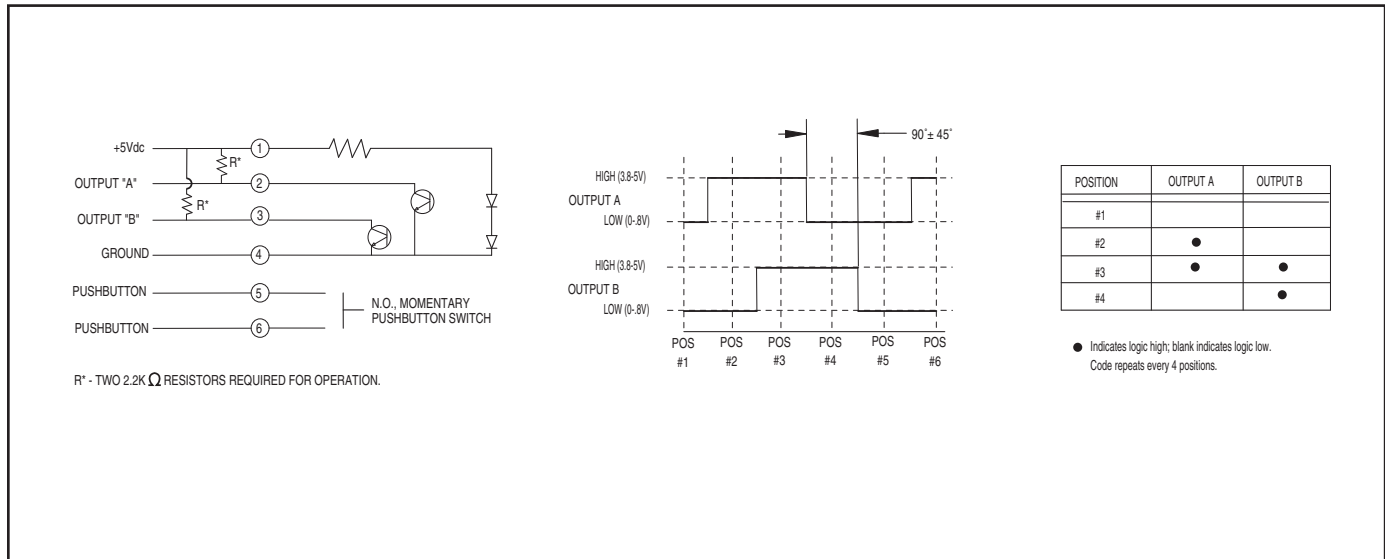


DIMENSIONS in inches (and millimeters)



Optical and Mechanical Encoders

WAVEFORM AND TRUTH TABLE



SPECIFICATIONS

Environmental Specifications

MIL-STD-810F Qualified

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

Storage Temperature Range: -55° C to 100° C

Humidity: 240 hours at 95% humidity at 30° C

Mechanical Vibration: Harmonic motion with amplitude of 15g, within a varied frequency of 10 to 2000 Hz

Mechanical Shock:

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

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

Pushbutton Electrical and Mechanical Specifications

Rating: 10mA @ 5 Vdc

Contact Resistance: <10ohms

Life: 3 million actuations minimum

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

Actuation Force: N – None, 7–700g, 10 – 1000g.

Thumbwheel Travel: .060 ± .015 in

Rotary Electrical and Mechanical Specifications

Operating Voltage: 5.00±0.25 Vdc

Supply Current: 25mA Max.

Output: Open collector phototransistor, external pull up resistors are required

Output Code: Two-bit quadrature, channel A leads channel B by 90° electrically during clockwise rotation of the thumbwheel

Logic high shall be no less than 3.8 Vdc

Logic low shall be no greater than 0.8 Vdc

Power Consumption: 125 mW Max.

Mechanical Life: 1,000,000 cycles of operation for Low and Non-Rotational Torque.

500,000 cycles of operation for Medium

Rotational Torque. 1 cycle is a rotation

through all positions and a full return.

Average Rotational Torque:

M: 2.2±.75 in-oz, L: 1.2±0.5 in-oz, N: <0.50

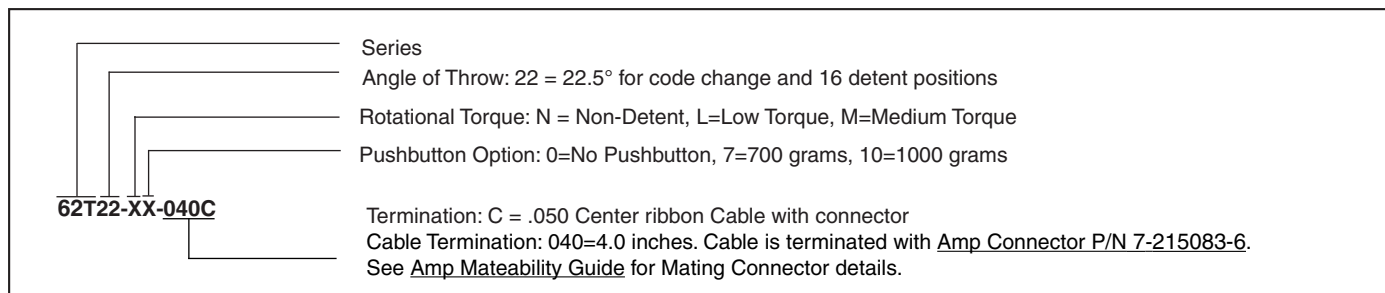
in-oz. Initially torque shall be within 75% of initial value throughout life.

Materials and Finishes

Face Plate: Plastic

Wheel: Plastic

Optical and Mechanical Encoders



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