

ED-20 Quadrature Output Series Packaged Magnetic Encoder

The ED-20 Series Magnetic Encoder

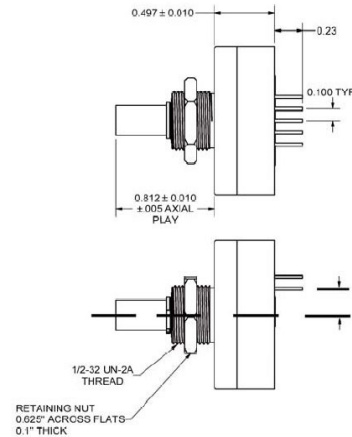
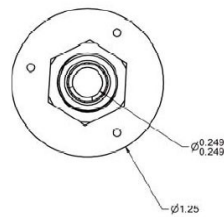
is designed for medium duty industrial feedback applications with ball bearing supported shaft. Resolutions are available from 200 to 1024 counts per revolution. This encoder series also features line drivers with active termination for long cable runs and reverse voltage protection. The ED-20 also offers the option of high voltage differential, low voltage differential or open collector (NPN) outputs. An index channel which offers a pulse every 180° is also included. The magnetic technology used in the ED-20 series offers many advantages over conventional optical encoder technology such as sealed electronics and extended temperature ranges. Furthermore, since there are no LED degradation issues, the ED-20 offers a virtually unlimited life.



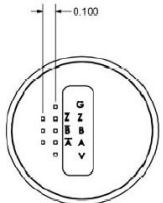
dimensions

FEATURES

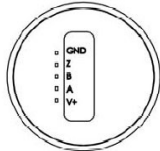
- Magnetic Sensing Technology
- Encapsulated Electronics/Sealed Unit
- Harsh Environment Compatibility
- Quadrature Outputs
- High or Low Profile Differential or NPN Outputs
- Consistent Rotational Torque
- Resistant to Contamination
- IP52 Sealing
- Metallic Threaded Bushing Mounting
- Wide Operational Temperature Range (-40°C to 85°C)
- Custom Housings, Shafts, Connectors Available in Most Cases with No Additional Tooling Required
- Excellent Stability – No Optical Degradation



HVD & LVD



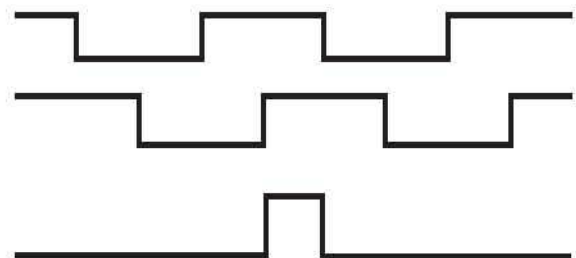
NPN



APPLICATIONS

- Marine, Avionics, Motor Speed and Position Control
- Marine Steering and Throttle Position Control/Feedback
- Monitor Pump Speed and Direction
- Camera Position and Control
- XY Stage Positioning
- Motor Feedback
- Medical Diagnostic Equipment
- Video and Sound Editing Equipment
- Valve Position
- Syringe Pump

sample quadrature output



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Measurement Specialties reserves the right to update and change these specifications without notice.

Performance Specifications

Standard Resolution	1024, 512, 400, 256, 200, counts per revolution (4 counts = 1 pulse)
Operating Temperature	-40°C to +85°C (Extended temperature range available, contact factory for details)
Maximum Speed	Up to 3000 RPM
Bearing Life	30,000,000 cycles
Bearings	Ball
Run Out	.010" max @ .75 from mounting surface
Bushing Mounting Torque	10 in-lb max

Electrical

Operating Current	HVD & LVD – 25mA (High Voltage Differential and Low Voltage Differential) NPN – 15mA
Operating Voltage (VDC)	HVD – 6.5 – 32 VDC NPN & LVD +/- .25
Output Type	HVD 2 CH Quad LVD 2 CH Quad NPN Open Collector, w/ 10k Pull up 2 CH Quad
Voltage Output High	HVD & LVD – (V+) – 400mV Max NPN – 4.75 VDC
Voltage Output Low	HVD & LVD – Max 400mV @ 16mA NPN – Max 125mV @ 16mA

Mechanical

Axial Load (lbs)	4.5 [20 N] Max.
Radial Load (lbs)	2.25 [10 N] Max.
Operating Speed (rpm)	300
Shaft End Play (in)	.005 [.10] Max.
Shaft Radial Play (in)	.010 [.25] Max @ .6 [15.2] from mounting surface
Shaft Push-In Force (lbs)	40 [9N]
Shaft Pull-Out Force (lbs)	6 [1.3N]

Environmental

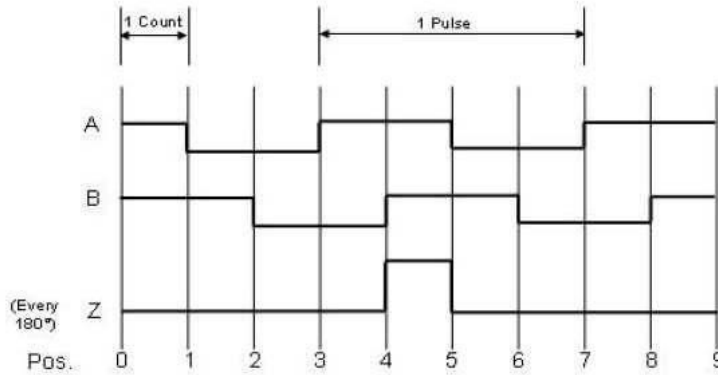
Vibration	MIL-STD-202F Method 204D Test Condition B
Shock	MIL-STD-202F Method 213B Test Condition C
Humidity	MIL-STD-202F Method 103B Test Condition A
Thermal Shock	MIL-STD-202F Method 107G Test Condition A
Operating Temperature	-40C to +85°C
Storage Temperature	-55C to 125°C

ED-20 Quadrature Output Series Packaged Magnetic Encoder

quadrature timing

Catalogue Units

ED-20-LVD-0256-Q-P
ED-20-NPN-0256-Q-P
ED-20-LVD-0512-Q-P
ED-20-NPN-0512-Q-P
ED-20-LVD-1024-Q-P
ED-20-NPN-1024-Q-P



Channel A leads when
Channel B shaft is rotated
in Clockwise direction.

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ordering info

