Hercules Encoders
Series 500
Hall Effect Incremental Rotary Shaft Encoders

Mechanical
- Shaft Speed: 4000 RPM maximum
- Shaft Direction: Bidirectional
- Standard Shaft Sizes (Dia.): .2497", .3125"
- Shaft Extension(s): 1.17" with .50x.05" flat
- Mounting: Refer to dimensional drawings
- Bearings: ABEC 7 Shielded
- Radial Loading: 15 lbs. Operating
- Axial Loading: 7 lbs. Operating
- Accuracy: ±1.0º of Shaft Rotation Typical
- Housing: Black Anodized Aluminum
- Weight: 7 oz.
- Connector (Side): Wire Out (Strip/Tin or Mate-n-Lok)

Electrical
- Pulse Rate: 10 kHz
- Outputs: NPN w/ pullup; NPN open collector; PNP sourcing
- Output Rating: 40 Vdc maximum
- Open Collector Transistor: 8 to 28 Vdc
- Supply Voltage: 5 Vdc with 5V TTL output
- Supply Current: 15 mA maximum
- Current Sinking: 250 mA maximum
- Output Duty Cycle: 50/50 w/ ±20% typical tolerance
- Rise/Fall Times: 1 µsec typical

Environmental
- Operating Temp.: -20º to +70º C (-4º to +158º F)
- Shock: 20 g's for 11 Milliseconds
- Vibration: 5 to 1000 Hertz at 10 g's
- Enclosures: NEMA 12/13 equiv. — Dust-, Oil-Tight

Electrical Connections
- Function: A, B, D, E, S
- Supply Voltage (-): A
- Supply Voltage (+): B
- Channel "A": D
- Channel "B": E
- Cable Shield: S

For the latest specifications visit our website
www.herculesencoders.com
Dimensional Drawings

**Series 500**

**Shaft Diameter**
1 = 1/4" (0.2497")
2 = 5/16" (0.3122")

**Mounting Type**
1 = 10-32 BH on Base & Wire Leads
2 = Flanged Base & Wire Leads
3 = 10-32 BH on Base & Male Connector
4 = Flanged Base & Male Connector

**Channel Outputs**
A = NPN w/Pullup Res.
B = NPN Open Collector
D = 1.5K Pullup, No Ser. R
F = 5Vdc w/Pullup Res.
G = 5Vdc Open Collector
H = PNP Sourcing Output

**Channel Types**
S = Single Channel
Q = Quadrature Outputs

**PPR (Pulses per Revolution)**

**Ordering Information**

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