



DANAHER'S GLOBAL REACH

With manufacturing plants around the world, global sales and applications support, and an expansive network of distributors, Danaher is always nearby. By fostering efficiency and responsiveness, we've established a standard lead-time of three days, with same-day shipments available on many of our products.

Our broad selection of encoders and feedback controls meet applications requirements in a variety of industries. We meet your system and budget requirements with user-configurable, accurate and flexible encoders with low, mid, or high level performance ranges.

With more than 25,000 customers around the world, Danaher is experienced in designing products that are reliable and durable, with quality standards that meet six sigma requirements.



Danaher Industrial Controls is a division of Danaher, a Fortune 500 company with offices in 30 countries around the world. For additional information on NorthStar or a full-line catalog, contact your DICG representative at 1.800.873.8731 or visit our web site at: www.feedbackdevices.com

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northstar

HEAVY-DUTY ENCODERS

RELIABLE HARSH-DUTY OPTICAL & MAGNETO-RESISTIVE
INCREMENTAL ENCODER PRODUCTS



1 800.873.8731
www.feedbackdevices.com



HARSH-DUTY OPTICAL INCREMENTAL ENCODERS with Washdown Resistance & ATEX Certification

This new series unites highly accurate, incremental optical accuracy with the rugged magneto-resistive performance you expect from NorthStar. Choose from a growing line designed to provide reliable and intrinsically safe operation in severe-duty food, oil/gas and related industrial applications. These exceptional encoders will not corrode and will withstand temperature extremes from -40 C to +100 C. In addition, they offer:

- Extreme shock and vibration resistance
- Special labyrinth sealing options on select models
- Hazardous environment ATEX certification and intrinsically safe operation
- Extreme corrosion & washdown resistant stainless & nickel plated models
- Applications: Food/Beverage, Oil/Gas

MAGNETO-RESISTIVE INCREMENTAL ENCODERS & PULSE TACHS Time-Tested & Proven Legacy of Rugged Performance

With magneto-resistive technology, NorthStar encoders SLIM Tach and RIM Tach Series are unaffected by dirt, dust or dampness, making these your best choice for high-horsepower, large-shaft motors and extreme environments.

- Types: Large Motor, C-Face Mount and Hollowshaft
- High performance velocity and position feedback in extreme environments
 - Easy to install hollowshaft designs in sizes nearly twice as big as competitive models
 - Highest-grade Industrial bearings in the industry
 - Industry-leading resolution – up to 2048 PPR

WHEN ACCURACY COUNTS!

Long a recognized brand and international leader in magneto-resistive technology and mill-duty industrial applications, NorthStar, a division of Danaher Industrial Controls Group, continues to produce innovative and highly dependable products for measuring speed in tough manufacturing environments.

For more than 30 years, NorthStar has specialized in meeting the needs of the industrial community

with a proven and time tested line of heavy-duty, mill-duty magneto-resistive incremental encoders and pulse tachs. More recently, NorthStar expanded the line to include a new line of compact and washdown resistant, harsh-duty optical incremental encoders. All NorthStar encoders are designed to provide rugged, high performance velocity feedback in extreme application environments...where accuracy counts (**guaranteed**).



NEW SERIES HD20



- Optical sensing
- Hard anodized aluminum, nickel plated or stainless steel housing
- Intrinsically-safe ATEX certification models available
- Optical unbreakable code disk
- Exceeds NEMA 4x and NEMA 60 and IP66/67

- Resolution: 1 to 3600 PPR; 125 KHz data and index
- Bore/Shaft Size: 3/8" or 10mm bore available
- Power/Output: 5-26 VDC; 5VDC or 7-26 VDC (ATEX)
- Sensing Technology: Optical Unbreakable Code Disk
- Operating Temperature: -40°C to +100°C (up to 80 C w/ATEX)
- Enclosure Rating / Protection: NEMA 4X, 6P and IP 66/67

NEW SERIES HD25



- Optical sensing
- Hard anodized aluminum, nickel plated or stainless steel housing
- Intrinsically-safe ATEX certification models available
- Optical unbreakable code disk
- Exceeds NEMA 4x and NEMA 6P and IP66/67

- Resolution: 1 to 5000 PPR; 125 KHz data and index
- Bore/Shaft Size: 3/8" or 10mm bore available
- Power/Output: 5-26 VDC; 5VDC or 7-26 VDC (ATEX)
- Sensing Technology: Optical Unbreakable Code Disk
- Operating Temperature: -40 to 100 C (-40 to +80 C w/ATEX)
- Enclosure Rating / Protection: NEMA 4X, 6P and IP 66/67

NEW SERIES HSD35



- Optical sensing
- Replaces Magcoder HS35M
- Cast housing aluminum; EPIC style connector for easy termination
- For industrial motor and machine applications at resolutions to 2500 PPR
- Choice of stamped metal or swivel rod tether available
- Protection from overvoltage, reverse voltage and output short circuits

- Type: Hollowshaft
- Resolution: 1 to 2500 PPR, quadrature, optional index (512 and above)
- Bore /Shaft Size: 1/4" or 1 1/4"; 6mm to 28mm bore" shaft diameter
- Power/Output: 5-15 VDC, 5VDC or 5-26 VDC; line driver
- Sensing Technology: Optical Unbreakable Code Disk
- Operating Temperature: -40 to 100 C
- Enclosure Rating / Protection: NEMA 4 / IP66

NEW SERIES HSD23



- Optical sensing
- Hard anodized aluminum, nickel plated or stainless steel housing
- Intrinsically-safe ATEX certification models available
- Optical unbreakable code disk
- Exceeds NEMA 4x and NEMA 6P and IP66/67

- Type: Hollowshaft
- Resolution: 1 to 3600 PPR; 125 KHz data and index
- Bore/Shaft Size: 3/8", 1/2", 5/8", 3/4" or 10mm bore available
- Power/Output: 5-26 VDC; 5VDC or 5-26 VDC (ATEX)
- Sensing Technology: Optical Unbreakable Code Disk
- Operating Temperature: -40 to 100 C (-40 to +80 C w/ATEX)
- Enclosure Rating / Protection: NEMA 4X, 6P and IP 66/67

NEW SERIES HSD38



- Optical sensing
- Nickel plated or stainless steel housing
- Enclosure rating NEMA 4x, NEMA 6, IP66/IP67

- Type: Hollowshaft
- Resolution: 15 to 5000 PPR; 125 KHz data and index
- Bore/Shaft Size: 3/8", 10mm, 1/2", 5/8" or 3/4" bores available
- Power/Output: 5-26 VDC; 5 VDC or 5-26 VDC
- Sensing Technology: Optical Unbreakable Code Disk
- Operating Temperature: -40 to 100 C
- Enclosure Rating / Protection: NEMA 4 / IP66

NEW SERIES DWD38



- Optical sensing technology
- Nickel-plated or stainless steel housing
- Intrinsically-safe ATEX certification models available
- NEMA 4x, IP67

- Type: Draw Works
- Resolution: 15 to 5000 PPR; 125 KHz data and index
- Bore/Shaft Size: 1-1/4 UNS x 5/8" – 18 UNS nonconvertible bores available
- Power/Output: 5-26 VDC; 5 VDC or 7-26 VDC (ATEX)
- Sensing Technology: Optical Unbreakable Code Disk
- Operating Temperature: -40 to 100 C (-40 to +80 C w/ATEX)
- Enclosure Rating / Protection: NEMA 4X , IP67

SLIM Tach® HS56



- Magneto-resistive sensing
- Hollow-shaft mount with anti-rotation tether
- Size/Mounting: 4.5" dia, hollowshaft mount
- Resolution: 64 to 2048 PPR
- Bore/Shaft Size: 5/8" to 1 1/8"; up to 3.75" available
- Power/Output: 5-15VDC or 5-26 VDC; differential line driver
- Sensing Technology: Magnetic Resonance (MR)
- Operating Temperature: -40 to 90 C (+120 C Optional)
- Enclosure Rating / Protection: NEMA MG1

SLIM Tach® RL67



- Magneto-resistive sensing
- Hard anodized aluminum housing
- Fits 6.75" machined recess on RPM AC or DC motors made by Reliance Electric.
- Low profile "pancake" design adds only 1.5" to motor length
- Size/Mounting: 4.5" dia, hollowshaft mount
- Resolution: 64 to 2048 PPR, quadrature, optional index (512 & above)
- Bore/Shaft Size: 5/8" or 2 7/8"; up to 3.75" available
- Power/Output: 5-15VDC or 5-26 VDC; differential line driver
- Sensing Technology: Magnetic Resonance (MR)
- Operating Temperature: -40 to 90 C (+120 C Optional)
- Enclosure Rating / Protection: NEMA MG1

SLIM Tach® SL1250



- Magneto-resistive sensing
- Economical bearing-less design for 12.5" C face motors
- Occupies only 1.4" of motor shaft
- High power line driver for long cable lengths
- Size/Mounting: 12.5" C face motors, hollowshaft mount
- Resolution: 60 to 2048 PPR, quadrature, optional index (480 and above)
- Bore/Shaft Size: 5/8" or 2 7/8"; up to 3.75" available
- Power/Output: 5-26V; up to 26V differential line driver
- Sensing Technology: Magnetic Resonance (MR)
- Operating Temperature: -40 to 90 C (+120 C Optional)
- Enclosure Rating / Protection: NEMA MG1

SLIM Tach® SL56



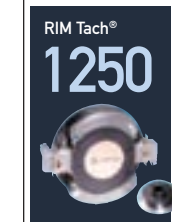
- Magneto-resistive sensing
- Cast aluminum and stainless steel construction
- Bearing-less, rugged
- Mounts directly to C-face motors
- Only 0.75" thick—ideal for tight machine configurations in harsh environments
- Size/Mounting: 4.5" 56 NEMA C-face
- Resolution: 64 to 2048 PPR, quadrature, optional index (512 and above)
- Bore/Shaft Size: 5/8" to 2.5" shaft diameter
- Power/Output: 5-15 or 5-26 VDC; line driver
- Sensing Technology: Magnetic Resonance (MR)
- Operating Temperature: -40 to 90 C (+120 C Optional)
- Enclosure Rating / Protection: NEMA MG1

SLIM Tach® SL85



- Magneto-resistive sensing
- Hard anodized aluminum housing
- Bearing-less for AC vector motors
- Provides higher resolution than traditional gear tooth ring kits
- Only 1.125" (35mm) thick
- Hardened encapsulated electronics
- Size/Mounting: 8.5" 180 NEMA C-face, thru-shaft, end-of-shaft and double C-face
- Resolution: 64 to 2048 PPR, quadrature, optional index (512 and above)
- Bore /Shaft Size: 5/8", 2 7/8" up to 3.75" shaft diameter
- Power/Output: 5-15 VDC; line driver
- Sensing Technology: Magnetic Resonance (MR)
- Operating Temperature: -40 to 90 C (+120 C Optional)
- Enclosure Rating / Protection: NEMA MG1

RIM Tach® 1250



- Magneto-resistive sensing
- Ideal for crane and hoist applications
- Ductile cast-iron enclosure protects against acid wash down
- Size/Mounting: 12.5" NEMA C-face, thru-shaft
- Resolution: 60 to 2048 PPR, quadrature, optional index (480 and above)
- Bore/Shaft Size: 5/8" 2 7/8" or 8" shaft diameter available
- Power/Output: 5-15 or 15-26 VDC; line driver
- Sensing Technology: Magnetic Resonance (MR)
- Operating Temperature: -40 to 80 C
- Enclosure Rating / Protection: NEMA MG1

RIM Tach® 6200



- Magneto-resistive sensing
- Stainless steel and cast-iron industrial tachometer
- Ideal for close-coupled, belt or wheel-driven setups in process environments
- Size/Mounting: 4.5" NEMA C-face mount, thru-shaft
- Resolution: 60 to 2048 PPR, quadrature, optional index (480 and above)
- Bore/Shaft Size: 0.625" shaft diameter; 1.87" long, single or double ended (standard)
- Power/Output: 5-15 or 15-26 VDC; line driver
- Sensing Technology: Magnetic Resonance (MR)
- Operating Temperature: -40 to 70 C
- Enclosure Rating / Protection: NEMA MG1

RIM Tach® 8500



- Magneto-resistive sensing
- For AC and DC drive control systems
- Cast iron and stainless steel construction
- Thin, pancake style mounts directly on the motor
- Bearing-less design increases reliability
- Dual sensors provide redundant signal in case of sensor failure
- Field replaceable sensor eliminates need to replace entire unit
- Innovative design requires no calibration
- Size/Mounting: Up to 8.5" face mount, thru-shaft or end-of-shaft
- Resolution: 60 to 1200 PPR
- Bore/Shaft Size: 5/8", 2 7/8" and up to 3.75" shaft diameter available
- Power/Output: 5-15 or 5-26 VDC; line driver
- Sensing Technology: Magnetic Resonance (MR)
- Operating Temperature: -40°C to +80°C
- Enclosure Rating / Protection: NEMA MG1

RIM Tach® HS85



- Magneto-resistive sensing
- Heavy cast-iron and stainless steel construction
- Most rugged hollowshaft encoder in the industry
- Heavy-duty double-sealed bearings for long life
- Interchangeable sensors for fast maintenance
- Size/Mounting: hollowshaft mount
- Resolution: 60 to 2048 PPR, quadrature, optional index (480 and above)
- Bore/Shaft Size: 1 1/8", 2 7/8" or 4.5" diameter available
- Power/Outputs: 5-15 or 15-26 VDC; line driver
- Sensing Technology: Magnetic Resonance (MR)
- Operating Temperature: -20°C to +70°C
- Enclosure Rating / Protection: NEMA MG1