NexGen RIM Tach HT85 *NorthStar*™ *brand*

Hollow Shaft Encoder

HD Heavy Duty

Key Features

- **Hollowshaft Design Mounts Easily to Large Motor Shafts, up to 4.50" in Diameter**

- **New Sensor Provides up to 0.075" of Air Gap, Over 50% More Than Competitive Models**

- **Expanded Resolution up to 2400PPR**

- **Redesigned Circuitry for On-Board Diagnostics with LED and Alarm Output**

- **Multiple Bore Sizes Available, Including Tapered Shafts**

- **Stainless Steel and Ductile Cast Iron Construction**

CE EN 61326-1 RoHS ✓

SPECIFICATIONS

STANDARD OPERATING CHARACTERISTICS

Code: Incremental, Magnetic
Pulses per Revolution: 60-2400 PPR
Phasing Sense: A leads B for Counter-Clockwise rotation (CCW) viewing encoder-mounted end
Quadrature Phasing: 90° ± 45°
Symmetry: 50% ±15%
Number of Output Modules: Single or Dual

ELECTRICAL

Input Power Requirements: 5-26VDC, 95mA typical per sensor module, plus line driver load
Output Signals: IC-WE Differential Line Driver: 150mA, sink or source
Frequency Response: 0 - 180kHz Data & Index
Noise Immunity: Tested to EN61326-1
Electrical Immunity: Reverse polarity and short circuit protected
Connector: 10 pin industrial duty latching, sealed NEMA 4 &12, IP65. Optional MS3102 10 pin, Pigtail Cable, or Latching connector on cable extension

MECHANICAL

Bore Diameter: 1" to 4-1/2", straight or tapered bore
Mounting Configuration: Hollow Shaft mount with Anti-Rotation Tether
Shaft Speed: 3,600 RPM
Shaft Length Required: 2.5" min
Acceleration Rate: 3,600 rpm/sec max
Allowable Shaft End-Play: 0.25" (Subject to RPM Limitation)
Allowable Shaft Runout: 0.010" TIR (Subject to RPM Limitation)
Housing Material: Cast Iron/Stainless Steel
Weight: 30 lbs

ENVIRONMENTAL

Operating Temperature Range: -40°C to +85°C
Storage Temperature Range: -40°C to +120°C
Shock (Sensor Module): 30 G's Min
Vibration: 18 G's @ 5-2000 Hz spectrum
Humidity: Up to 98% (non-condensing)

ELECTRICAL CONNECTIONS

Signal	Connector Pin	Pigtail Cable	MS 3102E18-IT#
Common	1	Black	A
B	2	Green	E
A	3	Blue	D
Z *	4	Violet	C
Alarm †	5	—	F
Vcc +	6	Red	B
$\overline{B}$	7	Yellow	H
$\overline{A}$	8	Gray	G
$\overline{Z}$ *	9	Orange	I
Shield	10	Braid	J

* Index (Z) optional. See Ordering Information
† Alarm not available with Pigtail cable. See Ordering Information

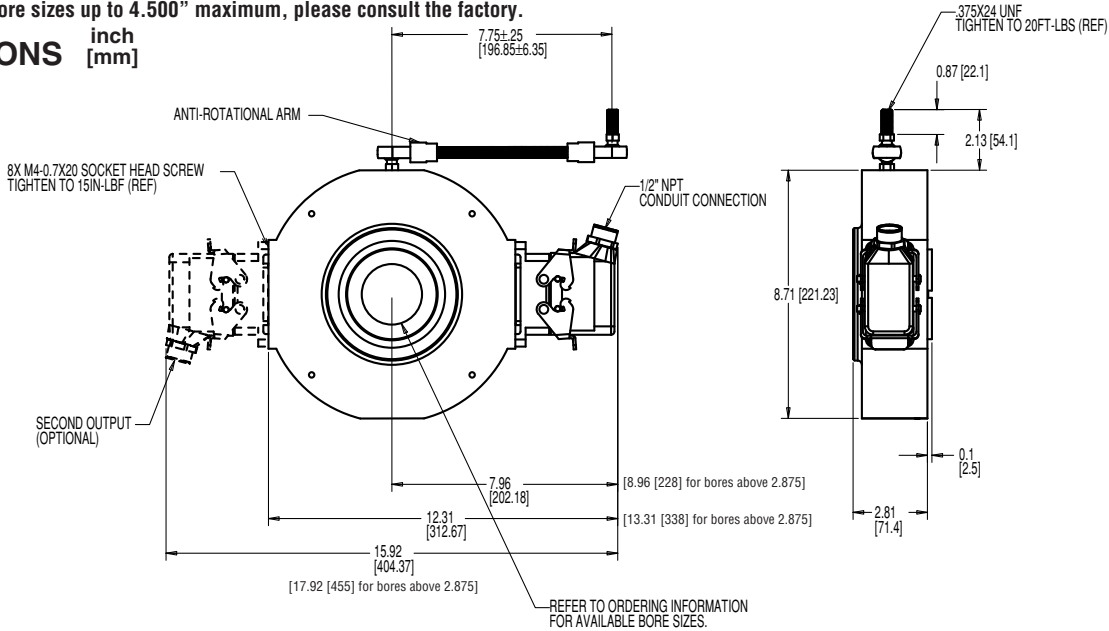# *NorthStar™ brand* NexGen RIM Tach HT85

Ordering Information
To order, complete the model number with code numbers from the table below:

Code 1: Model	Code 2: PPR	Code 3: Index	Code 4: Wheel Bore	Code 5: Electrical	Code 6: Termination
HT8 ☐☐☐☐		☐	☐☐☐	☐	☐
			Ordering Information		
HT8 Hollow Shaft	**0060 0480** **0120 0960** **0240 1920** Available with bore sizes up to 2.875" **0075 0600** **0150 1200** **0300 2400** Available with bore sizes up to 3.875" **0064 0512** **0128 1024** **0256 2048** Available with bore sizes up to 4.500"	**L** No Index **Z** With Index Signal Output	**Thru-bores** **T01** 1-1/8" **M25** 25 mm **T02** 1-3/8" **M40** 40 mm **T03** 1-5/8" **M48** 48 mm **T04** 1-7/8" **M55** 55 mm **T05** 2.00" **M65** 65 mm **T06** 2-1/8" **M70** 70 mm **T07** 2-1/4" **T08** 2-3/8" **T09** 2-1/2" **T10** 2-7/8" **Bores with 1.25" per foot taper** **P01** 1-1/8" **P02** 1-3/8" **P03** 1-5/8" **P04** 1-7/8" **P05** 2.00" **P06** 2-1/8" **P07** 2-1/4" **P08** 2-3/8" **P09** 2-1/2" **P10** 2-7/8" For additional bore sizes up to 4.5" maximum, please consult factory.	**1** 5-26VDC in, 5-26VDC Line Driver out (IC-WE), Single output **2** 5-26VDC in, 5-26VDC Line Driver out (IC-WE), Dual output	**C** Latching Industrial Connector with 1/2" NPT **M** 10 pin MS Connector **P** 18" Pigtail **Q** Latching Industrial Connector on 18" Cable

Note: See ACCESSORIES Section for Connectors and Spare Parts
For additional bore sizes up to 4.500" maximum, please consult the factory.

DIMENSIONS   inch [mm]

ANTI-ROTATIONAL ARM
8X M4-0.7X20 SOCKET HEAD SCREW TIGHTEN TO 15IN-LBF (REF)
SECOND OUTPUT (OPTIONAL)
1/2" NPT CONDUIT CONNECTION
7.75±.25 [196.85±6.35]
.375X24 UNF TIGHTEN TO 20FT-LBS (REF)
0.87 [22.1]
2.13 [54.1]
8.71 [221.23]
7.96 [202.18]
12.31 [312.67]
15.92 [404.37]
[17.92 [455] for bores above 2.875"]
[8.96 [228] for bores above 2.875"]
[13.31 [338] for bores above 2.875"]
0.1 [2.5]
2.81 [71.4]
REFER TO ORDERING INFORMATION FOR AVAILABLE BORE SIZES.