

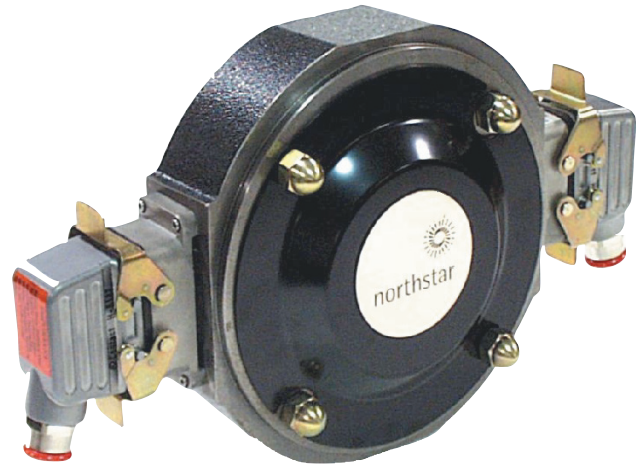
# SERIES RIM Tach 8500

**NorthStar™ brand**

## Bearingless Encoder

### Key Features

- **Compact, Bearingless Design Mounts to 180-C Face Motors**
- **Sensor Modules are Removable On-The-Fly and Require No Gapping**
- **Stainless Steel and Ductile Cast Iron Construction for Harsh Mill Environments**
- **Magneto-Resistive Technology Resists Dust, Dirt, Oil, Water and Other Common Contaminants**
- **New Model Available with Larger Air Gap and Diagnostic LED. See NexGen RT8**



## SPECIFICATIONS

### STANDARD OPERATING CHARACTERISTICS

**Code:** Incremental, Magnetic  
**Pulses per Revolution:** 60-1200 PPR  
**Phasing Sense:** A leads B for Counter-Clockwise rotation (CCW) viewing encoder-mounted end  
**Quadrature Phasing:** 90° ± 22°  
**Symmetry:** 180° ± 54°  
**Index:** 270°, ungated (optional gated to falling B edge)  
**Number of Output Modules:** Single or Dual

### ELECTRICAL

**Input Power Requirements:** 5-15 VDC, 15-26 VDC, 45 mA typical per sensor module plus line driver load  
**Output Signals:** 4428 Differential Line Driver: 150mA, sink or source  
**Frequency Response:** 0 - 120kHz 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

### MECHANICAL

**Bore Sizes:** 5/8" to 3.75"  
**Mounting Configuration:** 8.5" 180 C-Face Mount for NEMA MG1 Standards  
**Shaft Speed:** 7,000 RPM  
**Shaft Length Required:** 2.5" min  
**Allowable Shaft End-Play:** ± 0.050"  
**Allowable Shaft Runout:** 0.003" TIR  
**Acceleration Rate:** 3600 rpm/sec max  
**Housing Material:** Cast Iron/Stainless Steel  
**Weight:** 26.5 lbs

### 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
No Connection	5	—	—
Vcc	6	Red	B
B̄	7	Yellow	H
Ā	8	Gray	G
Z *	9	Orange	I
Shield	10	Braid	J

\* Index (Z) optional. See Ordering Information

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## 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: Output	Code 6: Electrical	Code 7: Termination	
<b>R8</b>	□□□□	□	□□□	□	□	□	
Ordering Information							
R8 Motor Mount Ring, for Nema 8 1/2" C-Face Motors (180C)	0060	0300	L No Index	J04 5/8" J05 7/8" J06 1.00" J07 1-1/8"	1 Single Output 2 Dual Output, (Isolated) Differential, Bidirectional signals (A, A̅, B, B̅)	L 5-15V in, 5-15V Line Driver (4428) out	C Latching Industrial Connector with 1/2" NPT
	0064	0480	Available when Code 2 is 0480, 0512, 0600, 0960 1024 or 1200	K09 1-3/8" K10 1-1/2" K11 1-5/8" K12 1-3/4" K13 1-7/8" K14 2" K15 2-1/8" K16 2-1/4" K17 2-3/8" K18 2-1/2" K19 2-7/8"		H Same as L with extended temp. to 100°C	F Latching Industrial Connector without Mating Connector
	0075	0512	G Gated Index (Z, Z̅)			R 15-26V in, 15V Line Driver (4428) out	M 10 pin MS Connector
	0120	0600	Z Differential Index (Z, Z̅)			5 5-15V in, 5V Line Driver (4428) out	P 18" Pigtail
	0128	0960					Q Latching Industrial Connector on 18" Cable
	0150	1024					R Latching Industrial Connector on 18" Pigtail Cable without Mating Connector
	0240	1200					
	0256						
				<b>End of shaft mounting for GE &amp; Emerson Motors</b> E01 1.125" EOS E06 2.125" EOS E08 2.375" EOS E10 2.875" EOS			

**Note:** See ACCESSORIES Section For Connectors, Grounding Brushes, Spare Parts and Pulse Wheels

## DIMENSIONS inch [mm]

