

NexGen RIM Tach 8500 NorthStar™ brand

Bearingless Encoder

Key Features

- 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
- Wide -40° to +100°C Temperature Range
- Optimized Pulse Wheel for Greater Shaft Holding Force and Ease of Assembly

HD
Heavy Duty



SPECIFICATIONS

STANDARD OPERATING CHARACTERISTICS

Code: Incremental, Magnetic
Pulses per Revolution: 60 to 2400 PPR
Phasing Sense: A leads B for Counter-Clockwise rotation (CCW) viewing male C-face 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 Sizes: 5/8" to 2-7/8"
Mounting Configuration: 8.5" 180 C-Face Mount for NEMA MG1 Standards
Shaft Speed: 7,000 RPM, max.
Shaft Length Required: 2.5" min
Radial Air Gap:
1200 PPR or lower:
 0.075", +0.015" / -0.070"
Above 1200 PPR:
 0.050", +0.015" / -0.040"
Allowable Shaft End-Play: ±0.150"
Allowable Shaft Runout: 0.005" TIR
Acceleration Rate: 3600 rpm/sec max
Housing Material: Cast Iron
Sensor Module Material: Stainless Steel
Weight: 26.5 lbs

ENVIRONMENTAL

Operating Temperature Range: -40°C to +100°C
Storage Temperature Range: -40°C to +125°C
Shock: 200 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	n/a	F
Vcc (5-24 VDC)	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

† Alarm not available with Pigtail cable. 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: Electrical	Code 6: Termination	
RT8	□□□□	□	□□□□	□	□	
Ordering Information						
RT8 RIMTach 8500 Heavy Duty Encoder	0060	0480	L No Index	V04 5/8"	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 F Latching Industrial Connector without Mating Connector M 10 pin MS Connector P 18" Pigtail (Not available with Alarm output) Q Latching industrial connector on 18" cable R Latching Industrial Connector on 18" Pigtail Cable without Mating Connector
	0064	0512	Z With Index Signal Output	V05 7/8"		
	0075	0600		V06 1.00"		
	0120	0960		V07 1-1/8"		
	0128	1024		V09 1-3/8"		
	0150	1200		V10 1-1/2"		
	0240	1920		V11 1-5/8"		
	0256	2048		V12 1-3/4"		
	0300	2400		V13 1-7/8"		
				V14 2.00"		
				V15 2-1/8"		
				V16 2-1/4"		
				V17 2-3/8"		
				V18 2-1/2"	For additional bore sizes up to 3.75" maximum, please consult factory.	
				V20 2-5/8"		
				V19 2-7/8"		
				End Of Shaft		
				F01 1-1/8" EOS		F44 4400 Series Motors
				F06 2-1/8" EOS	F47 4700 Series Motors	
				F08 2-3/8" EOS	F60 6000 Series Motors	
				F10 2-7/8" EOS	F68 680 Series Motors	

Note: See ACCESSORIES Section For Connectors, Grounding Brushes, Spare Parts and Pulse Wheels
 Dynapar's legacy RIM Tach 8500 product line is still available for configurations not currently available in the NexGen RIM Tach 8500 (RT8) product line.
 For additional bore sizes up to 3.75" maximum, please consult the factory.

DIMENSIONS inch [mm]

