

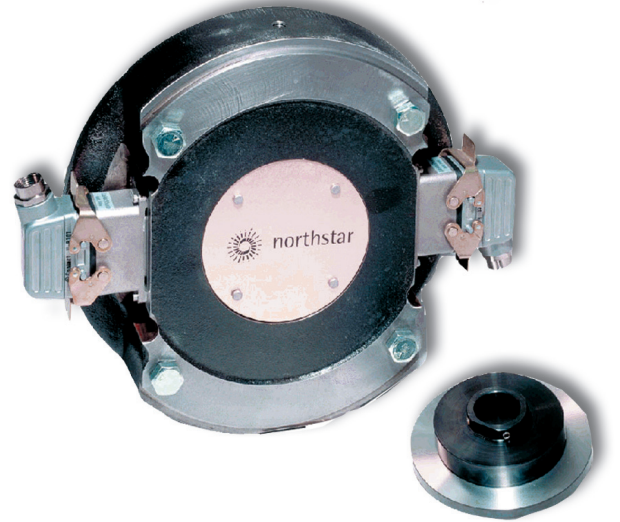
SERIES RIM Tach 1250

NorthStar™ brand

Bearingless Encoder

Key Features

- **Bearingless Design Mounts to 250-C Face Motors (12.5" Diameter Mounting Flange)**
- **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 RT1**



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 8" Available
Mounting Configuration: 12.5" C-Face Mount for NEMA MG1 Standards
Shaft Speed: 7,000 RPM (J or K wheels); 3600 RPM (TL wheels)
Shaft Length Required: 3.0" 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: 38.5 lbs

ENVIRONMENTAL

Operating Temperature Range: -40°C to +80°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
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

NorthStar™ brand SERIES RIM Tach 1250

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	
R1	□□□□	□	□□□	□	□	□	
Ordering Information							
R1 Motor Mount Ring, for 12-1/2" C-Face Motors	0060	0300	L No Index	J04 5/8"	1 Single 2 Dual (Isolated) Differential, bidirectional signals (A, \bar{A} , B, \bar{B})	L 5-15V in, 5-15V Line Driver (4428) out R 15-26V in, 15V Line Driver (4428) out 5 5-15V in, 5V Line Driver (4428) out	C Latching Industrial Connector with 1/2" NPT F Latching Industrial Connector without Mating Connector M 10 pin MS Connector P 18" Pigtail
	0064	0480	Available when Code 2 is 0480, 0512, 0600, 0960, 1024, 1200 or 2048	J05 7/8"			
	0075	0512		J06 1.00"			
	0120	0600		J07 1-1/8"			
	0128	0960		K09 1-3/8"			
	0150	1024		K10 1-1/2"			
	0240	1200		K11 1-5/8"			
	0256	G Gated Index (Z, \bar{Z}) Z Differential Index (Z, \bar{Z})		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"				
			For additional bore sizes up to 8.0" maximum, please consult factory.				

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

DIMENSIONS inch [mm]

APPROXIMATE DIMENSIONS (REF): inch [mm]
SHAFT SIZES: 2" x .825" THRU 3.350"

PPR's	CHANNELS:		
	B	A	D
60; 120; 240; 480-Z; 960-Z	7.72 [196.1]	7.33 [186.2]	14.66 [372.4]
64; 128; 256; 512-Z; 1024-Z	7.87 [199.9]	7.48 [190.0]	14.96 [380.0]
75; 150; 300; 600-Z; 1200-Z	8.28 [210.3]	7.89 [200.6]	16.56 [420.4]

