

# SERIES RIM 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



## SPECIFICATIONS

### STANDARD OPERATING CHARACTERISTICS

**Code:** Incremental

**Pulses per Revolution:** 60-2048

**Phasing Sense:** A leads B for Counter-Clockwise rotation (CCW) viewing encoder-mounted end

**Quadrature Phasing:**  $90^\circ \pm 22^\circ$

**Symmetry:**  $180^\circ \pm 54^\circ$

**Index:**  $270^\circ$ , ungated (optional gated to falling B edge)

### ELECTRICAL

**Input Power Requirements:** 5-15 Volts DC, 45 mA typical per sensor module plus line driver load

**Output Signals:** Line Driver, 150mA source/sink

**Frequency Response:** 0 - 120kHz Data & Index

**Electrical Immunity:** 2kV ESD, Reverse Polarity, Short Circuit

**Connector:** 10 pin industrial duty latching, sealed NEMA 4 & 12, IP65

### MECHANICAL

**Shaft Speed:** 7,000 RPM (J or K wheels); 3600 RPM (TL wheels)

**Mounting Configuration:** 12.5" face mount for NEMA MG1 standards

**Housing Material:** Cast Iron/Stainless Steel

**Acceleration Rate:** 3600 rpm/sec max

**Shaft Length Required:** 3.0" min

**Allowable Shaft End-Play:**  $\pm 0.050"$

**Allowable Shaft Runout:** 0.003" TIR

### ENVIRONMENTAL

**Operating Temperature Range:**  $-40^\circ\text{C}$  to  $+80^\circ\text{C}$

**Storage Temperature Range:**  $-40^\circ\text{C}$  to  $+120^\circ\text{C}$

**Humidity:** to 98% RH (non-condensing)

**Shock (Sensor Module):** 1 meter drop test, 30 G's Min

**Vibration:** 18 G's @ 5-2000 Hz spectrum

### 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
$\bar{B}$	7	Yellow	H
$\bar{A}$	8	Gray	G
$\bar{Z}$ *	9	Orange	I
Shield	10	Braid	J

\* Index (Z) optional. See Ordering Information

