

SERIES SL1250

NorthStar™ brand

Bearingless Encoder

Key Features

- **Bearingless Design Mounts to 250-C Face Motors and Requires only 1.4" of Motor Shaft**
- **Magneto-Resistive Technology Resists Dust, Dirt, Oil, Water and Other Common Contaminants**
- **Single or Dual Isolated Outputs Available**



SPECIFICATIONS

STANDARD OPERATING CHARACTERISTICS

Code: Incremental, Magnetic
Pulses per Revolution: 64-1024 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 Voltage Requirement: 5-15 or 5-26 Volts DC
Current Requirement:
 With Electrical Option L or H: 45 mA typical per sensor module plus line driver load
 With Electrical Option V or 5: 65 mA typical per sensor module plus line driver load
Output Signals:
 4428 Differential Line Driver: 150mA, sink or source
 IC-WE 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; MS connector or pig-tail

MECHANICAL

Bore Sizes: 5/8" to 3.75"
Mounting Configuration: 12.5" C-Face Mount for NEMA MG1-4 standards (excluding C-Face runout)
Shaft Speed: 5,000 RPM
Shaft Length Required: 1.1" min
Allowable Shaft End-Play: ± 0.045"
Allowable Shaft Runout: 0.003" TIR
Acceleration Rate: 12,000 rpm/sec max
Housing Material: Cast Aluminum
Weight: 11 lbs.

ELECTRICAL CONNECTIONS

Signal	Connector Pin	Pigtail Cable	MS 3102E18-IT#
Common	1	Black	F
B	2	Green	B
A	3	Blue	A
Z *	4	Violet	C
No Connection	5	—	E
Vcc (5-15 VDC)	6	Red	D
B̄	7	Yellow	I
Ā	8	Gray	H
Z *	9	Orange	J
Shield	10	Braid	G

* Index (Z) optional. See Ordering Information

ENVIRONMENTAL

Operating Temperature Range:
Standard: -40°C to +90°C
Extended: -40°C to +100°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)

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: Termination	Code 6: Electrical	Code 7: Cover/Adapter
□ 1	□□□□	□	□□□	□	□	□

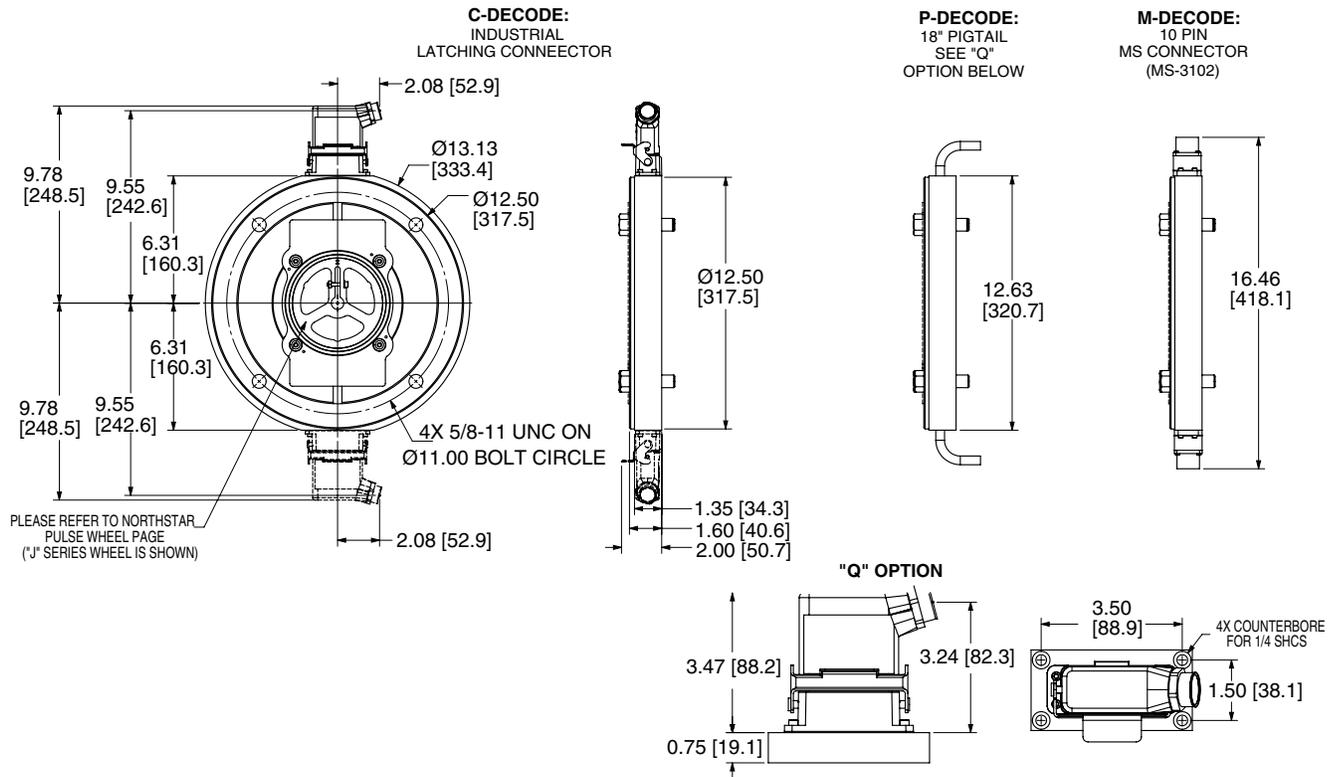
S1 Motor		Ordering Information					
Mount Ring, for 12 1/2" NEMA C-Face Motors Single Output	0064 0128 0256 0512 1024	L No Index Available when Code 2 is 0512 or 1024 G Gated Index (Z, \bar{Z}) Z Differential Index (Z, \bar{Z})	J04 5/8" J05 7/8" J06 1.00" J07 1-1/8" K09 1-3/8" K10 1-1/2" K11 1-5/8" K12 1-3/4" K13 1-7/8" K14 2.00" K15 2-1/8" K16 2-1/4" K17 2-3/8" K18 2-1/2" K19 2-7/8"	CB4 16 mm C36 24 mm C29 25 mm C31 30 mm CA4 45 mm C58 60 mm C40 80 mm	C Latching Industrial Connector with 1/2" NPT D 1" Extended Height Latching Industrial Connector with 1/2" NPT F Latching Industrial Connector without Mating Connector G 1" Extended Height Latching Industrial Connector without Mating Connector M 10 Pin MS Connector P 18" Pigtail Cable Q Latching Industrial Connector on 18" Pigtail Cable R Latching Industrial Connector on 18" Pigtail Cable without Mating Connector	L 5-15V in, 5-15V Line Driver (4428) out H Same as L with extended temp. to 100°C V 5-26V in, 5-26V Line Driver (IC-WE) out 5 5-15V in, 5V Line Driver (4428) out Differential, bidirectional signals (A, \bar{A} , B, \bar{B})	C No Cover F Flat Thru-hole cover
D1 Motor Mount Ring, for 12 1/2" NEMA C-Face Motors Dual Output			For additional bore sizes up to 3.75" maximum, please consult factory.				

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

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DIMENSIONS inch [mm]



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