

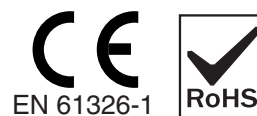
SERIES RL67

NorthStar™ brand

Bearingless Encoder

Key Features

- **Designed for Reliance Motors (6.75" fit and 56 and 140 C-Face)**
- **Magneto-Resistive Technology Resists Dust, Dirt, Oil, Water and Other Contaminants**
- **Anodized Aluminum Housing With Field-Serviceable Connector**
- **New Model Available with Larger Air Gap and Diagnostic LED. See ST67**



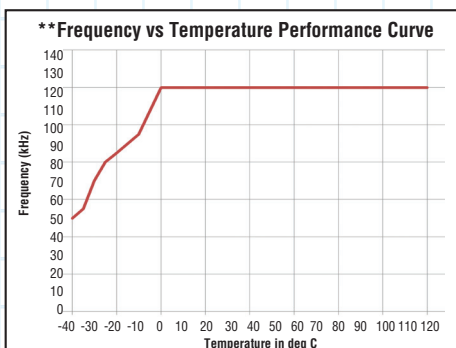
SPECIFICATIONS

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

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



ELECTRICAL (CONT.)

Frequency Response: 0 - 120kHz Data & Index. Please refer to our performance curve diagram for frequency and temperature details**
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 Size: 5/8" to 3.75"
Mounting Configuration: 4.5" diameter, 56 C-Face, 140 C-Face Mount or accessory flange to meet NEMA MG1-4 standards or mounts directly in the 6.75" machined accessory recess of the 4.5" accessory flange found on Reliance RPM™ motors
Shaft Speed: 5,000 RPM
Shaft Length Required: 0.7" 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: 4 lbs

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)

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 (+ 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

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
S6	□□□□	□	□□□	□	□	□
Ordering Information						
S6 Motor Mount Ring, for 4 1/2" NEMA 56 C-Face Motors or Reliance Electric Style 6.75" Recess	0064	L No Index	J04 5/8"	C Latching Industrial Connector with 1/2" NPT	L 5-15V in, 5-15V Line Driver (4428) out	C Standard cover
	0128	Available when Code 2 is 0512 or 1024	J05 7/8"	F Latching Industrial Connector without Mating Connector	H Same as L with extended temp. to 100°C	F Flat Thru-hole cover
0256	J06 1.00"					
	0512	G Gated Index (Z, Z̄) Z Differential Index (Z, Z̄)	J07 1-1/8"	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	V 5-26V in, 5-26V Line Driver (IC-WE) out 5 5-15V in, 5V Line Driver (4428) out Differential, bidirectional signals (A, Ā, B, B̄)	
	1024		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"				
		For additional bore sizes up to 3.75" maximum, please consult factory.				

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

