

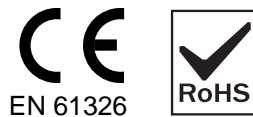
SLIM Tach ST56

NorthStar™ brand

Bearingless Encoder

Key Features

- Redesigned using our Revolutionary Sensor Technology to provide a Large Air Gap of 0.060"
- Bearingless Design Mounts to 56 and 140 C-Face Motors
- Thin 3/4" Profile Saves Space and Can be "Sandwiched" Between Motor & Reducer
- Compact Height of 9.8" Designed with Options to Extend
- Anodized Aluminum Housing with Field-Serviceable Connector
- Single or Dual Isolated Outputs Available



SPECIFICATIONS

STANDARD OPERATING CHARACTERISTICS

Code: Incremental
Pulses per Revolution: 64-2048
Phasing Sense: A leads B for Counter-Clockwise rotation (CCW) viewing encoder-mounted end
Quadrature Phasing: 90° ± 45°
Symmetry: 180° ± 54°
Index: Less than phase A/B pulse width
Number of Output Modules: Single or Dual Redundant

ELECTRICAL

Input Voltage Requirement: 5-26 Volts DC
Current Requirement: 95 mA typical per sensor module plus line driver load
Output Signals:
 With Elec Option V: 5-26 V Line Driver, 150mA
 With Elec Option 5: 5V Line Driver, 150mA
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; MS connector or pig-tail

MECHANICAL

Max. Shaft Speed: 7,000 RPM
Mounting Configuration: 4.5" 56C face mount for NEMA MG1 standards
Housing Material: Aluminum
Acceleration Rate: 3,600 rpm/sec max
Shaft Length Required: 0.7" min
Allowable Shaft End-Play: +0.050"/-0.125"
Allowable Shaft Runout: 0.005" TIR
Weight: 2.5 lbs.

ENVIRONMENTAL

Operating Temperature Range:
 Standard: -40°C to +100°C
 Optional: Extended, -40°C to +120°C
Storage Temperature Range: -40°C to +120°C
Humidity: to 100% RH
Shock: 300 G's Min.
Vibration: 20 G's @ 5-2000 Hz spectrum

ELECTRICAL CONNECTIONS

Signal	Connector Pin	Pigtail Cable	MS 3102E18-IT#	Conduit Box
Common	1	Black	F	1
B	2	Green	B	5
A	3	Blue	A	3
Z *	4	Violet	C	7
No Connection	5	—	E	—
Vcc (5-26 VDC)	6	Red	D	2
B	7	Yellow	I	6
A	8	Gray	H	4
Z *	9	Orange	J	8
Shield	10	Braid	G	—

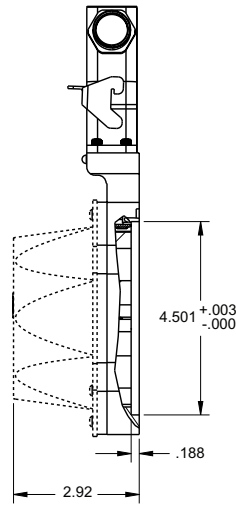
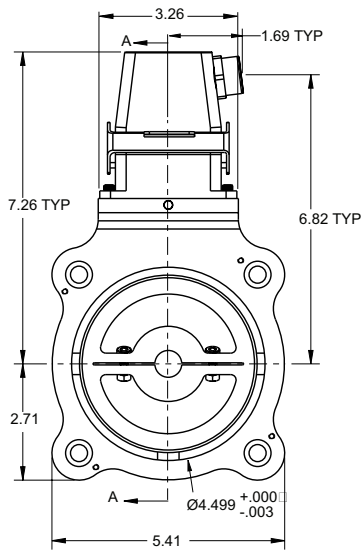
* Index (Z) optional. See Ordering Information

Ordering Information

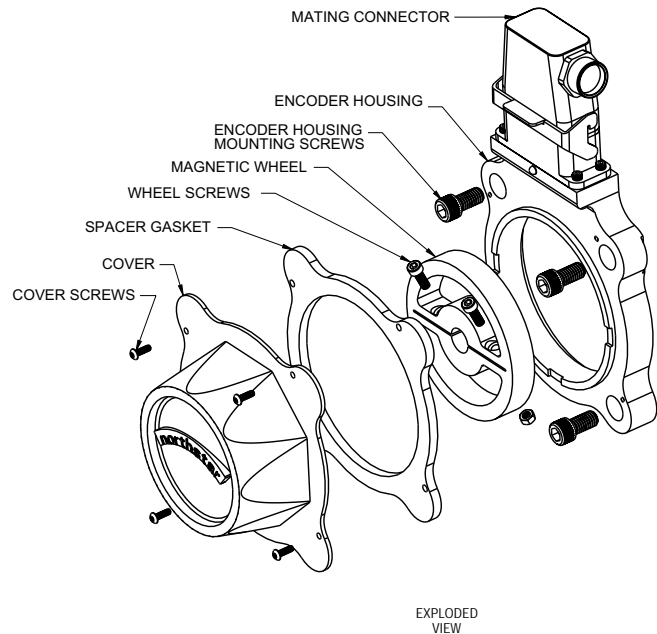
To order, complete the model number with code numbers from the table below:

Code 1: Model	Code 2: PPR	Code 3: Index	Code 4: Shaft Size	Code 5: Termination	Code 6: Electrical	Code 7: Cover/Adapter
□□□	□□□□	□	□□□	□	□	□
Ordering Information						
ST5 Direct Motor Mounting on NEMA 56 flange (4.5"), Single Output	0064 0128 0256 0512 1024 2048	L No Index Z Index	C04 0.625" C05 0.875" C06 1.000" C07 1.125" C08 1.250" C09 1.375" C10 1.500" C11 1.625" C12 1.750" C13 1.875" C14 2.000" C15 2.125" C16 2.250" C17 2.375" C18 2.500" C19 2.875" C20 2.625" Additional Shaft Sizes Available Including Metric	B Conduit Box C Latching Industrial Connector with 1/2" NPT D 1" Extended Height Latching Industrial Connector with 1/2" NPT E 3" Extended Height Latching Industrial Connector with 1/2" NPT M 10 pin MS Connector N 10 pin MS 3112 Connector P 18" Pigtail Cable (25" when Code 6 = H) Q Latching Industrial Connector on 18" Pigtail Cable	V 5-26V in, 5-26V Line Driver (IC-WE) out 5 5-26V in, 5V out Line Driver (IC-WE) H Same as V but with High Temperature, Extended Operating Range to 120°C	CC Standard Cover EE Extra Heavy Duty Steel Cover FF Flat Thru-Hole Cover TT Flat No Hole Cover

DIMENSIONS inches



SECTION A-A
PLASTIC COVER OPTION



EXPLODED VIEW



Headquarters: 1675 Delany Road • Gurnee, IL 60031-1282 • USA

Customer Service:
Tel.: +1.800.873.8731
Fax: +1.847.662.4150
custserv@dynapar.com

Technical Support
Tel.: +1.800.234.8731
Fax: +1.847.662.4150
northstar.techsupport@dynapar.com

European Sales Representative
Hengstler GmbH
Uhlandstrasse 49, 78554 Aldingen
Germany
www.hengstler.com