

Slim Tach SL56

NorthStar™ brand

Bearingless Encoder

Key Features

- **Bearingless Design Mounts to 56 and 140 C-Face Motors**
- **Thin 3/4" Profile Saves Space and Can be "Sandwiched" Between Motor & Reducer**
- **Magneto-Resistive Technology Resists Dust, Dirt, Oil, Water and Other Contaminants**
- **Anodized Aluminum Housing with Field-Serviceable Connector**
- **Single or Dual Isolated Outputs Available**



This product has been discontinued and replaced by the SLIM Tach ST56 series. Please visit www.dynapar.com for more info

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:
 IC-WE Differential Line Driver: 150mA, sink or source
 4428 Differential Line Driver: 150mA, sink or source

ELECTRICAL (CONT.)

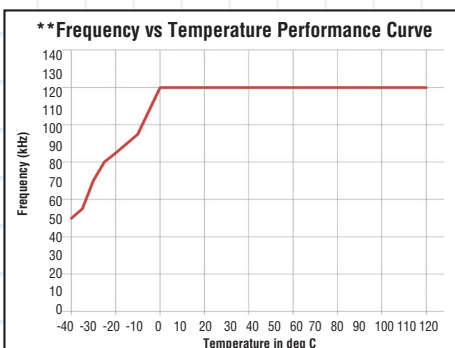
Frequency Response: 0 - 120kHz Data & Index. Please refer to our performance curve diagram for frequency and temperature details**
Noise Immunity: Tested to EN61326-1
Electrical Immunity: Reverse polarity and short circuit protected
Connector: 10 pin industrial duty latching, sealed NEMA 4 & 12, IP65; MS connector or pig-tail

MECHANICAL

Bore Size: 5/8" to 3.75"
Mounting Configuration: 4.5" 56C-Face or 140 C-Face Mount for NEMA MG1 Standards
Max. Shaft Speed: 5,000 RPM
Shaft Length Required: 0.7" min
Allowable Shaft End-Play: ± 0.045"
Allowable Shaft Runout: 0.002" TIR
Acceleration Rate: 12,000 rpm/sec max
Housing Material: Cast Aluminum
Weight: 7 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# | 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 (5-15 VDC) | 6 | Red | D | 2 |
| B | 7 | Yellow | I | 6 |
| A | 8 | Gray | H | 4 |
| Z * | 9 | Orange | J | 8 |
| Shield | 10 | Braid | G | — |

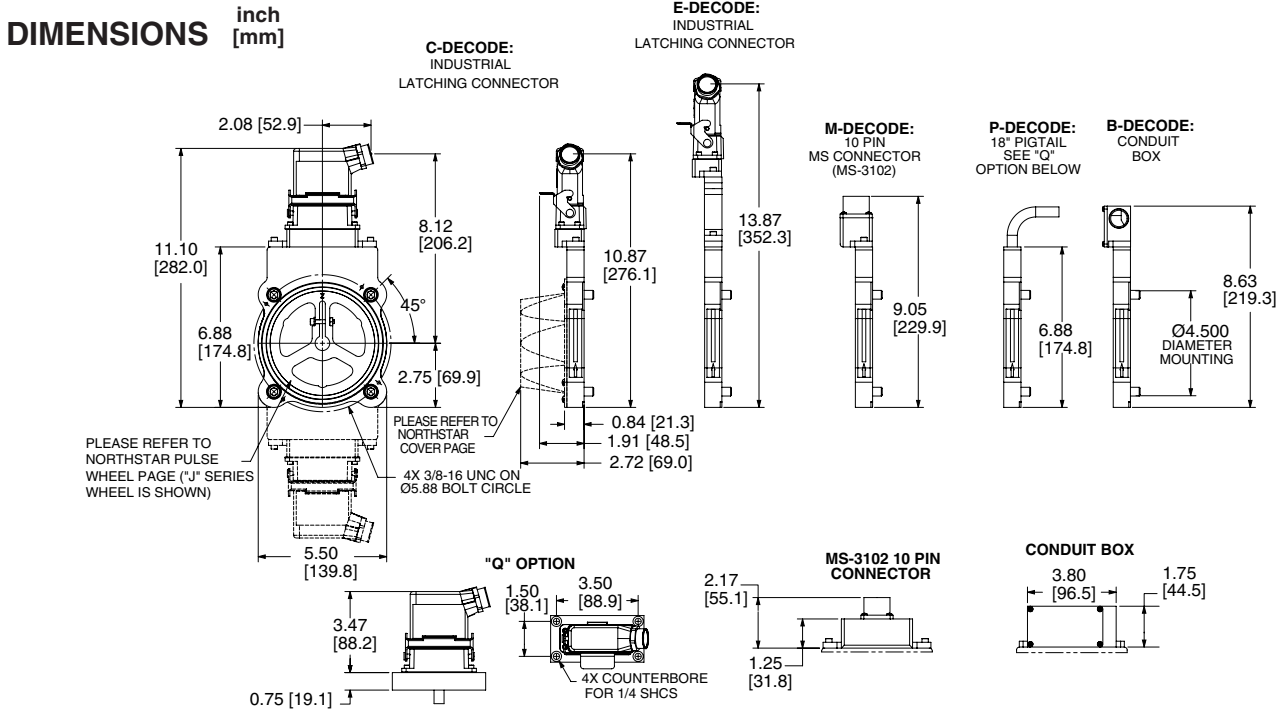
* Index (Z) optional. See Ordering Information

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: Wheel Bore | Code 5: Termination | Code 6: Electrical | Code 7: Cover/Adapter |
|--|---|---|---|---|---|--|
| 5 | □□□□ | □ | □□□□ | □ | □ | □ |
| Ordering Information | | | | | | |
| S5 Motor Mount Ring, for 4 1/2" C-Face Motors (56C) Single Output D5 Motor Mount Ring, for 4 1/2" C-Face Motors (56C) Dual Output | 0064 0128 0256 0512 1024 | L No Index Available when Code 2 is 0512, 1024 or 2048 G Gated Index (Z, Z̄) Z Differential Index (Z, Z̄) | 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" | B Conduit Box C Latching Industrial Connector with 1/2" NPT E 3" Extended Height Latching Industrial Connector with 1/2" NPT F Latching Industrial Connector without Mating Connector H 3" 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, Ā, B, B̄) | C Standard Cover E Extra heavy duty steel cover F Flat Thru-hole cover S Double 56 C-Face Sandwich Adapter T Flat No Hole Cover |
| | | | For additional bore sizes up to 3.75" maximum, please consult factory. | | | |

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



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
 Umlandstrasse 49, 78554 Aldingen
 Germany
 www.hengstler.com