

# SERIES H56

**Dynapar™ brand**

## Heavy Duty Encoder

### Key Features

- Encoder-Within-Encoder Design
- Large Outer Bearings Isolate Shaft Loads
- Foot Mount or 56C Mace Mount Easily Replaces BC42 and 46 Tachs



## SPECIFICATIONS

### STANDARD OPERATING CHARACTERISTICS

**Code:** Incremental  
**Resolution:** 1 to 2500 PPR (pulses/revolution)  
**Accuracy:** (Worst case any edge to any other edge) ±7.5 arc-min.  
**Format:** Two channel quadrature (AB) with optional Index (Z) and complementary outputs  
**Phase Sense:** A leads B for CW shaft rotation as viewed from the C-face of the encoder  
**Quadrature Phasing:** 90° ± 22.5° electrical  
**Symmetry:** 180° ± 18° electrical  
**Index:** 180° ± 18° electrical (gated with B low)  
**Waveforms:** Squarewave with rise and fall times less than 1 microsecond into a load capacitance of 1000 pf

### ELECTRICAL

**Input Power:** (each output) 4.5 min. to 26 VDC max. at 100 mA max., not including output loads  
**Outputs:**  
 7273 Open Collector: 30 VDC max., 40 mA sink max.  
 7272 Push-Pull and Differential Line Driver: 40 mA sink or source  
 4469 Differential Line Driver: 100 mA, sink or source  
**Frequency Response:** 100 kHz min.  
**Electrical Protection:** Overvoltage, reverse voltage and output short circuit protected  
**Noise Immunity:** Tested to EN50082-2 (Heavy Industrial) for Electro Static Discharge, Radio Frequency Interference, Electrical Fast Transients, Conducted and Magnetic Interference

### Mating Connector:

6 pin, style MS3106A-14S-6S (MCN-N4);  
 10 pin, style MS3106A-18-1S (MCN-N6)  
 Pluggable Screw-Terminal (110532-0001)

### ELECTRICAL CONNECTIONS

\* This is a mating connector/cable assembly described in the Encoder Accessories section of this catalog. Color-coding information is provided here for reference.

Function (If)	Cable #14002090010* 6 Pin Single Ended		Twisted Pairs Cable #14004190010* 10 Pin Differential		Pluggable Screw Terminal Pin Number
	Pin	Wire Color	Pin	Wire Color	
Sig. A	B	RED	B	RED	3
Sig. Ā	—	—	G	BLK	8
Sig. B	D	BLU	D	BLU	7
Sig. B̄	—	—	H	BLK	2
Sig. Z	A	GRN	A	GRN	4
Sig. Z̄	—	—	I	BLK	9
+V	E	WHT	E	WHT	6
Common	C	BLK	C	BLK	1
Shield	F	SHIELD	F	SHIELD	10

### MECHANICAL

**Bearing Life:** see table, below  
**Shaft Loading:** 100 lbs. radial, 50 lbs. axial  
**Shaft Speed:** 3600 RPM max.  
**Starting Torque:** 15 oz-in max.;  
**Moment of Inertia:** 7.9 x 10<sup>-4</sup> oz-in-sec<sup>2</sup>  
**Weight:** 144 oz. (9 lbs.)

### ENVIRONMENTAL

**Operating Temperature:** -40 to +80 °C  
**Storage Temperature:** -40 to +80 °C  
**Shock:** 50 G's for 11 milliseconds duration  
**Vibration:** 5 to 2000 Hz at 2.5 G's  
**Humidity:** to 98% without condensation  
**Enclosure Rating:** NEMA4/IP66 (dust proof, washdown)

### Bearing Life versus Load

Radial	Axial	Revolutions
75	15	1.3 x 10 <sup>10</sup>
75	25	6.4 x 10 <sup>9</sup>
100	25	4.1 x 10 <sup>9</sup>
100	50	1.3 x 10 <sup>9</sup>



### Satellite Locations:

- **North America:** North Carolina, South Carolina, Connecticut, Massachusetts, New York, Canada, British Virgin Islands
- **West Indies:** St. Kitts • **Europe:** United Kingdom, Italy, France, Germany, Spain, Slovakia
- **South America:** Brazil • **Asia:** China, Japan, Korea, Singapore

**Worldwide Brands:** NorthStar™ • Acuro™ • Dynapar™ • Hengstler™ • Harowe™

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### European Sales Representative

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## Ordering Information

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

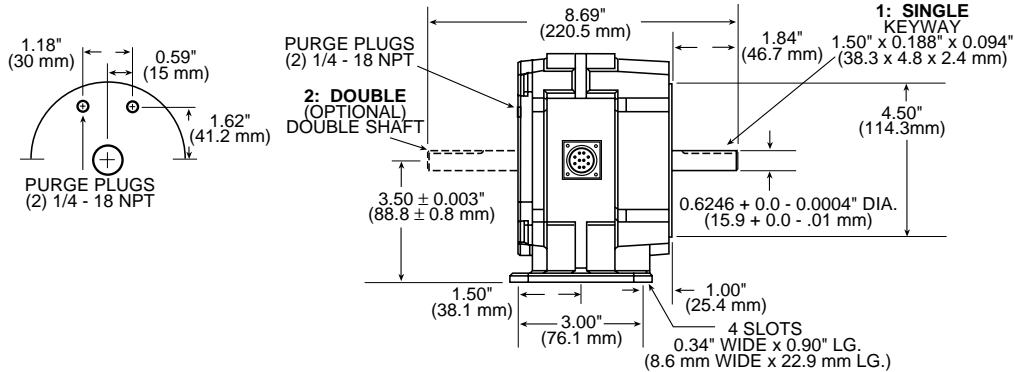
Code 1: Model	Code 2: PPR	Code 3: Shaft	Code 4: Format	Code 5: Electrical	Code 6: Termination	Code 7: Options
<b>H56</b>	□□□□	□	□	□	□	□□

Ordering Information						
<b>H56</b> Mill Duty, 56C-Face or Foot Mount Rotopulser®	<b>0001</b> <b>0300</b> <b>0002</b> <b>0360</b> <b>0003</b> <b>0400</b> <b>0005</b> <b>0500</b> <b>0006</b> <b>0512</b> <b>0010</b> <b>0600</b> <b>0012</b> <b>0625</b> <b>0025</b> <b>0720</b> <b>0050</b> <b>0900</b> <b>0060</b> <b>1000</b> <b>0064</b> <b>1024</b> <b>0100</b> <b>1200</b> <b>0120</b> <b>1270</b> <b>0128</b> <b>1500</b> <b>0180</b> <b>1800</b> <b>0200</b> <b>2000</b> <b>0240</b> <b>2048</b> <b>0250</b> <b>2400</b> <b>2500</b>	<b>1</b> Single <b>2</b> Double	Compliments available when Code 5 is 3 or 4 <b>2</b> Single, bidirectional quadrature (AB) <b>3</b> Single, bidirectional quadrature with index (ABZ) <b>4</b> Dual, isolated bidirectional quadrature (dual AB) <b>6</b> Dual, isolated bidirectional quadrature with index (dual ABZ)	<b>0</b> 5-26V in, 5-26V open collector out <b>1</b> 5-26V in, 5-26V open collector out w/ 2.2kΩ pullups <b>2</b> 5-26V in, 5-26V single ended push-pull out <b>3</b> 5-26V in, 5V differential line driver out (7272) <b>4</b> 5-26V in, 5-26V differential line driver out (7272) <b>5</b> 5-26V in, 5V Differential Line Driver out (4469) <b>6</b> 5-15V in, 5-15V Differential Line Driver out (4469)	<b>0</b> MS Connector(s) <b>1</b> MS Connector(s), plus mating connector(s) <b>2</b> Pluggable screw terminal connector(s) <b>3</b> Pluggable screw terminal(s), plus mating connector(s)	available when Code 6 is 0 or 1: <b>PS</b> LED Output Indicator

## DIMENSIONS inches [mm]

### Code 3: Shaft

#### Purge Plug Location



### Code 6: Termination

**0,1:** MS Connectors  
 Shown with LED Output Indicator Option  
 Code 9: PS

**2,3:** Pluggable Screw Terminals

### Code 4: Format

