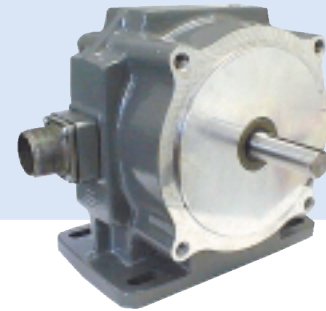


Series H56 Rotopulser®



- The most rugged and reliable pulse generator available
- Suitable for severe duty in paper, steel, and lumber mills
- Large outer bearings isolate internal encoder from excessive shaft loads

APPLICATION/INDUSTRY

The Series H56 Rotopulser is the most rugged and reliable digital pulse generator available for heavy industrial speed, length, and position applications.

DESCRIPTION

The H56 Rotopulser design employs an "encoder within an encoder" construction. The internal, high performance hollowshaft encoder is isolated from severe application environments. The heavy duty, cast aluminum housing features two heavy duty bearings and a 5/8" diameter shaft that is available with an optional drive shaft. The housing is completely sealed for washdown and temperature rated for outdoor use.

Complete electrical protection guards against failure due to overvoltage, reverse voltage, and output short circuits. For downtime critical applications, a second, redundant output can be ordered to allow quick changeover. The optional dual isolated outputs are completely independent, so one pulse generator can be used to provide drive feedback while the other provides input to a process controller or PLC.

FEATURES AND BENEFITS

Dynapar Exclusive:

The Series H56 Rotopulser electronics offers the greatest flexibility and reliability. It operates from 5 to 26 VDC power and provides wide voltage, line driver outputs that are compatible with all common motor drives, PLCs, and process controllers. Additionally, the outputs are protected from overvoltage or reverse voltage input power, and the outputs are protected against short circuits.

Dynapar Exclusive:

The Series H56 Rotopulser is tested to meet the stringent noise immunity requirements of the Electromagnetic Compatibility Directive of the European Union, EN50082-2. Stable performance is guaranteed, even in the presence of high current switchgear, radio transmitters, and noisy equipment.

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

CONNECTIONS

Mating Connector:
 6 pin, style MS3106A-145-6S (MCN-N4);
 10 pin, style MS3106A-18-1S (MCN-N6)
 Pluggable Screw-Terminal (110532-0001)
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 10⁻⁴ oz-in-sec²
 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)

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 Used)	Cable #14002090010*		Twisted Pairs Cable #14004190010*		Pluggable Screw Terminal Pin Number
	Pin	Wire Color	Pin	Wire Color	
Sig. A	B	RED	B	RED	3
Sig. \bar{A}	—	—	G	BLK	8
Sig. B	D	BLU	D	BLU	7
Sig. \bar{B}	—	—	H	BLK	2
Sig. Z	A	GRN	A	GRN	4
Sig. \bar{Z}	—	—	I	BLK	9
+V	E	WHT	E	WHT	6
Common	C	BLK	C	BLK	1
Shield	F	SHIELD	F	SHIELD	10

Bearing Life versus Load

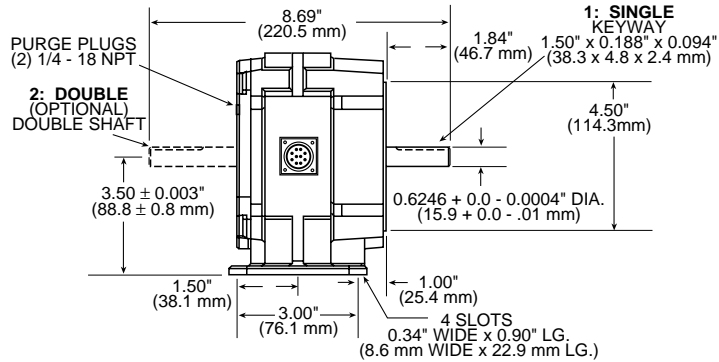
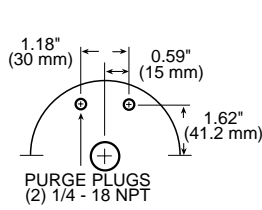
Radial	Axial	Revolutions
75	15	1.3 x 10 ¹⁰
75	25	6.4 x 10 ⁹
100	25	4.1 x 10 ⁹
100	50	1.3 x 10 ⁹

Series H56 Rotopulser[®]

Code 3: Shaft

INDUSTRIAL

Purge Plug Location



Code 6: Termination

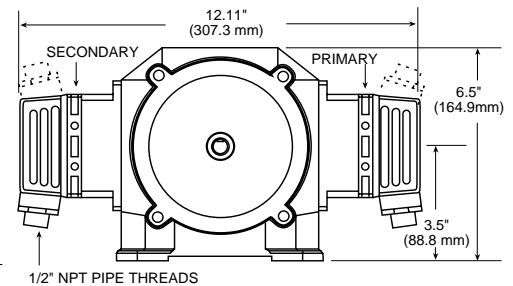
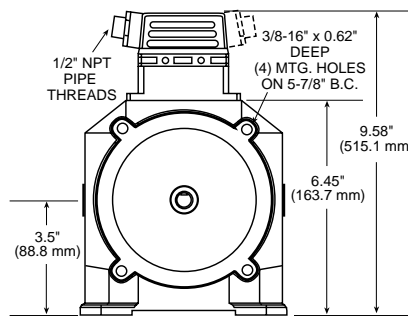
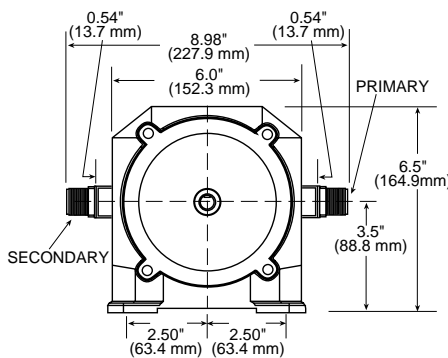
0,1: MS Connectors
Shown with LED Output Indicator Option
Code 9: PS

2,3: Pluggable Screw Terminals

Code 4: Format

2,3: Single

4,6: Dual, Isolated



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
H56	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>

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