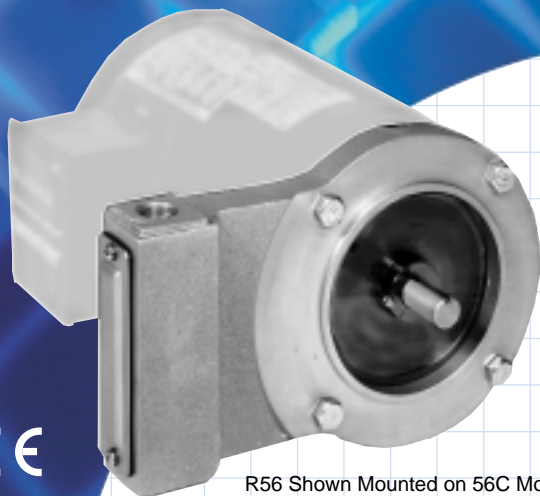


Series R56 Rotopulser®

This product has been discontinued.
Please contact Dynapar for assistance.
1-800-873-8731
www.dynapar.com



R56 Shown Mounted on 56C Motor



- **High performance speed feedback for AC and DC motors**
- **Direct mount to NEMA 4-1/2" C-face motors**
- **No shaft coupling or mounting bracket required**
- **Easy installation, no gapping or alignment steps**
- **Readhead is field replaceable for easy service**

The Series R56 Rotopulser® is the most cost effective, high performance velocity and position feedback solution for large motor applications.

Direct mounting to NEMA motors with a front or rear C-face without shaft couplings or brackets saves time and cost, and installation space. The separately mounted ring housing and magnetized code wheel do not require complicated alignment or gapping procedures during installation. No special parts or test equipment are needed, making the installation faster and more reliable.

The magneto-resistive sensor and electronics are encapsulated to protect against harsh industrial environments, but can also be replaced in the field for easy service. The magnetized wheel features a split collar clamp mount that provides retention under high acceleration or reversals and does not raise burrs or damage the motor shaft.

Dynapar Exclusive: The Series R56 Rotopulser® is the thinnest ring style device with field replaceable electronics. This makes more shaft extension available on the drive end for gear reducers, or on the accessory end for clutches or brakes.

Dynapar Exclusive: The Series R56 Rotopulser® electronics offer 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 and PLCs. Additionally, it is protected from over-voltage and reverse voltage input power, and the outputs are protected against short-circuits.

Dynapar Exclusive: The Series R56 Rotopulser® passes the stringent noise immunity requirements of the EN50082-2 Electromagnetic Compatibility Directive of the European Union. This noise immunity ensures stable motor performance with today's high performance AC induction vector drive controls.

The Series R56 Rotopulser® includes all necessary mounting hardware.

SPECIFICATIONS

Electrical

Code: Incremental, bidirectional with optional index

Resolution: 240 to 1200 pulses per revolution (PPR)

Input Voltage: 4.5 min. to 26 max. VDC at 80 mA max.

Output Frequency: 120 kHz max.

Phase Sense: A leads B with CCW motor shaft rotation

Phasing: 90° ± 22° electrical

Symmetry: 180° ± 54° electrical

Index Pulse Width: 270° electrical

Output Type: 7272 Differential Line Driver: 40 mA sink or source

Electrical Protection: Input reverse and overvoltage, output short circuit

Noise Immunity: Tested to EN50082-2 Heavy Industrial for Electrostatic Discharge, Radio Frequency Interference, Electrical Fast Transients, Conducted Radio Frequency Interference, and Power Frequency Magnetic Fields

Terminations: Screw terminals and heavy duty connectors accept 22 to 14 AWG solid or stranded wires

Cable: PVC jacket, overall foil shield, 3 twisted pairs 26 AWG (data), 1 twisted pair 24 AWG (V in/COM)

Electrical Connections

Function (If Used)	Terminal	Wire
Signal Z	1	YEL
Signal B	2	ORN
Signal A	3	BRN
+V in	4	RED
Common	5	BLK
Shield	6	DRAIN
Signal \bar{A}	7	BRN/WHT
Signal \bar{B}	8	ORN/WHT
Signal \bar{Z}	9	YEL/WHT

Mechanical

Motor Frame Sizes: 56C, 143TC, 145TC, 182C, 184C

Ring Material: Cast aluminum, Chromate finish with powder coat paint

Ring Thickness: 0.83"

Wheel Material: Aluminum hub with injection molded plastic perimeter, 4.1" dia. Split collar hub clamp

Motor Shaft Sizes (nominal): 5/8", 7/8", 1"

Motor Shaft Tolerance: +0.000/ -0.001"

Motor Shaft Length Required: 0.800" minimum

Allowable End Play: ±0.045" maximum

Allowable Shaft Runout: 0.003" T.I.R. maximum

Rotational Speed: 5,000 RPM maximum.

Environmental

Operating Temperature: -40° to +85°C standard; -40° to +120°C optional

Storage Temperature: -40° to +120°C

Humidity: to 98% RH (non-condensing)

Shock: 50 G's for 11 msec. duration

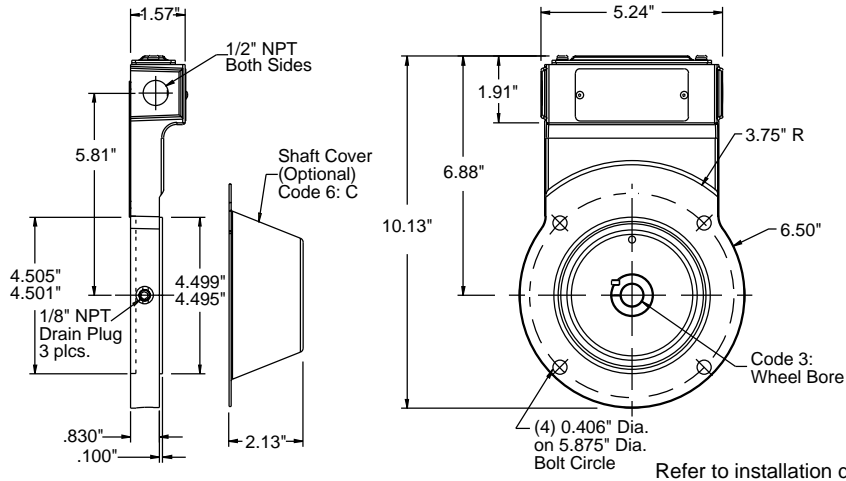
Vibration: 20 G's @ 5-2000 Hz

Heavy Duty Connector Electrical Connections

Function (If Used)	Pin
Common	1
Signal B	2
Signal A	3
Signal Z	4
N/C	5
+V in	6
Signal \bar{B}	7
Signal \bar{A}	8
Signal \bar{Z}	9
Shield	10

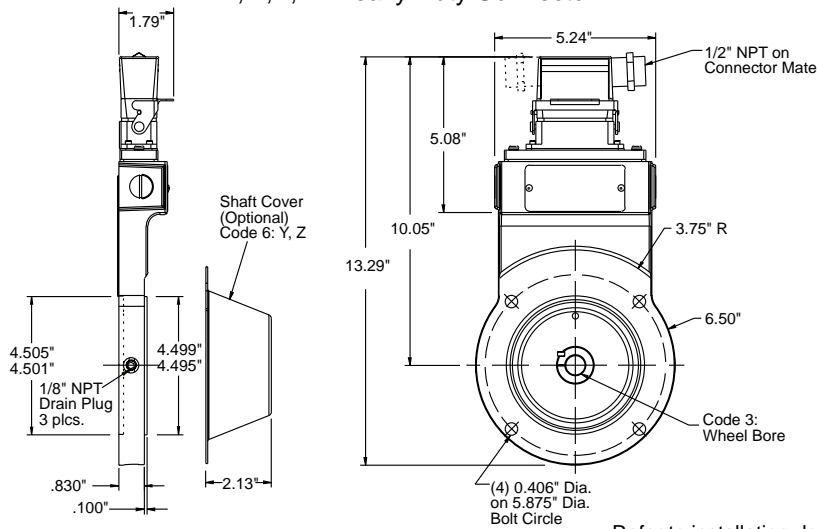
R56 Dimensions

Code 6: Termination
2,C: Screw Terminals



Refer to installation drawing number 200650-0001

Code 6: Termination
H,M,Y,Z: Heavy Duty Connector



Refer to installation drawing number 200650-0002

Ordering Information

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

Code 1: Model	Code 2: PPR	Code 3: Wheel Bore	Code 4: Output	Code 5: Electrical	Code 6: Termination
R56	<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"/>
R56 Motor Mount Ring, for NEMA 4-1/2" C-Face Motors (56C, 143TC, 145TC, 182TC)	0000 no wheel or readhead, ring only	000 no wheel, ring or readhead only 063 5/8" bore (56C) 088 7/8" bore (143TC, 145TC, 182C, 184C)	0 no readhead, ring or wheel only 2 two channel (AB), bidirectional 3 three channel (ABZ), bidirectional with index	0 no readhead, ring or wheel only Available when Code 4 is 2 or 3: 2 5-26V in, 5-26V differential line driver out 3 as "2" above, high temp. to 120°C	0 no readhead, ring or wheel only Available when Code 4 is 2 or 3: 2 screw terminals A 18" cable C screw terminals w/shaft cover H heavy duty w/o mating connector M heavy duty w/ mating connector Y heavy duty w/o mating connector, w/ shaft cover Z heavy duty w/ mating connector and shaft cover
R01 No Ring (Readhead or Wheel Only)	0240 0256 0300 0512 0600 1024 1200	100 1" bore 113 1-1/8" bore (182TC, 184TC, 213C, 215C, 254C) 138 1-3/8" bore (213TC, 215TC, 254UC, 256UC) 163 1-5/8" bore (254TC, 256TC) 188 1-7/8" bore 200 2" bore 213 2-1/8" bore (360) 225 2-1/4" bore 238 2-3/8" bore (400) 250 2-1/2" bore 288 2-7/8" bore (500)			
110437-0001	R56 Protective Shaft Cover Accessory				
111097-0001	Mating connector for heavy duty connector option				

Example Model number: 1024 PPR, 5/8" bore, wheel only = R011024063000