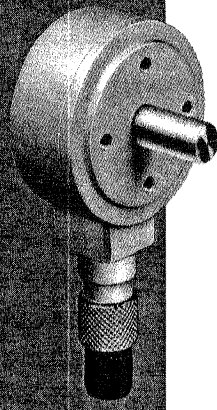


Series 71 Rotopulser® Encoders

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

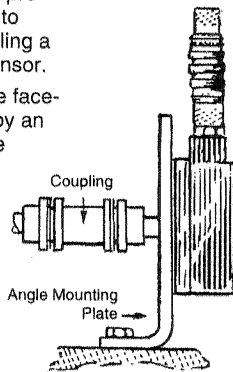
Rotopulser®



- **Ideal for Speed Monitoring**
- **Up to 120 PPR**
- **Choice of lower cost variable reluctance or zero-speed magneto-resistive technology**

The Series 71 Rotopulser® is a unidirectional, incremental, magnetic transducer which can be specified with either a variable reluctance or magneto-resistive sensor. (For specification assistance, refer to the Application Considerations section below.) A rotating gear is used to generate speed signals. The Series 71 is a convenient, compact, pre-packaged alternative to purchasing and installing a separate gear and sensor.

The Series 71 may be face-mounted and driven by an instrumentation-grade flexible coupling, or a Series XL timing belt. Both methods will help protect the Rotopulser from damage caused by shaft endplay, misalignment, and overhung loads.



volts minimum peak-to-peak needed by an instrument for reliable speed indicating. For example, the speed range of the Series 71 is 30 to 4000 RPM with Dynapar instruments.

Note: To order the variable reluctance sensor in a cylindrical package, see Series 50 and 52BH, Pick-ups.

Magneto-Resistive

The Series 71 magneto-resistive units provide a DC squarewave speed signal with constant voltage pulses across the entire speed range, from zero to 4000 RPM. These signals are compatible with most digital instruments and speed indicators. For example, the speed range for Series 71 magneto-resistive units is 0 to 4000 RPM with Dynapar instruments.

Note: To order the magneto-resistive sensor in a cylindrical package, see Series 53Z, Pick-ups.

Cable Length: Maximum recommended cable length is 100 feet, but can be extended to 300 feet if the minimum required operating speed is above 300 RPM. Line amplifiers are available for longer line lengths. Consult factory.

SPECIFICATIONS

Electrical

(Magneto-Resistive Units)

Output: Squarewave

Power Requirements: 4.5 to 15 VDC; 15 mA plus load

Mating Connector: MS3106A-10SL-3S or Dynapar Part No. CN16D34-20, 35-1

Recommended Cable: Belden #9770 or Dynapar Part No. 16002160022

SPECIFICATIONS

Electrical

(Variable Reluctance Units)

Power Requirements: None

Output: Sinewave

Mating Connector: MS3106A-10SL-4S or Dynapar Part No. CN-16D34-16, 35-1

The Series 71 has a large, rugged, 1/2-inch diameter stainless steel shaft and two heavy-duty bearings. Reliable operation in wet, dirty, high temperature environments has made these magnetic speed sensors popular for many industrial and commercial applications.

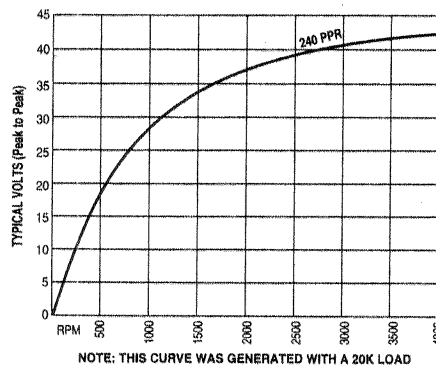
Note: For applications requiring bidirectional speed sensing, see Series 31/32 units.

Application Considerations

Variable Reluctance

Series 71 variable reluctance units are lower cost and require no external power source. Variable reluctance units generate an AC sinusoidal voltage with a peak-to-peak value in direct proportion with increases in shaft RPM. These signals are compatible with most instruments and speed indicators with sinewave input capabilities.

For example, a 60 PPR unit produces 60 electrical AC cycles of voltage for each revolution of the shaft. In addition, a minimum RPM will be required to generate the 1/2 to 2



Recommended Cable: Belden #8760, 2-conductor twisted pair with shield, or Dynapar Part No. 16002160021

Electrical Ratings

| Outputs | Voltage Range | Sink (mA) | Source (mA) | Operating Speed |
|---|---------------|-----------|-------------------|-----------------|
| Current Sink (open collector w/2.0 kΩ pull-ups) | 4.5-15 VDC | 25 | 0.8 @ 3.5V output | 10 kHz max. |

SPECIFICATIONS

Mechanical & Environmental

Speed Range: Up to 4000 RPM max.

Bearings: Lifetime lubricated ball bearings

Operating Temperature: +32 to +170°F

Housing: Cast aluminum

Shaft: Stainless steel, 1/2" diameter

Weight: 15 ounces

Starting Torque: 0.7 oz-in

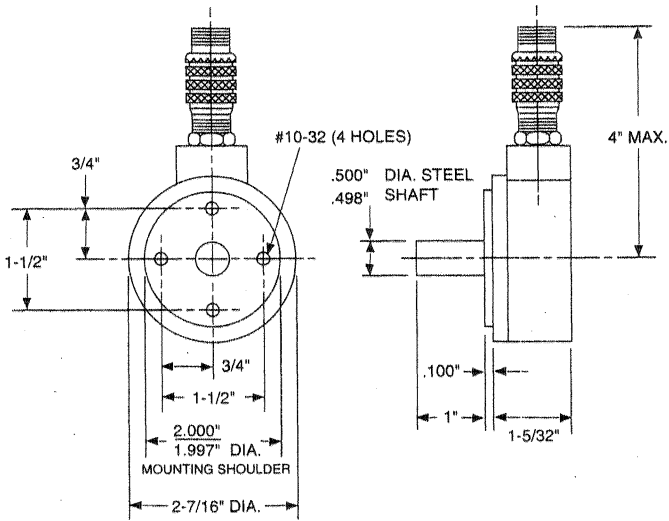
Running Torque: 0.3 oz-in

Inertia: 430 gram cm²

Radial Load: 10 lbs. overhung

Axial Load: 10 lbs.

Approximate Dimensions (in inches)



Optional Shaft: A flat or keyway can be provided. Consult factory.

Electrical Connections

| Function | Sinewave Output | Dynapar #14002030010* Cable Acc'y Color Code | Squarewave Output | Dynapar #14003340010* Cable Acc'y Color Code |
|-------------|--------------------|---|--------------------|---|
| | 2 Pin MS Connector | | 3 Pin MS Connector | |
| 5-15V Power | — | — | Pin A | RED |
| Signal | Pin A | RED | Pin B | WHT |
| Common | Pin B | BLK | Pin C | BLK |

Note: **Cable Shield:** When preparing the cable, the shield should be insulated from the sensor's mating connector, and should be connected to ground at the instrument during installation.

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

Ordering Information

To order, follow the table from left to right. Complete the model number with a 3-digit code for choice of pulses per revolution (PPR). Special PPR's up to 150 are available; consult factory.

| Output Waveform | Mechanical Shaft | Model No. |
|--|------------------|------------|
| Unidirectional Sinewave (Typical speed sensing range of 30 to 4000 RPM) | Single-ended | 71-SRM-___ |
| | Double-ended | 71-DRM-___ |
| Unidirectional Squarewave (0 to 4000 RPM) | Single-ended | 71-SZM-___ |
| | Double-ended | 71-DZM-___ |

| PPR | Option Code |
|-----|-------------|
| 1 | 001 |
| 60 | 060 |
| 120 | 120 |