

RE5032 SERIES



For Hybrids, Motors and Nuclear application

- ➡ **Compact and small**
- ➡ **Brushless resolver**
- ➡ **max. speed 65'000 RPM**
- ➡ **max. temperature up to 200°C**
- ➡ **High speed model is also radiation resistant**
- ➡ **Custom models available**

Product description

The MICRONOR RE5032 frameless Resolver provides high performance in measurement and feedback applications where traditional resolver fail. Perfect for Aerospace, Space, Submarine or other severe applications. The solid rotor has no coils and the stator has only half the number of windings of a traditional brushless resolver, reliability is significantly increased. Solid rotor allows operation with the rotor oil or other liquids.

Application

Applications are Industrial tachometer, High-speed spindles, Motor feedback, for AC and DC Servo Motors, Angle measurement, Flight control systems, Hydraulic pumps, Down hole.

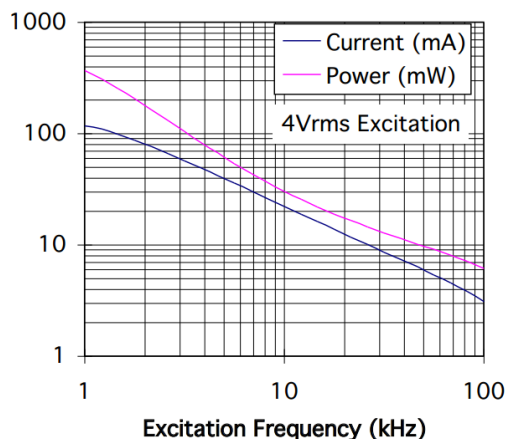
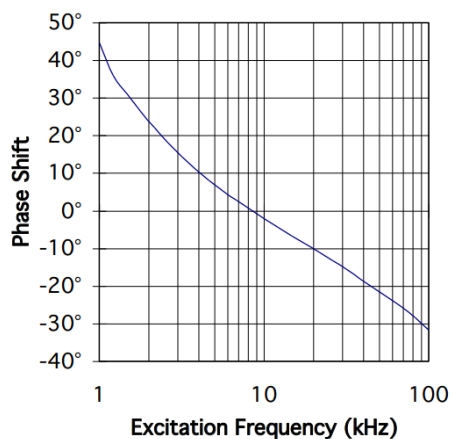
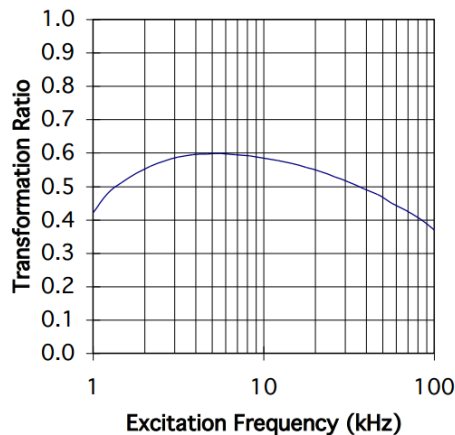
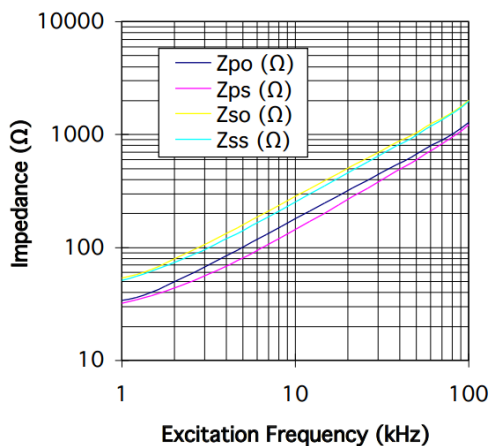
Technical Data

| | | |
|-------------------------|------------------------|-------------------------------|
| Max. dimension | | ø 50 mm |
| Accuracy | | +/- 60 arc minutes |
| Bore diameter (mm) | | ø 20-H7 |
| Cable outlet | | axial 300 mm |
| Lead wire size | | 26 AWG |
| | Electrical data | |
| Excitation frequency | | 8 kHz typical |
| Excitation amplitude | | 5 Vrms typical |
| Primary DC resistance | | 20 Ohm (+/- 10%) |
| Secondary DC resistance | | 27 Ohm (+/- 10%) |
| Transformation ratio | | 0,45 (+/- 10%) |
| Insulation resistance | | 100 Mega Ohm minimum |
| Dielectric strength | | (Hipot) |
| winding to winding | | 300 Vac |
| winding to housing | | 500 Vac |
| | Mechanical data | |
| Operating temperature | | (see order code) |
| Maximum speed | | (see order code) |
| Radial air gap | | 0,3 mm nominal |
| Rotor inertia | | 200 gxcm ² |
| Shock resistance | | 20G |
| Vibration | | 10....50Hz, 10G over 0.5 Std. |

RE5032 SERIE

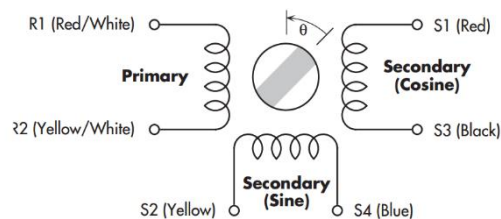


Electrical Outline drawing (only for info not absolute value)



Electrical connection

| | | |
|------|-----------|----|
| Ref+ | red/white | R1 |
| Ref- | yel/white | R2 |
| Cos+ | red | S1 |
| Cos- | black | S3 |
| Sin+ | yellow | S2 |
| Sin- | blue | S4 |



$$V_{(S1-S3)} = V_{(R1-R2)} \times TR \times \cos(\theta)$$

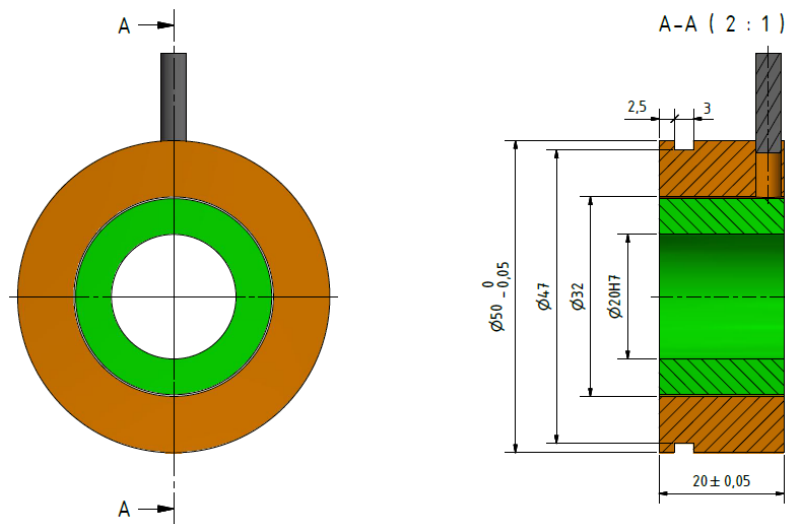
$$V_{(S2-S4)} = V_{(R1-R2)} \times TR \times \sin(\theta)$$

θ increases for CCW rotation when viewed from lead exit end

RE5032 SERIE



Reference drawing in mm



Order Code

Order Key

RE5032 - 1 - 1
a b

Configuration

| | | |
|----------|--------------------|---|
| a | Temperature | |
| | 1 Standard | -40°C bis +135°C |
| | 2 High temperature | -70°C bis +200°C (also radiation resistant) |
| b | Speed | |
| | 1 Standard | 60'000 U/min |
| | 2 High Speed | 65'000 U/min |

Contact Micronor Sensors for special bores, special 1mm gap, and higher speed models.