

**RE2010 SERIES**



**for Hybrids, Motors and Nuclear applications**



- ➔ **Compact and small**
- ➔ **Brushless resolver**
- ➔ **Max. speed 160'000 RPM**
- ➔ **Max. temperature up to 200°**
- ➔ **High temperature models are also radiation resistant**
- ➔ **Custom models available**

**Product description**

The MICRONOR RE2010 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**

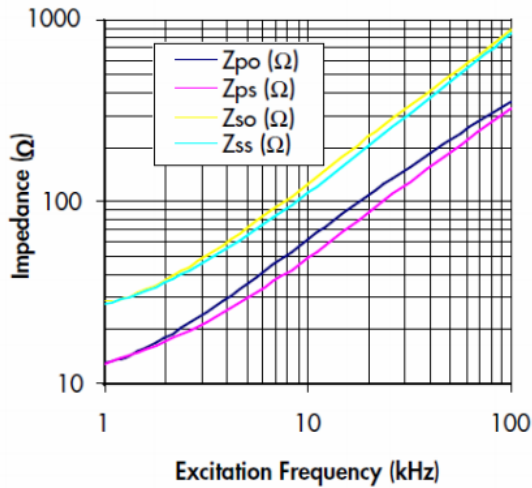
Max. dimension		ø 20 mm
Accuracy		+/- 60 arc minutes
Bore diameter		ø 4-H7
Cable outlet		axial 300 mm
Lead wire size		26 AWG
	<b>Electrical data</b>	
Excitation frequency		8 kHz typical
Excitation amplitude		5 Vrms typical
Primary DC resistance		11 Ohm (+/- 10%)
Secondary DC resistance		19 Ohm (+/- 10%)
Transformation ratio		0,5 (+/- 10%)
Insulation resistance		100 Mega Ohm minimum
Dielectric strength		(Hipot)
winding to winding		300 Vac
winding to housing		500 Vac
	<b>Mechanical data</b>	
Operating temperature		(see order code)
Maximum speed		(see order code)
Radial air gap		0,3 mm nominal
Rotor inertia		2 gxcm <sup>2</sup>
Shock resistance		20G
Vibration		10...50Hz, 10G over 0.5 hrs

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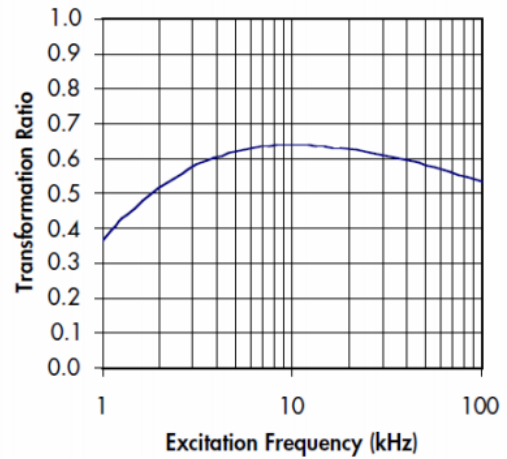


Electrical Outline drawing (only for info not absolute value)

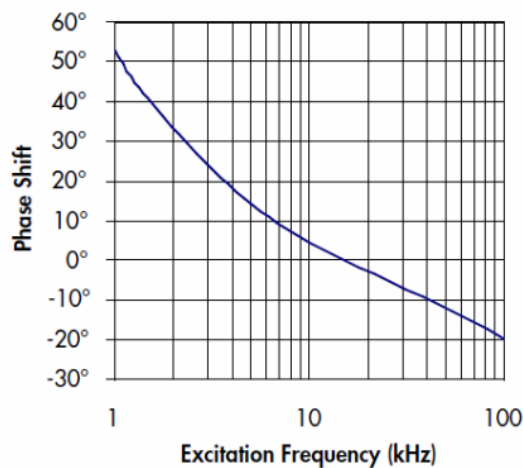
**IMPEDANCES**



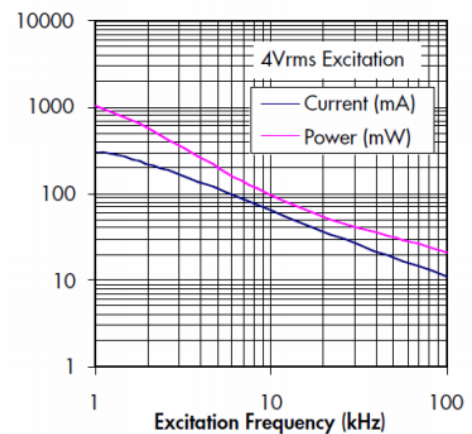
**TRANSFORMATION RATIO**



**PHASE SHIFT**

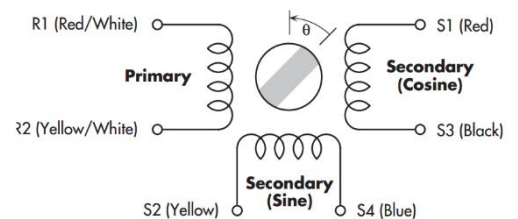


**INPUT CURRENT AND Power**



**Electrical Connection**

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



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

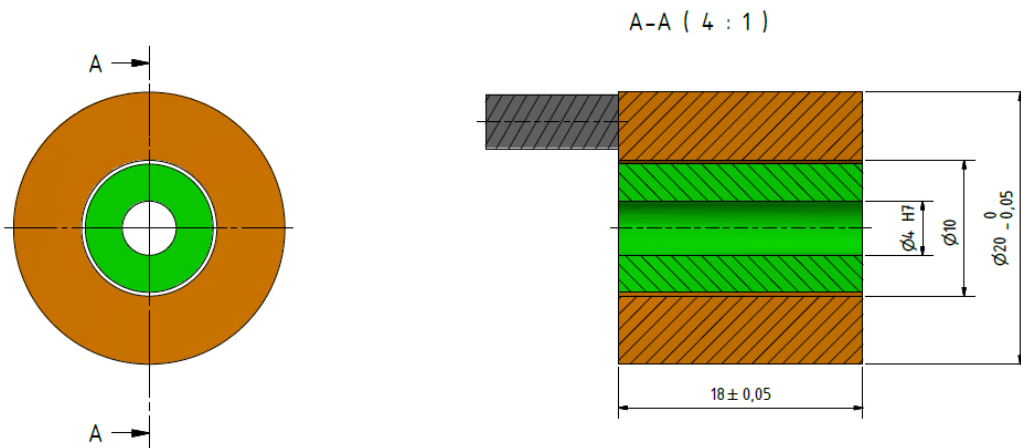
$$V_{(S2-S4)} = V_{(R1-R2)} \times TR \times \sin(\theta)$$

$\theta$  increases for CCW rotation when viewed from lead exit end

**RE2010 SERIES**



Dimension in mm



Order Code

Order Key

RE2010 - 1 - 1  
a - b

Configuration

**a** Temperature

- 1 Standard -40°C to +135°C
- 2 High temperature -70°C to +200°C (also radiation resistant)

**b** Speed

- 1 Standard 150'000 U/min
- 2 High Speed 160'000 U/min

Contact Micronor Sensors for special speeds and bore size models.



Do you have any questions ?

For sales and service in North America, contact Micronor Sensors:  
+1-805-389-6600 or sales@micronor.com

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sensors