

ARS-15 MHD Angular Rate Sensor

The ARS-15 is our newest angular rate sensor designed to fill the gap between the ARS-06 and the ARS-14. With a noise floor of less than 1.0 microradian, small case size, and virtually no sensitivity to linear inputs, the ARS-15 is ideal for low power airborne applications. The ARS-15 is suitable for accurate, compact systems for line-of-sight pointing and stabilization as well as motion control. The ARS-15 has a wide, usable frequency range from less than 4 Hz to more than 1,000 Hz. The scale factor of the ARS-15 is nominally 1 Volt/(rad/sec), but can be customized based on customer requirements.

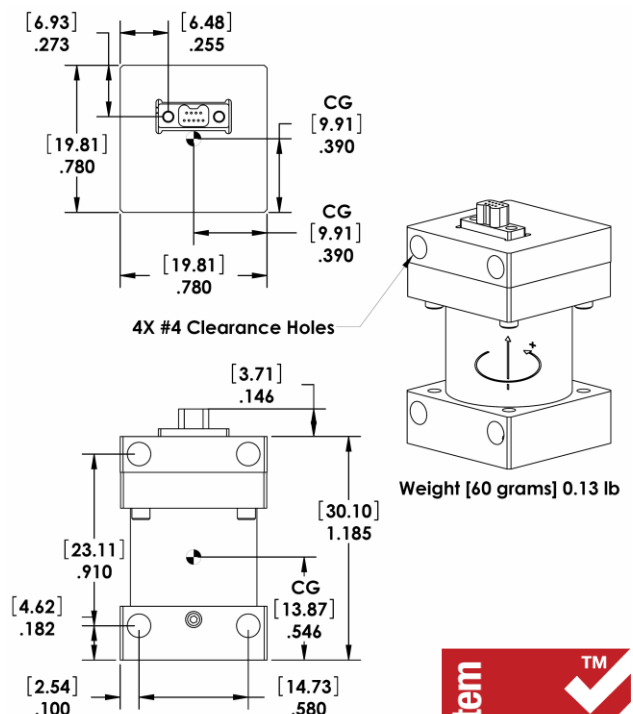


ATA's patented magneto-hydrodynamic angular motion sensors utilize the finest materials and workmanship combined in durable packages that feature:

- Dynamic range > 100 dB
- Low power consumption
- Low cross axis angular sensitivity
- Low linear acceleration sensitivity
- Integral electronics/low noise
- One-year warranty against defects in materials and workmanship on sensors, 90 days on cables.

This product is subject to U.S. Government approval as required in accordance with the U.S. Government International Traffic in Arms (ITAR) Subchapter M, Title 22, Code of Federal Regulations, Parts 120 through 130 (22 CFR 120-130).

Specifications are subject to change without notice.



"Sensing ways to make the world better"™

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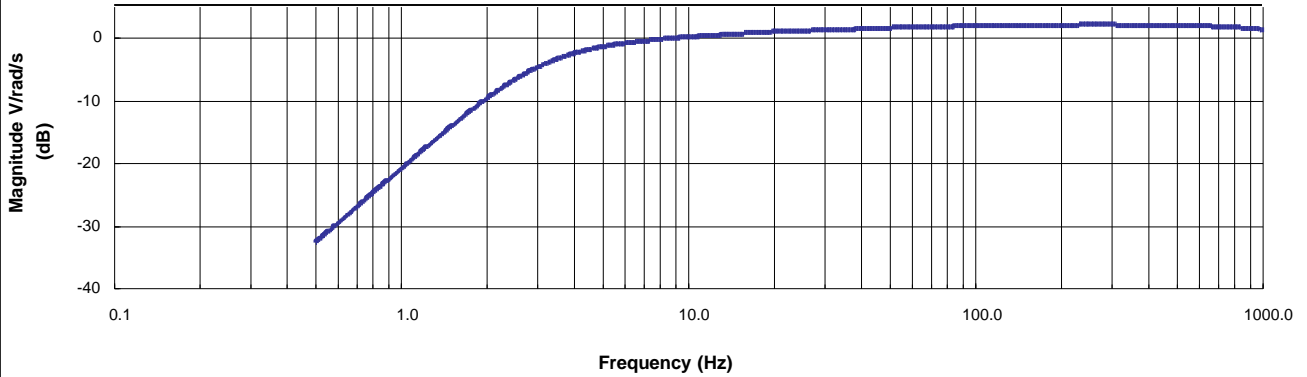


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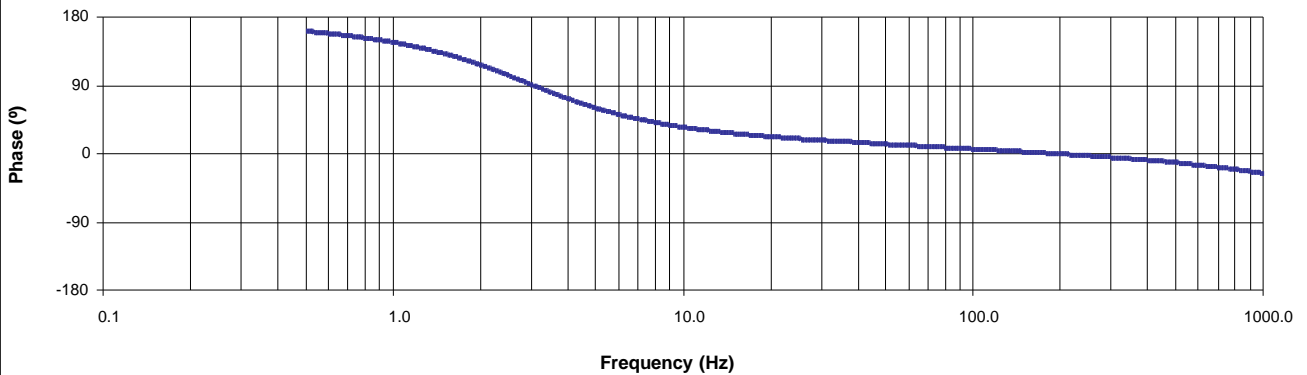
ISO 9001
Quality

ARS-15 Product Specifications

Typical ARS-15 Frequency Response



ARS-15



Performance / Electrical

ARS-15 Range ¹	± 10 radians/sec
ARS-15 Scale Factor ²	1.0 Volt/(rad/sec)
Bandwidth, -3dB	<4 to >1,000 Hz
Cross-axis Angular Error	< 2 %
Linear Acceleration Sensitivity ³	< 1 x 10 ⁻⁶ radians/g
Noise Equivalent Rate ⁴	< 25 x 10 ⁻⁶ radians/sec rms
Noise Equivalent Angle ⁴	< 1.0 x 10 ⁻⁶ radians rms
Non-linearity	< 0.25 %
Temperature Coefficient ⁵	< 0.4 % Scale Factor / °C
Power Dissipation	< 0.3 Watts
Output Impedance	< 100 Ohms
Grounding ⁶	Case isolated from signal common by 1MΩ minimum

Wiring

ARS-15 Pin Out AirBorn, NK-2G2-009-135-TH00		
Pin	Std. Color	Connection
1	Black	Temp*
2	Brown	Power/Signal Ground
3	Red	Power/Signal Ground
4	Orange	Signal Out
5	Yellow	Power/Signal Ground
6	Green	+15V
7	Blue	-15V
8	Violet	Power/Signal Ground
9	Gray	Case Ground

Notes:

- Based on a +/- 10V output voltage swing.
- Measured @ 10 Hz, custom scale factors available.
- Linear Acceleration Sensitivity is flat in angular displacement over sensor bandwidth.
- Over 1-1000 Hz.
- Percent change in Scale Factor per °C @ 10 Hz.
- Signal common may be connected to case if required.

Environmental

Contact ATA for environmental specifications.

*Nominally 10mV / °K

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