

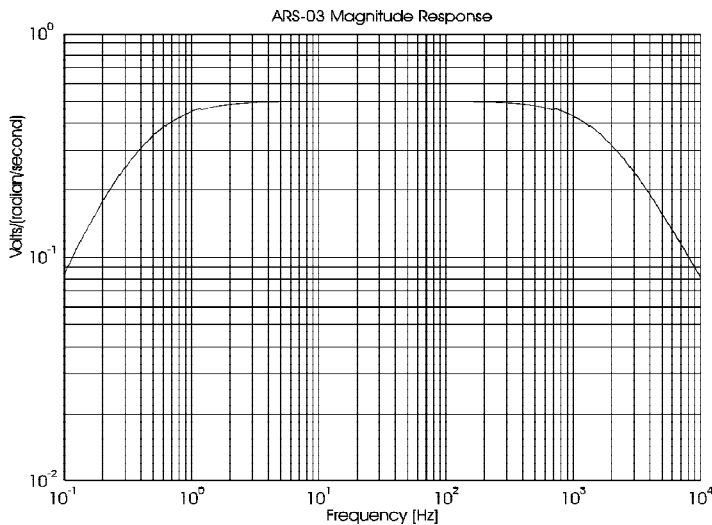
Specifications

ARS-03 Angular Rate Sensor

ATA Sensors patented MHD angular motion sensors utilize the finest materials and workmanship in durable packages that feature:

- No moving parts
- Dynamic range > 100 dB
- Hermetically sealed units
- Low power consumption
- Low cross axis angular sensitivity
- Low linear acceleration sensitivity
- Integral Electronics / low noise
- High survivable shock limits
- Superior applications support
- One-year warranty against defects in materials and workmanship on sensors, 90 days on cables.

The ARS-03 requires optional cable CA-01A.



Notes:

1. Peak-to-peak @ ± 15 Vdc input
2. Measured @ 10 Hz
3. Power spectral density flat to angular velocity over specified bandwidth.
4. Percent change in Scale Factor @ 100 Hz per $^{\circ}\text{C}$
5. Signal return connected to case (enclosed insulated mounting stud is recommended to eliminate ground loops)
6. Peak, 100 Hz half sine

Dynamic

Range ¹ :	± 20 Radian/sec (± 1200 Degrees/sec)
Sensitivity ² :	500 mv/radian/sec (8.7 mv/degree/sec)
Bandwidth:	0.5 to 1000 Hz
Cross-axis Angular Error:	< 2 %
Linear Acceleration Sensitivity:	<0.005 radians/sec/g (<0.3 degrees/sec/g)
Voltage Noise PSD:	1.1×10^{-10} V ² /Hz ³ .
Noise Equivalent Angle:	< 10.0 Microradians
Non-linearity:	< 1 %
Temperature Coefficient:	<0.05 % Scale Factor / $^{\circ}\text{C}$ ⁵ .

Electrical

Excitation Voltage:	± 5.0 to ± 15.0 Vdc
Power Dissipation:	< 0.25 Watts
Output Impedence:	< 100 Ohms
Grounding:	Case ⁵ .

Mechanical

Diameter:	55.3 mm (1.32 inches)
Height:	29.0 mm (1.14 inches)
Weight:	264 gm (9.3 oz.)
Case material:	Stainless Steel 430
Torque	

Environmental

Temperature - operating:	-35 to +60 $^{\circ}\text{C}$ (-31 to +140 $^{\circ}\text{F}$)
Temperature - Non-operating:	-35 to +60 $^{\circ}\text{C}$ (-31 to +140 $^{\circ}\text{F}$)
Humidity:	Unaffected - Hermetically sealed unit
Linear Acceleration, Max. Operating:	500 g any axis ⁶ .
Linear Acceleration, Max. Survivable:	3,000 g any axis ⁶ .

