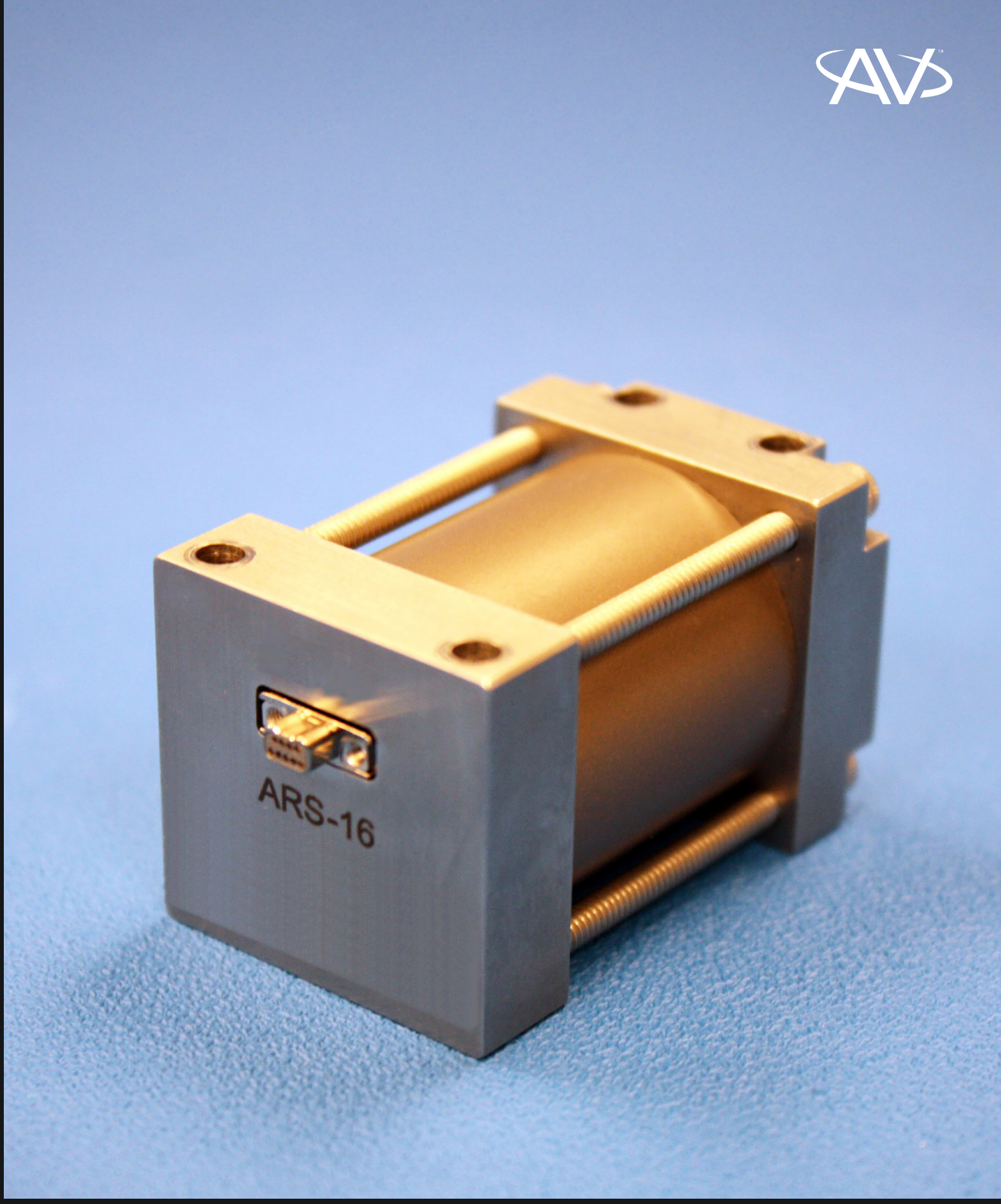
ARS-16

ANGULAR RATE SENSOR



The ARS-16 is our most sensitive angular rate sensor, designed to work in a variety of high-performance applications, such as line-of-sight stabilization and precision motion control systems. The ARS-16 can measure angular motions as low as 40 nanoradians, and has low sensitivity to linear acceleration inputs, making it ideal for use in highly dynamic environments such as aerial and ground-based vehicles. The ARS-16 has a wide, usable frequency range from less than 2 Hz to more than 1,000 Hz.

Angular Rate Sensor

_Product Details

The ARS-16 is designed to be a replacement for our older ARS-14 model. It is designed to provide an improved noise floor and larger temperature range to any application previously utilizing our ARS-14 sensor.

The ARS-16 is designed with a simple screw attachment method, or for applications requiring minimal size and weight, a cylindrical version is available which is designed to be epoxy bonded or clamped in place.

_Specifications for AV's ARS

[FEATURE]	[CAPABILITY
ARS-16 RANGE[1]	± 0.1 radians/sec
ARS-16 SCALE FACTOR[2]	100 Volts/(rad/sec)
BANDWIDTH, -3 DB IN TESTING	<2 to 1,000 Hz
CROSS-AXIS ANGULAR ERROR	<2%
NOISE EQUIVALENT RATE[4]	<5 × 10^{-6} radians/sec rms
NOISE EQUIVALENT ANGLE[4]	<40 × 10^{-9} radians rms
TEMPERATURE COEFFICIENT[5]	<0.3% Scale Factor/°C
POWER DISSIPATION	<0.2 Watts
OUTPUT IMPEDANCE	<100 Ohms
GROUNDING[6]	Case isolated from signal common by 1MΩ minimum

Notes:

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

Specifications are subject to change without notice.

_Features

AV's patented magnetohydrodynamic angular motion sensors utilize the finest materials and workmanship combined in durable packages that feature:

- Dynamic Range >120 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