



# **HG4930 S-CLASS** **MEMS INERTIAL** **MEASUREMENT UNIT**

**Honeywell**

# HG4930 S-CLASS MEMS INERTIAL MEASUREMENT UNIT



Proven - Dependable - Accurate

The HG4930 S-Class stabilization variant is a micro-electro-mechanical system (MEMS) based inertial measurement unit (IMU) designed to meet the needs of platform stabilization applications. It optimizes latency and bandwidth without sacrificing accuracy. Typical applications include optical sensor (e.g., camera) and antenna stabilization. With an industry standard communication interface, it is easily integrated into the variety of architectures that these applications present. The extremely small size, light weight, and low power make it ideal for most applications.

The HG4930 S-Class includes MEMS gyroscopes and accelerometers. In addition, the HG4930 S-Class employs an internal environmental isolation system to attenuate unwanted inputs commonly encountered in real world applications. The internal isolation and other proprietary design features ensure the HG4930 S-Class is rugged enough to meet the needs of the most demanding users.

Three different performance grades of the HG4930 S-Class are available as off-the-shelf items. Honeywell screens and calibrates all of the MEMS inertial sensors utilized in the HG4930 IMU.

The HG4930 S-Class is not ITAR controlled. Its Export Control Classification Number (ECCN) is 7A994.

## KEY HONEYWELL ADVANTAGES

- S-Class models provide the high bandwidth and high data rates needed for precision stabilization applications.
- World-class inertial sensor development, calibration and compensation.
- Proven reliability, dependability and ruggedness, through unit life.
- RS-422 Asynchronous standard protocol.
- Highest performing MEMS IMU of its size and price.
- Smaller, lower power and cost effective replacement for a FOG.

### S-CLASS MODEL - HG4930 IMU TYPICAL KEY CHARACTERISTICS

Volume/Size	82 cm <sup>3</sup> (5in <sup>3</sup> ), 65 x 51 x 35.5 mm
Weight	140 grams (0.3 lbs)
Gyroscope Operating Range	-400°/s to +400°/s <sup>3</sup>
Accelerometer Operating Range	-20 g to +20g
Supply Voltage	+5 VDC +/- 5%
Power Consumption	< 3 Watts
Operating Temperature Range	-54°C to +85°C
Gyro Bandwidth, -90°/-3 dB (Hz)	175/470
Accel Bandwidth, -90°/-3 dB (Hz)	125/225
Data Rate (Hz)	3600
Baud Rate	4 MBit

### S-CLASS MODEL - HG4930 TYPICAL PERFORMANCE OVER FULL OPERATING TEMPERATURE RANGE

Marketing Part Number <sup>1</sup>	Gyro Bias Repeatability (°/hr 1σ)	Gyro Bias In-run Stability <sup>2</sup> (°/hr 1σ)	ARW (°/√hr)	Accel Bias Repeatability (mg 1σ)	Accel Bias In-run Stability (mg 1σ)	VRW (m/s/√hr)
HG4930CS36	7	0.25	0.04	1.7	0.025	0.03
HG4930BS36	10	0.35	0.05	2.0	0.050	0.04
HG4930AS36	20	0.45	0.06	3.0	0.075	0.06

<sup>1</sup> When ordering direct from Honeywell, use part numbers 68904930-AS36, 68904930-BS36, 68904930-CS36.

<sup>2</sup> Gyro bias stability is >0.5 °/hr when measured over a constant operating period of one month.

<sup>3</sup> Full performance to +/- 325°/s

## For More Information

[aerospace.honeywell.com/HGuide](http://aerospace.honeywell.com/HGuide)

## Honeywell Aerospace

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