

OPTIM™ PRECISION TWO-AXIS RATE SENSOR

PRECISE AND MINIATURE

For high-end industrial, commercial and aerospace markets

The Collins OptIM™ is a miniature two-degrees-of-freedom rate sensor providing precise, two-axis outputs of angular rate and temperature.

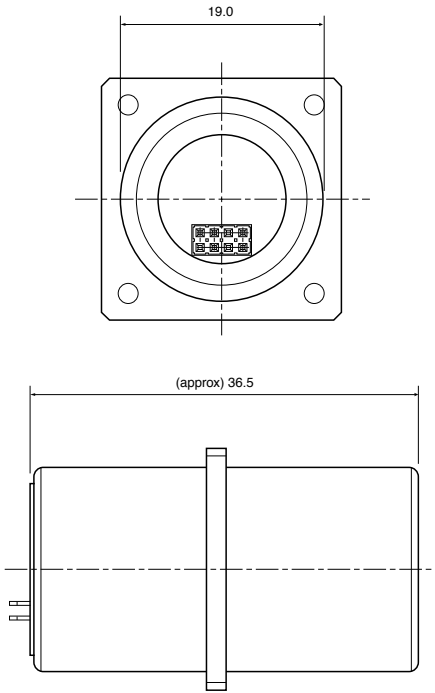
The sensor is designed specifically to meet the growing demand from high-end commercial and industrial market applications requiring a performance grade, non-ITAR rate sensor. The OptIM uses Collins Aerospace industry-leading micro electro-mechanical system (MEMS) inertial sensors that are integrated and calibrated using our in-house, state-of-the-art test facility.

Collins Aerospace has a long and respected heritage in the design and development of inertial sensors and today specializes in MEMS products.



KEY FEATURES

- MEMS two-axis rate sensor
- Latest-capacitive and PZT technology
- Low noise
- Bias instability and angular random walk – 5°/hr, 0.28°/√hr
- Compact and lightweight – 19.0 x 19.0 x 36.5 H (mm), excluding mounting
- Non-ITAR
- Non-licensable
- RoHS compliant
- First-class customer technical support



PERFORMANCE

- Miniature rate sensor
- Naturally robust MEMS sensor
- Two-axis output of rate and temperature

PRODUCT APPLICATIONS

- Platform stabilization
- EO stabilization
- Small satellite market
- Industrial applications
- Machine control

KEY CHARACTERISTICS

Volume	<16.5 cm ³ (without mount)
Mass	<50 g excluding mounting
Power consumption	1.25 W
Operating temperature	-40° C to +72° C
Start-up time	<3 s
Gyro operating range	±300°/sec
Supply voltage	+5V DC
Electrical interface	PC

TYPICAL PERFORMANCE

Bias repeatability (1σ)*	150°/hr
Bias instability (max)	5°/hr
Random walk (max)	0.28°/√hr
Scale factor error (1σ)*	1700 ppm
Bandwidth (-3 dB) (configurable up to)	90 Hz
Noise	0.1°/s rms

GYRO

*All axes, all temperatures, factory fresh

ALTERNATIVE PRODUCTS



IMU15™

PERFORMANCE

- Compact 6 DoF IMU
- Small form factor
- Under 1 cubic inch volume
- Non-licensable



SiRRS02®

PERFORMANCE

- Robust, high-performance rate sensor
- Varying levels of performance
- Highly modular, tailored solution

Specifications subject to change without notice.

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