

MAG-16 MEMS Single Axis Gyro

The ideal low cost solution for a wide range of military and commercial applications.

**Description:**

Northrop Grumman Corporation introduces our new MAG-16 Microelectromechanical Systems (MEMS) gyro as the ideal low cost solution for a wide range of military and commercial applications. The MAG-16 uses proprietary technology to attain the highest possible performance at an affordable cost. The MAG-16's proprietary technology minimizes the effects of acceleration, shock and vibration on the unit.

Northrop Grumman has filed for patent protection for this unique design.

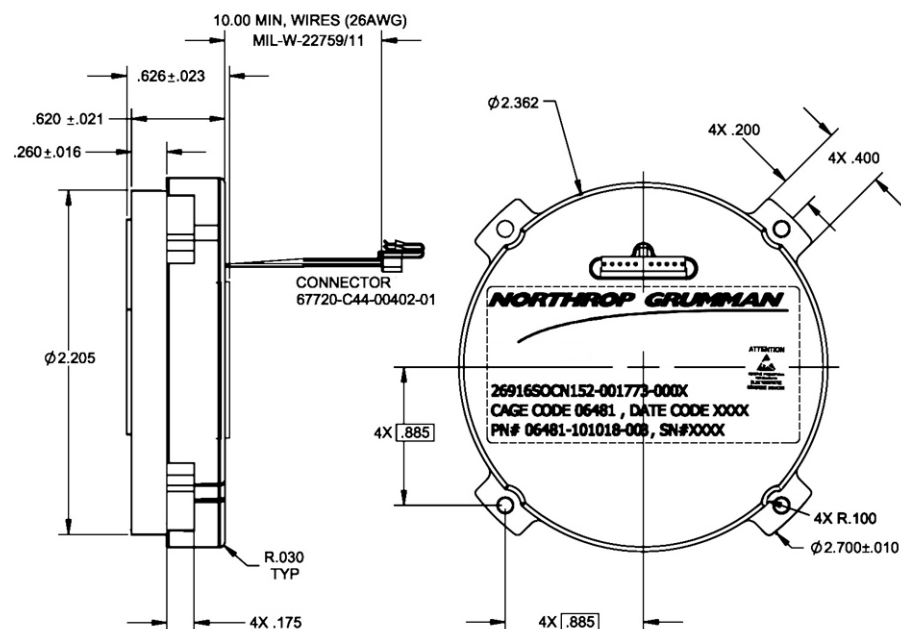
Applications:

- Antenna stabilization
- Radar stabilization
- Optical stabilization
- Industrial robotics
- Autonomous vehicles
- Attitude and Heading Reference Systems

MAG-16 MEMS Single Axis Gyro

Performance:

- Angular Rate $\pm 150^\circ / \text{second}$
- Bandwidth $350 \text{ Hz @ } -3 \text{ dB gain}$
minimum, typically 400 Hz
- Scale Factor (nominal) $36.0 \text{ mv} / ^\circ / \text{second} \pm 2\%$
- Scale Factor Stability (over temperature) $<3\%$
- Scale Factor Linearity $<1\%$
- Bias Change (over temperature) $<5.0^\circ / \text{second } 1\sigma$
- Residual Bias Error with Bias Modeled (over temp.) $<0.017^\circ / \text{second } 1\sigma$
- Bias Instability (1 hour) $<0.0028^\circ / \text{second}, 1\sigma \text{ at } 25^\circ \text{ C}$
- Output Rate Noise RMS $0.6^\circ / \text{second}, \text{ over a } 2 \text{ second interval}$
- Angle Random Walk (ARW) $<1.8 \text{ degrees/rt-hr}$
- Input Axis Misalignment $<10 \text{ milliradians}$
- G^2 Sensitive Drift $0.001^\circ / \text{sec}/g^2$
- Operating Temperature $-55^\circ \text{ C to } +85^\circ \text{ C}$
- Size $2.362 \text{ inch diameter x } 0.626 \text{ inch height}$
($57.87 \text{ mm diameter x } 15.337 \text{ mm height}$)
- Weight $80 \pm 5 \text{ grams}$
- Data Interface Analog Output
- Power Requirements $\pm 15 \text{ VDC} / \text{Pc: } 15 \text{ mW};$
 $+ 5 \text{ VDC} / \text{Pc: } 700 \text{ mW}$
- Connector $10 \text{ inch flying leads (245 mm)}$ or other specified connector



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All dimensions are measured in inches.