10MS57-HP

SINGLE-AXIS VIBRATING ANGULAR RATE GYRO

- Ultra low noise
- Best-in-class behaviour under shocks & vibrations
- Miniature package
- Light weight & rugged durability
- Proven operational MTBF: 500,000 hours

SAFRAN

10MS57-HP

Single-Axis vibrating angular rate gyro

100,000 SENSORS PRODUCED

The all new 10MS57-HP Single Axis Vibrating Rate gyro represents Safran Electronics & Defense's breakthrough gyro technology enabling an ultra-low noise and exceptional Allan variance curve. Find the right balance between MEMS and FOG technologies.

Each gyro is factory calibrated and compensated for temperature effects to provide high accuracy differential analogue output voltage, as well as a Plug and Play high-level RS422 and RS232 digital outputs. The unit is powered by a single 5 to 18Vdc supply.

Applications

- Aircraft flight controls
- Fire control systems
- Tactical training simulators
- Sights, optical & infrared line of sights
- Gyrostabilized gimbals
- Naval & land remote weapon systems
- Antenna & sonar stabilization
- Ship anti-roll systems
- Unmanned aerial vehicles (UAV) control
- Autonomous underwater vehicles (AUV) control
- Automotive testing
- Tilting trains
- Robotics
- Etc.

Functional Block Diagram
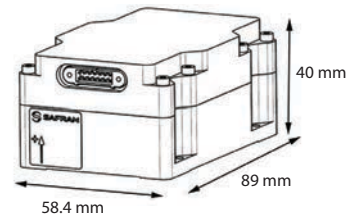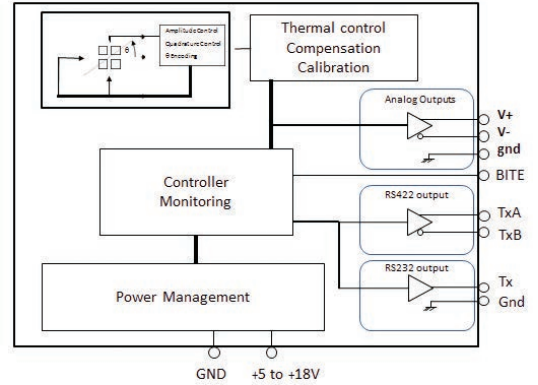
Parameter	10MS57-HP60	10MS57-HP100	10MS57-HP120	10MS57-HP180	10MS57-HP250
Measurement Range[1]	+/- 60 °/sec	+/- 100 °/sec	+/- 120 °/sec	+/- 180 °/sec	+/- 250 °/sec
Scale factor: Digital output (RS422 and RS232, 500 or 1kHz): Analogue output (differential):	24 bits +/- 0.166 V/°/sec	24 bits +/- 0.100 V/°/sec	24 bits +/- 0.083 V/°/sec	24 bits +/- 0.055 V/°/sec	24 bits +/- 0.040 V/°/sec
Scale factor sensitivity (- 50°C to 85°C)	5000 ppm, 1σ				
Bias stability (Allan variance method) [2]	0.15 °/h				
Noise: Random walk[2]: within 0,1 to 100Hz:	0.006 °/√h 0.015 °/sec rms				
Bandwidth	>100 Hz				
Power supply	5 to 18 Vdc				
Consumption (typical)	2 W				
Temperature (operating)	-50°C, +85°C				
Vibration (5, 2000Hz)	EN61373 - Mil Std 810 Method 514.6-II				
Shock	EN61373 - Mil Std 810 Method 516.6-I				

(1) Any other value available on request from 30 to 250°/sec.
(2) Analogue output, 2σ

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