**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

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**SAFRAN**
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.

### Specifications

#### Measurement Range

<table>
<thead>
<tr>
<th>Parameter</th>
<th>10MS57-HP60</th>
<th>10MS57-HP100</th>
<th>10MS57-HP120</th>
<th>10MS57-HP180</th>
<th>10MS57-HP250</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement Range(1)</td>
<td>+/- 60°/sec</td>
<td>+/- 100°/sec</td>
<td>+/- 120°/sec</td>
<td>+/- 180°/sec</td>
<td>+/- 250°/sec</td>
</tr>
</tbody>
</table>

#### Scale factor:

<table>
<thead>
<tr>
<th>Digital output (RS422 and RS232, 500 or 1kHz):</th>
<th>24 bits</th>
<th>24 bits</th>
<th>24 bits</th>
<th>24 bits</th>
<th>24 bits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analogue output (differential):</td>
<td>+/- 0.166 V/°/sec</td>
<td>+/- 0.100 V/°/sec</td>
<td>+/- 0.083 V/°/sec</td>
<td>+/- 0.055 V/°/sec</td>
<td>+/- 0.040 V/°/sec</td>
</tr>
</tbody>
</table>

#### Scale factor sensitivity (-50°C to 85°C)

| 5000 ppm, 1σ |

#### Bias stability (Allan variance method) (2)

| 0.15 °/h |

#### Noise:

<table>
<thead>
<tr>
<th>Random walk(2); within 0.1 to 100Hz:</th>
<th>0.006 °/√h</th>
<th>0.015 °/sec rms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bandwidth</td>
<td>&gt;100 Hz</td>
<td></td>
</tr>
</tbody>
</table>

#### 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 |

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

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