

QRS28

MEMS Quartz Dual Axis Rate Sensor

Ideal for High-Precision Applications:

- Platform Stabilization
- Guidance and Control
- Autopilot Control
- Gun and Optical Line of Sight Stabilization
- Missile Seeker Head Stabilization
- Instrumentation
- Fast Slewing Low Noise Scanning Systems



Key Performance Features:

- **Extremely Small Size**
- **Light Weight**
- **Fast Turn-On Time**
- **Low Noise**
- **Excellent Linearity**
- **Two Axes of Angular Rate**
- **Low Power Consumption**
- **High Reliability Long Life**



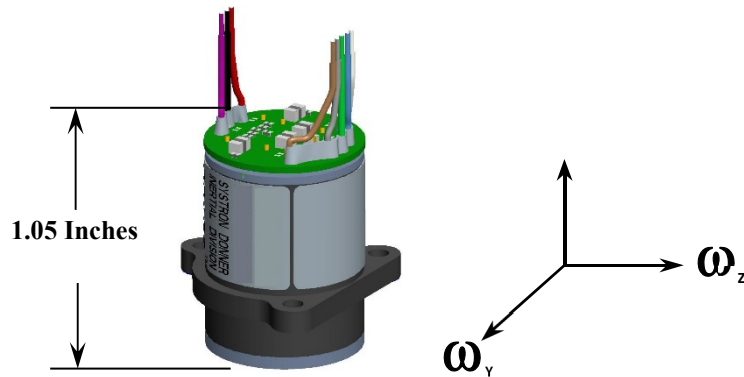
The QRS28 is a small, lightweight, two-axis MEMS rate sensor offering exceptional performance at a very attractive price. The sensor provides a simple DC-DC operation using two of EMCORE's quartz rate sensors.

The instrument is contained within a hermetically sealed, stainless steel cylinder measuring 1.05" [26.7 mm] x 0.71" [18.0 mm] diameter.

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QRS28

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| | QRS28-00100-100 | QRS28-00200-100 | QRS28-00400-100 |
|---------------------------------|------------------------------|-------------------|-------------------|
| Power Requirements | | | |
| Input Voltage (Dual Supply) | + & - 4.75 to 5.35 Vdc | | |
| Input Current | < 50 mA each supply | | |
| Performance | | | |
| Standard Range Full Scale | 100°/sec | 200°/sec | 400°/sec |
| Full-Scale Output (Nominal) | ± 3.50 V (Analog DC Voltage) | | |
| Over-Range Capability | > 110% of Full Scale | | |
| Scale Factor | 0.035 V/°/sec | 0.0175 V/°/sec | 0.00875 V/°/sec |
| Scale Factor Accuracy | ± 2% (factory set) | | |
| Zero Rate Output (Bias) | < 33 mV@25°C | | |
| Linearity Error | < 0.05% of Full Range | | |
| Turn On Time | < 1.0 sec | | |
| Random Noise (1-101 Hz) | < 0.005°/sec./√Hz. | < 0.005°/sec./√Hz | < 0.007°/sec./√Hz |
| Bandwidth (-90° Phase Shift) | 110 Hz ±10 Hz | | |
| Input Axis Alignment | < 31 mrad, uncompensated** | | |
| Environmental | | | |
| Operating Temperature | -55°C to +85°C | | |
| Storage Temperature | -55°C to +105°C | | |
| Shock | 300 g's, ½ sine, 5 mSec | | |
| G-Sensitivity | <0.02°/sec/g | | |
| Weight | 25 grams (0.88 oz) | | |

** Reduced X-Axis alignment available – consult factory.

For more information, contact:

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Transforming Navigation

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