

# CRS43

## Single Axis Angular Rate Sensor



A robust and affordable mass-produced gyroscope for industrial and commercial applications.

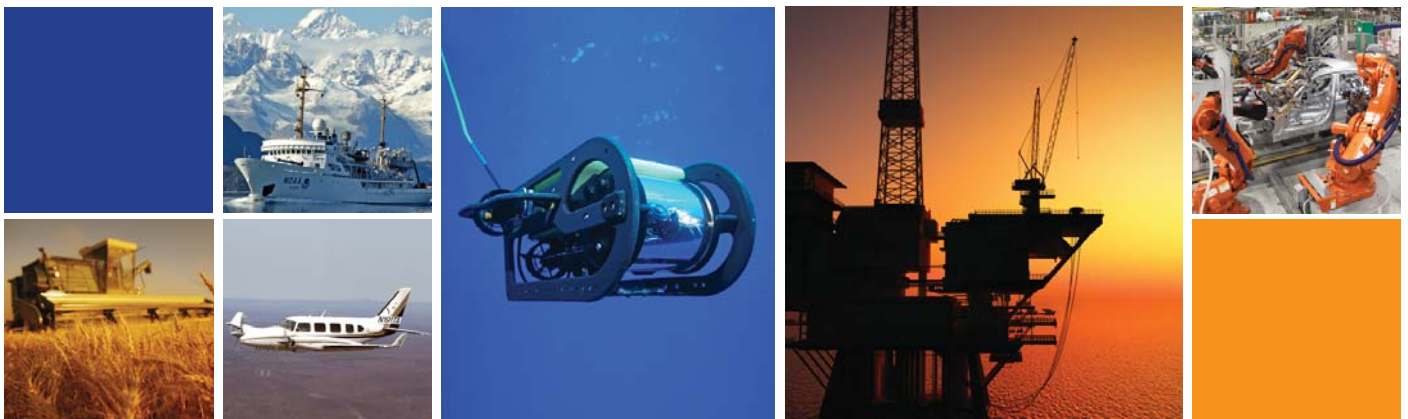
Angular rate sensors are used wherever rate of turn sensing is required without a fixed point of reference. The sensor will output a DC voltage proportional to the rate of turn and input voltage.

High performance motion sensing even under severe shock and vibration.

CRS43 has been developed to offer existing CRS03 customers a low cost, 'drop-in' alternative. Silicon Sensing's highly successful PinPoint® precision MEMS gyro provides the core angular rate sensing element.

### Key features

- Three model types available
- Excellent performance over temperature
- Repeatable drift characteristic
- High shock and vibration operation
- High reliability
- Metalised housing
- Suitable alternative to CRS03



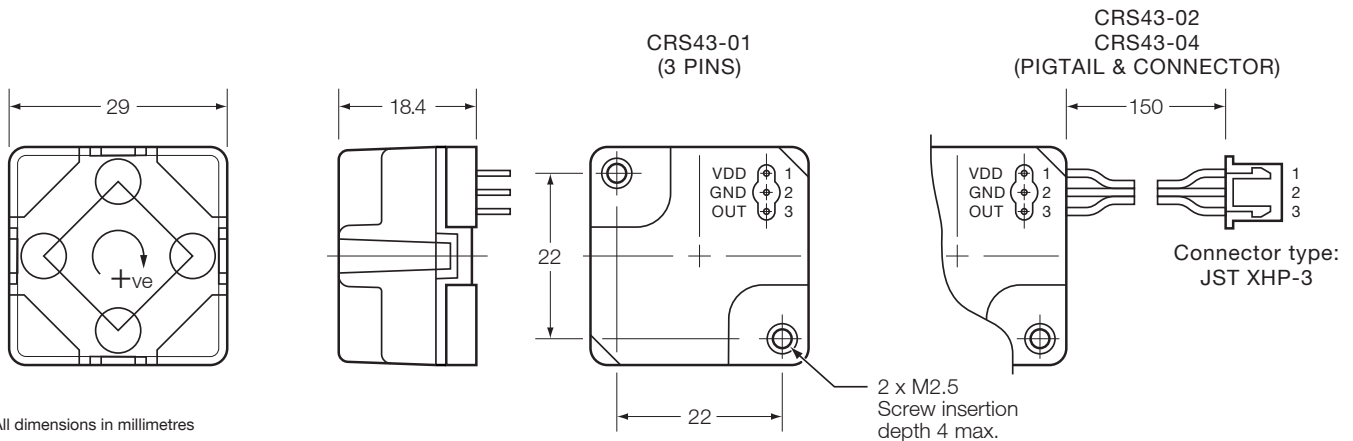
# CRS43

## Single Axis Angular Rate Sensor



For full technical datasheets please visit:  
www.siliconsensing.com

### CRS43-01, -02, -04



All dimensions in millimetres

#### Typical Data

	-01/-02	-04
<b>Angular Rate Range</b>	±100°/s	±200°/s
<b>Output</b>	Analogue voltage (ratiometric)	
<b>Scale Factor</b>		
Nominal	20mV/°/s	10mV/°/s
Variation over temperature range	< ±3%	
Non-linearity	< ±0.5% of full scale	

#### Bias

Setting tolerance	< ±3°/s	< ±6°/s
Variation over temperature range	< ±3°/s	< ±6°/s
Ratiometric error	< ±1°/s	< ±2°/s
g sensitivity	< ±0.1°/s/g on any axis	
Vibration sensitivity	< 0.003°/s/g <sup>2</sup> (20Hz to 2kHz)	
Bandwidth	> 10Hz (-3dB 25Hz typ)	
Quiescent noise	< 1mV rms	

#### Environment

Temperature	-40°C to +85°C	
Random vibration	10g rms (20Hz to 2kHz)	
Sine sweep vibration	5g peak (15Hz to 2kHz)	
Cross-axis sensitivity	< 5%	
Mass	< 18 gram	

#### Electrical

Supply voltage	+4.75V to +5.25V	
Supply current	< 35mA (steady state)	
Start-up time	< 0.5s	
RoHS Compliant	Yes	

#### Pin Connections

- 1 +5V
- 2 0V
- 3 Rate Output

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CRS43-00-0100-131 Rev 3  
DCR No. 710009065