

Coming  
Soon

# CRS43

## Single Axis Angular Rate Sensor

SILICON  
SENSING®



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

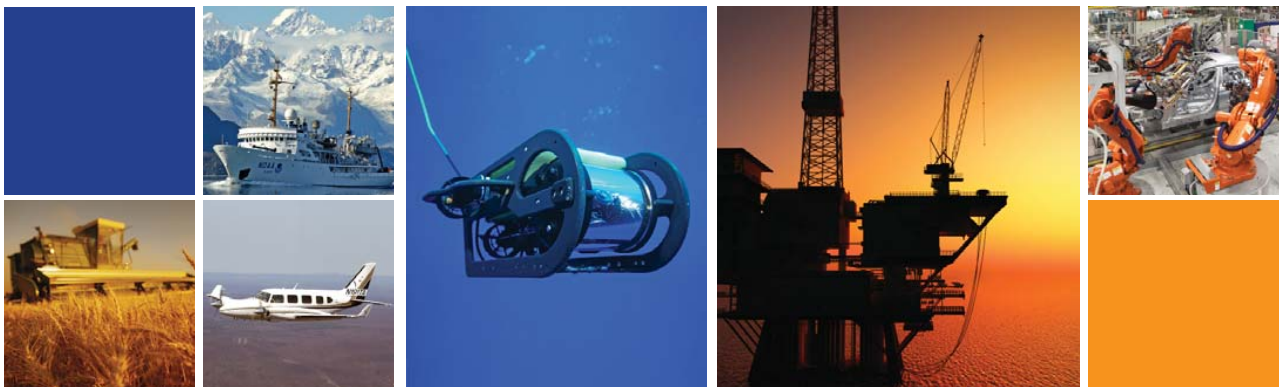
Angular rate sensors are used wherever rate of turn sensing is required without a fixed point of reference. The sensor will output a DC voltage proportional to the rate of turn and input voltage.

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



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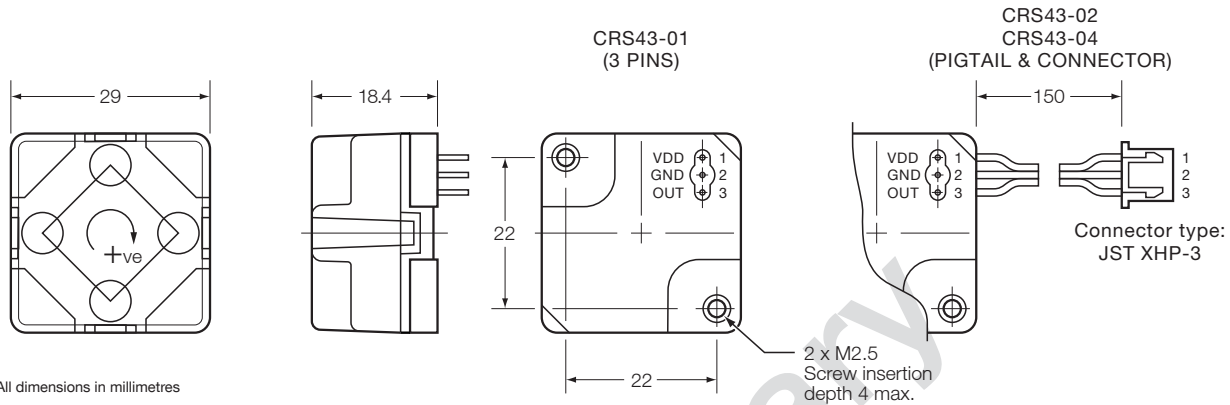
# CRS43

## 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>	$\pm 100^\circ/\text{s}$	$\pm 200^\circ/\text{s}$
<b>Output</b>	Analogue voltage (ratiometric)	
<b>Scale Factor</b>		
Nominal	20mV/ $^\circ/\text{s}$	10mV/ $^\circ/\text{s}$
Variation over temperature range	< $\pm 3\%$	
Non-linearity	< $\pm 0.5\%$ of full scale	

#### Bias

Setting tolerance	< $\pm 3^\circ/\text{s}$	< $\pm 6^\circ/\text{s}$
Variation over temperature range	< $\pm 3^\circ/\text{s}$	< $\pm 6^\circ/\text{s}$
Ratiometric error	< $\pm 1^\circ/\text{s}$	< $\pm 2^\circ/\text{s}$
g sensitivity	< $\pm 0.1^\circ/\text{s/g}$ on any axis	
Vibration sensitivity	< 0.003 $^\circ/\text{s/g}^2$ (20Hz to 2kHz)	
Bandwidth	> 10Hz (-3dB 25Hz typ)	
Quiescent noise	< 1mV rms	

#### Environment

Temperature	-40 $^\circ\text{C}$ to +85 $^\circ\text{C}$
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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Specification subject to change without notice.

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CRS43-00-0100-131 Rev 2  
DCR No. 710007252

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