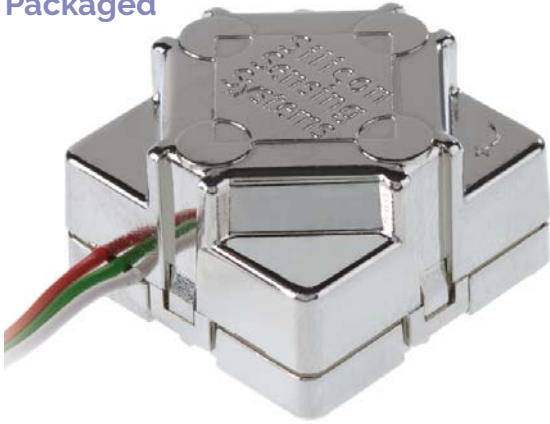


# CRS03

## Angular Rate Sensor

### Packaged



A robust and affordable mass-produced gyroscope for automotive and commercial customers.

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.

Whatever your application, the unique silicon ring technology, coupled with closed loop electronics, gives advanced and stable performance over time and temperature, overcoming the mount sensitivity problems experienced with simple beam or tuning fork based sensors.

### Key features

#### Packaged

- Four model types available
- Excellent performance over temperature
- Repeatable drift characteristic
- High shock and vibration operation
- High reliability
- Metalised housing

#### Unpackaged

- High rate range  $\pm 573^\circ/s$
- Excellent performance over temperature
- Repeatable drift characteristic
- High shock and vibration operation
- Packaged options

### Unpackaged



# CRS03

## Angular Rate Sensor

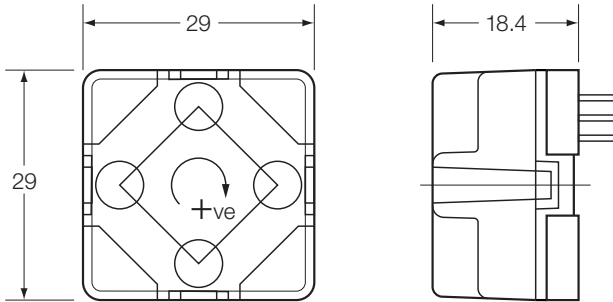


For full technical datasheets please go to our website where the documents can be downloaded

### CRS03-01, -02, -04, -05

#### Packaged

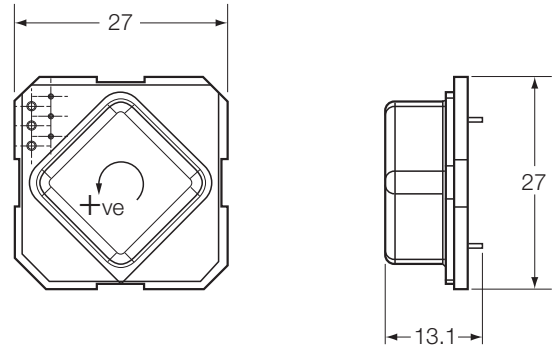
All dimensions in millimetres



### CRS03-11

#### Unpackaged

All dimensions in millimetres



#### Typical Data

	CRS03-11S	-01S/-02S	-04S	-05S
<b>Angular Rate Range</b>	$\pm 573^\circ/\text{s}$	$\pm 100^\circ/\text{s}$	$\pm 200^\circ/\text{s}$	$\pm 80^\circ/\text{s}$
<b>Output</b>	Analogue voltage (ratiometric)			
<b>Scale Factor</b>				
Nominal	3.49mV/ $^\circ/\text{s}$	20mV/ $^\circ/\text{s}$	10mV/ $^\circ/\text{s}$	25mV/ $^\circ/\text{s}$
Variation over temperature range	< $\pm 5\%$	< $\pm 3\%$		
Non-linearity	< $\pm 0.5\%$ of full scale			
<b>Bias</b>				
Setting tolerance	< $\pm 30^\circ/\text{s}$	< $\pm 3^\circ/\text{s}$	< $\pm 6^\circ/\text{s}$	< $\pm 4^\circ/\text{s}$
Variation over temperature range	< $\pm 30^\circ/\text{s}$	< $\pm 3^\circ/\text{s}$	< $\pm 6^\circ/\text{s}$	< $\pm 4^\circ/\text{s}$
Ratiometric error	< $\pm 1^\circ/\text{s}$	< $\pm 1^\circ/\text{s}$	< $\pm 2^\circ/\text{s}$	< $\pm 0.8^\circ/\text{s}$
Drift vs time	< $\pm 0.55^\circ/\text{s}$ in any 30s period (after start-up time)			
g sensitivity	< $\pm 0.1^\circ/\text{s/g}$ on any axis			
<b>Bandwidth</b>	55Hz (-3dB)	10Hz (-3dB)		
<b>Quiescent Noise</b>	< 1mV rms			
<b>Environment</b>				
Temperature	-20°C to +60°C	-40°C to +85°C		
Linear acceleration	< 100g			
Shock	200g (1ms, 1/2 sine)			
Vibration	2g rms (20Hz to 2kHz, random)			
Cross-axis sensitivity	< 5%			
<b>Mass</b>	< 10 gram	< 18 gram		
<b>Electrical</b>				
Supply voltage	+4.75V to +5.25V			
Supply current	< 35mA (steady state)			
Noise and ripple	< 15mV rms (DC to 100Hz)			
Start-up time	< 0.2s			
<b>RoHS Compliant</b>	Yes			

#### Pin Connections

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

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CRS03-00-0100-131 Rev 4  
DCR No. 710005234