



CRS03 Angular Rate Sensor

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

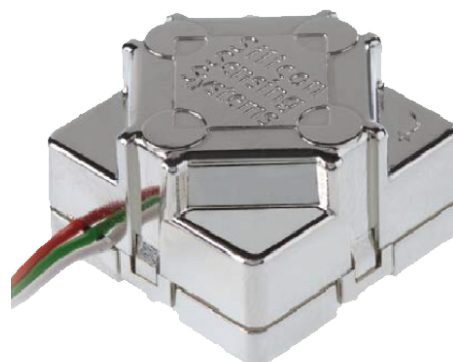
Angular rate sensors are used wherever rate of turn sensing is required without a fixed point of reference. The sensor will output a DC voltage proportional to the rate of turn and input voltage.

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.



CRS03-01T



CRS03-02T

■ FEATURES

- Two model types available
- Excellent performance over temperature
- Repeatable drift characteristic
- High shock and vibration operation
- High reliability
- Metalised housing
- FFF equivalent to CRS03-01S and CRS03-02S

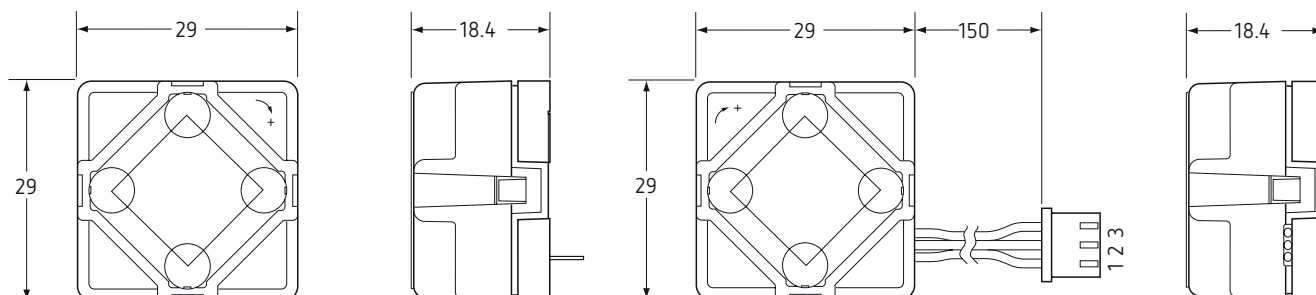


DIMENSION-mm

CRS03-01T

CRS03-02T

All dimensions in millimetres



TYPICAL DATA

	CRS03-01T	CRS03-02T
Angular Rate Range	$\pm 100^\circ/s$	
Output	Analogue voltage (ratiometric)	
Electrical Connections	Solder Pins	Connector
Scale Factor		
Nominal	20mV / $^\circ/s$	
Variation over temperature range	< $\pm 3\%$	
Non-linearity	< $\pm 0.5\%$ of full scale	
Bias		
Setting tolerance	< $\pm 3^\circ/s$	
Variation over temperature range	< $\pm 1^\circ/s$	
Ratiometric error	< $\pm 1^\circ/s$	
Drift vs time	< $\pm 0.55^\circ/s$ in any 30s period (after start-up time)	
g sensitivity	< $\pm 0.1^\circ/s/g$ on any axis	
Bandwidth	10Hz (-3dB)	
Quiescent Noise	0.025 $^\circ/s$ rms	
Environment		
Temperature	-40 $^\circ C$ to +85 $^\circ C$	
Linear acceleration	< 100g	
Shock	200g (1 ms, 1/2 sine)	
Vibration	2g rms (20Hz to 2kHz, random)	
Cross-axis sensitivity	< 5%	
Mass	< 18 gram	
Electrical		
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	
RoHS Compliant	Yes	

Pin Connections

1	+5V
2	0V
3	Rate Output