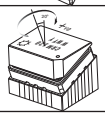
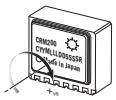
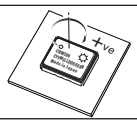
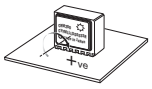
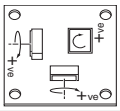
2 Ordering Information

Part Number	Sense Axis	Description	Measurement Range	Modes	Overall Dimensions	Supply Voltage
			°/s		mm	V
CRM100		Single-axis PinPoint® MEMS Gyroscope. Sensing axis perpendicular (in-plane) to the host PCBA.	User configured for ±75, ±150, ±300 & ±900	Analogue or Digital (User Configured)	5.7x4.8x1.2H	2.7 ~ 3.6
CRM120		Single-axis PinPoint® MEMS Gyroscope. Sensing axis at 20° (inclined) to the host PCBA.	User configured for ±75, ±150, ±300 & ±900	Analogue or Digital (User Configured)	5.7x5.0x4.9H	2.7 ~ 3.6
CRM200		Single-axis PinPoint® MEMS Gyroscope. Sensing axis parallel (orthogonal) to the host PCBA.	User configured for ±75, ±150, ±300 & ±900	Analogue or Digital (User Configured)	6.3x2.7x5.5H	2.7 ~ 3.6
400046-0100 (CRM100)		Gyro Evaluation Board for the CRM100 Single-axis PinPoint® MEMS Gyroscope (Includes the gyro). See Section 8 for more details	User configured for ±75, ±150, ±300 & ±900	Analogue	12x12x5H	2.7 ~ 3.6
400046-0200 (CRM200)		Gyro Evaluation Board for the CRM200 Single-axis PinPoint® MEMS Gyroscope (Includes the gyro). See Section 8 for more details	User configured for ±75, ±150, ±300 & ±900	Analogue	12x12x8.5H	2.7 ~ 3.6
400046-0300		3-axis Gyro Evaluation Board for the PinPoint® MEMS Gyroscope (Includes the gyros). See Section 8 for more details	User configured for ±75, ±150, ±300 & ±900	Analogue or Digital (User Configured)	25x25x8.5H	2.7 ~ 3.6

3 Specification

Unless stated otherwise, the following specification values assume Vdd = 3.0V and an ambient temperature of +25°C. 'Over temperature' refers to the temperature range -40°C to +85°C.

Parameter	Minimum	Typical	Maximum	Notes
Measurement Range:				
Dynamic Range	±75°/s, ±150°/s, ±300°/s, ±900°/s			User selectable Absolute limit 1,000°/s
Sensitivity:				
Analogue Output Mode Sensitivity:				
Scale Factor (k) (nominal)	For ±75°/s operation, k = 0.012 x Vdd/3 V/°/s For ±150°/s operation, k = 0.006 x Vdd/3 V/°/s For ±300°/s operation, k = 0.003 x Vdd/3 V/°/s For ±900°/s operation, k = 0.001 x Vdd/3 V/°/s		Ratiometric Ratiometric Ratiometric Ratiometric	See Section 7.1
Scale Factor variation at +25°C	–	±0.5%	–	–
Scale Factor variation over temperature	-3%	±1%	+3%	–

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Specification Continued

Parameter	Minimum	Typical	Maximum	Notes
Scale Factor non-linearity	–	0.06%	0.2%	Percentage of dynamic range using a best straight line fit
Bias (nominal), +25°C	–	Vdd/2 ±12mV	–	–
Bias variation with temperature	-3°/s	–	+3°/s	–
Bias switch on repeatability	–	0.14°/s rms	–	–
Bias drift with time after switch on	–	0.05°/s/min	–	After 250 seconds
Bias instability	–	24°/hr (75°/s range) 40°/hr (900°/s range)	–	Allan Variance
Digital Output Mode Sensitivity:				
Scale Factor (k) (nominal)	For ±75°/s operation, k = 96 LSB/°/s For ±150°/s operation, k = 48 LSB/°/s For ±300°/s operation, k = 24 LSB/°/s For ±900°/s operation, k = 8 LSB/°/s			Note: Digital output is NOT Ratiometric
Scale Factor variation at +25°C	–	±0.5%	–	–
Scale Factor variation over temperature	-3%	±1%	+3%	–
Scale Factor non-linearity	–	0.16%	0.2%	Percentage of dynamic range using a best straight line fit
Bias (nominal), +25°C	–	0000_{10} ±96_{10} LSB	–	–
Bias variation with temperature	-3°/s	–	+3°/s	–
Bias switch on repeatability	–	0.14°/s rms	–	–
Bias drift with time after switch on	–	0.05°/s/min	–	After 250 seconds
Bias instability	–	24°/hr (75°/s range) 40°/hr (900°/s range)	–	Allan Variance
Noise:				
Rate noise density	–	0.018°/s/√Hz	0.025°/s/√Hz	–
Angular Random Walk	–	0.28°/√hr	–	Allan Variance
Frequency Response:				
Bandwidth	5Hz	–	160Hz	User selectable see Section 7.5
Temperature Sensor:				Digital output only
Offset	–	0531_{10}	–	Nominal for 0°C

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