

EPSON Sensor Lineup

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Accelerometer/Vibration Sensor

Spec／Product Name		M-A342		M-A542		M-A352		M-A552		M-A370	
Feature		A quartz vibration sensor/accelerometer with a wide detection range, high resolution, high accuracy and excellent three-axis sync									
		Compliance with ISO10816				Low noise ・ Detecting of low frequency				Super low noise Detecting of low frequency	
Axis		3 axis (X/Y/Z)									
Output		Velocity/Displacement (selectable)				Acceleration					
Detection Range		Velocity: ±100 mm/s Displacement : ±200 m				±15 G				±10 G	
Resolution		Velocity : 2.38*10 ⁻⁴ mm/s/LSB Displacement : 2.38*10 ⁻⁴ mm/LSB				0.06 μG/LSB				0.06 μG/LSB	
Noise Density (25 °C, Avg.)		Velocity : 1.4*10 ⁻⁴ mm/s/√Hz (Avg. 200~1,000 Hz) Displacement : 0.7*10 ⁻⁵ mm/√Hz (Avg. 20~100 Hz)				0.2 μG/√Hz (Avg. 0.5~6 Hz)				0.02 μG/√Hz (Avg. 1~10 Hz)	
Bandwidth		Velocity : 10~1,000 Hz Displacement : 1~100 Hz				DC~460 Hz				DC~210 Hz	
Bias characteristics over temp (-30~+85 °C, Max)		N/A ※Due to the removal of the DC component				±2.0 mG				±0.5 mG	
Output rate		Velocity : 3,000 sps (Fixed) Displacement : 300 sps (Fixed)				50~1,000 sps (Selectable)				50~1,000 sps (Selectable)	
External trigger jitter		N/A				0~5 μs				0~5 μs	
1 PPS trigger jitter		N/A				N/A				0~5 μs	
Appearance	Product Image										
	Size	48x24x16 mm		65x60x30 mm		48x24x16 mm		65x60x30 mm		48x24x16 mm	
	Weight	25 g		128 g		25 g		128 g		30 g	
	Power supply current	29 mA @ 3.3 V		51 mA @ 12 V		13.2 mA @ 3.3 V		35 mA @ 12 V: M-A552AC10 49 mA @ 12 V: M-A552AR10		36.3 mA @ 3.3 V	
Interface		UART/SPI(Selectable)		RS422		UART/SPI(Selectable)		CANopen: M-A552AC10 RS-422: M-A552AR10		UART/SPI(Selectable)	

IMU

Spec／Product name		M-G370T	M-G370G	M-G366	M-G330	M-G355	M-G570	M-G552
Feature		Compact, lightweight and high-precision industrial grade IMU				Compliance IEC61508 SIL1	IP67-rated dustproof and waterproof protection	
Gyroscope								
Detection range		± 200 °/s	± 450 °/s	± 450 °/s	± 400 °/s	± 450 °/s	± 475 °/s	± 450 °/s
ARW		0.03 °/√h	0.06 °/√h	0.08 °/√h	0.10 °/√h	0.08 °/√h	0.04 °/√h	0.06 °/√h
BIS		0.8 °/h	0.8 °/h	1.2 °/h	3 °/h	1.2 °/h	0.5 °/h	0.8 °/h
Initial Error		360 °/h	360 °/h	360 °/h	720 °/h	360 °/h	360 °/h	360 °/h
Bandwidth		189 Hz	189 Hz	472 Hz	500 Hz	189 Hz	189 Hz	189 Hz
Accelerometer								
Detection range		± 8,16 G (selectable)	± 8,16 G (selectable)	± 8,16 G (selectable)	± 8,16 G (selectable)	± 8,16 G (selectable)	± 15 G	± 8,16 G (selectable)
VRW		0.020 m/s/√h	0.020 m/s/√h	0.020 m/s/√h	0.030 m/s/√h	0.020 m/s/√h	0.012 m/s/√h	0.020 m/s/√h
Initial Error		2 mG	2 mG	3 mG	4 mG	3 mG	2 mG	3 mG
Bandwidth		333 Hz	333 Hz	333 Hz	333 Hz	148 Hz	333 Hz	333 Hz
Appearance	Product Image							
	Size	24×24×10 mm	24×24×10 mm	24×24×10 mm	24×24×10 mm	24×24×10 mm	65×60×30 mm	65×60×30 mm
	Weight	10 g	10 g	10 g	10 g	10 g	150 g	115 g
	Power supply current	16 mA @ 3.3 V	16 mA @ 3.3 V	16 mA @ 3.3 V	16 mA @ 3.3 V	16 mA @ 3.3 V	60 mA @ 12 V	33 mA @ 12 V
	Interface	SPI/UART	SPI/UART	SPI/UART	SPI/UART	SPI/UART	RS422	J1939/Can/RS422



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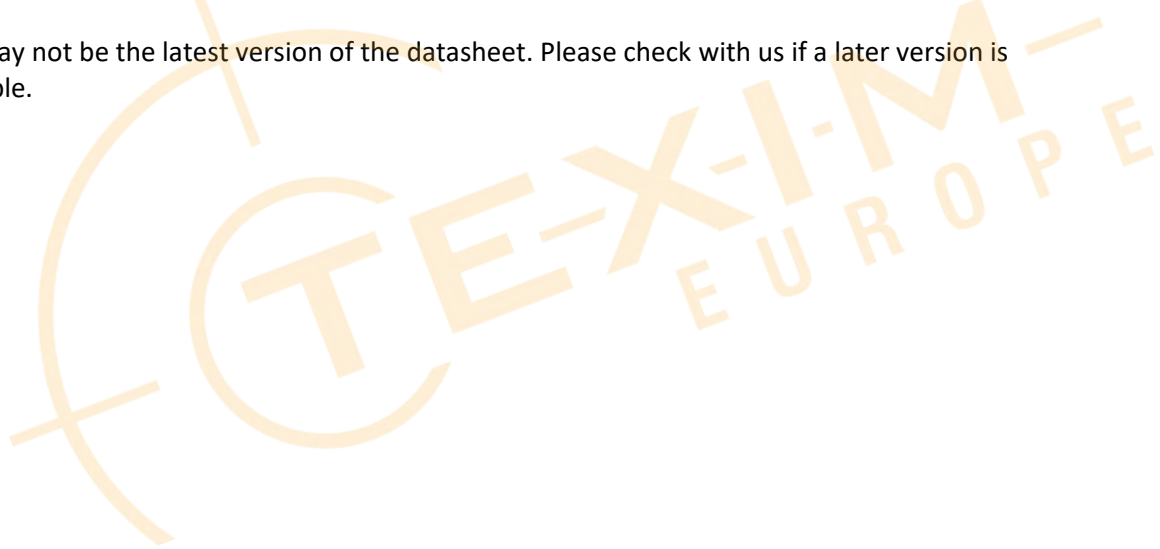
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Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time.

All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts.

Please contact us if you have any questions about the contents of the datasheet.

This may not be the latest version of the datasheet. Please check with us if a later version is available.





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