

# MS2008+

## Mems Accelerometer



The MS2008+ is a triaxial low-noise MEMS micro-machined capacitive accelerometer. Thanks to its sensibility and versatility, it can be used for different civil and structural applications.

Sensor MS2008+ to be linked to motion recorders such as

o MR3000DMS

o MR3000C

o MR2002-SM24-K

## MS2008+ MEMS Accelerometer

The MS2008+ is a triaxial high dynamic range accelerometer based on state-of-the-art MEMS technology. Its small dimensions, rugged and splash-proof design and excellent long term stability make the MS2008+ the perfect match for seismic monitoring in dams, buildings and other structures.

The micromachined capacitive MEMS sensor, thanks to its flat frequency and phase response together with the very low short- and long-term drift, provides true engineering data that require no post-processing. The MS2008+ from Bartec Syscom comes factory calibrated, equipped with a fully comprehensive self-test function and requires no re-calibration.

### Technical Specifications

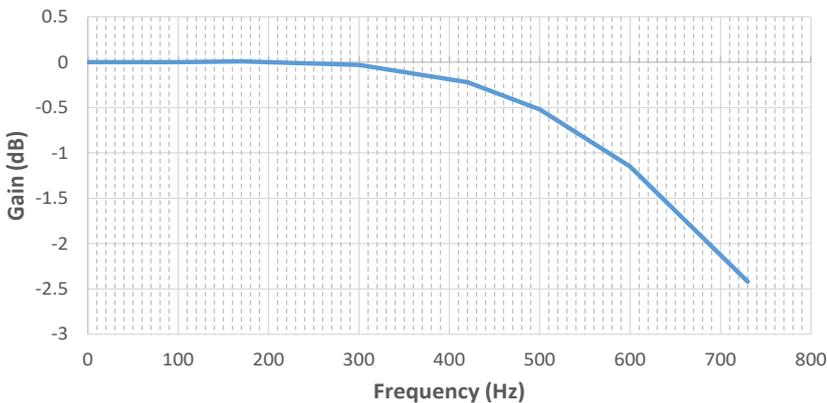
<b>Principle</b>	The MEMS accelerometer consists in a micro-machined capacitive sensing element and a custom integrated circuit that includes an amplifier and differential output stage.
<b>Hysteresis</b>	None
<b>Noise</b>	typ. 7 $\mu$ g rms/ $\sqrt{\text{Hz}}$
<b>Operating temperature</b>	-40 to +85 °C
<b>Orientation</b>	Triaxial, horizontal (floor) mounting or vertical (wall) mounting
<b>Non-Linearity</b>	<0.5 % of full scale
<b>Scale factor temp. drift (<math>\pm 4</math> g)</b>	typ. <100 ppm/°C
<b>Scale factor error</b>	< 1%
<b>Frequency response</b>	DC to 600 Hz (-1.5 dB)
<b>Dynamic range</b>	typ. 100 dB (@100 Hz BW)

### MS2008+ triaxial sensor

<b>Measuring range</b>	$\pm 4$ g
<b>Sensitivity</b>	1.25 V/g (differential)
<b>Supply voltage</b>	$\pm 6.5$ V to $\pm 15$ V
<b>Current consumption</b>	typ. 22 mA @ 7.8 V, 4.5 mA @ -7.8 V
<b>Self-test</b>	Test-pulse

### Physical characteristics

<b>Housing</b>	Aluminium, 85 x 75 x 58 mm (W x L x H)
<b>Connection</b>	Metallic self latching push-pull LEMO connector
<b>Weight</b>	0.5 kg
<b>Protection degree</b>	IP 65 (splash proof)
<b>Optional</b>	Mounted inside MR3000 and MR2002-SM24-K recorders



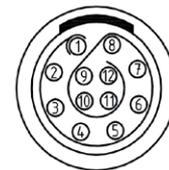
MS2008+ frequency response curve

### Ordering information

	Part Number	HORIZONTAL	VERTICAL	INTERNAL	EXTERNAL
MS2008+ triaxial $\pm 4$ g	MS2008-H4-A-DIFF-TRIA	x			x
MS2008+ triaxial $\pm 4$ g	MS2008-V4-A-DIFF-TRIA		x		x
MS2008+ triaxial $\pm 4$ g	Please refer to MR datasheet	x		x	
MS2008+ triaxial $\pm 4$ g	Please refer to MR datasheet		x	x	



MS2008+ aluminium housing



Signal	Number	Colour
+12 V	1	White
-12 V	2	Brown
Channel X+	3	Yellow
Channel X-	4	Green
Channel Y+	5	Grey
Channel Y-	6	Pink
Channel Z+	7	Blue
Channel Z-	8	Red
Test pulse	9	Violet
Control	10	Black
0 V	11	Grey/Pink
Free	12	Red/Blue

MS2008+ connector details

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