

**SAFETY IS OUR PRIORITY**

**BARTEC** **SYSCOM**

# 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

◦ MR3000DMS

◦ MR3000C

◦ 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 SYSCOM comes factory calibrated, equipped with a fully comprehensive self-test function and requires no re-calibration.

### Technical Specifications

#### Principle

The MEMS accelerometer consists in a micro-machined capacitive sensing element and a custom integrated circuit that includes an amplifier and differential output stage.

#### Hysteresis

None

#### Noise

typ. 7  $\mu\text{g}$  rms/ $\sqrt{\text{Hz}}$

#### Operating temperature

-40 to +85 °C

#### Orientation

Triaxial, horizontal (floor) mounting or vertical (wall) mounting

#### Non-Linearity

<0.5 % of full scale

#### Scale factor temp. drift ( $\pm 4$ g)

typ. <100 ppm/°C

#### Scale factor error

< 1%

#### Frequency response

DC to 600 Hz (-1.5 dB)

#### Dynamic range

typ. 100 dB (@100 Hz BW)

#### MS2008+ triaxial sensor

##### Measuring range

$\pm 4$  g

##### Sensitivity

1.25 V/g (differential)

##### Supply voltage

$\pm 6.5$  V to  $\pm 15$  V

##### Current consumption

typ. 22 mA @ 7.8 V, 4.5 mA @ -7.8 V

##### Self-test

Test-pulse

#### Physical characteristics

##### Housing

Aluminium, 85 x 75 x 58 mm (W x L x H)

##### Connection

Metallic self latching push-pull LEMO connector

##### Weight

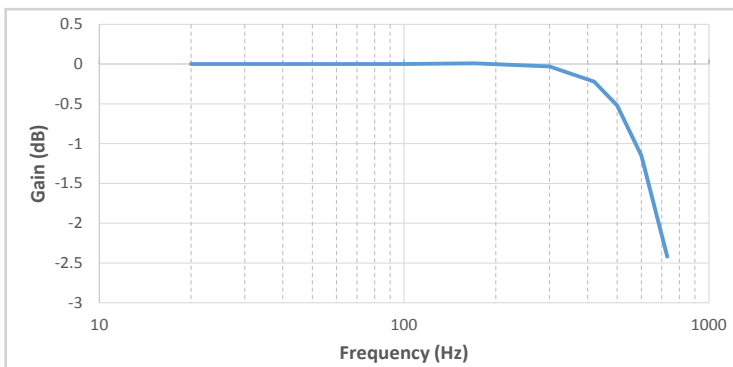
0.5 kg

##### Protection degree

IP 65 (splash proof)

##### Optional

Mounted inside MR3000 and MR2002-SM24-K recorders



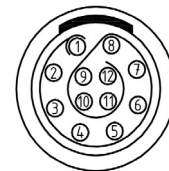
MS2008+ frequency response curve

#### Ordering information

		HORIZONTAL	VERTICAL	INTERNAL	EXTERNAL
	Part Number				
MS2008+ triaxial $\pm 4$ g	14115004	x			x
MS2008+ triaxial $\pm 4$ g	14115014		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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