



MS2004+ **Force-Balance** **Servo Accelerometer**

The MS2004+ is a triaxial, high dynamic range servo accelerometer based on state-of-the-art MEMS technology.

Its small dimensions, rugged and splash-proof design and excellent reliability make the MS2004+ the perfect match for seismic instrumentation.

The micromachined capacitive force feedback (servo) accelerometer in most applications outperforms traditionally used electromechanical FBA's. Using MEMS technology, this small high precision triaxial accelerometer shows environmental and reliability performance similar to integrated circuits. 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 MS2004+ from SYSCOM comes factory calibrated, equipped with a fully comprehensive self-test function and requires no re-calibration.

SYSCOM Instruments.
A Pleasure to Measure.

Technical Specification MS2004+

1, Performance

1.1 Acceleration Sensing Element

■ Principle	The sensing element is an analog force feedback accelerometer featuring a variable capacitance, silicon bulk-micromachined acceleration sensor (MEMS) and a custom low-power mixed-signal integrated circuit (ASIC). The MEMS/ASIC custom design forms a DC coupled analog servo accelerometer.
■ Hysteresis	none
■ Noise (100 Hz bandwidth)	800 ng Hz
■ Natural frequency	>1000 Hz
■ Shock survival	1100 g (0.5 ms half sine)
■ Vibration survival	60 g (random noise 20-2000 Hz, Peak-peak)
■ Operating temperature	-40 to +85 °C

1.2 MS2004+ triaxial sensor

■ Measuring range	±1 g standard, ±0.5 g or ±2 g
■ Scale factor temp. drift (+1 g)	2500 ppm/°C
■ Zero point offset drift (±1 g)	800 µg/°C
■ Orientation	triaxial, horizontal (floor) mounting or vertical (wall) mounting
■ Non-Linearity	<0.1 % of full scale
■ Frequency amplitude response	constant 0 to 150 Hz (error <1%)
■ Frequency phase response	constant 0 to 50 Hz (error <1%)
■ Dynamic range (RMS)	>120 dB (DC to 100 Hz)
■ Supply voltage	±6 V, ±5%
■ Current consumption	~30 mA quiscent, 40 mA typical
■ Output voltage	±4 V
■ Self-test	test-pulse
■ Cross axis rejection	>45 dB

2. Physical Characteristics

■ Housing	Aluminum, 80 x 80 x 60 mm (W x L x H)
■ Connector	Metallic self-latching push-pull connector with positioning key (LEMO)
■ Weight	0,5 kg
■ Protection degree	IP 66 (splash-proof)

Manufacturer:

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