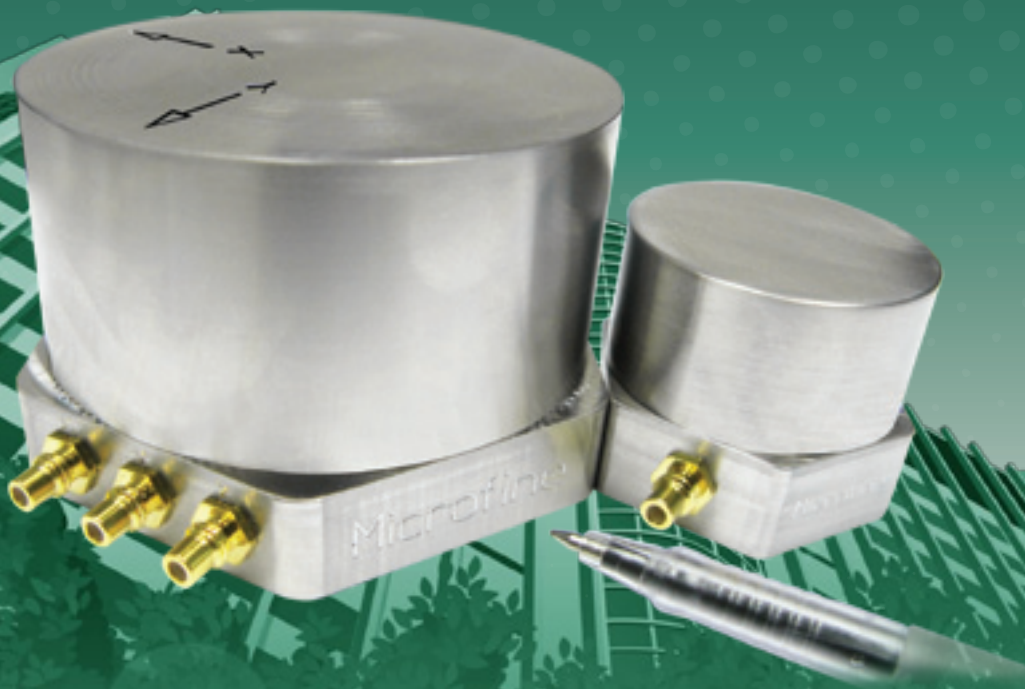


SEISMIC / INFRASONIC ACCELEROMETER SIA1

Ultra-high sensitivity and unmatched dynamic range



Model SIA1 is an ultra-high sensitivity seismic / infrasonic accelerometer. It incorporates MMT's unique design and PZN-PT single crystal technology and has an extremely wide dynamic range of $<1 \times 10^{-5}$ g to 20 g. It is available in both 1-D and 3-D designs. Other performance characteristics are provided in the table below.

Specifications

Description	Specifications
Working frequency range (Hz)	0.1 - 200
Resonant frequency (Hz)	350
Charge sensitivity (pC/g)	25,000
Voltage sensitivity (V/g)	≈ 2.5 (w/o pre-amp)*
Sensitivity direction [1-D]	Normal to base
Sensitivity direction [3-D]	3 axis (X, Y, Z)
Cross sensitivity (% of on-axis)	< 3
Capacitance (nF)	10
Dynamic range (g)	$< 1 \times 10^{-5}$ to 20
Dimensions (mm): 1D / 3D	$\varnothing 35 \times 29$ / $\varnothing 63 \times 42$ (both w/o electronics)
Weight (grams): 1D / 3D	135 / 480 (both w/o electronics)
Operation temperature range ($^{\circ}\text{C}$)	-10 to 65
Output connection	SMC socket
Casing material	AISI 304 stainless steel
Pre-amp electronics	Under development

* Measured with a 1 m cable together with a 10x probe.

Key Features

- **Ultra-high sensitivity**
(≈ 2.5 V/g without pre-amp)
- **Unmatched dynamic range** ($< 1 \times 10^{-5}$ g to 20 g)
- **Compact and light**
($\varnothing 63 \times 42$ mm & 480 grams for 3D version)

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Specifications are nominal and may be changed without prior notice