

CMG-6T-1



Portable medium motion seismometer

The Güralp CMG-6T-1 is an ultra-lightweight three-component digital seismometer ideally suited for rapid installation in medium-noise sites.

Key Features:

Modern force-feedback instrument

Direct velocity outputs

Lightweight, waterproof and self-contained

Quick and easy, one-person installation

Easy access to electrical connections

No mass clamping required – plug in and go

High sensitivity and dynamic range

The 6T-1 is a 1 s response sensor with a passband of 1 – 100 Hz.

Its high-gain feedback loop eliminates mechanical non-linearity (the overall measured linearity exceeds 90 dB) and minimizes resonances in the spring system.

The lowest spurious vibration mode of the 6T-1 is a barely measurable resonance at 440 Hz: a comparable 1 second geophone would have spurious resonances around 14 – 20 Hz.

Single-component vertical and horizontal sensors (CMG-6V-1 and CMG-6H-1) are also available.



Specifications

CMG-6T-1



Velocity output bandwidth	$1\text{ s} - 100\text{ Hz}$
Velocity output sensitivity	$2 \times 1200\text{ V/ms}^{-1}$ ² $2 \times 2000\text{ V/ms}^{-1}$ ² or $2 \times 1000\text{ V/ms}^{-1}$ ²
Peak output	$\pm 10\text{ V}$ (20 V peak-to-peak)
Optional high gain sensitivity	$2 \times 10000\text{ V/ms}^{-1}$ ² (adjustable)
Lowest spurious resonance	450 Hz
Linearity	$> 90\text{ dB}$
Cross-axis rejection	$> 65\text{ dB}$
Electronics noise level	$-172\text{ dB relative } 1\text{ m s}^{-2}\text{ Hz}^{-1}$ ² ⁻⁴ ⁻¹
Operating temperature	$-20\text{ to } +75\text{ }^{\circ}\text{C}$
Temperature sensitivity	$< 0.6\text{ V per } 10\text{ }^{\circ}\text{C}$
Mass recentring range	$\pm 3\text{ }^{\circ}$ from horizontal
Materials	Hard anodised aluminium case Gold plated contacts O-ring seals throughout
Case diameter	154 mm
Case height (with handle)	207 mm
Weight	2.49 kg
Power supply	$10 - 36\text{ V DC}$
Optional low power sensor	$5\text{ V DC supply (output } \pm 4.5\text{ V)}$
Current at 12 V DC	38 mA
Calibration controls	Common signal & enable lines exposed on sensor connector
Offset zeroing	Adjustable through case
Optional remote control	Offset zeroing with DC motors
Optional accessories	Handheld Control Unit

