



GURALP SYSTEMS

CMG-40T

broadband seismometer

The Guralp CMG-40T is a rugged and robust three-component broadband seismometer ideally suited for installation in vaults with moderate noise.



Features

True broadband force-feedback instrument

Direct velocity outputs

Self-contained in a waterproof steel case

Fully adjustable levelling feet

No mass clamping required – plug in and go

High sensitivity and dynamic range

The 40T can be supplied with response options of

1s, 10s, 30s, 60s for the LP Corner
50Hz or 100Hz for the HF Corner

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

Low-frequency vibration modes are carefully avoided in the design. The lowest spurious vibration mode of the 40T is a barely measurable resonance at 440 Hz.

Single-component vertical and horizontal sensors (CMG-40V and CMG-40H) are also available.

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Specifications

Velocity output bandwidth	30 s – 50 Hz (Standard) 1s, 2s, 10s, 60s LP options 100Hz HF option.
Velocity output sensitivity	2 × 400 V/m/s (Standard) Options for 2*1000 and 2*1600 V/m/s Optional High gain output (*10)
Peak output	±10 V (20 V peak-to-peak)
Optional high gain sensitivity	2 × 10000 V/m/s (adjustable)
Lowest spurious resonance	450 Hz
Linearity	> 90 dB
Cross-axis rejection	> 65 dB
Electronics noise level	-172 dB (rel. 1m ² s ⁻⁴ Hz ⁻¹)
Operating temperature	-20 to +75 °C
Temperature sensitivity	< 0.6 V per 10 °C
Mass recentring range	±3 ° from horizontal
Materials	Stainless steel 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 V DC
Optional low power sensor	5 V DC supply (output ±4.5 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
