



GURALP SYSTEMS

CMG-40T

broadband seismometer

The Guralp CMG-40T is a 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

Inside the 40T

The 40T can be supplied with response options of 10 s – 100 Hz, 30 s – 100 Hz and 60 s – 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.

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	10 s – 100 Hz or 30 s – 100 Hz
Velocity output sensitivity	2 × 1000 V/m/s, 2 × 800 V/m/s or 2 × 400 V/m/s
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. $1\text{m}^2\text{s}^{-4}\text{Hz}^{-1}$)
Operating temperature	-10 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
