

Güralp 6TD



BROADBAND SEISMOMETER WITH
INTEGRATED DIGITISER



An ultra lightweight, three component digital seismometer.

The Güralp 6TD is ideally suited for rapid, one-person installations in medium noise sites.

A true broadband, force-feedback instrument, the 6TD has zero mechanical non-linearity (the overall measured linearity exceeds 90 dB). The three components are orientated true to the sensitive axes to an accuracy better than 0.1°

Lightweight and waterproof to IP67 standard, with O-ring seals throughout, the 6TD is suitable for installation in a wide range of environments. The 6T mechanics have been tested down to -50 °C.

Applications

- > Monitoring volcanic unrest
- > Induced seismicity monitoring e.g. hydraulic fracturing
- > Rapid deployments e.g. aftershock monitoring

Images show the Güralp 6TD digital broadband seismometer

Key features

True broadband force-feedback instrument

Lightweight and waterproof to IP67 with 'O' ring seals throughout

6T mechanics have been tested down to -50 °C

Quick and easy, one-person installation

No mass clamping required - plug in and go

High sensitivity and dynamic range

On-board 24-bit digitizer with configurable output

Ultra low power (< 0.9 W at 100 samples per second)

Up to 32 GB of built-in Flash memory

Simple and fast live data download over FireWire

Ethernet and Wi-Fi options available

Smart case available for controlling multiple instruments

The 6T is also available as an analogue instrument for use with your own recording system

SPECIFICATIONS

| SYSTEM | | PHYSICAL | |
|--------------------------------|---|----------------------------------|---|
| Configuration / Topology | Triaxial orthogonal (ZNE) | Diameter | 154 mm |
| PERFORMANCE | | Height without handle | 153 mm |
| Velocity output | 100 Hz (option of 200 Hz) high corner 30 s (option of 20 s, 10 s, 1 s) low corner | Enclosure/Materials | Hard anodised aluminium case Gold plated contacts O-ring seals throughout |
| Output sensitivity | 2400 V/ms ⁻¹ (2*1200 V/ms ⁻¹) differential output | Weight | 2.7 kg (entire system < 4.1 kg) |
| Peak / Full scale output | ±10 V differential | DIGITAL | |
| Self noise | -172 dB (Relative to 1 [m/s ⁻¹] ² Hz ⁻¹) | Digital resolution/output format | 21-bits at 1 sample per second |
| Cross axis rejection | > 60 dB | Data output format | GCF over RS232, FireWire, Ethernet or Wi-Fi |
| Linearity | > 95 dB | Data storage | 64 MB Flash internal memory storage as standard (options available up to 32 GB) |
| Lowest spurious resonance | > 450 Hz | Communication interfaces | Ethernet, Wi-Fi |
| Transfer function | User manual is available to download from the website. Each sensor is provided with full calibration details including measured sensitivity, measured frequency response and instrument poles and zeros | | |
| Calibration controls | On board signal; generator: sine wave, impulse and broadband noise | | |
| MASS / MONITORING CONTROL | | | |
| Sensor Mass positions | Three independent sensor mass position outputs (single ended) | | |
| Mass centre | Remotely controlled automatic mass centring | | |
| POWER | | | |
| Power consumption (at 12 V DC) | 0.78 W | | |
| Power voltage range | 10– 36 V DC | | |
| ENVIRONMENTAL | | | |
| Operating temperature | -20 to +65 °C | | |