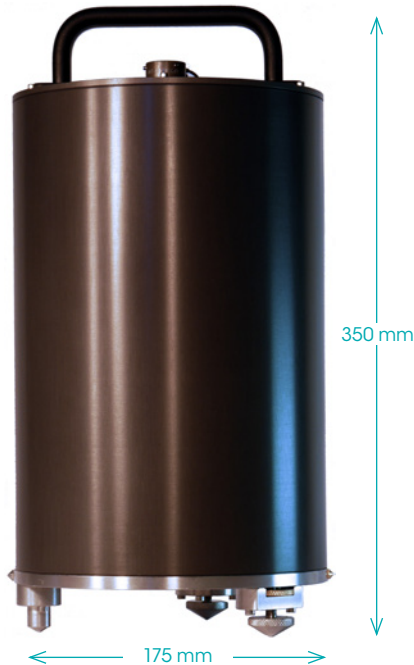


# Güralp 3ESPCD



PORTABLE WEAK MOTION DIGITAL SEISMOMETER



Our proven, all-purpose 3ESPC design with integrated digitiser in a highly compact form factor.

The Güralp 3ESPCD is a development from the well-proven 3ESPC seismometer. It is a small, lightweight, broadband, triaxial instrument, offering weak-motion performance with a built in CD24 digitiser for the price and size of a medium-motion instrument.

## Applications

- > Field-based monitoring stations
- > Surface vault
- > Post-hole
- > National seismic networks
- > Regional research projects
- > Rapid temporary deployments e.g. aftershock and volcanic unrest monitoring

## Key features

Covers the complete seismic spectrum with a single transfer function

60 s - 100 Hz standard frequency response, 120 s low-pass corner option available

On board 24-bit digitiser with configurable output and up to 32 GB of built in Flash memory

High linearity: >107 dB, 111 dB vertical

Over 140 dB dynamic range; low self noise over a wide frequency band

Cross axis rejection over 62 dB; sensor axes orthogonal to within +/- 0.05°

Robust automatic mass locking, unlocking and centring

Adjustable feet allow for levelling up to 4° tilt

Truly portable - 9.3 kg with lifting handle and convenient access to connectors

Simple and fast live data download over FireWire. Ethernet and Wi-Fi options available

## SPECIFICATIONS

SYSTEM	
Configuration / Topology	Triaxial orthogonal (ZNE)
PERFORMANCE	
Frequency Bandwidth	0.017 to 100 Hz (60 to 0.01 s) with option of a 120 s low-pass corner. Contact Güralp to discuss other frequency response options
Output sensitivity	6000 V/ms <sup>-1</sup> (2*3000 V/ms <sup>-1</sup> ) differential output Contact Güralp to discuss alternative high sensitivity (high gain) options
Peak / Full scale output	Differential: ±20 V (40 V peak-to-peak) Single-ended (e.g. mass positions): ±10 V (20 V peak-to-peak)
Sensor Dynamic Range	> 140 dB
Self-noise below USGS NLNM	>30s to >16 Hz
Cross axis rejection	> 62dB
Linearity	> 111 dB vertical; > 107 dB horizontal (USGS figures)
Lowest spurious resonance	> 300 Hz (vertical)
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	Sine, step and broadband calibration via web interface or command-line
Operating tilt range	± 2.5° from horizontal
MASS / MONITORING CONTROL	
Sensor Mass positions	Three independent sensor mass position outputs (single ended)
Locking	Remote auto mass lock/unlock
Mass centre	Remotely controlled automatic mass centring
POWER	
Power consumption (at 12 V DC)	1.6 W (without GPS or Ethernet)
Power voltage range	10– 28 V DC
ENVIRONMENTAL	
Operating temperature	–20 to +65 °C

PHYSICAL	
Diameter	175 mm
Height without feet and handle	274 mm
Height with feet	299 mm
Height with feet and handle	350 mm
Enclosure/Materials	Hard anodised aluminium
Weight	9.3 kg
Alignment	Bubble level on lid; north arrow on handle and base; adjustable feet up to 4°
Connectors	Military specification bayonet
DIGITISER	
Digital resolution/output format	24-bits
Internal storage capacity	Flash memory storage options available up to 32 GB
Communication interfaces	Simple and fast live data download over FireWire. Ethernet and Wi-Fi options available

\* See CD24 datasheet for full specifications