

Güralp 5U



SINGLE AXIS FEEDBACK ACCELEROMETER



An ultra compact, strong motion, force-feedback accelerometer with a large dynamic range.

The Güralp 5U is suitable for hazard mitigation, modal analysis and civil engineering applications.

The small size of the 5U makes it particularly suited to in-situ structural analysis applications. Experiments using a 5U, a 5TD and a DM24 digitiser can be set up with minimal disruption to working buildings. Signals from 5U instruments distributed throughout a building can be compared in real-time with earth movements measured using a buried 5TD instrument.

Applications

- > Civil engineering building design
- > Structural health monitoring

Key features

Low-noise components for high precision and extra dynamic range (greater than 140 dB)

Install to any surface, horizontal or vertical, with no mechanical adjustment required

Full-scale sensitivity from 0.1 to 2.0 g

Additional high-gain outputs or optional high-pass filter

Operates directly from 12 V DC power supply

Detailed calibration information provided with every instrument

Output offsets adjustable to within < 1 mV without exposing the sensor internal components

Optional low-pass filter with 50, 100 or 200 Hz corner frequency

SPECIFICATIONS

SYSTEM	
Configuration / Topology	Single axis
PERFORMANCE	
Acceleration output band	DC – 100 Hz standard Options of DC to 200 Hz high frequency; and 50 to 100 Hz low pass corners
Output sensitivity	± 2 g, ± 1 g, ± 0.5 g, or ± 0.1 g
Corresponding high gain outputs	0.2 g, 0.1 g, 0.05 g, 0.01 g
Peak / Full scale output	± 10 V differential
Sensor Dynamic Range, 3 to 30 Hz	< 127 dB
Cross axis rejection	0.001 g/g
Linearity	0.1% full scale
Lowest spurious resonance	> 450 Hz
Offset zeroing	Automatic on start up and on user command
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	Independent signal & enable lines exposed on sensor connector
POWER	
Power consumption (at 12 V DC)	96 mW
ENVIRONMENTAL	
Operating temperature	-20 to +70 °C

PHYSICAL	
Dimensions	75 x 75 x 125 mm
Enclosure/Materials	Hard anodised aluminium
Weight	908 g
Communication / Connectors	Mil-spec connector