## Technologies for seismology, engineering and geophysics

SS08 is a portable, broad-band, triaxial sesimometer designed for quick and simple installation, wide temperature operations and safe transport. It uses the symmetric architecture recovering Z,Y,X velocity signal from U,V,W homogeneous transducers. This methodology allows higher precision in reconstruction of real ground motion.

### **Applications**

- \* Observatory grade earthquake seismology
- \* Reservoir microseismic monitoring
- \* Planetary seismology and geophysics

### Main features

- \* High sensitivity
- \* Ultra low noise design
- \* Self noise below Peterson's noise model (NLNM)
- \* Automatic mass centering
- \* Electric mass lock upon command
- \* Magnetic shielding
- \* Low power consumption allows SS08 to be used in remote istallation with limited energy source
- \* Sealed housing with structure air-pressure variations resistant
- \* IP68 grade
- \* Made in EU (Italy)





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### Specifications

Configuration: U,V,W (output to physical motion Z, Y, X) Principle of operation: Force Feedback with capacitive transducer Nominal sensitivity: 1500V/m/s\* (customizable at order)

Z, Y, X (U,V,W mode also available at mass output signals) Velocity output:

Pass-band: 180-20s to 100Hz (customizable at order) Number of channels: 3 + 3 (Z, Y, X and virtual mass UVW status) Peak output: +/- 20V (differential output, 40V p-p)

Clip level: 13 mm/sec (nominal @ 1500 V/m/s, see chart)

Output impedance: 2 x 100 Ohm

Mass position output: +/- 10V from U,V,W signals

> 150dB in range 0.1 - 10Hz (see chart) Dynamic range: 1 with transducer selection (U,V,W,all) Calibration input:

9-36Vdc isolated Power supply input:

< 500mW\* @ 12Vdc (1W maximum depending on conditions) Power consumption: Surge and reverse-voltage, with self-resetting fuses Protections:

Calibration coil: 33 ohm

<USGS NLNM between 0.004 to 25Hz\* Sel noise: Levelling: Manual with lockable paddles, integrated level

Max. tilt olerance: +/- 3° with levelling feet

Operating temperat.: -20/+70°C (-/+25°C without recentering)

Storage temperature: -40/+80°C

Humidity: 0-100% even condensing (with plugged-in connectors)

Protection grade: IP68K

Mass lock & centering: Automatic, externally electrically activable

Max. shock allowed: 5g half sine

Connector: MIL-C-26842 26 pin at a side Standard cable lenght: 3 meters, customizable at order Digital interface: RS232 for diagnosis & commands Dimension: diameter 240mm, body height 275mm

Weight:

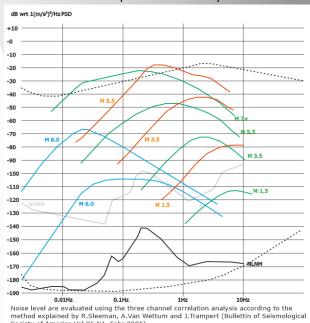
Enclosure: Aluminum, painted and coated

against corrosion

Regulation compliance: CE

Notice! This paper is an information leaflet only; it is published without programmed updates. All specifications, features and prices are subjected to changes without any prior notice. In the event of any discrepancies between this document and a commercial offer or bidding document, these latter will take precedence.

### Clip and noise level compared to NLNM and a list of amplitude of earthquakes



Noise level are evaluated using the three channel correlation analysis according method explained by R.Sleeman, A.Van Wettum and J.Trampert (Bullettin of Sei Society of America Vol.96 N1. Febr 2006).

---- Clip limit and Noise floo LOCAL EVENTS 5 - 50 km LOCAL EVENTS 80 - 120 km

LOCAL EVENTS 1800 - 3200 km

SARA electronic instruments s.r.l.

Registered office - Via A. Mercuri, 4 - 06129, Perugia - Operations: - Via A. Morettini, 11 - 06128, Perugia - ITALY Phone: +39 075 5051014 - +39 075 9370309 - +39 075 3726002 - +39 328 4165648 - www.sara.pg.it - info@sara.pg.it

<sup>\*</sup> specification can variates depending on customizations and versions of bandpass and sensitivity