



VERY BROADBAND SEISMOMETER

FEATURES

- Ultra low noise
- Three component
- 0.003 to 5 Hz
(optional to 16 Hz)

The Model **KS-1** is very broadband, observatory grade, Seismometer System. It is a direct off-spring of the well-known, time proven, Model **KS-54000** borehole seismometer used by AFTAC in their detection arrays and by IRIS in their global network. It has a response flat to velocity from about 0.003 to 5 Hz (an optional version with acceleration output goes up to 16Hz). This instrument family is known worldwide as the standard for low noise studies of very long period earth motion.

KS-1 uses the same electronics as **KS-54000** and was re-packaged for surface installations; it requires only about 2.4W at 24 Vdc.

KS-1 comes in two separate modules, one contains the three orthogonally mounted sensors, the other the electronics. Leveling is done manually by adjusting the feet; an air bubble indicator is provided.

MODEL KS-1



Sensor package



Electronics package

VERY BROADBAND SEISMOMETER MODEL KS-1 SPECIFICATIONS

OPERATING CHARACTERISTICS

Configuration	Three-component
Outputs, Seismic Data	
Number and Type	Three, differential
Sensitivity	Standard 2,400 V-sec/m (other values possible)
Response	Flat to velocity from 0.003 to 5 Hz (optional to 16 Hz)
Distortion	Less than 100 ppm to ½ full scale
Noise Level	see figure below for KS-54000 40 V _{p-p} , maximum

Output, Mass Monitor

Number and Type	Three, single-ended
Sensitivity	510 V-sec ² /m, nominal
Response	Flat to acceleration, dc to 4.2 Hz
Level	20 V _{p-p} , maximum

Calibration Input

Resistive Mode	Equivalent to flat earth acceleration
Capacitive Mode	Equivalent to flat earth velocity
Type	Voltage - sine wave, pulse, etc.
Level	20 V _{p-p} , maximum

Power Requirements

Operating	24 Vdc, 100 mA, nominal
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ENVIRONMENTAL CHARACTERISTICS

Operating Temperature	-25° to +60°C, no convections
Storage Temperature	-55° to +85°C

PHYSICAL CHARACTERISTICS

Dimensions of Sensor Package

Height	13.5 in (34 cm)
Diameter	10.75 in (27 cm)
Net Weight	95 lbs (43 kg)

Dimensions of Electronics Package

Length	26 in (66 cm)
Diameter	5.125 in (13 cm)
Net Weight	10 lbs (4.5 kg)

