

SGS-BH Smart Bore-Hole Geophone

The SGS-BH smart bore-hole Geophone is a Precise, Rugged and Versatile Embedded Vibration Meter

Professional Grade Vibration Measurements:

- 2 models for a wide range of applications
 1. ISEE BH (2-250Hz, 120mm/s, Bore-Hole)
 2. DIN BH (1-80Hz, 120mm/s, Bore-Hole)
- 2.756 kHz Sampling Rate
- 0.5 Hz – 400 Hz 1/3 Octave Bands
- Peak and RMS velocity
- Complies to ISEE and DIN 45669-1
- Automatic sensor check
- Rugged and compact form-factor
- Up-To 100 m cable length

Ideal for:

- Mines and quarries
- Construction sites
- Tunnels and subway
- Oil and gas exploration
- Protection of sensitive equipment



Technical Specifications

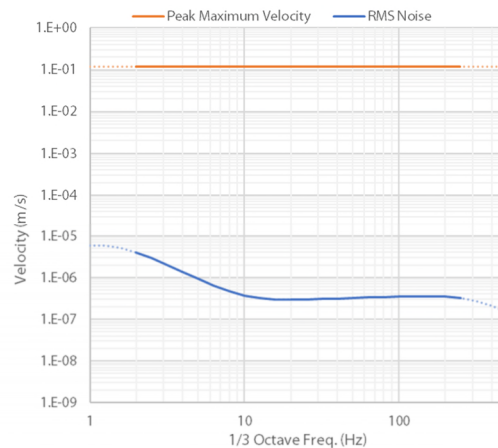
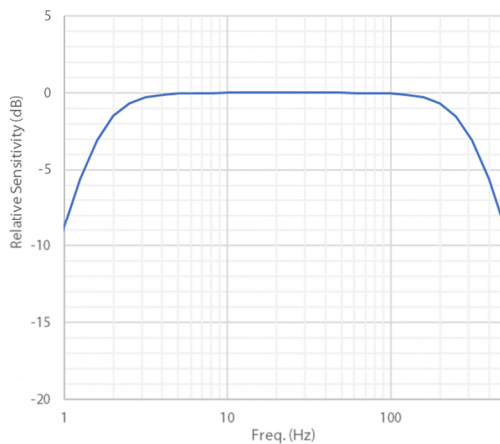
Vibration Meter	
Standards	ISEE (2022), DIN 45669-1 (2010)
Certificate	Embedded Calibration Certificate in Non-Volatile Memory
Sensor Technology	Analogue Geophone
Sampling Frequency	2.756 kHz
Resolution	32-bit floating point
Axis	X (Trans.), Y (Long.), Z (Vert.), Vector-Sum
Measured Metrics	RMS, Peak, Time-Signal and 1/3 Octave spectrum (0.5-400 Hz) DIN 45669 KBFT Weighted Velocity (0.125 s Expo. RMS) (Model DIN only)
Metrics Interval	93 ms
Metrics Buffer Length	10 s
Self-Test	
Method	Electromechanical force injected on sensor
Results	Time signal and Pass/Fail based on factory calibrated values in sensor memory
Communication	
Protocol	RS-485 Half-Duplex, 3Mbps
Cable	M12, 4-Conductor, Female-Male, 10m
Environmental	
Operating Temperature	-40 °C to 50 °C
Storage Temperature	-50 °C to 70 °C
Certified to	IP68, NEMA 4X,6,6P,12,13
Power	
Power	0.5 W
Operating Voltage	5 V
Physical	
Height	mm (")
Diameter	50 mm (1-31/32")
Weight	g (lb)
Density	kg/m ³ (lb/ft ³)
Mounting	Minimum hole diameter 54mm (2-1/8")
Accessories	
Extension Cable (PCAB-00006)	M12, 4-Conductor, Female-Male, 10m (can be daisy-chained up to 100m)
Adapter Cable (PCAB-00112)	USB-to-RS485 Adapter (Provided)

Technical Specifications, Cont.

Model	ISEE-BH (SGS0-00005)	DIN-BH (SGS0-00006)
Lower Frequency Limit, F_u (Hz)	2	1
Upper Frequency Limit, F_o (Hz)	250	80
Axis Peak Maximum Velocity (mm/s)*	120	120
Axis Peak Maximum Displacement (mm)*	0.75	1.5
Axis Peak Detection Limit (um/s)*	45	30
V-Sum Peak Detection Limit (um/s)*	75	50
Axis RMS Velocity Noise (um/s)*	15	10
V-Sum RMS Velocity Noise (um/s)*	25	15
Available KBft	NO	YES
Standard	ISEE	DIN 45669

* Values in the above table are minimum specifications. Typical peak maximum velocity is higher and typical vibration noise levels are lower.

Frequency Response, ISEE-BH (SGS0-00005)



Frequency Response, DIN-BH (SGS0-00006)

