

# VE-33 Velocity Sensor



## Overview

The VE Velocity Sensors are engineered for consistent performance over a long lifetime. Advanced computerised testing, manufacturing techniques and quality control are used in the production process to provide both the uniform parameters and the rugged qualities required in modern velocity sensors.

The sensor module has proven itself successfully worldwide for many years in different applications. The symmetrical rotating dual coil construction minimises the force on the spring arms. The use of precious metals ensure optimum electrical contact and a long operating life.

The VE Velocity Sensor has a 3 dB cutoff frequency at 4.5 Hz, making it suitable for a wide range of applications in civil engineering and general vibration measurement. The VE-33 is a triaxial velocity sensor.

The VE Velocity Sensors are housed in a very compact 195 x 112 x 95 mm case. The sealed cast aluminium housing contains an MS-style connector or a sealed cable inlet. The housing also

## Key Features

- ▶ Sensitivity G 27.3 Vs/m
- ▶ Bandwidth 4.5 Hz to 315 Hz
- ▶ Civil engineering and general vibration measurement applications
- ▶ Single bolt mounted housing provides up to  $\pm 10^\circ$  of levelling adjustment
- ▶ Surface and wall mount
- ▶ Temperature compensated

incorporates a single bolt mount with three levelling screws, which offers extended adjusting capability during mounting.

## Applications

- ▶ Civil engineering
- ▶ General vibration measurement

# VE-33 Velocity Sensor

## Specifications

### General Characteristics

Application: Civil engineering, general vibration measurement

Configurations:

VE-33:

Triaxial	Biaxial	Uniaxial	Axes	Alignment**
■	■	■	X - Y - Z	H - H - V

\*\* H: Horizontal, V: Vertical

### Specification

Instrument type: Digital grade long travel geo-phones  
 Dynamic range: > 96 dB  
 Linearity: < 0.3% of full scale  
 Cross axis sensitivity: < 0.1% of full scale  
 Frequency response: 4.5 to 315 Hz  
 Damping: standard 0.7  
 Sensitivity G: 27.3 Vs/m  
 Output impedance: 430  $\Omega$   
 Measuring range: See plot, bottom left

### Power

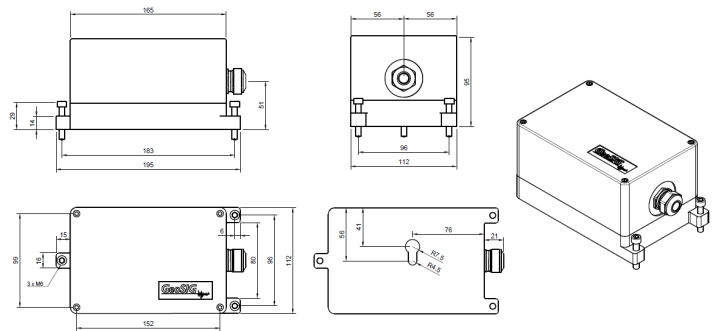
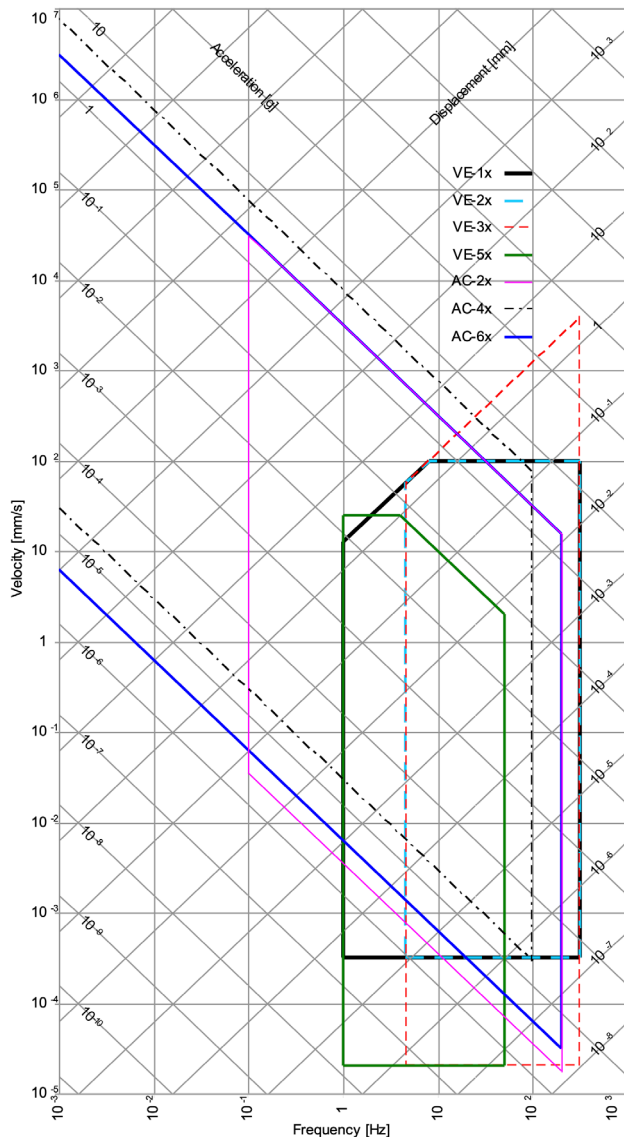
Supply Voltage: No power required

### Connector Pin Configuration

Pin 1-2, 3-4, 5-6: Signal output for axes X, Y, Z  
 Pin 7: Shield

### Environment / Housing

Housing type: Cast aluminium  
 Sealed access cover  
 Housing size: 195 x 112 x 95 mm  
 Weight: 1.0 kg  
 Index of protection: IP65  
 Temperature range: -25 to 85 °C (operating)  
 -40 to 100 °C (storage)  
 Humidity: 0 to 100% (non-condensing)  
 Mounting: Single bolt, surface mount, adjustable within  $\pm 10^\circ$



### Standard VE-3x

Floor mounted  
 2 m cable with sensor mating connector,  
 concrete anchor and user manual on CD

### Ordering Information

Specify: Type of VE-33 and other applicable options