

VE-3x 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-31-H is uniaxial horizontal, the VE-31-V is uniaxial vertical, VE-32 is biaxial, and 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

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

or a sealed cable inlet. The housing also incorporates a single bolt mount with three levelling screws, which offers extended adjusting capability during mounting.

Applications

- ▶ Civil engineering
- ▶ General vibration measurement

VE-33/ VE-32/ VE-31-V/ VE-31-H Velocity Sensor

Specifications

General Characteristics

Application: Civil engineering, general vibration measurement

Configurations:

	Triaxial	Biaxial	Uniaxial	Axes	Alignment**
VE-33:	■			X - Y - Z	H - H - V
VE-32-H:		■		X - Y	H - H
VE-32-HV:		■		X (or Y) - Z	H - V
VE-31-H:			■	X (or Y)	H
VE-31-V:			■	Z	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 Ω
 Measuring range: See plot, bottom left

Power

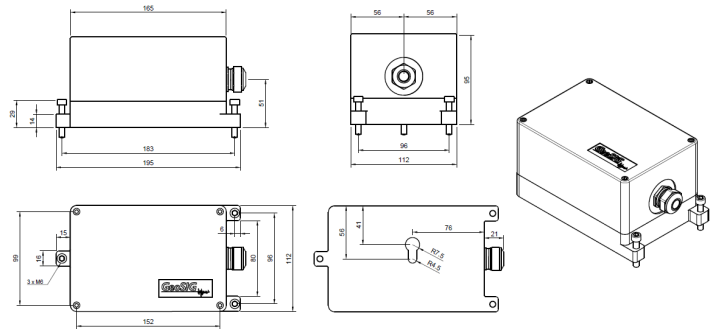
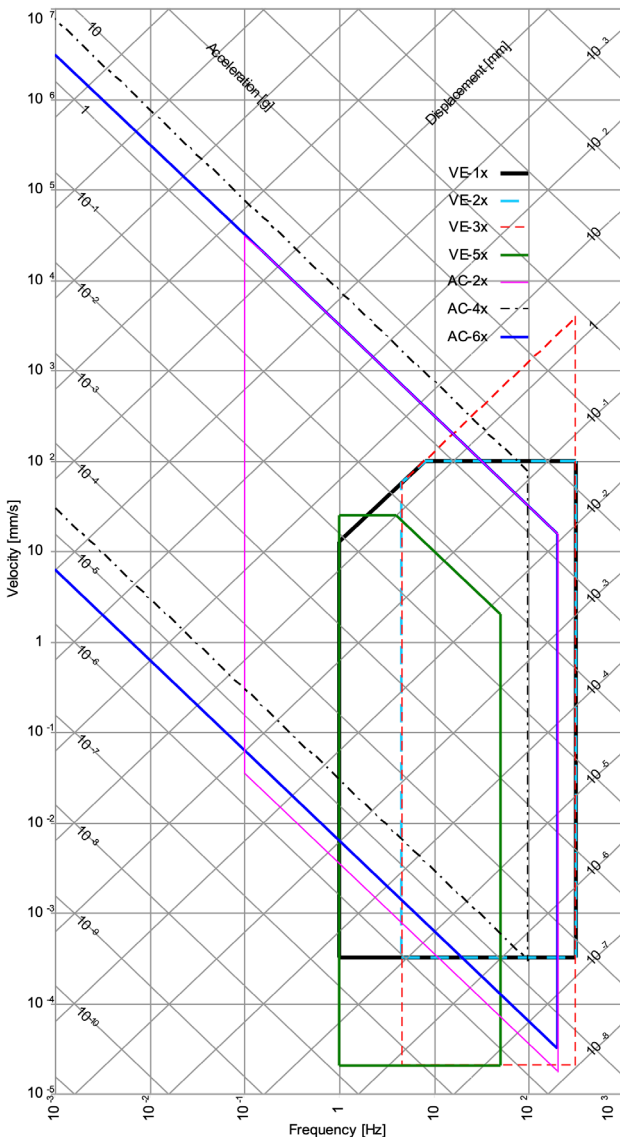
Supply Voltage: No power required

Connector Pin Configuration

Pin 1-2, 3-4, 5-6: Signal output for axis 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 ±10°



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-3x and other applicable options