

## GSV-310 / GSV-210 / GSV-111 / GSV-110 Velocity Sensor

### Features

- Wide Full Scale Range,  $\pm 1$  to  $\pm 100$  mm/s
- Bandwidth 1 Hz to 315 Hz
- Applications:
  - Civil engineering
  - General vibration measurement
- Built-in Impulse Test Circuit
- Single Bolt Mounted Housing provides up to  $\pm 10^\circ$  of levelling adjustment
- Also available as Borehole Version



### Outline

The GSV 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.

With the new GSV-x1x, 1 Hz Velocity Sensor now it is possible to measure vibrations in accordance with DIN 45669-1.

The sensor module has proven itself successfully world-wide 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 GSV Velocity Sensors operate from a wide range of input voltages and can be used for a variety of civil engineering and general vibration measurement applications. The GSV-110 is uniaxial horizontal, the GSV-111 uniaxial vertical, GSV-210 biaxial and the GSV-310 is a triaxial velocity sensor.

The GSV Velocity Sensors are housed in a very compact 63 x 63 x 140 mm case. The sealed cast aluminium housing contains a MS style connector or a sealed cable inlet. The housing also incorporates a single bolt mount with three levelling screws, which offers extended adjusting capability during mounting.

# Specifications GSV-310 / GSV-210 / GSV-111 / GSV-110

## General Characteristics

Application: Civil engineering, general vibration measurement

Configurations: GSV-110 Horizontal  
GSV-111 Vertical  
GSV-210 Biaxial  
GSV-310 Triaxial

Full Scale Range:  $\pm 1$  mm/s,  $\pm 10$  mm/s or  $\pm 100$  mm/s

## Specification

Instrument Type: Digital grade long travel geophones

Dynamic Range: > 96 dB or better

Linearity: < 0.3 % of full scale

Cross Axis Sensitivity: < 0.1 % of full scale

Frequency Response: 1 to 315 Hz

Damping: standard 0.7

Full Scale Output:  $2.5 \text{ V} \pm 2 \text{ V}$

Output Impedance: <  $50 \Omega$

Self Test: Impulse Test

## Power

Supply Voltage: 9 to 12 VDC

Supply Current: 1.2 mA per axis

## Environment / Housing

Housing Type: Cast aluminium  
Sealed access cover

Housing Size: 63 x 63 x 140 mm

Weight: GSV-110: 0,6 kg  
GSV-111: 0,6 kg  
GSV-210: 0,7 kg  
GSV-310: 0,8 kg

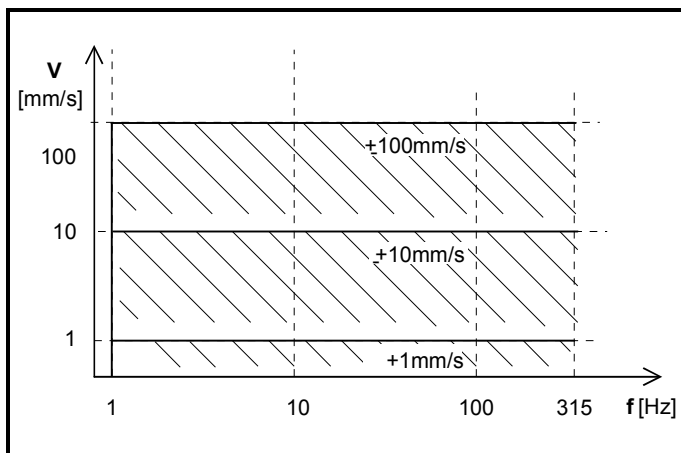
Index of Protection: IP 65 with connector  
IP 67 with cable inlet

Temperature Range: -25 to 85 °C (operating)  
-40 to 100 °C (storage)

Humidity: 0 to 100 % (non-condensing)

Mounting: Surface mount  
Single bolt fixing

Levelling: Three levelling screws  
 $\pm 10^\circ$  range



Measuring Range

## Interconnecting Cable (recommended)

GSV-110: 3 Pair, overall shield, 0.5 mm<sup>2</sup>  
GSV-111: 3 Pair, overall shield, 0.5 mm<sup>2</sup>  
GSV-210: 4 Pair, overall shield, 0.5 mm<sup>2</sup>  
GSV-310: 4 Pair, overall shield, 0.5 mm<sup>2</sup>

## Options

Temperature Range: -25 to 100 °C (operating)

Current Transmitter: 0 to 20 mA output, which allows long distance transmission

Cable Connection: Sealed cable inlet, replaces standard 8 Pin MS connector

Temperature Output: Temperature sensing at the sensor side

Type: Borehole Version

## Ordering Information

Specify: Type of GSV-x1x, full scale range, and options if applicable

## Specifications subject to change

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