

## Velocity Sensor GSV-120 / GSV-121 / GSV-320

### Features

- Wide Full Scale Range
- Bandwidth 4.5 to 315 Hz
- Application in Civil Engineering and General Vibration Measurement
- Built-in Impulse Test Circuit
- Single Bolt Mounted Enclosure provides up to  $\pm 10^\circ$  of Levelling Adjustment



### 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 necessary in modern velocity sensors.

The sensor module has been proven 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-120 is uniaxial horizontal, the GSV-121 a uniaxial vertical and the GSV-320 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.

# SPECIFICATIONS GSV-120 / GSV-121 / GSV-320

## General Characteristics

Application: Civil engineering, general vibration measurement

Configurations: GSV-120 Horizontal  
GSV-121 Vertical  
GSV-320 Triaxial

Full Scale Range:  $\pm 10$  mm/s,  $\pm 50$  mm/s or  $\pm 100$  mm/s

## Interconnecting Cable (recommended)

GSV-120: 4 Wire, overall shield, 0.5 mm<sup>2</sup>

GSV-121: 4 Wire, overall shield, 0.5 mm<sup>2</sup>

GSV-320: 4 Pair, individual shield, 0.5 mm<sup>2</sup>

## Power

Supply Voltage: 9 to 12 VDC

Supply Current: 1.2 mA per axis

## 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: 4.5 to 315 Hz

Damping: standard 0.7

Full Scale Output: 2.5 V  $\pm$  2 V

Output Impedance: < 50  $\Omega$

Self Test: Impulse Test

## Environment / Housing

Package Type: Cast aluminium, surface mount, sealed access cover

Package Size: 63 x 63 x 140 mm

Weight: GSV-120: 0,6 kg  
GSV-121: 0,6 kg  
GSV-320: 0,8 kg

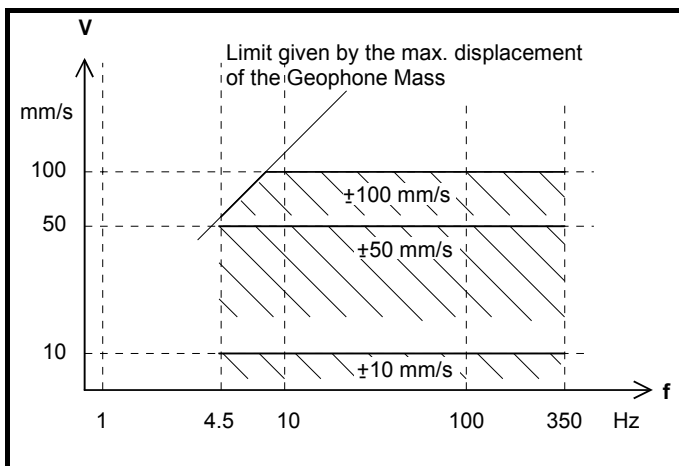
Index of Protection: IP 65

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

Humidity: 0 to 100 % (non-condensing)

Mounting: Single bolt fixing

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



Measuring Range

## Options

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

1 Hz Extension: Electrical circuit, which extends the passband down to 1 Hz.

Low Noise Amplifier: Amplification of 1000 using very low noise electronics (model GSV-X20HG).

## Ordering Information

Specify: Type (GSV-120, GSV-121, GSV-320), full scale range, and options if applicable

## Specifications subject to change

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