



# SV258 PRO

Building Vibration and  
Noise Monitoring Station



# Building Vibration Measurements with SV 258 Pro

SV258 PRO is a **portable monitoring system** housed in a waterproof case dedicated for periodic and long-term outdoor measurements.

Peak Particle Velocity (**PPV**), PPV Vector Sum and Vibration Dose Value (**VDV**) are measured simultaneously in THREE AXES. The time history logging of vibration velocity results (PPV) and acceleration (VDV) is performed simultaneously.

Station is fully configurable to measurement of **human vibration** in buildings in accordance to ISO 2631-1, BS 6472 and DIN 4150-2.

An additional measurement channel is available for **Class 1 noise** measurements in parallel to tri-axial vibration measurements.

Military standard connectors provide reliable, **robust and waterproof cable connections**.



The station is based on SVAN958A which can be easily removed from the case and used as **hand-held** sound and vibration level meter.

The **GSM modem** provides fast data transfer over the Internet to PC with standard Internet connectivity. SMS and E-MAIL alarms can be configured based on vibration or noise levels.

**SvanNET** enables a plug & play connection to Internet and easy management of measurement projects. Regardless of the SIM card type, Public or Private IP numbers, SvanNET will establish connection, giving full access to the measurement data via **WEB BROWSER**.

Station can be powered from **internal battery** or outdoor DC power supply and is ready for direct connection of **solar panel**. The powering is managed by the intelligent charging unit.

The low-noise, hermetically sealed **tri-axial** piezoelectric accelerometer enables an outdoor use without additional enclosures.

## About SV 258 PRO

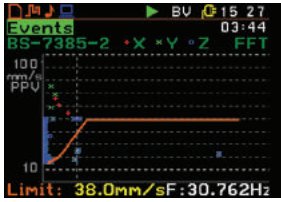
The SV 258 PRO is using the ground vibration mode in the SVAN958A has been developed for both short- and long-term monitoring applications. It measures triaxial velocity and acceleration in parallel and calculates Peak Particle Velocity and Vibration Dose value simultaneously. In addition to logging overall values and frequency spectra, the time domain signal is stored for post processing purposes.

FFT is used for dominant frequency determination according to BS and DIN standards. Alternatively, the RMS or PEAK velocity spectrum in 1/3 octave bands can be used for comparison with user curves.

An additional measurement channel is available for Class 1 noise measurements in parallel to triaxial vibration measurements.

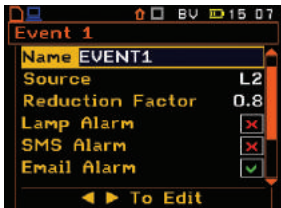


# All in One Solution



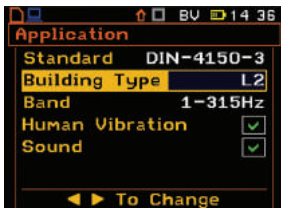
## Building Vibration Standards

The choice of Building Vibration Standard and the type of building (curve) enables the vibration velocity measurements according to with commonly used standards such as DIN 4150-3 or BS 7385-2 that use Peak Particle Velocity and Dominant Frequency method.



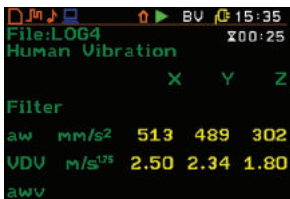
## Alarms and Events

The system generates SMS and E-mail notifications as well as visual and audio alarms. In addition to simple triggers from PPV or LEQ values, you can configure alarms from standard curves (e.g. DIN 4150-3) or custom curves based on FFT or 1/3 octaves. The triggering of an alarm starts the Event, whose length is configurable. After the Event time has elapsed, the instrument starts analysing the data and indicates the highest PPV value and its dominant frequency. The time and value of the Event is saved in the meter's memory.



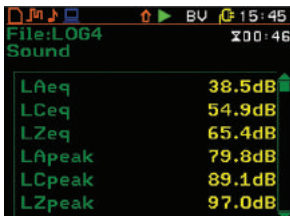
## User Curves in FFT and 1/3 Octaves

If you can't find the vibration standard on the list of implemented ones, you can always input customized values to create a criterion curve based on FFT or 1/3 octave (RMS, PEAK or MAX).



## Human Vibration in Buildings

The station allows simultaneous measurement of vibration acceleration, allowing the measurement of VDV with a different recording step than PPV making the reporting much easier. The analyzer has built-in weighing filters according to ISO 2631-1 and ISO 2631-2 as well as DIN 4150-2. It is also possible to measure the impact of vibrations on people using 1/3 octave spectrum.

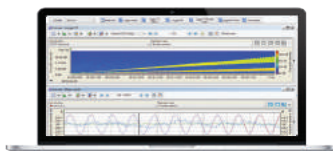


## Class 1 Noise

The fourth channel in the station can be used to measure sound in accordance with the requirements of IEC 61672 Class 1. The results (e.g. LEQ, MAX, MIN or PEAK) are recorded together with the vibration velocity and acceleration steps, making the correlation of sound and vibrations much easier.

## Wave Recording

With WAV analysis software you can search for peaks and calculate FFT or 1/3 octave spectrum on selected time periods. The post-processing software comes with the system at no additional cost.



## On-line data access with SvanNET

The built-in GSM modem transmits measurement data to the SvanNET server where the user has access to current data, historical data, and can also generate a measurement report.





## SV 258 Pro Technical Specifications

Standards	DIN 4150-3, DIN 4150-2, BS 7385-2, 22/09/1994, 23/07/1986, IN-1226, USER FFT, USER 1/3 OCTAVE
Meter Mode	PPV, DF, RMS, VDV, MAX, Peak, Peak-Peak, Vector, aw, aww
Profiles Per Channel	2 (Velocity and Acceleration)
Analyser	1/3 octave real-time analysis or FFT analysis Time domain signal recording to WAV format
Filters in Velocity Profile	DIN 80, DIN 315, VEL1
Filters in Acceleration Profile	HP1, HP3, HP10, Wk, Wd, Wc, Wj, Wm, Wg, Wb
RMS & RMQ Detectors	Digital true RMS & RMQ detectors with Peak detection, resolution 0.1 dB
Detector Time Constants	Fast 125 ms in accordance to DIN 4150-2
Accelerometer	SV 84 triaxial high sensitivity (1 V/g), noise floor RMS: 14 $\mu\text{m/s}$ (VEL1), 2 $\mu\text{m/s}$ (VEL3)
Measurement Range	SV 84: 0.0005 $\text{m/s}^2$ RMS $\div$ 50 $\text{m/s}^2$ PEAK
Frequency Range	SV 84: 0.2 Hz $\div$ 315 Hz
Standards	Class 1: IEC 61672-1
Meter Mode	SPL, Leq, SEL, Lden, Ltm3, Ltm5, Statistics - Ln (L1-L99), LMax, LMin, LPeak
Weighting Filters	A, C, Z, G
RMS Detector	Digital true RMS detector with Peak detection, resolution 0.1 dB
Detector Time Constants	Slow, Fast, Impulse
Microphone kit (optional)	SV 208A outdoor microphone kit with an extension cable
Measurement Range	16 dBA RMS $\div$ 140 dBA Peak (Total Dynamic Range)
Linearity Range	26 dBA RMS $\div$ 140 dBA Peak (IEC 61672)
Frequency Range	0.5 Hz $\div$ 20 kHz (microphone dependent) with MK 255: 3.5 Hz $\div$ 20 kHz
Remote Communication	3G modem
Power Supply	DC power supply / charger 11 V $\div$ 30 V (waterproof) Internal battery 17 Ah / 12 V Secondary external battery 33 Ah / 12 V (optional) Solar panel (optional)
Operating Time on Battery	3 days with continuous modem transmission <sup>2</sup> 7 days with modem switched off <sup>2</sup> Test Conditions: meter mode, display dimmed, 10 ms time-history logger
Environmental Conditions	Temperature -10 °C $\div$ +50 °C
Dimensions	420 x 340 x 210 mm (without accessories)
Weight	Approximately 9 kg including battery

<sup>1</sup>function parallel to the meter mode

<sup>2</sup>depends on configuration and environmental conditions

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