SV 258 PRO
Building Vibration and Noise Monitoring Station

SVANTEK
monitoring systems
Military standard connectors provide reliable, robust and waterproof cable connections.

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.

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.

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, awv

Profiles Per Channel
- 2 (Velocity and Acceleration)

Analysers
- 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 μm/s (VEL1), 2 μm/s (VEL3)

Measurement Range
- SV 84: 0.0005 m/s² RMS ÷ 50 m/s² PEAK

Frequency Range
- SV 84: 0.2 Hz ÷ 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 ÷ 140 dBA Peak (Total Dynamic Range)

Linearity Range
- 26 dBA RMS ÷ 140 dBA Peak (IEC 61672)

Frequency Range
- 0.5 Hz ÷ 20 kHz (microphone dependent) with MK 255: 3.5 Hz ÷ 20 kHz

Remote Communication
- 3G modem

Power Supply
- DC power supply / charger 11 V ÷ 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 transmission¹
- 7 days with modem switched off²

Test Conditions: meter mode, display dimmed, 10 ms time-history logger

Environmental Conditions
- Temperature -10 °C ÷ +50 °C

Dimensions
- 420 x 340 x 210 mm (without accessories)

Weight
- Approximately 9 kg including battery

¹function parallel to the meter mode
²depends on configuration and environmental conditions

The policy of our company is to continually innovate and develop our products. Therefore, we reserve the right to change the specifications without prior notice.