

SV258 *pro*

Building Vibration & Noise Monitoring Station



INSTRUMENTATION FOR SOUND & VIBRATION MEASUREMENTS

SV258 *pro* Vibration & Noise Monitoring Station

Features

SV 258 PRO is a portable monitoring system housed in a waterproof case dedicated for periodic **OUTDOOR** measurements.

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

Station uses waterproof **CHARGER** that is designed for outdoor use.

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

The **3G 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 provides web interface for instrument control, results preview and data download.

The station is based on **SVAN 958A** which can be easily removed from the case and used as hand-held sound and vibration level meter.

Peak Particle Velocity (PPV), PPV Vector Sum and Vibration Dose Value (VDV) are measured simultaneously in **THREE AXES**.

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

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.

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



About

SV258 PRO is an outdoor monitoring system based on SVAN 958A Class1 sound level meter. The portable and battery powered station can be used for a variety of monitoring applications including construction site monitoring, tunneling and blasting. The IP65-rated case contains a lead-acid battery which operating time can be easily extended by connecting an external battery or small solar panel. The intelligent charging unit enables use of a solar panel without expensive controllers and heavy batteries. The case is fitted with very robust, waterproof connectors (military standard) and comes with an IP65 external power supply. The system uses a low-noise, hermetically sealed tri-axial piezoelectric accelerometer enabling the outdoor use without additional enclosures. The accelerometers' signal ground is insulated from the mounting surface and outer case to prevent ground loops. All accessories fit conveniently into a second carrying case.

The system provides broad-band vibration results such as RMS and Peak or Peak-Peak. Optionally it can use FFT analysis for determination of dominant frequency used for comparison with the BS and DIN norm curves.

The broad-band noise results can be recorded simultaneously in three acoustic profiles, which enable measurements to be taken with 3 different filters (e.g. A, C, Z) as well as 3 different detector time constants (e.g. Fast, Slow, Impulse). The SVAN958A can be easily removed from the case and used as hand-held vibration and sound level meter.

The monitoring station uses the 3G modem for the remote communication with Internet. SvanNET, the relay server, supports the connection between PC and station allowing the usage of all types of SIM cards with the system, regardless if they have public or private IP. The connection over the SvanNET gives access to the status of the noise monitoring station via mobile phone or tablet.

What's inside?



The SV 258 PRO kit consists of two carrying cases. The main unit is a waterproof carrying case with internal 17 Ah battery and internal controller supporting powering from external DC or solar panel. The SVAN 958A Class 1 vibration and sound level meter is installed inside the main unit. The outdoor charger and vibration accelerometer are packed inside the second transportation case. The kit includes license for SvanPC++ software and SvanNET base account. Each kit has its factory calibration certificate and **36 MONTHS WARRANTY CARD**.

Software



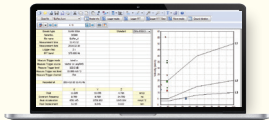
SvanPC++ is a PC software providing functions such as measurement data downloading from instruments to PC, measurement setups, measurement results in text, table and graphical form of presentation, export data to spread sheet or text editor applications.

SvanNET is a relay server supporting Internet connection between PC and SV258 PRO and allows usage of all types of SIM cards with the SV258 PRO modem regardless if they have public or private IP. The SvanNET provides a web interface that allows to watch real-time measurement results on a PC or mobile device, manually download files and reconfigure the station.

Optional functions



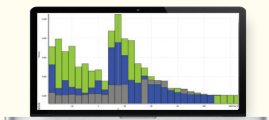
SvanPC++ REMOTE COMMUNICATION software package offers advanced features such as automatic data download, CSV and HTML data publishing as well as FTP upload. It also supports configuration of the monitoring station as well as simultaneous download from multiple stations. It can be activated at any time by entering the activation code.



The optional **FFT** is used for dominant frequency determination. Data files containing information about the dominant frequency are used for comparison with the BS and DIN norm curves in standard SvanPC++ software. It can be activated at any time by entering the activation code.

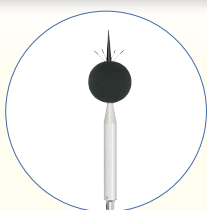


In building / ground vibration mode the **1/1 OCTAVE ANALYSIS** is recorded as vibration velocity RMS spectrum. It can be activated at any time by entering the activation code.



The **1/3 OCTAVE ANALYSIS** is available as an alternative to building / ground vibration mode. It enables to perform 1/3 octave spectrum analysis for all noise or vibration channels. It can be activated at any time by entering the activation code.

Optional accessories



SV208
Sound
Measurement Kit



SA206
Tripod for Outdoor
Microphone Kit



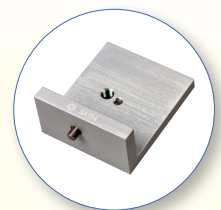
SV33A
Class 1 Acoustic
Calibrator
114 dB at 1 kHz



SB270_EB
External Battery 33 Ah
to Monitoring Station



SV111
Vibration Field
Calibrator



SA154
Calibration
Adapter to SV84
accelerometer

Technical Specifications

SVAN 958A Vibration Level Meter & Analyser



Meter Mode	RMS, VDV, MTVV or Max, Peak, Peak-Peak, Vector, A(8), Dose, ELV, EAV
Profiles Per Channel	2 (in Ground Vibration mode)
Analyser (optional)	1/1 octave real-time analysis 1/3 octave real-time analysis FFT analysis up to 1600 lines in a selectable frequency band Time domain signal recording to WAV format
Filters In Profile 1	HP1, HP3, HP10, VEL1, VEL3, VEL10, VELMF, DIL1, DIL3, DIL10, KB, W _k , W _d , W _c , W _j , W _m , W _h , W _g , W _b , W _v
Filters In Profile 2	VEL1, VEL3, VEL10
RMS & RMQ Detectors	Digital true RMS & RMQ detectors with Peak detection, resolution 0.1 dB
Detector Time Constants	From 100 ms to 10 s
Accelerometer	SV 84 triaxial high sensitivity (1 V/g)
Measurement Range	SV 84: 0.0005 ms ⁻² RMS ÷ 50 ms ⁻² PEAK (accelerometer dependent)
Frequency Range	SV 84: 0.2 Hz ÷ 3 700 Hz (accelerometer dependent)

SVAN 958A Sound Level Meter & Analyser (optional)

Standards	Class 1: IEC 61672-1:2002
Profiles Per Channel	3
Meter Mode	SPL, L _{eq} , SEL, L _{den} , L _{tm3} , L _{tm5} , Statistics - L _n (L ₁ -L ₉₉), L _{Max} , L _{Min} , L _{Peak}
Analyser (option)	1/1 octave real-time analysis, (Class 1, IEC 61260) 1/3 octave real-time analysis, (Class 1, IEC 61260) FFT analysis up to 1600 lines in selectable frequency band
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 (option)	MK 255, Class 1, 50 mV/Pa, prepolarised 1/2"
Preamplifier (option)	SV 12L detachable
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) MK 255: 3.5 Hz ÷ 20 kHz

SV 258 PRO Technical specifications



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 transmission 7 days with modem switched off Test Conditions: meter mode, display dimmed, 10 ms time-history logger
Microphone protection kit	SA 277 outdoor protection kit (optional)
Environmental Conditions	Temperature -10 °C ÷ +50 °C
Dimensions	420 x 340 x 210 mm (without antenna and cables)
Weight	Approximately 9 kg including battery
Accelerometer	SV 84 triaxial high sensitivity (1 V/g)

Our Company's policy is based upon continuous product development and innovation. Therefore, we reserve the right to change the specifications without any prior notice whatsoever.

Proudly distributed by:

SVANTEK Sp. z o. o.
ul. Strzygłowska 81, 04-872 WARSAW, POLAND
phone/fax (+48) 22 51 88 320, (+48) 22 51 88 312
<http://www.svantek.com> e-mail: office@svantek.com.pl