

SVAN 949

Sound & Vibration Analyser

The SVAN 949 is all digital, Type 1 sound & vibration meter along with analyser. Instrument is intended to general acoustic measurements, environmental noise monitoring, occupational health and safety monitoring.

Three acoustic or vibration profiles allow parallel measurements with independently defined filters and RMS detector time constants. Each profile provides significant number of results (like for sound L_{eq} , L_{Max} , L_{Min} , L_{Peak} , SPL, SEL etc.). Advanced time history logging for each profile provides complete information about measured signal in non-volatile 8 MB or 48 MB (option) internal memory and can be easy downloaded to any PC using USB 1.1 interface and SvanPC+ software.

All required weighting filters (e.g.: A, C, W_k , W_c , W_h) including the latest ISO 2631-1&2 standard are available with this instrument. RMQ detector

enables direct measurement of the Vibration Dose Value (VDV).

Using computational power of its digital signal processor the SVAN 949 can perform real time 1/1 & 1/3 octave analysis including statistical calculations, real time FFT analysis, reverberation time RT 60 and Tonality.

Fast USB 1.1 interface (12 MHz) creates real time link for the application of the SVAN 949 as a PC "front-end".

Measurement results can be stored in large 8 MB or 48 MB (option), non-volatile memory and easy downloaded to any PC using the USB interface and SvanPC+ software.

Thanks to replaceable standard four AA batteries, robust and lightweight design the SVAN 949 can be used in hard environmental conditions over the whole work day.

FEATURES

- Type 1 sound or vibration (option) measurements in 20 kHz band
- Three parallel independent profiles of the meter mode with time history (simultaneous to frequency analysis)
- Up to 48 MB (option) internal memory for logging more than six weeks of three 1 sec results (one result per profile)
- Measurement range 22 dBA RMS ÷ 140 dBA Peak in SLM mode
- Human Vibration measurements Type 1 accuracy (ISO 8041) including VDV and MTVV (option)
- 1/1 and 1/3 octave real time analysis with time history (option)
- 1920 lines real time FFT analysis in 20 kHz band (option)
- Reverberation Time measurement (RT 60 option)
- Tonality measurement (option)
- Advanced trigger function
- Easy in use
- USB 1.1 interface (real time PC "front end" application supported)
- Integration time programmable up to 24 h
- More than 12 h operational time with four standard AA alkaline batteries (more than 24 h with SA 17A external battery pack)
- Hand held, light weight and robust case (only ca 600 grams including batteries)



TECHNICAL SPECIFICATIONS

SOUND LEVEL METER / ANALYSER

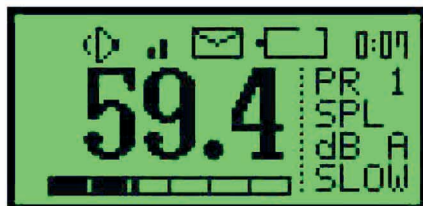
Standards	Type 1: IEC 651, IEC 804 and IEC 61672-1
Meter mode	SPL, L_{eq} , SEL, L_{den} , L_{im3} , L_{im5} , statistics- L_n ($L_1 \div L_{99}$), L_{Max} , L_{Min} , L_{Peak} , Time History
Analyser (option)	Simultaneous measurement in three profiles with independent set of filters and detector time constants Real time 1/1, 1/3 octave (spectra logging down to 2 ms time step), FFT (1920 lines in 20 kHz band and sub-bands with Hanning window), reverberation time RT 60 and Tonality analysis (each option parallel to the meter mode)
Weighting Filters	A, C and Lin (Type 1: IEC 651, IEC 804 and IEC 61672-1)
RMS Detector	Digital True RMS detector with Peak detection, resolution 0.1 dB, Time Constants: Slow, Fast, Impulse
Microphones (option)	SV 22 (10 Hz ÷ 20 kHz) or SV 22L (1 Hz ÷ 20 kHz) Type 1 prepolarised 1/2" condenser microphone (50 mV/Pa sensitivity) with SV 12L IEPE preamplifier
Measurement Range	22 dBA RMS ÷ 140 dBA Peak (with SV 22 microphone and 5 dB margin from noise level)
Internal Noise Level	less than 17 dBA RMS

VIBRATION LEVEL METER / ANALYSER (option)

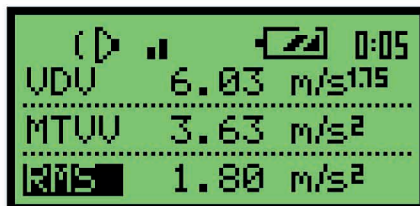
Standards	Type 1: ISO 8041 (meeting ISO 2631-1&2, ISO 5349-1&2) and ISO 10816-1
Meter mode	RMS, VDV, MTUV, Peak, Peak-Peak, Max, Min, Time History
Analyser (option)	Real time 1/1, 1/3 octave (spectra logging down to 2 ms step) and FFT (1920 lines in 20 kHz band and sub-bands with Hanning window) analysis (each option parallel to the meter mode)
Filters	W_k , W_c , W_d , W_l , W_h , W_m , HP1, HP3, HP10, Vel1, Vel3, Vel10, VelMF, Dil1, Dil3, Dil10, W-Bxy, W-Bz, H-A, W-Bc, KB
RMS & RMQ Detectors	Digital True RMS & RMQ detectors with Peak detection, resolution 0.1 dB, Time Constants: from 100 ms to 10 s
Accelerometers (option)	SV 39A/S seat accelerometer for Whole-Body measurements SV 50/S set for Hand-Arm measurements (incl. SV 3023M2 triaxial accelerometer)
Measurement Range	0.003 ms ⁻² RMS ÷ 1000 ms ⁻² Peak (with SV 39A/S seat accelerometer)
Internal Noise Level	less than 0.1 mms ⁻² RMS with W_m filter

BASIC DATA

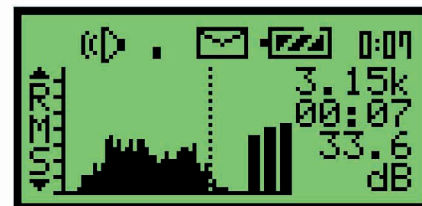
Input	IEPE interface with TNC connector
Dynamic Range	100 dB, 20 bits A/D converter
Frequency Range	1 Hz ÷ 20 kHz (input transducers dependent), sampling rate: 48 kHz
Display	LCD 97 x 32 pixels plus icons with backlighting
Memory	8 MB or 48 MB (option) non-volatile flash type
Interface	USB 1.1 (real time PC "front end" application supported), analogue output AC 1 V Peak
Power Supply	Internal 4 x AA batteries operation time > 12 h (alkaline batteries) With external battery pack SA 17A operation time > 24 h (option) External power supply 6 ÷ 24 V DC (1.5 W) USB interface 5 V @ 150 mA
Environmental Conditions	Temperature -10°C to 50°C Humidity up to 90 % RH, non condensed
Dimensions	338 x 82 x 42 mm (with microphone and preamplifier)
Weight	Approx. 0.6 kg with battery



Main result in one profile view



Main results in 3 profiles view



1/3 octave spectrum

Continuous product development and innovation are the policy of our company. Therefore, we reserve the right to change the specifications without prior notice.



SVANTEK Sp. z o. o.
Pl. Inwalidów 3/62
PL 01-514 WARSAW, POLAND
phone/fax (+48 22) 839 00 31, (+48 22) 839 64 26
<http://www.svantek.com> e-mail: office@svantek.com.pl

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