SV 104 & SV 104IS

Noise dosimeters

SVANTEK

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SV 104 Noise Dosimeter

Acoustic Dosimeter conforming to IEC 61252 and ANSI S1.25-1991

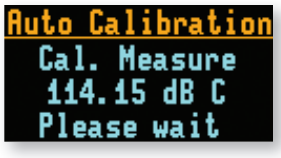
The SV 104 is a noise dosimeter that meets the specifications of IEC 61252 and ANSI S1.25-1991. The instrument measures acoustic results in the large measurement range of 55 dB to 140 dB. Results are recorded into three independently configurable profiles, which means that the measurement can be performed in accordance with three different standards simultaneously. Settings such as exchange rate, time constants, measurement time, start, stop or pause are all fully configurable.

Robust microphone and shock detection

Typically a noise dosimeter is worn by the worker on a shoulder which makes it vulnerable to accidental shocks and knocks. To avoid microphone damage on the SV 104, we've used a fully shock resistant MEMS microphone. There is also an inbuilt tri-axial accelerometer which detects any shocks and vibrations that could influence noise measurement results. Any unwanted events are marked in the results time history so that they can be easily excluded from the dose calculation.

Auto-calibration

The auto-calibration facility makes the SV 104 very easy to use. Once the instrument detects the calibration signal it starts the calibration process automatically, saving the calibration data together with the measurement file, both before and after measurement.

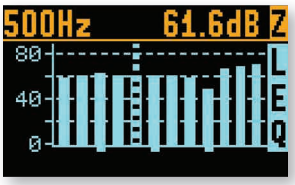


OLED display

The colour digital display is an OLED screen with a high contrast visibility even in full daylight or in low ambient light areas. It displays information in both text and graphical form.

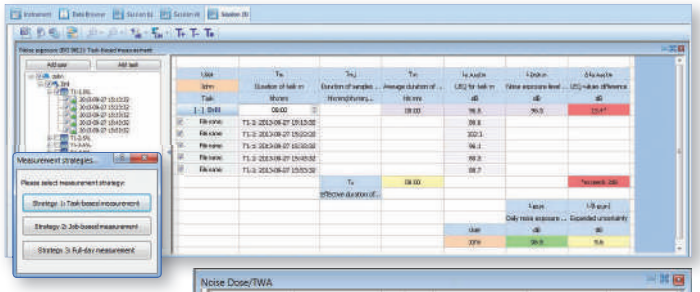
Audio recording and 1/1 octave analysis*

The SV 104 was the first noise dosimeter on the market with the option for 1/1 octave band filters that allows accurate and correct selection of hearing protectors and audio events recording - particularly useful in the identification of noise sources.



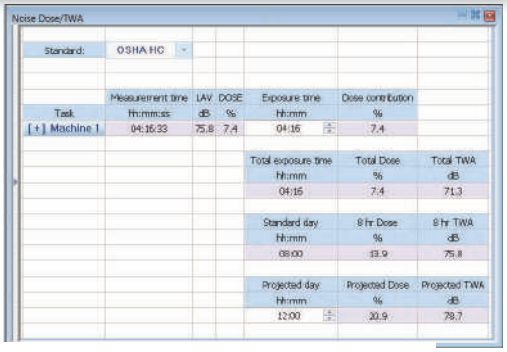
ISO 9612 noise exposure

The data files from the SV 104 can be used for calculation of all the required measurement results and uncertainties in accordance to the three measurement strategies described in ISO 9612: task-based, job-based and full-day.



TWA and DOSE calculator

The Supervisor software is a complete tool for the determination of occupational noise exposure from noise level measurements in accordance to all standards using TWA and DOSE such as OSHA, ACGIH, MSHA, NHO-01 or NR-15. Supervisor calculates the TWA and DOSE from measurements as well as projecting the exposure.



*Function requires optional software or hardware accessories. For more information contact Svantek distributor or check ordering information on svantek.com website.

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SV 104IS Intrinsically Safe Noise Dosimeter

The SV 104IS is the intrinsically safe version of our revolutionary SV 104 personal noise dosimeter and has many of the same features. Both instruments offer a new approach to occupational health and safety noise monitoring presenting features such as 1/1 octave band real-time analysis and audio events recording functions; a new feature in an instrument of this size. All results are clearly displayed on the amazing OLED screen which offers excellent visibility even in full daylight or darkness.
This personal dosimeter has a robust 1/2" MEMS microphone enabling easy calibration using most commonly available acoustic calibrators. The new MEMS microphone has a large dynamic range of 90 dB which allows it to measure noise from 60 dBA to 140 dBA. The long list of microphone advantages includes an auto-calibration feature and TEDS memory that stores the calibration info in the microphone itself. Auto-calibration means the instrument will automatically start the calibration process once the microphone is inserted into the calibrator.
The SV 104IS is a cable-free dosimeter and is typically attached to the user's shoulder, close to the ear using the mounting clips supplied. The instrument works with Svantek's health and safety software package, "Supervisor", that provides various tools for data analysis and reporting. The docking station supports data transfer to the PC through the infrared interface as well as handling battery charging. The rechargeable batteries of the SV 104IS are able to power the instrument for up to 50 hours.

Choose your dosimeter

SV 104IS only

- Intrinsic safety in accordance to ATEX and IECEx
- Measurement range 60 dBA RMS ÷ 140 dBA Peak
- Operational time 50 hours
- Communication and charging through docking station only
- Windscreen mounting using thread

SV 104 and SV 104IS

- Acoustic Dosimeter conforming to IEC 61252 and ANSI S1.25-1991
- Class 2 in accordance to IEC 61672
- Robust MEMS microphone
- Vibration shock detection
- Auto-calibration
- OLED color display with excellent brightness and contrast
- Audio events recording (optional)
- 1/1 octave real-time analysis (optional)
- Three parallel measurement profiles
- Voice comments recording
- Easy in use predefined setups
- Extremely compact, light weight and robust case
- Supervisor software

SV 104 only

- 8 GB memory
- USB for data download and charging
- Windscreen mounting using magnets

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Technical Specifications

	SV 104	SV 104IS
Standards	IEC 61252 ed1.1 (2002); ANSI S1.25-1991 (R2007); Class 2 IEC 61672-1 ed2.0 (2013)	IEC 61252 ed1.1 (2002); ANSI S1.25-1991 (R2007); Class 2 IEC 61672-1 ed2.0 (2013) ATEX: EN 50303:2000, EN 60079-0:2012, EN 60079-11:2012, EN 60079-26:2007; certificate number: FTZU 14 ATEX 0055X IEC 60079-0 ed6.0 (2011), IEC 60079-11 ed6.0 (2011), IEC 60079-26 ed2 (2006); certificate number IECEx FTZU 15.0001X Hazardous locations markings: I M1 Ex ia I Ma II 1G Ex ia IIC T4 Ga
Weighting Filters	A, C and Z	A, C and Z
Time Constants	Slow, Fast, Impulse	Slow, Fast, Impulse
Exchange Rates	2, 3, 4, 5, 6	2, 3, 4, 5, 6
Measurement Results	Elasped time, Lxy (SPL), Lxeq (LEQ), Lxpeak (PEAK), Lxymax (MAX), Lxymin (MIN), Lc-a DOSE, DOSE_8h, PrDOSE, LAV, Lxye (SEL), Lxye8 (SEL8), PLxye, (PSEL), E, E_8h, LEPd, PTC (PEAK COUNTER), PTP (PEAK THRESHOLD %), ULT (UPPER LIMIT TIME), TWA, PrTWA, LN (LEQ STATISTICS), OVL (OVERLOAD TIME %)	Elasped time, Lxy (SPL), Lxeq (LEQ), Lxpeak (PEAK), Lxymax (MAX), Lxymin (MIN), Lc-a DOSE, DOSE_8h, PrDOSE, LAV, Lxye (SEL), Lxye8 (SEL8), PLxye, (PSEL), E, E_8h, LEPd, PTC (PEAK COUNTER), PTP (PEAK THRESHOLD %), ULT (UPPER LIMIT TIME), TWA, PrTWA LN (LEQ STATISTICS), OVL (OVERLOAD TIME %)
Measurement Profiles	3 with independent filters (x) and time constants (y)	3 with independent filters (x) and time constants (y)
Microphone	SV 27 MEMS microphone, 1/2" housing with built-in TEDS functionality for the automatic calibration	SV 27IS MEMS microphone, 1/2" housing with built-in TEDS functionality for the automatic calibration
Measurement Range	55 dBA RMS ÷ 140.1 dBA Peak	60 dBA RMS ÷ 140.1 dBA Peak
Frequency Range	20 Hz ÷ 10 kHz	20 Hz ÷ 10 kHz
Dynamic Range	95 dB	90 dB
Data Logging[1]	Summary results for the measurement time Time-history logging of Leq/Max/Min/Peak with 1s logger step	Summary results for the measurement time Time-history logging of Leq/Max/Min/Peak with 1s logger step
Voice Comments	Audio records on demand, created before or after measurement, added to measurement file	Audio records on demand, created before or after measurement, added to measurement file
Audio Recording[1] (optional)	Audio events recording, trigger and continuous mode, 12 or 24 kHz sampling rate, WAV format	Audio events recording on trigger 12 kHz sampling rate, WAV format
1/1 Octave[1] (optional)	Real-time analysis in octave band filters, Class 1, IEC 61260; 9 filters with centre frequencies from 31.5 Hz to 8 kHz	Real-time analysis in octave band filters, Class 1, IEC 61260; 9 filters with centre frequencies from 31.5 Hz to 8 kHz

General Information

Display	colour OLED 128 x 64 pixels	colour OLED 128 x 64 pixels
Ingress Protection	IP 65	IP 65
Memory	8 GB	64 MB
Interfaces	USB 2.0 client, infrared (docking station compatible)	Infrared (docking station necessary)
Keyboard	3 push buttons	3 push buttons
Power Supply		
	Ni-MH rechargeable cells operation time > 40 hours[2] USB interface 500 mA HUB	Li-Ion rechargeable cell[3] operation time 50 hours[2]
Environmental Conditions		
Temperature	from -10 °C to 50 °C	from -10 °C to 50 °C
Humidity	up to 95 % RH, non-condensed	up to 95 % RH, non-condensed
Dimensions	88 x 49.5 x 19.2 mm	88 x 49.5 x 19.2 mm
Weight	121 grams	129 grams

[1] function parallel to the acoustic dosimeter mode

[2] depending on configuration and environmental conditions

[3] docking station required for battery recharging

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