

SV 102 Dual-Channel Acoustic Dosimeter

The SV 102 dual-channel instrument presents completely new approach to occupational health and safety acoustic monitoring task. The binaural dose measurements and the 1/1 octave analysis are simultaneously performed. Octave analysis provides direct data for the design of the ear-protectors. Together with Audio Events Recording (AER) option, these functionalities show the new reference standard on acoustic dose measurement field, now commonly available in compact size instrument.

Dosimeter is offered with one or two dedicated SV 25D ceramic microphones assembled in 1/2" housing. It ensures the very easy calibration by direct usage of commonly available acoustic calibrators. Moreover, SV 25D smart sensor, with built-in TEDS (Transducer Electronic Data Sheet), offers automatic calibration function.

The very robust casing of the SV 25D, together with the special mounting clip and dedicated headband, make that microphones can be very easily attached in extremely short distance from the human ears.

SV 25S smart sensor with TEDS, is dedicated for the measurements under headphones

or earmuffs (Hearing Protection Device - HPD) using MIRE technique (Microphone-In-Real-Ear). With special adapter, it can be also calibrated with available acoustic calibrators.

The SV 102 together with SV 25S are designed for individual real-world test of the earmuffs noise reduction ratio.

The SV 102 can be also used as a dual-channel type 2 sound level meter and real-time 1/1 octave analyser. Three acoustic profiles per channel allow parallel measurements with independently defined filters and RMS detector time constants. Advanced time-history logging for each profile, together with spectra saving and audio-events recording provide complete information about measured signal, which is saved in non-volatile internal memory up to 64 MB. Data files are easily downloaded to any PC using USB interface and SvanPC+ software.

Instrument is powered from two AA standard or rechargeable batteries (separate charger is required) as well as the USB interface.

FEATURES

- Dual-channel Acoustic Dosimeter conforming to IEC 61252 and ANSI S1.25-1991
- Dual-channel Sound Level Meter conforming to Type 2: IEC 61672
- Dual-channel 1/1 octave analysis
- Single measurement range
- Measurement range 45 dBA RMS ÷ 141 dBA Peak
- MIRE measurement technique with SV 25S
- Individual evaluation of the HPDs attenuation in real-world
- Three parallel independent profiles
- Advanced data logger, up to 12 results per channel logged simultaneously including spectral analysis
- Audio Events Recording
- Automatic calibration thanks to the TEDS technology
- Built-in non-volatile memory up to 64 MB
- USB 1.1 interface
- Large LCD with backlight
- Integration time programmable up to 24 h
- Power supply by two AA rechargeable or standard batteries (operational time > 24 h)
- Easy operation
- Extremely compact, light weight (260 grams with batteries) and robust case (volume comparable to PDA devices)



TECHNICAL SPECIFICATIONS

DOSIMETER / SLM / ANALYSER

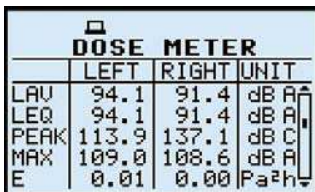
Standards	IEC 61252; ANSI S1.25-1991; Type 2: IEC 61672:2002
Acoustic Dosimeter Mode	Leq, Spl, Peak, SEL, DOSE, D_8h, LAV, SEL8, PSEL, E, E_8h, "Peaks Counter" and more Measurement simultaneous to the 1/1 octave analysis
SLM Mode	Leq, Spl, SEL, L _{EPD} , L _{den} , L _{tm3} , L _{tm5} , statistics - L _n (L ₁ - L ₉₉), L _{Max} , L _{Min} , L _{Peak} Simultaneous measurement in three profiles with independent set of filters and detectors
Weighting Filters	A, C and Z
RMS Detector	Digital True RMS detector with Peak detection, resolution 0.1 dB Time constants: Slow, Fast, Impulse
Microphone	SV 25D, Type 2, ceramic microphone, 1/2" housing with built-in preamplifier & integrated cable SV 25S, Type 2, ceramic microphone, special version of the SV 25D for measurements based on Microphone-In-Real-Ear technique (option) SV 25D and SV 25S have built-in TEDS functionality for the automatic calibration
Measurement Range	45 dBA RMS ÷ 141 dBA Peak
Frequency Range	20 Hz ÷ 8 kHz, sampling rate 24 kHz
Dynamic Range	100 dB
Data Logger*	Time-history logging of RMS/Max/Min/Peak results to internal memory with time step down to 1 second, up to 24 measurement results logged simultaneously
Audio Recorder*	Time-domain signal events recorder (option)
Dual Channel Mode	Dual-channel measurement mode with second microphone SV 25D or SV 25S (option)
1/1 Octave*	Dual-channel 1/1 octave real-time analysis and spectra logging, 9 filters with centre frequencies from 31.5 Hz to 8 kHz, Type 1: IEC 61260 (option)

BASIC DATA

Input	2 x LEMO 2-pins	
Display	LCD 128 x 64 pixels plus icons with backlighting	
Memory	Up to 64 MB non-volatile flash type	
Interfaces	USB 1.1 Client, Extended I/O - AC output (1 V Peak) / Digital Output (Alarm trigger) / Digital Input (Input trigger)	
Power Supply	Two AA batteries (alkaline)	operation time > 20 h (3.0 V / 1.6 Ah) **
	Two rechargeable batteries (not included)	operation time > 24 h (2.4 V / 2.6 Ah) **
	USB interface	150 mA HUB
Environmental Conditions	Temperature	from -10 °C to 50 °C
	Humidity	up to 90 % RH, non-condensed
Dimensions	95 x 83 x 33 mm (without microphones)	
Weight	260 grams with batteries (without microphones)	

*function parallel to the acoustic dosimeter mode or meter mode

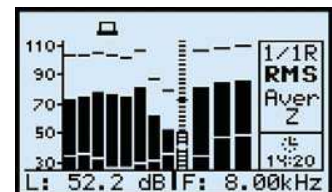
**in single-channel dosimeter mode and backlight off



Acoustic dose measurements



SLM results in 3-profiles view



1/1 octave analysis

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



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