SVANTEK
health and safety

SV 100A

Whole-Body Vibration Exposure Meter

The SV 100A is a wireless whole-body vibration exposure meter suitable for whole-body measurements in compliance with ISO 2631-1. Suitable for taking measurements both on the seat and seat-back, the device uses the very latest technology and is easy to use. The device is equipped with 4 push-buttons and a small OLED display that allows basic configuration in the field.

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Whole-Body Vibration Exposure Meter

PVEM

Personal Exposure Vibration Meter

SV 100A is a Personal Vibration Exposure Meter meeting the new ISO 8041-2:2021 standard. The user interface is easy to use. The meter performs automatic whole-body vibration measurements over the working day.

Whole-Body Vibration

3-Axial Seat MEMS Accelerometer

The SV 100A measures the A(8) vibration exposure and the overall vibration total value (VECTOR) in compliance with ISO 2631-1 and the EU Vibration Directive. The A(8) result is given in: m/s^2 (RMS), $m/s^{1.75}$ (VDV) and Points.

Force Sensors

ODS Operator Detection System

In accordance with ISO the SV 100A provides an operator detection system (ODS) based on force sensors which recognizes the presence of an driver exposed to vibration to avoid errors of the vibration exposure assessment by elimination of times with no vibration exposure.

Key Functions

ISO — Whole-Body Vibration Measurements

The SV 100A measures the A(8) vibration exposure and the overall vibration total value (VECTOR) in accordance with ISO 2631-1 and the EU Vibration Directive. The A(8) result is given in: m/s^2 (RMS), $m/s^{1.75}$ (VDV) and Points. The SV 100A monitors the time left to limits and activates the alarm when the limits are reached. When changing the orientation of the SV 100A to the vertical, the directions of axes and weight filters are automatically adjusted in compliance with ISO 2631-1.

VIBRATION — Low-frequency vibrations

SV 100A is also capable of measuring vibration frequencies from 0.1 Hz which makes it suitable for motion sickness measurements in compliance with ISO 2631-1. The low frequency vibrations are measured on the vertical axis with Wf for weight filter.

MEMS — Accelerometers Based On MEMS

The SV 100A uses triaxial MEMS vibration accelerometers meeting the requirements of ISO standards. Additionally, force sensors built into the SV 100A automatically detect the presence of a user or vehicle driver which enables real daily exposure calculations for the period of time when the driver is in contact with the vibrating surface.

Real-Time Frequency Analysis

Frequency analysis such as 1/1 or 1/3 octave provides information on dominant frequencies and harmonics, which may help to identify vibrations sources and detect artefacts. It can be activated at any time, by ordering an activation code.

Time-History Logging

The TIME HISTORY LOGGING of results such as RMS, VECTOR, VDV, Max, Min and Peak with two simultaneous logging steps is saved in 8 GB memory.

Low Power Consumption

One of the biggest advantages of using SV 100A is its power efficiency. It can run for up to 24 hours on one charge.

Software

SUPERVISOR

Supervisor software supports data download, instrument configuration and provides a complete set of tools for determination of occupational vibration exposure from measurements in compliance with ISO 2631-1 standard. Measurement results are expressed in m/s2 and can be directly compared to limits given by the European Directive 2002/44/EC. It is also possible to convert units into Points widely used in the health & safety sector. All information displayed within the panel window is directly printable to the report.

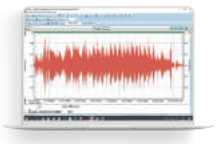
ASSISTANT

Assistant is an application for devices running on Android and iOS platforms, extending functionalities of SV 100A. The application uses the BT Wireless interface enabling current results to be previewed on a smartphone or tablet as well as controlling the measurement Start / Stop and Markers. The Assistant sounds an alarm when the vibration limits are exceeded. The unique feature of Assistant is its ability to send the GPS position and vehicle speed to the SV 100A to create images of vibration on a map, providing very powerful tools for identification of vibration sources.

Optional accessories

SA 38
Calibration Adapter

SV 111
Hand-Arm and Whole-Body Vibration Calibrator



SF 100A_WAV
License of audio recording

SF 100A_3OCT
License of 1/3 octave

Technical Specifications

Standards	ISO 8041-2:2021; ISO 8041-1:2017; ISO 2631-1:1997; ISO 2631-2:2003; ISO 2631-5:2018;
Meter Mode	aw (RMS WHOLE-BODY), awmax (RMS MAX WHOLE-BODY), VDV, MaxVDV, awv (VECTOR WHOLE-BODY), A(8) Daily Exposure, ELV Time (TIME LEFT TO LIMIT), EAV Time (TIME LEFT TO ACTION) MTVV, Max, Peak, Peak-Peak
Filters	Wd, Wk, Wm, Wb (ISO 2631) and corresponding Band Limiting Filters according to ISO 8041 Wf for motion sickness filter for measurements according to ISO 2631-1 (optional)
RMS & RMQ Detectors	Digital true RMS & RMQ detectors with Peak detection, resolution 0.1 dB
Measurement Range	0.01 m/s^2 RMS ÷ 157 m/s^2 PEAK
Frequency Range	0.1 Hz ÷ 180 Hz
Data Logger	Time-history data including meter mode results and spectra
Time-Domain Recording	Simultaneous x, y, z time-domain signal recording (optional)
Analyser	1/1 octave real-time analysis (optional) with center frequencies from 0.12 Hz to 128 Hz 1/3 octave real-time analysis (optional) with center frequencies from 0.1 Hz to 128 Hz
Accelerometer	Built-in tri-axial MEMS based
Memory	8 GB
Display	OLED 128 x 32 pixels
Interfaces	USB 2.0 client, BT Wireless interface, detector of operator
Power Supply	Ni-MH rechargeable cells operation time > 24 hours[1] USB interface 500 mA HUB
Environmental Conditions	Temperature from -10 °C to 50 °C Humidity up to 90 % RH, non-condensed
Dimensions	Ø 235 mm x 12 mm
Weight	Approx. 500 grams

[1] depending 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.

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