SVANTEK
health and safety

SV 103

Hand-Arm Vibration Exposure Meter

The SV 103 is a Personal Vibration Exposure Meter (PVEM) compliant with the new ISO 8041-2:2021 standard. It offers the measurement of the A(8) vibration exposure in accordance with the ISO 5349-2 standard and European Directive 2002/44/EC both in m/s^2 and points. The instrument significantly decreases the measurement uncertainty related to the estimation of daily exposure time as it is small enough to take daily vibration exposure measurements without interfering with normal working activities.

SV 103

Hand-Arm Vibration Exposure Meter

PVEM

Personal Exposure Vibration Meter

The SV 103 is a Personal Vibration Exposure Meter meeting the new ISO 8041-2:2021 standard. The SV 103 is simple to use and implement (internal complexity hidden from the user) and automatically performs unattended hand-arm vibration measurements.

Hand-Arm Vibration

3-axial hand-arm accelerometer with adapters

According to ISO 5349, hand-arm vibration should be measured in place, or at the point of contact with the hand tool. The SV 103 uses dedicated MEMS sensors to measure vibrations on a tool handle or directly on a hand.

Contact Force

Detection of a hand contact with tools

With the SV 107 vibration sensor, the SV 103 automatically obtains information about the period that the hand is in contact with the vibrating surface and evaluates the total contact time per day in order to calculate the A(8) exposure.

Key Functions

Hand-Arm Vibration Measurements

The instrument meets the ISO 8041:2021 standard and is the ideal choice for making measurements according to ISO 5349 and European Directive 2002/44/EC. The SV 103 significantly decreases the measurement uncertainty as the instrument is attached to the user's arm and is small enough to take daily vibration exposure measurements without interfering with normal working activities.

Simple to use and automatic

To meet the requirements of ISO 8041-2:2021 for PVEM, the internal complexity of the SV 103 is hidden from the user. The instrument setup is simple and measurements are automatic.

Accelerometers based on MEMS

The SV 103 uses our latest accelerometer, the SV 107, that has a contact force sensor in addition to the standard accelerometer. Contact force is the sum of grip force and push force and is therefore a measurement of how firmly a user is holding the vibrating tool. The accelerometer meets the requirements of the ISO 5349 standard and is worn on the palm of the hand so it can be used underneath gloves.

Real-time frequency analysis

Frequency analysis such as 1/3 octave provides information on dominant frequencies and harmonics, which helps to identify vibration sources measure as well as detection of 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, Max, Min, Peak and Force with two simultaneous logging steps is saved in an 8 GB memory.

Low power consumption

One of the biggest advantages of using SV 103 is its power efficiency. It can run up to 24 hours without recharging.

Software

Supervisor is a software package for health and safety specialists. The package supports all Svantek instruments for the health and safety market.

Supervisor software supports data download, instrument configuration and provides a complete set of tools for determination of hand-arm vibration exposure. The measurements are recorded in m/s^2 and are directly comparable to the limits laid down by European Directive 2002/44/EC. It is also possible to convert these units into Points, which are widely used within the health & safety sector. All the information displayed within the panel window can be printed in the report.

Optional accessories

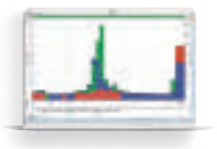
SV 111
Hand-Arm and Whole-Body Vibration Calibrator

SV 110
Hand-Arm Vibration Calibrator

SA 105
Calibration Adapter to SV107

SA 76
Waterproof Carrying Case

SA 47M
Carrying Bag Fabric Material



SF 103_3OCT
License of 1/3 octave

Technical Specifications

Standards	ISO 8041:2021, ISO 5349-1:2001; ISO 5349-2:2001;	
Meter Mode	ahw (RMS), ahv (VECTOR), Max, Peak, Peak-Peak, A(8) Daily Exposure, ELV Time (TIME LEFT TO LIMIT), EAV Time (TIME LEFT TO ACTION)	
Filters	Wh (ISO 5349) and corresponding Band Limiting filter (ISO 8041)	
RMS Detector	Digital true RMS detector with Peak	
Measurement Range	0.2 m/s^2 RMS ÷ 2000 m/s^2 Peak	
Frequency Range	0.1 Hz ÷ 2 kHz (transducer dependent)	
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 1 Hz to 1kHz 1/3 octave real-time analysis (optional) from 0.8 Hz to 1.3 kHz	
Accelerometer (optional)	Detachable SV 107 MEMS based tri-axial accelerometer with hand straps in accordance to ISO 5349	
Memory	8 GB	
Display	OLED 128 x 64 pixels	
Interfaces	USB 2.0 client	
Power Supply	Ni-MH rechargeable cells USB interface	operation time > 24 hours (depending on configuration) 500 mA HUB
Environmental Conditions	Temperature Humidity	from -10 °C to 50 °C up to 90 % RH, non-condensed
Dimensions	88 x 49.5 x 19.2 mm (instrument without accelerometer, cable and mounting stripes)	
Weight	150-160 grams with SV 107 accelerometer and one of vibration contact adapters	

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.

SVANTEK Sp. z o. o.
Strzyglowska 81, 04-872 WARSAW, POLAND
phone (+48) 22 51 88 320 | www.svantek.com/contact