SV 103 Hand-Arm Vibration Dosimeter

Technical Specifications

The SV 103 is the world's first personal hand-arm vibration exposure meter. The instrument meets ISO 8041:2005 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 related to the estimation of daily exposure time 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.
The SV 103 uses the SV 107 moulded hand-held adaptor designed in accordance to ISO standards. The SV 107 has tri-axial MEMS-based accelerometer and contact force sensors so it can detect when the user is actually holding vibrating tools. This solution allows automatic calculation of real daily exposure value for the period when the hand was in contact with the vibrating tool. Very important feature of the SV 107 is its robustness. The MEMS technology means the SV 107 is extremely robust, shock resistant, uses very low power and is free of the DC-shift effect that adversely affects systems based on piezoelectric accelerometers.
The SV 103 is powered using rechargeable batteries charged through the USB interface which also enables easy interconnection between the instrument and a PC. The measurement data is safely stored in the large 8 GB memory.
The instrument works with "Supervisor" software that offers dedicated calculator of A(8) daily exposure value and reporting templates.

Features

- Personal Daily Vibration Exposure Meter complying to ISO 8041
- Measurement under gloves
- Tri-axial accelerometer complying to ISO 5349
- Contact force measurement
- 1/1 or 1/3 octave real-time analysis (optional)
- Time-domain signal recording (optional)
- Large 8 GB memory
- USB 2.0 interface
- OLED colour display with super brightness and contrast
- Operational time > 24 hours

Vibration meter

Standards	ISO 8041:2005, ISO 5349-1:2001; ISO 5349-2:2001;
Meter Mode	ahw (RMS), ahv (VECTOR), Max, Peak, Peak-Peak A(8) Daily Exposure, ELV (TIME TO LIMIT), EAV (TIME TO ACTION) Simultaneous measurement in three channels
Filters	W_h (ISO 5349) and corresponding Band Limiting filter
RMS Detector	Digital true RMS detector with Peak detection, resolution 0.1 dB
Measurement Range	0.2 ms^{-2} RMS ÷ 2000 ms^{-2} PEAK
Frequency Range	1 Hz ÷ 2000 Hz
Data Logger	Time-history data including meter mode results and spectra
Time-Domain Recording[1]	Simultaneous 3-channel time-domain signal recording (optional)
Analyser[1]	1/1 octave real-time analysis meeting Class 1: IEC 61260 (optional) 1/3 octave real-time analysis meeting Class 1: IEC 61260 (optional)
Accelerometer	detachable SV 107 tri-axial accelerometer with hand straps in accordance to ISO 5349

General Information

Display	colour OLED 128 x 64 pixels	
Memory	8 GB non-removable	
Sampling rate	6 kHz	
Interfaces	USB 2.0 client	
Keyboard	4 push buttons	
Power Supply		
	Ni-MH rechargeable cells	operation time > 24 hours[2]
	USB interface	500 mA HUB
Environmental Conditions		
	Temperature	from -10 °C to 50 °C
	Humidity	up to 90 % RH, non-condensed
Dimensions	88 x 49.5 x 19.2 mm (instrument without accelerometer, cable and mounting adapter)	
Weight	150-160 grams with SV 107 accelerometer and one of vibration contact adapters	

[1]function operates together with vibration level meter
[2]dependent on instrument configuration

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.