SVANTEK
health and safety

SV104 BIS

Intrinsically Safe Noise Dosimeter

The SV104 BIS is a new version of an intrinsically safe noise dosimeter with a robust 1/2" patented MEMS microphone. The new microphone has a large dynamic range, auto-calibration feature and TEDS memory that stores the calibration info in the microphone itself. The SV104 BIS Bluetooth® interface enables current results to be previewed on a smartphone or tablet using our Assistant application. The smartphone application also signals an alarm when the set noise limits are exceeded.

SV 104 BIS

Intrinsically Safe Noise Dosimeter

New hardware

Patented microphone and faster data transfer

The new SV 104 BIS is equipped with the new MEMS microphone, which offers a measuring range from 53 dB Leq to 143 dB Peak. The list of add-ons includes new large 8 GB memory and fast data transmission with a new docking station.

New firmware

Options for noise sources recognition

The large 8 GB memory enables the SV 104 BIS to record 1/1 or 1/3 octave bands in real-time and simultaneous audio recording to determine the noise sources and hearing protector selection. Functions can be activated at any time by ordering the activation codes.

Mobile application

Remote connection via Bluetooth® interface

The Bluetooth interface enables current results to be previewed on a smartphone Assistant application without disturbing the workers. The smartphone application signals alarms when the set noise limits are exceeded.

Key Functions

Life-time warranty for microphone

The patented MEMS microphone is extremely robust and is covered by a life-time warranty. The dosimeter itself is also covered by a 3-year manufacturer's warranty.

Intrinsic Safety

The SV 104 BIS is the intrinsically safe personal noise dosimeter in accordance with the ATEX directive and the IECEx certification scheme.

Occupational noise measurements

The dosimeter is suitable for noise at work measurements in accordance with to standards such as ISO 9612, OSHA, MSHA and ACGIH.

Real-time frequency analysis

The 1/1 octave analysis is often used for the selection of hearing protectors. The 1/3 octave function allows the determination of the influence of high or low frequencies on overall values. Functions can be activated at any time by ordering the activation code.

Triggered audio recording

Audio recording is synchronized with a noise time-history and it can be opened and played back in PC software enabling noise source recognition. Audio recording can be triggered on threshold or time. It can be activated at any time by ordering the activation code.

Time-history logging

The time history logging of results such as Leq, Max, Min and Peak with two simultaneous logging steps is saved on a 8 GB memory.

Built-in vibration sensor

The inbuilt triaxial vibration sensor detects shocks and vibrations that influence noise measurement results and provides the information during the times when dosimeter is not used by the worker.

PC software

Supervisor software supports data download, instrument configuration and provides a complete set of tools for determination of occupational noise exposure from noise level measurements in accordance with all standards using TWA and DOSE, such as OSHA, ACGIH, MSHA, ISO 9612.

The Assistant is a smartphone application for devices running on Android and iOS platforms, enabling current results to be previewed on a smartphone or tablet as well as controlling the measurement Start/Stop and Markers. The Assistant also signals an alarm when set noise limits are exceeded.

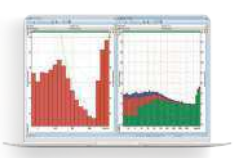
Optional accessories

SB 104B-1
Docking station for 1 dosimeter

SB 104B-5
Docking station for 5 dosimeters

SV 34B
Class 2 acoustic calibrator 114 dB at 1 kHz

SA 147B
Waterproof carrying case for dosimeter and docking station



SF 104BIS_3OCT
License of 1/1 & 1/3 octave

SF 104BIS_WAV
License of audio recording

Technical Specifications

Standards	IEC 61672-1:2013; IEC 61252 ed1.2 (2017), ANSI/ASA S1.25-1991 (R2020), IEC 61010-1:2010, ANSI/UL 61010-1 and CAN/CSA C22.2 No 61010-1; ATEX/IECEx: IEC 60079-0 ed7.0 (2017), IEC 60079-11 ed6.0 (2011), CAN/CSA C22.2 No 60079-0, CAN/CSA C22.2 No 60079-11, ANSI/UL 60079-0, ANSI/UL 60079-11. Hazardous locations markings: I M1 Ex ia I Ma; II 1G Ex ia IIC T4 Ga, -10°C < T_{amb} < +50°C; NRTL device marking: cQPSus, Ex ia IIC T4 Ga, Class I, Zone 0, AEx ia IIC T4 Ga NRTL certification for USA and Canada: [pending]	
Weighting Filters	A, C and Z	
Time Constants	Slow, Fast, Impulse	
Exchange Rates	2, 3, 4, 5, 6	
Microphone	ST 104B MEMS microphone, 1/2" housing, patented	
Linear Operating Range	53 dBA Leq ÷ 143 dBA Peak (in accordance to IEC 61672)	
Dynamic Measurement Range	46 dBA Leq ÷ 143 dBA Peak (typical from noise floor to the maximum level)	
Frequency Range	20 Hz ÷ 10 kHz	
Dynamic Range	100 dB	
Measurement Results	Run Time (TIME), Lpeak, Lmax, Lmin, L, DOSE (%), D_8h, PrDOSE, Leq, LAV, LE, SEL8, E, E_8h, LEPd, PSEL, Ltm3, Ltm5, Lstat, PTC, PTP, ULT, TWA, PrTWA, Lc-a, OVL, No Motion Time.	
Measurement Profiles	3 with independent settings of filters (x) and time constants (y)	
Data Logger	Summary results for the measurement time and time-history logging of Leq/Max/Min/Peak with adjustable logger step down to 1 s	
1/1 Octave Analysis (option)	Real-time analysis meeting Class 1 requirements of IEC 61260, centre frequencies from 31.5 Hz to 8 kHz	
1/3 Octave Analysis (option)	Real-time analysis meeting Class 1 requirements of IEC 61260, centre frequencies from 20 Hz to 10 kHz	
Audio Recording (option)	Audio events recording, trigger and continuous mode, 12 kHz or 24 kHz sampling rate, wav format	
Voice Comments	Audio records on demand, created before or after measurement, added to measurement file	
Memory	8 GB	
Display	OLED 128 x 64 pixels	
Keyboard	3 push buttons	
Communication Interfaces	Bluetooth® 5.2 Electrical contacts (docking station required)	
Power Supply	Li-Ion rechargeable cell	operation time 45 hours[1]
Environmental Conditions	Temperature Humidity	from -10 °C to 50 °C (14 °F to 122 °F) up to 95 % RH, non-condensed
Dimensions	88 x 49.5 x 19.2 mm	
Weight	140 grams	

[1] typical operational time is dependent on the instrument operation mode 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.

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