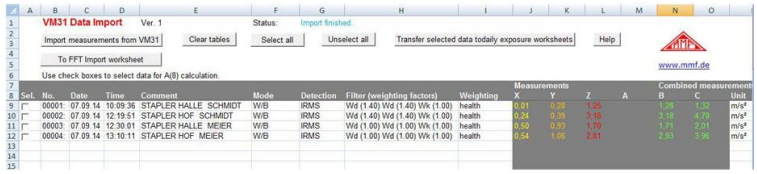
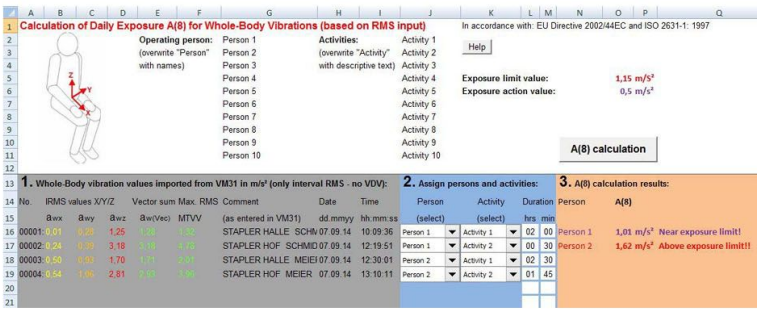
Four Channel Human and Universal Vibration Meter VM31





Application

- Versatile tool for vibration measurement during product development and for health and safety at the workplace to EU guideline
- Measurement of hand-transmitted vibration
- Measuerement of whole-body vibration
- SEAT measurement at driver seats
- Vibrations on passenger and merchant ships
- Condition monitoring of rotating machinery in three axes
- Vibration measurement in vehicles
- Supported standards: ISO 8041; ISO 2631; ISO 5349; ISO 10326; ISO 20816; ISO 20238-5; ISO 28927; ISO/TR 18570; 2002/44/EC

Properties

- Four independent measuring channels
- Weighting filters to ISO 8041 Wh for hand-arm vibration and Wb, Wc, Wd, Wj, Wk, Wm for whole-body vibration
- Interval and running RMS, maximum RMS (MTVV), vibration dose value (VDV), vector sum, peak and maximum peak
- Measurement of vibration acceleration, velocity and displacement
- FFT of acceleration with 125 lines
- TEDS sensor detection
- Memory for 10000 measurements and 1000 FFTs with date and comment
- USB interface
- Excel macro included for data transfer and calculation of daily exposure A(8)
- Clear user guidance with colored OLED
- Very compact design
- 10 hours operation with 3 Micro (AAA) batteries
- Available as hand-arm kit and whole-body kit including suitable sensors and accessories

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Technical Data

Measurement functions		
Measurands	Vibration acceleration	
	Vibration velocity/severity	
	Vibration displacement	
Overall values	True RMS value	
	Maximum transient vibration value MTVV	
	Interval RMS value; unlimited averaging time	
	Vector sum of X, Y, Z	
	Vibration dose value VDV	
	True pak value	
	Maximum peak value	
Measuring range acceleration	0.01 to 600 (Transducer sensitivity 10 mV/ms-2)	m/s²
	0.1 to 6000 (Transducer sensitivity 1 mV/ms-2)	m/s²
Measuring range velocity	0.01 to 5000 (Transducer sensitivity 10 mV/ms-2)	mm/s
Measuring range displacement	0.1 to 7500 (Transducer sensitivity 10 mV/ms-2)	µm
Linear amplitude range	>75 (±6 % error)	dB
ADC resolution	24	Bit
Noise	<0.003 m/s²	
Lower frequency limit acceleration	0.2; 1	Hz
Lower frequency limit velocity	1; 2; 10	Hz
Lower frequency limit displacement	5	Hz
Upper frequency limit acceleration	1000; 1500	Hz
Upper frequency limit velocity	100; 1000	Hz
Upper frequency limit displacement	250	Hz
Weighting filters (human vibration)	Wb; Wc; Wd; Wh; Wj; Wk; Wm; unweighted	
Frequency analysis	FFT; 125 points for X/Y/Z	
	Acceleration spectrum	
	3 to 240; 6 to 480; 12 to 960; 24 to 1920 Hz	
Indication	OLED; RGB; 128 x 160 pixels	

Connectors		
Input channels	4	
Input signals	IEPE	
Input connector	Socket Binder 711; 4 poles; channel 4: Socket Binder 711; 8 poles	
IEPEconstant current	0.7 to 1	mA
TEDS support	IEEE 1451.4; template 25	
Digital interfaces	USB 2.0 FS; CGC mode; ASCII command set; Binder 712; 8 poles	

Power Supply		
Battery	3 x LR03 / HR03 / AAA	
Battery operating time	10 to 14	h
External supply voltage	5 (USB)	VDC

Case Data		
Dimensions without connectors	125 x 65 x 27 (H x W x D)	mm
Case material	ABS	
Weight	140 (without sensor)	g
Operating temperature range	-20 to 60 (95 % rel. humidity without condensation)	°C

Scope of delivery

VM31-HA: VM31; KS963B10; 091-CMR-B711-3; 141B; 143B; 027
VM31-WB: VM31; KS963B100-S; 027
VM31-HAWB: VM31; KS963B10; 091-CMR-B711-3; 141B; 143B; 027; KS963B100-S
Carrying case ; USB cable

Notice

For data import and calculation of vibration exposure A(8) and VDV(8) an Excel macro file is provided

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04.23