

VibroMetra PC Vibration Measuring System

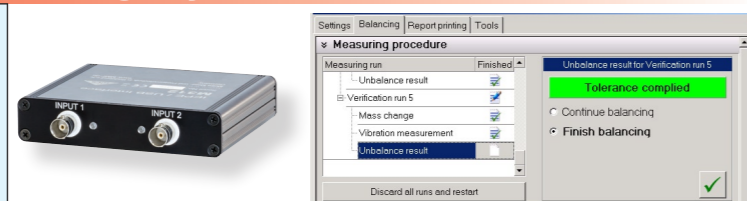


- Why choose VibroMetra?**
- Designed for vibration measurement - No ballast by unwanted functionality
 - VibroMetra is modular making it particularly economic with fewer channels
 - Also supports IEPE compatible microphones, force and pressure transducers
 - Off-line measurement: Save raw data in the background for later analysis
 - Compact hardware making VibroMetra particularly suited for mobile use
 - Simple plug & play installation
 - Short training time. Start the first measurement within a few minutes
 - Data export in common graphics, text and binary formats
 - Free updates

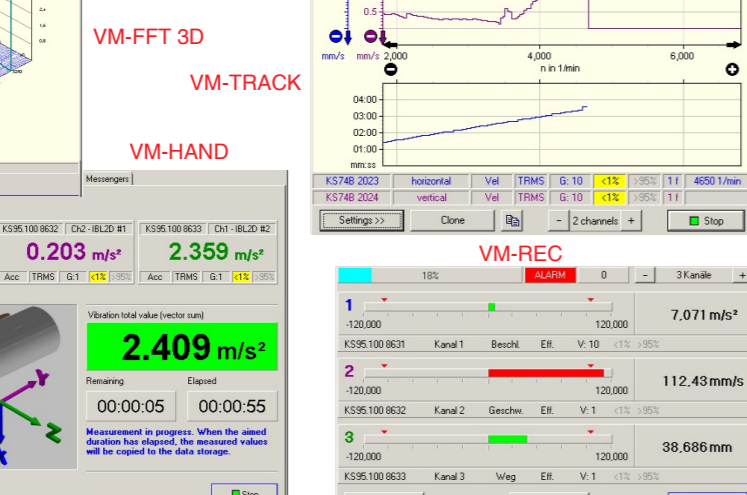
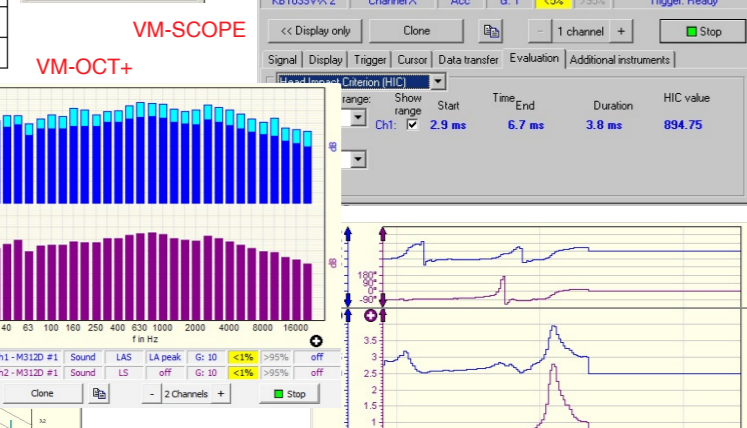
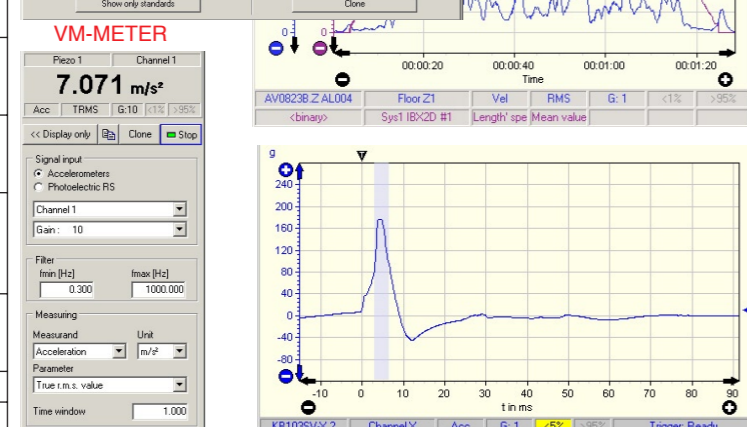
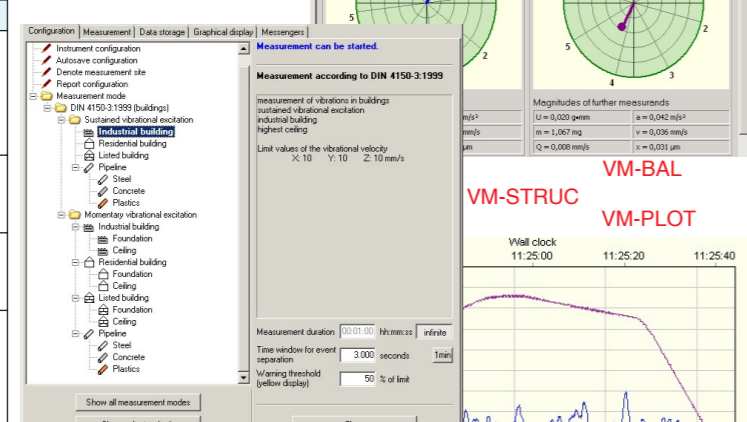
Hardware: M312B
IEPE / USB Interfaces: 2 IEPE, 1 digital trigger
 0.1 to 40,000 Hz

Available Software Modules:

- VM-BAL(+)**
 - Balancing of long and disk-shaped rotors, one or two planes
 - User guidance by clear text instructions
 - Up to six correction methods
 - Report function
 - Compact and handy **VM-BAL Kit**
- VM-SCOPE(+)**
 - Displays short vibration events, e.g. for drop testing
 - Memory for 10 second post and 1 second pre trigger
 - Acceleration (**VM-SCOPE+** also velocity, displacement)
- VM-PLOT(+)**
 - Long-term recording for slow changing vibration events
 - Zoom and scroll functions for time graph
 - Acceleration (**VM-PLOT+** also velocity, displacement)
- VM-FFT(+)**
 - FFT analyzer with 5 window functions, high frequency resolution
 - RMS and peak spectrum
 - Bearing analysis with bearing library in **VM-FFT+**
 - Power density spectrum in **VM-FFT+**
 - User-defined limits for alarms, e.g. for quality testing
 - Acceleration (**VM-FFT+** also velocity, displacement)
- VM-FFT 3D(+)**
 - View of FFT change over time (3D)
 - Useful tool for run-up / coast-down analysis
 - VM-FFT 3D+**: envelope, bearing and acoustic analysis
- VM-TRACK(+)**
 - Magnitude and phase as function of the rotary frequency
 - Quick detection of resonances
 - Acceleration (**VM-TRACK+** also velocity, displacement)
- VM-REC(+)**
 - Real-time recording in binary or text format
 - Bar graph and numeric display
 - Pre and post triggering
 - Acceleration (**VM-REC+** also velocity, displacement)
- VM-METER(+)**
 - RMS, peak value, instantaneous value
 - Vibration acceleration, velocity and displacement
 - VM-METER+**: for phase, rpm, main frequency, acoustics
- VM-OCT(+)**
 - Third-octave band analyzer, VC/Nano criteria, sound level
- VM-STRUC(+)**
 - Building vibration monitoring, DIN 4150-3
- VM-HAND(+)**
 - Hand-Arm vibration measurement, ISO 5349, ISO 8041-1
- VM-BODY(+)**
 - Whole-Body vibration measurement, ISO 2631, ISO 8041-1



Download the free VibroMetra trial software from www.MMF.de



Vibration Analyzers and Meters

Vibration Analyzer VM100

Model	VM100A	VM100B
Large touch screen	NEU	
Intuitive operation		
NFC detection for Measuring point		
Inputs	9 IEPE; 1 tach	3 IEPE; 1 tach
Measuring modules	Included: FFT, plot of overall values (RMS, peak, crest) Optional: hand-arm / whole-body vibration, machine monitoring, envelope analysis, run-up/coast-down test, balancing, third-octave analysis (VC/Nano)	
Frequency range	0.4 Hz - 24 kHz; various high/low pass filters	
Data storage/transfer	SD card, USB interface, CSV	



Human Vibration and Universal Meter VM31

Inputs	4 IEPE channels
Measuring modes	Hand-Arm vibration Whole-body vibration Acceleration Velocity Displacement
Display modes	RMS, Maximum RMS (MTVV) Peak value, maximum peak value Total Vibration Value (a_{wv}) Vibration dose value (VDV) Crest factor
Band filters	0.1 - 2000 Hz (acc.) 1 - 1000 Hz (acc.) 2 - 300 Hz (vel.) 10 - 1000 Hz (vel.) 5 - 250 Hz (displacement)
Weighting filters to ISO 8041	Hand-Arm: W _h , Whole-body: W _b , W _c , W _d , W _j , W _k , W _m
PC data transfer	USB interface, CSV A(B) calculation tool included



Size: 120 mm x 65 mm x 25 mm
 Power supply: 3 AAA cells or USB
 Available in the following kits:
 VM31-WB (Whole-Body Kit)
 VM31-HA (Hand-Arm Kit)
 VM31-HAWB (H/A and W/B Kit)
 VM31-M (Machine Vibration Kit)

Building Vibration Monitor VM40C

Includes triaxial piezoelectric sensor, signal conditioning, monitoring, recording and battery	
Optional accessories: 2G/4G modem, radio beacon light, printer	
Supported standards	DIN 4150-3; BS 7385; SN 640312a
Measuring ranges	Acceleration: 0.01 - 15 m/s ² ; Velocity: 0.1 - 2400 mm/s at 1 Hz; 0.1 - 30 mm/s at 80 Hz
Frequency ranges	0.8 - 100 Hz; 0.8 - 395 Hz; 5 - 150 Hz (-3 dB)
PC interface	USB for transfer of stored data
Cellular functions	SMS; sensor data platforms ThingSpeak and AskSensors



Vibration Switches • Digital Vibration Sensor

Model	VS10	VS11	VS12
Built-in piezoelectric accelerometer			
Filters and ranges programmable via USB			
MOS relay 60 V / 0.5 A			
M8 mounting stud			
Robust cases with IP67			
USB Measurement	-	RMS/Pk and 360 lines FFT (1/10 kHz)	
Monitoring functions	RMS/Peak value	RMS/Peak value or 10 selectable FFT limits	
Measuring ranges	acceleration: 0.1 - 1000 m/s ² ; velocity: frequency dependent		
Frequency ranges	HP: 0.1/2/5/10/20/50/100/200/500/1000 Hz; LP: 0.1/0.2/0.5/1/2/5/10 kHz		
Connections	Screw terminals for relay and supply, Micro USB socket inside		
Power supply	USB or 5 to 30 VDC		
Dimensions (Ø x h)	50 mm x 52 mm	50 mm x 52 mm	50 mm x 36 mm

Vibration Meters

Model	VM22	VM23	VM24	VM25
VMID Measuring Points provide reliable magnetic coupling, identify the measuring point and set the instrument automatically				
Acceleration	-	-	0.1 - 240 m/s ² 0.2 - 10,000 Hz 3 - 1000 Hz 1000 - 10,000 Hz	0.1 - 240 m/s ² 0.2 - 10,000 Hz 3 - 1000 Hz 1000 - 10,000 Hz
Velocity	0.1 - 1000 mm/s 10 - 1000 Hz (ISO 10816)	0.1 - 1000 mm/s 2 - 100 Hz 10-1000 Hz	0.1 - 1000 mm/s 2 - 300 Hz 10 - 1000 Hz	0.1 - 1000 mm/s 2 - 300 Hz 10 - 1000 Hz
Displacement	-	0.01 - 60 mm 3-60/3-200 Hz	0.01 - 60 mm 2-300 Hz	0.01 - 60 mm 2-300 Hz
Parameters	true RMS	true RMS, peak - peak	true RMS, peak	true RMS, peak, crest, K(t)
Frequency analysis	-	512 lines (no graphics)	-	127 lines FFT
Temperature (infrared)	-	-	-	-40 - 125 °C
Rotary speed (optical)	-	-	-	1 - 9999 rpm
Memory, interface	16,000 values/USB	16,000 values/USB	16,000 values/USB	16,000 values/USB



Vibration Monitoring

Vibration Monitors

Model	M12	M14
M12 provides common analog signals: AC, DC, RMS, peak, 4-20 mA, relay		
M14 is fully digital with USB and RS-485 for setup and measurement; 4-20 mA and relay		
Vibr. acceleration	10 / 50 / 250 m/s ²	1000 m/s ²
Vibration velocity	10 / 50 / 250 mm/s	1000 mm/s
Vibr. displacement	100 / 500 / 2500 µm	-
High pass filters	FB3 plug-in modules; 2 to 1000 Hz	5/10/20/50/100/200/500/1000 Hz
Low pass filters	FB2 plug-in modules; 0.1 to 50 kHz	0.1/0.2/0.5/1k/2k/5k/10kHz
Monitoring modes	true RMS or true peak-peak	true RMS or true peak FFT (500 lines, 10 limits)
Analog and digital interfaces	DC (RMS and pk-peak); AC wide-band; AC filtered; DC 4-20 mA	AC wide-band; DC 4-20 mA; USB; RS-485
Relay output	1 relay: 40 VAC/2 A	2 relays: 60 VAC/0.5 A
Sensor input	IEPE	IEPE
Level indication	LED bar graph	LED bar graph; bi-color
Power supply	12 to 28 VDC	8 to 28 VDC
Dimensions	22 x 76 x 111 mm ³	13 x 100 x 114 mm ³



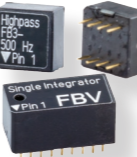
Plug-In Filter Modules for M12, M33 and M208

The plug-in filter modules **FB2** (low pass) and **FB3** (high pass) are available with the following 3 dB cut-off frequencies:

FB2: 0.1 / 0.3 / 0.5 / 1.0 / 3.0 / 5.0 / 10 / 30 / 50 kHz
 Butterworth, 4th order low pass

FB3: 2 / 3 / 5 / 10 / 30 / 50 / 100 / 300 / 500 / 1000 Hz
 Butterworth, 2nd order high pass

FBV/FBD: Single / double integrator modules (M33 / M208)



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wind energy plants material testing 2024
 modal analysis structural health monitoring
 noise reduction vibration severity
 drop testing **Vibration** Sensors
 velocity frequency response
 spectral analysis Signal Conditioners
 unbalance monitoring ship vibration Monitors
 shock testing end-of-line test Meters
 vibration exposure earthquake monitoring Calibrators
 noise vibration harshness (NVH)
 whole-body vibration order tracking analysis
 vibration immersion passenger comfort
 machine condition monitoring
 seismic vibration emergency shutdown
 acceleration calibration crash test
 fatigue testing quality control
 hand-arm vibration ground-borne vibration
 building vibration head injury criterion (HIC)
 balancing predictive maintenance
 pipeline vibration human vibration
 bearing monitoring displacement



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