VibraZEB VM-7TSR2

Vibration Meter

VM-7TSR2

OPTIONS & EXTENSIONS

- DIN4150-II – KB-Value Calculation (Germany)
- Split sensor block for extra vertical axis
- Acceleration measurement (virtual/real)
- GPS module
- Internal 5G modem
- Portable printer
- Alert system (radio/cable)
- Webserver with e-mail function
- Extensions cables up to 80m
- Hard shell cases
- Rugged bags

OVERVIEW

VibraZEB series vibration meters are designed to easily and reliably record vibrations.

The **VM-7TSR2** is the latest equipment of the VibraZEB family. Is was developed to fulfil all requirements of DIN45669. This allows the equipment to record and monitor vibrations according to German DIN4150 and many more international standards.

Improvements of the R2 Version

The VM-7TSR2 features a lot of improvement. The Touchscreen is more sensible, has a higher resolution and consumes lesser power. The equipment can be equipped with a GPS module to store the location of the event recorded. Also the equipment can be delivered with an internal 5G modem. The network and USB connectors are improved.

ADVANTAGES

The heavy-duty housings of the vibration meter and sensor blocks are colored signal orange, to allow a better visibility while working outdoors.

Waterproof Push-Pull-Connectors (no more screw on needed) allow a fast setup up of the equipment. The connectors are coded and can only be plugged into the designated sockets.

The internal high capacity battery in combination with energy saving modes allows the equipment to continuously operated for a couple of days.

The basic product includes everything you need to start vibration measurement. The vibration meter software is also included for archiving, analysing and printing files. The software can be installed on any windows PC, there is no limitation.

FLEXIBILITY

The VM-7TS can be customized to customer needs. If a second sensor block is needed the equipment can be advanced with a second triaxial block.

An air pressure microphone can be added and recorded as 7th channel.

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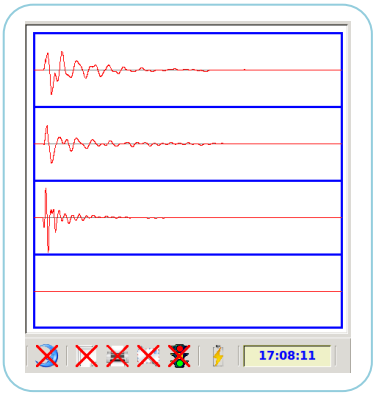
RECORDING

The equipment features two different recording modes that can additionally be combined. For blasting operations for example the function mode v(t) should be chosen, while for long time recordings the bar graph mode is favorable. Recording as function allows the user to set up one trigger value for all channels or individual levels. The bar graph records are saved as 24h files. The length of each event can be selected from 1 second up to 32 seconds. If the optional KB value calculation or the acceleration modules are installed 3 additional virtual channels are shown. If the screen is off to save power during the measurement the current recording status of the equipment is displayed by a flashing red LED. Next to the red LED there is a yellow LED showing the general system status.



VM-7TSR2 (VM.7TS shown)

FILE SAVE & TRANSFER

The VM-7TSR2 is equipped with approx. 1800MB internal memory for records and log files. Up to 10000 single events can be stored. To transfer the files to a computer simply connect the equipment with a USB cable as external hard drive. The records can also be directly copied to an attached USB drive. If the communication module is installed the files can also be transferred via Ethernet/LAN/Wi-Fi/Internet.

VM-7TSR2

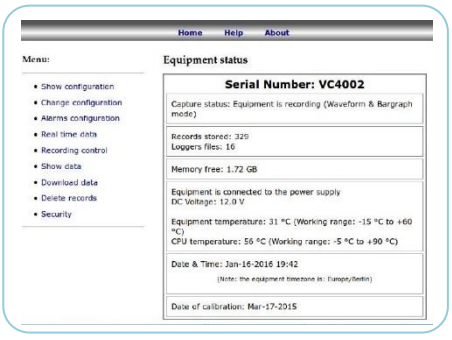
SENSOR BLOCK & SENSORS

The VM-7TS basic configuration features a tri-axial sensor block with leveling plate. The equipment can be advanced with a second tri-axial block or a single vertical channel to measure the highest floor for example. A microphone can be connected to channel 7 to record the air pressure value. We can offer 1-315HZ geophones or 2-250Hz according to customer requests.

VM-7TSR2 Sensor block

EXTENSIONS & OPTIONS

The communications module adds a network port (Ethernet/LAN) to the equipment. A web-server let the user control and configure the equipment from a remote location. Files (records and logs) can be downloaded via FTP-server access. The e-mail-server allows sending notification and status emails. The user can select if a pure text file, a binary sis file or a small PDF report of the recorded event is attached to the mails. The PDF files can easily be viewed on a smartphone or tablet.



The KB-Value-Module extends the equipment with 3 virtual channels according to DIN4150 Part 2.

The acceleration module displays the values of the three geophones of Block 1 in mm/s² as virtual channels.

The printer module activates controls the mobile printer for direct text reports.

The alert system module is always included. A cabled or wireless attached alert box notifies workers or machine operators that trigger values exceeded the maximum limit with loud sound and red/yellow lighting.

Every equipment can be advanced and extended with the above listed features.

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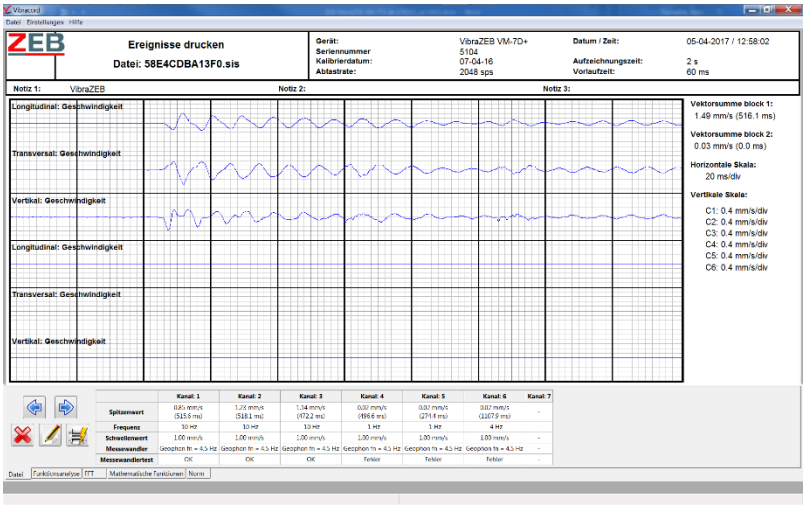
VIBRATION METER SOFTWARE

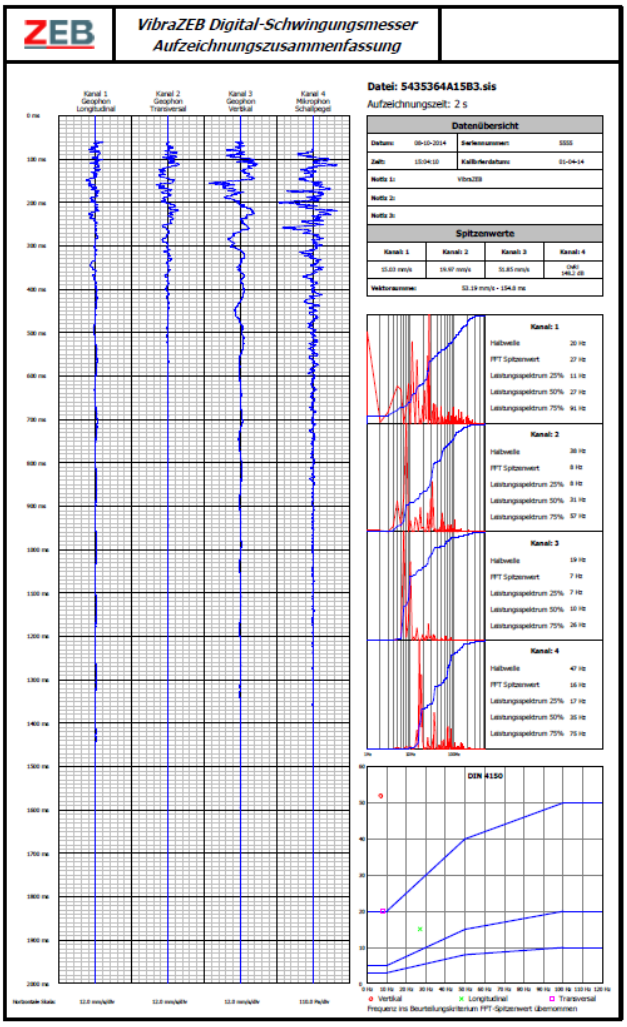
The Vibration Meter Analysis Software is a powerful tool that lets the user analyze, organize and print the recorded events. It includes waveform view, frequency analysis, filters, and many more functions.

The software also creates complete reports with all needed information, charts, tables that are needed for a proof analysis.

The multilingual program features the following languages: DE, EN, FR, ES, PT & RUS.

Updates are free to download from our website.





The main summary print can be created with only one mouse click. It shows the wave form analysis on the left, while the country specific vibration standard is shown on the lower right. In the middle, there is the frequency analysis with calculated values by using the zero-crossing method (have-wave) and additionally the FFT-Analysis. In the upper right corner is the important measurement data. It contains the name of the file, a time stamp, the user customizable notes, the peak values and more. The sheet can be customized with your own company logo and your company name and the user name in the header.

The software supports the following country specific vibration standards:

Country	Standard
Germany	DIN4150
Austria	ÖNORMS9020
Switzerland	SN640312a
France	GFEE
Spain	UNE22-381
Portugal	NP-2074
Sweden	SNI7571
United Kingdom	BS7385
Brazil	NBR9653
United States of America	USBM RI8507
United Arabic Emirates	UAE MoEW

If your standard is not listed, please send us an e-mail at zeb@zeb.maxam.net with a request.

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TECHNICAL SPECIFICATIONS

Type	VibraZEB VM-7TSR2	Power Supply	12V/2A
Measuring variable	Velocity of vibration v(t)	Internal Battery Pack	Li-Ion, rechargeable
Number of Channels	3 (x, y, z) + additional 3 (x, y, z) + 1 Mic	Internal Memory	1800MB/30.000 Events
		I/O Ports	Serial, USB, LAN
Measuring Range	±120mm/s	Display	Touchscreen and 3 LEDs
Sampling Rate	2048sps	Protection	IP65
ADC Resolution	16bit	Dimensions	180 x 220 x 70mm
Frequency Range	1 – 315Hz or 2 -250Hz	Weight	2800g
Recording Time	1, 2, 4, 8, 16, 32s	Operating temperature	-10°C to +50°C
Mic Measuring Range	2-500Pa	Storage temperature	-20°C to +60°C
Mic Resolution	0.1Pa	Humidity	No condensation

ACCESSORIES

The mobile printer is a battery powered accessory to print the recorded events directly or from the equipment internal storage. It can be connected to the serial port. The printer comes pre-configured and ready to use

We also offer wireless and wired Alert Systems that display trigger value exceptions with sound and light. These are customer specific products, so do not hesitate to ask for a solution.

To protect the equipment against damages while transport or work we also offer Rugged Bags and Hard Shell Cases.

SAFETY WARNING

Read the User Manual delivered with the vibration meter carefully before using the product. This product is not allowed to be used in flammable environments such as methane or coal dust.

DISCLAIMER AND LIMITATION OF LIABILITY

The information contained herein can vary according to the different conditions of storage and use of the products as well as external factors like temperature, humidity and pressure, among others. This product is potentially dangerous; and, therefore, its use and handling must be restricted to the personnel duly qualified and be submitted to applicable laws.

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