

Accelerometer PCE-VM 20



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Vibration measuring device for vibration measurement on machines / Direct evaluation according to DIN ISO 10816 / Various measurement modes / Real-time FFT analysis / Route option for fast acquisition of measuring points

The vibration measuring device PCE-VM 20 is a compact device for the direct evaluation of the vibration behavior of a machine. The device can measure and display various vibration parameters, such as vibration acceleration, vibration velocity or vibration displacement. Thanks to the integrated real-time FFT analysis, the condition of a machine can be analyzed and determined during the measurement.

The PCE-VM 20 vibration meter can evaluate and display signals from IEPE standard piezoelectric vibration sensors as well as piezoelectric vibration sensors with charge output.

- ▶ Real-time FFT analysis
- ▶ Robust housing
- ▶ Many vibration parameters
- ▶ Direct evaluation according to DIN ISO 10816
- ▶ Integrated LiPo battery

Specifications

Vibration acceleration	0 ... 200 m/s ² , RMS and Peak-Peak
Vibration velocity	0 ... 200 mm/s, RMS
Vibration displacement	0 ... 2000 μm, Peak-Peak
Accuracy vibration	± 5%
Operating modes	Vibration, temperature, speed
Representable measured variables	Frequency Vibration acceleration Vibration velocity Vibration FFT spectrum
Units	Metric, Imperial, Hz, mm/s ² , mm/s, μm, RPM, Hz
Interface	USB 2.0
Storage	4GB micro SD card
Battery life	Up to 8 h continuous operation
Battery type	Lithium polymer
Display	128 x 160 pixel color LCD
Environmental conditions	-10 ... 55°C / 14 ... 131°F ≤ 80% RH not condensing
Dimensions	132 x 70 x 33 mm / 5.2 x 2.8 x 1.3 in (L x W x D)
Weight	About 150 g / < 1 lb

Handset: must not be exposed to strong vibrations, magnetic fields, corrosive media or dust

Technical data for the vibration sensor

Sensitivity	100 mV / g
Frequency response (± 3 dB)	0.5 ... 15,000 Hz
Frequency response (± 10%)	2.0 ... 10,000 Hz
Dynamic range	± 50 g, peak
Power supply (IEPE)	18 ... 30V DC
Constant current source	2 ... 10-mA
Spectral noise at 10 Hz	14 μg / √Hz
Spectral noise at 100 Hz	2.3 μg / √Hz
Spectral noise at 1000 Hz	2 μg / √Hz
Output impedance	< 100 Ω
Bias voltage	10 ... 14V DC
Housing insulation	> 100 MΩ
Environmental conditions	-50 ... 121 °C / -58 ... 249.8 °F
Maximum impact protection	5000 g, peak
Resonant frequency	23,000 Hz
Housing material	316L stainless steel
Connection	2 Pin MIL-C-5015
Protection	IP68
Weight	90 g / < 1 lb

Subject to change