

## Technical Vibration Analyser PCE-VM 25

### **Vibration Meter to monitor machines and roller bearing / contact-free temperature and rotational speed determination / OLED- color display / graphic display / data storage for 16,000 measurement values / USB interface**

The PCE-VM 25 Vibration Meter is designed for engine monitoring to assure a smooth operation of machines. Due to its simple application, the Vibration Meter can be used for the measurement of a large range of parameters including acceleration, velocity and displacement. The Vibration Meter not only shows the effective value but also the peak value and crest factor. The Vibration Meter delivers detailed information on the current state as well as past history of the measurement values due to a spectral analysis and a tendency prognosis. Measured data can be transferred to a computer via a USB connection in order to evaluate it there in an optionally purchasable software. This allows long-term measurements to be recorded and reviewed in detail. Even if the data is not transferred, the Vibration Meter has enough data storage capacity to save 16,000 measured values internally. There is also the option of purchasing VMID measurement slots.

- Graphic diagram of tendency
- Output for headphones
- Multiple languages
- OLED display
- Automatic. recognition of measuring location due to sensor foot
- Pocket design

#### **Technical Specifications**

Oscillation acceleration	0.1 ... 240 m/s <sup>2</sup> , 0.2 Hz ... 10 kHz, 3 Hz ... 1 kHz, 1 kHz ... 10 kHz
Oscillation velocity	0.1 ... 1000 mm/s, 2 ... 300 Hz, 10 ... 1000 Hz
Oscillation displacement	0.01 ... 60 mm, 2 ... 300 Hz
Diagnosis parameter K(t) for roller bearing	1 ... 10 kHz, with data storage for 1600 initiation values (eff. / peak)
Effective value measurement	yes
Peak value measurement	yes
Crest factor measurement	yes
Measurement accuracy (oscillation)	±5 %, ±2 digits
Revolution measurement	1 ... 9999 rpm, optical
Temperature measurement	-40 ... +125 °C ±2 K, infrared
Frequency analysis	125 lines FFT; acceleration / speed 7 frequency ranges 2 to 11712 Hz
Output for headphones	3.5 mm via adapter VM2xHP,

	volume adjustable
Interface	USB
Data storage for measured value	16000 values, opt. computer software to administer measured data and measurement slots
Display	OLED graphic display; colored; 128 x 160 pixels
Voltage supply	3 x LR03 / HR03 / AAA batteries or NiMH batteries, operation time 8 ... 12 h
Operation temperature	-20 ... +60 °C, <95 % air humidity without condensing
Dimensions	125 mm x 65 mm x 27 mm herer 4.9 in x 2.6 in x 1.1 in
Weight	140 g / 0.3 lbs with batteries, without sensors

#### **Technical Specifications on acceleration sensor of PCE-VM 25**

Output	Low power IEPE
Piezo system	Shear principle
Nominal sensitivity	3.5 mV/ms <sup>-2</sup>
Sensitivity for irrelevant parameters	<5 %
Dimensions	Ø 21, height 34 mm (without socket)
Weight	53 g
Operation temperature	-20 ... +80 °C
Sensor cable	Spiral Cable, stretched length approx. 1.6 m, Ø 4 mm
VMID recognition of measuring slot	digital, one-time 16-digit hexa decimal number, read-out via sensor foot, enclosure of stainless steel Ø 25 mm, height 15 mm, 45 g, montage: two-components epoxy adhesive

#### **General information on VMID-measurement locations**

There can be optionally VMID measuring point used for the analysis. These are magnetic coupling parts maid of stainless steel, that have a digital serial number. This serial number can be transferred through a read-out contact inside the sensor's bottom via the sensor cable. By using these fixed measuring points it is guaranteed that the relevant locations can be measured again and again.

#### **Delivery Contents:**

1 x PCE-VM 25 Vibration Meter, 1 x vibration meter sensor with spiral cable, 1 x VMID measurement location, 1 x USB cable, 1 x head phone adapter, 1 x calibration certificate, 1 x instruction manual, 1 x plastic case