

Human Vibration Meter without Sensors PCE-VM 31



The PCE-VM 31 Human Vibration Meter is designed for measuring human vibration at the workplace. The Vibration Meter can calculate hand-arm vibration measurements according to ISO 5349 and whole-body vibration measurements according to ISO 2631. In addition to human vibration measurements, the Vibration Meter or Vibration Analyzer can measure the vibrations of machines. The Vibration Analyzer also supports TEDS, which means that it can detect and identify TEDS-capable sensors automatically. Overall, the device comes with 4 independent measuring channels. The measured data can be displayed as interval, running or maximum RMS (MTVV), as well as estimated vibration dose value (eVDV), vector sum, peak, and maximum peak. The acceleration can also be displayed as FFT with up to 125 lines. The internal flash memory of the Vibration Analyzer can store up to 10,000 measurements or up to 1,000 FFTs, each with date, time, and a comment. The measured data can also be transferred to a PC via the USB 2.0 interface.

Sensors not included - sold separately (see accessories)

- ▶ For tri-axial measurement (Xh, Yh and Zh axes) of hand-arm and whole-body human vibration
- ▶ For hand-arm vibration syndrome (HAVS) and carpal tunnel syndrome risk assessment, measuring exposure action values (EAVs) and exposure limited values (ELVs), and regulation compliance
- ▶ Velocity, acceleration, displacement
- ▶ 3 channel FFT
- ▶ TEDS support
- ▶ Flash memory for up to 10,000 readings
- ▶ USB interface
- ▶ Compact design
- ▶ Easy to use- ISO 8041 calibration certificate option available (see accessories)

Specifications

Technical specifications

| | | |
|---------------------|--|---|
| Measuring range | Sensor with 1 mV/(m/s ²) | Sensor with 10 mV/(m/s ²) |
| Acceleration | 1100 m/s ² / 3609 ft/s ² | 110 m/s ² / 361 ft/s ² |
| Velocity | 100 mm/s ... 10,000 mm/s 4.0 in/s ... 394.0 in/s(1 kHz/1 Hz) | 10 mm/s ... 1,000 mm/s 0.4 in/s ... 39.4 in/s(1 kHz/1 Hz) |
| Displacement (Peak) | 250 µm ... 15,000 µm 0.01 in ... 0.6 in(5 Hz/250 Hz) | 25 µm ... 1,500 µm 0.001 in ... 0.06 in(5 Hz/250 Hz) |

Display resolution (1 / 10 mV/(m/s²))

| | |
|--------------|---|
| Acceleration | 0.01 m/s ² / 0.4 in/s ² |
| Velocity | 0.1 mm/s / 0.004 in/s |
| Displacement | 1 µm / 4 x 10 ⁻⁵ in |

| | |
|---|---|
| Linearity range | > 75 dB for ±6 % error |
| Noise | < 0.003 m/s ² / 0.12 in/s ² |
| Inputs | 4 Low-Power-IEPE inputs; 0.7 mA / 17 V; TEDSsupport, IEEE1451.4, Template 25 |
| Sensor sensibility | 0.8 - 120 mV/(m/s ²) |
| Display units human vibration (acceleration) | Interval RMS vector sum max. running RMS (MTVV) vibration dose value (VDV) |
| Display units acceleration, velocity, displacement | running RMS maximum RMS vector sum peakvalue maximum peak value |
| Filters | Weighting filters: Wb, Wc, Wd, Wh, Wj, Wk, Wm Unweighted: 6.3 - 1259 Hz (H/A) / 0.4 - 100 Hz (G/K) Acceleration: 0.1 - 2000 Hz / 1 - 1000 Hz Velocity: 1 - 100 Hz / 2 - 1000 Hz / 10 - 1000 Hz Displacement: 5 - 250 Hz |
| Frequency analysis (FFT) | 125 lines for X/Y/Z, peak spectrum of acceleration, 3 -240 / 6 - 480 / 12 - 960 / 24 - 1920 Hz |
| Data memory | Flash, 10,000 measurements, 1,000 FFts, each with date,time and comment |
| Display | OLED, 128 x 160 pixels, coloured |
| Interface | USB 2.0, full speed, CDC-mode (virtual COM port),via cable VM2x-USB |
| Batteries | 3 x 1.5 V AAA batteries or accumulators (LR03 or HR03) |
| Environmental conditions | -20° C ... +60° C / -4° F ... +140° F < 95 % RH |
| Approx. dimensions | 125 mm x 65 mm x 27 mm 4.9 in x 2.6 in x 1.1 in (without connectors) |
| Approx. weight | 140 g / 0.31 lbs |

More information

Manual



More product info



Similar products



Subject to change