Vibration Meters

PCE-S 41

Electronic vibration meter for inspection and machine maintenance

This battery powered electronic vibration meter is used to measure noises in machines, e.g. in fans or pistons. This unit gives the user the opportunity to identify problem areas before they cause a machine to breakdown (preventative maintenance). This vibration meter is an entry level product which is an easy to use, versatile unit which comes complete with transducer, probe and carrying case. The headphones of the vibration meter are equipped with two adjustable auditory protectors and a 1m cable.

- Suitable for inspection and maintenance (to find potential machine malfunctions)
- Revolving switch for volume control
- ABS plastic enclosure
- With two needles (70 + 290 mm)

Technical specifications
- Measurement range: 100 Hz to 10 kHz
- Volume: adjustable
- Tweeter: 8 W
- Operating conditions: -10 to +55 °C
- Power: 9 V battery included
- Enclosure: ABS
- Dimensions: meter: 206 x 50 x 32 mm; sensor: 1 x 290 mm; 1 x 70 mm (length)
- Sensor: stainless steel
- Weight: 240 g with battery included

Contents
- PCE-S 41 vibration meter, headphones with 1m cable, battery, 70 and 290 mm sensors, carrying case and user’s manual

Model No. Description
- PCE-S 41 Electronic vibration meter

PCE-VT 1000 & PCE-VT 2600

Pocket-sized device to measure vibration velocity in machines and installations

The vibration meter is used primarily for the preventative maintenance of production machinery and installations. This vibration meter quickly measures imbalance and tests the state of mechanisms. It is also used to check small electromotors.

- Measures the velocity of vibration; The PCE-VT 2600 also measures acceleration of vibration and displacement
- Retains reading after each measurement
- Easy to use, powered by batteries
- Wide frequency range
- Automatic shut-off after two minutes of inactivity
- Advises when battery needs changing

Technical specifications
- Measurement ranges:
  - acceleration: 0.1 to 199.9 m/s²
  - velocity: 10 Hz to 1 kHz
  - displacement: 10 Hz to 500 Hz
- Operating conditions: 0 to +40 °C, < 85 % r.h.
- Power: 4 AAA batteries
- Enclosure: ABS
- Dimensions: 150 x 22 x 15 mm
- Weight: 190 g

Contents
- Pen vibration meter, leather case, batteries and user’s manual

Model No. Description
- PCE-VT 1000 Pen vibration meter
- PCE-VT 2600 Pen vibration meter

Optional accessories
- CAL-V-I ISO Certificate for PCE-VT 1000
- CAL-V-II ISO Certificate for PCE-VT 2600

PCE-VT 2000

Pen vibration meter for velocity (RMS) and acceleration (peak)

The pen vibration meter is basically used for preventative maintenance in machines and installations by measuring velocity and acceleration. This pocket tester is ideal for personal maintenance and repair technicians. This instrument can be used anywhere as it is powered by batteries.

- Measures velocity and acceleration
- Data hold, Memory (max., min.)
- Large display
- Wide frequency range
- Shows low battery indicator
- Auto-Power-Off

Technical specifications
- Measurement ranges:
  - acceleration: 0.1 to 199.9 m/s²
  - velocity: 0.1 to 199.9 mm/s
  - displacement: - - -
- Operating conditions: 0 to +50 °C, < 80 % r.h.
- Power: 4 AAA batteries
- Enclosure: ABS
- Dimensions: 175 x 40 x 132 mm
- Weight: 240 g

Contents
- Pen vibration meter, 30 mm needle probe, magnetic plate, batteries, carrying case and user’s manual

Model No. Description
- PCE-VT 2000 Pen vibration meter

Optional accessories
- CAL-V-I ISO Certificate for PCE-VT 2000
### PCE-VT 2700

**Vibration meter for velocity (RMS), acceleration (peak) and displacement (peak-peak)**

The vibration meter is basically used for preventative maintenance in machines and installations by measuring velocity, acceleration and displacement. This small tester is ideal for personal maintenance and repair technicians. This device can be used anywhere as it is battery powered.

- Measures velocity, acceleration and displacement
- RS-232 interface
- Retains maximum value after each measurement
- Large display
- Wide frequency range
- Shows low battery indicator
- Automatic shut-off

#### Technical specifications

| Measurement ranges | - acceleration | 0.1 to 400.0 m/s²  
| - velocity | 0.1 to 400.0 mm/s  
| - displacement | 0.001 to 4.000 mm  
| Resolution | 0.1 m/s², 0.1 mm/s, 1 µm  
| Accuracy | ±5 %  
| Frequency ranges | - acceleration | 10 Hz to 1 kHz  
| - velocity | 10 Hz to 1 kHz  
| - displacement | 10 Hz to 1 kHz  
| Indicator | 4 digit LCD; shows last reading  
| Interface | RS-232  
| Power | 4 AAA batteries (1.5 V); approx. 4.5 hours of continuous operation  
| Operating conditions | 0 to +50 °C, < 90 % r.h.  
| Dimensions | 124 x 62 x 30 mm  
| Weight | 240 g  

### PCE-VT 204

**Vibration meter with external acceleration sensor**

The PCE-VT 204 vibration meter and hand tachometer are combined into one device. It is the ideal device for testing machines and installations that have components that rotate or vibrate. This will help detect possible damage and allow for a repair programme to be established to minimise machine down time. In future there will also be an infrared thermometer available (-20 to +270°C), that will allow this device to measure surface temperature without contact.

- Measures velocity, displacement and acceleration
- optically measures revolutions with a laser pointer and reflective tape up to a distance of 1.5m or by contact
- measures velocity in m/min in way of a contact measurement
- external vibration sensor (Ø 18 x 40 mm) with magnetic pedestal included
- Memory for 1000 readings
- Minimum, maximum and Data-hold functions
- Computer interface
- Optional: software and USB interface

#### Technical specifications

| Vibration functions | - Acceleration range: 0.5 to 199.9 m/s²  
| - Velocity range: 0.5 to 199.9 mm/s  
| - Displacement range: 0.005 to 199.9 mm  
| Resolution | 0.1 m/s², 0.1 mm/s, 1 µm  
| Accuracy | ±5 % of range ±2 digit  
| Frequency range | 10 Hz to 1 kHz  
| Tachometer functions | - Revolution range (optical): 10 to 999 U/min  
| - Revolution range (contact): 0.1 r.p.m (<1000), 1 r.p.m (>1000)  
| - Speed range (contact): 0.05 to 1,999 U/min  
| Resolution | 0.1 U/min (<100), 0.1 r.p.m (≥100)  
| Accuracy | ±0.05 % of reading; ±1 digit  
| Measure. distance | 50 to 1500 mm (depending on surface)  

#### General properties

- Memory: 1000 readings
- Indicator: LCD with graphic bars
- Power: 4 AA batteries (1.5 V)
- Operating conditions: 0 to +50 °C, < 80 % r.h.
- Dimensions: 188 x 76 x 47 mm
- Weight: 400 g

### PCE-VT 3000

**Vibration meter with memory, FFT analysis, interface for PC and optional software**

This vibration meter is an easy to use, versatile unit which measures the acceleration, displacement and oscillation speed quickly. One advantage is the possibility to store readings directly to the unit’s internal memory. With the RS-232 interface, you will be able to transfer the data from the vibration meter to a PC.

- Acceleration, velocity, displacement, turn and frequency of vibration
- Internal memory to store up to 1800 values (in 25 groups of 72 values)
- Three operating modes:
  - Special mode: displays maximum acceleration, turn velocity in RMS and displacement of maximum value
  - Common mode: only displays one of the previous values in large digits
  - Spectrum mode: displays the spectrum value
- Automatic analysis of maximum spectral value
- Interface
- Optional software

#### Technical specifications

| Measurement ranges | - Acceleration range: 0.1 m/s² to 392 m/s² (Peak), (39.95 g force)  
| - Velocity range: 0.01 cm/s to 80 cm/s (RMS)  
| - Displacement range: 0.001 mm to 10 mm (Peak-Peak)  
| - Frequency ranges | 10 Hz to 1 kHz  
| - Displacement range: 10 Hz to 500 Hz  
| - Acceleration range: 0.1 m/s² to 392 m/s² (Peak-Peak)  
| - Velocity range: 10 Hz to 1 kHz  
| - Displacement range: 10 Hz to 500 Hz  
| General features | Resolution: 0.25 Hz  
| Accuracy | ±0.5 %  
| Interface | RS-232  
| Power | rechargeable battery  
| Operating conditions: 0 to 40 °C / <80 % r.h.  
| Dimensions: 171 x 78.5 x 28 mm  
| Weight: approx. 230 g with battery  

### Contents

- PCE-VT 2700 vibration meter, sensor, 2 needle probes, magnetic pedestal, case and user’s manual
- PCE-VT 204 vibration meter / tachometer, external sensor, needle sensor, magnetic pedestal, measurement end, measurement cone (the measurement end and cone are for tachometer functions), reflective tape (600 mm), case, batteries and user’s manual
- PCE-VT 3000 Vibration meter, probe (50 mm pointer with handle and 1.5m cable), battery, battery charger, carrying case and user’s manual

### Optional accessories

- PCE-VT 2700:
  - VT-2700-SW: Software and RS-232 interface
  - CAL-V-II: ISO Certificate

- PCE-VT 204:
  - VT-204-SW: Software and USB interface
  - REF: Reflective tape (5 m roll)
  - CAL-V-II: ISO Certificate (Vibration)
  - CAL-DT: ISO Certificate (Tachometer)

- PCE-VT 3000:
  - MT-MEGEG-PCE-FT: Software and RS-232 interface
  - RS232-USB: USB Adapter
  - CAL-V-II: ISO Certificate