

Manual

Vibration Analyser PCE-VT 1000



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1 Introduction

Thank you for choosing and buying a Vibration Analyser of PCE Instruments UK Ltd.

The PCE-VT 1000 vibration analyser is designed for the preventive or rather precautionary maintenance of production machines. The vibration analyser is established for quick measurements of an imbalance and the examination of bearings and gears. It also is frequently used to evaluate the state of small electronic motors. In the following section, you will find classifications of the values obtained with the vibration analyser.

1.1 Features

- Full-scale function, three parameters displacement, velocity and acceleration can be tested.
- Small size, lightness and portability.
- Easy using, single-key control
- Automatically switched off, power saved.

2 Safety Information

Please read this manual carefully and complete before using the device for the first time. Only trained personnel are allowed to operate with this device.

- This device is only designed for the applications mentioned in this manual. In case the device is used for any other application than these, it might lead to hazardous situations.
- Do not expose the device to extreme temperatures, direct sunlight, extreme air humidity or liquids.
- The device may be opened only by specialized personnel of PCE instruments
- Do not operate the device with wet hands.
- Technical alternations on the device are not allowed.
- The device should be only cleaned with a damp cloth. Do not use scrubbing agents or or detergents of any kind.
- The device may be only combined with the optional equipment provided by PCE instruments or comparable alternatives.
- Please check the prior to every operation the enclosure of the device on any visible damages. In case there appears any visible damage, refrain from any further application of the device.
- Furthermore the device may not be applied in any areas where the surrounding conditions (e.g. temperature, air humidity ...) deviate from the specifications and limits listed in this manual, any application of the device is prohibited.
- The device cannot be used in explosion-hazardous areas.
- The threshold specified in this manual cannot be trespassed under any circumstance.
- Do not use the device, if the battery is down (e.g. the display indicates that the battery is low), since it might lead to wrong measurement results. First change the batteries before operating the device again.
- Please check the measurement device prior to every operation with a standard.
- Do not place the measurement device anywhere with its control panel facing down (e.g. control panel facing the table)
- Do not perform any measurements with the device connected to the computer.
- Turn off the device before changing the batteries of the device.
- A disregard of these instructions can lead to a damage of this device and serious injuries.

This manual is published by PCE Instruments without any guarantee.

We are referring to our general condition of sale which can be found in our general terms and conditions.

If there are any upcoming questions please contact the PCE Instruments UK Ltd.

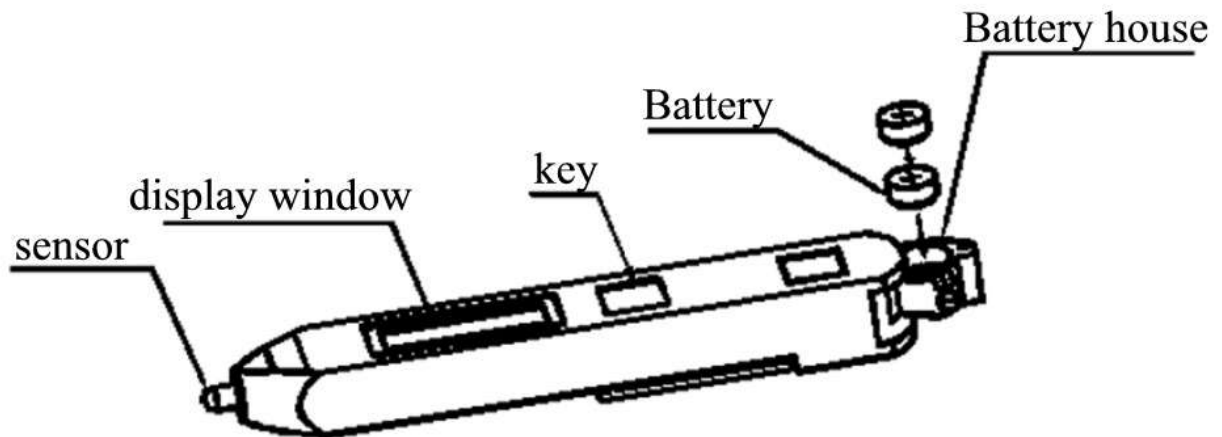
3 Technical Specification

Range of Measurement (vibration velocity)	0.1 ... 199.9 mm/s
Resolution	0.1 mm/s
Accuracy	± 5 %
Frequency Range	10 Hz ... 1 kHz
Relative error	Indeterminacy of sensitivity: ≤3% Linear relative error of amplitude: ±5%±2 Relative error of frequency response: -20%~+10% (frequency is 10Hz≤f<20Hz), 5%(frequency is 20Hz≤f≤1000Hz)
Display	3.5 positions LCD display that shows the last measurement value.
Battery	2 watch batteries 1.5 V with 5 hours of continuous use
Battery Life	continuous working 5 h, resting time is about 1 year
Auto Shut-off	automatically disconnects after 2 minutes without activity to protect battery life
Operational Temperature Range	0 ... 40 °C, < 85 % H. r.
Dimensions	150 x 22 x 15 mm
Weight	55 g

3.1 Scope of Delivery

1 x PCE-VT 1000 vibration analyser,
 1 x carrying case,
 2 x batteries,
 1 x factory certificate,
 1 x user's manual.

4 Device Description



5 Operation

5.1 Principles:

Push the sensor on the plane being tested while keeps PCE-VT 1000 perpendicular to it. Make sure the sensor to touch the tested surface tightly with force of about 5~20N in order to make the vibration of tested object transmitted to the pen completely. Testing points should be on bearing, bearing support or any parts which have obvious response to driving force or show the vibration of the machine accurately. For the accurate testing of vibration, it is necessary to test at three different directions which are vertical with each other. The pen doesn't have the function of data memory, so you need to record them by writing.

5.2 Usage:

Push the sensor on the tested surface. Press the button, the pen get into the function of acceleration testing. If

release the button now, the testing value will be kept for 40s, then the pen turns off automatically. "Over" will be displayed on the screen when the testing values go over the permitted range.

6 Maintenance:

- PCE-VT 1000 is a close gauge, and should be seriously protected from collision, damp, strong electromagnetic field, smear and dust.
- Pay attention to and make sure the anode towards " "while changing the battery.
- Please take the battery off when the pen will not be used for a long time.
- Please do not dismantle the pen optionally in case of damaging the circuit.
- Polish the screen with clean water only, not alcohol or diluents which will corrode the screen.

7 Contact

If you have any questions about our range of products or measuring instruments please contact PCE Instruments UK Ltd.

By post:

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You can find an overview of our measuring instruments here: <http://www.industrial-needs.com/measuring-instruments.htm>

You can find an overview of our scales here <http://www.industrial-needs.com/balances.htm>

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