

# ACCELEROMETER

PCE-VT 3950

- » For mobile vibration measurement
- » Measuring range up to 399.9 m/s<sup>2</sup> / 15744 in/s<sup>2</sup>
- » FFT analysis
- » Route measurement
- » Manual measured value memory
- » Automatic ISO 10816-3 evaluation
- » Internal memory
- » 2.8" LC display
- » Rechargeable battery
- » Micro-USB interface
- » incl. headset

The accelerometer is an ideal measuring device for fast and precise checking of vibrating parts, machines and systems. This vibration meter uses the external vibration sensor to determine the vibration displacement (measuring range 0.000 ... 3.9 mm), the vibration velocity (measuring range 0.00 ... 399.9 mm/s) and the vibration acceleration (measuring range 0.0 ... 399.9 m/s<sup>2</sup>). Various measurement parameters are available for the vibration meter, such as RMS, peak, peak-peak and crest factor. The vibration meter is equipped with a mode that allows a measurement to be automatically evaluated according to the limit values of ISO 10816-3. The vibration meter analyzes the measured values and shows a corresponding good/bad rating on the display. The built-in battery in the vibration measuring device has a capacity of 2500 mAh and can be recharged directly via the built-in micro-USB interface.

In addition to the normal measuring mode, the accelerometer has an FFT mode. In the FFT mode, the frequency spectrum for the measured vibration speed or vibration acceleration is calculated and displayed. The calculated FFT lines are displayed in a graphic representation in an overall view for the entire frequency band and parallel to this in a zoom view to display the individual lines.

An additional function is route measurement. The route measurement is specially designed for recurring measurements at identical measuring points.



## Specification

### Acceleration

Measurement range up to 0 ... 399,9 ft/s<sup>2</sup>

Resolution 0,1 ft/s<sup>2</sup>

Accuracy ±2 %

Frequency range 10 Hz ... 10 kHz  
1 kHz ... 10 kHz

### Optical speed

Measurement range up to 600 ... 50000 rpm

### Speed

Measurement range up to 0 ... 399,9 km/h

Resolution 0.1 mm/s

Accuracy ±2 %

Frequency range 10 Hz ... 1 kHz

### Path

Measurement range up to 0 ... 3,9 inch

Resolution 1 inch

Accuracy ±2 %

Frequency range 10 Hz ... 200 Hz

### Sensor

Designation PCE-VT 3xxx SENSOR

Dimension Ø 29 x 81 mm

Additional description Resonant frequency: 24 kHz  
Cross sensitivity: Δ 5%  
Destruction limit: 5000 g (peak)  
Housing material: stainless steel  
Mounting thread: ¼ - 28 in

### General technical data

Number of measuring channels 1

Measuring functions RMS, peak, Peak-peak, Crest factor

FFT FFT acceleration: 10 Hz ... 8 kHz  
FFT velocity: 10 Hz ... 1 kHz  
Accuracy @ 160 Hz: ±2 %  
Number of FFT lines: 2048  
Route measurement: 100 routes, each with 100 machines, each with 100 measuring points, each with 1000 measured values

Frequency 10 ... 10000 Hz

Display type LCD

Display size 2,8 Inch

Storage medium Internal memory

Storage capacity 2160000 Values

Storage interval from 1 s

Storage interval to 12 min.

Interface Micro-USB, 3.5 mm jack

Menu language English, German, French, Spanish, Italian, Dutch, Portuguese, Turkish, Polish, Russian, Chinese, Japanese

Protection class (device) IP52

Power supply Rechargeable battery: 3.7 V  
USB: 5 VDC, 500 mA

(Rechargeable) battery 1 x 3,7 V internal, Lithium polymer battery

Capacity 2500 mAh

Operating conditions -20 ... 65 °C, 10 ... 95 % RH

Storage conditions -20 ... 65 °C, 10 ... 95 % RH

Dimensions ( L x W x H ) 165 x 85 x 32 mm

Other dimensions Vibration sensor Ø 17 x 46 mm  
Headphone connection 3.5 mm jack

Weight 239 g

Other weights Vibration sensor 52 g