ACCELEROMETER

PCE-VT 3950



- **For mobile vibration measurement**
- **Measuring range up to 399.9 m/s² / 15744 in/s²**
- **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/s²). 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	
Measuring range	0 ... 399,9 m/s²
Resolution	0,1 m/s²
Accuracy	±2% @160 Hz
Frequency range	10 Hz ... 10 kHz 1 kHz ... 10 kHz
Mechanical speed	
Measuring range	600 ... 50000 RPM
Resolution	1 RPM
Accuracy	2 % of Rd
Speed	
Measuring range	0 ... 399,9 mm/s
Resolution	0.1 mm/s
Accuracy	±2% @160 Hz
Frequency range	10 Hz ... 1 kHz
Path	
Measuring range	0 ... 3,9 mm
Resolution	1 µm
Accuracy	±2 %
Frequency range	10 Hz ... 200 Hz
Sensor	
Designation	PCE-VT 3xxx SENSOR
Additional description	Resonance frequency: 24 kHz Cross sensitivity: Δ 5% Destruction limit: 5000 g (peak) Housing material: stainless steel Mounting thread: ¼ - 28 UNF
Dimension	Ø 19 x 48 mm

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
Connections	3.5 mm headphone connection
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
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 LP785060 , Lithium polymer battery
Capacity	2500 mAh
Performance	9,25 Wh
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
Weight	253 g