

# VIBRATION METER

PCE-VT 420



- » **Measurement of acceleration, velocity and displacement**
- » **Measurement functions: RMS, Peak, MAX-Hold, Peak-Peak, MAX**
- » **Sensor with magnetic mount**
- » **Protection class IP63 (unit), IP60 (sensor)**
- » **Measurement range calibration possible**
- » **Measurement in accordance with ISO 2954**

The vibration meter offers a reliable solution for monitoring vibrations in industrial machinery. The device can measure and output either acceleration, velocity or displacement. The desired measurement parameter is conveniently set using integrated DIP switches. The device operates in the frequency range of 10 Hz to 1000 Hz and meets the requirements of ISO 2954. The measurement ranges are 0.5 to 199.9 m/s<sup>2</sup> for acceleration, 0.5 to 199.9 mm/s for velocity and 0 to 1.999 mm for displacement. The high resolution of 0.1 m/s<sup>2</sup>, 0.1 mm/s and 0.001 mm enables precise measurement of even the smallest vibrations. Accuracy is  $\pm 5\%$  + 2 digits under typical operating conditions.

The vibration meter supports both RMS and peak-to-peak measurements, offering versatile analysis options. The analogue 4-20 mA interface enables easy integration into existing monitoring systems. Separate vibration measurement is carried out via a robust probe with a magnetic mount, ensuring flexible and secure attachment to the measurement object. The vibration meter's housing is rated to IP63, and the probe to IP60. Power is supplied via 12-30 V DC, allowing the vibration meter to be integrated into a wide variety of industrial environments.

Thanks to zero and span adjustment, the vibration meter can be optimally adapted to the respective measurement requirements. Operation is particularly user-friendly thanks to the compact design and ease of use.

## Specification

### Acceleration

Measuring range 0,5 ... 199,9 m/s<sup>2</sup>

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

Accuracy ±(5% +2Digits) v.Mw. @ 160 Hz, 80 Hz, 23 ±5°C

Frequency range 10 ... 1,000 Hz

### Speed

Measuring range 0,5 ... 199,9 mm/s

Resolution 0.1 mm/s

Accuracy ±(5% +2Digits) v.Mw. @ 160 Hz, 80 Hz, 23 ±5°C

Frequency range 10 ... 1,000 Hz

### Displacement

Measuring range 0 ... 1,999 mm

Resolution 0,001 mm

Accuracy ±(5% +2Digits) v.Mw. @ 160 Hz, 80 Hz, 23 ±5°C

Frequency range 10 ... 1,000 Hz

### Sensor

Cable length 1,2 m

Protection class IP60

Dimension Diameter 16 mm, Length 31 mm

### General technical data

Analogue output 4 ... 20 mA

Outputs Output parameter selectable via DIP switches

Cable length 1,95 m

Measuring functions MAX, MAX Team, peak, Peak-peak, RMS

Frequency 10 ... 1000 Hz

Display type without display

Standard(s) ISO 2954

Calibration Calibration point: - Acceleration 50 m/s<sup>2</sup> (160 Hz) - Speed 50 mm/s (160 Hz) - Displacement 0.141 mm (160 Hz)

Protection class (device) IP63

Power supply 9 ... 30V DC, 200 mA

Operating conditions 0 ... 70 °C , 0 ... 85 % RH

Storage conditions 0 ... 70 °C , 0 ... 85 % RH

Dimensions ( L x W x H ) 96 x 120 x 43 mm

Weight 239 g