

DATA LOGGER FOR MACHINE MONITORING

PCE-VDL 16I



- » **3-axis Acceleration up to 800 Hz**
- » **For temperature, humidity, air pressure and light**
- » **32 GB SD memory card**
- » **Small design: 86.8 x 44.1 x 22.2 mm / 3.4 x 1.7 x 0.87 in**

Data logger for machine monitoring with an additional function of environmental data registration

The mechanical engineering data logger PCE-VDL 16I from PCE Instruments measures and stores the relevant measured variables, such as temperature, relative humidity, air pressure, light as well as acceleration in three axes (by means of a vibration sensor). This data logger is therefore ideal for monitoring vibrations on machines while measuring and recording the relevant ambient conditions of the system. Although production machines or processing machines such as a multi-axis milling machine use significantly improved work units, but the datalogger can capture in any case a basic vibration behavior of the machine and record from there over time the development of the vibrations. Thus, the vibration behavior of the milling machine can be assessed in short time intervals or the emerging sources of error can be localized. Does the drive cause a vibration problem or is a tool defective? PCE Instruments also offers vibration meters for permanent installation and thus continuous monitoring of a machine, though the data logger also provides a very cost-effective option for fast and accurate machine monitoring. Optimize your equipment and record the valuable measurement data that will help you to reduce the wear of your equipment and machines. Facilitate the design of bearings and damper systems, make it possible to reduce the noise in motors, detect unbalance quickly

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Specification

Acceleration

Measuring range -16 ... +16 g

Resolution 0,003906 g

Accuracy ± 0.24 g

Light

Measuring range 0,045 lx ... 188 klx

Resolution 0,045 lx

Air pressure

Measuring range 10 ... 750 mbar

Resolution 0,02 mbar

Accuracy ± 4 mbar

Air pressure

Measuring range 750 ... 1100 mbar

Resolution 0,02 mbar

Accuracy ± 4 mbar

Air pressure

Measuring range 1100 ... 2000 mbar

Resolution 0,02 mbar

Accuracy ± 4 mbar

Oscillation

Measuring range -16 ... +16 g

Resolution 0,003906 g

Accuracy ± 0.24 g

Relative humidity

Measuring range 0 ... 100 %

Resolution 0,04 %

Accuracy ± 1.8 %

Temperature

Measuring range -20 ... +65 °C

Resolution 0,01 °C

Accuracy ± 0.2 °C, not during the charging process

General technical data

Units °C, mbar, lx, g

Measuring interval 1 ... 1800 s

Display type without display

Adjustable measuring rate 1 ... 800 Hz

Storage medium Micro SD card

Storage capacity 32 GB

Memory capacity (additional information) 3.2 billion readings with included 32 GB micro SD memory card. A new file is automatically created after 200,000 readings

Interface Micro-USB

Operating time 1680 min.

Protection class (device) IP40

Power supply 5 V DC

Capacity 700 mAh

Performance 2,59 Wh

Operating conditions -20 ... 65 °C, 0 ... 100 % RH

Storage conditions 5 ... 45 °C, 10 ... 95 % RH

Dimensions (L x W x H) 87 x 44 x 23 mm

Weight 57 g