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 ...

Specification

Acceleration	
Measuring range	-16 ... +16 g
Resolution	0,00390625 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	0,00390625 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

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