



PRODUCT INFORMATION

PCH 1106 COMPACT VIBRATION SENSOR

With optional temperature output as 4-20 mA



The vibration sensor PCH 1106 Mk2 can be used on many different machines in a production environment. It is suitable for monitoring blowers, ventilators, pumps, decanters, separators, compressors and mills. The vibration sensor continuously monitors the machine vibration level and gives a DC output in relation to this. When connected to a PLC or a CTS system the operator will gain an active protection of the machine, which limits the damages to the machine and consequently will reduce the maintenance costs. Optionally, PCH 1106 Mk2 can be delivered with a bearing temperature output measured on the bearing housing or a raw time waveform output.

Bearing damages

A bearing damage often occurs due to undetected unbalance or misalignment of a machine. Hence, the machine runs for a very long period of time with a far too high vibration level. This is the most common reason for serious machine crashes and down time.

Avoid unscheduled production stops

Deciding not to invest in vibration monitoring only because of initial investments costs can be an unwise decision. This will often lead to unexpected expenses due to machine repairs, not to mentioned the further economic losses due to a production stop.

Price attractive alternative

For users who prefer a simple protection against damaging vibrations the PCH 1106 Mk2 is very price attractive solution that easily can be connected to a PLC or CTS system.

Functionality

The vibration sensor consists of a vibration sensor as well as output electronics, which are embedded in a stainless steel housing. The PCH 1106 Mk2 monitors mechanical vibrations according to **DIN/ISO 10816**. The PCH 1106 Mk2 can be delivered to measure ve-

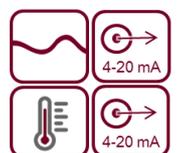
locity (**mm/s**), acceleration (**m/s²**) or displacement (**mm**) and measures in true RMS or Peak-Peak. Optionally, the PCH 1106 Mk2 can be delivered with a 4-20 mA **surface temperature reading in °C** as well.

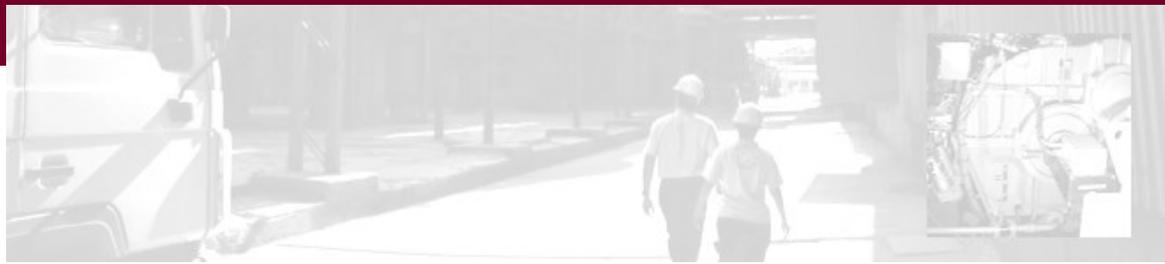
The vibration sensor can be connected to a PLC or a machine monitoring system. Two DC outputs are available for vibration level as a **4-20 mA** and **1-5 V DC signal** proportional to Full Scale to the PLC. Optionally, a temperature reading or a raw time waveform output, 100 mV/g, can be delivered instead of the 1-5 VDC signal.

Alarms for individual vibration levels can be programmed in the PLC or CTS system, where also a preventive action can be initiated.

Connecting the vibration sensor to the PLC or CTS system only requires a single cable with 4 wires. The measuring and frequency ranges are pre-set by PCH, so the vibration sensor is ready for use at delivery.

PCH 1106 Mk2 can also be used for periodic measurements by connecting a portable meter, like the PCH 1033, which displays the actual vibration level at the point of a permanently mounted PCH 1106 Mk2.





Technical data

PCH 1106 COMPACT VIBRATION SENSOR



PCH 1106 Mk2 with cable



PCH 1033 Vibration Meter



CHA 1012 HT adaptor and isolator

Type

Sensor type:

Capacitive accelerometer
Velocity (mm/s), Acceleration (m/s²), Displacement (mm) and °C

Measuring parameter:

Measuring range:

0-10 mm/s, 0-20 mm/s and more, optional:
temperature 0-100 °C

Measuring accuracy:

± 5 %

Max. measuring range

± 18 g

Shock

1000 g

Frequency range:

10 Hz - 1000 Hz, 18 dB/oct (-3 dB, -60 dB/dec)
or to be agreed upon

Detector:

True RMS Detector or Peak -Peak

Output

2 Output signals:

4-20 mA and 1-5 V DC relative to 0-100 % of vibration measuring range.
Optionally: 4-20 mA relative to temperature 0-100 °C or raw time waveform output
100 mV/g, 0.1-1000 Hz

Connection

Grounding:

Ground (0 V) to housing

Power supply:

+24 V DC, ± 10 %, max. 50 mA DC

Operating temperature:

-20 °C to +70 °C

Housing (IP65):

Stainless steel type 1.4305

Weight:

Approx 101 g

Connector:

M 12, 4-pin

Dimensions:

Height: 66 mm, Ø 25

Cable (option):

1.5, 3, 5, 10 m

Mounting:

Threaded stud, M 8 mm

Ordering

When ordering please inform about the requested measuring range, frequency range and as an option cable length.

Options

Surface temperature output as 4-20 mA (PCH 1106 T)
PCH 1033 Vibration meter for displaying in mm/s
CHA 1012 High Temperature adaptor, 90 °C radiation
CHL 1073 Cable with M 12 connector, L=1500 mm
CHL 1074 Cable with M 12 connector, L=3000 mm
CHL 1075 Cable with M 12 connector, L=5000 mm
CHL 1088 Cable w. M12 90° connector, L = 5000 mm
CHL 1077 Cable with M 12 connector, L=10000 mm
Raw time waveform signal output; contact PCH

Note:

PCH 1106 Mk2 replaces PCH 1102/1106 Mk1. Note that output has changed from 1-6 V to 1-5 V output. Power supply and 4-20 mA remain unchanged.

PCH Engineering A/S reserves the right to change all specifications and accessories listed in this sheet without notice.

VED KLÆDEBO 4 • DK-2970 HØRSOLM • COPENHAGEN • DENMARK
TEL: +45 4576 8776 • FAX: +45 4576 8702 • E-MAIL: pch@pch-engineering.dk • WEB: www.pch-engineering.dk