



PRODUCT INFORMATION

PCHcompact VIBRATION GUARD PCH 1270/72



The vibration guard PCH 1270/72 serie can be used on many different machines in a production. It is suitable for monitoring blowers, ventilators, pumps, decanters, separators, compressors and mills. The vibration guard continuously monitors the machine vibration level. Two adjustable alarms can be used to ensure that the machine vibrations do not exceed the acceptable level. The operator will gain an active protection of the machine, which limits the damages to the machine and consequently will reduce the maintenance costs.

Bearing damages

A bearing damage often occurs due to undetected unbalance or misalignment of a machine. Hence the machine runs for a very long time period with a much 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 simply due to price can be a very unwise decision. Often will this leads to unexpected expenses to machine repairs, not to mentioned the further economic loss due to the production stop.

Price attractive alternative

For users who want a simple protection against damaging vibrations. PCH 1270/72 is very **price attractive** and can easily be connected to a PLC or CTS system.

Functionality

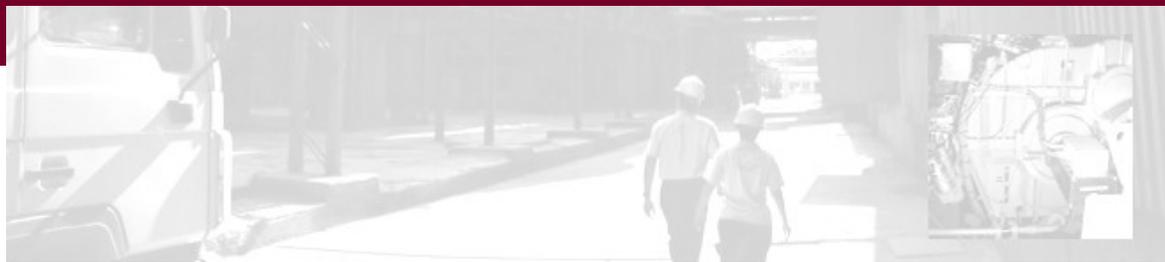
The Vibration Guard consists of a vibration sensor as well as conditioning-, alarm- and output circuitry, all embedded in stainless steel housing. The PCH 1270/72 monitors seismic mechanical vibrations according to DIN/ISO 10816. PCH 1270/72 can be configured to measure velocity (mm/s) or acceleration (m/s^2). **Low frequency versions** are available. Individual

measuring parameters can be customized. Measurement range, alarm limits and delay times can be adjusted directly in the PCH 1270/72 according to the machine type and size, it has to monitor. For the PCH 1272 all settings can also be changed by using the PC control and display software. Incl. readout of vibration level, status and FFT analysis.

The present vibration level is continuously compared with the two alarm limits and if the alarm limits are exceeded the **two alarm relays** A1/D1 will trigger and thereby inform the user, e.g. via a connected rotor light, beeper, controller or by directly shutting down the machine. Both alert (A1) and danger (D1) have build in delay time, which prevents false alarms due to momentary transients.

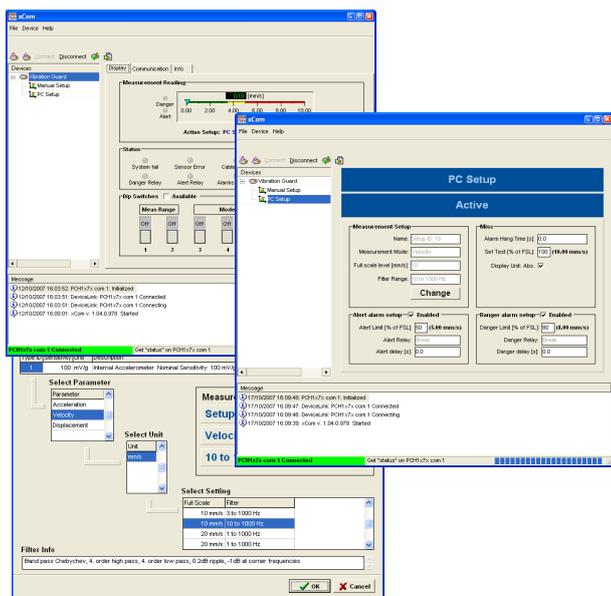
Also the PCH 1270/72 has a built in **latch function**, ensuring the alarm relay stays triggered until it has been manually/remotely reset, even though the vibration level has decreased again. PCH 1270/72 also provides a 4-20 mA signal, which always expresses the relative vibration level. The **4-20 mA output** can also be used to verify the alarm limits of the Vibration Guard.



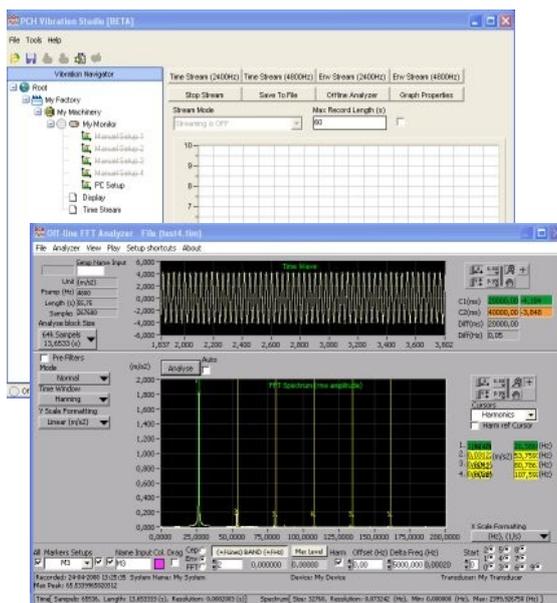


Technical data

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Monitor set up



Frequency analysis

Sensor: Capacitive accelerometer

Measuring parameter: Velocity (mm/s)
Optional: Acceleration (m/s²)

Measuring ranges (selectable):
10 or 20 or 50 or 100 mm/s
Optional: 2.5 or 6 or 12 or 24 m/s²

Frequency range: 10 Hz - 1000 Hz,
-1 dB, >18 dB/oct. (>60 dB/dec.)
Optional: 1 - 300 Hz - Low Freq Version
(or to be agreed upon at ordering)

Detector: True RMS detector

DC output: 4 - 20 mA, relative to 0 - 100
% of measuring range, load: max. 400 Ω

Measuring accuracy: ± 1.5 %
Max. measuring range: ± 18 g or ± 6 g
Shock: 1000 g

Alarm detectors:
Alert alarm with adjustable alarm limit.
Danger alarm with adjustable alarm limit.

Alarm relays:
A1: Alert relay, break
D1: Danger relay, break

Alert and Danger with Latch or auto reset
(selectable)
Max voltage:.....30 V
Max current:.....100 mA

Delay time:
A1: 10 s., D1: 5 s.
The delay times are adjustable from 0 -
100 s. Other delay times can be agreed
upon.

Hang time for both A1 and D1: 1 s.

Manual reset function:
If alarm relays are latched reset can be
made, via controller/PLC or switch.

Test function:
Can be activated remotely or by switch.
Both relays are activated after the duration
of the delay time, if the analogue output
continues to exceeds the alarm trigger
level during self-test.

Grounding:
Common/ground (0V) and chassis can be
disconnected via built-in switch.

Power supply:
+24 V DC, +/- 10 %, max. 60 mA DC

Operating temperature:
- 20 °C to + 65 °C

Housing (IP68):
Stainless steel type 1.4305
Optional: 1.4404

Cable: 2 m PUR oil resistant, screened.
Different lengths can be ordered.

Mounting:
M8 internal thread and threaded stud M8
or M10

Compliance: 0359
Rated according to EN 13849, PL-D

Option:
Can be supplied
with M12 connector
instead of inte-
grated cable.



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

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