

PCHcompact VIBRATION GUARD - PCH 1270/72



Vibration Guard - Type PCH 1270/72

PCH 1270/72 Vibration Guard

This version monitors the development of vibrations in a machine and gives an alarm if the vibration level is too high.

Price attractive alternative

For users who want to prevent their machines from damaging vibrations, e.g. vibrations coming from unbalance and misalignment.

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 buy a Vibration Guard due to price can be a very unwise decision. Often this leads to extra unexpected expenses to machine repairs, not to mentioned the further economic loss due to the production stop.

Applications

The Vibration Guard PCH 1270/72 can be used on many different rotating machines in a production. It is very suitable for monitoring ventilators, fans, pumps, decanters, separators and mills.

What does the PCH 1270/72 monitor

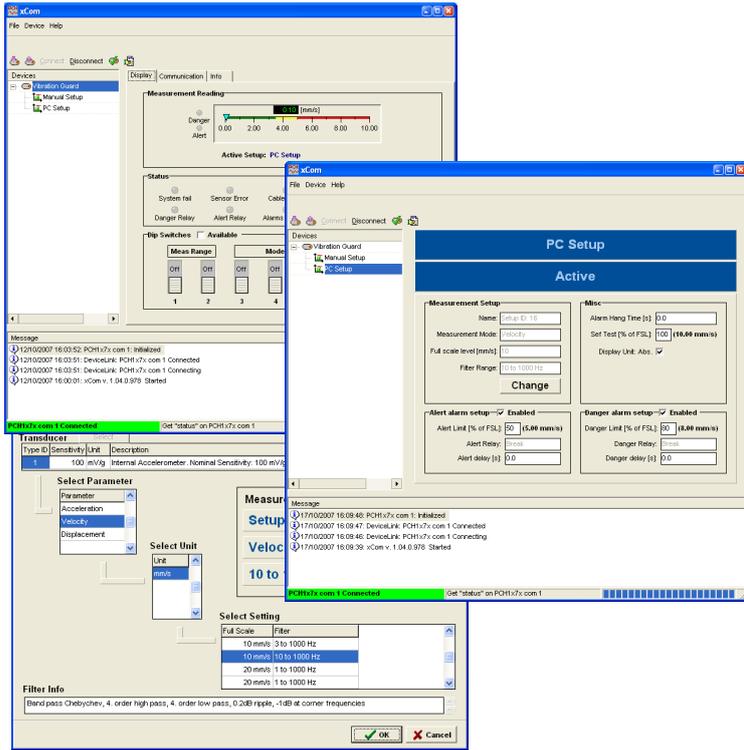
The Vibration Guard continuously monitors the machine vibration level. The Vibration Guard has two adjustable alarms, which can be used to ensure that the machine vibration does not exceed the acceptable or allowed limit. Hence the user obtains an active protection of the machine resulting in a considerable reduction of machine damages and accidents and thereby decreasing the maintenance expenses.

Functionality

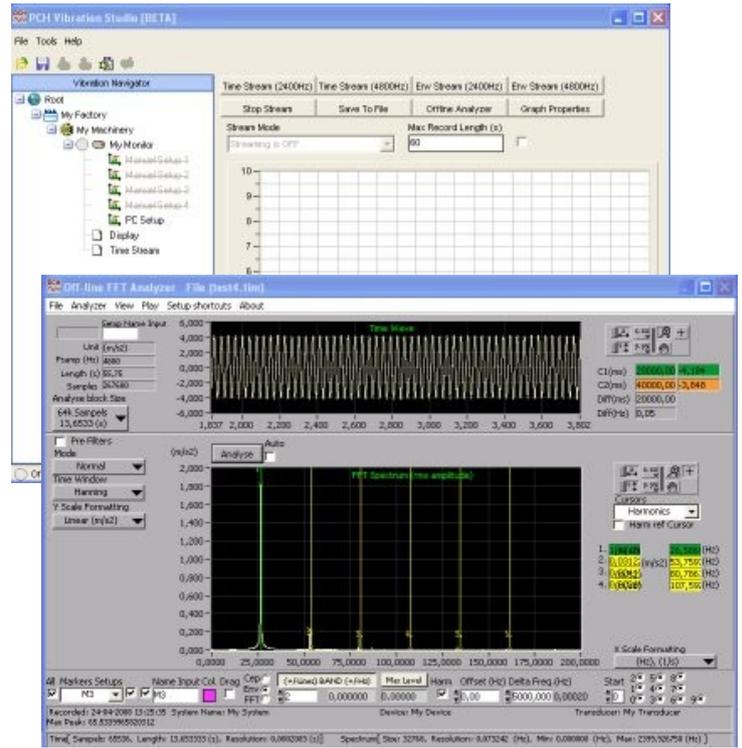
The Vibration Guard consists of a vibration sensor as well as conditioning-, alarm- and output circuitry, all embedded in Stainless Steel housing. The PCH 1270/72 monitors seismic mechanical vibrations according to DIN/ISO 10816. PCH 1270/72 can be configured to measure velocity (**mm/s**) or acceleration (**m/s²**). The measuring parameter is to be determined prior to ordering. For the PCH 1272 all settings can be changed by using the xCom control and display software. Incl. Readout of vibration level and status.

Measurement range and 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. 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 **4-20mA** signal which always expresses the relative vibration level. The 4-20mA output can also be used to verify the alarm limits of the Vibration Guard.

Monitor set up



Frequency analysis



Vibration studio

TECHNICAL DATA:

Sensor type:
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, >60 dB/dec.
Optional: 1 - 300 Hz
(Must be stated when ordering)

Detector:
True RMS Detector

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

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 with latch or auto reset (selectable)
Danger with latch or auto reset (selectable)

Max voltage:.....30 V
Max current:.....100 mA

Delay Time:
A1: 10 sec.
D1: 5 sec.
This delay times are adjustable from 0 - 100 sec. Other delay times can also be ordered separately.

Hang time for both A1 and D1: 1 sec.

Manual Reset Function:
Common for both A1 and D1
- via controller/PLC, common for A1/D1

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: Oil resistant, PUR, screened. Different lengths can be ordered.

Mounting:
Threaded stud, M8 mm internal thread.

PCH Engineering A/S reserves the right, without any notification, to change all specifications in this Product Information.



The Vibration Monitoring Specialists

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