



PRODUCT INFORMATION

PCH 1230/1232 COMPACT VIBRATION GUARD

The PCH compact vibration guards series can be used on many different machines in a production. It is suitable for monitoring blowers, fans, 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 to invest in vibration monitoring equipment is a very wise decision. Often this leads to fewer unexpected expenses to machine repairs, not to mentioned the economic loss due to the unforeseen production stop.

Price attractive alternative

For users who want a simple protection against damaging vibrations. PCH Vibration Guards are very **price attractive** and can easily be connected to a PLC or CTS system.

Functionality

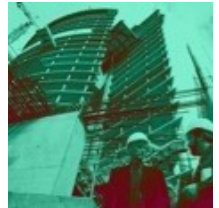
The Vibration Guard consists of a vibration sensor as well as conditioning-, alarm- and output circuitry, all embedded in a stainless steel housing. PCH 12xx monitors seismic mechanical vibrations according to DIN/ISO 10816. PCH 12xx monitors seismic mechanical vibrations as well as structural vibrations and can be configured to measure velocity (mm/s), acceleration (m/s^2) and displacement (μm or mm). Optionally, **up to 4 simultaneously running filter bands** can be configured. Measurement range, alarm limits and delay times can be adjusted directly in the monitor according to the machine type and size, it has to monitor.

Configuration is done using a service cable with USB connector and PCH Vibration Studio user software.

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.

All monitors have 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 1230 provides an analogue **0/4-20 mA** or **0-5/10 VDC output**, which is relative to the vibration level. PCH 1232 offers 2 DC outputs.

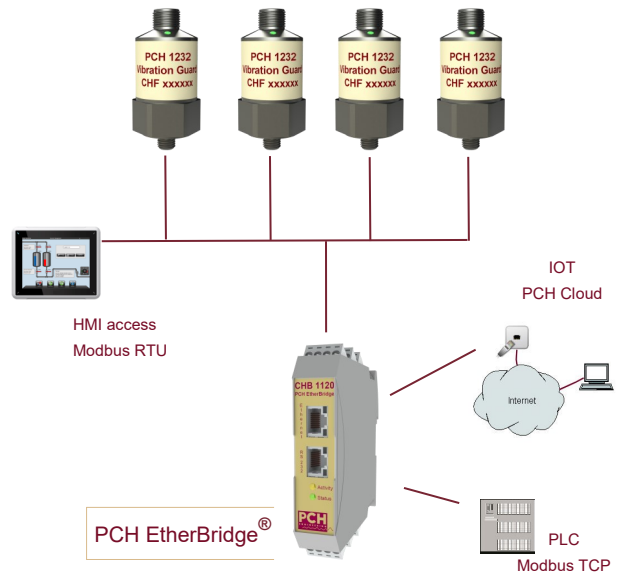
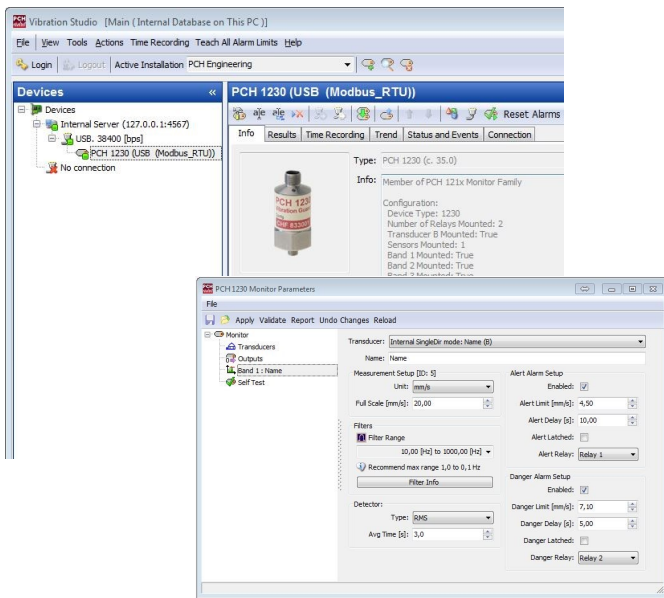
PCH 1232 is the version offering full multidrop **Modbus RTU** integration through 2-wire RS-485. Configuration can be done by service cable or via the RS-485 network, when connected to PCH Vibration Studio.





Technical data

PCH 1230/1232 COMPACT VIBRATION GUARD



Easy monitor set up

Modbus RTU or TCP network

Sensor: Redundant capacitive accelerometer ± 16 g

Measuring parameter: Velocity (mm/s), Acceleration (m/s^2), Displacement (μm)

Measuring ranges (configurable):
0.1-100 m/s^2 , 0.5-200 mm/s, 1-20 mm
Optional: Imperial units (IPS)

Frequency range (configurable):
0.1-1000 Hz Acceleration and 1-1000 Hz Velocity (5 Hz HP is recommended in Velocity, 10 Hz HP for displacement)
-1 dB, >18 dB/oct. (>60 dB/dec.)

Optional: Several narrow bands can be configured, please ask for more details.

Detector: True RMS, True 0-Peak, True Peak-Peak detector

DC output PCH 1230 (1), PCH 1232 (2):
0/4 - 20 mA (max. 400 Ω load) or 0-5/10 V (min. 1K Ω), relative to 0 - 100 % of measuring range

Measuring accuracy: ± 2.5 %
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
Selectable Latched or auto reset
Max voltage:.....30 V
Max current:.....100 mA

Adjustable Delay and Hang time:
A1: 10 s., D1: 5 s. Hang time for both A1 and D1: 1 s. Delay and Hang times are adjustable from 0 - 100 s.

Manual reset function:
If alarm relays are latched reset can be done digitally via a PLC or a local switch.

Test function:
Can be activated digitally via a controller/ PLC or by a local switch.

Grounding:
Common/ground (0V) and chassis are connected internally (1M Ω /1uF/2Kv).

Communication:
USB via Service Cable or Adaptor for configuration and selftest
Modbus RTU; PCH 1232 only

Power supply:
+10.5 - 30V DC, max. 1.5 Watt

Operating temperature:
- 40 $^{\circ}C$ to + 65 $^{\circ}C$

Housing (IP68):
Stainless steel type 1.4404

Connection:
M12, 8-pin or 12-pin (PCH 1232)

Mounting:
M8x1.25 integrated mounting stud

Dimensions PCH 1230/1232:
Height:.....56 mm
Diameter..... $\varnothing 27$ mm
Weight:.....82 g

Compliance PCH 1230/1232: 0359
Rated according to EN 13849, PL-d, Cat 2
MTTF(d):.....290 years
Architecture:..... 1001 B

Option:
CHB1131 Service Cable 8-pin/12-pin
CHB1134 Service Adaptor (ruggedized)
M12 Cables: please specify length, 3/5/10//15/20 and 30 meters



CHB 1131 Service Cable

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