



PRODUCT INFORMATION

PCH 1072 Mk2 Vibration Monitor



PCH 1072 Mk2 in enclosure with options

PCH 1072 Mk2 Vibration Monitor

Monitors the development of vibrations in a machine and gives an alarm if the vibration level is too high. PCH 1072 has easy and flexible set up possibilities for individual frequency ranges, alarms levels and delay times etc. by using the user software PCH Vibration Studio.

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 monitor 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 PCH 1072 Mk2 Vibration Monitor can be used on many different machines in a production. It is very suitable for monitoring ventilators, fans, pumps, decanters, separators and mills where **SIL 2** measuring chain is required.

What does the PCH 1072 Mk2 Vibration Monitor

The vibration monitor constantly keeps track of the machine vibration level. The vibration monitor has two adjustable alarms, which can be used to ensure that the machine vibrations do 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

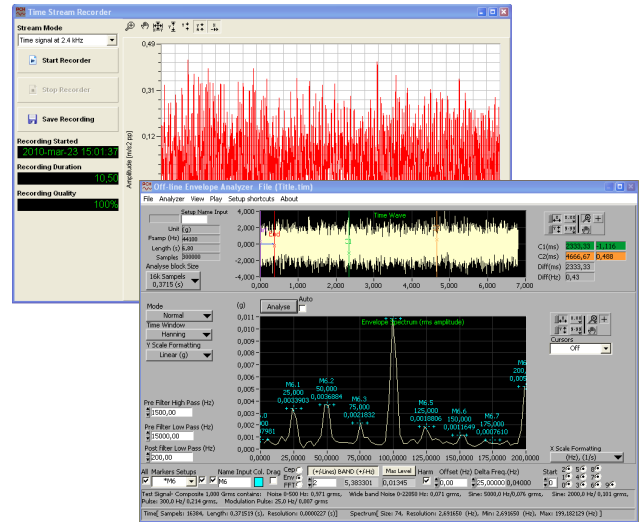
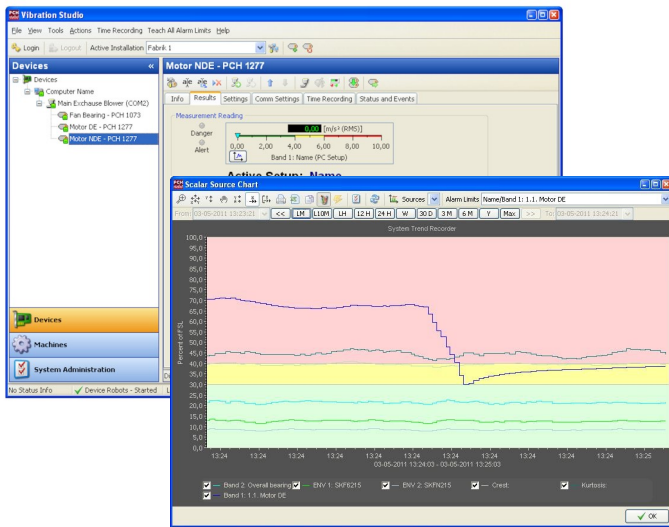
The PCH 1072 Mk2 is a conditioning-, alarm- and output transmitter unit, with a aluminium housing. The monitor is equipped with an IEPE(ICP®) input for accelerometers. The PCH 1072 Mk2 monitors seismic mechanical vibrations according to DIN/ISO 10816-3. By using the PCH Vibration Studio software the PCH 1072 Mk2 can be configured to measure Velocity (**mm/s**), Acceleration (**m/s²**) or Displacement (**µm/mm**). Versions for moving-coil/Veloccity Sensor or proximity probes are available as well.

Measurement Range and Alarm Limits can be adjusted directly in the PCH 1072 Mk2 according to the machine type and size, it has to monitor. The present vibration level is constantly compared with the two Alarm Limits and if the Alarm Limits are exceeded the **two Alarm Relays** Alert/Danger 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 and Danger have user defined Delay Time, which prevents false alarms due to momentary transients. The integrated **Test function** can be activated from customer PLC or by a switch. Also the PCH 1072 Mk2 offers the option of a **Latch function**, ensuring the Alarm Relay stays triggered until it has been manually/remotely reset, even though the vibration level has decreased again. PCH 1072 Mk2 also provides a **4-20 mA** signal, which expresses the relative vibration level.



Technical specifications

PCH 1072 Mk2 Vibration Monitor



Monitor set-up, Trends and Frequency analysis using PCH Vibration Studio®

TECHNICAL DATA:

Sensor Type IEPE/CCLD:

Sensitivity 10/100/500/1000mV/g
Zoomed Dynamic range ± 1.8 Vp
Full Dynamic range ± 5.4 Vp
Transducer Bias Current 5 mA

Measuring Parameter:

Velocity (mm/s), Acceleration (m/s^2)
or Displacement ($\mu m/mm$)

Measuring Ranges (Selectable):

0 to 10-20-50-100 mm/s + a large
selection of other ranges in m/s^2 , g
or $\mu m/mm$.

Typical Frequency Range:

10 Hz - 1000 Hz, -1 dB, 24 dB/oct.
Optional: 1 - 300 and many others,
please ask

Detector:

True RMS Detector or 0-Peak

DC Output:

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

Alarm Detector:

Alert Alarm, adjustable alarm limit
Danger Alarm, adjustable alarm limit

Alarm Relays:

Alert relay, Break
Danger relay, Break
Failure relay, Break

The Failure Relay will trip automatically on
cable short, cable break and system failure.

Alert with Latch or Auto Reset (selectable)
Danger with Latch or Auto Reset (selectable)

Max Voltage:.....30 V
Max Current:.....100 mA

Delay Time:

Alert relay 10 sec. (adjustable)
Danger relay 5 sec. (adjustable)

Other Delay Times can be ordered separately.
Hang time for both Alert and Danger: 1 sec.

Manual Reset Function:

Available for both Alert and Danger relay
- via switch, separately
- via Controller/PLC, common for Alert/Danger

Test Function:

Can be activated remotely. The relays
are activated after the duration of the
Delay time and the DC increases to the
specified test level 1-102%

Power Supply:

+24 V DC, $\pm 7\%$, max. power con-
sumption 2.6 W

Operating temperature:

-20° C to +50° C

Housing:

DIN rail enclosure IP20
Optional: Aluminium IP68

Dimensions (LxWxH):

For DIN: 163 mm x 127 mm x 66 mm
In IP68: 275 mm x 153 mm x 88 mm

Compliance:

CE mark indicates compliance with EMC
directive and Low Voltage Directive
Rated according to EN61508-6, SIL-2

