

VIBRATION MONITOR - PCH 1040



Vibration Monitor - Type PCH 1040

PCH 1040 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 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 pro-

Applications

The Vibration Monitor PCH 1040 can be used on many different machines in a production. It is very suitable for monitoring ventilators, fans, pumps, decanters, separators and mills.

What does the PCH 1040 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 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 PCH1040 is a conditioning-, alarm- and output unit, with a Steel housing. The monitor is equipped with an CCLD(ICP)input for accelerometers. The PCH 1040 monitors seismic mechanical vibrations according to DIN/ISO 10816. PCH 1040 can be configured to measure Velocity (**mm/s**) or Acceleration (**m/s²**). The measuring parameter is to be determined prior to ordering.

Measurement Range and Alarm Limits can be **adjusted directly** in the PCH 1040 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** 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 1040 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 1040 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 monitor.

HOW TO ORDER THE PCH VIBRATION MONITOR:

The PCH Vibration Monitor PCH 1040 is available in different versions depending upon the desired measuring parameter and frequency range (depending upon the machine RPM). By selecting a number from the 2 areas below and writing them in the rectangular boxes respectively, you can create the precise order code to be used when ordering your PCH 1040 Vibration Monitor.

ORDERING CODE:

PCH 1040 - -

Sensor type:

1 PCH 1040

Measuring Parameter:

1 Velocity (mm/s)
2 Acceleration (m/s²)

Frequency Range:

1 10 - 1000 Hz (Standard)
2 1 - 300 Hz

TECHNICAL DATA:

Sensor Type:

CCLD(ICP)transducer input
Maximum input,CCLD +/-6V peak
Input overload, CCLD +/-7V peak
Transducer Bias Current 10mA

Measuring Parameter:

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

Measuring Ranges (Selectable):

0-10 or 0-20 or 0-50 mm/s

Frequency Range:

10Hz - 1000Hz, -3 dB, 40 dB/dec.
Optional: 1 - 300Hz,

Detector:

True RMS Detector

DC Output:

4 - 20 mA, relative to 0-100 % of
max. Measuring range.
Load: 200 - 500 Ohm

Alarm Detector:

Alert Alarm (YELLOW), adjustable alarm limit
Danger Alarm (RED), adjustable alarm limit

Alarm Relays:

A1: Alert relay, Make or Break
D1: Danger relay, Make or Break

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

Max Voltage:.....30V
Max Current:.....1A

Delay Time:

A1: 10 sec.
D1: 5 sec.
Other Delay Times can be ordered separately.
Hang time for both A1 and D1: 0,5 sec.

Manual Reset Function:

Available for both A1 and D1
- via switch, separately
- via Controller/PLC, common for A1/D1

Test Function:

Can be activated remotely. The relays
are activated after the duration of the
Delay time and the DC increases to max.

Grounding:

Common/Ground (0V) and Chassis
can be connected via built in switch.

Power Supply:

+24 V DC, +/- 10%, max. 85 mA DC

Operating temperature:

- 30° C to + 70° C

Housing (IP65):

Alu-steel

Mounting:

4 screw wholes on flange

Dimensions:

L:120/146mm W: 65mm H: 42mm

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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