



# PRODUCT INFORMATION

## PCH 1073 Vibration Monitor

**PCH Engineering launches new generation versatile advanced industrial monitor with both high and low frequency bands as well as a variety of bearing failure detectors like Envelope, Kurtosis and Crest factor.**

The PCH 1073 Vibration Monitor is the new generation of high quality low cost vibration monitors, which can be used in various rotating machine applications. The monitor has a permanent accelerometer input channel and several monitors can be connected by RS-485 to offer multiple channels.

The monitor operates within 2 simultaneously running frequency bands configurable from 0.7 Hz up to 11.5 kHz. A primary low-frequency band monitors vibrations according to DIN/ISO 10816. A second multi purpose band offers detectors as RMS, Envelope, Crest factor and Kurtosis, and is ideal for roller bearing monitoring. A range of user selectable filters as well as a selection between acceleration, velocity or displacement is available.

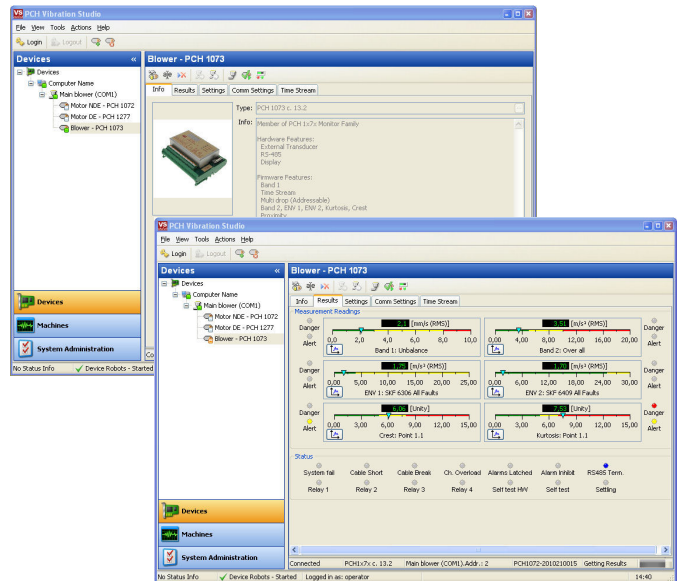
Both bands can also be configured within 0.7 - 1000 Hz making it possible to monitor 2 individual machine components simultaneously, like unbalance frequency and gear mesh frequencies.

PCH 1073 uses only a single sensor point to simultaneously detect both unbalance as well as upcoming bearing failure at an early stage.

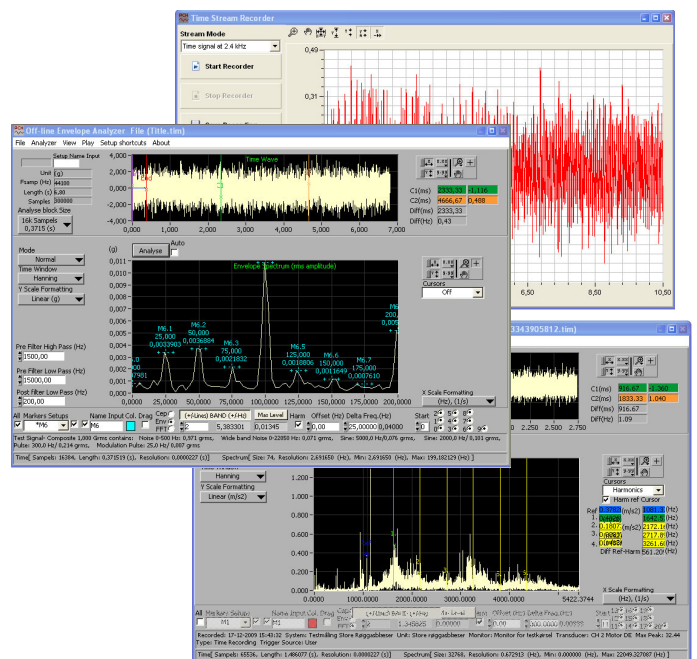
The user software PCH Vibration Studio® offers easy parameter set-up, Time Stream of vibration sequence and includes a bearing database as well as an offline FFT analyzer.



2 of PCH 1073 in IP67 casing



Monitor set-up through PCH Vibration Studio®





# Technical specifications

## PCH 1073 Vibration Monitor



PCH 1073 Vibration Monitor for DIN rail



Accelerometer and cables

**Input channel:**

1 voltage signal from 2-wire accelerometer

**Sensor type:**

Accelerometer, 10-500 mV/g, type IEPE

(e.g. ICP®):

Maximum input,.....  $\pm 1.8$  VpInput overload,.....  $\pm 1.8$  Vp

Transducer Bias Current..... 10 mA

**Band 1 Detectors (0.7 to 1 kHz):**

True RMS, Peak-Peak or Peak

**Band 2 Detectors (1 Hz to 11.5 kHz):**

True RMS

2 Envelope detectors with user defined filters from 1 - 500 Hz

Kurtosis

Crest factor (top factor)

**Measuring parameter:**Velocity (mm/s), Acceleration ( $\text{m/s}^2$ , g) orDisplacement ( $\mu\text{m}$ , mm, mils, g)**Measuring ranges (selectable):**

10 or 20 or 50 or 100 mm/s

2.5 or 6 or 12 or 24  $\text{m/s}^2$ **Frequency ranges (selectable):**

10 Hz - 1000 Hz, -1 dB, 24 dB/oct.

Optional: 1-1000 Hz, 0.7-10.5 Hz

High frequency band 2-11.5 kHz

Other filters available upon request

**2 selectable DC outputs:**

Can be factory configured to 4-20 mA or 0 -10 V. Each output can be assigned to any of the measuring parameters. Output is relative to measuring range.

Voltage load: min. 10 k $\Omega$ Current load: max. 400  $\Omega$ **Alarm detectors:**

Alert and Danger Alarm with adjustable alarm limits

**Delay time:**

Alert delay time..... 0-100 s.

Danger delay time..... 0-100 s.

Hang time for Alert and Danger.... 0-100 s.

**Alarm relays:**

1 System failure relay with break-function (power fail-safe). 4 relays with break-function, can be configured as Alert or Danger relays.

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

Alert and Danger relays with selectable

Latch or Auto Reset.

Max voltage:..... 30 V

Max current:..... 100 mA

**Test function:**

Can be activated digitally or by PC. The relays activate after the duration of the

Delay time and DC output increases to the specified test level of 1-102 %.

**Communication:**

RS-232 interface..... 9 pin SUB-D male

RS-485 interface..... 2 spring terminal

Daisy chain, up to 255 units

Remote access through Ethernet Device Server

**Power supply:**+24 V DC,  $\pm 7$  %, max. power cons. 2.6 W**Operating temperature:**

-10 °C to + 50 °C

**Housing:**

DIN rail enclosure IP20

Option Aluminium IP67

**Dimensions:**

On DIN rail:..... 163x127x66 mm

In single IP67 casing:..... 270x146x88 mm

In double IP67 casing:..... 378x164x102 mm

**Compliance:**

CE, (GOST-R pending)

**Other 1-Ch PCH Vibration Monitors:**

PCH 1072 Mk2 for 2-wire accelerometer

PCH 1072 Mk2 for velocity probes

PCH 1072 Mk2 for proximity probes