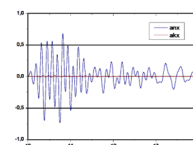




PRODUCT DATA SHEET

PCH 1026 Mk3 Digital Wind Turbine Monitor



PCH 1026 Mk3 is a self contained vibration monitor in a sealed, rugged box. To function, only a DC power supply and desired output connections are required. PCH 1026 Mk3 is designed for low frequency structural vibration monitoring applications.

The design of PCH 1026 Mk3 is based on a digital platform allowing multiple customer solutions, and easy rapid change of configuration and settings through PC software, also in the field.

DC power supply

Voltage range.....20-28 V
Max power consumption.....5 W

Dimensions

Length, width, height.....254x130x66 mm
Weight.....app. 2 kg
Mounting slots.....5 x 6.5 mm

Input sensors

Input channels.....up to 4
Internal accelerometers.....up to 3
Directions of internal accelerometers..... A, B and/or C
External accelerometers.....up to 4
Dynamic range..... ± 6 g, peak
All accelerometers have internal exciters for Self-Test function through the PCH 1026 monitor.

Measuring parameter

PCH 1026 offers measurements from accelerometers in the following parameters and units:

Acceleration: m/s², mm/s², g, mg, Inch/s², mInch/s².

Velocity: mm/s

Displacement (optionally for proximity probe): m, mm, μ m, Inch, Mils, μ Inch

Overall Frequency range: 0.1 - 200 Hz.
Optional 0.1 - 1000 Hz (for 2 bands only).

Signal conditioning

Performed digitally and settings can be configured and verified by the supplied PC software program.

Number of simultaneous conditioning bands12

The filters in each band include high and low pass filters like:

8th order Elliptic.....1.1 - 10 Hz
8th order Butterworth.....0.1 - 1.0 Hz
and other 2nd, 4th, 6th order special filters

Optionally customized solution can easily be performed and uploaded to the monitor.



Zoom FFT: optionally available for Tower Frequency Tracking and basic drive train monitoring.

1 channel: 400 lines / 2 channels: 200 lines

FFT zoom frequency ranges.....127

Averaged spectrums.....0 to 2000

Overlap.....50 %

Time windows: Rectangular, Hanning, Blackman, Flat top

Signal detection

True RMS:

Averaging time (exponential).....0.01 - 100 s

Linear averaging on 2 conditioning bands.....1 - 600 s

Peak or Peak-Peak:

Attack time.....1 - 1000 ms

Decay time.....0.1 - 100 s

Alarm & System Failure relays

Alarm relays for individual configuration.....up to 4

Offers selectable Alert/Danger, Latch/non-latch, Delay time and Make/Brake function.

Failsafe System Failure Relay:

Break function for failures detected by the internal watchdog. Relay reacts to: brownouts, power failure, processor halted and defective sensors.

Type of relays.....Photomos (Solid State)
Max Current/Voltage.....100 mA / 30 VDC
Max contact resistance incl protection device...23 ohm

Analog outputs

Up to 4 outputs.....4-20 mA

Relative to measuring range, 0-100 %

Precision..... ± 0.1 mA

Output impedance.....> 10 M Ohm

Load impedance.....< 450 Ohm

Optional analog output.....0 -10 V

Digital inputs (current sinking)

Digital inputs have IEC61131-2, type 1 limits, for rated voltage +24 VDC.

Input High (Inactive).....+15 - +30 VDC

Input Low (Active).....-3 - +5 VDC

Current sink at 0 VDC input.....4.8 mA



PRODUCT DATA SHEET

PCH 1026 Mk3 Digital Wind Turbine Monitor

Service Port USB interface

USB

Connector on monitor.....Micro USB

Cable type.....Standard USB A to Micro USB

Ethernet (Optional).....M12 connector, 4 pole, D-code

Bus communication

Optional, OEM Fieldbus solutions: CAN Open, InterBUS, PROFIBUS DP, PROFINET, DeviceNet, EtherCAT, etc.

Accessories included

Setup & Configuration PC software type CHT 1024 for Windows 7 and 10, and a user manual.

Standard compliance

CE mark indicates compliance with EMC directive and Low Voltage Directive.

Safety:

EN61010-1 and IEC 61010-1: Safety requirements for electrical equipment for measurement, control and laboratory use.

EMC Emission:

EN61000-6-3: Generic emission standard part 6-3: Residential, commercial and light-industry.

EN61000-6-4: Generic emission standard part 6-4: Industrial environments.

EMC Immunity:

EN61000-6-1: Generic emission standard part 6-1: Residential, commercial and light-industry

EN61000-6-2: Generic immunity standard part 6-2: Industrial environment .

Temperature:

EN60068-2-1 & EN60068-2-2: Environmental testing. Cold and dry heat.

Operating temperature.....-40 °C to +60 °C

Storage temperature.....-45 °C to +85 °C

Humidity:

EN60068-2-78, Operating.....95 % RH (40 °C)

EN60068-2-78, Storage.....95 % RH (40 °C)

Mechanical vibration: Non operating:

EN60068-2-64, Random...0.3 mm, 20 m/s², 10-500 Hz

EN60068-2-27, Shock.....750 m/s²

Enclosure:

EN60529+A1+A2:Protection provided by enclosure IP54.

Optional features for PCH 1026 Mk3

- **R&D Starter Kit**, Cables, breakout and power supply. Part number CHV 1012.
- **SSD** - Safety Shock Detection. Certified by DNV-GL according to guideline GL-IV-1:2010. Data sheet CHF 1178.
- **TFD** - Tower Frequency Detection, tracks development in tower frequency. Data sheet CHF 1116.
- Basic drive train monitoring incl. **FFT analysis**. Data sheet CHF 1115.
- **External sensors**, one or two directions, CHB 1101 or CHB 1102/1115/1117. See data sheet CHF 1040 and CHF 1041.



PCH 1026 Mk3 monitor with external sensor

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

PCH ENGINEERING AS • ØSTBANEGADE 123 • DK-2100 NORDHAVN • COPENHAGEN • DENMARK
TEL: +45 4576 8776 • FAX: +45 4576 8702 • E-MAIL: pch@pch-engineering.dk • WEB: www.pch-engineering.dk