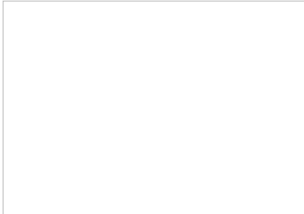


## ***Vibration monitor for wind power system with CANopen***

**The PCH 1026 vibration monitor system by PCH Engineering (Denmark) is dedicated for very low frequency applications such as wind power turbines or steel towers, chimneys, bridges, and buildings. The optional CANopen interface allows the integration with other sub-systems, especially in wind power systems.**



THE PCH 1026 SYSTEM IS DESIGNED TO MONITOR PERMANENTLY low frequency structural and seismic vibrations. It can measure vibration in buildings according to ISO 4866. The system has three internal sensors (accelerometers) allowing for measurements in three directions (X, Y and Z), each with independent conditioning channels. However, also two or three conditioning channels can be assigned to just one sensor, i.e. one direction, if signals of different frequencies have the strongest appearance in the same direction.

The vibration monitor is equipped with filter techniques, based on experience with many applications, especially in wind turbines. The product comes with a PC program for setup and configuration. As an option for OEM customer solutions, the vibration monitor can be equipped with a CANopen interface

The monitoring system comprises a test function, which can be used to test both the internal sensors (accelerometers) as well as the outputs of the monitor. It reports to any connected controller by means of the system failure relay and the CANopen network. Details concerning the cause of the system failure can be found using the comprehensive information list in the supplied PC program. The test can also be performed automatically. In the PC program the user can set how often the test should be performed.

The vibration monitor has been designed in close cooperation with wind turbine manufactures and is daily protecting several thousands of wind turbines all over the world. The feature Omni Directional Tower Monitoring developed by PCH Engineering gives a complete monitoring of the bending of the tower. It enables the monitor to detect all movements of the tower in the horizontal plane. This means, no matter what causes the tower to move and no matter what direction it moves in, the monitor will detect the movement. If it exceeds the pre-set alarm limits, the monitor will send an alarm, which can be used to stop (brake) the wind turbine. "The digital vibration monitor provides far more precise electronically surveillance of the wind turbine than today's existing mechanical and electronic detectors, thus resulting in fewer faulty shutdowns and a more economical power production," claims the Danish manufacturer.