

PREVENTING COSTLY MACHINE SHUTDOWNS WITH VIBRATION DATA ACQUISITION EQUIPMENT

ALL-IN-ONE SOLUTION FOR MONITORING OF TURBINES & GENERATORS



Vibration data acquisition is a key indicator of the status of your costly rotating equipment. Industrial turbines and generators alike can be monitored for improper vibration values regardless of power class and bearing type. Acceleration, Velocity, or Displacement is typically monitored as a crucial way to help prevent costly machine shutdowns and process delays.

[Delphin Expert Vibro](#) devices can collect data from directly connected accelerometers – no external signal conditioning required - and integrate the signals as required to record acceleration, velocity or displacement. The sensor signals are measured proportionally and instantly converted into an effective value.

The Delphin Expert Vibro then creates the TRMS, (True RMS) and peak to peak values, continuously monitored by limit-value channels. If a limit is exceeded, digital outputs are switched or messages sent to controllers via a fieldbus.

APPLICATION FEATURES

- Vibration monitoring of [hydroelectric](#) turbines and air gaps
- Diagnosing damage in ship drives, bearings and shafts
- Acquisition and monitoring of combustion chamber vibrations in gas turbines
- Monitoring and signal evaluation in test stands
- Mobile systems enclosed in measurement cases for portable vibration measurement technology



VERSATILE INPUTS AND OUTPUTS

The Expert Vibro's up to 16 synchronous analog inputs support high sampling rates of up to 50kHz per channel, and all channels are galvanically isolated. The system also features 4 analog outputs and 8 digital outputs for monitoring; integrated comparators for Keyphasor® sensors; and 4 digital inputs enabling flexible triggering.

The 24-Bit A/D converter ensures high-precision measurement. The Expert Vibro system uses its own internal 32 GB data logger memory, making it both a reliable and secure vibration data acquisition device. Meanwhile, the touchscreen display shows the important configuration and measurement data onsite.

SINGLE VIBRATION MONITORING SOLUTION

The condition of bearings, shafts and machinery needs to be continually monitored to avoid costly damage to equipment. For this purpose, the compact [Delphin Expert Vibro](#) combines monitoring, analysis, and diagnosis capabilities all in one system.

The Expert Vibro has a wide array of internal functions that can be configured in an intuitive and simple way. Expert Vibro data loggers measure, monitor and record fully independently of a PC. Non-periodic signals (fault diagnostics, etc.) can be precisely analyzed, and even the smallest of irregularities are recorded.

Other systems usually require multiple pieces of equipment, while the Expert Vibro is a compact all-in-one solution. Users can quickly start collecting vibration data and saving costs.

MODULAR DESIGN TO SUIT INDIVIDUAL APPLICATIONS

Optional integrated Wi-Fi, GSM, UMTS or LTE modules are available for standalone operation. Expert Vibro dataloggers can also be connected to PCs via LAN or USB. Two PROFIBUS interfaces are available as well as Modbus TCP for fieldbus connections.

PROFESSIONAL VIBRATION ANALYSIS SOFTWARE

The Expert Vibro is fully compatible with Delphin ProfiSignal software and can be used in conjunction with the “Vibro” option enabling record-keeping and statistic functions. ProfiSignal is an easy-to-learn software system performing vibration data acquisition, visualization, analysis, and automation.

For example, users can configure the analog inputs between voltage, IEPE and shaft vibration measurement. With an intuitive interface, ProfiSignal is modular, scalable and available in 3 versions: Go, Basic and Klicks. Each of these versions has backward compatibility for operability, data files and application projects.

For more information on the [Delphin Expert Vibro](#), vibration data acquisition equipment or to find the ideal solution for your application-specific needs, contact a CAS DataLogger Application Specialist at **(800) 956-4437** or www.DataLoggerInc.com.