

## **VIBmonitor: modular, multichannel and autonomous system operating close to the monitored machine**



The system monitors and protects operating machines through conditioning, high quality acquisition of signals and process parameters, all well as their continuous analysis. Due to True Data Validator™, the real-time data validation technology, as well as automated machine operational states detection and advanced diagnostic analyses, the system effectively detects anomalies in an early development phase, and significantly reduces the number of false alarms.

Expansion of the system is possible through adding or exchanging hardware feature cards. The base version of the system is named VIBmonitor EL, and is comprised of: processing card, server card and measurement card.

### **VIBmonitor key features**

- Continuous real-time data processing
- Built-in diagnostic analyses
- Parallel data processing for each signal
- Reduction of false alarms
- Modular structure based on functional cards
- Historical data recording
- 24bit measurement resolution, sampling up to 100kHz
- Integration with SCADA systems
- Relay outputs for protection
- Access from any place in the world (Ethernet)

### **VIBmonitor EL specification (base version\*)**

Inputs

4 measurement inputs (expandable up to 20):

Outputs	<ul style="list-style-type: none"> <li>- Input type: IEPE (ICP)</li> <li>- Resolution: 24bit</li> <li>- Synchronized sampling: 25/50/100kHz</li> <li>- Spectrum resolution: down to 0,002Hz</li> <li>- Parallel processing</li> <li>- 1 phase marker</li> </ul>
Estimates available for each channel	Modbus TCP (expandable by OPC, 4-20mA, relays) Wideband: <ul style="list-style-type: none"> <li>- RMS</li> <li>- VRMS</li> <li>- PP</li> <li>- Crest</li> <li>- Kurtosis</li> </ul>
Casing	Narrowband (up to 20 per channel) IP code: IP65 Prepared for optional LCD panel
Power supply and environmental conditions	Power supply: 24V DC 25W Operational temperature: from -40oC to +85oC Vibration resistance: group 1B Optional ATEX compliance

## Available feature cards and expansions

Processing card	Integrated system for measurement data processing <ul style="list-style-type: none"> <li>- Continuous monitoring of measurement data stream</li> <li>- Configurable analysis module</li> <li>- Recording of trends</li> <li>- Remote access to VIBmonitor system</li> </ul>
Server card	Supervision over measurement process and synchronization of system cards <ul style="list-style-type: none"> <li>- Handles up to 6 measurement cards</li> <li>- Ethernet communication interface</li> </ul>
Measurement card	4 measurement inputs (expandable up to 20) <ul style="list-style-type: none"> <li>- Input type: IEPE (ICP)</li> <li>- Resolution: 24bit</li> <li>- Synchronic sampling: 25/50/100kHz</li> <li>- Spectrum resolution: down to 0,002Hz</li> <li>- Parallel processing</li> <li>1 phase marker</li> </ul>
Process variables card	4 analog inputs: <ul style="list-style-type: none"> <li>- Standard: 0-10V or 4-20mA</li> <li>- Resolution: 16bit</li> <li>- Sampling frequency: 1kHz</li> <li>- Parallel processing</li> </ul> 2 digital inputs: <ul style="list-style-type: none"> <li>- 24VDC OC</li> </ul> 3 relay outputs

ANDout card	<ul style="list-style-type: none"> <li>- Contacts load: 24VDC 100mA NO/NC</li> <li>4 analog outputs: 4-20mA</li> <li>8 digital outputs:</li> </ul>
GSM card	<ul style="list-style-type: none"> <li>- Contacts load 24VDC 100mA NO/NC</li> <li>Remote access to the system using GSM technology</li> <li>Sending messages on email/cell phone/Android app</li> </ul>
LCD panel	<ul style="list-style-type: none"> <li>Visualization of estimates: RMS, PP, Kurtosis, VRMS, Envelope RMS</li> <li>Visualization of settings and exceeded thresholds</li> <li>Possibility to configure: <ul style="list-style-type: none"> <li>- Threshold levels (warning, alarm)</li> <li>- Relay outputs states</li> </ul> </li> </ul>
VIBair	<ul style="list-style-type: none"> <li>Wireless vibration sensor: <ul style="list-style-type: none"> <li>- 1(2) Measurement directions</li> <li>- Band: 10kHz</li> <li>- Implemented analyses: 12 wide and narrowband analyses</li> <li>- Temperature measurement from od -45oC to 85oC</li> </ul> </li> </ul> <p>The set includes communication module for connection with the sensors and their integration with the VIBmonitor system.</p>