

## Online vibration monitoring system



### VIBRO MONITOR 4000

is a multichannel (max. 24 channels) system dedicated for advanced diagnostics of rotating machines. Modular construction makes it possible to configure system to application. It works with VibNavigator vibration monitoring software

AVM 4000 is a 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.

- 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)

### TECHNICAL DETAILS

#### Inputs

4 measurement inputs (expandable up to 24):

- Input type: IEPE (ICP)
- Resolution: 24bit
- Synchronized sampling: 25/50/100kHz
- Spectrum resolution: down to 0,002Hz
- Parallel processing
- 1 phase marker

#### Outputs

- Modbus TCP (expandable by OPC, 4-20mA, relays)

### Estimates available for each channel

Wideband:

- RMS
- VRMS
- PP
- Crest
- Kurtosis
- Narrowband (up to 20 per channel)

### Casing

- IP code: IP65
- Prepared for optional LCD panel

### Power supply and environmental conditions

- Power supply: 24V DC 25W
- Operational temperature: from -40°C to +85°C
- Vibration resistance: group 1B
- Optional ATEX compliance

### VIBnavigator – the vibration monitoring software for AVM 4000

VIBnavigator is the user interface of the AVM 4000 platform based on I3 Technology™. It is primarily used for event monitoring, data viewing, configuration and administration of the system. On one hand interactive and easy to use browser ensures intuitive handling for the operator. On the other it offers maintenance and diagnostic teams a wide functionality for processing and analysis of signals. High degree of configurability and automation of operations make it very easy to verify the causes of an alarm.

### It is flexible with Modular structure

Expansion of the system is possible through adding or exchanging hardware feature cards. The base version of the system is named AVM 4000 EU, and is comprised of: processing card, server card and measurement card.



## Online vibration monitoring system

### SPECIFICATIONS\*

#### AVM 4000EU – the base

- Integrated system for measurement data processing
- Continuous monitoring of measurement data stream
- Configurable analysis module
- Recording of trends
- Remote access to AVM 4000 system



#### AVM 4000+V – Measurement Card

4 measurement inputs (expandable up to 24)

- Input type: IEPE (ICP)
- Resolution: 24bit
- Synchronic sampling: 25/50/100kHz
- Spectrum resolution: down to 0,002Hz
- Parallel processing
- 1 phase marker



#### AVM 4000+U

4 analog outputs: 4-20mA

8 digital outputs:

- Contacts load 24VDC 100mA NO/NC



#### AVM 4000+P

Process variables card

4 analog inputs:

- Standard: 0-10V or 4-20mA
- Resolution: 16bit
- Sampling frequency: 1kHz
- Parallel processing

2 digital inputs:

- 24VDC OC

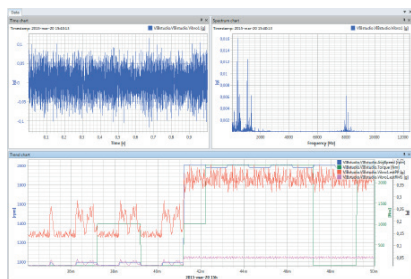
3 relay outputs

- Contacts load: 24VDC 100mA NO/N



#### AVM LCD – Integrated LCD monitor:

- Visualization of estimates: RMS, PP, Kurtosis, VRMS, Envelope RMS
- Visualization of settings and exceeded thresholds
- Possibility to configure:
  - Threshold levels (warning, alarm)
  - Relay outputs states



#### VIBNAVIGATOR UNIQUE FEATURES:

- Displaying data from time periods of an unlimited length
- Displaying time signals and trends on the same plot
- Viewing of continuous time signal
- Displaying characteristic frequency bands on spectrum plots
- Rejection of data not matching validation criteria
- Filtration of data according to machine operational states
- Spectrum calculation from selected fragments of signals
- Comments on data and configuration

\*Specifications are subject to change without notice



www

www.delta3n.hu



+36-75-510-115



info@delta3n.hu



H-7030 Paks, Jedlik Á. u. 2.