

VIBGUARD®

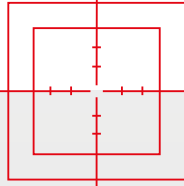
Advanced Condition Monitoring



- fast
- synchronous
- reliable

VIBGUARD® – the safe system

Seamless monitoring for greater machine safety



PRÜFTECHNIK values safety! VIBGUARD® is a Condition Monitoring System that not only protects your machines from damage but also provides production security and improves the efficiency of your assets. Try it for yourself!

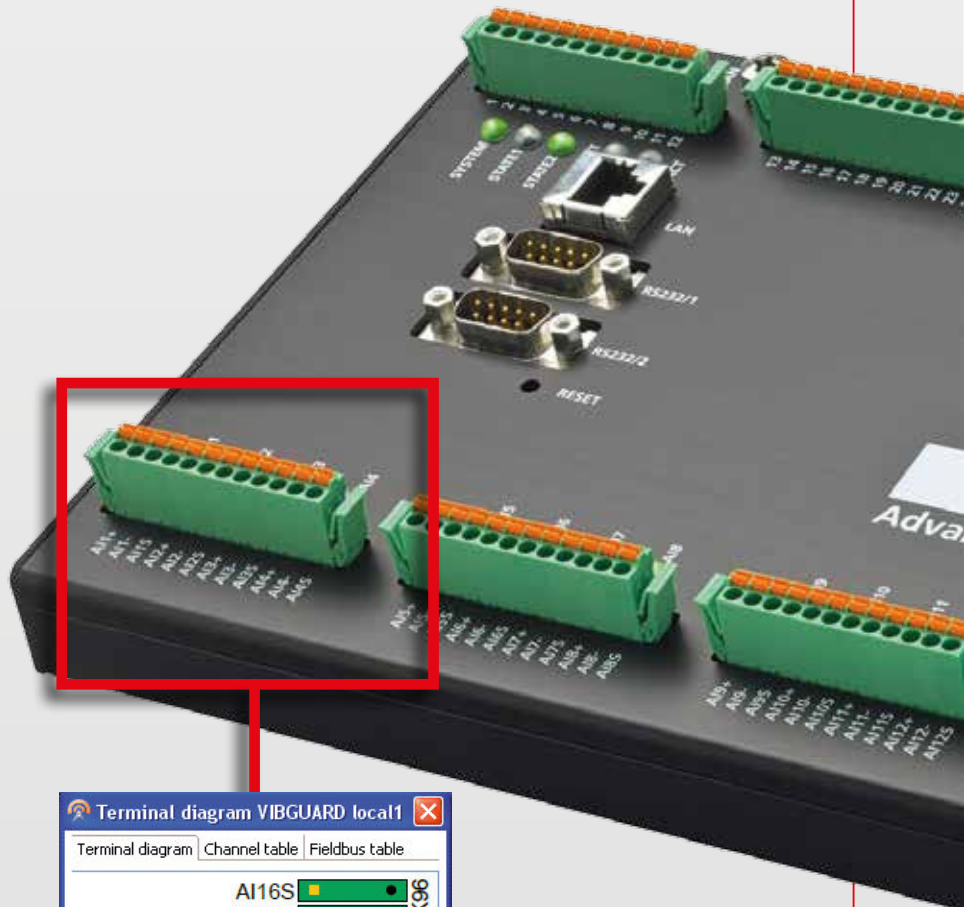
The facts about VIBGUARD®

- ▶ 20 synchronous measurement channels
- ▶ Continuous data recording on every channel
- ▶ Tachometer pulse channels for triggered measurements
- ▶ Automatic check for sensor and cable defects
- ▶ Digital inputs and outputs
- ▶ Networkable (Ethernet, Modbus TCP)
- ▶ Compact and robust
- ▶ No active cooling required
- ▶ On board ring buffer for transient event capturing
- ▶ Supports Shock Pulse and Crest Factor for advanced bearing and gearbox monitoring

Intelligent data management

Every channel is able to measure continuously two time signals or one envelope curve signal and – at intervals of one second – up to 8 characteristic overall values, such as vibration severity and bearing condition. The 20 measurement channels supply sufficient data every day for seamless documentation of the machine status.

Intelligent data management ensures that important information is not lost and that the flow of information does not become overwhelming. This keeps the network load at an acceptable level and data can even be sent over a wireless connection without problems.



Terminal diagram VIBGUARD local1		
Terminal diagram	Channel table	Fieldbus table
AI16S	■	● UK96
AI16-	■	● UK96
AI16+	■	● UK96
AI15S	■	● UK96
AI15-	■	● UK96
AI15+	■	● UK96
AI14S	■	● UK96
AI14-	■	● UK96
AI14+	■	● UK96
AI13S	■	● UK96
AI13-	■	● UK96
AI13+	■	● UK96
AI12S	■	● 84
AI12-	■	● 84
AI12+	■	● 84

Practical installation help

The terminal diagram shows the assignment of sensors and cables for the specific connection. A valuable reference during preparation for installation or for documentation.

VIBGUARD® – monitoring at top level

especially developed for your critical machines

VIBGUARD® – a new level of Online Condition Monitoring that for the first time allows critical machines with highly dynamic processes and

complex monitoring tasks to be included in a reliability-oriented maintenance schedule.



VIBGUARD® is ...

► fast

Powerful processors, optimized measurement routines and intelligent data management place VIBGUARD® in the formula-1 class of online systems.

► synchronous

VIBGUARD® measures continuously and simultaneously on up to 20 channels. This allows it to be used to monitor even complex machines with many variable operating parameters.

► safe

VIBGUARD® protects your systems from sudden failure by seamless recording and evaluation of all status parameters.

► autonomous

Data recording, evaluation and alarming are all included in the VIBGUARD® module.

► modular

VIBGUARD® can be expanded at any time. Connect additional measurement channels or install additional VIBGUARD® modules in the switching cabinet.

► flexible

The measurement channels can be configured to measure vibration and process values. The digital high and low pass filters can be set as required to derive the appropriate characteristic overall values.



... with many perspectives

VIBGUARD® Viewer adapts its interface to the application and displays only the content that you currently require for your work.

For example, when measurement data is analyzed, the software shows the tree view of the machines and a measurement data diagram. For administration, configuration and reporting, the software shows the applicable views.

Analysis

Visualization and evaluation of measurement data

Configuration

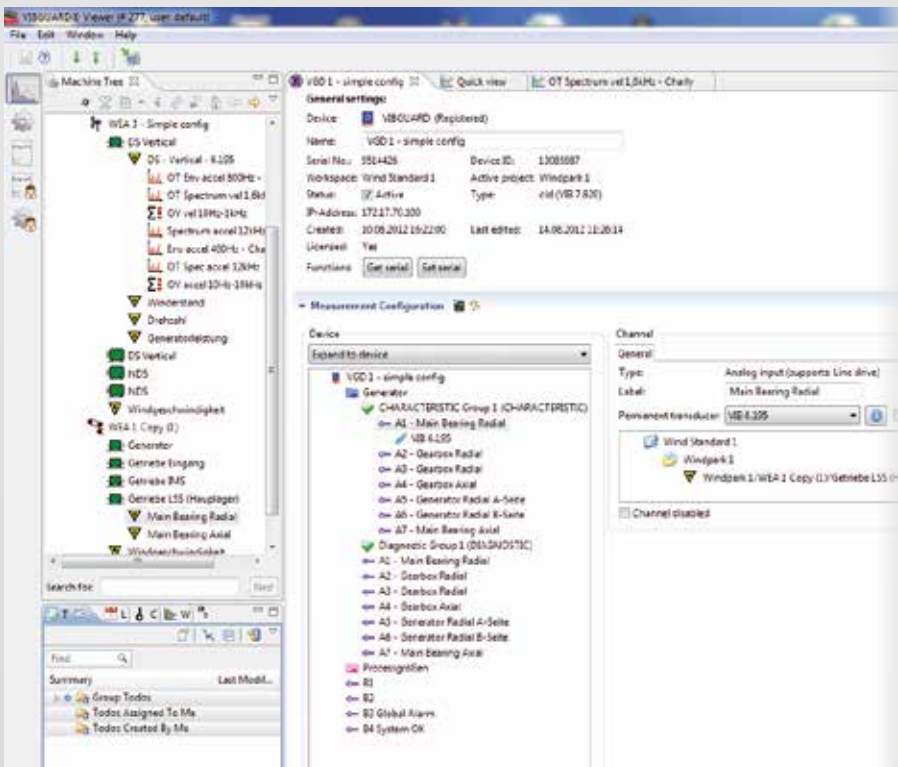
Setup of measuring points and measurement tasks

Administration

Management of projects and system components

Report

Creation of interactive reports and tasks



Central system settings

The measurement tasks, the trigger and alarm conditions and additional parameters for data management are defined in the online manager for every channel.

All settings are hardware-based and do not require connection to the machine and measuring point hierarchy.

Interactive elements save time

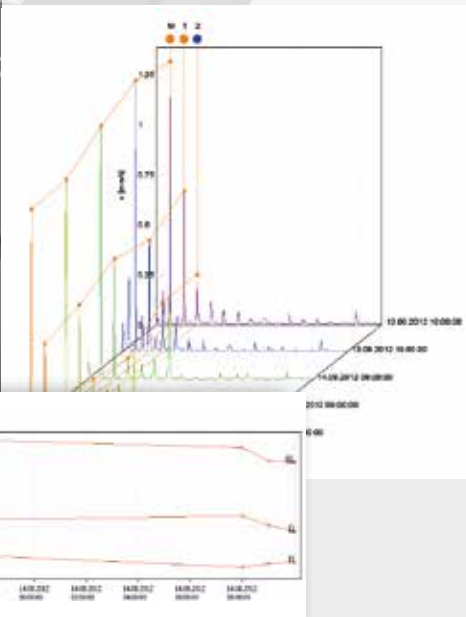
A click of the mouse opens every referenced element. For example, click on a measurement and the corresponding diagram opens, click on a sensor and the sensor editor opens.

VIBGUARD® Viewer – the software

... for convenient and efficient working ...

A reliable partner on the PC

VIBGUARD® Viewer is the perfect companion for configuration of measurement channels, data analysis and reporting. A clear structure makes it very easy to use and provides a working environment where the user feels at home immediately. Advanced functions and the perfectly tailored user interface fulfill even the highest requirements.



Convincing arguments

- ▶ Clearly arranged interface
- ▶ Context-dependent perspectives for improved overview and simple operation
- ▶ Multi-screen operation: separate windows can be distributed over multiple monitors
- ▶ Open reporting formats (HTML, DOC,...).
- ▶ Single or multi user version
- ▶ Kinematics model for calculation and management of characteristic machine frequencies – including complex systems
- ▶ Practical analytical tools: waterfall, cursor family, frequency markers, trend forecast, ...
- ▶ Advanced diagnostic features for turbomachinery: Orbit plot (unfiltered, 1st to 5th order), gap measurement, shaft centerline
- ▶ Export of raw data for further post processing
- ▶ Data analysis with reference to up to six operating states
- ▶ High operating speed with optimized data organization
- ▶ User administration with project-dependent roles
- ▶ Online manager for convenient configuration of measurement tasks
- ▶ ‚To-do‘ outputs for tasks distribution and action-related system messages



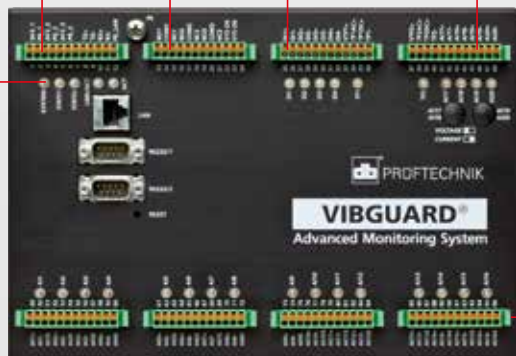
Connection for power supply and communications

4 digital switching outputs

4 digital inputs and 2 tachometer pulse channels

4 analog measurement channels for current/voltage, configurable in pairs

LED status displays



16 analog measurement channels for vibration signals
Module types:

- 16 x ICP
- 16 x CLD
- 16 x U
- 8 x ICP and 8 x U
- 8 x CLD and 8 x U

- ▶ Compact housing suitable for standard rail
- ▶ Plug-in terminals for easy cable connections

Three models

- ▶ VIBGUARD® module for installation in a switching cabinet on a standard rail
- ▶ VIBGUARD® in the compact PRÜFTECHNIK protective housing
- ▶ VIBGUARD® in the standard PRÜFTECHNIK protective housing

VIBGUARD® is also available in a portable version for mobile troubleshooting. Please refer to the flyer VIBGUARD® portable for more details.

VIBGUARD® – part of the PRÜFTECHNIK strategy

VIBGUARD® forms an integral part of the PRÜFTECHNIK Condition Monitoring concept – consisting of handheld instruments and online monitoring systems. This allows the optimum monitoring solution that meets budgetary and technical requirements to be realized for each machine park.

Technical data – hardware modules - VIB 7.8...

Measurement channels	20 synchronous channels each with one ADC
Dynamic range	110 dB at 24 bits
FFT lines	standard: 6400 / analysis: 102400
Channel monitoring	continuous over a separate signal path on every channel
Digital inputs	4
Speed inputs	2
Digital outputs	4 relay outputs
Communication	TCP/IP, Modbus RTU
Comm. ports	Ethernet (100 Mbit); 2 x RS232
Power supply	24 VDC / 0.5 A
Memory capacity	2 GB
Housing material	aluminium
Degree of protection	IP 20, in switching cabinet without protective housing IP 65, in protective housing

PRÜFTECHNIK – proven technology for all industries

With our products, processes and services for alignment applications, condition monitoring and availability optimization, we help ensure that your machines run smoothly and generate an output of consistently high quality.

This also includes systems for automatic process control and quality assurance that are integrated directly in your production process.

PRÜFTECHNIK consists of the following business areas



Alignment Systems



Condition Monitoring



Nondestructive Testing



Service & Support



Known Consignor in
air cargo transport with
LBA registration no.
DE/KC/00802-01/0218 +
DE/KC/00802-02/0218

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