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## **VIBRONET® Signalmaster** Online Condition Monitoring for industrial plants and distributed operating facilities

 Original State

 Origin

 Intelligent, ATEX compliant system architecture

 Integration of Condition Monitoring and Automation levels

 More than 10 years proven reliable systems installed worldwide

## Affordable Online Monitoring with VI

## Why online?

Online systems pay off:

- Less unplanned downtime
- Optimal planning of manpower
- Reduced spare part warehousing
- Avoidance of secondary damage
- Improved plant safety

Online systems enable:

- Reliable alarm notification
- Monitoring of inaccessible measurement locations
- Machine condition analysis by external experts (Telediagnosis)
- Integration of the measurement data in control systems.

## First steps ...



VIBRONET<sup>®</sup> Signalmaster is the ideal introductory solution for the online monitoring of standard aggregates such as motors, pumps, fans and simple gear transmissions. Premounted in a robust switching cabinet, the system is designed for quick and easy commissioning, while being easily expandable.

### ... or upgrade

Whether you are already using our offline systems or VIBRONET<sup>®</sup> Signalmaster is your first step into Condition Monitoring, you can expand either way by using OM-NITREND<sup>®</sup>, the software platform which assures compatibility between all PRÜFTECHNIK Condition Monitoring tools. Think about the time, effort and cost you will save in training and implementation.

# All functions<br/>at a glanceVibrationImage: Second structure<br/>Image: Second structureImage: Second structure<br/>Image: Second structureImage: Second structure<br/>Image: Second st





**Ethernet**, RS 232 (LAN/WAN, Intranet, Internet)

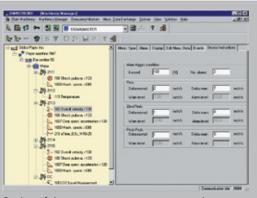
Connect up to 3 strings of 6 multiplexers to the signal inputs. Multiplexers do not need an additional power supply! Connect up to 9 sensors to each multiplexer for a network of maximum 162 channels for each VIBRONET<sup>®</sup> Signalmaster.

#### **Special solutions**

For special monitoring tasks (e.g. extruders, wind turbines), measurement functions can be added and individually tailored. Both special and standard versions can be integrated into any company network and accessed by several users at the same time.

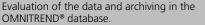
# **BRONET<sup>®</sup> Signalmaster**

# Programming, evaluation and archiving in OMNITREND<sup>®</sup> PC software



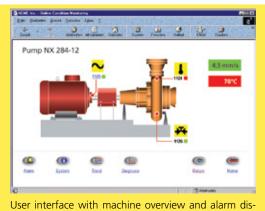
Setting of the measurement parameters and programming of the measurement cycles.





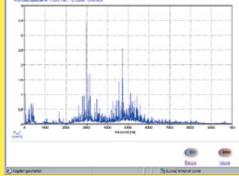
The OMNITREND® PC software is used to configure the measurement locations and to program the measurement cycles. This software also evaluates, documents and archives the measurement data (trend, spectrum, time signal).

# Alarm notification and telediagnosis in any Internet browser



User interface with machine overview and alarm displays (option).





Damage diagnosis in the Internet browser with the aid of an FFT spectrum.

The condition of the system can be queried online from any PC via an Internet connection. If the condition of the machines has led to an alarm, the cause of any faults can be localized immediately by diagnostic measurements (spectrum, time signal).



PLC / PCS RS 232 (Profibus, ModBus,...)



## **Technical Data**

#### **VIBRONET®** Signalmaster

Basic unit - VIB 5.802 Analog inputs

6 differential inputs (3 of them synchronous) Measurement ranges, analog input

±10 V, ±1 V, ±100 mV, ±10 mV

Dynamic range / Resolution 96 dB / 16 bit

Sampling rate, analog input 153.6 / 76.8 / 38.4 / 19.2 / 9.6 kHz SW downsampling: 4.8/ 2.4/ 1.2/ 0.6/ 0.3/ 0.15 kHz

Frequency range 0...50 Hz to 0...50 kHz, divided into 11 ranges

Frequency resolution 400, 800, 1600, 3200, 6400, 12800 lines

Envelope analysis Selectable digital input filter

Tacho inputs

RPM / Counter: 2 x TTL...30 V Keyphaser: ± 30 V AC and DC

Digital inputs/outputs 4 x, TTL...30 V

Digital outputs 8 x, 5 V, 5 mA

FET switching output 12 V DC, 1 A, switchable

#### Measurement functions Time signal, spectrum, integration of the spectrum,

envelope, orbit, shock pulse, acceleration (RMS), vibration velocity (peak, RMS)

RAM memory capacity 128 MB

Flash memory storage capacity 1 GB

Ethernet interface 1x, data rate: 100 Mbit

RS 232 interface 2x, data rate: 115.2 kbit

## **System Components**

#### **VIBRONET®** Signalmaster

Standard package - VIB 5.890-1 for 1 string line (connection for max. 6 multiplexers)

- VIB 5.802 VIBRONET Signalmaster basic unit
- VIB 5.962 Power supply, 5V
- VIB 5.963 Power supply, 12V
- VIB 5.956-2 Systembus cable with two connectors VIB 5.815-1 Shock pulse module for one string line
- VIB 5.917 Output module with two SPDT relays
- VIB 5.973 Terminal with voltage limitation 5V, 5 pcs.
- VIB 9.520.G LIT 01.800
- Installation instructions
- 800 CD ROM, Condition Monitoring catalogs, brochures, magazines

#### Standard package - VIB 5.890-3 for 3 string lines

same as VIB 5.890-1 package except for VIB 5.815-3 shock pulse module for 3 string lines

PC software VIB 8.957 OMNITREND® for VIBRONET® Signalmaster

Hardware for field installation

- MultiplexerTransducers
- Transduce
  Cabling















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