

# VIBRONET® Signalmaster

Online Condition Monitoring for  
industrial plants and distributed operating facilities



Cost-effective installation for more than 120 measurement locations

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 VIB

## 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® 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® Signalmaster is your first step into Condition Monitoring, you can expand either way by using OM-NITREND®, 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 at a glance



Vibration



Bearing condition



Temperature



Variable speed



Process parameters



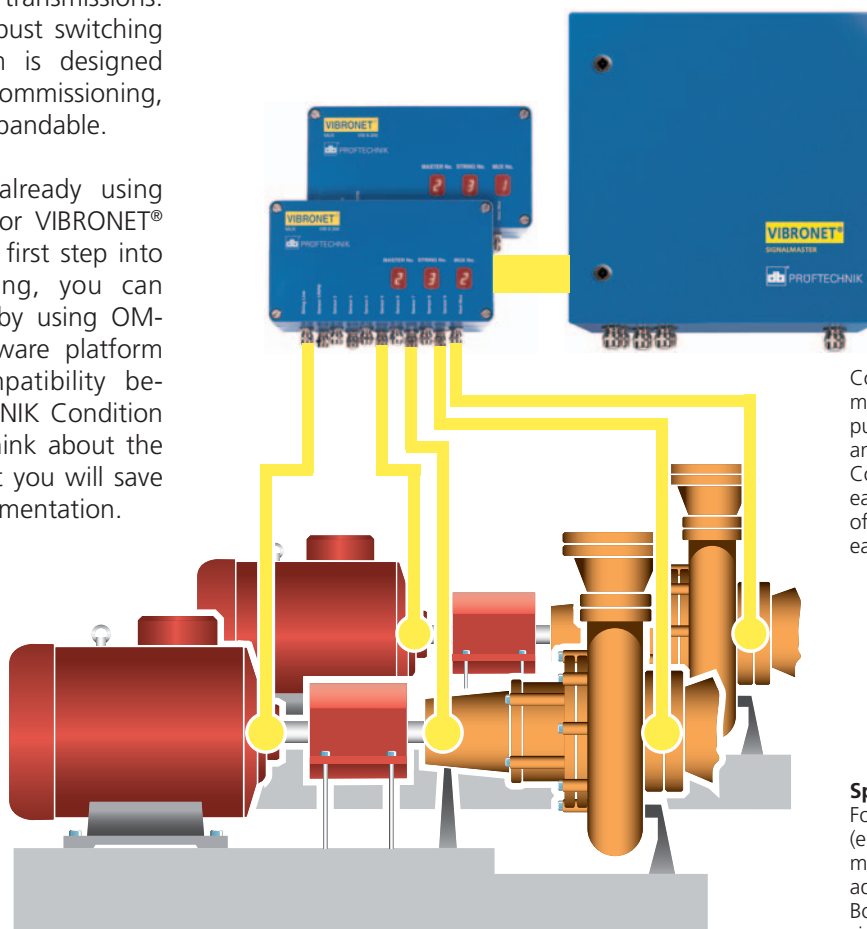
FFT spectrum



Envelope



Time signal



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

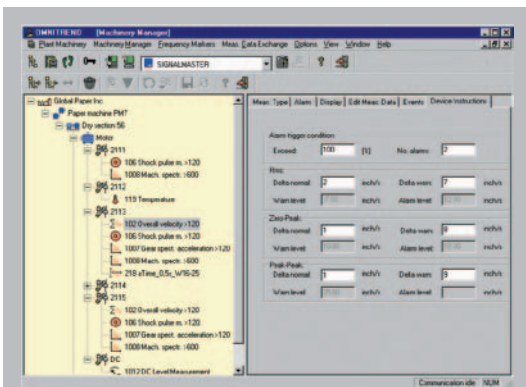
Connect up to 3 strings of 6 multiplexers to the signal inputs. Multiplexers do not need an additional power supply! Connect up to 9 sensors to each multiplexer for a network of maximum 162 channels for each VIBRONET® Signalmaster.

## 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® Signalmaster

Programming, evaluation and archiving  
in OMNITREND® PC software



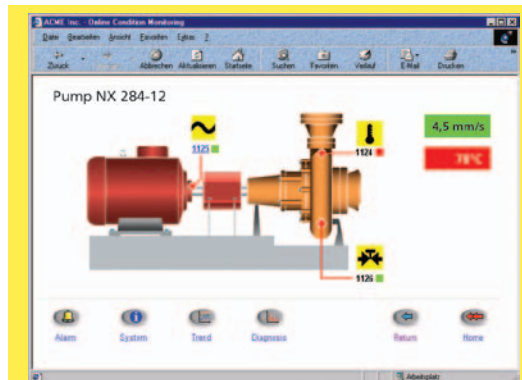
Setting of the measurement parameters and programming of the measurement cycles.



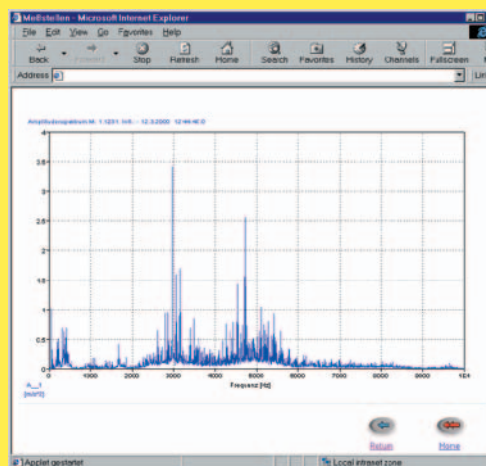
Evaluation of the data and archiving in the OMNITREND® database.

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 5.902

#### Analog inputs

6 differential inputs (1 of them synchronous)  
or 12 single-ended inputs

#### 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

2, TTL (active low), ext. multiplexer  
Max. counter frequency: 1000 Hz

#### Key phaser input

TTL (active low)

#### Digital inputs/outputs

4, input: TTL, output: 5V, 5 mA

#### Digital outputs

4 outputs, 5V, 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

64 MB

#### Flash memory storage capacity

32 MB (optional 128 MB)

#### Ethernet interface

Quantity: 1, data rate: 10 Mbit

#### RS 232 interface

Quantity: 2, data rate: 38.4 kbit



## System Components

### VIBRONET® Signalmaster

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

VIB 5.902	VIBRONET® Signalmaster basic unit
VIB 5.960-B	Power supply, 12V
VIB 5.956-2	System bus with 2 connectors
VIB 5.815-1/1	Shock pulse module for 1 string line
VIB 5.885	Firmware module 'Standard'
VIB 5.917	Output module with 2 SPDT relays
VIB 9.520	VIBRONET® Signalmaster installation instructions
VIB 9.662-3	VIBRONET® Signalmaster product catalog
VIB 9.663-3	VIBRONET® Signalmaster accessories catalog

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

- Multiplexer
- Transducers
- Cabling

