



**Brüel & Kjær Vibro**



# VIBROCONTROL 1500

Remote Diagnostic Monitoring

# VIBROCONTROL 1500

Is the powerful, and low-priced solution for measurement and monitoring of

- Casing vibrations
- Rolling-element bearing condition
- Temperature

simultaneously at 2 bearings of your machine.

The acceleration sensor AS-062/T1 integrates a temperature sensor in the housing beside the elements necessary for vibration measurement. With the mounting of the sensor all three measured variables are acquired. Expensive additional components and wiring costs are unnecessary.

## Vibration monitoring

Measurement of casing vibration is in accordance with the ISO Standard 10816.

The two actual measured values are shown in the display of the monitoring instrument, as well as their percentage values related to the set limit values.

A violation of the preset limit values is signalled visually at the monitoring instrument as well as through the built-in relays for the Alert and Danger alarms.

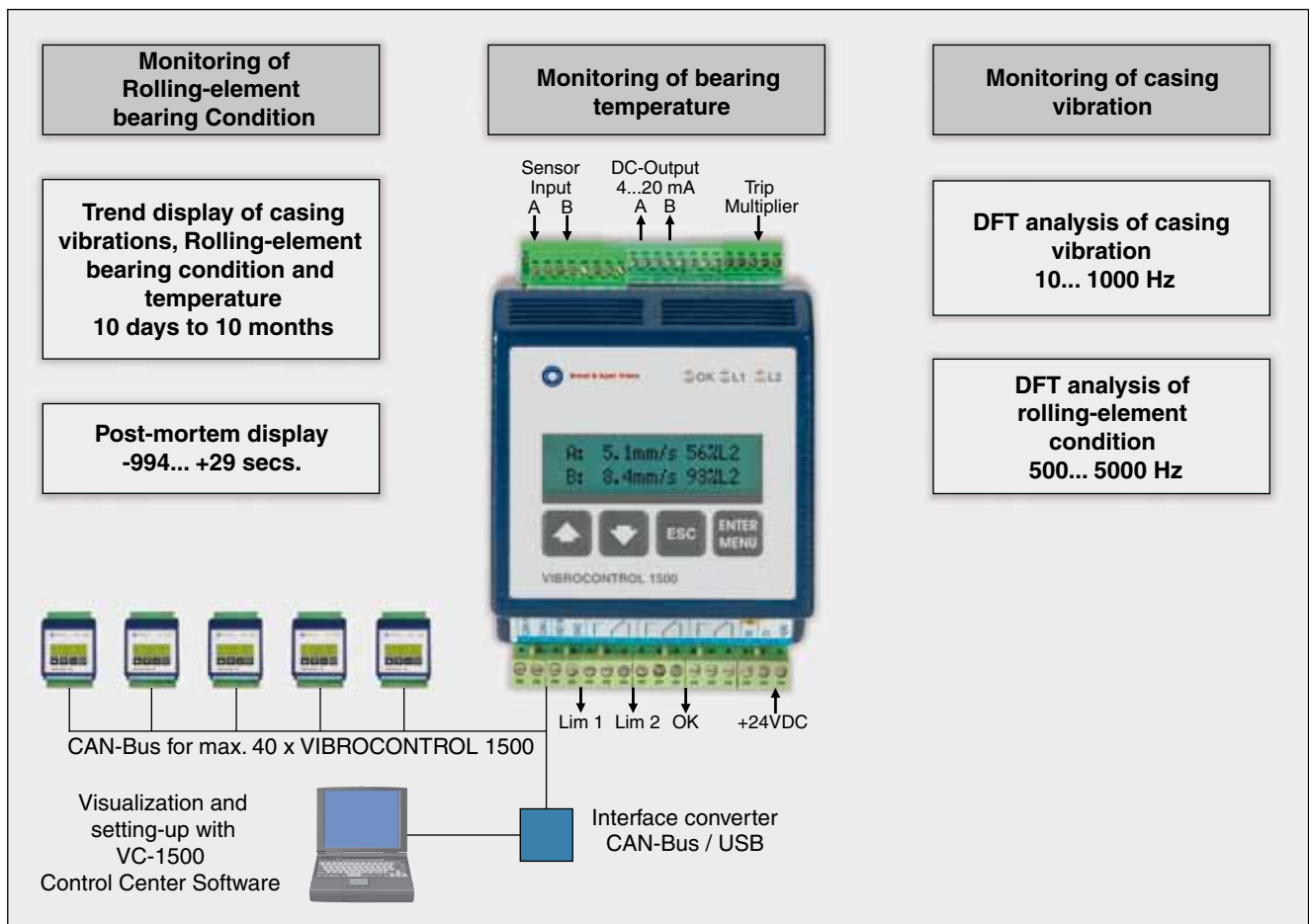
An additional OK-relay monitors the functions of the instrument and the connected sensors. With this permanent monitoring any changes in the machine condition are reliably acquired and signalled. To complete the additional types of output signals, the instrument has available 2 analogue outputs of 4...20 mA proportional to the selected measuring range of casing vibration measurement.

## Rolling-element bearing condition monitoring

For acquiring the rolling-element bearing condition, after an DFT of the sensor signal in the range 500 to 5000 cycles per second, the Sum of the largest RMS value of vibration acceleration is formed. From a comparison with the measured value when the bearing was new, the "Bearing Condition Value" is displayed. A positive change of this value refers to a deterioration of the rolling-element bearing condition.

## Trend measurement

To provide you with an overview of the trend of the measurements, VIBROCONTROL 1500 has a trend measurement function for the casing vibration, rolling-element bearing condition and temperature. The display is provided right at the instrument over a selectable time period between 10 days and 10 months.



### Post Mortem Display

After a LIM2 violation the measured values up to 994 secs. before the violation and 29 secs. after the event can be displayed.

### Vibration analysis

To be able to assess the cause of a vibration, VIBROCONTROL 1500 can perform a

- DFT analysis of casing vibrations in the frequency range 10... 1000 Hz

for determination of the source of the vibration and cost-effective vibration reduction. VIBROCONTROL 1500 displays the 3 largest vibration values with the associated frequencies in the display, separately for both sensors.

### VC-1500

#### Control Center Software

This software makes possible both the setup of the equipment by means of PC-Download and the visualization and documentation of the measurements. For the operation of the software a CAN-Bus / USB converter is necessary.

#### CAN-Bus Connection

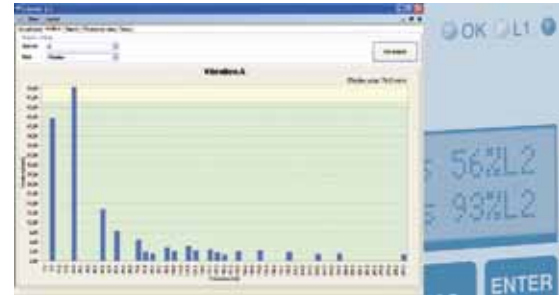
Up to 40 VIBROCONTROL 1500 instruments can be networked with one another. Setting up, visualization and evaluation is possible using the software program VC-1500 Control Center and also over the internet.

#### Remote Monitoring

The condition of your machines can be interrogated by any PC over an internet connection. Naturally a trend display or vibration analysis is also possible over this connection.



The online display of actual measurements at a PC provides an overview of the condition of the machines.



Using the software a vibration analysis can be performed over an internet connection. The cause of the increased vibration condition can be determined in such a simple way.

Technical data VIBROCONTROL 1500	
No. of channels	2, Channel A and B
Display	2-line LCD with 2 x 16 characters
Measurement of vibration:	RMS value of vibration velocity in mm/s, Acceleration sensor with current power, Transmission factor 100 mV/g
Measuring range	0...10/20/40/50/100/200 mm/s
Frequency range	1/3/10...1000 Hz
Limit values	LIM1 and LIM2 with display, relays and LEDs
Time delay	0.2 to 10 secs. , selectable
Trip Multiplier	Factor 1.0...20.0, selectable
Limit relays	3 (LIM1, LIM2, OK), potential-free Contacts with switching power 24 VDC, 5 A, resp. 230 VAC, 5A
Measurement of RE bearings	RMS value of acceleration and condition DFT in range 0.5...5 kHz, with LIM1 and LIM2
Temperature measurement	designed for PT 100, 0...150°C, with LIM1 and LIM2
Post-mortem display	-994...+29 secs. after LIM2 violation
Trend display of measurements	in the time period 10 days to 10 months
DFT analysis	320 line spectrum in range 10...1000 Hz
Analogue output	For vibration channel A & B: 2 x 4...20 mA
Power requirement	18...36 VDC, min. 10 VA
EMC	EN 61326-1
Operating temperature range	0...+ 55°C
Housing	Powder-coated metal housing, IP 20, U-rail mounting
Dimensions, weight	90 x 75 x 115 mm, 700 g

<b>Extent of delivery and ordering information</b>		
<b>Pos.</b>	<b>Type</b>	<b>Description</b>
<b>1</b>	VC-1500	<b>Electronics</b> Monitoring instrument VIBROCONTROL 1500 2-channel; with measurement, display and monitoring of Overall casing vibrations, rolling-element bearing condition and temperature. Temperature measurement designed for PT 100 sensor. With trend display, post-mortem display and DFT analysis of casing and rolling-element bearing vibrations. With relays, CAN-Bus and Analogue-output
<b>2</b>		<b>Vibration sensor</b> acceleration sensor (CCS-type) with integrated temperature sensor PT 100 with 5 m cable, 6-conductors plus shield and open cable ends
2.1	AS-062/T1	
2.2	AS-062	acceleration sensor (CCS-type) with 5 m cable, 2-conductors plus shield and open cable ends
<b>3</b>		<b>Power supply (Optional), 100... 240 VAC / 24 VDC</b> Power supply for 1 instrument Power supply for max. 8 instruments
3.1	AC-4111	
3.2	AC-4601	
<b>4</b>		<b>Software and Interfaces</b> with VC-1500 Control Center-Software incl. Interface converter CAN-Bus / USB and connection cable to VC-1500
4.1	AC-4201	

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