



Brüel & Kjær Vibro



VIBROCONTROL 1500

Remote Diagnostic Monitoring

VIBROCONTROL 1500

The powerful and affordable solution for measuring and monitoring three parameters simultaneously at two bearings of a machine:

- bearing vibration
- bearing condition
- temperature

In addition to the elements required for vibration measurement, the acceleration sensor AS-062/T1 has a temperature sensor integrated into the same housing to enable simultaneous acquisition of all parameters, while eliminating additional installation and wiring costs.

Vibration monitoring

Bearing vibration measurements are undertaken in accordance with the ISO standard 10816.

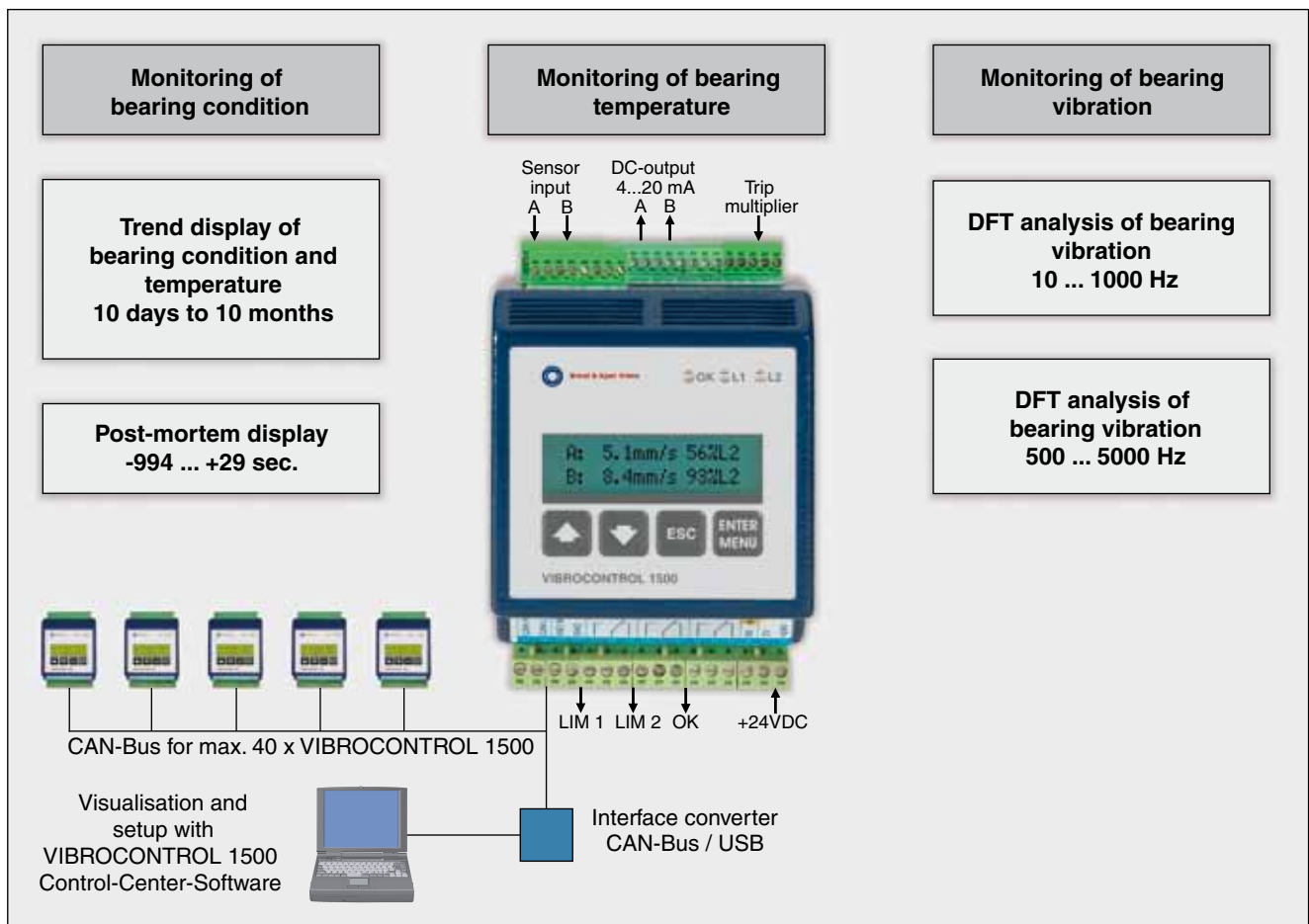
The two current readings of the two sensors as well as their percentage value relative to the set limits are displayed on the monitoring device. If the pre-set vibration limits are exceeded, this is signalled both visually on the monitoring device as well as via the built-in relays for the pre-alarm and main alarm. An additional OK relay monitors the proper function of the device and the connected sensor. With this constant monitoring, any change to the condition of the machine is reliably recorded and reported. To allow additional monitoring devices to be connected, the system has two 4 ... 20 mA analogue outputs proportional to the selected measuring range of the bearing vibration.

Bearing condition monitoring

To determine the bearing condition, the DFT of the sensor signal is calculated in the range 500 to 5000 Hz followed by the summation of the largest root mean square values of the vibration acceleration. The resultant bearing condition value is displayed following a comparison of the values derived from the as new condition of the bearing. Changes to this value indicate a deterioration of the bearing condition.

Trend measurements

In order to obtain a historical overview of the measured values, VIBROCONTROL 1500 is equipped with trend measuring capabilities for bearing vibration, bearing condition as well as temperatures. The values are displayed directly on the device with a selectable period of 10 days to 10 months.



Post-mortem display

After a LIM 2 violation, the measured values can be displayed both 994 sec. before and 29 sec. after the violation.

Vibration analysis

To determine the cause of vibration, VIBROCONTROL 1500 can perform:

- DFT analyses of the bearing vibration in the range 10 ... 1000 Hz

VIBROCONTROL 1500 displays the three largest vibration values with the corresponding frequencies separately for each of the two channels. This makes it easier to identify the cause of the vibration and therefore take the appropriate maintenance action to resolve the problem.

VIBROCONTROL 1500 Control-Center-Software

The software enables device parameters to be configured via PC download and the measurements can be visualised and stored. In order to use the software, a CAN-Bus / USB converter is necessary.

CAN-Bus connection

Up to 40 VIBROCONTROL 1500 devices can be connected with each other. Parameter configuration, visualisation and analysis can thus be performed both locally and via the Internet using the VIBROCONTROL 1500 Control-Center-Software.

Remote monitoring

The condition of your machines can be checked online via an Internet connection from any PC which has the VIBROCONTROL 1500 Control-Center-Software installed on it. Trend observation and vibration analyses can also be performed via this connection.

The online display of the current measurements at a PC provides an overview of the condition of the machine.



Using the VIBROCONTROL 1500 Control-Center-Software, vibration analysis can be performed via an Internet connection. The cause of the excessive vibration can thus be easily determined.



VIBROCONTROL 1500	Specifications
Number of channels	2, channel A and B
Display	2-line LCD with 2 x 16 characters
Measuring of vibration	RMS value of vibration velocity in mm/s, acceleration sensor with constant current supply (CCS) transfer factor 100 mV/g
Measuring range	0 ... 10/20/40/50/100/200 mm/s
Frequency	1/3/10 ... 1000 Hz
Limit values	LIM 1 and LIM 2 switched via relay with information via display and LED
Operate delay	0.2 to 10 sec., pre-selectable
Trip multiplier	Factor 1.0 ... 20.0, pre-selectable
Limit relays	3 relays (LIM 1, LIM 2, OK), floating change-over contacts with a switching capacity of 24 VDC, 5 A or 230 VAC, 5A
Measurement of bearing condition	RMS value of acceleration and DFT in the range 0.5 ... 5 kHz, with LIM 1 and LIM 2
Temperature measurement	Designed for PT 100, 0 ... 150 °C, with LIM 1 and LIM 2
Post-mortem display	-994 ... +29 sec. after LIM 2 violation
Trend display of measurements	in the time period 10 days to 10 months
DFT analysis	320 line spectrum in the range 10 ... 1000 Hz
Analogue output	For vibration channel A & B: 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 115 x 75 mm (B x H x D), 700 g

Scope of delivery and ordering information		
	Type	Description
1	VIBROCONTROL 1500	<p>Electronics</p> <p>Monitoring device VIBROCONTROL 1500; for measuring, displaying and monitoring bearing vibration, bearing condition and temperature. Temperature measurement is designed for PT 100 sensors.</p> <p>With trend display, post-mortem display and DFT analysis of the bearing vibration and roller bearing condition.</p> <p>With CAN-Bus interface, relay and analogue output.</p>
2		Vibration sensor
2.1	AS-062/T1	Acceleration sensor (CCS type) with integrated temperature sensor PT 100, with 5 m cable, 6-wire lead plus shield and open cable ends.
2.2	AS-062	Acceleration sensor (CCS type) with 5 m cable, 2-wire lead plus shield and open cable ends.
3		Power supply (optional), 100 ... 240 VAC / 24 VDC
3.1	AC-4111	Power supply for 1 device
3.2	AC-4601	Power supply for max. 8 devices
4		Software and interfaces
4.1	AC-4201	VIBROCONTROL 1500 Control-Center-Software incl. interface converter CAN-Bus / USB and connection cable to VIBROCONTROL 1500

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