Intelligent vibration monitoring – Online or handheld

Systems for vibration monitoring and diagnostics

Intelligent vibration sensor with integrated display
Measurement modi for raw data and spectral analysis
Compact design
Power supply also possible via USB
Large onboard history log with real-time clock

New firmware with additional in-depth diagnostics using PC software
Using the new firmware for vibration sensor VN it is now possible to switch between the standard monitoring mode and the measurement mode using the PC software VES004. The measurement mode transfers the raw acceleration data to the software for analysis and recording. It is also possible to analyse the frequency spectra (FFT, HFFT) in the software.

Compact handheld
Using a magnet it is possible to mount the VN temporarily on the machine. The power supply from the USB interface activates the measurement mode and the measurement values (e.g. v-RMS according to ISO 10816) appear directly on the integrated display. Any deviations in the measurement values can be analysed further using the PC software on a laptop/tablet.
Online vibration monitoring

For small and average sized machines (such as motors, fans, pumps and compressors) which are often monitored manually or not at all ifm electronic now has, with the VN family, a simple and attractive alternative. The compact VN series continually monitors the overall vibration of equipment and components according to ISO 10816. VNB211 also monitors acceleration (factory setting).

Using the analogue input it is also possible to monitor an additional process value (e.g. temperature) or a further vibration signal (VNA001).

The onboard history memory enables data logging for later trending in the PC software VES004. Parameters and limit values can be configured with the push buttons. The factory settings (basic parameters) can be changed with the PC software. In addition to online vibration monitoring the new firmware allows in-depth vibration analysis.

The sensor is then switched to measurement mode granting access to the time domain (raw acceleration data). In the PC software the signal can be analysed, stored and processed further (FFT, HFFT).

This function is possible for both permanently installed units and for handheld units. In the PC software it is possible to create a tree structure which corresponds to the structure of the machine.

All measurements (history and time domain recordings) can then be assigned to the relevant measuring point using the PC software.

Wiring diagram

```
Pin 1: VCC (5 V) via USB interface
Pin 2: USB D-
Pin 3: L-
Pin 4: USB D+
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Pin 1: L+ (9.6...30 V DC)
Pin 2: Out 1 switching output or current output 0/4...20/22 mA (programmable)
Pin 3: L
Pin 4: Out 2 switching output
Pin 5: In 0/4...20 mA
```

Accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>Order no.</th>
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</thead>
<tbody>
<tr>
<td>USB / M8 cable</td>
<td>E30136</td>
</tr>
<tr>
<td>Adapter UNF / M5</td>
<td>E30137</td>
</tr>
<tr>
<td>Power supply</td>
<td>E30080</td>
</tr>
<tr>
<td>Y connection cable, M12 plug / 2 x M12 socket</td>
<td>E12405</td>
</tr>
<tr>
<td>Parameter software</td>
<td>VES004</td>
</tr>
<tr>
<td>Acceleration sensor (for VNB211 only)</td>
<td>VNA001</td>
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</tbody>
</table>

Connection technology

<table>
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<tr>
<th>Description</th>
<th>Order no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socket M12 screened, 2 m black, PUR cable, 5-pole, angled</td>
<td>EVC535</td>
</tr>
<tr>
<td>Socket M12 screened, 2 m black, PUR cable, 5-pole, straight</td>
<td>EVC532</td>
</tr>
</tbody>
</table>

For further technical details please visit: www.ifm.com