



VIBO®

Industrial IoT Edge vibration sensor



VIBO® directly delivers key machine health indicators

VIBO® is a digital MEMS accelerometer that enables a continuous monitoring of machine vibrations. Embedded in spindle, motor, pump, fan, gearbox, compressor or generator, VIBO® detects early signs of failure such as unbalance, misalignment, bearing or gearing issue. Besides delivering raw data, its embedded edge processing capability enables VIBO® to directly send key machine health indicators set to the use case. Connectivity, identification, auto-diagnosis and configurability ease VIBO direct integration into any digital IoT field bus, point to point or in a daisy chain.

Key performances

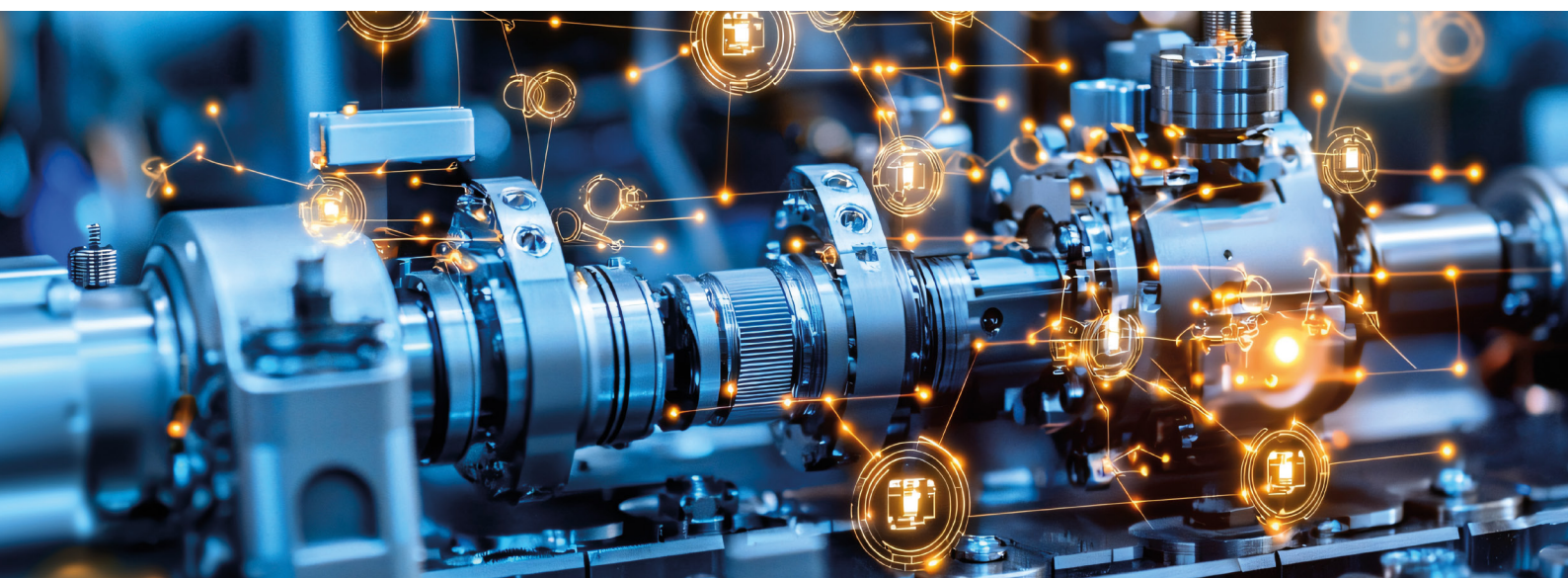
- Sensitivity: 1.4 mg/LSB @ ± 8 g (eq. 100 mV/g)
- Noise: 26 $\mu\text{g}/\sqrt{\text{Hz}}$
- Operating temperature: -40 to +125°C

Applications

- Vibration monitoring
- Critical machinery health monitoring
- Predictive maintenance
- Condition based monitoring
- Process quality monitoring

Key features

- Single-axis acceleration and velocity sensor
- Selectable range: ± 8 g, ± 16 g, ± 32 g, ± 64 g
- Bandwidth 0.5 Hz to 20 kHz
- Programmable digital filters
- Configurable embedded indicators: peak, peak-peak, RMS, crest factor
- RS485/MODBUS RTU
- 8 cm³, 20 grams
- REACH / RoHS compliant
- Computation: envelope, velocity
- IP68





Parameter	Typ. value				Unit	Note
Technical performance						
Input range	±8 ±16 ±32 ±64				g	User selectable
Sensitivity	1.4	2.8	5.6	11.2	mg/LSB	Eq. to 100 mV/g @ 8 g, 10 mV/g @ 64 g
Sensitivity error	± 10%					At room temperature
Frequency response	0.5 – 20k				Hz	1 - 10 kHz @ ±10%
Resonant frequency	25000				Hz	
Noise density @ 8g	26				µg/√Hz	
Digital output						
Output data rate	50000				Hz	Configurable on demand
Protocol	RS485/MODBUS RTU					
Edge processing						
Programmable digital filter	Low pass, high pass, band pass					
Indicators	Peak, peak-peak, RMS, crest					Configurable on demand
Computation	Velocity, envelope					
Electrical						
Power supply voltage	12 to 30				V	Nominal 24 V
Current	7.5				mA	@ 24 V
Physical						
Case material	Aluminum					Alu 5083
Sensing element	MEMS					
Mounting interface	M6 x6 tap hole					
Connector	M5-4 pins					
Environmental						
Protection	68				IP	
Operating temperature	-40 to +125				°C	

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