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

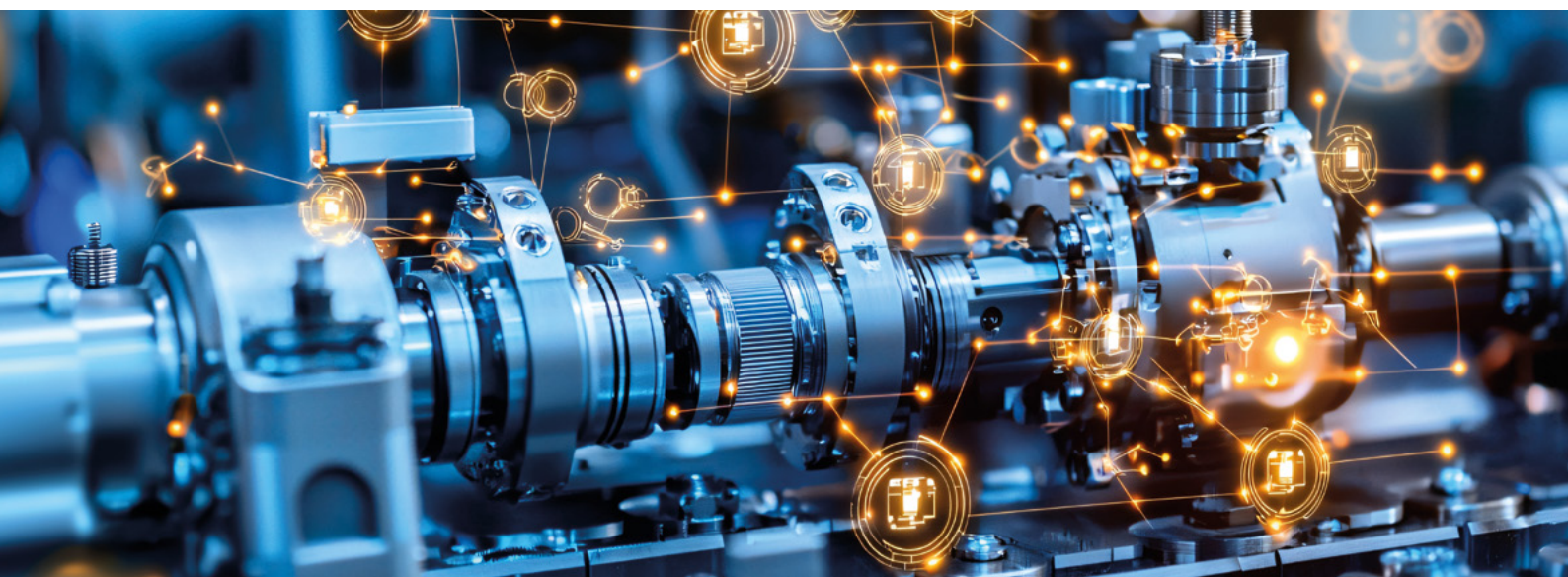
- Sensitivity: 0.35 mg/LSB @ ±8 g
- Noise: 26 µg/√Hz
- Operating temperature: -40 to +125°C

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 to ±64 g
- Bandwidth 0.5 Hz to 20 kHz
- Programmable digital filters
- Configurable indicators: peak, peak-peak, RMS, crest factor
- RS485/MODBUS RTU
- Learning and monitoring modes
- Computation: envelope, velocity
- 8 cm3, 20 grams, IP68



Parameter	Typ. value	Unit	Note
Technical performance			
Input range	±8 ±16 ±32 ±64	g	User selectable
Sensitivity	0.35 0.7 1.4 2.8	mg/LSB	
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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