



Condition monitoring systems

Simply good, doubly effective: sensor measures acceleration on two axes



Systems for vibration monitoring and diagnostics



Optimum condition analysis thanks to acceleration measurement in 2 axes of motion

For connection to VSE diagnostic electronics

Universal use thanks to IEPE standard

Wide measuring range for many different application scenarios

Robust IP 67 design



For efficient vibration diagnostics

The VSM102 acceleration sensor is capable of detecting radial and axial vibration changes. This makes it easier, for example, to monitor the condition of angular contact ball bearings or extruders, as well as other systems where forces and unbalances act on more than just one axis of motion.

Important indicator of condition monitoring

The acceleration signal plays an important role in machine and plant condition monitoring. It indicates symptoms, such as unbalance, bearing damage or a crash, which, if they go unnoticed, can lead to machine failure, at an early stage. The detected raw data is transferred for further evaluation to an external device, such as the VSE diagnostic electronics from ifm.



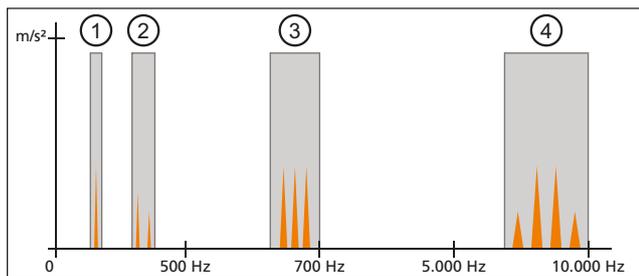
Type	Description	Order no.
	0.6 m connection cable with M12 connector	VSM102

Robust: MEMS measuring principle

The VSM102 acceleration sensor is based on a MEMS chip (capacitive measuring principle) and designed for demanding industrial applications. Thanks to MEMS technology, the sensor's proper functioning can be checked actively via the diagnostic electronics (self-test).

Widely compatible: IEPE standard

The sensor transmits its data according to the IEPE signal, which is an established standard, e.g. for acceleration sensors. The advantage of IEPE devices is their consistently high sensitivity – regardless of the type and length of the connection cable.



- 1) Unbalance
- 2) Alignment error, loose footing
- 3) Rolling element bearing
- 4) Cavitation

Further technical data		
Operating voltage	[V DC]	10...15
Operating current	[mA]	4...10
Measuring sensitivity	[mV/g]	100
Measuring range	[g]	-40...40
Frequency range	[Hz]	1...4500
Number of measurement axes		2
Ambient temperature	[°C]	-30...85
Protection rating		IP 67
Housing material		stainless steel (316L / 1.4404)

Accessories

Type	Description	Order no.
Diagnostic electronics for vibration sensors		
	Communication interface: Ethernet, protocol: TCP/IP Real-time clock	VSE003
	Communication interface: Ethernet, protocol: TCP/IP Real-time clock	VSE101
	Communication interface: Ethernet, protocol: PROFINET IO Real-time clock	VSE150

Installation		
	Mounting adapter M16 and 1/4"	E30494

Connection technology

Type	Description	Order no.
M12 connection cable		
	2 m, black, PUR cable	EVC538
	5 m, black, PUR cable	EVC539
	10 m, black, PUR cable	EVC540