

amc VIBRO



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[ modules ]

**AVS 1001HF**

**AVS 1003LH**

- new generation of vibration monitoring systems

[www.amcvibro.com](http://www.amcvibro.com)

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AVS are either **single (1001HF)**  
or **triaxial (1003LF) miniature**  
**industrial systems for vibration**  
**and temperature monitoring**  
*with built-in signal processing, all*  
*enclosed in a sensor-sized housing.*



# functions and applications

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AVS modules allow for the reading of parameter values such as **Peak-to-Peak**, **RMS acceleration**, **RMS velocity**, as well as **temperature** directly from the module using any device that supports the **Modbus RS-485** communication protocol.

## THE MODULES DETECT, AMONG OTHERS:

- **[Shafts]** unbalance, misalignment, looseness (loose connections), coupling damage.
- **[Drives]** rotor unbalance, mechanical looseness, mounting issues.
- **[Fans]** blade unbalance, uneven blade loading, shaft misalignment or looseness.
- **[Gearboxes]** tooth wear or damage, raceway wear, backlash.

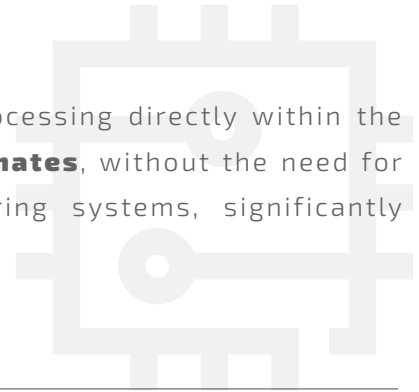


# AVS modules advantages

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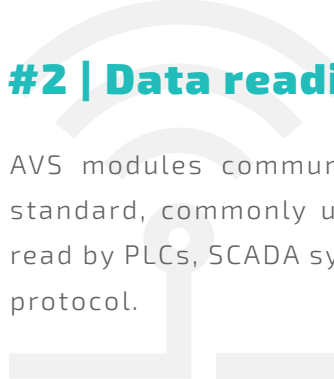
## #1 | Signal processing directly in the module

Built-in electronics enable signal processing directly within the module and the **reading of key estimates**, without the need for complex machine condition monitoring systems, significantly reducing implementation costs.



## #2 | Data reading via Modbus RS-485

AVS modules communicate directly using the **Modbus RS-485** standard, commonly used in automation. This allows data to be read by PLCs, SCADA systems, or any other devices supporting this protocol.



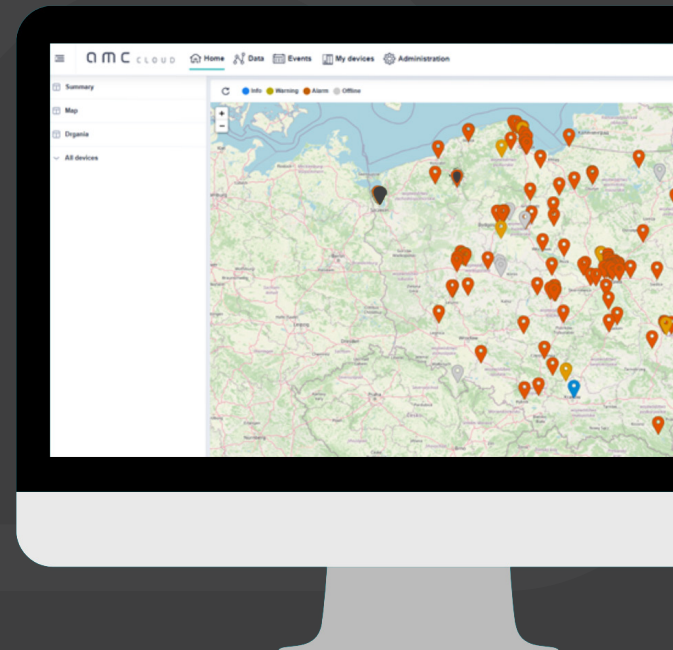
# AVS modules advantages

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## #3 | AVM Cloud cloud service

AVS series modules enable the transmission of measurement data to the **AVM Cloud system** – a cloud-based platform that provides access to information from anywhere in the world.

AVM Cloud allows for the simultaneous connection of multiple measurement systems, offers data visualization on a customizable dashboard, generates measurement reports, and notifies users of warnings and alarms related to threshold exceedances.



# AVS modules advantages

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## #4 | Integrated temperature measurement

The modules are equipped with a **built-in temperature sensor**. Simultaneous measurement of vibration and temperature provides a more comprehensive view of the monitored object's condition, allowing for the detection of issues such as excessive friction, drive overload, short circuits, or cooling problems.

## #5 | Up to 100 modules on a single cable

The modules can be connected in series, with **up to 100 units in a single circuit**. This allows the entire installation to be implemented using a single 4-core cable, reducing costs, simplifying installation, and increasing the overall clarity of the system layout on site.

# AVS modules advantages

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## #6 | Installation based on standard connectors and cables

AVS series modules are equipped with **5-pin M12 connectors**, a popular industrial standard, allowing for easy interconnection **using standard cables, T-connectors, and splitters.**

## #7 | Thread, magnet or adhesive mounting

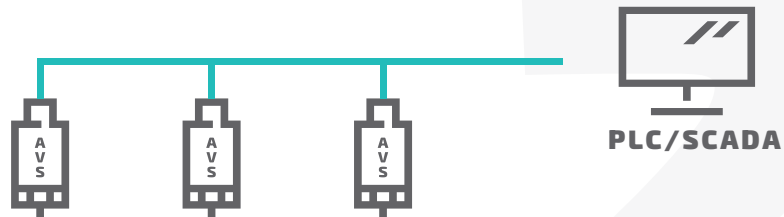
The modules can be mounted in **threaded mounting holes**, or, when non-invasive installation is required, they can be attached using **adhesive or a magnetic mount.**

*[ All mounting accessories are available in our offer ]*

# AVS modules advantages

## #8 | Multiple data analysis options

- **Directly on PC** - AVS Link allows you to configure, update, read and export data (including raw signal) from your workstation.



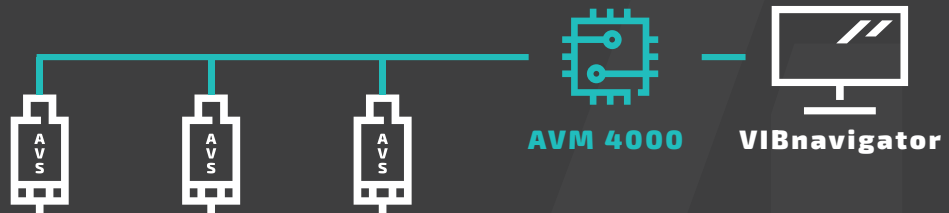
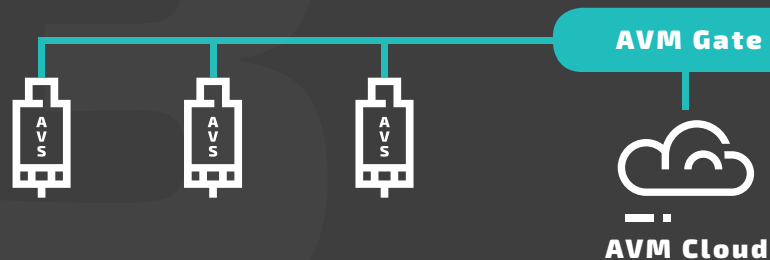
- **Locally with PLC/SCADA** – the module ensures integration with industrial automation systems via Modbus RS-485.



# AVS modules advantages

## #8 | Multiple data analysis options

- **Remotely in the cloud** - **AVM GATE** enables secure data transfer via the Internet to the **AVM Cloud** system.



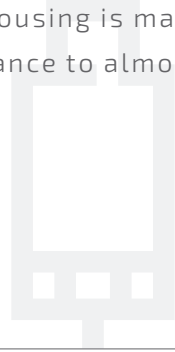
- **In diagnostic software** - **AVM4000i** enables aggregation of data from any number of sensors and advanced analysis in the **VIBnavigator** program.

# AVS modules advantages

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## #9 | Stainless steel housing

The modules meet the **IP67 standard** and their housing is made of stainless steel, which translates into high resistance to almost all unfavourable operating conditions.



## #10 | Miniaturization without losing measurement quality

Research conducted in collaboration with Analog Devices enabled the selection of **MEMS transducers** that allow the integration of the measurement and data processing system into a 50 × 22 mm housing, while maintaining signal quality comparable to piezoelectric sensors.

# 1-axis module - AVS 1001HF

The **AVS 1001HF** series modules enable **single-axis** vibration measurement.

They feature a wide measurement range from 1 Hz to 11 kHz and a high sampling rate of up to 32 kHz, enabling effective detection of even early and short-term machine malfunctions.

## SYSTEM FEATURES

- **Z-axis measurements**
- Range: 1 Hz to 11 kHz
- Determined parameters:
  - acc Peak
  - acc RMS
  - vel RMS
  - env Peak
  - env RMS
  - Temp
- Sampling frequency: 32 kHz



# 3-axis module - AVS 1003LF

**AVS 1003LF** series modules enable simultaneous vibration measurement in **three axes: X, Y, and Z**. This allows for comprehensive dynamic diagnostics of a machine from a single location, without the need for multiple sensors.



## SYSTEM FEATURES

- **X, Y, and Z axis measurements**
- Range from 1 Hz to 1 kHz
- Determined parameters:
  - Acc Peak
  - Acc RMS
  - AKA RMS
  - Temp
- Sampling rate: 4 kHz

# technical data

	AVS 1001HF	AVS 1003LF
Number of measuring axes	1: Z	3: Z,Y,X
Measurement band	0 ... 11 000 kHz	0 ... 1000 kHz
Sampling rate	32 kHz	4 kHz
Calculated parameters	acc Peak, acc RMS, vel RMS (ISO), env Peak, env RMS, Temp	X accPeak, Y accPeak. Z ac- cPeak, X accRMS, Y accRMS, Z accRMS, X vel RMS (ISO), Y vel RMS (ISO), Z vel RMS (ISO), Temp
Protection class	IP67	
Temperature range	-40 °C ... +85 °C	
Measuring range	± 50 g, peak	± 40 g
Operating voltage	24 V DC	
Maximum number of modules in one circuit	100 units	
Connector	M12 5PIN	
Mounting hole	M6	

# available accessories

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## MOUNTING ACCESSORIES:



**M6 studs**



**magnet**



**glue studs**

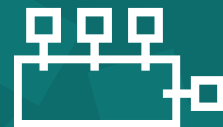
## CONNECTION ACCESSORIES:



**t-connectors**



**wires**



**multipliers**

# contact us

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BOOK A **FREE DEMONSTRATION:**



ANY QUESTIONS?  
CONTACT US!

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