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## AV MONITOR 1000

one channel devices  
for monitoring  
and diagnostics of  
rotating machinery



# system description

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**AMC VIBRO MONITOR 1000 (AVM 1000)** series is a one-channel devices for online condition monitoring and basic diagnostics of rotating machinery. It is designed for a small or large rotating machines with fixed or variable rotational speed. Some of AVM1000 versions is specially suited for reciprocating compressors. AVM1000 devices detect and locate among other things: unbalance, overload and cavitation.

## INPUTS/OUTPUTS SPECIFICATION:

- 1 IEPE (ICP®) analog input channel
- 1 speed/phase marker input channel (PM/FK) - (DS version)
- 2 relay outputs - just some modules (1002D version)
- 1 analog output (4-20mA)

## BASIC FEATURES:

- fully configurable and independent relay outputs
- IEPE open-loop/short-circuit detection
- easy integration with PLC systems by 4-20 mA or relay outputs
- compact design and DIN rail installation
- embedded LED display

## VERSIONS:

- **AV MONITOR 1000E** – single channel device for online condition monitoring and diagnostic of constant and variable speed rotating machinery (e.g. ventilators, pumps, compressors).
- **AV MONITOR 1002D** – upgraded version of the AVM 1000E module with 2 relay outputs, which can work independently performing the warning and alarm functions. The device has a built-in display showing current measured vibration signal value. The configuration is made with 3 buttons and DIP switches.
- **AV MONITOR 1002DS** – for reciprocating machines, such as compressors or internal combustion engines. Indicates the current vibration level of the monitored element. Features relay outputs. Calculates acceleration RMS or 0-Peak analyses for 24 sections of the machine's rotation.
- **AV MONITOR 1002DT** – module designed to work with IEPE sensors with additional temperature output measurement (10 mV/°C).

## TECHNICAL DATA:

	AVM 1000E	AVM 1002D	AVM 1002DS	AVM 1002DT
<b>Inputs</b>	1 x IEPE	1 x IEPE	1 x IEPE 1 x phase marker (PM)	1 x IEPE
<b>Outputs</b>	<b>1 x analog (4-20 mA)</b>	2 x relay (NO, NC)*, <b>1 x analog (4-20 mA)</b>	2 x relay (NO, NC)*, <b>1 x analog (4-20 mA)</b>	2 x relay (NO, NC)*, <b>1 x analog (4-20 mA)</b>
<b>Measured values</b>		velocity, acceleration		temperature
<b>Damage detection</b>	✓	✓	✓	✓
<b>Types of estimates</b>		(0-Peak or RMS) acceleration or (0-Peak or RMS) vibration velocity		
<b>Sections of rotation</b>	✗	✗	✓ 24	✗
<b>Application</b>	General, for rotating machines	General, for rotating machines	General, for reciprocating machines	General use
<b>Examples of types of machines</b>	<ul style="list-style-type: none"> <li>• fans</li> <li>• pumps</li> <li>• compressors</li> <li>• transmissions</li> </ul>	<ul style="list-style-type: none"> <li>• fans</li> <li>• pumps</li> <li>• compressors</li> <li>• transmissions</li> </ul>	<ul style="list-style-type: none"> <li>• reciprocating compressors</li> <li>• internal combustion engines</li> </ul>	<ul style="list-style-type: none"> <li>• fans</li> <li>• pumps</li> <li>• compressors</li> <li>• transmissions</li> </ul>
<b>Examples of detected damages</b>	Signaling of exceeding the vibration threshold values of the monitored element			

\*definition at the order stage

## SPECIFICATION:

	AVM 1000E	AVM 1002D	AVM 1002DS	AVM 1002DT
<b>Sensor types</b>	1 x IEPE	1 x IEPE	1 x IEPE 1 x phase marker (PM)	1 x IEPE
<b>Power supply</b>			24V DC	
<b>Power consumption</b>			Max 4W	
<b>Insulation</b>			1kV	
<b>Operational temperature</b>			-20 °C... +80 °C	
<b>Housing</b>			IP20, 23 x 100 x 120 (WxHxL mm), DIN rail	
<b>Low-power relay outputs status / warning / alarm</b>		<b>2 x relay output:</b> <ul style="list-style-type: none"> <li>• contact type: NC or NO</li> <li>• maximum switching voltage +32 VDC (possibility of extending the voltage range up to <b>+100 VDC at the production stage</b>)</li> <li>• operating current up to 150 mA</li> <li>• maximum contact resistance 8 Ω (typical 4.7 Ω)</li> </ul>	<b>2 x relay output:</b> <ul style="list-style-type: none"> <li>• contact type: NC or NO</li> <li>• maximum switching voltage +32 VDC (possibility of extending the voltage range up to <b>+100 VDC at the production stage</b>)</li> <li>• operating current up to 150 mA</li> <li>• maximum contact resistance 8 Ω (typical 4.7 Ω)</li> </ul>	<b>2 x relay output:</b> <ul style="list-style-type: none"> <li>• contact type: NC or NO</li> <li>• maximum switching voltage +32 VDC (possibility of extending the voltage range up to <b>+100 VDC at the production stage</b>)</li> <li>• operating current up to 150 mA</li> <li>• maximum contact resistance 8 Ω (typical 4.7 Ω)</li> </ul>
<b>4-20 mA output</b>		<b>1 x 4-20 mA current output:</b> <ul style="list-style-type: none"> <li>• current loop voltage from +7 VDC to +36 VDC proportional to the measured estimate</li> </ul>		
<b>AC voltage output</b>		<b>1x voltage output:</b> <ul style="list-style-type: none"> <li>• buffer output - connected vibration sensor, enabling advanced connection <ul style="list-style-type: none"> <li>• analyzer eg: AVM 1000DC/P</li> </ul> </li> </ul>		
<b>Panel</b>	<ul style="list-style-type: none"> <li>• 1 x 24-segment LEDs</li> <li>• LEDs indicators</li> <li>• 2x configuration DIPswitch</li> </ul>	<ul style="list-style-type: none"> <li>• 2 x 8-segment LED display</li> <li>• 3 x configuration buttons</li> <li>• LEDs indicators</li> <li>• 2x configuration DIPswitch</li> </ul>	<ul style="list-style-type: none"> <li>• 2 x 8-segment LED display</li> <li>• 3 x configuration buttons</li> <li>• LEDs indicators</li> <li>• 2x configuration DIPswitch</li> </ul>	<ul style="list-style-type: none"> <li>• 2 x 8-segment LED display</li> <li>• 3 x configuration buttons</li> <li>• configuration</li> <li>• LEDs indicators</li> <li>• 2x configuration DIPswitch</li> </ul>

# contact us

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## WOULD YOU LIKE TO SEE HOW IT WORKS?

We offer a **free demonstration of the product!** Schedule it now and don't forget to ask about our **free of charge technical support service!**

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