



**ELMODIS**  
WE MAKE INDUSTRY SMARTER

**SDMS-VMS-E**  
Vibration Module

Quick Reference Guide

Vibration Module is a part of Elmodis system used to monitor electric induction motor driven machines. Vibration module constitutes an extension of systems with Electro Module as a basic module. The task of Vibration Module is to read and preprocess data from vibration sensors. Vibration sensor signals are sampled with the frequency of 32 kHz. In order to synchronize electrical measurements with vibration measurements, the module is equipped with additional key phasor input installed at the machine shaft. This enables spectral analysis of a signal within a wide range of frequencies and detection of vibration pattern anomalies with reference to a specific angular position of the shaft. Communication between Electro and Vibration modules is executed via Ethernet.

## BASIC FEATURES

- Up to four vibration sensors supported
- Support of IEPE (Integrated Electronic Piezoelectric) sensors.
- Temperature measurement from vibration sensors with an integrated temperature sensor
- Sampling of signal with the frequency of 32 kHz
- Ethernet interface used for communication with the Internet and other SDMS modules
- 24 VDC supply
- Installation on DIN TS35 rail

## SAFETY



Installation may only be performed by adequately authorized persons.

Prior to the commencement of installation works read the ELMODIS installation and start-up manual. Prior to the commencement of installation works it is absolutely required to switch off the electrical supply of machine at which the Elmodis system is installed in the switching station. Failure to comply with the above requirement may result in permanent disability or death. Special care should be taken during installation in order not to damage the existing devices or interrupt their operation.



The symbol designating selective collection of electronic equipment. It is forbidden to dispose used equipment with other waste.

Symbol	Status	Description
		Failure-free operation of the system
		Service required - contact Elmodis customer service
		Stable communication with the Cloud
		No communication with the Cloud
		No Internet access
[1]		Collecting vibration measurements
[2]		Sensor properly connected, in stand-by mode
[3]		No vibration sensor or open circuit
[4]		Sensor circuit shorted / sensor damaged
		Machine OK
		Module identification
		Machine-related alarm



Failure-free operation of the system

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[1]

Collecting vibration measurements

[2]

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No vibration sensor or open circuit

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Sensor circuit shorted / sensor damaged



CASING  
BACK-LIGHT

Machine OK

Module identification

Machine-related alarm

## OPERATION



Intermittent    Static

## TECHNICAL DATA

Vibration sensor standard: IEPE (Integrated Electronic Piezoelectric)

Vibration measurement range: 0 ÷ 30 [g] (for a sensor with the sensitivity of 100 mV/g)

Nominal supply current of vibration sensors: 4.7 mA

Measurement track according to: ISO 2954 standard

Temperature measurement range: 10 ÷ 120 [°C] (for a sensor with the sensitivity of 10 mV/°C)

Temperature measurement accuracy: ±0.5 °C

Power supply [SELV]: 24 VDC

Power consumption: < 7.5W

Communication: 10/100 Mbit Ethernet

Operation temperature: -20 ÷ 50 [°C]

Storage temperature: -20 ÷ 85 [°C]

Operating humidity range: 5% to 90% without condensation

Maximum altitude: 2000 m

Mounting method: TH35 rail (acc. to PN-EN 60715 standard)

Dimensions: 46 x 115 x 125 [mm]

Weight: 0.4 kg