

VKS-02 + vibration sensor (ICP accelerometer)

- measures effective speed or acceleration of vibrations
- has an adjustable frequency range
- active current loop of $4 \div 20\text{mA}$ as an output
- output current is proportional to the measured quantity
- power supply $18\text{V} \div 36\text{V DC}$
- designed for continuous operation
- compact box design, IP64 protection

Main areas of application

- motors, generators, gearboxes
- fans, compressors, wind turbines
- water turbines, pumps, ...



Specification of the VKS-02 transducer

The VKS-02 transducer is used to diagnose vibrations during a machine operation. It is designed to be mounted separately and can also be placed in the switchboard area on a mounting plate. The electronics is installed in a box with the IP64 protection.

Bearing vibrations are sensed by a suitably placed vibration sensor - an ICP accelerometer with a built-in amplifier. The sensor is connected via a cable to the input terminals of the transducer, which continuously evaluates the set vibrations

- effective speed (RMS) of vibrations (mm/s)
or
- effective acceleration (RMS) of vibrations (m/s^2)
in the adjustable frequency range of 10Hz to $1, 2, 5$ or 10kHz .

Application deployment

A measuring point on the machine is fitted with a sensor – the ICP accelerometer, preferably by screwing onto the bearing housing radially or axially, to measure the vibrations in the desired direction. The sensor cable is inserted into the switchboard (the recommended switchboard distance from the sensors is up to 100m) directly to the VKS-02 transducer.

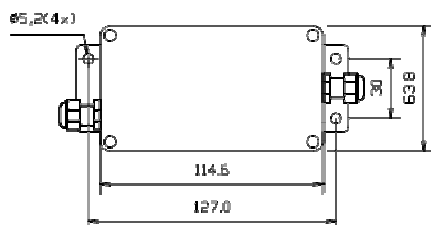
The VKS-02 transducer is connected to the 24V DC power supply and the active current loop output of $4 \div 20\text{mA}$ is connected to the analog input of the control and diagnostic system of the machine.

By measuring and evaluating the magnitude of the current output, the supervising system itself can evaluate the vibration condition and perform a shutdown of the machine if necessary.

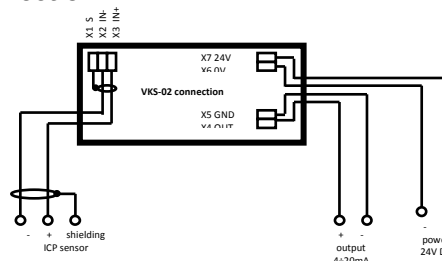
Transducer delivery and calibration

The VKS-02 module is supplied with an appropriate ICP accelerometer with the sensitivity of 100mV/g , e.g. the type SVE756. This sensor is also factory calibrated, so the user does not have to make any further adjustments.

Dimensions



Connection



Basic parameters of the VKS-02 module with the accelerometer

Transducer power supply	24V DC/100mA, acceptable range $18\text{V} \div 36\text{V DC}$
Analog output	Active current $4 \div 20\text{mA}$, appropriate to the measured quantity
Measured quantity (adjustable by configuration)	- RMS vibration speed $0 \div 20\text{mm/s}$ - RMS vibration acceleration $0 \div 200\text{m/s}^2$
Frequency range (adjustable by configuration)	$10\text{Hz} \div 1, 2, 5$ or 10kHz
Parameters of sensor	Accelerometer with the ICP interface Feeding current 4mA , voltage up to 30V DC Sensor constant: 100mV/g or 10mV/g
Standard type of sensor	SVE756 ($K=100\text{mV/g}$)
Execution and operating conditions	
Transducer execution	Separate box
Box material	Aluminum alloy
Protection	IP64
Operating temperature range	-25 to $+65^\circ\text{C}$
Dimensions (W x H x D)	$115 \times 64 \times 30\text{mm}$