

VIX-OEM Vibration Sensor

Loop Powered Vibration sensor (4-20 mA) with true RMS-velocity and frequency response 10-1000 Hz.

VIX is a smart vibration sensor for velocity in mm/s or ips RMS. Internal filtering is within 10-1000 Hz according to ISO-standard 2954. VIX is a loop powered sensor according to 4-20 mA standards.



VIX is used to monitor vibration levels of rotating machines that can be damaged by high vibration levels.

VIX is mounted directly on the machine and the cable connects to Programmable Logic Controllers (PLC) or SCADA systems.

Applications:

- Motors
- Generators
- Pumps
- Fans
- Compressors
- Paper Machines
- Transmissions
- NC-machines, saws, milling machines

Easy to install

VIX can be mounted in any direction. It has a robust waterproof stainless steel housing and is mounted with a single bolt (M6 or smaller). The radial integrated cable is easy to install.

All in one

VIX is based on a very shock resistant and stable acceleration sensing piezoelectric element.

The acceleration signal is integrated into velocity, filtered according to the specifications of ISO 2954 with a frequency band from 10 to 1000 Hz.

The filtered velocity signal is RMS-detected and this signal is converted to a mA output signal. All power is supplied by the mA-loop and no other power supply is needed.

Signal for advanced analysis

The time varying velocity signal is superimposed on the mA-signal.

A signal analyzer (e.g. a standard FFT-analyzer) can be connected to the sensor and the frequency content of the signal can be analyzed. This is of great help for understanding the underlying reason for a high vibration level.

Technical Data

VIX :

-A loop powered Vibration Sensor
 -A Vibration Sensor with a superimposed velocity time signal for frequency analysis.

Measures vibration level in mm/s rms according to ISO-standard 2954 within 10 Hz - 1000 Hz.

The only power needed is supplied by the mA loop connection.

Mechanical:

Square with a centerhole for an M6 bolt. Hole diam 6.1 mm. Sensor dimensions 52 * 52 * 12 mm excluding the protrusion at the cable. Connection cables are securely fixed in the sensor end and go out in the radial direction in order to follow the surface that the sensor is attached to. The free outer end of the cable is designed to be mounted in screw terminal (or equivalent). Standard cable length 3 meter *. All parts are stainless steel. Water proof IP67. Weight 100 g.

Sensing direction ****

The sensor is only sensitive to vibrations in the bolt direction, perpendicular to the mounting surface. The sensor can be mounted in any direction.

Cable connection:

VIX is a two-wire loop powered sensor with a plus and a minus-connection. Operates with a power supply of 10 – 30 Volt DC. Absolute maximum voltage 100 V DC. Protected against polarity change.

Measuring Range:

The sensor generates a mA-signal between 4 and 20 mA. 4 mA corresponds to 0 mm/s RMS. 20 mA corresponds to 20 mm/s RMS **. Frequency range 10-1000 Hz *** with a time constant of 1 second. The sensor is calibrated at room temperature with a nominal sensitivity within +/- 2 %.

CE approval: Fulfills EMC demands according to EN 50082-2 (Immunity) EN50081-2 (Emission)

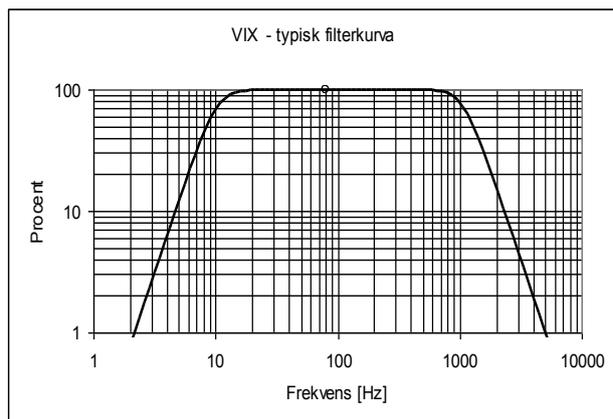
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Product specifications and descriptions in this document are subject to change without notice

Sensing element:

The sensor is based on a high quality piezoelectric sensor-element. It is a very robust unit with the following characteristics:

- High mechanical shock tolerance
- Long term stability
- Wide operating temperature range
- -20 - +85 degrees Celsius



Order Number: VIX-OEM

*) Other cable length can be offered

**) Other sensitivity can be offered, 20 and 50 mm/s are standard

***) Other frequency range can be offered 10-1000Hz and

2.5 - 1000 Hz are standard

****) Other sensing direction (horizontal) can be offered

