

VM42-A/-H

Vibration Monitor 1 or 2-Channels

Features:

- ◆ Selectable low frequency range
- ◆ Selectable measuring Range
- ◆ Selectable current output
- ◆ 2 Alarm levels with Relays
- ◆ Selectable time delay

Outputs:

- ◆ Analysis signal
- ◆ mA output (RMS)
- ◆ Relays
- ◆ Built-in display



VM42-A is available for accelerometers and **VM42-H** is available for velocity transducers.

Description

The transducer signal is compensated in the input amplifier to correct signal level and selected frequency range. This signal is available at the front panel BNC connector and on terminals for further analysis.

When accelerometer or velocity transducers are used the analysis, alarm and mA signals are always measured in velocity. This signal can be amplified in 2 selectable ranges 0-10 and 0-100 mm/s. Other ranges are optional.

The signal is converted to an RMS value. This DC-level is compared with the alarm levels. If the RMS level is higher than the alarm level a LED lamp is lit. If the RMS level stays higher then the alarm level during the whole selected delay time the relay is changing.

The RMS level is converted to a corresponding current output selectable between 0-20mA or 4-20mA. This signal is available on terminals for connection to other instruments or data logger.

Enclosure

Sealed (IP65), PVC box with transparent lid for overview of vibration levels, alarm settings and alarm status.

VM42 fulfils the following standards:

EN50081-1, EN55011 (B), EN50082-2, EN61000-4-2,-3,-4,-5

VM42-H for velocity transducers

Input Sensitivity

Only for velocity transducer HG91: 5mV/(mm/s) above 200Hz. Sensitivity is increased with decreasing frequency due to transducer compensation.

Frequency range

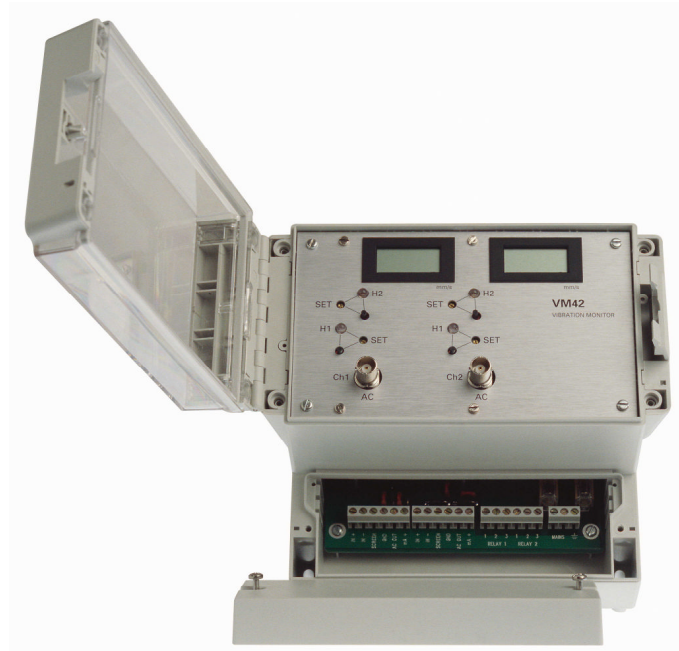
2 - 2000 Hz as standard. The low frequency range can be changed to 10 Hz on the pc-board.

Analysis output

10mV/(mm/s) within selected frequency range.
Min load 10 Kohm.

Measuring range

selectable between 10 and 100 mm/s.
This selection does not influence the sensitivity of the analysis output.



VM42-A for accelerometer transducers with built-in amplifiers

Input sensitivity

100 mV/g. The positive input terminal supplies a 4 mA constant current at max. 20V to the built in transducer amplifier.

Frequency range

1.5 - 2000 Hz as standard. The low frequency range can be changed to 10 Hz on the pc-board.

Analysis output

10 mV/(mm/s) between 1.5Hz-15KHz or 10Hz-15KHZ. Min load 10 Kohm.

Measuring range

selectable between 10 and 100 mm/s.
This selection does not influence the sensitivity of the analysis output

Options

- Customer specified frequency and measuring ranges
- Adaptation to proximity probes
- Adaptation to temperature measurements with Pt100 elements

Ordering codes

VM42-1/H for one velocity transducer
VM42-1/A for one accelerometer

VM42-2/H for two velocity transducers
VM42-2/A for two accelerometers

Common data for all types

RMS Value

The instrument measures the RMS value of the signal within the selected frequency range

Current output

The current output is selectable between 0-20mA or 4-20mA on pc-board. Max. load not more than 600 ohm or 12V. 20mA refers to 100% of selected measuring range.

Time delay

The time delay of relay activation is adjustable between 8-90 sec.

Alarm settings

The alarm level is set by pressing the SET button and simultaneously adjusting the potentiometer. The alarm level is displayed in measured unit.

Relay output and functions

Single pole changeover relay 5A/250VAC or 5A/24V. The relay coils can be activated or deactivated below the alarm level by a switch on the pc-board. The 2-channel version has shared relays for both channels and the highest vibration level activates the relay.

Power supply

220-240VAC is standard. 110VAC or 24VDC is optional.

Enclosure dimensions

Width 170mm, height 160mm, depth 130mm



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