

# Vibration sensor

## VIM62PP-E1V16-0NE-I420KA4



- Extended temperature range
- Screw-in thread for simple installation
- Simple electrical commissioning
- Rugged stainless steel housing
- Vibration velocity in mm/s via root mean square formation (rms)
- Suitable for use in hazardous area up to Zone 1/21 with type of protection explosionproof enclosure

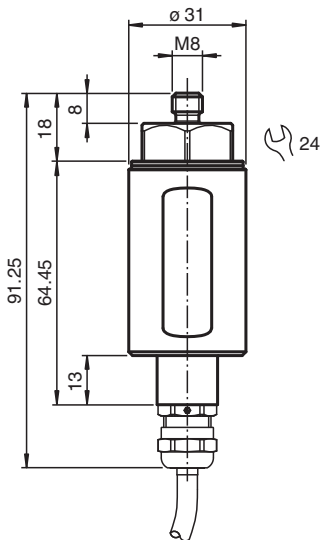
Vibration sensor with analog current output, increased temperature resistance, suitable up to Zone 1/21 with type of protection explosionproof enclosure



### Function

The vibration sensor determines the vibration quantity using rms (root mean square) averaging. This form of quadratic averaging or pre-filtering enables precise trend statements about the condition of the application. The sensor's design is impressively robust against tough environmental conditions. The stainless steel housing provides optimal protection against corrosion. The wide temperature range of the sensor enables reliable measured values even in harsh conditions. Furthermore there is an approval for the use of the sensor in hazardous areas. The simple mounting allows for commissioning in any application.

### Dimensions



### Technical Data

#### General specifications

Type	Vibration sensor
Measuring technology	MEMS

Release date: 2023-10-25 Date of issue: 2023-10-25 Filename: 70141166-100009\_eng.pdf

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

**PF** PEPPERL+FUCHS

## Technical Data

Series	Performance Plus Line	
Measured variable	Vibration velocity	
Measurement range		
Vibration velocity	v-rms	0 ... 16 mm/s
Measurement accuracy	± 0.1 mm/s (calibration point: 90% of the measuring range; 159.2 Hz) Complies with the tolerance requirements of DIN ISO 2954 for measurement range greater than 8 mm/s	
Cross-sensitivity	< 5 % of the partial lateral acceleration, which acts exactly 90° to the measuring axis	
Frequency range	10 ... 1000 Hz	
Averaging time	for v-rms: 2 s	
<b>Electrical specifications</b>		
Fusing	external fuse is required: 3 A , semi-time-lag , 30 V DC	
Operating voltage	U <sub>B</sub>	10 ... 30 V DC
Current consumption	max. 25 mA	
Power consumption	P <sub>0</sub>	max. 750 mW
Time delay before availability	t <sub>v</sub>	10 s (rms filter is calculated initially with measurement data before they are available at the output)
Surge protection	up to 2 kV	
<b>Output 1</b>		
Output type	analog output, current output of the vibration variable	
Output current	4 ... 20 mA	
Load resistor	≤ 500 Ω	
<b>Standard conformity</b>		
Degree of protection	DIN EN 60529, IP66, IP67	
Shock resistance	DIN EN 60068-2-27, 60 g, 6 ms	
Vibration resistance	DIN EN 60068-2-6, 16.5 g, 10 ... 1000 Hz	
<b>Approvals and certificates</b>		
IECEX approval		
Equipment protection level Gb	IECEX CSAE 22.0042X	
Equipment protection level Db	IECEX CSAE 22.0042X	
ATEX approval		
Equipment protection level Gb	CSANe 21 ATEX 1074 X	
Equipment protection level Db	CSANe 21 ATEX 1074 X	
<b>Ambient conditions</b>		
Ambient temperature	-40 ... 60 °C (-40 ... 140 °F)	
Measuring head temperature	-40 ... 125 °C (-40 ... 257 °F) directly at the mounting point	
Storage temperature	-40 ... 60 °C (-40 ... 140 °F)	
<b>Mechanical specifications</b>		
Connection type	cable	
Housing material	Stainless steel 1.4305 / AISI 303	
Housing length	82.35 mm	
Housing diameter	31 mm	
Degree of protection	IP66 / IP67 only in connected state	
Cable		
Number of cores	4	
Core cross section	0.34 mm <sup>2</sup>	
Length	L	10 m
Tension force	max. 80 N (tensile loading directly at the cable, not at the metal conduit if attached)	
Mass	740 g	
<b>General information</b>		
Use in the hazardous area	see instruction manuals Only use accessories specified by the manufacturer.	

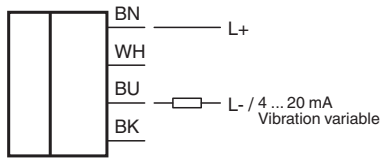
Release date: 2023-10-25 Date of issue: 2023-10-25 Filename: 70141166-100009\_eng.pdf

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Pepperl+Fuchs Group  
www.pepperl-fuchs.comUSA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.comGermany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.comSingapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

**PEPPERL+FUCHS**

## Connection



## Accessories

Accessories for this product can be found on the internet at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com).

## Installation

### Further Documentation

The sensor manual is also available as detailed overall documentation. Among other things, installation, grounding concepts and mounting are described there in detail.

You can access the manual via the product detail page at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com).

### Note

The correct electrical connection and the selection of the appropriate grounding concept are crucial for malfunction-free operation of the sensor. For detailed information you may refer to the manual of the sensor.