

Vibration sensor

VIM62PL-E0G10-0ME-I420V14



- Extended temperature range
- Screw-in thread for simple installation
- Simple electrical commissioning
- Rugged stainless steel housing
- Vibration acceleration in g (rms) acc. to DIN ISO 10816/20816
- Detection of low frequency vibrations

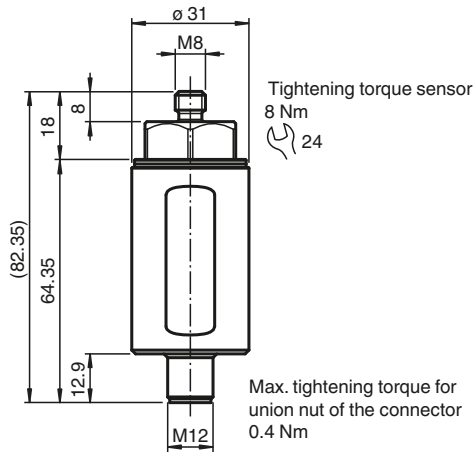
Vibration sensor with analog current output and increased temperature resistance



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. The simple mounting allows for commissioning in any application.

Dimensions



Technical Data

General specifications

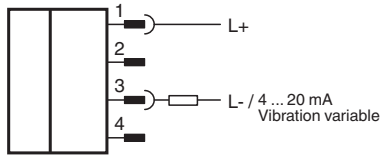
Type	Vibration sensor
Measuring technology	MEMS
Series	Performance Line

Release date: 2024-05-21 Date of issue: 2024-05-21 Filename: 70141166-100003_eng.pdf

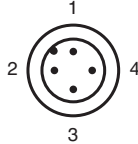
Technical Data

Measured variable		Vibration acceleration
Measurement range		
Vibration acceleration	a-rms	0 ... 10 g rms
Measurement accuracy		± 0.01 g (calibration point: 90% of the measuring range; 159.2 Hz) Complies with the tolerance requirements of DIN ISO 2954
Cross-sensitivity		< 5 % of the partial lateral acceleration, which acts exactly 90° to the measuring axis
Frequency range		1 ... 1000 Hz
Averaging time		for a-rms: 12 s
Electrical specifications		
Fusing		external fuse is required: 3 A , semi-time-lag , 30 V DC
Operating voltage	U _B	10 ... 30 V DC
Current consumption		max. 25 mA
Power consumption	P ₀	max. 750 mW
Time delay before availability	t _v	10 s (rms filter is calculated initially with measurement data before they are available at the output)
Surge protection		up to 2 kV
Output 1		
Output type		analog output, current output of the vibration variable
Output current		4 ... 20 mA
Load resistor		≤ 500 Ω
Standard conformity		
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
Vibration evaluation		DIN ISO 10816/20816
Approvals and certificates		
UL approval		
Ordinary Location		E468231 cULus Listed, Class III Power Source and limited energy , if UL marking is marked on the product. For use in NFPA 70 Applications only. adapters providing field wiring on request
Maximum permissible ambient temperature		max. 60 °C (max. 140 °F)
Ambient conditions		
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)
Mechanical specifications		
Connection type		plug
Housing material		Stainless steel 1.4305 / AISI 303
Degree of protection		IP66 / IP67 only in connected state
Connector		
Threading		M12
Number of pins		4
Mass		approx. 200 g
Dimensions		
Length		82.35 mm
Diameter		31 mm

Connection



Connection Assignment



Accessories

Accessories for this product can be found on the internet at 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.

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.