

Vibration sensor

VIM62PL-E0G10-0ME-I420K24



- 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

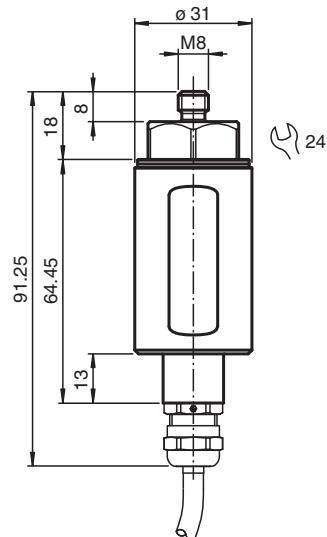
Vibration sensor with analog current output and increased temperature resistance



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

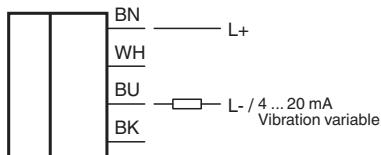
General specifications

Type	Vibration sensor
Measuring technology	MEMS
Series	Performance Line

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	$\leq 500 \Omega$	
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	cable	
Housing material	Stainless steel 1.4305 / AISI 303	
Degree of protection	IP66 / IP67 only in connected state	
Cable		
Number of cores	4	
Core cross section	0.34 mm ²	
Length	L	2 m
Tension force	max. 80 N (tensile loading directly at the cable, not at the metal conduit if attached)	
Mass	425 g	
Dimensions		
Length	91.25 mm	
Diameter	31 mm	

Connection



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.