

Vibration sensor

VIM62PL-E0T16-0ME-I420V14

- Extended temperature range
- Screw-in thread for simple installation
- Simple electrical commissioning
- Rugged stainless steel housing
- Vibration velocity in mm/s (rms) acc. to DIN ISO 10816/20816
- Detection of low frequency vibrations
- Additional output with measured temperature value

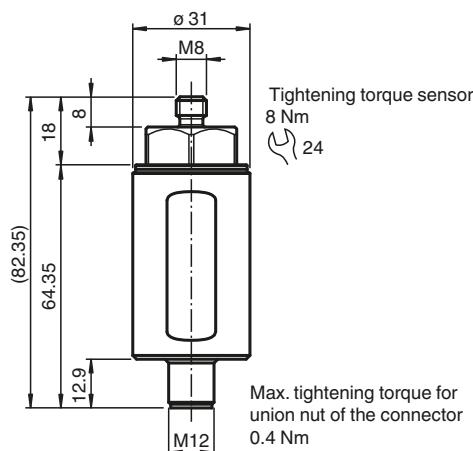
Vibration sensor with analog current output and increased temperature resistance



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. Furthermore, the vibration sensor has an additional output for the output of the measured temperature value. 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 |

Technical Data

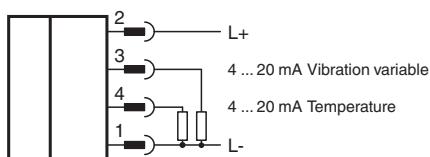
| Series | | Performance Line |
|---|----------------|---|
| Measured variable | | Vibration velocity Temperature |
| Measurement range | | |
| Vibration velocity | v- rms | 0 ... 16 mm/s |
| Temperature | | -40 ... 125 °C (-40 ... 257 °F) |
| Measurement accuracy | | ± 0.1 mm/s (calibration point: 90% 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 | | 1 ... 1000 Hz |
| Averaging time | | for v-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. 50 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 |
| Output 2 | | |
| Output type | | analog output, current output of the temperature |
| 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 |

Technical Data

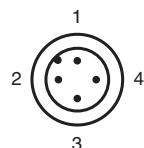
Diameter

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.