

Vibration sensor

VIM62PP-E1T16-0NE-I420K24



- 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
- Suitable for use in hazardous area up to Zone 1/21 with type of protection explosionproof enclosure

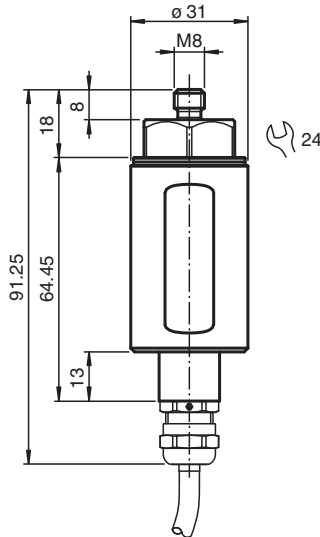
Vibration sensor with analog current output, increased temperature resistance, suitable up to Zone 1/21 with type of protection explosionproof enclosure



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. 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. 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 |
|------|------------------|

Technical Data

| | | |
|-----------------------------------|----------------|--|
| Measuring technology | | MEMS |
| Series | | Performance Plus Line |
| Measured variable | | Vibration velocity Temperature |
| 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 |
| 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 |
| 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 | | |
| 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 |
| 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 | | 82.35 mm |
| Diameter | | 31 mm |

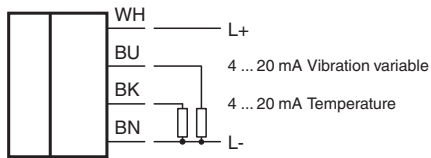
Technical Data

General information

Use in the hazardous area

see instruction manuals
Only use accessories specified by the manufacturer.

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.