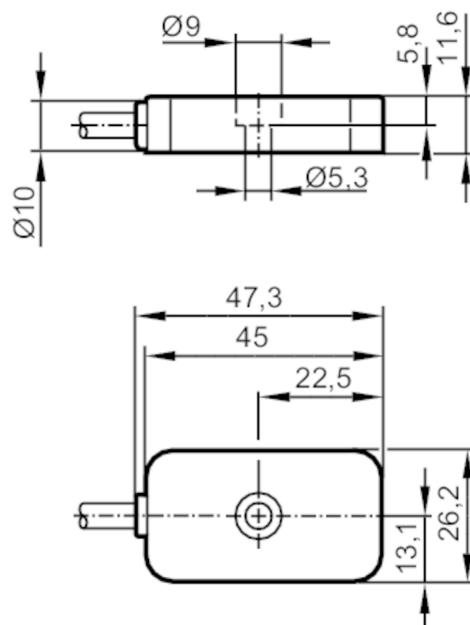




## Acceleration sensor

VIBRATION SENSOR



### Product characteristics

|                              |      |            |
|------------------------------|------|------------|
| Measuring range of vibration | [g]  | -40...40   |
| Frequency range              | [Hz] | 0...4500   |
| Measuring principle          |      | capacitive |

### Application

|                 |                                        |
|-----------------|----------------------------------------|
| Special feature | Screened cable; Drag chain suitability |
|-----------------|----------------------------------------|

### Electrical data

|                             |               |                                      |
|-----------------------------|---------------|--------------------------------------|
| Bias voltage DC             | [V]           | 11...16                              |
| Operating current           | [mA]          | 4...6                                |
| Min. insulation resistance  | [M $\Omega$ ] | 100; (500 V DC)                      |
| Protection class            |               | III                                  |
| Reverse polarity protection |               | yes                                  |
| Sensor type                 |               | microelectromechanical system (MEMS) |

### Measuring/setting range

|                              |      |            |
|------------------------------|------|------------|
| Measuring range of vibration | [g]  | -40...40   |
| Frequency range              | [Hz] | 0...4500   |
| Measuring principle          |      | capacitive |
| Max. transverse sensitivity  | [%]  | 5          |
| Number of measurement axes   |      | 3          |

### Accuracy / deviations

|                       |  |                                          |
|-----------------------|--|------------------------------------------|
| Accuracy              |  | 0...3 kHz: +/- 10 %<br>3...4.5 kHz: 3 dB |
| Measuring sensitivity |  | 100 mV/g                                 |
| Linearity deviation   |  | 2                                        |



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VIBRATION SENSOR

|                                                                                                                               |                                       |                                       |
|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------|
| [% of the span]                                                                                                               |                                       |                                       |
| <b>Operating conditions</b>                                                                                                   |                                       |                                       |
| Ambient temperature                                                                                                           | [°C]                                  | -30...85                              |
| Storage temperature                                                                                                           | [°C]                                  | -30...100                             |
| Protection                                                                                                                    |                                       | IP 67; IP 68; IP 69K                  |
| <b>Tests / approvals</b>                                                                                                      |                                       |                                       |
| EMC                                                                                                                           | DIN EN 61000-6-2                      |                                       |
|                                                                                                                               | DIN EN 61000-6-3                      |                                       |
| Shock resistance                                                                                                              | DIN EN 60068-2-27                     | 50 g 11 ms                            |
| Vibration resistance                                                                                                          | DIN EN 60068-2-6                      | 20 g / 10...3000 Hz                   |
| MTTF                                                                                                                          | [years]                               | 529                                   |
| UL approval                                                                                                                   | Ta                                    | < 70 °C                               |
|                                                                                                                               | Enclosure type                        | Type 1                                |
|                                                                                                                               | power supply                          | Limited Voltage/Current               |
|                                                                                                                               | UL Approval no.                       | L003                                  |
|                                                                                                                               | File number UL                        | E251902                               |
| <b>Mechanical data</b>                                                                                                        |                                       |                                       |
| Weight                                                                                                                        | [g]                                   | 187.2                                 |
| Type of mounting                                                                                                              |                                       | mounting screw                        |
| Dimensions                                                                                                                    | [mm]                                  | 26.2 x 47.3 x 11.6                    |
| Materials                                                                                                                     |                                       | housing: stainless steel (444/1.4404) |
| Tightening torque                                                                                                             | [Nm]                                  | 3.5                                   |
| Drag chain suitability                                                                                                        |                                       | yes                                   |
| Drag chain suitability                                                                                                        | bending radius for flexible use       | min. 10 x cable diameter              |
|                                                                                                                               | bending radius for fixed installation | min. 4 x cable diameter               |
| <b>Accessories</b>                                                                                                            |                                       |                                       |
| Items supplied                                                                                                                |                                       | socket head screw: 1 x M5 x 12        |
| <b>Remarks</b>                                                                                                                |                                       |                                       |
| Pack quantity                                                                                                                 |                                       | 1 pcs.                                |
| <b>Electrical connection</b>                                                                                                  |                                       |                                       |
| Cable: 3 m, PUR, Ø 4.9 mm, shielded; Maximum cable length: 250 m; screen (connected to the housing); 5 x 0.14 mm <sup>2</sup> |                                       |                                       |
| brown IEPE X                                                                                                                  |                                       |                                       |
| white IEPE Z                                                                                                                  |                                       |                                       |
| blue GND                                                                                                                      |                                       |                                       |
| black self-test                                                                                                               |                                       |                                       |
| grey IEPE Y                                                                                                                   |                                       |                                       |
| yellow screen                                                                                                                 |                                       |                                       |