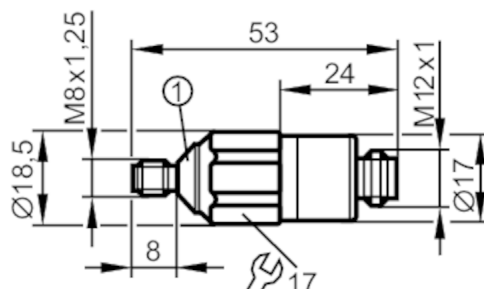


# VSA201



## Accelerometer

VIBRATION SENSOR



1 conical angle = 90°



### Product characteristics

|                              |      |            |
|------------------------------|------|------------|
| Measuring range of vibration | [g]  | -250...250 |
| Frequency range              | [Hz] | 1...6000   |
| Measuring principle          |      | capacitive |

### Application

|             |                                                       |
|-------------|-------------------------------------------------------|
| Design      | for connection to external diagnostic electronics VSE |
| Application | vibration detection                                   |

### Electrical data

|                             |      |                                      |
|-----------------------------|------|--------------------------------------|
| Operating voltage           | [V]  | 7.2...10.8 DC                        |
| Current consumption         | [mA] | < 15                                 |
| Min. insulation resistance  | [MΩ] | 100; (500 V DC)                      |
| Protection class            |      | III                                  |
| Reverse polarity protection |      | yes                                  |
| Type of sensor              |      | Microelectromechanical system (MEMS) |

### Outputs

|                       |      |        |
|-----------------------|------|--------|
| Analog current output | [mA] | 0...10 |
| Max. load             | [Ω]  | 300    |

### Measuring/setting range

|                              |        |            |
|------------------------------|--------|------------|
| Measuring range of vibration | [g]    | -250...250 |
| Frequency range              | [Hz]   | 1...6000   |
| Measuring principle          |        | capacitive |
| Sensitivity                  | [μA/g] | 14.2       |
| Number of measurement axes   |        | 1          |

### Accuracy / deviations

|                     |  |     |
|---------------------|--|-----|
| Linearity deviation |  | 5 % |
|---------------------|--|-----|

### Operating conditions

|                             |      |                         |
|-----------------------------|------|-------------------------|
| Ambient temperature         | [°C] | -30...125               |
| Note on ambient temperature |      | UL application: < 70 °C |
| Storage temperature         | [°C] | -30...125               |
| Protection                  |      | IP 67; IP 68; IP 69K    |

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## Accelerometer

VIBRATION SENSOR

| Tests / approvals                                                                   |                   |                                          |
|-------------------------------------------------------------------------------------|-------------------|------------------------------------------|
| EMC                                                                                 | EN 61000-6-2      |                                          |
|                                                                                     | EN 61000-6-3      |                                          |
| Shock resistance                                                                    | DIN EN 60068-2-27 | 50 g 11 ms                               |
|                                                                                     |                   | 500 g 1 ms                               |
| Vibration resistance                                                                | DIN EN 60068-2-6  | 20 g / 10 ... 2000 Hz                    |
| MTTF                                                                                | [years]           | 3094                                     |
| Mechanical data                                                                     |                   |                                          |
| Weight                                                                              | [g]               | 49                                       |
| Type of mounting                                                                    |                   | M8 x 1,25                                |
| Material                                                                            |                   | housing: stainless steel (1.4404 / 316L) |
| Tightening torque                                                                   | [Nm]              | 8                                        |
| Accessories                                                                         |                   |                                          |
| Items supplied                                                                      |                   | washer, conical                          |
| Remarks                                                                             |                   |                                          |
| Pack quantity                                                                       |                   | 1 pcs.                                   |
| Electrical connection                                                               |                   |                                          |
| Connector: 1 x M12; coding: A; Maximum cable length: 250 m                          |                   |                                          |
|  |                   |                                          |
| 1                                                                                   | L+ (+9 V)         |                                          |
| 2                                                                                   | I out             |                                          |
| 3                                                                                   | GND               |                                          |
| 4                                                                                   | Test              |                                          |