

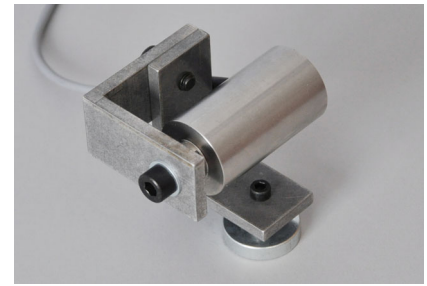
## Sensing Vibrations

# Vibration Velocity Sensors PMG 81 / 85



### Advantages

- High sensitivity
- Large temperature range
- Generation of signals without auxiliary voltage
- Rugged



Adjustable angle mount

### Applications

- Sensing vibration velocity
- Capturing mechanical vibrations on machines and buildings
- Connecting to vibration measuring and monitoring devices

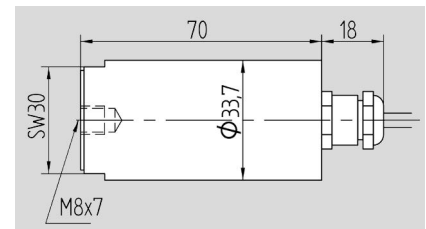
### Options

- Various connectors
- Protective hose
- Retaining Magnet
- Probe

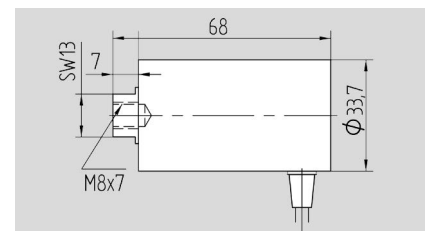
### Description

The vibration sensors PMG 81 / PMG 85 are used for converting mechanical vibrations into an analogue alternating electric voltage which is directly proportional to the vibration velocity.

They differ with respect to their frequency range, their design and their field of application. Their rugged design makes the sensors suitable both for mobile and fixed installations for continuous vibration monitoring.



PMG 81 EA / 81 VT / 81 HT / 85 EA



PMG 81 N / 85 H

## Technical data

| Sensor                      | PMG 81 N         | PMG 81 EA                       | PMG 81 HT        |
|-----------------------------|------------------|---------------------------------|------------------|
| Input                       |                  | Vibration velocity              |                  |
| Orientation                 |                  | any spatial orientation         |                  |
| Measuring direction         |                  | in direction of sensor axis     |                  |
| Reference system            |                  | absolute - vibration transducer |                  |
| Mounting                    |                  | M8 threaded hole                |                  |
| Output                      |                  | alternating electrical voltage  |                  |
| Weight                      | approx. 260 g    | approx. 330 g                   | approx. 330 g    |
| Case                        |                  | Stainless steel, non-magnetic   |                  |
| Operating temperature       | - 40 ...+ 120 °C | - 40 ...+ 120 °C                | - 40 ...+ 200 °C |
| Sensitivity <sup>1)</sup>   |                  | 42.4 mV / (mm/sec.) +/- 2 %     |                  |
| Internal resistance         |                  | approx. 3 kOhms                 |                  |
| Operating frequency         |                  | 10 ... 2,000 Hz                 |                  |
| Displacement amplitude      |                  | max. 1 mm                       |                  |
| Acceleration                |                  | max. 20 g                       |                  |
| Directional sensitivity     |                  | better than 1: 25               |                  |
| Natural frequency           |                  | approx. 15 Hz                   |                  |
| Damping of measuring system |                  | 0,7                             |                  |

| Sensor                      | PMG 85 H      | PMG 85 EA                        | PMG 81 VT     |
|-----------------------------|---------------|----------------------------------|---------------|
| Input                       |               | Vibration velocity               |               |
| Orientation                 |               | horizontal direction +/- 10 deg. |               |
| Measuring direction         |               | in direction of sensor axis      |               |
| Reference system            |               | absolute - vibration transducer  |               |
| Mounting                    |               | M8 threaded hole                 |               |
| Output                      |               | alternating electrical voltage   |               |
| Weight                      | approx. 260 g | approx. 330 g                    | approx. 330 g |
| Case                        |               | Stainless steel, non-magnetic    |               |
| Operating temperature       |               | - 40 ...+ 120 °C                 |               |
| Sensitivity <sup>1)</sup>   |               | 42.4 mV/(mm/sec.) +/- 2 %        |               |
| Internal resistance         |               | approx. 3 kOhms                  |               |
| Operating frequency         |               | 2.5 ... 500 Hz                   |               |
| Displacement amplitude      |               | max. 1 mm                        |               |
| Acceleration                |               | max. 20 g                        |               |
| Directional sensitivity     |               | better than 1: 25                |               |
| Natural frequency           |               | approx. 4 Hz                     |               |
| Damping of measuring system |               | 0,7                              |               |

<sup>1)</sup> at 80 Hz and 50 kOhms termination resistor

**All information without obligation, subject to change without notice!**