

Sensing Vibrations

Vibration Velocity Sensors PMG 81 / 85



Advantages

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

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

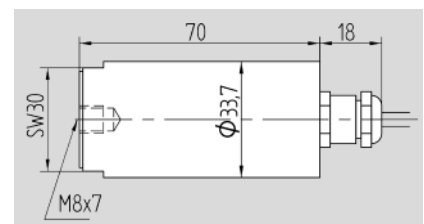
Description

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.

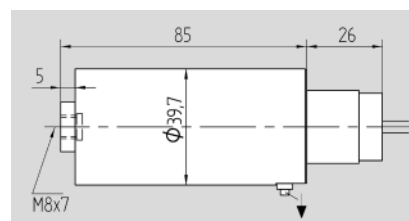
They differ with respect to their frequency range, their design and their field of application (e.g. in Ex-zones). Their rugged design makes the sensors suitable both for mobile and fixed installations for continuous vibration monitoring.



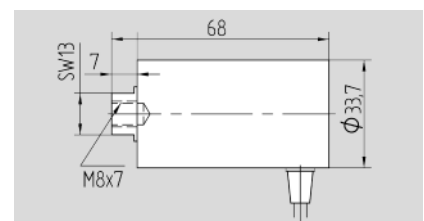
Adjustable angle mount



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



PMG 81 Ex(d) / Ex(d)VT



PMG 81 N / 85 H

Technical data

Sensor	PMG 81 N	PMG 81 EA	PMG 81 HT	PMG 81 Ex(d)
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	approx. 450 g
Case	Stainless steel, non-magnetic			
Operating temperature	- 40 ...+ 120 °C	- 40 ...+ 120 °C	- 40 ...+ 200 °C	- 40 ...+ 120 °C
Sensitivity ¹⁾	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	PMG 81 Ex(d)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	approx. 450 g
Case	Stainless steel, non-magnetic			
Operating temperature	- 40 ...+ 120 °C			
Sensitivity ¹⁾	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			

¹⁾ at 80 Hz and 50 kOhms termination resistor

All information without obligation, subject to change without notice!