

Europe Vibration Sensors - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

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Report description:

The Europe Vibration Sensors Market size is estimated at USD 4.51 billion in 2025, and is expected to reach USD 6.17 billion by 2030, at a CAGR of 6.49% during the forecast period (2025-2030).

Key Highlights

The Europe Vibration Sensors Market is experiencing significant growth, driven by industrialization and advancements in predictive maintenance technologies. The shift towards predictive maintenance in industries such as food and beverage, energy, and chemicals is crucial, as maintenance costs can exceed 25% of product value in continuous output-producing sectors.
Further, the growing adoption of piezoelectric ceramics for manufacturing vibration sensors enhances their efficiency in converting mechanical stress into electrical signals, which is vital for monitoring machine conditions. In an increasingly competitive industrial market, new features are required to produce more smart machines. Monitoring a machine's condition has become a fundamental need, which is expected to boost vibration sensors' demand over the forecast period.

- There is an increasing need for high-performing operational products due to the growing significance of industrial hubs worldwide. This has increased the demand for vibration sensors, which are integral to defining the product's efficiency. Further, the customization in the vibration sensor is growing with respect to its size, load capacity, and frequency range. They are designed to pinpoint engine problems and eliminate unnecessary engine removals quickly.

- There has been an increase in demand for various sensors to perform many functions as vehicles have become more complex over the last five years. Continued growth is anticipated for this market, propelled by enhanced demand for more significant driver information, tighter safety controls, and more sophisticated engine management systems to improve fuel economy and reduce emissions. The Europe Vibration Sensors market comprises mostly large global corporations with few small market participants.

- However, a major restraint in the market is the technical challenge posed by heavy signal loads, which can hinder the response

time in analyzing vibrations. This issue affects the reliability and effectiveness of vibration sensors in real-time monitoring applications.

Europe Vibration Sensors Market Trends

Aerospace & Defense End User to Hold Significant Share

- Increased situational awareness to drive operations, cost-effective maintenance, and increased asset utilization drive aircraft health monitoring systems demand. The passenger traffic in Europe and other major aviation markets, such as the United Kingdom and Germany, has witnessed growth in the number of passengers and aircraft movements, which is expected to drive the market during the forecast period.

- Turbine engine failures are the primary cause of mechanical failures, increasing costs; hence, users increasingly turn to prognostic health management (PHM) systems to prevent these losses and reduce maintenance costs. As vibration is the most common health monitoring parameter in the aerospace engine industry, the development of PHM systems is likely to directly impact the growth of vibration sensors.

- Moreover, during satellite launch and deployment, these sensors are employed to monitor the mechanical stress experienced by the satellite, which helps ensure that sensitive instruments and components remain operational. The increasing launches of satellites in the region are expected to boost the growth of vibration sensors.

- Companies like Meggitt Defense Systems are developing accelerometers capable of operating under extreme temperatures (up to 1500F or 815C) for applications in aerospace engines.

- In terms of new innovations, for instance, in July 2023, Airbus and Thales Alenia Space successfully launched the Syracuse 4B military communications satellite, the second space segment of Syracuse IV, which will provide military communications for France alongside Syracuse 4A, launched in 2021.

Germany Expected to Hold the Major Share

- Germany is the third-highest car production in the world and fourth-highest total motor vehicle production. It is recognized over the world for its outstanding automotive industry and excellence in engineering as its cars are highly cherished innovation, reliability, safety, and design due to world-class R&D infrastructure, smart manufacturing facilities, and qualified workforce that create an internationally peerless automotive environment. ?

- Electric vehicles and hybrid vehicles are expected to lead the growth of the automotive industry in the country, with companies focusing on electric vehicle technologies. The federal government is also supporting the adoption of plug-in electric vehicles in the country. ?

- For instance, in the 2030 Climate Action Programme, the government aims to have up to 10 million EVs and 1 million charging stations on German roads by 2030. In order to achieve this ambitious objective, several EV incentives have been extended or added. ?

- Additionally, the recently announced post-COVID-19 stimulus package of EUR 130 billion is set to allocate significant funding into infrastructure development, tax cuts, and further subsidies to invigorate Germany's EV market.?

- The companies in the aerospace sector also utilize vibration sensors for measuring the changes within acceleration, pressure, temperature, and force otherwise strain by changing to an electrical charge. Thus, the growth of the sector is also positively impacting the growth of the studied market.?

- Airbus, one of the leading aerospace companies in the world, has recently unveiled three concepts for the world's first zero-emission commercial aircraft, which is expected to be in service by 2035. Each concept represents a different approach to

achieve zero-emission flight, explore various technology pathways and aerodynamic configurations in order to support the company's ambition to lead the way in the decarbonization of the entire aviation industry.?

Europe Vibration Sensors Industry Overview

The European vibration sensor market is highly fragmented. The presence of global sensor manufacturers with established brand identities in the market is expected to profoundly influence the intensity of competitive rivalry as new entrants face challenges in reaching out to consumers. Brand identity plays a strong role in determining buyer behavior. Therefore, well-known companies have a considerable advantage over other players in the market. Some of the key players are Texas Instruments, Honeywell, and Emerson.

The Europe vibration sensors market is poised for significant growth due to technological advancements, increased safety requirements, and a shift towards predictive maintenance across various industries. The aerospace sector remains a key contributor to this growth, alongside other industrial applications. As manufacturers continue to innovate and adapt their products to meet evolving demands, the market will likely see sustained expansion in the coming years.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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