

## **Magnetic Sensors - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)**

Market Report | 2025-04-28 | 100 pages | Mordor Intelligence

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### **Report description:**

The Magnetic Sensors Market size is estimated at USD 3.79 billion in 2025, and is expected to reach USD 5.54 billion by 2030, at a CAGR of 7.91% during the forecast period (2025-2030).

The high usage of magnetic sensors in new navigation devices, presence detection (building automation-related applications), medical areas, and the automotive sector are leading to a paradigm shift in the magnetic sensors market around the world.

### **Key Highlights**

- The increase in demand for IIoT and the production of consumer electronics, electric and hybrid vehicles, and high-quality sensing devices, globally, are influencing the adoption of magnetic sensors across several end-user industries. This is expected to drive the growth of magnetic sensors during the forecast period.
- An increase in the adoption of robotics for factory automation, owing to the Industry 4.0 policies, is driving the need for magnetic sensors for various safety applications in the global market. The development in the services sector in the country and high growth rate of data center and cloud providers are further augmenting the demand for these sensors to be deployed in the power distribution unit (PDU), which forms a crucial part in data centers.
- However, the recent outbreak of COVID-19 is influencing both the demand and production of the semiconductor industry. Asia-Pacific holds the major share in the semiconductor and electronics industry, as countries, such as China, Taiwan, and South Korea, are home to a significant number of pureplay foundries in the world.

### **Magnetic Sensor Market Trends**

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## Automotive Industry to Hold Largest Share of the Market

- In the case of automotive applications, GMR and TMR sensors have demonstrated less power consumption than mW and  $\mu$ W during continuous operation. They are also easily accommodated in package sizes less than their counterparts. Thus, they are finding increasing deployment in auto parts.
- The demand for magnetic sensors is anticipated to increase in the automotive industry. Sensing devices are increasingly being used in this industry to improve vehicle convenience and fuel efficiency. Also, mandatory regulations by government bodies, such as the installation of safety equipment and sensing elements in automobiles, are estimated to create significant opportunities for the growth of the market studied.
- Magnetic sensor vendors are focusing on providing efficient devices, which can serve an extensive range of automotive applications. The increase in demand and penetration of electric vehicles and hybrid electric vehicles and the use of GPS in automobiles may also fuel the demand for magnetic sensors from the automotive industry.
- Moreover, hall and GMR-based magnetic sensors are increasingly being used for motorcycles, three-wheel, and all-terrain vehicle applications. These sensors are being developed for switching applications in these vehicles, as well as the position and speed measurement for lightweight construction and reduced battery operation space, weight, and power consumption in electric vehicles.

## Asia-Pacific to Hold the Largest Share of the Market Studied

- China is one of the most promising automotive and consumer electronics manufacturing nation, globally. Due to increased use of applications, such as anti-braking system (ABS) and anti-locking system, where magnetic sensors are widely utilized, the automobile industry holds an important position in the market in this region.
- Moreover, Japan is a supplier of industrial robots and their components, such as reducers, servo motors, and various sensors, to the world. The developments in industrial robots, of late, involves precision in positioning accuracy. It further requires accurate detection of joint angles, where magnetic sensors play a key role.
- The magnetic sensor market in India is mainly growing due to the proliferation of smartphones, as smartphones use hall-effect sensors to support compass applications. However, one of the factors restraining the market currently is the spread of coronavirus, as several states of India have issued lockdown orders to curb the spread of coronavirus.

## Magnetic Sensor Industry Overview

The magnetic sensors market is highly competitive. The improved manufacturing practices and adoption of TMR technology are poised to offer substantial growth opportunities to sensor fabricators and associated industry participants. The market is identified to be highly technology intensive. Thus, the players in the market are integrating advanced technological products, like xMR, into their product portfolios. These companies include AKM, Infineon Technologies, Allegro Microsystems, Melexis, TDK, Diodes, and Honeywell.

- November 2019 - Allegro MicroSystems launched the ATS17051, one of the first gear tooth sensor ICs designed to provide incremental position for electric vehicle traction motors operating up to 30k RPM. The device addresses the engineers' traction motor challenges, which include vibration at startup and running mode, high rotational speed, mechanical space constraints, high operating temperatures, and ISO 26262 safety requirements.
- June 2019 - Infineon Technologies AG expanded its sensor portfolio by a new AMR-based angle sensor, which is aimed at

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providing high accuracy in low magnetic fields. The XENSIV TLE109A16 product line is designed to address the need for very precise, fast, and cost-efficient angle measurement at one of the high functional safety levels in automotive and industrial applications.

Additional Benefits:

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

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