

Global Sensors and Actuators - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

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Report description:

The Global Sensors and Actuators Market is expected to register a CAGR of 8.24% during the forecast period.

Key Highlights

- The factory automation industry has been revolutionized by combining the digital and physical aspects of manufacturing, including sensors and actuators, which aim to deliver optimum performance. Further, the focus on achieving zero waste production and shorter time to market has augmented the sensors and actuators market growth.
- The rise in automation of production systems in both discrete and process industries has increased the demand for components capable of providing critical data related to the production process. These sensors facilitate process control in factories by detecting the presence and position of metal objects.
- Electric actuators, a standard option for various applications across industries, including IoT, convert energy into mechanical torque. Electric energy is considered less noisy in operation than other actuator types. Electric actuators don't require fluid to run, and they offer high-control precision positioning owing to programmability. These actuators are poised to witness increasing demand in the near future due to their advantages over pneumatic actuators.
- Manual setup and adjustment are required for pneumatic actuators, and it is relatively difficult to get precise feedback on their speed and position. In contrast, the encoder is embedded into the electric actuator enabling more precise movement.
- Miniaturization has been driving the sensors and actuators market, supported by the development of new sensor and actuator modalities by leveraging the available semiconductor expertise.

Sensors and Actuators Market Trends

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Emergence of Automation and Industry 4.0

- Sensors and actuators are an integral part of the industrial automation system as they help achieve precision and efficiency. The need for motion control technologies using sensors and actuators plays a significant role in the factory and industrial automation systems.
- SCADA (supervisory control and data acquisition) components include sensors and actuators. SCADA systems include components deployed in the field to collect real-time data and related systems to allow data collection and enhance industrial automation.
- Servo motors have become an essential component for realizing factory automation where the servo motor itself functions as a sensor and the traditional high-speed and high-precision performance.
- Moreover, industrial robots have been increasingly utilized in industrial automation. Sensors and actuators are one of the key components of these robots. China, the United States, and Japan are at the forefront of industrial robots adoption. In response to the growing demand, market players also introduce robot-specific products.
- For instance, in April 2022, Kollmorgen announced a new TBM2G series of frameless servo motors having features that simplify the design of collaborative, industrial, aerospace and defense, and other robots while offering better performance in a lighter and more compact package.

Asia-Pacific is Expected to Grow with the Highest CAGR

- China's political push for industrial modernization creates a huge demand for smart manufacturing products, like smart sensors, wireless sensor networks, improved actuators, etc. International suppliers of sensors and actuator technologies are currently focusing on China to cater to growing demand from the country's manufacturing industry. China's industry has an enormous demand for high-end machine tools, smart sensors, and other technologies.
- India is fast accelerating the deployment of several emerging sensors and IoT technologies. The country provides an opportunity to deploy these technologies at a larger scale to bring economies of scale. Advanced IoT-based opportunities and ecosystems are developing consistently. The Indian Government is taking steps to push the adoption of emerging technologies with innovative initiatives, including Make in India, Digital India, Smart Cities, etc. These initiatives are expected to further boost the sensors and actuators market in the country.
- With the COVID-19 impact, in the long-term, it is expected that manufacturers operating in the Asia Pacific adopt Industry 4.0 procedures to become more agile and limit production and distribution shortfalls should an event similar to this ever happen again.
- The Asia-Pacific region has long been a major manufacturing base, and the industry continues to be a strong adopter of the Internet of Things (IoT). According to Microsoft IoT Signals Report published in February 2022, IoT is currently much more widely adopted across industry verticals, and across the world, with smart spaces, a significant focus for many markets in the Asia Pacific region, becoming one of the leading application areas.

Sensors and Actuators Industry Overview

The global sensors and actuators market is fragmented as numerous international companies, such as TE Connectivity, Texas Instruments Inc., Honeywell International Inc., Emerson Electric Company, and SMC Corporation, are operating.

- In September 2021, TE Connectivity, a leading company in connectivity and sensors, acquired ERNI Group AG (ERNI), a leading

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player in electronic connectivity for factory automation and automotive. The acquisition of ERNI complements TE Connectivity's wide connectivity product portfolio, specifically in high-speed and fine-pitch connectors for automotive, factory automation, and other industrial applications.

- In August 2021, Parker Hannifin Corporation, a leading market player in motion and control technologies, announced the acquisition of Meggitt PLC, a company operating in aerospace and defense motion and control technologies. In Coventry, United Kingdom, Meggitt PLC had approximately USD 2.3 billion in annual revenue in annual revenue in 2020.

Additional Benefits:

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

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