

## **Capacitive Sensors Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)**

Market Report | 2023-01-23 | 130 pages | Mordor Intelligence

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### **Report description:**

The capacitive sensors market was valued at USD 26.68 billion in 2021, and it is expected to reach USD 36.50 billion by 2027, registering a CAGR of 5.24% from 2022 to 2027. Capacitive sensing technology is witnessing swift developments to meet the advanced user interface requirements of modern applications. The increasing preference for capacitive sensors, due to their exceptional durability, superior sensitivity, and higher measurement accuracy than resistive or inductive sensors, is one of the primary factors driving the growth of the market studied.

#### Key Highlights

The rise in automation of complex production systems 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.

The implementation of touchscreen display systems as human-machine interaction by end-users, such as consumer, industrial, automotive, and medical, is also anticipated to drive the demand for capacitive sensors. Additionally, the increasing factory automation of production processes is expected to spur the demand for capacitive sensors in the healthcare and automotive industries.

The outlook of the market studied is positive. It is expected to grow significantly due to the emergence of enhanced applications in high-growth sectors, such as healthcare and machine handling. These sensors offer better price-performance than other sensors by relying on economies of scale advantages. The growth of capacitive ceramic pressure sensors has been driven by the development of medical, industrial, and automotive applications, majorly in the oil and gas industries, marine industries, and chemical industries.

The spread of advanced electronic control systems has provided sensor users with advances in sensor accuracy, reliability, response time, robustness, miniaturization, communications capability, and efficiency. This has fueled research and development

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in the sensors industry, which creates opportunities for technology advancements in the industrial sector. Capacitive ceramic pressure sensor manufacturers have significantly improved measurement technology for industries.

The growth of factory automation in Europe, the Middle East, and the growing adoption of smart automobiles is driving the capacitive sensor market in these regions. These regions witness high activities of mergers and partnerships. For instance, Pewatron AG merged with Angst+Pfister Group to form a new brand, Angst+Pfister Sensors and Power, to expand its line of sensors and other power electronics-related components in March 2021.

However, issues related to the supply shortage of indium tin oxide are estimated to challenge the growth of the market studied during the forecast period.

## Capacitive Sensors Market Trends

### The Automotive Industry to Account for a Significant Share

Human-machine interface technologies have witnessed a paradigm shift, owing to the increasing information interchange between social and various systems in cars. This has resulted in a surge in demand for capacitive sensors, as they are deployed for the implementation of human-machine interface (HMI) applications, such as indoor illumination control, navigation control, etc.

For instance, the Japanese government has proposed an ambitious strategy to be implemented during the Tokyo 2020 Summer Games - the introduction of a self-driving vehicle force to be used as Olympic transport.

The automated vehicle will be nested with a position sensor, humidity sensor, temperature sensor, and capacitive sensor, among others. These sensors are used in the infotainment system, keyless entry system, 3D gesture, interior lighting control, etc. With the increase in global automotive penetration, the demand for these sensors, including the capacitive sensor, will increase in the forecast period.

For example, in the parking assistance system, these sensors can detect the presence of objects in the pathway of the reversing vehicle and can raise the alarm to warn the driver. These sensors also prevent collision with pedestrians while parking, and the demand are expected to be continuing during the forecast period.

The global pandemic has influenced the automotive and manufacturing industries significantly over the period of last year. The manufacturing industry shrunk significantly due to the pandemic as the industry faced unprecedented challenges in the supply chain and procurement of raw materials, which resulted in significant losses for manufacturers. Few industries, such as food & beverage and pharmaceutical, were deemed essential by governments. However, a prominent share of the manufacturers faced shut down for weeks, and currently, after the re-opening, are facing declined demands, investments pertaining to workforce safety, supply chain challenges, and due to reduced demands, production plants are either running at half the capacity or shutdown.

### Asia-Pacific to Grow Significantly During the Forecast Period

The established electronics industry in Asia-Pacific and the adoption of innovative technologies have provided the regional organizations a competitive edge in the market studied. Moreover, the region enjoys the presence of several major capacitive sensor vendors, such as Omron Corporation (Japan) and Fujitsu Ltd (Japan), among others.

China's Ministry of Industry and Information Technology, the National Development and Reform Commission, the Ministry of Science and Technology, and other 12 agencies released "The 14th Five-Year Development Plan for the Robotics Industry" in December 2021.

This is China's second five-year growth plan for the robotics industry, and it serves a critical role in facilitating and encouraging

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the industry's high-quality development. As robotics involve capacitive sensors in touch, proximity detection, and so on, the sector's growth as a whole is set to boost the market growth rate.

Similarly, In 2021, South Korea announced ambitious plans to spend almost USD 450 billion over the next decade to establish the world's largest chipmaking base, joining China and the United States in a worldwide contest to control the critical technology. Moreover, Japanese researchers are also exploring new applications apart from the traditional use of touchpads and tablets. For instance, research is being carried out to integrate capacitive touch sensors with the 1-micron size of nylon fibers for patient monitoring in the healthcare sector.

### Capacitive Sensors Market Competitor Analysis

The major players in the capacitive sensors market are Cypress Semiconductor, STMicroelectronics, NXP Semiconductors, Analog Devices, 3M Company, Omron Corporation, and Siemens AG, among others. The market is fragmented due to the presence of several players that continuously strive to gain a competitive edge in the market. Therefore, the market concentration will be low.

February 2022 - Sony announced the latest PS VR2 with an updated and final design image of PlayStation VR2 Sense controller that uses a capacitive sensor and finger touch detection IR LED for position tracking.

November 2021 - IP Group Inc. and CoMotion partnered at the University of Washington to launch a nanotechnology startup Somalytics Inc., which is aimed to bring a better sense to the digital world. The company's main emphasis is on creating and mass-producing a paper carbon nanotube capacitive sensor that is small, flexible, and very sensitive to the human body, allowing for novel consumer and industrial applications.

### Additional Benefits:

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

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