

# Pressure Sensor Market - Forecasts from 2021 to 2026

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## Abstracts

The pressure sensor market is estimated to grow at a CAGR of 6.35% to reach US\$4.896 billion in 2026 from US\$3.183 billion in 2019. Pressure sensors are devices equipped with pressure-sensitive elements to measure physical quantity such as length, force, temperature, and pressure and converted into an electrical or optical signal. The pressure sensor determines the actual pressure applied to the sensor and some parts to convert the value to an electronic signal as output data. The use of the pressure sensors is depending on the material and application for which the pressure needs to be measured. It is widely used to monitor relative systems pressure in process applications such as hydraulics and pneumatics. The global pressure sensor market is highly competitive on account of its wide consumer base and the presence of well-diversified international, local and regional players. The rising requirement of existing technology and the further investment in the technological upgrades is leading to the increase in the market share thus, attracting more players into the market. Intense competition in the pressure sensor market is paving the way for the strategies such as mergers and acquisitions and others to enhance their market share. However, pricing pressure on companies due to intense competition and huge expenditure on R&D activities will restrain the demand for pressure sensors during the forecast period. Market players included in the report include STMicroelectronics, TE Connectivity, General Electric, Emerson Electric Co., Robert Bosch GmbH, ABB, Denso Corporation, NXP Semiconductors, Siemens AG, and Omron Corporation. Bosch Sensortec announced the BMP390, a barometric pressure sensor for altitude tracking in smartphones and wearable and hearable devices in April 2020. It can support GPS applications for outdoor navigation and calorie expenditure estimation tasks. It is available for hearable manufacturers, wearable, and high-volume smartphones.

Market Drivers:

Factors driving the growth of the pressure sensor market include a rise in applications

especially in the automotive industry, increasing demand for the pressure sensor in consumer electronics, and favorable government regulations regarding the applications of the pressure sensor is boosting the market growth of the pressure sensor. Also, the rise in the trend of the internet of things (IoT) and the growing demand for pressure sensors in the development of smart cities are expected to augment the pressure sensor market.

In the IT dominant world, people are shifting their preference towards automation-based solutions and services. IoT is a technology that provides internet or networking for all applications and uses electronic software, actuators, and sensors to connect the devices to the common network. It incorporates various sensors such as proximity sensors, temperature sensors, and pressure sensors. Thus, the major adoption of IoT-connected devices is anticipated to boost the growth of the pressure sensor market.

#### Segment Analysis:

The pressure sensor market by product is classified as absolute pressure sensor, differential pressure sensor, and gauge pressure sensor.

By technology, the market is segmented into piezoresistive pressure sensor, electromagnetic pressure sensor, optical pressure sensor, resonant solid-state pressure sensor, capacitive pressure sensor, and others. Technology is enhancing pressure sensors and is leading to significant growth over the forecasted period on account of increasing applications across the industries. For instance, in December 2019, The Korea Advanced Institute of Science and Technology (KAIST) developed a highly sensitive wearable pressure sensor for health monitoring applications. It is capable of early diagnosis of diseases.

The pressure sensor has application across different industries and the market by application is segmented by application as automotive, food, and beverage, aerospace and defense, consumer electronics, medical, industrial, and others. The automotive segment holds a larger share. The pressure sensor is being increasingly deployed in the automotive industry for engine optimization, emission control, and safety enhancement. The rise in environmental and safety concerns is further enhancing the demand for sensors in the automotive industry. The high demand is motivating the manufacturers to form multiple expansion strategies. For instance, in January 2020, JK Tyre introduced a Tire Pressuring Monitoring System (TPMS) by previously acquired TREEL mobility solutions, TREEL sensors. Whereas, it is being used in the industries for leak detection, flow monitoring, gas detection, pneumatic controls, and many others.

The sensors help the manufacturers in reducing the manufacturing cost by assisting them to avoid untimely failures which can cause excessive downtime.

#### Regional Analysis:

Geographically, the global Pressure Sensor market is segmented as North America, South America, Europe, Middle East and Africa, and the Asia Pacific. North America holds the major share in the market on account of the high rate of automation. The region is a dominating market for smart offices and homes and has witnessed the highest adoption of technology in the healthcare industry compared to other regions. Further, with several smart city projects and initiatives, it is expected by 2025 that there would be around 30 global smart cities and a major of these will be likely to be located in North America and Europe. Government regulations in North America regarding passenger safety in automobile safety are expected to boost the market growth of the pressure sensor. For instance, the US government passed the TREAD act to mandate the installation of the Tire Pressure Monitoring Safety (TPMS) in every automobile. Due to the large applications of the pressure sensor in the region, the region is offering various opportunities and that is expected to boost the market during the forecasted period.

#### COVID-19 Impact:

The outbreak of covid-19 pandemic and lockdown globally has negatively impacted the manufacturing activities especially in the Asia-Pacific region where major pressure sensors and other semiconductor components are manufactured. Pandemic interrupted the supply chain causing delay and also, the fear of being infected led to the absence of the factory workers causing a delay in the manufacturing process. However, by May 2020 many of the manufacturing had started their operations and were recovering their loss.

#### Segmentation:

##### By Product

Absolute Pressure Sensor

Differential Pressure Sensor

Gauge Pressure Sensor

## By Technology

Piezoresistive Pressure Sensor

Electromagnetic Pressure Sensor

Optical Pressure Sensor

Resonant Solid State Pressure Sensor

Capacitive Pressure Sensor

Others

## By Application

Automotive

Food and Beverage

Aerospace and Defence

Consumer Electronics

Medical

Industrial

Others

## By Geography

North America

USA

Canada

Mexico

South America

Brazil

Argentina

Others

Europe

Germany

Spain

United Kingdom

France

Others

Middle East and Africa

Saudi Arabia

South Africa

Others

Asia Pacific

China

Japan

Australia

India

Others

\*Note: The report will be dispatched in 3 business days.

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