

Force Sensors Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2023-2028

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Abstracts

The global force sensors market size reached US\$ 2.6 Billion in 2022. Looking forward, IMARC Group expects the market to reach US\$ 3.5 Billion by 2028, exhibiting a growth rate (CAGR) of 5.2% during 2023-2028.

Force sensors are transducers that convert an input mechanical load, weight, tension, compression, and pressure into an electrical output signal that can be restored, measured, and standardized. They offer high accuracy, long-term reliability, and cost-effectiveness compared to other measurement technologies. As a result, they are widely used in various applications, ranging from bathroom scales, musical instruments, medical devices to automobiles; detecting seat occupancy; and process controlling in manufacturing facilities. Presently, several manufacturers worldwide are offering force sensors in a variety of sizes, shapes, and capacities.

Force Sensors Market Trends:

The escalating demand for factory automation and high precision in manufacturing processes represents one of the key factors impelling the market growth. Apart from this, force sensors are employed in the aerospace industry to help measure force and in-flight torque controls, actuation systems, and braking systems with high reliability. This, in confluence with the rising air passenger traffic and the increasing emphasis on in-flight test and safety measurements, is contributing to the market growth. Moreover, force sensors are integrated into medical devices, such as catheters and endoscopes, which are used in a variety of settings like hospitals and home care. They are also utilized in surgical robots that can display three-dimensional (3D) visualization, which further enhances the view of the operative area and improves the control, precision, and range of small instruments. This, coupled with the escalating demand for minimally invasive surgeries (MIS) and the growing focus of healthcare providers on improving

primary procedural outcomes and patients' quality of life, is driving the sales of force sensors. Furthermore, as these sensors support several hardware developments and control programs in various military applications, increasing funding in various defense projects by governing agencies of numerous countries is positively influencing the market.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global force sensors market report, along with forecasts at the global, regional and country level from 2023-2028. Our report has categorized the market based on sensing technology, force type, operation and end use.

Breakup by Sensing Technology:

- Strain Gauge
- Load Cell
- Force Sensitive Resistors
- Others

Breakup by Force Type:

- Compression
- Tension
- Compression and Tension

Breakup by Operation:

- Analog
- Digital

Breakup by End Use:

- Automotive
- Locomotive
- Manufacturing
- Mining
- Aerospace and Defense
- Construction
- Healthcare

Others

Breakup by Region:

North America

United States

Canada

Asia-Pacific

China

Japan

India

South Korea

Australia

Indonesia

Others

Europe

Germany

France

United Kingdom

Italy

Spain

Russia

Others

Latin America

Brazil

Mexico

Others

Middle East and Africa

Competitive Landscape:

The competitive landscape of the industry has also been examined along with the profiles of the key players being ABB Ltd, Alps Electric Co. Ltd., FUTEK Advanced Sensor Technology Inc., Honeywell International Inc., Hottinger Br?el & Kjaer GmbH (Spectris plc), Interlink Electronics Inc., Sensata Technologies Inc., Nextinput Inc. (Qorvo Inc.), Sensel Inc., Synaptics Incorporated, Tangio Printed Electronics and Tekscan Inc.

Key Questions Answered in This Report

1. What was the size of the global force sensors market in 2022?

2. What is the expected growth rate of the global force sensors market during 2023-2028?
3. What are the key factors driving the global force sensors market?
4. What has been the impact of COVID-19 on the global force sensors market?
5. What is the breakup of the global force sensors market based on the sensing technology?
6. What is the breakup of the global force sensors market based on the force type?
7. What is the breakup of the global force sensors market based on the operation?
8. What is the breakup of the global force sensors market based on the end use?
9. What are the key regions in the global force sensors market?
10. Who are the key players/companies in the global force sensors market?

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