

Report Information

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Level Sensor Market Research Report - Forecast 2032

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Description:

Global Level Sensor Market Overview:

Level Sensor Market Size was valued at USD 2.1 billion in 2022. The Level Sensor market industry is projected to grow from USD2.289 Billion in 2023 to USD 4.560 billion by 2032, exhibiting a compound annual growth rate (CAGR) of 9.00% during the forecast period (2023 - 2032). Surging demand for supervising and monitoring the fluid level in process industries due to the accurate, precise, and low-cost perpetuation and the increasing adoption of MEMS and Nano-enabled sensors are the key market drivers enhancing the market growth.

Global Level Sensor Market

Source: Secondary Research, Primary Research, MRFR Database, and Analyst Review

Level Sensor Market Trends

- Increasing use of smart sensors is driving the market growth

The increasing use of smart sensors capable of two-way communication and self-diagnosis is projected to drive market growth. For instance, digital technology applications such as water conservation can be connected to microcontrollers to monitor water usage and capacity.

Digital level sensors are also used for gas flow measurement technology and can easily interface with computers. The increasing use of Micro-Electro-Mechanical Systems (MEMS) non-contact type technology in residential, commercial, and industrial measurement applications is also anticipated to enhance the market demand. The growing demand for intelligent instruments equipped with microprocessors that provide information about the instrument's performance is expected to fuel market growth. The ability to offer higher accuracy and efficiency, along with easy installation and maintenance, is anticipated to drive industry growth. The increasing acceptance of smart multiphase sensors in the oil & gas and food & water industries has led to enhanced market CAGR growth.

The Technology is easily available in the market owing to the presence of many suppliers, the reduction in the size of the sensors, and the increasing usage of multipurpose level sensors in the automotive and industrial sectors. However, the adoption of thin-film Technology and increasing competition among market players is expected to hamper the market growth over the forecast period.

Additionally, favorable industry regulations aid in stimulating the growth of the level sensors market. For instance, regulations laid by the Environmental Protection Agency (EPA) for power plants have increased sensor demand for monitoring gas leakage. Health and safety organizations also work toward implementing a hazard-free environment, ensuring workplace safety for employees. Compliance with regulations and standards in the food and beverage industry is the most demanding challenge for measuring instruments and sensors. The product design must comply with the industry guidelines issued by the Food and Drug Administration (FDA) and European Hygienic Engineering & Design Group (EHEDG), as well as meet the special Sterilization-in-Place and Clean-in-Place (SIP/CIP) process requirements for surface quality, materials used, process connections, and reliability. Programmable measuring instruments and specialized accessories further improve the customer experience. In the U.S., EPA regulates the wastewater discharge and treatment of wastewater under the Clean Water Act (CWA). These factors, Thus, drive the Level Sensor market revenue.

Level Sensor Market Segment Insights:

Level Sensor By Technology Insights

The Level Sensor Market segmentation, based on technology, the market is segmented into contact technology and non-contact technology. The market is experiencing a transition from contact type to non-contact technology owing to their flexibility, accuracy in measurement, and a lesser need for maintenance. Non-contact/continuous level sensors are electronic devices that generate the electromagnetic field for level measurement. These sensors operate faster and have greater application flexibility. Non-contact type technologies include photoelectric, capacitive, and ultrasonic sensors. Contact/point levels are electrochemical devices that are used to detect a change through physical contact with the target material/object. Magnetostrictive, vibratory probes, hydrostatic, and magnetic float are a few types of contact sensors. Continuous-level monitoring systems offer continuous level measurement of liquids and solids in silos, bins, and sumps. The solid flow sensor is based on microwave technology that senses solid materials. In contrast, point-level switches measure the level of solids, slurries, and liquids and are usually mounted on bins, hoppers, tanks, chutes, pipes, and vessels.

May 2021: Sick AG launched a new non-contact radar sensing technology for real-time monitoring of liquid and bulk solid levels in food & beverage applications. The Sick LBR SicWave is a bulk solid level sensor with a range of up to 120m and the Sick LFR SicWave is a fluid level sensor with a maximum range of 30m.

Figure1: Level Sensor Market, by Technology, 2022 & 2032(USD billion)

Level Sensor Market, by Technology, 2022 & 2032

Source: Secondary Research, Primary Research, MRFR Database, and Analyst Review

Level Sensor Application Insights

The Level Sensor Market segmentation, based on application, includes Industrial manufacturing, chemicals, pharmaceuticals, wastewater, Oil and Gas, energy, and healthcare. The Oil and Gas segment dominated the market. This is the oil and gas sector is one of the most significant end users of level sensors, globally. The extensive use of these sensors for monitoring storage units and downstream processing plants has maintained a constant demand for level sensors from the sector. With the growing crude oil production in some countries, such as the United States, the need for level sensors is expected to increase.

January 2020:The Union Cabinet of India approved a memorandum of understanding (MoU) on cooperation in the oil and gas sector. As part of the MoU, the two countries may focus on exploration and production (E&P) and liquefied natural gas (LNG) opportunities. Both India and Brazil may also focus on R&D in the energy sector.

Level Sensor Regional Insights

By Region, the study provides market insights into North America, Europe, Asia-Pacific, and the Rest of the World. The Asia-Pacific level sensor market will dominate this market; the growing concern toward the environment and water management also positively impacts the market growth over the forecast period and will boost the market growth in this Region. Moreover, China's Level Sensor market held the largest market share, and the Indian Level Sensor market was the fastest-growing market in the Asia-Pacific region. Further, the major countries studied in the market report are The U.S., Canada, Germany, France, the UK, Italy, Spain, China, Japan, India, Australia, South Korea, and Brazil.

Figure2: Level Sensor Market SHARE BY REGION 2022 (%)

Level Sensor Market SHARE BY REGION 2022

Source: Secondary Research, Primary Research, MRFR Database, and Analyst Review

Europe Level Sensor market accounts for the second-largest market share due to the increasing adoption of MEMS and Nano-enabled sensors. Further, the German Level Sensor market held the largest market share, and the UK Level Sensor market was the fastest-growing market in the European Region

The North America Level Sensor Market is expected to grow at the fastest CAGR from 2023 to 2032. This is due to the increased adoption of sensors in new cars. The introduction of the TREAD Act mandates the pressure sensor for every vehicle to intimate the underinflated tires is expected to drive the industry demand in the U.S. region

Level Sensor Key Market Players & Competitive Insights

Leading market players are investing heavily in research and development to expand their product lines, which will help the level sensor market grow even more. Market participants are also undertaking various strategic activities to expand their global footprint, with important market developments including new product launches, contractual agreements, mergers and acquisitions, higher investments, and collaboration with other organizations. The Level Sensor industry must offer cost-effective items to expand and survive in a more competitive and rising market climate.

Manufacturing locally to minimize operational costs is one of the key business tactics manufacturers use in the global level sensor industry to benefit clients and increase the market sector. In recent years, the Level sensor industry has offered some of the most significant advantages to medicine. Major players in the level sensor market include Texas Instruments Incorporated (U.S.), Fortive Corporation (U.S.), Honeywell International Inc. (U.S.), Siemens AG (Germany), ABB Ltd (Switzerland), and Nohken Inc. (Japan), Ametek Inc. (U.S.), TE Connectivity Ltd (Switzerland), First Sensor AG (Germany), Krohne Messtechnik GMBH (Germany), and others are attempting to increase market demand by investing in research and development operations.

Emerson Electric Co. is an American multinational corporation headquartered in Ferguson, Missouri. The Fortune 500 company manufactures products and provides engineering services for industrial, commercial, and consumer markets. Emerson has approximately 86,700 employees and 170 manufacturing locations. Emerson acquired Bioproduction Group, a biomanufacturing simulation, modeling, and scheduling software leader. Bio-G's scheduling and modeling systems, combined with Emerson's extensive life science technology and expertise portfolio, will help the companies bring therapies for cancer, diabetes, and other illnesses to the patients.

Sick AG launched a new non-contact radar sensing technology for real-time monitoring of liquid and bulk solid levels in food & beverage applications. The Sick LBR SicWave is a bulk solid level sensor with a range of up to 120m, and the Sick LFR SicWave is a fluid level sensor with a maximum range of 30m. Sick AG, based in Waldkirch, Germany, manufactures global sensors and sensor solutions for industrial applications. The company is active in factory and logistics automation and process automation. The company employs around 10,344 employees worldwide and achieved sales of EUR 1.7 billion in 2020.

Key Companies in the Level Sensor market include

- Texas Instruments Incorporated (U.S.)
- Fortive Corporation (U.S.)

- Honey Well International Inc. (U.S.)
- Siemens AG (Germany)
- ABB Ltd (Switzerland)
- Nohken. Inc (Japan)
- Ametek Inc. (U.S.)
- TE Connectivity Ltd (Switzerland)
- First Sensor AG (Germany)
- Krohne Messtechnik GMBH (Germany)

Level Sensor Industry Developments

December 2019: VEGA added a new compact 80 GHz instrument series to its portfolio of radar-based sensors for level measurement. Radar is explicitly designed in line with price-sensitive applications, such as the water/wastewater industry or additional process loops in process automation. Its extremely small size, fast start uptime, and low energy consumption characterize it.

April 2019: Emerson acquired Bioproduction Group, a leader in simulation, modeling, and scheduling software for biomanufacturing. Bio-G's scheduling and modeling systems, combined with Emerson's extensive life science technology and expertise portfolio, will help the companies bring therapies for cancer, diabetes, and other illnesses to the patients.

Level Sensor Market Segmentation:

Level Sensor Technology Outlook

- Contact type
- Non-contact type

Level Sensor Application Outlook

- Consumer goods
- Industrial manufacturing
- Chemicals
- Pharmaceuticals
- Wastewater
- Oil and Gas

- Energy and Power
- Healthcare

Level Sensor Regional Outlook

- North America
 - US
 - Canada
- Europe
 - Germany
 - France
 - UK
 - Italy
 - Spain
 - Rest of Europe
- Asia-Pacific
 - China
 - Japan
 - India
 - Australia
 - South Korea

- Australia
- Rest of Asia-Pacific
- Rest of the World
 - Middle East
 - Africa
 - Latin America

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