

# Smart Grid Sensors Market Report by Sensor (Voltage and Temperature Sensors, Outage Detection, and Others), Application (Advanced Metering Infrastructure, Smart Grid Distribution Management, Supervisory Control and Data Acquisition, Smart Energy Meter, and Others), and Region 2024-2032

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# **Abstracts**

The global smart grid sensors market size reached US\$ 387.6 Million in 2023. Looking forward, IMARC Group expects the market to reach US\$ 1,135.0 Million by 2032, exhibiting a growth rate (CAGR) of 12.3% during 2024-2032. The growing demand for energy, the development of advanced smart grid sensors with improved capabilities, the implementation of various government initiatives, and extensive research and development (R&D) activities represent some of the key factors driving the market.

Smart grid sensors are devices that are deployed within a smart grid infrastructure to monitor and manage various aspects of the electrical grid. They are widely used to measure a range of parameters such as voltage, frequency, temperature, humidity, current, power flow, and temperature. In addition, smart grid sensors are equipped with real-time data collection, wireless or wired communication, data storage, and advanced analytics capabilities. They are small and lightweight nodes that enable utilities to monitor and manage the grid more efficiently, improve reliability, detect and respond to issues promptly, and enhance overall grid performance. As a result, smart grid sensors are extensively used in advanced metering infrastructure, smart grid distribution management, supervisory control and data acquisition, and smart energy meters.

Smart Grid Sensors Market Trends:

The growing demand for energy coupled with an increasing focus on power quality is



one of the key factors driving the market growth. Smart grid sensors are widely used to optimize distribution, ensure reliable electricity supply, address power quality issues, and monitor accurate and real-time data on voltage and current. In line with this, the widespread product adoption to enable advanced monitoring and control capabilities in renewable energy sources, such as solar and wind, is favoring the market growth. Moreover, several countries are investing in upgrading aging power infrastructure by implementing smart grid technologies, which in turn is contributing to the market growth. Apart from this, the development of advanced smart grid sensors with improved capabilities, such as enhanced accuracy, reliability, and cost-effectiveness, are providing an impetus to the market growth. Furthermore, the launch of miniaturized smart grid sensors that are easy to install in compact spaces and enables their integration into various devices and equipment, such as smart meters, distribution transformers, and power lines, is positively influencing the market growth. Additionally, the widespread product adoption that allows early detection of faults, rapid response to grid disturbances, and predictive maintenance, owing to the increasing frequency of extreme weather events and the threat of cyberattacks, grid resilience, and reliability are providing a considerable boost to the market growth. Other factors, including an enhanced focus on research and development (R&D) activities, growing smart city initiatives, and the implementation of various government regulations to promote the installation of smart grid sensors to improve efficiency, reduce energy waste, and improve reliability, are creating a positive outlook for the market.

#### Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each segment of the global smart grid sensors market, along with forecasts at the global, regional, and country levels from 2024-2032. Our report has categorized the market based on sensor and application.

Sensor Insights:
Voltage and Temperature Sensors
Outage Detection
Others

The report has provided a detailed breakup and analysis of the smart grid sensors market based on the sensor. This includes voltage and temperature sensors, outage detection, and others. According to the report, voltage and temperature sensors represented the largest segment.

## Application Insights:



Advanced Metering Infrastructure
Smart Grid Distribution Management
Supervisory Control and Data Acquisition
Smart Energy Meter
Others

The report has provided a detailed breakup and analysis of the smart grid sensors market based on the application. This includes advanced metering infrastructure, smart grid distribution management, supervisory control and data acquisition, smart energy meter, and others. According to the report, smart energy meter represented the largest segment.

Regional Insights:
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



The report has also provided a comprehensive analysis of all the major regional markets, which include North America (the United States and Canada); Asia Pacific (China, Japan, India, South Korea, Australia, Indonesia, and others); Europe (Germany, France, the United Kingdom, Italy, Spain, Russia, and others); Latin America (Brazil, Mexico, and others); and the Middle East and Africa. According to the report, Asia Pacific was the largest market for smart grid sensors. Some of the factors driving the Asia Pacific smart grid sensors market included the increasing demand for energy, growing smart city initiatives, and the rising focus on power quality.

## Competitive Landscape:

The report has also provided a comprehensive analysis of the competitive landscape in the global smart grid sensors market. Detailed profiles of all major companies have been provided. Some of the companies covered include Aclara Technologies LLC (Hubbell Incorporated), Eaton Corporation plc, GIPRO GmbH, Itron Inc., Landis+Gyr AG, S & C Electric Company, Schneider Electric SE, Sentient Energy Inc. (Koch Engineered Solutions), etc. Kindly note that this only represents a partial list of companies, and the complete list has been provided in the report.

# Key Questions Answered in This Report:

How has the global smart grid sensors market performed so far, and how will it perform in the coming years?

What are the drivers, restraints, and opportunities in the global smart grid sensors market?

What is the impact of each driver, restraint, and opportunity on the global smart grid sensors market?

What are the key regional markets?

Which countries represent the most attractive smart grid sensors market?

What is the breakup of the market based on the sensor?

Which is the most attractive sensor in the smart grid sensors market?

What is the breakup of the market based on the application?

Which is the most attractive application in the smart grid sensors market?

What is the competitive structure of the global smart grid sensors market?

Who are the key players/companies in the global smart grid sensors market?



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