

# Global Automotive Battery Sensor Market Size Study & Forecast, by Voltage, Communication Technology, Vehicle Type, Hybrid Vehicle Type, and Regional Forecasts 2022–2032

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## Abstracts

The Global Automotive Battery Sensor Market is estimated to be valued at approximately USD 2.66 billion in 2024 and is projected to expand at a compound annual growth rate (CAGR) of 11.17% between 2025 and 2035. As the backbone of intelligent energy management systems in modern vehicles, automotive battery sensors play a pivotal role in continuously monitoring parameters such as voltage, current, and temperature. These sensors communicate with the vehicle's electronic control unit (ECU), facilitating optimal battery usage, longer battery life, and enhanced fuel economy. The market is being driven by the exponential surge in vehicle electrification, coupled with the tightening of global emissions standards, which are pushing automakers to embrace more efficient battery monitoring systems.

An increasing inclination toward hybrid and plug-in hybrid electric vehicles (HEVs and PHEVs) has reshaped the demand for sophisticated battery sensing technologies. Automotive battery sensors, which were once considered luxury components, have now transitioned into essential elements in mass-market passenger and commercial vehicles alike. Regulatory mandates emphasizing fuel efficiency and carbon neutrality have propelled OEMs to integrate advanced battery monitoring systems to ensure compliance while enhancing performance. Additionally, the adoption of 48V systems for mild hybrid applications is further accelerating innovation in battery sensor designs, encouraging manufacturers to invest in sensor miniaturization and multifunctional integration.

From a regional perspective, North America remains a key player in the battery sensor

landscape due to the region's rapid advancements in connected vehicle technologies and its growing fleet of electric and hybrid vehicles. Europe also holds a significant stake, with the region's green mobility initiatives and established automotive giants pioneering battery-efficient systems. Meanwhile, the Asia Pacific region is anticipated to witness the fastest growth rate, fueled by the surge in EV production, expanding automotive manufacturing infrastructure, and governmental subsidies on electric vehicle purchases in countries like China, Japan, South Korea, and India. These developments, combined with increasing consumer awareness about energy-efficient vehicles, are pushing battery sensor installations across all vehicle classes in APAC.

Major market player included in this report are:

Robert Bosch GmbH

Continental AG

HELLA GmbH & Co. KGaA

ZF Friedrichshafen AG

Denso Corporation

Hitachi Astemo, Ltd.

NXP Semiconductors

ams-OSRAM AG

TE Connectivity

Infineon Technologies AG

Furukawa Electric Co., Ltd.

Sensata Technologies

Analog Devices, Inc.

Renesas Electronics Corporation

Panasonic Corporation

Global Automotive Battery Sensor Market Report Scope:

Historical Data – 2023, 2024

Base Year for Estimation – 2024

Forecast period – 2025–2035

Report Coverage – Revenue forecast, Company Ranking, Competitive Landscape, Growth factors, and Trends

Regional Scope – North America; Europe; Asia Pacific; Latin America; Middle East & Africa

Customization Scope – Free report customization (equivalent up to 8 analysts' working hours) with purchase. Addition or alteration to country, regional & segment scope\*

The objective of the study is to define market sizes of different segments & countries in recent years and to forecast the values for the coming years. The report is designed to incorporate both qualitative and quantitative aspects of the industry within the countries involved in the study. The report also provides detailed information about crucial aspects, such as driving factors and challenges, which will define the future growth of the market. Additionally, it incorporates potential opportunities in micro-markets for stakeholders to invest, along with a detailed analysis of the competitive landscape and product offerings of key players. The detailed segments and sub-segments of the market are explained below:

By Voltage:

12V

24V

48V

By Communication Technology:

Local Interconnect Network (LIN)

Controller Area Network (CAN)

By Vehicle Type:

Passenger Car

Light Commercial Vehicle

Heavy Commercial Vehicle

By Hybrid Vehicle Type:

Hybrid Electric Vehicle (HEV)

Plug-In Hybrid Electric Vehicle (PHEV)

By Region:

North America

U.S.

Canada

Europe

UK

Germany

France

Spain

Italy

Rest of Europe

#### Asia Pacific

China

India

Japan

Australia

South Korea

Rest of Asia Pacific

#### Latin America

Brazil

Mexico

#### Middle East & Africa

UAE

Saudi Arabia

South Africa

Rest of Middle East & Africa

#### Key Takeaways:

Market Estimates & Forecast for 10 years from 2025 to 2035.

Annualized revenues and regional level analysis for each market segment.

Detailed analysis of geographical landscape with Country level analysis of major regions.

Competitive landscape with information on major players in the market.

Analysis of key business strategies and recommendations on future market approach.

Analysis of competitive structure of the market.

Demand side and supply side analysis of the market.

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