

# Global Powertrain Sensor Market Size Study & Forecast, by Sensor Type, Propulsion, Subsystem, Vehicle & EV Type and Regional Forecasts 2025-2035

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## Abstracts

The Global Powertrain Sensor Market is valued at approximately USD 29.97 billion in 2024 and is anticipated to grow with a steady CAGR of 2.80% over the forecast period from 2025 to 2035. Powertrain sensors, which serve as a crucial part of the automotive ecosystem, play an indispensable role in ensuring optimal performance, efficiency, and emissions compliance of modern vehicles. These sensors, deployed throughout internal combustion engines (ICE) and electric powertrains, are engineered to capture real-time data on pressure, speed, temperature, voltage, and position. With electrification, autonomy, and energy efficiency at the forefront of automotive innovation, the reliance on intelligent sensing systems has been profoundly amplified, enabling OEMs to streamline diagnostics, enhance safety, and maximize fuel economy through real-time powertrain management.

The industry is undergoing a transformative shift, accelerated by the dual momentum of e-mobility adoption and stricter regulatory environments across major global markets. In ICE-powered vehicles, sensors that monitor oil pressure, camshaft positioning, crankshaft rotation, and coolant temperatures have become pivotal for performance tuning and emissions reduction. Simultaneously, the transition to electric vehicles has fueled a parallel surge in demand for voltage, temperature, and current sensors tailored to EV platforms. These components ensure thermal regulation, battery efficiency, and system safety. The rapid proliferation of hybrid and battery electric vehicles has thus opened new frontiers, creating a parallel growth trajectory for powertrain sensor technologies that are compact, highly sensitive, and digitally integrated.

From a geographic standpoint, Asia Pacific holds the lion's share of the global powertrain sensor market, underpinned by robust automotive manufacturing hubs in

China, Japan, and India. These nations have not only expanded ICE vehicle production but have also made assertive strides in EV development, backed by government incentives and green energy targets. Europe continues to command a strong presence owing to the continent's early move toward emission neutrality and the presence of several premium automotive brands pioneering sensor-intensive powertrain systems. Meanwhile, North America remains a key region with technological advancements driven by both legacy automakers and emerging EV startups. Latin America and the Middle East & Africa, though relatively nascent, are anticipated to witness incremental growth driven by rising vehicle ownership and supportive policy frameworks over the long term.

Major market player included in this report are:

Robert Bosch GmbH

Infineon Technologies AG

Denso Corporation

Sensata Technologies

BorgWarner Inc.

Continental AG

NXP Semiconductors

Analog Devices Inc.

Texas Instruments Incorporated

Hitachi Astemo Ltd.

ZF Friedrichshafen AG

Renesas Electronics Corporation

TE Connectivity Ltd.

Valeo SA

STMicroelectronics NV

## Global Powertrain 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 Sensor Type for ICE Vehicle:

Position

Pressure

Speed

Temperature

By Sensor Type for EV:

Position

Temperature

Current

Voltage

By Propulsion:

Internal Combustion Engine (ICE)

Electric Vehicle (EV)

Hybrid Electric Vehicle (HEV)

Plug-in Hybrid Electric Vehicle (PHEV)

By Powertrain Subsystem:

Engine

Transmission

Battery

Motor/Generator

Others

**By Vehicle Type:**

Passenger Car (PC)

Light Commercial Vehicle (LCV)

Heavy Commercial Vehicle (HCV)

**By EV Type:**

Battery Electric Vehicle (BEV)

Plug-in Hybrid Electric Vehicle (PHEV)

Hybrid Electric Vehicle (HEV)

Fuel Cell Electric Vehicle (FCEV)

**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.

## Contents

### **CHAPTER 1. GLOBAL POWERTRAIN SENSOR MARKET REPORT SCOPE & METHODOLOGY**

- 1.1. Research Objective
- 1.2. Research Methodology
  - 1.2.1. Forecast Model
  - 1.2.2. Desk Research
  - 1.2.3. Top-Down and Bottom-Up Approach
- 1.3. Research Attributes
- 1.4. Scope of the Study
  - 1.4.1. Market Definition
  - 1.4.2. Market Segmentation
- 1.5. Research Assumptions
  - 1.5.1. Inclusion & Exclusion
  - 1.5.2. Limitations
  - 1.5.3. Years Considered for the Study

### **CHAPTER 2. EXECUTIVE SUMMARY**

- 2.1. CEO/CXO Standpoint
- 2.2. Strategic Insights
- 2.3. ESG Analysis
- 2.4. Key Findings

### **CHAPTER 3. GLOBAL POWERTRAIN SENSOR MARKET FORCES ANALYSIS**

- 3.1. Market Forces Shaping the Global Powertrain Sensor Market (2024–2035)
- 3.2. Drivers
  - 3.2.1. Accelerating Electrification and Emissions Regulations
  - 3.2.2. Demand for Real-Time Diagnostics and Predictive Maintenance
- 3.3. Restraints
  - 3.3.1. High Development and Integration Costs
  - 3.3.2. Technical Challenges in Harsh Operating Environments
- 3.4. Opportunities
  - 3.4.1. Rapid Growth of EV and Hybrid Vehicle Fleets
  - 3.4.2. Integration with IoT and Advanced Driver-Assistance Systems

## **CHAPTER 4. GLOBAL POWERTRAIN SENSOR INDUSTRY ANALYSIS**

- 4.1. Porter's Five Forces Model
  - 4.1.1. Bargaining Power of Buyers
  - 4.1.2. Bargaining Power of Suppliers
  - 4.1.3. Threat of New Entrants
  - 4.1.4. Threat of Substitutes
  - 4.1.5. Competitive Rivalry
- 4.2. Porter's Five Forces Forecast Model (2024–2035)
- 4.3. PESTEL Analysis
  - 4.3.1. Political
  - 4.3.2. Economic
  - 4.3.3. Social
  - 4.3.4. Technological
  - 4.3.5. Environmental
  - 4.3.6. Legal
- 4.4. Top Investment Opportunities
- 4.5. Top Winning Strategies (2025)
- 4.6. Market Share Analysis (2024–2025)
- 4.7. Global Pricing Analysis and Trends (2025)
- 4.8. Analyst Recommendation & Conclusion

## **CHAPTER 5. GLOBAL POWERTRAIN SENSOR MARKET SIZE & FORECASTS BY SENSOR TYPE FOR ICE VEHICLE 2025–2035**

- 5.1. Market Overview
- 5.2. Position Sensors
  - 5.2.1. Top Countries Breakdown Estimates & Forecasts, 2024–2035
  - 5.2.2. Market Size Analysis, by Region, 2025–2035
- 5.3. Pressure Sensors
  - 5.3.1. Top Countries Breakdown Estimates & Forecasts, 2024–2035
  - 5.3.2. Market Size Analysis, by Region, 2025–2035
- 5.4. Speed Sensors
  - 5.4.1. Top Countries Breakdown Estimates & Forecasts, 2024–2035
  - 5.4.2. Market Size Analysis, by Region, 2025–2035
- 5.5. Temperature Sensors
  - 5.5.1. Top Countries Breakdown Estimates & Forecasts, 2024–2035
  - 5.5.2. Market Size Analysis, by Region, 2025–2035

## **CHAPTER 6. GLOBAL POWERTRAIN SENSOR MARKET SIZE & FORECASTS BY SENSOR TYPE FOR EV 2025–2035**

### 6.1. Market Overview

### 6.2. Position Sensors

#### 6.2.1. Top Countries Breakdown Estimates & Forecasts, 2024–2035

#### 6.2.2. Market Size Analysis, by Region, 2025–2035

### 6.3. Temperature Sensors

#### 6.3.1. Top Countries Breakdown Estimates & Forecasts, 2024–2035

#### 6.3.2. Market Size Analysis, by Region, 2025–2035

### 6.4. Current Sensors

#### 6.4.1. Top Countries Breakdown Estimates & Forecasts, 2024–2035

#### 6.4.2. Market Size Analysis, by Region, 2025–2035

### 6.5. Voltage Sensors

#### 6.5.1. Top Countries Breakdown Estimates & Forecasts, 2024–2035

#### 6.5.2. Market Size Analysis, by Region, 2025–2035

## **CHAPTER 7. GLOBAL POWERTRAIN SENSOR MARKET SIZE & FORECASTS BY PROPULSION & SUBSYSTEM 2025–2035**

### 7.1. Propulsion Overview

#### 7.1.1. ICE

#### 7.1.2. EV

#### 7.1.3. HEV

#### 7.1.4. PHEV

### 7.2. Powertrain Subsystem

#### 7.2.1. Engine

#### 7.2.2. Transmission

#### 7.2.3. Battery

#### 7.2.4. Motor/Generator

#### 7.2.5. Others

## **CHAPTER 8. GLOBAL POWERTRAIN SENSOR MARKET SIZE & FORECASTS BY VEHICLE & EV TYPE 2025–2035**

### 8.1. Vehicle Type

#### 8.1.1. Passenger Car (PC)

#### 8.1.2. Light Commercial Vehicle (LCV)

#### 8.1.3. Heavy Commercial Vehicle (HCV)

## 8.2. EV Type

### 8.2.1. BEV

### 8.2.2. PHEV

### 8.2.3. HEV

### 8.2.4. FCEV

## **CHAPTER 9. GLOBAL POWERTRAIN SENSOR MARKET SIZE & FORECASTS BY REGION 2025–2035**

### 9.1. Market, Regional Snapshot

### 9.2. Top Leading & Emerging Countries

### 9.3. North America

#### 9.3.1. U.S.

##### 9.3.1.1. Sensor & Subsystem Breakdown, 2025–2035

##### 9.3.1.2. Vehicle & EV Type Breakdown, 2025–2035

#### 9.3.2. Canada

### 9.4. Europe

#### 9.4.1. UK

#### 9.4.2. Germany

#### 9.4.3. France

#### 9.4.4. Spain

#### 9.4.5. Italy

#### 9.4.6. Rest of Europe

### 9.5. Asia Pacific

#### 9.5.1. China

#### 9.5.2. India

#### 9.5.3. Japan

#### 9.5.4. Australia

#### 9.5.5. South Korea

#### 9.5.6. Rest of Asia Pacific

### 9.6. Latin America

#### 9.6.1. Brazil

#### 9.6.2. Mexico

### 9.7. Middle East & Africa

#### 9.7.1. UAE

#### 9.7.2. Saudi Arabia

#### 9.7.3. South Africa

#### 9.7.4. Rest of Middle East & Africa

## **CHAPTER 10. COMPETITIVE INTELLIGENCE**

- 10.1. Top Market Strategies
- 10.2. Robert Bosch GmbH
  - 10.2.1. Company Overview
  - 10.2.2. Key Executives
  - 10.2.3. Company Snapshot
  - 10.2.4. Financial Performance (Subject to Data Availability)
  - 10.2.5. Product/Services Portfolio
  - 10.2.6. Recent Development
  - 10.2.7. Market Strategies
  - 10.2.8. SWOT Analysis
- 10.3. Infineon Technologies AG
- 10.4. Denso Corporation
- 10.5. Sensata Technologies
- 10.6. BorgWarner Inc.
- 10.7. Continental AG
- 10.8. NXP Semiconductors
- 10.9. Analog Devices Inc.
- 10.10. Texas Instruments Incorporated
- 10.11. Hitachi Astemo Ltd.
- 10.12. ZF Friedrichshafen AG
- 10.13. Renesas Electronics Corporation
- 10.14. TE Connectivity Ltd.
- 10.15. Valeo SA
- 10.16. STMicroelectronics NV

## List Of Tables

### LIST OF TABLES

- Table 1. Global Powertrain Sensor Market, Report Scope
- Table 2. Global Powertrain Sensor Market Estimates & Forecasts by ICE Sensor Type 2024–2035
- Table 3. Global Powertrain Sensor Market Estimates & Forecasts by EV Sensor Type 2024–2035
- Table 4. Global Powertrain Sensor Market Estimates & Forecasts by Propulsion 2024–2035
- Table 5. Global Powertrain Sensor Market Estimates & Forecasts by Powertrain Subsystem 2024–2035
- Table 6. Global Powertrain Sensor Market Estimates & Forecasts by Vehicle Type 2024–2035
- Table 7. Global Powertrain Sensor Market Estimates & Forecasts by EV Type 2024–2035
- Table 8. U.S. Powertrain Sensor Market Estimates & Forecasts, 2024–2035
- Table 9. Canada Powertrain Sensor Market Estimates & Forecasts, 2024–2035
- Table 10. UK Powertrain Sensor Market Estimates & Forecasts, 2024–2035
- Table 11. Germany Powertrain Sensor Market Estimates & Forecasts, 2024–2035
- Table 12. France Powertrain Sensor Market Estimates & Forecasts, 2024–2035
- Table 13. Spain Powertrain Sensor Market Estimates & Forecasts, 2024–2035
- Table 14. Italy Powertrain Sensor Market Estimates & Forecasts, 2024–2035
- Table 15. Rest of Europe Powertrain Sensor Market Estimates & Forecasts, 2024–2035
- Table 16. China Powertrain Sensor Market Estimates & Forecasts, 2024–2035
- Table 17. India Powertrain Sensor Market Estimates & Forecasts, 2024–2035
- Table 18. Japan Powertrain Sensor Market Estimates & Forecasts, 2024–2035
- Table 19. Australia Powertrain Sensor Market Estimates & Forecasts, 2024–2035
- Table 20. South Korea Powertrain Sensor Market Estimates & Forecasts, 2024–2035

## List Of Figures

### LIST OF FIGURES

- Fig 1. Global Powertrain Sensor Market, Research Methodology
- Fig 2. Global Powertrain Sensor Market, Market Estimation Techniques
- Fig 3. Global Market Size Estimates & Forecast Methods
- Fig 4. Global Powertrain Sensor Market, Key Trends 2025
- Fig 5. Global Powertrain Sensor Market, Growth Prospects 2024–2035
- Fig 6. Global Powertrain Sensor Market, Porter's Five Forces Model
- Fig 7. Global Powertrain Sensor Market, PESTEL Analysis
- Fig 8. Global Powertrain Sensor Market, Value Chain Analysis
- Fig 9. Powertrain Sensor Market by ICE Sensor Type, 2025 & 2035
- Fig 10. Powertrain Sensor Market by EV Sensor Type, 2025 & 2035
- Fig 11. Powertrain Sensor Market by Propulsion, 2025 & 2035
- Fig 12. Powertrain Sensor Market by Powertrain Subsystem, 2025 & 2035
- Fig 13. Powertrain Sensor Market by Vehicle Type, 2025 & 2035
- Fig 14. Powertrain Sensor Market by EV Type, 2025 & 2035
- Fig 15. North America Powertrain Sensor Market, 2025 & 2035
- Fig 16. Europe Powertrain Sensor Market, 2025 & 2035
- Fig 17. Asia Pacific Powertrain Sensor Market, 2025 & 2035
- Fig 18. Latin America Powertrain Sensor Market, 2025 & 2035
- Fig 19. Middle East & Africa Powertrain Sensor Market, 2025 & 2035
- Fig 20. Global Powertrain Sensor Market, Company Market Share Analysis (2025)

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