

Automotive Solenoid Market Forecasts to 2034 – Global Analysis By Vehicle Type (Passenger Vehicle, Light Commercial Vehicles, Heavy Commercial Vehicles, Truck, Bus and Other Vehicle Types), Electric Vehicle Type (Battery Electric Vehicles, Plug-In Hybrid Electric Vehicles, Fuel Cell Electric Vehicles and Other Electric Vehicle Types), Function (Fluid Control, Gas Control, Motion Control and Other Functions), Valve Design, Application and by Geography

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Abstracts

According to Statistics MRC, the Global Automotive Solenoid Market is accounted for \$6.7 billion in 2026 and is expected to reach \$13.7 billion by 2034 growing at a CAGR of 9.3% during the forecast period. Automotive solenoids are essential parts of contemporary car systems; they do everything from start the engine to regulate fuel injection, transmission shifts, and emissions systems. These electromagnetic gadgets function as switches, transforming electrical energy into mechanical motion. Moreover, solenoid functions are crucial in the automotive industry because they automate tasks, improve efficiency, and guarantee accurate control over important mechanisms.

According to the International Federation of Automotive Engineering Societies (FISITA), automotive solenoids play a pivotal role in modern vehicle technologies, providing essential functions such as ignition control, transmission shifting, and emissions management.

Market Dynamics:

Driver:

Growing hybrid and electric vehicle integration

The demand for automotive solenoids is largely being driven by the growing number of people buying electric and hybrid cars. Solenoids play a crucial role in electric propulsion systems, helping with things like thermal control, battery management, and electric power steering. Additionally, solenoid demand is directly correlated with the growth of the electric vehicle market, highlighting the significance of solenoids in the continuous advancement of automotive propulsion technologies.

Restraint:

The automotive industry's cost sensitivity

The cost-sensitive nature of the automotive industry places restrictions on the automotive solenoid market. Solenoid manufacturers are under pressure to offer cost-effective solutions as manufacturers constantly look for ways to reduce production costs and improve overall affordability. Furthermore, this limitation may affect how sophisticated and high-performing solenoids are integrated, which may restrict their use in particular car models or market niches.

Opportunity:

Expanding use of hybrid and electric vehicles

An important opportunity exists for the automotive solenoid market due to the growing trend toward electric and hybrid vehicles. Solenoids are becoming more and more necessary for applications like electric power steering, battery management, and thermal control because these cars mainly rely on sophisticated electronic systems. Moreover, in order to meet the specific needs of electric and hybrid propulsion systems, solenoid manufacturers can profit from this trend by creating customized solutions.

Threat:

Intense market competition

There is a risk of fierce competition in the automotive solenoid market, with many manufacturers fighting for market share. Solenoid manufacturers may face price pressure and reduced profit margins as a result of increased competition. Additionally, companies must set themselves apart through innovation, quality, and the capacity to offer comprehensive solutions that satisfy the changing demands of automotive OEMs in order to lessen this threat.

Covid-19 Impact:

The COVID-19 pandemic caused significant disruptions in supply chains, demand, and production, which in turn had an impact on the automotive solenoid market. The demand for solenoids in a variety of applications was impacted by the major decline in global vehicle manufacturing caused by lockdowns, travel restrictions, and economic uncertainty. Furthermore, production was further hampered by supply chain disruptions brought on by factory closures and logistical difficulties, which affected the timely availability of components and raw materials.

The Passenger Vehicle segment is expected to be the largest during the forecast period

In the market, the passenger vehicle segment usually holds the largest share. Sedans, sport utility vehicles (SUVs), and hatchbacks are all included in the broad category of passenger cars, which are very well-liked by people all over the world. For personal transportation needs, families and individual consumers frequently drive the demand for passenger cars. Moreover, the growing urban population, rising disposable income, and ongoing demand for more technologically advanced and fuel-efficient cars are major factors driving this segment's dominance.

The Safety and Security segment is expected to have the highest CAGR during the forecast period

Due to the integration of cutting-edge technologies and the growing emphasis on vehicle safety, the safety and security segment is growing at the highest CAGR. The segment's growth is attributed to consumer preferences for vehicles with cutting-edge safety features, strict regulatory requirements, and rising awareness of road safety. Additionally, adoption of autonomous safety technologies, advanced driver assistance systems (ADAS), and ongoing innovation in collision avoidance systems are important factors.

Region with largest share:

Within the automotive solenoid market, North America is expected to hold the largest share. Technology developments, a well-developed automotive sector, and a notable need for solenoids in a range of automotive applications are all factors contributing to the region's prominence. Furthermore, leading the automotive solenoid market in North America is a result of the region's established presence of important automakers and suppliers as well as its emphasis on implementing cutting-edge technologies.

Region with highest CAGR:

The automotive solenoid market is expected to grow at the highest CAGR in the European region. The automotive sector in the region is distinguished by a strong focus on innovation, strict regulations, and a healthy market for both conventional and electric vehicles. Europe's leading automotive nations—Germany, France, and the United Kingdom, for example—contribute to the market's consistent expansion for solenoids. Moreover, the demand for solenoids in a variety of applications is driven by the region's dedication to sustainability and the growing integration of solenoids in cutting-edge automotive technologies.

Key players in the market

Some of the key players in Automotive Solenoid market include Hitachi Ltd., Denso corporation, Johnson Electric Holding Ltd., Global Point Magnetics Asia Co. Ltd, Mitsubishi Electric Corporation, BorgWarner Inc., Padmini VNA Mechatronics Pvt Ltd, Robert Bosch GmbH, Nidec Corporation and Continental AG.

Key Developments:

In November 2023, Hitachi Systems India Pvt. Ltd., a wholly owned subsidiary of Hitachi Systems announced their agreement with Cyemptive Technologies, Inc., an award-winning provider of preemptive cybersecurity solutions for business and government, to jointly provide Cyemptive Technology's next-generation cybersecurity innovations, including on-demand, end-to-end secure platform solutions, to Hitachi Systems India's Southeast Asia/Middle East and India customers.

In September 2023, Mitsubishi Electric Corporation and Evercomm Singapore Pte. Ltd. jointly announced today that they have entered into a cooperative agreement to develop and market solutions that support carbon neutrality in the manufacturing sector. As part of the agreement, Mitsubishi Electric will take an equity stake in Evercomm to solidify

the ties between the two companies.

In July 2023, DENSO Corporation and Toyota Tsusho Corporation today announced that TD Mobile Corporation, which is a joint venture of DENSO and Toyota Tsusho has concluded a company split agreement with a newly established subsidiary of ranet Co.,Ltd. in relation to its cell phone sales and agency business. TD Mobile will transfer the above business to the new subsidiary as a result of the company split.

Vehicle Types Covered:

Passenger Vehicle

Light Commercial Vehicles

Heavy Commercial Vehicles

Truck

Bus

Other Vehicle Types

Electric Vehicle Types Covered:

Battery Electric Vehicles

Plug-In Hybrid Electric Vehicles

Fuel Cell Electric Vehicles

Other Electric Vehicle Types

Functions Covered:

Fluid Control

Gas Control

Motion Control

Other Functions

Valve Designs Covered:

2-way Valve

3-way Valve

4-way Valve

5-way Valve

Other Valve Designs

Applications Covered:

Engine Control and Cooling System

Fuel and Emission Control

Safety and Security

Body Control and Interiors

HVAC

Other Applications

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

Contents

1 EXECUTIVE SUMMARY

2 PREFACE

- 2.1 Abstract
- 2.2 Stake Holders
- 2.3 Research Scope
- 2.4 Research Methodology
 - 2.4.1 Data Mining
 - 2.4.2 Data Analysis
 - 2.4.3 Data Validation
 - 2.4.4 Research Approach
- 2.5 Research Sources
 - 2.5.1 Primary Research Sources
 - 2.5.2 Secondary Research Sources
 - 2.5.3 Assumptions

3 MARKET TREND ANALYSIS

- 3.1 Introduction
- 3.2 Drivers
- 3.3 Restraints
- 3.4 Opportunities
- 3.5 Threats
- 3.6 Application Analysis
- 3.7 Emerging Markets
- 3.8 Impact of Covid-19

4 PORTERS FIVE FORCE ANALYSIS

- 4.1 Bargaining power of suppliers
- 4.2 Bargaining power of buyers
- 4.3 Threat of substitutes
- 4.4 Threat of new entrants
- 4.5 Competitive rivalry

5 GLOBAL AUTOMOTIVE SOLENOID MARKET, BY VEHICLE TYPE

- 5.1 Introduction
- 5.2 Passenger Vehicle
- 5.3 Light Commercial Vehicles
- 5.4 Heavy Commercial Vehicles
- 5.5 Truck
- 5.6 Bus
- 5.7 Other Vehicle Types

6 GLOBAL AUTOMOTIVE SOLENOID MARKET, BY ELECTRIC VEHICLE TYPE

- 6.1 Introduction
- 6.2 Battery Electric Vehicles
- 6.3 Plug-In Hybrid Electric Vehicles
- 6.4 Fuel Cell Electric Vehicles
- 6.5 Other Electric Vehicle Types

7 GLOBAL AUTOMOTIVE SOLENOID MARKET, BY FUNCTION

- 7.1 Introduction
- 7.2 Fluid Control
- 7.3 Gas Control
- 7.4 Motion Control
- 7.5 Other Functions

8 GLOBAL AUTOMOTIVE SOLENOID MARKET, BY VALVE DESIGN

- 8.1 Introduction
- 8.2 2-way Valve
- 8.3 3-way Valve
- 8.4 4-way Valve
- 8.5 5-way Valve
- 8.6 Other Valve Designs

9 GLOBAL AUTOMOTIVE SOLENOID MARKET, BY APPLICATION

- 9.1 Introduction
- 9.2 Engine Control and Cooling System
- 9.3 Fuel and Emission Control

- 9.4 Safety and Security
- 9.5 Body Control and Interiors
- 9.6 HVAC
- 9.7 Other Applications

10 GLOBAL AUTOMOTIVE SOLENOID MARKET, BY GEOGRAPHY

- 10.1 Introduction
- 10.2 North America
 - 10.2.1 US
 - 10.2.2 Canada
 - 10.2.3 Mexico
- 10.3 Europe
 - 10.3.1 Germany
 - 10.3.2 UK
 - 10.3.3 Italy
 - 10.3.4 France
 - 10.3.5 Spain
 - 10.3.6 Rest of Europe
- 10.4 Asia Pacific
 - 10.4.1 Japan
 - 10.4.2 China
 - 10.4.3 India
 - 10.4.4 Australia
 - 10.4.5 New Zealand
 - 10.4.6 South Korea
 - 10.4.7 Rest of Asia Pacific
- 10.5 South America
 - 10.5.1 Argentina
 - 10.5.2 Brazil
 - 10.5.3 Chile
 - 10.5.4 Rest of South America
- 10.6 Middle East & Africa
 - 10.6.1 Saudi Arabia
 - 10.6.2 UAE
 - 10.6.3 Qatar
 - 10.6.4 South Africa
 - 10.6.5 Rest of Middle East & Africa

11 KEY DEVELOPMENTS

11.1 Agreements, Partnerships, Collaborations and Joint Ventures

11.2 Acquisitions & Mergers

11.3 New Product Launch

11.4 Expansions

11.5 Other Key Strategies

12 COMPANY PROFILING

12.1 Hitachi Ltd.

12.2 Denso corporation

12.3 Johnson Electric Holding Ltd.

12.4 Global Point Magnetics Asia Co. Ltd

12.5 Mitsubishi Electric Corporation

12.6 BorgWarner Inc.

12.7 Padmini VNA Mechatronics Pvt Ltd

12.8 Robert Bosch GmbH

12.9 Nidec Corporation

12.10 Continental AG

List Of Tables

LIST OF TABLES

Table 1 Global Automotive Solenoid Market Outlook, By Region (2023-2034) (\$MN)

Table 2 Global Automotive Solenoid Market Outlook, By Vehicle Type (2023-2034) (\$MN)

Table 3 Global Automotive Solenoid Market Outlook, By Passenger Vehicle (2023-2034) (\$MN)

Table 4 Global Automotive Solenoid Market Outlook, By Light Commercial Vehicles (2023-2034) (\$MN)

Table 5 Global Automotive Solenoid Market Outlook, By Heavy Commercial Vehicles (2023-2034) (\$MN)

Table 6 Global Automotive Solenoid Market Outlook, By Truck (2023-2034) (\$MN)

Table 7 Global Automotive Solenoid Market Outlook, By Bus (2023-2034) (\$MN)

Table 8 Global Automotive Solenoid Market Outlook, By Other Vehicle Types (2023-2034) (\$MN)

Table 9 Global Automotive Solenoid Market Outlook, By Electric Vehicle Type (2023-2034) (\$MN)

Table 10 Global Automotive Solenoid Market Outlook, By Battery Electric Vehicles (2023-2034) (\$MN)

Table 11 Global Automotive Solenoid Market Outlook, By Plug-In Hybrid Electric Vehicles (2023-2034) (\$MN)

Table 12 Global Automotive Solenoid Market Outlook, By Fuel Cell Electric Vehicles (2023-2034) (\$MN)

Table 13 Global Automotive Solenoid Market Outlook, By Other Electric Vehicle Types (2023-2034) (\$MN)

Table 14 Global Automotive Solenoid Market Outlook, By Function (2023-2034) (\$MN)

Table 15 Global Automotive Solenoid Market Outlook, By Fluid Control (2023-2034) (\$MN)

Table 16 Global Automotive Solenoid Market Outlook, By Gas Control (2023-2034) (\$MN)

Table 17 Global Automotive Solenoid Market Outlook, By Motion Control (2023-2034) (\$MN)

Table 18 Global Automotive Solenoid Market Outlook, By Other Functions (2023-2034) (\$MN)

Table 19 Global Automotive Solenoid Market Outlook, By Valve Design (2023-2034) (\$MN)

Table 20 Global Automotive Solenoid Market Outlook, By 2-way Valve (2023-2034)

(\$MN)

Table 21 Global Automotive Solenoid Market Outlook, By 3-way Valve (2023-2034)

(\$MN)

Table 22 Global Automotive Solenoid Market Outlook, By 4-way Valve (2023-2034)

(\$MN)

Table 23 Global Automotive Solenoid Market Outlook, By 5-way Valve (2023-2034)

(\$MN)

Table 24 Global Automotive Solenoid Market Outlook, By Other Valve Designs
(2023-2034) (\$MN)

Table 25 Global Automotive Solenoid Market Outlook, By Application (2023-2034)
(\$MN)

Table 26 Global Automotive Solenoid Market Outlook, By Engine Control and Cooling
System (2023-2034) (\$MN)

Table 27 Global Automotive Solenoid Market Outlook, By Fuel and Emission Control
(2023-2034) (\$MN)

Table 28 Global Automotive Solenoid Market Outlook, By Safety and Security
(2023-2034) (\$MN)

Table 29 Global Automotive Solenoid Market Outlook, By Body Control and Interiors
(2023-2034) (\$MN)

Table 30 Global Automotive Solenoid Market Outlook, By HVAC (2023-2034) (\$MN)

Table 31 Global Automotive Solenoid Market Outlook, By Other Applications
(2023-2034) (\$MN)

Note: Tables for North America, Europe, APAC, South America, and Middle East &
Africa Regions are also represented in the same manner as above.

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