

Europe Functional Safety Market Size and Forecast (2021 - 2031)

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Abstracts

The Europe Functional Safety Market is projected to grow significantly, reaching approximately US\$ 3,640.9 million by 2031, up from US\$ 2,262.3 million in 2024. This growth represents a compound annual growth rate (CAGR) of 7.3% from 2025 to 2031, indicating a robust expansion in this sector.

Executive Summary and Market Analysis

Key contributors to the growth of the Europe functional safety market include Germany, France, the UK, and Italy. According to the International Council on Clean Transportation, Europe produced around 10.6 million new cars in 2023, marking a 14% increase compared to 2022. While the mini car segment saw stagnant sales, the sport utility vehicle (SUV) and off-road vehicle segment led the market, accounting for 48% of new registrations, followed by the lower medium segment at 19%. Additionally, the European Automobile Manufacturers Association (ACEA) reported a 5.1% increase in new EU car registrations in December 2024, with Spain experiencing a notable 28.8% growth.

The trend towards digitalization has significantly influenced the adoption of electric commercial vehicles across various businesses. Data from the European Environment Agency (EEA) published in October 2023 indicates a rising demand for electric vans, which constituted 5.5% of new registrations in 2022. Battery electric vehicles (BEVs) dominated this category, and in 2023, newly registered BEVs surged by 25%, while registrations of plug-in hybrid vehicles remained stable. This increase in vehicle demand and production underscores the necessity for safety-certified electronic control units (ECUs) and layered safety architectures, thereby benefiting the overall functional safety market within the automotive sector in Europe.

Strategic Insights

Market Segmentation Analysis

The Europe Functional Safety Market is segmented based on various criteria:

By Offering: The market is divided into Components and Services, with the Components segment leading in 2024.

By System: It includes Emergency Shutdown Systems (ESD), High Integrity Pressure Protection Systems (HIPPS), Burner Management Systems (BMS), Fire and Gas Monitoring, Turbo Machinery Control (TMC), and others. The ESD segment was the market leader in 2024.

By End-user Industry: This includes Power Generation, Oil and Gas, Chemicals, Pharmaceuticals, Food and Beverages, among others, with Power Generation dominating the market in 2024.

Market Outlook

The rapidly expanding electric vehicle (EV) industry is a significant driver of growth in the functional safety market. The International Energy Agency (IEA) reported that in 2023, nearly 14 million new electric vehicles were registered globally, bringing the total to 40 million. This represents a remarkable 35% year-on-year increase, with over 250,000 new electric cars registered weekly. Electric vehicles accounted for approximately 18% of total car sales in 2023, up from 14% in 2022, with BEVs making up 70% of the electric car stock.

Government incentives and stricter emissions regulations are propelling the shift from traditional internal combustion engines to zero-emission vehicles. In the US, for instance, tax credits of up to US\$ 7,500 for new electric vehicles and US\$ 4,000 for used ones are encouraging this transition. As the electric vehicle market matures, the demand for advanced technologies such as advanced driver assistance systems (ADAS), battery management systems, and autonomous driving capabilities is increasing. Each of these technologies must adhere to stringent safety standards to ensure the protection of drivers and passengers, necessitating thorough functional safety assessments to prevent failures that could lead to accidents.

Country Insights

The Europe Functional Safety Market is further segmented by country, including Germany, France, the United Kingdom, Italy, Russia, and the Rest of Europe. The Rest of Europe held the largest market share in 2024, with countries like Norway, the Netherlands, Switzerland, Spain, Sweden, and Poland showing significant growth in their oil and gas and chemical industries.

For instance, the Netherlands ranks highly in natural gas supply and production, and in October 2023, it began constructing a 1,200 km hydrogen pipeline, with the first section expected to be operational by 2025. Spain is also expanding its chemical production capabilities, with companies like Covestro and AkzoNobel investing in new facilities to enhance production capacity. This growth in the oil and gas and chemical sectors is driving demand for functional safety systems across the region.

Company Profiles

Key players in the Europe Functional Safety Market include ABB Ltd, Schneider Electric SE, Emerson Electric Co, Honeywell International Inc, Rockwell Automation Inc, Siemens AG, OMRON Corp, Yokogawa Electric Corp, GE Vernova Inc., and HIMA Paul Hildebrandt GmbH. These companies are employing various strategies such as expansion, product innovation, and mergers and acquisitions to enhance their market presence and offer innovative solutions to their customers.

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