

Functional Safety Market Report by Device Type (Safety Sensors, Safety Controllers/Modules/Relays, Safety Switches, Programmable Safety Systems, Emergency Stop Devices, Final Control Elements, and Others), Safety System (Burner Management System (BMS), Turbomachinery Control System (TMC), High-Integrity Pressure Protection System (HIPPS), Fire and Gas Monitoring Control System, Emergency Shutdown System (ESD), Supervisory Control and Data Acquisition System (SCADA), Distributed Control System (DCS)), End Use Industry (Oil and Gas, Power Generation, Food and Beverage, Pharmaceutical, Automotive, and Others), and Region 2024-2032

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Abstracts

The global functional safety market size reached US\$ 5.9 Billion in 2023. Looking forward, IMARC Group expects the market to reach US\$ 14.0 Billion by 2032, exhibiting a growth rate (CAGR) of 9.9% during 2024-2032.

Functional safety refers to the general safety of a plant and equipment using safety-related systems, such as alarm systems, safety instrumented systems (SIS), and basic process control systems (BPCS). It covers fault detection, physical or systemic redundancy, and transitioning to a safe state that reduces the overall risk caused by faults in the electronic system. As a result, it finds extensive applications in the pharmaceutical, automotive, oil and gas, and food and beverage (F&B) industries

worldwide.

Functional Safety Market Trends:

The increasing requirement of safety systems for personnel and asset protection on account of stringent government regulations represents one of the key factors impelling the growth of the market. Besides this, the introduction of the industrial internet of things (IIoT), also known as Industry 4.0, is offering new opportunities for integrated safety and compliance services. It enables industries and enterprises to have better efficiency and reliability in their operations. Moreover, a key concept in Industry 4.0 is cyber-physical systems (CPS), which consists of storage systems, smart machines, and production facilities capable of autonomously exchanging information, triggering actions, and controlling each other independently. This, coupled with the increasing focus of market players on product innovations to offer better services, is driving the overall sales and profitability. Furthermore, there is an increase in the utilization of safety sensor switches in machines and other industrial applications to inhibit accidental contact with live electrical connections. Factors like the rising automation in different industry verticals and the rising number of power projects to meet the escalating demand for energy across the globe are anticipated to offer lucrative growth opportunities to industry investors and strengthen the growth of the market.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global functional safety market report, along with forecasts at the global, regional and country level from 2024-2032. Our report has categorized the market based on device type, safety system and end use industry.

Breakup by Device Type:

- Safety Sensors
- Safety Controllers/Modules/Relays
- Safety Switches
- Programmable Safety Systems
- Emergency Stop Devices
- Final Control Elements
- Others

Breakup by Safety System:

- Burner Management System (BMS)

Turbomachinery Control System (TMC)
High-Integrity Pressure Protection System (HIPPS)
Fire and Gas Monitoring Control System
Emergency Shutdown System (ESD)
Supervisory Control and Data Acquisition System (SCADA)
Distributed Control System (DCS)

Breakup by End Use Industry:

Oil and Gas
Power Generation
Food and Beverage
Pharmaceutical
Automotive
Others

Breakup by Region:

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

Competitive Landscape:

The competitive landscape of the industry has also been examined along with the profiles of the key players being ABB Ltd., Emerson Electric Co., General Electric Company, Honeywell International Inc., Intel Corporation, Johnson Controls, OMRON Corporation, Panasonic Corporation, Pepperl+Fuchs SE, Rockwell Automation Inc., Schneider Electric SE, Siemens AG and Yokogawa Electric Corporation.

Key Questions Answered in This Report

1. What was the size of the global functional safety market in 2023?
2. What is the expected growth rate of the global functional safety market during 2024-2032?
3. What are the key factors driving the global functional safety market?
4. What has been the impact of COVID-19 on the global functional safety market?
5. What is the breakup of the global functional safety market based on the device type?
6. What is the breakup of the global functional safety market based on the safety system?
7. What is the breakup of the global functional safety market based on the end use industry?
8. What are the key regions in the global functional safety market?
9. Who are the key players/companies in the global functional safety market?

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