

# Process Automation And Instrumentation Market Size, Share & Trends Analysis Report By Instrument Type (Field Instruments, Control Valves & Analyzers), By Solution, By End Use, By Region, And Segment Forecasts, 2025 - 2030

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## Abstracts

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### Market Size & Trends

The global process automation and instrumentation market size was estimated at USD 74.45 billion in 2024 and is projected to grow at a CAGR of 5.9% from 2025 to 2030. The market growth is largely fueled by the increasing demand from industries to optimize operational costs while simultaneously boosting productivity. Companies are increasingly investing in smart factories that integrate cyber-physical systems, IoT, and real-time data analytics.

The shift towards cloud-based automation solutions is gaining traction in the market, driven by the increasing need for scalable, flexible, and cost-efficient platforms that enable real-time monitoring and management of cloud resources. These factors are expected to present lucrative growth opportunities for market expansion.

The integration of cutting-edge technologies such as Internet of Things (IoT), artificial intelligence (AI), and machine learning (ML) is transforming the process automation and instrumentation industry. IoT connects sensors and systems to centralized platforms, enabling real-time data collection and predictive maintenance to prevent downtime. AI and ML optimize process parameters, improve yield, and reduce energy consumption by analyzing historical and real-time data. These technologies enable adaptive control

systems that evolve with changing conditions, driving the transition towards smarter, more flexible, and proactive automation in digital plants and smart factories and thereby driving the process automation and instrumentation industry expansion.

Moreover, the growing shift toward remote monitoring and control solutions is a major trend within the process automation and instrumentation industry. This trend is largely driven by the need to improve safety and operational flexibility, especially in hazardous or geographically dispersed environments such as offshore oil rigs, chemical plants, and mining operations. Industries are increasingly adopting remote automation solutions to enhance safety protocols, reduce labor costs, and maintain uninterrupted operations, which is expected to drive the market growth in the coming years.

Furthermore, the global push toward Industry 4.0 and smart manufacturing is significantly influencing the process automation and instrumentation industry. Industry 4.0 encompasses the integration of cyber-physical systems, advanced robotics, big data analytics, and digital twins into manufacturing and process industries. This transformation enables the creation of highly automated, interconnected, and intelligent production environments that can self-optimize and adapt in real-time, which is further driving the market expansion.

Moreover, Governments worldwide are investing heavily in infrastructure development and manufacturing capabilities to support economic growth, which in turn is driving the adoption of automation technologies to meet increasing production demands. For instance, the pharmaceutical industry's stringent regulatory requirements for process control and quality assurance are creating a strong need for precise instrumentation and automated monitoring systems. Such factors are expected to drive the market growth in the coming years.

## Global Process Automation And Instrumentation Market Report Segmentation

This report forecasts revenue growth at global, regional, and country levels and provides an analysis of the latest technological trends in each of the sub-segments from 2018 to 2030. For this study, Grand View Research has segmented the global process automation and instrumentation market report based on instrument type, solution, and end use:

### Instrument Type Outlook (Revenue, USD Billion, 2018 - 2030)

Field Instruments

Control Valves & Analyzers

Solution Outlook (Revenue, USD Billion, 2018 - 2030)

Programmable Logic Controllers (PLC)

Supervisory Control and Data Acquisition (SCADA)

Distributed Control Systems (DCS)

Human Machine Interface (HMI)

Advanced Process Control (APC)

Manufacturing Execution Systems (MES)

Safety Instrumented Systems (SIS)

End Use Outlook (Revenue, USD Billion, 2018 - 2030)

Automotive

Chemical

Energy & Utilities

Food & Beverage

Metals & Mining

Oil & Gas

Pharmaceutical

Pulp & Paper

Aerospace & Defense

Others

Regional Outlook (Revenue, USD Billion, 2018 - 2030)

North America

U.S.

Canada

Mexico

Europe

UK

Germany

France

Asia Pacific

China

Japan

India

South Korea

Australia

Latin America

Brazil

Middle East & Africa

Saudi Arabia

South Africa

UAE

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