

North America Process Instrumentation Market Size and Forecast (2021 - 2031)

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Abstracts

The North America Process Instrumentation Market is projected to grow significantly, reaching an estimated US\$ 10,782.2 million by 2031, up from US\$ 7,549.8 million in 2024. This growth represents a compound annual growth rate (CAGR) of 5.5% from 2025 to 2031.

Executive Summary and Market Analysis

The North American market encompasses the United States, Canada, and Mexico, and is heavily influenced by federal regulations, particularly those set by the U.S. Environmental Protection Agency (EPA). These regulations are crucial for environmental and emissions monitoring, mandating the use of advanced air quality monitoring technologies to comply with the National Ambient Air Quality Standards (NAAQS). As a result, there is a growing demand for precise and reliable instrumentation that can provide accurate data and real-time reporting. This regulatory environment fosters the need for connected instrumentation that supports remote monitoring and automated alerts, enhancing operational efficiency.

Moreover, the increasing focus on quality assurance and quality control (QA/QC) has led to a heightened demand for certified calibration instruments and standards-compliant test kits. The stringent regulatory landscape that requires rigorous data collection and technological advancement is a significant driver for the process instrumentation market in North America.

Strategic Insights

Market Segmentation Analysis

The North America Process Instrumentation Market can be segmented by technology, application, and specific instruments:

By Technology: The market is divided into Flow Meters, Pressure and Temperature Sensors, Analytical Instruments, and Level Meters. In 2024, Flow Meters held the largest market share.

By Flow Meter: This segment includes Mass Flow, Electromagnetic Flow (EMF), Vortex, Ultrasonic, and others, with Ultrasonic Flow Meters leading the market in 2024.

By Level Meter: This includes High Frequency Radar, Time Domain Reflectometry (TDR), and others, where TDR was the market leader in 2024.

By Application: The market is segmented into various industries such as Oil and Gas, Energy and Power, Water and Wastewater, Food and Beverage, Marine, Petrochemical, Chemical, and others. The Chemical sector held the largest share in 2024.

Market Outlook

The global trend towards industrial automation is significantly impacting the North America Process Instrumentation Market. Manufacturers are increasingly recognizing the benefits of automation, including reduced capital expenditure, improved product quality, and faster time to market. Automation technologies are streamlining operations by minimizing the need for manual labor and accelerating production processes.

Key players in the market, such as Mitsubishi Electric, Omron Corp., and Rockwell Automation, are actively developing and launching industrial automation solutions. For instance, Rockwell Automation introduced the FactoryTalk OptiX in April 2023, a cloud-enabled human-machine interface (HMI) platform that allows users to create, test, and launch applications from any web browser, enhancing connectivity and collaboration in industrial settings.

Process instrumentation plays a vital role in industrial automation by utilizing sensors and transmitters to monitor critical parameters such as temperature, pressure, and flow rates tailored to specific operational needs. The data collected by these instruments is

essential for understanding equipment performance and manufacturing processes, enabling operators and control systems to make informed decisions swiftly. This capability supports preventive maintenance, allowing issues to be addressed before they escalate, and optimizes processes for greater efficiency. Consequently, the rise of industrial automation is a key driver of growth in the process instrumentation market.

Country Insights

The North America Process Instrumentation Market is further segmented by country, with the United States holding the largest market share in 2024. The demand for real-time monitoring of chemical processes is particularly critical in the U.S., especially in refineries and petrochemical plants, where accurate measurement of various streams in challenging environments is essential.

Recent developments highlight this trend. For example, in October 2023, HORIBA Instruments Incorporated acquired Process Instruments, expanding its commercial opportunities in the U.S. market, particularly in refinery and petrochemical solutions. Additionally, in January 2025, SICK and Endress+Hauser announced a strategic partnership in process automation, integrating SICK's advanced gas analysis and flow measurement technologies into Endress+Hauser's instrumentation portfolio.

Company Profiles

Key players in the North America Process Instrumentation Market include ABB Ltd, Schneider Electric SE, Emerson Electric Co, Honeywell International Inc, Siemens AG, Yokogawa Electric Corp, Fuji Electric Co Ltd, ENDRESS + HAUSER GROUP SERVICES AG, Metso Outotec Corp, and Brooks Instrument. These companies are employing various strategies such as market expansion, product innovation, and mergers and acquisitions to enhance their offerings and increase market share.

In conclusion, the North America Process Instrumentation Market is poised for substantial growth driven by regulatory demands, technological advancements, and the increasing adoption of industrial automation.

Contents

1. INTRODUCTION

- 1.1 Report Guidance
- 1.2 Market Segmentation

2. EXECUTIVE SUMMARY

- 2.1 Key Insights
- 2.2 Market Attractiveness

3. RESEARCH METHODOLOGY

- 3.1 Secondary Research
- 3.2 Primary Research
 - 3.2.1 Hypothesis formulation:
 - 3.2.2 Macroeconomic factor analysis:
 - 3.2.3 Developing base number:
 - 3.2.4 Data Triangulation:
 - 3.2.5 Country-level data:

4. PROCESS INSTRUMENTATION MARKET LANDSCAPE

- 4.1 Market Overview
- 4.2 PEST Analysis
- 4.3 Ecosystem Analysis
- 4.4 List of Vendors in the Value Chain

5. NORTH AMERICA PROCESS INSTRUMENTATION MARKET - KEY MARKET DYNAMICS

- 5.1 Market Drivers
- 5.2 Market Restraints
- 5.3 Market Opportunities
- 5.4 Future Trends
- 5.5 Impact of Drivers and Restraints:

6. PROCESS INSTRUMENTATION MARKET - NORTH AMERICA MARKET

ANALYSIS

6.1 North America Process Instrumentation Market Revenue (US\$ Million), 2024 - 2031

6.2 North America Process Instrumentation Market Forecast and Analysis

7. NORTH AMERICA PROCESS INSTRUMENTATION MARKET REVENUE ANALYSIS - BY TECHNOLOGY

7.1 Flow Meter

7.1.1 Overview

7.1.2 Flow Meter: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

7.2 Pressure and Temperature Sensor

7.2.1 Overview

7.2.2 Pressure and Temperature Sensor: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

7.3 Analytical Instrument

7.3.1 Overview

7.3.2 Analytical Instrument: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

7.4 Level Meter

7.4.1 Overview

7.4.2 Level Meter: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

8. NORTH AMERICA PROCESS INSTRUMENTATION MARKET REVENUE ANALYSIS - BY FLOW METER

8.1 Mass Flow

8.1.1 Overview

8.1.2 Mass Flow: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

8.2 EMF

8.2.1 Overview

8.2.2 EMF: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

8.3 Vortex

8.3.1 Overview

8.3.2 Vortex: North America Process Instrumentation Market - Revenue and Forecast,

2021 - 2031 (US\$ Million)

8.4 Ultrasonic

8.4.1 Overview

8.4.2 Ultrasonic: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

8.5 Others

8.5.1 Overview

8.5.2 Others: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

9. NORTH AMERICA PROCESS INSTRUMENTATION MARKET REVENUE ANALYSIS - BY LEVEL METER

9.1 High Frequency Radar

9.1.1 Overview

9.1.2 High Frequency Radar: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

9.2 TDR

9.2.1 Overview

9.2.2 TDR: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

9.3 Others

9.3.1 Overview

9.3.2 Others: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

10. NORTH AMERICA PROCESS INSTRUMENTATION MARKET REVENUE ANALYSIS - BY APPLICATION

10.1 Oil and Gas

10.1.1 Overview

10.1.2 Oil and Gas: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

10.2 Energy and Power

10.2.1 Overview

10.2.2 Energy and Power: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

10.3 Water and Wastewater

10.3.1 Overview

10.3.2 Water and Wastewater: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

10.4 Food and Beverage

10.4.1 Overview

10.4.2 Food and Beverage: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

10.5 Marine

10.5.1 Overview

10.5.2 Marine: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

10.6 Petrochemical

10.6.1 Overview

10.6.2 Petrochemical: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

10.7 Chemical

10.7.1 Overview

10.7.2 Chemical: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

10.8 Others

10.8.1 Overview

10.8.2 Others: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

11. NORTH AMERICA PROCESS INSTRUMENTATION MARKET - COUNTRY ANALYSIS

11.1 North America

11.1.1 North America Process Instrumentation Market Revenue and Forecast and Analysis - by Country

11.1.1.1 North America Process Instrumentation Market Revenue and Forecast and Analysis - by Country

11.1.1.2 United States: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

11.1.1.2.1 United States: North America Process Instrumentation Market Share - by Technology

11.1.1.2.2 United States: North America Process Instrumentation Market Share - by Flow Meter

11.1.1.2.3 United States: North America Process Instrumentation Market Share - by Level Meter

11.1.2.2.4 United States: North America Process Instrumentation Market Share - by Application

11.2.3.3 Canada: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

11.2.3.3.1 Canada: North America Process Instrumentation Market Share - by Technology

11.2.3.3.2 Canada: North America Process Instrumentation Market Share - by Flow Meter

11.2.3.3.3 Canada: North America Process Instrumentation Market Share - by Level Meter

11.2.3.3.4 Canada: North America Process Instrumentation Market Share - by Application

11.3.4.4 Mexico: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

11.3.4.4.1 Mexico: North America Process Instrumentation Market Share - by Technology

11.3.4.4.2 Mexico: North America Process Instrumentation Market Share - by Flow Meter

11.3.4.4.3 Mexico: North America Process Instrumentation Market Share - by Level Meter

11.3.4.4.4 Mexico: North America Process Instrumentation Market Share - by Application

12 COMPETITIVE LANDSCAPE

12.1 Heat Map Analysis by Key Players

12.2 Company Positioning & Concentration

12.3 Company Share Analysis, 2024

13 INDUSTRY LANDSCAPE

13.1 Overview

13.2 New Product Development

13.3 Merger and Acquisition

13.4 Other Strategic Developments

14 COMPANY PROFILES

14.1 ABB Ltd

- 14.1.1 Key Facts
- 14.1.2 Business Description
- 14.1.3 Products and Services
- 14.1.4 Financial Overview
- 14.1.5 SWOT Analysis
- 14.1.6 Key Developments
- 14.2 Schneider Electric SE
 - 14.2.1 Key Facts
 - 14.2.2 Business Description
 - 14.2.3 Products and Services
 - 14.2.4 Financial Overview
 - 14.2.5 SWOT Analysis
 - 14.2.6 Key Developments
- 14.3 Emerson Electric Co
 - 14.3.1 Key Facts
 - 14.3.2 Business Description
 - 14.3.3 Products and Services
 - 14.3.4 Financial Overview
 - 14.3.5 SWOT Analysis
 - 14.3.6 Key Developments
- 14.4 Honeywell International Inc
 - 14.4.1 Key Facts
 - 14.4.2 Business Description
 - 14.4.3 Products and Services
 - 14.4.4 Financial Overview
 - 14.4.5 SWOT Analysis
 - 14.4.6 Key Developments
- 14.5 Siemens AG
 - 14.5.1 Key Facts
 - 14.5.2 Business Description
 - 14.5.3 Products and Services
 - 14.5.4 Financial Overview
 - 14.5.5 SWOT Analysis
 - 14.5.6 Key Developments
- 14.6 Yokogawa Electric Corp
 - 14.6.1 Key Facts
 - 14.6.2 Business Description
 - 14.6.3 Products and Services
 - 14.6.4 Financial Overview

- 14.6.5 SWOT Analysis
- 14.6.6 Key Developments
- 14.7 Fuji Electric Co Ltd
 - 14.7.1 Key Facts
 - 14.7.2 Business Description
 - 14.7.3 Products and Services
 - 14.7.4 Financial Overview
 - 14.7.5 SWOT Analysis
 - 14.7.6 Key Developments
- 14.8 ENDRESS + HAUSER GROUP SERVICES AG
 - 14.8.1 Key Facts
 - 14.8.2 Business Description
 - 14.8.3 Products and Services
 - 14.8.4 Financial Overview
 - 14.8.5 SWOT Analysis
 - 14.8.6 Key Developments
- 14.9 Metso Outotec Corp
 - 14.9.1 Key Facts
 - 14.9.2 Business Description
 - 14.9.3 Products and Services
 - 14.9.4 Financial Overview
 - 14.9.5 SWOT Analysis
 - 14.9.6 Key Developments
- 14.10 Brooks Instrument
 - 14.10.1 Key Facts
 - 14.10.2 Business Description
 - 14.10.3 Products and Services
 - 14.10.4 Financial Overview
 - 14.10.5 SWOT Analysis
 - 14.10.6 Key Developments

15. APPENDIX

15.1 About The Insight Partners

List Of Tables

LIST OF TABLES

Table 1. North America Process Instrumentation Market Segmentation

Table 2. List of Vendors

Table 3. North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

Table 4. North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million) - by Technology

Table 5. North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million) - by Flow Meter

Table 6. North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million) - by Level Meter

Table 7. North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million) - by Application

Table 8. North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million) - by Country

Table 9. United States: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million) - by Technology

Table 10. United States: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million) - by Flow Meter

Table 11. United States: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million) - by Level Meter

Table 12. United States: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million) - by Application

Table 13. Canada: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million) - by Technology

Table 14. Canada: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million) - by Flow Meter

Table 15. Canada: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million) - by Level Meter

Table 16. Canada: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million) - by Application

Table 17. Mexico: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million) - by Technology

Table 18. Mexico: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million) - by Flow Meter

Table 19. Mexico: North America Process Instrumentation Market - Revenue and

Forecast, 2021 - 2031 (US\$ Million) - by Level Meter

Table 20. Mexico: North America Process Instrumentation Market - Revenue and

Forecast, 2021 - 2031 (US\$ Million) - by Application

Table 21. Heat Map Analysis by Key Players

List Of Figures

LIST OF FIGURES

Figure 1. North America Process Instrumentation Market Segmentation - Country

Figure 2. PEST Analysis

Figure 3. Ecosystem: Process Instrumentation Market

Figure 4. North America Process Instrumentation Market - Key Market Dynamics

Figure 5. Impact Analysis of Drivers and Restraints

Figure 6. North America Process Instrumentation Market Revenue (US\$ Million), 2024 - 2031

Figure 7. North America Process Instrumentation Market Share (%) - by Technology, 2024 and 2031

Figure 8. Flow Meter: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

Figure 9. Pressure and Temperature Sensor: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

Figure 10. Analytical Instrument: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

Figure 11. Level Meter: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

Figure 12. North America Process Instrumentation Market Share (%) - by Flow Meter, 2024 and 2031

Figure 13. Mass Flow: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

Figure 14. EMF: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

Figure 15. Vortex: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

Figure 16. Ultrasonic: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

Figure 17. Others: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

Figure 18. North America Process Instrumentation Market Share (%) - by Level Meter, 2024 and 2031

Figure 19. High Frequency Radar: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

Figure 20. TDR: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

Figure 21. Others: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

Figure 22. North America Process Instrumentation Market Share (%) - by Application, 2024 and 2031

Figure 23. Oil and Gas: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

Figure 24. Energy and Power: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

Figure 25. Water and Wastewater: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

Figure 26. Food and Beverage: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

Figure 27. Marine: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

Figure 28. Petrochemical: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

Figure 29. Chemical: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

Figure 30. Others: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

Figure 31. North America Process Instrumentation Market Breakdown by Key Countries, 2024 and 2031 (%)

Figure 32. United States: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

Figure 33. Canada: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

Figure 34. Mexico: North America Process Instrumentation Market - Revenue and Forecast, 2021 - 2031 (US\$ Million)

Figure 35. Company Positioning & Concentration

Figure 36. Global Company Share Analysis, 2024

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