

Process Automation and Instrumentation Market with COVID-19 Impact Analysis by Instrument (Field Instruments, Process Analyzers), Solution (PLC, DCS, SCADA, HMI, Functional Safety, MES), Industry and Region - Global Forecast to 2027

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Abstracts

The global process automation and instrumentation market size is expected to grow from USD 66.2 billion in 2022 to USD 86.6 billion by 2026, at a CAGR of 5.5%. The growth of this market can be attributed to the growing importance of energy efficiency and cost optimization, increased productivity, minimized errors and better scalability; the increasing use of digital technologies such as IIoT, machine learning, and artificial intelligence; and the rising emphasis on industrial automation and optimum utilization of resources. However, COVID-19 pandemic had a negative impact on the growth of various process industries which is likely to affect the demand for process automation and instrumentation products in some regions.

'Oil & gas industry is leading the global process automation and instrumentation market'

The oil & gas industry is leading the global process automation and instrumentation market at present, and a similar trend is likely to continue in the next few years. Oil and gas companies are increasingly leveraging process automation and instrumentation to acquire a constant stream of data that can be mined, aggregated into big data, and transformed into smart data through analytics and detailed analysis. Major components used for process automation and instrumentation in the oil & gas industry are solutions, such as MES and SCADA, and instruments, such as control valves, actuators, positioners, flowmeters, and transmitters. The oil demand can be met by increasing the productivity and efficiency of the oil and gas companies. Therefore, it becomes

necessary for industry players to implement solutions to improve manufacturing processes. This can ultimately be achieved by adopting process automation and instrumentation solutions such as HMI, SCADA, and PLC.

“Field instruments dominated the global process automation and instrumentation market in 2021”

Field instruments assist in managing plant assets, enhancing plant safety, and optimizing overall production processes through data acquisition, control, and measurement. It is necessary to obtain key information regarding major parameters, including temperature, pressure, and level, to monitor and control processes quickly, smoothly, securely, and accurately, as well as to achieve optimum productivity. These instruments play a pivotal role in measuring and controlling process parameters in process industries. For example, in June 2021, Emerson Electric Co. introduced a new Rosemount 1408H level transmitter, specifically designed for the food & beverages industry. The constant release of advanced products to automate industrial processes and measure and control different process parameters is expected to drive the process automation and instrumentation market for field instruments.

“Asia Pacific to grow at the highest CAGR during the forecast period of 2022 to 2027”

In terms of region, Asia Pacific led the global process automation and instrumentation market, followed by North America and Europe in 2021. In Asia Pacific, the demand for process automation and instrumentation solutions is growing from the oil & gas and food & beverages industries due to the ever-increasing population in Asia Pacific. Increasing investments in clean energy infrastructure in Asia Pacific to meet escalating demand for electricity and reduce reliance on fossil fuels to generate energy. Also, the process automation and instrumentation market for the pharmaceuticals industry in this region is expected to grow at the highest CAGR from 2022 to 2027 due to changing regulatory environment. Also, advantages such as higher reliability and flexibility and greater speed and accuracy offered by process automation encourage pharma companies to adopt process automation and instrumentation solutions.

Breakdown of the profiles of primary participants:

By Company Type: Tier 1 - 40%, Tier 2 - 25%, and Tier 3 - 35%

By Designation: C-level Executives - 47%, Directors - 32%, and others - 21%

By Region: North America - 29%, Europe – 27%, Asia Pacific - 38%, and RoW - 6%

Major players profiled in this report are as follows: ABB Ltd (Switzerland), Emerson Electric Co. (US), Siemens (Germany), General Electric Company (US), and Schneider Electric (France), and others.

Research Coverage

In this report, the process automation and instrumentation market has been segmented based on instrument, solution, industry, and region. The process automation and instrumentation market based on instrument has been segmented into field instruments and process analyzers. Based on solution, the market is segmented into PLC, DCS, SCADA, HMI, functional safety, and MES. Based on industry, the market has been segmented into oil & gas, chemicals, pulp & paper, pharmaceuticals, metals & mining, food & beverages, energy & power, water & wastewater treatment, and others. The study also forecasts the size of the market in four main regions—North America, Europe, APAC, and RoW.

Key Benefits of Buying the Report:

The report would help market leaders/new entrants in this market in the following ways:

This report segments of the process automation and instrumentation market comprehensively and provides the closest approximation of the overall market size and subsegments that include instrument, solution, industry, and region.

The report would help stakeholders understand the pulse of the market and provide them with information on key drivers, restraints, challenges, and opportunities pertaining to the process automation and instrumentation market.

This report would help stakeholders understand their competitors better and gain more insights to enhance their position in the business.

The competitive landscape section includes the competitor ecosystem, as well as growth strategies such as product launches and acquisitions carried out by major market players

Contents

1 INTRODUCTION

1.1 STUDY OBJECTIVES

1.2 MARKET DEFINITION

1.2.1 INCLUSIONS AND EXCLUSIONS

1.3 STUDY SCOPE

1.3.1 MARKETS COVERED

FIGURE 1 PROCESS AUTOMATION AND INSTRUMENTATION MARKET: SEGMENTATION

1.3.2 GEOGRAPHIC SCOPE

1.3.3 YEARS CONSIDERED

1.4 CURRENCY & PRICING

1.5 LIMITATIONS

1.6 STAKEHOLDERS

1.7 SUMMARY OF CHANGES

2 RESEARCH METHODOLOGY

2.1 RESEARCH DATA

FIGURE 2 PROCESS AUTOMATION AND INSTRUMENTATION MARKET: RESEARCH DESIGN

2.1.1 SECONDARY AND PRIMARY RESEARCH

2.1.2 SECONDARY DATA

2.1.2.1 List of major secondary sources

2.1.2.2 Key data from secondary sources

2.1.3 PRIMARY DATA

2.1.3.1 Primary interviews with experts

2.1.3.2 Key data from primary sources

2.1.3.3 Key industry insights

2.1.3.4 Breakdown of primaries

2.2 MARKET SIZE ESTIMATION

2.2.1 BOTTOM-UP APPROACH

2.2.1.1 Approach for arriving at market size by bottom-up analysis (demand side)

FIGURE 3 PROCESS AUTOMATION AND INSTRUMENTATION MARKET: BOTTOM-UP APPROACH

2.2.2 TOP-DOWN APPROACH

2.2.2.1 Approach for capturing market size by top-down analysis
(supply side)

FIGURE 4 PROCESS AUTOMATION AND INSTRUMENTATION MARKET:
TOP-DOWN APPROACH

FIGURE 5 MARKET SIZE ESTIMATION METHODOLOGY FOR LEVEL
TRANSMITTERS MARKET USING SUPPLY-SIDE ANALYSIS

2.3 MARKET BREAKDOWN AND DATA TRIANGULATION

FIGURE 6 DATA TRIANGULATION

2.4 RESEARCH ASSUMPTIONS

2.5 RISK ASSESSMENT

3 EXECUTIVE SUMMARY

FIGURE 7 IMPACT OF COVID-19 ON PROCESS AUTOMATION AND
INSTRUMENTATION MARKET

3.1 REALISTIC SCENARIO

3.2 PESSIMISTIC SCENARIO

3.3 OPTIMISTIC SCENARIO

FIGURE 8 FIELD INSTRUMENTS TO ACCOUNT FOR LARGER MARKET SHARE
THAN PROCESS ANALYZERS THROUGHOUT FORECAST PERIOD

FIGURE 9 DCS TO HOLD LARGEST MARKET SHARE DURING FORECAST PERIOD

FIGURE 10 OIL & GAS TO ACCOUNT FOR LARGEST SHARE OF PROCESS
AUTOMATION AND INSTRUMENTATION MARKET BETWEEN 2022 AND 2027

FIGURE 11 ASIA PACIFIC TO EXHIBIT HIGHEST CAGR IN PROCESS
AUTOMATION AND INSTRUMENTATION MARKET DURING FORECAST PERIOD

4 PREMIUM INSIGHTS

4.1 ATTRACTIVE GROWTH OPPORTUNITIES FOR PROCESS AUTOMATION AND
INSTRUMENTATION MARKET

FIGURE 12 RISING ADOPTION OF PROCESS AUTOMATION AND
INSTRUMENTATION SOLUTIONS IN VARIOUS INDUSTRIES TO INCREASE
OPERATIONAL EFFICIENCY WOULD FUEL MARKET GROWTH DURING
FORECAST PERIOD

4.2 PROCESS AUTOMATION AND INSTRUMENTATION MARKET, BY INSTRUMENT

FIGURE 13 FIELD INSTRUMENTS TO CAPTURE LARGER MARKET SHARE
FROM 2022 TO 2027

4.3 PROCESS AUTOMATION AND INSTRUMENTATION MARKET, BY SOLUTION

FIGURE 14 MANUFACTURING EXECUTION SYSTEM (MES) TO REGISTER

HIGHEST

CAGR IN PROCESS AUTOMATION AND INSTRUMENTATION MARKET FROM 2022 TO 2027

4.4 PROCESS AUTOMATION AND INSTRUMENTATION MARKET IN NORTH AMERICA, BY COUNTRY

FIGURE 15 US TO ACCOUNT FOR LARGEST SHARE OF NORTH AMERICAN PROCESS AUTOMATION AND INSTRUMENTATION MARKET IN 2027

4.5 PROCESS AUTOMATION AND INSTRUMENTATION MARKET, BY INDUSTRY

FIGURE 16 OIL & GAS INDUSTRY TO HOLD MAJORITY MARKET SHARE IN 2027

4.6 PROCESS AUTOMATION AND INSTRUMENTATION MARKET, BY COUNTRY

FIGURE 17 INDIA TO EXHIBIT HIGHEST CAGR IN PROCESS AUTOMATION AND INSTRUMENTATION MARKET FROM 2022 TO 2027

5 MARKET OVERVIEW

5.1 INTRODUCTION

5.2 MARKET DYNAMICS

FIGURE 18 PROCESS AUTOMATION AND INSTRUMENTATION MARKET: DRIVERS, RESTRAINTS, OPPORTUNITIES, AND CHALLENGES

5.2.1 DRIVERS

5.2.1.1 Increasing focus of manufacturing firms on achieving cost saving and better efficiency

5.2.1.2 Growing need for efficient utilization of resources

5.2.1.3 Rising trend of connected enterprises in process industries

FIGURE 19 PROCESS AUTOMATION AND INSTRUMENTATION MARKET: IMPACT ANALYSIS OF DRIVERS

5.2.2 RESTRAINTS

5.2.2.1 High implementation and maintenance costs associated with process automation

5.2.2.2 Sharp decline in revenue of major end-user industries such as oil & gas and energy & power

FIGURE 20 PROCESS AUTOMATION AND INSTRUMENTATION MARKET: IMPACT ANALYSIS OF RESTRAINTS

5.2.3 OPPORTUNITIES

5.2.3.1 Growing adoption of Industry 4.0 by manufacturing firms

5.2.3.2 Surging demand for safety automation systems across process industries

5.2.3.3 Rising need for efficient multivariable pressure transmitters

5.2.3.4 Increasing adoption of IIoT across industries

FIGURE 21 PROCESS AUTOMATION AND INSTRUMENTATION MARKET: IMPACT ANALYSIS OF OPPORTUNITIES

5.2.4 CHALLENGES

5.2.4.1 Cyberattacks and security threats

5.2.4.2 Shortage of skilled personnel to operate sophisticated automation systems

FIGURE 22 PROCESS AUTOMATION AND INSTRUMENTATION MARKET: IMPACT ANALYSIS OF CHALLENGES

5.3 VALUE CHAIN ANALYSIS

FIGURE 23 VALUE CHAIN: PROCESS AUTOMATION AND INSTRUMENTATION MARKET

5.4 ECOSYSTEM ANALYSIS

FIGURE 24 PROCESS AUTOMATION AND INSTRUMENTATION MARKET: ECOSYSTEM ANALYSIS

TABLE 1 PROCESS AUTOMATION AND INSTRUMENTATION MARKET ECOSYSTEM: KEY PLAYERS

5.5 TRENDS/DISRUPTIONS IMPACTING CUSTOMERS' BUSINESS

FIGURE 25 REVENUE SHIFT AND NEW REVENUE POCKETS FOR PLAYERS IN PROCESS AUTOMATION AND INSTRUMENTATION MARKET

5.6 PORTER'S FIVE FORCES ANALYSIS

TABLE 2 PROCESS AUTOMATION AND INSTRUMENTATION MARKET: PORTER'S FIVE FORCES ANALYSIS

5.6.1 INTENSITY OF COMPETITIVE RIVALRY

5.6.2 BARGAINING POWER OF SUPPLIERS

5.6.3 BARGAINING POWER OF BUYERS

5.6.4 THREAT OF SUBSTITUTES

5.6.5 THREAT OF NEW ENTRANTS

5.7 CASE STUDY ANALYSIS

TABLE 3 INDUSTRIAL NETWORKING SOLUTIONS (INS) HELPED ARB MIDSTREAM DEPLOY SCADA SOLUTIONS FOR NEW PIPELINE

TABLE 4 EMERSON HELPED CRUDE OIL PRODUCER TO REDUCE OPERATIONAL COSTS USING PRESSURE TRANSMITTERS

TABLE 5 AVEVA HELPED CITY OF BARCELONA EFFECTIVELY MANAGE RESOURCES AND INTEGRATE NEW PROCESSES AND FACILITIES

TABLE 6 COLOMBIAN OIL AND GAS COMPANY REDUCED MAINTENANCE COSTS AND INCREASED CYBER SECURITY FOR ITS ABB DISTRIBUTED CONTROL SYSTEMS

5.8 TECHNOLOGY ANALYSIS

5.8.1 IOT

5.8.1.1 IoT connectivity for process automation and instrumentation

5.8.2 ARTIFICIAL INTELLIGENCE

5.8.2.1 AI in process automation to reduce human intervention

5.8.3 PREDICTIVE MAINTENANCE

5.8.3.1 Maximum benefits of predictive maintenance

5.8.4 DIGITAL TWIN

5.8.4.1 Digital twin as foundation of Industry 4.0

5.9 PRICING ANALYSIS

5.9.1 LEVEL TRANSMITTERS

5.9.2 MES

TABLE 7 MANUFACTURING EXECUTION SYSTEM: AVERAGE PRICE ANALYSIS

5.9.3 FUNCTIONAL/INDUSTRIAL SAFETY COMPONENTS

TABLE 8 AVERAGE SELLING PRICE OF COMPONENTS

5.9.4 PROCESS ANALYZERS

5.9.5 DCS

TABLE 9 PRICE OF CONVENTIONAL DISTRIBUTED CONTROL SYSTEMS:

5.9.6 PLC

TABLE 10 PRICING ANALYSIS OF PROGRAMMABLE LOGIC CONTROLLER (PLC):

5.10 TRADE ANALYSIS

5.10.1 IMPORT SCENARIO FOR INSTRUMENTS AND APPARATUS FOR MEASURING OR CHECKING FLOW, LEVEL, PRESSURE OR OTHER VARIABLES

FIGURE 26 IMPORT DATA FOR INSTRUMENTS AND APPARATUS FOR MEASURING OR CHECKING FLOW, LEVEL, PRESSURE, OR OTHER VARIABLES, BY KEY COUNTRY, 2016?2020 (USD MILLION)

5.10.2 EXPORT SCENARIO FOR INSTRUMENTS AND APPARATUS FOR MEASURING OR CHECKING FLOW, LEVEL, PRESSURE, OR OTHER VARIABLES
FIGURE 27 EXPORT DATA FOR INSTRUMENTS AND APPARATUS FOR MEASURING OR CHECKING FLOW, LEVEL, PRESSURE, OR OTHER VARIABLES, BY KEY COUNTRY, 2016?2020 (USD MILLION)

5.11 PATENT ANALYSIS

FIGURE 28 TOP 10 COMPANIES WITH HIGHEST NUMBER OF PATENT APPLICATIONS IN LAST 10 YEARS

FIGURE 29 NUMBER OF PATENTS GRANTED PER YEAR FROM 2011 TO 2021

TABLE 11 TOP 20 PATENT OWNERS IN US FROM 2011 TO 2021

TABLE 12 LIST OF FEW PATENTS IN INDUSTRIAL AUTOMATION MARKET, 2019–2021

5.12 MARKET REGULATIONS AND STANDARDS

TABLE 13 REGULATIONS AND STANDARDS FOR PROCESS AUTOMATION AND INSTRUMENTATION

5.13 COMMUNICATION PROTOCOLS

5.13.1 WIRED COMMUNICATION PROTOCOLS

FIGURE 30 WIRED COMMUNICATION PROTOCOLS

5.13.1.1 USB protocol

5.13.1.2 UART protocol

5.13.1.3 SPI protocol

5.13.1.4 I2C protocol

5.13.1.5 CAN protocol

5.13.2 WIRELESS COMMUNICATION PROTOCOLS

5.13.2.1 Wi-Fi

5.13.2.2 Bluetooth

5.13.2.3 Zigbee

5.13.2.4 3G & 4G cellular

5.13.2.5 Others

TABLE 14 COMPARISON: WIRELESS COMMUNICATION PROTOCOLS

6 PROCESS AUTOMATION AND INSTRUMENTATION MARKET, BY INSTRUMENT

6.1 INTRODUCTION

FIGURE 31 PROCESS AUTOMATION AND INSTRUMENTATION MARKET, BY INSTRUMENT

FIGURE 32 SOLUTIONS TO LEAD PROCESS AUTOMATION AND INSTRUMENTATION MARKET FROM 2022 TO 2027

TABLE 15 PROCESS AUTOMATION AND INSTRUMENTATION MARKET, BY TYPE, 2018–2021 (USD MILLION)

TABLE 16 PROCESS AUTOMATION AND INSTRUMENTATION MARKET, BY TYPE, 2022–2027 (USD MILLION)

TABLE 17 PROCESS AUTOMATION AND INSTRUMENTATION MARKET, BY INSTRUMENT, 2018–2021 (USD MILLION)

TABLE 18 PROCESS AUTOMATION AND INSTRUMENTATION MARKET, BY INSTRUMENT, 2022–2027 (USD MILLION)

6.2 FIELD INSTRUMENTS

TABLE 19 FIELD INSTRUMENTS: COMMON TYPES OF TRANSMITTERS USED IN PROCESS INDUSTRIES

6.2.1 IMPACT OF COVID-19 ON MARKET FOR FIELD INSTRUMENTS

TABLE 20 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR FIELD INSTRUMENTS, BY TYPE, 2018–2021 (USD MILLION)

TABLE 21 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR FIELD INSTRUMENTS, BY TYPE, 2022–2027 (USD MILLION)

TABLE 22 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR FIELD INSTRUMENTS, BY INDUSTRY, 2018–2021 (USD MILLION)

TABLE 23 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR FIELD INSTRUMENTS, BY INDUSTRY, 2022–2027 (USD MILLION)

TABLE 24 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR FIELD INSTRUMENTS, BY REGION, 2018–2021 (USD MILLION)

TABLE 25 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR FIELD INSTRUMENTS, BY REGION, 2022–2027 (USD MILLION)

6.2.2 LEVEL TRANSMITTERS

6.2.2.1 Accurate measurements offered by level transmitters for applications in water & wastewater treatment industry to foster market growth

TABLE 26 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR LEVEL TRANSMITTERS, BY INDUSTRY, 2018–2021 (USD MILLION)

TABLE 27 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR LEVEL TRANSMITTERS, BY INDUSTRY, 2022–2027 (USD MILLION)

TABLE 28 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR LEVEL TRANSMITTERS, BY REGION, 2018–2021 (USD MILLION)

TABLE 29 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR LEVEL TRANSMITTERS, BY REGION, 2022–2027 (USD MILLION)

6.2.3 PRESSURE TRANSMITTERS

6.2.3.1 Widespread use of pressure transmitters in oil & gas industry to push market growth

TABLE 30 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR PRESSURE TRANSMITTERS, BY INDUSTRY, 2018–2021 (USD MILLION)

TABLE 31 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR PRESSURE TRANSMITTERS, BY INDUSTRY, 2022–2027 (USD MILLION)

TABLE 32 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR PRESSURE TRANSMITTERS, BY REGION, 2018–2021 (USD MILLION)

TABLE 33 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR PRESSURE TRANSMITTERS, BY REGION, 2022–2027 (USD MILLION)

6.2.4 TEMPERATURE TRANSMITTERS

6.2.4.1 Advanced capabilities of temperature transmitters to simplify operations will facilitate their demand

TABLE 34 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR TEMPERATURE TRANSMITTERS, BY INDUSTRY, 2018–2021 (USD MILLION)

TABLE 35 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR TEMPERATURE TRANSMITTERS, BY INDUSTRY, 2022–2027 (USD MILLION)

TABLE 36 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR TEMPERATURE TRANSMITTERS, BY REGION, 2018–2021 (USD MILLION)

TABLE 37 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR TEMPERATURE TRANSMITTERS, BY REGION, 2022–2027 (USD MILLION)

6.2.5 OTHERS

6.2.5.1 Humidity transmitters

6.2.5.2 Vibration level switches

TABLE 38 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR OTHERS, BY INDUSTRY, 2018–2021 (USD MILLION)

TABLE 39 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR OTHERS, BY INDUSTRY, 2022–2027 (USD MILLION)

TABLE 40 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR OTHERS, BY REGION, 2018–2021 (USD MILLION)

TABLE 41 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR OTHERS, BY REGION, 2022–2027 (USD MILLION)

6.3 PROCESS ANALYZERS

6.3.1 HIGH DEMAND FROM PHARMACEUTICALS INDUSTRY TO DRIVE GROWTH OF MARKET FOR PROCESS ANALYZERS

TABLE 42 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR PROCESS ANALYZERS, BY INDUSTRY, 2018–2021 (USD MILLION)

TABLE 43 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR PROCESS ANALYZERS, BY INDUSTRY, 2022–2027 (USD MILLION)

TABLE 44 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR PROCESS ANALYZERS, BY REGION, 2018–2021 (USD MILLION)

TABLE 45 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR PROCESS ANALYZERS, BY REGION, 2022–2027 (USD MILLION)

7 PROCESS AUTOMATION AND INSTRUMENTATION MARKET, BY SOLUTION

7.1 INTRODUCTION

FIGURE 33 PROCESS AUTOMATION AND INSTRUMENTATION MARKET, BY SOLUTION

FIGURE 34 DCS TO HOLD LARGER SHARE OF PROCESS AUTOMATION AND INSTRUMENTATION MARKET FROM 2022 TO 2027

TABLE 46 PROCESS AUTOMATION AND INSTRUMENTATION MARKET, BY SOLUTION, 2018–2021 (USD MILLION)

TABLE 47 PROCESS AUTOMATION AND INSTRUMENTATION MARKET, BY SOLUTION, 2022–2027 (USD MILLION)

TABLE 48 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR SOLUTIONS, BY INDUSTRY, 2018–2021 (USD MILLION)

TABLE 49 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR

SOLUTIONS, BY INDUSTRY, 2022–2027 (USD MILLION)

TABLE 50 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR SOLUTIONS, BY REGION, 2018–2021 (USD MILLION)

TABLE 51 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR SOLUTIONS, BY REGION, 2022–2027 (USD MILLION)

7.2 PROGRAMMABLE LOGIC CONTROLLER

7.2.1 GROWING USE OF MICRO AND NANO CONTROLLERS IN DIFFERENT PROCESS INDUSTRIES TO FUEL MARKET GROWTH

7.2.2 IMPACT OF COVID-19 ON MARKET FOR PROGRAMMABLE LOGIC CONTROLLERS

TABLE 52 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR PLC, BY INDUSTRY, 2018–2021 (USD MILLION)

TABLE 53 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR PLC, BY INDUSTRY, 2022–2027 (USD MILLION)

TABLE 54 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR PLC, BY REGION, 2018–2021 (USD MILLION)

TABLE 55 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR PLC, BY REGION, 2022–2027 (USD MILLION)

7.3 DISTRIBUTED CONTROL SYSTEM

7.3.1 RISING NEED FOR AUTOMATION TO ACHIEVE IMPROVED OPERATIONAL EFFICIENCY WILL AUGMENT DEMAND FOR DCS

7.3.2 IMPACT OF COVID-19 ON MARKET FOR DCS

TABLE 56 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR DCS, BY INDUSTRY, 2018–2021 (USD MILLION)

TABLE 57 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR DCS, BY INDUSTRY, 2022–2027 (USD MILLION)

TABLE 58 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR DCS, BY REGION, 2018–2021 (USD MILLION)

TABLE 59 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR DCS, BY REGION, 2022–2027 (USD MILLION)

7.4 SCADA

7.4.1 SURGING ADOPTION OF SCADA SYSTEMS TO COLLECT REAL-TIME DATA REGARDING PRODUCTION COUNT AND DOWNTIME PROPELS MARKET GROWTH

7.4.2 IMPACT OF COVID-19 ON MARKET FOR SCADA

TABLE 60 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR SCADA, BY INDUSTRY, 2018–2021 (USD MILLION)

TABLE 61 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR SCADA, BY INDUSTRY, 2022–2027 (USD MILLION)

TABLE 62 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR SCADA, BY REGION, 2018–2021 (USD MILLION)

TABLE 63 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR SCADA, BY REGION, 2022–2027 (USD MILLION)

7.5 HUMAN–MACHINE INTERFACE

7.5.1 INCREASING ADOPTION OF IIOT BY MANUFACTURING COMPANIES TO BOOST DEMAND FOR HMI

7.5.2 IMPACT OF COVID-19 ON MARKET FOR HMI

TABLE 64 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR HMI, BY INDUSTRY, 2018–2021 (USD MILLION)

TABLE 65 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR HMI, BY INDUSTRY, 2022–2027 (USD MILLION)

TABLE 66 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR HMI, BY REGION, 2018–2021 (USD MILLION)

TABLE 67 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR HMI, BY REGION, 2022–2027 (USD MILLION)

7.6 FUNCTIONAL SAFETY

7.6.1 RISING FOCUS OF GOVERNMENT ON IMPOSING STRINGENT SAFETY STANDARDS ACROSS INDUSTRIES ACCELERATES DEMAND FOR FUNCTIONAL SAFETY SOLUTIONS

7.6.2 IMPACT OF COVID-19 ON MARKET FOR FUNCTIONAL SAFETY

TABLE 68 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR FUNCTIONAL SAFETY, BY INDUSTRY, 2018–2021 (USD MILLION)

TABLE 69 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR FUNCTIONAL SAFETY, BY INDUSTRY, 2022–2027 (USD MILLION)

TABLE 70 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR FUNCTIONAL SAFETY, BY REGION, 2018–2021 (USD MILLION)

TABLE 71 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR FUNCTIONAL SAFETY, BY REGION, 2022–2027 (USD MILLION)

7.7 MANUFACTURING EXECUTION SYSTEM

7.7.1 ACCELERATING NEED FOR EFFICIENT DATA MONITORING AND CONTROL SOFTWARE SOLUTIONS TO SPUR DEMAND FOR MES

7.7.2 IMPACT OF COVID-19 ON MARKET FOR MANUFACTURING EXECUTION SYSTEM

TABLE 72 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR MES, BY INDUSTRY, 2018–2021 (USD MILLION)

TABLE 73 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR MES, BY INDUSTRY, 2022–2027 (USD MILLION)

TABLE 74 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR MES,

BY REGION, 2018–2021 (USD MILLION)

TABLE 75 PROCESS AUTOMATION AND INSTRUMENTATION MARKET FOR MES,
BY REGION, 2022–2027 (USD MILLION)

8 PROCESS AUTOMATION AND INSTRUMENTATION MARKET, BY INDUSTRY

8.1 INTRODUCTION

FIGURE 35 PROCESS AUTOMATION AND INSTRUMENTATION MARKET, BY
INDUSTRY

FIGURE 36 OIL & GAS INDUSTRY TO CAPTURE MAJORITY SHARE OF PROCESS
AUTOMATION AND INSTRUMENTATION MARKET IN 2027

TABLE 76 PROCESS AUTOMATION AND INSTRUMENTATION MARKET, BY
INDUSTRY, 2018–2021 (USD MILLION)

TABLE 77 PROCESS AUTOMATION AND INSTRUMENTATION MARKET, BY
INDUSTRY, 2022–2027 (USD MILLION)

8.2 OIL & GAS

8.2.1 ACCELERATED DEPLOYMENT OF AUTOMATION SOLUTIONS IN OIL & GAS
SECTOR TO REDUCE RISK OF ACCIDENTS AND ACHIEVE OPTIMUM EQUIPMENT
NETWORK PERFORMANCE AUGMENT MARKET GROWTH

8.2.2 IMPACT OF COVID-19 ON OIL & GAS INDUSTRY

8.3 CHEMICALS

8.3.1 INCREASED USE OF PROCESS AUTOMATION PRODUCTS IN CHEMICAL
PLANTS TO ENHANCE SAFETY AND IMPROVE EFFICIENCY TO
STIMULATE MARKET GROWTH

8.3.2 IMPACT OF COVID-19 ON CHEMICALS INDUSTRY

8.4 PULP & PAPER

8.4.1 STRINGENT ENVIRONMENTAL REGULATIONS AND CRITICAL NEED TO
REDUCE OPERATING COSTS BOOST ADOPTION OF PROCESS AUTOMATION
SOLUTIONS IN PULP & PAPER INDUSTRY

8.4.2 IMPACT OF COVID-19 ON PULP & PAPER INDUSTRY

8.5 PHARMACEUTICALS

8.5.1 RAPID ADOPTION OF PROCESS AUTOMATION SOLUTIONS IN
PHARMACEUTICALS INDUSTRY TO IMPROVE PRODUCTION EFFICIENCY AND
REDUCE PRODUCTION AND OPERATING COSTS TO SUPPORT
MARKET GROWTH

8.5.2 IMPACT OF COVID-19 ON PHARMACEUTICALS INDUSTRY

8.6 METALS & MINING

8.6.1 HIGH NEED FOR EFFICIENT MONITORING AND CONTROL SOLUTIONS IN
MINING OPERATIONS TO BOOST DEMAND FOR PROCESS AUTOMATION AND

INSTRUMENTATION SOLUTIONS

8.6.2 IMPACT OF COVID-19 ON METALS & MINING INDUSTRY

8.7 FOOD & BEVERAGES

8.7.1 ESCALATED NEED FOR PROCESS AUTOMATION SOLUTIONS TO IMPROVE PLANT PRODUCTIVITY AND EFFICIENCY WILL PROPEL MARKET GROWTH FOR F&B INDUSTRY

8.7.2 IMPACT OF COVID-19 ON FOOD & BEVERAGES INDUSTRY

8.8 ENERGY & POWER

8.8.1 ELEVATED DEMAND FOR ELECTRICITY AND STRONG NEED FOR HIGH OPERATIONAL EFFICIENCY TO PUSH MARKET GROWTH

8.8.2 IMPACT OF COVID-19 ON ENERGY & POWER INDUSTRY

8.9 WATER & WASTEWATER TREATMENT

8.9.1 URGENT NEED TO IMPROVE WATER TREATMENT PROCESSES TO SPUR DEMAND FOR PROCESS AUTOMATION AND INSTRUMENTATION SOLUTIONS

8.9.2 IMPACT OF COVID-19 ON WATER & WASTEWATER TREATMENT INDUSTRY

8.10 OTHERS

8.10.1 IMPACT OF COVID-19 ON OTHER INDUSTRIES

9 PROCESS AUTOMATION AND INSTRUMENTATION MARKET, BY REGION

9.1 INTRODUCTION

FIGURE 37 PROCESS AUTOMATION AND INSTRUMENTATION MARKET, GEOGRAPHIC ANALYSIS

TABLE 78 PROCESS AUTOMATION AND INSTRUMENTATION MARKET, BY REGION, 2018–2021 (USD MILLION)

TABLE 79 PROCESS AUTOMATION AND INSTRUMENTATION MARKET, BY REGION, 2022–2027 (USD MILLION)

FIGURE 38 GEOGRAPHIC SNAPSHOT: PROCESS AUTOMATION AND INSTRUMENTATION MARKET

9.2 NORTH AMERICA

9.2.1 IMPACT OF COVID-19 ON MARKET IN NORTH AMERICA

FIGURE 39 SNAPSHOT: PROCESS AUTOMATION AND INSTRUMENTATION MARKET IN NORTH AMERICA

FIGURE 40 US TO LEAD NORTH AMERICAN PROCESS AUTOMATION AND INSTRUMENTATION MARKET THROUGHOUT FORECAST PERIOD

TABLE 80 PROCESS AUTOMATION AND INSTRUMENTATION MARKET IN NORTH AMERICA, BY COUNTRY, 2018–2021 (USD MILLION)

TABLE 81 PROCESS AUTOMATION AND INSTRUMENTATION MARKET IN

NORTH AMERICA, BY COUNTRY, 2022–2027 (USD MILLION)

9.2.2 US

9.2.2.1 Increasing adoption of automation solutions in oil & gas, pharmaceuticals, and food & beverages industries drives market growth in US

9.2.3 CANADA

9.2.3.1 Growing support offered by Canadian government to small-scale food processing industries to adopt advanced technologies such as machine learning and automation to boost market growth

9.2.4 MEXICO

9.2.4.1 Rising adoption of Industry 4.0 to provide growth opportunities for process automation and instrumentation market

9.3 EUROPE

9.3.1 IMPACT OF COVID-19 ON MARKET IN EUROPE

FIGURE 41 SNAPSHOT: PROCESS AUTOMATION AND INSTRUMENTATION MARKET IN EUROPE

FIGURE 42 GERMANY TO HOLD LARGEST SHARE OF EUROPEAN PROCESS AUTOMATION AND INSTRUMENTATION MARKET DURING FORECAST PERIOD

TABLE 82 PROCESS AUTOMATION AND INSTRUMENTATION MARKET IN EUROPE, BY COUNTRY, 2018–2021 (USD MILLION)

TABLE 83 PROCESS AUTOMATION AND INSTRUMENTATION MARKET IN EUROPE, BY COUNTRY, 2022–2027 (USD MILLION)

9.3.2 GERMANY

9.3.2.1 Declining working-age population and stringent regulatory framework in Germany promote deployment of process automation solutions across process industries

9.3.3 UK

9.3.3.1 Increasing adoption of IoT across several industries to foster process automation and instrumentation market

9.3.4 FRANCE

9.3.4.1 Thriving chemical and food processing industries in France fuel demand for process automation and instrumentation solutions

9.3.5 REST OF EUROPE

9.4 ASIA PACIFIC

9.4.1 IMPACT OF COVID-19 ON MARKET IN ASIA PACIFIC

FIGURE 43 SNAPSHOT: PROCESS AUTOMATION AND INSTRUMENTATION MARKET IN ASIA PACIFIC

FIGURE 44 CHINA TO ACCOUNT FOR LARGEST SHARE OF PROCESS AUTOMATION AND INSTRUMENTATION MARKET IN ASIA PACIFIC DURING

FORECAST PERIOD

TABLE 84 PROCESS AUTOMATION AND INSTRUMENTATION MARKET IN ASIA PACIFIC, BY COUNTRY, 2018–2021 (USD MILLION)

TABLE 85 PROCESS AUTOMATION AND INSTRUMENTATION MARKET IN ASIA PACIFIC, BY COUNTRY, 2022–2027 (USD MILLION)

9.4.2 CHINA

9.4.2.1 Growing demand for SCADA from water & wastewater treatment industry to foster market growth in China

9.4.3 JAPAN

9.4.3.1 Increasing labor shortage and labor wages to accelerate demand for automation solutions in Japan

9.4.4 INDIA

9.4.4.1 Supportive government initiatives to fuel adoption of automation solutions across process industries in India

9.4.5 REST OF ASIA PACIFIC

9.5 ROW

9.5.1 IMPACT OF COVID-19 ON MARKET IN ROW

FIGURE 45 MIDDLE EAST TO COMMAND PROCESS AUTOMATION AND INSTRUMENTATION MARKET IN ROW THROUGHOUT FORECAST PERIOD

TABLE 86 PROCESS AUTOMATION AND INSTRUMENTATION MARKET IN ROW, BY REGION, 2018–2021 (USD MILLION)

TABLE 87 PROCESS AUTOMATION AND INSTRUMENTATION MARKET IN ROW, BY REGION, 2022–2027 (USD MILLION)

9.5.2 MIDDLE EAST

9.5.2.1 Strong oil & gas industry in Middle East drives demand for process automation solutions

TABLE 88 PROCESS AUTOMATION AND INSTRUMENTATION MARKET IN MIDDLE EAST, BY COUNTRY, 2018–2021 (USD MILLION)

TABLE 89 PROCESS AUTOMATION AND INSTRUMENTATION MARKET IN MIDDLE EAST, BY COUNTRY, 2022–2027 (USD MILLION)

9.5.3 SOUTH AMERICA

9.5.3.1 High demand for automation in oil & gas industry to fuel market growth in South America

9.5.4 AFRICA

9.5.4.1 Increased use of automation in mining industry to streamline processes provides growth opportunities for process automation and instrumentation market

10 COMPETITIVE LANDSCAPE

10.1 INTRODUCTION

10.2 KEY PLAYER STRATEGIES/RIGHT TO WIN

TABLE 90 OVERVIEW OF STRATEGIES ADOPTED BY KEY PLAYERS IN
PROCESS AUTOMATION AND INSTRUMENTATION MARKET

10.3 TOP 5 COMPANY REVENUE ANALYSIS

FIGURE 46 PROCESS AUTOMATION AND INSTRUMENTATION MARKET:
REVENUE ANALYSIS OF TOP 5 PLAYERS, 2016–2020

10.4 MARKET SHARE ANALYSIS, 2021

TABLE 91 DCS MARKET: MARKET SHARE ANALYSIS (2021)

TABLE 92 MES MARKET: MARKET SHARE ANALYSIS (2021)

TABLE 93 SCADA MARKET: MARKET SHARE ANALYSIS (2021)

10.5 COMPANY EVALUATION QUADRANT, 2021

10.5.1 STAR

10.5.2 EMERGING LEADER

10.5.3 PERVASIVE

10.5.4 PARTICIPANT

FIGURE 47 SCADA MARKET: COMPANY EVALUATION QUADRANT, 2021

10.6 SMALL AND MEDIUM ENTERPRISES (SMES) EVALUATION QUADRANT, 2021

10.6.1 PROGRESSIVE COMPANY

10.6.2 RESPONSIVE COMPANY

10.6.3 DYNAMIC COMPANY

10.6.4 STARTING BLOCK

FIGURE 48 SCADA MARKET, SME EVALUATION QUADRANT, 2021

10.7 PROCESS AUTOMATION AND INSTRUMENTATION MARKET: COMPANY FOOTPRINT

TABLE 94 COMPANY FOOTPRINT

FIGURE 49 INDUSTRY: COMPANY FOOTPRINT

TABLE 95 REGIONAL: COMPANY FOOTPRINT

FIGURE 50 PROCESS AUTOMATION AND INSTRUMENTATION MARKET:
DETAILED LIST OF KEY STARTUPS/SMES

FIGURE 51 PROCESS AUTOMATION AND INSTRUMENTATION MARKET:
COMPETITIVE BENCHMARKING OF KEY STARTUPS/SMES

10.8 COMPETITIVE SITUATIONS AND TRENDS

10.8.1 PROCESS AUTOMATION AND INSTRUMENTATION MARKET:
PRODUCT LAUNCHES

10.8.2 PROCESS AUTOMATION AND INSTRUMENTATION MARKET: DEALS

11 COMPANY PROFILES

11.1 KEY PLAYERS

(Business Overview, Products Offered, Recent Developments, and MnM View)*

11.1.1 ABB LTD.

TABLE 96 ABB LTD: BUSINESS OVERVIEW

FIGURE 52 ABB LTD: COMPANY SNAPSHOT

TABLE 97 ABB LTD: PRODUCT OFFERINGS

TABLE 98 ABB LTD: PRODUCT LAUNCHES

11.1.2 EMERSON ELECTRIC CO.

TABLE 99 EMERSON ELECTRIC CO.: BUSINESS OVERVIEW

FIGURE 53 EMERSON ELECTRIC CO.: COMPANY SNAPSHOT

TABLE 100 EMERSON ELECTRIC CO.: PRODUCT OFFERINGS

TABLE 101 EMERSON ELECTRIC CO.: PRODUCT LAUNCHES

TABLE 102 EMERSON ELECTRIC CO.: DEALS

11.1.3 SIEMENS

TABLE 103 SIEMENS: BUSINESS OVERVIEW

FIGURE 54 SIEMENS: COMPANY SNAPSHOT

TABLE 104 SIEMENS: PRODUCT OFFERINGS

TABLE 105 SIEMENS: PRODUCT LAUNCHES

TABLE 106 SIEMENS: DEALS

11.1.4 GENERAL ELECTRIC COMPANY

TABLE 107 GENERAL ELECTRIC COMPANY: BUSINESS OVERVIEW

FIGURE 55 GENERAL ELECTRIC COMPANY: COMPANY SNAPSHOT

TABLE 108 GENERAL ELECTRIC COMPANY: PRODUCT OFFERING

TABLE 109 GENERAL ELECTRIC COMPANY: PRODUCT LAUNCHES

TABLE 110 GENERAL ELECTRIC COMPANY: DEALS

11.1.5 SCHNEIDER ELECTRIC

TABLE 111 SCHNEIDER ELECTRIC: BUSINESS OVERVIEW

FIGURE 56 SCHNEIDER ELECTRIC: COMPANY SNAPSHOT

TABLE 112 SCHNEIDER ELECTRIC: PRODUCT OFFERING

TABLE 113 SCHNEIDER ELECTRIC: PRODUCT LAUNCHES

TABLE 114 SCHNEIDER ELECTRIC: DEALS

TABLE 115 SCHNEIDER ELECTRIC: OTHERS

11.1.6 HONEYWELL INTERNATIONAL INC.

TABLE 116 HONEYWELL INTERNATIONAL INC.: BUSINESS OVERVIEW

FIGURE 57 HONEYWELL INTERNATIONAL INC.: COMPANY SNAPSHOT

TABLE 117 HONEYWELL INTERNATIONAL INC.: PRODUCT OFFERINGS

TABLE 118 HONEYWELL INTERNATIONAL INC.: PRODUCT LAUNCHES

TABLE 119 HONEYWELL INTERNATIONAL INC.: DEALS

TABLE 120 HONEYWELL INTERNATIONAL INC.: OTHERS

11.1.7 ROCKWELL AUTOMATION, INC.

TABLE 121 ROCKWELL AUTOMATION, INC.: BUSINESS OVERVIEW

FIGURE 58 ROCKWELL AUTOMATION, INC.: COMPANY SNAPSHOT

TABLE 122 ROCKWELL AUTOMATION, INC.: PRODUCT OFFERINGS

TABLE 123 ROCKWELL AUTOMATION, INC.: PRODUCT LAUNCHES

TABLE 124 ROCKWELL AUTOMATION INC.: DEALS

11.1.8 YOKOGAWA ELECTRIC CORPORATION

TABLE 125 YOKOGAWA ELECTRIC CORPORATION: BUSINESS OVERVIEW

FIGURE 59 YOKOGAWA ELECTRIC CORPORATION: COMPANY SNAPSHOT

TABLE 126 YOKOGAWA ELECTRIC CORPORATION: PRODUCT OFFERING

TABLE 127 YOKOGAWA ELECTRIC CORPORATION: PRODUCT LAUNCHES

TABLE 128 YOKOGAWA ELECTRIC CORPORATION: DEALS

11.1.9 MITSUBISHI ELECTRIC CORPORATION

TABLE 129 MITSUBISHI ELECTRIC CORPORATION: BUSINESS OVERVIEW

FIGURE 60 MITSUBISHI ELECTRIC CORPORATION: COMPANY SNAPSHOT

TABLE 130 MITSUBISHI ELECTRIC CORPORATION: PRODUCT OFFERINGS

TABLE 131 MITSUBISHI ELECTRIC CORPORATION: PRODUCT LAUNCHES

TABLE 132 MITSUBISHI ELECTRIC CORPORATION: DEALS

11.1.10 ENDRESS+HAUSER GROUP SERVICES AG

TABLE 133 ENDRESS+HAUSER GROUP SERVICES AG: BUSINESS OVERVIEW

FIGURE 61 ENDRESS+HAUSER GROUP SERVICES AG: COMPANY SNAPSHOT

TABLE 134 ENDRESS+HAUSER GROUP SERVICES AG: PRODUCT OFFERINGS

TABLE 135 ENDRESS+HAUSER GROUP SERVICES AG: PRODUCT LAUNCHES

TABLE 136 ENDRESS+HAUSER GROUP SERVICES AG: DEALS

11.1.11 OMRON CORPORATION

TABLE 137 OMRON CORPORATION: BUSINESS OVERVIEW

FIGURE 62 OMRON CORPORATION: COMPANY SNAPSHOT

TABLE 138 OMRON CORPORATION: PRODUCT OFFERINGS

TABLE 139 OMRON CORPORATION: PRODUCT LAUNCHES

TABLE 140 OMRON CORPORATION: DEALS

11.1.12 THERMO FISHER SCIENTIFIC INC.

TABLE 141 THERMO FISCHER SCIENTIFIC INC.: BUSINESS OVERVIEW

FIGURE 63 THERMO FISCHER SCIENTIFIC INC.: COMPANY SNAPSHOT

TABLE 142 THERMO FISHER SCIENTIFIC INC.: PRODUCT OFFERINGS

TABLE 143 THERMO FISHER SCIENTIFIC INC.: PRODUCT LAUNCHES

TABLE 144 THERMO FISHER INC.: DEALS

11.1.13 FUJI ELECTRIC CO., LTD.

TABLE 145 FUJI ELECTRIC CO., LTD.: BUSINESS OVERVIEW

FIGURE 64 FUJI ELECTRIC CO., LTD.: COMPANY SNAPSHOT

TABLE 146 FUJI ELECTRIC CO., LTD.: PRODUCT OFFERINGS

TABLE 147 FUJI ELECTRIC CO., LTD.: PRODUCT LAUNCHES

TABLE 148 FUJI ELECTRIC CO., LTD.: DEALS

11.1.14 HITACHI, LTD.

TABLE 149 HITACHI, LTD.: BUSINESS OVERVIEW

FIGURE 65 HITACHI, LTD.: COMPANY SNAPSHOT

TABLE 150 HITACHI, LTD.: PRODUCT OFFERINGS

TABLE 151 HITACHI, LTD.: PRODUCT LAUNCHES

TABLE 152 HITACHI, LTD.: DEALS

11.1.15 DELTA ELECTRONICS, INC.

TABLE 153 DELTA ELECTRONICS, INC.: BUSINESS OVERVIEW

FIGURE 66 DELTA ELECTRONICS, INC.: COMPANY SNAPSHOT

TABLE 154 DELTA ELECTRONICS, INC.: PRODUCT OFFERINGS

TABLE 155 DELTA ELECTRONICS, INC.: PRODUCT LAUNCHES

TABLE 156 DELTA ELECTRONICS, INC.: DEALS

* Business Overview, Products Offered, Recent Developments, and MnM View might not be captured in case of unlisted companies.

11.2 OTHER PLAYERS

11.2.1 HOLLYSYS

TABLE 157 HOLLYSYS: COMPANY OVERVIEW

11.2.2 WIKA ALEXANDER WIEGAND SE & CO. KG

TABLE 158 WIKA ALEXANDER WIEGAND SE & CO. KG: COMPANY OVERVIEW

11.2.3 AZBIL CORPORATION

TABLE 159 AZBIL CORPORATION: COMPANY OVERVIEW

11.2.4 XYLEM

TABLE 160 XYLEM: COMPANY OVERVIEW

11.2.5 HACH CORPORATION

TABLE 161 HACH CORPORATION: COMPANY OVERVIEW

11.2.6 SHIMADZU CORPORATION

TABLE 162 SHIMADZU CORPORATION: COMPANY OVERVIEW

11.2.7 HIMA PAUL HILDEBRANDT GMBH

TABLE 163 HIMA PAUL HILDEBRANDT GMBH: COMPANY OVERVIEW

11.2.8 AMETEK, INC.

TABLE 164 AMETEK, INC.: COMPANY OVERVIEW

11.2.9 CHRISTIAN B?RKERT GMBH & CO. KG

TABLE 165 CHRISTIAN B?RKERT GMBH & CO. KG: COMPANY OVERVIEW

11.2.10 KROHNE MESSTECHNIK GMBH

TABLE 166 KROHNE MESSTECHNIK GMBH: COMPANY OVERVIEW

11.2.11 DWYER INSTRUMENTS, INC.

TABLE 167 DWYER INSTRUMENTS, INC.: COMPANY OVERVIEW

11.2.12 ANDRITZ AG

TABLE 168 ANDRITZ AG: COMPANY OVERVIEW

11.2.13 VALMET

TABLE 169 VALMET: COMPANY OVERVIEW

11.2.14 SPRECHER AUTOMATION GMBH

TABLE 170 SPRECHER AUTOMATION GMBH: COMPANY OVERVIEW

11.2.15 INDUCTIVE AUTOMATION, LLC

TABLE 171 INDUCTIVE AUTOMATION, LLC: COMPANY OVERVIEW

12 ADJACENT & RELATED MARKETS

12.1 INTRODUCTION

12.2 LIMITATIONS

12.3 RFID MARKET

12.3.1 INTRODUCTION

FIGURE 67 RFID TAG MARKET IN ASIA PACIFIC TO GROW AT HIGHEST CAGR DURING FORECAST PERIOD

TABLE 172 RFID TAG MARKET, BY REGION, 2017–2020 (USD BILLION)

TABLE 173 RFID TAG MARKET, BY REGION, 2021–2026 (USD BILLION)

12.3.2 AMERICAS

FIGURE 68 SNAPSHOT: RFID TAG MARKET IN AMERICAS

TABLE 174 AMERICAS: RFID TAG MARKET, BY APPLICATION, 2017–2020 (USD MILLION)

TABLE 175 AMERICAS: RFID TAG MARKET, BY APPLICATION, 2021–2026 (USD MILLION)

TABLE 176 AMERICAS: RFID TAG MARKET, BY COUNTRY/REGION, 2017–2020 (USD MILLION)

TABLE 177 AMERICAS: RFID TAG MARKET, BY COUNTRY/REGION, 2021–2026 (USD MILLION)

12.3.2.1 US

12.3.2.1.1 US accounted for largest share of RFID tag market in Americas in 2020

12.3.2.2 Canada

12.3.2.2.1 Healthcare sector to generate growth opportunities for RFID solutions in Canada

12.3.2.3 Mexico

12.3.2.3.1 RFID market in Mexico is expected to witness significant growth

12.3.2.4 Brazil

12.3.2.4.1 Brazil to emerge as key contributor to RFID
market in Americas

12.3.2.5 Rest of Americas

12.3.2.6 Impact of COVID-19 on Americas

12.3.2.6.1 High demand for RFID solutions in various service- and manufacturing-
oriented industries during COVID-19 pandemic to boost market growth

FIGURE 69 AMERICAS: PRE- AND POST-COVID-19 MARKET SCENARIOS FOR
RFID TAGS, 2017–2026 (USD BILLION)

TABLE 178 AMERICAS: PRE- AND POST-COVID-19 MARKET SCENARIOS FOR
RFID TAGS, 2017–2026 (USD BILLION)

12.3.3 EUROPE, MIDDLE EAST, AND AFRICA (EMEA)

FIGURE 70 SNAPSHOT: RFID TAG MARKET IN EMEA

TABLE 179 EMEA: RFID TAG MARKET, BY APPLICATION, 2017–2020 (USD
MILLION)

TABLE 180 EMEA: RFID TAG MARKET, BY APPLICATION, 2021–2026 (USD
MILLION)

TABLE 181 EMEA: RFID TAG MARKET, BY COUNTRY/REGION, 2017–2020 (USD
MILLION)

TABLE 182 EMEA: RFID TAG MARKET, BY COUNTRY/REGION, 2021–2026 (USD
MILLION)

12.3.3.1 Germany

12.3.3.1.1 Germany to account for largest share of RFID tag
market in EMEA

12.3.3.2 UK

12.3.3.2.1 Increasing government regulations in UK would
boost RFID tag market

12.3.3.3 France

12.3.3.3.1 Aerospace is most prominent growth sector for
RFID market in France

12.3.3.4 Italy

12.3.3.4.1 Need for effective assets management would drive Italian RFID market

12.3.3.5 Russia

12.3.3.5.1 Energy, oil & gas, and aviation industries are expected to drive Russian
RFID market

12.3.4 REST OF EMEA

12.3.4.1 Impact of COVID-19 on EMEA

12.3.4.1.1 Declining demand from automobiles and aerospace applications is
expected to restrain growth of RFID tag market in EMEA

FIGURE 71 EMEA: PRE- AND POST-COVID-19 MARKET SCENARIOS FOR RFID

TAGS, 2017–2026 (USD BILLION)

TABLE 183 EMEA: PRE- AND POST-COVID-19 MARKET SCENARIOS FOR RFID TAGS, 2017–2026 (USD BILLION)

12.3.5 ASIA PACIFIC (APAC)

FIGURE 72 SNAPSHOT: RFID TAG MARKET IN APAC

TABLE 184 APAC: RFID TAG MARKET, BY APPLICATION, 2017–2020 (USD MILLION)

TABLE 185 APAC: RFID TAG MARKET, BY APPLICATION, 2021–2026 (USD MILLION)

TABLE 186 APAC: RFID TAG MARKET, BY COUNTRY/REGION, 2017–2020 (USD MILLION)

TABLE 187 APAC: RFID TAG MARKET, BY COUNTRY/REGION, 2021–2026 (USD MILLION)

12.3.5.1 Japan

12.3.5.1.1 Healthcare sector to offer growth opportunities to RFID market in Japan due to aging population

12.3.5.2 China

12.3.5.2.1 China to account for largest share of RFID market in APAC during forecast period

12.3.5.3 South Korea

12.3.5.3.1 Electronics manufacturing industry to largely adopt RFID solutions

12.3.5.4 India

12.3.5.4.1 Manufacturing and healthcare industries in India to drive growth of RFID market

12.3.5.5 Australia

12.3.5.5.1 Sports and entertainment industries providing growth avenues for RFID market in Australia

12.3.5.6 Rest of APAC

12.3.5.7 Impact of COVID-19 on APAC

12.3.5.7.1 Increasing demand for industrial automation, supply chain automation, and service industry automation in region could improve demand for RFID solutions

FIGURE 73 APAC: PRE- AND POST-COVID-19 SCENARIOS FOR RFID TAG MARKET, 2017–2026 (USD BILLION)

TABLE 188 APAC: PRE- AND POST-COVID-19 SCENARIOS FOR RFID TAG MARKET, 2017–2026 (USD BILLION)

13 APPENDIX

13.1 INSIGHTS OF INDUSTRY EXPERTS

13.2 DISCUSSION GUIDE

13.3 KNOWLEDGE STORE: MARKETSANDMARKETS' SUBSCRIPTION PORTAL

13.4 AVAILABLE CUSTOMIZATIONS

13.5 RELATED REPORTS

13.6 AUTHOR DETAILS

About

The process automation and instrumentation market report details the design architecture, market statistics, and market standards for process automation. The report is segmented into process automation and instrumentation. The overall process automation market is further segmented into technology, hardware, software, and services. On the other hand, process instrumentation is segmented on the basis of four principle types of transmitters: flow, pressure, temperature, and level. Apart from transmitters, process instrumentation generally consists of another very important instrument segment called “control valves”. Control valves are the most important device for the process industry. They are used for controlling conditions such as temperature, pressure, flow, and liquid level by partially or completely closing or opening to respond to the signals received from the controllers; which, in turn, compare a “setpoint” to a “process variable”; whose value gets provided by sensors monitoring changes in these conditions.

This report aims to detail the aggregation of equipment, components, systems, OEM, and contractor services. It also aims to capture the market roadmap with market sizes, value forecasts, market dynamics, application market and product trends, geographical analysis, and price trends. The report is fragmented into segments like components and services, production process technology, applications, and geography; each of these segments is further divided into sub-segments.

The report also identifies different market dynamics like drivers, restraints, and opportunities of each of the markets. Major players of the current market and the players with high potential to enter the market have been identified and profiled. Apart from the company profiles, competitive landscape (CL) of key players for each of the markets has been discussed. The CL includes detailed market share analysis, mergers and acquisitions, collaborations, partnerships, new product developments, and the key growth strategies of each player.

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