

Europe Temperature Sensor Market Forecast to 2030 - Regional Analysis - by Type (Thermocouple, Resistance Temperature Detectors (RTD), Thermistor, Infrared, and Others), Connectivity (Wired and Wireless), and End Users (Semiconductor Manufacturing, Healthcare & Pharma, Food & Beverage, Data Center, Aerospace, Energy & Utilities, and Others)

<https://marketpublishers.com/r/E942B07872BFEN.html>

Date: March 2025

Pages: 179

Price: US\$ 3,450.00 (Single User License)

ID: E942B07872BFEN

Abstracts

The Europe temperature sensor market was valued at US\$ 1,450.64 million in 2023 and is expected to reach US\$ 2,111.95 million by 2030; it is estimated to register a CAGR of 5.5% from 2023 to 2030.

Evolution of Industry 4.0 Drives Europe Temperature Sensor Market

The introduction of Industry 4.0 brings several advances in the efficiency and productivity of industrial processes. Several industries use temperature sensors for generating real-time data based on temperature variation. Industries use this data for process optimization, predictive maintenance, and quality control, which further leads to a reduction in downtime, creating opportunities in the market. Temperature sensors are deployed to monitor complex industrial instruments and machines for monitoring their temperature range to maintain operational efficiency. The evolution of Industry 4.0 encourages technological advancements in nations, which creates opportunities for market growth.

Temperature sensors are crucial for smart factories and Industry 4.0 for enabling

advanced automation, smart manufacturing, and data-driven decision-making activities. Temperature sensors are essential for measuring the temperature of various components, including motors, engines, and machines in smart factories. Temperature sensor enables continuous monitoring, which allows smart factories to identify deviations or inefficiencies in the processes by allowing real-time adjustments to improve productivity and reduce energy consumption. Temperature sensors are primarily used in Industry 4.0 and smart manufacturing. It helps in detecting overheating and abnormal temperature in the machinery and equipment by ensuring efficient operations and automation within modern industrial facilities. Thus, the growth in the smart manufacturing process is creating opportunities in the market.

Rising investment in smart city projects and growing city management initiatives further generate opportunities for market growth. For instance, in May 2022, the European Commission announced the participation of 100 climate-neutral and smart cities in the Cities Mission by 2030. The Cities Mission will receive funding of US\$ 378.2 million to start research and innovation paths toward climate neutrality by 2030. These research and innovation actions are projected to address clean mobility, green urban planning, and energy efficiency and offer the possibility of collaborations in synergies with other EU programs. Temperature sensors are deployed in smart city projects for collecting real-time temperature variation data. This data helps urban planners in the designing of green roofs, reflective pavement, and urban forests to combat rising temperatures, which is expected to create opportunities in the market during the forecast period.

Europe Temperature Sensor Market Overview

The aerospace & defense sector in Europe is a crucial contributor to the region's economy. According to the General Aviation Manufacturers Association, the overall 2023 general aviation shipments and billings, when compared to 2022, saw an increment in all aircraft segments, in shipments, and preliminary aircraft deliveries which were valued at US\$ 27.8 billion, an increase of 3.6%. As almost all aircraft require temperature sensors to perform flawlessly and to monitor the temperatures of turbine blades and other critical components, the increase in aircraft deliveries simultaneously drives the market for temperature sensors. The demand for these sensors is also increasing in military applications, such as in military ground vehicles, where temperature sensors are employed to monitor engine and transmission temperatures, ensuring optimal performance in diverse operational environments. Further, a consistent growth in military spending has been observed for seven consecutive years. According to the European Defense Agency, European military spending was US\$ 231 billion in 2021, a 6% increase from 2020.

Various companies in Europe are taking initiatives in the temperature sensor market to expand their portfolio, such as partnerships and product launches. For instance, in August 2023, Greece's prime minister announced the launch of forest temperature sensors to improve preventive firefighting after criticism from climate activists over a devastating wildfire burning for almost two weeks. Similarly, in January 2024, Monnit announced that its ALTA Wireless Standard Enterprise and industrial temperature sensors are certified for Europe's EN12830 cold chain traceability standard. Hence, the growth of the aerospace & defense industry and new launches of temperature sensors are boosting the temperature sensor market growth in Europe.

Europe Temperature Sensor Market Revenue and Forecast to 2030 (US\$ Million)

Europe Temperature Sensor Market Segmentation

The Europe temperature sensor market is categorized into type, connectivity, end user, and country.

Based on type, the Europe temperature sensor market is segmented into thermocouple, resistance temperature detectors (RTD), thermistor, infrared, and others. The thermocouple segment held the largest share of Europe temperature sensor market share in 2023.

In terms of connectivity, the Europe temperature sensor market is bifurcated into wired and wireless. The wired segment held a larger share of Europe temperature sensor market in 2023.

By end users, the Europe temperature sensor market is segmented into semiconductor manufacturing, healthcare & pharma, food and beverage, data center, aerospace, energy & utilities, and others. The semiconductor manufacturing segment held the largest share of Europe temperature sensor market in 2023.

By country, the Europe temperature sensor market is segmented into Germany, the UK, France, Italy, Russia, and the Rest of Europe. Germany dominated the Europe temperature sensor market share in 2023.

Texas Instruments Inc.; Siemens Ltd.; TE Connectivity Ltd.; Amphenol LTW Ltd.; Analog Devices Inc.; Emerson Electric Co.; Microchip Technology Inc.; Panasonic Corporation; Honeywell International, Inc.; and NXP Semiconductors N.V are some of

the leading companies operating in the Europe temperature sensor market.

Reason to buy

Save and reduce time carrying out entry-level research by identifying the growth, size, leading players, and segments in the Europe temperature sensor market.

Highlights key business priorities in order to assist companies to realign their business strategies.

The key findings and recommendations highlight crucial progressive industry trends in the Europe temperature sensor market, thereby allowing players across the value chain to develop effective long-term strategies.

Develop/modify business expansion plans by using substantial growth offering developed and emerging markets.

Scrutinize in-depth Europe market trends and outlook coupled with the factors driving the Europe temperature sensor market, as well as those hindering it.

Enhance the decision-making process by understanding the strategies that underpin commercial interest with respect to client products, segmentation, pricing, and distribution.

The List of Companies - Europe Temperature Sensor Market

Texas Instruments Inc.

Siemens Ltd.

TE Connectivity Ltd.

Amphenol LTW Ltd.

Analog Devices Inc.

Emerson Electric Co.

Microchip Technology Inc.

Panasonic Corporation

Honeywell International, Inc.

NXP Semiconductors N.V

Contents

1. INTRODUCTION

- 1.1 The Insight Partners Research Report Guidance
- 1.2 Market Segmentation

2. EXECUTIVE SUMMARY

- 2.1 Key Insights
- 2.2 Market Attractiveness

3. RESEARCH METHODOLOGY

- 3.1 Coverage
- 3.2 Secondary Research
- 3.3 Primary Research

4. TEMPERATURE SENSOR MARKET LANDSCAPE

- 4.1 Overview
- 4.2 Ecosystem Analysis
 - 4.2.1 List of Vendors in the Value Chain
- 4.3 Premium Insights
 - 4.3.1 Pricing Analysis by Type (US\$/Unit)
 - 4.3.2 Product Benchmarking by End Users

5. EUROPE TEMPERATURE SENSOR MARKET – KEY MARKET DYNAMICS

- 5.1 Market Drivers
 - 5.1.1 Growing Adoption Across Various Industries
 - 5.1.2 Increasing number of Data Centers
 - 5.1.3 Strategic Initiatives by Government
- 5.2 Market Restraints
 - 5.2.1 High Costs Associated with the Temperature Sensors
- 5.3 Market Opportunities
 - 5.3.1 Evolution of Industry 4.0
 - 5.3.2 Rising Demand for Wireless Temperature Sensors
- 5.4 Future Trends

5.4.1 Miniaturization of Temperature Sensors

5.5 Impact of Drivers and Restraints:

6. TEMPERATURE SENSOR MARKET – EUROPE ANALYSIS

6.1 Overview

6.2 Temperature Sensor Market Revenue (US\$ Million), 2020–2030

6.3 Temperature Sensor Market Forecast Analysis

7. EUROPE TEMPERATURE SENSOR MARKET ANALYSIS – BY TYPE

7.1 Thermocouple

7.1.1 Overview

7.1.2 Thermocouple: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)

7.2 Resistance Temperature Detectors (RTD)

7.2.1 Overview

7.2.2 Resistance Temperature Detectors (RTD): Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)

7.3 Thermistor

7.3.1 Overview

7.3.2 Thermistor: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)

7.4 Infrared

7.4.1 Overview

7.4.2 Infrared: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)

7.5 Others

7.5.1 Overview

7.5.2 Others: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)

8. EUROPE TEMPERATURE SENSOR MARKET ANALYSIS – BY CONNECTIVITY

8.1 Wired

8.1.1 Overview

8.1.2 Wired: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)

8.2 Wireless

8.2.1 Overview

8.2.2 Wireless: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)

9. EUROPE TEMPERATURE SENSOR MARKET ANALYSIS – BY END USERS

9.1 Semiconductor Manufacturing

9.1.1 Overview

9.1.2 Semiconductor Manufacturing: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)

9.2 Healthcare and Pharma

9.2.1 Overview

9.2.2 Healthcare and Pharma: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)

9.3 Food and Beverage

9.3.1 Overview

9.3.2 Food and Beverage: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)

9.4 Data Center

9.4.1 Overview

9.4.2 Data Center: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)

9.5 Aerospace

9.5.1 Overview

9.5.2 Aerospace: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)

9.6 Energy and Utilities

9.6.1 Overview

9.6.2 Energy and Utilities: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)

9.7 Others

9.7.1 Overview

9.7.2 Others: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)

10. EUROPE TEMPERATURE SENSOR MARKET – COUNTRY ANALYSIS

10.1 Europe Market Overview

10.1.1 Europe: Temperature Sensor Market, By Key Country - Revenue 2023 (US\$

Million)

10.1.2 Europe: Temperature Sensor Market – Revenue and Forecast Analysis – by Country

10.1.2.1 Europe: Temperature Sensor Market – Revenue and Forecast Analysis – by Country

10.1.2.2 Germany: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)

10.1.2.2.1 Germany: Temperature Sensor Market Breakdown, by Type

10.1.2.2.2 Germany: Temperature Sensor Market Breakdown, by Connectivity

10.1.2.2.3 Germany: Temperature Sensor Market Breakdown, by End Users

10.1.2.3 United Kingdom: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)

10.1.2.3.1 United Kingdom: Temperature Sensor Market Breakdown, by Type

10.1.2.3.2 United Kingdom: Temperature Sensor Market Breakdown, by Connectivity

10.1.2.3.3 United Kingdom: Temperature Sensor Market Breakdown, by End Users

10.1.2.4 France: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)

10.1.2.4.1 France: Temperature Sensor Market Breakdown, by Type

10.1.2.4.2 France: Temperature Sensor Market Breakdown, by Connectivity

10.1.2.4.3 France: Temperature Sensor Market Breakdown, by End Users

10.1.2.5 Italy: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)

10.1.2.5.1 Italy: Temperature Sensor Market Breakdown, by Type

10.1.2.5.2 Italy: Temperature Sensor Market Breakdown, by Connectivity

10.1.2.5.3 Italy: Temperature Sensor Market Breakdown, by End Users

10.1.2.6 Russia: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)

10.1.2.6.1 Russia: Temperature Sensor Market Breakdown, by Type

10.1.2.6.2 Russia: Temperature Sensor Market Breakdown, by Connectivity

10.1.2.6.3 Russia: Temperature Sensor Market Breakdown, by End Users

10.1.2.7 Rest of Europe: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)

10.1.2.7.1 Rest of Europe: Temperature Sensor Market Breakdown, by Type

10.1.2.7.2 Rest of Europe: Temperature Sensor Market Breakdown, by Connectivity

10.1.2.7.3 Rest of Europe: Temperature Sensor Market Breakdown, by End Users

11. COMPETITIVE LANDSCAPE

- 11.1 Heat Map Analysis by Key Players
- 11.2 Company Positioning & Concentration
- 11.3 Market Share Analysis
- 11.4 Competitive Benchmarking

12. INDUSTRY LANDSCAPE

- 12.1 Overview
- 12.2 Market Initiative
- 12.3 Product Development
- 12.4 Mergers & Acquisitions

13. COMPANY PROFILES

- 13.1 Texas Instruments Inc.
 - 13.1.1 Key Facts
 - 13.1.2 Business Description
 - 13.1.3 Products and Services
 - 13.1.4 Financial Overview
 - 13.1.5 SWOT Analysis
 - 13.1.6 Key Developments
- 13.2 Siemens LTD.
 - 13.2.1 Key Facts
 - 13.2.2 Business Description
 - 13.2.3 Products and Services
 - 13.2.4 Financial Overview
 - 13.2.5 SWOT Analysis
 - 13.2.6 Key Developments
- 13.3 TE Connectivity Ltd.
 - 13.3.1 Key Facts
 - 13.3.2 Business Description
 - 13.3.3 Products and Services
 - 13.3.4 Financial Overview
 - 13.3.5 SWOT Analysis
 - 13.3.6 Key Developments
- 13.4 Amphenol LTW Ltd.
 - 13.4.1 Key Facts
 - 13.4.2 Business Description
 - 13.4.3 Products and Services

- 13.4.4 Financial Overview
- 13.4.5 SWOT Analysis
- 13.4.6 Key Developments
- 13.5 Analog Devices Inc.
 - 13.5.1 Key Facts
 - 13.5.2 Business Description
 - 13.5.3 Products and Services
 - 13.5.4 Financial Overview
 - 13.5.5 SWOT Analysis
 - 13.5.6 Key Developments
- 13.6 Emerson Electric Co.
 - 13.6.1 Key Facts
 - 13.6.2 Business Description
 - 13.6.3 Products and Services
 - 13.6.4 Financial Overview
 - 13.6.5 SWOT Analysis
 - 13.6.6 Key Developments
- 13.7 Microchip Technology Inc
 - 13.7.1 Key Facts
 - 13.7.2 Business Description
 - 13.7.3 Products and Services
 - 13.7.4 Financial Overview
 - 13.7.5 SWOT Analysis
 - 13.7.6 Key Developments
- 13.8 Panasonic Corporation
 - 13.8.1 Key Facts
 - 13.8.2 Business Description
 - 13.8.3 Products and Services
 - 13.8.4 Financial Overview
 - 13.8.5 SWOT Analysis
 - 13.8.6 Key Developments
- 13.9 Honeywell International, Inc.
 - 13.9.1 Key Facts
 - 13.9.2 Business Description
 - 13.9.3 Products and Services
 - 13.9.4 Financial Overview
 - 13.9.5 SWOT Analysis
 - 13.9.6 Key Developments
- 13.10 NXP Semiconductors N.V

- 13.10.1 Key Facts
- 13.10.2 Business Description
- 13.10.3 Products and Services
- 13.10.4 Financial Overview
- 13.10.5 SWOT Analysis
- 13.10.6 Key Developments

14. APPENDIX

- 14.1 Word Index
- 14.2 About the Insight Partners

List Of Tables

LIST OF TABLES

Table 1. Temperature Sensor Market Segmentation

Table 2. List of Vendors

Table 3. Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)

Table 4. Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million) – by Type

Table 5. Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million) – by Connectivity

Table 6. Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million) – by End Users

Table 7. Europe: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million) – by Country

Table 8. Germany: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million) – by Type

Table 9. Germany: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million) – by Connectivity

Table 10. Germany: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million) – by End Users

Table 11. United Kingdom: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million) – by Type

Table 12. United Kingdom: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million) – by Connectivity

Table 13. United Kingdom: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million) – by End Users

Table 14. France: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million) – by Type

Table 15. France: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million) – by Connectivity

Table 16. France: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million) – by End Users

Table 17. Italy: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million) – by Type

Table 18. Italy: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million) – by Connectivity

Table 19. Italy: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million) – by End Users

Table 20. Russia: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million) – by Type

Table 21. Russia: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million) – by Connectivity

Table 22. Russia: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million) – by End Users

Table 23. Rest of Europe: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million) – by Type

Table 24. Rest of Europe: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million) – by Connectivity

Table 25. Rest of Europe: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million) – by End Users

Table 26. Heat Map Analysis by Key Players

Table 27. Company Positioning & Concentration

Table 28. Competitive Benchmarking

Table 29. List of Abbreviation

List Of Figures

LIST OF FIGURES

- Figure 1. Temperature Sensor Market Segmentation, by Country
- Figure 2. Temperature Sensor Market – Key Market Dynamics
- Figure 3. Impact Analysis of Drivers and Restraints
- Figure 4. Temperature Sensor Market Revenue (US\$ Million), 2020–2030
- Figure 5. Temperature Sensor Market Share (%) – by Type (2023 and 2030)
- Figure 6. Thermocouple: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)
- Figure 7. Resistance Temperature Detectors (RTD): Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)
- Figure 8. Thermistor: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)
- Figure 9. Infrared: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)
- Figure 10. Others: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)
- Figure 11. Temperature Sensor Market Share (%) – by Connectivity (2023 and 2030)
- Figure 12. Wired: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)
- Figure 13. Wireless: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)
- Figure 14. Temperature Sensor Market Share (%) – by End Users (2023 and 2030)
- Figure 15. Semiconductor Manufacturing: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)
- Figure 16. Healthcare and Pharma: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)
- Figure 17. Food and Beverage: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)
- Figure 18. Data Center: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)
- Figure 19. Aerospace: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)
- Figure 20. Energy and Utilities: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)
- Figure 21. Others: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)

Figure 22. Europe: Temperature Sensor Market, By Key Country - Revenue 2023 (US\$ Million)

Figure 23. Europe: Temperature Sensor Market Breakdown, by Key Countries, 2023 and 2030 (%)

Figure 24. Germany: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)

Figure 25. United Kingdom: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)

Figure 26. France: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)

Figure 27. Italy: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)

Figure 28. Russia: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)

Figure 29. Rest of Europe: Temperature Sensor Market – Revenue and Forecast to 2030 (US\$ Million)

Figure 30. Market Share Analysis

I would like to order

Product name: Europe Temperature Sensor Market Forecast to 2030 - Regional Analysis - by Type (Thermocouple, Resistance Temperature Detectors (RTD), Thermistor, Infrared, and Others), Connectivity (Wired and Wireless), and End Users (Semiconductor Manufacturing, Healthcare & Pharma, Food & Beverage, Data Center, Aerospace, Energy & Utilities, and Others)

Product link: <https://marketpublishers.com/r/E942B07872BFEN.html>

Price: US\$ 3,450.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/E942B07872BFEN.html>