

Torque Sensor Market Report by Type (Rotary Torque Sensor, Reaction Torque Sensor), Technology (Surface Acoustic Wave (SAW), Optical, Strain Gauge, and Others), Application (Aerospace and Defense, Automotive, Testing and Measurement, Healthcare, and Others), and Region 2024-2032

<https://marketpublishers.com/r/TEF27F785A0FEN.html>

Date: March 2024

Pages: 144

Price: US\$ 3,899.00 (Single User License)

ID: TEF27F785A0FEN

Abstracts

The global torque sensor market size reached US\$ 8.9 Billion in 2023. Looking forward, IMARC Group expects the market to reach US\$ 17.8 Billion by 2032, exhibiting a growth rate (CAGR) of 7.8% during 2024-2032. The market is experiencing steady growth driven by the increasing demand from the automotive industry's shift towards electric vehicles, expanding applications in industrial automation and robotics, and the rising prominence of these sensors in renewable energy projects worldwide.

Torque Sensor Market Trends:

Automotive industry innovation

The automotive industry plays a pivotal role in driving the growth of the market. As automotive manufacturers continue to innovate and develop electric and hybrid vehicles, there is a growing need for precise torque measurement systems. Torque sensors are essential components in electric power steering, regenerative braking systems, and other advanced automotive technologies. The increasing demand for fuel-efficient and environmentally friendly vehicles has led to a rise in the adoption of electric powertrains, creating a significant market for these sensors. Additionally, the integration of these sensors in autonomous vehicles is becoming crucial for ensuring accurate control and feedback in various driving conditions, further propelling market growth.

Industrial automation and robotics

The rise of industrial automation and the growing adoption of robotics across various industries are key factors fueling the market. In automated manufacturing processes, torque sensors are essential for monitoring and controlling the torque applied by robotic arms and machinery. The demand for higher precision and efficiency in manufacturing processes is driving the integration of advanced torque sensing technologies. As industries strive for increased productivity and reduced downtime, these sensors contribute to achieving optimal performance and ensuring the safety of automated systems. The expansion of Industry 4.0 and the implementation of smart manufacturing practices further boost the market, as these sensors are integral to real-time monitoring and control in smart factory environments.

Renewable energy expansion

The global focus on sustainable and renewable energy sources is another significant driver for the market. In wind turbines, these sensors are crucial for monitoring and optimizing the performance of the rotating blades. As the demand for clean energy solutions continues to grow, the wind energy sector is expanding rapidly, contributing to the increased adoption of these sensors. Moreover, they play a vital role in the development and maintenance of solar tracking systems, ensuring the efficient capture of solar energy throughout the day. The push for renewable energy projects worldwide, coupled with advancements in sensor technologies, is driving market growth as these sensors become essential components in renewable energy applications.

Torque Sensor Industry Segmentation:

IMARC Group provides an analysis of the key trends in each segment of the market, along with forecasts at the global, regional, and country levels for 2024-2032. Our report has categorized the market based on type, technology, and application.

Breakup by Type:

Rotary Torque Sensor

Reaction Torque Sensor

Rotary torque sensor accounts for the majority of the market share

The report has provided a detailed breakup and analysis of the market based on the type. This includes rotary torque sensor and reaction torque sensor. According to the

report, rotary torque sensor represented the largest segment.

Rotary torque sensors are a crucial segment within the market, primarily designed to measure the twisting force applied to a rotating shaft. These sensors find extensive applications in various industries, including automotive, manufacturing, and aerospace. Employing different technologies such as strain gauges or magnetoelastic elements, these sensors offer high precision and reliability in measuring rotational forces. Their versatility allows integration into a wide range of systems, from engine testing in the automotive sector to quality control in manufacturing processes. As industries continue to demand accurate torque measurements for performance optimization and quality assurance, the rotary segment is poised for sustained growth, driven by ongoing technological advancements and expanding industrial applications.

On the contrary, reaction sensors are specifically designed to measure the static torque or reaction force in non-rotating systems. These sensors excel in applications where the torque is not generated through rotation but rather through static forces, making them essential in various scenarios such as torque wrench calibration, torque auditing, and force measurement. The precision and reliability of reaction sensors are critical for ensuring accurate readings in stationary or non-rotating setups, contributing significantly to industries like construction, assembly line testing, and quality control. As the demand for precise torque measurements in non-rotational applications continues to grow, the reaction segment is expected to witness sustained expansion, driven by its vital role in enhancing accuracy and efficiency across diverse industries.

Breakup by Technology:

Surface Acoustic Wave (SAW)

Optical

Strain Gauge

Others

Strain gauge holds the largest share of the industry

A detailed breakup and analysis of the market based on the technology have also been provided in the report. This includes surface acoustic wave (SAW), optical, strain gauge, and others. According to the report, strain gauge accounted for the largest market share.

Surface Acoustic Wave (SAW) technology represents a significant segment in the

market, offering a non-contact and highly sensitive approach to torque measurement. These sensors utilize acoustic waves to detect changes in the surface waves caused by torque-induced deformations. This technology provides advantages such as high resolution, minimal hysteresis, and immunity to electromagnetic interference. SAW torque sensors find applications in environments where contact-based methods might be challenging, such as high-speed rotational systems or those requiring non-intrusive sensing. As industries increasingly prioritize precision and reliability in torque measurements, SAW technology is gaining prominence, driving its growth within the market.

On the other hand, optical torque sensors utilize light-based principles, such as fiber optics or the reflection and refraction of light, to measure torque accurately. This non-contact technology offers advantages like high-speed measurements, immunity to electromagnetic interference, and durability in harsh environments. They find applications in aerospace, automotive, and manufacturing industries where precision and reliability are critical. The growing demand for contactless torque sensing in high-performance applications, along with advancements in optical technology, propels the adoption of optical sensors. As industries strive for enhanced efficiency and accuracy, the optical technology segment is anticipated to experience continued growth in the market.

Moreover, strain gauge technology remains a foundational and widely adopted segment in the market. These sensors operate on the principle of measuring the deformation or strain in a material subjected to torque. These sensors are versatile, offering a cost-effective solution with high accuracy and reliability. Commonly used in various applications, from automotive testing to industrial machinery, strain gauge torque sensors provide a direct and robust method for measuring torque. The maturity of this technology, coupled with ongoing innovations, ensures its continued relevance in the torque sensor market, catering to a broad range of industries seeking dependable and proven torque measurement solutions.

Breakup by Application:

- Aerospace and Defense
- Automotive
- Testing and Measurement
- Healthcare
- Others

Automotive represents the leading market segment

The report has provided a detailed breakup and analysis of the market based on the application. This includes aerospace and defense, automotive, testing and measurement, healthcare, and others. According to the report, automotive represented the largest segment.

The automotive industry is a primary and dynamic segment within the market, fueled by the rapid evolution of vehicle technologies. Torque sensors are integral to automotive applications, particularly in electric power steering, engine testing, and control systems. With the increasing shift toward electric and hybrid vehicles, the demand for these sensors has escalated to ensure precise control, safety, and efficiency. Additionally, they play a pivotal role in performance testing, quality control, and advanced driver-assistance systems (ADAS). The automotive sector's continuous innovation and emphasis on vehicle electrification propel the growth of torque sensors in this application domain.

On the other hand, the aerospace and defense sector constitutes a significant segment of the market, driven by the stringent precision and reliability requirements in aircraft and military applications. Torque sensors play a crucial role in aerospace engineering, where they are used in tasks ranging from monitoring engine performance to ensuring the precise control of flight surfaces. In defense applications, torque sensors contribute to the accurate functioning of weapon systems and vehicle components. As the aerospace and defense industry continues to advance technologically, the demand for high-performance torque sensors remains robust, positioning this segment as a key driver for market growth.

Moreover, the testing and measurement segment encompasses a wide range of industries where accurate torque measurement is essential for quality assurance, research, and development. Torque sensors find extensive applications in material testing, calibration processes, and laboratory experiments. Industries such as manufacturing, electronics, and machinery rely on these sensors for precise measurements during product development and quality control. The versatility of these sensors in adapting to diverse testing scenarios and ensuring accuracy positions this application segment as a key driver in the market, meeting the varied needs of industries focused on testing and measurement.

Furthermore, the healthcare sector is emerging as a notable application segment within the market, driven by the increasing adoption of robotic-assisted surgical procedures

and rehabilitation devices. These sensors play a critical role in robotic surgical systems, providing surgeons with haptic feedback and ensuring precise control during minimally invasive procedures. In rehabilitation devices, they contribute to monitoring and adjusting resistance levels, aiding in the rehabilitation process. As technology continues to transform healthcare practices, these sensors contribute to enhancing the precision and safety of medical devices, establishing a niche but growing presence in this vital application domain.

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

Asia Pacific leads the market, accounting for the largest torque sensor market share

The market research report has also provided a comprehensive analysis of all the major regional markets, which include North America (the United States and Canada); Asia

Pacific (China, Japan, India, South Korea, Australia, Indonesia, and others); Europe (Germany, France, the United Kingdom, Italy, Spain, Russia, and others); Latin America (Brazil, Mexico, and others); and the Middle East and Africa. According to the report, Asia Pacific accounted for the largest market share.

North America is a key region in the global market, driven by the significant presence of industries such as automotive, aerospace, and manufacturing. The region's advanced technological infrastructure and a robust emphasis on research and development contribute to the widespread adoption of these sensors across various applications. The automotive sector, in particular, benefits from the region's focus on electric and autonomous vehicles, creating a substantial demand for torque sensors. Additionally, stringent quality standards in industries like aerospace and defense further propel the market growth in North America, making it a crucial contributor to the overall market.

The Asia Pacific region is a thriving hub for the product market, fueled by rapid industrialization, technological advancements, and the presence of key manufacturing economies. Countries like China, Japan, and South Korea are pivotal players, with a strong focus on automotive production, industrial automation, and electronics manufacturing. The booming automotive industry, coupled with the increasing adoption of automation in manufacturing processes, drives the demand for these sensors in the Asia Pacific. Moreover, the region's growing investments in renewable energy and healthcare technologies contribute to the expanding applications of these sensors. As Asia Pacific continues to be a major contributor to global economic growth, its influence on the market remains substantial.

Europe stands as a significant market, characterized by a mature industrial landscape and a strong focus on technological innovation. The automotive industry in Europe, with its emphasis on electric vehicles and advanced driver-assistance systems, propels the demand for precise torque measurement solutions. Additionally, the region's commitment to sustainable practices fuels the growth of these sensors in renewable energy applications. European countries also have a robust aerospace sector, further contributing to the market. With stringent quality standards and a highly competitive manufacturing environment, Europe plays a vital role in shaping the trajectory of the global market.

Latin America contributes to the market with its diverse industrial landscape, including automotive manufacturing, energy production, and mining. While the market may not be as mature as some other regions, increasing investments in industrial automation, particularly in countries like Brazil and Mexico, drive the adoption of these sensors. The

automotive sector benefits from the region's growing middle class and urbanization trends, leading to a rise in demand for vehicles and associated technologies. As Latin America continues its industrial development, the market is expected to witness steady growth, supported by the evolving manufacturing landscape in the region.

The Middle East and Africa region exhibit potential for market growth, driven by infrastructure development, oil and gas exploration, and a focus on renewable energy. In the oil and gas sector, these sensors are crucial for monitoring and optimizing drilling operations. The region's commitment to renewable energy projects, such as solar and wind, contributes to the demand for these sensors in these applications. Moreover, the automotive and manufacturing sectors in some Middle Eastern countries contribute to the overall market growth. As these economies diversify and invest in technology, the market in the Middle East and Africa is poised for expansion, reflecting the broader industrial trends in the region.

Leading Key Players in the Torque Sensor Industry:

The key players in the market are driving growth through strategic initiatives such as technological advancements, product innovations, and strategic partnerships. Several companies are investing heavily in research and development to enhance the accuracy, reliability, and durability of torque sensors, catering to evolving industry needs. Additionally, market players are focusing on expanding their product portfolios to address a wide range of applications across diverse industries, ensuring their relevance in the dynamic market landscape. Collaborations with key industry stakeholders, including automotive manufacturers, industrial automation companies, and renewable energy developers, are facilitating the integration of these sensors into emerging technologies. These efforts not only strengthen market players' positions but also contribute to the overall growth of the market by fostering innovation, creating synergies, and meeting the increasing demand for high-performance torque sensing solutions globally.

The market research report has provided a comprehensive analysis of the competitive landscape. Detailed profiles of all major companies have also been provided. Some of the key players in the market include:

Applied Measurements Limited
Crane Electronics Inc.
Datum Electronics Limited (Indutrade AB)
FUTEK Advanced Sensor Technology Inc.
Hitachi Limited

Honeywell International Inc.
Hottinger Baldwin Messtechnik GmbH (Spectris plc)
Infineon Technologies AG
Kistler Holding AG
Norbar Torque Tools Limited (Snap-on Incorporated)
PCB Piezotronics Inc. (MTS Systems Corporation)

(Please note that this is only a partial list of the key players, and the complete list is provided in the report.)

Latest News:

December 7, 2023: Hitachi Limited is promoting an initiative called "AI Transformation" both internally and externally that will significantly improve business productivity and create new business opportunities.

December 19, 2023: Honeywell International Inc. announced that its Honeywell Building Solutions business has secured a contract from Reliance Life Sciences (RLS) for building management and safety technology.

December 18, 2023: Infineon Technologies AG announced its commitment to set a science-based target. Which will allow the company to expand its climate strategy even further.

Key Questions Answered in This Report:

How has the global torque sensor market performed so far, and how will it perform in the coming years?

What are the drivers, restraints, and opportunities in the global torque sensor market?

What is the impact of each driver, restraint, and opportunity on the global torque sensor market?

What are the key regional markets?

Which countries represent the most attractive torque sensor market?

What is the breakup of the market based on the type?

Which is the most attractive type in the torque sensor market?

What is the breakup of the market based on the technology?

Which is the most attractive technology in the torque sensor market?

What is the breakup of the market based on the application?

Which is the most attractive application in the torque sensor market?

What is the competitive structure of the market?

Who are the key players/companies in the global torque sensor market?

Contents

1 PREFACE

2 SCOPE AND METHODOLOGY

- 2.1 Objectives of the Study
- 2.2 Stakeholders
- 2.3 Data Sources
 - 2.3.1 Primary Sources
 - 2.3.2 Secondary Sources
- 2.4 Market Estimation
 - 2.4.1 Bottom-Up Approach
 - 2.4.2 Top-Down Approach
- 2.5 Forecasting Methodology

3 EXECUTIVE SUMMARY

4 INTRODUCTION

- 4.1 Overview
- 4.2 Key Industry Trends

5 GLOBAL TORQUE SENSOR MARKET

- 5.1 Market Overview
- 5.2 Market Performance
- 5.3 Impact of COVID-19
- 5.4 Market Forecast

6 MARKET BREAKUP BY TYPE

- 6.1 Rotary Torque Sensor
 - 6.1.1 Market Trends
 - 6.1.2 Market Forecast
- 6.2 Reaction Torque Sensor
 - 6.2.1 Market Trends
 - 6.2.2 Market Forecast

7 MARKET BREAKUP BY TECHNOLOGY

7.1 Surface Acoustic Wave (SAW)

7.1.1 Market Trends

7.1.2 Market Forecast

7.2 Optical

7.2.1 Market Trends

7.2.2 Market Forecast

7.3 Strain Gauge

7.3.1 Market Trends

7.3.2 Market Forecast

7.4 Others

7.4.1 Market Trends

7.4.2 Market Forecast

8 MARKET BREAKUP BY APPLICATION

8.1 Aerospace and Defense

8.1.1 Market Trends

8.1.2 Market Forecast

8.2 Automotive

8.2.1 Market Trends

8.2.2 Market Forecast

8.3 Testing and Measurement

8.3.1 Market Trends

8.3.2 Market Forecast

8.4 Healthcare

8.4.1 Market Trends

8.4.2 Market Forecast

8.5 Others

8.5.1 Market Trends

8.5.2 Market Forecast

9 MARKET BREAKUP BY REGION

9.1 North America

9.1.1 United States

9.1.1.1 Market Trends

9.1.1.2 Market Forecast

9.1.2 Canada

9.1.2.1 Market Trends

9.1.2.2 Market Forecast

9.2 Asia Pacific

9.2.1 China

9.2.1.1 Market Trends

9.2.1.2 Market Forecast

9.2.2 Japan

9.2.2.1 Market Trends

9.2.2.2 Market Forecast

9.2.3 India

9.2.3.1 Market Trends

9.2.3.2 Market Forecast

9.2.4 South Korea

9.2.4.1 Market Trends

9.2.4.2 Market Forecast

9.2.5 Australia

9.2.5.1 Market Trends

9.2.5.2 Market Forecast

9.2.6 Indonesia

9.2.6.1 Market Trends

9.2.6.2 Market Forecast

9.2.7 Others

9.2.7.1 Market Trends

9.2.7.2 Market Forecast

9.3 Europe

9.3.1 Germany

9.3.1.1 Market Trends

9.3.1.2 Market Forecast

9.3.2 France

9.3.2.1 Market Trends

9.3.2.2 Market Forecast

9.3.3 United Kingdom

9.3.3.1 Market Trends

9.3.3.2 Market Forecast

9.3.4 Italy

9.3.4.1 Market Trends

9.3.4.2 Market Forecast

9.3.5 Spain

- 9.3.5.1 Market Trends
- 9.3.5.2 Market Forecast
- 9.3.6 Russia
 - 9.3.6.1 Market Trends
 - 9.3.6.2 Market Forecast
- 9.3.7 Others
 - 9.3.7.1 Market Trends
 - 9.3.7.2 Market Forecast
- 9.4 Latin America
 - 9.4.1 Brazil
 - 9.4.1.1 Market Trends
 - 9.4.1.2 Market Forecast
 - 9.4.2 Mexico
 - 9.4.2.1 Market Trends
 - 9.4.2.2 Market Forecast
 - 9.4.3 Others
 - 9.4.3.1 Market Trends
 - 9.4.3.2 Market Forecast
- 9.5 Middle East and Africa
 - 9.5.1 Market Trends
 - 9.5.2 Market Breakup by Country
 - 9.5.3 Market Forecast

10 SWOT ANALYSIS

- 10.1 Overview
- 10.2 Strengths
- 10.3 Weaknesses
- 10.4 Opportunities
- 10.5 Threats

11 VALUE CHAIN ANALYSIS

12 PORTERS FIVE FORCES ANALYSIS

- 12.1 Overview
- 12.2 Bargaining Power of Buyers
- 12.3 Bargaining Power of Suppliers
- 12.4 Degree of Competition

12.5 Threat of New Entrants

12.6 Threat of Substitutes

13 PRICE INDICATORS

14 COMPETITIVE LANDSCAPE

14.1 Market Structure

14.2 Key Players

14.3 Profiles of Key Players

14.3.1 Applied Measurements Ltd.

14.3.1.1 Company Overview

14.3.1.2 Product Portfolio

14.3.1.3 Financials

14.3.2 Crane Electronics Inc.

14.3.2.1 Company Overview

14.3.2.2 Product Portfolio

14.3.3 Datum Electronics Limited (Indutrade AB)

14.3.3.1 Company Overview

14.3.3.2 Product Portfolio

14.3.3.3 Financials

14.3.4 FUTEK Advanced Sensor Technology Inc.

14.3.4.1 Company Overview

14.3.4.2 Product Portfolio

14.3.5 Hitachi Ltd.

14.3.5.1 Company Overview

14.3.5.2 Product Portfolio

14.3.5.3 Financials

14.3.5.4 SWOT Analysis

14.3.6 Honeywell International Inc.

14.3.6.1 Company Overview

14.3.6.2 Product Portfolio

14.3.6.3 Financials

14.3.6.4 SWOT Analysis

14.3.7 Hottinger Baldwin Messtechnik GmbH (Spectris Plc)

14.3.7.1 Company Overview

14.3.7.2 Product Portfolio

14.3.7.3 Financials

14.3.7.4 SWOT Analysis

- 14.3.8 Infineon Technologies AG
 - 14.3.8.1 Company Overview
 - 14.3.8.2 Product Portfolio
 - 14.3.8.3 Financials
 - 14.3.8.4 SWOT Analysis
- 14.3.9 Kistler Holding AG
 - 14.3.9.1 Company Overview
 - 14.3.9.2 Product Portfolio
- 14.3.10 Norbar Torque Tools Limited (Snap-on Incorporated)
 - 14.3.10.1 Company Overview
 - 14.3.10.2 Product Portfolio
 - 14.3.10.3 Financials
- 14.3.11 PCB Piezotronics Inc. (MTS Systems Corporation)
 - 14.3.11.1 Company Overview
 - 14.3.11.2 Product Portfolio

List Of Tables

LIST OF TABLES

Table 1: Global: Torque Sensor Market: Key Industry Highlights, 2023 and 2032

Table 2: Global: Torque Sensor Market Forecast: Breakup by Type (in Million US\$), 2024-2032

Table 3: Global: Torque Sensor Market Forecast: Breakup by Technology (in Million US\$), 2024-2032

Table 4: Global: Torque Sensor Market Forecast: Breakup by Application (in Million US\$), 2024-2032

Table 5: Global: Torque Sensor Market Forecast: Breakup by Region (in Million US\$), 2024-2032

Table 6: Global: Torque Sensor Market: Competitive Structure

Table 7: Global: Torque Sensor Market: Key Players

List Of Figures

LIST OF FIGURES

Figure 1: Global: Torque Sensor Market: Major Drivers and Challenges

Figure 2: Global: Torque Sensor Market: Sales Value (in Billion US\$), 2018-2023

Figure 3: Global: Torque Sensor Market: Breakup by Type (in %), 2023

Figure 4: Global: Torque Sensor Market: Breakup by Technology (in %), 2023

Figure 5: Global: Torque Sensor Market: Breakup by Application (in %), 2023

Figure 6: Global: Torque Sensor Market: Breakup by Region (in %), 2023

Figure 7: Global: Torque Sensor Market Forecast: Sales Value (in Billion US\$), 2024-2032

Figure 8: Global: Torque Sensor (Rotary Torque Sensor) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 9: Global: Torque Sensor (Rotary Torque Sensor) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 10: Global: Torque Sensor (Reaction Torque Sensor) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 11: Global: Torque Sensor (Reaction Torque Sensor) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 12: Global: Torque Sensor (Surface Acoustic Wave) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 13: Global: Torque Sensor (Surface Acoustic Wave) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 14: Global: Torque Sensor (Optical) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 15: Global: Torque Sensor (Optical) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 16: Global: Torque Sensor (Strain Gauge) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 17: Global: Torque Sensor (Strain Gauge) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 18: Global: Torque Sensor (Others) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 19: Global: Torque Sensor (Others) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 20: Global: Torque Sensor (Aerospace and Defense) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 21: Global: Torque Sensor (Aerospace and Defense) Market Forecast: Sales

Value (in Million US\$), 2024-2032

Figure 22: Global: Torque Sensor (Automotive) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 23: Global: Torque Sensor (Automotive) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 24: Global: Torque Sensor (Testing and Measurement) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 25: Global: Torque Sensor (Testing and Measurement) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 26: Global: Torque Sensor (Healthcare) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 27: Global: Torque Sensor (Healthcare) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 28: Global: Torque Sensor (Other Applications) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 29: Global: Torque Sensor (Other Applications) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 30: North America: Torque Sensor Market: Sales Value (in Million US\$), 2018 & 2023

Figure 31: North America: Torque Sensor Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 32: United States: Torque Sensor Market: Sales Value (in Million US\$), 2018 & 2023

Figure 33: United States: Torque Sensor Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 34: Canada: Torque Sensor Market: Sales Value (in Million US\$), 2018 & 2023

Figure 35: Canada: Torque Sensor Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 36: Asia Pacific: Torque Sensor Market: Sales Value (in Million US\$), 2018 & 2023

Figure 37: Asia Pacific: Torque Sensor Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 38: China: Torque Sensor Market: Sales Value (in Million US\$), 2018 & 2023

Figure 39: China: Torque Sensor Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 40: Japan: Torque Sensor Market: Sales Value (in Million US\$), 2018 & 2023

Figure 41: Japan: Torque Sensor Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 42: India: Torque Sensor Market: Sales Value (in Million US\$), 2018 & 2023

Figure 43: India: Torque Sensor Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 44: South Korea: Torque Sensor Market: Sales Value (in Million US\$), 2018 & 2023

Figure 45: South Korea: Torque Sensor Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 46: Australia: Torque Sensor Market: Sales Value (in Million US\$), 2018 & 2023

Figure 47: Australia: Torque Sensor Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 48: Indonesia: Torque Sensor Market: Sales Value (in Million US\$), 2018 & 2023

Figure 49: Indonesia: Torque Sensor Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 50: Others: Torque Sensor Market: Sales Value (in Million US\$), 2018 & 2023

Figure 51: Others: Torque Sensor Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 52: Europe: Torque Sensor Market: Sales Value (in Million US\$), 2018 & 2023

Figure 53: Europe: Torque Sensor Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 54: Germany: Torque Sensor Market: Sales Value (in Million US\$), 2018 & 2023

Figure 55: Germany: Torque Sensor Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 56: France: Torque Sensor Market: Sales Value (in Million US\$), 2018 & 2023

Figure 57: France: Torque Sensor Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 58: United Kingdom: Torque Sensor Market: Sales Value (in Million US\$), 2018 & 2023

Figure 59: United Kingdom: Torque Sensor Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 60: Italy: Torque Sensor Market: Sales Value (in Million US\$), 2018 & 2023

Figure 61: Italy: Torque Sensor Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 62: Spain: Torque Sensor Market: Sales Value (in Million US\$), 2018 & 2023

Figure 63: Spain: Torque Sensor Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 64: Russia: Torque Sensor Market: Sales Value (in Million US\$), 2018 & 2023

Figure 65: Russia: Torque Sensor Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 66: Others: Torque Sensor Market: Sales Value (in Million US\$), 2018 & 2023

Figure 67: Others: Torque Sensor Market Forecast: Sales Value (in Million US\$),

2024-2032

Figure 68: Latin America: Torque Sensor Market: Sales Value (in Million US\$), 2018 & 2023

Figure 69: Latin America: Torque Sensor Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 70: Brazil: Torque Sensor Market: Sales Value (in Million US\$), 2018 & 2023

Figure 71: Brazil: Torque Sensor Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 72: Mexico: Torque Sensor Market: Sales Value (in Million US\$), 2018 & 2023

Figure 73: Mexico: Torque Sensor Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 74: Others: Torque Sensor Market: Sales Value (in Million US\$), 2018 & 2023

Figure 75: Others: Torque Sensor Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 76: Middle East and Africa: Torque Sensor Market: Sales Value (in Million US\$), 2018 & 2023

Figure 77: Middle East and Africa: Torque Sensor Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 78: Global: Torque Sensor Industry: SWOT Analysis

Figure 79: Global: Torque Sensor Industry: Value Chain Analysis

Figure 80: Global: Torque Sensor Industry: Porter's Five Forces Analysis

I would like to order

Product name: Torque Sensor Market Report by Type (Rotary Torque Sensor, Reaction Torque Sensor), Technology (Surface Acoustic Wave (SAW), Optical, Strain Gauge, and Others), Application (Aerospace and Defense, Automotive, Testing and Measurement, Healthcare, and Others), and Region 2024-2032

Product link: <https://marketpublishers.com/r/TEF27F785A0FEN.html>

Price: US\$ 3,899.00 (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/TEF27F785A0FEN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:
Last name:
Email:
Company:
Address:
City:
Zip code:
Country:
Tel:
Fax:
Your message:

****All fields are required**

Customer signature _____

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below
and fax the completed form to +44 20 7900 3970