

# **Global AI Based Electrical Switchgear Market Size Study & Forecast, By Type (Indoor, Outdoor) By Application (Public Utility, Commercial, Industrial, Residential, Others) and Regional Analysis, 2023-2030**

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## **Abstracts**

Global AI Based Electrical Switchgear Market is valued at approximately USD xx billion in 2022 and is anticipated to grow with a healthy growth rate of more than xx% over the forecast period 2023-2030. AI Based Electrical Switchgear refers to a type of electrical distribution equipment that incorporates artificial intelligence (AI) technology to enhance its functionality, efficiency, and reliability. AI-based switchgear integrates advanced computational algorithms and sensor technologies to enable intelligent monitoring, predictive maintenance, fault detection, and self-diagnosis capabilities. The AI Based Electrical Switchgear market is expanding because of factors such as growing electrical energy demand and a rising focus on electric grid resilience. AI-based switchgear can dynamically adjust its operation in response to changing grid conditions, such as load fluctuations, voltage variations, or disturbances. This adaptability improves grid stability and resilience under varying operating conditions. As a result, the demand for AI Based Electrical Switchgear has progressively increased in the international market during the forecast period 2023-2030.

AI-based switchgear offers scalability and adaptability to evolving energy demands. Machine learning algorithms can continuously learn from operational data to improve performance and adapt to changing grid conditions over time. This adaptability ensures that electrical infrastructure remains responsive and resilient in the face of shifting energy requirements and technological advancements. According to the International Energy Organization, the monthly net electricity production for all OECD member countries accounted for about 934,938.7 GWh in the year 2020 and the production has increased to 950,389.4 GWh by the year 2022. Furthermore, the growing complexity of

electrical grids necessitates more advanced safety measures. AI-based switchgear can incorporate machine learning algorithms to detect anomalies in the electrical system that could pose safety risks, such as overloads, short circuits, or insulation faults. Another important factor that drives the AI Based Electrical Switchgear market is increasing focus on electric grid resilience. AI-based switchgear can automatically adjust settings or switch between different operating modes to stabilize the grid, ensuring uninterrupted power supply even during challenging conditions. In addition, In October 2023, the U.S. Department of Energy announced up to USD 3.5 billion in Grid Resilience and Innovation Partnerships (GRIP) Programme investments for 58 projects in 44 states to improve electric grid resilience and dependability across America. In addition, the Government of India has developed the National Smart Grid Mission (NSGM) to oversee the formulation and implementation of policies and initiatives about Smart Grid endeavors across the country. The overarching aim of Smart Grids is to bolster the resilience of the grid while enhancing its capability to accommodate renewable energy sources via distributed generation. Moreover, the increasing development of artificial intelligence-based technologies and the growing rate of Industrialization is anticipated to create a lucrative growth opportunity for the market over the forecast period. However, the high cost of AI Based Electrical Switchgear is going to impede overall market growth throughout the forecast period of 2023-2030.

The key regions considered for the Global AI Based Electrical Switchgear Market study include Asia Pacific, North America, Europe, Latin America, and Middle East & Africa. North America dominated the market in 2022 owing to the rising industrial automation in the region. Industries are increasingly embracing automation to enhance productivity, reduce costs, and improve safety. According to Gitnux Organization, the automation market in North America is estimated to grow at a CAGR of 8.4% between the years 2021 to 2028. AI-based switchgear facilitates automation by providing intelligent control and monitoring capabilities, thereby supporting the evolving needs of industrial applications. The region's dominant performance is anticipated to propel the overall demand for AI Based Electrical Switchgear. Furthermore, Asia Pacific is expected to grow fastest during the forecast period, owing to factors such as the expansion of renewable energy integration in the region.

Major market players included in this report are:

ABB Ltd

Schneider Electric SE

Siemens AG

Mitsubishi Electric Corporation

Eaton Corporation

SwitchGear Company NV

Lucy Electric UK Ltd

Havells India Limited

Shenzhen Hankang Electric Automation Co., Ltd

Jiangsu Daye Intelligent Electric Co., Ltd

Recent Developments in the Market:

In February 2024, Schneider Electric SE, a global pioneer in the digital revolution of energy management and automation, launched its new SureSeT Medium Voltage (MV) switchgear product in Canada. This new and upgraded system, supported by the unique and award-winning EvoPacT circuit breaker, has been created to satisfy the needs of primary switchgear applications with a smaller, stronger, and smarter solution capable of handling digital day-to-day operations.

Global AI Based Electrical Switchgear Market Report Scope:

Historical Data – 2020 - 2021

Base Year for Estimation – 2022

Forecast period - 2023-2030

Report Coverage - Revenue forecast, Company Ranking, Competitive Landscape, Growth factors, and Trends

Segments Covered - Type, Application, Region

Regional Scope - North America; Europe; Asia Pacific; Latin America; Middle East & Africa

Customization Scope - Free report customization (equivalent to up to 8 analysts' working hours) with purchase. Addition or alteration to country, regional & segment scope\*

The objective of the study is to define the market sizes of different segments & countries in recent years and to forecast the values for the coming years. The report is designed to incorporate qualitative and quantitative aspects of the industry within countries involved in the study.

The report also caters to detailed information about the crucial aspects such as driving factors & challenges that will define the future growth of the market. Additionally, it also incorporates potential opportunities in micro markets for stakeholders to invest along with a detailed analysis of the competitive landscape and product offerings of key players. The detailed segments and sub-segment of the market are explained below:

By Type

Indoor

Outdoor

By Application

Public Utility

Commercial

Industrial

Residential

Others

By Region:

North America

U.S.

Canada

Europe

UK

Germany

France

Spain

Italy

ROE

Asia Pacific

China

India

Japan

Australia

South Korea

RoAPAC

Latin America

Brazil

Mexico

RoLA

Middle East & Africa

Saudi Arabia

South Africa

Rest of Middle East & Africa

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