

Solid State Transformer Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2023-2028

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Report description:

Market Overview:

The global solid state transformer market size reached US\$ 187.9 Million in 2022. Looking forward, IMARC Group expects the market to reach US\$ 430.2 Million by 2028, exhibiting a growth rate (CAGR) of 14.3% during 2023-2028.

A solid state transformer (SST), also known as a smart transformer, is a modern electrical energy device that offers bi-directional power flow. It is capable of compensating voltage sags and harmonic distortion, interconnecting asynchronous networks, and interfacing direct current (DC) and alternating current (AC) ports. As it can also isolate disturbances from source and load or vice versa and eliminate the use of mechanical actuators or tap changers, SST finds extensive applications in traction/locomotives, electric ships and power grids across the globe.

Solid State Transformer Market Trends:

There is currently an increase in the use of electric vehicles (EVs) around the world on account of the rising environmental awareness among individuals. This, in confluence with the burgeoning energy sector, represents one of the key factors propelling the growth of the market. Moreover, conventional transformers have drawbacks, such as power loss and temperature rise due to harmonics, poor voltage regulation under load, inadequate protection from abnormal currents, and over-voltages. They also lack adequate controllability and have an adverse impact on the environment due to excessive usage of transformer oil. However, SSTs provide a wide range of services to smart grids, including reactive power compensation, power quality improvement, current limiting, voltage regulation, and power factor correction. Consequently, they have emerged as superior alternatives to conventional transformers worldwide. Apart from this, SSTs help integrate different distributed energy sources into the distribution grid with multiple functionalities. This, coupled with the increasing adoption of renewable energy sources, is augmenting the overall sales and profitability. Other factors, including technological advancements and extensive research and development

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(R&D) activities financed by key players, are strengthening the growth of the market.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global solid state transformer market report, along with forecasts at the global, regional and country level from 2023-2028. Our report has categorized the market based on product, component, voltage level, application and end user.

Breakup by Product:

- Distribution Solid State Transformer
- Power Solid State Transformer
- Traction Solid State Transformer

Breakup by Component:

- Converters
- High-frequency Transformers
- Switches
- Others

Breakup by Voltage Level:

- HV/MV
- MV/LV

Breakup by Application:

- Alternative Power Generation
- Electric Vehicle Charging Stations
- Power Distribution
- Traction Locomotives
- Others

Breakup by End User:

- Energy
- Transportation
- Others

Breakup by Region:

- North America

- United States

- Canada

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□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

□

Competitive Landscape:

The competitive landscape of the industry has also been examined along with the profiles of the key players being ABB Ltd., Alstom SA, Eaton Corporation PLC, Electric Research and Manufacturing Cooperative Inc. (ERMCO) (Arkansas Electric Cooperatives Inc.), General Electric Company, Hitachi Ltd., Kirloskar Electric Company Ltd., Mitsubishi Electric Corporation, Schneider Electric SE, Siemens AG, Synergy Transformers and Vollspark.

Key Questions Answered in This Report:

□How has the global solid state transformer market performed so far and how will it perform in the coming years?

□What has been the impact of COVID-19 on the global solid state transformer market?

□What are the key regional markets?

□What is the breakup of the market based on the product?

□What is the breakup of the market based on the component?

□What is the breakup of the market based on the voltage level?

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

□What is the breakup of the market based on the end user?

□What are the various stages in the value chain of the industry?

□What are the key driving factors and challenges in the industry?

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- What is the structure of the global solid state transformer market and who are the key players?
- What is the degree of competition in the industry?

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