

A Compact and Lightweight Design to Reduce Installation Space **Launching a Cast Resin Transformer for the Global Market**

Fuji Electric Co., Ltd. is pleased to announce that it is launching a compact and lightweight cast resin transformer for Southeast Asia and for the global market.

1. Background

As renewable energy expands and the social implementation of generative AI advances, the construction of data centers and semiconductor factories is increasing in Japan and overseas. This has resulted in a rapid increase, domestically and internationally, in demand for transmission and distribution equipment, which is essential for stable supply of electricity. One such piece of equipment is cast resin transformers, the Southeast Asian market for which is expected to grow at an average annual rate of 6.1% (2023 - 2030, according to research by FE).

Transformers are installed in power stations and substations, where they change the voltage of electricity to suit the location and application, such as for factories or buildings.

While oil-immersed transformers use oil to insulate the inside of the equipment, cast resin transformers use a flame-retardant resin to cover the wires (windings) around the internal iron core to provide both insulation properties and disaster prevention performance. Because they have a lower fire risk than oil-immersed transformers, they are often installed inside data centers, semiconductor factories and other general industrial factories, and buildings.

In Japan, the primary voltage of medium-voltage transformers in buildings and medium-sized factories is generally 6.6 kV, but overseas, it can be as high as 22 kV, necessitating larger transformers than those used in Japan. To address the growing need to reduce the installation space for transmission and distribution equipment, FE has recently released cast resin transformers for Southeast Asia and the global market that are smaller, lighter, and more cost competitive.



A cast resin transformer for the global

2. Features

Optimized the insulation structure to reduce size and weight

Cast resin transformers perform voltage conversion based on the principle of electromagnetic induction, and their main components are an iron core, a primary winding, and a secondary winding. For insulation purposes, these parts are spaced a certain distance apart (insulation distance).

By optimizing the structure and layout of the windings, this product greatly reduces the insulation distance while maintaining the same withstand voltage performance. It also eliminates the need for the spacers that are used to maintain the insulation distance. This has successfully reduced the footprint and the weight by approximately 17% and 13%, respectively, compared with conventional products. Not only does this help customers to save installation space, but the smaller size and weight also mean lower costs.

3. Product Specifications

Rated capacity	1000 - 3150 kVA
Frequency	50Hz
Primary voltage	22 kV
Secondary voltage	400V

4. Launch Schedule

The date of this announcement

5. Inquiries

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[Product Website]

https://www.fujielectric.com/products/transmission_distribution/cast_resin_transformer/

*The information conveyed in this release is accurate as of the date of this announcement and is subject to change without prior notice.