SIEMENS



Totally Integrated Power

Reliable operation of your data center

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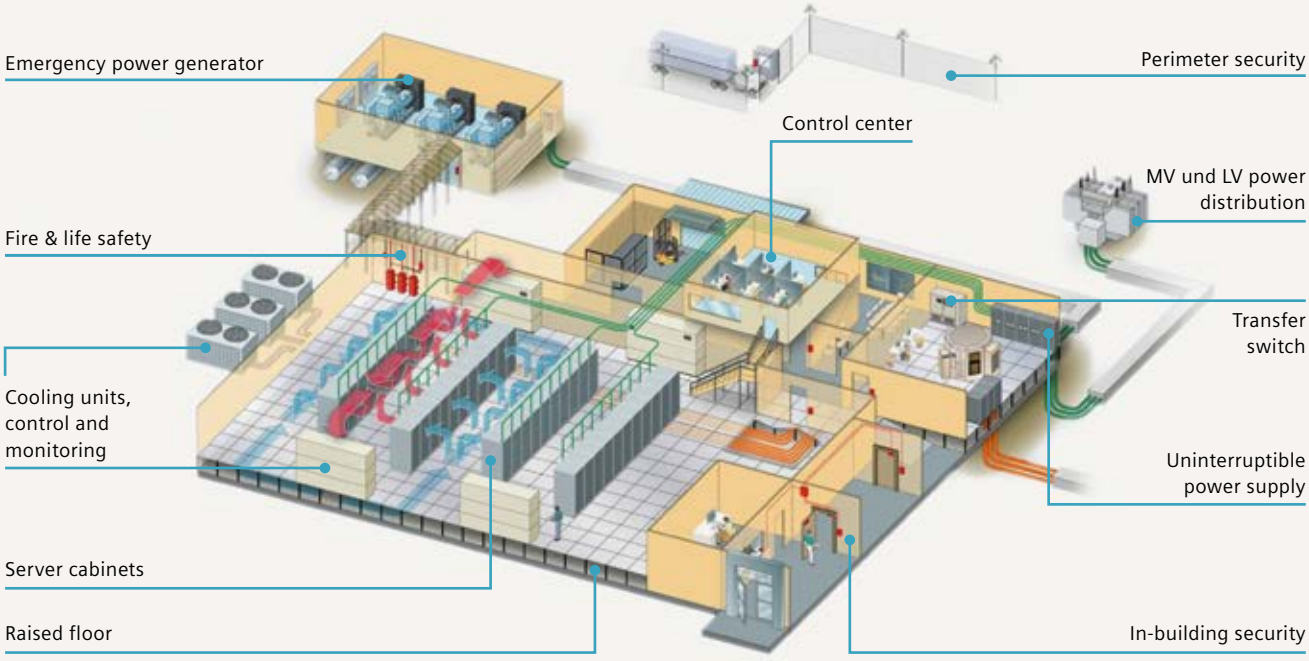

Power supply is an integral part of the infrastructure in data centers



Individual power distribution concepts for data centers



Comprehensive answers for power distribution in complex power systems – from Siemens

Totally Integrated Power
We bring power to the point – safely and reliably.

Efficient, reliable, safe: These are the demands placed on electrification and especially power distribution. And our answer – for all application areas of the energy system – is Totally Integrated Power (TIP). It's based on our comprehensive range of products, systems, and solutions for low and medium voltage, rounded out by our support throughout the entire lifecycle – from planning with our own software tools to installation, operation, and services.

Smart interfaces allow linking to industrial or building automation, making it possible to fully exploit all the optimization potential of an integrated solution. This is how we provide our customers around the world with answers to their challenges. With highly efficient, reliable, and safe power distribution, we lay the foundation for sustainable infrastructure and cities, buildings, and industrial plants. We bring power to the point – wherever and whenever it is needed.

Our power distribution concepts for data centers are as individual as the tasks they perform. Tailored to the process requirements of our customers, we develop a system or overall solution that focuses on reliability and availability and provides a reliable supply of power to the most important systems of a data center in the event of a power failure.

The challenge

Consuming approximately 1.5 – 2 percent of the electricity globally, data centers are among the world's largest users of electricity. Their storage capacity is doubling worldwide every 18 months. To remain competitive despite the growing need for processing and storage capacity, many operators are investing in greater rack density for more processing power in the same amount of space. This places new demands on the power supply, because the connected load of a high-performance rack can be as much as 2.5 times that of a conventional rack. Cooling requirements are increasing at the same pace as processing power – which is why, apart from the power costs, the performance of the power supply is especially crucial when it comes to operation.

Totally Integrated Power offers more:

- **Consistency:** Improved system planning and commissioning, easy integration of building automation
- **One-stop shop:** One contact partner for all low- and medium-voltage products, systems, solutions and services
- **Safety:** Perfect protection of personnel and equipment through optimized protection and switching devices
- **Reliability:** Our planning tools and consultant support assure that a sophisticated power distribution system helps to minimize power failures
- **Efficiency:** Higher system availability, maximum energy efficiency in the power distribution thanks to monitoring and protection against overload and short circuit.
- **Flexibility:** Seamless integration of either a static or a dynamic UPS into the overall electrical power distribution
- **Advanced technology:** Meeting the needs of tomorrow with a fully integrated low- and medium-voltage power distribution equipment which perfectly meshes with the Data Center Infrastructure Management (DCIM)*



*together with Siemens Building Technologies

The solution

Totally Integrated Power (TIP) for data centers is more than just a comprehensive portfolio of low and medium voltage products, systems, and components: It is a clever and integrated concept to support the data center's diverse business goals with intelligent links to building automation and uninterruptible power supply solutions. Based on our leading expertise and innovative planning tools, our TIP solutions support from consulting through planning to commissioning and service along the entire lifecycle of the investment. In addition, our global footprint with dedicated Centers of Competence offers a fast response and speedy service to help our customers maintain a competitive edge in their market.

Simply efficient

Our integrated solutions offer all products and systems from a single source – and considerable cost savings during installation and operation. TIP power distribution concepts include the right technologies to optimally support processes and maximize the return on investment. A highly competent planning and design offers an even greater potential for the long-term reduction of energy consumption and costs – for example, through the optimized design of power distribution.

The benefit

With TIP, operators receive either a modular system tailored to their requirements or a complete solution that offers them safety in all power distribution matters and beyond. This allows them to focus on their core business – the operation of the data center. Thanks to intelligent technology from Siemens, their data center will be on the right track economically as well, beginning with the effective management of their company's energy flow to exploit saving potentials.

Optimal system performance

The high quality of Siemens power distribution products pays off in two ways: They pave the way for smooth data center operation while significantly extending the maintenance and service intervals – which in turn reduces lifecycle costs.

Siemens AG
Infrastructure & Cities Sector
Low and Medium Voltage
Freyeslebenstr. 1
91058 Erlangen
Germany

E-mail: infrastructure-cities@siemens.com

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