

Siemens launches fully electronic e-Starter with semiconductor technology

- **Short-circuit protection 1000 times faster than conventional technology reduces downtime and maintenance costs**
- **Smart Start offers electrical and mechanical protection for motors and applications during start-up**
- **Full integration into SIMATIC STEP 7 (TIA Portal)**
- **Sustainable product bears Siemens EcoTech label**

Siemens Smart Infrastructure launches its first fully electronic starter with semiconductor technology. The SIMATIC ET 200SP e-Starter offers short-circuit protection that is 1000 times faster and is virtually wear-free compared to conventional solutions such as circuit breakers or fuses. This ensures optimal protection for motors as well as other types of loads and the applications in which they are used. The e-Starter also features the application-friendly Smart Start and full integration into the Totally Integrated Automation (TIA) concept. The compact device can be used worldwide, requires minimal space in the control cabinet, and is easy to install.

In industries such as food and beverage, intralogistics, and mechanical engineering, high efficiency motors are used in demanding applications, for example to drive conveyor systems or pumps. Malfunctions and failures can quickly lead to considerable damage and costs. Against this backdrop, motor starters play an important role: They not only switch motors reliably, but also protect them against overload and short circuits.

The SIMATIC ET 200SP e-Starter uses semiconductor technology with silicon carbide metal-oxide semiconductor field-effect transistors (SiC MOSFETS), which enables ultra-fast and wear-free switching. Because of the short-circuit protection

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device they are equipped with conventional feeder solutions have a comparatively slow response time. As a result, the device often needs to be replaced when a short circuit occurs. In contrast, the e-Starter detects short circuits extremely quickly and switches off in less than 4 µs. This makes it approximately 1,000 times faster than conventional components. The device offers unlimited short-circuit shutdown and does not need to be replaced after being tripped, which increases availability and significantly reduces warehousing costs for replacement parts.

High inrush currents are typical for high-efficiency motors, e.g. those in energy efficiency classes IE3 and IE4, and can lead to unintended trips of the protection device. The phase-optimized switching and Smart Start of the SIMATIC ET 200SP e-Starter neutralize the inrush currents and significantly reduce the starting currents and therefore the electrical load on the grid during start-up. In addition, the torque surges that occur during a direct start are minimized as well, noticeably reducing the mechanical wear. This means that less maintenance work is required – a valuable benefit for applications with a high switching rate.

“Our fully electronic e-Starter is a real innovation that offers many benefits over traditional electromechanical or hybrid motor starters. We developed it in close consultation with potential users. That is why it responds to their challenges exactly as needed. It makes demanding motors and applications more available, durable, and user-friendly than ever before,” said Andreas Matthé, CEO of Electrical Products at Siemens Smart Infrastructure. “Siemens is the first manufacturer with a fully electronic starter that is completely integrated into ET 200SP and TIA Portal and specifically addresses two challenges in the industrial sector: applications prone to short circuits and high current peaks when starting high efficiency motors.”

Machine and plant manufacturers and system integrators benefit from the seamless integration of the e-Starter into the market-leading automation concept Totally Integrated Automation (TIA). Diagnostic functions come as a standard, enabling detailed system diagnostics without the need for programming. Unlimited data availability and engineering using SIMATIC STEP 7 in TIA Portal simplify project planning, parameterization and commissioning. Automatic re-parameterization makes it easy to replace devices during ongoing operation (hot swapping).

Minimal use of materials, energy efficiency, and durability all combine to make the SIMATIC ET 200SP e-Starter a highly sustainable product, earning it the Siemens EcoTech label. In addition to its use of recycled materials, the e-starter offers lower energy consumption and wear-free switching for a longer and more efficient service life.

The new starter will make its public debut at the Smart Production Solutions (SPS) trade fair held from November 12 to 14, 2024 in Nuremberg, Germany. The Siemens booth will be located in Hall 11.

This press release as well as press pictures are available [here](#).

For more information on the e-Starter, please see www.siemens.com/e-starter.

For more information on Siemens Smart Infrastructure, please see [Siemens Smart Infrastructure](#).

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Siemens Smart Infrastructure (SI) is shaping the market for intelligent, adaptive infrastructure for today and the future. It addresses the pressing challenges of urbanization and climate change by connecting energy systems, buildings, and industries. SI provides customers with a comprehensive end-to-end portfolio from a single source – with products, systems, solutions, and services from the point of power generation all the way to consumption. With an increasingly digitalized ecosystem, it helps customers thrive and communities progress while contributing toward protecting the planet. Siemens Smart Infrastructure has its global headquarters in Zug, Switzerland. As of September 30, 2023, the business had around 75,000 employees worldwide.

Siemens AG (Berlin and Munich) is a leading technology company focused on industry, infrastructure, mobility, and healthcare. The company's purpose is to create technology to transform the everyday, for everyone. By combining the real and the digital worlds, Siemens empowers customers to accelerate their digital and sustainability transformations, making factories more efficient, cities more livable, and transportation more sustainable. Siemens also owns a majority stake in the publicly listed company, Siemens Healthineers, a leading global medical technology provider shaping the future of healthcare.

In fiscal 2023, which ended on September 30, 2023, the Siemens Group generated revenue of €74.9 billion and net income of €8.5 billion. As of September 30, 2023, the company employed around 305,000 people worldwide on the basis of continuing operations. Further information is available on the Internet at www.siemens.com.