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Press

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Siemens launches groundbreaking portfolio for the era of direct current technology

- **New SENTRON 3QD2 semiconductor circuit breaker and SIRIUS 3RF5 solid-state switching device support more efficient and resilient industrial and infrastructure applications**
- **Ultrafast interruption in microseconds for maximum protection of sensitive components in data centers, industrial manufacturing and battery storage systems**
- **New direct current portfolio enables significant energy and material savings, with up to 80 percent reduction in peak power consumption and up to 50 percent less material required for cabling or busbars**

Siemens Smart Infrastructure has launched a new, comprehensive portfolio of direct current (DC) protection and switching solutions, solidifying its position as a pioneer in the DC era. The new offering, including the innovative SENTRON 3QD2 semiconductor circuit breaker and the SIRIUS 3RF5 solid-state switching device, is designed to meet the growing demand for sustainable, efficient, and reliable low-voltage power distribution and industrial switching technology. Integrated in power distribution systems such as SIVACON S8 low-voltage switchboard and SIVACON 8PS busbar trunking systems, these solutions are particularly crucial for high-performance applications such as data centers, especially AI Factories, production facilities and battery storage systems, as well as for the integration of renewable energies.

The shift from widely used AC (Alternating Current) systems towards DC technology is a critical step in the global energy transition. Renewable energy sources like photovoltaics (PV) and battery storage systems generate or store electricity as Direct Current. By reducing conversion (DC to AC) losses and enabling the direct

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integration of renewable energy sources, DC systems offer a more efficient and sustainable alternative to traditional AC grids. Siemens is at the forefront of this transformation, with a deep commitment to research and development, demonstrated by its active participation in initiatives like the Open Direct Current Alliance (ODCA) and Current/OS.

A key innovation in the new portfolio is the SENTRON 3QD2 semiconductor circuit breaker. Based on semiconductor technology and smart protection algorithms, it enables ultra-fast interruption of short circuits in the microsecond range, up to 1,000 times faster than conventional systems. This is mandatory for DC grids and offers a significant increase of protection and system availability.

“With the consistent development of our pioneering semiconductor switching technology, we enable a new level of electrical safety also for the DC era,” said Andreas Matthé, CEO of Electrical Products at Siemens. The parametrizable SENTRON 3QD2 combines protection, switching, monitoring, and energy management in a single compact and multifunctional unit, replacing multiple components and saving significant space. Being maintenance-free with no mechanical wear parts, the SENTRON 3QD2 ensures a long service life and maximum plant availability, making it ideal for critical infrastructure.

“Our new DC portfolio equips customers with innovative solutions that not only enhance energy efficiency but also enable them to build a more resilient, future-ready infrastructure. This is a crucial contribution to the decarbonization of our industries and a testament to our commitment to creating technologies with purpose," Andreas Matthé added.

Complementing the SENTRON 3QD2 is the new SIRIUS 3RF5 solid-state switching device, the first of its kind for DC applications. It is designed for high-frequency switching of resistive loads, offering a low wear and durable solution that enhances the efficiency and availability of industrial plants. The SIRIUS 3RF5 also carries the Siemens EcoTech Label, highlighting its sustainable and transparent product design.

Together with the SIVACON S8 low-voltage switchboard (with Siemens EcoTech Label), SIVACON 8PS busbar trunking systems as well as integrated DC protection

and switching devices, we are paving the way for new DC solutions, supporting a high level of reliability and efficiency in production or infrastructure.

The advantages of DC solutions extend beyond individual products. By implementing DC grids, customers can achieve significant cost and material savings. For example, in a manufacturing setting with the use of robots, applying DC technology combined with energy recuperation and storage can reduce peak power demand by up to 80 percent, leading to substantial cost reductions. Furthermore, DC systems eliminate the need for reactive power compensation and require less copper in cabling, resulting in up to 50 percent material savings and a smaller environmental footprint.

Siemens will present its new portfolio at the Hannover Messe 2026 in Hall 27, booth A 48.

This press release as well as press pictures are available here.

For more information on Siemens' DC portfolio, please see here.

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. To protect this journey, we foster holistic cybersecurity to ensure secure and reliable operations. Siemens Smart Infrastructure has its global headquarters in Zug, Switzerland. As of September 30, 2025, the business had around 79,400 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. A leader in industrial AI, Siemens leverages its deep domain know-how to apply AI – including generative AI – to real-world applications, making AI accessible and impactful for customers across diverse industries. Siemens also owns a majority stake in the publicly listed company Siemens Healthineers, a leading global medical technology provider pioneering breakthroughs in healthcare. For everyone. Everywhere. Sustainably.
In fiscal 2025, which ended on September 30, 2025, the Siemens Group generated revenue of €78.9 billion and net income of €10.4 billion. As of September 30, 2025, the company employed around 318,000 people worldwide on the basis of continuing operations. Further information is available on the Internet at www.siemens.com.