

Siemens introduces one of the world's most innovative circuit protection devices

- **Ultra-fast, multifunctional, parametrizable, and sustainable**
- **Up to 1,000 times faster, plus wear-free switching**
- **Multiple functions in one device; each can be adjusted individually**
- **Up to 80 percent less space required in distribution board, compared to conventional solutions**

Siemens has developed one of the world's most innovative circuit protection devices with cutting-edge electronic switching technology. SENTRON ECPD (Electronic Circuit Protection Device) electronically switches off circuit faults if errors occur and, if necessary, trips the mechanical isolating contact downstream. Up to now, disconnection was handled purely through electro-mechanical elements. "This innovation offers a variety of benefits and has the potential to revolutionize today's circuit protection world," said Andreas Matthé, CEO of Electrical Products at Siemens Smart Infrastructure.

SENTRON ECPD enables completely new approaches in electrical planning, maximizing safety, flexibility and delivering enormous space and energy savings compared to conventional solutions. "For the first time in the history of circuit protection, it is possible to benefit from several functionalities in one product and to activate them as required by the individual application or adapt them if needed. All of this combined with the solid-state switching technology enables up to a thousand times faster, wear-free switching," added Matthé.

Ultra-fast

Circuit protection devices are central components of every electrical installation. If certain load current limits are exceeded, these devices disconnect the individual loads

to protect people and systems from damage. In the event of a short circuit, for example, this type of disconnection occurs in commercially available circuit breakers in two to three milliseconds.

In comparison, SENTRON ECPD disconnects up to a thousand times faster, minimizing the occurring short-circuit energy. This ensures maximum safety for people, systems, and electrical equipment. SENTRON ECPD also offers wear-free switching, which increases the service life of systems and reduces maintenance and repair costs. In addition, the integrated cyclical self-test (including the integrated RCD function) raises safety to an entirely new level not covered by current concepts.

Multifunctional and parametrizable

The smart SENTRON ECPD offers more functionalities in one compact design, saving space and costs. The range of functions can be customized as required. New functions can be easily activated on the SENTRON ECPD without having to purchase a new device and functionally adapt it into the circuit. The SENTRON powerconfig app makes this task easy and convenient.

SENTRON ECPD can be adjusted as required and adapts perfectly to the requirements of the application, for example with regard to rated current, tripping limits or behavior. These properties offer major planning and cost advantages. For example, circuits can simply be designed based on the rated current of the loads instead of the significantly higher inrush current peaks that occur briefly with certain load types, such as LED lights. This reduces complexity as well as planning and installation efforts and saves on materials such as copper.

Reducing operating costs and downtime

SENTRON ECPD offers full transparency on energy consumption in the final circuit through radio-based communication with the SENTRON Powercenter 1000 and 3000 gateways. This enables measures to optimize systems and processes, for example as part of energy management in accordance with ISO 50001, which in turn allows for efficient reductions in energy and operating costs.

For the first time, it is possible to perform detailed condition monitoring of the applications at the final circuit level. This substantially increases availability and operational reliability. The large volume of measurement data enables the detection

of irregularities and deviations and creates a reliable planning basis for preventive maintenance. SENTRON ECPD can be easily integrated into higher-level systems by using the open Modbus TCP standard.

SENTRON ECPD makes it possible to carry out remote diagnostics and remote switching during normal operation as well as in the event of a fault. This offers significant benefits, especially for remote applications without direct on-site support. In addition, it is easier to localize and identify faults by differentiating the cause of the fault.

Sustainable

SENTRON ECPD combines multiple product functions in one device. Depending on the application, this allows savings of up to 80 percent on electronics, 90 percent on metals and 90 percent on plastics. Overall, SENTRON ECPD is approximately 90 percent lighter than the devices otherwise required. Compared to solutions based on today's conventional technology, SENTRON ECPD also requires up to 80 percent less space in the distribution board, eliminating the need for costly structural measures.

This press release as well as press pictures / further material are available here:

<https://sie.ag/5kk89s>

For further information on the ECPD, please see www.siemens.com/sentron-ecpd

For further information on Siemens Smart Infrastructure, please see

www.siemens.com/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, transport, and healthcare. From more resource-efficient factories, resilient supply chains, and smarter buildings and grids, to cleaner and more comfortable transportation as well as advanced healthcare, the company creates technology with purpose adding real value for customers. By combining the real and the digital worlds, Siemens empowers its customers to transform their industries and markets, helping them to transform the everyday for billions of people. Siemens also owns a majority stake in the publicly listed company Siemens Healthineers, a globally leading medical technology provider shaping the future of healthcare.

In fiscal 2023, which ended on September 30, 2023, the Siemens Group generated revenue of €77.8 billion and net income of €8.5 billion. As of September 30, 2023, the company employed around 320,000 people worldwide. Further information is available on the Internet at www.siemens.com.