

News Release

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Hitachi Energy's new Relion REF650 delivers advanced protection and control for power distribution applications

- All-new relay ready to meet the demands of distribution automation and medium-voltage applications
- Complemented by an IEC 61850 Ed 2.1 compatible configuration tool to maximize security and interoperability
- Demonstrates vision of a smarter, modular, and actively managed distribution network



Come see the REF650 at CIGRE 2024 Paris Session, Hitachi Energy Palais des congrès, Stand No. S175

Zurich, August 19, 2024 – Today, Hitachi Energy achieved another milestone in extending its distribution automation offering with the launch of the [Relion REF650](#) multi-application protection and control relay, specifically designed for medium-voltage power distribution grids. Enhanced flexibility, modularity, security, and a new, intuitive user interface make the REF650 uniquely suited for the evolving power quality requirements across both utility and industrial operations.

With growing complexity and increased digitalization in the distribution grid, electrical substations must be managed with higher fidelity. System components like protection and control relays integrate critical data sources to operate distribution grids more autonomously and responsively.

“Increasingly, demands on the system are not only related to the delivery of energy but also in the smart adoption of new standards and technologies to make the system more resilient, interoperable, and efficient,” said Claus Vetter, Head of Automation and Communications Global Product Group (GPG) for Hitachi Energy. “Automation and intelligent electronic devices (IEDs) can now work seamlessly to reduce disturbances, maintain high reliability, and lower opex.”

Distribution operators no longer want technologies and products that only do one thing. Instead, they want solutions that work together as a modular, scalable, and intelligent platform across the network. They also want compliance with the latest standards and full interoperability across diverse equipment and power sources. The REF650 marks further innovation in Hitachi Energy's record as a recognized leader in power automation and communication, delivering

technology that serves more than 50 percent of global utilities.

REF650 offers significant new features and benefits for the protection and control of primary distribution systems in key areas:

- **Cost-efficiency:** single-device modular design is ideal for long-term deployment with scalable and flexible features
- **Ease of use:** new Human Machine Interface (HMI) touchscreen shows machine status and real-time voltage/current data while giving an operator interactive control
- **Performance and interoperability:** REF650 is certified to the latest industry standards (IEC 61850 Ed 2.1), with PCM600 3.1, compatible across vendors
- **Simplified engineering:** streamlined configuration and parameterization allow for easier settings changes, simplifying testing and maintenance processes
- **Compact form factor:** a smaller size significantly reduces the space needed for installation, especially in space-constrained environments
- **Sustainable, safe, and secure:** provides increased uptime with modular, user-exchangeable hardware modules, and it supports extended operating temperature ranges and vibration classes
- **Enhanced after-sales service:** can be reconfigured and extended with hardware modules, offering flexibility in incorporating late project or design changes

Hitachi Energy's Grid Automation portfolio enables customers to manage the evolving demands of utility grids by delivering better visibility and scalable communications solutions for increased performance, safety, and cost efficiency. The company also delivers advanced services and digital capabilities, including integration of IT/OT, data analytics, and digitalization tools to make the entire grid system more sustainable, flexible, and secure.

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About Hitachi Energy

Hitachi Energy is a global technology leader that is advancing a sustainable energy future for all. We are advancing the world's energy system to be more sustainable, flexible and secure and we collaborate with customers and partners to enable a sustainable energy future – for today's generations and those to come. Hitachi Energy has a proven track record and unparalleled installed base in more than 140 countries, serving customers in utility, industry, transportation, data centers and infrastructure sectors. With innovative technologies and services including the integration of more than 150 gigawatts of HVDC links into the power system, we help make the energy value chain more efficient, making electricity more accessible to all. Together with stakeholders across sectors and geographies, we enable the digital transformation required to accelerate the energy transition towards a carbon-neutral future. Headquartered in Switzerland, we employ around 45,000 people in 90 countries and generate business volumes of around \$13 billion USD.

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About Hitachi, Ltd.

Hitachi drives Social Innovation Business, creating a sustainable society through the use of data and technology. We solve customers' and society's challenges with Lumada solutions leveraging IT, OT (Operational Technology) and products. Hitachi operates under the 3 business sectors of “Digital Systems & Services” – supporting our customers’ digital transformation; “Green Energy & Mobility” – contributing to a decarbonized society through energy and railway systems, and “Connective Industries” – connecting products through digital technology to provide solutions in various industries. Driven by Digital, Green, and Innovation, we aim for growth through co-creation with our customers. The company’s revenues as 3 sectors for fiscal year 2023 (ended March 31, 2024) totaled 8,564.3 billion yen, with 573 consolidated subsidiaries and approximately 270,000 employees worldwide. For more information on Hitachi, please visit the company's website at <https://www.hitachi.com>.

Information contained in this news release is current as of the date of the press announcement, but may be subject to change without prior notice.
