

Erlangen, April 24, 2018

Hannover Messe 2018, Hall 9, Booth D35

Transformers meet connectivity: Siemens introduces Sensformer™ at Hannover Messe

- **Sensformer™ will make relevant data available in real-time**
- **Enable customers to take full advantage of digitalization**
- **Benefit from Siemens expertise in IoT and cybersecurity**

Siemens has launched the world's first comprehensive digital transformer portfolio at Hannover Messe, Germany. The new Sensformer™ merges physics and information and ensures digital intelligence for transformers regardless of their product class, size and rating. As transformers are placed at critical nodes of the power grid, they are perfect sensors for grid conditions containing full information on energy flow. Sensformer™ provides the easy step-in to digitalization for all customers, turning the "voltage regulators" into an info-hub. The data will allow for conclusions on the status of the assets as well as the power grid and thus allow for enhanced flexibility and optimized operation of the entire grid. While currently available solutions are imposing additional hurdles in terms of cost and complexity to customers, Sensformer™ will already be equipped per default with easy-to-use digital intelligence. The basic functionalities of Sensformer™ (incl. hardware, software and cloud access) are kept simple for ease of use. The Sensformer™ also holds the advantage of offering highest stability by limiting physical measurements to the bare minimum as well as avoiding unnecessary IT equipment at site. Siemens will shift its complete transformer portfolio to Sensformer™ starting June 2018.

"The current challenge of the transformer industry is to enable connectivity for all assets. With the launch of Sensformer™ we combine function and information in one product with the focus on simplicity and smart data", says Beatrix Natter, CEO Transformers at Siemens Energy Management. "Like the smart phone has replaced the cell phone, all transformers will be Sensformer™ in the near future," Natter adds.

All Sensformer™ will be equipped with an IoT gateway to provide direct real-time measurements of oil level, top oil temperature, LV winding current and GPS location –. Every operator will get access to a cloud-based platform application that visualizes the collected data and provides insights on the assets' status and performance across voltage levels. Knowing the exact status of their transformers will enable grid operators to face challenges like integrating a growing amount of renewables and distributed energy generation into the power grid, while operating their networks as economically as possible. In a next step the co-creation process with customers will lead to different application sets and apps tailor-made to customers' needs. With MindSphere Siemens offers a cloud-based, open operating system for developing these applications. MindSphere is Siemens' cloud-based, open Internet of Things (IoT) platform that connects physical assets to the digital world, and enables powerful applications and digital services.

Cybersecurity is a critical factor for the success of digitalization

Siemens introduces this product with best in class cyber security features complying to all the relevant standards today. With more than one million devices already connected to MindSphere, Siemens has first-hand experience with cybersecurity challenges in the age of the Industrial Internet of Things. With its unique combination of technical expertise in cybersecurity and domain knowledge, Siemens is ideally positioned to be both a market and a thought leader. Currently, our company has about 1,275 cybersecurity experts worldwide, which includes about 25 white-hat hackers who continuously challenge the security of both internal IT systems and products being shipped to customers. Siemens' experience in cybersecurity goes back to 1986, when the first IT Security team at Siemens was established at the company's central research department, Corporate Technology.

This press release and a press picture are available at

www.siemens.com/press/PR2018040247EMEN

For more information about the Energy Management Division please visit

www.siemens.com/energy-management

More information about Hannover Messe can be found at:

www.siemens.com/press/hm18

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Siemens AG (Berlin and Munich) is a global technology powerhouse that has stood for engineering excellence, innovation, quality, reliability and internationality for 170 years. The company is active around the globe, focusing on the areas of electrification, automation and digitalization. One of the world's largest producers of energy-efficient, resource-saving technologies, Siemens is a leading supplier of efficient power generation and power transmission solutions and a pioneer in infrastructure solutions as well as automation, drive and software solutions for industry. With its publicly listed subsidiary Siemens Healthineers AG, the company is also a leading provider of medical imaging equipment – such as computed tomography and magnetic resonance imaging systems – and a leader in laboratory diagnostics as well as clinical IT. In fiscal 2017, which ended on September 30, 2017, Siemens generated revenue of €83.0 billion and net income of €6.2 billion. At the end of September 2017, the company had around 377,000 employees worldwide. Further information is available on the Internet at www.siemens.com.