Siemens launches new telecontrol and power grid automation system on the market

Siemens is launching a new telecontrol and power grid automation system on the market: the modular equipment series Sicam A8000. This combination of power supply, processor, and expansion modules can be employed in substations, in distribution network automation, for connecting renewable energy sources, for power supply applications in industry, or in railway power supply systems. The compact device CP-8000 comprises a power supply, a display with function keys, and binary inputs and outputs. New processor and power supply modules in conjunction with expansion modules enable scalable solutions for a wide range of different power requirements.

“If the transition to a new energy mix is going to succeed, the energy business needs to further digitalize its power grids. What Industrie 4.0 is to industry is increasingly becoming the Utility 4.0 for the power supply sector. We’re supporting this development with our new telecontrol and grid automation system,” said Ralf Christian, CEO of the Siemens Energy Management Division.

Analog input modules with four inputs are available, as are binary input modules with 16 inputs and binary output modules with eight outputs. There are analog input modules with three inputs for current and voltage and a current transformer adapter module with three current inputs. With a standard width of 30 millimeters, the modules can be mounted on a DIN rail in any sequence and are interconnected via a bus on the back side. The system automatically detects the individual modules during startup. Thanks to the different power levels of the processor modules and expansion modules, the system is almost infinitely scalable and expandable. The telecontrol and grid automation system – which is based on international standards such as IEC 61850 – can also be operated in climatically adverse
conditions thanks to its extended temperature range from -40° Celsius to +70°
Celsius. In addition, the enhanced EMC stability with a voltage of up to five kV (IEC
60255) permits direct application in substations. An integrated crypto chip protects
the data in a secure environment, IPSec encryption allows secure communication
over IP networks, and an https protocol ensures the secure transmission of sensitive
data.

Sicam A8000 can also be adapted to the user’s communications infrastructure via
various interfaces and an integrated GPRS module (CP-8022). The system not only
supports standard protocols but also specific protocols used in non-Siemens
equipment. Short-circuit indicator functions also make it possible to use the system
in network monitoring. Last but not least, an integrated web parameterizing tool
facilitates system engineering.

In power transmission and distribution, the system can be used for automating
several voltage levels in substations for the transmission grid. In distribution network
automation, the system takes over the role of monitoring and control of secondary
substations on the medium-voltage side with regard to fault location and the
automatic restoral of the power supply.

Another application area is the network coupling of wind and solar parks using the
incoming feeder controller as a hub for exchanging information between wind farm
and supply grid. Turbine control systems, process controls, or switching interlocks
can be implemented for open- and closed-loop control applications, thanks to the
Sicam A8000’s logic functions. In industry it can be utilized as the power automation
technology for all systems, from local power infeed through integration of the
emergency power supply to the low-voltage distribution level.

The system can control distributed power generating plants within a microgrid, and
can therefore meet the challenges of specific energy scenarios. However, it also
functions as a communications gateway for RTU networks (remote terminal units)
that can be based on different network and communications protocols. The RTU can
also be used as a gateway with protocol conversion and network separation
between the process and visualization levels. Sicam A8000 is also suitable for
automating the railway power supply, including the entire control system and
protection and communications technology.
Telecontrol and power grid automation solutions are part of the Siemens Division Energy Management's product portfolio. As a product supplier, system integrator, and solution and service provider, the Division offers power supply companies and industry cost-efficient, reliable, and intelligent solutions for the transmission and distribution of electrical power. The portfolio ranges from products and systems for low-voltage and distribution networks and smart grid and energy automation solutions to high voltage transmission systems. With a presence in more than 100 countries, the Siemens Division earned approximately €11.9 billion in sales and €570 million in profit and employed just fewer than 53,000 employees worldwide last fiscal year, which ended on September 30, 2015.

This press release and a press picture is available at www.siemens.com/press/PR2016090389EMEN

For further information on Division Energy Management, please see www.siemens.com/energy-management

For further information on Sicam A8000 Serie, please see www.siemens.com/sicam-a8000

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