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PRESS RELEASE

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Yokogawa Releases HXS10 Controller for Solar Tracking Applications – Precision tracking for maximum capture of solar energy –

Yokogawa Electric Corporation announces the July 1 release of the HXS10 controller. This new product controls the actuation systems that move heliostats (reflectors) and photovoltaic panels. The HXS10 helps maximize power generating efficiency by controlling the angles of heliostats and solar panels so they stay pointed at the sun as it moves across the sky.

Development Background

Renewable energy is seen as an alternative to the world's dwindling supply of fossil fuels and as a means of reducing greenhouse gas emissions. One of the driving forces for solar thermal and photovoltaic power generation systems in recent years has been their ability to generate electricity during the daytime hours, when demand is at its highest.

In a solar thermal power generation system, sunlight is concentrated onto a receiver that uses the heat to turn water into steam, which rotates a turbine and generates electricity. By controlling the angle of the heliostat so it tracks the movement of the sun, it is possible to precisely focus the sunlight onto the receiver. For photovoltaic power generation systems, though most solar panels used today are of the fixed type, power generating efficiency can be

improved if panels are kept directed at an optimal angle towards the sun. Control technologies that can precisely orient the heliostats and panels to follow the movement of the sun are crucial.

By utilizing its reliable control technologies, Yokogawa has developed the HXS10 to control the actuation systems of solar thermal and photovoltaic power generation systems. Based on the facility location, date, and time, the HXS10 calculates the position of the sun through a high-resolution (64-bit) solar position algorithm, and operates motors or hydraulic actuators to adjust the angle of the heliostats and solar panels so they stay pointed toward the sun.

Product Features

1. Low-cost / high-value design

The HXS10 is designed specifically for the control of solar tracking systems. Compared to general-purpose controllers such as PLCs, this controller has lower initial costs and requires less engineering time.

2. Excellent environmental resistance

The HXS10 is built of environmentally resistant and durable components and can withstand temperatures ranging from –20°C to +70°C. This product is optimal for the control of solar power generating facilities installed in deserts and other harsh locations.

3. Communication functions

The HXS10 has a communication function that allows it to be monitored by a host system in a central control room. Moreover, to eliminate communication traffic overload and create a more secure and stable communication environment, each HXS10's communications can be routed to the host system via another HXS10 unit.

Main Target Markets

Heavy machinery companies that manufacture solar thermal and photovoltaic power systems

Application

Control of solar tracking actuation systems

About Yokogawa Corporation of America

Yokogawa Corporation of America is the North American division of $ 4 billion Yokogawa Electric Corporation, a global leader in the manufacture and supply of instrumentation, process control and automation solutions. Headquartered in Sugar Land, Texas, Yokogawa Corporation of America offers a variety of clients with leading products on the market as analyzers, flowmeters, transmitters, controllers, recorders, data acquisition products, measuring instruments, distributed control systems, and more. For more information about Yokogawa, please visit our website www.yokogawa.com/us.

About Yokogawa

Yokogawa's global network of 25 manufacturing facilities and 80 companies spans 54 countries. Since its founding in 1915, the US$3 billion company has been engaged in cutting-edge research and innovation, securing more than 7,200 patents and registrations, including the world's first digital sensors for flow and pressure measurement. Industrial automation and control, test and measurement, information systems and industry support are the core businesses of Yokogawa. For more information about Yokogawa, please visit our web site at www.yokogawa.com.