

PRESS RELEASE

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Contact: info@us.yokogawa.com

Contact Phone: 1-800-888-6400

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Yokogawa Releases Enhanced Version of ProSafe-RS Safety Instrumented System

Yokogawa Electric Corporation announces that it is releasing an enhanced version of the ProSafe-RS Safety Instrumented System, ProSafe-RS R2.02.00, on October 31. This new version adds an output module for use with alternating voltage power sources and offers improved maintenance and documentation functions that make this system ideal for widely distributed upstream processes, including wellheads and pipelines. These enhancements meet users' latest requirements for safety instrumented systems, and strike the perfect balance between improved operational efficiency and safety in upstream and downstream processes.

Development Background

There is a growing emphasis on safety instrumented systems for operational safety in energy and basic materials industries such as oil, natural gas, petrochemicals, and iron & steel that is driven by the need to provide a safe workplace, protect the environment, and be a responsible corporate citizen. An ARC study^{*1} estimates that the global market for safety instrumented systems will average at least 12% annual growth and be worth US\$2.5 billion in 2012.

To achieve both operational efficiency and safety, it is necessary to finely integrate the distributed control systems (DCSs) that are necessary for stable plant operations with the safety instrumented systems that perform emergency shutdowns. To address this need, Yokogawa developed the ProSafe-RS Safety Instrumented System, and has continued to strengthen its linkage with the CENTUM[®] series.

At the same time, safety has become a major concern not only at oil, natural gas, and petrochemical plants but also at widely distributed production facilities such as wellheads and pipelines. A safety instrumented system has

been needed that can work with the SCADA systems widely used to control and monitor these facilities. With the release of this enhanced version, the ProSafe-RS platform now offers connectivity with the control and monitoring functions of the STARDOM Network-based Control System, thereby securing the safety of widely distributed production facilities.

Overview of Enhancements

1. Connectivity with upstream processes including wellheads and pipelines^{*2}

We have achieved connectivity between ProSafe-RS, STARDOM, and the FAST/TOOLS SCADA system over a single network that is based on the Vnet/IP real-time control bus and dedicated to upstream processes. As a result, FAST/TOOLS can now monitor both the STARDOM and ProSafe-RS systems in an integrated manner.

2. New I/O module

An output module has been added for connecting directly to devices such as emergency shutdown valves that use a 100-120 V AC power source. This eliminates the need to set up relays for such devices, simplifying system configuration and improving maintenance efficiency. This module complies with the IEC61508 international safety standard^{*3} and is SIL3 certified^{*4}.

3. Enhanced online maintenance

A function has been added that makes it possible to change the operational parameter settings in an I/O module without disrupting input/output to/from any connected equipment. It is no longer necessary for these settings to be done manually.

4. Improved documentation functions

This enhanced function makes it possible to modify the format of a spreadsheet for printing out data. Users are free to select whatever format is most efficient for displaying the data.

Major Target Markets and Applications

Oil, natural gas, petrochemicals, and other process industries that use systems for emergency plant shutdown, fire prevention/fighting, and burner management

About ProSafe-RS

Released in February 2005, the ProSafe-RS Safety Instrumented System helps prevent accidents by detecting unusual conditions in plant operations and taking emergency actions such as shutting down the plant. Unlike conventional safety instrumented systems and DCSs, which are regarded as having different roles and functions and operate separately, the operation of ProSafe-RS and the CENTUM series can be fully integrated. An independent certification body has certified that ProSafe-RS conforms to the IEC61508^{*3} international safety standard and can be used in SIL3^{*4} applications. As a result, ProSafe-RS is highly regarded by users and has been installed in more than 350 projects worldwide since its release.

^{*1} Survey conducted by ARC Advisory Group, published on October 1, 2008

^{*2} Available in April 2009

^{*3} A standard relating to the functional safety of electrical and electronic equipment that was established by the International Electrotechnical Commission (IEC)

^{*4} Safety integrity levels (SIL) are defined by the IEC. At SIL3, the risk factor for a plant where safety measures are not in place has been reduced to a range from 1/1000 to 1/10000.

About Yokogawa Electric Corporation

Yokogawa's global network of 19 manufacturing facilities and 89 companies spans 32 countries. Since its founding in 1915, the US\$4 billion company has been engaged in cutting-edge research and innovation, securing more than 7,500 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 website at www.yokogawa.com.