



PRESS RELEASE

For small and medium scale applications:

New Safety Controller from Mitsubishi Electric

See Mitsubishi Electric at SPS/IPC/Drives: Hall 7, Booth 380

Ratingen, 24 November 2009. Mitsubishi Electric has added yet another attractive product to its growing line of safety solutions for industrial automation: A compact safety controller for small and medium scale applications. Developed in collaboration with SICK AG, the MELSEC WS powered by SICK has a modular architecture and meets the most exacting international safety standards. The new safety controller is being launched in Europe at the SPS/IPC/Drives 2009 trade show in Nuremberg. Mitsubishi Electric will also be presenting its entire line of safety products at the show, from simple safety relays for standard tasks to modular safety PLCs for entire production lines.

The MELSEC WS safety controller is specifically designed for the safety requirements of individual machines and smaller and medium sized systems. With its compact dimensions and modular architecture the programmable logic controller (PLC) is very easy to configure for a wide range of different tasks. Two base module types with an integrated PLC processor, optionally with or without an EFI (Enhanced Function Interface), and up to twelve expansion modules make the system exceptionally versatile. Available expansion modules include network modules for Ethernet and CC-Link and a variety of different I/O modules: one expansion module with eight digital safety inputs, a combination module with eight safety inputs and four outputs and a relay module with four safety outputs. Each module is just 22.5mm wide. The PLC processor can handle up to 255 function blocks and can connect up to 144

safety inputs and outputs. The certified controller conforms to the international IEC 61058 SIL 3 (Safety Integrity Level) and EN ISO 13849-1 PL e (Performance Level) standards. This means it meets all manufacturing industry safety requirements up to the very highest level, making it much easier to produce machinery and equipment conforming to the European machinery directive.

Powered by SICK

The newly-developed safety controller enables efficient combination of industrial safety technology and standard controller systems. The proprietary EFI communications port makes it possible to integrate SICK AG's intelligent sensors in any safety solution quickly and easily. Additional functions like comprehensive diagnostics all the way up to the control level are just as simple to implement as cascaded photoelectric barriers and switching safety zones with the help of laser scanners. Standard signals and data can be exchanged in a network via the CC-Link or Ethernet communications interfaces. Short response times of no more than eight milliseconds ensure both optimum protection for personnel and machinery and make it possible to install the safety equipment directly next to the danger zones of your machines. This saves space and also reduces cabling overheads and installation costs.

Once the necessary modules have been selected the sensors and actuators are connected and configured on-screen with intuitive Drag & Drop operations. The system is programmed and configured with an user-friendly software package with a graphical user interface. A comprehensive library of certified function blocks and powerful functions for program development, simulation, analysis and documentation supports users in every aspect of their safety solution implementation. For example, the online monitor enables fast diagnostics with an informative status display, and the reports function automatically generates detailed project descriptions for standards-compliant documentation.

A tiered portfolio of safety products

The new MELSEC WS safety controller complements Mitsubishi Electric's existing portfolio of industrial safety products. In addition to simple safety switchgear for standard tasks in small applications these include the modular MELSEC QS safety PLC system, which is a mature safety solution for large machines and complete production lines, and also drive products with integrated safety technology. These products can be used to implement standards-compliant safety solutions for plant and machinery of all types and sizes.

The QS90 series of safety relays is designed for basic safety functions like emergency-off circuits and automatic safety watchdog systems. The base modules are available in two versions: as a plug-in module for the MELSEC System Q automation platform and as a remote module for the CC-Link fieldbus network. Up to three additional modules for a maximum of four safety functions per unit are supported, enabling flexible configuration for specific tasks. The safety circuit in each module can be integrated in the standard control system just by wiring it up, without any additional programming. Direct data communication via the backplane bus of the rack system enables comprehensive diagnostics of the safety modules, going well beyond what is possible in simple standard solutions. For example, the status of every single relay can be monitored and displayed without any additional wiring. The combination of base and expansion modules enables selective disabling of individual system segments in the event of a failure, and thus the establishment of additional safety zones. This safety solution is particularly well suited for applications requiring good safety, but for which a separate safety controller would be excessive and uneconomical.

In contrast, the MELSEC QS modular safety PLC caters to users who need complex safety solutions. Its main processor unit has a safety architecture with two processors, and it supports up to 6,144 distributed I/O points and 14,000 program steps. Memory for 3,000 operational and error messages makes all safety activity transparent and enables fast and detailed analysis when problems occur. This safety PLC is also based on the hardware of the modular MELSEC System Q controller platform. A master module and a remote I/O block module for the standard safety fieldbus CC-Link Safety round off the portfolio. The master module supports up to 64 safety and standard distributed I/O stations via a network. The block module has 16 digital inputs and four digital outputs with pulse function.

Caption:

Mitsubishi Electric's product range includes tiered safety solutions from simple safety relays to a modular safety controller for entire production lines.

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