

Modular safety automation: singular simplicity, multiple flexibility

Waldkirch, November 2008 – Migration capability, simple hardware selection, intuitive Logic Editor, rapid selection of functional blocks, and ready for operation within minutes – the Flexi Soft safety controller offers all this. Only ever using the minimum space necessary, the modular hardware controller platform grows module-by-module with the application – right up to the maximum safety level. Whether CANopen, PROFIBUS-DP, DeviceNet, EtherNet IP, Ethernet TCP/IP, Modbus TCP or ProfiNet I/O, integration in all common networks – and thus connected, bi-directional communication between sensors, actuators, controllers and the management level – makes Flexi Soft particularly interesting for small to medium machine sizes. Sceptics should find out more at the www.sens-control.com internet site, try out the Starter Kit – and possibly win a satellite navigation system!

Flexi Soft allows the design of safe system solutions with singular simplicity and multiple flexibility – especially as Flexi Soft's scalability permits efficient adaptation to the demands of numerous safety applications.

Sensors, actuators and controller graphically wired

The basis module of the safety controller is the CPU. Its configuration takes place via a particularly intuitively designed interface in the configuration software. The necessary sensors and actuators can easily be “wired” and parameterised to the previously selected Flexi Soft module via drag & drop. The Logic Editor offers a number of different function blocks with which even very complex links can be created and shown transparently. The entire configuration is stored on a separate system plug that is connected to the main module of the controller like a plug-in block terminal. Because the power supply is also provided via this plug, any device replacement necessary can be achieved with minimum wiring effort – ensuring maximum possible system availability.

12 to 144 inputs/outputs are possible

The Flexi Soft CPU, also optionally with two integrated Enhanced Function Interfaces (EFIs), is designed for the connection of 12 Flexi Soft modules so that the system limit is set at 96 inputs and 48 outputs. The granularity of Flexi Soft thus leads to customised safety solutions without unnecessary ballast in the form of innumerable inputs and outputs. The modules are supplied with power, and connected to the data bus of the controller, by the integrated module bus that need no backplane. Input and input/output expansions, relay modules, and gateways for integration in the standard controller are available.

EFI – expanded sensor functionalities

When employing intelligent safety sensors from SICK, such as S300 and S3000 safety laser scanners or the C4000 safety light curtain, users can opt for the main module with an EFI interface. In this case, the electro-sensitive protective equipment communicates directly with the controller – an input/output expansion module, to which the most varied of actuators (such as drives, magnetic valves, control elements or signal indicators) can be connected, is only required for the output of switch-off signals.

Expansion module open for variety of safety sensors

In input terms, the expansion modules permit the integration of numerous different safety sensors. These include almost the entire sensor portfolio from SICK, i.e. safety switches and locks, safety position switches and hinge switches, non-contact safety switches and safety control devices, as well as almost all electro-sensitive protective equipment such as laser scanners, camera systems, light curtains as well as single-beam and multibeam photoelectric switches. It is also possible to integrate safety sensors from other producers, e.g. pressure mats or two-hand controls as well as, of course, emergency stop circuits.

Ethernet communication allows comprehensive diagnosis

Depending on the task, Flexi Soft can be operated with or without network integration. In the former case, all the modules are equipped with a bidirectional communication

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interface. This possibility of data transmission offers numerous supplementary benefits, including the comprehensive diagnosis of all control sensor functions and representation of the process. In addition to the typical process and diagnostic data that is made available to a higher-ranking controller by the Flexi Soft system via the corresponding fieldbus connection, commands from a controller can also be processed in the Flexi Soft Logic Editor.

Information and the chance to win at www.sens-control.com!

In good time for the SPS/IPC/DRIVES trade fair in Nuremberg, SICK has prepared comprehensive information at www.sens-control.com. In addition, interested and potential users can experience the advantages of safe small controllers. As a visitor to the web site, one can download the free full version of the configuration software and start to create one's own control solutions. It is also possible to order a Flexi Soft Starter Kit with control modules, a pre-configured system plug, a reed switch and an emergency stop button. It only remains to wire up the individual sensors according to the description provided – and now one can test the Flexi Soft oneself. It could not be simpler to discover the possibilities of Flexi Soft. And while you are at www.sens-control.com you can also join in the Flexi Soft competition and win a TomTom satellite navigation system.