




Flyer

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Modular automation with SIMATIC CPU 410

Flexible, highly available automation
performance – nonstop

Developed for the process industry: On just one hardware platform, the robust AS 410 automation system covers the complete range of standard, high-availability and/or safety applications. By varying the number of SIMATIC PCS 7 process objects (PO), automation performance can be scaled very flexible at any time. Should the task shift, the automation system simply follows – without the need to replace the CPU, and even without interruption!

Scalable availability

The SIMATIC PCS 7 CPU 410-5H controller is an essential component of the SIMATIC PCS 7 process control system. It does not only consistently utilize all the potential of the world's leading Industrial Ethernet standard, PROFINET (IEC 61158/61784), it also satisfies the demands of the process industry.

Already with a Single Station of the type AS 410, the availability can be selectively raised through redundant configuration of the power supply, redundant communication, or by use of Media Redundancy Protocols (MRP) at the PROFINET interface. For high-availability applications, the AS 410 automation system can also be run with redundant CPUs. The current controller version enables the formation of redundant PROFINET configurations (R1). Beyond that, high-availability redundant PROFINET

configurations are also possible by support of the MRP. In all variants, connected devices can be replaced as well as new devices can be integrated during ongoing operation.

Lower costs

One single hardware platform, adaptable for all purposes, application sizes and performance ranges? This reduces spare parts costs and storage costs considerably. Since the automation power of the CPU 410-5H can be flexibly adapted at any time, cost-intensive reserves or complex system configurations can be renounced.

Comprehensive security features

The CPU 410-5H features multiple security functions. Thus, for example, security levels can be configured, which protect the programs in the CPU against unauthorized access. Moreover, the STEP 7 package "S7-Block Privacy" also protects functions and function blocks against unauthorized access.

Currently unique in process automation is the ability to limit internal interfaces of the CPU purely to fieldbus operation: With the "Field Interface Security" function, all unknown connection requests to the fieldbus interfaces (PROFINET and PROFIBUS) are denied. Only field devices that are configured via the CPU can communicate with it.



A separate memory is available for tracking communication events and user accesses: Events such as password and program change, or the loading of new configurations are automatically stored in the SysLog memory. This memory can be linked to up to four SysLog/SIEM servers (SIEM – Security Information and Event Management) for constant monitoring of events.

Functions

- Supports PROFINET R1, S2, MRP and (H)CiR
- Working temperature range from 0 to +70 °C, Conformal Coating, usage in Ex-Zone 2
- SysLog and SIEM support
- Staggered access protection by “Field Interface Security”
- Battery-free operation for even simpler use, and higher availability through remanent load memory

Your benefits

- Powerful and on demand scalable controller
- Flexible useable: Standard, high-availability and/or safety – according to the requirements of the process industry
- Cost-optimized spare parts management due to the use of one single hardware platform
- Future-proof and investment protection through PROFINET and PROFIBUS support
- Connection of PROFIBUS and PROFINET with full redundancy
- Minimization of downtimes and maximum availability due to extensive change options during ongoing operation (Change in Run)
- Expanded security features for more system security
- Optimum support for “Modular Automation” concepts
- Digitalization in the plant

Special CPU for applications with few process values

With the SIMATIC CPU 410E, SIMATIC PCS 7 offers the ideal automation solution for applications with few process values. The CPU 410E is based on the hardware of the CPU 410-5H, and is equal with it in terms of fanless, robust construction and high quality standards. Even this controller can be configured for high available and/or safety applications. The CPU 410E can process up to 200 process objects (PO).

The field of applications includes dedicated use cases in the water and wastewater sector, in the oil & gas or food sector. Combined with the CPU 410-5H, the CPU 410E can also be used as decentralized automation solution, for example for highly modular technological components, which can be linked into the overall system via Plug-and-Produce.

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