SIEMENS

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Siemens sets new standards in drive technology with Sinamics S220 drive system

- **The Sinamics S220 drive system is an integral part of the Siemens Xcelerator portfolio**
- **The new CU320-3 control unit offers maximum performance**
- **Versatile applications and flexible performance options**
- **Meets the high safety and cybersecurity standards for industry**
- **A sustainable drive system for the industry of the future**

Siemens is setting new standards in industrial drive technology with the launch of its new high-performance drive system, Sinamics S220. Building on the success of Sinamics S120, the system marks a leap in performance with the new control unit CU320-3 and software version 6.6. As an integral part of the Siemens Xcelerator portfolio, Sinamics S220 offers a seamless and innovative drive system withcomprehensive simulation and analysis capabilities and advanced connectivity features that enable full integration into digital work processes. This significantly improved system performance provides users with a decisive productivity boost.

Multi-Axis Control Unit CU320-3: The Technological Heart

At the core of Sinamics S220, the newly developed control unit CU320-3 sets pioneering standards in drive technology with its unique architecture. With the ability to operate up to 12 axes on a single control unit, the system achieves an outstanding level of integration density. The built-in multicore processor provides the necessary computing power, while the Drive-Cliq-Express interface, with a speed of 1GBit/s, ensures rapid data transfer. An innovative test pulse method using three voltage sensors per axis enables sensorless control with near-encoder quality – while also improving energy efficiency and robustness.

Siemens AG
Communications
Head: Christiane Ribeiro

Werner-von-Siemens-Strasse 1
80333 Munich
Germany

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Digitalization and Future-Readiness

Sinamics S220 has been fundamentally reconceived to meet the demands of digital transformation. The targeted generation of high-quality field data opens up new business models in Industry 4.0. High-frequency data transmission for predictive maintenance occurs via the X128 interface. Integration into the TIA Portal, as well as virtual commissioning with DriveSim Designer, significantly improve the engineering workflow. New assistants and an undo function facilitate operation. The Smart Drive Interface is available as a compact panel (SDI S220) directly on the CU320-3 or as a remote version (SDI Pro with a larger display and web server). Optionally, a Smart WiFi adapter enables flexible remote access.

Flexibility and scalability

The Sinamics S220 drive system offers a broad performance spectrum for industrial applications. Upon market launch, air-cooled motor modules in booksize and chassis designs, with a voltage range of 3AC 380 to 480 V, are available. The rated current ranges from 3 A (1.1 kW) to 1.518 A (900 kW) and can be expanded up to 6.984 kW through 8-fold parallel connection. For power supply, regenerative active infeeds ranging from 210 kW to 921 kW are available, also scalable through parallel connection. Additionally, air-cooled universal modules are introduced, which can be flexibly operated as motor modules or active line modules. Six devices cover the entire functional and performance range for spare parts cases and allow rapid adaptation to changing requirements.

Safety integrated and cybersecurity at the highest level

With software version 6.6, the Sinamics S220 sets new standards in plant safety. The new safety architecture reduces the safety cycle from 12 ms to 4 ms, enabling faster reactions and higher productivity. Automatic background tests ensure uninterrupted operation, while offline parameterizable safety functions greatly simplify engineering. The drive is SIL 3 certified for all operating states and offers the certified level of safety in critical applications. The Sinamics S220 was developed within a secure development process according to the standard IEC 62443-4-1, independently certified by TÜV SÜD. The drive system features numerous integrated safety functions, including user and access control, encrypted drive data, and integrity and authentication checks for firmware and configuration data. These features, along with additional measures within the machine, enhance resilience against cybersecurity risks.

Sustainable Drive System for the Future of Industry

With Sinamics S220, Siemens presents a drive system that combines sustainability and performance. Its compact design saves space while resource-saving materials and high reparability and recyclability contribute to reducing carbon impact. Industrial Edge applications enable the capture and visualization of energy consumption and CO_2 emissions. The ISO 14021 certified Environmental Product Declaration (EPD) documents its environmental performance over the entire lifecycle, underscoring Siemens' commitment to sustainable industrial solutions.

The Sinamics S220 drive system offers a broad performance spectrum for industrial applications.

You can find this press release and press pictures at the following link:
https://sie.ag/5bNpVt

More information about Sinamics S220 can be found here:
https://www.siemens.com/sinamics-s220

Contact for journalists
Katharina Rebbereh
Phone: +49 172 841 35 39
E-mail: katharina.rebbereh@siemens.com

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