SIEMENS

Press

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Siemens launches new ELV drive solution for AGVs and mobile robotics

- **Integrated extra-low-voltage (ELV) drive solution for 24 V and 48 V applications**
- **Reduced integration effort for mobile systems**
- **Seamless integration into TIA Portal and the Simove modular system**

Siemens is expanding its drive portfolio for extra-low-voltage (ELV) applications with the introduction of the new Sinamics E210 converter and the new Simotics E-1EE1 servomotors. The new drive solution has been specifically developed to meet the requirements of battery-powered mobile systems, particularly Automated Guided Vehicles (AGVs), Autonomous Mobile Robots (AMRs) and driverless transport systems. Its aim is to provide a powerful, compact, and fully integrated drive solution that helps manufacturers and system integrators reduce development effort and simplify the implementation of safety concepts.

At the same time, it provides a future-ready foundation for modern mobile applications. Together, the Sinamics E210 and Simotics E-1EE1 motors form a coordinated ELV drive solution. Through its integration into TIA Portal and the Simove modular system, the Sinamics E210 can be easily incorporated into higher-level automation and vehicle concepts.

Sinamics E210: Compact ELV converter for mobile applications

The new Sinamics E210 has been specifically designed for battery-powered 24 V and 48 V applications. As a compact regenerative converter, it enables precise and safe control of traction and wheel drives as well as other motion axes, including steering, lifting, and auxiliary axes. Direct connection to ELV battery systems eliminates the need for additional voltage conversion, simplifying system architecture and improving

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energy efficiency. Integrated safety functions, PROFIsafe support, PROFINET IRT communication, and seamless integration into TIA Portal and Simove enable rapid implementation in modern vehicle designs. Thanks to its compact design, high overload capability, and flexible installation options, the converter is ideally suited for the next generation of high-performance AGVs and AMRs.

Simotics E-1EE1: New servomotors for high-performance ELV applications

With the new Simotics E-1EE1 motors in shaft heights 40 to 63, Siemens is strategically expanding its motor portfolio for extra-low-voltage applications into higher power and torque ranges. Designed for 24 V and 48 V systems, the servomotors are optimally matched to the Sinamics E210 and are particularly suitable for dynamic mobile applications. An absolute 14-bit BiSS-C safety encoder and the internal dual-channel design support safety-related applications up to SIL 2. The electronic nameplate enables the Sinamics E210 to automatically read relevant motor data, simplifying parameterization and commissioning. Optional holding brakes, various gearbox options, and flexible connection technology further allow adaptation to a wide range of vehicle and machine concepts.

An integrated Siemens solution for the mobile intralogistics systems of tomorrow

With the Sinamics E210 converter and Simotics E-1EE1 motors, Siemens provides a new, integrated drive solution for the growing requirements of mobile intralogistics applications. The combination of converter, motor, integrated safety, simplified engineering, and automation enables manufacturers of AGVs, AMRs, and other mobile platforms to accelerate development, reduce integration risks, and achieve long-term investment security. As part of the Siemens ecosystem, users benefit not only from high-performance drive technology but also from a scalable system architecture capable of supporting future requirements in automation, safety, and cybersecurity.



Sinamics E210 and Simotics E-1EE1 form a new ELV drive solution for mobile applications

You can find this press release and press pictures at the following link: https://press.siemens.com/global/en/pressrelease/siemens-launches-new-elv-drive-solution-agvs-and-mobile-robotics

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