

Press release

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Lenze: i-series motec decentralized inverters open up new perspectives for energy-efficient production

New frequency inverter generation celebrates premiere at Hannover Messe 2022

Increasing demands for energy efficiency and plant transparency are presenting industry with ever new challenges. Just in time for Hannover Messe 2022, automation specialist Lenze is offering an intelligent, cost- and energy-efficient solution for this with its i-series motec decentralized frequency inverters. The main beneficiaries will be machine builders and operators from intralogistics, the automotive industry and consumer goods production.

In the public discourse, the increasing digitalization of industry is taking on a key role. Peter Blatter, Head of Product Management Inverters at Lenze, says: "Digitization also opens up scope for sustainable innovations in drive technology. In the i550 and i650 motec frequency inverters, we use intelligent technologies and comprehensive connectivity. This opens up new benchmarks for efficient production processes."

Digital in every sense

With its digital functions, the frequency inverter takes on several tasks at once: It acts as an efficient **sensor in the system**, collects data and reliably forwards it to IIoT platforms and higher-level edge systems in a standardized manner. The connectivity of the motec accelerates and facilitates ongoing production processes. This is due to the **Drives DataHub** software provided by Lenze, which enables direct access to important drive data via numerous communication interfaces. In particular, the integrated IO-Link master provides machine operators with high-quality information about the drive technology.

The sensor data analyzed in real time paves the way for condition monitoring and predictive maintenance. "This gives customers a comprehensive overview of the condition of their machine, enables them to plan service and maintenance actions in advance, and thus saves time and money," explains Blatter.

Before and during commissioning, the decentralized frequency inverter makes an essential contribution to an improved value chain, because important product data can be viewed at any time. The **digital nameplate** supports asset management standards and can be read via smartphone or directly via the frequency inverter. This gives machine operators quick and easy access to relevant data such as product code, CAD files and spare parts information.

Energy efficient through and through

An important lever for saving energy is the motec's **integrated regenerative unit**. Machine operators can rest assured that regenerative energy is not lost in braking resistors, as the motor feeds it back into the grid automatically and without additional hardware costs. In addition, the inverter controls synchronous motors completely without sensors. The compact **drive package consisting of gearbox, motor and inverter** proves to be particularly energy efficient. In combination, the three components **ensure a minimal CO2 footprint** for the application. The savings are particularly evident in intralogistics, because conveyor lines can be several kilometers long with thousands of drives in use - and that adds up.

In addition, functions such as "**VFC eco**" and "**PROFIenergy**" improve the energy balance of the system. If, in addition, Lenze's EASY System Designer is used, an optimal design of the system is guaranteed. The intelligent software avoids oversizing and leads to **energy savings of up to 30 percent** compared to previous designs.

Powerful, user-friendly, secure

The frequency inverter's connectivity supports the entire system and, thanks to new pluggable M12 push-pull cable technology, simplifies the process chain right from the start. Blatter emphasizes: "There is no way to connect an inverter faster and more reliably." Voltage-free parameterization, simple menu

navigation, and practical factory settings are other notable features that make commissioning easier.

With integrated positioning, the motec additionally masters dynamic motion control that previously only a servo inverter could fulfill. This opens up new applications for the inverter, creating further potential for cost savings. In addition, scalable, integrated safety levels from "STO" to "Extended Safety" with functions such as "SLS" to "Safety over Ethernet" lead to comprehensive protection of the machine and guarantee constant productivity. "All in all, our customers have the option of solving decentralized safety applications without sensors, quickly and in a space-saving manner," adds Blatter.

— **Premiere: At the Hannover Messe, visitors can see the advantages of the i-series motec for themselves. You will find Lenze in Hall 6, Stand F21.**

About Lenze

Lenze is a leading automation company for mechanical engineering. With the solution expertise gained from 75 years of experience, Lenze is a strong partner at its customers' side. The portfolio includes high-quality mechatronic products and packages, powerful systems consisting of hardware and software for machine automation, and services for digitalization in areas such as big data management, cloud or mobile solutions, and software in the context of the Internet of Things (IoT).

The Group employs around 3,700 people worldwide. As part of its growth strategy, Lenze will continue to invest more heavily in the areas of Industry 4.0 over the next few years - with the aim of further increasing sales and profitability.

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