

Agritechnica 2023 Hall / Stand 17.E57

Cultivating the future

Marquardt shows solutions for the operation and electrification of agricultural vehicles

- Interactive Charging Socket (ICS) and E-Lock actuator for more comfort, safety and productivity during the charging process
- High-voltage sensor offers safety against overcurrent
- Keyless-Go and intuitive control units for agricultural machinery

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Rietheim-Weilheim, October 2023 – Under the motto "Cultivating the future", Marquardt will be presenting solutions at Agritechnica 2023 that are specifically tailored to the latest developments in agricultural production: particularly intuitive, robust and safe control units for agricultural machinery as well as innovative systems and components for machines and commercial vehicles with hybrid or battery-electric drives. As a partner in electrification, the mechatronics and automotive specialist is thus following the goal of "Green Productivity" proclaimed by the world's largest trade fair for agricultural technology.

Alternative drives are in demand

In the wake of environmental protection and exhaust emission requirements, alternative drive systems are also in demand in agriculture. Corresponding components and systems for hybrid and battery-electric agricultural machinery and vehicles must not only be robust and user-friendly, but also sustainable and function under extreme conditions. With the Interactive Charging Socket (ICS) charging system, the associated E-Lock locking system and a new high-voltage sensor for battery management systems, Marquardt has attractive solutions on offer.

Interactive Charging Socket (ICS) and E-Lock

The Interactive Charging Socket (ICS) makes charging safer and more productive. The smart charging system is designed with a wide range of features and is compatible with all global inlet standards. Manufacturers of agricultural machinery and commercial vehicles benefit from the solution, as do manufacturers of charging stations. In addition to various LED lighting scenarios, the ICS offers motorized inlet covers to protect the contact pins from dirt, sensor-based controls, a heating module for easy operation of the charging plug in icy conditions, and automated charging flaps. In addition, Marquardt offers the E-Lock charging plug locking system, a platform solution that can be quickly and flexibly adapted to customer requirements and wishes. This significantly reduces the time to market. The system detects up to five positions of the locking bolt and thus recognizes misalignments.

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High-voltage sensor to meet safety requirements

The safety of vehicles with alternative drives is also served by a high-voltage sensor (HV sensor) that Marquardt has developed for battery management systems. It measures current and voltage not only very precisely, but also very quickly. In the event of an accident or overvoltage, the HV sensor can trigger a so-called pyroswitch. Then the circuit is interrupted within five milliseconds.

Innovative control units and keyless go technology

In addition to the solutions for electrification, Marquardt is presenting innovative products for the operation and control of construction and commercial vehicles at Agritechnica. These include the operating elements of the Intelli-Controls family as well as the PnD3 drive authorization system.

The dust- and water-resistant control units of the Intelli-Controls family can be perfectly integrated into the vehicle systems of all types of agricultural and construction machinery. All four variants are based on a modular technology platform and are highly configurable with respect to the operating concept and the desired functionalities. The control

units have four to six buttons which, like the rotary/push knob that can be combined with them, can be adapted to needs, requirements and cockpit design.

With PnD3, Marquardt closes the gap between smartphone and driver authorization system and makes keyless go technology via smartphone also suitable for mass production and cost-effective for manufacturers of agricultural machinery. With the system, drivers have every key they need at hand at the place of use, fleet operators simplify the delivery and return of vehicles by securely passing on the digital key via "key sharing", and PnD3 also opens up new possibilities for service providers - e.g. for maintenance, cleaning, charging, refueling.

World's largest trade fair for agricultural technology

Agritechnica, organized by the German Agricultural Society (DLG), is considered the world's largest trade fair for agricultural technology. It will take place from 12 to 18 November 2023 in Hanover. Marquardt will present its solutions in Hall 17, Stand E57.

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Press images:



Marquardt Interactive Charging Socket: Makes the entire charging process smarter: the Marquardt Interactive Charging Socket (ICS).

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Marquardt E-Lock: The Marquardt E-Lock: For a safe charging process for vehicles with electric or plug-in hybrid drive.



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Marquardt_High-Voltage-Sensor: The Marquardt high-voltage sensor measures much faster and more accurately than conventional sensors.



Marquardt_Intelli_Controls: The Intelli-Controls family from Marquardt sets standards in control units for off-road vehicles.

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Marquardt_PnD3: With the PnD3 system, the vehicle key merges with the smartphone - practical also for operators of agricultural machinery.

About Marquardt

Marquardt, a family-owned company founded in 1925 and headquartered in Rietheim-Weilheim, is one of the world's leading manufacturers of mechatronic switching and operating systems. The products of the mechatronics specialist - including operating components, vehicle access, drive authorization and battery management systems for electrically powered vehicles - are used by many well-known customers in the automotive industry. Marquardt systems can also be found in household appliances, industrial applications and power tools. The company has around 11,000 employees worldwide at 22 locations on four continents. The turnover in the 2022 financial year was around 1.4 billion euros. Every year, Marquardt invests around ten percent of its turnover in research and development.

Further press information and images can be found at:
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