The newly developed FUSION-High Voltage Distribution Systems up to 800 Volts prove their safety and robustness in the Europe-wide use of electric excavators and baggage tow tractors.

In each electric vehicle, the battery is connected to various loads and sources. This functionality is provided by a high-voltage distribution system that protects all individual components and connections from overload.

The company SUNCAR HK AG launches the high voltage distribution system FUSION for the electrification of machines and vehicles. The systems which are already in use throughout Europe are now also available for third parties. With the high voltage distribution system, the main components battery, charger, inverter, motor and optionally the fast-charging system get connected. All inputs and outputs are fused on both poles (positive and negative pole). Typical applications are electrified machines and vehicles with increased demands regarding robustness and safety, such as construction machinery, commercial vehicles and municipal vehicles. From Q4 2019, two standard solutions are available, the FUSION450 and FUSION800 with system voltages of 450 Volt and 800 Volt. A shorting link enables the vehicle to be disconnected in accordance with the guidelines for high voltage systems. Optionally available is an interlock generator which is a safety cut-off system for the high voltage system. Auxiliary units such as heating/air conditioning and DC-DC voltage transformers can also be connected via the FUSION high voltage distribution system. The FUSION800 also includes insulation monitoring. The system is designed according to current construction machinery standards.

The FUSION high voltage systems are market proved. For example, the FUSION450 is used in the baggage tow tractor »SHERPA« E from GOLDHOFER and the FUSION800 in the ZE85 electric excavator. Custom-made solutions for special applications are also available on request. SUNCAR HK AG also offers a DC fast charging system and a remote system for fleet management.

SUNCAR HK AG
SUNCAR HK is a start-up company of ETH Zurich and a subsidiary of Huppenkothen Baumaschinen (www.huppenkothen.com). SUNCAR HK is a development office which consists of a team of fifteen people and specializes in the electrification of construction machines, utility and municipal vehicles.

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