



Technical article

## PREH'S PRODUCT PORTFOLIO FOR ELECTROMOBILITY

Automotive supplier Preh offers an extensive product portfolio for electric vehicles. The "E-Mobility" division, founded 12 years ago, develops and manufactures, among other things, direct voltage converters (DC/DC converters), high-voltage boosters, on-board chargers (OBC) and battery management systems. In the special in-house high-performance test laboratory for applications up to 250 kW, all components can be subjected to mechanical, electrical and service life tests. Environmental influence simulations are also possible. One of the latest developments used in a fully electric 800V sports car is the Preh DC/DC converter. This multi-converter transfers a voltage of 800 volts into 48V, 12V and 400V. 48V voltage supplies the vehicle's roll stabilization and works bidirectionally thanks to recuperation, so the 48V can be converted back to 800V. 12V voltage is used for the on-board network and 400V for the air conditioning compressor. Preh's high-voltage booster also relies on voltage conversion. Preh boosters with a choice of 50 kW to 150 kW power enable 800V vehicles to be charged at 400V fast charging stations. The 400V output is "boosted" to 800V by means of voltage conversion. This means that the entire 400V charging infrastructure is available for 800V vehicles. Preh offers electromobility solutions for both cars and trucks. Preh OnBoard Chargers are used, for example, in the Lynk & Co 01 and Volvo XC40 passenger car models, as well as in Volvo trucks and buses. These robust generic single-phase OBCs with 3.5 kW for passenger cars and 11 kW for commercial vehicles are characterized by maximum safety and reliability and have a high power density. It is also possible to expand the modular 11kW OnBoard Charger to outputs up to 44 kW. An 11 kW OnBoard Charger with bidirectional charging options for vehicle to grid (V2G) and vehicle to load (V2L) applications is part of Preh's electromobile future. "Wireless charging" options with 11 kW will also be possible. Preh can also equip next-generation e-vehicles with combinations of OnBoard Chargers and wireless power transfer (WPT), as well as combinations of OnBoard Chargers and DC converters.