******Electro mobility becomes fit for everyday use: Fast charging with currents of up to 500 amps**

Drivers and electric vehicle manufacturers are demanding shorter charging times, because these contribute to a vehicle's suitability for everyday use and the acceptance of electro mobility. With High Power Charging (HPC), Phoenix Contact has developed a charging technology that charges a battery for a range of 100 km in just three to five minutes. At the centre of this technology is a high performance charging connector with intelligent cooling that enables a charging current of up to 500 A and/or a charging capacity of 500,000 watts.

Until now, fast charging is only possible with currents of up to 200 amps. Significantly higher currents are necessary, however, to achieve markedly short charging times. Conventional charging technology would result in dangerous overheating – or would require larger, cumbersome cable diameters.

Phoenix Contact's HPC technology is based on an active cooling system that makes charging currents of up to 500 A possible, without compromising on safety or manageability. We use an environmentally sound and maintenance friendly water-glycol mixture as the coolant. This cools both the charging cable and the DC power contacts in the vehicle connector. The contact carrier also acts as a heatsink, due to its outstanding thermal conductivity. Integrated temperature sensors measure the development of heat in real time. A controller evaluates this acquired data and regulates the cooling output accordingly. This reliably prevents overheating and, at the same time, increases the energy efficiency of the cooling system.

The HPC vehicle connector is based on the established Combined Charging System for Europe and North America and is therefore completely CCS-compatible. Furthermore, it is easy to maintain, because the mating face frame and the DC contacts can be easily exchanged, in the event of damage, without needing to drain the coolant. It is also especially safe thanks to integrated temperature and gas leak sensors. Even the flexible and easily managed HPC charging cable provides the user or operator with an early warning in the event of a safety risk, thanks to a wear indicator integrated in the cable sheath.

**ENDS**

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