



Position Paper of Charging Interface Initiative e.V.

CharIN endorses increasing charging currents for battery electric passenger vehicles

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Coordination Office

CharIN e. V.

c/o innos – Sperlich GmbH
Schiffbauerdamm 12
10117 Berlin

Contact

Andre Kaufung

Phone: **+49.30.288 8388-0**

Fax: **+49.30.288 8388-19**

E-Mail: coordination@charinev.org



Introduction

CharIN is dedicated to develop and establish the Combined Charging System (CCS) as the standard for charging Battery Electric Vehicles (BEVs) of all kinds.

Statement

As part of its ongoing process to provide guidance and support for the development of a battery electric vehicle charging eco system the CharIN Association endorses the initiative to increase the charging currents for battery electric vehicles, and specifically for passenger vehicles. The goal is to provide safe, reliable and efficient charging while reducing the necessary charging time.

The existing DC High-Power Charging infrastructure is limited to 200 kW. The CharIN Association and its Members have been the leading proponents for development of the charging systems capable of 350 kW. The results of which are currently being integrated into the International standards⁽¹⁾.

Following considerable performance testing it has been demonstrated that these charging systems are capable of charging currents up to 500 A. Therefore, CharIN is endorsing and supporting efforts to upgrade these Standards from 200 A to 500 A charging. CharIN will enhance the Combined Charging System 2.0 document to include 500 A / 350 kW charging for Combo 1 and Combo 2 CCS charging connectors. This shall ensure the demands of future use cases.

Right now, several companies providing battery electric vehicles and charging infrastructure products are offering or advertising products, which can charge continuously with a current of 500 A. Even though some manufacturers have already certified products for charging current of 500 A, the national and international standards are not yet available for all necessary components and sub-systems. In order to ensure safety, interoperability and reliability, CharIN and its Members are endorsing and working diligently with the respective standardization committees to expedite the publication of these important standards.

Beyond this particular focus on battery electric passenger vehicles, CharIN is also leading the efforts to develop High-Power Charging for commercial and institutional applications such as transit buses and over-the-road trucks.

For more information concerning the Combined Charging System and the CharIN power class definitions please visit our website: www.charinev.org.

(1) – International Electrotechnical Commission documents IEC61851 and IEC62196



Reference

This document was created by the focus group Charging Connection of the CharIN association.

The focus group has the following goals:

- Harmonize future developments of coupler systems for AC, DV and charging cables
- Develop recommendations for standardization

Contact

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