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CONTROLLING VIA CAN

Charging controller for DC wallboxes

As an interface between the electric vehicle and the power electronics, Vsecc.single from Vector Informatik controls the charging communication for the combined charging system (CCS) in accordance to ISO 15118-2 and DIN 70121.

Vsecc.single in its first expansion stage as a plug-on board (Source: Vector Informatik)

The product supports Chademo specified by the Japanese Charging Consortium and, in the future, Chaoji. The charge control unit communicates with the charging station management system (back end) via OCPP 2.0.1 and with the power electronics via CAN or alternatively via Ethernet. The processor is already prepared for further use cases such as integration in energy management systems, smart home, or plug and charge.

The initially available pocket-sized plug-on board is particularly suitable for DC or AC wallboxes in private and commercial environments due to its dimensions of 14,25 mm x 58 mm x 99,2 mm. The board can be integrated into existing electronics and handles all communication within the charging station. It is connected to a base board via two connectors. Inverter and photovoltaic system manufacturers thus conveniently add electric charging to their portfolio as the controller contains all for charging communication and controls the power electronics via CAN. The product is already prepared for bidirectional charging. Here, the electric vehicle serves as a stationary storage device by storing or returning energy as needed, provided that the user of the electric vehicle does mostly not rely on the full battery capacity for their trips.

The device in a DIN rail housing is suitable when only one charge point per charging station is possible due to the size of the vehicle and limited cable lengths. Such a scenario arises when charging large commercial vehicles via plug or pantograph charging stations. The power electronics are located further away and conveniently controlled via Ethernet with the board, which makes distances of up to 100 meters possible. As a result, small and slim charging stations can be set up, explained the company. This reduces space between the vehicles and protects the power electronics from accidents.

The company already offers the universal controller Vsecc for managing multiple charge points, as frequently required for public charging stations. The latest board and its larger counterpart Vseccare functionally interchangeable thanks to compatible interfaces and software. After integrating one controller, developers can also use the other charge control unit. This saves customers additional programming effort and allows them to expand their existing product portfolio, said the company.

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