

Handling charging communication to EVs

The Vsecc by Vector Informatik is a charge station controller performing communication, monitoring, and control functions. Communication with the EV (electric vehicle) is done via CAN.

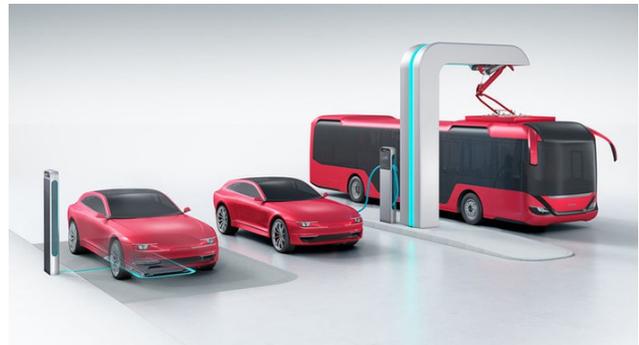


The Vsecc (supply equipment communication controller) combines control and monitoring functions in one device (Source: Vector Informatik)

The main functions of a DC charging station are to communicate with the vehicle during charging, to monitor the continuous vehicle connection, and to control the power electronics depending on the vehicle requirements. Until now, several devices were necessary for this purpose. The Vsecc controller handles the communication of the charging station with the vehicle and with the back-end, and controls the power electronics via CAN or Ethernet. As no additional controller is required, this saves space in the charging station and reduces the integration effort. Manufacturers of charging equipment can also include the electrical safety features, such as securing and monitoring of the vehicle contact. For example, the integrated hardware monitoring feature allows a dangerous voltage to be switched off in the event of a fault. The controller also communicates with the user interface. All peripheral components such as RFID readers, sensors, and smart meters in the charging station can be connected directly to the controller.

Power electronic manufacturers in the renewable energy sector (e.g. photovoltaics) can also use this controller to implement a DC charge point. This shows an application of the University of Bochum. In a pilot project, a mobile charging container for electric vehicles is being built. The container provides photovoltaic cells on the roof and a charging interface. The charging container was made ready for use in a short time, said Vector.

The controller supports electric vehicle charging communication over CCS (combined charging system), Chademo (Japanese charging consortium), and GB/T (Chinese charging standard). It is suitable for use at charging stations in fleet depots, company parking lots, residential complexes, charging points for opportunity charging (e.g. wireless charging, pantographs with external Wi-Fi module), or at semi-public/public fast charging stations. The device with housing dimensions of 162 mm x 89,7 mm x 62,2 mm can be made available within one week. The company is also currently working on a compact device version (114,5 mm x 27 mm x 99 mm) to meet the growing demand for small DC charging stations for private and commercial garages, as well as parking lots.



The controller is designed to meet the requirements of AC and DC charging stations (Source: Vector Informatik)

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