

innoelectric D3C

The most versatile
charge controller



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Enabeling easy charging for your EV



Full DC charging communication

State-of-the-art DC charging according to the latest standards requires fast, accurate and intelligent communication. The innoelectric D3C can be used as the central communication unit in the electric vehicle. The component complies with the relevant standards IEC 61851, ISO 15118-20 and DIN SPEC 70121 for charging communication. Thus it ensures reliable interoperability with other charging technology components and international compability.

HIGHLIGHTS

- DC charging process with up to 500 kW and more
- Easy integration by simple CAN interface
- Communication according to ISO 15118-20 to allow value added services
- All necessary peripherals can be controlled from the D3C, including DC contactors
- Megawatt Charging System (MCS) in preparation

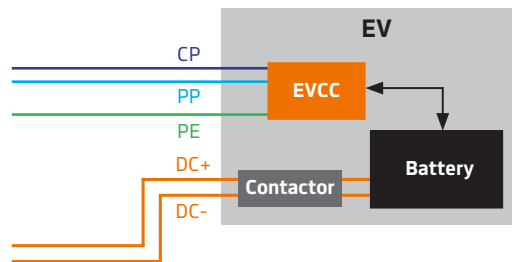
Application in different types of commercial electric vehicles



Heavy E-vehicles



Compact and light working machinery



The DC Charging Controller is suitable for electric vehicles with high battery capacity. This includes the majority of the commercial vehicles. It can also be used in compact work vehicles with limited installation space.

The D3C supports the international charging standards CCS1, CCS2 and NACS. The MCS standard to allow megawatt charging is in preparation.

Simple integration of the „Plug & Play“ system solution

The D3C is an intelligent stand-alone charge controller that manages the communication for a seamless DC charging process of up to 500 kW and more. It is suitable for commercial electric vehicles, thanks to its wide LV input range. The D3C has been designed with a focus on easy „plug & play“ system integration for the customer. In addition, the intelligence of the communication controller in the application makes it a total solution rather than a simple vehicle component. The D3C is tested in a wide range of different environmental conditions to ensure reliable long-term operation.

The D3C is available as a stand-alone intelligent communication module or as part of the innoelectric On-Board Charger. The On-Board Charger is an integrated overall solution for AC and DC charging that includes all the functionality of the D3C. The On-board Charger can be used in the customer application without any additional equipment.

State of the art technology

Updateable software

Charging communication and charging standards, as well as customer requirements can evolve over time. Thanks to over-the-air updates via EV-CAN, it is always possible to keep the DC charging controller up to date with the latest standards and requirements. All communication protocols are continuously updated by innoelectric to accommodate future standard updates. The D3C can be updated to the latest version at any time.

Additional services

Depending on the requirements and the application, the respective additional function can be integrated after consultation with innoelectric. The D3C provides a communication bridge whose functionalities can be implemented by innoelectric as part of a development effort. This can include CAN protocol adaptations or support for different certificates to support standard-compliant charging, e.g.

Technical Data of the D3C

Charging standard	CCS1, CCS2, NACS available MCS in preparation
Charging communication	PWM (IEC 61851, J1772), PLC (DIN SPEC 70121, ISO 15118-20)
Interfaces	1x CAN J1939, 1x Service CAN
Degree of Protection	IP67
Dimensions (l x w x h)	197 x 44 x 154 mm
Weight	0,9 kg
Operating Temperature	-40 to 75 °C

Minimal adjustments are possible.

Customer benefits


The innoelectric D3C has many features to meet the customers' needs:

- Supports DC charging control up to 500 kW and more
- International DC charging possible with CCS1, CCS2 and NACS
- Full charging communication according to IEC 61851 / DIN SPEC 70121 and ISO 15118-20
- Designed under consideration of relevant automotive standards to ensure safety and reliability in the LV and HV bordnet of the EV
- Full interoperability with all standards compliant EVSEs and EVs

Cutting-edge solutions

innoelectric drives forward electromobility and develops component solutions for electrically powered vehicles. We focus on the charging process as well as engineering services. innoelectric offers efficient charging technology for on-board and off-board applications. It can be used in cars, trucks, all other commercial and construction vehicles for all relevant standards.

In addition to the D3C, we also offer the innoelectric On-Board Charger for more complex requirements. The On-board Charger provides an integrated charging solution with all the functionality of the D3C. In addition to the DC charging standard PLC (DIN SPEC 70121 and ISO 15118-20), the OBC supports AC charging up to 22 kW. Users of the innoelectric On-Board Charger benefit from a turnkey solution that requires only a single integration of the system application on the user side, as the power electronics and charging communication are perfectly matched.



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