DEHN protects.

Hypercharger DC charging stations by alpitronic GmbH / S.r.l.

Customer

alpitronic

Project overview

Industry
Electric mobility

Application
DC fast charging station

Hardware
DEHNvap EMOB

DEHN protects.

Hypercharger DC charging stations by alpitronic GmbH / S.r.l.

alpitronic GmbH / S.r.l.
Based in Bolzano/South Tyrol, alpitronic GmbH develops and produces innovative and reliable high-performance systems for e-mobility and aerospace applications. It has extensive experience in the development of highly compact and cost-efficient inverter solutions with power ratings of up to 500 kW.

Special features

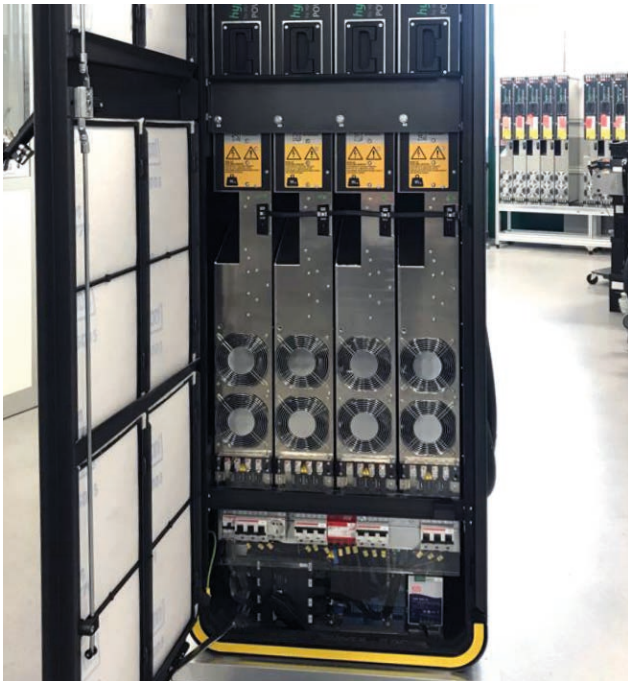
With its hypercharger, alpitronic offers a compact and powerful DC charging station. It is future-proof in terms of norms, future standards and new electric vehicle designs. Hypercharger DC charging systems come in two sizes with power ratings from 75 to 300 kW. This power is available across almost the entire 150 to 1000 V DC range. All commonly used charging standards can be configured, including the cooled CCS 2 charging cable. The power stacks can easily be connected in parallel and their overall performance upgraded. The hypercharger is designed for all charging processes and fulfils all important standards. The power density of the system allows installation even in difficult and cramped parking conditions.

Challenge

The charging infrastructure must function reliably, permanently and safely. This is important for both customers and operators. Customers must have the certainty of being able to charge their vehicles at any time and anywhere. From the point of view of charging station operators, it is all about profitability, customer satisfaction and protection of the vehicle owners.
However, it is precisely these requirements that are at considerable risk, especially in an international context, due to the rapidly increasing threat of lightning strikes and surges. Not only direct or nearby, but also remote lightning discharges and network-generated surges can damage the charging station, e.g. the power stacks themselves or, when it is being charged, even the electric vehicle. This has serious technical and financial consequences.

Solution

In order to avoid these hazards and ensure permanent availability, alpitronic relies on the tested quality solution DEHNvap EMOB. This is a combined arrester with type 1+2+3 protective effect specifically designed for universal use in the charging infrastructure which offers maximum protection against lightning currents and overvoltages, whatever the threat scenario.



Based on RAC spark gap technology (mains follow current limiting), the rapid response of the arrester limits the residual energy to <0.5 joules even during a maximum discharge process so that, for example, the terminal device varistors typically installed are not overloaded and even the most sensitive electronics can be reliably protected.
Since it is used in the alpitronic system without a backup fuse, installation is also space-saving and practical.

If copper-based data and information lines such as Ethernet or RS485 are used, the protection concept is rounded off with universal solutions such as DEHNpatch or BLITZDUCTORconnect.

Benefits of DEHNvap EMOB

- Specifically designed for electric mobility
- Based on RAC spark gap technology
- Residual energy <0.5 joules
- Fully compliant with VDE-AR-N-4100
- Universal and flexible use (3+1 configuration)

Photos: alpitronic GmbH / S.r.l
REF073/E/1020

Surge Protection
Lightning Protection
Safety Equipment
DEHN protects.

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