

Megawatt charging system (MCS)

E-Mobility | Multi-pole connectors

EN



MEGAWATT CHARGING SYSTEM

E-mobility by Stäubli

As more EVs hit the road in long-distance and heavy-duty applications, charging these larger capacity batteries within a reasonable time has been a significant challenge. To overcome this obstacle, the global association Charging Interface Initiative e.V. (CharIN) has been working with industry leaders, including Stäubli, on developing the Megawatt Charging System (MCS) standard, to promote interoperability as the global standard for charging vehicles of all kinds.

Stäubli's electrical connectors have been developed to ensure that e-vehicles meet all the requirements placed on them efficiently, safely and with a long service life, even under harsh environmental conditions. They are characterized by their compact design, uncomplicated maintenance, vibration as well as shock resistant and guarantee – thanks to the patented, unique MULTILAM contact technology – permanent electrical contact. External certifications and extensive quality tests underline our commitment to providing you, the customer, with the best possible solution.

Features

The Stäubli MCS system is designed around the CharIN task force specifications and with a special emphasis on robustness and easy handling. It allows for quick and user-friendly charging, enabling drivers to charge their electric heavy-duty vehicles manually without the need for supporting machines or robots. With larger conductor cross-sections for the cable assembly according to existing standards, the MCS system also enables faster charging times and increased customer flexibility. This makes it an essential component in the push towards sustainable transportation.

Maximum power in minimal time

Capable of delivering up to 4.5 MW of charging power, with a rated current of up to 3000 A and rated voltage of DC 1500 V, the Stäubli MCS system significantly improves the output of existing combined charging systems. This high charging power enables a significant reduction in charging time, resulting in longer operating times for heavy-duty vehicles. The special robustness of the Stäubli MCS further underlines this quality and prevents downtimes.

Application

The Stäubli MCS connector can be used to charge a wide variety of heavy-duty vehicles. Although the CharIN “standard” primarily focuses on Class 6, 7, & 8 commercial vehicles such as trucks, construction- and agricultural vehicles, the MCS connector can also be used for buses, vessels, aircraft, and other large battery electric vehicles (BEVs) with large battery packs and the ability to accept megawatt charging.



Based on
CharIN task force



Integrated
safety features



Power
up to 4.5 MW



Proven
MULTILAM technology



Customizable
inlet



Crimp connection up to
300 mm² or busbar connection,
up to 2000 A



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