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Siemens Offboard High Power Charger

Intelligent charging technology for e-buses

Recharge quickly, safely and at a reasonable cost

The Siemens Offboard High Power Charger is a quick-charge system that combines a number of benefits: a range of very high charging capacities are available to shorten the time needed for recharging, plus the entire charging system is housed in the charging point or a separate utility area, so there is no need for each individual bus to come equipped with its own unit. Siemens looks after everything, from supplying all the components needed for the charging system to the fittings on the buses themselves.

The benefits of opportunity charging

The idea behind the Offboard High Power Charger is to recharge the batteries – at a depot, for example – enough to take the bus to the next charging station. This makes short recharging times possible, which will fit best into a tight schedule. A charging station also enables several buses to be recharged one after another to improve flexibility in operation. This arrangement also provides the best possible protection for the batteries.





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Schematic view of offboard charging

Top-down pantograph

The most striking feature of this charging solution is the top-down pantograph, which can be mounted on a pole or the roof of a public transport stop. The e-bus drives under the charging station and communicates with it wirelessly to lower the pantograph onto the contact rails fitted to the roof of the bus (charging process as per EN 61851-23, communication protocol as per ISO standard 15118). Charging begins fully automatically following an automatic identification process, as soon as the pantograph is correctly positioned. The charging process ends once a defined charging state is achieved, or when the driver releases the parking brake. Both interrupt the electricity supply and the pantograph is raised to enable the bus to continue its journey.

Customized charging capacity

The charging capacity at the station can be adapted in accordance with the local route profile and the available stopping times in steps of 150, 300 and 450 kW. This means that even quite challenging situations can be overcome with charging times of between two and nine minutes.

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The information in this document contains general descriptions of the technical options available, which do not always have to be present in individual cases. The required features should therefore be specified in each individual case at the time of closing the contract.