

elexon: planning and investment security for fleets and logistics centers

Our ultra-fast 480 kW DC charging column is extremely cost-effective - it doesn't get much faster or more efficient than this

A future-proof investment is a key selling point in a dynamic environment such as e-mobility. Another is maximum flexibility for future fleet developments. For mobility and fleet managers, planning reliability and a high efficiency factor are what count. This makes solutions that cover all of the current charging capacities, while also being well-equipped for future capacities particularly interesting. This applies twofold if the solution also increases flexibility in terms of load capacity and load planning. The charging solution introduced by elexon, a charging infrastructure provider based in Aachen, Germany, at the IAA Transportation in September offers up to 480 kW of charging power. The leader in the logistics sector presented a solution with up to 6 charging points at up to 3 terminals including PowerBank, for flexible charging power from 80 kW to 480 kW.

Aachen, 10.12.2022

- **The dynamic distribution of charging power from 80 kW - 480 kW**
- **6 charging points at 3 terminals for a cost-optimized charging infrastructure**
- **Charging capacity and charging points can be customized**
- **Charging current up to 500 amps**
- **Covers a wide range of battery voltages**

A reliable charging solution for planning and investment

Up to 6 charging stations resp. user terminals can be connected to elexon's new base station, the so-called "PowerBank". Each charging point can be operated with different charging capacities. A maximum of 480 kW and 500 amps can be used per charging point. This means that elexon currently offers the largest number of terminals per base station on the European market. The user terminals are available as dual and single chargers. Customers can decide individually how many charging points they want to use per PowerBank. In order to respond to changes in fleet management, the number of charging points can be expanded to 6 or reduced accordingly at any time. And, just as the number of charging stations can vary, so can the charging power. While a truck with sufficient battery capacity can use elexon's new 500 Amp user terminal to recharge up to 480 kW of power, other charging options are available. For example, two charging points can provide 160 kW each, while four others provide 80 kW, or all six charging points provide 80 kW. Currently, the concurrency factor for charging high power

is mostly below 1, especially in the logistics industry, which is why elexon focuses on a sensible distribution of the total power. The energy management system connected to the system distributes the total charging power to every connected charging point as required. The result: maximum charging efficiency for all charging points. This ensures that the charging stations are used to their full capacity and that the charging infrastructure is used as cost-effectively as possible. If a vehicle can charge a maximum of 135 kW, the PowerBank delivers this power to the user terminal that is connected. A charging infrastructure with easy-to-plan charging processes can reap significant cost benefits with this solution. The costs per charging point are noticeably reduced with each connected terminal. "Currently available charging solutions of this type usually offer five or fewer charging points and reduce usage to 2 columns when charging capacity is high. The other charging points cannot be used during this time. Cost-intensive infrastructure is unused. With our solution, all of the charging stations can be used simultaneously. This is a major selling point for our customers," explains Nurhan Rizqy Averous, Head of Product Development & Engineering at elexon.

Location advantages for a sustainable infrastructure

In addition to flexibility in terms of charging power, there is yet another advantage of modular design, namely space utilization. The PowerBank weighs less and is more compact than an all-in-one device and can also be installed out of sight and earshot of the charging situation. A cable with a length of up to 100 m connects the base with the individual charging points. A space-saving solution that offers advantages especially in high-traffic, more complex parking situations, parking spaces in confined areas, or parking lots for trucks. At the same time, the concept of sustainability comes into play. A modular system promises quicker and more sustainable handling in the event of maintenance. If one power module fails, the PowerBank's total power is reduced by only 20 kW. And module replacement can be completed within just a few minutes with minimal manpower, partly thanks to the fact that each power module weighs less than 10 kilograms. In order to use the charging current at the upper standard of 500 amperes on a sustained basis, charging cables and CCS plugs are cooled actively.

Charging power for today and the future

For fleet managers and mobility managers the most important arguments are planning and investment security. The new DC charging station charges up to 480 kW, so it can be scaled down. As a result, it covers all current charging capacities and is equipped for capacities that manufacturers are announcing for the future. Already, there are cars and vans that can access this high power, and new vehicle types are expected to follow in the near future. In fact, our new 480 kW DC charging column is already proving interesting for current models capable of charging at high power levels. A driver whose vehicle can charge 150 or 350 kW tends to choose a charging column with more charging power in order to make full use of their car's charging capability.

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About elexon

Elexon is a joint venture established in 2019 by SMA Solar Technology AG (SMA), AixControl GmbH and aixACCT charging solutions GmbH aimed at advancing the development of charging infrastructures for EVs across Europe.

Elexon operates as a full-service provider and, as a result of the merger, boasts extensive expertise in the field of electromobility. elexon focuses on charging infrastructure, energy and load management, as well as the provision of electricity via renewable energies.

With its 360° charging infrastructure solutions, elexon offers its customers holistic plug-and-play solutions for the planning, installation and service of efficient EV charging parks from a single source.

Image 1:

The new DC charging station from elexon charges up to 480 kW, so it can be scaled down.



Image 2:
elexon's new DC charging station with 480 kW was presented at this year's IAA-Transportation in Hannover.



Image 3:
The new AC charging station from elexon offers up to 3 terminals with 2 charging points each and a PowerBank as a base.



Image credits: elexon GmbH