Porsche Wireless Charging: Inductive charging for a convenient energy supply

04/09/2025 Wireless charging has already radically simplified the use of the mobile phone: simply place the smartphone in a charging cradle and the energy flows. Porsche will soon be offering this user-friendly technology for electric cars as well: The company will be the first car manufacturer to bring an 11 kW charging system with a one-box base plate for battery-electric vehicles to market maturity. One-Box means that apart from the floor plate mounted at the parking lot, there is no longer any need to install a wallbox or control unit.

The new, all-electric generation of the Cayenne will be the first Porsche model series that can be ordered with the vehicle-side equipment. Also in 2026, sales of the floor plate will start at Porsche Centres and online in the Porsche Shop. At the IAA Mobility in Munich, a prototype with fluorescent paint demonstrates the innovative technology. The world premiere of the new Cayenne Electric is planned for the end of 2025.

"Ease of use, suitability for everyday use and charging infrastructure are still the decisive factors when it comes to the acceptance of electric mobility," says Dr. Michael Steiner, Deputy Chairman and Member of the Executive Board, Research and Development. "We are proud that inductive charging will soon be available in series production at Porsche. Charging an electric car at home has never been so easy and convenient."

With a maximum charging power of up to 11 kW, the sports car manufacturer has even reached the level of wired AC charging with its contactless charging system. The efficiency of energy transfer from the power grid to the battery is up to 90 percent.

Great potential for inductive charging

Around 75 percent of all charging processes in an all-electric Porsche take place at home. This was the result of an analysis by the sports car manufacturer. The potential for inductive charging is correspondingly great. The user-friendly Porsche Wireless Charging floor plate (length/width/height: 117/78/6 centimetres) can be installed in a garage, carport or open-air parking space and connected to the mains. As usual, customers can be supported by Porsche Installation Service: If ordered, an electrician will install the inductive floor plate and put it into operation.

In order to be able to charge contactlessly, hardware is also required on the car. The new Cayenne Electric (internal abbreviation: E4) will be the first model series to be ordered with optional Porsche Wireless Charging pre-installation and Porsche Wireless vehicle plate. Protected from stone chips and the effects of the weather, the receiver unit is located in the underbody of the vehicle between the front wheels. For the charging process, the Cayenne then only has to be parked above the floor plate. The contactless transfer of energy between the two charging units takes place over a distance of a few centimetres. To this end, the Cayenne lowers automatically. The base plate has a motion detector and foreign object detection. The charging process is automatically interrupted if a living creature gets between the vehicle and the floor plate or if a metallic object lies on the latter and heats up.

Porsche Wireless Charging is integrated into the My Porsche app, so that charging processes can be tracked and several vehicles can be authenticated. A special view in the Surround View parking function makes it easier to steer the Cayenne to the optimal charging position. As soon as the parking position above the floor plate is reached and the parking brake is activated, the charging process begins. Customers don't need to do anything else. Convenience functions familiar from AC charging, such as timer charging with preconditioning, are also available for wireless charging.

The floor plate, which weighs a good 50 kilograms, is equipped with an LTE and WLAN module as standard, so that remote software updates and infrastructure support are also guaranteed in the future. Porsche Wireless Charging will initially launch in Europe in 2026. Other markets worldwide will follow.

How inductive charging works in detail

Inductive charging is known from smartphones, but also from electric toothbrushes. The energy is transferred through the air via a magnetic field. For this purpose, a transmitter coil made of copper and ferrites is located in the base plate. Alternating current flows through this coil, which generates a magnetic field.

Porsche's innovative concept uses ultra-wideband technology to determine the vehicle's relative position above the floor plate. When the optimal parking position is reached, the driver is informed. In the vehicle's secondary coil, which acts as a receiver unit, the magnetic field then generates alternating current. A rectifier then converts this into direct current so that the Cayenne's high-voltage battery can store it.

Weatherproof and extensively tested

The Porsche Wireless Charging base plate is also suitable for outdoor use. All live components are protected from rain and snow. Even driving over the floor slab does not cause any significant damage. Electromagnetic radiation is limited to the underbody of the vehicle during charging. Extensive tests – including by TÜV Süd – have confirmed the robustness of the system. In addition, the floor plate is CE and UL certified, i.e. it meets EU and US-wide requirements for safety and environmental protection.

A new dimension in fast charging

Those who want to travel as quickly as possible on long-haul journeys can also rely on a very high charging capacity with the new Cayenne. Like the Macan and Taycan, which were previously leaders in their segments with 270 and 320 kW respectively, the Cayenne sets new standards. The DC charging power is said to be up to 400 kW. This means that the Cayenne can be optimally recharged at any Porsche Charging Lounge, for example.

Conspicuously camouflaged prototype with fluorescent paint

At its first official appearances in the UK, the Cayenne caused a stir with an eye-catching wrap. The IAA show car in Munich is now equipped with a very similarly designed, innovative fluorescent paint. As soon as electricity flows, an exciting body image with brightly coloured surfaces is created: Style Porsche designed the dynamic camouflage pattern. Individual paint sections are deliberately left out and remain dark. Five colour tones, from blue to violet, can be controlled in a targeted manner.

The innovative coating is made up of over 25 extremely thin layers. These include conductive primers, electrode and insulating layers as well as the actual electroluminescent material with colour pigments.

Under alternating voltage, it emits light. In addition, there are more than 15 layers of clear coats. A total of 100 litres of clear varnish were applied. More than 30 sanding cycles and over 500 meters of cable are evidence of the effort behind this unique show car paintwork.

The innovative prototype will be on display for the first time at the IAA MOBILITY. This will take place from 9 to 14 September 2025 in Munich.

MEDIA ENQUIRIES

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Consumption data

Cayenne Turbo Electric (WLTP)*: Electrical consumption combined: 22.5 – 20.4 kWh/100 km; CO_2 emissions combined: 0 g/km; CO_2 class: A

*Further information on the official fuel consumption and the official specific CO_2 emissions of new passenger cars can be found in the "Leitfaden über den Kraftstoffverbrauch, die CO_2-Emissionen und den Stromverbrauch neuer Personenkraftwagen" (Fuel Consumption, CO_2Emissions and Electricity Consumption Guide for New Passenger Cars), which is available free of charge at all sales outlets and from DAT (Deutsche Automobil Treuhand GmbH, Helmuth-Hirth-Str. 1, 73760 Ostfildern-Scharnhausen, www.dat.de).

Video

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