

# Inductive Charging System





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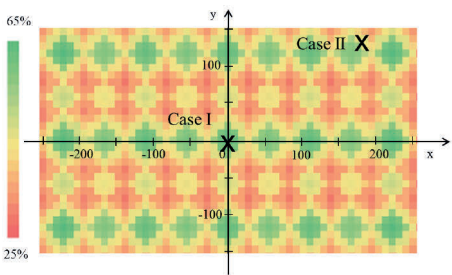
This new inductive charging solution consists of a primary and secondary coil system. Each coil system comprises several coils which are separately available for the optimal charging constellation.



### High Position Tolerance

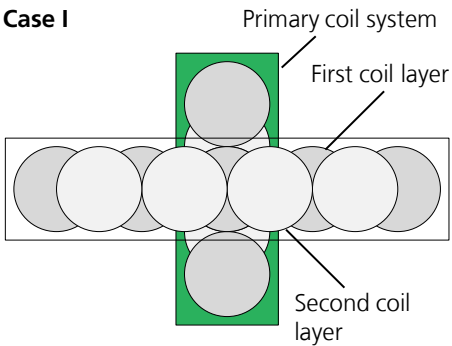
- Nine coils in two layers fit into a standardized license plate
- Orthogonal alignment between primary and secondary coil system
- Five primary (stationary) and nine secondary (mobile) coils lead to an effective charging area of 0.9 x 0.5 m<sup>2</sup>

Characteristic coupling factor map

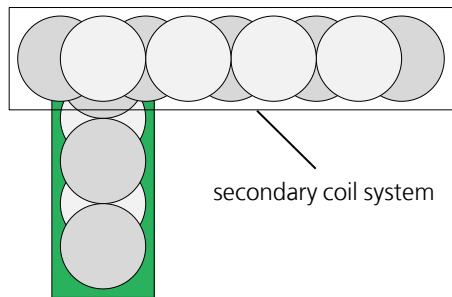


- Comparatively high coupling factors within the charging area

Case I



Case II



### Technical Data

|                     |         |
|---------------------|---------|
| Nominal power       | 3 kW    |
| Efficiency          | 93%     |
| Operating frequency | ≤150kHz |

### System Advantages

- **High transfer efficiency** and **small stray fields** through minimal air gap
- High **interoperability** through orthogonal alignment
- **High positioning tolerance**
- **Lightweight** pick-up
- Coils **fit in** conventional and standardized **license plate dimension**
- **Minimal package** volume compared to underbody systems
- No moving parts
- **Bidirectional** operation mode
- Further efficiency improvement through **wide band gap devices**

### Contact Us!

The Fraunhofer IISB is your research and development partner for inductive power transfer.

**We develop and realize complete inductive power transfer systems. From the FEM-Simulation, over power electronics analysis/simulation and mechanical integration to the realization of complete demonstrators.**

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