



IEC International Standardization Work on Wireless Power Transfer for Electric Vehicles

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IEC Charging Standards

- Main committee: TC69
 - IEC 61851: conductive charging systems
 - Part 1: General requirements
 - Parts 21-1 and 21-2: EMC requirements
 - Parts 23 and 24: d.c. charging
 - Parts 3-x: Light electric vehicles
 - IEC 61980: wireless power transfer systems
 - IEC 62840: battery swap systems
 - IEC 62831: RFID



IEC 61980

- Electric vehicle wireless power transfer systems
- Part 1: General requirements
 - FDIS circulation January 2015
- Part 2: Specific requirements for communication between electric road vehicle (EV) and infrastructure with respect to wireless power transfer (WPT) systems
 - Now circulating as CD, first publication as TS mid 2015
- Part 3: Specific requirements for the magnetic field wireless power transfer systems
 - Now circulating as CD, first publication as TS mid 2015

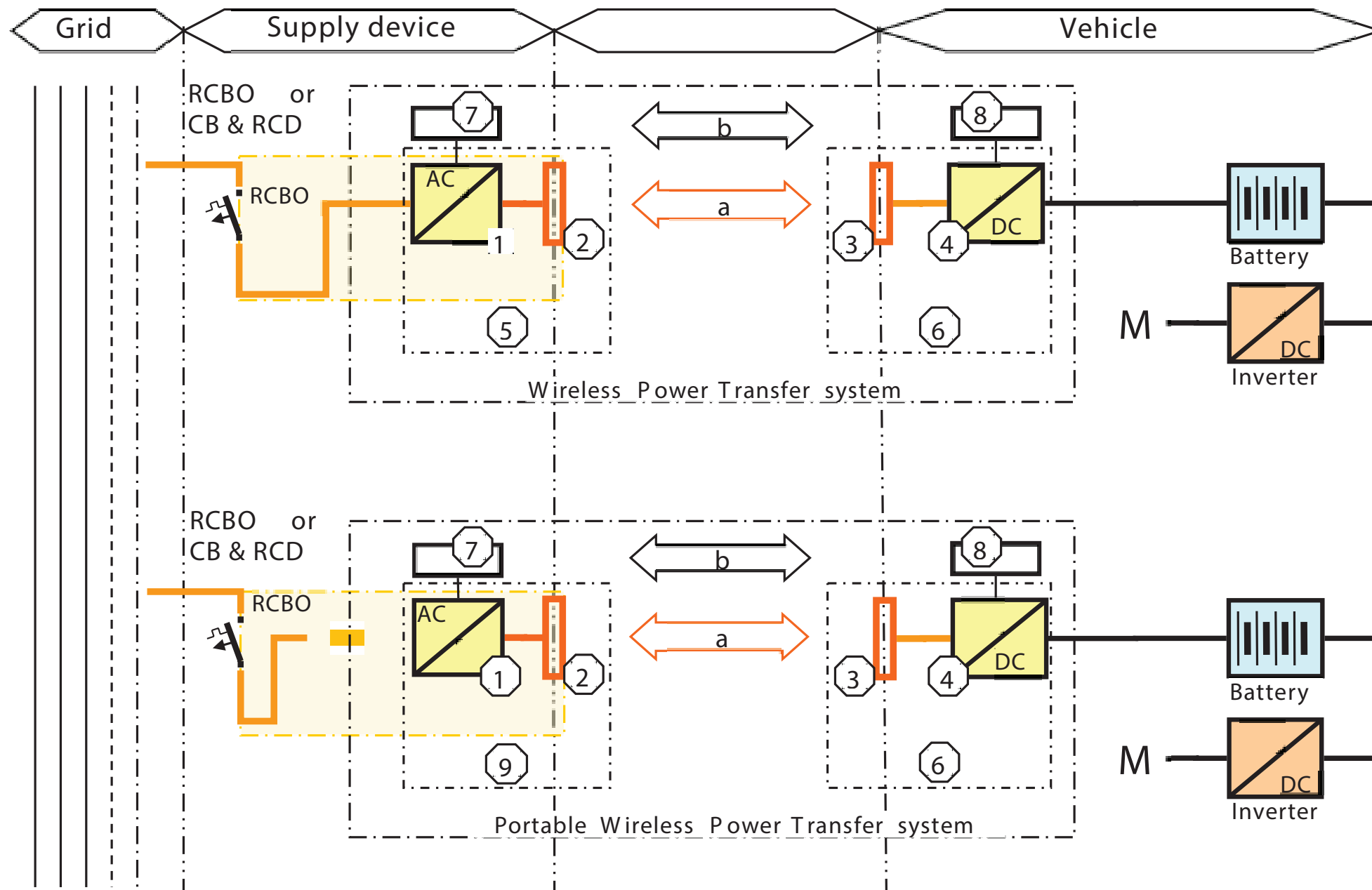


IEC 61980-1

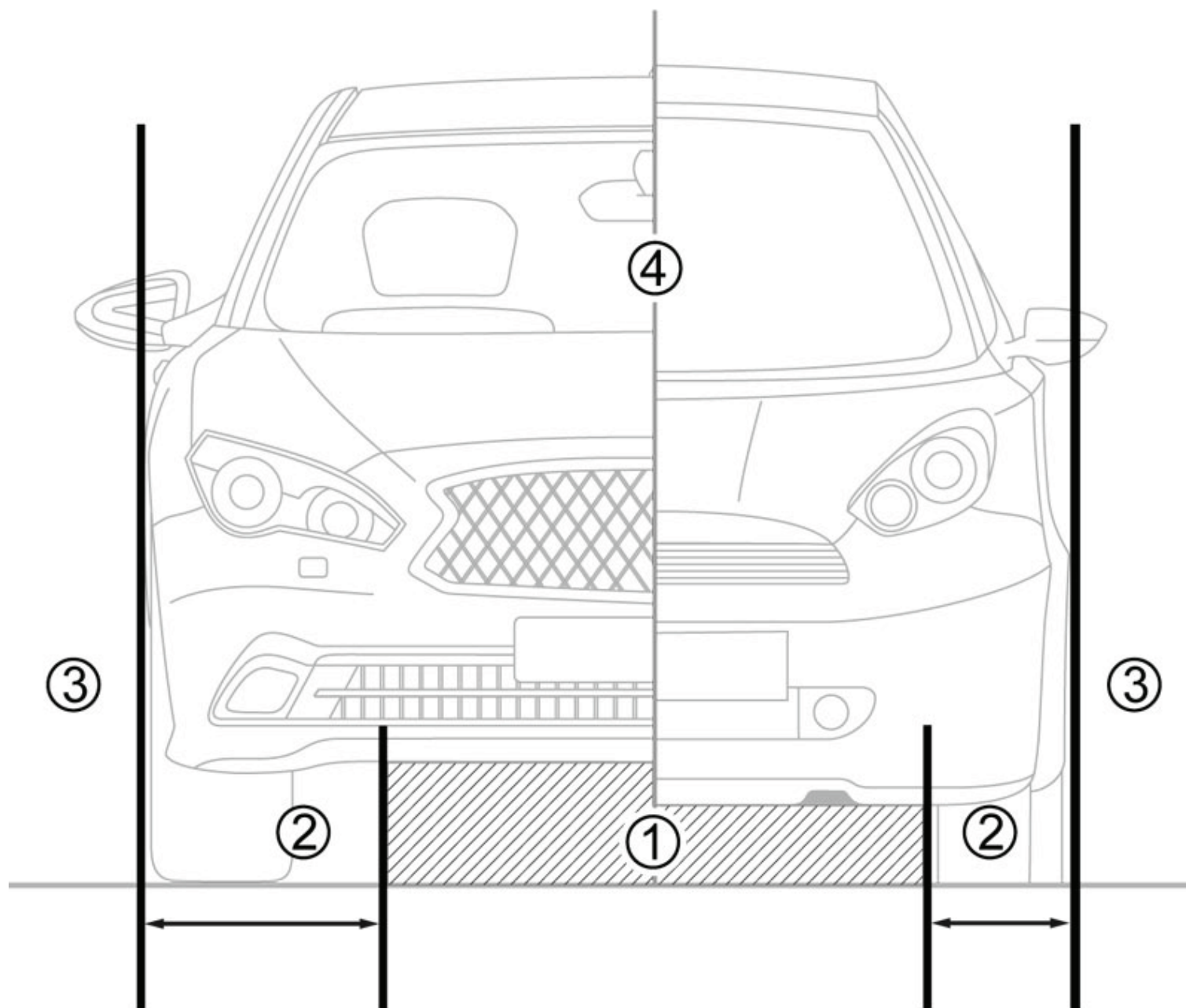
- General requirements:

- characteristics and operating conditions
- electrical safety for the off-board supply equipment
- basic communication for safety and process matters if required by a WPT system
- basic positioning for efficiency and process matters if required by a WPT system
- specific EMC requirements not covered by IEC61851-21-2
- dynamic power transfer and bidirectional power transfer: under consideration

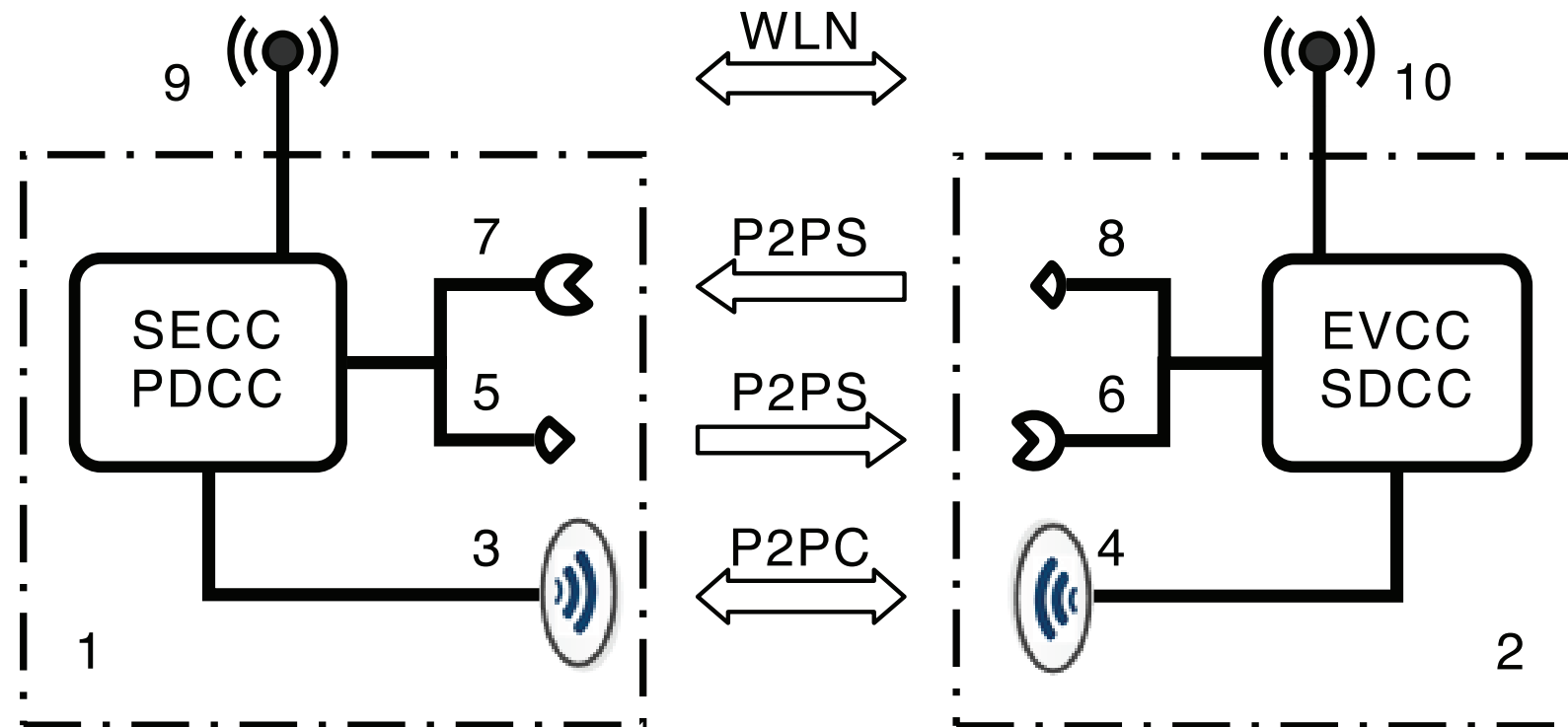
Wireless power transfer system



Areas of protection



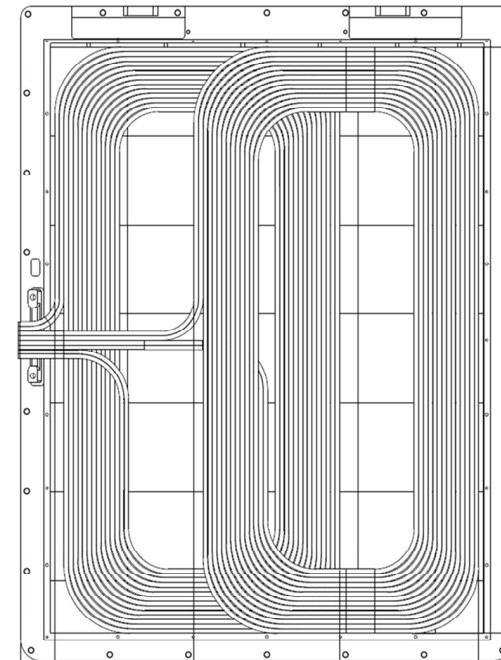
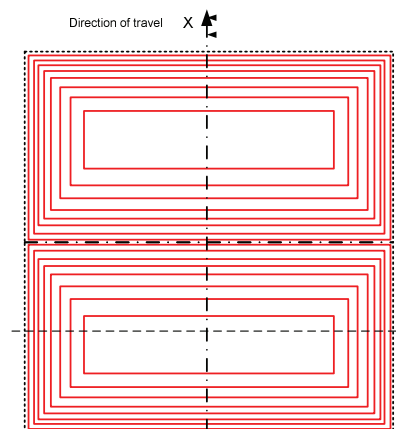
- Specific requirements for communication
 - operational characteristics and functional characteristics of the WPT communication subsystem





IEC61980-3

- Magnetic field ("inductive") wireless power transfer
- Description of several systems in annexes
 - design of primary devices for interoperability
 - Examples (subject to change!):





Interaction

- Vehicle issues (ISO TC22 SC37): ISO 19363
- Optional communication issues (ISO TC22 SC31): ISO 15118 series
- EMC/EMF issues: (Wireless Power Transfer Task-Force CISPR B/WG1/ TF WPT)