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(54) Title: Device, method and system for enabling secure wireless transfer of energy to a vehicle

(56) Cited documents: ---

(57) Abstract:

A device and a method for enabling secure wireless transfer of energy from a charging station in a roadway to a vehicle, wherein the device includes a plurality of sensors configured to generate a detection field in a certain pattern underneath the vehicle for sensing a metallic object, and a control unit, wherein the control unit is configured to: provide authentication data of an authentication between the vehicle and the charging station; determine a distance d between the charging station and the vehicle, and compare the distance with a threshold distance d_t; generate activation data to the plurality of sensors in order to activate the detection field when the distance between the vehicle and the charging station is equal to or less than the threshold distance d_t and before any transfer of energy is started; monitor if any metallic object is in the detection field; generate control data for controlling transfer of energy from the charging station to the vehicle in dependence of the monitoring and the authentication data.