Title (en)

WIRELESS BATTERY CHARGING SYSTEM VARYING MAGNETIC FIELD FREQUENCY TO MAINTAIN A DESIRE VOLTAGE-CURRENT PHASE RELATIONSHIP

Title (de)

DRAHTLOSES BATTERIELADESYSTEM MIT VARIIERENDER MAGNETFELDFREQUENZ ZUR AUFRECHTERHALTUNG EINER GEWÜNSCHTEN SPANNUNG-STROMPHASEN-BEZIEHUNG

Title (fr)

SYSTÈME DE CHARGE DE BATTERIE SANS FIL À VARIATION DE FRÉQUENCE DE CHAMP MAGNÉTIQUE PERMETTANT DE MAINTENIR UNE RELATION DE PHASE DE COURANT-TENSION SOUHAITÉE

Publication

EP 3294588 A1 20180321 (EN)

Application

EP 16793361 A 20160510

Priority

- US 201514708526 A 20150511
- US 2016031601 W 20160510

Abstract (en)

[origin: WO2016183058A1] An electrical charging system (12) configured to wirelessly charge an energy storage device (14), such as a battery (14). The charging system (12) includes an off- transducer (18) in electrical communication with an alternating power source (48) and electromagnetically coupled to an on- vehicle transducer (20) connected to the energy storage device (14). A controller (53) adjusts a variable frequency oscillator (71) within the power transmitter (16), thereby changing the frequency of the sourced electrical power. The charging system (12) further includes a phase detection circuit (72) in communication with the controller (53) and the off-transducer (18) and configured to determine a phase difference between the alternating voltage and the alternating current supplied by the power source (48). The controller (53) is configured to adjust the variable frequency oscillator (71) based on the phase difference such that the frequency of the sourced electrical power maintains the phase difference within a desired range.

IPC 8 full level

B60L 11/18 (2006.01); **H02J 7/00** (2006.01); **H02J 50/12** (2016.01); **H02J 50/90** (2016.01)

CPC (source: CN EP KR US)

B60L 53/126 (2019.01 - EP US); **B60L 53/38** (2019.01 - KR); **B60L 53/60** (2019.01 - KR); **H02J 7/025** (2023.08 - CN); **H02J 50/12** (2016.02 - CN EP KR US); **H02J 50/80** (2016.02 - CN KR); B60Y 2200/91 (2013.01 - KR); B60Y 2200/92 (2013.01 - KR); H02J 50/80 (2016.02 - EP); Y02T 10/70 (2013.01 - EP); Y02T 10/7072 (2013.01 - EP); Y02T 90/12 (2013.01 - EP); Y02T 90/14 (2013.01 - EP); Y02T 90/16 (2013.01 - EP KR)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

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DOCDB simple family (application)

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