

Title (en)

BIDIRECTIONAL DC CONVERTER ASSEMBLY HAVING CASCADE OF ISOLATED RESONANT CONVERTER AND STEP-UP/STEP-DOWN CONVERTER

Title (de)

BIDIREKTIONALE GLEICHSPANNUNGSWANDLERANORDNUNG MIT KASKADE AUS ISOLIERTEM RESONANZWANDLER UND HOCH/TIEFSETZSTELLER

Title (fr)

DISPOSITIF DE CONVERSION DE TENSION CONTINUE ÉQUIPÉ D'UNE CASCADE FAITE D'UN CONVERTISSEUR DE RÉSONANCE ISOLÉ ET D'UN CONVERTISSEUR ÉLÉVATEUR/ABAISSEUR

Publication

EP 3465896 A1 20190410 (DE)

Application

EP 17725264 A 20170524

Priority

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Abstract (en)

[origin: WO2017202900A1] The invention relates to a bidirectional DC converter assembly for an electric vehicle, which electric vehicle has a high voltage level and a low voltage level, wherein the DC converter assembly has a series circuit of two DC-to-DC converters, of which the one DC-to-DC converter has a series resonant switching converter having a transformer and of which the other DC-to-DC converter has a buck converter or buck/boost converter, wherein the buck converter or buck/boost converter is provided for connecting to the high voltage level and the series resonant switching converter is provided for connecting to the low voltage level of the electric vehicle, wherein a bidirectional peak current control system is provided, which is realized by means of a current measurement at an inductor of the buck converter or buck/boost converter, and the peak current control system uses the coil current value, which is modified with an offset value and thus has a constant sign, as a set point.

IPC 8 full level

H02M 3/158 (2006.01); **H02M 1/00** (2006.01); **H02M 3/337** (2006.01)

CPC (source: EP US)

H02M 3/158 (2013.01 - EP US); **H02M 3/1582** (2013.01 - US); **H02M 3/18** (2013.01 - US); **H02M 3/33584** (2013.01 - US); **H02M 3/3378** (2013.01 - EP US); **H02M 1/0025** (2021.05 - EP US); **H02M 1/007** (2021.05 - EP US); **H02M 7/757** (2013.01 - US); **Y02B 70/10** (2013.01 - EP)

Citation (search report)

See references of WO 2017202900A1

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