

Title (en)
BATTERY SYSTEM FOR A MOTOR VEHICLE FOR BALANCING BATTERY MODULES, METHOD FOR OPERATING A BATTERY SYSTEM AND MOTOR VEHICLE

Title (de)
BATTERIESYSTEM FÜR EIN KRAFTFAHRZEUG ZUM BALANCING VON BATTERIEMODULEN, VERFAHREN ZUM BETREIBEN EINES BATTERIESYSTEMS UND KRAFTFAHRZEUG

Title (fr)
SYSTÈME DE BATTERIE POUR VÉHICULE À MOTEUR POUR RÉALISER UN ÉQUILIBRAGE ENTRE DES MODULES DE BATTERIE, PROCÉDÉ POUR FAIRE FONCTIONNER UN SYSTÈME DE BATTERIE ET VÉHICULE À MOTEUR

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Abstract (en)
[origin: WO2021032411A1] The invention relates to a battery system (10) for a motor vehicle, comprising: a first battery module (5) which has a first voltage source (V1), a first inductor (L1), a positive pole (22) and a negative pole (21); a second battery module (6) which has a second voltage source (V2), a second inductor (L2), a positive pole (22) and a negative pole (21); an output capacitor (CA) which has a positive terminal (12) and a negative terminal (11); a first switching unit (50) for connecting the first battery module (5) to the output capacitor (CA); and a second switching unit (60) for connecting the second battery module (6) to the output capacitor (CA). Each of the switching units (50, 60) has a first switching element (61), a second switching element (62) and a third switching element (63), a first connector of the first switching element (61) being connected to a node (25), a second connector of the first switching element (61) being connected to one of the poles (21, 22) of the associated battery module (5, 6), a first connector of the second switching element (62) being connected to the node (25), a second connector of the second switching element (62) being connected to one of the terminals (11, 12) of the output capacitor (CA), a first connector of the third switching element (63) being connected to the other one of the poles (21, 22) of the associated battery module (5, 6) and to the other one of the terminals (11, 12) of the output capacitor (CA), and a second connector of the third switching element (63) being connected to the node (25). The invention further relates to a method for operating a battery system (10) according to the invention, the second switching unit (60) being controlled in such a way that a current flows through the second battery module (6), such that electrical energy is transmitted to the second voltage source (V2). The invention further relates to a motor vehicle comprising at least one battery system (10) according to the invention which is operated by the method according to the invention.

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