

Title (en)

MULTIPHASE VOLTAGE TRANSFORMER FOR A SUPPLY NETWORK AND METHOD FOR POWERING DOWN AN INTERMEDIATE CIRCUIT VOLTAGE OF THIS SUPPLY NETWORK

Title (de)

MEHRPHASIGER SPANNUNGSWANDLER FÜR EIN VERSORGUNGSNETZ UND VERFAHREN ZUM HERUNTERFAHREN EINER ZWISCHENKREISSPANNUNG DIESES VERSORGUNGSNETZES

Title (fr)

CONVERTISSEUR DE TENSION À PLUSIEURS PHASES POUR UN RÉSEAU D'ALIMENTATION ET PROCÉDÉ DE RÉDUCTION D'UNE TENSION DE CIRCUIT INTERMÉDIAIRE DE CE RÉSEAU D'ALIMENTATION

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Application

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Abstract (en)

[origin: WO202224700A1] The invention relates to a multiphase voltage transformer (22) for an electrical supply network (18) for supplying an electrical machine (12), in particular an electrical traction machine (14) of a vehicle, with electrical energy from an electrical energy storage system (16). This electrical supply network (18) comprises the multiphase voltage transformer (22), an output current converter (26) connected downstream of this voltage transformer (22) and an intermediate circuit (28) connected between the voltage transformer (22) and the output current converter (26). The multiphase voltage transformer (22) itself comprises a circuit arrangement (30) having a plurality of parallel-connected voltage transformer units (32, 34) at the input end, each of said units having an inductance (36, 38) and two semiconductor switch units (40, 42; 44, 46) and also a control unit (48) for actuating the semiconductor switch units (40, 42, 44, 46). According to the invention, the control unit (48) is configured so as to actuate the semiconductor switch units (40, 42, 44, 46) in an intermediate circuit discharging operation in such a way that it powers down the intermediate circuit voltage of the intermediate circuit (28) in less than a second into the low voltage range. The invention further relates to a corresponding electrical supply network (18) for supplying an electrical machine (12), an energy supply system (10) having such an electrical supply network (18) and a method for powering down an intermediate circuit voltage of a corresponding electrical supply network (18).

IPC 8 full level

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EUROPEAN UNION: "Regulation No 94 of the Economic Commission for Europe of the United Nations (UN/ECE) -Uniform provisions concerning the approval of vehicles with regard to the protection of the occupants in the event of a frontal collision", 26 July 2012, pages: L 254/77 - L 254/135, XP093209812

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