

Title (en)
DEVICE FOR THE LOW-COMMON-MODE CONVERSION OF ALTERNATING VOLTAGE

Title (de)
VORRICHTUNG ZUR GLEICHTAKTARMEN UMRICHTUNG VON WECHSELSPANNUNG

Title (fr)
DISPOSITIF DE CONVERSION DE MODE COMMUN FAIBLE DE TENSION ALTERNATIVE

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Application
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Abstract (en)
[origin: WO2022101396A1] The invention relates to a device for the low-common-mode conversion of alternating voltage, comprising: • a voltage feed (E1... E4), the voltage feed being provided, during operation, by means of a single-phase, two-conductor alternating voltage network, a single-phase, three-conductor alternating voltage network or a three-phase, multi-conductor alternating voltage network; • three first switching branches, each first switching branch having a bidirectional switch (SA, SB, SC) which can be cycled at low frequency; • wherein the outputs of the first switching branches can each be switchably led to a first conductor (m); • wherein during operation each of the inputs of the voltage feed (E1... E4) is led to a second conductor (p) by means of a first rectifier apparatus (D1a, D2a, D3a) in a positive half-wave; • wherein during operation each of the inputs of the voltage feed (E1... E4) is led to a third conductor (n) by means of a second rectifier apparatus (D1b, D2b, D3b) in a negative half-wave; • wherein the device also has at least two second switching branches, each second switching branch having a switch (S1, S2) which can be cycled at high frequency; • wherein a first of the second switching branches (S1) is located between the first conductor (m) and the second conductor (p), and a second of the second switching branches (S2) is located between the first conductor (m) and the third conductor (n); • wherein exactly one first effective step-up reactor (Lp) is located in the feed of the second conductor (p) to the first of the second switching branches (S1); • wherein exactly one second effective step-up reactor (Ln) is located in the feed of the third conductor (n) to the second of the second switching branches (S2).

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