



US 20240178738A1

(19) **United States**

(12) **Patent Application Publication**
Spesser et al.

(10) **Pub. No.: US 2024/0178738 A1**

(43) **Pub. Date: May 30, 2024**

(54) **METHOD AND DEVICE FOR
COMPENSATING LEAKAGE CURRENTS IN
AN ELECTRICAL POWER CONVERTER**

(52) **U.S. Cl.**

CPC *H02M 1/0038* (2021.05); *H02M 1/0009*
(2021.05); *H02M 1/0043* (2021.05); *H02M*
1/32 (2013.01); *H02J 7/00304* (2020.01)

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ABSTRACT

A method compensates for leakage currents in a protective conductor of an electrical power converter. The method includes: using a first differential current sensor for determining a differential current depending on a phase conductor current in a phase conductor and a neutral conductor current in a neutral conductor; feeding a compensation current into the phase conductor and/or into the neutral conductor via a first compensation circuit; using a second differential current sensor for capturing a signal representing remaining residual leakage current; converting the signal representing the residual leakage current to a frequency domain; generating a compensation signal for the residual leakage current in a frequency-selective manner; converting the compensation signal to a time domain; supplying the converted compensation signal converted to the first compensation circuit or a second compensation circuit; and feeding a residual compensation current corresponding to the compensation signal into the phase conductor(s) and/or into the neutral conductor.

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(21) Appl. No.: **18/520,307**

(22) Filed: **Nov. 27, 2023**

(30) **Foreign Application Priority Data**

Nov. 28, 2022 (DE) 10 2022 131 311.5

Publication Classification

(51) **Int. Cl.**
H02M 1/00 (2006.01)
H02M 1/32 (2006.01)

