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PERICHON et al.(10) **Pub. No.: US 2024/0213798 A1**(43) **Pub. Date: Jun. 27, 2024**(54) **UNINTERRUPTIBLE POWER SUPPLY
CIRCUIT**(57) **ABSTRACT**(71) Applicant: **COMMISSARIAT A L'ENERGIE
ATOMIQUE ET AUX ENERGIES
ALTERNATIVES, PARIS (FR)**(72) Inventors: **Pierre PERICHON, GRENOBLE
(FR); Charley LANNELUC,
GRENOBLE (FR); Léo STERNA,
GRENOBLE (FR)**(21) Appl. No.: **18/528,676**(22) Filed: **Dec. 4, 2023**(30) **Foreign Application Priority Data**

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An uninterruptible power supply circuit in the form of a dual active bridge converter includes first terminals which are configured to be connected to a first AC electrical network, second terminals which are configured to be connected to a second AC electrical network, and third terminals which are configured to be connected to a DC voltage source, the uninterruptible power supply circuit further comprising a transformer comprising a primary and a first secondary, a first electrical branch comprising the primary, the first electrical branch being connected to a first switch circuit configured to make it possible to exchange energy with the first terminals via the primary, and a second electrical branch comprising the first secondary, the second electrical branch being connected to a second switch circuit configured to make it possible to exchange energy with the second terminals via the first secondary. The first electrical branch comprises a first inductor connected in series with the primary, the second electrical branch comprises a second inductor connected in series with the first secondary, the transformer further comprises a second secondary, a third switch circuit being connected to the second secondary and being configured to make it possible to exchange energy with the third terminals via the second secondary, so as to make it possible to exchange energy between the first AC electrical network and the DC voltage source and between the DC voltage source and the second AC electrical network.

