Title (en)

POWER CONDITIONING AND UPS MODULES

Title (de)

SPANNUNGSAUFBEREITUNGS- UND UPS-MODULE

Title (fr)

MODULES UPS ET CONDITIONNEMENT DE PUISSANCE

Publication

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Application

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Abstract (en)

[origin: WO2017134293A1] The present invention provides a power conditioning module (10) for connection between an AC power supply (16) and a load (24), comprising an AC power supply input (14) for connection to the AC power supply (16), whereby the AC power supply input (14) receives a first reference (42) from the AC power supply (16), a split DC link (18) with its midpoint (26) connected to a second reference (44), a power output (22) for connection to the load (24), whereby the power output (22) receives a third reference (46) from the load (24), a first converter (34) connected between the AC power supply input (14) and the split DC link (18), whereby the first converter (34) is provided to power the split DC link (18) from the AC power supply (16), a second converter (36) connected between positive and negative halves (28, 30) of the split DC link (18) and the midpoint (26), whereby the second converter (36) is provided to transfer energy between the DC link halves (28, 30), a third converter (38) connected between the split DC link (18) and the power output (22), whereby the third converter (38) is provided to power the load (24) from the split DC link (18), whereby the first, second, and third converters (34, 36, 38) enable bi-directional energy flow between at least one of the two halves (28, 30) of the split DC link (18) and the first, second or third reference (42, 44, 46), respectively, and at least one or multiple semiconductor switching devices (84, 86) of at least one of the first, second and third converter (34, 36, 38) are provided as wide band gap semiconductor switching devices (84, 86), whereby the semiconductor switching devices (84, 86) comprise controlled and/or uncontrolled semiconductor switching devices (84, 86) in an at least three-level configuration.

IPC 8 full level

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