

Title (en)

METHOD FOR SELF-TESTING OF A PHASE OF A 3-LEVEL ANPC CONVERTER WITH LC FILTER

Title (de)

VERFAHREN ZUM SELBSTTEST EINER PHASE EINES 3-PUNKT ANPC UMRICHTERS MIT LC FILTER

Title (fr)

PROCÉDÉ DESTINÉ À AUTOÉVALUER UNE PHASE D'UN CONVERTISSEUR ANPC À 3 NIVEAUX À FILTRE LC

Publication

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Application

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Priority

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Abstract (en)

[origin: WO2022049062A1] A method for testing an inverter having a bridge comprising a first switch (T1) arranged between a positive connection (DC+) of a divided link circuit, having a centre point (M), and a positive inner connection (PI), a second switch (T2) arranged between the positive inner connection (PI) and a bridge output (BR), a third switch (T3) arranged between the bridge output (BR) and a negative inner connection (NI), a fourth switch (T4) arranged between the negative inner connection (NI) and a negative connection (DC-) of the divided link circuit, a fifth switch (T5) arranged between the centre point (M) and the positive inner connection (PI), and a sixth switch (T6) arranged between the centre point (M) and the negative inner connection (NI) is disclosed. A grid filter having a filter inductor (LF) and a filter capacitor (CF) is connected to the bridge output (BR). The method comprises applying a link circuit voltage to the divided link circuit, while the bridge output (BR) is isolated from a connected grid using the connected grid filter, fully discharging the filter capacitor (CF), closing the first switch (T1) and the sixth switch (T6), while the fourth switch (T4) and the fifth switch (T5) are open, subsequently clocking the second switch (T2) using a plurality of short pulses, wherein the duty cycle of the short pulses is predetermined between 1% and 5%, subsequently to the clocking determining a voltage dropped across the filter capacitor (CF) and identifying a fault state of the bridge when the voltage dropped is outside of a voltage window with an upper window limit and a lower window limit. An inverter is also disclosed, which has a control system designed and set up to execute the method according to one of the preceding claims and to connect the inverter to a connected grid only if a fault state is not identified.

IPC 8 full level

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