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Chen et al.

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(54) **POWER CONDITIONER WITH NEUTRAL LINE OFFSET CURRENT COMPENSATION FUNCTION AND CONTROL METHOD THEREOF**

(58) **Field of Classification Search**
CPC H02M 1/0012; H02M 1/0009; H02M 1/0025; H02M 1/0088; H02M 1/123; H02M 7/53871; H02M 7/53873
See application file for complete search history.

(71) Applicant: **National Taiwan University**, Taipei (TW)

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(72) Inventors: **Yaow-Ming Chen**, Taipei (TW); **Irham Fadlika**, Taipei (TW); **Wen-Yen Li**, Taipei (TW)

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(73) Assignee: **National Taiwan University**, Taipei (TW)

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Primary Examiner — Yusef A Ahmed

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(74) Attorney, Agent, or Firm — Best & Flanagan LLP

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(57) **ABSTRACT**

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A power conditioner with neutral line offset current compensation function, includes a power converter, a measurement unit, a control module, and two coupling capacitors connected through the neutral line to a three-phase AC grid. The power conditioner eliminates the offset current on the neutral line by compensating the inaccuracies in the measurement unit with the control module, thus minimizing the voltage deviation of the coupling capacitors. Compared to traditional control circuits, a feedback path is added to achieve the elimination of the neutral line offset current, suppressing unstable and unpredictable voltage fluctuations on the coupling capacitors without affecting the rated power transmission of the power converter, thus extending the lifespan of the coupling capacitors and enabling the power conditioner to operate more stably.

(30) **Foreign Application Priority Data**

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10 Claims, 15 Drawing Sheets

