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TWO-INVERTER-BASED PHOTOVOLTAIC INSTALLATION ADJUSTED BY THE MODIFIED SCHEME OF SPACE-VECTOR MODULATION

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Abstract

Algorithms of synchronous one-stage modulation have been modified and disseminated for adjustment of two two-level inverters of transformer-based photovoltaic installation with specific double-delta configuration of inverter-side windings of power transformer. Modified algorithms of synchronous space-vector modulation, applied for control of inverters of PV system with specialized connection of windings of power transformer, assure improved spectral composition of winding voltages of transformer, characterized by the lacking in its spectra of even harmonics and undesirable subharmonics for any control modes and regimes of operation of system. Refer ences 9, figures 6, table 1.

Key words: voltage source inverter, photovoltaic panels and arrays, multi-winding transformer, modulation strategy.

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