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IDENTIFICATION AND ASSESSMENT OF THE INFLUENCE OF UNBALANCE VOLTAGE SOURCES IN THREE-PHASE THREE-WIRE ELECTRIC NETWORKS

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Abstract

Identification and assessment of the influence of voltage unbalance sources on the power quality is an important task in the relationship between suppliers and consumers of electricity. The method of measurement and evaluation of power quality factors imposes significant restrictions on its decision. For this reason, the existing methods of identification and assessment of the influence of voltage unbalance sources have significant limitations, which make it possible to find acceptable solutions only for the case of one dominant distortion source. A fundamentally new method of solving this problem, focused on the data of one elementary measurement interval of power quality factors is considered in the paper. Simplicity of implementation and high accuracy allow using it without any restrictions on the number and power of distortion sources at the point of common coupling. References 10, figures 4, tables 2.

Key words: identification of unbalance voltage source, distribution of actual contributions, point of common coupling, unbalance voltage, power quality.

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