

DOI: <https://doi.org/10.15407/techned2018.03.090>

OPTIMIZATION OF SOFTWARE FOR AUTONOMOUS MEASURING MODULES OF DISTRIBUTED DIAGNOSTIC SYSTEMS

Journal	Tekhnichna elektrodynamika
Publisher	Institute of Electrodynamics National Academy of Science of Ukraine
ISSN	1607-7970 (print), 2218-1903 (online)
Issue	No 3, 2018 (May/June)
Pages	90 – 96

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Abstract

The problem of energy consumption reducing in autonomous modules of distributed multi-level systems for monitoring and technical diagnostics of the equipment of electric power objects due to the use of optimized algorithms and programs for statistical processing of measurements data is considered. Improved algorithm for testing of diagnostic signals for homogeneity, which is used for the preliminary detection of defects in the elements of electrical equipment, is developed. Minimization of program execution time and consequently the reducing of power consumption in autonomous measuring modules are achieved through the use of computations with integers which are supported by modern 32-bit microcontrollers. References 17.

Key words: statistical diagnostics, power objects equipment, digital signal processing, data homogeneity test, algorithm

Received: 09.01.2018

Accepted: 05.02.2018

Published: 13.04.2018

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