



V.V. Koval, O.V. Samkov, V. I. Vakas, Yu. V. Pylypenko, I. Ya. Yanitsky, D. S. Lavinsky; Fault-tolerant time synchronization systems of intelligent electrical networks. - /National University of Life and Environmental Sciences of Ukraine/. Kyiv, Publishing Center of NUBiPU, 2024. – 320p. (20.0). – 300. - ISBN.

The monograph represents significant results of scientific research and practical developments aimed at solving problems related to increasing the fault tolerance of synchronization systems of intelligent electric power and telecommunication networks. The monograph analyzes methods for increasing the energy efficiency of electric networks using

synchronized vector measurements and develops methods for assessing the energy efficiency of agro-industrial consumers of electric energy. The principles of creation, practical implementation, technical operation of fault-tolerant synchronization systems and multi-channel monitoring of synchronization signals of electric and telecommunication networks are considered. The results of experimental studies of digital telecommunications synchronization devices, quality control tools and measurements of synchronization parameters of mobile communication networks are presented.

The publication is intended for scientists engaged in research and development of automation systems, a wide range of engineering and technical workers who ensure the operation of electrical and telecommunication networks, monitoring and synchronization systems, and will also be useful to teachers, postgraduates, undergraduates and students of relevant specialties.