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ESTIMATION OF DISTRIBUTION NETWORK STATE ON THE BASIS OF A MATHEMATICAL LOAD MODEL

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The target of estimating distribution network state is to refine the measurement data, but it is especially important to detect significant measurement errors or mistakes. Usually the redundancy of data required for estimation is not available in distribution networks – the number of measurements is not essentially bigger or is even smaller than the number of main state parameters. Resolving of this problem can be based on a mathematical load model, by means of which it is possible to calculate load values and characteristics for all loads at any time. Such a load model should consider all main regular changes of a load and take into account temperature dependency, stochastic nature of a load, and also frequency and voltage dependencies.

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