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The model of the power lines fault location method using time domain reflectometry

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Abstract

The article describes a simulation model of the method, locating power lines fault, using time domain reflectometry. This diagnostic method is a one-side method that can work on both enabled and disabled transmission lines and allows defining the main types of faults, including the high-impedance faults. The developed model consists of two modules: a generation unit implemented in PSCAD/EMTDC and a processing unit implemented in MATLAB. The model is successfully verified and is intended for a comprehensive study of the time domain reflectometry method for power lines diagnostics including analysis for various line topologies using different probing signals and various signal to noise ratio.

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