

# Faults Diagnosis in Transport and Distribution Lines Based on the Analytic Model

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**Abstract**— The method based on analytic models can be used when the system behavior is compared with the results of the mathematical model which reproduces the system in normal operation conditions. The paper applies the diagnosis method based on the analytic model by investigating the waveforms of the currents and voltages specific to a transport and distribution line when interruption fault occurs. For identifying the fault, the waveforms corresponding to different faults are stored in an information database and compared with the ones corresponding to the normal operation. The paper presents a microcontroller based system used to control switching of interruption fault for transport and distribution lines.

**Keywords**— fault diagnosis; overhead long lines; fault interruption; microcontroller system

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