Modeling Filters of Six Symmetrical Components of Controlled Self-compensating Power Transmission Lines

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Abstract

This article discusses the implementation of filters for six symmetrical components of currents (voltages) of a selfcompensating power line (SCPL) and a controlled selfcompensating power line with closely placed phases (CSCPL) Mathematical descriptions of these filters are provided. The principle of implementation of relay protection based on the allocation of six symmetrical components of currents (voltages) is proposed, which allows to increase its sensitivity and ensure the "survivability" of the S??L (CSCPL) for various asymmetric short circuits. For this purpose, a structural model of the filter scheme of six symmetrical components is reproduced in the MATLAB Simulink dynamic modeling environment.

Index terms— ?????? ????? ???????????? ????????????

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Figure 1:

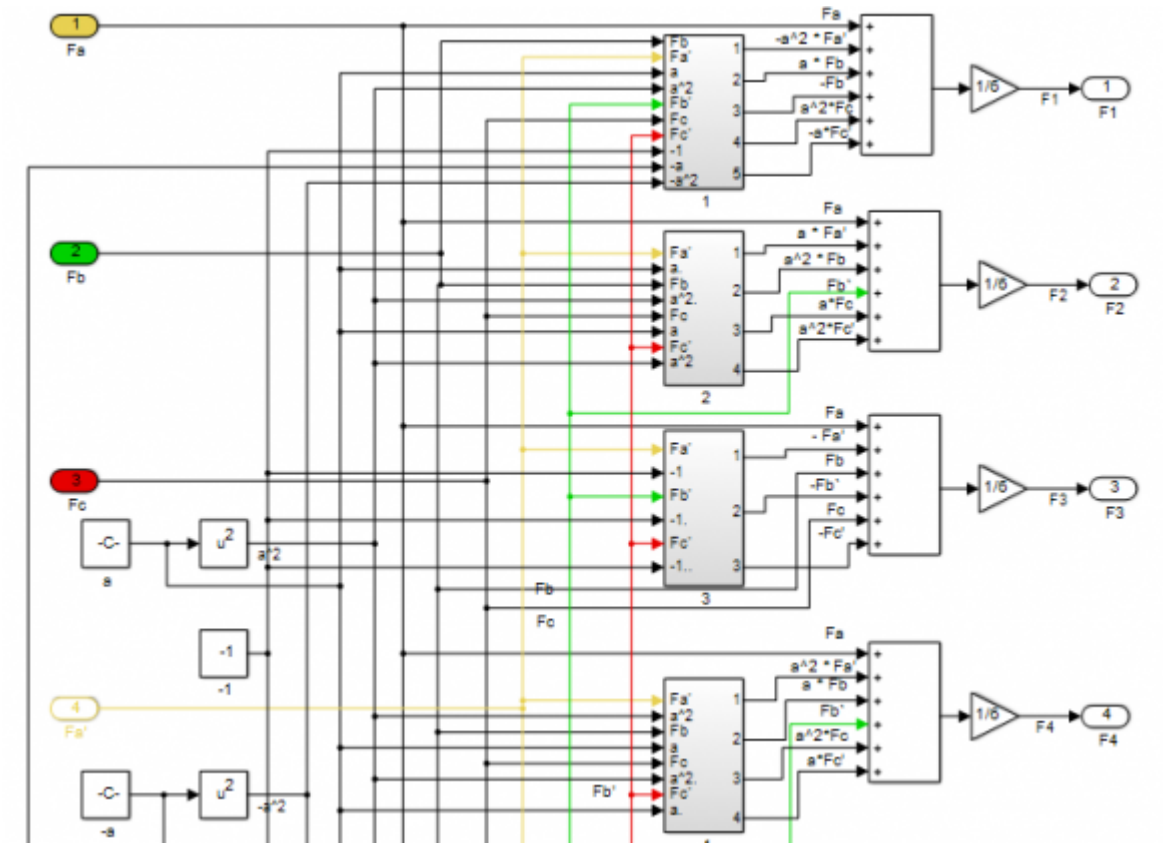

Figure 2:

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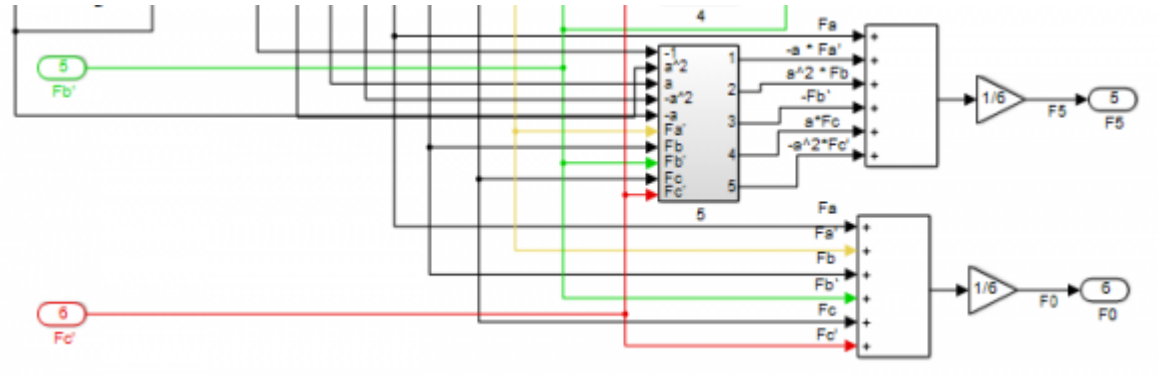

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Figure 4:

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