

Multiphysics Analysis and Optimization of Mechatronic Device Applications for Switching Devices

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Abstract

Medium- and high-voltage circuit breakers and reclosers are important grid protection devices that connect different grid sources and increase the network/grid reliability. Currently, there is a clear need of increasing the numbers of switching operation. Therefore, the optimal design of these devices becomes of extreme importance in order to enable the required switching capabilities. This presentation introduces a typical structure MV/HV mechatronic devices, the challenging problems to solve, the coupling of different multiphysics interfaces, as well as different case studies solved with COMSOL Multiphysics® software.