INDIRECT TEST CIRCUIT FOR TESTING HIGH VOLTAGE FUSES IN OVERLOAD CONDITIONS

ABSTRACT  During direct tests of high voltage fuses in overload conditions, the tested fuse has to carry the rated overload current at the rated voltage for a long enough time to interrupt the overcurrent. These types of tests cannot be done in short circuit laboratories. A short circuit generator cannot be excited for the length of time needed to complete the test. Therefore the indirect test method is often applied. It uses separate current and voltage circuits in sequence: first the fuse is supplied from a low voltage current circuit to conduct a current of the recommended intensity and, at the moment of the current interruption, the fuse is disconnected from the low voltage circuit and switched to a high voltage circuit. To ensure the equivalence of the direct and indirect tests the switching time from the current to the voltage circuit should be as short as possible. This paper describes a fast operating switch for use in such tests.

Keywords: high voltage fuse, fast operating switch, current circuit, voltage circuit
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