

IEEE Guide for Liquid-Immersed Transformer Through-Fault-Current Duration

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Abstract: Recommendations believed essential for the application of overcurrent protective devices applied to limit the exposure time of transformers to short circuit current are set forth. Transformer coordination curves are presented for four categories of transformers. There is no intent to imply overload capability.

Keywords: liquid-immersed transformer, transformer

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Introduction

(This introduction is not a part of IEEE Std C57.109-1993, IEEE Guide for Liquid-Immersed Transformer Through-Fault-Current Duration.)

This is the first revision of IEEE Std C57.109-1985. Sections 1 (Scope), 2 (Purpose), and 3 (General) have been incorporated as subclauses into a new clause 1, Overview, in order to conform to the 1992 edition of the *IEEE Standards Style Manual*. A new clause on definitions has been added for clarification. The major revision is the definition of short-circuit impedance of a transformer. This definition is intended to make the fault calculations related to the use of these curves consistent with the short-circuit design requirements of Categories III and IV transformers described in IEEE Std C57.12.00-1993. The clause on transformer coordination curves has been modified with more explanation on the curves and the use of system and transformer impedances.

The other changes made in this revision are editorial and related to general updating of the guide. Some of these changes are intended to improve the ease and efficiency of its use.

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