

An American National Standard

**IEEE Guide for
Transformer Through-Fault-Current Duration**

Sponsor

**Transformers Committee of the
IEEE Power Engineering Society**

Secretariat

**Institute of Electrical and Electronics Engineers
National Electrical Manufacturers Association**

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IEEE Standards Board

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Foreword

(This Foreword is not a part of ANSI/IEEE C57.109-1985, IEEE Guide for Transformer Through-Fault-Current Duration.)

ANSI C57.92-1962, American National Standard Guide for Loading Oil-Immersed Distribution and Power Transformers (Appendix to ANSI C57.12 standards) was issued in 1962. The guide contained a section entitled *Protective Devices* which provided information indicating the short-time thermal load capability of oil-immersed transformers. That information, of particular interest to those responsible for application of overcurrent protective devices for protection of transformers, is summarized as follows:

Time	Times Rated Current
2 s	25.0
10 s	11.3
30 s	6.3
60 s	4.75
5 min	3.0
30 min	2.0

During the revision activities of C57.92 it became evident that *Times Rated Current* capability of transformers as stated therein did not recognize the mechanical withstand considerations of transformers. Consequently, it was decided that the *Protective Devices* portion of the loading guide should be removed and considered separately.

In 1978, following particular urging by the IEEE Power Systems Relaying Committee, a working group was formed under the auspices of the IEEE Transformers Committee with the assignment to prepare a guide that would document the through-fault-current duration capability of transformers in sufficient detail to facilitate coordination of overcurrent protective devices with power transformers. This guide is the product of that working group.

Since its issue in 1978 the short-circuit characteristic information of ANSI/IEEE C57.12.00b-1978 has been incorporated in the current issue of ANSI/IEEE C57.12.00-1980, IEEE Standard General Requirements for Liquid-Immersed Distribution, Power, and Regulating Transformers. This guide supplements, but does not in any way supersede, ANSI/IEEE C57.12.00-1980.

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