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IEEE Standard for Shunt Power Capacitors

IEEE Power Engineering Society

Sponsored by the
Transmission and Distribution Committee



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IEEE Standard for Shunt Power Capacitors

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**Transmission and Distribution Committee
of the
IEEE Power Engineering Society**

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Abstract: Capacitors rated 216 V or higher, 2.5 kvar or more, and designed for shunt connection to alternating-current transmission and distribution systems operating at a nominal frequency of 50 Hz or 60 Hz, within the guidelines of IEEE Std 1036-1992, are considered.

Keywords: capacitors, shunt connection, transmission and distribution systems

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Introduction

(This introduction is not part of IEEE Std 18-2002, IEEE Standard for Shunt Power Capacitors.)

This standard's principal objective is to provide a basis for uniformity in design and testing of shunt power capacitors.

This standard was revised in response to a need created by the continuous changes in capacitor technology, primarily in the areas of internally fused and fuseless capacitors, and the need to move capacitor application information previously contained in this standard to IEEE Std 1036-1992, IEEE Guide for Application of Shunt Power Capacitors. It was also the aim of this revision to coordinate the information contained in this standard, whenever possible, with other pertinent national and international standards.

Participants

This standard was revised by a working group sponsored by the Capacitor Subcommittee of the Transmission and Distribution Committee of the IEEE Power Engineering Society. At the time this standard was approved, the Capacitor Subcommittee consisted of the following membership:

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IEEE Standard for Shunt Power Capacitors

1. Overview

1.1 Scope

This standard applies to capacitors rated 216 V or higher, 2.5 kvar or more, and designed for shunt connection to alternating current transmission and distribution systems operating at a nominal frequency of 50 Hz or 60 Hz, within the guidelines of IEEE Std 1036™-1992¹.

2. References

This standard shall be used in conjunction with the following publications. When the following standards are superseded by an approved revision, the revision shall apply.

ASTM D1535-01, Standard Practice for Specifying Color by the Munsell System.²

IEEE Std 1036™-1992, IEEE Guide for Application of Shunt Power Capacitors.^{3,4}

IEEE Std C37.41e™-1996, IEEE Standard Design Tests for External Fuses for Shunt Capacitors.

IEEE Std C37.99™-2000, IEEE Guide for Protection of Shunt Capacitor Banks.

IEEE Std C57.19.00™-1991 (R1997), IEEE Standard General Requirements and Test Procedures for Outdoor Power Apparatus Bushings.

NEMA 107-1993, Methods of Measurement of Radio Influence Voltage (RIV) of High-Voltage Apparatus.⁵

¹Information on references can be found in Clause 2.

²ASTM publications are available from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, USA (<http://www.astm.org/>).

³IEEE publications are available from the Institute of Electrical and Electronics Engineers, 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331, USA (<http://standards.ieee.org/>).

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