



IEEE Standard for Ventilated Dry-Type Power Transformers, 501 kVA and Larger, Three-Phase, with High-Voltage 601 V to 34 500 V; Low-Voltage 208Y/120 V to 4160 V—General Requirements

IEEE Power & Energy Society

Sponsored by the
Transformers Committee

IEEE
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Abstract: Characteristics relating to performance, limited electrical and mechanical interchangeability, as well as safety of the equipment described, and to assist in the proper selection of such equipment, are set forth in this standard. Specific rating combinations are described in the range from 750/1000 kVA to 7500/10 000 kVA inclusive, with high-voltage 601 V to 34 500 V inclusive and low-voltage 208Y/120 V to 4160 V inclusive. This standard describes certain electrical and mechanical requirements and takes into consideration certain safety features of 60 Hz, two-winding, three-phase, ventilated dry-type transformers with self-cooled ratings 501 kVA and larger, which are generally used for step-down purposes. Clause 9 through Clause 11 describe other requirements or alternatives that may be specified for some applications and lists forced-air-cooled ratings for certain sizes.

Keywords: ambient temperature, basic lightning impulse insulation level (BIL), construction, current transformer, dry-type, electrical, forced-air cooled, grounding, insulation level, jacking, limiting temperature, mechanical, percent impedance voltage, performance, rating, self-cooled, surge arresters, taps, temperature device, temperature rise, tests, transformer, transformer enclosure, unit substation, winding temperature

The Institute of Electrical and Electronics Engineers, Inc.
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This dry-type transformer standard describes ventilated dry-type transformers with self-cooled kilovolt-ampere ratings 501 V to 7500 V and high voltages 601 V to 34 500 V; forced-air-cooled ratings for certain sizes are listed in Clause 9.

This standard is the result of an effort encompassing the interests of users, manufactures, and others dedicated to developing voluntary consensus standards primarily for dry-type transformers. Table 2, Table 3, Table 9, Table 11, and Table 12 of this standard have been revised to coordinate with IEEE Std C57.12.01.^a Table 4 has been revised to reflect industry practice.

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^a For information on references, see Clause 2.

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At the time this standard was submitted to the IEEE-SA Standards Board for approval, the Ventilated Dry-Type Power Transformers Working Group had the following membership:

Paulette Payne Powell, *Chair*

Derek Foster

Charles Johnson
Richard Marek

Sheldon Kennedy

The following members of the balloting committee voted on this standard. Balloters may have voted for approval, disapproval, or abstention.

William J. Ackerman
I. Antweiler
Stan Arnot
David Barnard
Wallace Binder
Thomas Bishop
Thomas Blair
William Bloethe
Steven Brockschink
Carl Bush
Tommy Cooper
Jerry Corkran
Dieter Dohnal
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John Houdek
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Charles Johnson
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Jim Kulchisky
Saumen Kundu
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Jerry Murphy

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Alvaro Portillo
Paulette Payne Powell
Iulian Profir
Kirk Robbins
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Dinesh Pranathy Sankarakurup
Bartien Sayogo
Hyeong Sim
Tarkeshwar Singh
James E. Smith
Jerry Smith
S. Thamilarasan
T. Traub
John Vergis
Kenneth White
James Wilson
William Wimmer
Kipp Yule
Matthew Zeedyk
Ahmed Zobaa

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Joseph L. Koepfinger*
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David J. Law
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Ronald C. Petersen
Chuck Powers
Narayanan Ramachandran
Jon Walter Rosdahl
Anne-Marie Sahazizian
Malcolm V. Thaden
Howard L. Wolfman
Don Wright

*Member Emeritus

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Satish K. Aggarwal, *NRC Representative*

Michael Janezic, *NIST Representative*

Lorraine Patsco

IEEE Standards Program Manager, Document Development

Matthew J. Ceglia

IEEE Standards Program Manager, Technical Program Development

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