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IEEE Standard for Pad-Mounted-Type, Self-Cooled, Single-Phase Distribution Transformers 250 kVA and Smaller: High Voltage, 34 500 GrdY/19 920 V and Below; Low Voltage, 480/240 V and Below

IEEE Power and Energy Society

Sponsored by the
Transformers Committee

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IEEE Std C57.12.38™-2014
(Revision of
IEEE Std C57.12.38-2009)

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Abstract: Certain electrical, dimensional, and mechanical characteristics are covered in this standard, and certain safety features of single-phase, 60-Hz, mineral-oil-immersed, self-cooled, pad-mounted, compartmental-type distribution transformers are taken into consideration. These transformers are rated 250 kVA and smaller with high voltages of 34 500 GrdY/19 920 V and below and with low voltages of 480/240 V and below. These transformers are generally used for step-down purposes from an underground primary cable supply. The connector, bushing, and terminal arrangements for radial or loop feed systems are covered in this standard. The electrical and mechanical requirements of any accessory devices that may be supplied with the transformer are not covered in this standard.

Keywords: distribution transformers, IEEE C57.12.38™, pad-mounted, padmounted, single phase, single-phase, transformer

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Introduction

This introduction is not part of IEEE Std C57.12.38™-2014, IEEE Standard for Pad-Mounted-Type, Self-Cooled, Single-Phase Distribution Transformers 250 kVA and Smaller: High Voltage, 34 500 GrdY/19 920 V and Below; Low Voltage, 480/240 V and Below.

The Accredited Standards Committee on Transformers, Regulators, and Reactors, C57, has for many years been developing standards on transformers, regulators, and reactors. The data has been obtained from many sources including the standards of the Institute of Electrical and Electronics Engineers (IEEE) and the National Electrical Manufacturers Association (NEMA), reports of committees of the Edison Electrical Institute, and others.

In 2009, the first version of this standard was prepared. It replaced and combined ANSI C57.12.21-1992 and ANSI C57.12.25-1990 and was generally revised to comply with the then approved style for published standards.

In this version of the standard, the ratings have been increased to include a 250-kVA rating, additional figures for low-voltage line and neutral terminal arrangements and dimensions have been added, and the details for low-voltage line and neutral studs were expanded.

This standard was prepared by the Single-Phase, Pad-Mounted, Distribution Transformers Working Group of the Distribution Transformers Subcommittee of the IEEE Power and Energy Society.

Contents

IEEE Standard for Pad-Mounted-Type, Self-Cooled, Single-Phase Distribution Transformers 250 kVA and Smaller: High Voltage, 34 500 GrdY/19 920 V and Below; Low Voltage, 480/240 V and Below

1. Overview

1.1 Scope

This standard covers certain electrical, dimensional, and mechanical characteristics and safety requirements of single-phase, 60-Hz, liquid-filled, self-cooled, pad-mounted, compartmental-type distribution transformers. These transformers are rated 250 kVA and smaller with high voltages of 34 500 GrdY/19 920 V and below for operation between one phase and grounded neutral and low voltage of 480/240 V and below. These transformers are generally used for step-down purposes from an underground primary cable supply. This standard covers the connector, bushing, and terminal arrangements for radial or loop feed systems. This standard does not cover the electrical and mechanical requirements of any accessory devices that may be supplied with the transformer.