C57.12.38™

IEEE Standard for Pad-Mounted-Type, Self-Cooled, Single-Phase Distribution Transformers; High Voltage, 34 500 GrdY/19 920 V and Below, Low Voltage, 240/120 V; 167 kVA and Smaller

IEEE Power & Energy Society

Sponsored by the
Transformers Committee

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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 167 kVA and smaller, with high voltages of 34 500 GrdY/19 920 V and below, and with low voltages of 240/120 V. 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, pad-mounted, padmounted, single phase, single-phase, transformer

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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.

This standard was prepared by the Single-Phase, Pad-Mounted, Distribution Transformers Working Group of the Distribution Transformers Subcommittee of the IEEE Power & Energy Society, and it is a revision and combination of ANSI C57.12.21-1992 [B1] and ANSI Std C57.12.25-1990 [B2].[a]

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1. Overview

1.1 Scope

This standard covers certain electrical, dimensional, mechanical characteristics and safety requirements of single-phase, 60 Hz, liquid-filled, self-cooled, pad-mounted, compartmental-type distribution transformers. These transformers are rated 167 kVA and smaller, with the high voltages of 34 500 GrdY/19 920 V and below for operation between one phase and grounded neutral, and low voltage of 240/120 V. 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.

1.2 Purpose

This standard is intended to define the electrical, mechanical, dimensional, performance, and interchangeability requirements of the transformers covered under this standard and to assist in the proper