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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB 19212.2-2012

**Safety of transformers, reactors, power supply units and combinations thereof -
Part 2: Particular requirements and tests for separating transformers and power
supply units incorporating separating transformers for general applications**

(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is Part 2 of GB/T 19212 "Safety of transformers, reactors, power supply units and their combinations"¹⁾. GB/T 19212 has been the following parts have been published.

1) In this series of documents, some parts are under the heading "Safety of power transformers, power supplies, reactors and similar products" and some parts are under the heading "Mains voltage Some parts are under the heading "Safety of transformers, reactors, power supply units and similar products of 1100 V and below" all future releases of this series of documents will be under the title of "Safety of Transformers, Reactors, Power Supply Devices and Their Combinations" release.

- Part 1: General requirements and tests;
- Part 2: Particular requirements and tests for general purpose isolating transformers and power supply units with built-in isolating transformers;
- Part 3: Particular requirements and tests for control transformers and power supplies with built-in control transformers;
- Part 4: Particular requirements and tests for ignition transformers for gas and oil burners;
- Part 5: Particular requirements and tests for general purpose isolating transformers and power supply units with built-in isolating transformers;
- Part 6: Particular requirements and tests for shaver transformers, shaver power supply units and shaver power supply units;
- Part 7: Particular requirements and tests for safety isolating transformers and power supply units with built-in safety isolating transformers;
- Part 8: Particular requirements and tests for transformers and power supplies for toys;
- Part 9: Particular requirements and tests for transformers and power supplies for bells and clocks;
- Part 10: Particular requirements and tests for transformers and power supply units for class III portable tungsten filament lamps;
- Part 11: Special requirements for high insulation level separating transformers and separating transformers with output voltage exceeding 1000V and test;
- Part 13: Particular requirements and tests for constant voltage transformers and power supply units;

- Part 14: Particular requirements and tests for general purpose autotransformers and power supply units with built-in autotransformers;
- Part 15: Particular requirements and tests for voltage regulators and power supply units with built-in voltage regulators;
- Part 16: Particular requirements and tests for isolating transformers for power supply to medical facilities;
- Part 17: Particular requirements and tests for switching power supply units and transformers for switching power supply units;
- Part 20: Particular requirements for interference attenuation transformers;
- Part 21: Special requirements and tests for small reactors;
- Part 24: Particular requirements and tests for transformers and power supply units for construction sites;
- Part 27: Particular requirements and tests for transformers and power supply units for energy saving and other purposes.

This document replaces GB/T 19212.2-2012 "Safety of power transformers, power supplies, reactors and similar products Part 2: General Particular requirements and tests for power supplies with separation transformers and built-in separation transformers" compared with GB/T 19212.2-2012, except for the structure in addition to adjustments and editorial changes, the main technical changes are as follows.

- Changed the content of the "Scope" chapter and redefined the scope of application and scope of non-application (see Chapter 1, Chapter 1 of the 2012 edition);
- Changed the graphic symbols and added a new symbol with output voltage as "linear power supply device" (see Chapter 8, 2012 edition Chapter 8);
- Changed the requirements for no-load output voltage and added "For independent transformers, the rated output voltage should exceed AC 50V or no ripple Wave DC 120V" (see 12.101, 12.101 of the 2012 edition);
- Changed the requirements for product structure (see Chapter 19, Chapter 19 of the 2012 edition);
- Deleted the additional requirements for creepage distance, electrical clearance and insulation distance, and changed to directly quote GB/T 19212.1-2023 (see Chapter 26, Chapter 26 of the 2012 edition);
- Deleted Appendices C and D (see Appendices C and D of the 2012 edition).

This document is modified to adopt IEC 61558-2-1:2021 "Safety of transformers, reactors, power supply units and their combinations - Part 2-1.1 Special requirements and tests for

general purpose separating transformers and power supply units with built-in separating transformers.

The technical differences between this document and IEC 61558-2-1:2021 and their reasons are as follows.

- IEC 61558-1:2017 was replaced by GB/T 19212.1-2023, which is a modified international standard, to meet the actual situation in my country situation and ease of use;
- Replaced IEC 60076-11:2018 with GB/T 1094.11, which is a modified international standard, and adjusted it from reference to Normative references;
- Added references to GB/T 5465.2-2023 and GB/T 19212.17.

The following editorial changes were made to this document.

- The name of the standard was changed to "Safety of transformers, reactors, power supply units and their combinations - Part 2: General purpose separation transformers and Particular requirements and tests for power supply units with built-in separation transformers";
- The contents of Chapter 1 were rewritten, and the last two paragraphs and Note 1 were deleted;
- The introduction to Chapter 3 was adjusted;
- The references were adjusted.

Introduction

The series of standards on the safety of transformers, reactors, power supply devices and their combinations are formulated to provide a reference for the safety of transformers with rated power supply voltage not exceeding AC.

1000V, rated power frequency not exceeding 500Hz transformers, reactors, power supply devices and their combination products to establish a set of best evaluation Guidelines for the safety of related products in terms of material selection, design, production and inspection, and for the development of related products GB/T 19212 aims to establish the design and certification standards for transformers, reactors, power supply units and their combined products.

It is planned to consist of 20 parts, including principles and relevant rules for design, manufacturing and testing.

- Part 1: General requirements and tests. The purpose is to establish the overall general technical requirements for products covered by the GB/T 19212 series of standards.

Technical requirements and test requirements.