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

GB/T 41911-2022

**Power frequency overvoltage protective devices (POPs) for
household and similar applications**

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Standardization Administration**

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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 modified to adopt IEC 63052.2019 "Power Frequency Overvoltage Protective Appliances (POP) for Household and Similar Purposes".

Compared with IEC 63052.2019, this document has made the following structural adjustments.

--- Added 9.21, 9.22 and 9.23.

The technical differences between this document and IEC 63052.2019 and their reasons are as follows.

--- Added "This document specifies the classification, characteristics, signs and other product information, standard conditions for use and installation of POP, structure

And operational requirements and test requirements. "to comply with the requirements of GB/T 1.1 (see Chapter 1);

--- ISO 306 is replaced by GB/T 1633, which is cited normatively, in line with the actual reference situation in this document, so as to adapt to the technical requirements of our country

Technical conditions, increased operability (see Table 21);

--- IEC 60529 is replaced by GB/T 4208 referenced normatively, which conforms to the actual reference situation in this document, so as to adapt to our country

Technical conditions, increasing operability (see 6.1);

--- Replace CISPR14-1 with the normatively quoted GB 4343.1, which conforms to the actual reference situation in this document, to adapt to my

National technical conditions, increase operability (see 9.18.3 and 9.18.5);

--- Replaced IEC 60695-2-10 with the normative reference GB/T 5169.10, in line with the actual reference situation in this document, with

Adapt to my country's technical conditions and increase operability (see 9.14);

--- Replaced IEC 60898-2:2016 with the normatively referenced GB/T 10963.2-2020, the consistency procedure between the two documents

The degree is modified to adapt to the technical conditions of our country and increase operability (see 6.1, 9.1.1.1 and 9.1.1.2);

--- Replaced IEC 60664-3 with the normative referenced GB/T 16935.3, in line with the actual references in this document, to suit

Adapt to my country's technical conditions and increase operability (see 8.2.3.1, Table 5 and 9.19.3);

--- Replaced IEC 61000-4-2 with the normative referenced GB/T 17626.2, in line with the actual references in this document, to suit

Adapt to my country's technical conditions and increase operability (see Table 19);

--- Replaced IEC 61000-4-3 with the normative referenced GB/T 17626.3, in line with the actual references in this document, to suit

Adapt to my country's technical conditions and increase operability (see Table 19);

--- Replaced IEC 61000-4-4 with the normative referenced GB/T 17626.4, in line with the actual references in this document, to suit

Adapt to my country's technical conditions and increase operability (see Table 19);

--- Replaced IEC 61000-4-6 with the normative referenced GB/T 17626.6, in line with the actual references in this document, to suit

Adapt to my country's technical conditions and increase operability (see Table 19);

--- Replaced IEC 61000-6-3 with the normative referenced GB 17799.3, in line with the actual reference situation in this document, to adapt to

my country's technical conditions, increased operability (see Table 20);

--- IEC 62873-2 is replaced by GB/T 37751.2, which is referenced normatively, in line with the actual references in this document, to suit

Adapt to the technical conditions of our country and increase operability (see 3.1);

--- IEC 62873-3-1 is replaced by the normatively quoted GB/T 37751.31-2019, which is in line with the actual citations in this document

conditions, in order to adapt to my country's technical conditions and increase operability

(see 8.2.5.1);

--- IEC 62873-3-2 is replaced by the normatively quoted GB/T 37751.32-2019, which is in line with the actual citations in this document

conditions, in order to adapt to my country's technical conditions and increase operability (see 8.2.5.1);

--- IEC 62873-3-3 is replaced by the normatively quoted GB/T 37751.33-2019, which is in line with the actual citations in this document

conditions, in order to adapt to my country's technical conditions and increase operability (see 8.2.5.1);

--- Modify the overvoltage action value and time in Table 1 (see Table 1);

--- Increase the signs, requirements and tests related to the indicating function of the indicator (see 6.1, 8.2.2 and 9.21);

--- Supplementary operating characteristics and test circuit and requirements for life test (see 9.9, 9.10, 9.21, 9.22, 9.23, Figure 21 and Figure 22);

--- Increase the requirements and tests for manual closing under overvoltage (see 8.2.2 and 9.22);

--- Increase the requirements and tests of the locking function (see 8.2.2 and 9.23).

The following editorial changes have been made to this document.

--- Replace IEC 60664-5 with the informative referenced GB/T 16935.5 (see Table 5);

--- Replace IEC 60112 with the informative referenced GB/T 4207 (see Table 5);

--- Replaced IEC 60060-2 (see 9.16.2.1) with the informative referenced GB/T 16927.2.

Please note that some contents of this document may refer to patents. The issuing agency of this document assumes no responsibility for identifying patents.

1 Scope

This document specifies the classification, characteristics, signs and other product information, standard conditions for use and installation, requirements for structure and operation of POP

requirements and test requirements.

This document applies to rated frequency 50Hz, 60Hz or 50/60Hz, rated voltage not exceeding AC 230V (phase and neutral), and

and household and similar power frequency overvoltage protective devices (POP) with a rated current not exceeding 63A, which can be connected by the functional unit and the

main protection circuit

A device (MPD) combination or an independent electrical appliance with a disconnecting device that can break the protection circuit under specified conditions.

The main protective device is a circuit breaker, RCCB or RCBO.

Note 1. The POP as a separate electrical appliance is not an automatic disconnecting protective appliance as specified in IEC 60364-4-41.

The POP is intended for use in environments with pollution degree 2 and overvoltage category III. Suitable for isolation.

It can be designed that the POP unit is assembled or embedded in the main protective device by the manufacturer, or the POP unit and the main protective device are mechanically installed on site

Or electrically coupled, or as an independent electrical appliance that can break the protective circuit under specified conditions.

These appliances are designed to relieve phase and neutral in downstream equipment by disconnecting the protected circuit when an overvoltage is detected between phase and neutral.

effects of power frequency overvoltages between neutrals (e.g. caused by a neutral fault in a three-phase supply upstream of a POP).

Note 2. In this document, "mitigating" means that POP will provide protection in most cases of power frequency overvoltage.

If the phase-to-phase rated voltage of the phase-to-phase power system does not exceed 230V, a single-wire monitor conforming to this document may be used in accordance with the manufacturer's instructions.

Control POP.

When all conductors can be broken, the POP specified in this document applies to IT systems.

This document does not apply to protection against common mode overvoltages.

This document does not apply to surge protective appliances.

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text. Among them, dated references

For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is