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

GB/T 22687-2022

Replacing GB/T 22687-2008

Bimetal temperature controls for household and similar use

家用和类似用途双金属温度控制器

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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 of Standardization Documents" drafted. This document replaces GB/T 22687-2008 "Bimetallic Temperature Controllers for Household and Similar Use", which is similar to GB/T 22687-2008. In addition to structural adjustments and editorial changes, the main technical changes are as follows:

- "Range" adds "the operating temperature range is -30°C~320°C" (see Chapter 1);
- Deleted the terms "temperature controller", "temperature limiter" and "automatic protection device"; changed the name of the term "operating temperature" to "operating temperature" degrees; the terms "kick characteristics of bimetallic elements", "adjustable thermostats", "momentary thermostats" were added (see Chapter 3, 2008 Chapter 3 of the year edition);
- Added the description of "(except waterproof products)" (see 5.1.1.4);
- Added the requirement or option of "agreement between supply and demand" (see 5.2.2, 5.3);
- Replace the concept of "operating temperature accuracy" with the concept of operating temperature deviation of specific samples (see 5.3.1, 2008 edition 5.3.1);
- Added "non-same polarity (reverse polarity) between live terminals" at the applied voltage (see 5.6);
- Deleted the technical requirements and test methods for leakage current (see 6.7 of the 2008 edition);
- Changed the description of the allowable value of temperature change, changed to "not more than $\pm 3^{\circ}\text{C}$ " and "not more than $\pm 3\%$ " [see 5.7a), 2008 edition 5.8a)];
- Added durability technical requirements
- Changed the technical requirements for the tracking resistance performance level of

insulating materials [see 5.16c), 5.16c) of the.2008 edition];

--- Added technical requirements and detection methods for action synchronization (see 5.18, 6.18);

1 Scope

GB/T 22687-2022 is the Chinese national standard on bimetal temperature controls for household and similar use, in the field of domestic and commercial equipment, entertainment, sport. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 9 March 2022 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 October 2022. Classification: ICS 97.120, CCS K32. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the definition of terms, classification and model designation of bimetal temperature controllers for household and similar purposes (hereinafter referred to as "thermostats"). Name methods, technical requirements, test methods, inspection rules, marking, packaging, transportation and storage. This document is suitable for installation on household and similar electrical appliances, the rated voltage does not exceed 690V, the rated current does not exceed 63A, and the operating temperature does not exceed 690V. The temperature range is -30 °C ~ 320 °C, and the temperature controller uses bimetal as the temperature sensing element. This document applies to temperature controllers, temperature limiters and thermal cut-offs described in GB/T 14536.1-2008.

Note. For thermostats beyond the scope of this document, the requirements are agreed between the user and the manufacturer.

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, dated citations documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to this document.

GB/T 191 Graphical signs of packaging, storage and transportation

GB/T 2423.3-2016 Environmental Test Part

3 Terms and Definitions

The following terms and definitions apply to this document.

Note. The terms "voltage" and "current" used in this document refer to the effective value (rms) unless otherwise specified.

3.1 A temperature-sensitive, bimetallic material is used as a temperature-sensing element. During normal operation, the circuit is connected or disconnected through electrical contacts, so that the A controller that maintains the temperature of the controlled object within a certain range.

3.2 set temperature settingtemperature The temperature target value set on the thermostat, under normal working conditions, when the temperature rises or falls to the target value, it is expected that the electrical contacts will automatically break on or on.

3.3 operating temperature When the temperature set by the thermostat is a certain temperature value, the temperature rise causes the contact to be disconnected or connected, or the temperature drop causes the contact to be disconnected or connected.