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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 3667-2005

Replacing GB/T 3667.1-2005

AC motor capacitors -- Part 1: General -- Performance, testing and rating -- Safety requirements -- Guide for installation and operation

(English Translation)

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Foreword

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

GB/T 3667 "AC Motor Capacitor" is divided into two parts.

--- Part 1. General performance, test and rating safety requirements Installation and operation guidelines;

--- Part 2. Motor starting capacitors.

This part is the first part of GB/T 3667.

This part replaces GB/T 3667.1-2005 "AC motor capacitors - Part 1. General performance, test and rating Guide to installation and operation of all requirements.

Compared with GB/T 3667.1-2005, the main technical changes except editorial changes are as follows.

--- Added the definition of "spacer capacitor" (see 3.6);

--- Revised the definition of "discharge device for capacitors" (see 3.7, 1.3.6 of the 2005 edition);

--- Revised the definition of "operating level", and added the concept of "probability life" with reference to statistical theory (see 3.9, 2005 version 1.3.8);

--- Modified the definition of "safety protection level" (see 3.22, 2005 version 1.3.21);

--- Change the "lead wire" to "insulated wire lead terminal";

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--- Revised the requirements of the "destruction test" (see 5.16, version 2.16 of the 2005 version);

--- Added the phrase "the operation above the rated voltage will shorten the life expectancy of the capacitor" in the "maximum allowable voltage".

(see 6.1);

--- In the "flag" mainly added some instructions for small-capacity capacitors (see Chapter 8).

This part uses the translation method equivalent to IEC 60252-1:2013 "AC motor capacitors Part 1. General performance, test and installation safety and safety guidelines for safety requirements (English version).

The documents of our country that have a consistent correspondence with the international documents referenced in this part are as follows.

GB -T 2423 (All parts) Environmental testing of electric and electronic products - Part 2. Test methods [IEC 60068-2 (All section)];

--- GB/T 2423.3-2006 Environmental testing of electric and electronic products - Part 2. Test method test Cab. constant damp heat test Inspection (IEC 60068-2-78:2001, IDT);

GB/T 2423.10-2008 Environmental testing for electric and electronic products - Part 2. Test method test Fc. Vibration (sinusoidal) (IEC 60068-2-6:1995, IDT);

GB/T 2423.28-2005 Environmental testing for electric and electronic products - Part 2. Test methods Test T. Soldering (IEC 60068-2-20:1979, IDT);

--- GB/T 2423.60-2008 Environmental testing of electric and electronic products - Part 2. Test method test U. lead-out and Body mount strength (IEC 60068-2-21:2006, IDT);

---GB/T 2691-1994 Symbol codes for resistors and capacitors (IEC 60062:1992, IDT);

---GB/T 4207-2012 Determination of the electrical tracking resistance index and the electrical tracking index of solid insulating materials (IEC 60112.

2009, IDT);

--- GB/T 5169.10-2006 Electrical and electronic products - Fire hazard testing - Part 10. Glowing wire/hot wire basic test Glowing wire device and general test method (IEC 60695-2-10:2000, IDT);

--- GB/T 5169.11-2006 Electrical and electronic products - Fire hazard testing - Part 11. Glowing wire/hot wire basic test Glow flammability test method for finished products (IEC 60695-2-11:2000, IDT);

--- GB/T 11918.1-2014 Plugs and couplers for industrial use - Part 1. General requirements [IEC 60309-1:2012 (ed.4.2), MOD].

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This section has errata for some editorial errors in IEC 60252-1:2013.

--- Checked, IEC 60252-1:2013 normative reference document "ISO 4046:2002 paper, cardboard, pulp and related terms (Paper, board, pulpsand relatedterms-Vocabulary)" is incorrect, should be "ISO 4046-4:2002 paper, paper Board, pulp and related terminology paper and board grades and processed products (Paper, board, pulpsandrelated Terms-Vocabulary-Paperandboardgradesandconvertedproducts)";

--- After verification, IEC 60252-1:2013 5.15.5.2 "in accordance with ISO 4046:2002 6.86" is incorrect, should be "in accordance with ISO 4046-4. 4.187 in 2002";

--- After verification, "5.16.1" in 5.15.5.3 of IEC 60252-1:2013 is incorrect and should be "5.16.2".

For ease of use, this section has made the following editorial changes.

--- According to the requirements of GB/T 1.1-2009, some arrangements and writing formats have been modified;

--- Replace the comma "," as a decimal point in the original IEC standard with a decimal point ".";

--- Removed the preface to IEC 60252-1:2013;

--- Replace the word "this standard" of IEC 60252-1:2013 with "this part";

--- Deleted Table 2b and related contents of IEC 60252-1:2013, and modified Table 2a to Table 2;

--- According to the national conditions, some of the graphical symbols in Figure 5 of IEC 60252-1:2013 have been modified;

--- Change some expressions applicable to international standards to those applicable to Chinese standards.

1 Scope and purpose

This section applies to motor capacitors intended to be connected to asynchronous motor windings powered by single-phase systems with frequencies of 100 Hz and below.

And a capacitor connected to a three-phase asynchronous motor to enable such a motor to be powered by a single phase system.

This section applies to capacitors that are impregnated or not impregnated. These capacitors are made of paper, plastic film or a combination of both as a medium, using metal or metal foil electrode, rated voltage is 660V and below.

Motor starting capacitors will be included in GB/T 3667.2.

Note: This section does not apply to the following capacitors.

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--- Self-healing shunt capacitors for AC power systems with nominal voltages of 1000V and below (see IEC 60831-1);

--- Non-self-healing shunt capacitors for AC power systems with nominal voltages of 1000V and below (see IEC 60931-1);

--- Shunt capacitors for AC power systems with a nominal voltage above 1000V (see IEC 60871-1);

--- Capacitors for induction heating devices operating at a frequency of 50 kHz (see IEC 60110-1);

--- series capacitors (see IEC 60143);

---Coupling capacitors and capacitor dividers (see IEC 60358);

--- Capacitors for power electronic circuits (see IEC 61071);

--- Small AC capacitors for fluorescent and discharge lamps (see IEC 61048);

--- Capacitors for suppressing radio interference;

--- Capacitors intended to be used as components in various electrical equipment;

--- Capacitor to be used under an AC voltage superimposed with a DC voltage.

The purpose of this section is.

a) Describe uniform rules regarding performance, testing and rating.

b) Explain specific security rules.

c) Provide installation and operation guidelines.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB 4208-2008 Shell protection class (IP code) (IEC 60529:2001, IDT) ISO 4046-4:2002 Paper, board, pulp and their terminology, paper and board grades and processed products (Paper, board, pulpsandrelatedterms-Vocabulary-Paperandboardgradesandconvertedproducts) IEC 60062 resistor and capacitor marking code (Markingcodesforresistorsandcapacitors) IEC 60068-2 (all parts) Environmental testing - Part 2. Test methods (Environmental testing - Part 2. Tests) IEC 60068-2-6 Environmental testing - Part 2-6. Test method test Fc. Vibration (sinusoidal) [Environmental testing-Part 2-6.Tests-TestFc.Vibration(sinusoidal)] IEC

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