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

GB/T 12668.2-2025

Replacing GB/T 12668.2-2002, GB/T 12668.4-2006

**Adjustable speed electrical power drive systems - Part 2:
General requirements - Rating specifications for adjustable
speed AC power drive systems**

调速电气传动系统 第2部分：一般要求 交流调速电气传动系统额定值的规定
(English Translation)

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References

Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document is Part 2 of GB/T 12668 "Speed-regulating electrical drive systems". GB/T 12668 has already published the following parts.

---Part 1: General Requirements - Specifications for Ratings of Low-Voltage DC Speed-Regulating Electrical Drive Systems;

---Part 2: General Requirements - Specifications for Ratings of AC Speed-Regulating Electrical Drive Systems;

---Part 3: Electromagnetic compatibility requirements for electrical drive systems and machine tools and specific test methods;

---Part 5-1.Safety Requirements for Electrical, Thermal, and Energy;

---Part 5-2.Safety Requirements Functions;

---Part 6: Guidelines for determining load duty cycle type and corresponding current rating;

---Part 701: General Interfaces and Usage Specifications for Electrical Drive Systems;

---Part 7-201.General Interfaces and Usage Specifications for Electrical Drive Systems, Type 1 Specification Description;

---Part 7-202.General Interfaces and Usage Specifications for Electrical Drive Systems, Type 2 Specification Description;

---Part 7-301.General Interfaces and Usage Specifications for Electrical Drive Systems Type 1 Specification Corresponds to Network Technology;

---Part 7-302.General Interfaces and Usage Specifications for Electrical Drive Systems Type 2 Specification Corresponding to Network Technology;

---Part 8: Voltage Specifications for Power Interfaces;

---Part 9-1.Eco-design of electrical drive systems, motor starters, power electronic equipment and their drive applications adopts extended the Product Act (EPA) and the Semi-Analytical Model (SAM) are used to establish general requirements for energy efficiency standards for electrical drive equipment;

---Part 9-2.Eco-design of electrical drive systems, motor starters, power electronic equipment and their drive applications Electrical Drives Energy efficiency indicators for the system and motor starter.

This document replaces GB/T 12668.2-2002 "Speed-regulating electrical drive systems - Part 2: General requirements - Low-voltage AC frequency conversion electrical drives".

The specifications for rated values of transmission systems and GB/T 12668.4-2006 "Speed-regulating electrical transmission systems - Part 4: General requirements - AC voltage" are required.

"Specifications for Rated Values of AC Speed-Regulating Electrical Drive Systems Above 1000V but Not Exceeding 35kV". This document is based on GB/T 12668.2-Based primarily on GB/T 12668.4-2006, this version integrates the content of GB/T 12668.4-2006.Compared to GB/T 12668.2-2002, aside from structural adjustments and editorial changes...

Aside from the modifications, the main technical changes are as follows.

a) The "Range" has been changed from "Input AC power supply voltage below 1kV" to "Input AC power supply voltage 35kV and below" (see...).

Chapter 1, GB/T 12668.2-2002, section 1.1);

b) The "Terms and Definitions" section has been revised to include the basic definitions used in GB/T 12668 (see Chapter 3, GB/T 12668.2-).

Chapter 2 (2002)

- c) Added "Basic Drive Module (BDM)/Complete Drive Module (CDM)/Electrical Drive System (PDS) Specifications and Compliance Methods" the regulations for "South" (see Chapter 4);
- d) A general principle for "Performance and Functionality Guidelines" has been added (see 5.1);
- e) Added specifications for "BDM/CDM/PDS characteristics and topology" (see 5.2);
- f) The relevant provisions regarding "rated values" have been changed (see 5.3, Chapter 5 of GB/T 12668.2-2002);
- g) The performance requirements have been changed (see 5.4, Chapters 3 and 6 of GB/T 12668.2-2002);
- h) Added "Electrical safety, functional safety, electromagnetic compatibility, eco-design, environmental assessment, duty cycle, communication standards, and power" Requirements for "interface voltage, interface of the driven equipment, explosive atmosphere, and grounding" (see 5.5~5.8 and 5.10~5.15);
- i) The requirements for "Environmental conditions for operation, transportation and storage" have been changed (see 5.9, Chapter 4 of GB/T 12668.2-2002);
- j) The provisions for "Testing Requirements" have been amended to provide a clear relationship between design requirements and testing requirements (see Chapter 6, Chapter 7 of GB/T 12668.2-2002);
- k) The requirements for "Information and Identification" have been changed (see Chapter 7, Chapters 8 and 9 of GB/T 12668.2-2002).

This document is modified to adopt IEC 61800-2:2021 "Motor drives for speed regulation - Part 2: General requirements - AC motor drives for speed regulation".

"System Ratings Specifications".

The technical differences between this document and IEC 61800-2:2021, and the reasons therefor, are as follows.

---IEC 60721-3-1:1997 has been replaced with the normatively referenced GB/T 4798.1-2019 (see Tables 16 and 5.9.5).

The consistency relationship between GB/T 4798.1-2019 and IEC 60721-3-1:2018 is equivalent, in order to adapt to my country's technical conditions.

Add components to increase operability;

---IEC 60721-3-2:1997 has been replaced with the normatively referenced GB/T 4798.2-2021 (see Tables 16 and 5.9.4).

The consistency relationship between GB/T 4798.2-2021 and IEC 60721-3-2:2018 is