



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

**GB/T 755-2025**

Replacing GB/T 755-2019

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**Rotating electrical machines - Rating and performance**

旋转电机 定额与性能

**(English Translation)**

**Issued on: August 1, 2025**

**Implemented on: February 1, 2026**

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**Issued by: State Administration for Market Regulation and the  
Standardization Administration of China**

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### Foreword

This document was issued on 1 August 2025 by the State Administration for Market Regulation and the Standardization Administration of China, and has applied since 1 February 2026.

It replaces GB/T 755-2019.

It is a GB/T standard: recommended rather than compulsory, but it is the text a Chinese reviewer, customer or inspection body applies.

### 1 Scope

This document is applicable to all rotating electrical machines, except rotating electrical machines for rail and road vehicles, which are covered by the IEC 60349 series of standards.

Machines within the scope of this document may also be subject to superseding, modifying or additional requirements in other standards, for example, IEC 60079 and IEC 60092.

**Note:** If particular clauses of this document are modified to meet special applications, for example machines subject to radioactivity or machines for aerospace, all other clauses apply insofar as they are compatible.

## 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this document. For dated references, only the edition cited applies. For undated references, the latest edition (including any amendments) applies.

GB/T 21210-2016 Starting performance of single-speed three-phase cage induction motors (IEC 60034-12:2016, IDT)

IEC 60027-1 Letter symbols to be used in electrical technology - Part 1: General

**Note:** GB/T 2987-1996 Letter symbols of parameter for electronic tubes (IEC 60027-1:1992, NEQ)

IEC 60027-4 Letter symbols to be used in electrical technology - Part 4: Rotating electric machines

IEC 60034-2 (All parts) Rotating electrical machines - Part 2: Standard methods for determining losses and efficiency from tests (excluding machines for traction vehicles)

IEC 60034-3 Rotating electrical machines - Part 3: Specific requirements for synchronous generators driven by steam turbines or combustion gas turbines

IEC 60034-5 [Rotating electrical machines - Part 5: Degrees of protection provided by the integral design of rotating electrical machines (IP code) - Classification]

**Note:** GB/T 4942-2021 Degrees of protection provided by the integral design of rotating electrical machines (IP code) - Classification (IEC 60034-5:2020, IDT)

IEC 60034-6 Rotating electrical machines - Part 6: Methods of cooling (IC code)

**Note:** GB/T 1993-1993 Cooling methods for rotating electrical machines (IEC 60034-6:1991, IDT)

IEC 60034-8 Rotating electrical machines - Part 8: Terminal markings and direction of Rotation

**Note:** GB/T 1971-2021 Rotating electrical machines - Terminal markings and direction of rotation (IEC 60034-8:2014, IDT)

IEC 60034-12 Rotating electrical machines - Part 12: Starting performance of single-speed three-phase cage induction motors

**Note:** GB/T 21210-2016 Starting performance of single-speed three-phase cage induction motors (IEC 60034-12:2016, IDT)

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-411 and the following apply.

**Note 1:** For definitions concerning cooling and coolants, other than those in 3.17 to 3.22, see IEC 60034-6.

**Note 2:** For the purposes of this document, the term "agreement" means "agreement between the manufacturer and purchaser".

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>;
- ISO online browsing platform: available at <http://www.iso.org/obp>

#### 3.1

##### **rated value**

quantity value assigned, generally by a manufacturer, for a specified operating condition of a machine

**Note:** The rated voltage or voltage range is the rated voltage or voltage range between lines at the terminals.

[Source: GB/T 2900.25-2008, 411-51-23]

#### 3.2

##### **rating**

set of rated values and operating conditions

[Source: GB/T 2900.25-2008, 411-51-24]

#### 3.3

##### **rated output**

value of the output included in the rating

#### 3.4

##### **load**

all the values of the, in case of a generator, electrical and, in case of a motor, mechanical quantities that signify the demand made on a rotating machine by an electrical circuit or a mechanism at a given instant

[Source: GB/T 2900.25-2008, 411-51-01, modified]

### 3.5

#### **no-load (operation)**

state of a machine rotating with zero output power (but under otherwise normal operating conditions)

[Source: GB/T 2900.25-2008, 411-51-02, modified]

### 3.6

#### **full load**

load which causes a machine to operate at its rating

[Source: GB/T 2900.25-2008, 411-51-10]

### 3.7

#### **full load value**

quantity value for a machine operating at full load

[Source: GB/T 2900.25-2008, 411-51-11]

**Note:** This concept applies to power, torque, current, speed, etc.

### 3.8

#### **rest and de-energized**

complete absence of all movement and of all electrical supply or mechanical drive

[Source: GB/T 2900.25-2008, 411-51-03]

### 3.9

#### **duty**

statement of the load(s) to which the machine is subjected, including, if applicable, starting, electric braking, no-load and rest and de-energized periods, and including their durations and sequence in time

[Source: GB/T 2900.25-2008, 411-51-06]

### 3.10

#### **duty type**

continuous, short-time or periodic duty, comprising one or more loads remaining constant for the duration specified, or a non-periodic duty in which generally load and speed vary within the permissible operating range

[Source: GB/T 2900.25-2008, 411-51-13]

### 3.11

#### **cyclic duration factor**

ratio between the period of loading, including starting and electric braking, and the duration