

ICS 29.160.30

CCS K22



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

GB/T 12974.1-2023

Replacing GB/T 12974-2012

**General specification for a.c. lift motor - Part 1: Three-phase
asynchronous motor**

交流电梯电动机通用技术条件 第1部分：三相异步电动机

Issued on: September 7, 2023

Implemented on: April 1, 2024

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

Table of Contents

- 1 Scope
- 2 Normative reference documents
- 3 Terms and definitions
- 4 Type, basic parameters and dimensions
 - 4.1 Type
- 5 General requirements
- 6 Technical requirements
- 7 Test method
- 8 Inspection rules
- 12 Outgoing terminal mark

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 1 of GB/T 12974 "General Technical Conditions for AC Elevator Motors". GB/T 12974 has been released with Lower part.

1. Three-phase asynchronous motor;

2. Permanent magnet synchronous motor. This document replaces GB/T 12974-2012 "General Technical Conditions for AC Elevator Motors". Compared with GB/T 12974-2012, except In addition to structural adjustments and editorial changes, the main technical changes are as follows:

---Deleted the permanent magnet synchronous motor product content (see 3.6, 4.4, 5.4, 6.3 of the.2012 edition);

---The expression of motor voltage and frequency requirements has been modified. The deviation of voltage and frequency from the rated value is in accordance with GB/T 755-2019 stipulations, no longer listed in detail (see 5.2,

4.3.1 of the.2012 version);

---Added efficiency requirements for single-speed asynchronous motors, in line with the minimum energy efficiency level regulations of GB 18613-2020 (see 6.1);

- Modified the expression of electrical performance guaranteed value tolerance (see 6.6, 4.3.2, 4.3.3, 4.3.4 of the.2012 edition);
- Added motor overspeed test (see 6.7);
- Added provisions for the deviation of the DC resistance of any one phase of the three-phase stator winding in the actual cold state from the three-phase average value (see 6.18);
- Modified the thermal test requirements for electric motors (see 7.8,

1 Scope

GB/T 12974.1-2023 is the Chinese national standard on general specification for a.c. lift motor - part 1: three-phase asynchronous motor, in the field of electrical engineering. 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 7 September 2023 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 April 2024. Classification: ICS 29.160.30, CCS K22. 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 type, basic parameters and dimensions, general requirements, technical requirements, inspection rules, and standards of three-phase asynchronous motors for elevators. logo, packaging and shelf life requirements, and describes the corresponding test methods. This document is applicable to the manufacturing, design and inspection of three-phase asynchronous motors for various types of passenger elevators, freight elevators, medical elevators and home elevators. Testing, etc., the manufacturing, design, testing, etc. of various series of motors derived from this series of motors shall be carried out with reference to this.

2 Normative reference documents

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

GB/T 191-2008 Packaging, storage and transportation pictorial markings

GB/T 755-2019 Ratings and performance of rotating electrical machines

GB/T 997-2022 Classification of structural types, installation types and junction box locations of rotating electrical machines (IM code)

GB/T 1032-2012 Three-phase asynchronous motor test methods

GB/T 1971-2021 Rotating motor wire end markings and direction of rotation

GB/T 1993-1993 Cooling methods for rotating electrical machines

GB/T 4772.1-1999 Dimensions and output power levels of rotating electrical machines Part

3 Terms and definitions

There are no terms or definitions to be defined in this document.

4.1 Type

4.1.1 The shell protection level of the three-phase asynchronous motor for elevators (hereinafter referred to as the motor) is in accordance with the provisions of GB/T 4942-2021. IP00, IP20, IP21 or IP41.