



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

GB 14249-2026

Replacing GB 14249.1-1993

Safety requirements for electronic weighing instrument

电子衡器安全要求

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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 replaces GB 14249.1-1993 "Safety Requirements for Electronic Weighing Instruments". Compared with GB 14249.1-1993, except for structural adjustments and... Aside from editorial changes, the main technical changes are as follows:

- a) Explosion-proof electronic scales have been removed from the scope (see Chapter 1, Chapter 1 of the 1993 edition).
- b) Based on the development of domestic electronic product safety technology and weighing instrument products, some terms have been added (see Chapter 3);
- c) The content on protection against electric shock has been revised, and tables have been added for ease of use (see Chapter 4, 4.5.1 of the 1993 edition).
- d) Change the mechanical structure requirements to protection against mechanical hazards (see Chapter 5, 4.5.2 of the 1993 edition);
- e) Added measures to prevent the spread of flames (see Chapter 6);
- f) Change the high temperature and other hazards to the temperature limits and heat resistance of the weighing instrument (see Chapter 7, 4.2 of the 1993 edition);
- g) Added electromagnetic interference immunity (see Chapter 8) and performance testing methods (see 11.5);
- h) The component requirements from various parts of the standard are consolidated into a single chapter, "Components" (see Chapter 9, sections 4.7, 4.8, and 4.9 of the 1993 edition). 4.10, 4.11).

1 Scope

GB 14249 is the safety standard for electronic weighing instruments - the scales and weighbridges used in trade, industry and logistics - and it treats them as electrical equipment rather than as measuring instruments. It sets the protection against electric shock and against mechanical hazards, the prevention of flame spread, the temperature limits and heat resistance, the electromagnetic immunity, the requirements on components and on protective interlocks, the tests that verify each of these, and the marking and documentation to be supplied. The 2026 edition replaces GB 14249.1-1993, a text more than thirty years old, and takes effect on 1 August 2027. Issued on 28 January 2026. 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 edition it replaces are taken from there. The clause text, the tables and the numeric limits are not reproduced on this page - they are in the document itself, which is delivered in full in English translation.

This document specifies safety precautions for electronic weighing instruments, including those for protection against electric shock, mechanical hazards, and flames, in both non-automatic and various types of automatic weighing instruments. The technical requirements for propagation, temperature limits and heat resistance, electromagnetic interference resistance, components, protection using interlocking devices, and marking and documentation are described. The corresponding experimental methods. This document applies to systems that use load cells as force-to-electricity conversion devices, electronic weighing instruments as weight indicators, and various supporting components. Weighing instruments with a Class I electrical control box that enable weighing or automatic control of the load being weighed shall be equipped with Class I and Class II electrical safety standards. model. This document does not apply to weighing instruments used in explosive or high-temperature (≥ 70 °C) environments.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are listed below. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 4208 Degrees of protection provided by enclosures (IP codes)

GB/T 4776-2017 Electrical Safety Terminology

GB 4793.1-2007 Safety requirements for electrical equipment for measuring, control and laboratory use - Part

3 Switches, isolators, disconnecting switches and fuse combinations

GB/T 14250-2008 Weighing Instrument Terminology

GB/T 15934 Electrical accessories wire assemblies and interconnecting wire assemblies

GB/T 16927.1 High Voltage Testing Techniques - Part