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

GB/T 18663.6-2026

**Mechanical structures for electrical and electronic equipment -
Tests for metric and inch system - Part 6: Security aspects for
indoor cabinets**

电气和电子设备机械结构 公制系列和英制系列的试验 第6部分：户内机柜的安全
要求

(English Translation)

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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 is Part 6 of GB/T 18663 "Tests on mechanical structures of electrical and electronic equipment in metric and imperial series".

GB/T 18663 has published the following parts.

---Part 1: Climate, mechanical testing, and safety requirements for cabinets, racks, enclosures, and chassis;

---Part 2: Seismic Testing of Cabinets and Racks;

---Part 3: Electromagnetic shielding performance testing of cabinets and enclosures;

---Part 4: Performance Level Combinations for Modular Cabinets;

---Part 5: Seismic Testing of Chassis, Enclosures and Components;

---Part 6: Security requirements for indoor server racks.

This document is equivalent to IEC 61587-6:2021 "Mechanical construction of electrical and electronic equipment - IEC 60917 and IEC 60297 series".

Test Part 6: Safety Requirements for Indoor Cabinets.

The following minimal editorial changes have been made to this document.

---To harmonize with existing standards, the standard title has been changed to "Test of Mechanical Structures of Electrical and Electronic Equipment in Metric and Imperial Series".

Part 6: Security Requirements for Indoor Server Racks.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed and is under the jurisdiction of the National Technical Committee on Comprehensive Standardization of Electrical and Electronic Equipment Structures (SAC/TC34).

Introduction

The mechanical structure (racks, cabinets, enclosures, chassis, and modules) of electrical and electronic equipment is an important component of electrical and electronic equipment.

For the mechanical structures of electrical and electronic equipment conforming to the imperial and metric modular series and harmonized dimensional standards, a set of pneumatic systems needs to be established.

Test specifications and requirements for weather, mechanical environment, and safety requirements are established to meet the functional and reliability requirements of electrical and electronic equipment. Its main purpose is to address...

The problems are.

---Specifies the general climate, mechanical environment, and safety testing standards and requirements for the mechanical structures of electronic equipment;

---Provides combinations of performance and protection levels for the mechanical structure of electronic devices;

---Specifies the seismic testing requirements for the mechanical structure of electronic equipment;

---Specifies the electromagnetic shielding performance test specifications and requirements for server racks and enclosures;

---Specifies the security requirements for indoor server racks.

GB/T 18663, "Tests for Mechanical Structures of Electrical and Electronic Equipment (Metric and Imperial Series)," is for electrical and electronic equipment.

The proposed environmental testing standards for mechanical structures (racks, racks, enclosures, chassis, and components) will consist of six parts.

---Part 1: Climate, Mechanical Testing, and Safety Requirements for Cabinets, Racks, Chassis, and Enclosures. The purpose is to specify the climate, mechanical testing, and safety requirements for electronic equipment.

General climate, mechanical environment and safety requirements for mechanical structures (racks, cabinets, sockets and enclosures).

---Part 2: Seismic Testing of Cabinets and Racks. The purpose is to specify the seismic testing conditions and standards for cabinets and racks to evaluate...

The ability of a cabinet or rack mechanical structure to withstand a specific earthquake intensity.

---Part 3: Electromagnetic Shielding Performance Testing of Cabinets and Enclosures. The purpose is to standardize the electromagnetic shielding performance of empty cabinets and enclosures at 30MHz~ Electromagnetic shielding performance tests and grade requirements within the 3000MHz frequency range.

---Part 4: Performance Level Combinations for Modular Cabinets. The aim is to provide modular cabinets with performance levels in terms of IP code, climate class, static and dynamic performance.

Load testing, electromagnetic shielding, and seismic requirements necessitate combinations of different protection levels to facilitate selection and procurement.

---Part 5: Seismic Testing of Chassis, Enclosures, and Components. The purpose is to specify the seismic testing conditions for chassis, enclosures, and components.

Standards are used to assess the ability of chassis, enclosures, and plug-in mechanical structures to withstand specific earthquake intensities.

---Part 6: Safety Requirements for Indoor Server Racks. The purpose is to specify the safety

requirements and performance of the mechanical structure of indoor server racks.
grade.

This document categorizes the security levels of indoor server racks, clarifying the relationship between installation conditions and security requirements.

It establishes the relationship and provides performance requirements and test methods for mechanical components related to the security of indoor cabinets.

Mechanical structure of electrical and electronic equipment Trials of metric and imperial series Part 6: Security Requirements for Indoor Server Racks

1 Scope

This document specifies the safety requirements for the mechanical structure of indoor cabinets in accordance with IEC 60917 (all parts) and IEC 60297 (all parts).

And security performance level. This document does not cover acts of intentional sabotage.

Note: Protection against intentional damage is usually specified by the user's specific requirements.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

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.

IEC 60297 (all parts) Mechanical structures of electronic equipment 482.6mm (19in) series mechanical structure dimensions [Mechanical ries] Note. GB/T 19520 (all parts) Mechanical structures of electronic equipment 482.6mm (19in) series mechanical structure dimensions [IEC 60297 (all parts)] Note. GB/T 4208-2017 Degrees of protection provided by enclosures (IP code) (IEC 60529:2013, IDT) Note. GB/T 19290 (all parts) Mechanical structure module sequence for developing electronic equipment [IEC 60917 (all parts)] IEC 61587-1 Mechanical construction of electrical and electronic equipment; Tests of the IEC 60917 and IEC 60297 series - Part 1: Environmental Note. GB/T 18663.1-2008 Mechanical Structures of Electronic Equipment (Metric and Imperial Series) - Tests Part 1: Cabinets, Racks, Chassis and Enclosures Climate, mechanical testing and safety requirements (IEC 61587-1:2007, IDT) IEC 61587-2 Mechanical structure of electronic equipment - Tests - Part 2 of IEC 60917 and IEC 60297. Grounding of cabinets and racks Note. GB/T 18663.2-2021 Mechanical Structures of Electronic Equipment (Metric and Imperial Series) - Part 2: Seismic Testing of Cabinets and Racks (IEC 61587-2:2011, IDT)