

ICS 19.040
CCS A 21



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

GB/T 20159.3-2026

Replacing GB/T 20159.3-2011

**Classification of environmental conditions - Guidance for the correlation and
transformation of environmental condition classes to the environmental tests -
Part 3: Stationary use at weatherprotected locations**

环境条件分类 环境条件分类与环境试验之间的关系及转换指南 第3部分：有气候
防护场所固定使用

(English Translation)

Issued on: July 2, 2026

Implemented on: February 1, 2027

Issued by: State Administration for Market Regulation

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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 Section 3 of GB/T 20159 "Classification of Environmental Conditions, Relationship between Environmental Condition Classification and Environmental Testing and Conversion Guidelines".

Parts. GB/T 20159 has published the following parts.

- Storage (GB/T 20159.1);
- Transportation (GB/T 20159.2);
- Part 3: Fixed use in locations with climate protection (GB/T 20159.3);
- Ground vehicle use (GB/T 20159.5);
- Marine use (GB/T 20159.6);
- Portable and non-fixed use (GB/T 20159.7);
- Introduction (GB/T 20159.8).

This document replaces GB/T 20159.3-2011 "Classification of Environmental Conditions -

Relationship and Conversion Instructions between Environmental Condition Classification and Environmental Testing".

"Fixed Use of Climate Protection Sites in the South" Compared with GB/T 20159.3-2011, apart from structural adjustments and editorial changes, the main technical differences are...

The changes are as follows.

- a) A new chapter on "Terms and Definitions" and "Terms and Definitions for Enclosed Spaces" have been added (see Chapter 3);
- b) The "Recommended Testing Procedures and Severity Levels" have been revised (see 4.3, 3.3 in the 2011 version);
- c) The "Climatic Environmental Conditions" and "Mechanical Environmental Conditions" categories have been changed, and the old classifications have been replaced by the new ones (see Chapters 5 and 8).

(Chapters 4 and 5 of the 2011 edition)

- d) Added "Special climatic environmental conditions" and "biological environmental conditions" (see Chapters 6 and 7).

This document adopts IEC TS60721-4-3:2023 "Environmental conditions classification - Part 4-3.Environmental conditions classification IEC 60721-3" equivalent to IEC 60721-3.

The relationship and conversion guidelines with IEC 60068 environmental testing include "Fixed Use in Climate Protection Sites". Document type is determined by IEC 's technical standards.

The technical specifications have been adjusted to become my country's recommended national standards.

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

---To align with existing standards, the title has been changed to "Environmental Conditions Classification. Relationship and Conversion between Environmental Conditions Classification and Environmental Testing".

Guidelines Part 3: Fixed Use in Climate-Protected Locations;

---Based on the actual citations in the text, IEC 60068-1:2013 and IEC 60721-3-3:2023 in Chapter 2 have been changed to omit the date.

This document was proposed and is under the jurisdiction of the National Technical Committee on Standardization of Electrical and Electronic Environmental Conditions and Environmental Testing (SAC/TC8).

Introduction

GB/T 20159, "Classification of Environmental Conditions, Relationship between Environmental Condition Classification and Environmental Testing, and Conversion Guidelines," covers the storage conditions of products.

Environmental conditions that may be encountered during storage, transportation and handling, installation and use [see GB/T 4798 (all parts)] and environmental testing [see GB/T 2423 (all parts)] selects the conversion relationship. GB/T 20159 is proposed to consist of the following 8 parts.

---Part 1: Storage. The purpose is to provide the environmental conditions given in IEC 60721-3-1 and IEC 60068-2 (all parts).

The relationship between environmental trials and transition guidelines.

---Part 2: Transport. The purpose is to provide the environmental conditions given in IEC 60721-3-2 and IEC 60068-2 (all parts) for environmental conditions.

The relationship between environmental trials and transition guidelines.

---Part 3: Fixed use in locations with climate protection. The purpose is to provide the environmental conditions given in IEC 60721-3-3 and...

---Part 4: Fixed Use in Locations Without Climate Protection. The purpose is to provide the environmental conditions given in IEC 60721-3-4 and...

IEC 60068-2 (all parts) guidelines on the relationships and conversions between environmental tests.

---Part 5: Ground Vehicle Use. The purpose is to provide the environmental conditions given in IEC 60721-3-5 and IEC 60068-2 (all...).

(Partial) Relationships between environmental tests and conversion guidelines.

---Part 6: Marine. The purpose is to provide the environmental conditions given in IEC 60721-3-6 and IEC 60068-2 (all parts).

The relationship between environmental trials and transition guidelines.

---Part 7: Portable and Non-stationary Use. The purpose is to provide the environmental conditions given in IEC 60721-3-7 and IEC 60068-2.

(All sections) Relationships and conversion guidelines between environmental tests.

---Part 8: Introduction. The purpose is to provide guidelines for the GB/T 20195 series of standards.

Environmental conditions classification and Relationships and Conversion Guidelines for Environmental Testing Part 3: Fixed use in climate-protected areas

1 Scope

This document provides the environmental conditions given in IEC 60721-3-3 and the environmental tests given in IEC 60068-2 (all parts).

Relationship and Conversion Guide.

This document applies to the test procedures provided for electrical and electronic products used in fixed locations with weather protection, as specified in IEC 60721-3-3.

Environmental parameters and severity.

The environment consists of several environmental conditions, such as mechanical conditions, climatic conditions, biological conditions, and conditions arising from chemically and mechanically active substances.

Other effects. This document considers mechanical conditions, air pressure, biological conditions, and climatic conditions.

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.

guidance)

Note: GB/T 2421-2020 Overview and Guidelines for Environmental Testing (IEC 60068-1:2013, IDT)

Note. GB/T 4796-2017 Environmental Conditions Classification - Environmental Parameters and Their Severity (IEC 60721-1:2002, IDT) IEC 60721-3-3 Classification of Environmental Conditions Part 3-3. Classification of Environmental Parameter Groups and Grading of Severity with Climate

Protection Fields Note. GB/T 4798.3-2023 Classification of Environmental Conditions - Classification of Environmental Parameter Groups and Grading of Severity - Part 3: Fixed Use of

Climate-Protected Sites (Use (IEC 60721-3-3:2019, IDT))

3 Terms and Definitions

The terms and definitions defined in IEC 60721-1 and the following terms and definitions apply to this document.

The URLs for the terminology databases maintained by ISO and IEC for standardization are as follows.

enclosed location