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

GB/T 39673.2-2026

**Home and building electronic systems (HBES) and building
automation and control systems (BACS) - Part 2: Environmental
conditions**

住宅和楼宇电子系统（HBES）及楼宇自动化和控制系统（BACS）第2部分：环
境条件

(English Translation)

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Foreword

This document conforms to GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting is scheduled.

This document is part of GB/T 39673 "Residential and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS)".

Part 2: GB/T 39673 has published the following parts.

- Part 1: General Requirements;
- Part 2: Environmental Conditions;
- Part 3: Electrical Safety Requirements;
- Part 4: General functional safety requirements for products intended to be integrated into HBES and BACS;
- Part 51: EMC Requirements, Conditions and Test Setup;
- Part 52: EMC requirements for HBES and BACS in residential, commercial and light industrial environments;
- Part 6: Planning and Installation Requirements.

This document is equivalent to IEC TR 63044-2:2022 "Residential and building electronic systems (HBES) and building automation and control systems".

(BACS) Part 2: Environmental Conditions.

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

--The title of Chapter 5 has been changed to "Environmental Testing Conditions" to differentiate it from Chapter 6 and increase its operability;

--Change the units of the values in the same row in Table 1 to be consistent.

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 by the China Electrical Equipment Industry Association.

This document is under the jurisdiction of the National Technical Committee on Standardization of Electrical Accessories (SAC/TC 67).

Introduction

GB/T 39673 aims to standardize the requirements for residential and building electronic systems (HBES) and building automation and control systems (BACS), ensuring...

The security and reliability of the authentication system are proposed to consist of the following components.

General requirements for (BACS), including general requirements, applications, and cluster overview.

--Part 2: Environmental Conditions. The purpose is to provide general information on the environmental conditions for all tests performed on the HBES/BACS device.

Environmental category combinations, etc.

--Part 3: Electrical Safety Requirements. The purpose is to regulate residential and building electronic systems (HBES) and building automation and control.

Technical requirements for the system (BACS), including overvoltage categories, pollution levels, electrical safety, and installation.

--Part 4: General functional safety requirements for products intended to be integrated into HBES and BACS. The purpose is to standardize the expected...

General functional safety requirements for products integrated into HBES and BACS.

--Part 51: EMC Requirements, Conditions, and Test Setup. The purpose is to standardize residential and building electronic systems (HBES) and building...

Technical requirements for EMC, conditions, and test setup for Bio-Automation and Control Systems (BACS).

--Part 52: EMC requirements for HBES and BACS in residential, commercial, and light industrial environments. The purpose is to regulate...

General EMC requirements, performance criteria, and standards for HBES and BACS used in residential, commercial, and light industrial environments.

Technical requirements such as test conditions and EMC requirements.

--Part 53: EMC Requirements for HBES and BACS in Industrial Environments. The purpose is to standardize applications used in industrial environments.

The technical requirements for EMC, performance criteria, standard test conditions, and EMC requirements of HBES and BACS are as follows.

Require.

--Part 6: Planning and Installation Requirements. The purpose is to standardize residential and building electronic systems (HBES) and building automation and control.

Building Automation System (BACS) in Planning and Installation. Residential/Building Network Model and General Requirements, Infrastructure Requirements, Cable Requirements, Technical requirements include electrical safety and functional safety, EMC requirements, grounding and shielding requirements, and fire protection and fire resistance requirements.

HBES/BACS includes any combination of HBES and/or BACS devices, including those connected together via one or more networks.

This document contains and defines the environmental conditions for manufacturer-declared use of HBES/BACS devices to power residential and building electronic systems.

The implementation and application of Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) will enhance the development of residential and building electronic systems (HBES) and building automation and control systems in my country.

The technological level of the Bio-Automation and Control Systems (BACS) industry.

Residential and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) Part 2: Environmental Conditions

1 Scope

This document provides general descriptions of all tests, environmental conditions, and combinations of environmental categories for the HBES/BACS device, applicable to...

When one or more environment levels are declared in the manufacturer's documentation for use with the definitions in Chapter 6.

This document primarily focuses on the following environmental conditions.

- Climate and environmental conditions;
- Chemical environmental conditions;
- Mechanical environmental conditions;
- Biological environmental conditions.

This document does not supersede any relevant product standards (if any), and applies only to standards other than those mentioned in the manufacturer's documentation.

A standard. Intended to support a particular manufacturer's statement or any agreement between the customer and the manufacturer regarding environmental conditions.

This document is not intended to provide guidance on the requirements and testing for product standard drafting.

This document outlines the devices that operate in weather-protected and non-weather-protected locations, marine use, portable use, and storage and transport.

Environmental conditions.

This document has no normative references.

3 Terms and Definitions

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.

Product documentation A set of files that may contain any of the following.

- Manufacturer's installation and operation manual included with the product;
- Product information contained in manufacturer directories and other product marketing materials/information;
- Descriptions, definitions, product information, and usages presented electronically by the manufacturer (or supplier) on the World Wide Web/Internet.

Weather-protected controlled location A closed space that is completely unaffected by the weather.

Example.

- Typical living or working areas, such as living rooms, as well as general-purpose rooms such as theaters, restaurants, offices, shops, electronics assembly and product workshops;
- Telecommunications Center;