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

GB/T 39673.51-2020

**Home and building electronic systems (HBES) and building
automation and control systems(BACS) - Part 51: EMC
requirements, conditions and test set-up**

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Foreword

GB/T 39673 "Home and Building Electronic System (HBES) and Building Automation and Control System (BACS)" intends to publish the following parts:

- Part 1: General requirements;
- Part 2: Environmental conditions;
- Part 3: Electrical safety requirements;
- Part 4: Functional safety;
- Part 5: EMC requirements;
- Part 51: EMC requirements, conditions and test arrangements;
- Part 52: EMC requirements for HBES and BACS used in residential, commercial and light industrial environments;
- Part 53: EMC requirements for HBES and BACS used in industrial environments;
- Part 6: Planning and installation of HBES:

This part is part 51 of GB/T 39673:

This section was drafted in accordance with the rules given in GB/T 1:1-2009:

This part uses the redrafting law to amend and adopt IEC 63044-5-1:2017 "Housing and Building Electronic System (HBES) and Building Automation

And Control System (BACS) Part 5-1: EMC Requirements, Conditions and Test Arrangements":

The technical differences between this part and IEC 63044-5-1:2017 and the reasons are as follows:

---Regarding normative reference documents, this section has made adjustments with technical differences to adapt to my country's technical conditions and adjustments:

The situation is collectively reflected in Chapter 2 "Normative Reference Documents", and the specific adjustments are as follows:

- * Replace CISPR22 with GB/T 9254 which is equivalent to adopting international standards;
- * Replace IEC 61000-3-2 with GB 17625:1 which is equivalent to adopting international standards;
- * Replace IEC 61000-3-3 with GB/T 17625:2 equivalent to the international standard;
- * Replace IEC 61000-4-2 with GB/T 17626:2 which is equivalent to adopting international standards;
- * Replace IEC 61000-4-3 with GB/T 17626:3 which is equivalent to adopting international standards;
- * Replace IEC 61000-4-4 with GB/T 17626:4 which is equivalent to adopting international standards;
- * Replace IEC 61000-4-5 with GB/T 17626:5 which is equivalent to adopting international standards;
- * Replace IEC 61000-4-6 with GB/T 17626:6 which is equivalent to adopting international standards;
- * Replace IEC 61000-4-8 with GB/T 17626:8 which is equivalent to adopting international standards;
- * Replace IEC 61000-4-11 with GB/T 17626:11 which is equivalent to adopting international standards;
- * Replace IEC 63044-1 with GB/T 39673:1 modified to adopt international standards;
- * Replace IEC 63044-3 with GB/T 39673:3 modified to adopt international standards:

This section has made the following editorial changes:

---According to the relevant regulations of GB/T 1:1-2009, in accordance with the national standard naming rules, the standard name is changed to "House and Building Electronics System (HBES) and Building Automation and Control System (BACS) Part 51: EMC requirements, conditions and test arrangements";

---According to the relevant regulations of GB/T 1:1-2009, in Chapter 1 "Scope", "This part of GB/T 39673 provides

EMC requirements, conditions and test layouts for home and building electronic systems (HBES) and building automation and control systems (BACS)

Set";

---According to the relevant regulations of GB/T 1:1-2009, in Chapter 1 "Scope", "This part applies to residential and building electronics

System (HBES) and Building Automation and Control System (BACS)";

---According to the relevant provisions of GB/T 1:1-2009, in accordance with the order in which the appendices appear in the text, the order of the appendices has been adjusted:

This part was proposed by China Electrical Equipment Industry Association:

This part is under the jurisdiction of the National Electrical Accessories Standardization Technical Committee (SAC/TC67):

Drafting organizations of this section: Guangzhou Hancheng Testing Technology Service Co., Ltd., Feidiao Electric Group Co., Ltd., Jiangsu Tongling Technology Co., Ltd:

Company, Hangzhou Hongyan Electric Co., Ltd., Guangdong Midea HVAC Equipment Co., Ltd., China National Electrical Equipment Research Institute Co., Ltd., Simon Electric

(China) Co., Ltd., Zhejiang Youmao Technology Co., Ltd., Guangdong Xinruan Technology Co., Ltd., Bull Group Co., Ltd., Zhuhai Gree Electric

Co., Ltd., Xiamen Keli Electronics Co., Ltd., Xiamen Meike Security Technology Co., Ltd., Xiamen Kexin Electronics Co., Ltd., Dongguan

Ruijing Electric Technology Co., Ltd., Xiamen Wanming Electronics Co., Ltd., Xiamen Kunjin Electronic Technology Co., Ltd., Weikai Testing Technology Co., Ltd.,

Zhejiang Delixi International Electrical Co., Ltd., Huizhou Xidun Industrial Development Co., Ltd:

Introduction

GB/T 39673 involves the development and testing of home and building electronic systems

(HBES) and building automation and control systems (BACS):

GB/T 39673:51, GB/T 39673:52 and GB/T 39673:53 ensure that the electromagnetic compatibility requirements of HBES/BACS equipment meet

To the common level:

And Control System (BACS) Part 51: EMC

Requirements, conditions and test arrangements

1 Scope

This part of GB/T 39673 specifies the requirements for residential and building electronic systems (HBES) and building automation and control systems (BACS)

EMC requirements, conditions and test arrangements:

This section applies to residential and building electronic systems (HBES) and building automation and control systems (BACS):

This part is a product family standard, in addition to the product EMC standard of HBES/BACS equipment, it is also HBES/BACS network

The lowest EMC performance level is set:

This section also applies to equipment that does not have a specific HBES/BACS product safety standard in the HBES/BACS network:

In addition, this section also defines EMC requirements for the interface of equipment intended to be connected to the HBES/BACS network: This section does not apply

Interface to other networks:

Note: An example of other networks is the dedicated information and communication technology (ICT) network covered by GB/T 9254 and CISPR23:

This section provides general performance requirements and test settings:

This section applies to (but not limited to):

---Operation station and other man-machine interface equipment;

---Management function equipment;

---Control equipment, automation stations and application-specific controllers;

---Field equipment and its interface;

--- Wiring and interconnection of equipment:

The above is used in a dedicated HBES/BACS network: