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Standards

Irish Standard  
I.S. EN IEC 63044-5-1:2019

# Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 5-1: EMC requirements, conditions and test set-up

**I.S. EN IEC 63044-5-1:2019**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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## National Foreword

I.S. EN IEC 63044-5-1:2019 is the adopted Irish version of the European Document EN IEC 63044-5-1:2019, Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 5-1: EMC requirements, conditions and test set-up

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EUROPEAN STANDARD

**EN IEC 63044-5-1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2019

ICS 29.120.01; 29.120.99

Supersedes EN 50491-5-1:2010 and all of its  
amendments and corrigenda (if any)

English Version

**Home and Building Electronic Systems (HBES) and Building  
Automation and Control Systems (BACS) - Part 5-1: EMC  
requirements, conditions and test set-up  
(IEC 63044-5-1:2017)**

Systèmes Electroniques pour les Foyers Domestiques et  
les Bâtiments (HBES) et Systèmes de Gestion Technique  
du Bâtiment (SGTB) - Partie 5-1: CEM Exigences  
générales, condition et montage d'essais  
(IEC 63044-5-1:2017)

Allgemeine Anforderungen an die Elektrische  
Systemtechnik für Heim und Gebäude (ESHG) und an  
Systeme der Gebäudeautomation (GA) - Teil 5-1: EMV-  
Anforderungen, Bedingungen und Prüfungen  
(IEC 63044-5-1:2017)

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Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

## **EN IEC 63044-5-1:2019 (E)**

### **European foreword**

The text of document 23/736/CDV, future edition 1 of IEC 63044-5-1, prepared by IEC/TC 23 "Electrical accessories" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 63044-5-1:2019.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2020-05-01
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2026-11-01

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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60669-2-1	NOTE	Harmonized as EN 60669-2-1.
IEC 60669-2-5	NOTE	Harmonized as EN 60669-2-5.
IEC 60730 Series	NOTE	Harmonized as EN 60730 Series.
IEC 62041	NOTE	Harmonized as EN 62041.
IEC 60669-2-5	NOTE	Harmonized as EN 60669-2-5.
CISPR 16 Series	NOTE	Harmonized as EN 55016 Series.

## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cenelec.eu](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61000-3-2	-	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current $\leq 16$ A per phase)	EN 61000-3-2	-
IEC 61000-3-3	-	Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current $\leq 16$ A per phase and not subject to conditional connection	EN 61000-3-3	-
IEC 61000-4-2	-	Electromagnetic compatibility (EMC) - Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test	EN 61000-4-2	-
IEC 61000-4-3	-	Electromagnetic compatibility (EMC) - Part 4-3 : Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	EN 61000-4-3	-
IEC 61000-4-4	-	Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	EN 61000-4-4	-
IEC 61000-4-5	-	Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test	EN 61000-4-5	-
IEC 61000-4-6	-	Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	EN 61000-4-6	-
IEC 61000-4-8	-	Electromagnetic compatibility (EMC) - Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test	EN 61000-4-8	-

**EN IEC 63044-5-1:2019 (E)**

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61000-4-11	-	Electromagnetic compatibility (EMC) - Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests	EN 61000-4-11	-
IEC 63044-1	-	Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 1: General requirements	EN 63044-1	-
IEC 63044-3	-	Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 3: Electrical safety requirements	EN IEC 63044-3	-
CISPR 22	-	Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement	-	-
CISPR 32	-	Electromagnetic compatibility of multimedia equipment - Emission requirements	EN 55032	-





**IEC 63044-5-1**

Edition 1.0 2017-01

# **INTERNATIONAL STANDARD**

# **NORME INTERNATIONALE**



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**Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) –  
Part 5-1: EMC requirements, conditions and test set-up**

**Systèmes Electroniques pour les Foyers Domestiques et les Bâtiments (HBES)  
et Systèmes de Gestion Technique du Bâtiment (SGTB) –  
Partie 5-1: CEM Exigences générales, condition et montage d'essais**



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Edition 1.0 2017-01

# **INTERNATIONAL STANDARD**

# **NORME INTERNATIONALE**



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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**HOME AND BUILDING ELECTRONIC SYSTEMS (HBES) AND  
BUILDING AUTOMATION AND CONTROL SYSTEMS (BACS) –****Part 5-1: EMC requirements, conditions and test set-up**

## FOREWORD

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International Standard IEC 63044-5-1 has been prepared by IEC technical committee 23: Electrical accessories.

The text of this standard is based on the following documents:

CDV	Report on voting
23/736/CDV	23/748/RVC

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 63044 series, published under the general title *Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS)*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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## INTRODUCTION

The IEC 63044 series deals with developing and testing Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS).

The IEC 63044-5 series ensures a common level of EMC requirements for HBES/BACS devices.



# **HOME AND BUILDING ELECTRONIC SYSTEMS (HBES) AND BUILDING AUTOMATION AND CONTROL SYSTEMS (BACS) –**

## **Part 5-1: EMC requirements, conditions and test set-up**

### **1 Scope**

This part of IEC 63044 is a product family standard that sets the minimum level of EMC performance for the HBES/BACS network in addition to the product EMC standards for HBES/BACS devices.

It also applies to devices used within an HBES/BACS network for which no specific HBES/BACS product EMC standard exists.

In addition, it defines EMC requirements for the interface of equipment intended to be connected to an HBES/BACS network. It does not apply to interfaces to other networks.

NOTE An example of other networks is a dedicated ICT network covered by CISPR 22 and 23.

This document provides general performance requirements and test set-ups.

This document is applicable (but not limited) to

- operator stations and other human–system interface devices,
- devices for management functions,
- control devices, automation stations and application-specific controllers,
- field devices and their interfaces,
- cabling and interconnection of devices,

used within a dedicated HBES/BACS network.

### **2 Normative references**

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61000-3-2, *Electromagnetic compatibility (EMC) – Part 3-2: Limits – Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)*

IEC 61000-3-3, *Electromagnetic compatibility (EMC) – Part 3-3: Limits – Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection*

IEC 61000-4-2, *Electromagnetic compatibility (EMC) – Part 4-2: Testing and measurement techniques – Electrostatic discharge immunity test*

IEC 61000-4-3, *Electromagnetic compatibility (EMC) – Part 4-3 : Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test*

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