

Home and building electronic systems (HBES) and building automation and control systems (BACS) - Part 4: General functional safety requirements for products intended to be integrated in HBES and BACS

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN IEC 63044-4:2021 sisaldab Euroopa standardi EN IEC 63044-4:2021 ingliskeelset teksti.	This Estonian standard EVS-EN IEC 63044-4:2021 consists of the English text of the European standard EN IEC 63044-4:2021.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
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Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

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English Version

Home and building electronic systems (HBES) and building
automation and control systems (BACS) - Part 4: General
functional safety requirements for products intended to be
integrated in HBES and BACS
(IEC 63044-4:2021)

Systèmes électroniques pour les foyers domestiques et les
bâtiments (HBED) et systèmes de gestion technique du
bâtiment (SGTB) - Partie 4: Exigences générales de
sécurité fonctionnelle pour les produits destinés à être
intégrés dans les HBES et SGTB
(IEC 63044-4:2021)

Allgemeine Anforderungen an die Elektrische
Systemtechnik für Heim und Gebäude (ESHG) und an
Systeme der Gebäudeautomation (GA) - Teil 4:
Anforderungen an die funktionale Sicherheit für Produkte,
die für den Einbau in ESHG/GA vorgesehen sind
(IEC 63044-4:2021)

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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

European foreword

The text of document 23/973/FDIS, future edition 1 of IEC 63044-4, prepared by IEC/TC 23 "Electrical accessories" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 63044-4:2021.

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) 2022-05-03
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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60364 (series) NOTE Harmonized as HD 60364 (series)

IEC 60664-1:2020 NOTE Harmonized as EN IEC 60664-1:2020 (not modified)

IEC 61000-1-2 NOTE Harmonized as EN 61000-1-2

IEC 61000-6-1 NOTE Harmonized as EN IEC 61000-6-1

IEC 61000-6-2 NOTE Harmonized as EN IEC 61000-6-2

IEC 61000-6-3 NOTE Harmonized as EN IEC 61000-6-3

IEC 61000-6-4 NOTE Harmonized as EN IEC 61000-6-4

IEC 61508-1 NOTE Harmonized as EN 61508-1

IEC 61508-2 NOTE Harmonized as EN 61508-2

IEC 61508-3 NOTE Harmonized as EN 61508-3

ISO 9000 NOTE Harmonized as EN ISO 9000

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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60364	series	Low-voltage electrical installations	HD 60364	series
IEC 61508	series	Functional safety of electrical/electronic/programmable electronic safety-related systems	EN 61508	series
IEC 61709	2017	Electric components - Reliability Reference conditions for failure rates and stress models for conversion	EN 61709	2017
IEC 63044-3	2017	Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 3: Electrical safety requirements	EN IEC 63044-3	2018
IEC 63044-5	series	Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 5: EMC requirements	EN IEC 63044-5	series

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Home and building electronic systems (HBES) and building automation and control systems (BACS) –

Part 4: General functional safety requirements for products intended to be integrated in HBES and BACS

Systèmes électroniques pour les foyers domestiques et les bâtiments (HBES) et systèmes de gestion technique du bâtiment (SGTB) –

Partie 4: Exigences générales de sécurité fonctionnelle pour les produits destinés à être intégrés dans les HBES et SGTB



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INTERNATIONAL STANDARD

NORME INTERNATIONALE

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Partie 4: Exigences générales de sécurité fonctionnelle pour les produits destinés à être intégrés dans les HBES et SGTB**

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CONTENTS

FOREWORD.....	3
INTRODUCTION.....	5
1 Scope.....	6
2 Normative references	6
3 Terms and definitions	6
4 General requirements	10
4.1 General.....	10
4.2 Method of establishment of the requirements	10
4.2.1 General	10
4.2.2 HBES/BACS application environment	11
4.2.3 Sources of hazards.....	11
4.2.4 Hazardous events.....	11
4.2.5 Derivation of requirements.....	11
5 Requirements for functional safety.....	12
5.1 General.....	12
5.2 Power feeding.....	12
5.3 Life time.....	13
5.4 Reasonably foreseeable misuse.....	13
5.5 Software and communication	13
5.6 Remote operations.....	15
5.6.1 General recommendations	15
5.6.2 Within a single building or in its immediate vicinity.....	15
5.6.3 From outside the building	15
5.6.4 Management.....	16
Annex A (informative) Example of a method for the determination of safety integrity levels.....	17
A.1 General.....	17
A.2 As low as reasonably practicable (ALARP) and tolerable risk concepts	17
Annex B (informative) Hazards and development of necessary functional safety requirements.....	19
Annex C (informative) Some examples of non-safety-related HBES/BACS applications	27
C.1 General.....	27
C.2 Examples of non-safety-related HBES/BACS applications.....	27
C.2.1 Example 1: Oven	27
C.2.2 Example 2: Devices presenting a high potential risk of hazard	27
C.2.3 Example 3: Mains plugs, socket outlets and circuits.....	28
C.2.4 Example 4: Water temperature adjustment	28
Bibliography.....	29
Figure A.1 – Risk reduction – General concept	17
Table 1 – Requirements for avoiding inadvertent operations and possible ways to achieve them	16
Table A.1 – Example of risk classification of accidents.....	18
Table A.2 – Interpretation of risk classes	18
Table B.1 – Requirements and/or risk reduction measures.....	19

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**HOME AND BUILDING ELECTRONIC SYSTEMS (HBES) AND
BUILDING AUTOMATION AND CONTROL SYSTEMS (BACS) –****Part 4: General functional safety requirements for
products intended to be integrated in HBES and BACS**

FOREWORD

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The text of this International Standard is based on the following documents:

FDIS	Report on voting
23/973/FDIS	23/975/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

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 document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

Functional safety includes the safe operation of devices and appliances ("products") when installed into and operating on a communications network in a home or building ("premises").

This document specifies installation, control, operating, and failure mode procedures to enhance the functional safety of devices installed in homes and buildings. A device functions safely if it causes no harm while operating and performing an intended task. Such devices might not operate safely due to installation or control problems.

The growing use of home and building networks to interconnect devices introduces additional challenges to maintaining functional safety because of possible device interactions. Therefore, this document addresses the risks of connecting devices to a home or building network, which enables data exchanges and remote control from within the home or building.

Furthermore, if the home or building network is connected to a public network, control from remote locations may be possible. Such control messages might originate from a smart phone app, be sent through a mobile telephone network, routed to a building gateway, and sent via a home or building network to a device communications interface. Thus, there are many opportunities for such messages to be compromised. Remote access poses additional threats to functional safety that are addressed in this document.

This document is part of IEC 63044 series and applies to home and building electronic systems (HBES/BACS).

This document applies to home and building electronic systems (HBES) in general and specifically to systems conforming to the home electronic system (HES) family of ISO/IEC standards.

HBES/BACS products in this document are for non-safety-related systems.

The intention of this document is to specify, as far as possible, all safety requirements for HBES/BACS products in their life cycle.

This document specifies the general functional safety requirements for devices connected to a home or building network following the principles of the basic standard for functional safety, IEC 61508 (all parts). It covers functional safety issues related to device and device installations. The requirements are based on a risk analysis in accordance with IEC 61508.