SLOVENSKI STANDARD
SIST EN IEC 63044-4:2021

01-november-2021

Splošne zahteve za stanovanjske in stavbne elektronske sisteme (HBES) in sisteme za avtomatizacijo in krmiljenje stavb (BACS) - 4. del: Varnostne zahteve za splošno funkcionalnost proizvodov, namenjenih za integracijo v stavbne elektronske sisteme (HBES) in sisteme za avtomatizacijo in krmiljenje stavb (BACS)

General requirements for 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 Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS)

Ta slovenski standard je istoveten z: **EN IEC 63044-4:2021**

ICS:

35.240.67	Uporabniške rešitve IT v gradbeništvu	IT applications in building and construction industry
97.120	Avtomatske krmilne naprave za dom	Automatic controls for household use

SIST EN IEC 63044-4:2021 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 63044-4

August 2021

ICS 29.120.01; 29.120.99

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)

This European Standard was approved by CENELEC on 2021-08-03. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

CENELEC

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

Ref. No. EN IEC 63044-4:2021 E

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
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2024–08–03

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

Any feedback and questions on this document should be directed to the users’ national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 63044-4:2021 was approved by CENELEC as a European Standard without any modification.

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.

Publication	Year	Title	EN/HD	Year
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

IEC 63044-4

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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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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

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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IEC 63044-4 has been prepared by IEC technical committee 23: Electrical accessories. It is an International Standard.

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.

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

1 Scope

This part of IEC 63044 provides the functional safety requirements for HBES/BACS.

In addition, it defines functional safety 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 1 An example of another network is a dedicated ICT network covered by IEC 62949.

This document does not provide functional safety requirements for safety-related systems.

NOTE 2 Examples of non-safety-related HBES/BACS applications are given in Annex C.

This document does not provide requirements on data protection and security.

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 60364 (all parts), *Low-voltage electrical installations*

IEC 63044-3:2017, *Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) – Part 3: Electrical safety requirements*

IEC 63044-5 (all parts), *Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS)*

IEC 61508 (all parts), *Functional safety of electrical/electronic/programmable electronic safety-related systems*

IEC 61709:2017, *Electric components – Reliability – Reference conditions for failure rates and stress models for conversion*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp