BS EN 62949:2017

BSI Standards Publication

Particular safety requirements for equipment to be connected to information and communication technology networks (IEC 62949:2017)

bsi.

National foreword

This British Standard is the UK implementation of EN 62949:2017. It is identical to IEC 62949:2017. It supersedes BS EN 41003:2009 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee EPL/108, Safety of electronic equipment within the field of audio/video, information technology and communication technology.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 September 2017.

Amendments/corrigenda issued since publication

Date	Text affected

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 62949

June 2017

ICS 33.160; 35.020

Supersedes EN 41003:2008

English Version

Particular safety requirements for equipment to be connected to information and communication networks (IEC 62949:2017)

Exigences de sécurité spécifiques pour les équipements destinés à être connectés aux réseaux d'information et de communication
(IEC 62949:2017)

Besondere Sicherheitsanforderungen an Geräte zum Anschluss an Kommunikationsnetze mit paarweise angeordneten Leitern
(IEC 62949:2017)

This European Standard was approved by CENELEC on 2017-02-24. 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.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Ref. No. EN 62949:2017 E

European foreword

The text of document 108/664/FDIS, future edition 1 of IEC 62949, prepared by IEC/TC 108 "Safety of electronic equipment within the field of audio/video, information technology and communication technology" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62949:2017.

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) 2017-12-09
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-06-20

This document supersedes EN 41003:2008.

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

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive(s) see informative Annex ZZ, which is an integral part of this document.

Endorsement notice

The text of the International Standard IEC 62949:2017 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 60065:2014	NOTE	Harmonized as EN 60065:2014 (modified).
IEC 60364	NOTE	Harmonized in HD 384 / HD 60364 series.
IEC 60529	NOTE	Harmonized as EN 60529.
IEC 60664-1	NOTE	Harmonized as EN 60664-1.
IEC 60950-1:2005	NOTE	Harmonized as EN 60950-1:2006 (modified).

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When 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 62368-1 (mod)	2014	Audio/video, information and communication technology equipment - Part 1: Safety requirements	EN 62368-1	2014
-	-		+ AC	2015-05
-	-		+AC	2017-03
-	-		+ A11	2017

Annex ZZ
(informative)

Relationship between this European Standard and the safety objectives of Directive 2014/35/EU [2014 OJ L96] aimed to be covered

This European Standard has been prepared under a Commission's standardization request relating to harmonized standards in the field of the Low Voltage Directive, M/511, to provide one voluntary means of conforming to safety objectives of Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonization of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits [2014 OJ L96].

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZZ.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding safety objectives of that Directive, and associated EFTA regulations.

Table ZZ.1 – Correspondence between this European Standard and Annex I of Directive 2014/35/EU [2014 OJ L96]

Safety objectives of Directive 2014/35/EU	Clause(s) / sub-clause(s) of this EN	Remarks / Notes
Annex I 1. General conditions	This standard is an interface standard, only. It addresses the electrical characteristic of the electric interface to an ICT network. See Clause 1	
2. Protection against hazards arising from the electrical equipment	See 4.1 up to 4.5 and 4.7	
a) protected against the danger of physical injury or other harm which might be caused by direct or indirect contact;	See 4.2. – 4.5. See 4.7	
b) temperatures, arcs or radiation which would cause a danger, are not produced;	Not addressed in this standard	
c) protected against non-electrical dangers caused by the electrical equipment which are revealed by experience;	Not addressed in this standard	
d) the insulation is suitable for foreseeable conditions.	See 4.2. – 4.5.3	

Safety objectives of Directive 2014/35/EU	Clause(s) / sub-clause(s) of this EN	Remarks / Notes
3. Protection against hazards which may be caused by external influences on the electrical equipment	See 4.5.4; 4.6 and 4.7	
a) meets the expected mechanical requirements in such a way that persons, domestic animals and property are not endangered;	Not addressed in this standard	
b) is resistant to non-mechanical influences in expected environmental conditions, in such a way that persons, domestic animals and property are not endangered	See 4.5.4 See 4.6	
c) does not endanger persons, domestic animals and property in foreseeable conditions of overload	See 4.7	

WARNING 1: Presumption of conformity stays valid only as long as a reference to this European standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

WARNING 2: Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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PARTICULAR SAFETY REQUIREMENTS FOR EQUIPMENT TO BE CONNECTED TO INFORMATION AND COMMUNICATION NETWORKS

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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8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 62949 has been prepared by IEC technical committee 108: Safety of electronic equipment within the field of audio/video, information technology and communication technology.

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

FDIS	Report on voting
108/664/FDIS	108/676/RVD

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

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

In this standard, the following print types are used:

- requirements proper and normative annexes: in roman type;

- *compliance statements and test specifications: in italic type;*
- notes and other informative matter: in smaller roman type;
- normative conditions within tables: in smaller roman type;
- Terms that are defined in Clause 3: **bold**.

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.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

This document is applicable for products intended to be connected as **communication terminal** to an **ICT network** not covered by the scope of IEC 62368-1. It is to be used in conjunction with other product safety standards, examples of which are listed in Annex A.

This document, in accordance with the 'principles of safety' given in the introduction of IEC 62368-1, covers the requirements and compliance criteria under three headings.

- Protection of equipment users from hazards in the equipment. The users are considered to be protected from hazards in the equipment if the equipment complies with a relevant safety standard, for example one of those listed in Annex A, but compliance with those standards is not part of this document.

  NOTE An equipment user could be an **ordinary person** or an **instructed person**.

- Protection of **skilled persons** or **instructed persons** working on an **ICT network** and other users of an **ICT network**, from hazardous conditions on an **ICT network** resulting from the connection of the equipment.
- Protection of equipment users from voltages on an **ICT network**.

Upper limits for **ICT networks** signals have been defined. They include also telephone ringing signals which have been defined taking into account voltages commonly used in the different networks. The electrical hazard criteria have been chosen to be in accordance with IEC TS 60479 (all parts).

Test levels used for the equipment take account of the possibility that overvoltages may occur on **ICT networks**. Special consideration has been given to equipment parts expected to be held or touched during normal use, e.g. telephone handsets.

It is recognised that in high overvoltages risk areas, requirements of this document may not be sufficient. Additional protective devices, not covered by this document, may be installed in the **ICT networks** to better meet extreme conditions.

A comparison of terms introduced in this document with existing IEC standards is given in Annex C.

PARTICULAR SAFETY REQUIREMENTS FOR EQUIPMENT TO BE CONNECTED TO INFORMATION AND COMMUNICATION NETWORKS

1 Scope

This document applies to the interface of equipment designed and intended to be connected as a **communication terminal** to an **information and communication technology (ICT) network** termination.

This document does not apply to:

- equipment covered by IEC 62368-1; and
- interfaces to other networks.

NOTE 1 An example of 'other networks' is a dedicated Home and Building Electronic Systems/Building Automation and Control Systems HBES/BACS network covered by EN 50491-3.

This document specifies the safety requirements of the interface to the **ICT network** only.

NOTE 2 See Annex D.

Requirements additional to those specified in this document may be necessary for

- equipment intended for operation while exposed, for example, to extremes of temperature, to excessive dust, moisture, or vibration, to flammable gases, to corrosive or explosive atmospheres,
- electro medical applications with physical connections to the patient.

The following requirements are not covered by this document:

- functional safety of equipment;
- functional reliability of equipment;
- communication facilities with remote supply using hazardous voltage;
- protection of equipment connected to **ICT networks** from functional damage.

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.

NOTE Lists of other related documents can be found in Annex A and in the Bibliography.

IEC 62368-1:2014, *Audio/video, information and communication technology equipment – Part 1: Safety requirements*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 62368-1and the following apply.