



Institut luxembourgeois de la normalisation
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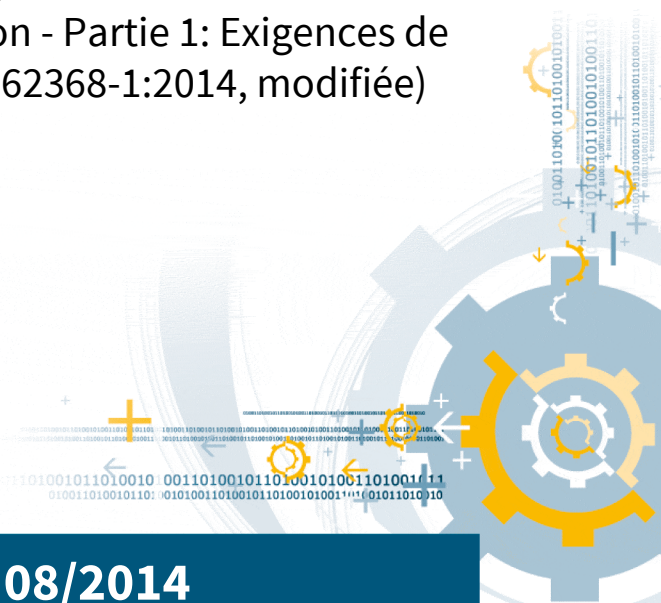
ILNAS-EN 62368-1:2014

Audio/video, information and communication technology equipment - Part 1: Safety requirements (IEC 62368-1:2014, modified)

Einrichtungen für Audio/Video-,
Informations- und
Kommunikationstechnik – Teil 1:
Sicherheitsanforderungen (IEC

Equipements des technologies de
l'audio/vidéo, de l'information et de la
communication - Partie 1: Exigences de
sécurité (IEC 62368-1:2014, modifiée)

08/2014



National Foreword

This European Standard EN 62368-1:2014 was adopted as Luxembourgish Standard ILNAS-EN 62368-1:2014.

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EUROPEAN STANDARD ^{ILNAS-EN 62368-1:2014} **EN 62368-1**
NORME EUROPÉENNE
EUROPÄISCHE NORM

August 2014

ICS 33.160.01; 35.020

English Version

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

Equipements des technologies de l'audio/vidéo, de
l'information et de la communication - Partie 1: Exigences
de sécurité
(CEI 62368-1:2014 , modifiée)

Einrichtungen für Audio/Video, Informations- und
Kommunikationstechnik - Teil 1: Sicherheitsanforderungen
(IEC 62368-1:2014 , modifiziert)

This European Standard was approved by CENELEC on 2014-06-20. 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, 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

Foreword

The text of document 108/521/FDIS, future edition 2 of IEC 62368-1:2014, 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 62368-1:2014.

A draft amendment, which covers common modifications to IEC 62368-1:2014, was prepared by CLC/TC 108X, "Safety of electronic equipment within the fields of Audio/Video, Information Technology and Communication Technology" and approved by CENELEC.

The following dates are fixed:

- latest date by which this document has to be implemented at (dop) 2015-06-20
national level by publication of an identical
national standard or by endorsement
- latest date by which the national standards conflicting with this (dow) 2019-06-20
document have to be withdrawn

Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 62368-1:2014 are prefixed "Z".

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 standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

Requirement of sound pressure for personal music player addressed by the mandate M/452 are covered in 10.6 "Safeguards against acoustic energy sources".

For equipment falling within the scope of directives other than those against which this standard is harmonized, additional requirements from those directives may apply.

Endorsement notice

The text of the International Standard IEC 62368-1:2014 was approved by CENELEC as a European Standard with agreed common modifications.

COMMON MODIFICATIONS

CONTENTS	Add the following annexes:
	Annex ZA (normative) Normative references to international publications with their corresponding European publications
	Annex ZB (normative) Special national conditions
	Annex ZC (informative) A-deviations
	Annex ZD (informative) IEC and CENELEC code designations for flexible cords

Delete all the “country” notes in the reference document according to the following list:

0.2.1	Note	1	Note 3	4.1.15	Note
4.7.3	Note 1 and 2	5.2.2.2	Note	5.4.2.3.2.2 Table 13	Note c
5.4.2.3.2.4	Note 1 and 3	5.4.2.5	Note 2	5.4.5.1	Note
5.5.2.1	Note	5.5.6	Note	5.6.4.2.1	Note 2 and 3
5.7.5	Note	5.7.6.1	Note 1 and 2	10.2.1 Table 39	Note 2, 3 and 4
10.5.3	Note 2	10.6.2.1	Note 3	F.3.3.6	Note 3

For special national conditions, see Annex ZB.

1 **Add** the following note:

NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2011/65/EU.

4.Z1 **Add** the following new subclause after 4.9:

To protect against excessive current, short-circuits and earth faults in circuits connected to an a.c. **mains**, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c):

- except as detailed in b) and c), protective devices necessary to comply with the requirements of B.3.1 and B.4 shall be included as parts of the equipment;
- for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation;
- it is permitted for **pluggable equipment type B** or **permanently connected equipment**, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions.

If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for **pluggable equipment type A** the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.

5.4.2.3.2.4 **Add** the following to the end of this subclause:

The requirement for interconnection with **external circuit** is in addition given in EN 50491-3:2009.

10.2.1 **Add** the following to ^{c)} and ^{d)} in Table 39:

For additional requirements, see 10.5.1.

10.5.1 **Add** the following after the first paragraph:

For RS 1 compliance is checked by measurement under the following conditions:

In addition to the normal operating conditions, all controls adjustable from the outside by hand, by any object such as a tool or a coin, and those internal adjustments or pre-sets which are not locked in a reliable manner, are adjusted so as to give maximum radiation whilst maintaining an intelligible picture for 1 h, at the end of which the measurement is made.

NOTE Z1 Soldered joints and paint lockings are examples of adequate locking.

The dose-rate is determined by means of a radiation monitor with an effective area of 10 cm², at any point 10 cm from the outer surface of the apparatus.

Moreover, the measurement shall be made under fault conditions causing an increase of the high-voltage, provided an intelligible picture is maintained for 1 h, at the end of which the measurement is made.

For RS1, the dose-rate shall not exceed 1 µSv/h taking account of the background level.

NOTE Z2 These values appear in Directive 96/29/Euratom of 13 May 1996.

10.6.2.1 **Add** the following paragraph to the end of the subclause:

EN 71-1:2011, 4.20 and the related tests methods and measurement distances apply.

10.Z1 **Add** the following new subclause after 10.6.5.

10.Z1 Non-ionizing radiation from radio frequencies in the range 0 to 300 GHz

The amount of non-ionizing radiation is regulated by European Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz).

For intentional radiators, ICNIRP guidelines should be taken into account for Limiting Exposure to Time-Varying Electric, Magnetic, and Electromagnetic Fields (up to 300 GHz). For hand-held and body-mounted devices, attention is drawn to EN 50360 and EN 50566

G.7.1 **Add** the following note:

NOTE Z1 The harmonized code designations corresponding to the IEC cord types are given in Annex ZD.

Bibliography **Add** the following standards:

Add the following notes for the standards indicated:

IEC 60130-9	NOTE Harmonized as EN 60130-9.
IEC 60269-2	NOTE Harmonized as HD 60269-2.
IEC 60309-1	NOTE Harmonized as EN 60309-1.
IEC 60364	NOTE some parts harmonized in HD 384/HD 60364 series.
IEC 60601-2-4	NOTE Harmonized as EN 60601-2-4.
IEC 60664-5	NOTE Harmonized as EN 60664-5.
IEC 61032:1997	NOTE Harmonized as EN 61032:1998 (not modified).
IEC 61508-1	NOTE Harmonized as EN 61508-1.
IEC 61558-2-1	NOTE Harmonized as EN 61558-2-1.
IEC 61558-2-4	NOTE Harmonized as EN 61558-2-4.
IEC 61558-2-6	NOTE Harmonized as EN 61558-2-6.
IEC 61643-1	NOTE Harmonized as EN 61643-1.
IEC 61643-21	NOTE Harmonized as EN 61643-21.
IEC 61643-311	NOTE Harmonized as EN 61643-311.
IEC 61643-321	NOTE Harmonized as EN 61643-321.
IEC 61643-331	NOTE Harmonized as EN 61643-331.

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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
		Safety of Toys – Part 1: Mechanical and physical properties	EN 71-1	-
		Sound system equipment: Headphones and earphones associated with personal music players — Maximum sound pressure level measurement methodology— Part 1: General method for "one package equipment"	EN 50332-1	-
		Sound system equipment: Headphones and earphones associated with personal music players — Maximum sound pressure level measurement methodology— Part 2: Matching of sets with headphones if either or both are offered separately, or are offered as one package equipment but with standardised connectors between the two allowing to combine components of different manufacturers or different design	EN 50332-2	-
		Product standard to demonstrate the compliance of mobile phones with the basic restrictions related to human exposure to electromagnetic fields (300 MHz - 3 GHz)	EN 50360	-
-	-	Insulating, sheathing and covering materials for low-voltage energy cables	EN 50363	(all parts)
-	-	Electrical test methods for low voltage energy cables	EN 50395	2005
-	-	Non electrical test methods for low voltage energy cables	EN 50396	2005
		General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) -- Part 3: Electrical safety requirements.	EN 50491-3	2009
		Product standard to demonstrate compliance of radio frequency fields from handheld and body-mounted wireless communication devices used by the general public (30 MHz - 6 GHz)	EN 50566	-
IEC 60027-1	-	Letter symbols to be used in electrical technology – Part 1: General	EN 60027-1	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60065	-	Audio, video and similar electronic apparatus – Safety requirements	EN 60065	-
IEC 60068-2-6	-	Environmental testing Part 2-6: Tests – Test Fc: Vibration (sinusoidal)	EN 60068-2-6	-
IEC 60068-2-78	-	Environmental testing Part 2-78: Tests – Test Cab: Damp heat, steady state	EN 60068-2-78	-
IEC/TR 60083	-	Plugs and socket-outlets for domestic and similar general use standardised in member countries of IEC	-	-
IEC 60085	-	Electrical insulation – Thermal classification and designation	EN 60085	-
IEC 60086-4	-	Primary batteries – Part 4: Safety of lithium batteries	EN 60086-4	-
IEC 60107-1	1997	Methods of measurement on receivers for television broadcast transmissions – Part 1: General considerations - Measurements at radio and video frequencies	EN 60107-1	1997
IEC 60112	-	Method for the determination of the proof and the comparative tracking indices of solid insulating materials	EN 60112	-
IEC 60127	(all parts)	Miniature fuses	EN 60127	(all parts)
IEC 60227-1	-	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750V – Part 1: General requirements	HD 21 ¹⁾	-
IEC 60227-2	2003	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750V – Part 2: Test methods	HD 21 ¹⁾	-
IEC 60245-1	-	Rubber insulated cables – Rated voltages up to and including 450/750V – Part 1: General requirements	HD 22 ²⁾	-
IEC 60309	(all parts)	Plugs, socket-outlets and couplers for industrial purposes	EN 60309	(all parts)
IEC 60317	(all parts)	Specifications for particular types of winding wires	EN 60317	(all parts)
IEC 60317-43	-	Part 43: Aromatic polyimide tape wrapped round copper wire, class 240	EN 60317-43	-
IEC 60320	(all parts)	Appliance couplers for household and similar general purposes	EN 60320	(all parts)

¹⁾ The HD 21 series is related to, but not directly equivalent with the IEC 60227 series. Also EN 50363, EN 50395 and EN 50396 are to be taken into account.

²⁾ The HD 22 series is related to, but not directly equivalent with the IEC 60245 series. Also EN 50363, EN 50395 and EN 50396 are to be taken into account.