



**SLOVENSKI STANDARD**  
**SIST EN 60065:2003/A11:2009**  
**01-januar-2009**

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**Avdio, video in sorodni elektronski aparati - Varnostne zahteve**

Audio, video and similar electronic apparatus - Safety requirements

Audio-, Video- und ähnliche elektronische Geräte - Sicherheitsanforderungen

Appareils audio, vidéo et appareils électroniques analogues - Exigences de sécurité

**Ta slovenski standard je istoveten z: EN 60065:2002/A11:2008**

[SIST EN 60065:2003/A11:2009](https://standards.iteh.ai/catalog/standards/sist/80a900ae-42b2-46aa-ab14-6a3a844c5af7/sist-en-60065-2003-a11-2009)

<https://standards.iteh.ai/catalog/standards/sist/80a900ae-42b2-46aa-ab14-6a3a844c5af7/sist-en-60065-2003-a11-2009>

**ICS:**

33.160.01	Avdio, video in avdiovizualni sistemi na splošno	Audio, video and audiovisual systems in general
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**SIST EN 60065:2003/A11:2009**

**en,de**

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SIST EN 60065:2003/A11:2009

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 60065/A11**

November 2008

ICS 97.020

English version

## **Audio, video and similar electronic apparatus - Safety requirements**

Appareils audio, vidéo et  
appareils électroniques analogues -  
Exigences de sécurité

Audio-, Video- und  
ähnliche elektronische Geräte -  
Sicherheitsanforderungen

This amendment A11 modifies the European Standard EN 60065:2002; it was approved by CENELEC on 2008-07-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 Central Secretariat or to any CENELEC member.

This amendment 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 Central Secretariat has the same status as the official versions.

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

# CENELEC

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

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

This amendment to the European Standard EN 60065:2002 was prepared by the Technical Committee CENELEC TC 108X, Safety of electronic equipment within the fields of audio/video, information technology and communication technology.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as amendment A11 to EN 60065:2002 on 2008-07-01.

The following dates were fixed:

- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2009-07-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2010-07-01

Clauses, subclauses, notes, tables and figures which are additional to those in IEC 60065 are prefixed “Z”.

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## 2 Definitions

### 2.2 Types of apparatus

**Add** after the definition 2.2.12 the following new definition:

#### 2.2.Z1

##### PORTABLE SOUND SYSTEM

small battery powered audio equipment:

- whose prime purpose is to listen to recorded or broadcasted sound; and
- that uses headphones or earphones that can be worn in or on or around the ears; and
- that allows the user to walk around

NOTE Examples are mini-disk or CD players, MP3 audio players or similar equipment.

#### 5.4.1

**Modify** indent za) as follows:

- za) For a PORTABLE SOUND SYSTEM, a warning that excessive sound pressure from earphones and headphones can cause hearing loss.

**6.1 Replace** the entire subclause in EN 60065:2002 and EN 60065:2002/A1:2006 by:

#### 6.1 Ionizing radiation

Apparatus including a potential source of ionizing radiation shall be so constructed that personal protection against ionizing radiation is provided under normal operating conditions and under fault conditions.

<https://standards.iteh.ai/catalog/standards/sist/80a900ae-42b2-46aa-ab14-6a3a844c5af7/sist-en-60065-2003-a11-2009>

*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 1 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 cm<sup>2</sup>, 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.*

*The dose-rate shall not exceed 1 μSv/h (0,1 mR/h) taking account of the background level.*

NOTE 2 These values appear in Directive 96/29/Euratom of 13<sup>th</sup> May 1996.

*A picture is considered to be intelligible if the following conditions are met:*

- *a scanning amplitude of at least 70 % of the usable screen width;*
- *a minimum luminance of 50 cd/m<sup>2</sup> with locked blank raster provided by a test generator;*
- *a horizontal resolution corresponding to at least 1,5 MHz in the centre, with a similar vertical degradation;*
- *not more than one flashover per 5 min.*

**Add** the following new clause after Clause 20:

## **Z1 Resistance to candle flame ignition**

A television set shall be so designed that the likelihood of ignition and the spread of fire caused by a candle flame is reduced.

NOTE 1 An apparatus with a viewing screen is not regarded to be a television set if it is declared not to be so by the manufacturer.

This requirement does not apply to the display screen of rear projection TV's.

NOTE 2 This exemption has been allowed because this technology is falling out of use and it is expected that within a few years it will no longer exist. This exemption will not be extended to other technologies.

NOTE 3 The frame around the screen is not exempted from the requirements.

Wood and WOOD-BASED MATERIAL with a thickness of at least 6 mm is considered to fulfil the V-1 requirement when applying CLC/TS 62441.

[SIST EN 60065:2003/A11:2009](#)

*Compliance is checked according to CLC/TS 62441.*

NOTE 4 The term vertical, as used in the first dash of clause 5.2 of CLC/TS 62441, does not mean a perfectly vertical position. It should be interpreted as any surface that can be touched by the flame of a candle of 150 mm height and 20 mm diameter while the candle is still touching the supporting surface. A typical candle used in the home is assumed to be 20 mm diameter.

NOTE 5 It is expected that CLC/TS 62441 will in the future be replaced by a standard, at which time that standard will become applicable, subject to a vote by National Committees at the time.

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Replace the entire Annex ZA by the following.

**Annex ZA**  
(normative)

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

The following referenced documents are indispensable for the application 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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Date</u>	<u>Title</u>	<u>EN/HD</u>	<u>Date</u>
-	-	Audio, video and similar electronic apparatus - Routine electrical safety testing in production	EN 50333	2001
IEC 60027	Series	Letter symbols to be used in electrical technology	EN 60027	Series
IEC 60038	2002	IEC standard voltages	-	-
IEC 60068-2-6 + corr. March	1995 1995	Environmental testing - Part 2: Tests - Test Fc: Vibration (sinusoidal)	EN 60068-2-6	1995
IEC 60068-2-32	1975	Environmental testing - Part 2: Tests - Test Ed: Free fall	EN 60068-2-32 <sup>1)</sup>	1993
IEC 60068-2-75	1997	Environmental testing - Part 2: Tests - Test Eh: Hammer tests	EN 60068-2-75	1997
IEC 60068-2-78	2001	Environmental testing - Part 2: Tests - Test Cab: Damp heat, steady state	EN 60068-2-78	2001
IEC 60085	2004	Electrical insulation - Thermal evaluation	EN 60085	2004
IEC 60086-4	2000	Primary batteries - Part 4: Safety of lithium batteries	EN 60086-4	2000
IEC 60112	2003	Method for the determination of the proof and the comparative tracking indices of solid insulating materials	EN 60112	2003
IEC 60127	Series	Miniature fuses	EN 60127	Series
IEC 60167	1964	Methods of test for the determination of the insulation resistance of solid insulating materials	HD 568 S1	1990

<sup>1)</sup> EN 60068-2-32 includes A2:1990 to IEC 60068-2-32.

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<u>Publication</u>	<u>Date</u>	<u>Title</u>	<u>EN/HD</u>	<u>Date</u>
IEC 60216	Series	Electrical insulating materials - Thermal endurance properties	EN 60216	Series
IEC 60227 (mod) <sup>2)</sup>	Series	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V	-	-
IEC 60245 (mod) <sup>3)</sup>	Series	Rubber insulated cables - Rated voltages up to and including 450/750 V	-	-
IEC 60249-2	Series	Base materials for printed circuits - Part 2: Specifications	EN 60249-2	Series
IEC 60268-1	1985	Sound system equipment - Part 1: General	HD 483.1 S2 <sup>4)</sup>	1989
IEC 60317	Series	Specifications for particular types of winding wires	EN 60317	Series
IEC 60320	Series	Appliance couplers for household and similar general purposes	EN 60320	Series
IEC 60335-1 (mod) A1	2001 2004	Household and similar electrical appliances - Safety - Part 1: General requirements	EN 60335-1 A1	2002 2004
A2 + corr. August	2006		+ corr. January A2 + A11 + A12	2007 2006 2004 2006
IEC 60384-1 (mod)	1999	Fixed capacitors for use in electronic equipment - Part 1: Generic specification	EN 60384-1	2001
IEC 60384-14	2005	Fixed capacitors for use in electronic equipment - Part 14: Sectional specification: Fixed capacitors for electromagnetic interference suppression and connection to the supply mains	EN 60384-14	2005
IEC 60417	Data-base	Graphical symbols for use on equipment	-	-
IEC 60454	Series	Pressure-sensitive adhesive tapes for electrical purposes	EN 60454	Series
IEC 60529 A1	1989 1999	Degrees of protection provided by enclosures (IP Code)	EN 60529 + corr. May A1	1991 1993 2000

<sup>2)</sup> The HD 21 series, which is related to, but not directly equivalent with the IEC 60227 series, applies instead.

<sup>3)</sup> The HD 22 series, which is related to, but not directly equivalent with the IEC 60245 series, applies instead.

<sup>4)</sup> HD 483.1 S2 includes A1:1988 to IEC 60268-1.



<u>Publication</u>	<u>Date</u>	<u>Title</u>	<u>EN/HD</u>	<u>Date</u>
IEC 60664-1	2007	Insulation coordination for equipment within low-voltage systems - Part 1: Principles, requirements and tests	EN 60664-1	2007
IEC 60664-3	2003	Insulation coordination for equipment within low-voltage systems - Part 3: Use of coating, potting or moulding for protection against pollution	EN 60664-3	2003
IEC 60691 A1	2002 2006	Thermal links - Requirements and application guide	EN 60691 A1	2003 2007
IEC 60695-2-2	1991	Fire hazard testing - Part 2: Test methods - Section 2: Needle-flame test	EN 60695-2-2	1994
IEC 60695-11-10 A1	1999 2003	Fire hazard testing - Part 11-10: Test flames - 50 W horizontal and vertical flame test methods	EN 60695-11-10 A1	1999 2003
IEC 60695-11-20 A1	1999 2003	Fire hazard testing - Part 11-20: Test flames - 500 W flame test methods	EN 60695-11-20 A1	1999 2003
IEC 60730 (mod)	Series	Automatic electrical controls for household and similar use	EN 60730	Series
IEC 60747-5-5	2007	Semiconductor devices - Discrete devices - Part 5-5: Optoelectronic devices - Photocouplers	EN 60747-5-5 <sup>5)</sup>	-
IEC 60825-1 + corr. December A1 A2	1993 1994 1997 2001	Safety of laser products Part 1: Equipment classification, requirements and user's guide	EN 60825-1 + corr. February A1 A2 + A2/corr. April	1994 1995 2002 2001 2004
IEC 60851	Series	Winding wires - Test methods	EN 60851	Series
IEC 60884	Series	Plugs and socket-outlets for household and similar purposes	-	-
IEC 60885-1	1987	Electrical test methods for electric cables - Part 1: Electrical tests for cables, cords and wires for voltages up to and including 450/750 V	-	-

<sup>5)</sup> At draft stage.