



SLOVENSKI STANDARD
SIST EN 60065:2003/A2:2011
01-januar-2011

Avdio, video in sorodni elektronski aparati - Varnostne zahteve (IEC 60065:2001/A2:2010, spremenjen)

Audio, video and similar electronic apparatus - Safety requirements (IEC 60065:2001/A2:2010, modified)

Audio-, Video- und ähnliche elektronische Geräte - Sicherheitsanforderungen (IEC 60065:2001/A2:2010, modifiziert)

Appareils audio, vidéo et appareils électroniques analogues - Exigences de sécurité (CEI 60065:2001/A2:2010, modifié)

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Ta slovenski standard je istoveten z: EN 60065:2002/A2:2010

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/A2:2011 **en**

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60065/A2

October 2010

ICS 97.020

English version

**Audio, video and similar electronic apparatus -
Safety requirements**
(IEC 60065:2001/A2:2010, modified)

Appareils audio, vidéo et appareils
électroniques analogues -
Exigences de sécurité
(CEI 60065:2001/A2:2010, modifié)

Audio-, Video- und ähnliche elektronische
Geräte -
Sicherheitsanforderungen
(IEC 60065:2001/A2:2010, modifiziert)

This amendment A2 modifies the European Standard EN 60065:2002, it was approved by CENELEC on 2010-10-01. 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.

<https://standards.iteh.ai/catalog/standards/sist/c79c701-4c35-4e01-8779-c79c701-4c35-4e01-8779-sist-en-60065-2003-a2-2011>

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, Croatia, 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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 108/395/FDIS, future amendment 2 to IEC 60065:2001, 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.

A draft amendment was prepared by the Technical Committee CENELEC TC 108X, Safety of electronic equipment within the fields of audio/video, information technology and communication technology and was submitted to formal vote.

The combined texts were approved by CENELEC as EN 60065:2002/A2 on 2010-10-01.

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

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) 2011-10-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2013-10-01

Annexes ZA and ZB have been added by CENELEC.

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Endorsement notice

The text of amendment 2:2010 to the International Standard IEC 60065:2001 was approved by CENELEC as an amendment to the European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

In **IEC 60065:2001/A2 delete** all the "country" notes according to the following list:

5.3	Note
5.4.1	Note
20	Note

For special national conditions, see Annex ZB.

After 3.2 **add** a new clause 3.Z1:

- 3.Z1** To protect against excessive current, short-circuits and earth faults in 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 11 shall be included as parts of the equipment;
 - for components in series or parallel 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 equipment supplied via an industrial mains plug or for **PERMANENTLY CONNECTED APPARATUS**, to rely on dedicated over current 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 not via an industrial mains plug or for **PERMANENTLY CONNECTED APPARATUS** the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.

5.1 i) in **EN 60065:2002** and **EN 60065:2002/A1:2006**:

Withdraw the common modification for both standards.

Rationale: The relevant text is now part of IEC 60065:2001/A2, Subclause 5.1 item h).

Bibliography in IEC 60065:2001/A2:200X (108/395/FDIS)

Add the following notes for the standards indicated:

IEC 60695 series	NOTE	Harmonized in EN 60695 series.
IEC 62087	NOTE	Harmonized as EN 62087.

Replace the whole Annex ZA by the following:

NOTE The changes related to EN 60065:2002/A11:2008 are indicated in red.

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 ¹⁾	2001
-	-	Insulating, sheathing and covering materials for low-voltage energy cables	EN 50363	series
-	-	Electrical test methods for low voltage energy cables	EN 50395	2005
-	-	Non electrical test methods for low voltage energy cables	EN 50396	2005
IEC 60027	series	Letter symbols to be used in electrical technology	EN/HD 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 ²⁾
IEC 60068-2-32	1975	Environmental testing Part 2: Tests – Test Ed: Free fall	EN 60068-2-32 ³⁾	1993
IEC 60068-2-31	2008	Environmental testing Part 2-31: Tests – Test Ec: Rough handling shocks, primarily for equipment-type specimens	EN 60068-2-31	2008

¹⁾ Will be superseded by EN 50514:2008 “Audio, video and information technology equipment - Routine electrical safety testing in production” on 2011-07-01.

²⁾ Will be superseded by EN 60068-2-6:2008 “Environmental testing - Part 2-6: Tests - Test Fc: Vibration (sinusoidal)” on 2011-02-01.

³⁾ EN 60068-2-32 includes A2:1990 to IEC 60068-2-32:1975 (IEC/EN 60068-2-32 has been replaced by IEC/EN 60068-2-31:2008).

<u>Publication</u>	<u>Date</u>	<u>Title</u>	<u>EN/HD</u>	<u>Date</u>
IEC 60068-2-75	1997	Environmental testing Part 2-75: Tests - Test Eh: Hammer tests	EN 60068-2-75	1997
IEC 60068-2-78	2001	Environmental testing Part 2-78: Tests - Test Cab: Damp heat, steady state	EN 60068-2-78	2001
IEC 60085	2004	Thermal evaluation and classification of electrical insulation	EN 60085	2004 ⁴⁾
IEC 60086-4	2000	Primary batteries Part 4: Safety of lithium batteries	EN 60086-4	2000 ⁵⁾
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	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
IEC 60216	series	Electrical insulating materials - Thermal endurance properties	EN 60216	series
IEC 60227 ⁶⁾	series	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V	HD 21	series
IEC 60245 ⁷⁾	series	Rubber insulated cables – Rated voltages up to and including 450/750 V	HD 22	series
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 ⁸⁾	1989

⁴⁾ Will be superseded by EN 60085:2008 "Electrical insulation - Thermal evaluation and designation" on 2010-12-01.

⁵⁾ Will be superseded by EN 60086-4:2007 "Primary batteries -- Part 4: Safety of lithium batteries" on 2010-11-01.

⁶⁾ The HD 21 series, which is related to, but not directly equivalent with the IEC 60227 series. Also EN 50363, EN 50395 and EN 396 are to be taken into account.

⁷⁾ The HD 22 series, which is related to, but not directly equivalent with the IEC 60245 series. Also EN 50363, EN 50395 and EN 396 are to be taken into account.

⁸⁾ HD 483.1 S2:1989 includes A1:1988 to IEC 60268-1:1985.

<u>Publication</u>	<u>Date</u>	<u>Title</u>	<u>EN/HD</u>	<u>Date</u>
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 A2 + Corr. August	2001 2004 2006	Safety of household and similar electrical appliances Part 1: General requirements	EN 60335-1 A1 A2 + A11 + A12 + A13	2002 2004 2006 2004 2006 2008
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	database	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
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: 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 60695-11-5	2004	Fire hazard testing Part 11-5: Test flames - Needle-flame test method – Apparatus, confirmatory test arrangement and guidance	EN 60695-11-5	2005

<u>Publication</u>	<u>Date</u>	<u>Title</u>	<u>EN/HD</u>	<u>Date</u>
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 ⁹⁾	201X
IEC 60825-1	2007	Safety of laser products Part 1: Equipment classification and requirements	EN 60825-1	2007
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	-	-
IEC 60906	series	IEC system of plugs and socket- outlets for household and similar purposes	-	-
IEC 60950-1 (mod)	2005	Safety of information technology equipment Part 1: General requirements	EN 60950-1 + A11	2006 2009
IEC 60990	1999	Methods of measurement of touch- current and protective conductor current	EN 60990	1999
IEC 60998-2-2 (mod)	2002	Connecting devices for low-voltage circuits for household and similar purposes Part 2-2: Particular requirements for connecting devices as separate entities with screwless-type clamping units	EN 60998-2-2	2004

⁹⁾ At draft stage.

<u>Publication</u>	<u>Date</u>	<u>Title</u>	<u>EN/HD</u>	<u>Date</u>
IEC 60999-1	1999	Connecting devices – Safety requirements for screw-type and screwless-type clamping units Part 1: General requirements and particular requirements for clamping units for conductors from 0,2 mm ² up to 35 mm ² (included)	EN 60999-1	2000
IEC 61032	1997	Protection of persons and equipment by enclosures – Probes for verification	EN 61032	1998
IEC 61051-2	1991	Varistors for use in electronic equipment Part 2: Sectional specification for surge suppression varistors	-	-
IEC 61058-1 + A1 (mod)	2000	Switches for appliances	EN 61058-1	2002
A2	2001 2007	Part 1: General requirements	A2	2008
IEC/TR2 61149	1995	Guide for safe handling and operation of mobile radio equipment	-	-
IEC 61260 A1	1995 2001	Electroacoustics – Octave-band and fractional-octave-band filters	EN 61260 A1	1995 2001
IEC 61293	1994	Marking of electrical equipment with ratings related to electrical supply – Safety requirements	EN 61293	1994
IEC 61558-1 A1	2005 2009	Safety of power transformers, power supplies, reactors and similar products Part 1: General requirements and tests	EN 61558-1 + corr. August A1	2005 2006 2009
IEC 61558-2-17	1997	Safety of power transformers, power supply units and similar Part 2-17: Particular requirements for transformers for switch mode power supplies	EN 61558-2-17	1997
IEC 61965	2003	Mechanical safety of cathode ray tubes	EN 61965	2003
IEC 62087	-	Methods of measurement for the power consumption of audio, video and related equipment	EN 62087	-
IEC 62151	2000	Safety of equipment electrically connected to a telecommunication network	-	-
IEC/TS 62441	-	Accidentally caused candle flame ignition for audio/video, communication and information technology equipment	CLC/TS 62441	-

<u>Publication</u>	<u>Date</u>	<u>Title</u>	<u>EN/HD</u>	<u>Date</u>
ISO 261 ¹⁰⁾	1973	ISO general purpose metric screw threads - General plan	-	-
ISO 262 ¹¹⁾	1973	ISO general purpose metric screw threads - Selected sizes for screws, bolts and nuts	-	-
ISO 306	1994	Plastics - Thermoplastic materials - Determination of Vicat softening temperature (VST)	EN ISO 306 ¹²⁾	1996
ISO 7000 ¹³⁾	1989	Graphical symbols for use on equipment - Index and synopsis	-	-
ITU-T Recommendation K17	1988	Tests on power-fed repeaters using solid-state devices in order to check the arrangements for protection from external interference	-	-
ITU-T Recommendation K21	1996	Resistibility of telecommunication equipment installed in customer's premises to overvoltages and overcurrents	-	-

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¹⁰⁾ Superseded by ISO 261:1998.

¹¹⁾ Superseded by ISO 262:1998.

¹²⁾ Superseded by EN ISO 306:2004, which is based on ISO 306:2004.

¹³⁾ Superseded by ISO 7000:2004.