

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60950-1/A11

March 2009

ICS 35.020; 35.260

English version

Information technology equipment -

Part 1: General requirements

Matériel de traitement de l'information -
Sécurité -
Partie 1: Exigences générales

Einrichtungen der Informationstechnik -
Sicherheit -
Teil 1: Allgemeine Anforderungen

This amendment A11 modifies the European Standard EN 60950-1:2006; it was approved by CENELEC on 2008-12-01. 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: avenue Marnix 17, B - 1000 Brussels

Foreword

This amendment to the European Standard EN 60950-1:2006 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 60950-1:2006 on 2008-12-01.

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) 2009-12-01
 - latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2010-12-01
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Replace the current 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 Where 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>
IEC 60065 (mod) A1	2001 2005	Audio, video and similar electronic apparatus - Safety requirements	EN 60065 A1 + A11	2002 2006 2008
A2	- ¹⁾		A2	- ¹⁾
IEC 60068-2-78	- ²⁾	Environmental testing Part 2-78: Tests - Test Cab: Damp heat, steady state	EN 60068-2-78	2001 ³⁾
IEC 60073	- ²⁾	Basic and safety principles for man-machine interface, marking and identification - Coding principles for indication devices and actuators	EN 60073	2002 ³⁾
IEC 60083	- ²⁾	Plugs and socket-outlets for domestic and similar general use standardized in member countries of IEC	-	-
IEC 60085	2004	Electrical insulation - Thermal classification	EN 60085	2004
IEC 60112	- ²⁾	Method for determining the proof and comparative tracking indices of insulating materials	EN 60112	2003 ³⁾
IEC 60216-4-1	- ²⁾	Guide for the determination of thermal endurance properties of electrical insulating materials Part 4: Ageing ovens Section 1: Single-chamber ovens	EN 60216-4-1	2006 ³⁾
IEC 60227 (mod)	Series	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750V	HD 21 ⁴⁾	Series
IEC 60245 (mod)	Series	Rubber insulated cables of rated voltages up to and including 450/750V	HD 22 ⁵⁾	Series

¹⁾ At draft stage.

²⁾ Undated reference.

³⁾ Valid edition at date of issue.

⁴⁾ The HD 21 series is related to, but not directly equivalent with the IEC 60227 series.

⁵⁾ The HD 22 series is related to, but not directly equivalent with the IEC 60245 series.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60309 (mod)	Series	Plugs, socket-outlets and couplers for industrial purposes	EN 60309	Series
IEC 60317	Series	Specifications for particular types of winding wires	EN 60317	Series
IEC 60317-43	- ²⁾	Part 43: Aromatic polyimide tape wrapped round copper wire, class 240	EN 60317-43	1997 ³⁾
IEC 60320 (mod)	Series	Appliance couplers for household and similar general purposes	EN 60320	Series
IEC 60364-1 (mod)	2001	Electrical installations of buildings Part 1: Fundamental principles, assessment of general characteristics, definitions	HD 384.1 S2	2001
IEC 60384-14 A1	1993 1995	Fixed capacitors for use in electronic equipment Part 14: Sectional specification: Fixed capacitors for electromagnetic interference suppression and connection to the supply mains	EN 132400 ⁶⁾	1994
IEC 60417	Data-base	Graphical symbols for use on equipment	-	-
IEC 60664-1 + A1 + A2	1992 2000 2002	Insulation coordination for equipment within low-voltage systems Part 1: Principles, requirements and tests	EN 60664-1	2003
IEC 60695-2-11	- ²⁾	Fire hazard testing Part 2-11: Glowing/hot-wire based test methods - Glow-wire flammability test method for end-products	EN 60695-2-11	2001 ³⁾
IEC 60695-2-20	- ²⁾	Part 2-20: Glowing/hot-wire based test methods - Hot-wire coil ignitability - Apparatus, test method and guidance	-	-
IEC 60695-10-2	- ²⁾	Part 10-2: Guidance and test methods for the minimization of the effects of abnormal heat on electrotechnical products involved in fires - Method for testing products made from non-metallic materials for resistance to heat using the ball pressure test	EN 60695-10-2	2003 ³⁾
IEC 60695-11-3	- ²⁾	Part 11-3: Test flames - 500 W flames - Apparatus and confirmational test methods	-	-
IEC 60695-11-4	- ²⁾	Part 11-4: Test flames - 50 W flames - Apparatus and confirmational test methods	-	-
IEC 60695-11-10 A1	- ²⁾	Part 11-10: Test flames - 50 W horizontal and vertical flame test methods	EN 60695-11-10 A1	1999 ³⁾ 2003 ³⁾

⁶⁾ EN 132400, *Sectional Specification: Fixed capacitors for electromagnetic interference suppression and connection to the supply mains (Assessment level D)*, and its amendments are related to, but not directly equivalent to IEC 60384-14. They are superseded by EN 60384-14:2005, which is based on IEC 60384-14:2005.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60695-11-20 A1	- ²⁾	Part 11-20: Test flames - 500 W flame test methods	EN 60695-11-20 A1	1999 ³⁾ 2003 ³⁾
IEC 60730-1 (mod) A1	1999 2003	Automatic electrical controls for household and similar use Part 1: General requirements	EN 60730-1 A1 A12 + A13 + A14 + A16 A2	2000 2004 2003 2004 2005 2007 2008
A2	2007		A2	2008
IEC 60747-5-5	2007	Semiconductor devices - Discrete devices Part 5-5: Optoelectronic devices - Photocouplers	EN 60747-5-5	- ¹⁾
IEC 60825-1	- ²⁾	Safety of laser products Part 1: Equipment classification, requirements and user's guide	EN 60825-1	2007 ³⁾
IEC 60825-2	- ²⁾	Part 2: Safety of optical fibre communication systems	EN 60825-2 A1	2004 ³⁾ 2007 ³⁾
IEC/TR 60825-9	- ²⁾	Part 9: Compilation of maximum permissible exposure to incoherent optical radiation	-	-
IEC 60825-12	- ²⁾	Part 12: Safety of free space optical communication systems used for transmission of information	EN 60825-12	2004 ³⁾
IEC 60851-3 A1	1996 1997	Winding wires - Test methods Part 3: Mechanical properties	EN 60851-3 A1	1996 1997
IEC 60851-5 A1 A2	1996 1997 2004	Part 5: Electrical properties	EN 60851-5 A1 A2	1996 1997 2004
IEC 60851-6	1996	Part 6: Thermal properties	EN 60851-6	1996
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 60906-1	- ²⁾	IEC System of plugs and socket-outlet for household and similar purposes Part 1: Plugs and socket-outlets 16 A 250 V a.c.	-	-
IEC 60906-2	- ²⁾	Part 2: Plugs and socket-outlets 15 A 125 V a.c.	-	-
IEC 60947-1	2004	Low voltage switchgear and control gear Part 1: General rules	EN 60947-1	2004
IEC 60990	1999	Methods of measurement of touch current and protective conductor current	EN 60990	1999

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61051-2	1991	Varistors for use in electronic equipment Part 2: Sectional specification for surge suppression varistors	-	-
IEC 61058-1 (mod)	2000	Switches for appliances Part 1: General requirements	EN 61058-1 ⁷⁾	2002
ISO 178	- ²⁾	Plastics - Determination of flexural properties	EN ISO 178	2003 ³⁾
ISO 179	Series	Plastics - Determination of Charpy impact strength	EN ISO 179	Series
ISO 180	- ²⁾	Plastics - Determination of Izod impact strength	EN ISO 180	2000 ³⁾
ISO 261	- ²⁾	ISO general-purpose metric screw threads - General plan	-	-
ISO 262	- ²⁾	ISO general-purpose metric screw threads - Selected sizes for screws, bolts and nuts	-	-
ISO 527	Series	Plastics - Determination of tensile properties	EN ISO 527	Series
ISO 3864	Series	Safety colours and safety signs	-	-
ISO 4892-1	- ²⁾	Plastics - Methods of exposure to laboratory light sources Part 1: General guidance	EN ISO 4892-1	2000 ³⁾
ISO 4892-2	- ²⁾	Part 2: Xenon-arc sources	EN ISO 4892-2	2006 ³⁾
ISO 4892-4	- ²⁾	Part 4: Open-flame carbon-arc lamps	-	-
ISO 7000	Data- base	Graphical symbols for use on equipment - Index and synopsis	-	-
ISO 8256	- ²⁾	Plastics - Determination of tensile-impact strength	EN ISO 8256	2004 ³⁾
ISO 9772	- ²⁾	Cellular plastics - Determination of horizontal burning characteristics of small specimens subjected to a small flame	-	-
ISO 9773	- ²⁾	Plastics - Determination of burning behaviour of thin flexible vertical specimens in contact with a small-flame ignition source	EN ISO 9773	1998 ³⁾
ITU-T Recommendation K.44	- ²⁾	Resistibility tests for telecommunication equipment exposed to overvoltages and overcurrents - Basic Recommendation	-	-

⁷⁾ EN 61058-1:2002 includes A1:2001 to IEC 61058-1:2000.

Annex ZB
(normative)

Special national conditions

Special national condition: National characteristic or practice that cannot be changed even over a long period, e.g. climatic conditions, electrical earthing conditions.

NOTE If it affects harmonization, it forms part of the European Standard.

For the countries in which the relevant special national conditions apply these provisions are normative, for other countries they are informative.

Change the existing special national conditions as follows:

Clause	Special national condition
1.2.13.14	<p>Add as new SNC:</p> <p>In Norway and Sweden, for requirements see 1.7.2.1 and 7.3 of this annex.</p>
1.5.7.1	<p>Replace the existing SNC by the following:</p> <p>In Finland, Norway and Sweden, resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.</p>
1.7.2.1	<p>Add as new SNC:</p> <p>In Norway and Sweden, the screen of the cable distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation need to be isolated from the screen of a cable distribution system.</p> <p>It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by e.g. a retailer.</p> <p>The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in:</p> <p>“Equipment connected to the protective earthing of the building installation through the mains connection or through other equipment with a connection to protective earthing – and to a cable distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a cable distribution system has therefore to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11).”</p> <p>NOTE In Norway, due to regulation for installations of cable distribution systems, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min.</p>

Clause	Special national condition
1.7.5	<p>Translation to Norwegian (the Swedish text will also be accepted in Norway):</p> <p>“Utstyr som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordkoplek utstyr – og er tilkoplek et kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkoplek av utstyret til kabel-TV nettet installeres en galvanisk isolator mellom utstyret og kabel- TV nettet.”</p> <p>Translation to Swedish:</p> <p>”Utrustning som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av utrustningen till kabel-TV nät galvanisk isolator finnas mellan utrustningen och kabel-TV nätet.”</p> <p>Add the following paragraph to the existing SNC for Denmark:</p> <p>For CLASS II EQUIPMENT the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.</p>
7.3	<p>Delete the existing SNC for Norway and Sweden (based on NOTE 1 of IEC 60950-1:2005 + corr. 1).</p> <p>Add as new SNC (based on future NOTE 3 of IEC 60950-1:200X):</p> <p>In Norway and Sweden, for requirements see 1.2.13.14 and 1.7.2.1 of this annex.</p>

Annex ZC
(informative)

A-deviations

A-deviation: National deviation due to regulations, the alteration of which is for the time being outside the competence of the CENELEC national member.

This European Standard falls under Directives RTTED (1999/5/EC) and LVD (2006/95/EC).

NOTE (from CEN/CENELEC IR Part 2:2006, 2.17) When standards fall under EC Directives, it is the view of the Commission of the European Communities (OJ No. C 59, 1982-03-09) and the effect of the decision of the Court of Justice in case 815/79 Cremonini/Vrankovich (European Court Reports 1980, p. 3583) is that compliance with A-deviations is no longer mandatory and that the free movement of products complying with such a standard should not be restricted within the EC except under the safeguard procedure provided for in the relevant Directive.

A-deviations in an EFTA-country are valid instead of the relevant provisions of the European Standard in that country until they have been removed.

Clause	Deviation
1.5.1	<p>Sweden</p> <p>Delete the A-deviation.</p>
1.7.2.1	<p>Denmark</p> <p>Delete the A-deviation.</p>
1.7.5	<p>Denmark</p> <p>Delete the A-deviation.</p>
5.1.7.1	<p>Denmark</p> <p>Delete the A-deviation.</p>