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Hörfrekvensutrustningar för industriellt, vetenskapligt och medicinskt bruk (ISM-utrustning) – Elektromagnetiska störningar – Gränsvärden och mätmetoder

*Industrial, scientific and medical (ISM) radio-frequency equipment –
Electromagnetic disturbance characteristics –
Limits and methods of measurement*

Som svensk standard gäller europastandarden EN 55011:2007. Den svenska standarden innehåller den officiella engelska språkversionen av EN 55011:2007.

Nationellt förord

Europastandarden EN 55011:2007

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **CISPR 11^{*)}, Fourth edition, 2003 - Industrial, scientific and medical (ISM) radio-frequency equipment - Electromagnetic disturbance characteristics - Limits and methods of measurement**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 55011, utgåva 2, 1998, SS-EN 55011/A1, utgåva 1, 1999 och SS-EN 55011/A2, utgåva 1, 2002, gäller ej fr o m 2009-11-01.

^{*)} Amendment A1 till CISPR 11:2003 är inarbetat i texten. Ändringarna är markerade med ett lodrät streck i marginalen.

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Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

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English version

**Industrial, scientific and medical (ISM) radio-frequency equipment -
Electromagnetic disturbance characteristics -
Limits and methods of measurement
(CISPR 11:2003 + A1:2004, modified)**

Appareils industriels,
scientifiques et médicaux (ISM)
à fréquence radioélectrique -
Caractéristiques de perturbations
électromagnétiques -
Limites et méthodes de mesure
(CISPR 11:2003 + A1:2004, modifiée)

Industrielle, wissenschaftliche
und medizinische Hochfrequenzgeräte
(ISM-Geräte) -
Funkstörungen -
Grenzwerte und Messverfahren
(CISPR 11:2003 + A1:2004, modifiziert)

This European Standard was approved by CENELEC on 2006-11-01. 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 Central Secretariat 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 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

The text of the International Standard CISPR 11:2003 + A1:2004, prepared by CISPR SC B, Interference relating to industrial, scientific and medical radio-frequency apparatus, to other (heavy) industrial equipment, to overhead power lines, to high voltage equipment and to electric traction, together with the common modifications prepared by the Technical Committee CENELEC TC 210, Electromagnetic compatibility (EMC), was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 55011 on 2006-11-01.

This European Standard supersedes EN 55011:1998 + A1:1999 + A2:2002.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2007-11-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2009-11-01

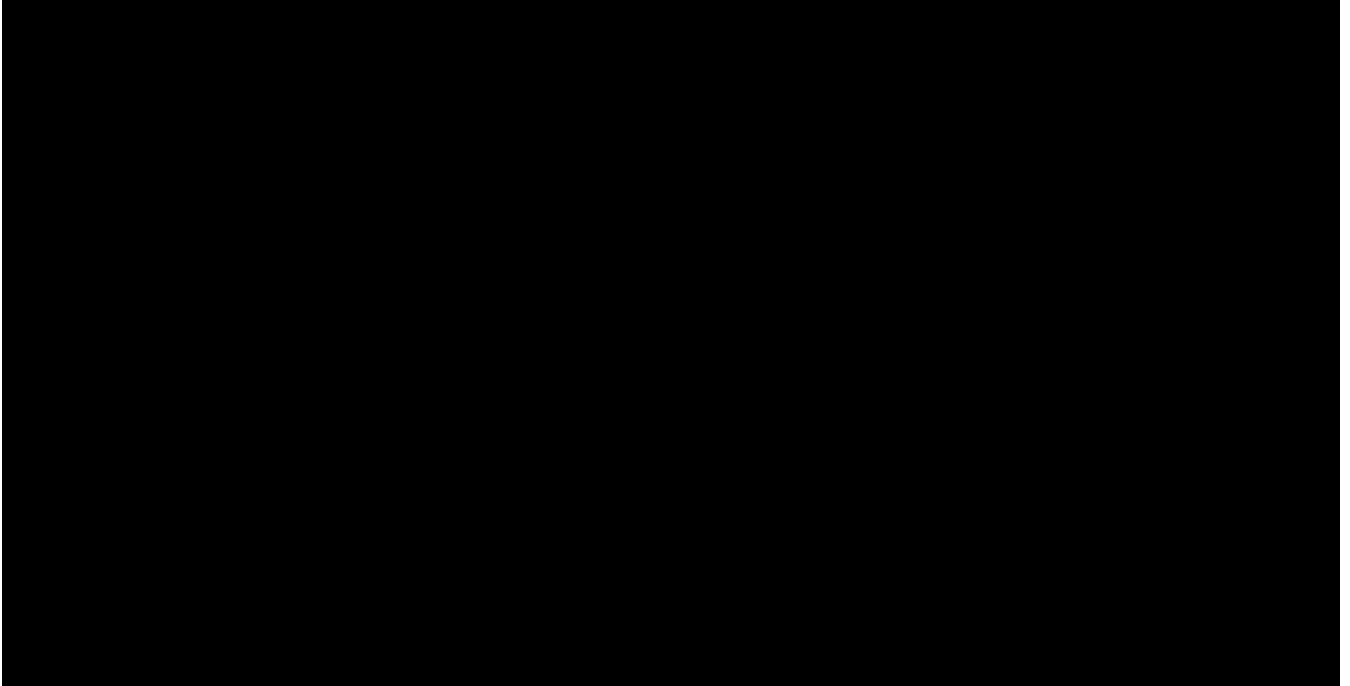
This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and covers essential requirements of EC Directive 89/336/EEC. See Annex ZZ.

Clauses, subclauses, notes, tables and figures which are additional to those in CISPR 11 are prefixed “Z”.

Annexes ZA, ZB and ZZ have been added by CENELEC.

Endorsement notice

The text of the International Standard CISPR 11:2003 + A1:2004 was approved by CENELEC as a European Standard with agreed common modifications as given below.



Annex ZB (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>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
CISPR 15	- ¹⁾	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment	EN 55015	2006 ²⁾
CISPR 16-1	1999	Specification for radio disturbance and immunity measuring apparatus and methods - Part 1: Radio disturbance and immunity measuring apparatus	-	-
CISPR 16-2	1996	Specification for radio disturbance and immunity measuring apparatus and methods - Part 2: Methods of measurement of disturbances and immunity	-	-
CISPR 19	- ¹⁾	Guidance on the use of the substitution method - for measurements of radiation from microwave ovens for frequencies above 1 GHz	-	-
IEC 60050-161	- ¹⁾	International Electrotechnical Vocabulary (IEV) - Chapter 161: Electromagnetic compatibility	-	-
IEC/TR 60083	- ¹⁾	Plugs and socket-outlets for domestic and similar general use standardized in member countries of IEC	-	-
IEC 60705	1999	Household microwave ovens - Methods for measuring performance	EN 60705	1999
IEC 60974-10	- ¹⁾	Arc welding equipment - Part 10: Electromagnetic compatibility (EMC) requirements	EN 60974-10	2003 ²⁾
IEC 61689	- ¹⁾	Ultrasonics - Physiotherapy systems - Performance requirements and methods of measurement in the frequency range 0,5 MHz to 5 MHz	EN 61689	1996 ²⁾

¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

CONTENTS

1	General	13
1.1	Scope and object.....	13
1.2	Normative references	13
2	Definitions	15
3	Frequencies designated for ISM use	17
4	Classification of ISM equipment	17
4.1	Separation into groups.....	19
4.2	Division into classes	19
5	Limits of electromagnetic disturbances.....	19
5.1	Limits of terminal disturbance voltage	21
5.2	Limits of electromagnetic radiation disturbance	25
5.3	Provisions for protection of safety services	39
5.4	Provisions for protection of specific sensitive radio services	39
6	General measurement requirements	39
6.1	Ambient noise.....	41
6.2	Measuring equipment	41
6.3	Frequency measurement	45
6.4	Configuration of equipment under test.....	45
6.5	Load conditions of equipment under test	49
7	Special provisions for test site measurements (9 kHz to 1 GHz)	55
7.1	Measurement of mains terminal disturbance voltage	55
7.2	Radiation test site for 9 kHz to 1 GHz.....	57
7.3	Alternative radiation test sites for the frequency range 30 MHz to 1 GHz	59
8	Radiation measurements: 1 GHz to 18 GHz	59
8.1	Test arrangement	59
8.2	Receiving antenna	59
8.3	Validation and calibration of test site	61
8.4	Measuring procedure	61
9	Measurement <i>in situ</i>	61
10	Safety precautions	61
11	Assessment of conformity of equipment	63
11.1	Statistical assessment of compliance of series produced equipment.....	63
11.2	Equipment in small-scale production	63
11.3	Equipment produced on an individual basis	65
	Annex A (informative) Examples of equipment classification	71
	Annex B (informative) Precautions to be taken in the use of a spectrum analyzer (see 6.2.1)	73
	Annex C (normative) Measurement of electromagnetic radiation disturbance in the presence of signals from radio transmitters.....	77

Annex D (informative) Propagation of interference from industrial r.f. equipment at frequencies between 30 MHz and 300 MHz	79
Annex E (informative) Safety related service bands	81
Annex F (informative) Sensitive service bands	83
 Bibliography	 85
 Figure 1 – Test site	 65
Figure 2 – Minimum size of metal ground plane	65
Figure 3 – Disposition of medical (capacitive type) and dummy load (see 6.5.1.1)	67
Figure 4 – Circuit for disturbance voltage measurements on mains supply (see 6.2.2)	67
Figure 5 – Decision tree for the measurement of emissions from 1 GHz to 18 GHz of class B, group 2 ISM equipment operating at frequencies above 400 MHz	69
Figure 6 – Artificial hand, RC element (see 6.2.5)	69
 Table 1 – Frequencies designated by ITU for use as fundamental ISM frequencies	 17
Table 2a – Mains terminal disturbance voltage limits for class A equipment measured on a test site	23
Table 2b – Mains terminal disturbance voltage limits for class B equipment measured on a test site	23
Table 2c – Mains terminal disturbance voltage for induction cooking appliances	25
Table 3 – Electromagnetic radiation disturbance limits for group 1 equipment	27
Table 4 – Electromagnetic radiation disturbance limits for group 2, class B equipment measured on a test site	31
Table 5a – Electromagnetic radiation disturbance limits for group 2, Class A equipment	33
Table 5b – Electromagnetic radiation disturbance limits for class A EDM and arc welding equipment measured on a test site	35
Table 6 – Electromagnetic radiation disturbance peak limits for group 2, class A and class B ISM equipment producing CW type disturbances and operating at frequencies above 400 MHz	37
Table 7 – Electromagnetic radiation disturbance peak limits for group 2, class B ISM equipment producing fluctuating disturbances other than CW and operating at frequencies above 400 MHz	37
Table 8 – Electromagnetic radiation disturbance weighted limits for group 2, class B ISM equipment operating at frequencies above 400 MHz	37
Table 9 – Limits for electromagnetic radiation disturbances to protect specific safety services in particular areas	39
Table 10 – The non-central <i>t</i> -distribution factor <i>k</i> as a function of the sample size <i>n</i>	63

INDUSTRIAL, SCIENTIFIC AND MEDICAL (ISM) RADIO-FREQUENCY EQUIPMENT – ELECTROMAGNETIC DISTURBANCE CHARACTERISTICS – LIMITS AND METHODS OF MEASUREMENT

1 General

1.1 Scope and object

The limits and methods of measurement laid down in this International Standard apply to industrial, scientific and medical (ISM) equipment as defined in Clause 2, and to electro-discharge machining (EDM) and arc welding equipment.

NOTE The limits have been determined on a probabilistic basis taking into account the likelihood of interference. In cases of interference, additional provisions may be required.

Procedures are given for the measurement of radio-frequency disturbances and limits are laid down within the frequency range 9 kHz to 400 GHz.

Requirements for ISM lighting apparatus and UV irradiators operating at frequencies within the ISM frequency bands defined by the ITU Radio Regulations are contained in this standard.

Requirements for other types of lighting apparatus are covered in CISPR 15.

1.2 Normative references

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.

CISPR 15, *Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment*

CISPR 16-1:1999, *Specification for radio disturbance and immunity measuring apparatus and methods – Part 1: Radio disturbance and immunity measuring apparatus*

CISPR 16-2:1996, *Specification for radio disturbance and immunity measuring apparatus and methods – Part 2: Methods of measurement of disturbances and immunity*

CISPR 19, *Guidance on the use of the substitution method for measurements of radiation from microwave ovens for frequencies above 1 GHz*

IEC 60050(161), *International Electrotechnical Vocabulary (IEV) – Chapter 161: Electromagnetic compatibility*

IEC 60083, *Plugs and sockets outlets for domestic and similar general use standardized in member countries of IEC*