SLOVENSKI STANDARD
SIST EN 55011:2007

01-oktober-2007

Industrijska, znanstvena in medicinska (ISM) radiofrekvenļna oprema - Karakteristike obļutljivosti za radijske motnje - Mejne vrednosti in merilne metode (CISPR 11:2003 (spremenjen) + A1:2004 (spremenjen))

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

Industrielle, wissenschaftliche und medizinische Hochfrequenzgeräte (ISM-Geräte) - Funkstörungen - Grenzwerte und Messverfahren

Appareils industriels, scientifiques et médicaux (ISM) a fréquence radioélectrique - Caractéristiques de perturbations électromagnétiques - Limites et méthodes de mesure

Ta slovenski standard je istoveten z: **EN 55011:2007**

ICS:

33.100.10 Emisija Emission

SIST EN 55011:2007 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 55011

March 2007

ICS 33.100.10

Supersedes EN 55011:1998 + A1:1999 + A2:2002

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

Ref. No. EN 55011:2007 E

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.

COMMON MODIFICATIONS

2 Definitions

Add a new definition:

2.Z1
low voltage
set of voltage levels used for the distribution of electricity and whose upper limit is 1 000 V a.c. r.m.s.

3 Frequencies designated for ISM use

Replace Clause 3 by:

3 National measures and frequencies designated for ISM use

Certain frequencies are designated by the International Telecommunication Union (ITU) for use as fundamental frequencies for ISM equipment. The frequencies designated for ISM use are listed in Table 1.

Table 1 – Frequencies designated by ITU for use as fundamental ISM frequencies [a]

Centre frequency MHz	Frequency range MHz	Maximum radiation limit [b]	Number of appropriate footnote to the table of frequency allocation of the ITU Radio Regulations
6,780	6,765 – 6,795	Under consideration	S5.138
13,560	13,553 – 13,567	Unrestricted	S5.150
27,120	26,957 – 27,283	Unrestricted	S5.150
40,680	40,66 – 40,70	Unrestricted	S5.150
433,920	433,05 – 434,79	Under consideration	S5.138 in Region 1, except countries mentioned in S5.280
915,000	902 – 928	Unrestricted	S5.150 in Region 2 only
2 450	2 400 – 2 500	Unrestricted	S5.150
5 800	5 725 – 5 875	Unrestricted	S5.150
24 125	24 000 – 24 250	Unrestricted	S5.150
61 250	61 000 – 61 500	Under consideration	S5.138
122 500	122 000 – 123 000	Under consideration	S5.138
245 000	244 000 – 246 000	Under consideration	S5.138

[a] Resolution No. 63 of the ITU Radio Regulations applies.

[b] The term “unrestricted” applies to the fundamental and all other frequency components falling within the designated band.

In some CENELEC countries different or additional frequencies may be designated for ISM equipment. These frequencies are listed in Table ZA.1.

The limits for terminal voltages and radiation do not apply to these ISM frequencies. If ISM equipment uses fundamental frequencies other than the ITU or nationally designated frequencies, the limits for terminal voltage and radiation in this standard apply also to the fundamental frequencies.

5 Limits of electromagnetic disturbances

Table 5a **Delete** "(40) [a]" and "(60) [a]" and the corresponding Footnote "[a]".

Table 6 **Delete** NOTE 1.

Table 7 **Delete** NOTE 1.

Table 8 **Delete** NOTE 1.

Annex ZA
(informative)

Frequencies designated on a national basis in CENELEC countries for use as fundamental ISM frequencies

Table ZA.1 - Frequencies designated on a national basis in CENELEC countries for use as fundamental ISM frequencies

Frequency MHz			Maximum radiation limit [a]	Notes
0,009	-	0,010	Unlimited	Germany only
13,533	-	13,553	110 dB(µV/m) at 100 m	United Kingdom only
13,567	-	13,587	110 dB(µV/m) at 100 m	United Kingdom only
83,996	-	84,004	130 dB(µV/m) at 30 m	United Kingdom only
167,992	-	168,008	130 dB(µV/m) at 30 m	United Kingdom only
886,000	-	906,000	120 dB(µV/m) at 30 m	United Kingdom only

[a] Distance measured from the exterior wall outside the building in which the equipment is situated.

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.

Publication	Year	Title	EN/HD	Year
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.

Annex ZZ
(informative)

Coverage of Essential Requirements of EC Directives

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and within its scope the standard covers the requirements as given in Article 4(a) of the EC Directive 89/336/EEC.

Compliance with this standard provides one means of conformity with the specified essential requirements of the Directive concerned.

WARNING: Other requirements and other EC Directives may be applicable to the products falling within the scope of this standard.

COMMISSION
ÉLECTROTECHNIQUE
INTERNATIONALE

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

CISPR 11

Edition 4.1
2004-06

Edition 4:2003 consolidée par l'amendement 1:2004
Edition 4:2003 consolidated with amendment 1:2004

COMITÉ INTERNATIONAL SPÉCIAL DES PERTURBATIONS RADIOÉLECTRIQUES
INTERNATIONAL SPECIAL COMMITTEE ON RADIO INTERFERENCE

Appareils industriels, scientifiques et médicaux (ISM) à fréquence radioélectrique – Caractéristiques de perturbations électromagnétiques – Limites et méthodes de mesure

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

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE X

Pour prix, voir catalogue en vigueur
For price, see current catalogue

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

INTERNATIONAL SPECIAL COMMITTEE ON RADIO INTERFERENCE

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

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard CISPR 11 has been prepared by CISPR Subcommittee 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.

It has the status of a Product Family EMC standard in accordance with IEC Guide 107.

This consolidated version of CISPR 11 is based on the fourth edition (2003) [documents CISPR/B/295/FDIS and CISPR/B/301/RVD] and its amendment 1 (2004) [documents CISPR/B/324/FDIS and CISPR/B/327/RVD].

It bears the edition number 4.1.

A vertical line in the margin shows where the base publication has been modified by amendment 1.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of the base publication and its amendments will remain unchanged until the maintenance result date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.