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Elektriska hushållsapparater, elverktyg och liknande bruksföremål - Elektromagnetisk kompatibilitet (EMC) - Del 2: Immunitet

*Electromagnetic compatibility - Requirements for household appliances,
electric tools and similar apparatus -
Part 2: Immunity - Product family standard*

Som svensk standard gäller europastandarden EN 55014-2:1997, Den svenska standarden innehåller den officiella engelska språkversionen av EN 55014-2:1997.

Nationellt förord

Europastandarden EN 55014-2:1997

består av:

- **europastandardens ikraftsättningsdokument, utarbetat inom CENELEC**
- **CISPR 14-2, First edition, 1997 - Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 2: Immunity - Product family standard**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare utgiven svensk standard SS-EN 55104, utgåva 1, 1995, gäller ej fr o m 1997-08-01.

ICS 33.100

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Descriptors: Electromagnetic compatibility, immunity, household electrical appliances, electric equipment, portable electric tools, specifications, classifications, tests, conformity tests, test conditions

English version

**Electromagnetic compatibility - Requirements for household appliances,
electric tools and similar apparatus
Part 2: Immunity - Product family standard
(CISPR 14-2:1997)**

Compatibilité électromagnétique
Exigences pour les appareils
électrodomestiques, outillages
électriques et appareils analogues
Partie 2: Immunité
Norme de famille de produits
(CISPR 14-2:1997)

Elektromagnetische Verträglichkeit
Anforderungen an Haushaltgeräte
Elektrowerkzeuge und ähnliche
Elektrogeräte
Teil 2: Störfestigkeit
Produktfamiliennorm
(CISPR 14-2:1997)

This European Standard was approved by CENELEC on 1996-10-01. 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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and 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 document CISPR/F/201/FDIS, future edition 1 of CISPR 14-2, prepared by CISPR SC F, Interference relating to household appliances, tools, lighting equipment and similar apparatus, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 55014-2 on 1996-10-01.

This European Standard supersedes EN 55104:1995.

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) 1997-08-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 1997-08-01

Annexes designated "normative" are part of the body of the standard.

In this standard, annex ZA is normative.

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard CISPR 14-2:1997 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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>
IEC 50(161)	1990	International Electrotechnical Vocabulary (IEV) Chapter 161: Electromagnetic compatibility	-	-
IEC 1000-4-2	1995	Electromagnetic compatibility (EMC) Part 4: Testing and measurement techniques Section 2: Electrostatic discharge immunity test - Basic EMC publication	EN 61000-4-2	1995
IEC 1000-4-3 (mod)	1995	Section 3: Radiated, radio-frequency, electromagnetic field immunity test	EN 61000-4-3	1996
IEC 1000-4-4	1995	Section 4: Electrical fast transient/burst immunity test - Basic EMC publication	EN 61000-4-4	1995
IEC 1000-4-5	1995	Section 5: Surge immunity test	EN 61000-4-5	1995
IEC 1000-4-6	1996	Section 6: Immunity to conducted disturbances, induced by radio-frequency fields	EN 61000-4-6	1996
IEC 1000-4-11	1994	Section 11: Voltage dips, short interruptions and voltage variations immunity tests - Basic EMC publication	EN 61000-4-11	1994
CISPR 11 (mod)	1990	Limits and methods of measurement of electromagnetic disturbance characteristics of industrial, scientific and medical (ISM) radio-frequency equipment ¹⁾	EN 55011	1991

1) The title of EN 55011 is: Limits and methods of measurement of radio disturbance characteristics of industrial, scientific and medical (ISM) radio-frequency equipment.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
CISPR 14	1993	Limits and methods of measurement of radio disturbance characteristics of electrical motor-operated and thermal appliances for household and similar purposes, electric tools and similar electric apparatus	EN 55014	1993
CISPR 16-1	1993	Specification for radio disturbance and immunity measuring apparatus and methods Part 1: Radio disturbance and immunity measuring apparatus	-	-

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ELECTROMAGNETIC COMPATIBILITY - REQUIREMENTS FOR HOUSEHOLD APPLIANCES, ELECTRIC TOOLS AND SIMILAR APPARATUS -

Part 2: Immunity - Product family standard

1 Scope and object

1.1 This standard deals with the electromagnetic immunity of appliances and similar apparatus for household and similar purposes that use electricity, as well as electric toys and electric tools, the rated voltage of the apparatus being not more than 250 V for single-phase apparatus to be connected to phase and neutral, and 480 V for other apparatus.

Apparatus may incorporate motors, heating elements or their combination, may contain electric or electronic circuitry, and may be powered by the mains, by batteries, or by any other electrical power source.

Apparatus not intended for household use, but which nevertheless may require the immunity level, such as apparatus intended to be used by laymen in shops, in light industry and on farms, are within the scope of this standard, as far as they are included in CISPR 14, and in addition:

- microwave ovens for domestic use and catering;
- cooking hobs and cooking ovens, heated by means of r.f. energy, (single- and multiple-zone) induction cooking appliances;
- UV and IR radiators for personal care.

1.2 This standard does not apply to:

- equipment for lighting purposes;
- apparatus designed exclusively for heavy industrial purposes;
- apparatus intended to be part of the fixed electrical installation of buildings (such as fuses, circuit breakers, cables and switches);
- apparatus intended to be used in locations where special electromagnetic conditions prevail, such as the presence of high e.m. fields (for example in the vicinity of a broadcast transmitting station), or where high pulses occur on the power network (such as in a power generator station);
- radio and television receivers, audio and video equipment, and electronic music instruments;
- medical electrical appliances;
- personal computers and similar equipment;
- radio transmitters;
- apparatus designed to be used exclusively in vehicles,

1.3 Immunity requirements in the frequency range 0 Hz to 400 GHz are covered.

1.4 The effects of electromagnetic phenomena relating to the safety of apparatus are excluded from this standard and are covered by other standards, for example IEC 335.

Abnormal operation of the apparatus (such as simulated faults in the electric circuitry for testing purposes) is not taken into consideration.

NOTE – Attention is drawn to the fact that additional requirements may be necessary for apparatus intended to be used on board ships or aircraft.

1.5 The object of this standard is to specify the immunity requirements for apparatus defined in the scope in relation to continuous and transient, conducted and radiated electromagnetic disturbances, including electrostatic discharges.

These requirements represent essential electromagnetic compatibility immunity requirements.

NOTE - In special cases situations will arise where the level of disturbances may exceed the test values specified in this standard. In these instances special mitigation measure may have to be employed.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid international standards.

IEC 50(161): 1990, *International Electrotechnical Vocabulary (IEV) – Chapter 161: Electromagnetic compatibility*

IEC 1000-4-2: 1995, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 2: Electrostatic discharge immunity test – Basic EMC publication*

IEC 1000-4-3: 1995, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 3: Radiated, radio-frequency, electromagnetic field immunity test*

IEC 1000-4-4: 1995, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 4: Electrical fast transient/burst immunity test – Basic EMC publication*

IEC 1000-4-5: 1995, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 5: Surge immunity test*

IEC 1000-4-6: 1996, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 6: Immunity to conducted disturbances, induced by radio-frequency fields*

IEC 1000-4-11: 1994, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 11: Voltage dips, short interruptions and voltage variations immunity tests – Basic EMC publication*

CISPR 11: 1990, *Limits and methods of measurement of electromagnetic disturbance characteristics of industrial, scientific and medical (ISM) radio-frequency equipment*

CISPR 14: 1993, *Limits and methods of measurement of radio disturbance characteristics of electrical motor-operated and thermal appliances for household and similar purposes, electric tools and similar electric apparatus*

CISPR 16-1: 1993, *Specification for radio disturbance and immunity measuring apparatus and methods – Part 1: Radio disturbance and immunity measuring apparatus*