SLOVENSKI STANDARD
SIST EN 55104:1997

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

Electromagnetic compatibility - Immunity requirements for household appliances, tools and similar apparatus - Product family standard

Elektromagnetische Verträglichkeit - Störfestigkeitsanforderungen für Haushaltgeräte, Werkzeuge und ähnliche Geräte - Produktfamilien-Norm

Compatibilité électromagnétique - Exigences d'immunité pour les appareils électrodomestiques, outils électriques et appareils analogues - Norme de famille de produits

Ta slovenski standard je istoveten z: **EN 55104:1995**

ICS:

33.100.20	Imunost	Immunity

SIST EN 55104:1997 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 55104

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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 Immunity requirements for household appliances, tools and similar apparatus Product family standard

Compatibilité électromagnétique
Exigences d'immunité pour les appareils électrodomestiques, outils électriques et appareils analogues
Norme de famille de produits

Elektromagnetische Verträglichkeit
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Produktfamilien-Norm

This European Standard was approved by CENELEC on 1995-03-06. 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.

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

This European Standard was prepared jointly by the CENELEC Technical Committees TC 61, Safety of household and similar electrical appliances, and SC 110A, EMC Products.

The draft was submitted to the CENELEC Unique Acceptance Procedure (UAP) in May 1994 and was approved by CENELEC as EN 55104[1)] on 1995-03-06.

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) 1996-01-01

- latest date by which national standard conflicting with the EN have to be withdrawn (dow) 1996-01-01

For products which have complied with EN 50082-1:1992 before 1996-01-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 1997-01-01.

1) This standard may be adapted and renumbered as EN 55014-2 pending the outcome of the IEC-CENELEC parallel vote on CISPR 14-2.

Introduction

The intention of this standard is to establish uniform requirements for the electromagnetic immunity of the equipment contained in the scope, to fix test specifications of immunity, to refer to basic standards for methods of testing and to standardize operating conditions, performance criteria and interpretation of results.

Content

1 Scope

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 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 EN 55014, 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 general lighting purposes;
- apparatus designed exclusively for heavy industrial purposes;
- apparatus intended to be part of the fixed electrical installation of buildings (e.g. 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 (e.g. in the vicinity of a broadcast transmitting station) or where high pulses occur on the power network (e.g. 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, e.g. EN 60335.

Abnormal operation of the apparatus (e.g. simulated faults in the electric circuitry for testing purposes) are 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.

2 Normative references

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).

ENV 50140[2)]	Electromagnetic compatibility - Basic immunity standard - Radiated, radio-frequency electromagnetic field - Immunity test
ENV 50141[2)]	Electromagnetic compatibility - Basic immunity standard - Conducted disturbances induced by radio-frequency fields - Immunity test
EN 61000	Electromagnetic compatibility
EN 61000-4-2	Part 4: Testing and measuring techniques Section 2: Electrostatic discharge immunity test (IEC 1000-4-2)
EN 61000-4-4	Part 4: Testing and measuring techniques Section 4: Electrical fast transient burst immunity test (IEC 1000-4-4)
EN 61000-4-5	Part 4: Testing and measuring techniques Section 5: Surge immunity test (IEC 1000-4-5)
EN 61000-4-11	Part 4: Testing and measuring techniques Section 11: Voltage dips, short interruptions and voltage variations immunity tests (IEC 1000-4-11)
EN 55011	Limits and methods of measurement of electromagnetic disturbance characteristics of industrial, scientific and medical (ISM) radio-frequency equipment (CISPR 11, modified)
EN 55014	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 14)
CISPR 16	CISPR specification for radio interference measuring apparatus and measuring methods
IEC 50(161)	International Electrotechnical Vocabulary (IEV) Chapter 161: Electromagnetic compatibility

2) ENV 50140 and ENV 50141 may be replaced by EN 61000-4-3 (IEC 1000-4-3) and EN 61000-4-6 (IEC 1000-4-6) pending their approval by CENELEC.

3 Objective

The objective 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 measures may have to be employed.

4 Definitions

Definitions related to EMC and relevant phenomena may be found in chapter 161 of the IEV (IEC 50) and in IEC and CISPR Publications.

The following particular definitions are used in this standard:

4.1 **electromagnetic compatibility**: The ability of a device, unit of equipment or system to function satisfactorily in its electromagnetic environment without introducing intolerable electromagnetic disturbances to anything in that environment.

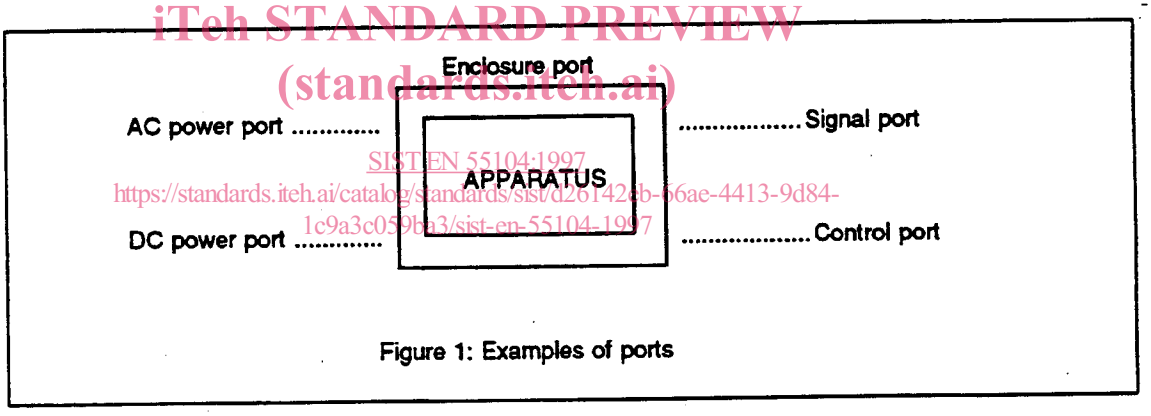

Figure 1: Examples of ports

4.2 **port**: Particular interface of the specified apparatus with the external electromagnetic environment (see figure 1).

4.3 **enclosure port**: The physical boundary of the apparatus through which electromagnetic fields may radiate or impinge.

4.4 **series production**: The production process in which apparatus are manufactured continuously or in batches (consisting of identical products).