



# SLOVENSKI STANDARD

## SIST EN 61000-4-14:2001

01-marec-2001

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**Elektromagnetna združljivost (EMC) – 4-16. del: Preskušanje in merilne tehnike – Preskušanje odpornosti proti napetostnim nihanjem (IEC 61000-4-14:1999)**

Electromagnetic compatibility (EMC) -- Part 4-14: Testing and measurement techniques - Voltage fluctuation immunity test

Elektromagnetische Verträglichkeit (EMV) -- Teil 4-14: Prüf- und Meßverfahren - Prüfung der Störfestigkeit gegen Spannungsschwankungen

Compatibilité électromagnétique (CEM) -- Partie 4-14: Techniques d'essai et de mesure - Essai d'immunité aux fluctuations de tension

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**Ta slovenski standard je istoveten z: EN 61000-4-14:1999**

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**ICS:**

33.100.20      Imunost      Immunity

**SIST EN 61000-4-14:2001      en**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 61000-4-14**

April 1999

ICS 33.100.20

English version

**Electromagnetic compatibility (EMC)**  
**Part 4-14: Testing and measurement techniques**  
**Voltage fluctuation immunity test**  
(IEC 61000-4-14:1999)

Compatibilité électromagnétique (CEM)  
Partie 4-14: Techniques d'essai et de  
mesure - Essai d'immunité aux  
fluctuations de tension  
(CEI 61000-4-14:1999)

Elektromagnetische  
Verträglichkeit (EMV)  
Teil 4-14: Prüf- und Meßverfahren -  
Prüfung der Störfestigkeit gegen  
Spannungsschwankungen  
(IEC 61000-4-14:1999)

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This European Standard was approved by CENELEC on 1999-04-01. 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, Czech Republic, 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 77A/263/FDIS, future edition 1 of IEC 61000-4-14, prepared by SC 77A, Low-frequency phenomena, of IEC TC 77, Electromagnetic compatibility, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61000-4-14 on 1999-04-01.

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) 2000-01-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2002-04-01

Annexes designated "normative" are part of the body of the standard. Annexes designated "informative" are given for information only. In this standard, annex ZA is normative and annex A informative. Annex ZA has been added by CENELEC.

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## iTeh STANDARD PREVIEW

### Endorsement notice

The text of the International Standard IEC 61000-4-14:1999 was approved by CENELEC as a European Standard without any modification.

In the official version, Bibliography, the following notes have to be added for the standards indicated:

- IEC 61000-2-2 NOTE: Harmonized as ENV 61000-2-2:1993 (modified).
  - IEC 61000-4-1 NOTE: Harmonized as EN 61000-4-1:1994 (not modified).
  - IEC 61000-4-11 NOTE: Harmonized as EN 61000-4-11:1994 (not modified).
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**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 60050(161)	1990	International Electrotechnical Vocabulary (IEV) Chapter 161: Electromagnetic compatibility	-	-
IEC 60068-1	1988	Environmental testing Part 1: General and guidance	EN 60068-1 <sup>1)</sup>	1994
IEC 61000-2-4 + corr. August	1994 1994	Electromagnetic compatibility (EMC) Part 2: Environment Section 4: Compatibility levels in industrial plants for low-frequency conducted disturbances	EN 61000-2-4	1994

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1) EN 60068-1 includes the corrigendum October 1988 and A1:1992 to IEC 60068-1.

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PUBLICATION FONDAMENTALE EN CEM  
BASIC EMC PUBLICATION

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**Compatibilité électromagnétique (CEM) –  
Partie 4-14:  
Techniques d'essai et de mesure –  
Essai d'immunité aux fluctuations de tension**

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**Electromagnetic compatibility (EMC) –**

**Part 4-14:** SIST EN 61000-4-14:2001  
<https://standards.iteh.ai/catalog/standards/sist/05e298be-55f9-45bb-9c03-119921771177>  
**Testing and measurement techniques –  
Voltage fluctuation immunity test**

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International Electrotechnical Commission  
Международная Электротехническая Комиссия

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

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTROMAGNETIC COMPATIBILITY (EMC) –****Part 4-14: Testing and measurement techniques –  
Voltage fluctuation immunity test**

## FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the 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, the IEC publishes International Standards. 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. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61000-4-14 has been prepared by subcommittee 77A: Low frequency phenomena, of IEC technical committee 77: Electromagnetic compatibility.

This standard forms part 4-14 of IEC 61000 series. It has the status of basic EMC publication in accordance with IEC Guide 107.

The text of this standard is based on the following documents:

FDIS	Report on voting
77A/263/FDIS	77A/268/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

Annex A is for information only.

## INTRODUCTION

IEC 61000 is published in separate parts according to the following structure:

### Part 1: General

General considerations (introduction, fundamental principles)

Definitions, terminology

### Part 2: Environment

Description of the environment

Classification of the environment

Compatibility levels

### Part 3: Limits

Emission limits

Immunity limits (insofar as these limits do not fall under the responsibility of the product committees)

### Part 4: Testing and measurement techniques

Measurement techniques

Testing techniques

### Part 5: Installation and mitigation guidelines

Installation guidelines

Mitigation methods and devices

### Part 6: Generic standards

### Part 9: Miscellaneous

Each part is further subdivided into several parts, published either as International Standards, or as technical reports, some of which have already been published as sections. Others will be published with the part number followed by a dash and a second number identifying the subdivision (example 61000-6-1).

## ELECTROMAGNETIC COMPATIBILITY (EMC) –

### Part 4-14: Testing and measurement techniques – Voltage fluctuation immunity test

#### 1 Scope

This part of IEC 61000 is a basic electromagnetic compatibility (EMC) publication. It considers immunity tests for electrical and/or electronic equipment in their electromagnetic environment. Only conducted phenomena are considered, including immunity tests for equipment connected to public and industrial power supply networks.

This part aims to establish a reference for evaluating the immunity of electric and electronic equipment when subjected to positive and negative low amplitude voltage fluctuations.

The voltage fluctuations considered by this standard do not include flicker, which is a physiological phenomenon due to lighting luminance fluctuations.

This standard applies to electrical and/or electronic equipment that have a rated input current up to 16 A per phase. It does not apply to electrical and/or electronic equipment connected to d.c. or a.c. 400 Hz distribution networks. Tests concerning these networks will be covered by other IEC standards.

The immunity test levels required for a specific electromagnetic environment, together with the performance criteria, are indicated in the product, product family or generic standards as applicable. However, most product groups do not have a history of being susceptible to voltage fluctuations. Consequently, testing for these phenomena is often not required.

#### 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 61000. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of IEC 61000 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60050(161):1990, *International Electrotechnical Vocabulary (IEV) – Chapter 161: Electromagnetic compatibility*

IEC 60068-1:1988, *Environmental testing – Part 1: General and guidance*

IEC 61000-2-4:1994, *Electromagnetic compatibility (EMC) – Part 2: Environment – Section 4: Compatibility levels in industrial plants for low-frequency conducted disturbances*