
Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 11: Voltage dips, short interruptions and voltage variations immunity tests

Electromagnetic compatibility (EMC) -- Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests

Elektromagnetische Verträglichkeit (EMV) -- Teil 4-11: Prüf- und Meßverfahren - Prüfung der Störfestigkeit gegen Spannungseinbrüche, Kurzzeitunterbrechungen und Spannungsschwankungen (standards.iteh.ai)

Compatibilité électromagnétique (CEM) -- Partie 4-11: Techniques d'essai et de mesure - Essais d'immunité aux creux de tension, coupures brèves et variations de tension

Ta slovenski standard je istoveten z: EN 61000-4-11:1994

ICS:

33.100.20 Imunost Immunity

SIST EN 61000-4-11:1997 en

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EUROPEAN STANDARD

EN 61000-4-11

NORME EUROPEENNE

EUROPÄISCHE NORM

August 1994

UDC 621.37.001.365

Descriptors: Electromagnetic compatibility, measurements, electric power networks, low voltage, electric equipment, electronic equipment, tests, voltage, electric power supply, variation

ENGLISH VERSION

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

Compatibilité électromagnétique
(CEM)

Partie 4: Techniques d'essai et
de mesure

Section 11: Essais d'immunité
relatifs aux creux de tension,
coupures brèves et variations
de tension

(CEI 1000-4-11:1994)

Elektromagnetische
Verträglichkeit (EMV)

Teil 4: Prüf- und
Meßverfahren

Hauptabschnitt 11: Prüfung der
Störfestigkeit gegen

Spannungseinbrüche,
Kurzzeitunterbrechungen und
Spannungsschwankungen

(IEC 1000-4-11:1994)

SIST EN 61000-4-11:1997

This European Standard was approved by CENELEC on 1993-12-08.
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 77B(CO)17, as prepared by Sub-Committee 77B: High-frequency phenomena, of IEC Technical Committee 77: Electromagnetic compatibility, was submitted to the IEC-CENELEC parallel vote in May 1993.

The reference document was approved by CENELEC as EN 61000-4-11 on 8 December 1993.

The following dates were fixed:

- latest date of publication of an identical national standard (dop) 1995-06-01
- latest date of withdrawal of conflicting national standards (dow) 1995-06-01

For products which have complied with the relevant national standard before 1995-06-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 2000-06-01.

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Annexes designated "normative" are part of the body of the standard. Annexes designated "informative" are given only for information. In this standard annexes A and ZA are normative and annexes B and C are informative.

ENDORSEMENT NOTICE

The text of the International Standard IEC 1000-4-11:1994 was approved by CENELEC as a European Standard without any modification.

ANNEX ZA (normative)

OTHER INTERNATIONAL PUBLICATIONS QUOTED IN THIS STANDARD
WITH THE REFERENCES OF THE RELEVANT 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.

NOTE : When the international publication has been modified by CENELEC common modifications, indicated by (mod), the relevant EN/HD applies.

| IEC Publication | Date | Title | EN/HD | Date |
|--------------------|------|---|---------------|------|
| ----- | ---- | ----- | ----- | ---- |
| 50(161) | 1990 | International Electrotechnical Vocabulary (IEV) - Chapter 161: Electromagnetic compatibility | - | - |
| 68-1 | 1988 | Environmental testing - Part 1: General and guidance (corrigendum October 1988) | HD 323.1 S2 | 1988 |
| 1000-2-1 | 1990 | Electromagnetic compatibility (EMC) Part 2: Environment - Section 1: Description of the environment Electromagnetic environment for low-frequency conducted disturbances and signalling in public power supply systems | - | - |
| 1000-2-2 (mod) | 1990 | Section 2: Compatibility levels for low-frequency conducted disturbances and signalling in public low-voltage power supply systems | ENV 61000-2-2 | 1993 |
| 1000-4-1 | 1992 | Part 4: Testing and measurement techniques - Section 1: Overview of immunity tests - Basic EMC publication | EN 61000-4-1 | 1994 |

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NORME
INTERNATIONALE
INTERNATIONAL
STANDARD

CEI
IEC
1000-4-11

Première édition
First edition
1994-06

Compatibilité électromagnétique (CEM) –

Partie 4:

Techniques d'essai et de mesure –

Section 11: Essais d'immunité aux creux de tension,
coupures brèves et variations de tension

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Electromagnetic compatibility (EMC) –

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Part 4:

Testing and measuring techniques –

Section 11: Voltage dips, short interruptions and
voltage variations immunity tests

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTROMAGNETIC COMPATIBILITY (EMC) –

Part 4: Testing and measuring techniques –

Section 11: Voltage dips,
short interruptions and voltage variations immunity tests

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 cooperation 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, prepared by technical committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
- 3) They have the form of recommendations for international use 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.

International Standard IEC 1000-4-11 has been prepared by sub-committee 77B: High-frequency phenomena, of IEC technical committee 77: Electromagnetic compatibility.

It forms section 11 of part 4 of IEC 1000. It has the status of a Basic EMC Publication in accordance with IEC guide 107.

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

| | |
|-----------|------------------|
| DIS | Report on voting |
| 77B(CO)17 | 77B(CO)20 |

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 forms an integral part of this standard.

Annexes B and C are for information only.

INTRODUCTION

This section of part 4 belongs to the IEC 1000 series, *Electromagnetic compatibility (EMC)*, 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 (in so far as they 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 9: Miscellaneous

Each part is further subdivided into sections which are to be published either as international standards or as technical reports.

These standards and reports will be published in chronological order and numbered accordingly.

This part is an international standard which gives immunity requirements and test procedures related to voltage dips, short interruptions and voltage variations.

ELECTROMAGNETIC COMPATIBILITY (EMC) –

Part 4: Testing and measuring techniques –

Section 11: Voltage dips, short interruptions and voltage variations immunity tests

1 Scope

This section of IEC 1000-4 defines the immunity test methods and range of preferred test levels for electrical and electronic equipment connected to low-voltage power supply networks for voltage dips, short interruptions, and voltage variations.

The standard applies to electrical and electronic equipment having a rated input current not exceeding 16 A per phase.

It does not apply to electrical and electronic equipment for connection to d.c. networks or 400 Hz a.c. networks. Tests for these networks will be covered by future IEC standards.

The object of this standard is to establish a common reference for evaluating the immunity of electrical and electronic equipment when subjected to voltage dips, short interruptions, and voltage variations.

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2 Normative references

SIST EN 61000-4-11:1997

The following normative documents contain provisions which, through reference in this text, constitute provisions of this section of IEC 1000-4. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this section of IEC 1000-4 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.

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

IEC 68-1: 1988, *Environmental testing – Part 1: General and guidance*

IEC 1000-2-1: 1990, *Electromagnetic compatibility (EMC) – Part 2: Environment – Section 1: Description of the environment – Electromagnetic environment for low-frequency conducted disturbances and signalling in public power supply systems*

IEC 1000-2-2: 1990, *Electromagnetic compatibility (EMC) – Part 2: Environment – Section 2: Compatibility levels for low-frequency conducted disturbances and signalling in public low-voltage power supply systems*

IEC 1000-4-1, 1992, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 1: Overview of immunity tests – Basic EMC publication*